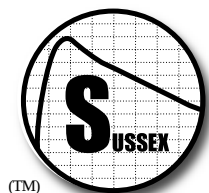




TM

**SUSSEX SEMICONDUCTOR, INC.**  
**Transient Suppressor**  
**Devices**



(TM)

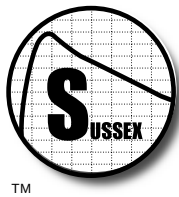
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**12251 TOWNE LAKE DRIVE, FORT MYERS, FLORIDA, 33913**

**TEL: (239) 768-6800 • FAX: (239) 768-6868**

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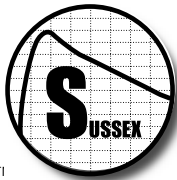
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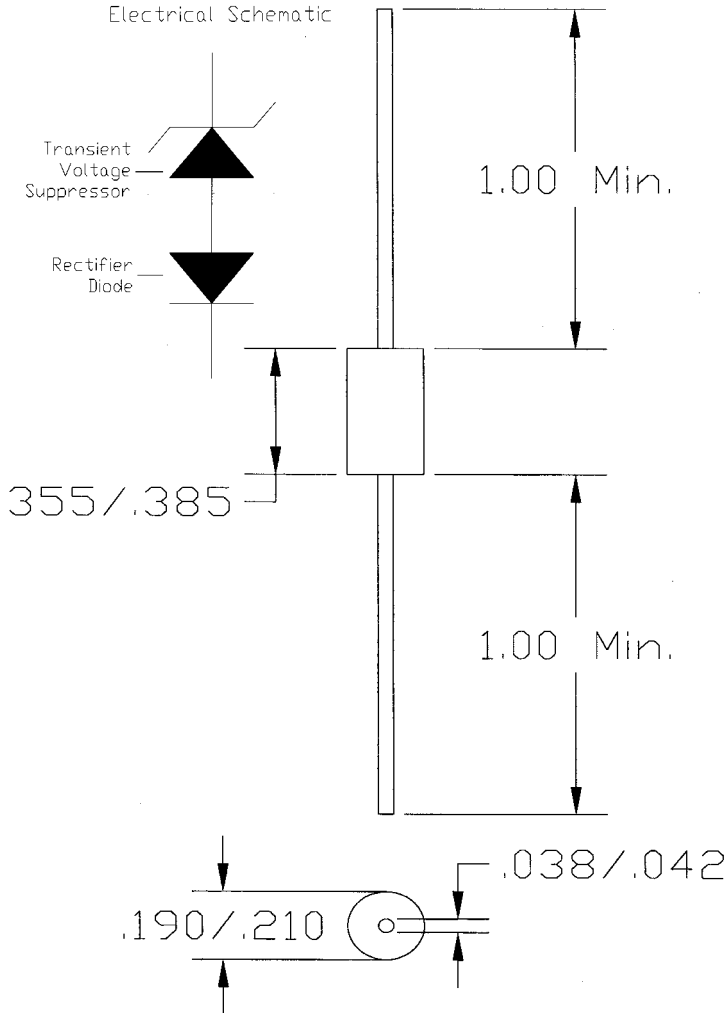


**SUSSEX**  
SEMICONDUCTOR, INC.

**LCE6.5 TO LCE170A 1500 WATT  
TRANSIENT SUPPRESSORS**

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Electrical Schematic



### LCE SERIES TRANSIENT SUPPRESSORS

**VOLTAGES - 6.5 TO 170 VOLTS**

**1500 WATT MAXIMUM POWER DISSIPATION**

### LCE SERIES DEVICE SPECIFICATIONS

- ◆ Built Using Sussex Glass Passivated Dies
- ◆ Each Device Individually Inspected
- ◆ Molded Epoxy Package
- ◆ Operating Temperature: -65 to 175°C
- ◆ Storage Temperature: -65 to 175°C
- ◆ Marked With Sussex Logo, Part Number, and Cathode Band
- ◆ Solvent Resistant Marking
- ◆ Silver Plated Leads, Solderable Per MIL-STD-750
- ◆ Sussex 1500 Watt Transient Suppressor Die In Series With a Rectifier For Low Capacitance Transient Protection

All Dimensions In Inches

## CUSTOM ORDERING SPECIFIER

DIE SPECIFICATIONS

**LCE**

DEVICE PART  
NUMBER

STANDOFF  
VOLTAGE

- ◆ BLANK INDICATES UNIPOLAR  
DEVICE  $\pm 10\%$  ON  $V_{BR}$
- ◆ A INDICATES UNIPOLAR  
DEVICE  $\pm 5\%$  ON  $V_{BR}$



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**LCE6.5 TO LCE170A 1500 WATT  
TRANSIENT SUPPRESSOR  
SPECIFICATIONS CONTINUED**

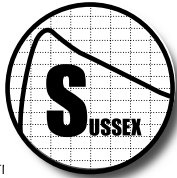
TABLE 5A - LCE SERIES TRANSIENT SUPPRESSOR ELECTRICAL SPECIFICATIONS (NOTE 1)

| INDUSTRY<br>STANDARD<br>PART<br>NUMBER | STANDOFF<br><br>VOLTAGE<br><br>(V <sub>SO</sub> )<br><br>Volts | MAX.                                                                  | REVERSE                                                     |      | TEST<br><br>CURRENT<br><br>(I <sub>T</sub> )<br><br>mA | MAX. CLAMPING                                                                         |                                                     | Rectifier<br>Voltage<br>(V <sub>dc</sub> )<br>Volts | MAX. TEMP.                             | MAX             |                 |
|----------------------------------------|----------------------------------------------------------------|-----------------------------------------------------------------------|-------------------------------------------------------------|------|--------------------------------------------------------|---------------------------------------------------------------------------------------|-----------------------------------------------------|-----------------------------------------------------|----------------------------------------|-----------------|-----------------|
|                                        |                                                                | REVERSE<br>LEAKAGE<br><br>(I <sub>R</sub> )@V <sub>SO</sub><br><br>μA | BREAKDOWN<br>VOLTAGE (V <sub>BR</sub> ) @<br>I <sub>T</sub> |      |                                                        | VOLTAGE (V <sub>CL</sub> ) @ PEAK<br>PULSE CURRENT (I <sub>PP</sub> )<br><br>(NOTE 2) | COEFFICIENT<br><br>OF V <sub>BR</sub><br><br>(%/°C) |                                                     | CAPACITANCE<br><br>@ 0 VOLTS<br><br>Pf |                 |                 |
|                                        |                                                                |                                                                       | MIN.                                                        | MAX. |                                                        |                                                                                       |                                                     |                                                     |                                        | V <sub>CL</sub> | I <sub>PP</sub> |
|                                        |                                                                |                                                                       |                                                             |      |                                                        |                                                                                       |                                                     |                                                     |                                        |                 |                 |
| LCE6.5                                 | 6.5                                                            | 1000                                                                  | 7.22                                                        | 8.82 | 10                                                     | 12.3                                                                                  | 100                                                 | 600                                                 | 0.057                                  | 110             |                 |
| LCE6.5A                                | 6.5                                                            | 1000                                                                  | 7.22                                                        | 7.98 | 10                                                     | 11.2                                                                                  | 100                                                 | 600                                                 | 0.057                                  | 110             |                 |
| LCE7.0                                 | 7                                                              | 500                                                                   | 7.78                                                        | 9.51 | 10                                                     | 13.3                                                                                  | 100                                                 | 600                                                 | 0.061                                  | 110             |                 |
| LCE7.0A                                | 7                                                              | 500                                                                   | 7.78                                                        | 8.6  | 10                                                     | 12                                                                                    | 100                                                 | 600                                                 | 0.061                                  | 110             |                 |
| LCE7.5                                 | 7.5                                                            | 250                                                                   | 8.33                                                        | 10.2 | 10                                                     | 14.3                                                                                  | 100                                                 | 600                                                 | 0.065                                  | 110             |                 |
| LCE7.5A                                | 7.5                                                            | 250                                                                   | 8.33                                                        | 9.21 | 10                                                     | 12.9                                                                                  | 100                                                 | 600                                                 | 0.065                                  | 110             |                 |
| LCE8.0                                 | 8                                                              | 100                                                                   | 8.89                                                        | 10.9 | 1                                                      | 15                                                                                    | 100                                                 | 600                                                 | 0.068                                  | 110             |                 |
| LCE8.0A                                | 8                                                              | 100                                                                   | 8.89                                                        | 9.83 | 1                                                      | 13.6                                                                                  | 100                                                 | 600                                                 | 0.068                                  | 110             |                 |
| LCE8.5                                 | 8.5                                                            | 50                                                                    | 9.44                                                        | 11.5 | 1                                                      | 15.9                                                                                  | 94                                                  | 600                                                 | 0.073                                  | 110             |                 |
| LCE8.5A                                | 8.5                                                            | 50                                                                    | 9.44                                                        | 10.4 | 1                                                      | 14.4                                                                                  | 100                                                 | 600                                                 | 0.073                                  | 110             |                 |
| LCE9.0                                 | 9                                                              | 10                                                                    | 10                                                          | 12.2 | 1                                                      | 16.9                                                                                  | 89                                                  | 600                                                 | 0.075                                  | 110             |                 |
| LCE9.0A                                | 9                                                              | 10                                                                    | 10                                                          | 11.1 | 1                                                      | 15.4                                                                                  | 97                                                  | 600                                                 | 0.075                                  | 110             |                 |
| LCE10                                  | 10                                                             | 5                                                                     | 11.1                                                        | 13.6 | 1                                                      | 18.8                                                                                  | 80                                                  | 600                                                 | 0.078                                  | 110             |                 |
| LCE10A                                 | 10                                                             | 5                                                                     | 11.1                                                        | 12.3 | 1                                                      | 17                                                                                    | 88                                                  | 600                                                 | 0.078                                  | 110             |                 |
| LCE11                                  | 11                                                             | 5                                                                     | 12.2                                                        | 14.9 | 1                                                      | 20.1                                                                                  | 74                                                  | 600                                                 | 0.061                                  | 110             |                 |
| LCE11A                                 | 11                                                             | 5                                                                     | 12.2                                                        | 13.5 | 1                                                      | 18.2                                                                                  | 82                                                  | 600                                                 | 0.081                                  | 110             |                 |
| LCE12                                  | 12                                                             | 5                                                                     | 13.3                                                        | 16.3 | 1                                                      | 22                                                                                    | 68                                                  | 600                                                 | 0.084                                  | 110             |                 |
| LCE12A                                 | 12                                                             | 5                                                                     | 13.3                                                        | 14.7 | 1                                                      | 19.9                                                                                  | 75                                                  | 600                                                 | 0.084                                  | 110             |                 |
| LCE13                                  | 13                                                             | 5                                                                     | 14.4                                                        | 17.6 | 1                                                      | 23.8                                                                                  | 63                                                  | 600                                                 | 0.086                                  | 110             |                 |
| LCE13A                                 | 13                                                             | 5                                                                     | 14.4                                                        | 15.9 | 1                                                      | 21.5                                                                                  | 70                                                  | 600                                                 | 0.086                                  | 110             |                 |
| LCE14                                  | 14                                                             | 5                                                                     | 15.6                                                        | 19.1 | 1                                                      | 25.8                                                                                  | 58                                                  | 600                                                 | 0.088                                  | 110             |                 |
| LCE14A                                 | 14                                                             | 5                                                                     | 15.6                                                        | 17.2 | 1                                                      | 23.2                                                                                  | 65                                                  | 600                                                 | 0.088                                  | 110             |                 |
| LCE15                                  | 15                                                             | 5                                                                     | 16.7                                                        | 20.4 | 1                                                      | 26.9                                                                                  | 56                                                  | 600                                                 | 0.090                                  | 110             |                 |
| LCE15A                                 | 15                                                             | 5                                                                     | 16.7                                                        | 18.5 | 1                                                      | 24.4                                                                                  | 61                                                  | 600                                                 | 0.090                                  | 110             |                 |
| LCE16                                  | 16                                                             | 5                                                                     | 17.8                                                        | 21.8 | 1                                                      | 28.8                                                                                  | 52                                                  | 600                                                 | 0.092                                  | 110             |                 |
| LCE16A                                 | 16                                                             | 5                                                                     | 17.8                                                        | 19.7 | 1                                                      | 26                                                                                    | 57                                                  | 600                                                 | 0.092                                  | 110             |                 |
| LCE17                                  | 17                                                             | 5                                                                     | 18.9                                                        | 23.1 | 1                                                      | 30.5                                                                                  | 49                                                  | 600                                                 | 0.091                                  | 110             |                 |
| LCE17A                                 | 17                                                             | 5                                                                     | 18.9                                                        | 20.9 | 1                                                      | 27.6                                                                                  | 54                                                  | 600                                                 | 0.094                                  | 110             |                 |
| LCE18                                  | 18                                                             | 5                                                                     | 20                                                          | 24.4 | 1                                                      | 32.2                                                                                  | 46                                                  | 600                                                 | 0.096                                  | 110             |                 |
| LCE18A                                 | 18                                                             | 5                                                                     | 20                                                          | 22.1 | 1                                                      | 29.2                                                                                  | 51                                                  | 600                                                 | 0.096                                  | 110             |                 |
| LCE20                                  | 20                                                             | 5                                                                     | 22.2                                                        | 27.1 | 1                                                      | 35.8                                                                                  | 42                                                  | 600                                                 | 0.097                                  | 110             |                 |
| LCE20A                                 | 20                                                             | 5                                                                     | 22.2                                                        | 24.5 | 1                                                      | 32.4                                                                                  | 46                                                  | 600                                                 | 0.097                                  | 110             |                 |
| LCE22                                  | 22                                                             | 5                                                                     | 24.4                                                        | 29.8 | 1                                                      | 39.4                                                                                  | 38                                                  | 600                                                 | 0.098                                  | 110             |                 |
| LCE22A                                 | 22                                                             | 5                                                                     | 24.4                                                        | 26.9 | 1                                                      | 35.5                                                                                  | 42                                                  | 600                                                 | 0.098                                  | 110             |                 |
| LCE24                                  | 24                                                             | 5                                                                     | 26.7                                                        | 32.6 | 1                                                      | 43                                                                                    | 35                                                  | 600                                                 | 0.099                                  | 110             |                 |
| LCE24A                                 | 24                                                             | 5                                                                     | 26.7                                                        | 29.5 | 1                                                      | 38.9                                                                                  | 39                                                  | 600                                                 | 0.099                                  | 110             |                 |
| LCE26                                  | 26                                                             | 5                                                                     | 28.9                                                        | 35.3 | 1                                                      | 46.6                                                                                  | 32                                                  | 600                                                 | 0.100                                  | 110             |                 |
| LCE26A                                 | 26                                                             | 5                                                                     | 28.9                                                        | 31.9 | 1                                                      | 42.1                                                                                  | 36                                                  | 600                                                 | 0.100                                  | 110             |                 |
| LCE28                                  | 28                                                             | 5                                                                     | 31.1                                                        | 38   | 1                                                      | 50.1                                                                                  | 30                                                  | 600                                                 | 0.101                                  | 110             |                 |
| LCE28A                                 | 28                                                             | 5                                                                     | 31.1                                                        | 34.4 | 1                                                      | 45.5                                                                                  | 33                                                  | 600                                                 | 0.101                                  | 110             |                 |
| LCE30                                  | 30                                                             | 5                                                                     | 33.3                                                        | 40.7 | 1                                                      | 53.5                                                                                  | 28                                                  | 600                                                 | 0.101                                  | 110             |                 |
| LCE30A                                 | 30                                                             | 5                                                                     | 33.3                                                        | 36.8 | 1                                                      | 48.4                                                                                  | 31                                                  | 600                                                 | 0.101                                  | 110             |                 |
| LCE33                                  | 33                                                             | 5                                                                     | 36.7                                                        | 44.9 | 1                                                      | 59                                                                                    | 25.4                                                | 600                                                 | 0.102                                  | 110             |                 |

THIS TABLE CONTINUES

## NOTES

- NOTE 1:** ♦ ELECTRICAL CHARACTERISTICS ARE AT A JUNCTION TEMPERATURE (T<sub>J</sub>) OF 25°C
- NOTE 2:** ♦ SURGE CURRENT WAVEFORM SHOWN IN FIGURE 2A ON PAGE
- ♦ PEAK PULSE POWER DERATING SHOWN IN FIGURE 3A ON PAGE



**SUSSEX**  
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**LCE6.5 TO LCE170A 1500 WATT  
TRANSIENT SUPPRESSOR  
SPECIFICATIONS CONTINUED**

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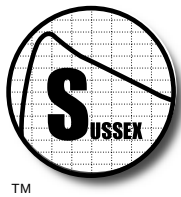
**TABLE 5A - LCE SERIES TRANSIENT SUPPRESSOR ELECTRICAL SPECIFICATIONS (NOTE 1)**

| INDUSTRY<br>STANDARD<br>PART<br>NUMBER | STANDOFF<br>VOLTAGE<br>(V <sub>SO</sub> )<br>Volts | MAX.<br>REVERSE<br>LEAKAGE<br>(I <sub>R</sub> )@V <sub>SO</sub><br>μA | REVERSE<br>BREAKDOWN<br>VOLTAGE (V <sub>BR</sub> ) @<br>I <sub>T</sub> |               | TEST<br>CURRENT<br><br>(I <sub>T</sub> )<br><br>mA | MAX. CLAMPING<br>VOLTAGE (V <sub>CL</sub> ) @ PEAK<br>PULSE CURRENT (I <sub>PP</sub> )<br>(NOTE 2) |                         | Rectifier<br>Voltage<br>(V <sub>dc</sub> )<br>Volts | MAX. TEMP.<br>COEFFICIENT<br><br>OF V <sub>BR</sub><br><br>(%/°C) | MAX<br>CAPACITANCE<br><br>@ 0 VOLTS<br><br>Pf |
|----------------------------------------|----------------------------------------------------|-----------------------------------------------------------------------|------------------------------------------------------------------------|---------------|----------------------------------------------------|----------------------------------------------------------------------------------------------------|-------------------------|-----------------------------------------------------|-------------------------------------------------------------------|-----------------------------------------------|
|                                        |                                                    |                                                                       | MIN.<br>Volts                                                          | MAX.<br>Volts |                                                    | V <sub>CL</sub><br>Volts                                                                           | I <sub>PP</sub><br>Amps |                                                     |                                                                   |                                               |
|                                        |                                                    |                                                                       | LCE33A                                                                 | 33            | 5                                                  | 36.7                                                                                               | 40.6                    |                                                     |                                                                   |                                               |
| LCE36                                  | 36                                                 | 5                                                                     | 40                                                                     | 48.9          | 1                                                  | 64.3                                                                                               | 23.3                    | 600                                                 | 0.103                                                             | 110                                           |
| LCE36A                                 | 36                                                 | 5                                                                     | 40                                                                     | 44.2          | 1                                                  | 58.1                                                                                               | 25.8                    | 600                                                 | 0.103                                                             | 110                                           |
| LCE40                                  | 40                                                 | 5                                                                     | 44.4                                                                   | 54.3          | 1                                                  | 71.4                                                                                               | 21                      | 600                                                 | 0.104                                                             | 110                                           |
| LCE40A                                 | 40                                                 | 5                                                                     | 44.4                                                                   | 49.1          | 1                                                  | 64.5                                                                                               | 23.3                    | 600                                                 | 0.104                                                             | 110                                           |
| LCE43                                  | 43                                                 | 5                                                                     | 47.8                                                                   | 58.4          | 1                                                  | 76.7                                                                                               | 19.5                    | 600                                                 | 0.104                                                             | 110                                           |
| LCE43A                                 | 43                                                 | 5                                                                     | 48.8                                                                   | 52.8          | 1                                                  | 69.4                                                                                               | 21.6                    | 600                                                 | 0.104                                                             | 110                                           |
| LCE45                                  | 45                                                 | 5                                                                     | 50                                                                     | 61.1          | 1                                                  | 80.3                                                                                               | 18.7                    | 600                                                 | 0.105                                                             | 110                                           |
| LCE45A                                 | 45                                                 | 5                                                                     | 50                                                                     | 55.3          | 1                                                  | 72.7                                                                                               | 20.6                    | 600                                                 | 0.105                                                             | 110                                           |
| LCE48                                  | 48                                                 | 5                                                                     | 53                                                                     | 65.1          | 1                                                  | 85.5                                                                                               | 17.5                    | 600                                                 | 0.105                                                             | 110                                           |
| LCE48A                                 | 48                                                 | 5                                                                     | 53                                                                     | 58.9          | 1                                                  | 77.4                                                                                               | 19.4                    | 600                                                 | 0.105                                                             | 110                                           |
| LCE51                                  | 51                                                 | 5                                                                     | 56.7                                                                   | 69.3          | 1                                                  | 91.1                                                                                               | 16.5                    | 600                                                 | 0.106                                                             | 110                                           |
| LCE51A                                 | 51                                                 | 5                                                                     | 56.7                                                                   | 62.7          | 1                                                  | 82.4                                                                                               | 18.2                    | 600                                                 | 0.106                                                             | 110                                           |
| LCE54                                  | 54                                                 | 5                                                                     | 60                                                                     | 73.3          | 1                                                  | 96.3                                                                                               | 15.6                    | 600                                                 | 0.106                                                             | 110                                           |
| LCE54A                                 | 54                                                 | 5                                                                     | 60                                                                     | 66.3          | 1                                                  | 87.1                                                                                               | 17.2                    | 600                                                 | 0.106                                                             | 110                                           |
| LCE58                                  | 58                                                 | 5                                                                     | 64.4                                                                   | 78.7          | 1                                                  | 103                                                                                                | 14.6                    | 600                                                 | 0.107                                                             | 110                                           |
| LCE58A                                 | 58                                                 | 5                                                                     | 64.4                                                                   | 71.2          | 1                                                  | 93.6                                                                                               | 16                      | 600                                                 | 0.107                                                             | 110                                           |
| LCE60                                  | 60                                                 | 5                                                                     | 66.7                                                                   | 81.5          | 1                                                  | 107                                                                                                | 14                      | 600                                                 | 0.107                                                             | 110                                           |
| LCE60A                                 | 60                                                 | 5                                                                     | 66.7                                                                   | 73.7          | 1                                                  | 96.8                                                                                               | 15.5                    | 600                                                 | 0.107                                                             | 110                                           |
| LCE64                                  | 64                                                 | 5                                                                     | 71.1                                                                   | 86.9          | 1                                                  | 114                                                                                                | 13.2                    | 600                                                 | 0.107                                                             | 110                                           |
| LCE64A                                 | 64                                                 | 5                                                                     | 71.1                                                                   | 78.6          | 1                                                  | 103                                                                                                | 14.6                    | 600                                                 | 0.107                                                             | 110                                           |
| LCE70                                  | 70                                                 | 5                                                                     | 77.8                                                                   | 95.1          | 1                                                  | 125                                                                                                | 12                      | 600                                                 | 0.108                                                             | 110                                           |
| LCE70A                                 | 70                                                 | 5                                                                     | 77.8                                                                   | 86            | 1                                                  | 113                                                                                                | 13.3                    | 600                                                 | 0.108                                                             | 110                                           |
| LCE75                                  | 75                                                 | 5                                                                     | 83.3                                                                   | 102           | 1                                                  | 134                                                                                                | 11.2                    | 600                                                 | 0.108                                                             | 110                                           |
| LCE75A                                 | 75                                                 | 5                                                                     | 83.3                                                                   | 92.1          | 1                                                  | 121                                                                                                | 12.4                    | 600                                                 | 0.108                                                             | 110                                           |
| LCE80                                  | 80                                                 | 5                                                                     | 88.7                                                                   | 108           | 1                                                  | 142                                                                                                | 10.6                    | 600                                                 | 0.108                                                             | 110                                           |
| LCE80A                                 | 80                                                 | 5                                                                     | 88.7                                                                   | 98            | 1                                                  | 129                                                                                                | 11.6                    | 600                                                 | 0.108                                                             | 110                                           |
| LCE90                                  | 90                                                 | 5                                                                     | 100                                                                    | 122           | 1                                                  | 160                                                                                                | 9.4                     | 600                                                 | 0.108                                                             | 110                                           |
| LCE90A                                 | 90                                                 | 5                                                                     | 100                                                                    | 111           | 1                                                  | 146                                                                                                | 10.3                    | 600                                                 | 0.108                                                             | 110                                           |
| LCE100                                 | 100                                                | 5                                                                     | 111                                                                    | 136           | 1                                                  | 179                                                                                                | 8.4                     | 600                                                 | 0.108                                                             | 110                                           |
| LCE100A                                | 100                                                | 5                                                                     | 111                                                                    | 123           | 1                                                  | 162                                                                                                | 9.3                     | 600                                                 | 0.108                                                             | 110                                           |
| LCE110                                 | 110                                                | 5                                                                     | 122                                                                    | 149           | 1                                                  | 196                                                                                                | 7.7                     | 600                                                 | 0.108                                                             | 110                                           |
| LCE110A                                | 110                                                | 5                                                                     | 122                                                                    | 135           | 1                                                  | 178                                                                                                | 8.4                     | 600                                                 | 0.108                                                             | 110                                           |
| LCE120                                 | 120                                                | 5                                                                     | 133                                                                    | 163           | 1                                                  | 214                                                                                                | 7                       | 600                                                 | 0.110                                                             | 110                                           |
| LCE120A                                | 120                                                | 5                                                                     | 133                                                                    | 147           | 1                                                  | 193                                                                                                | 7.8                     | 600                                                 | 0.110                                                             | 110                                           |
| LCE130                                 | 130                                                | 5                                                                     | 144                                                                    | 176           | 1                                                  | 231                                                                                                | 6.5                     | 600                                                 | 0.110                                                             | 110                                           |
| LCE130A                                | 130                                                | 5                                                                     | 144                                                                    | 159           | 1                                                  | 209                                                                                                | 7.2                     | 600                                                 | 0.110                                                             | 110                                           |
| LCE150                                 | 150                                                | 5                                                                     | 167                                                                    | 204           | 1                                                  | 268                                                                                                | 5.6                     | 600                                                 | 0.110                                                             | 110                                           |
| LCE150A                                | 150                                                | 5                                                                     | 167                                                                    | 185           | 1                                                  | 243                                                                                                | 6.2                     | 600                                                 | 0.110                                                             | 110                                           |
| LCE160                                 | 160                                                | 5                                                                     | 178                                                                    | 218           | 1                                                  | 287                                                                                                | 5.2                     | 600                                                 | 0.110                                                             | 110                                           |
| LCE160A                                | 160                                                | 5                                                                     | 178                                                                    | 197           | 1                                                  | 259                                                                                                | 5.8                     | 600                                                 | 0.110                                                             | 110                                           |
| LCE170                                 | 170                                                | 5                                                                     | 189                                                                    | 231           | 1                                                  | 304                                                                                                | 4.9                     | 600                                                 | 0.110                                                             | 110                                           |
| LCE170A                                | 170                                                | 5                                                                     | 189                                                                    | 209           | 1                                                  | 275                                                                                                | 5.4                     | 600                                                 | 0.110                                                             | 110                                           |

HIGHER VOLTAGES AVAILABLE. CONTACT FACTORY

## NOTES

- NOTE 1:** ♦ ELECTRICAL CHARACTERISTICS ARE AT A JUNCTION TEMPERATURE (T<sub>J</sub>) OF 25°C
- NOTE 2:** ♦ SURGE CURRENT WAVEFORM SHOWN IN FIGURE 2A ON PAGE
- ♦ PEAK PULSE POWER DERATING SHOWN IN FIGURE 3A ON PAGE



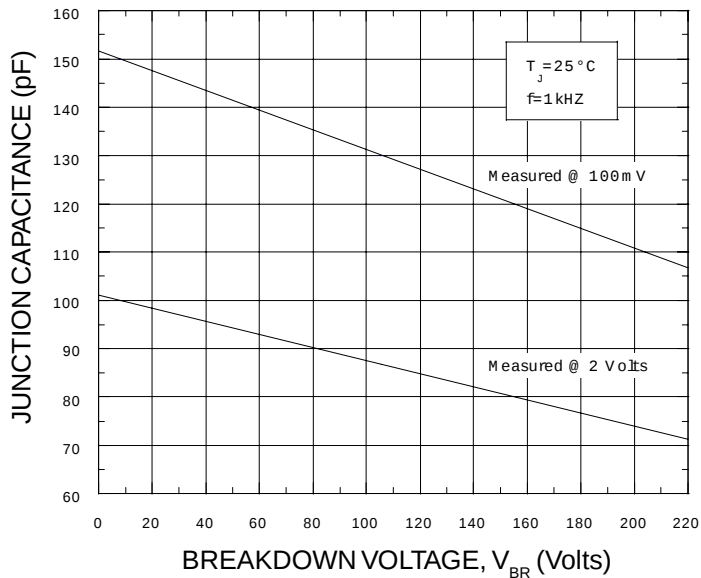
# SUSSEX

SEMICONDUCTOR, INC.

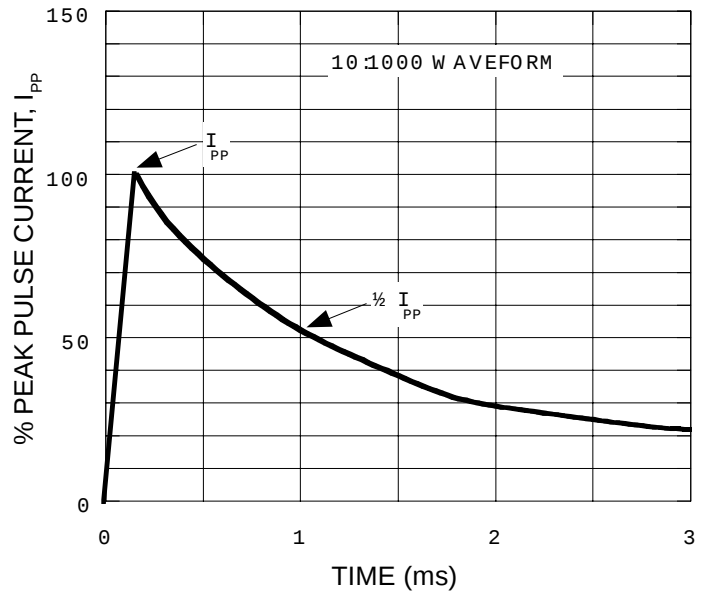
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**LCE6.5 TO LCE170A 1500 WATT  
TRANSIENT SUPPRESSOR  
SPECIFICATIONS CONTINUED**

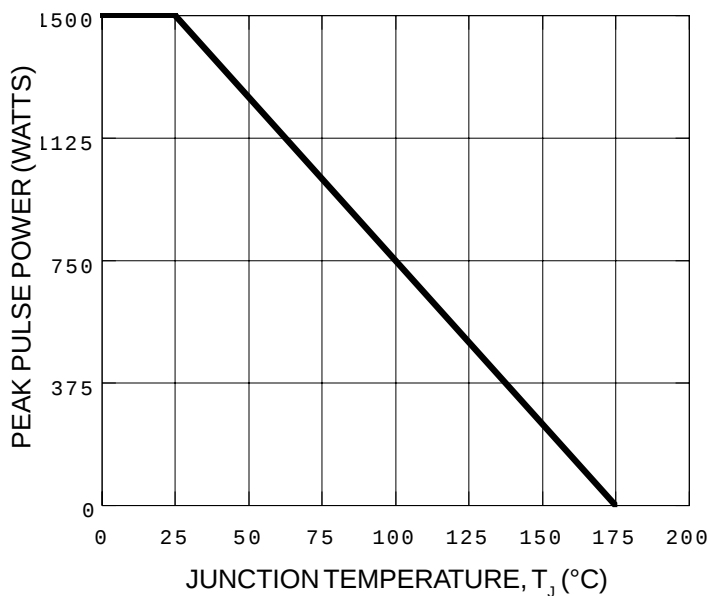
**FIGURE 1A - TYPICAL JUNCTION  
CAPACITANCE**



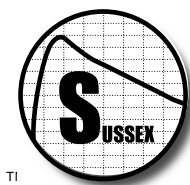
**FIGURE 2A - PULSE WAVEFORM**



**FIGURE 3A - PULSE DERATING CURVE**



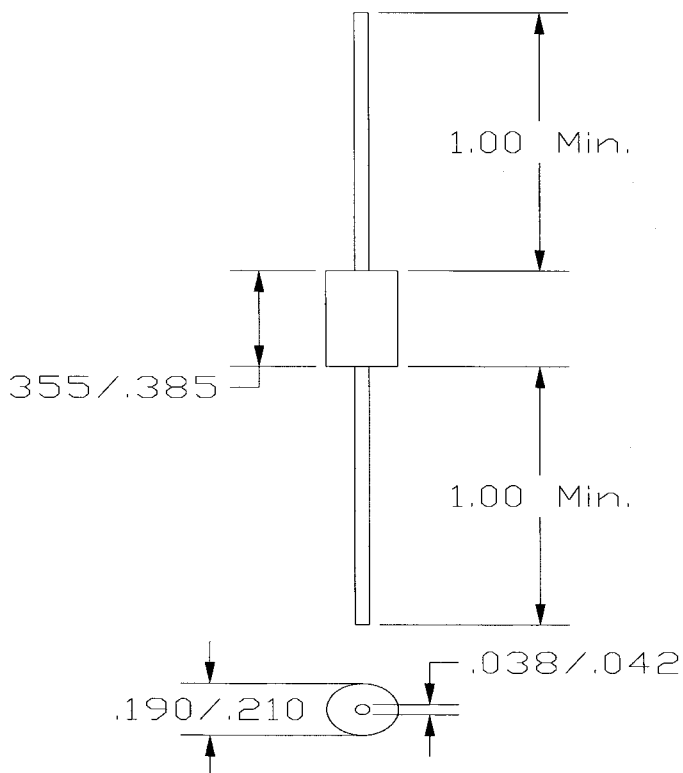
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**ULC6 SERIES  
ULTRA-LOW CAPACITANCE  
600 WATT TRANSIENT  
SUPPRESSOR SPECIFICATIONS**



All Dimensions In Inches

◆ **ULC6 SERIES TRANSIENT SUPPRESSORS**

◆ **VOLTAGES - 6.8+**

◆ **600 WATT MAXIMUM POWER DISSIPATION**

**ULC SERIES  
ULTRA LOW CAPACITANCE DEVICE  
SPECIFICATIONS**

- ◆ Built With Sussex Glass Passivated Dies
- ◆ Each Device Individually Inspected
- ◆ Molded Epoxy Package
- ◆ Polarity Indicated By Solvent Resistant Marking
- ◆ Operating Temperature: -55 to 175°C
- ◆ Storage Temperature: -55 to 175°C
- ◆ Marked With Sussex Logo, Part Number, and Cathode Band
- ◆ Silver Plated Leads, Solderable Per MIL-STD-750

**For Additional Information and to request a quote call the factory at (239) 768-6800.**

## CUSTOM ORDERING SPECIFIER

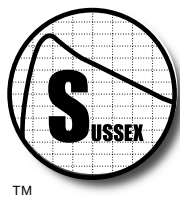
DIE SPECIFICATIONS

**ULC6-**

DEVICE PART  
NUMBER

STANDOFF  
VOLTAGE

- ◆ BLANK INDICATES UNIPOLAR  
DEVICE  $\pm 10\%$  ON  $V_{BR}$
- ◆ A INDICATES UNIPOLAR  
DEVICE  $\pm 5\%$  ON  $V_{BR}$



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## ULC6 SERIES ULTRA-LOW CAPACITANCE 600 WATT TRANSIENT SUPPRESSOR SPECIFICATIONS

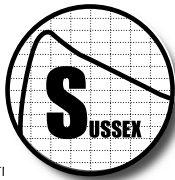
TABLE 5A - LCE SERIES TRANSIENT SUPPRESSOR ELECTRICAL SPECIFICATIONS (NOTE 1)

| INDUSTRY<br>STANDARD<br>PART<br>NUMBER | STANDOFF<br><br>VOLTAGE<br><br>(V <sub>SO</sub> )<br><br>Volts | MAX.<br><br>REVERSE<br>LEAKAGE<br><br>(I <sub>R</sub> )@ V <sub>SO</sub><br><br>μA | REVERSE<br>BREAKDOWN<br>VOLTAGE (V <sub>BR</sub> ) @<br>I <sub>T</sub> |               | TEST<br><br>CURRENT<br><br>(I <sub>T</sub> )<br><br>mA | MAX. CLAMPING<br>VOLTAGE (V <sub>CL</sub> ) @ PEAK<br>PULSE CURRENT (I <sub>PP</sub> )<br>(NOTE 2) |                         | MAX<br><br>CAPACITANCE<br><br>@ 0 VOLTS<br><br>Pf |
|----------------------------------------|----------------------------------------------------------------|------------------------------------------------------------------------------------|------------------------------------------------------------------------|---------------|--------------------------------------------------------|----------------------------------------------------------------------------------------------------|-------------------------|---------------------------------------------------|
|                                        |                                                                |                                                                                    | MIN.<br>Volts                                                          | MAX.<br>Volts |                                                        | V <sub>CL</sub><br>Volts                                                                           | I <sub>PP</sub><br>Amps |                                                   |
|                                        |                                                                |                                                                                    |                                                                        |               |                                                        |                                                                                                    |                         |                                                   |
| ULC6-6.8                               | 6.8                                                            | 500                                                                                | 7.2                                                                    | 8.8           | 10                                                     | 12.3                                                                                               | 60.00                   | 35                                                |
| ULC6-7                                 | 7                                                              | 500                                                                                | 7.78                                                                   | 9.51          | 10                                                     | 13.3                                                                                               | 45.11                   | 35                                                |
| ULC6-7A                                | 7                                                              | 500                                                                                | 7.78                                                                   | 8.6           | 10                                                     | 12                                                                                                 | 50.00                   | 35                                                |
| ULC6-7.5                               | 7.5                                                            | 250                                                                                | 8.33                                                                   | 10.2          | 10                                                     | 14.3                                                                                               | 41.96                   | 35                                                |
| ULC6-7.5A                              | 7.5                                                            | 250                                                                                | 8.33                                                                   | 9.21          | 10                                                     | 12.9                                                                                               | 46.51                   | 35                                                |
| ULC6-8                                 | 8                                                              | 100                                                                                | 8.89                                                                   | 10.9          | 1                                                      | 15                                                                                                 | 40.00                   | 35                                                |
| ULC6-8A                                | 8                                                              | 100                                                                                | 8.89                                                                   | 9.83          | 1                                                      | 13.6                                                                                               | 44.12                   | 35                                                |
| ULC6-8.5                               | 8.5                                                            | 50                                                                                 | 9.44                                                                   | 11.5          | 1                                                      | 15.9                                                                                               | 37.74                   | 35                                                |
| ULC6-8.5A                              | 8.5                                                            | 50                                                                                 | 9.44                                                                   | 10.4          | 1                                                      | 14.4                                                                                               | 41.67                   | 35                                                |
| ULC6-9                                 | 9                                                              | 10                                                                                 | 10                                                                     | 12.2          | 1                                                      | 16.9                                                                                               | 35.50                   | 35                                                |
| ULC6-9A                                | 9                                                              | 10                                                                                 | 10                                                                     | 11.1          | 1                                                      | 15.4                                                                                               | 38.96                   | 35                                                |
| ULC6-10                                | 10                                                             | 5                                                                                  | 11.1                                                                   | 13.6          | 1                                                      | 18.8                                                                                               | 31.91                   | 35                                                |
| ULC6-10A                               | 10                                                             | 5                                                                                  | 11.1                                                                   | 12.3          | 1                                                      | 17                                                                                                 | 35.29                   | 35                                                |
| ULC6-11                                | 11                                                             | 5                                                                                  | 12.2                                                                   | 14.9          | 1                                                      | 20.1                                                                                               | 29.85                   | 35                                                |
| ULC6-11A                               | 11                                                             | 5                                                                                  | 12.2                                                                   | 13.5          | 1                                                      | 18.2                                                                                               | 32.97                   | 35                                                |
| ULC6-12                                | 12                                                             | 5                                                                                  | 13.3                                                                   | 16.3          | 1                                                      | 22                                                                                                 | 27.27                   | 35                                                |
| ULC6-12A                               | 12                                                             | 5                                                                                  | 13.3                                                                   | 14.7          | 1                                                      | 19.9                                                                                               | 30.15                   | 35                                                |
| ULC6-13                                | 13                                                             | 5                                                                                  | 14.4                                                                   | 17.6          | 1                                                      | 23.8                                                                                               | 25.21                   | 35                                                |
| ULC6-13A                               | 13                                                             | 5                                                                                  | 14.4                                                                   | 15.9          | 1                                                      | 21.5                                                                                               | 27.91                   | 35                                                |
| ULC6-14                                | 14                                                             | 5                                                                                  | 15.6                                                                   | 19.1          | 1                                                      | 25.8                                                                                               | 23.26                   | 35                                                |
| ULC6-14A                               | 14                                                             | 5                                                                                  | 15.6                                                                   | 17.2          | 1                                                      | 23.2                                                                                               | 25.86                   | 35                                                |
| ULC6-15                                | 15                                                             | 5                                                                                  | 16.7                                                                   | 20.4          | 1                                                      | 26.9                                                                                               | 22.30                   | 35                                                |
| ULC6-15A                               | 15                                                             | 5                                                                                  | 16.7                                                                   | 18.5          | 1                                                      | 24.4                                                                                               | 24.59                   | 35                                                |
| ULC6-16                                | 16                                                             | 5                                                                                  | 17.8                                                                   | 21.8          | 1                                                      | 28.8                                                                                               | 20.83                   | 35                                                |
| ULC6-16A                               | 16                                                             | 5                                                                                  | 17.8                                                                   | 19.7          | 1                                                      | 26                                                                                                 | 23.08                   | 35                                                |
| ULC6-17                                | 17                                                             | 5                                                                                  | 18.9                                                                   | 23.1          | 1                                                      | 30.5                                                                                               | 19.67                   | 35                                                |
| ULC6-17A                               | 17                                                             | 5                                                                                  | 18.9                                                                   | 20.9          | 1                                                      | 27.6                                                                                               | 21.74                   | 35                                                |
| ULC6-18                                | 18                                                             | 5                                                                                  | 20                                                                     | 24.4          | 1                                                      | 32.2                                                                                               | 18.63                   | 35                                                |
| ULC6-18A                               | 18                                                             | 5                                                                                  | 20                                                                     | 22.1          | 1                                                      | 29.2                                                                                               | 20.55                   | 35                                                |
| ULC6-20                                | 20                                                             | 5                                                                                  | 22.2                                                                   | 27.1          | 1                                                      | 35.8                                                                                               | 16.76                   | 35                                                |
| ULC6-20A                               | 20                                                             | 5                                                                                  | 22.2                                                                   | 24.5          | 1                                                      | 32.4                                                                                               | 18.52                   | 35                                                |
| ULC6-22                                | 22                                                             | 5                                                                                  | 24.4                                                                   | 29.8          | 1                                                      | 39.4                                                                                               | 15.23                   | 35                                                |
| ULC6-22A                               | 22                                                             | 5                                                                                  | 24.4                                                                   | 26.9          | 1                                                      | 35.5                                                                                               | 16.90                   | 35                                                |
| ULC6-24                                | 24                                                             | 5                                                                                  | 26.7                                                                   | 32.6          | 1                                                      | 43                                                                                                 | 13.95                   | 35                                                |
| ULC6-24A                               | 24                                                             | 5                                                                                  | 26.7                                                                   | 29.5          | 1                                                      | 38.9                                                                                               | 15.42                   | 35                                                |
| ULC6-26                                | 26                                                             | 5                                                                                  | 28.9                                                                   | 35.3          | 1                                                      | 46.6                                                                                               | 12.88                   | 35                                                |
| ULC6-26A                               | 26                                                             | 5                                                                                  | 28.9                                                                   | 31.9          | 1                                                      | 42.1                                                                                               | 14.25                   | 35                                                |
| ULC6-28                                | 28                                                             | 5                                                                                  | 31.1                                                                   | 38            | 1                                                      | 50.1                                                                                               | 11.98                   | 35                                                |
| ULC6-28A                               | 28                                                             | 5                                                                                  | 31.1                                                                   | 34.4          | 1                                                      | 45.5                                                                                               | 13.19                   | 35                                                |
| ULC6-30                                | 30                                                             | 5                                                                                  | 33.3                                                                   | 40.7          | 1                                                      | 53.5                                                                                               | 11.21                   | 35                                                |
| ULC6-30A                               | 30                                                             | 5                                                                                  | 33.3                                                                   | 36.8          | 1                                                      | 48.4                                                                                               | 12.40                   | 35                                                |
| ULC6-33                                | 33                                                             | 5                                                                                  | 36.7                                                                   | 44.9          | 1                                                      | 59                                                                                                 | 10.17                   | 35                                                |

HIGHER VOLTAGES AVAILABLE. CONTACT FACTORY

### NOTES

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SEMICONDUCTOR, INC.

**ULC6 SERIES**  
**ULTRA-LOW CAPACITANCE**  
**600 WATT TRANSIENT**  
**SUPPRESSOR SPECIFICATIONS**

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TABLE 5A - LCE SERIES TRANSIENT SUPPRESSOR ELECTRICAL SPECIFICATIONS (NOTE 1)

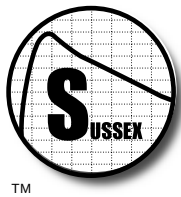
| INDUSTRY<br>STANDARD<br>PART<br>NUMBER | STANDOFF<br>VOLTAGE<br>(V <sub>so</sub> )<br>Volts | MAX.<br>REVERSE<br>LEAKAGE<br>(I <sub>R</sub> )@V <sub>so</sub><br>μA | REVERSE<br>BREAKDOWN<br>VOLTAGE (V <sub>BR</sub> ) @<br>I <sub>T</sub> |               | TEST<br>CURRENT<br><br>(I <sub>T</sub> )<br><br>mA | MAX. CLAMPING<br>VOLTAGE (V <sub>CL</sub> ) @ PEAK<br>PULSE CURRENT (I <sub>PP</sub> )<br><br>(NOTE 2) |                         | MAX<br>CAPACITANCE<br><br>@ 0 VOLTS<br><br>Pf |
|----------------------------------------|----------------------------------------------------|-----------------------------------------------------------------------|------------------------------------------------------------------------|---------------|----------------------------------------------------|--------------------------------------------------------------------------------------------------------|-------------------------|-----------------------------------------------|
|                                        |                                                    |                                                                       | MIN.<br>Volts                                                          | MAX.<br>Volts |                                                    | V <sub>CL</sub><br>Volts                                                                               | I <sub>PP</sub><br>Amps |                                               |
|                                        |                                                    |                                                                       |                                                                        |               |                                                    |                                                                                                        |                         |                                               |
| ULC6-33A                               | 33                                                 | 5                                                                     | 36.7                                                                   | 40.6          | 1                                                  | 53.3                                                                                                   | 11.26                   | 35                                            |
| ULC6-36                                | 36                                                 | 5                                                                     | 40                                                                     | 48.9          | 1                                                  | 64.3                                                                                                   | 9.33                    | 35                                            |
| ULC6-36A                               | 36                                                 | 5                                                                     | 40                                                                     | 44.2          | 1                                                  | 58.1                                                                                                   | 10.33                   | 35                                            |
| ULC6-40                                | 40                                                 | 5                                                                     | 44.4                                                                   | 54.3          | 1                                                  | 71.4                                                                                                   | 8.40                    | 35                                            |
| ULC6-40A                               | 40                                                 | 5                                                                     | 44.4                                                                   | 49.1          | 1                                                  | 64.5                                                                                                   | 9.30                    | 35                                            |
| ULC6-43                                | 43                                                 | 5                                                                     | 47.8                                                                   | 58.4          | 1                                                  | 76.7                                                                                                   | 7.82                    | 35                                            |
| ULC6-43A                               | 43                                                 | 5                                                                     | 48.8                                                                   | 52.8          | 1                                                  | 69.4                                                                                                   | 8.65                    | 35                                            |
| ULC6-45                                | 45                                                 | 5                                                                     | 50                                                                     | 61.1          | 1                                                  | 80.3                                                                                                   | 7.47                    | 35                                            |
| ULC6-45A                               | 45                                                 | 5                                                                     | 50                                                                     | 55.3          | 1                                                  | 72.7                                                                                                   | 8.25                    | 35                                            |
| ULC6-48                                | 48                                                 | 5                                                                     | 53                                                                     | 65.1          | 1                                                  | 85.5                                                                                                   | 7.02                    | 35                                            |
| ULC6-48A                               | 48                                                 | 5                                                                     | 53                                                                     | 58.9          | 1                                                  | 77.4                                                                                                   | 7.75                    | 35                                            |
| ULC6-51                                | 51                                                 | 5                                                                     | 56.7                                                                   | 69.3          | 1                                                  | 91.1                                                                                                   | 6.59                    | 35                                            |
| ULC6-51A                               | 51                                                 | 5                                                                     | 56.7                                                                   | 62.7          | 1                                                  | 82.4                                                                                                   | 7.28                    | 35                                            |
| ULC6-54                                | 54                                                 | 5                                                                     | 60                                                                     | 73.3          | 1                                                  | 96.3                                                                                                   | 6.23                    | 35                                            |
| ULC6-54A                               | 54                                                 | 5                                                                     | 60                                                                     | 66.3          | 1                                                  | 87.1                                                                                                   | 6.89                    | 35                                            |
| ULC6-58                                | 58                                                 | 5                                                                     | 64.4                                                                   | 78.7          | 1                                                  | 103                                                                                                    | 5.83                    | 35                                            |
| ULC6-58A                               | 58                                                 | 5                                                                     | 64.4                                                                   | 71.2          | 1                                                  | 93.6                                                                                                   | 6.41                    | 35                                            |
| ULC6-60                                | 60                                                 | 5                                                                     | 66.7                                                                   | 81.5          | 1                                                  | 107                                                                                                    | 5.61                    | 35                                            |
| ULC6-60A                               | 60                                                 | 5                                                                     | 66.7                                                                   | 73.7          | 1                                                  | 96.8                                                                                                   | 6.20                    | 35                                            |
| ULC6-64                                | 64                                                 | 5                                                                     | 71.1                                                                   | 86.9          | 1                                                  | 114                                                                                                    | 5.26                    | 35                                            |
| ULC6-64A                               | 64                                                 | 5                                                                     | 71.1                                                                   | 78.6          | 1                                                  | 103                                                                                                    | 5.83                    | 35                                            |
| ULC6-70                                | 70                                                 | 5                                                                     | 77.8                                                                   | 95.1          | 1                                                  | 125                                                                                                    | 4.80                    | 35                                            |
| ULC6-70A                               | 70                                                 | 5                                                                     | 77.8                                                                   | 86            | 1                                                  | 113                                                                                                    | 5.31                    | 35                                            |
| ULC6-75                                | 75                                                 | 5                                                                     | 83.3                                                                   | 102           | 1                                                  | 134                                                                                                    | 4.48                    | 35                                            |
| ULC6-75A                               | 75                                                 | 5                                                                     | 83.3                                                                   | 92.1          | 1                                                  | 121                                                                                                    | 4.96                    | 35                                            |
| ULC6-80                                | 80                                                 | 5                                                                     | 88.7                                                                   | 108           | 1                                                  | 142                                                                                                    | 4.23                    | 35                                            |
| ULC6-80A                               | 80                                                 | 5                                                                     | 88.7                                                                   | 98            | 1                                                  | 129                                                                                                    | 4.65                    | 35                                            |
| ULC6-90                                | 90                                                 | 5                                                                     | 100                                                                    | 122           | 1                                                  | 160                                                                                                    | 3.75                    | 35                                            |
| ULC6-90A                               | 90                                                 | 5                                                                     | 100                                                                    | 111           | 1                                                  | 146                                                                                                    | 4.11                    | 35                                            |
| ULC6-100                               | 100                                                | 5                                                                     | 111                                                                    | 136           | 1                                                  | 179                                                                                                    | 3.35                    | 35                                            |
| ULC6-100A                              | 100                                                | 5                                                                     | 111                                                                    | 123           | 1                                                  | 162                                                                                                    | 3.70                    | 35                                            |
| ULC6-110                               | 110                                                | 5                                                                     | 122                                                                    | 149           | 1                                                  | 196                                                                                                    | 3.06                    | 35                                            |
| ULC6-110A                              | 110                                                | 5                                                                     | 122                                                                    | 135           | 1                                                  | 178                                                                                                    | 3.37                    | 35                                            |
| ULC6-120                               | 120                                                | 5                                                                     | 133                                                                    | 163           | 1                                                  | 214                                                                                                    | 2.80                    | 35                                            |
| ULC6-120A                              | 120                                                | 5                                                                     | 133                                                                    | 147           | 1                                                  | 193                                                                                                    | 3.11                    | 35                                            |
| ULC6-130                               | 130                                                | 5                                                                     | 144                                                                    | 176           | 1                                                  | 231                                                                                                    | 2.60                    | 35                                            |
| ULC6-130A                              | 130                                                | 5                                                                     | 144                                                                    | 159           | 1                                                  | 209                                                                                                    | 2.87                    | 35                                            |
| ULC6-150                               | 150                                                | 5                                                                     | 167                                                                    | 204           | 1                                                  | 268                                                                                                    | 2.24                    | 35                                            |
| ULC6-150A                              | 150                                                | 5                                                                     | 167                                                                    | 185           | 1                                                  | 243                                                                                                    | 2.47                    | 35                                            |
| ULC6-160                               | 160                                                | 5                                                                     | 178                                                                    | 218           | 1                                                  | 287                                                                                                    | 2.09                    | 35                                            |
| ULC6-160A                              | 160                                                | 5                                                                     | 178                                                                    | 197           | 1                                                  | 259                                                                                                    | 2.32                    | 35                                            |
| ULC6-170                               | 170                                                | 5                                                                     | 189                                                                    | 231           | 1                                                  | 304                                                                                                    | 1.97                    | 35                                            |
| ULC6-170A                              | 170                                                | 5                                                                     | 189                                                                    | 209           | 1                                                  | 275                                                                                                    | 2.18                    | 35                                            |

HIGHER VOLTAGES AVAILABLE. CONTACT FACTORY

## NOTES

**NOTE 1:** ♦ ELECTRICAL CHARACTERISTICS ARE AT A JUNCTION TEMPERATURE (T<sub>J</sub>) OF 25°C

**NOTE 2:** ♦ SURGE CURRENT WAVEFORM SHOWN IN FIGURE 2A ON PAGE

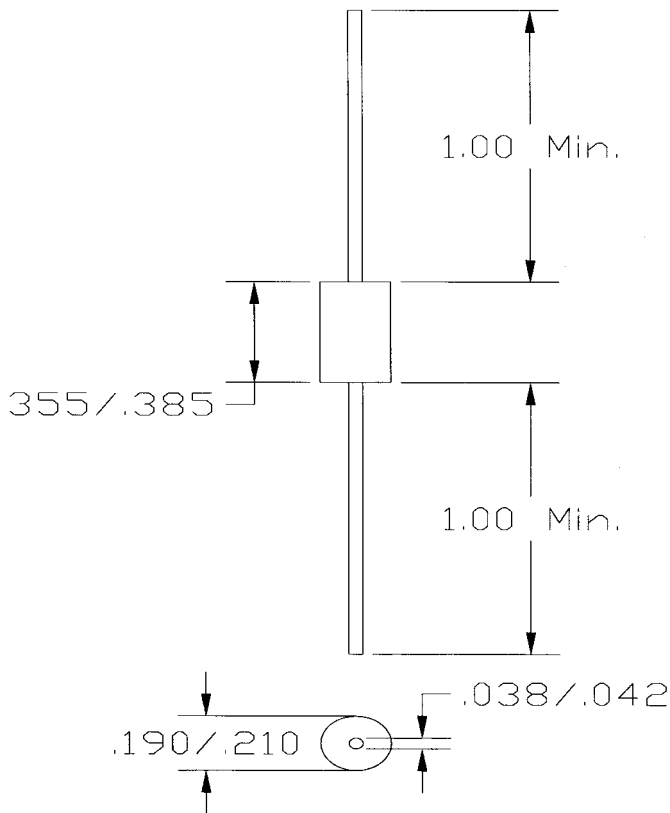


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## ULC15 SERIES ULTRA-LOW CAPACITANCE 1500 WATT TRANSIENT SUPPRESSOR SPECIFICATIONS



All Dimensions In Inches

### ◆ ULC15 SERIES TRANSIENT SUPPRESSORS

### ◆ VOLTAGES - 6.8+

### ◆ 1500 WATT MAXIMUM POWER DISSIPATION

### ULC SERIES ULTRA LOW CAPACITANCE DEVICE SPECIFICATIONS

- ◆ Built With Sussex Glass Passivated Dies
- ◆ Each Device Individually Inspected
- ◆ Molded Epoxy Package
- ◆ Polarity Indicated By Solvent Resistant Marking
- ◆ Operating Temperature: -55 to 175°C
- ◆ Storage Temperature: -55 to 175°C
- ◆ Marked With Sussex Logo, Part Number, and Cathode Band
- ◆ Silver Plated Leads, Solderable Per MIL-STD-750

For additional Information and to request a quote  
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## CUSTOM ORDERING SPECIFIER

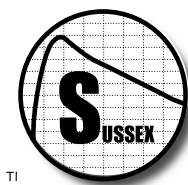
DIE SPECIFICATIONS

### ULC15-

DEVICE PART  
NUMBER

STANDOFF  
VOLTAGE

- ◆ BLANK INDICATES UNIPOLAR  
DEVICE  $\pm 10\%$  ON  $V_{BR}$
- ◆ A INDICATES UNIPOLAR  
DEVICE  $\pm 5\%$  ON  $V_{BR}$



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SUPPRESSOR SPECIFICATIONS**

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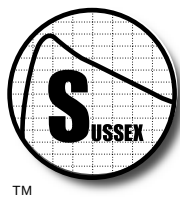
TABLE 5A - LCE SERIES TRANSIENT SUPPRESSOR ELECTRICAL SPECIFICATIONS (NOTE 1)

| INDUSTRY<br>STANDARD<br>PART<br>NUMBER | STANDOFF<br><br>VOLTAGE<br><br>(V <sub>SO</sub> )<br><br>Volts | MAX.<br><br>REVERSE<br>LEAKAGE<br><br>(I <sub>R</sub> )@ V <sub>SO</sub><br><br>μA | REVERSE<br>BREAKDOWN<br>VOLTAGE (V <sub>BR</sub> ) @<br>I <sub>T</sub> |               | TEST<br><br>CURRENT<br><br>(I <sub>T</sub> )<br><br>mA | MAX. CLAMPING<br>VOLTAGE (V <sub>CL</sub> ) @ PEAK<br>PULSE CURRENT (I <sub>PP</sub> )<br>(NOTE 2) |                         | MAX<br><br>CAPACITANCE<br><br>@ 0 VOLTS<br><br>Pf |
|----------------------------------------|----------------------------------------------------------------|------------------------------------------------------------------------------------|------------------------------------------------------------------------|---------------|--------------------------------------------------------|----------------------------------------------------------------------------------------------------|-------------------------|---------------------------------------------------|
|                                        |                                                                |                                                                                    | MIN.<br>Volts                                                          | MAX.<br>Volts |                                                        | V <sub>CL</sub><br>Volts                                                                           | I <sub>PP</sub><br>Amps |                                                   |
|                                        |                                                                |                                                                                    |                                                                        |               |                                                        |                                                                                                    |                         |                                                   |
|                                        |                                                                |                                                                                    |                                                                        |               |                                                        |                                                                                                    |                         |                                                   |
| ULC15-6.8                              | 6.8                                                            | 500                                                                                | 7.2                                                                    | 8.8           | 10                                                     | 12.3                                                                                               | >100                    | 35                                                |
| ULC15-7                                | 7                                                              | 500                                                                                | 7.78                                                                   | 9.51          | 10                                                     | 13.3                                                                                               | 100                     | 35                                                |
| ULC15-7A                               | 7                                                              | 500                                                                                | 7.78                                                                   | 8.6           | 10                                                     | 12                                                                                                 | 100                     | 35                                                |
| ULC15-7.5                              | 7.5                                                            | 250                                                                                | 8.33                                                                   | 10.2          | 10                                                     | 14.3                                                                                               | 100                     | 35                                                |
| ULC15-7.5A                             | 7.5                                                            | 250                                                                                | 8.33                                                                   | 9.21          | 10                                                     | 12.9                                                                                               | 100                     | 35                                                |
| ULC15-8                                | 8                                                              | 100                                                                                | 8.89                                                                   | 10.9          | 1                                                      | 15                                                                                                 | 100                     | 35                                                |
| ULC15-8A                               | 8                                                              | 100                                                                                | 8.89                                                                   | 9.83          | 1                                                      | 13.6                                                                                               | 100                     | 35                                                |
| ULC15-8.5                              | 8.5                                                            | 50                                                                                 | 9.44                                                                   | 11.5          | 1                                                      | 15.9                                                                                               | 94                      | 35                                                |
| ULC15-8.5A                             | 8.5                                                            | 50                                                                                 | 9.44                                                                   | 10.4          | 1                                                      | 14.4                                                                                               | 100                     | 35                                                |
| ULC15-9                                | 9                                                              | 10                                                                                 | 10                                                                     | 12.2          | 1                                                      | 16.9                                                                                               | 89                      | 35                                                |
| ULC15-9A                               | 9                                                              | 10                                                                                 | 10                                                                     | 11.1          | 1                                                      | 15.4                                                                                               | 97                      | 35                                                |
| ULC15-10                               | 10                                                             | 5                                                                                  | 11.1                                                                   | 13.6          | 1                                                      | 18.8                                                                                               | 80                      | 35                                                |
| ULC15-10A                              | 10                                                             | 5                                                                                  | 11.1                                                                   | 12.3          | 1                                                      | 17                                                                                                 | 88                      | 35                                                |
| ULC15-11                               | 11                                                             | 5                                                                                  | 12.2                                                                   | 14.9          | 1                                                      | 20.1                                                                                               | 74                      | 35                                                |
| ULC15-11A                              | 11                                                             | 5                                                                                  | 12.2                                                                   | 13.5          | 1                                                      | 18.2                                                                                               | 82                      | 35                                                |
| ULC15-12                               | 12                                                             | 5                                                                                  | 13.3                                                                   | 16.3          | 1                                                      | 22                                                                                                 | 68                      | 35                                                |
| ULC15-12A                              | 12                                                             | 5                                                                                  | 13.3                                                                   | 14.7          | 1                                                      | 19.9                                                                                               | 75                      | 35                                                |
| ULC15-13                               | 13                                                             | 5                                                                                  | 14.4                                                                   | 17.6          | 1                                                      | 23.8                                                                                               | 63                      | 35                                                |
| ULC15-13A                              | 13                                                             | 5                                                                                  | 14.4                                                                   | 15.9          | 1                                                      | 21.5                                                                                               | 70                      | 35                                                |
| ULC15-14                               | 14                                                             | 5                                                                                  | 15.6                                                                   | 19.1          | 1                                                      | 25.8                                                                                               | 58                      | 35                                                |
| ULC15-14A                              | 14                                                             | 5                                                                                  | 15.6                                                                   | 17.2          | 1                                                      | 23.2                                                                                               | 65                      | 35                                                |
| ULC15-15                               | 15                                                             | 5                                                                                  | 16.7                                                                   | 20.4          | 1                                                      | 26.9                                                                                               | 56                      | 35                                                |
| ULC15-15A                              | 15                                                             | 5                                                                                  | 16.7                                                                   | 18.5          | 1                                                      | 24.4                                                                                               | 61                      | 35                                                |
| ULC15-16                               | 16                                                             | 5                                                                                  | 17.8                                                                   | 21.8          | 1                                                      | 28.8                                                                                               | 52                      | 35                                                |
| ULC15-16A                              | 16                                                             | 5                                                                                  | 17.8                                                                   | 19.7          | 1                                                      | 26                                                                                                 | 57                      | 35                                                |
| ULC15-17                               | 17                                                             | 5                                                                                  | 18.9                                                                   | 23.1          | 1                                                      | 30.5                                                                                               | 49                      | 35                                                |
| ULC15-17A                              | 17                                                             | 5                                                                                  | 18.9                                                                   | 20.9          | 1                                                      | 27.6                                                                                               | 54                      | 35                                                |
| ULC15-18                               | 18                                                             | 5                                                                                  | 20                                                                     | 24.4          | 1                                                      | 32.2                                                                                               | 46                      | 35                                                |
| ULC15-18A                              | 18                                                             | 5                                                                                  | 20                                                                     | 22.1          | 1                                                      | 29.2                                                                                               | 51                      | 35                                                |
| ULC15-20                               | 20                                                             | 5                                                                                  | 22.2                                                                   | 27.1          | 1                                                      | 35.8                                                                                               | 42                      | 35                                                |
| ULC15-20A                              | 20                                                             | 5                                                                                  | 22.2                                                                   | 24.5          | 1                                                      | 32.4                                                                                               | 46                      | 35                                                |
| ULC15-22                               | 22                                                             | 5                                                                                  | 24.4                                                                   | 29.8          | 1                                                      | 39.4                                                                                               | 38                      | 35                                                |
| ULC15-22A                              | 22                                                             | 5                                                                                  | 24.4                                                                   | 26.9          | 1                                                      | 35.5                                                                                               | 42                      | 35                                                |
| ULC15-24                               | 24                                                             | 5                                                                                  | 26.7                                                                   | 32.6          | 1                                                      | 43                                                                                                 | 35                      | 35                                                |
| ULC15-24A                              | 24                                                             | 5                                                                                  | 26.7                                                                   | 29.5          | 1                                                      | 38.9                                                                                               | 39                      | 35                                                |
| ULC15-26                               | 26                                                             | 5                                                                                  | 28.9                                                                   | 35.3          | 1                                                      | 46.6                                                                                               | 32                      | 35                                                |
| ULC15-26A                              | 26                                                             | 5                                                                                  | 28.9                                                                   | 31.9          | 1                                                      | 42.1                                                                                               | 36                      | 35                                                |
| ULC15-28                               | 28                                                             | 5                                                                                  | 31.1                                                                   | 38            | 1                                                      | 50.1                                                                                               | 30                      | 35                                                |
| ULC15-28A                              | 28                                                             | 5                                                                                  | 31.1                                                                   | 34.4          | 1                                                      | 45.5                                                                                               | 33                      | 35                                                |
| ULC15-30                               | 30                                                             | 5                                                                                  | 33.3                                                                   | 40.7          | 1                                                      | 53.5                                                                                               | 28                      | 35                                                |
| ULC15-30A                              | 30                                                             | 5                                                                                  | 33.3                                                                   | 36.8          | 1                                                      | 48.4                                                                                               | 31                      | 35                                                |
| ULC15-33                               | 33                                                             | 5                                                                                  | 36.7                                                                   | 44.9          | 1                                                      | 59                                                                                                 | 25.4                    | 35                                                |

THIS TABLE CONTINUES

## NOTES

- NOTE 1:** ♦ ELECTRICAL CHARACTERISTICS ARE AT A JUNCTION TEMPERATURE (T<sub>J</sub>) OF 25°C
- NOTE 2:** ♦ SURGE CURRENT WAVEFORM SHOWN IN FIGURE 2A ON PAGE
- ♦ PEAK PULSE POWER DERATING SHOWN IN FIGURE 3A ON PAGE



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**ULC15 SERIES**  
**ULTRA-LOW CAPACITANCE**  
**1500 WATT TRANSIENT**  
**SUPPRESSOR SPECIFICATIONS**

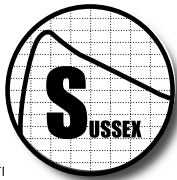
TABLE 5A - LCE SERIES TRANSIENT SUPPRESSOR ELECTRICAL SPECIFICATIONS (NOTE 1)

| INDUSTRY<br>STANDARD<br>PART<br>NUMBER | STANDOFF<br>VOLTAGE<br>(V <sub>SO</sub> )<br>Volts | MAX.<br>REVERSE<br>LEAKAGE<br>(I <sub>R</sub> )@V <sub>SO</sub><br>μA | REVERSE<br>BREAKDOWN<br>VOLTAGE (V <sub>BR</sub> ) @<br>I <sub>T</sub> |               | TEST<br>CURRENT<br><br>(I <sub>T</sub> )<br><br>mA | MAX. CLAMPING<br>VOLTAGE (V <sub>CL</sub> ) @ PEAK<br>PULSE CURRENT (I <sub>PP</sub> )<br>(NOTE 2) |                         | MAX<br>CAPACITANCE<br><br>@ 0 VOLTS<br><br>Pf |
|----------------------------------------|----------------------------------------------------|-----------------------------------------------------------------------|------------------------------------------------------------------------|---------------|----------------------------------------------------|----------------------------------------------------------------------------------------------------|-------------------------|-----------------------------------------------|
|                                        |                                                    |                                                                       | MIN.<br>Volts                                                          | MAX.<br>Volts |                                                    | V <sub>CL</sub><br>Volts                                                                           | I <sub>PP</sub><br>Amps |                                               |
|                                        |                                                    |                                                                       |                                                                        |               |                                                    |                                                                                                    |                         |                                               |
| ULC15-33A                              | 33                                                 | 5                                                                     | 36.7                                                                   | 40.6          | 1                                                  | 53.3                                                                                               | 28.1                    | 35                                            |
| ULC15-36                               | 36                                                 | 5                                                                     | 40                                                                     | 48.9          | 1                                                  | 64.3                                                                                               | 23.3                    | 35                                            |
| ULC15-36A                              | 36                                                 | 5                                                                     | 40                                                                     | 44.2          | 1                                                  | 58.1                                                                                               | 25.8                    | 35                                            |
| ULC15-40                               | 40                                                 | 5                                                                     | 44.4                                                                   | 54.3          | 1                                                  | 71.4                                                                                               | 21                      | 35                                            |
| ULC15-40A                              | 40                                                 | 5                                                                     | 44.4                                                                   | 49.1          | 1                                                  | 64.5                                                                                               | 23.3                    | 35                                            |
| ULC15-43                               | 43                                                 | 5                                                                     | 47.8                                                                   | 58.4          | 1                                                  | 76.7                                                                                               | 19.5                    | 35                                            |
| ULC15-43A                              | 43                                                 | 5                                                                     | 48.8                                                                   | 52.8          | 1                                                  | 69.4                                                                                               | 21.6                    | 35                                            |
| ULC15-45                               | 45                                                 | 5                                                                     | 50                                                                     | 61.1          | 1                                                  | 80.3                                                                                               | 18.7                    | 35                                            |
| ULC15-45A                              | 45                                                 | 5                                                                     | 50                                                                     | 55.3          | 1                                                  | 72.7                                                                                               | 20.6                    | 35                                            |
| ULC15-48                               | 48                                                 | 5                                                                     | 53                                                                     | 65.1          | 1                                                  | 85.5                                                                                               | 17.5                    | 35                                            |
| ULC15-48A                              | 48                                                 | 5                                                                     | 53                                                                     | 58.9          | 1                                                  | 77.4                                                                                               | 19.4                    | 35                                            |
| ULC15-51                               | 51                                                 | 5                                                                     | 56.7                                                                   | 69.3          | 1                                                  | 91.1                                                                                               | 16.5                    | 35                                            |
| ULC15-51A                              | 51                                                 | 5                                                                     | 56.7                                                                   | 62.7          | 1                                                  | 82.4                                                                                               | 18.2                    | 35                                            |
| ULC15-54                               | 54                                                 | 5                                                                     | 60                                                                     | 73.3          | 1                                                  | 96.3                                                                                               | 15.6                    | 35                                            |
| ULC15-54A                              | 54                                                 | 5                                                                     | 60                                                                     | 66.3          | 1                                                  | 87.1                                                                                               | 17.2                    | 35                                            |
| ULC15-58                               | 58                                                 | 5                                                                     | 64.4                                                                   | 78.7          | 1                                                  | 103                                                                                                | 14.6                    | 35                                            |
| ULC15-58A                              | 58                                                 | 5                                                                     | 64.4                                                                   | 71.2          | 1                                                  | 93.6                                                                                               | 16                      | 35                                            |
| ULC15-60                               | 60                                                 | 5                                                                     | 66.7                                                                   | 815           | 1                                                  | 107                                                                                                | 14                      | 35                                            |
| ULC15-60A                              | 60                                                 | 5                                                                     | 66.7                                                                   | 73.7          | 1                                                  | 96.8                                                                                               | 15.5                    | 35                                            |
| ULC15-64                               | 64                                                 | 5                                                                     | 71.1                                                                   | 86.9          | 1                                                  | 114                                                                                                | 13.2                    | 35                                            |
| ULC15-64A                              | 64                                                 | 5                                                                     | 71.1                                                                   | 78.6          | 1                                                  | 103                                                                                                | 14.6                    | 35                                            |
| ULC15-70                               | 70                                                 | 5                                                                     | 77.8                                                                   | 95.1          | 1                                                  | 125                                                                                                | 12                      | 35                                            |
| ULC15-70A                              | 70                                                 | 5                                                                     | 77.8                                                                   | 86            | 1                                                  | 113                                                                                                | 13.3                    | 35                                            |
| ULC15-75                               | 75                                                 | 5                                                                     | 83.3                                                                   | 102           | 1                                                  | 134                                                                                                | 11.2                    | 35                                            |
| ULC15-75A                              | 75                                                 | 5                                                                     | 83.3                                                                   | 92.1          | 1                                                  | 121                                                                                                | 12.4                    | 35                                            |
| ULC15-80                               | 80                                                 | 5                                                                     | 88.7                                                                   | 108           | 1                                                  | 142                                                                                                | 10.6                    | 35                                            |
| ULC15-80A                              | 80                                                 | 5                                                                     | 88.7                                                                   | 98            | 1                                                  | 129                                                                                                | 11.6                    | 35                                            |
| ULC15-90                               | 90                                                 | 5                                                                     | 100                                                                    | 122           | 1                                                  | 160                                                                                                | 9.4                     | 35                                            |
| ULC15-90A                              | 90                                                 | 5                                                                     | 100                                                                    | 111           | 1                                                  | 146                                                                                                | 10.3                    | 35                                            |
| ULC15-100                              | 100                                                | 5                                                                     | 111                                                                    | 136           | 1                                                  | 179                                                                                                | 8.4                     | 35                                            |
| ULC15-100A                             | 100                                                | 5                                                                     | 111                                                                    | 123           | 1                                                  | 162                                                                                                | 9.3                     | 35                                            |
| ULC15-110                              | 110                                                | 5                                                                     | 122                                                                    | 149           | 1                                                  | 196                                                                                                | 7.7                     | 35                                            |
| ULC15-110A                             | 110                                                | 5                                                                     | 122                                                                    | 135           | 1                                                  | 178                                                                                                | 8.4                     | 35                                            |
| ULC15-120                              | 120                                                | 5                                                                     | 133                                                                    | 163           | 1                                                  | 214                                                                                                | 7                       | 35                                            |
| ULC15-120A                             | 120                                                | 5                                                                     | 133                                                                    | 147           | 1                                                  | 193                                                                                                | 7.8                     | 35                                            |
| ULC15-130                              | 130                                                | 5                                                                     | 144                                                                    | 176           | 1                                                  | 231                                                                                                | 6.5                     | 35                                            |
| ULC15-130A                             | 130                                                | 5                                                                     | 144                                                                    | 159           | 1                                                  | 209                                                                                                | 7.2                     | 35                                            |
| ULC15-150                              | 150                                                | 5                                                                     | 167                                                                    | 204           | 1                                                  | 268                                                                                                | 5.6                     | 35                                            |
| ULC15-150A                             | 150                                                | 5                                                                     | 167                                                                    | 185           | 1                                                  | 243                                                                                                | 6.2                     | 35                                            |
| ULC15-160                              | 160                                                | 5                                                                     | 178                                                                    | 218           | 1                                                  | 287                                                                                                | 5.2                     | 35                                            |
| ULC15-160A                             | 160                                                | 5                                                                     | 178                                                                    | 197           | 1                                                  | 259                                                                                                | 5.8                     | 35                                            |
| ULC15-170                              | 170                                                | 5                                                                     | 189                                                                    | 231           | 1                                                  | 304                                                                                                | 4.9                     | 35                                            |
| ULC15-170A                             | 170                                                | 5                                                                     | 189                                                                    | 209           | 1                                                  | 275                                                                                                | 5.4                     | 35                                            |

THIS TABLE CONTINUES

## NOTES

- NOTE 1:** ♦ ELECTRICAL CHARACTERISTICS ARE AT A JUNCTION TEMPERATURE (T<sub>J</sub>) OF 25°C
- NOTE 2:** ♦ SURGE CURRENT WAVEFORM SHOWN IN FIGURE 2A ON PAGE
- ♦ PEAK PULSE POWER DERATING SHOWN IN FIGURE 3A ON PAGE



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**1.5KE SERIES 1500 WATT  
TRANSIENT SUPPRESSORS**

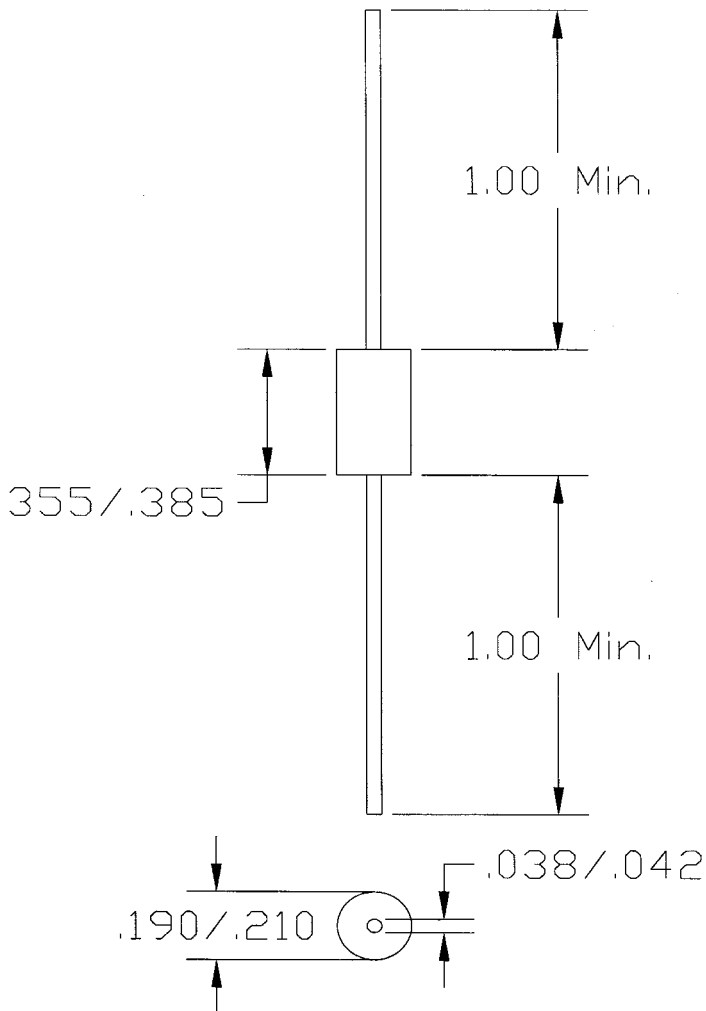
### 1.5KE SERIES TRANSIENT SUPPRESSORS

**VOLTAGES - 6.8 TO 440 VOLTS**

**1500 WATT MAXIMUM POWER DISSIPATION**

### 1.5KE SERIES DEVICE SPECIFICATIONS

- ◆ Built With Sussex Glass Passivated Dies
- ◆ Available as Uni- and Bi-Directional
- ◆ Each Device Individually Inspected
- ◆ Molded Epoxy Package
- ◆ Polarity Indicated By Solvent Resistant Marking
- ◆ Operating Temperature: -55 to 175°C
- ◆ Storage Temperature: -55 to 175°C
- ◆ Marked With Sussex Logo, Part Number, and Cathode Band on Unipolar Types
- ◆ Silver Plated Leads, Solderable Per MIL-STD-750
- ◆ Underwriter Laboratories Approved



All Dimensions In Inches

## CUSTOM ORDERING SPECIFIER

DIE SPECIFICATIONS

**1.5KE**

DEVICE PART  
NUMBER

REVERSE  
BREAKDOWN  
VOLTAGE  
(VBR)

- ◆ BLANK INDICATES UNIPOLAR  
DEVICE  $\pm 10\%$  ON  $V_{BR}$
- ◆ A INDICATES UNIPOLAR  
DEVICE  $\pm 5\%$  ON  $V_{BR}$
- ◆ C INDICATES BIPOLAR  
DEVICE  $\pm 10\%$  ON  $V_{BR}$
- ◆ CA INDICATES BIPOLAR  
DEVICE  $\pm 5\%$  ON  $V_{BR}$



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## 1.5KE SERIES 1500 WATT TRANSIENT SUPPRESSOR SPECIFICATIONS CONTINUED

TABLE 6A - 1.5KE SERIES 1500 WATT TRANSIENT SUPPRESSOR ELECTRICAL SPECIFICATIONS (NOTE 1)

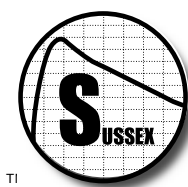
| JEDEC PART NUMBERS | SUSSEX PART NUMBERS 1500 WATT 1.5KE SERIES | STANDOFF VOLTAGE ( $V_{SO}$ ) Volts | MAX. REVERSE LEAKAGE ( $I_R$ )@ $V_{SO}$ (NOTE 2) $\mu A$ | REVERSE BREAKDOWN VOLTAGE ( $V_{BR}$ ) @ $I_R$ |            | TEST CURRENT ( $I_T$ ) mA | MAX. CLAMPING VOLTAGE ( $V_{CL}$ ) @ PEAK PULSE CURRENT ( $I_{PP}$ ) (NOTE 3) |               | MAX. TEMP. COEFFICIENT OF $V_{BR}$ (%/°C) |
|--------------------|--------------------------------------------|-------------------------------------|-----------------------------------------------------------|------------------------------------------------|------------|---------------------------|-------------------------------------------------------------------------------|---------------|-------------------------------------------|
|                    |                                            |                                     |                                                           | MIN. Volts                                     | MAX. Volts |                           | $V_{CL}$ Volts                                                                | $I_{PP}$ Amps |                                           |
| 1N6267             | 1.5KE6.8                                   | 5.50                                | 1000                                                      | 6.12                                           | 7.48       | 10                        | 10.8                                                                          | 139           | 0.057                                     |
| 1N6267A            | 1.5KE6.8A                                  | 5.80                                | 1000                                                      | 6.45                                           | 7.14       | 10                        | 10.5                                                                          | 143           | 0.057                                     |
| 1N6268             | 1.5KE7.5                                   | 6.05                                | 500                                                       | 6.75                                           | 8.25       | 10                        | 11.7                                                                          | 128           | 0.061                                     |
| 1N6268A            | 1.5KE7.5A                                  | 6.40                                | 500                                                       | 7.13                                           | 7.88       | 10                        | 11.3                                                                          | 132           | 0.061                                     |
| 1N6269             | 1.5KE8.2                                   | 6.63                                | 200                                                       | 7.38                                           | 9.02       | 10                        | 12.5                                                                          | 120           | 0.065                                     |
| 1N6269A            | 1.5KE8.2A                                  | 7.02                                | 200                                                       | 7.79                                           | 8.61       | 10                        | 12.1                                                                          | 124           | 0.065                                     |
| 1N6270             | 1.5KE9.1                                   | 7.37                                | 50                                                        | 8.19                                           | 10.00      | 1                         | 13.8                                                                          | 109           | 0.068                                     |
| 1N6270A            | 1.5KE9.1A                                  | 7.78                                | 50                                                        | 8.65                                           | 9.55       | 1                         | 13.4                                                                          | 112           | 0.068                                     |
| 1N6271             | 1.5KE10                                    | 8.10                                | 10                                                        | 9.00                                           | 11.00      | 1                         | 15.0                                                                          | 100           | 0.073                                     |
| 1N6271A            | 1.5KE10A                                   | 8.55                                | 10                                                        | 9.50                                           | 10.50      | 1                         | 14.5                                                                          | 103           | 0.073                                     |
| 1N6272             | 1.5KE11                                    | 8.92                                | 5.0                                                       | 9.90                                           | 12.10      | 1                         | 16.2                                                                          | 93            | 0.075                                     |
| 1N6272A            | 1.5KE11A                                   | 9.40                                | 5.0                                                       | 10.50                                          | 11.60      | 1                         | 15.6                                                                          | 96            | 0.075                                     |
| 1N6273             | 1.5KE12                                    | 9.72                                | 5.0                                                       | 10.80                                          | 13.20      | 1                         | 17.3                                                                          | 87            | 0.078                                     |
| 1N6273A            | 1.5KE12A                                   | 10.20                               | 5.0                                                       | 11.40                                          | 12.60      | 1                         | 16.7                                                                          | 90            | 0.078                                     |
| 1N6274             | 1.5KE13                                    | 10.50                               | 5.0                                                       | 11.70                                          | 14.30      | 1                         | 19.0                                                                          | 79            | 0.061                                     |
| 1N6274A            | 1.5KE13A                                   | 11.10                               | 5.0                                                       | 12.40                                          | 13.70      | 1                         | 18.2                                                                          | 82            | 0.081                                     |
| 1N6275             | 1.5KE15                                    | 12.10                               | 5.0                                                       | 13.50                                          | 16.50      | 1                         | 22.0                                                                          | 68            | 0.084                                     |
| 1N6275A            | 1.5KE15A                                   | 12.80                               | 5.0                                                       | 14.30                                          | 15.80      | 1                         | 21.2                                                                          | 71            | 0.084                                     |
| 1N6276             | 1.5KE16                                    | 12.90                               | 5.0                                                       | 14.40                                          | 17.60      | 1                         | 23.5                                                                          | 64            | 0.086                                     |
| 1N6276A            | 1.5KE16A                                   | 13.60                               | 5.0                                                       | 15.20                                          | 16.80      | 1                         | 22.5                                                                          | 67            | 0.086                                     |
| 1N6277             | 1.5KE18                                    | 14.50                               | 5.0                                                       | 16.20                                          | 19.80      | 1                         | 26.5                                                                          | 56.5          | 0.088                                     |
| 1N6277A            | 1.5KE18A                                   | 15.30                               | 5.0                                                       | 17.10                                          | 18.90      | 1                         | 25.2                                                                          | 59.5          | 0.088                                     |
| 1N6278             | 1.5KE20                                    | 16.20                               | 5.0                                                       | 18.00                                          | 22.00      | 1                         | 29.1                                                                          | 51.5          | 0.090                                     |
| 1N6278A            | 1.5KE20A                                   | 17.10                               | 5.0                                                       | 19.00                                          | 21.00      | 1                         | 27.7                                                                          | 54            | 0.090                                     |
| 1N6279             | 1.5KE22                                    | 17.80                               | 5.0                                                       | 19.80                                          | 24.20      | 1                         | 31.9                                                                          | 47            | 0.092                                     |
| 1N6279A            | 1.5KE22A                                   | 18.80                               | 5.0                                                       | 20.90                                          | 23.10      | 1                         | 30.6                                                                          | 49            | 0.092                                     |
| 1N6280             | 1.5KE24                                    | 19.40                               | 5.0                                                       | 21.60                                          | 26.40      | 1                         | 34.7                                                                          | 43            | 0.091                                     |
| 1N6280A            | 1.5KE24A                                   | 20.50                               | 5.0                                                       | 22.80                                          | 25.20      | 1                         | 33.2                                                                          | 45            | 0.094                                     |
| 1N6281             | 1.5KE27                                    | 21.80                               | 5.0                                                       | 24.30                                          | 29.70      | 1                         | 39.1                                                                          | 38.5          | 0.096                                     |
| 1N6281A            | 1.5KE27A                                   | 23.10                               | 5.0                                                       | 25.70                                          | 28.40      | 1                         | 37.5                                                                          | 40            | 0.096                                     |
| 1N6282             | 1.5KE30                                    | 24.30                               | 5.0                                                       | 27.00                                          | 33.00      | 1                         | 43.5                                                                          | 34.5          | 0.097                                     |
| 1N6282A            | 1.5KE30A                                   | 25.60                               | 5.0                                                       | 28.50                                          | 31.50      | 1                         | 41.4                                                                          | 36            | 0.097                                     |
| 1N6283             | 1.5KE33                                    | 26.80                               | 5.0                                                       | 29.70                                          | 36.30      | 1                         | 47.7                                                                          | 31.5          | 0.098                                     |
| 1N6283A            | 1.5KE33A                                   | 28.20                               | 5.0                                                       | 31.40                                          | 34.70      | 1                         | 45.7                                                                          | 33            | 0.098                                     |
| 1N6284             | 1.5KE36                                    | 29.10                               | 5.0                                                       | 32.40                                          | 39.60      | 1                         | 52.0                                                                          | 29            | 0.099                                     |
| 1N6284A            | 1.5KE36A                                   | 30.80                               | 5.0                                                       | 34.20                                          | 37.80      | 1                         | 49.9                                                                          | 30            | 0.099                                     |
| 1N6285             | 1.5KE39                                    | 31.60                               | 5.0                                                       | 35.10                                          | 42.90      | 1                         | 56.4                                                                          | 26.5          | 0.100                                     |
| 1N6285A            | 1.5KE39A                                   | 33.30                               | 5.0                                                       | 37.10                                          | 41.00      | 1                         | 53.9                                                                          | 28            | 0.100                                     |
| 1N6286             | 1.5KE43                                    | 34.80                               | 5.0                                                       | 38.70                                          | 47.30      | 1                         | 61.9                                                                          | 24            | 0.101                                     |
| 1N6286A            | 1.5KE43A                                   | 36.80                               | 5.0                                                       | 40.90                                          | 45.20      | 1                         | 59.3                                                                          | 25            | 0.101                                     |
| 1N6287             | 1.5KE47                                    | 36.10                               | 5.0                                                       | 42.30                                          | 51.70      | 1                         | 67.8                                                                          | 22.2          | 0.101                                     |
| 1N6287A            | 1.5KE47A                                   | 40.20                               | 5.0                                                       | 44.70                                          | 49.40      | 1                         | 64.8                                                                          | 23.2          | 0.101                                     |
| 1N6288             | 1.5KE51                                    | 41.30                               | 5.0                                                       | 45.90                                          | 56.10      | 1                         | 73.5                                                                          | 20.4          | 0.102                                     |

THIS TABLE CONTINUES

### NOTES

NOTE 1: ♦ ELECTRICAL CHARACTERISTICS ARE AT A JUNCTION TEMPERATURE ( $T_J$ ) OF 25°C  
NOTE 2: ♦ FOR BIPOLAR DEVICES WITH A  $V_{BR}$  OF 10 VOLTS OR LESS, THE  $I_R$  LIMIT IS DOUBLED

NOTE 3: ♦ SURGE CURRENT WAVEFORM SHOWN IN FIGURE 2A ON PAGE  
♦ PEAK PULSE POWER DERATING SHOWN IN FIGURE 3A ON PAGE



**SUSSEX**  
SEMICONDUCTOR, INC.

**1.5KE SERIES 1500 WATT  
TRANSIENT SUPPRESSOR  
SPECIFICATIONS CONTINUED**

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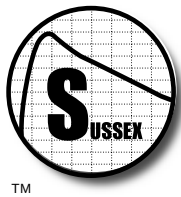
**TABLE 6A - 1.5KE SERIES 1500 WATT TRANSIENT SUPPRESSOR ELECTRICAL SPECIFICATIONS (NOTE 1)**

| JEDEC PART<br>NUMBERS | SUSSEX<br>PART<br>NUMBERS<br>1500 WATT<br>1.5KE<br>SERIES | STANDOFF<br>VOLTAGE<br>(V <sub>SO</sub> )<br>Volts | MAX.<br>REVERSE<br>LEAKAGE<br>(I <sub>R</sub> )@V <sub>SO</sub><br>(NOTE 2)<br>μA | REVERSE<br>BREAKDOWN<br>VOLTAGE (V <sub>BR</sub> )<br>@ I <sub>T</sub> |               | TEST<br>CURRENT<br>(I <sub>T</sub> )<br>mA | MAX. CLAMPING<br>VOLTAGE (V <sub>CL</sub> ) @<br>PEAK PULSE<br>CURRENT (I <sub>PP</sub> )<br>(NOTE 3) |                         | MAX. TEMP.<br>COEFFICIENT<br>OF V <sub>BR</sub><br>(%/°C) |
|-----------------------|-----------------------------------------------------------|----------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------|---------------|--------------------------------------------|-------------------------------------------------------------------------------------------------------|-------------------------|-----------------------------------------------------------|
|                       |                                                           |                                                    |                                                                                   | MIN.<br>Volts                                                          | MAX.<br>Volts |                                            | V <sub>CL</sub><br>Volts                                                                              | I <sub>PP</sub><br>Amps |                                                           |
| 1N6288A               | 1.5KE51A                                                  | 43.60                                              | 5.0                                                                               | 48.50                                                                  | 53.60         | 1                                          | 70.1                                                                                                  | 21.4                    | 0.102                                                     |
| 1N6289                | 1.5KE56                                                   | 45.60                                              | 5.0                                                                               | 50.40                                                                  | 61.80         | 1                                          | 80.5                                                                                                  | 18.6                    | 0.103                                                     |
| 1N6289A               | 1.5KE56A                                                  | 47.80                                              | 5.0                                                                               | 53.20                                                                  | 58.80         | 1                                          | 77.0                                                                                                  | 19.5                    | 0.103                                                     |
| 1N6290                | 1.5KE62                                                   | 50.20                                              | 5.0                                                                               | 55.80                                                                  | 68.20         | 1                                          | 89.0                                                                                                  | 16.9                    | 0.104                                                     |
| 1N6290A               | 1.5KE62A                                                  | 53.00                                              | 5.0                                                                               | 58.90                                                                  | 65.10         | 1                                          | 85.0                                                                                                  | 17.7                    | 0.104                                                     |
| 1N6291                | 1.5KE68                                                   | 55.10                                              | 5.0                                                                               | 61.20                                                                  | 74.80         | 1                                          | 96.0                                                                                                  | 15.3                    | 0.104                                                     |
| 1N6291A               | 1.5KE68A                                                  | 58.10                                              | 5.0                                                                               | 64.60                                                                  | 71.40         | 1                                          | 92.0                                                                                                  | 16.3                    | 0.104                                                     |
| 1N6292                | 1.5KE75                                                   | 60.70                                              | 5.0                                                                               | 67.50                                                                  | 82.50         | 1                                          | 108.0                                                                                                 | 13.9                    | 0.105                                                     |
| 1N6292A               | 1.5KE75A                                                  | 64.10                                              | 5.0                                                                               | 71.30                                                                  | 78.80         | 1                                          | 103.0                                                                                                 | 14.6                    | 0.105                                                     |
| 1N6293                | 1.5KE82                                                   | 66.40                                              | 5.0                                                                               | 73.80                                                                  | 90.20         | 1                                          | 118.0                                                                                                 | 12.7                    | 0.105                                                     |
| 1N6293A               | 1.5KE82A                                                  | 70.10                                              | 5.0                                                                               | 77.90                                                                  | 86.10         | 1                                          | 113.0                                                                                                 | 13.3                    | 0.105                                                     |
| 1N6294                | 1.5KE91                                                   | 73.70                                              | 5.0                                                                               | 81.90                                                                  | 100.00        | 1                                          | 131.0                                                                                                 | 11.4                    | 0.106                                                     |
| 1N6294A               | 1.5KE91A                                                  | 77.80                                              | 5.0                                                                               | 86.50                                                                  | 95.50         | 1                                          | 125.0                                                                                                 | 12                      | 0.106                                                     |
| 1N6295                | 1.5KE100                                                  | 81.00                                              | 5.0                                                                               | 90.00                                                                  | 110.00        | 1                                          | 144.0                                                                                                 | 10.4                    | 0.106                                                     |
| 1N6295A               | 1.5KE100A                                                 | 85.50                                              | 5.0                                                                               | 95.00                                                                  | 105.00        | 1                                          | 137.0                                                                                                 | 11                      | 0.106                                                     |
| 1N6296                | 1.5KE110                                                  | 89.20                                              | 5.0                                                                               | 99.00                                                                  | 121.00        | 1                                          | 158.0                                                                                                 | 9.5                     | 0.107                                                     |
| 1N6296A               | 1.5KE110A                                                 | 94.00                                              | 5.0                                                                               | 106.00                                                                 | 116.00        | 1                                          | 152.0                                                                                                 | 9.9                     | 0.107                                                     |
| 1N6297                | 1.5KE120                                                  | 97.20                                              | 5.0                                                                               | 108.00                                                                 | 132.00        | 1                                          | 173.0                                                                                                 | 8.7                     | 0.107                                                     |
| 1N6297A               | 1.5KE120A                                                 | 102.00                                             | 5.0                                                                               | 114.00                                                                 | 126.00        | 1                                          | 165.0                                                                                                 | 9.1                     | 0.107                                                     |
| 1N6298                | 1.5KE130                                                  | 106.00                                             | 5.0                                                                               | 117.00                                                                 | 143.00        | 1                                          | 187.0                                                                                                 | 8                       | 0.107                                                     |
| 1N6298A               | 1.5KE130A                                                 | 111.00                                             | 5.0                                                                               | 124.00                                                                 | 137.00        | 1                                          | 179.0                                                                                                 | 8.4                     | 0.107                                                     |
| 1N6299                | 1.5KE150                                                  | 121.00                                             | 5.0                                                                               | 136.00                                                                 | 165.00        | 1                                          | 215.0                                                                                                 | 7                       | 0.108                                                     |
| 1N6299A               | 1.5KE150A                                                 | 128.00                                             | 5.0                                                                               | 143.00                                                                 | 158.00        | 1                                          | 207.0                                                                                                 | 7.2                     | 0.108                                                     |
| 1N6300                | 1.5KE160                                                  | 130.00                                             | 5.0                                                                               | 144.00                                                                 | 176.00        | 1                                          | 230.0                                                                                                 | 6.5                     | 0.108                                                     |
| 1N6300A               | 1.5KE160A                                                 | 136.00                                             | 5.0                                                                               | 152.00                                                                 | 168.00        | 1                                          | 219.0                                                                                                 | 6.8                     | 0.108                                                     |
| 1N6301                | 1.5KE170                                                  | 138.00                                             | 5.0                                                                               | 153.00                                                                 | 167.00        | 1                                          | 244.0                                                                                                 | 6.2                     | 0.108                                                     |
| 1N6301A               | 1.5KE170A                                                 | 145.00                                             | 5.0                                                                               | 162.00                                                                 | 179.00        | 1                                          | 234.0                                                                                                 | 6.4                     | 0.108                                                     |
| 1N6302                | 1.5KE180                                                  | 146.00                                             | 5.0                                                                               | 162.00                                                                 | 198.00        | 1                                          | 256.0                                                                                                 | 5.8                     | 0.108                                                     |
| 1N6302A               | 1.5KE180A                                                 | 154.00                                             | 5.0                                                                               | 171.00                                                                 | 189.00        | 1                                          | 246.0                                                                                                 | 6.1                     | 0.108                                                     |
| 1N6303A               | 1.5KE200                                                  | 162.00                                             | 5.0                                                                               | 180.00                                                                 | 220.00        | 1                                          | 287.0                                                                                                 | 5.2                     | 0.108                                                     |
| 1N6303A               | 1.5KE200A                                                 | 171.00                                             | 5.0                                                                               | 190.00                                                                 | 210.00        | 1                                          | 274.0                                                                                                 | 5.5                     | 0.108                                                     |
| N/A                   | 1.5KE220                                                  | 175.00                                             | 5.0                                                                               | 196.00                                                                 | 242.00        | 1                                          | 344.0                                                                                                 | 4.3                     | 0.108                                                     |
| N/A                   | 1.5KE220A                                                 | 185.00                                             | 5.0                                                                               | 209.00                                                                 | 231.00        | 1                                          | 328.0                                                                                                 | 4.6                     | 0.108                                                     |
| N/A                   | 1.5KE250                                                  | 202.00                                             | 5.0                                                                               | 225.00                                                                 | 275.00        | 1                                          | 360.0                                                                                                 | 5                       | 0.110                                                     |
| N/A                   | 1.5KE250A                                                 | 214.00                                             | 5.0                                                                               | 237.00                                                                 | 263.00        | 1                                          | 344.0                                                                                                 | 5                       | 0.110                                                     |
| N/A                   | 1.5KE300                                                  | 243.00                                             | 5.0                                                                               | 270.00                                                                 | 330.00        | 1                                          | 430.0                                                                                                 | 5                       | 0.110                                                     |
| N/A                   | 1.5KE300A                                                 | 256.00                                             | 5.0                                                                               | 285.00                                                                 | 315.00        | 1                                          | 414.0                                                                                                 | 5                       | 0.110                                                     |
| N/A                   | 1.5KE350                                                  | 284.00                                             | 5.0                                                                               | 315.00                                                                 | 385.00        | 1                                          | 504.0                                                                                                 | 4                       | 0.110                                                     |
| N/A                   | 1.5KE350A                                                 | 300.00                                             | 5.0                                                                               | 333.00                                                                 | 368.00        | 1                                          | 482.0                                                                                                 | 4                       | 0.110                                                     |
| N/A                   | 1.5KE400                                                  | 324.00                                             | 5.0                                                                               | 360.00                                                                 | 440.00        | 1                                          | 574.0                                                                                                 | 4                       | 0.110                                                     |
| N/A                   | 1.5KE400A                                                 | 342.00                                             | 5.0                                                                               | 380.00                                                                 | 420.00        | 1                                          | 548.0                                                                                                 | 4                       | 0.110                                                     |
| N/A                   | 1.5KE440                                                  | 356.00                                             | 5.0                                                                               | 396.00                                                                 | 484.00        | 1                                          | 598.0                                                                                                 | 4                       | 0.110                                                     |
| N/A                   | 1.5KE440A                                                 | 376.00                                             | 5.0                                                                               | 418.00                                                                 | 462.00        | 1                                          | 590.0                                                                                                 | 4                       | 0.110                                                     |

## NOTES

**NOTE 1:** ♦ ELECTRICAL CHARACTERISTICS ARE AT A JUNCTION TEMPERATURE (T<sub>J</sub>) OF 25°C  
**NOTE 2:** ♦ FOR BIPOLAR DEVICES WITH A V<sub>BR</sub> OF 10 VOLTS OR LESS, THE I<sub>R</sub> LIMIT IS DOUBLED

**NOTE 3:** ♦ SURGE CURRENT WAVEFORM SHOWN IN FIGURE 2A ON PAGE  
 ♦ PEAK PULSE POWER DERATING SHOWN IN FIGURE 3A ON PAGE



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**1.5KE SERIES 1500 WATT  
TRANSIENT SUPPRESSOR  
SPECIFICATIONS CONTINUED**

FIGURE 1A - TYPICAL JUNCTION CAPACITANCE

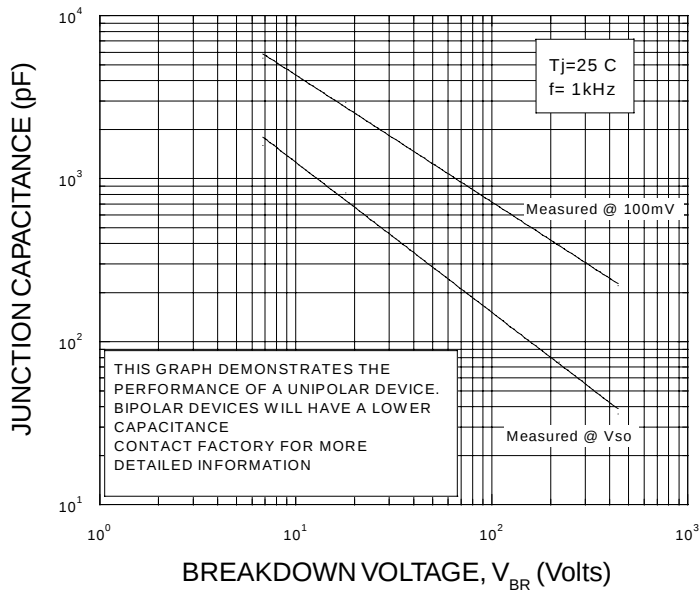


FIGURE 2A - PULSE WAVEFORM

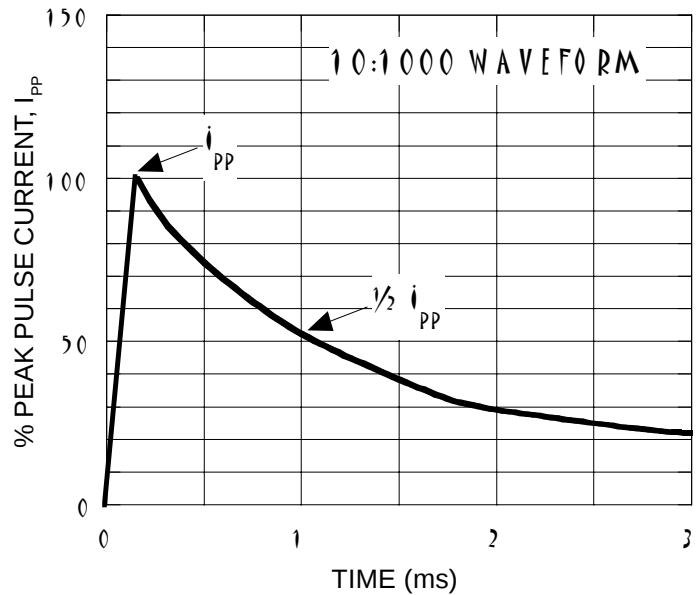
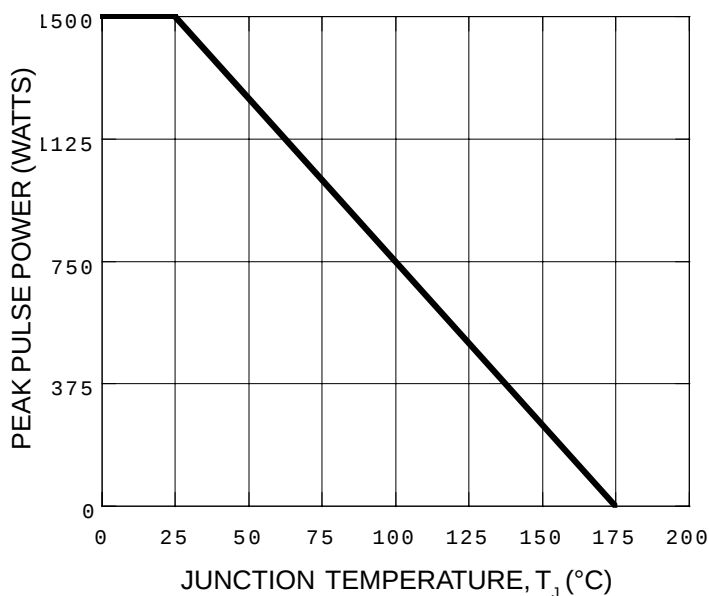
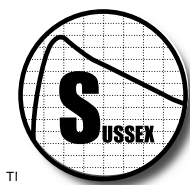


FIGURE 3A - PULSE DERATING CURVE



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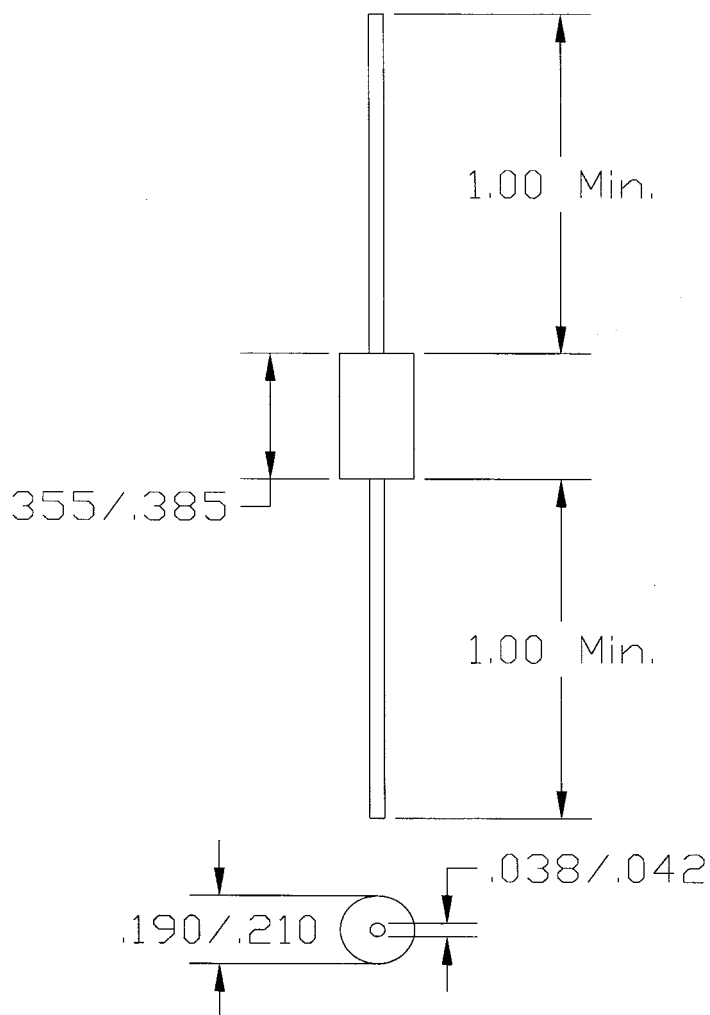
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**3KE SERIES 3000 WATT  
TRANSIENT SUPPRESSORS**

### 3KE SERIES TRANSIENT SUPPRESSORS

**VOLTAGES - 6.8 TO 440 VOLTS**

**3000 WATT MAXIMUM POWER DISSIPATION**



### 3KE SERIES DEVICE SPECIFICATIONS

- ◆ Built With Sussex Glass Passivated Dies
- ◆ Available as Uni- and Bi-Directional
- ◆ Each Device Individually Inspected
- ◆ Molded Epoxy Package
- ◆ Polarity Indicated By Solvent Resistant Marking
- ◆ Operating Temperature: -55 to 175°C
- ◆ Storage Temperature: -55 to 175°C
- ◆ Marked With Sussex Logo, Part Number, and Cathode Band on Unipolar Types
- ◆ Silver Plated Leads, Solderable Per MIL-STD-750
- ◆ Underwriter Laboratories Approved



All Dimensions In Inches

## CUSTOM ORDERING SPECIFIER

DIE SPECIFICATIONS

**3KE**

DEVICE PART  
NUMBER

REVERSE  
BREAKDOWN  
VOLTAGE  
(VBR)

- ◆ BLANK INDICATES UNIPOLAR  
DEVICE  $\pm 10\%$  ON  $V_{BR}$
- ◆ A INDICATES UNIPOLAR  
DEVICE  $\pm 5\%$  ON  $V_{BR}$
- ◆ C INDICATES BIPOLAR  
DEVICE  $\pm 10\%$  ON  $V_{BR}$
- ◆ CA INDICATES BIPOLAR  
DEVICE  $\pm 5\%$  ON  $V_{BR}$



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**3KE SERIES 3000 WATT  
TRANSIENT SUPPRESSOR  
SPECIFICATIONS CONTINUED**

**TABLE 6A - 1.5KE SERIES 1500 WATT TRANSIENT SUPPRESSOR ELECTRICAL SPECIFICATIONS (NOTE 1)**

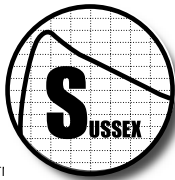
| JEDEC PART<br>NUMBERS | SUSSEX<br>PART<br>NUMBERS<br>1500 WATT<br>1.5KE<br>SERIES | STANDOFF<br>VOLTAGE<br>(V <sub>SO</sub> )<br>Volts | MAX.<br>REVERSE<br>LEAKAGE<br>(I <sub>R</sub> )@V <sub>SO</sub><br>(NOTE 2)<br>µA | REVERSE<br>BREAKDOWN<br>VOLTAGE (V <sub>BR</sub> )<br>@ I <sub>T</sub> |               | TEST<br>CURRENT<br>(I <sub>T</sub> )<br>mA | MAX. CLAMPING<br>VOLTAGE (V <sub>CL</sub> ) @<br>PEAK PULSE<br>CURRENT (I <sub>PP</sub> )<br>(NOTE 3) |                         | MAX. TEMP.<br>COEFFICIENT<br>OF V <sub>BR</sub><br>(%/°C) |
|-----------------------|-----------------------------------------------------------|----------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------|---------------|--------------------------------------------|-------------------------------------------------------------------------------------------------------|-------------------------|-----------------------------------------------------------|
|                       |                                                           |                                                    |                                                                                   | MIN.<br>Volts                                                          | MAX.<br>Volts |                                            | V <sub>CL</sub><br>Volts                                                                              | I <sub>PP</sub><br>Amps |                                                           |
| N/A                   | 3KE13                                                     | 10.50                                              | 5.0                                                                               | 11.70                                                                  | 14.30         | 1                                          | 19.0                                                                                                  | 158.0                   | 0.061                                                     |
| N/A                   | 3KE15                                                     | 12.10                                              | 5.0                                                                               | 13.50                                                                  | 16.50         | 1                                          | 22.0                                                                                                  | 136.0                   | 0.084                                                     |
| N/A                   | 3KE15A                                                    | 12.80                                              | 5.0                                                                               | 14.30                                                                  | 15.80         | 1                                          | 21.2                                                                                                  | 142.0                   | 0.084                                                     |
| N/A                   | 3KE16                                                     | 12.90                                              | 5.0                                                                               | 14.40                                                                  | 17.60         | 1                                          | 23.5                                                                                                  | 128.0                   | 0.086                                                     |
| N/A                   | 3KE16A                                                    | 13.60                                              | 5.0                                                                               | 15.20                                                                  | 16.80         | 1                                          | 22.5                                                                                                  | 134.0                   | 0.086                                                     |
| N/A                   | 3KE18                                                     | 14.50                                              | 5.0                                                                               | 16.20                                                                  | 19.80         | 1                                          | 26.5                                                                                                  | 113.0                   | 0.088                                                     |
| N/A                   | 3KE18A                                                    | 15.30                                              | 5.0                                                                               | 17.10                                                                  | 18.90         | 1                                          | 25.2                                                                                                  | 119.0                   | 0.088                                                     |
| N/A                   | 3KE20                                                     | 16.20                                              | 5.0                                                                               | 18.00                                                                  | 22.00         | 1                                          | 29.1                                                                                                  | 103.0                   | 0.090                                                     |
| N/A                   | 3KE20A                                                    | 17.10                                              | 5.0                                                                               | 19.00                                                                  | 21.00         | 1                                          | 27.7                                                                                                  | 108.0                   | 0.090                                                     |
| N/A                   | 3KE22                                                     | 17.80                                              | 5.0                                                                               | 19.80                                                                  | 24.20         | 1                                          | 31.9                                                                                                  | 94.0                    | 0.092                                                     |
| N/A                   | 3KE22A                                                    | 18.80                                              | 5.0                                                                               | 20.90                                                                  | 23.10         | 1                                          | 30.6                                                                                                  | 98.0                    | 0.092                                                     |
| N/A                   | 3KE24                                                     | 19.40                                              | 5.0                                                                               | 21.60                                                                  | 26.40         | 1                                          | 34.7                                                                                                  | 86.0                    | 0.091                                                     |
| N/A                   | 3KE24A                                                    | 20.50                                              | 5.0                                                                               | 22.80                                                                  | 25.20         | 1                                          | 33.2                                                                                                  | 90.0                    | 0.094                                                     |
| N/A                   | 3KE27                                                     | 21.80                                              | 5.0                                                                               | 24.30                                                                  | 29.70         | 1                                          | 39.1                                                                                                  | 77.0                    | 0.096                                                     |
| N/A                   | 3KE27A                                                    | 23.10                                              | 5.0                                                                               | 25.70                                                                  | 28.40         | 1                                          | 37.5                                                                                                  | 80.0                    | 0.096                                                     |
| N/A                   | 3KE30                                                     | 24.30                                              | 5.0                                                                               | 27.00                                                                  | 33.00         | 1                                          | 43.5                                                                                                  | 69.0                    | 0.097                                                     |
| N/A                   | 3KE30A                                                    | 25.60                                              | 5.0                                                                               | 28.50                                                                  | 31.50         | 1                                          | 41.4                                                                                                  | 72.0                    | 0.097                                                     |
| N/A                   | 3KE33                                                     | 26.80                                              | 5.0                                                                               | 29.70                                                                  | 36.30         | 1                                          | 47.7                                                                                                  | 63.0                    | 0.098                                                     |
| N/A                   | 3KE33A                                                    | 28.20                                              | 5.0                                                                               | 31.40                                                                  | 34.70         | 1                                          | 45.7                                                                                                  | 66.0                    | 0.098                                                     |
| N/A                   | 3KE36                                                     | 29.10                                              | 5.0                                                                               | 32.40                                                                  | 39.60         | 1                                          | 52.0                                                                                                  | 58.0                    | 0.099                                                     |
| N/A                   | 3KE36A                                                    | 30.80                                              | 5.0                                                                               | 34.20                                                                  | 37.80         | 1                                          | 49.9                                                                                                  | 60.0                    | 0.099                                                     |
| N/A                   | 3KE39                                                     | 31.60                                              | 5.0                                                                               | 35.10                                                                  | 42.90         | 1                                          | 56.4                                                                                                  | 53.0                    | 0.100                                                     |
| N/A                   | 3KE39A                                                    | 33.30                                              | 5.0                                                                               | 37.10                                                                  | 41.00         | 1                                          | 53.9                                                                                                  | 56.0                    | 0.100                                                     |
| N/A                   | 3KE43                                                     | 34.80                                              | 5.0                                                                               | 38.70                                                                  | 47.30         | 1                                          | 61.9                                                                                                  | 48.0                    | 0.101                                                     |
| N/A                   | 3KE43A                                                    | 36.80                                              | 5.0                                                                               | 40.90                                                                  | 45.20         | 1                                          | 59.3                                                                                                  | 50.0                    | 0.101                                                     |
| N/A                   | 3KE47                                                     | 36.10                                              | 5.0                                                                               | 42.30                                                                  | 51.70         | 1                                          | 67.8                                                                                                  | 44.4                    | 0.101                                                     |
| N/A                   | 3KE47A                                                    | 40.20                                              | 5.0                                                                               | 44.70                                                                  | 49.40         | 1                                          | 64.8                                                                                                  | 46.4                    | 0.101                                                     |
| N/A                   | 3KE51                                                     | 41.30                                              | 5.0                                                                               | 45.90                                                                  | 56.10         | 1                                          | 73.5                                                                                                  | 40.8                    | 0.102                                                     |

THIS TABLE CONTINUES

## NOTES

**NOTE 1:** ♦ ELECTRICAL CHARACTERISTICS ARE AT A JUNCTION TEMPERATURE (T<sub>J</sub>) OF 25°C  
**NOTE 2:** ♦ FOR BIPOLAR DEVICES WITH A V<sub>BR</sub> OF 10 VOLTS OR LESS, THE I<sub>R</sub> LIMIT IS DOUBLED

**NOTE 3:** ♦ SURGE CURRENT WAVEFORM SHOWN IN FIGURE 2A ON PAGE  
 ♦ PEAK PULSE POWER DERATING SHOWN IN FIGURE 3A ON PAGE



# SUSSEX

SEMICONDUCTOR, INC.

## 3KE SERIES 3000 WATT TRANSIENT SUPPRESSOR SPECIFICATIONS CONTINUED

12251 TOWNE LAKE DRIVE, FORT MYERS, FLORIDA, 33913 • TEL: (239) 768-6800 • FAX: (239) 768-6868

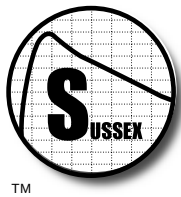
TABLE 6A - 1.5KE SERIES 1500 WATT TRANSIENT SUPPRESSOR ELECTRICAL SPECIFICATIONS (NOTE 1)

| JEDEC PART NUMBERS | SUSSEX PART NUMBERS 1500 WATT 1.5KE SERIES | STANDOFF VOLTAGE ( $V_{SO}$ ) Volts | MAX. REVERSE LEAKAGE ( $I_R$ ) @ $V_{SO}$ (NOTE 2) $\mu A$ | REVERSE BREAKDOWN VOLTAGE ( $V_{BR}$ ) @ $I_R$ |            | TEST CURRENT ( $I_T$ ) mA | MAX. CLAMPING VOLTAGE ( $V_{CL}$ ) @ PEAK PULSE CURRENT ( $I_{PP}$ ) (NOTE 3) |               | MAX. TEMP. COEFFICIENT OF $V_{BR}$ (%/°C) |
|--------------------|--------------------------------------------|-------------------------------------|------------------------------------------------------------|------------------------------------------------|------------|---------------------------|-------------------------------------------------------------------------------|---------------|-------------------------------------------|
|                    |                                            |                                     |                                                            | MIN. Volts                                     | MAX. Volts |                           | $V_{CL}$ Volts                                                                | $I_{PP}$ Amps |                                           |
| N/A                | 3KE51A                                     | 43.60                               | 5.0                                                        | 48.50                                          | 53.60      | 1                         | 70.1                                                                          | 42.8          | 0.102                                     |
| N/A                | 3KE56                                      | 45.60                               | 5.0                                                        | 50.40                                          | 61.80      | 1                         | 80.5                                                                          | 37.2          | 0.103                                     |
| N/A                | 3KE56A                                     | 47.80                               | 5.0                                                        | 53.20                                          | 58.80      | 1                         | 77.0                                                                          | 39.0          | 0.103                                     |
| N/A                | 3KE62                                      | 50.20                               | 5.0                                                        | 55.80                                          | 68.20      | 1                         | 89.0                                                                          | 33.8          | 0.104                                     |
| N/A                | 3KE62A                                     | 53.00                               | 5.0                                                        | 58.90                                          | 65.10      | 1                         | 85.0                                                                          | 35.4          | 0.104                                     |
| N/A                | 3KE68                                      | 55.10                               | 5.0                                                        | 61.20                                          | 74.80      | 1                         | 96.0                                                                          | 30.6          | 0.104                                     |
| N/A                | 3KE68A                                     | 58.10                               | 5.0                                                        | 64.60                                          | 71.40      | 1                         | 92.0                                                                          | 32.6          | 0.104                                     |
| N/A                | 3KE75                                      | 60.70                               | 5.0                                                        | 67.50                                          | 82.50      | 1                         | 108.0                                                                         | 27.8          | 0.105                                     |
| N/A                | 3KE75A                                     | 64.10                               | 5.0                                                        | 71.30                                          | 78.80      | 1                         | 103.0                                                                         | 29.2          | 0.105                                     |
| N/A                | 3KE82                                      | 66.40                               | 5.0                                                        | 73.80                                          | 90.20      | 1                         | 118.0                                                                         | 25.4          | 0.105                                     |
| N/A                | 3KE82A                                     | 70.10                               | 5.0                                                        | 77.90                                          | 86.10      | 1                         | 113.0                                                                         | 26.6          | 0.105                                     |
| N/A                | 3KE91                                      | 73.70                               | 5.0                                                        | 81.90                                          | 100.00     | 1                         | 131.0                                                                         | 22.8          | 0.106                                     |
| N/A                | 3KE91A                                     | 77.80                               | 5.0                                                        | 86.50                                          | 95.50      | 1                         | 125.0                                                                         | 24.0          | 0.106                                     |
| N/A                | 3KE100                                     | 81.00                               | 5.0                                                        | 90.00                                          | 110.00     | 1                         | 144.0                                                                         | 20.8          | 0.106                                     |
| N/A                | 3KE100A                                    | 85.50                               | 5.0                                                        | 95.00                                          | 105.00     | 1                         | 137.0                                                                         | 22.0          | 0.106                                     |
| N/A                | 3KE110                                     | 89.20                               | 5.0                                                        | 99.00                                          | 121.00     | 1                         | 158.0                                                                         | 19.0          | 0.107                                     |
| N/A                | 3KE110A                                    | 94.00                               | 5.0                                                        | 106.00                                         | 116.00     | 1                         | 152.0                                                                         | 19.8          | 0.107                                     |
| N/A                | 3KE120                                     | 97.20                               | 5.0                                                        | 108.00                                         | 132.00     | 1                         | 173.0                                                                         | 17.4          | 0.107                                     |
| N/A                | 3KE120A                                    | 102.00                              | 5.0                                                        | 114.00                                         | 126.00     | 1                         | 165.0                                                                         | 18.2          | 0.107                                     |
| N/A                | 3KE130                                     | 106.00                              | 5.0                                                        | 117.00                                         | 143.00     | 1                         | 187.0                                                                         | 16.0          | 0.107                                     |
| N/A                | 3KE130A                                    | 111.00                              | 5.0                                                        | 124.00                                         | 137.00     | 1                         | 179.0                                                                         | 16.8          | 0.107                                     |
| N/A                | 3KE150                                     | 121.00                              | 5.0                                                        | 136.00                                         | 165.00     | 1                         | 215.0                                                                         | 14.0          | 0.108                                     |
| N/A                | 3KE150A                                    | 128.00                              | 5.0                                                        | 143.00                                         | 158.00     | 1                         | 207.0                                                                         | 14.4          | 0.108                                     |
| N/A                | 3KE160                                     | 130.00                              | 5.0                                                        | 144.00                                         | 176.00     | 1                         | 230.0                                                                         | 13.0          | 0.108                                     |
| N/A                | 3KE160A                                    | 136.00                              | 5.0                                                        | 152.00                                         | 168.00     | 1                         | 219.0                                                                         | 13.6          | 0.108                                     |
| N/A                | 3KE170                                     | 138.00                              | 5.0                                                        | 153.00                                         | 187.00     | 1                         | 244.0                                                                         | 12.4          | 0.108                                     |
| N/A                | 3KE170A                                    | 145.00                              | 5.0                                                        | 162.00                                         | 179.00     | 1                         | 234.0                                                                         | 12.8          | 0.108                                     |
| N/A                | 3KE180                                     | 146.00                              | 5.0                                                        | 162.00                                         | 198.00     | 1                         | 256.0                                                                         | 11.6          | 0.108                                     |
| N/A                | 3KE180A                                    | 154.00                              | 5.0                                                        | 171.00                                         | 189.00     | 1                         | 246.0                                                                         | 12.2          | 0.108                                     |
| N/A                | 3KE200                                     | 162.00                              | 5.0                                                        | 180.00                                         | 220.00     | 1                         | 287.0                                                                         | 10.4          | 0.108                                     |
| N/A                | 3KE200A                                    | 171.00                              | 5.0                                                        | 190.00                                         | 210.00     | 1                         | 274.0                                                                         | 11.0          | 0.108                                     |
| N/A                | 3KE220                                     | 175.00                              | 5.0                                                        | 196.00                                         | 242.00     | 1                         | 344.0                                                                         | 8.6           | 0.108                                     |
| N/A                | 3KE220A                                    | 185.00                              | 5.0                                                        | 209.00                                         | 231.00     | 1                         | 328.0                                                                         | 9.2           | 0.108                                     |
| N/A                | 3KE250                                     | 202.00                              | 5.0                                                        | 225.00                                         | 275.00     | 1                         | 360.0                                                                         | 10.0          | 0.110                                     |
| N/A                | 3KE250A                                    | 214.00                              | 5.0                                                        | 237.00                                         | 263.00     | 1                         | 344.0                                                                         | 10.0          | 0.110                                     |
| N/A                | 3KE300                                     | 243.00                              | 5.0                                                        | 270.00                                         | 330.00     | 1                         | 430.0                                                                         | 10.0          | 0.110                                     |
| N/A                | 3KE300A                                    | 256.00                              | 5.0                                                        | 285.00                                         | 315.00     | 1                         | 414.0                                                                         | 10.0          | 0.110                                     |
| N/A                | 3KE350                                     | 284.00                              | 5.0                                                        | 315.00                                         | 385.00     | 1                         | 504.0                                                                         | 8.0           | 0.110                                     |
| N/A                | 3KE350A                                    | 300.00                              | 5.0                                                        | 333.00                                         | 368.00     | 1                         | 482.0                                                                         | 8.0           | 0.110                                     |
| N/A                | 3KE400                                     | 324.00                              | 5.0                                                        | 360.00                                         | 440.00     | 1                         | 574.0                                                                         | 8.0           | 0.110                                     |
| N/A                | 3KE400A                                    | 342.00                              | 5.0                                                        | 380.00                                         | 420.00     | 1                         | 548.0                                                                         | 8.0           | 0.110                                     |
| N/A                | 3KE440                                     | 356.00                              | 5.0                                                        | 396.00                                         | 484.00     | 1                         | 598.0                                                                         | 8.0           | 0.110                                     |
| N/A                | 3KE440A                                    | 376.00                              | 5.0                                                        | 418.00                                         | 462.00     | 1                         | 590.0                                                                         | 8.0           | 0.110                                     |

### NOTES

**NOTE 1:** ♦ ELECTRICAL CHARACTERISTICS ARE AT A JUNCTION TEMPERATURE ( $T_J$ ) OF 25°C  
**NOTE 2:** ♦ FOR BIPOLAR DEVICES WITH A  $V_{BR}$  OF 10 VOLTS OR LESS, THE  $I_R$  LIMIT IS DOUBLED

**NOTE 3:** ♦ SURGE CURRENT WAVEFORM SHOWN IN FIGURE 2A ON PAGE  
 ♦ PEAK PULSE POWER DERATING SHOWN IN FIGURE 3A ON PAGE



# SUSSEX

SEMICONDUCTOR, INC.

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**3KE SERIES 3000 WATT  
TRANSIENT SUPPRESSOR  
SPECIFICATIONS CONTINUED**

FIGURE 1A - TYPICAL JUNCTION  
CAPACITANCE

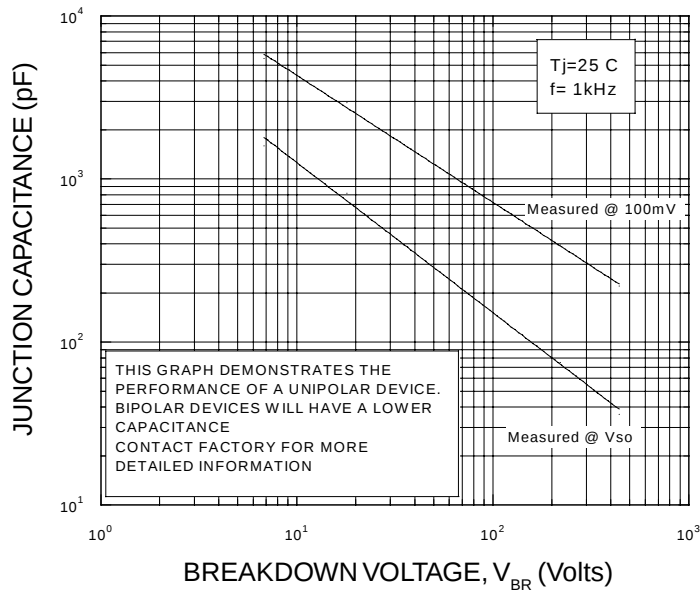
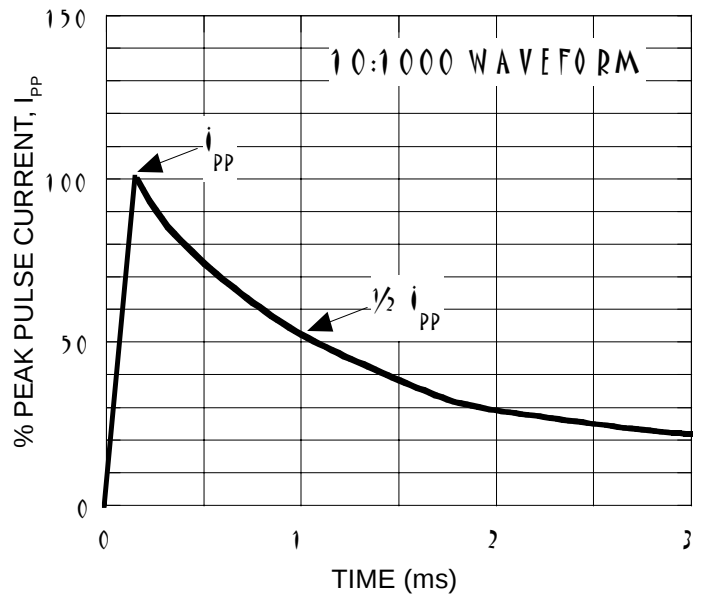
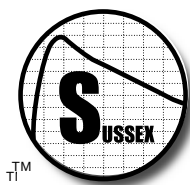


FIGURE 2A - PULSE WAVEFORM





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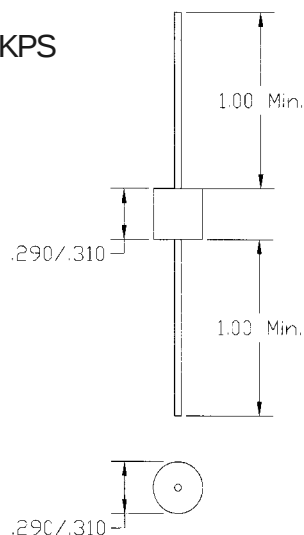
**5KP SERIES 5000 WATT  
TRANSIENT SUPPRESSORS**

### 5KP SERIES TRANSIENT SUPPRESSORS

**VOLTAGES - 5.0 TO 440 VOLTS**

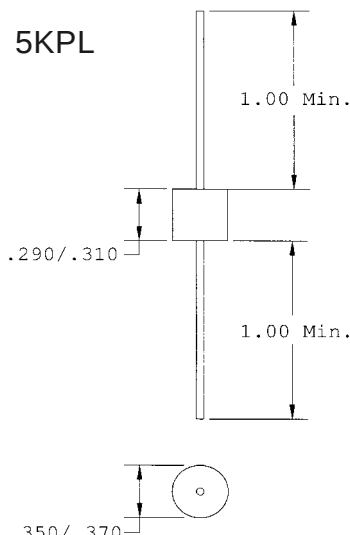
**5000 WATT MAXIMUM POWER DISSIPATION**

5KPS



All Dimensions In Inches

5KPL



All Dimensions In Inches

Two package sizes are available for your convenience. The "L" version is the industry standard size package for the 5KP. The "S" version is to save space in your application. Both sizes are UL approved.

### 5KP SERIES DEVICE SPECIFICATIONS

- ◆ Built With Sussex Glass Passivated Dies
- ◆ Available as Uni- and Bi-Directional
- ◆ Each Device Individually Inspected
- ◆ Molded Epoxy Package
- ◆ Operating Temperature: -55 to 175°C
- ◆ Storage Temperature: -55 to 175°C
- ◆ Marked With Sussex Logo, Part Number, and Cathode Band on Unipolar Types
- ◆ Plated Leads, Solderable Per MIL-STD-750 Method 2026
- ◆ Underwriter Laboratories Approved



## CUSTOM ORDERING SPECIFIER

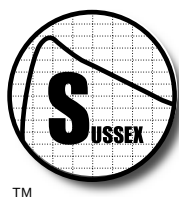
DIE SPECIFICATIONS

**5KP**

DEVICE PART  
NUMBER

STAND-OFF  
VOLTAGE  
( $V_{SO}$ )

- ◆ BLANK INDICATES UNIPOLAR  
DEVICE  $\pm 10\%$  ON  $V_{BR}$
- ◆ A INDICATES UNIPOLAR  
DEVICE  $\pm 5\%$  ON  $V_{BR}$
- ◆ C INDICATES BIPOLAR  
DEVICE  $\pm 10\%$  ON  $V_{BR}$
- ◆ CA INDICATES BIPOLAR  
DEVICE  $\pm 5\%$  ON  $V_{BR}$



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## 5KP SERIES 5000 WATT TRANSIENT SUPPRESSOR SPECIFICATIONS CONTINUED

TABLE 7A - 5KP SERIES 5000 WATT TRANSIENT SUPPRESSOR ELECTRICAL SPECIFICATIONS (NOTE 1)

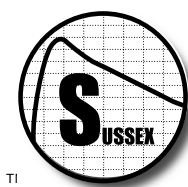
| SUSSEX<br>PART<br>NUMBERS<br>5000 WATT<br>5KP SERIES | STANDOFF                                       | MAX.<br>REVERSE<br>LEAKAGE<br>(I <sub>R</sub> )@V <sub>SO</sub><br>(NOTE 2)<br>µA | REVERSE<br>BREAKDOWN<br>VOLTAGE (V <sub>BR</sub> ) @ I <sub>T</sub> |      | TEST                                       | MAX. CLAMPING<br>VOLTAGE (V <sub>CL</sub> ) @<br>PEAK PULSE<br>CURRENT (I <sub>PP</sub> ) (NOTE 3) |     | MAX. TEMP.                                          |
|------------------------------------------------------|------------------------------------------------|-----------------------------------------------------------------------------------|---------------------------------------------------------------------|------|--------------------------------------------|----------------------------------------------------------------------------------------------------|-----|-----------------------------------------------------|
|                                                      | VOLTAGE<br><br>(V <sub>SO</sub> )<br><br>Volts |                                                                                   |                                                                     |      | CURRENT<br><br>(I <sub>T</sub> )<br><br>mA |                                                                                                    |     | COEFFICIENT<br><br>OF V <sub>BR</sub><br><br>(%/°C) |
|                                                      |                                                |                                                                                   |                                                                     |      |                                            |                                                                                                    |     |                                                     |
|                                                      |                                                |                                                                                   |                                                                     |      |                                            |                                                                                                    |     |                                                     |
| 5KP5.0                                               | 5.0                                            | 2000                                                                              | 6.4                                                                 | 7.3  | 50                                         | 9.6                                                                                                | 546 | 0.057                                               |
| 5KP5.0A                                              | 5.0                                            | 2000                                                                              | 6.4                                                                 | 7.0  | 50                                         | 9.2                                                                                                | 570 | 0.057                                               |
| 5KP6.0                                               | 6.0                                            | 5000                                                                              | 6.7                                                                 | 8.2  | 50                                         | 11.4                                                                                               | 460 | 0.061                                               |
| 5KP6.0A                                              | 6.0                                            | 5000                                                                              | 6.7                                                                 | 7.4  | 50                                         | 10.3                                                                                               | 509 | 0.061                                               |
| 5KP6.5                                               | 6.5                                            | 2000                                                                              | 7.2                                                                 | 8.8  | 50                                         | 12.3                                                                                               | 426 | 0.065                                               |
| 5KP6.5A                                              | 6.5                                            | 2000                                                                              | 7.2                                                                 | 8.0  | 50                                         | 11.2                                                                                               | 468 | 0.065                                               |
| 5KP7.0                                               | 7.0                                            | 1000                                                                              | 7.8                                                                 | 9.5  | 50                                         | 13.3                                                                                               | 394 | 0.068                                               |
| 5KP7.0A                                              | 7.0                                            | 1000                                                                              | 7.8                                                                 | 8.6  | 50                                         | 12.0                                                                                               | 437 | 0.068                                               |
| 5KP7.5                                               | 7.5                                            | 250                                                                               | 8.3                                                                 | 10.2 | 5.0                                        | 14.3                                                                                               | 367 | 0.073                                               |
| 5KP7.5A                                              | 7.5                                            | 250                                                                               | 8.3                                                                 | 9.2  | 5.0                                        | 12.9                                                                                               | 406 | 0.073                                               |
| 5KP8.0                                               | 8.0                                            | 150                                                                               | 8.9                                                                 | 10.9 | 5.0                                        | 15.0                                                                                               | 350 | 0.075                                               |
| 5KP8.0A                                              | 8.0                                            | 150                                                                               | 8.9                                                                 | 9.8  | 5.0                                        | 13.6                                                                                               | 386 | 0.075                                               |
| 5KP8.5                                               | 8.5                                            | 50                                                                                | 9.4                                                                 | 11.5 | 5.0                                        | 15.9                                                                                               | 330 | 0.078                                               |
| 5KP8.5A                                              | 8.5                                            | 50                                                                                | 9.4                                                                 | 10.4 | 5.0                                        | 14.4                                                                                               | 364 | 0.078                                               |
| 5KP9.0                                               | 9.0                                            | 20                                                                                | 10.0                                                                | 12.2 | 5.0                                        | 16.9                                                                                               | 310 | 0.081                                               |
| 5KP9.0A                                              | 9.0                                            | 20                                                                                | 10.0                                                                | 11.1 | 5.0                                        | 15.4                                                                                               | 340 | 0.081                                               |
| 5KP10                                                | 10                                             | 15                                                                                | 11.1                                                                | 13.6 | 5.0                                        | 18.8                                                                                               | 279 | 0.084                                               |
| 5KP10A                                               | 10                                             | 15                                                                                | 11.1                                                                | 12.3 | 5.0                                        | 17.0                                                                                               | 308 | 0.084                                               |
| 5KP11                                                | 11                                             | 10                                                                                | 12.2                                                                | 14.9 | 5.0                                        | 20.1                                                                                               | 261 | 0.086                                               |
| 5KP11A                                               | 11                                             | 10                                                                                | 12.2                                                                | 13.5 | 5.0                                        | 18.2                                                                                               | 288 | 0.086                                               |
| 5KP12                                                | 12                                             | 10                                                                                | 13.3                                                                | 16.3 | 5.0                                        | 22.0                                                                                               | 238 | 0.088                                               |
| 5KP12A                                               | 12                                             | 10                                                                                | 13.3                                                                | 14.7 | 5.0                                        | 19.9                                                                                               | 263 | 0.088                                               |
| 5KP13                                                | 13                                             | 10                                                                                | 14.4                                                                | 17.6 | 5.0                                        | 23.8                                                                                               | 220 | 0.090                                               |
| 5KP13A                                               | 13                                             | 10                                                                                | 14.4                                                                | 15.9 | 5.0                                        | 21.5                                                                                               | 244 | 0.090                                               |
| 5KP14                                                | 14                                             | 10                                                                                | 15.6                                                                | 19.1 | 5.0                                        | 25.8                                                                                               | 203 | 0.092                                               |
| 5KP14A                                               | 14                                             | 10                                                                                | 15.6                                                                | 17.2 | 5.0                                        | 23.2                                                                                               | 226 | 0.092                                               |
| 5KP15                                                | 15                                             | 10                                                                                | 16.7                                                                | 20.4 | 5.0                                        | 26.9                                                                                               | 195 | 0.094                                               |
| 5KP15A                                               | 15                                             | 10                                                                                | 16.7                                                                | 18.5 | 5.0                                        | 24.4                                                                                               | 215 | 0.094                                               |
| 5KP16                                                | 16                                             | 10                                                                                | 17.8                                                                | 21.8 | 5.0                                        | 28.8                                                                                               | 182 | 0.096                                               |
| 5KP16A                                               | 16                                             | 10                                                                                | 17.8                                                                | 19.7 | 5.0                                        | 26.0                                                                                               | 201 | 0.096                                               |
| 5KP17                                                | 17                                             | 10                                                                                | 18.9                                                                | 23.1 | 5.0                                        | 30.5                                                                                               | 172 | 0.097                                               |
| 5KP17A                                               | 17                                             | 10                                                                                | 18.9                                                                | 20.9 | 5.0                                        | 27.6                                                                                               | 190 | 0.097                                               |
| 5KP18                                                | 18                                             | 10                                                                                | 20.0                                                                | 24.4 | 5.0                                        | 32.2                                                                                               | 163 | 0.098                                               |
| 5KP18A                                               | 18                                             | 10                                                                                | 20.0                                                                | 22.1 | 5.0                                        | 29.2                                                                                               | 179 | 0.098                                               |
| 5KP20                                                | 20                                             | 10                                                                                | 22.2                                                                | 27.1 | 5.0                                        | 35.8                                                                                               | 146 | 0.099                                               |
| 5KP20A                                               | 20                                             | 10                                                                                | 22.2                                                                | 24.5 | 5.0                                        | 32.4                                                                                               | 162 | 0.099                                               |
| 5KP22                                                | 22                                             | 10                                                                                | 24.4                                                                | 29.8 | 5.0                                        | 39.4                                                                                               | 133 | 0.100                                               |
| 5KP22A                                               | 22                                             | 10                                                                                | 24.4                                                                | 26.9 | 5.0                                        | 35.5                                                                                               | 147 | 0.100                                               |
| 5KP24                                                | 24                                             | 10                                                                                | 26.7                                                                | 32.6 | 5.0                                        | 43.0                                                                                               | 122 | 0.101                                               |
| 5KP24A                                               | 24                                             | 10                                                                                | 26.7                                                                | 29.5 | 5.0                                        | 38.9                                                                                               | 134 | 0.101                                               |
| 5KP26                                                | 26                                             | 10                                                                                | 28.9                                                                | 35.3 | 5.0                                        | 46.6                                                                                               | 112 | 0.101                                               |
| 5KP26A                                               | 26                                             | 10                                                                                | 28.9                                                                | 31.9 | 5.0                                        | 42.1                                                                                               | 124 | 0.101                                               |
| 5KP28                                                | 28                                             | 10                                                                                | 31.1                                                                | 38.0 | 5.0                                        | 50.1                                                                                               | 104 | 0.102                                               |
| 5KP28A                                               | 28                                             | 10                                                                                | 31.1                                                                | 34.4 | 5.0                                        | 45.4                                                                                               | 115 | 0.102                                               |
| 5KP30                                                | 30                                             | 10                                                                                | 33.3                                                                | 40.7 | 5.0                                        | 53.5                                                                                               | 98  | 0.103                                               |
| 5KP30A                                               | 30                                             | 10                                                                                | 33.3                                                                | 36.8 | 5.0                                        | 48.4                                                                                               | 108 | 0.103                                               |
| 5KP33                                                | 33                                             | 10                                                                                | 36.7                                                                | 44.9 | 5.0                                        | 59.0                                                                                               | 88  | 0.104                                               |
| 5KP33A                                               | 33                                             | 10                                                                                | 36.7                                                                | 40.6 | 5.0                                        | 53.3                                                                                               | 98  | 0.104                                               |
| 5KP36                                                | 36                                             | 10                                                                                | 40.0                                                                | 48.9 | 5.0                                        | 64.3                                                                                               | 81  | 0.104                                               |
| 5KP36A                                               | 36                                             | 10                                                                                | 40.0                                                                | 44.2 | 5.0                                        | 58.1                                                                                               | 90  | 0.104                                               |
| 5KP40                                                | 40                                             | 10                                                                                | 44.4                                                                | 54.3 | 5.0                                        | 71.4                                                                                               | 73  | 0.105                                               |

THIS TABLE CONTINUES

### NOTES

**NOTE 1:** ♦ ELECTRICAL CHARACTERISTICS ARE AT A JUNCTION TEMPERATURE (T<sub>J</sub>) OF 25°C  
**NOTE 2:** ♦ FOR BIPOLAR DEVICES WITH A V<sub>BR</sub> OF 10 VOLTS OR LESS, THE I<sub>R</sub> LIMIT IS DOUBLED

**NOTE 3:** ♦ SURGE CURRENT WAVEFORM SHOWN IN FIGURE 2A ON PAGE  
♦ PEAK PULSE POWER DERATING SHOWN IN FIGURE 3A ON PAGE



**SUSSEX**  
SEMICONDUCTOR, INC.

**5KP SERIES 5000 WATT  
TRANSIENT SUPPRESSOR  
SPECIFICATIONS CONTINUED**

12251 TOWNE LAKE DRIVE, FORT MYERS, FLORIDA, 33913 • TEL: (239) 768-6800 • FAX: (239) 768-6868

**TABLE 7A - 5KP SERIES 5000 WATT TRANSIENT SUPPRESSOR ELECTRICAL SPECIFICATIONS (NOTE 1)**

| SUSSEX<br>PART<br>NUMBERS<br>5000 WATT<br>5KP SERIES | STANDOFF                                       | MAX.<br>REVERSE<br>LEAKAGE<br>(I <sub>R</sub> )@V <sub>SO</sub><br>(NOTE 2)<br>µA | REVERSE<br>BREAKDOWN<br>VOLTAGE (V <sub>BR</sub> ) @ I <sub>T</sub> |        | TEST                                       | MAX. CLAMPING<br>VOLTAGE (V <sub>CL</sub> ) @<br>PEAK PULSE<br>CURRENT (I <sub>PP</sub> ) (NOTE 3) |                 | MAX. TEMP.                                          |
|------------------------------------------------------|------------------------------------------------|-----------------------------------------------------------------------------------|---------------------------------------------------------------------|--------|--------------------------------------------|----------------------------------------------------------------------------------------------------|-----------------|-----------------------------------------------------|
|                                                      | VOLTAGE<br><br>(V <sub>SO</sub> )<br><br>Volts |                                                                                   |                                                                     |        | CURRENT<br><br>(I <sub>T</sub> )<br><br>mA |                                                                                                    |                 | COEFFICIENT<br><br>OF V <sub>BR</sub><br><br>(%/°C) |
|                                                      |                                                |                                                                                   | MIN.                                                                | MAX.   |                                            | V <sub>CL</sub>                                                                                    | I <sub>PP</sub> |                                                     |
|                                                      |                                                | Volts                                                                             | Volts                                                               | Volts  |                                            | Amps                                                                                               |                 |                                                     |
| 5KP40A                                               | 40                                             | 10                                                                                | 44.4                                                                | 49.1   | 5.0                                        | 64.5                                                                                               | 81              | 0.105                                               |
| 5KP43                                                | 43                                             | 10                                                                                | 47.8                                                                | 58.4   | 5.0                                        | 76.7                                                                                               | 68              | 0.105                                               |
| 5KP43A                                               | 43                                             | 10                                                                                | 47.8                                                                | 52.8   | 5.0                                        | 69.4                                                                                               | 75              | 0.105                                               |
| 5KP45                                                | 45                                             | 10                                                                                | 50.0                                                                | 61.1   | 5.0                                        | 80.3                                                                                               | 65              | 0.106                                               |
| 5KP45A                                               | 45                                             | 10                                                                                | 50.0                                                                | 55.3   | 5.0                                        | 72.7                                                                                               | 72              | 0.106                                               |
| 5KP48                                                | 48                                             | 10                                                                                | 53.3                                                                | 65.2   | 5.0                                        | 85.5                                                                                               | 61              | 0.106                                               |
| 5KP48A                                               | 48                                             | 10                                                                                | 53.3                                                                | 58.9   | 5.0                                        | 77.4                                                                                               | 67              | 0.106                                               |
| 5KP51                                                | 51                                             | 10                                                                                | 56.1                                                                | 69.3   | 5.0                                        | 91.1                                                                                               | 57              | 0.107                                               |
| 5KP51A                                               | 51                                             | 10                                                                                | 56.7                                                                | 62.7   | 5.0                                        | 82.4                                                                                               | 63              | 0.107                                               |
| 5KP54                                                | 54                                             | 10                                                                                | 60.0                                                                | 73.3   | 5.0                                        | 96.3                                                                                               | 54              | 0.107                                               |
| 5KP54A                                               | 54                                             | 10                                                                                | 60.0                                                                | 66.3   | 5.0                                        | 87.1                                                                                               | 60              | 0.107                                               |
| 5KP58                                                | 58                                             | 10                                                                                | 64.4                                                                | 78.7   | 5.0                                        | 103.0                                                                                              | 50              | 0.107                                               |
| 5KP58A                                               | 58                                             | 10                                                                                | 64.4                                                                | 71.2   | 5.0                                        | 94.0                                                                                               | 55              | 0.107                                               |
| 5KP60                                                | 60                                             | 10                                                                                | 66.7                                                                | 81.5   | 5.0                                        | 107.0                                                                                              | 49              | 0.108                                               |
| 5KP60A                                               | 60                                             | 10                                                                                | 66.7                                                                | 73.7   | 5.0                                        | 97.0                                                                                               | 54              | 0.108                                               |
| 5KP64                                                | 64                                             | 10                                                                                | 71.1                                                                | 96.9   | 5.0                                        | 114.0                                                                                              | 46              | 0.108                                               |
| 5KP64A                                               | 64                                             | 10                                                                                | 71.1                                                                | 78.6   | 5.0                                        | 103.0                                                                                              | 50              | 0.108                                               |
| 5KP70                                                | 70                                             | 10                                                                                | 77.6                                                                | 95.1   | 5.0                                        | 125.0                                                                                              | 42              | 0.108                                               |
| 5KP70A                                               | 70                                             | 10                                                                                | 77.8                                                                | 86.0   | 5.0                                        | 113.0                                                                                              | 46              | 0.108                                               |
| 5KP75                                                | 75                                             | 10                                                                                | 83.3                                                                | 102.0  | 5.0                                        | 134.0                                                                                              | 39              | 0.108                                               |
| 5KP75A                                               | 75                                             | 10                                                                                | 83.3                                                                | 92.1   | 5.0                                        | 121.0                                                                                              | 43              | 0.108                                               |
| 5KP78                                                | 78                                             | 10                                                                                | 86.7                                                                | 106.0  | 5.0                                        | 139.0                                                                                              | 37              | 0.108                                               |
| 5KP78A                                               | 78                                             | 10                                                                                | 86.7                                                                | 95.8   | 5.0                                        | 126.0                                                                                              | 41              | 0.108                                               |
| 5KP85                                                | 85                                             | 10                                                                                | 94.4                                                                | 115.0  | 5.0                                        | 151.0                                                                                              | 34              | 0.108                                               |
| 5KP85A                                               | 85                                             | 10                                                                                | 94.4                                                                | 104.0  | 5.0                                        | 137.0                                                                                              | 38              | 0.110                                               |
| 5KP90                                                | 90                                             | 10                                                                                | 100                                                                 | 122.0  | 5.0                                        | 160.0                                                                                              | 32              | 0.110                                               |
| 5KP90A                                               | 90                                             | 10                                                                                | 100                                                                 | 111.0  | 5.0                                        | 146.0                                                                                              | 35              | 0.110                                               |
| 5KP100                                               | 100                                            | 10                                                                                | 111                                                                 | 136.0  | 5.0                                        | 179.0                                                                                              | 29              | 0.110                                               |
| 5KP100A                                              | 100                                            | 10                                                                                | 111                                                                 | 123.0  | 5.0                                        | 162.0                                                                                              | 32              | 0.110                                               |
| 5KP110                                               | 110                                            | 10                                                                                | 122                                                                 | 149.0  | 5.0                                        | 196.0                                                                                              | 26              | 0.112                                               |
| 5KP110A                                              | 110                                            | 10                                                                                | 122                                                                 | 135.0  | 5.0                                        | 177.0                                                                                              | 28              | 0.112                                               |
| 5KP120                                               | 120                                            | 10                                                                                | 133                                                                 | 163.0  | 5.0                                        | 214.0                                                                                              | 23              | 0.121                                               |
| 5KP120A                                              | 120                                            | 10                                                                                | 133                                                                 | 148.0  | 5.0                                        | 194.0                                                                                              | 26.0            | 0.121                                               |
| 5KP160                                               | 160                                            | 10                                                                                | 177                                                                 | 217.0  | 5.0                                        | 285.0                                                                                              | 18.0            | 0.135                                               |
| 5KP160A                                              | 160                                            | 10                                                                                | 177                                                                 | 197.0  | 5.0                                        | 259.0                                                                                              | 19.0            | 0.134                                               |
| 5KP180                                               | 180                                            | 10                                                                                | 199                                                                 | 244.0  | 5.0                                        | 321.0                                                                                              | 16.0            | 0.150                                               |
| 5KP180A                                              | 180                                            | 10                                                                                | 199                                                                 | 222.0  | 5.0                                        | 291.0                                                                                              | 177.0           | 0.150                                               |
| 5KP200                                               | 200                                            | 10                                                                                | 222                                                                 | 272.0  | 5.0                                        | 356.0                                                                                              | 14.0            | 0.200                                               |
| 5KP200A                                              | 200                                            | 10                                                                                | 222                                                                 | 247.0  | 5.0                                        | 323.0                                                                                              | 15.0            | 0.200                                               |
| 5KP220                                               | 220                                            | 10                                                                                | 244                                                                 | 299.0  | 5.0                                        | 392.0                                                                                              | 13.0            | 0.200                                               |
| 5KP220A                                              | 220                                            | 10                                                                                | 244                                                                 | 271.0  | 5.0                                        | 356.0                                                                                              | 14.0            | 0.200                                               |
| 5KP250                                               | 250                                            | 10                                                                                | 277                                                                 | 340.0  | 5.0                                        | 445.0                                                                                              | 11.0            | 0.222                                               |
| 5KP250A                                              | 250                                            | 10                                                                                | 277                                                                 | 308.0  | 5.0                                        | 404.0                                                                                              | 12.0            | 0.222                                               |
| 5KP320                                               | 320                                            | 10                                                                                | 355                                                                 | 435.0  | 5.0                                        | 570.0                                                                                              | 9.0             | 0.235                                               |
| 5KP320A                                              | 320                                            | 10                                                                                | 355                                                                 | 395.0  | 5.0                                        | 517.0                                                                                              | 10.0            | 0.235                                               |
| 5KP360                                               | 360                                            | 10                                                                                | 399                                                                 | 4869.0 | 5.0                                        | 641.0                                                                                              | 8.0             | 0.240                                               |
| 5KP360A                                              | 360                                            | 10                                                                                | 399                                                                 | 444.0  | 5.0                                        | 582.0                                                                                              | 9.0             | 0.240                                               |
| 5KP400                                               | 400                                            | 10                                                                                | 443                                                                 | 543.0  | 5.0                                        | 712.0                                                                                              | 7.0             | 0.250                                               |
| 5KP400A                                              | 400                                            | 10                                                                                | 443                                                                 | 493.0  | 5.0                                        | 647.0                                                                                              | 8.0             | 0.250                                               |
| 5KP440                                               | 440                                            | 10                                                                                | 488                                                                 | 598.0  | 5.0                                        | 784.0                                                                                              | 6.0             | 0.260                                               |
| 5KP440A                                              | 440                                            | 10                                                                                | 488                                                                 | 543.0  | 5.0                                        | 711.0                                                                                              | 7.0             | 0.260                                               |

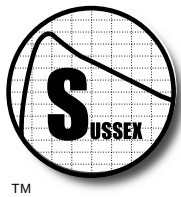
## NOTES

**NOTE 1:** ♦ ELECTRICAL CHARACTERISTICS ARE AT A JUNCTION TEMPERATURE (T<sub>J</sub>) OF 25°C

**NOTE 2:** ♦ FOR BIPOLAR DEVICES WITH A V<sub>BR</sub> OF 10 VOLTS OR LESS, THE I<sub>R</sub> LIMIT IS DOUBLED

**NOTE 3:** ♦ SURGE CURRENT WAVEFORM SHOWN IN FIGURE 2A ON PAGE

♦ PEAK PULSE POWER DERATING SHOWN IN FIGURE 3A ON PAGE



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**5KP SERIES 5000 WATT  
TRANSIENT SUPPRESSOR  
SPECIFICATIONS CONTINUED**

FIGURE 1A - TYPICAL JUNCTION CAPACITANCE

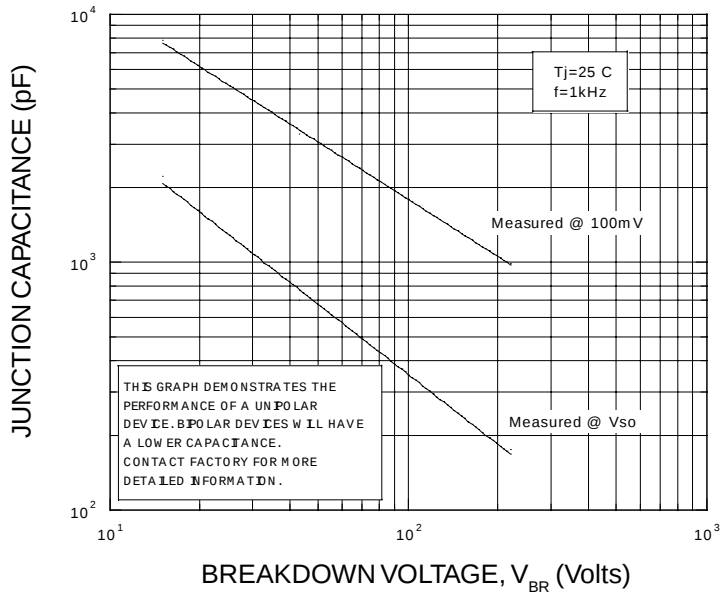


FIGURE 2A - PULSE WAVEFORM

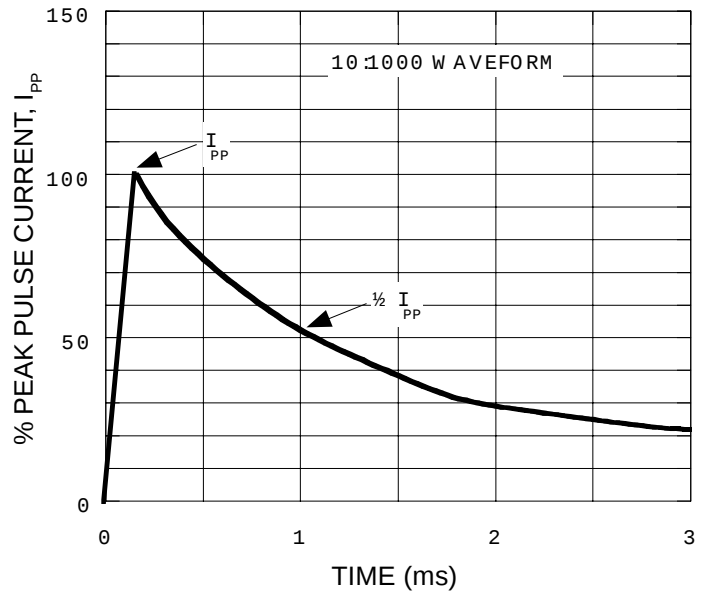
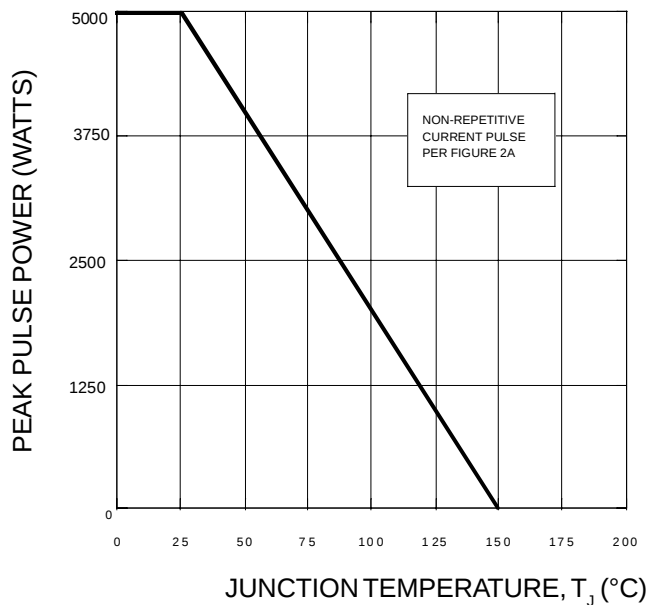
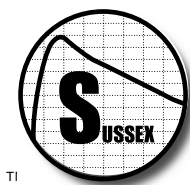


FIGURE 3A - PULSE DERATING CURVE



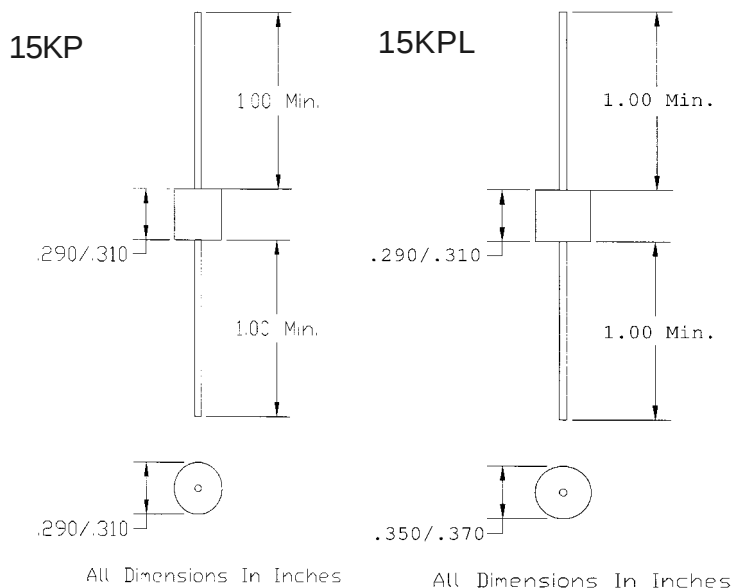
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**15KP SERIES 15000 WATT  
TRANSIENT SUPPRESSORS**



### 15KP SERIES TRANSIENT SUPPRESSORS

**VOLTAGES - 17 TO 220 VOLTS**

**15000 WATT MAXIMUM POWER DISSIPATION**

### 15KP SERIES DEVICE SPECIFICATIONS

- ◆ Built With Sussex Glass Passivated Dies
- ◆ Available as Uni- and Bi-Directional
- ◆ Each Device Individually Inspected
- ◆ Molded Epoxy Package
- ◆ Operating Temperature: -55 to 175°C
- ◆ Storage Temperature: -55 to 175°C
- ◆ Available in Unipolar and Bipolar
- ◆ Marked With Sussex Logo, Part Number, and Cathode Band on Unipolar Types
- ◆ Solvent Resistant Marking
- ◆ Silver Plated Leads, Solderable Per MIL-STD-750



Two package sizes are available for your convenience. The "L" version is the industry standard size package for the 15KP. Our 15KP version is to save space in your application. Both are UL approved.

## CUSTOM ORDERING SPECIFIER

**15KP**

DEVICE PART  
NUMBER

STANDOFF  
VOLTAGE  
( $V_{SO}$ )

- ◆ BLANK INDICATES UNIPOLAR  
DEVICE  $\pm 10\%$  ON  $V_{BR}$
- ◆ A INDICATES UNIPOLAR  
DEVICE  $\pm 5\%$  ON  $V_{BR}$
- ◆ C INDICATES BIPOLAR  
DEVICE  $\pm 10\%$  ON  $V_{BR}$
- ◆ CA INDICATES BIPOLAR  
DEVICE  $\pm 5\%$  ON  $V_{BR}$

DIE SPECIFICATIONS



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**15KP SERIES 15000 WATT  
TRANSIENT SUPPRESSOR  
SPECIFICATIONS CONTINUED**

**TABLE 8A - 15KP SERIES TRANSIENT SUPPRESSOR ELECTRICAL SPECIFICATIONS (NOTE 1)**

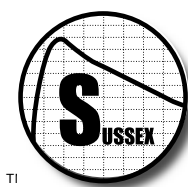
| SUSSEX<br>PART<br>NUMBERS | STANDOFF<br>VOLTAGE<br>(V <sub>SO</sub> )<br>Volts | MAX.<br>REVERSE<br>LEAKAGE<br>(I <sub>R</sub> )@V <sub>SO</sub><br>(NOTE 2)<br>μA | REVERSE<br>BREAKDOWN<br>VOLTAGE (V <sub>BR</sub> ) @<br>I <sub>T</sub> |               | TEST<br>CURRENT<br>(I <sub>T</sub> )<br>mA | MAX. CLAMPING<br>VOLTAGE (V <sub>CL</sub> ) @ PEAK<br>PULSE CURRENT (I <sub>PP</sub> )<br>(NOTE 3) |                         | MAX. TEMP.<br>COEFFICIENT<br>OF V <sub>BR</sub><br>(%/°C) |
|---------------------------|----------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------|---------------|--------------------------------------------|----------------------------------------------------------------------------------------------------|-------------------------|-----------------------------------------------------------|
|                           |                                                    |                                                                                   | MIN.<br>Volts                                                          | MAX.<br>Volts |                                            | V <sub>CL</sub><br>Volts                                                                           | I <sub>PP</sub><br>Amps |                                                           |
| 15KP17                    | 17                                                 | 5000                                                                              | 18.9                                                                   | 23.10         | 50                                         | 32.3                                                                                               | 464                     | 0.090                                                     |
| 15KP17A                   | 17                                                 | 5000                                                                              | 18.9                                                                   | 20.90         | 90                                         | 29.3                                                                                               | 512                     | 0.085                                                     |
| 15KP18                    | 18                                                 | 5000                                                                              | 20                                                                     | 24.40         | 50                                         | 34.2                                                                                               | 429                     | 0.090                                                     |
| 15KP18A                   | 18                                                 | 5000                                                                              | 20                                                                     | 22.10         | 50                                         | 30.9                                                                                               | 485                     | 0.086                                                     |
| 15KP20                    | 20                                                 | 1500                                                                              | 22.2                                                                   | 27.10         | 20                                         | 37.9                                                                                               | 396                     | 0.097                                                     |
| 15KP20A                   | 20                                                 | 1500                                                                              | 22.2                                                                   | 24.50         | 20                                         | 34.3                                                                                               | 437                     | 0.090                                                     |
| 15KP22                    | 22                                                 | 500                                                                               | 24.4                                                                   | 29.80         | 10                                         | 41.1                                                                                               | 365                     | 0.100                                                     |
| 15KP22A                   | 22                                                 | 500                                                                               | 24.4                                                                   | 26.90         | 10                                         | 37.1                                                                                               | 404                     | 0.094                                                     |
| 15KP24                    | 24                                                 | 150                                                                               | 26.7                                                                   | 32.60         | 5                                          | 45                                                                                                 | 333                     | 0.101                                                     |
| 15KP24A                   | 24                                                 | 150                                                                               | 26.7                                                                   | 29.50         | 5                                          | 40.7                                                                                               | 369                     | 0.096                                                     |
| 15KP26                    | 26                                                 | 50                                                                                | 28.9                                                                   | 35.30         | 5                                          | 48.7                                                                                               | 308                     | 0.100                                                     |
| 15KP26A                   | 26                                                 | 50                                                                                | 28.9                                                                   | 31.90         | 5                                          | 44                                                                                                 | 341                     | 0.095                                                     |
| 15KP28                    | 28                                                 | 25                                                                                | 31.1                                                                   | 38.00         | 5                                          | 52.4                                                                                               | 286                     | 0.101                                                     |
| 15KP28A                   | 28                                                 | 25                                                                                | 31.1                                                                   | 34.40         | 5                                          | 47.5                                                                                               | 316                     | 0.095                                                     |
| 15KP30                    | 30                                                 | 15                                                                                | 33.3                                                                   | 40.70         | 5                                          | 56.2                                                                                               | 267                     | 0.073                                                     |
| 15KP30A                   | 30                                                 | 15                                                                                | 33.3                                                                   | 36.80         | 5                                          | 50.7                                                                                               | 296                     | 0.097                                                     |
| 15KP33                    | 33                                                 | 10                                                                                | 36.7                                                                   | 44.90         | 5                                          | 60.6                                                                                               | 248                     | 0.103                                                     |
| 15KP33A                   | 33                                                 | 10                                                                                | 36.7                                                                   | 40.60         | 5                                          | 54.8                                                                                               | 274                     | 0.098                                                     |
| 15KP36                    | 36                                                 | 10                                                                                | 40                                                                     | 48.90         | 5                                          | 66                                                                                                 | 227                     | 0.103                                                     |
| 15KP36A                   | 36                                                 | 10                                                                                | 40                                                                     | 44.20         | 5                                          | 59.7                                                                                               | 251                     | 0.097                                                     |
| 15KP40                    | 40                                                 | 10                                                                                | 44.4                                                                   | 54.30         | 5                                          | 72.8                                                                                               | 206                     | 0.103                                                     |
| 15KP40A                   | 40                                                 | 10                                                                                | 44.4                                                                   | 49.10         | 5                                          | 65.8                                                                                               | 228                     | 0.098                                                     |
| 15KP43                    | 43                                                 | 10                                                                                | 47.8                                                                   | 58.40         | 5                                          | 77.1                                                                                               | 195                     | 0.104                                                     |
| 15KP43A                   | 43                                                 | 10                                                                                | 47.8                                                                   | 52.80         | 5                                          | 69.7                                                                                               | 215                     | 0.099                                                     |
| 15KP45                    | 45                                                 | 10                                                                                | 50                                                                     | 61.10         | 5                                          | 60.7                                                                                               | 186                     | 0.103                                                     |
| 15KP45A                   | 45                                                 | 10                                                                                | 50                                                                     | 55.30         | 5                                          | 73                                                                                                 | 205                     | 0.099                                                     |
| 15KP48                    | 48                                                 | 10                                                                                | 53.3                                                                   | 65.20         | 5                                          | 85.9                                                                                               | 175                     | 0.105                                                     |
| 15KP48A                   | 48                                                 | 10                                                                                | 53.3                                                                   | 58.90         | 5                                          | 77.7                                                                                               | 193                     | 0.100                                                     |
| 15KP51                    | 51                                                 | 10                                                                                | 56.7                                                                   | 69.30         | 5                                          | 91.5                                                                                               | 164                     | 0.105                                                     |
| 15KP51A                   | 51                                                 | 10                                                                                | 56.7                                                                   | 62.70         | 5                                          | 92.8                                                                                               | 181                     | 0.101                                                     |
| 15KP54                    | 54                                                 | 10                                                                                | 60                                                                     | 73.30         | 5                                          | 96.8                                                                                               | 155                     | 0.105                                                     |
| 15KP54A                   | 54                                                 | 10                                                                                | 60                                                                     | 66.30         | 5                                          | 87.5                                                                                               | 171                     | 0.100                                                     |
| 15KP58                    | 58                                                 | 10                                                                                | 64.4                                                                   | 78.70         | 5                                          | 104                                                                                                | 144                     | 0.106                                                     |
| 15KP58A                   | 58                                                 | 10                                                                                | 64.4                                                                   | 71.20         | 5                                          | 94.0                                                                                               | 160                     | 0.100                                                     |
| 15KP60                    | 60                                                 | 10                                                                                | 66.7                                                                   | 81.50         | 5                                          | 107                                                                                                | 140                     | 0.105                                                     |
| 15KP60A                   | 60                                                 | 10                                                                                | 66.7                                                                   | 73.70         | 5                                          | 97.3                                                                                               | 154                     | 0.101                                                     |
| 15KP64                    | 64                                                 | 10                                                                                | 71.1                                                                   | 86.90         | 5                                          | 115                                                                                                | 130                     | 0.106                                                     |

THIS TABLE CONTINUES

## NOTES

**NOTE 1:** ♦ ELECTRICAL CHARACTERISTICS ARE AT A JUNCTION TEMPERATURE (T<sub>J</sub>) OF 25°C  
**NOTE 2:** ♦ FOR BIPOLAR DEVICES WITH A V<sub>BR</sub> OF 10 VOLTS OR LESS, THE I<sub>R</sub> LIMIT IS DOUBLED

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SPECIFICATIONS CONTINUED**

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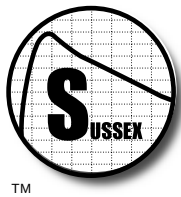
**TABLE 8A - 15KP SERIES TRANSIENT SUPPRESSOR ELECTRICAL SPECIFICATIONS (NOTE 1)**

| SUSSEX<br>PART<br>NUMBERS | STANDOFF<br>VOLTAGE<br>(V <sub>SO</sub> ) Volts | MAX.<br>REVERSE<br>LEAKAGE<br>(I <sub>R</sub> )@V <sub>SO</sub><br>(NOTE 2)<br>μA | REVERSE<br>BREAKDOWN<br>VOLTAGE (V <sub>BR</sub> ) @<br>I <sub>T</sub> |               | TEST<br>CURRENT<br>(I <sub>T</sub> )<br>mA | MAX. CLAMPING<br>VOLTAGE (V <sub>CL</sub> ) @ PEAK<br>PULSE CURRENT (I <sub>PP</sub> )<br>(NOTE 3) |                         | MAX. TEMP.<br>COEFFICIENT<br>OF V <sub>BR</sub><br>(%/°C) |
|---------------------------|-------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------|---------------|--------------------------------------------|----------------------------------------------------------------------------------------------------|-------------------------|-----------------------------------------------------------|
|                           |                                                 |                                                                                   | MIN.<br>Volts                                                          | MAX.<br>Volts |                                            | V <sub>CL</sub><br>Volts                                                                           | I <sub>PP</sub><br>Amps |                                                           |
| 15KP64A                   | 64                                              | 10                                                                                | 71.1                                                                   | 78.60         | 5                                          | 104                                                                                                | 144                     | 0.102                                                     |
| 15KP70                    | 70                                              | 10                                                                                | 77.8                                                                   | 95.10         | 5                                          | 126                                                                                                | 119                     | 0.106                                                     |
| 15KP70A                   | 70                                              | 10                                                                                | 77.8                                                                   | 86.00         | 5                                          | 114                                                                                                | 132                     | 0.101                                                     |
| 15KP75                    | 75                                              | 10                                                                                | 83.3                                                                   | 102.00        | 5                                          | 135                                                                                                | 111                     | 0.108                                                     |
| 16KP75A                   | 75                                              | 10                                                                                | 83.3                                                                   | 92.10         | 5                                          | 122                                                                                                | 123                     | 0.101                                                     |
| 15KP78                    | 78                                              | 10                                                                                | 86.7                                                                   | 106.00        | 5                                          | 140                                                                                                | 107                     | 0.108                                                     |
| 15KP78A                   | 78                                              | 10                                                                                | 86.7                                                                   | 95.80         | 5                                          | 126                                                                                                | 119                     | 0.102                                                     |
| 15KP85                    | 85                                              | 10                                                                                | 94.4                                                                   | 115.00        | 5                                          | 152                                                                                                | 99                      | 0.108                                                     |
| 15KP85A                   | 85                                              | 10                                                                                | 94.4                                                                   | 104.00        | 5                                          | 137                                                                                                | 109                     | 0.103                                                     |
| 15KP90                    | 90                                              | 10                                                                                | 100                                                                    | 122.00        | 5                                          | 160                                                                                                | 94                      | 0.108                                                     |
| 15KP90A                   | 90                                              | 10                                                                                | 100                                                                    | 111.00        | 5                                          | 146                                                                                                | 103                     | 0.103                                                     |
| 15KP100                   | 100                                             | 10                                                                                | 111                                                                    | 136.00        | 5                                          | 179                                                                                                | 84                      | 0.109                                                     |
| 15KP100A                  | 100                                             | 10                                                                                | 111                                                                    | 123.00        | 5                                          | 162                                                                                                | 93                      | 0.103                                                     |
| 15KP110                   | 110                                             | 10                                                                                | 122                                                                    | 149.00        | 5                                          | 196                                                                                                | 77                      | 0.108                                                     |
| 15KP110A                  | 110                                             | 10                                                                                | 122                                                                    | 135.00        | 5                                          | 178                                                                                                | 84                      | 0.104                                                     |
| 15KP120                   | 120                                             | 10                                                                                | 133                                                                    | 163.00        | 5                                          | 214                                                                                                | 70                      | 0.109                                                     |
| 15KP120A                  | 120                                             | 10                                                                                | 133                                                                    | 147.00        | 5                                          | 193                                                                                                | 78                      | 0.104                                                     |
| 15KP130                   | 130                                             | 10                                                                                | 144                                                                    | 176.00        | 5                                          | 231                                                                                                | 65                      | 0.109                                                     |
| 15KP130A                  | 130                                             | 10                                                                                | 144                                                                    | 159.00        | 5                                          | 209                                                                                                | 72                      | 0.104                                                     |
| 15KP150                   | 150                                             | 10                                                                                | 167                                                                    | 204.00        | 5                                          | 268                                                                                                | 56                      | 0.109                                                     |
| 15KP150A                  | 150                                             | 10                                                                                | 167                                                                    | 185.00        | 5                                          | 243                                                                                                | 62                      | 0.104                                                     |
| 15KP160                   | 160                                             | 10                                                                                | 178                                                                    | 218.00        | 5                                          | 287                                                                                                | 52                      | 0.109                                                     |
| 15KP160A                  | 160                                             | 10                                                                                | 178                                                                    | 197.00        | 5                                          | 259                                                                                                | 56                      | 0.124                                                     |
| 15KP170                   | 170                                             | 10                                                                                | 189                                                                    | 231.00        | 5                                          | 304                                                                                                | 49                      | 0.109                                                     |
| 15KP170A                  | 170                                             | 10                                                                                | 189                                                                    | 209.00        | 5                                          | 275                                                                                                | 55                      | 0.104                                                     |
| 15KP180                   | 180                                             | 10                                                                                | 200                                                                    | 244.00        | 5                                          | 321                                                                                                | 47                      | 0.109                                                     |
| 15KP180A                  | 180                                             | 10                                                                                | 200                                                                    | 222.00        | 5                                          | 291                                                                                                | 52                      | 0.104                                                     |
| 15KP200                   | 200                                             | 10                                                                                | 222                                                                    | 272.00        | 5                                          | 356                                                                                                | 42                      | 0.109                                                     |
| 15KP200A                  | 200                                             | 10                                                                                | 222                                                                    | 247.00        | 5                                          | 322                                                                                                | 47                      | 0.104                                                     |
| 15KP220                   | 220                                             | 10                                                                                | 245                                                                    | 299.00        | 5                                          | 393                                                                                                | 36                      | 0.109                                                     |
| 15KP220A                  | 220                                             | 10                                                                                | 245                                                                    | 271.00        | 5                                          | 356                                                                                                | 42                      | 0.104                                                     |

## NOTES

**NOTE 1:** ♦ ELECTRICAL CHARACTERISTICS ARE AT A JUNCTION TEMPERATURE (T<sub>J</sub>) OF 25°C  
**NOTE 2:** ♦ FOR BIPOLAR DEVICES WITH A V<sub>BR</sub> OF 10 VOLTS OR LESS, THE I<sub>R</sub> LIMIT IS DOUBLED

**NOTE 3:** ♦ SURGE CURRENT WAVEFORM SHOWN IN FIGURE 2A ON PAGE  
 ♦ PEAK PULSE POWER DERATING SHOWN IN FIGURE 3A ON PAGE



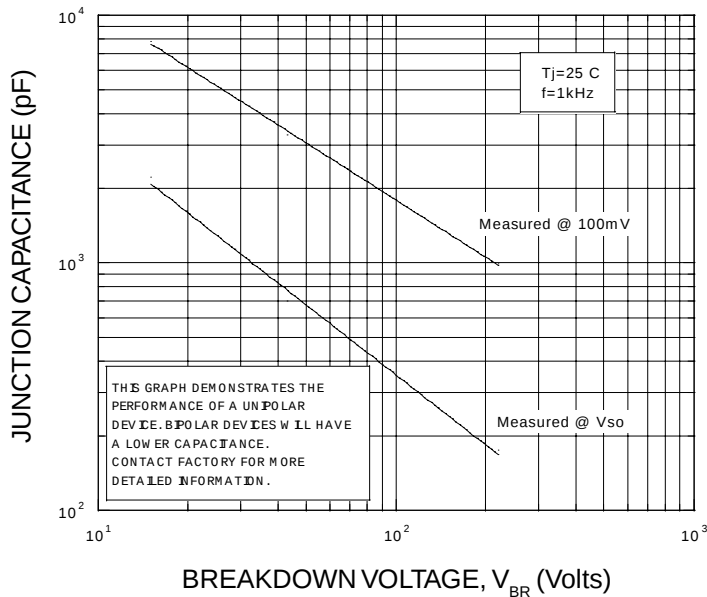
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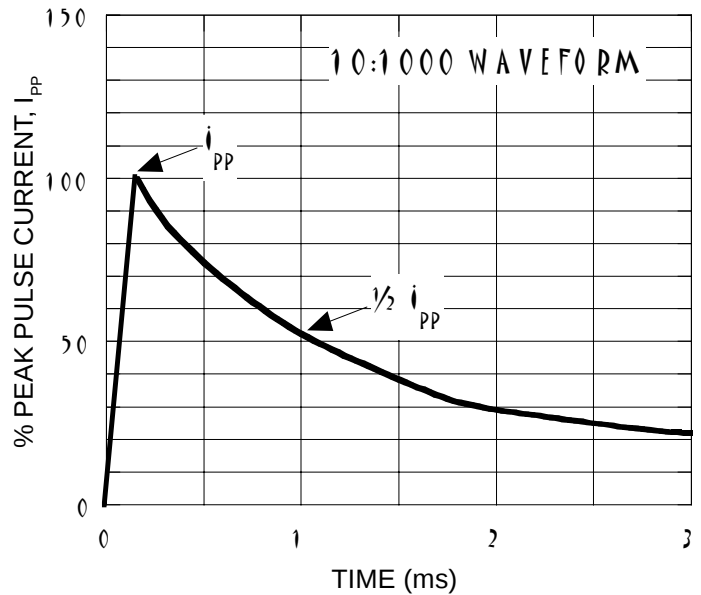
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**15KP SERIES 15000 WATT  
TRANSIENT SUPPRESSOR  
SPECIFICATIONS CONTINUED**

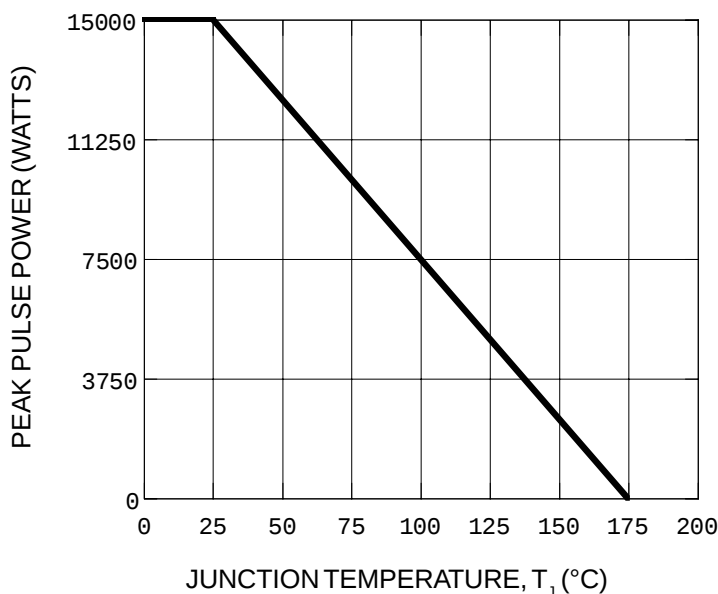
**FIGURE 1A - TYPICAL JUNCTION CAPACITANCE**



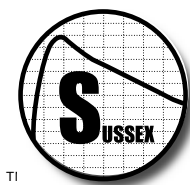
**FIGURE 2A - PULSE WAVEFORM**



**FIGURE 3A - PULSE DERATING CURVE**



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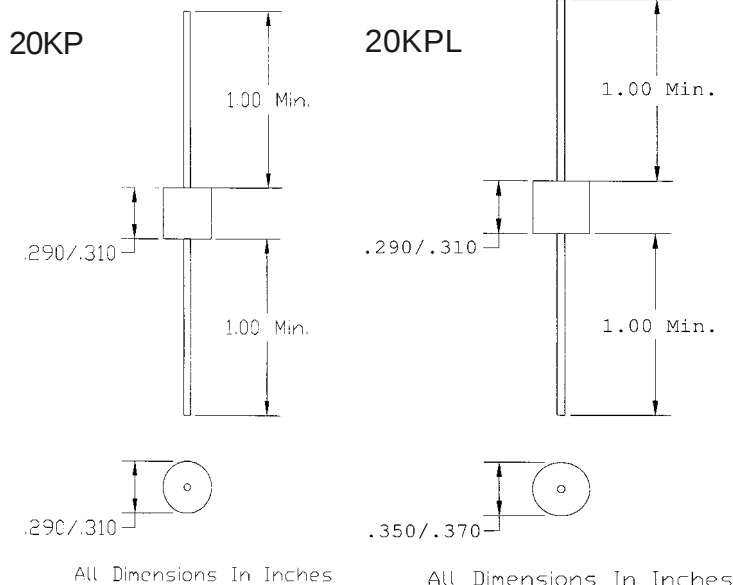
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**20KP SERIES 20000 WATT  
TRANSIENT SUPPRESSORS**

## 20KP SERIES TRANSIENT SUPPRESSORS

**VOLTAGES - 26 TO 440 VOLTS**

**20,000 WATT MAXIMUM POWER DISSIPATION**



Two package sizes are available for your convenience. The "L" version is the industry standard size package for the 20KP. Our 20KP version is to save space in your application.

## 20KP SERIES DEVICE SPECIFICATIONS

- ◆ Built With Sussex Glass Passivated Dies
- ◆ Available as Uni- and Bi-Directional
- ◆ Each Device Individually Inspected
- ◆ Molded Epoxy Package
- ◆ Operating Temperature: -55 to 175°C
- ◆ Storage Temperature: -55 to 175°C
- ◆ Available as Unipolar and Bipolar
- ◆ Marked With Sussex Logo, Part Number, and Cathode Band on Unipolar Types
- ◆ Solvent Resistant Marking
- ◆ Silver Plated Leads, Solderable Per MIL-STD-750

## CUSTOM ORDERING SPECIFIER

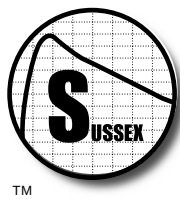
DIE SPECIFICATIONS

**20KP**

DEVICE PART  
NUMBER

STANDOFF  
VOLTAGE  
( $V_{SO}$ )

- ◆ BLANK INDICATES UNIPOLAR  
DEVICE  $\pm 10\%$  ON  $V_{BR}$
- ◆ A INDICATES UNIPOLAR  
DEVICE  $\pm 5\%$  ON  $V_{BR}$
- ◆ C INDICATES BIPOLAR  
DEVICE  $\pm 10\%$  ON  $V_{BR}$
- ◆ CA INDICATES BIPOLAR  
DEVICE  $\pm 5\%$  ON  $V_{BR}$



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## 20KP SERIES 20,000 WATT TRANSIENT SUPPRESSOR SPECIFICATIONS CONTINUED

TABLE 7A - 20KP SERIES 20000 WATT TRANSIENT SUPPRESSOR ELECTRICAL SPECIFICATIONS (NOTE 1)

| SUSSEX<br>PART<br>NUMBERS<br>20000 WATT<br>20KPSERIES | STANDOFF                                           | MAX.<br>REVERSE<br>LEAKAGE<br>(I <sub>R</sub> )@ V <sub>SO</sub><br>(NOTE 2)<br>μ A | REVERSE<br>BREAKDOWN<br>VOLTAGE (V <sub>BR</sub> ) @ I <sub>T</sub> |                   | TEST<br>CURRENT<br><br>(I <sub>T</sub> )<br><br>m A | MAX. CLAMPING<br>VOLTAGE (V <sub>CL</sub> ) @<br>PEAK PULSE<br>CURRENT (I <sub>PP</sub> ) (NOTE 3) |                            | IPP (8 X 20)<br>A m p s |
|-------------------------------------------------------|----------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------|-------------------|-----------------------------------------------------|----------------------------------------------------------------------------------------------------|----------------------------|-------------------------|
|                                                       | VOLTAGE<br><br>(V <sub>SO</sub> )<br><br>V o l t s |                                                                                     | MIN.<br>V o l t s                                                   | MAX.<br>V o l t s |                                                     | V <sub>CL</sub><br>V o l t s                                                                       | I <sub>PP</sub><br>A m p s |                         |
|                                                       |                                                    |                                                                                     |                                                                     |                   |                                                     |                                                                                                    |                            |                         |
| 20KP26                                                | 26                                                 | 10                                                                                  | 28.9                                                                | 35.3              | 5.0                                                 | 46.6                                                                                               | 429.2                      | 3863                    |
| 20KP26A                                               | 26                                                 | 10                                                                                  | 28.9                                                                | 31.9              | 5.0                                                 | 42.1                                                                                               | 475.1                      | 4276                    |
| 20KP28                                                | 28                                                 | 10                                                                                  | 31.1                                                                | 38.0              | 5.0                                                 | 50.1                                                                                               | 399.2                      | 3593                    |
| 20KP28A                                               | 28                                                 | 10                                                                                  | 31.1                                                                | 34.4              | 5.0                                                 | 45.4                                                                                               | 440.5                      | 3965                    |
| 20KP30                                                | 30                                                 | 10                                                                                  | 33.3                                                                | 40.7              | 5.0                                                 | 53.5                                                                                               | 373.8                      | 3364                    |
| 20KP30A                                               | 30                                                 | 10                                                                                  | 33.3                                                                | 36.8              | 5.0                                                 | 48.4                                                                                               | 413.2                      | 3719                    |
| 20KP33                                                | 33                                                 | 10                                                                                  | 36.7                                                                | 44.9              | 5.0                                                 | 59.0                                                                                               | 339.0                      | 3051                    |
| 20KP33A                                               | 33                                                 | 10                                                                                  | 36.7                                                                | 40.6              | 5.0                                                 | 53.3                                                                                               | 375.2                      | 3377                    |
| 20KP36                                                | 36                                                 | 10                                                                                  | 40.0                                                                | 48.9              | 5.0                                                 | 64.3                                                                                               | 311.0                      | 2799                    |
| 20KP36A                                               | 36                                                 | 10                                                                                  | 40.0                                                                | 44.2              | 5.0                                                 | 58.1                                                                                               | 344.2                      | 3098                    |
| 20KP40                                                | 40                                                 | 10                                                                                  | 44.4                                                                | 54.3              | 5.0                                                 | 71.4                                                                                               | 280.1                      | 2521                    |
| 20KP40A                                               | 40                                                 | 10                                                                                  | 44.4                                                                | 49.1              | 5.0                                                 | 64.5                                                                                               | 310.1                      | 2791                    |
| 20KP43                                                | 43                                                 | 10                                                                                  | 47.8                                                                | 58.4              | 5.0                                                 | 76.7                                                                                               | 260.8                      | 2347                    |
| 20KP43A                                               | 43                                                 | 10                                                                                  | 47.8                                                                | 52.8              | 5.0                                                 | 69.4                                                                                               | 288.2                      | 2594                    |
| 20KP45                                                | 45                                                 | 10                                                                                  | 50.0                                                                | 61.1              | 5.0                                                 | 80.3                                                                                               | 249.1                      | 2242                    |
| 20KP45A                                               | 45                                                 | 10                                                                                  | 50.0                                                                | 55.3              | 5.0                                                 | 72.7                                                                                               | 275.1                      | 2476                    |
| 20KP48                                                | 48                                                 | 10                                                                                  | 53.3                                                                | 65.2              | 5.0                                                 | 85.5                                                                                               | 233.9                      | 2105                    |
| 20KP48A                                               | 48                                                 | 10                                                                                  | 53.3                                                                | 58.9              | 5.0                                                 | 77.4                                                                                               | 258.4                      | 2326                    |
| 20KP51                                                | 51                                                 | 10                                                                                  | 56.1                                                                | 69.3              | 5.0                                                 | 91.1                                                                                               | 219.5                      | 1976                    |
| 20KP51A                                               | 51                                                 | 10                                                                                  | 56.7                                                                | 62.7              | 5.0                                                 | 82.4                                                                                               | 242.7                      | 2184                    |
| 20KP54                                                | 54                                                 | 10                                                                                  | 60.0                                                                | 73.3              | 5.0                                                 | 96.3                                                                                               | 207.7                      | 1869                    |
| 20KP54A                                               | 54                                                 | 10                                                                                  | 60.0                                                                | 66.3              | 5.0                                                 | 87.1                                                                                               | 229.6                      | 2067                    |
| 20KP58                                                | 58                                                 | 10                                                                                  | 64.4                                                                | 78.7              | 5.0                                                 | 103.0                                                                                              | 194.2                      | 1748                    |
| 20KP58A                                               | 58                                                 | 10                                                                                  | 64.4                                                                | 71.2              | 5.0                                                 | 94.0                                                                                               | 212.8                      | 1915                    |
| 20KP60                                                | 60                                                 | 10                                                                                  | 66.7                                                                | 81.5              | 5.0                                                 | 107.0                                                                                              | 186.9                      | 1682                    |
| 20KP60A                                               | 60                                                 | 10                                                                                  | 66.7                                                                | 73.7              | 5.0                                                 | 97.0                                                                                               | 206.2                      | 1856                    |
| 20KP64                                                | 64                                                 | 10                                                                                  | 71.1                                                                | 96.9              | 5.0                                                 | 114.0                                                                                              | 175.4                      | 1579                    |
| 20KP64A                                               | 64                                                 | 10                                                                                  | 71.1                                                                | 78.6              | 5.0                                                 | 103.0                                                                                              | 194.2                      | 1748                    |
| 20KP70                                                | 70                                                 | 10                                                                                  | 77.6                                                                | 95.1              | 5.0                                                 | 125.0                                                                                              | 160.0                      | 1440                    |
| 20KP70A                                               | 70                                                 | 10                                                                                  | 77.8                                                                | 86.0              | 5.0                                                 | 113.0                                                                                              | 177.0                      | 1593                    |
| 20KP75                                                | 75                                                 | 10                                                                                  | 83.3                                                                | 102.0             | 5.0                                                 | 134.0                                                                                              | 149.3                      | 1343                    |
| 20KP75A                                               | 75                                                 | 10                                                                                  | 83.3                                                                | 92.1              | 5.0                                                 | 121.0                                                                                              | 165.3                      | 1488                    |
| 20KP78                                                | 78                                                 | 10                                                                                  | 86.7                                                                | 106.0             | 5.0                                                 | 139.0                                                                                              | 143.9                      | 1295                    |
| 20KP78A                                               | 78                                                 | 10                                                                                  | 86.7                                                                | 95.8              | 5.0                                                 | 126.0                                                                                              | 158.7                      | 1429                    |
| 20KP85                                                | 85                                                 | 10                                                                                  | 94.4                                                                | 115.0             | 5.0                                                 | 151.0                                                                                              | 132.5                      | 1192                    |
| 20KP85A                                               | 85                                                 | 10                                                                                  | 94.4                                                                | 104.0             | 5.0                                                 | 137.0                                                                                              | 146.0                      | 1314                    |
| 20KP90                                                | 90                                                 | 10                                                                                  | 100                                                                 | 122.0             | 5.0                                                 | 160.0                                                                                              | 125.0                      | 1125                    |
| 20KP90A                                               | 90                                                 | 10                                                                                  | 100                                                                 | 111.0             | 5.0                                                 | 146.0                                                                                              | 137.0                      | 1233                    |
| 20KP100                                               | 100                                                | 10                                                                                  | 111                                                                 | 136.0             | 5.0                                                 | 179.0                                                                                              | 111.7                      | 1006                    |
| 20KP100A                                              | 100                                                | 10                                                                                  | 111                                                                 | 123.0             | 5.0                                                 | 162.0                                                                                              | 123.5                      | 1111                    |
| 20KP110                                               | 110                                                | 10                                                                                  | 122                                                                 | 149.0             | 5.0                                                 | 196.0                                                                                              | 102.0                      | 918                     |
| 20KP110A                                              | 110                                                | 10                                                                                  | 122                                                                 | 135.0             | 5.0                                                 | 177.0                                                                                              | 113.0                      | 1017                    |
| 20KP120                                               | 120                                                | 10                                                                                  | 133                                                                 | 163.0             | 5.0                                                 | 214.0                                                                                              | 93.5                       | 841                     |
| 20KP120A                                              | 120                                                | 10                                                                                  | 133                                                                 | 148.0             | 5.0                                                 | 194.0                                                                                              | 103.1                      | 928                     |
| 20KP160                                               | 160                                                | 10                                                                                  | 177                                                                 | 217.0             | 5.0                                                 | 285.0                                                                                              | 70.2                       | 632                     |
| 20KP160A                                              | 160                                                | 10                                                                                  | 177                                                                 | 197.0             | 5.0                                                 | 259.0                                                                                              | 77.2                       | 695                     |
| 20KP180                                               | 180                                                | 10                                                                                  | 199                                                                 | 244.0             | 5.0                                                 | 321.0                                                                                              | 62.3                       | 561                     |
| 20KP180A                                              | 180                                                | 10                                                                                  | 199                                                                 | 222.0             | 5.0                                                 | 291.0                                                                                              | 68.7                       | 619                     |
| 20KP200                                               | 200                                                | 10                                                                                  | 222                                                                 | 272.0             | 5.0                                                 | 356.0                                                                                              | 56.2                       | 506                     |
| 20KP200A                                              | 200                                                | 10                                                                                  | 222                                                                 | 247.0             | 5.0                                                 | 323.0                                                                                              | 61.9                       | 557                     |
| 20KP220                                               | 220                                                | 10                                                                                  | 244                                                                 | 299.0             | 5.0                                                 | 392.0                                                                                              | 51.0                       | 459                     |
| 20KP220A                                              | 220                                                | 10                                                                                  | 244                                                                 | 271.0             | 5.0                                                 | 356.0                                                                                              | 56.2                       | 506                     |
| 20KP250                                               | 250                                                | 10                                                                                  | 277                                                                 | 340.0             | 5.0                                                 | 445.0                                                                                              | 44.9                       | 404                     |
| 20KP250A                                              | 250                                                | 10                                                                                  | 277                                                                 | 308.0             | 5.0                                                 | 404.0                                                                                              | 49.5                       | 446                     |
| 20KP320                                               | 320                                                | 10                                                                                  | 355                                                                 | 435.0             | 5.0                                                 | 570.0                                                                                              | 35.1                       | 316                     |
| 20KP320A                                              | 320                                                | 10                                                                                  | 355                                                                 | 395.0             | 5.0                                                 | 517.0                                                                                              | 38.7                       | 348                     |
| 20KP360                                               | 360                                                | 10                                                                                  | 399                                                                 | 489.0             | 5.0                                                 | 641.0                                                                                              | 31.2                       | 281                     |
| 20KP360A                                              | 360                                                | 10                                                                                  | 399                                                                 | 444.0             | 5.0                                                 | 582.0                                                                                              | 34.4                       | 309                     |
| 20KP400                                               | 400                                                | 10                                                                                  | 443                                                                 | 543.0             | 5.0                                                 | 712.0                                                                                              | 28.1                       | 253                     |
| 20KP400A                                              | 400                                                | 10                                                                                  | 443                                                                 | 493.0             | 5.0                                                 | 647.0                                                                                              | 30.9                       | 278                     |
| 20KP440                                               | 440                                                | 10                                                                                  | 488                                                                 | 598.0             | 5.0                                                 | 784.0                                                                                              | 25.5                       | 230                     |
| 20KP440A                                              | 440                                                | 10                                                                                  | 488                                                                 | 543.0             | 5.0                                                 | 711.0                                                                                              | 28.1                       | 253                     |

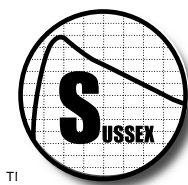
## NOTES

NOTE 1: ♦ ELECTRICAL CHARACTERISTICS ARE AT A JUNCTION TEMPERATURE (T<sub>J</sub>) OF 25°C

NOTE 2: ♦ FOR BIPOLAR DEVICES WITH A V<sub>BR</sub> OF 10 VOLTS OR LESS, THE I<sub>R</sub> LIMIT IS DOUBLED

NOTE 3: ♦ SURGE CURRENT WAVEFORM SHOWN IN FIGURE 2A ON PAGE

♦ PEAK PULSE POWER DERATING SHOWN IN FIGURE 3A ON PAGE



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**AX-4**

The new AX-4 series of high current transient suppressors have been specifically designed for use in **A.C. Line Protection**.

### Features:

- Glass Passivated Junction
- Bidirectional
- Multijunction
- Low Clamping Voltage
- Sharp Breakdown Voltage
- Low Slope Resistance
- Three Available devices with  $V_{BR}$  65V, 200V and 220V

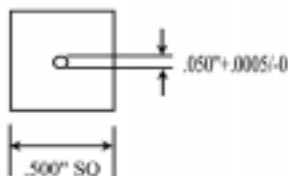
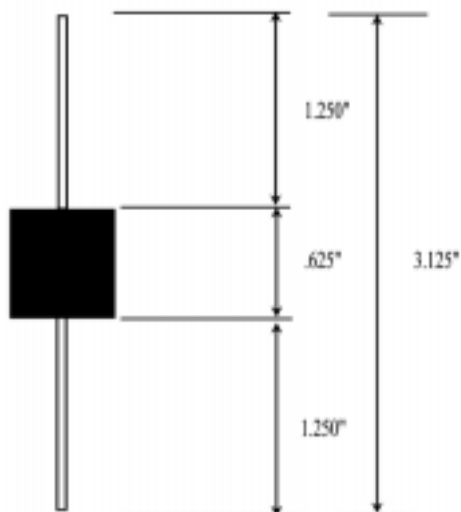
**UL  
APPROVED**

### Maximum Ratings:

- Current Rating ( $I_{pp}$ ) 6kA (See Note 1)
- Maximum Junction Temperature is 150°C
- Storage Temperature -55°C to 175°C
- Max Clamping of 330V<sub>CL</sub>
- Rated  $I_{pp}$  measured with 8 x 20 μsec pulse
- Standoff measured  $V_{SO}$  at 80%  $V_{BR}$

### Mechanical Characteristics:

- Molded plastic case
- Axial lead terminals (solderable per MIL-STD-202 Method 208)
- Device code and logo marked on every device

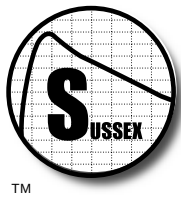


**For Additional Information See Charts and Graphs  
Or Call Factory at (239) 768-6800**

TABLE 17A - AX-4 SERIES TRANSIENT SUPPRESSOR ELECTRICAL SPECIFICATIONS

| SUSSEX<br>PART<br>NUMBERS | STANDOFF<br>VOLTAGE<br>( $V_{SO}$ )<br>Volts | MAX.<br>REVERSE<br>LEAKAGE<br>( $I_R$ )@ $V_{SO}$<br>μA | REVERSE<br>BREAKDOWN<br>VOLTAGE ( $V_{BR}$ )<br>@ $I_T$ |               | TEST<br>CURRENT<br>( $I_T$ )<br>mA | MAX. CLAMPING<br>VOLTAGE ( $V_{CL}$ ) @<br>PEAK PULSE CURRENT<br>( $I_{PP}$ ) (NOTE 1) |                  | MAX. TEMP.<br>COEFFICIENT<br>OF $V_{BR}$<br>(%/°C) | MAX.<br>Capacitance<br>0 Bias<br>10k Hz<br>(nF) |
|---------------------------|----------------------------------------------|---------------------------------------------------------|---------------------------------------------------------|---------------|------------------------------------|----------------------------------------------------------------------------------------|------------------|----------------------------------------------------|-------------------------------------------------|
|                           |                                              |                                                         | MIN.<br>Volts                                           | MAX.<br>Volts |                                    | $V_{CL}$<br>Volts                                                                      | $I_{PP}$<br>Amps |                                                    |                                                 |
| AX4-65                    | 58                                           | 20                                                      | 64                                                      | 70            | 10                                 | 115                                                                                    | 6000             | 0.100                                              | 6.5                                             |
| AX4-200                   | 170                                          | 20                                                      | 180                                                     | 220           | 10                                 | 300                                                                                    | 6000             | 0.100                                              | 2.5                                             |
| AX4-220                   | 190                                          | 20                                                      | 200                                                     | 245           | 10                                 | 330                                                                                    | 6000             | 0.100                                              | 2.2                                             |

Note 1: Pulse repitition rate is greater than 2 minutes between pulses.

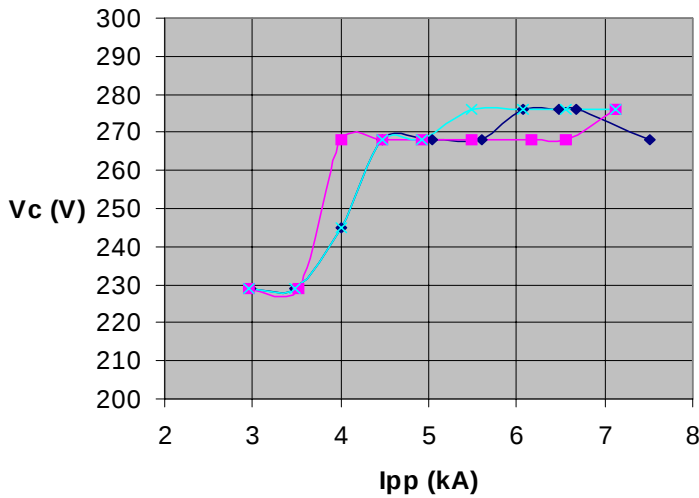


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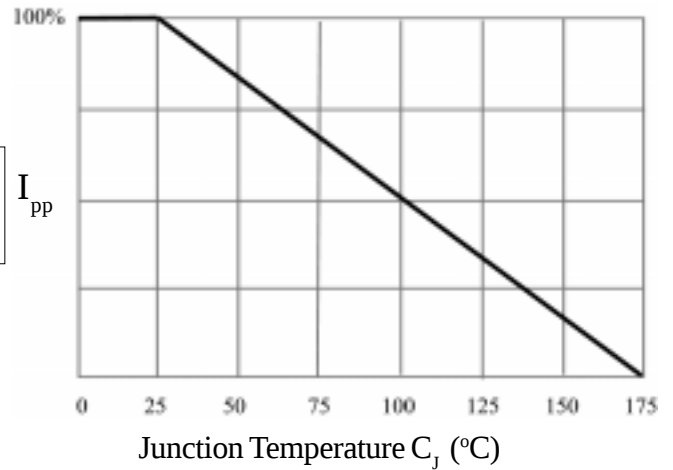
12251 TOWNE LAKE DRIVE, FORT MYERS, FLORIDA, 33913 • TEL: (239) 768-6800 • FAX: (239) 768-6868

**AX-4**

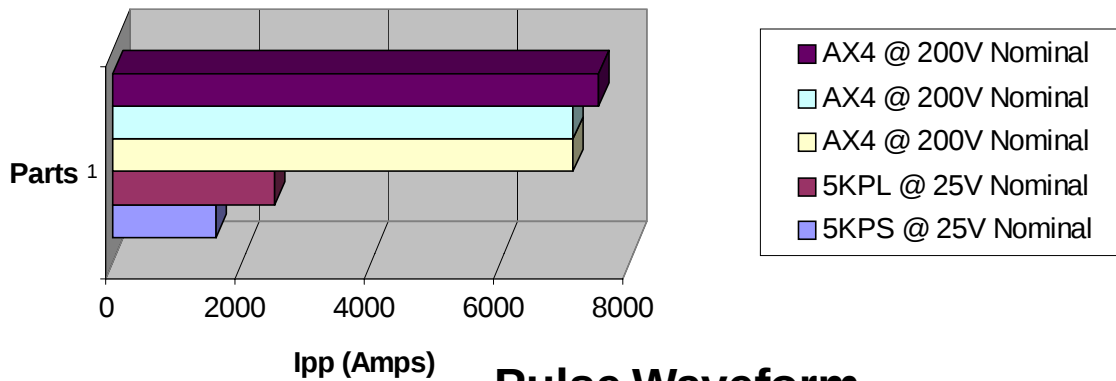
Typical Sussex AX-4



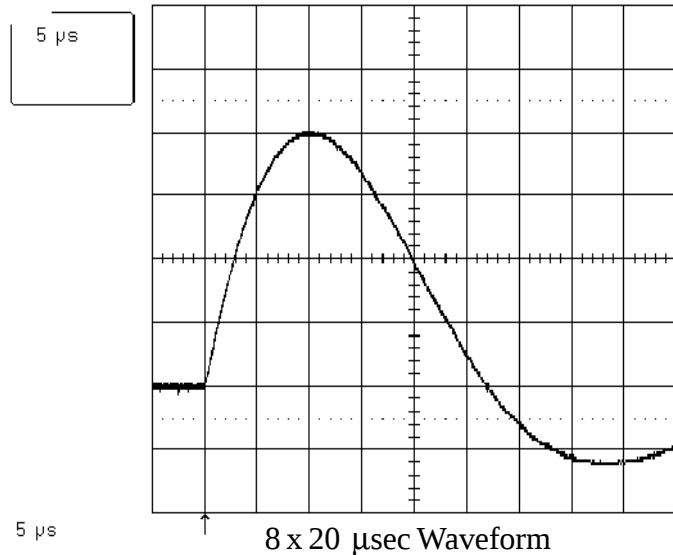
Pulse Derating Curve



Typical AX-4/5KPL/5KPS

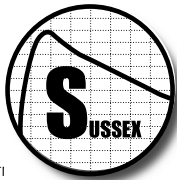


Pulse Waveform



**Disclaimer:**

Sussex Semiconductor, Inc believes that the information contained in this publication is an accurate description of the typical characteristics. However, it is your responsibility to thoroughly test the product in your specific application to determine its performance, efficacy and safety.

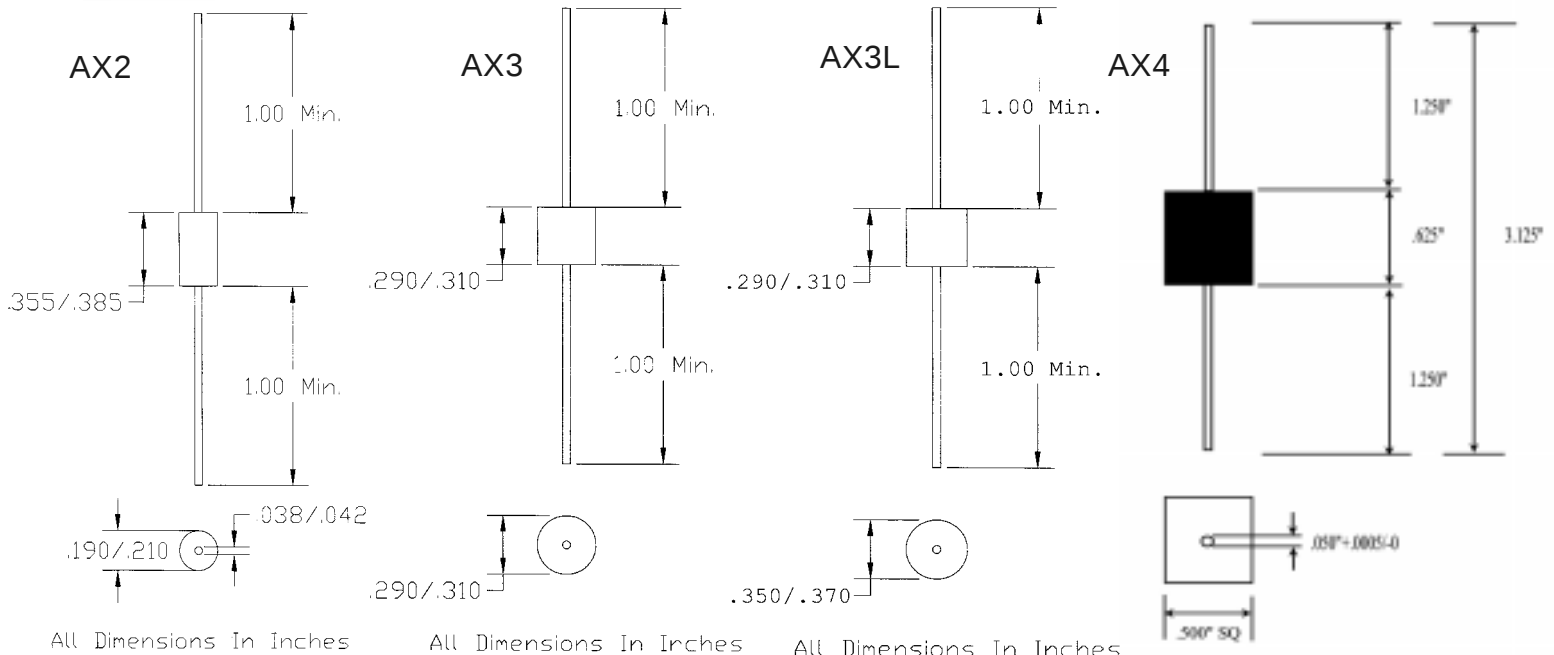


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## CUSTOM AXIAL TRANSIENT SUPPRESSOR SPECIFICATIONS GUIDE

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## CUSTOM AXIAL TRANSIENT SUPPRESSOR SPECIFICATIONS GUIDE



### AXIAL LEAD SPECIFICATIONS

- ◆ Built Using Sussex Glass Passivated Dies
- ◆ Each Device Individually Inspected
- ◆ Molded Epoxy Package
- ◆ Operating Temperature: -65 to 175°C
- ◆ Storage Temperature: -65 to 175°C
- ◆ Marked With Sussex Logo, Part Number, and Cathode Band on Unipolar Types
- ◆ Solvent Resistant Marking
- ◆ Plated Leads, Solderable Per MIL-STD-750

\*\*\*\* To decide what axial lead device is right for you, choose the size of the axial lead which best suits your application. Then go to the Chips and Cells section of the catalog/web and pick out the chip which will best suit your needs. Which size do you use? See the list below under DEVICE SIZES and for each coded axial type is a particular range of chips that fit in that package. Can't find what you need exactly, call our sales team and we can help you decide in no time.\*\*\*\*

## CUSTOM ORDERING SPECIFIER

**AX2 - SZU 16 - 64 - 88 - 3 -**

DIE SIZE

DIE SPECIFICATIONS

FOR MULTI-CHIP  
ASSEMBLY  
CONTACT FACTORY

| DEVICE SIZES |                 |
|--------------|-----------------|
| CODE         | CHIP SIZES      |
| AX2          | 3-16            |
| AX3          | 16-35           |
| AX3L         | 40              |
| AX4          | contact factory |

| POLARITY CODE |           |
|---------------|-----------|
| CODE          | POLARITY  |
| SZU           | UNIPOLAR  |
| SZZ           | BIPOLAR   |
| SZ            | ZENER     |
| S             | RECTIFIER |

**TVS:** REVERSE BREAKDOWN VOLTAGE ( $V_{BR}$ )  
**ZENER:** NOMINAL ZENER VOLTAGE ( $V_Z$ )  
**RECTIFIER:** PIV

**TVS:** CLAMPING VOLTAGE ( $V_{CL}$ )  
**ZENER:** %TOLERANCE  
**RECTIFIER:** trr

FOR INFORMATION REGARDING SUSSEX SEMICONDUCTOR DIES SEE OUR CHIPS AND CELLS CATALOG

**TVS:** %TOLERANCE  
**ZENER:** TEST CURRENT (mA)