



Micro Commercial Components  
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## 3KP5.0(C)(A) THRU 3KP170(C)(A)

### Features

- 3000 Watts Peak Power
- Low Inductance
- Unidirectional and Bidirectional unit
- Voltage Range: 5.0 to 170 Volts.

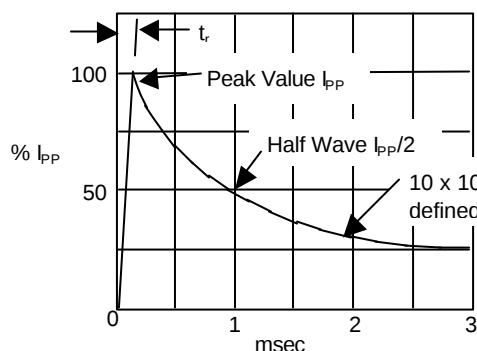
### Mechanical Data

- Case: Molded Plastic
- Polarity: Color band denotes cathode.
- Terminals: Axial leads, solderable per MIL-STD-202, Methode 208

### Maximum Ratings

- Operating Temperature:  $-50^{\circ}\text{C}$  to  $+150^{\circ}\text{C}$
- Storage Temperature:  $-50^{\circ}\text{C}$  to  $+150^{\circ}\text{C}$
- 3000 watts of Peak Power Dissipation (10X1000 us)
- Forward Surge Current: 200 Amps, 1/120 sec @  $25^{\circ}\text{C}$
- $T_{\text{clamping}}$  (0 volts to  $V_{\text{(BR)}}$  min): less than  $1 \times 10^{-12}$  seconds

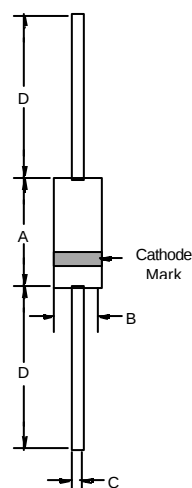
Figure 1 - Pulse Waveform



Peak Pulse Current (%  $I_{PP}$ ) - Versus - Time (t)

Test wave  
form  
parameters:  
 $t = 10 \text{ usec}$

3KP



| DIMENSIONS |        |      |       |      |      |
|------------|--------|------|-------|------|------|
| DIM        | INCHES |      | MM    |      | NOTE |
|            | MIN    | MAX  | MIN   | MAX  |      |
| A          | .365   | .375 | 9.27  | 9.53 |      |
| B          | .240   | .250 | 6.10  | 6.35 |      |
| C          | .049   | .050 | 1.25  | 1.27 |      |
| D          | 1.100  | ---  | 27.94 | ---  |      |

# 3KP Series



| MCC<br>PART NUMBER | REVERSE<br>STAND-OFF<br>VOLTAGE<br>$V_{WM}$ | BREAKDOWN VOLTAGE<br>$V_{BR}$ @ $I_T$<br>(VOLTS) |      |            | MAXIMUM<br>CLAMPING<br>VOLTAGE @ $I_{PP}$ | PEAK PULSE<br>CURRENT<br>$I_{PP}$ | MAXIMUM REVERSE<br>LEAKAGE @ $V_{WM}$<br>$I_0$ |
|--------------------|---------------------------------------------|--------------------------------------------------|------|------------|-------------------------------------------|-----------------------------------|------------------------------------------------|
|                    | (VOLTS)                                     | MIN                                              | MAX  | $I_T$ (mA) | (VOLTS)                                   | (AMPS)                            | ( $\mu A$ )                                    |
| 3KP5.0             | 5.0                                         | 6.40                                             | 7.30 | 10         | 9.6                                       | 312.5                             | 1000                                           |
| 3KP5.0A            | 5.0                                         | 6.40                                             | 7.00 | 10         | 9.2                                       | 326.0                             | 1000                                           |
| 3KP6.0             | 6.0                                         | 6.67                                             | 8.15 | 10         | 11.4                                      | 263.2                             | 1000                                           |
| 3KP6.0A            | 6.0                                         | 6.67                                             | 7.37 | 10         | 10.3                                      | 291.3                             | 1000                                           |
| 3KP6.5             | 6.5                                         | 7.22                                             | 8.82 | 10         | 12.3                                      | 243.9                             | 500                                            |
| 3KP6.5A            | 6.5                                         | 7.22                                             | 7.98 | 10         | 11.2                                      | 267.9                             | 500                                            |
| 3KP7.0             | 7.0                                         | 7.78                                             | 9.51 | 10         | 13.3                                      | 225.6                             | 200                                            |
| 3KP7.0A            | 7.0                                         | 7.78                                             | 8.60 | 10         | 12.0                                      | 250.0                             | 200                                            |
| 3KP7.5             | 7.5                                         | 8.33                                             | 10.2 | 1          | 14.3                                      | 209.8                             | 100                                            |
| 3KP7.5A            | 7.5                                         | 8.33                                             | 9.21 | 1          | 12.9                                      | 232.6                             | 100                                            |
| 3KP8.0             | 8.0                                         | 8.89                                             | 10.9 | 1          | 15.0                                      | 200.0                             | 50                                             |
| 3KP8.0A            | 8.0                                         | 8.89                                             | 9.83 | 1          | 13.6                                      | 220.6                             | 50                                             |
| 3KP8.5             | 8.5                                         | 9.44                                             | 11.5 | 1          | 15.9                                      | 188.6                             | 25                                             |
| 3KP8.5A            | 8.5                                         | 9.44                                             | 10.4 | 1          | 14.4                                      | 208.4                             | 25                                             |
| 3KP9.0             | 9.0                                         | 10.0                                             | 12.2 | 1          | 16.9                                      | 177.4                             | 10                                             |
| 3KP9.0A            | 9.0                                         | 10.0                                             | 11.1 | 1          | 15.4                                      | 194.8                             | 10                                             |
| 3KP10              | 10                                          | 11.1                                             | 13.6 | 1          | 18.8                                      | 159.6                             | 5                                              |
| 3KP10A             | 10                                          | 11.1                                             | 12.3 | 1          | 17.0                                      | 176.4                             | 5                                              |
| 3KP11              | 11                                          | 12.2                                             | 14.9 | 1          | 20.1                                      | 149.2                             | 5                                              |
| 3KP11A             | 11                                          | 12.2                                             | 13.5 | 1          | 18.2                                      | 164.8                             | 5                                              |
| 3KP12              | 12                                          | 13.3                                             | 16.3 | 1          | 22.0                                      | 136.4                             | 5                                              |
| 3KP12A             | 12                                          | 13.3                                             | 14.7 | 1          | 19.9                                      | 150.6                             | 5                                              |
| 3KP13              | 13                                          | 14.4                                             | 17.6 | 1          | 23.8                                      | 126.0                             | 5                                              |
| 3KP13A             | 13                                          | 14.4                                             | 15.9 | 1          | 21.5                                      | 139.4                             | 5                                              |
| 3KP14              | 14                                          | 15.6                                             | 19.1 | 1          | 25.8                                      | 116.2                             | 5                                              |
| 3KP14A             | 14                                          | 15.6                                             | 17.2 | 1          | 23.2                                      | 129.4                             | 5                                              |
| 3KP15              | 15                                          | 16.7                                             | 20.4 | 1          | 26.9                                      | 111.6                             | 5                                              |
| 3KP15A             | 15                                          | 16.7                                             | 18.5 | 1          | 24.4                                      | 123.0                             | 5                                              |
| 3KP16              | 16                                          | 17.8                                             | 21.8 | 1          | 28.8                                      | 104.2                             | 5                                              |
| 3KP16A             | 16                                          | 17.8                                             | 19.7 | 1          | 26.0                                      | 115.4                             | 5                                              |
| 3KP17              | 17                                          | 18.9                                             | 23.1 | 1          | 30.5                                      | 98.4                              | 5                                              |
| 3KP17A             | 17                                          | 18.9                                             | 20.9 | 1          | 27.6                                      | 106.6                             | 5                                              |
| 3KP18              | 18                                          | 20.0                                             | 24.4 | 1          | 32.2                                      | 93.2                              | 5                                              |
| 3KP18A             | 18                                          | 20.0                                             | 22.1 | 1          | 29.2                                      | 102.8                             | 5                                              |
| 3KP20              | 20                                          | 22.2                                             | 27.1 | 1          | 35.8                                      | 83.8                              | 5                                              |
| 3KP20A             | 20                                          | 22.2                                             | 24.5 | 1          | 32.4                                      | 92.6                              | 5                                              |
| 3KP22              | 22                                          | 24.4                                             | 29.8 | 1          | 39.4                                      | 76.2                              | 5                                              |
| 3KP22A             | 22                                          | 24.4                                             | 26.9 | 1          | 35.5                                      | 84.4                              | 5                                              |
| 3KP24              | 24                                          | 26.7                                             | 32.6 | 1          | 43.0                                      | 69.8                              | 5                                              |
| 3KP24A             | 24                                          | 26.7                                             | 29.5 | 1          | 38.9                                      | 77.2                              | 5                                              |
| 3KP26              | 26                                          | 28.9                                             | 35.3 | 1          | 46.6                                      | 64.4                              | 5                                              |
| 3KP26A             | 26                                          | 28.9                                             | 31.9 | 1          | 42.1                                      | 71.2                              | 5                                              |
| 3KP28              | 28                                          | 31.1                                             | 38.0 | 1          | 50.0                                      | 60.0                              | 5                                              |
| 3KP28A             | 28                                          | 31.1                                             | 34.4 | 1          | 45.4                                      | 66.0                              | 5                                              |
| 3KP30              | 30                                          | 33.3                                             | 40.7 | 1          | 53.5                                      | 56.0                              | 5                                              |
| 3KP30A             | 30                                          | 33.3                                             | 36.8 | 1          | 48.4                                      | 62.0                              | 5                                              |
| 3KP33              | 33                                          | 36.7                                             | 44.9 | 1          | 59.0                                      | 50.4                              | 5                                              |
| 3KP33A             | 33                                          | 36.7                                             | 40.6 | 1          | 53.3                                      | 56.2                              | 5                                              |
| 3KP36              | 36                                          | 40.0                                             | 48.9 | 1          | 64.3                                      | 46.6                              | 5                                              |
| 3KP36A             | 36                                          | 40.0                                             | 44.2 | 1          | 58.1                                      | 51.6                              | 5                                              |
| 3KP40              | 40                                          | 44.4                                             | 54.3 | 1          | 71.4                                      | 42.0                              | 5                                              |
| 3KP40A             | 40                                          | 44.4                                             | 49.1 | 1          | 64.5                                      | 46.4                              | 5                                              |
| 3KP43              | 43                                          | 47.8                                             | 58.4 | 1          | 76.7                                      | 39.2                              | 5                                              |
| 3KP43A             | 43                                          | 47.8                                             | 52.8 | 1          | 69.4                                      | 43.2                              | 5                                              |
| 3KP45              | 45                                          | 50.0                                             | 61.1 | 1          | 80.3                                      | 37.4                              | 5                                              |
| 3KP45A             | 45                                          | 50.0                                             | 55.3 | 1          | 72.7                                      | 41.2                              | 5                                              |
| 3KP48              | 48                                          | 53.3                                             | 65.1 | 1          | 85.5                                      | 35.0                              | 5                                              |

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|--------------------|---------------------------------------------|--------------------------------------------------|------|------------|-------------------------------------------|-----------------------------------|------------------------------------------------|
|                    | (VOLTS)                                     | MIN                                              | MAX  | $I_T$ (mA) | (VOLTS)                                   | (AMPS)                            | ( $\mu A$ )                                    |
| 3KP48A             | 48                                          | 53.3                                             | 58.9 | 1          | 77.4                                      | 38.8                              | 5                                              |
| 3KP51              | 51                                          | 56.7                                             | 69.3 | 1          | 91.1                                      | 37.0                              | 5                                              |
| 3KP51A             | 51                                          | 56.7                                             | 62.7 | 1          | 82.4                                      | 36.4                              | 5                                              |
| 3KP54              | 54                                          | 60.0                                             | 73.3 | 1          | 96.3                                      | 31.2                              | 5                                              |
| 3KP54A             | 54                                          | 60.0                                             | 66.3 | 1          | 87.1                                      | 34.4                              | 5                                              |
| 3KP58              | 58                                          | 64.4                                             | 78.7 | 1          | 103                                       | 39.2                              | 5                                              |
| 3KP58A             | 58                                          | 64.4                                             | 71.2 | 1          | 93.6                                      | 32.0                              | 5                                              |
| 3KP60              | 60                                          | 66.7                                             | 81.5 | 1          | 107                                       | 28.0                              | 5                                              |
| 3KP60A             | 60                                          | 66.7                                             | 73.7 | 1          | 96.8                                      | 31.0                              | 5                                              |
| 3KP64              | 64                                          | 71.1                                             | 86.9 | 1          | 114                                       | 26.4                              | 5                                              |
| 3KP64A             | 64                                          | 71.1                                             | 78.6 | 1          | 103                                       | 29.2                              | 5                                              |
| 3KP70              | 70                                          | 77.8                                             | 95.1 | 1          | 125                                       | 24.0                              | 5                                              |
| 3KP70A             | 70                                          | 77.8                                             | 86.0 | 1          | 113                                       | 26.6                              | 5                                              |
| 3KP75              | 75                                          | 83.3                                             | 102  | 1          | 134                                       | 22.4                              | 5                                              |
| 3KP75A             | 75                                          | 83.3                                             | 92.1 | 1          | 121                                       | 24.8                              | 5                                              |
| 3KP78              | 78                                          | 86.7                                             | 106  | 1          | 139                                       | 21.6                              | 5                                              |
| 3KP78A             | 78                                          | 86.7                                             | 95.8 | 1          | 126                                       | 22.8                              | 5                                              |
| 3KP85              | 85                                          | 94.4                                             | 115  | 1          | 151                                       | 19.8                              | 5                                              |
| 3KP85A             | 85                                          | 94.4                                             | 104  | 1          | 137                                       | 20.8                              | 5                                              |
| 3KP90              | 90                                          | 100                                              | 122  | 1          | 160                                       | 18.8                              | 5                                              |
| 3KP90A             | 90                                          | 100                                              | 111  | 1          | 146                                       | 20.6                              | 5                                              |
| 3KP100             | 100                                         | 111                                              | 136  | 1          | 179                                       | 16.8                              | 5                                              |
| 3KP100A            | 100                                         | 111                                              | 123  | 1          | 162                                       | 18.6                              | 5                                              |
| 3KP110             | 110                                         | 122                                              | 149  | 1          | 196                                       | 15.4                              | 5                                              |
| 3KP110A            | 110                                         | 122                                              | 135  | 1          | 177                                       | 16.8                              | 5                                              |
| 3KP120             | 120                                         | 133                                              | 163  | 1          | 214                                       | 14.0                              | 5                                              |
| 3KP120A            | 120                                         | 133                                              | 147  | 1          | 193                                       | 15.6                              | 5                                              |
| 3KP130             | 130                                         | 144                                              | 176  | 1          | 231                                       | 13.0                              | 5                                              |
| 3KP130A            | 130                                         | 144                                              | 159  | 1          | 209                                       | 14.4                              | 5                                              |
| 3KP150             | 150                                         | 167                                              | 204  | 1          | 268                                       | 11.2                              | 5                                              |
| 3KP150A            | 150                                         | 167                                              | 185  | 1          | 243                                       | 12.4                              | 5                                              |
| 3KP160             | 160                                         | 178                                              | 218  | 1          | 287                                       | 10.4                              | 5                                              |
| 3KP160A            | 160                                         | 178                                              | 197  | 1          | 259                                       | 11.6                              | 5                                              |
| 3KP170             | 170                                         | 189                                              | 231  | 1          | 304                                       | 9.8                               | 5                                              |
| 3KP170A            | 170                                         | 189                                              | 209  | 1          | 275                                       | 11.0                              | 5                                              |

Figure 2 - Derating Curve

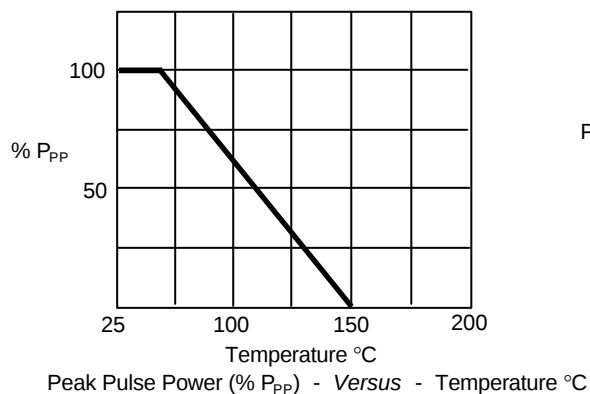
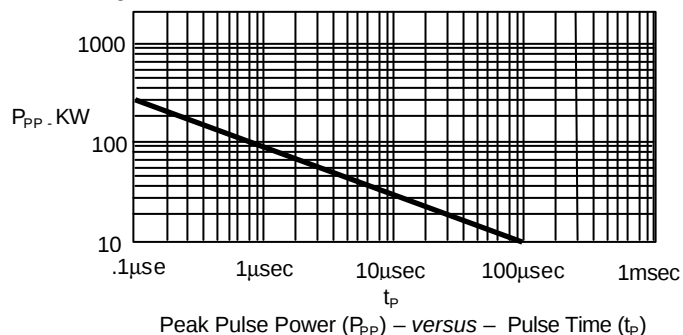


Figure 3



## 3KP Series



### ORDER INFORMATION:

P/N: 3KPXXX-\*

\* ----- B (Bulk Packaging)

\* ----- T (Tape and Reel Packaging)

For Example:

3KP28A-T means MCC P/N is 3KP28A, tape and reel package.