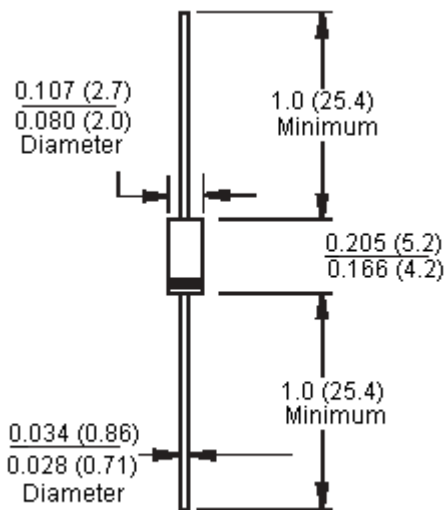


## Features:

- Plastic package.
- Exceeds environmental standards of MIL-STD-19500.
- 400W surge capability at 10 x 1000 $\mu$ s waveform, duty cycle: 0.01%.
- Excellent clamping capability.
- Low impedance surge resistance.
- Very fast response timeV.
- Typical  $I_R$  less than 1 $\mu$ A above 10V.
- High temperature soldering guaranteed: 260°C/10 seconds/0.375 inch (9.5mm) lead length/5lbs. (2.3kg) tension.

## DO-41



Dimensions : Inches (Millimetres)

## Mechanical Data

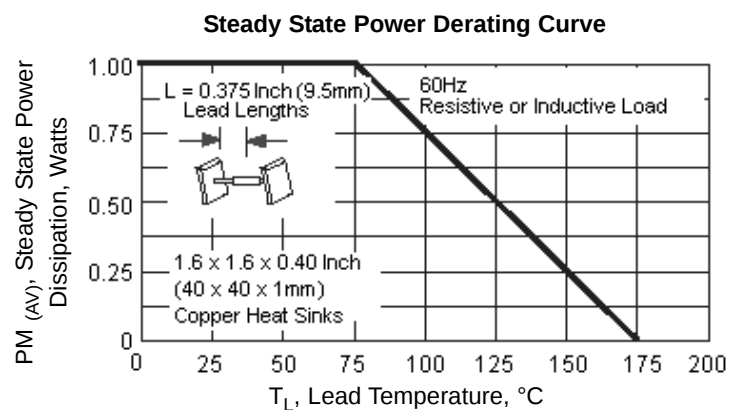
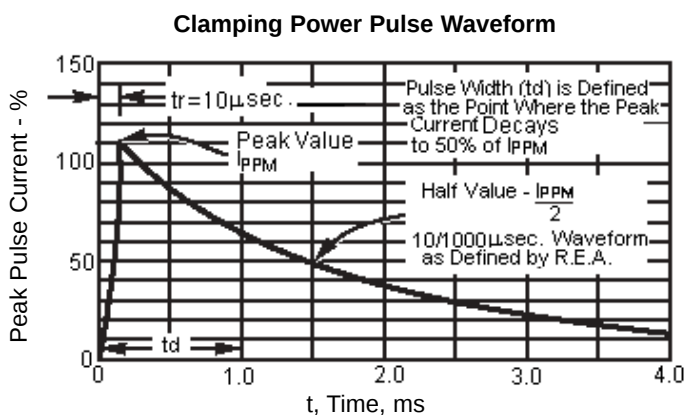
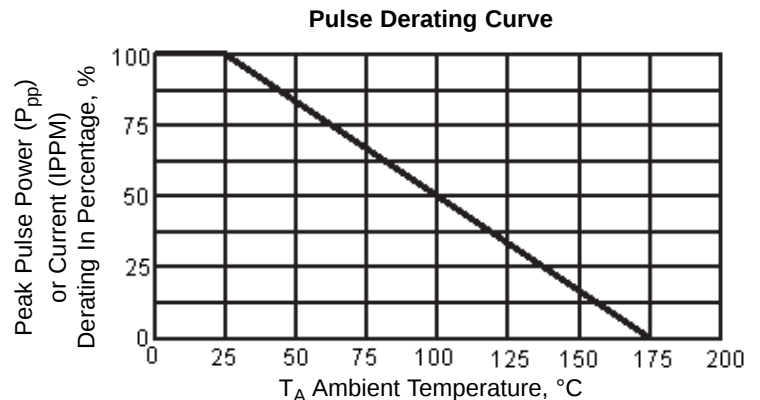
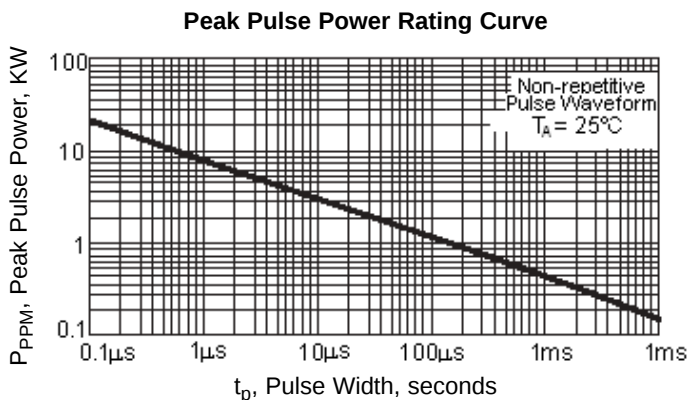
Case : Molded plastic.  
Lead : Axial leads, solderable per MIL-STD-202, Method 208.  
Polarity : Color band denotes cathode except bipolar.  
Weight : 0.34 gram.

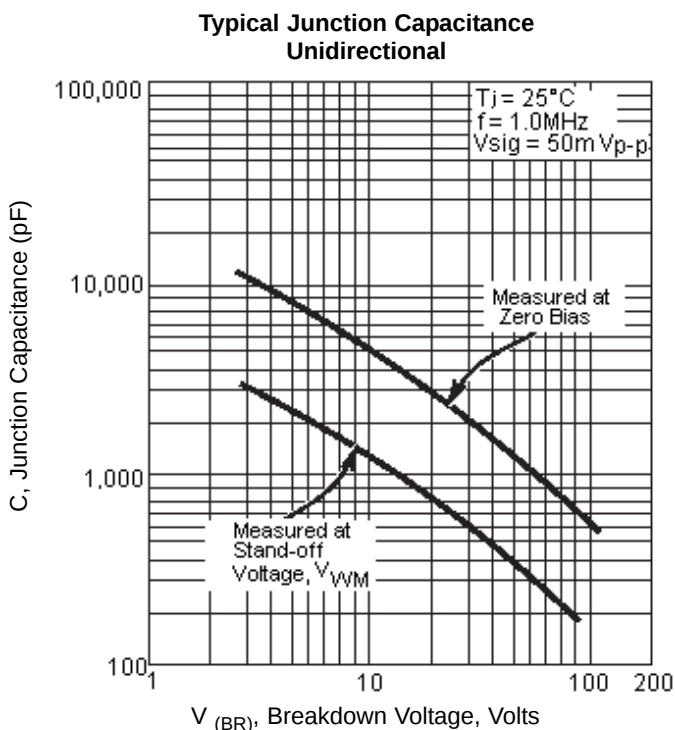
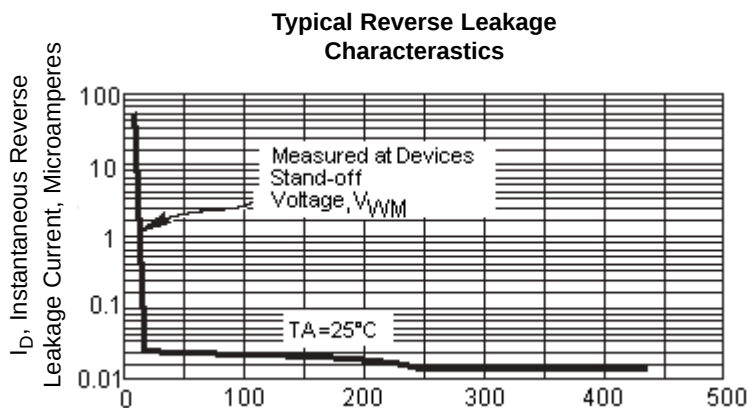
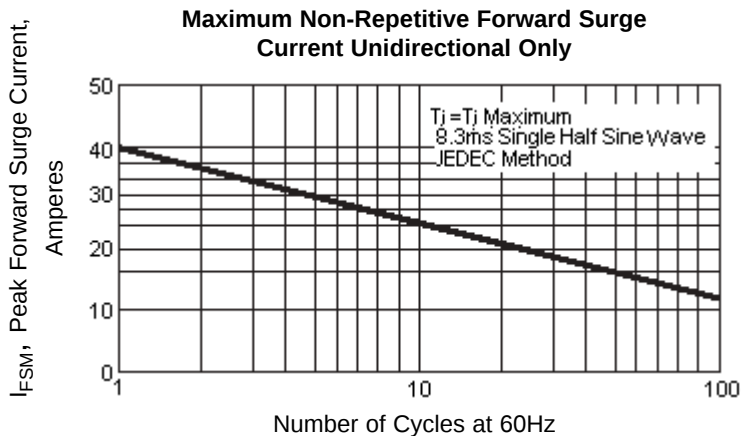
## Maximum Ratings and Electrical Characteristics ( $T_A = 25^\circ\text{C}$ )

| Type Number                                                                                                   | Symbol          | Value        | Units              |
|---------------------------------------------------------------------------------------------------------------|-----------------|--------------|--------------------|
| Peak Pulse Power Dissipation at $T_A = 25^\circ\text{C}$ , $T_p = 1\text{ms}$ (Note 1)                        | $P_{PP}$        | Minimum 400  | Watts              |
| Steady State Power Dissipation at $T_L = 75^\circ\text{C}$<br>Lead Lengths 0.375 Inch 9.5mm (Note 2)          | $P_D$           | 1.0          |                    |
| Peak Forward Surge Current, 8.3ms Single Half Sine-wave<br>Superimposed on Rated Load (JEDEC method) (Note 3) | $I_{FSM}$       | 40           | Amps               |
| Junction to Leads                                                                                             | $R_{\theta JL}$ | 60           | $^\circ\text{C/W}$ |
| Junction to Ambient on Printed Circuit.<br>L Lead = 10mm                                                      | $R_{\theta JA}$ | 100          |                    |
| Operating and Storage Temperature Range                                                                       | $T_J, T_{STG}$  | -65 to + 175 | $^\circ\text{C}$   |

- Notes: 1. Non-repetitive current pulse, per derated above  $T_A = 25^\circ\text{C}$ .  
 2. Mounted on copper pad area of 1.6 x 1.6 inch (40 x 40mm).  
 3. Measured on 8.3ms single half sine-wave or equivalent square wave, duty cycle = 4 pulses per minute maximum.

## Ratings and Characteristic Curves





## Electrical Characteristics ( $T_A=25^{\circ}\text{C}$ unless otherwise noted)

| Device         |               | Breakdown Voltage $V_{BR}$ at $I_R$ (V) <sup>(1)</sup> |         | Test Current $I_T$ (mA) | Stand-off Voltage $V_{WM}$ (Volts) | Maximum Reverse Leakage at $V_{WM}$ $I_o$ (uA) <sup>(3)</sup> | Maximum Peak Pulse Current $I_{PPM}$ (Amps) | Maximum Clamping Voltage at $I_{PPM}$ $V_c$ (Volts) | Maximum Temperature Coefficient of $V_{(BR)}$ ( $^{\circ}\text{C}$ ) |
|----------------|---------------|--------------------------------------------------------|---------|-------------------------|------------------------------------|---------------------------------------------------------------|---------------------------------------------|-----------------------------------------------------|----------------------------------------------------------------------|
| Unidirectional | Bidirectional | Minimum                                                | Maximum |                         |                                    |                                                               |                                             |                                                     |                                                                      |
| BZW04-11       | BZW04-11B     | 12.4                                                   | 13.7    | 1.0                     | 11.1                               | 5.0                                                           | 22.0                                        | 18.2                                                | 0.081                                                                |
| BZW04-128      | BZW04-128B    | 143.0                                                  | 158.0   |                         | 128.0                              | 1.0                                                           | 2.0                                         | 207.0                                               | 0.108                                                                |
| BZW04-13       | BZW04-13B     | 14.3                                                   | 15.8    |                         | 12.8                               | 5.0                                                           | 19.0                                        | 21.2                                                | 0.084                                                                |
| BZW04-14       | BZW04-14B     | 15.2                                                   | 16.8    |                         | 13.6                               | 1.0                                                           | 17.8                                        | 22.5                                                | 0.083                                                                |
| BZW04-145      | BZW04-145B    | 161.0                                                  | 179.0   |                         | 145                                |                                                               | 1.7                                         | 234.0                                               | 0.108                                                                |
| BZW04-15       | BZW04-15B     | 17.1                                                   | 18.9    |                         | 15.3                               |                                                               | 16.0                                        | 25.2                                                | 0.088                                                                |
| BZW04-154      | BZW04-154B    | 171.0                                                  | 189.0   |                         | 154.0                              |                                                               | 1.6                                         | 246.0                                               | 0.108                                                                |
| BZW04-17       | BZW04-17B     | 19.0                                                   | 21.0    |                         | 17.1                               |                                                               | 14.5                                        | 27.7                                                | 0.090                                                                |
| BZW04-171      | BZW04-171B    | 190.0                                                  | 210.0   |                         | 171.0                              |                                                               | 1.5                                         | 274.0                                               | 0.108                                                                |
| BZW04-19       | BZW04-19B     | 20.9                                                   | 23.1    |                         | 18.8                               |                                                               | 13.0                                        | 30.6                                                | 0.092                                                                |
| BZW04-20       | BZW04-20B     | 22.8                                                   | 25.2    |                         | 20.5                               |                                                               | 12.0                                        | 33.2                                                | 0.094                                                                |
| BZW04-23       | BZW04-23B     | 25.7                                                   | 28.4    |                         | 23.1                               |                                                               | 10.7                                        | 37.5                                                | 0.096                                                                |
| BZW04-26       | BZW04-26B     | 28.5                                                   | 31.5    |                         | 25.6                               |                                                               | 9.6                                         | 41.5                                                | 0.097                                                                |
| BZW04-28       | BZW04-28B     | 31.4                                                   | 34.7    |                         | 28.2                               |                                                               | 8.8                                         | 45.7                                                | 0.098                                                                |
| BZW04-31       | BZW04-31B     | 34.2                                                   | 37.8    |                         | 30.8                               |                                                               | 8.0                                         | 49.9                                                | 0.099                                                                |
| BZW04-342      | BZW04-342B    | 380.0                                                  | 420.0   |                         | 342.0                              |                                                               | 0.75                                        | 548.0                                               | 0.110                                                                |
| BZW04-376      | BZW04-376B    | 418.0                                                  | 462.0   |                         | 376.0                              |                                                               | 0.67                                        | 603.0                                               |                                                                      |
| BZW04-40       | BZW04-40B     | 44.7                                                   | 49.4    |                         | 40.2                               |                                                               | 6.2                                         | 64.8                                                | 0.101                                                                |
| BZW04-44       | BZW04-44B     | 48.5                                                   | 53.6    |                         | 43.6                               |                                                               | 5.7                                         | 70.1                                                | 0.102                                                                |
| BZW04-48       | BZW04-48B     | 53.2                                                   | 58.8    |                         | 47.8                               |                                                               | 5.2                                         | 77.0                                                | 0.103                                                                |
| BZW04-64       | BZW04-64B     | 71.3                                                   | 78.8    |                         | 64.1                               |                                                               | 3.9                                         | 103.0                                               | 0.105                                                                |
| BZW04-85       | BZW04-85B     | 95.0                                                   | 105.0   |                         | 85.5                               |                                                               | 2.9                                         | 137.0                                               | 0.106                                                                |

- Notes:
1. Pulse test:  $t_p < 50\text{ms}$ .
  2. All terms and symbols are consistent with ANSI/IEEE C62.35.
  3. For bidirectional types having  $V_{WM}$  of 10 volts and less, the  $I_D$  limit is doubled.

## Notes:

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