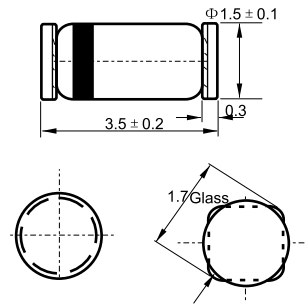




## MINI-MELF

### Features

- ✧ Zener voltage range 2.0 to 75 volts
- ✧ LL-34(Mini-MELF) package
- ✧ Surface device type mounting
- ✧ Hermetically sealed glass
- ✧ Compression Bonded Construction
- ✧ All external surfaces are corrosion resistant and terminals are readily solderable
- ✧ RoHS compliant
- ✧ Matte Tin(Sn) lead finish
- ✧ Blue color band indicates negative polarity



Dimension in millimeters

### Maximum Ratings and Electrical Characteristics

Rating at 25 °C ambient temperature unless otherwise specified.

| Type Number                             | Symbol                            | Value        | Units |
|---|-----------------------------------|--------------|-------|
| Power Dissipation                       | P <sub>tot</sub>                  | 500          | mW    |
| Operating and Storage Temperature Range | T <sub>J</sub> , T <sub>STG</sub> | -65 to + 200 | °C    |

Notes: These ratings are limiting values above which the serviceability of the diode may be impaired

### RATINGS AND CHARACTERISTIC CURVES (BZV55B SERIES)

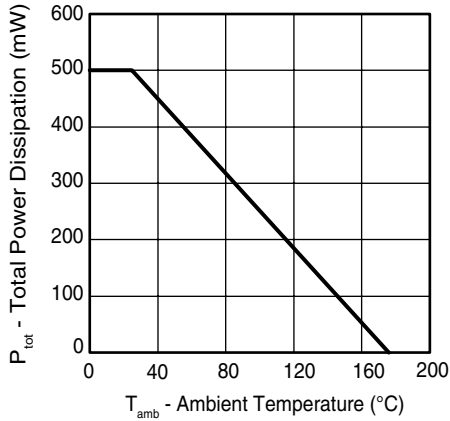


Figure 1. Total Power Dissipation vs. Ambient Temperature

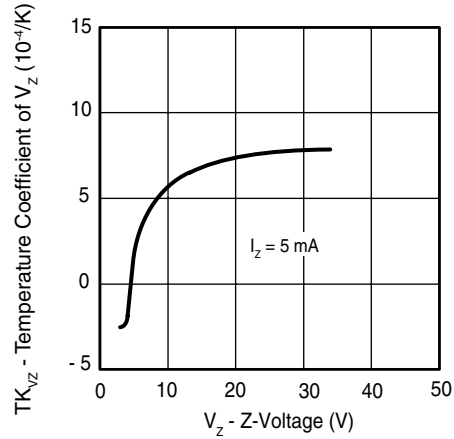


Figure 4. Temperature Coefficient of Vz vs. Z-Voltage

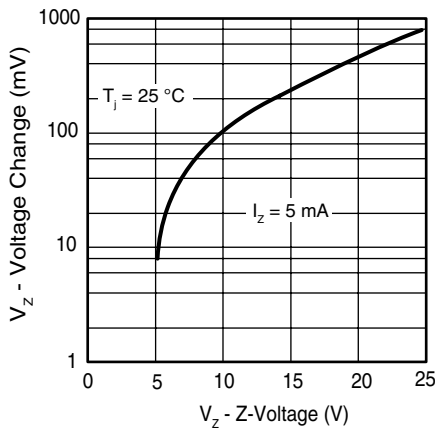


Figure 2. Typical Change of Working Voltage under Operating Conditions at  $T_{amb}=25^{\circ}C$

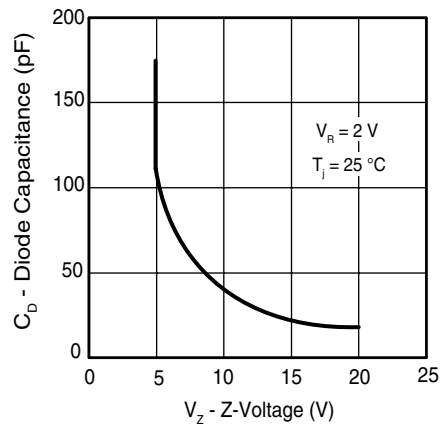


Figure 5. Diode Capacitance vs. Z-Voltage

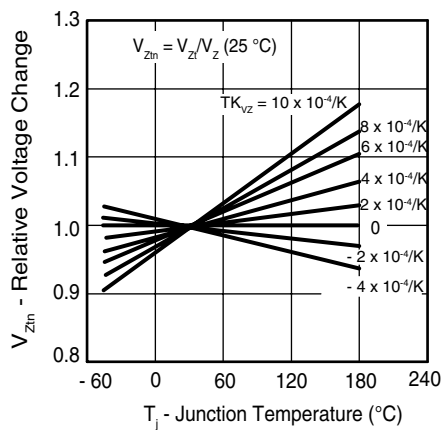


Figure 3. Typical Change of Working Voltage vs. Junction Temperature

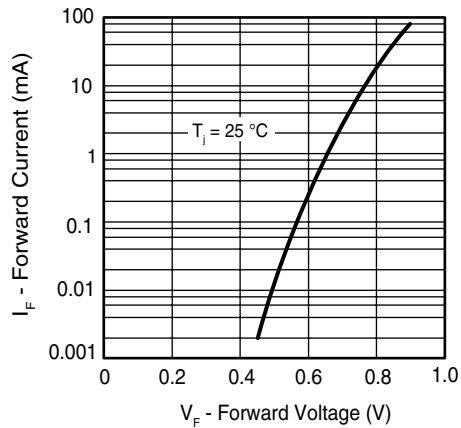


Figure 6. Forward Current vs. Forward Voltage

RATINGS AND CHARACTERISTIC CURVES (BZV55B SERIES)

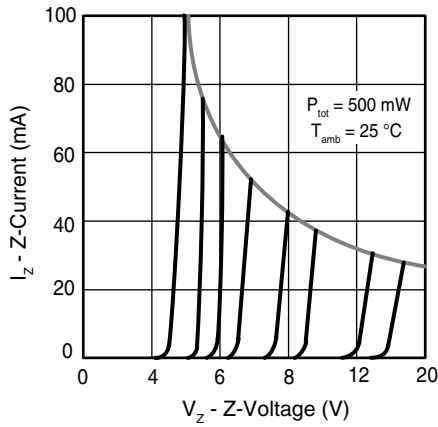


Figure 7. Z-Current vs. Z-Voltage

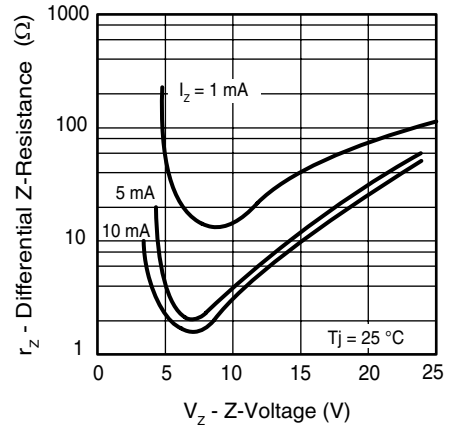


Figure 9. Differential Z-Resistance vs. Z-Voltage

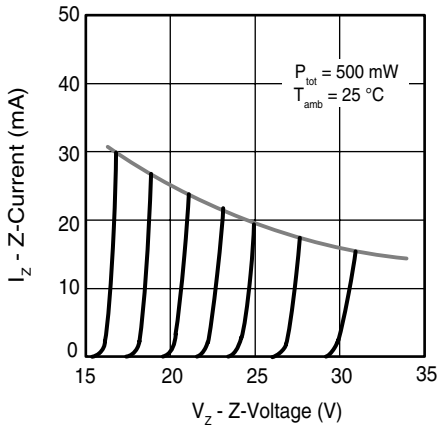


Figure 8. Z-Current vs. Z-Voltage

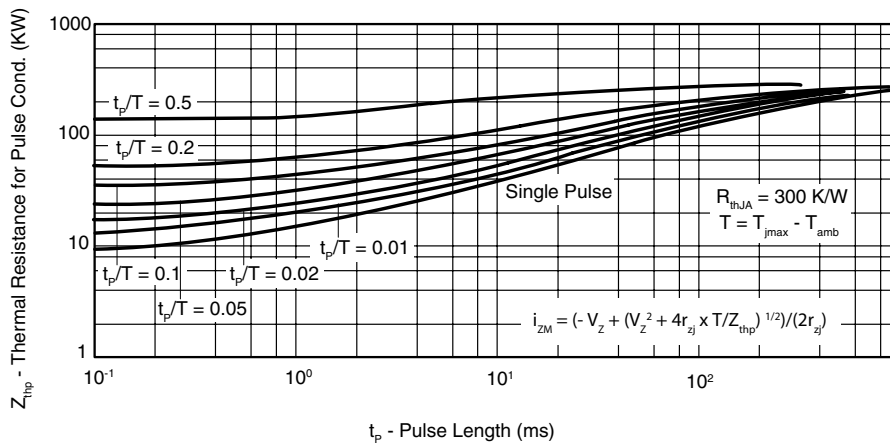


Figure 10. Thermal Response

**ELECTRICAL CHARACTERISTICS (TA=25°C unless otherwise noted)**

| Type Number | V <sub>Z</sub> @ I <sub>ZT</sub><br>(Volts) |                           | I <sub>ZT</sub><br>mA | Z <sub>ZT</sub> @ I <sub>ZT</sub><br>Ohms<br>Max | I <sub>ZK</sub><br>mA | Z <sub>ZK</sub> @ I <sub>ZK</sub><br>Ohms | IR @ VR<br>uA<br>Max | VR<br>V |
|-------------|---|---------------------------|-----------------------|--|-----------------------|---|----------------------|---------|
|             | V <sub>Z</sub><br>Min (V)                   | V <sub>Z</sub><br>Max (V) |                       |  |                       |   |                      |         |
| BZV55B2V0   | 1.96  | 2.04                      | 5                     | 100  | 1.0                   | 600                                       | 50                   | 1.0     |
| BZV55B2V2   | 2.16  | 2.24                      | 5                     | 100  | 1.0                   | 600                                       | 50                   | 1.0     |
| BZV55B2V4   | 2.35  | 2.45                      | 5                     | 85   | 1.0                   | 600                                       | 50                   | 1.0     |
| BZV55B2V7   | 2.65  | 2.75                      | 5                     | 85   | 1.0                   | 600                                       | 10                   | 1.0     |
| BZV55B3V0   | 2.94  | 3.06                      | 5                     | 85   | 1.0                   | 600                                       | 4                    | 1.0     |
| BZV55B3V3   | 3.23  | 3.37                      | 5                     | 85   | 1.0                   | 600                                       | 2                    | 1.0     |
| BZV55B3V6   | 3.53  | 3.67                      | 5                     | 85   | 1.0                   | 600                                       | 2                    | 1.0     |
| BZV55B3V9   | 3.82  | 3.98                      | 5                     | 85   | 1.0                   | 600                                       | 2                    | 1.0     |
| BZV55B4V3   | 4.21  | 4.39                      | 5                     | 75   | 1.0                   | 600                                       | 1                    | 1.0     |
| BZV55B4V7   | 4.61  | 4.79                      | 5                     | 60   | 1.0                   | 600                                       | 0.5                  | 1.0     |
| BZV55B5V1   | 5.00  | 5.2                       | 5                     | 35   | 1.0                   | 550                                       | 0.1                  | 1.0     |
| BZV55B5V6   | 5.49  | 5.71                      | 5                     | 25   | 1.0                   | 450                                       | 0.1                  | 1.0     |
| BZV55B6V2   | 6.08  | 6.32                      | 5                     | 10   | 1.0                   | 200                                       | 0.1                  | 2.0     |
| BZV55B6V8   | 6.66  | 6.94                      | 5                     | 8  | 1.0                   | 150                                       | 0.1                  | 3.0     |
| BZV55B7V5   | 7.35  | 7.65                      | 5                     | 7  | 1.0                   | 50  | 0.1                  | 5.0     |
| BZV55B8V2   | 8.04  | 8.36                      | 5                     | 7  | 1.0                   | 50  | 0.1                  | 6.2     |
| BZV55B9V1   | 8.92  | 9.28                      | 5                     | 10   | 1.0                   | 50  | 0.1                  | 6.8     |
| BZV55B10    | 9.80  | 10.2                      | 5                     | 15   | 1.0                   | 70  | 0.1                  | 7.5     |
| BZV55B11    | 10.78                                       | 11.22                     | 5                     | 20   | 1.0                   | 70  | 0.1                  | 8.2     |
| BZV55B12    | 11.76                                       | 12.24                     | 5                     | 20   | 1.0                   | 90  | 0.1                  | 9.1     |
| BZV55B13    | 12.74                                       | 13.26                     | 5                     | 26   | 1.0                   | 110                                       | 0.1                  | 10      |
| BZV55B15    | 14.70                                       | 15.30                     | 5                     | 30   | 1.0                   | 110                                       | 0.1                  | 11      |
| BZV55B16    | 15.68                                       | 16.32                     | 5                     | 40   | 1.0                   | 170                                       | 0.1                  | 12      |
| BZV55B18    | 17.64                                       | 18.36                     | 5                     | 50   | 1.0                   | 170                                       | 0.1                  | 13      |
| BZV55B20    | 19.60                                       | 20.40                     | 5                     | 55   | 1.0                   | 220                                       | 0.1                  | 15      |
| BZV55B22    | 21.56                                       | 22.44                     | 5                     | 55   | 1.0                   | 220                                       | 0.1                  | 16      |
| BZV55B24    | 23.52                                       | 24.48                     | 5                     | 80   | 1.0                   | 220                                       | 0.1                  | 18      |
| BZV55B27    | 26.46                                       | 27.54                     | 2                     | 80   | 1.0                   | 220                                       | 0.1                  | 20      |
| BZV55B30    | 29.40                                       | 30.60                     | 2                     | 80   | 1.0                   | 220                                       | 0.1                  | 22      |
| BZV55B33    | 32.34                                       | 33.66                     | 2                     | 80   | 1.0                   | 220                                       | 0.1                  | 24      |
| BZV55B36    | 35.28                                       | 36.72                     | 2                     | 80   | 1.0                   | 220                                       | 0.1                  | 27      |
| BZV55B39    | 38.22                                       | 39.78                     | 2                     | 90   | 0.5                   | 500                                       | 0.1                  | 28      |
| BZV55B43    | 42.14                                       | 43.86                     | 2                     | 90   | 0.5                   | 600                                       | 0.1                  | 32      |
| BZV55B47    | 46.06                                       | 47.94                     | 2                     | 110  | 0.5                   | 700                                       | 0.1                  | 35      |
| BZV55B51    | 49.98                                       | 52.02                     | 2                     | 125  | 0.5                   | 700                                       | 0.1                  | 38      |
| BZV55B56    | 54.88                                       | 57.12                     | 2                     | 135  | 0.5                   | 1000                                      | 0.1                  | 42      |
| BZV55B62    | 60.76                                       | 63.24                     | 2.5                   | 150  | 0.5                   | 1000                                      | 0.1                  | 47      |
| BZV55B68    | 66.64                                       | 69.36                     | 2.5                   | 160  | 0.5                   | 1000                                      | 0.1                  | 51      |
| BZV55B75    | 73.50                                       | 76.50                     | 2.5                   | 170  | 0.5                   | 1000                                      | 0.1                  | 56      |

VF Forward Voltage = 1.0v Maximum @ IF=100mA for all types.

- Notes:
1. The type numbers listed have zener voltage min/max limits as shown.
  2. The zener impedance is derived from the 60-cycle ac voltage, which results when an ac current having an rms value equal to 10% of the dc zener current (I<sub>ZT</sub> or I<sub>ZK</sub>) is superimposed to I<sub>ZT</sub> or I<sub>ZK</sub>.