

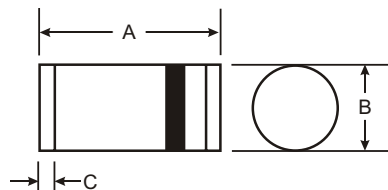
### Features

- 1.0W Power Dissipation
- 3.9V - 100V Nominal Zener Voltages
- Standard  $V_Z$  Tolerance is 5%

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USE SMAZ SERIES (SMA PACKAGE)

### Mechanical Data

- Case: MELF, Glass
- Terminals: Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Approx. Weight: 0.25 grams



| MELF                 |              |      |
|----------------------|--------------|------|
| Dim                  | Min          | Max  |
| A                    | 4.80         | 5.20 |
| B                    | 2.40         | 2.60 |
| C                    | 0.55 Nominal |      |
| All Dimensions in mm |              |      |

### Maximum Ratings @ $T_A = 25^\circ\text{C}$ unless otherwise specified

| Characteristic                               | Symbol          | Value       | Unit             |
|----------------------------------------------|-----------------|-------------|------------------|
| Zener Current (see Table page 2)             | $I_Z$           | $P_d/V_Z$   | mA               |
| Power Dissipation @ $T_A = 25^\circ\text{C}$ | $P_d$           | 1           | W                |
| Thermal Resistance - Junction to Ambient Air | $R_{\theta JA}$ | 170         | K/W              |
| Forward Voltage @ $I_F = 200\text{ mA}$      | $V_F$           | 1.2         | V                |
| Operating & Storage Temperature Range        | $T_j, T_{STG}$  | -65 to +200 | $^\circ\text{C}$ |

- Notes:
1. Measured under thermal equilibrium and DC ( $I_{ZT}$ ) test conditions.
  2. The Zener impedance is derived from the 60Hz AC voltage which results when an AC current having an RMS value equal to 10% of the Zener current ( $I_{ZT}$  or  $I_{ZK}$ ) is superimposed on  $I_{ZT}$  or  $I_{ZK}$ . Zener impedance is measured at two points to insure a sharp knee on the breakdown curve and to eliminate unstable units.

**Electrical Characteristics** @  $T_A = 25^\circ\text{C}$  unless otherwise specified

| Type Number | Nominal Zener Voltage (1) | Test Current | Maximum Zener Impedance (2) |                   |          | Maximum Reverse Leakage Current |         | Max Surge Current 8.3ms | Maximum Zener Current |
|-------------|---------------------------|--------------|-----------------------------|-------------------|----------|---------------------------------|---------|-------------------------|-----------------------|
|             | $V_Z @ I_{ZT}$            | $I_{ZT}$     | $Z_{ZT} @ I_{ZT}$           | $Z_{ZK} @ I_{ZK}$ | $I_{ZK}$ | $I_R$                           | @ $V_R$ | $I_{ZS}$                | $I_{ZM}$              |
|             | V                         | mA           | $\Omega$                    | $\Omega$          | mA       | $\mu\text{A}$                   | V       | mA                      | mA                    |
| ZM4728A     | 3.3                       | 76           | 10                          | 400               | 1.0      | 100                             | 1.0     | 1380                    | 276                   |
| ZM4729A     | 3.6                       | 69           | 10                          | 400               | 1.0      | 100                             | 1.0     | 1260                    | 252                   |
| ZM4730A     | 3.9                       | 64           | 9.0                         | 400               | 1.0      | 50                              | 1.0     | 1190                    | 234                   |
| ZM4731A     | 4.3                       | 58           | 9.0                         | 400               | 1.0      | 10                              | 1.0     | 1070                    | 217                   |
| ZM4732A     | 4.7                       | 53           | 8.0                         | 500               | 1.0      | 10                              | 1.0     | 970                     | 193                   |
| ZM4733A     | 5.1                       | 49           | 7.0                         | 550               | 1.0      | 10                              | 1.0     | 890                     | 178                   |
| ZM4734A     | 5.6                       | 45           | 5.0                         | 600               | 1.0      | 10                              | 2.0     | 810                     | 162                   |
| ZM4735A     | 6.2                       | 41           | 2.0                         | 700               | 1.0      | 10                              | 3.0     | 730                     | 146                   |
| ZM4736A     | 6.8                       | 37           | 3.5                         | 700               | 1.0      | 10                              | 4.0     | 660                     | 133                   |
| ZM4737A     | 7.5                       | 34           | 4.0                         | 700               | 0.5      | 10                              | 5.0     | 605                     | 121                   |
| ZM4738A     | 8.2                       | 31           | 4.5                         | 700               | 0.5      | 10                              | 6.0     | 550                     | 110                   |
| ZM4739A     | 9.1                       | 28           | 5.0                         | 700               | 0.5      | 10                              | 7.0     | 500                     | 100                   |
| ZM4740A     | 10                        | 25           | 7.0                         | 700               | 0.25     | 10                              | 7.6     | 454                     | 91                    |
| ZM4741A     | 11                        | 23           | 8.0                         | 700               | 0.25     | 5.0                             | 8.4     | 414                     | 83                    |
| ZM4742A     | 12                        | 21           | 9.0                         | 700               | 0.25     | 5.0                             | 9.1     | 380                     | 76                    |
| ZM4743A     | 13                        | 19           | 10                          | 700               | 0.25     | 5.0                             | 9.9     | 344                     | 69                    |
| ZM4744A     | 15                        | 17           | 14                          | 700               | 0.25     | 5.0                             | 11.4    | 304                     | 61                    |
| ZM4745A     | 16                        | 15.5         | 16                          | 700               | 0.25     | 5.0                             | 12.2    | 285                     | 57                    |
| ZM4746A     | 18                        | 14           | 20                          | 750               | 0.25     | 5.0                             | 13.7    | 250                     | 50                    |
| ZM4747A     | 20                        | 12.5         | 22                          | 750               | 0.25     | 5.0                             | 15.2    | 225                     | 45                    |
| ZM4748A     | 22                        | 11.5         | 23                          | 750               | 0.25     | 5.0                             | 16.7    | 205                     | 41                    |
| ZM4749A     | 24                        | 10.5         | 25                          | 750               | 0.25     | 5.0                             | 18.2    | 190                     | 38                    |
| ZM4750A     | 27                        | 9.5          | 35                          | 750               | 0.25     | 5.0                             | 20.6    | 170                     | 34                    |
| ZM4751A     | 30                        | 8.5          | 40                          | 1000              | 0.25     | 5.0                             | 22.8    | 150                     | 30                    |
| ZM4752A     | 33                        | 7.5          | 45                          | 1000              | 0.25     | 5.0                             | 25.1    | 135                     | 27                    |
| ZM4753A     | 36                        | 7.0          | 50                          | 1000              | 0.25     | 5.0                             | 27.4    | 125                     | 25                    |
| ZM4754A     | 39                        | 6.5          | 60                          | 1000              | 0.25     | 5.0                             | 29.7    | 115                     | 23                    |
| ZM4755A     | 43                        | 6.0          | 70                          | 1500              | 0.25     | 5.0                             | 32.7    | 110                     | 22                    |
| ZM4756A     | 47                        | 5.5          | 80                          | 1500              | 0.25     | 5.0                             | 35.8    | 95                      | 19                    |
| ZM4757A     | 51                        | 5.0          | 95                          | 1500              | 0.25     | 5.0                             | 38.8    | 90                      | 18                    |
| ZM4758A     | 56                        | 4.5          | 110                         | 2000              | 0.25     | 5.0                             | 42.6    | 80                      | 16                    |
| ZM4759A     | 62                        | 4.0          | 125                         | 2000              | 0.25     | 5.0                             | 47.1    | 70                      | 14                    |
| ZM4760A     | 68                        | 3.7          | 150                         | 2000              | 0.25     | 5.0                             | 51.7    | 65                      | 13                    |
| ZM4761A     | 75                        | 3.3          | 175                         | 2000              | 0.25     | 5.0                             | 56.0    | 60                      | 12                    |
| ZM4762A     | 82                        | 3.0          | 200                         | 3000              | 0.25     | 5.0                             | 62.2    | 55                      | 11                    |
| ZM4763A     | 91                        | 2.8          | 250                         | 3000              | 0.25     | 5.0                             | 69.2    | 50                      | 10                    |
| ZM4764A     | 100                       | 2.5          | 350                         | 3000              | 0.25     | 5.0                             | 76.0    | 45                      | 9.0                   |

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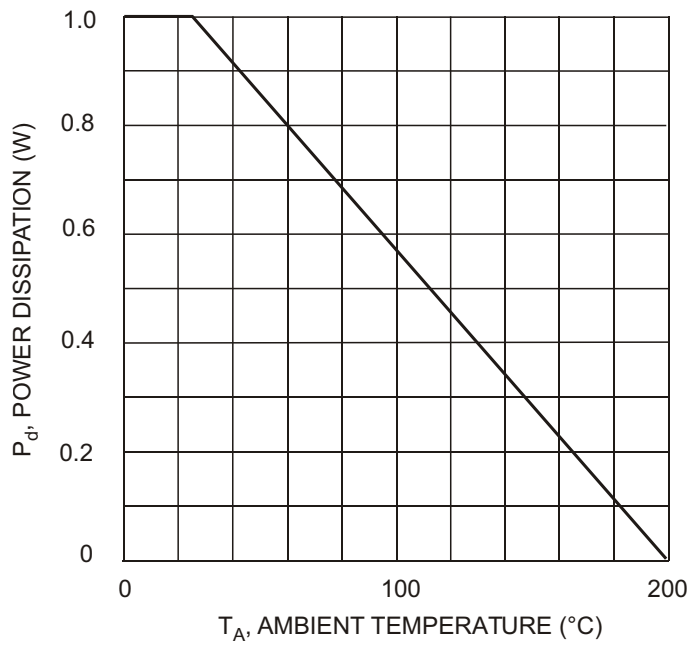


Fig. 1, Power Derating Curve

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