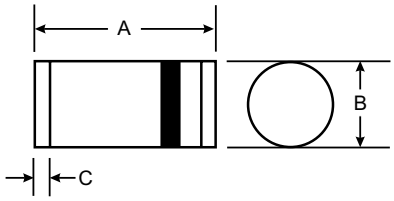
# ZM4728A - ZM4764A

## 1.0W SURFACE MOUNT ZENER DIODE

NOT RECOMMENDED FOR NEW DESIGN, USE SMAZ SERIES (SMA PACKAGE)

## Features

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




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

## Mechanical Data

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

## Maximum Ratings

@ $T_A$ = 25°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°C | $P_d$ | 1 | W |
| Thermal Resistance - Junction to Ambient Air | $R_{\theta JA}$ | 170 | K/W |
| Forward Voltage @ $I_F$ = 200 mA | $V_F$ | 1.2 | V |
| Operating & Storage Temperature Range | $T_j$, $T_{STG}$ | -65 to +200 | °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°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 | Ω | Ω | mA | μA | 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 |

Notes: 1. Measured under thermal equilibrium and DC ($I_{ZT}$) test conditions.

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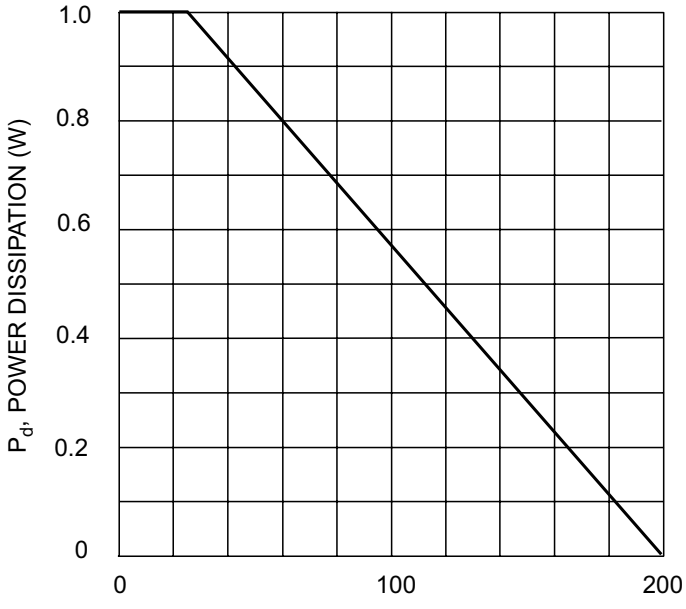

Fig. 1, Power Derating Curve