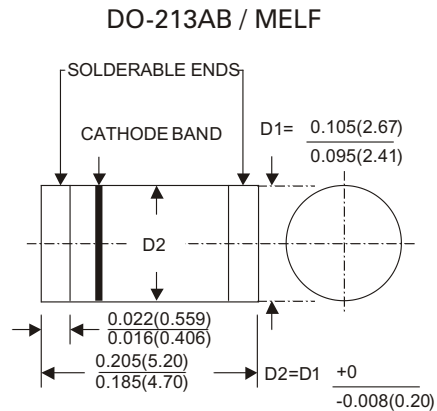


ZM4728 thru ZM4764

SILICON PLANAR POWER ZENER DIODES



Dimension in inches (millimeters)

FEATURES

- For use in stabilizing and clipping circuits with high power Rating. Standard Zener Voltage tolerance is $\pm 10\%$. Add suffix "A" for $\pm 5\%$ tolerance and suffix "B" for $\pm 2\%$ tolerance. Other tolerances available are upon request.

MECHANICAL DATA

These diodes are also available in do-41 case with the type Designation 1N4728...1N4767

These diodes are delivered taped.
Details see "Taping"

Absolute Maximum Ratings ($T_A=25^\circ\text{C}$)

| | SYMBOL | VALUE | UNITS |
|---|-----------|-----------------|------------------|
| Zener Current see Table "Characteristics" | | | |
| Power Dissipation | P_{tot} | 1 ¹⁾ | W |
| Junction Temperature | T_J | 175 | $^\circ\text{C}$ |
| Storage Temperature range | T_S | -65 to +175 | $^\circ\text{C}$ |
| 1) Valid provided that electrodes are kept at ambient temperature | | | |

Characteristics at $T_{amb}=25^\circ\text{C}$

| | SYMBOL | Min | Typ | Max | UNITS |
|---|-----------|-----|-----|-------------------|-------|
| Thermal Resistance Junction to Ambient Air | R_{thA} | | | 170 ¹⁾ | K/W |
| Forward Voltage at $I_F=200\text{mA}$ | V_F | | | 1.2 | V |
| 1) Valid provided that electrodes are kept at ambient temperature | | | | | |

ZM4728 thru ZM4764

SILICON PLANAR POWER ZENER DIODES

ELECTRICAL CHARACTERISTICS (at $T_A=25^\circ\text{C}$ unless otherwise noted)

| Type | Nominal Zener Voltage ³⁾ | Test Current | Maximum Zener Impedance ¹⁾ | | | Maximum Reverse Leakage Current | | Surge Current | Maximum Regulator Current ²⁾ |
|--------|-------------------------------------|--------------|---------------------------------------|------------------|-------------------|---------------------------------|------------|---------------------------------------|---|
| | at I_{ZT} V_Z V | I_{ZT} mA | at I_{ZT} V_Z Ω | V_Z K Ω | at I_{ZK} mA | I_R μ A | at V_R V | At $T_A=25^\circ\text{C}$ I_R mA | I_{ZM} mA |
| ZM4728 | 3.3 | 76 | 10 | 400 | 1 | 150 | 1 | 1375 | 275 |
| ZM4729 | 3.6 | 79 | 10 | 400 | 1 | 100 | 1 | 1260 | 252 |
| ZM4730 | 3.9 | 64 | 9 | 400 | 1 | 100 | 1 | 1190 | 234 |
| ZM4731 | 4.3 | 58 | 9 | 400 | 1 | 50 | 1 | 1070 | 217 |
| ZM4732 | 4.7 | 53 | 8 | 500 | 1 | 10 | 1 | 970 | 193 |
| ZM4733 | 5.1 | 49 | 7 | 550 | 1 | 10 | 1 | 890 | 178 |
| ZM4734 | 5.6 | 45 | 5 | 600 | 1 | 10 | 2 | 810 | 162 |
| ZM4735 | 6.2 | 41 | 2 | 700 | 1 | 10 | 3 | 730 | 146 |
| ZM4736 | 6.8 | 37 | 3.5 | 700 | 1 | 10 | 4 | 660 | 133 |
| ZM4737 | 7.5 | 34 | 4.0 | 700 | 0.5 | 10 | 5 | 605 | 121 |
| ZM4738 | 8.2 | 31 | 4.5 | 700 | 0.5 | 10 | 6 | 550 | 110 |
| ZM4739 | 9.1 | 28 | 5.0 | 700 | 0.5 | 10 | 7 | 500 | 100 |
| ZM4740 | 10 | 25 | 7 | 700 | 0.25 | 10 | 7.6 | 454 | 91 |
| ZM4741 | 11 | 23 | 8 | 700 | 0.25 | 5 | 8.4 | 414 | 83 |
| ZM4742 | 12 | 21 | 9 | 700 | 0.25 | 5 | 9.1 | 380 | 76 |
| ZM4743 | 13 | 19 | 10 | 700 | 0.25 | 5 | 9.9 | 344 | 69 |
| ZM4744 | 15 | 17 | 14 | 700 | 0.25 | 5 | 11.4 | 304 | 61 |
| ZM4745 | 16 | 15.5 | 16 | 700 | 0.25 | 5 | 12.2 | 285 | 57 |
| ZM4746 | 18 | 14 | 20 | 750 | 0.25 | 5 | 13.7 | 250 | 50 |
| ZM4747 | 20 | 12.5 | 22 | 750 | 0.25 | 5 | 15.2 | 225 | 45 |
| ZM4748 | 22 | 11.5 | 23 | 750 | 0.25 | 5 | 16.7 | 205 | 41 |
| ZM4749 | 24 | 10.5 | 25 | 750 | 0.25 | 5 | 18.2 | 190 | 38 |
| ZM4750 | 27 | 9.5 | 35 | 750 | 0.25 | 5 | 20.6 | 170 | 34 |
| ZM4751 | 30 | 8.5 | 40 | 1000 | 0.25 | 5 | 22.8 | 150 | 30 |
| ZM4752 | 33 | 7.5 | 45 | 1000 | 0.25 | 5 | 25.1 | 135 | 27 |
| ZM4753 | 36 | 7.0 | 50 | 1000 | 0.25 | 5 | 27.4 | 125 | 25 |
| ZM4754 | 39 | 6.5 | 60 | 1000 | 0.25 | 5 | 29.7 | 115 | 23 |
| ZM4755 | 43 | 6.0 | 70 | 1500 | 0.25 | 5 | 32.7 | 110 | 22 |
| ZM4756 | 47 | 5.5 | 80 | 1500 | 0.25 | 5 | 35.8 | 95 | 19 |
| ZM4757 | 51 | 5.0 | 95 | 1500 | 0.25 | 5 | 38.8 | 90 | 18 |
| ZM4758 | 56 | 4.5 | 110 | 2000 | 0.25 | 5 | 42.6 | 80 | 16 |
| ZM4759 | 62 | 4.0 | 125 | 2000 | 0.25 | 5 | 47.1 | 70 | 14 |
| ZM4760 | 68 | 3.7 | 150 | 2000 | 0.25 | 5 | 51.7 | 65 | 134 |
| ZM4761 | 75 | 3.3 | 175 | 2000 | 0.25 | 5 | 56.0 | 60 | 12 |
| ZM4762 | 82 | 3.0 | 200 | 3000 | 0.25 | 5 | 62.2 | 55 | 11 |
| ZM4763 | 91 | 2.8 | 250 | 3000 | 0.25 | 5 | 69.2 | 50 | 10 |
| ZM4764 | 100 | 2.5 | 350 | 3000 | 0.25 | 5 | 76 | 45 | 9 |

1) 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.

2) Valid provided that electrodes are kept at ambient temperature.

3) Measured under thermal equilibrium and DC test conditions.

ZM4728 thru ZM4764

SILICON PLANAR POWER ZENER DIODES

RATING AND CHARACTERISTICS CURVES ZM4728 THRU ZM4764

Admissible power dissipation
versus ambient temperature
Valid provided that electrodes are kept
at ambient temperature

