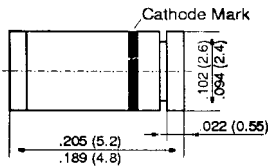


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ZM4731A-ZM4764A
ZENER DIODES

MELF



Dimensions are in inches and (millimeters)

FEATURE

- ◆ For use stabilizing and clipping circuits with high power rating.
- ◆ Silicon Planar Power Zener Diodes.
- ◆ Standard Zener voltage tolerance is $\pm 10\%$. Add suffix "A" for $\pm 5\%$ tolerance. Other Zener voltages and tolerances are available upon request.
- ◆ These diodes are also available in DO-41 case with the type designation 1N4728...1N4764.

MECHANICAL DATA

- ◆ Case: MELF Glass Case
- ◆ Weight: approx. 0.25g

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

| | SYMBOLS | VALUE | UNITS |
|---|------------------|--------------|--------------|
| Zener Current see Table Characteristics | | | |
| Power Dissipation at Tamb=25°C(Note 1) | P _{tot} | 1.0 | W |
| Junction Temperature | T _j | 150 | °C |
| Storage Temperature Range | T _{STG} | -65 to + 150 | °C |
| Thermal resistance junction ambient(Note 1) | R _{θJA} | 170 | °C/W |
| Forward voltage at I _F =100mA | V _F | 1.2 | V |

Note 1: Valid provided that leads at a distance of 10mm from case are kept at ambient temperature

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ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

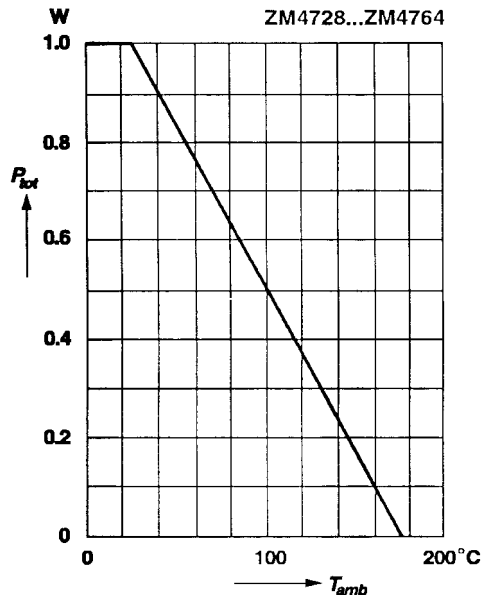
| Type | Nominal Zener voltage ⁽³⁾ at I _{ZT} V _Z (V) | Test current I _{ZT} (mA) | Maximum Zener impedance ⁽¹⁾ | | | Maximum reverse leakage current | | Surge current at T _A = 25°C I _R (mA) | Maximum regulator current ⁽²⁾ I _{ZM} (mA) |
|--------|--|--------------------------------------|--|------------------------|-------------------------------|---------------------------------|--------------------------|---|--|
| | | | Z _{ZT} at I _{ZT} (Ω) | Z _{ZK} (Ω) | at I _{ZK} (mA) | I _R (μA) | at V _R (V) | | |
| ZM4728 | 3.3 | 76 | 10 | 400 | 1.0 | 100 | 1.0 | 1380 | 276 |
| ZM4729 | 3.6 | 69 | 10 | 400 | 1.0 | 100 | 1.0 | 1260 | 252 |
| ZM4730 | 3.9 | 64 | 9 | 400 | 1.0 | 50 | 1.0 | 1190 | 234 |
| ZM4731 | 4.3 | 58 | 9 | 400 | 1.0 | 10 | 1.0 | 1070 | 217 |
| ZM4732 | 4.7 | 53 | 8 | 500 | 1.0 | 10 | 1.0 | 970 | 193 |
| ZM4733 | 5.1 | 49 | 7 | 550 | 1.0 | 10 | 1.0 | 890 | 178 |
| ZM4734 | 5.6 | 45 | 5 | 600 | 1.0 | 10 | 2.0 | 810 | 162 |
| ZM4735 | 6.2 | 41 | 2 | 700 | 1.0 | 10 | 3.0 | 730 | 146 |
| ZM4736 | 6.8 | 37 | 3.5 | 700 | 1.0 | 10 | 4.0 | 660 | 133 |
| ZM4737 | 7.5 | 34 | 4.0 | 700 | 0.5 | 10 | 5.0 | 605 | 121 |
| ZM4738 | 8.2 | 31 | 4.5 | 700 | 0.5 | 10 | 6.0 | 550 | 110 |
| ZM4739 | 9.1 | 28 | 5.0 | 700 | 0.5 | 10 | 7.0 | 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 | 13 |
| 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 | 76.0 | 45 | 9 |

NOTES:

- (1) The Zener impedance is derived from the 1KHz 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 at a distance of 10mm from case are kept at ambient temperature
(3) Measured under thermal equilibrium and DC test conditions

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



TECHNICAL DATA

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