

## ZM4728 - ZM4764

$V_Z$  : 3.3 to 100V

$P_D$  : 1W

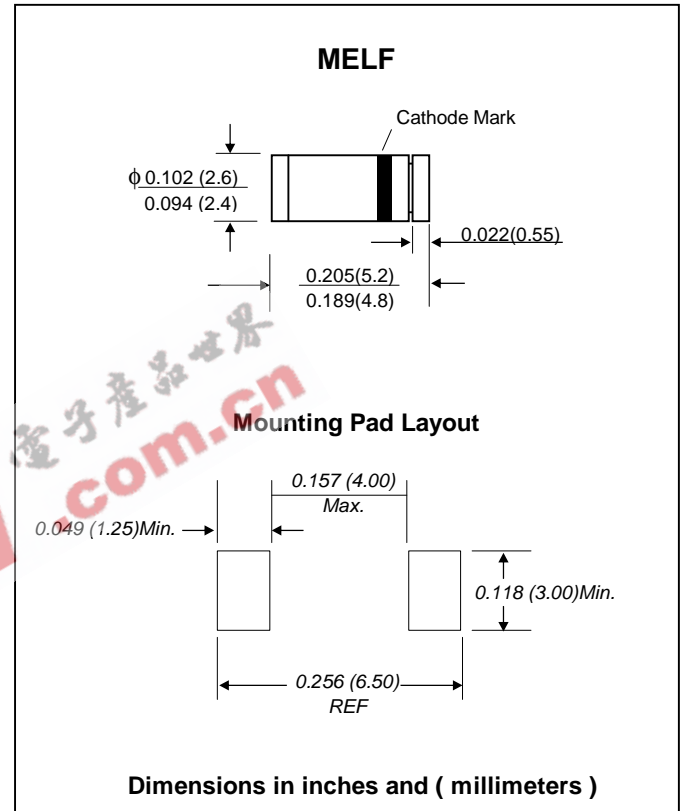
### FEATURES :

- Silicon planar power zener diodes
- For use in stabilizing and clipping circuits with higher power rating.
- Standard zener voltage tolerance is  $\pm 10\%$ .
- Other zener voltages and tolerances are available upon request.
- These diodes are also available in the DO-41 case with type designation 1N4728 ... 1N4764
- Pb / RoHS Free

### MECHANICAL DATA :

- \* Case : MELF Glass Case
- \* Weight : 0.25 g (approximately)

## ZENER DIODES



### Maximum Ratings and Thermal Characteristics

Rating at 25 °C ambient temperature unless otherwise specified.

| Parameter                                  | Symbol          | Value              | Unit |
|--|-----------------|--------------------|------|
| Zener Current see Table "Characteristics"  |                 |                    |      |
| Maximum Forward Voltage at $I_F = 200$ mA. | $V_F$           | 1.2                | V    |
| Power Dissipation                          | $P_D$           | 1 <sup>(1)</sup>   | W    |
| Thermal Resistance Junction to Ambient Air | $R_{\theta JA}$ | 170 <sup>(1)</sup> | °C/W |
| Junction temperature                       | $T_J$           | -65 to + 200       | °C   |
| Storage temperature range                  | $T_S$           | -65 to + 200       | °C   |

Note : (1) Valid provided that electrodes are kept at ambient temperature

## ELECTRICAL CHARACTERISTICS

(Ta = 25 °C unless otherwise noted)

| Type   | Nominal Zener Voltage |      | Maximum Zener Impedance <sup>(1)</sup> |           |      | Maximum Reverse Leakage Current |      | Maximum DC Zener Current |
|--------|-----------------------|------|--|-----------|------|---------------------------------|------|--------------------------|
|        | Vz @ IzT              | IzT  | ZzT @ IzT                              | Zzk @ Izk | Izk  | I <sub>R</sub> @ V <sub>R</sub> |      | Iz <sup>(2)</sup>        |
|        | (V)                   | (mA) | (Ω)                                    | (Ω)       | (mA) | (μA)                            | (V)  | (mA)                     |
| ZM4728 | 3.3                   | 76.0 | 10                                     | 400       | 1.0  | 100                             | 1.0  | 276                      |
| ZM4729 | 3.6                   | 69.0 | 10                                     | 400       | 1.0  | 100                             | 1.0  | 252                      |
| ZM4730 | 3.9                   | 64.0 | 9.0                                    | 400       | 1.0  | 50                              | 1.0  | 234                      |
| ZM4731 | 4.3                   | 58.0 | 9.0                                    | 400       | 1.0  | 10                              | 1.0  | 217                      |
| ZM4732 | 4.7                   | 53.0 | 8.0                                    | 500       | 1.0  | 10                              | 1.0  | 193                      |
| ZM4733 | 5.1                   | 49.0 | 7.0                                    | 550       | 1.0  | 10                              | 1.0  | 178                      |
| ZM4734 | 5.6                   | 45.0 | 5.0                                    | 600       | 1.0  | 10                              | 2.0  | 162                      |
| ZM4735 | 6.2                   | 41.0 | 2.0                                    | 700       | 1.0  | 10                              | 3.0  | 146                      |
| ZM4736 | 6.8                   | 37.0 | 3.5                                    | 700       | 1.0  | 10                              | 4.0  | 133                      |
| ZM4737 | 7.5                   | 34.0 | 4.0                                    | 700       | 0.5  | 10                              | 5.0  | 121                      |
| ZM4738 | 8.2                   | 31.0 | 4.5                                    | 700       | 0.5  | 10                              | 6.0  | 110                      |
| ZM4739 | 9.1                   | 28.0 | 5.0                                    | 700       | 0.5  | 10                              | 7.0  | 100                      |
| ZM4740 | 10                    | 25.0 | 7.0                                    | 700       | 0.25 | 10                              | 7.6  | 91                       |
| ZM4741 | 11                    | 23.0 | 8.0                                    | 700       | 0.25 | 5.0                             | 8.4  | 83                       |
| ZM4742 | 12                    | 21.0 | 9.0                                    | 700       | 0.25 | 5.0                             | 9.1  | 76                       |
| ZM4743 | 13                    | 19.0 | 10                                     | 700       | 0.25 | 5.0                             | 9.9  | 69                       |
| ZM4744 | 15                    | 17.0 | 14                                     | 700       | 0.25 | 5.0                             | 11.4 | 61                       |
| ZM4745 | 16                    | 15.5 | 16                                     | 700       | 0.25 | 5.0                             | 12.2 | 57                       |
| ZM4746 | 18                    | 14.0 | 20                                     | 750       | 0.25 | 5.0                             | 13.7 | 50                       |
| ZM4747 | 20                    | 12.5 | 22                                     | 750       | 0.25 | 5.0                             | 15.2 | 45                       |
| ZM4748 | 22                    | 11.5 | 23                                     | 750       | 0.25 | 5.0                             | 16.7 | 41                       |
| ZM4749 | 24                    | 10.5 | 25                                     | 750       | 0.25 | 5.0                             | 18.2 | 38                       |
| ZM4750 | 27                    | 9.5  | 35                                     | 750       | 0.25 | 5.0                             | 20.6 | 34                       |
| ZM4751 | 30                    | 8.5  | 40                                     | 1000      | 0.25 | 5.0                             | 22.8 | 30                       |
| ZM4752 | 33                    | 7.5  | 45                                     | 1000      | 0.25 | 5.0                             | 25.1 | 27                       |
| ZM4753 | 36                    | 7.0  | 50                                     | 1000      | 0.25 | 5.0                             | 27.4 | 25                       |
| ZM4754 | 39                    | 6.5  | 60                                     | 1000      | 0.25 | 5.0                             | 29.7 | 23                       |
| ZM4755 | 43                    | 6.0  | 70                                     | 1500      | 0.25 | 5.0                             | 32.7 | 22                       |
| ZM4756 | 47                    | 5.5  | 80                                     | 1500      | 0.25 | 5.0                             | 35.8 | 19                       |
| ZM4757 | 51                    | 5.0  | 95                                     | 1500      | 0.25 | 5.0                             | 38.8 | 18                       |
| ZM4758 | 56                    | 4.5  | 110                                    | 2000      | 0.25 | 5.0                             | 42.6 | 16                       |
| ZM4759 | 62                    | 4.0  | 125                                    | 2000      | 0.25 | 5.0                             | 47.1 | 14                       |
| ZM4760 | 68                    | 3.7  | 150                                    | 2000      | 0.25 | 5.0                             | 51.7 | 13                       |
| ZM4761 | 75                    | 3.3  | 175                                    | 2000      | 0.25 | 5.0                             | 56.0 | 12                       |
| ZM4762 | 82                    | 3.0  | 200                                    | 3000      | 0.25 | 5.0                             | 62.2 | 11                       |
| ZM4763 | 91                    | 2.8  | 250                                    | 3000      | 0.25 | 5.0                             | 69.2 | 10                       |
| ZM4764 | 100                   | 2.5  | 350                                    | 3000      | 0.25 | 5.0                             | 76.0 | 9.0                      |

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) The type number listed have a standard tolerance on the nominal zener voltage of  $\pm 10\%$ .