

## ZM4728A - ZM4764A

$V_Z$  : 3.3 to 100V

$P_D$  : 1W

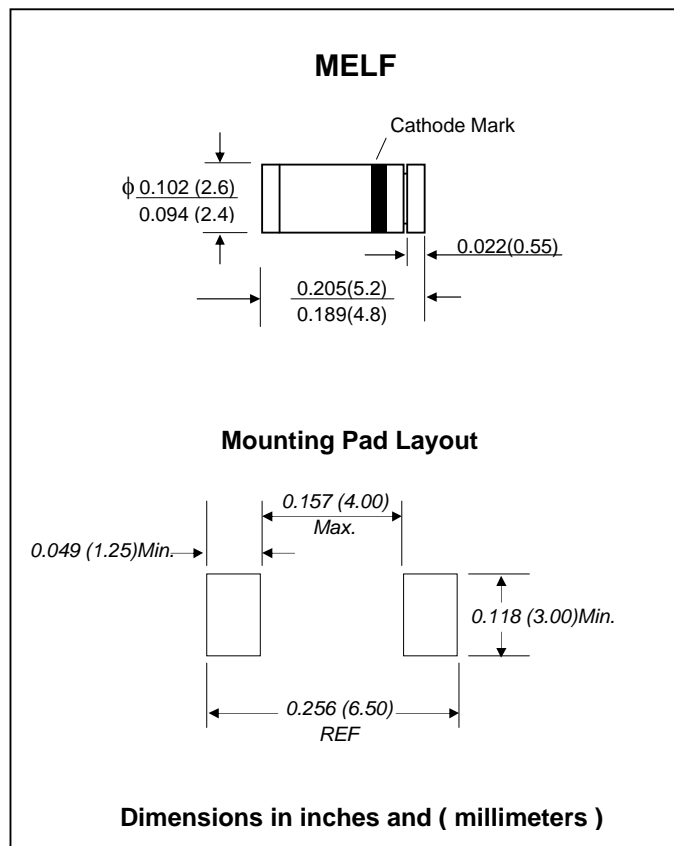
### FEATURES :

- Silicon planar power zener diodes
- For use in stabilizing and clipping circuits with higher power rating.
- Standard zener voltage tolerance is  $\pm 5\%$ .
- Other zener voltages and tolerances are available upon request.
- These diodes are also available in the DO-41 case with type designation 1N4728A ... 1N4764A
- 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 specifie.

| 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  | IR @ VR                         |      | IZM <sup>(2)</sup>       |
|         | (V)                   | (mA) | (Ω)                                    | (Ω)       | (mA) | (μA)                            | (V)  | (mA)                     |
| ZM4728A | 3.3                   | 76.0 | 10                                     | 400       | 1.0  | 100                             | 1.0  | 276                      |
| ZM4729A | 3.6                   | 69.0 | 10                                     | 400       | 1.0  | 100                             | 1.0  | 252                      |
| ZM4730A | 3.9                   | 64.0 | 9.0                                    | 400       | 1.0  | 50                              | 1.0  | 234                      |
| ZM4731A | 4.3                   | 58.0 | 9.0                                    | 400       | 1.0  | 10                              | 1.0  | 217                      |
| ZM4732A | 4.7                   | 53.0 | 8.0                                    | 500       | 1.0  | 10                              | 1.0  | 193                      |
| ZM4733A | 5.1                   | 49.0 | 7.0                                    | 550       | 1.0  | 10                              | 1.0  | 178                      |
| ZM4734A | 5.6                   | 45.0 | 5.0                                    | 600       | 1.0  | 10                              | 2.0  | 162                      |
| ZM4735A | 6.2                   | 41.0 | 2.0                                    | 700       | 1.0  | 10                              | 3.0  | 146                      |
| ZM4736A | 6.8                   | 37.0 | 3.5                                    | 700       | 1.0  | 10                              | 4.0  | 133                      |
| ZM4737A | 7.5                   | 34.0 | 4.0                                    | 700       | 0.5  | 10                              | 5.0  | 121                      |
| ZM4738A | 8.2                   | 31.0 | 4.5                                    | 700       | 0.5  | 10                              | 6.0  | 110                      |
| ZM4739A | 9.1                   | 28.0 | 5.0                                    | 700       | 0.5  | 10                              | 7.0  | 100                      |
| ZM4740A | 10                    | 25.0 | 7.0                                    | 700       | 0.25 | 10                              | 7.6  | 91                       |
| ZM4741A | 11                    | 23.0 | 8.0                                    | 700       | 0.25 | 5.0                             | 8.4  | 83                       |
| ZM4742A | 12                    | 21.0 | 9.0                                    | 700       | 0.25 | 5.0                             | 9.1  | 76                       |
| ZM4743A | 13                    | 19.0 | 10                                     | 700       | 0.25 | 5.0                             | 9.9  | 69                       |
| ZM4744A | 15                    | 17.0 | 14                                     | 700       | 0.25 | 5.0                             | 11.4 | 61                       |
| ZM4745A | 16                    | 15.5 | 16                                     | 700       | 0.25 | 5.0                             | 12.2 | 57                       |
| ZM4746A | 18                    | 14.0 | 20                                     | 750       | 0.25 | 5.0                             | 13.7 | 50                       |
| ZM4747A | 20                    | 12.5 | 22                                     | 750       | 0.25 | 5.0                             | 15.2 | 45                       |
| ZM4748A | 22                    | 11.5 | 23                                     | 750       | 0.25 | 5.0                             | 16.7 | 41                       |
| ZM4749A | 24                    | 10.5 | 25                                     | 750       | 0.25 | 5.0                             | 18.2 | 38                       |
| ZM4750A | 27                    | 9.5  | 35                                     | 750       | 0.25 | 5.0                             | 20.6 | 34                       |
| ZM4751A | 30                    | 8.5  | 40                                     | 1000      | 0.25 | 5.0                             | 22.8 | 30                       |
| ZM4752A | 33                    | 7.5  | 45                                     | 1000      | 0.25 | 5.0                             | 25.1 | 27                       |
| ZM4753A | 36                    | 7.0  | 50                                     | 1000      | 0.25 | 5.0                             | 27.4 | 25                       |
| ZM4754A | 39                    | 6.5  | 60                                     | 1000      | 0.25 | 5.0                             | 29.7 | 23                       |
| ZM4755A | 43                    | 6.0  | 70                                     | 1500      | 0.25 | 5.0                             | 32.7 | 22                       |
| ZM4756A | 47                    | 5.5  | 80                                     | 1500      | 0.25 | 5.0                             | 35.8 | 19                       |
| ZM4757A | 51                    | 5.0  | 95                                     | 1500      | 0.25 | 5.0                             | 38.8 | 18                       |
| ZM4758A | 56                    | 4.5  | 110                                    | 2000      | 0.25 | 5.0                             | 42.6 | 16                       |
| ZM4759A | 62                    | 4.0  | 125                                    | 2000      | 0.25 | 5.0                             | 47.1 | 14                       |
| ZM4760A | 68                    | 3.7  | 150                                    | 2000      | 0.25 | 5.0                             | 51.7 | 13                       |
| ZM4761A | 75                    | 3.3  | 175                                    | 2000      | 0.25 | 5.0                             | 56.0 | 12                       |
| ZM4762A | 82                    | 3.0  | 200                                    | 3000      | 0.25 | 5.0                             | 62.2 | 11                       |
| ZM4763A | 91                    | 2.8  | 250                                    | 3000      | 0.25 | 5.0                             | 69.2 | 10                       |
| ZM4764A | 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  $\pm 5\%$ .