

MZ4728 - MZ4764

MZ1110 - MZ1200

V_Z : 3.3 - 200 Volts
P_D : 1 Watt

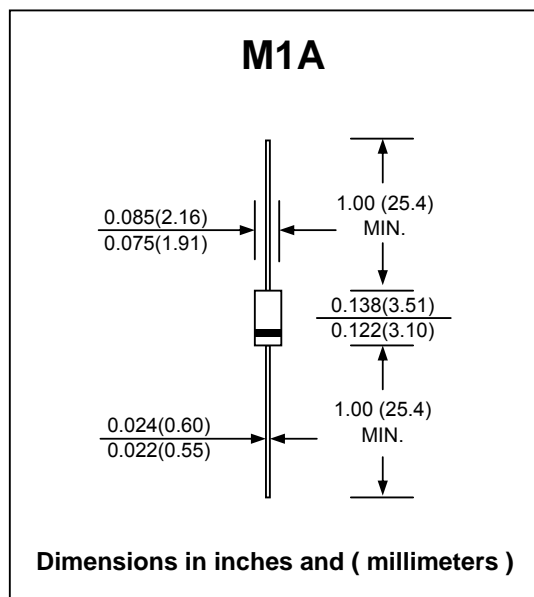
FEATURES :

- * Complete voltage range 3.3 to 200 Volts
- * High peak reverse power dissipation
- * High reliability
- * Low leakage current
- * **Pb / RoHS Free**

MECHANICAL DATA :

- * Case : M1A Molded plastic
- * Epoxy : UL94V-O rate flame retardant
- * Lead : Axial lead solderable per MIL-STD-202, method 208 guaranteed
- * Polarity : Color band denotes cathode end
- * Mounting position : Any
- * Weight : 0.20 gram (approximately)

SILICON ZENER DIODES



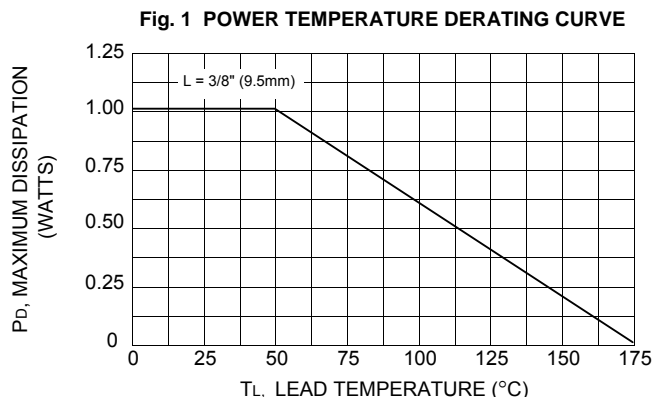
MAXIMUM RATINGS

Rating at 25 °C ambient temperature unless otherwise specified

| Rating | Symbol | Value | Unit |
|--|------------------|---------------|-------|
| DC Power Dissipation at T _L = 50 °C (Note1) | P _D | 1.0 | Watt |
| Maximum Forward Voltage at I _F = 200 mA | V _F | 1.2 | Volts |
| Maximum Thermal Resistance Junction to Ambient Air (Note2) | R _{θJA} | 170 | K / W |
| Junction Temperature Range | T _J | - 55 to + 175 | °C |
| Storage Temperature Range | T _{STG} | - 55 to + 175 | °C |

Notes :

- (1) T_L = Lead temperature at 3/8 " (9.5mm) from body
- (2) Valid provided that leads are kept at ambient temperature at a distance of 10 mm from case.



ELECTRICAL CHARACTERISTICS (Rating at 25 °C ambient temperature unless otherwise specified)

| Type No. | Nominal Zener Voltage | | Maximum Zener Impedance | | | Maximum Reverse Leakage Current | | Maximum DC Zener Current | Maximum Surge Current |
|----------|------------------------|----------|-------------------------|---------------------|----------|---------------------------------|----------|--------------------------|-----------------------|
| | $V_Z^{(1)}$ @ I_{ZT} | I_{ZT} | Z_{ZT} @ I_{ZT} | Z_{ZK} @ I_{ZK} | I_{ZK} | I_R @ V_R | I_{ZM} | $I_{RM}^{(2)}$ | |
| | (V) | (mA) | (Ω) | (Ω) | (mA) | (μ A) (V) | (mA) | (mApk) | |
| MZ4728 | 3.3 | 76.0 | 10 | 400 | 1.0 | 100 | 1.0 | 276 | 1380 |
| MZ4729 | 3.6 | 69.0 | 10 | 400 | 1.0 | 100 | 1.0 | 252 | 1260 |
| MZ4730 | 3.9 | 64.0 | 9.0 | 400 | 1.0 | 50 | 1.0 | 234 | 1190 |
| MZ4731 | 4.3 | 58.0 | 9.0 | 400 | 1.0 | 10 | 1.0 | 217 | 1070 |
| MZ4732 | 4.7 | 53.0 | 8.0 | 500 | 1.0 | 10 | 1.0 | 193 | 970 |
| MZ4733 | 5.1 | 49.0 | 7.0 | 550 | 1.0 | 10 | 1.0 | 178 | 890 |
| MZ4734 | 5.6 | 45.0 | 5.0 | 600 | 1.0 | 10 | 2.0 | 162 | 810 |
| MZ4735 | 6.2 | 41.0 | 2.0 | 700 | 1.0 | 10 | 3.0 | 146 | 730 |
| MZ4736 | 6.8 | 37.0 | 3.5 | 700 | 1.0 | 10 | 4.0 | 133 | 660 |
| MZ4737 | 7.5 | 34.0 | 4.0 | 700 | 0.5 | 10 | 5.0 | 121 | 605 |
| MZ4738 | 8.2 | 31.0 | 4.5 | 700 | 0.5 | 10 | 6.0 | 110 | 550 |
| MZ4739 | 9.1 | 28.0 | 5.0 | 700 | 0.5 | 10 | 7.0 | 100 | 500 |
| MZ4740 | 10 | 25.0 | 7.0 | 700 | 0.25 | 10 | 7.6 | 91 | 454 |
| MZ4741 | 11 | 23.0 | 8.0 | 700 | 0.25 | 5.0 | 8.4 | 83 | 414 |
| MZ4742 | 12 | 21.0 | 9.0 | 700 | 0.25 | 5.0 | 9.1 | 76 | 380 |
| MZ4743 | 13 | 19.0 | 10 | 700 | 0.25 | 5.0 | 9.9 | 69 | 344 |
| MZ4744 | 15 | 17.0 | 14 | 700 | 0.25 | 5.0 | 11.4 | 61 | 305 |
| MZ4745 | 16 | 15.5 | 16 | 700 | 0.25 | 5.0 | 12.2 | 57 | 285 |
| MZ4746 | 18 | 14.0 | 20 | 750 | 0.25 | 5.0 | 13.7 | 50 | 250 |
| MZ4747 | 20 | 12.5 | 22 | 750 | 0.25 | 5.0 | 15.2 | 45 | 225 |
| MZ4748 | 22 | 11.5 | 23 | 750 | 0.25 | 5.0 | 16.7 | 41 | 205 |
| MZ4749 | 24 | 10.5 | 25 | 750 | 0.25 | 5.0 | 18.2 | 38 | 190 |
| MZ4750 | 27 | 9.5 | 35 | 750 | 0.25 | 5.0 | 20.6 | 34 | 170 |
| MZ4751 | 30 | 8.5 | 40 | 1000 | 0.25 | 5.0 | 22.8 | 30 | 150 |
| MZ4752 | 33 | 7.5 | 45 | 1000 | 0.25 | 5.0 | 25.1 | 27 | 135 |
| MZ4753 | 36 | 7.0 | 50 | 1000 | 0.25 | 5.0 | 27.4 | 25 | 125 |
| MZ4754 | 39 | 6.5 | 60 | 1000 | 0.25 | 5.0 | 29.7 | 23 | 115 |
| MZ4755 | 43 | 6.0 | 70 | 1500 | 0.25 | 5.0 | 32.7 | 22 | 110 |
| MZ4756 | 47 | 5.5 | 80 | 1500 | 0.25 | 5.0 | 35.8 | 19 | 95 |
| MZ4757 | 51 | 5.0 | 95 | 1500 | 0.25 | 5.0 | 38.8 | 18 | 90 |
| MZ4758 | 56 | 4.5 | 110 | 2000 | 0.25 | 5.0 | 42.6 | 16 | 80 |
| MZ4759 | 62 | 4.0 | 125 | 2000 | 0.25 | 5.0 | 47.1 | 14 | 70 |
| MZ4760 | 68 | 3.7 | 150 | 2000 | 0.25 | 5.0 | 51.7 | 13 | 65 |
| MZ4761 | 75 | 3.3 | 175 | 2000 | 0.25 | 5.0 | 56.0 | 12 | 60 |
| MZ4762 | 82 | 3.0 | 200 | 3000 | 0.25 | 5.0 | 62.2 | 11 | 55 |
| MZ4763 | 91 | 2.8 | 250 | 3000 | 0.25 | 5.0 | 69.2 | 10 | 50 |
| MZ4764 | 100 | 2.5 | 350 | 3000 | 0.25 | 5.0 | 76.0 | 9.0 | 45 |
| MZ1110 | 110 | 2.3 | 450 | 4000 | 0.25 | 5.0 | 83.6 | 8.6 | 40 |
| MZ1120 | 120 | 2.0 | 550 | 4500 | 0.25 | 5.0 | 91.2 | 7.8 | 37 |
| MZ1130 | 130 | 1.9 | 700 | 5000 | 0.25 | 5.0 | 98.8 | 7.0 | 34 |
| MZ1150 | 150 | 1.7 | 1000 | 6000 | 0.25 | 5.0 | 114.0 | 6.4 | 30 |
| MZ1160 | 160 | 1.6 | 1100 | 6500 | 0.25 | 5.0 | 121.6 | 5.8 | 28 |
| MZ1180 | 180 | 1.4 | 1200 | 7000 | 0.25 | 5.0 | 136.8 | 5.2 | 25 |
| MZ1200 | 200 | 1.2 | 1900 | 9990 | 0.25 | 5.0 | 152.0 | 4.7 | 22 |

Notes :

- The type number listed have a standard tolerance on the nominal zener voltage of $\pm 10\%$.
Suffix "A" indicates $\pm 5\%$ tolerance, suffix "C" indicates $\pm 2\%$ tolerance.
- The reverse surge current is a non-repetitive, 8.3ms pulse width square wave or equivalent sine-wave superimposed on I_{ZT} per JEDEC Method