

MM3Z2V0WAT THRU MM3Z75WAT

SILICON PLANAR ZENER DIODES

Power Dissipation: 300mW

Zener Voltage: 2.0V to 75V

FEATURES

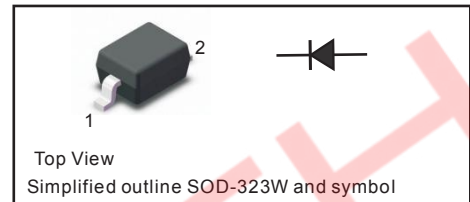
- ◆ Total power dissipation: Max. 300mW.
- ◆ Wide zener reverse voltage range 2.0V to 75V.
- ◆ Small plastic package suitable for surface mounted design.
- ◆ Tolerance approximately $\pm 5\%$

MECHANICAL DATA

- ◆ Case: SOD-323W
- ◆ Terminals: Solderable per MIL-STD-750, Method 2026
- ◆ Approx. Weight: 5.48mg / 0.00019oz

PINNING

| PIN | DESCRIPTION |
|-----|-------------|
| 1 | Cathode |
| 2 | Anode |



Absolute Maximum Ratings And Characteristics ($T_a = 25^\circ\text{C}$)

| Parameter | Symbol | Value | Unit |
|---------------------------------------------------------------|-----------------|------------|--------------------|
| Power Dissipation | P_{tot} | 300 | mW |
| Forward Voltage at $I_F = 10\text{ mA}$ | V_F | 0.9 | V |
| Typical thermal resistance juncting to ambient ⁽¹⁾ | $R_{\theta JA}$ | 417 | $^\circ\text{C/W}$ |
| Operating and Storage Temperature Range | T_j, T_{stg} | -55 ~ +150 | $^\circ\text{C}$ |

(1) Thermal resistance from junction to ambient at P.C.B. mounted with 2.0" X 2.0" (5 X 5 cm) copper areas pads.

Fig.1 Maximum Continuous Power Derating

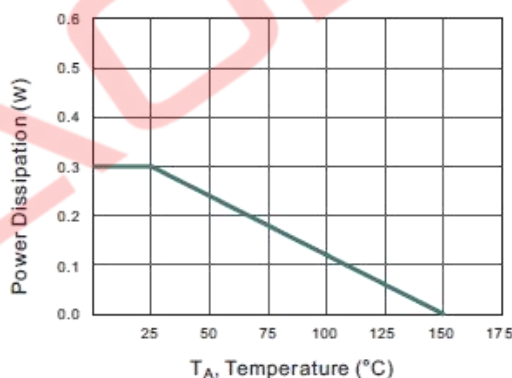
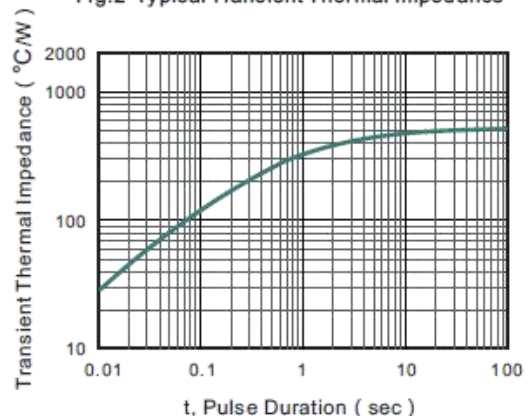


Fig.2 Typical Transient Thermal Impedance



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Characteristics at Ta = 25°C

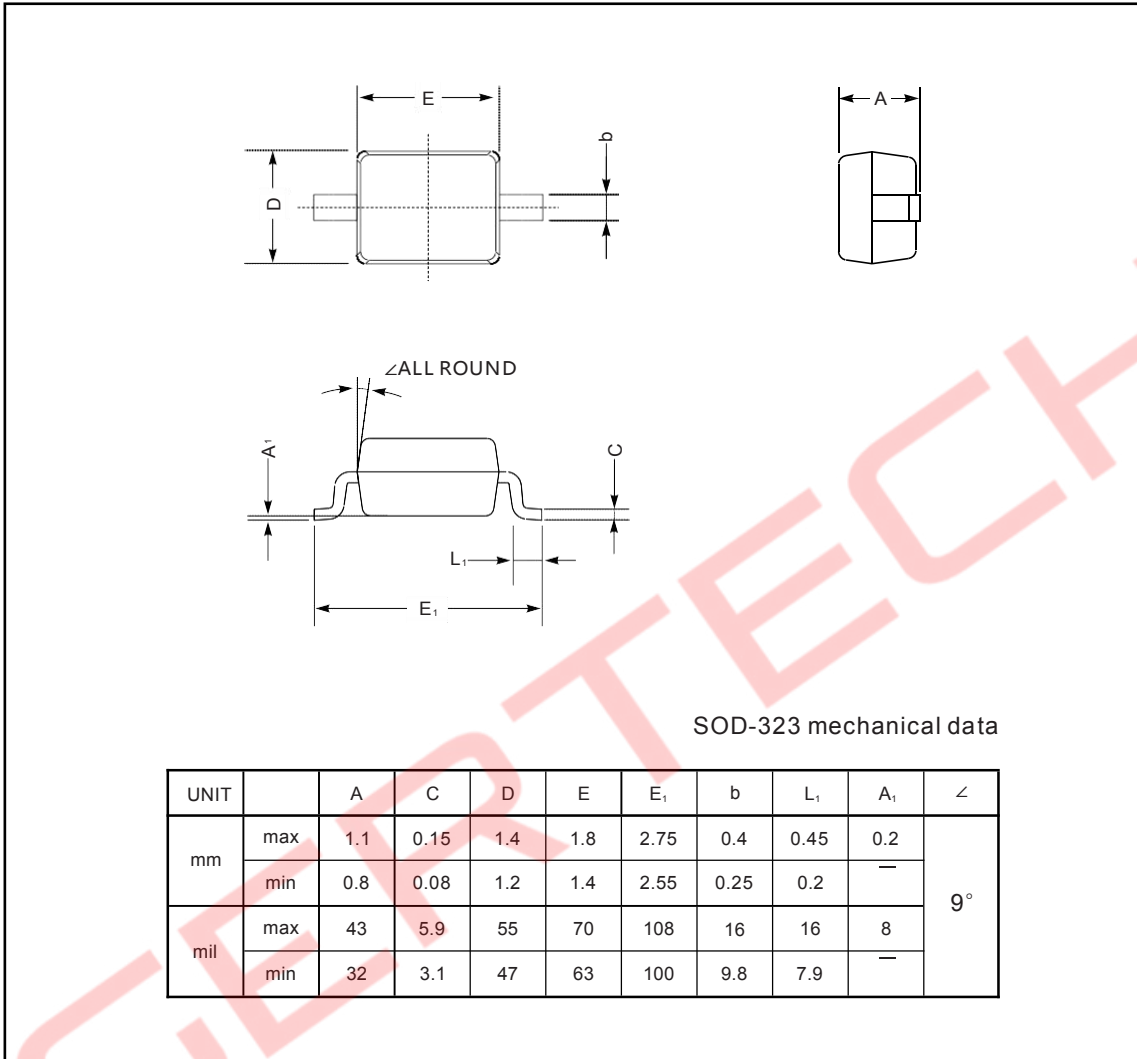
| Type | Marking | Zener Voltage Range ⁽¹⁾ | | | I _{ZT} (mA) | Dynamic Impedance Z _{ZT} (at I _{ZT}) Max (Ω) | Reverse Current | |
|------------|---------|---------------------------------------|---------|---------|-------------------------|-----------------------------------------------------------------------|----------------------------|--------------------------|
| | | V _{ZT} (at I _{ZT}) | | | | | I _R Max (μA) | at V _R (V) |
| | | Min (V) | Nom (V) | Max (V) | | | | |
| MM3Z2V0WAT | B0 | 1.8 | 2.0 | 2.15 | 5 | 100 | 120 | 0.5 |
| MM3Z2V2WAT | C0 | 2.08 | 2.2 | 2.33 | 5 | 100 | 120 | 0.7 |
| MM3Z2V4WAT | 1C | 2.28 | 2.4 | 2.56 | 5 | 100 | 120 | 1 |
| MM3Z2V7WAT | 1D | 2.5 | 2.7 | 2.9 | 5 | 110 | 120 | 1 |
| MM3Z3V0WAT | 1E | 2.8 | 3.0 | 3.2 | 5 | 120 | 50 | 1 |
| MM3Z3V3WAT | 1F | 3.1 | 3.3 | 3.5 | 5 | 130 | 20 | 1 |
| MM3Z3V6WAT | 1H | 3.4 | 3.6 | 3.8 | 5 | 130 | 10 | 1 |
| MM3Z3V9WAT | 1J | 3.7 | 3.9 | 4.1 | 5 | 130 | 5 | 1 |
| MM3Z4V3WAT | 1K | 4 | 4.3 | 4.6 | 5 | 130 | 5 | 1 |
| MM3Z4V7WAT | 1M | 4.4 | 4.7 | 5 | 5 | 130 | 2 | 1 |
| MM3Z5V1WAT | 1N | 4.8 | 5.1 | 5.4 | 5 | 130 | 2 | 1.5 |
| MM3Z5V6WAT | 1P | 5.2 | 5.6 | 6 | 5 | 80 | 1 | 2.5 |
| MM3Z6V2WAT | 1R | 5.8 | 6.2 | 6.6 | 5 | 50 | 1 | 3 |
| MM3Z6V8WAT | 1X | 6.4 | 6.8 | 7.2 | 5 | 30 | 0.5 | 3.5 |
| MM3Z7V5WAT | 1Y | 7 | 7.5 | 7.9 | 5 | 30 | 0.5 | 4 |
| MM3Z8V2WAT | 1Z | 7.7 | 8.2 | 8.7 | 5 | 30 | 0.5 | 5 |
| MM3Z9V1WAT | 2A | 8.5 | 9.1 | 9.6 | 5 | 30 | 0.5 | 6 |
| MM3Z10WAT | 2B | 9.4 | 10 | 10.6 | 5 | 30 | 0.1 | 7 |
| MM3Z11WAT | 2C | 10.4 | 11 | 11.6 | 5 | 30 | 0.1 | 8 |
| MM3Z12WAT | 2D | 11.4 | 12 | 12.7 | 5 | 35 | 0.1 | 9 |
| MM3Z13WAT | 2E | 12.4 | 13 | 14.1 | 5 | 35 | 0.1 | 10 |
| MM3Z15WAT | 2F | 13.8 | 15 | 15.6 | 5 | 40 | 0.1 | 11 |
| MM3Z16WAT | 2H | 15.3 | 16 | 17.1 | 5 | 40 | 0.1 | 12 |
| MM3Z18WAT | 2J | 16.8 | 18 | 19.1 | 5 | 45 | 0.1 | 13 |
| MM3Z20WAT | 2K | 18.8 | 20 | 21.2 | 5 | 50 | 0.1 | 15 |
| MM3Z22WAT | 2M | 20.8 | 22 | 23.3 | 5 | 55 | 0.1 | 17 |
| MM3Z24WAT | 2N | 22.8 | 24 | 25.6 | 5 | 60 | 0.1 | 19 |
| MM3Z27WAT | 2P | 25.1 | 27 | 28.9 | 2 | 70 | 0.1 | 21 |
| MM3Z30WAT | 2R | 28 | 30 | 32 | 2 | 80 | 0.1 | 23 |
| MM3Z33WAT | 2X | 31 | 33 | 35 | 2 | 80 | 0.1 | 25 |
| MM3Z36WAT | 2Y | 34 | 36 | 38 | 2 | 90 | 0.1 | 27 |
| MM3Z39WAT | 2Z | 37 | 39 | 41 | 2 | 100 | 0.1 | 30 |
| MM3Z43WAT | 3A | 40 | 43 | 46 | 2 | 130 | 0.1 | 33 |
| MM3Z47WAT | 3B | 44 | 47 | 50 | 2 | 150 | 0.1 | 36 |
| MM3Z51WAT | 3C | 48 | 51 | 54 | 2 | 180 | 0.1 | 39 |
| MM3Z56WAT | 3D | 52 | 56 | 60 | 2 | 200 | 0.1 | 43 |
| MM3Z62WAT | 3E | 58 | 62 | 66 | 2 | 215 | 0.1 | 47 |
| MM3Z68WAT | 3F | 64 | 68 | 72 | 2 | 240 | 0.1 | 52 |
| MM3Z75WAT | 3H | 70 | 75 | 79 | 2 | 265 | 0.1 | 56 |

(1) V_{ZT} is tested with pulses (20 ms)

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Package Outline

SOD-323W



The recommended mounting pad size

