



Silicon Planar Zener Diodes

FEATURES

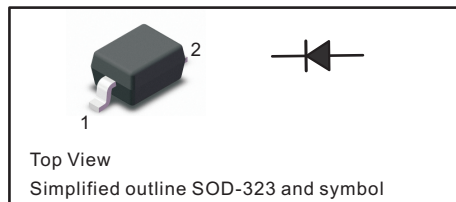
- Total power dissipation: Max. 300mW.
- Wide zener reverse voltage range 2.0V to 75V.
- Small plastic package suitable for surface mounted design.
- Tolerance approximately $\pm 5\%$

MECHANICAL DATA

- Case: SOD-323
- 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 (Ta = 25 °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 junction to ambient ⁽¹⁾ | $R_{\theta JA}$ | 417 | $^{\circ}\text{C}/\text{W}$ |
| 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

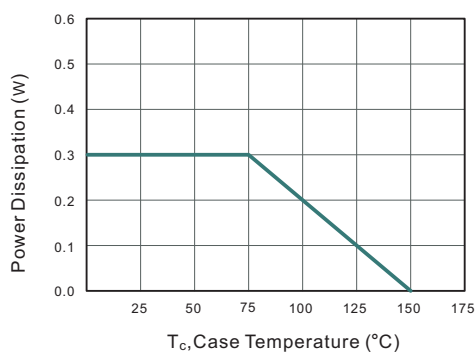
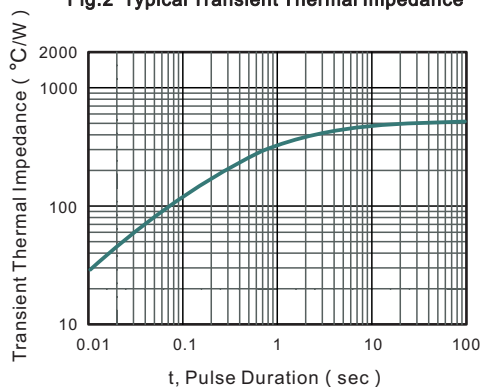


Fig.2 Typical Transient Thermal Impedance





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 | at V _R |
| | | Min (V) | Nom (V) | Max (V) | | | Max (μA) | (V) |
| MM3Z2V0 | B0 | 1.8 | 2.0 | 2.15 | 5 | 100 | 120 | 0.5 |
| MM3Z2V2 | C0 | 2.08 | 2.2 | 2.33 | 5 | 100 | 120 | 0.7 |
| MM3Z2V4 | 1C | 2.28 | 2.4 | 2.56 | 5 | 100 | 120 | 1 |
| MM3Z2V7 | 1D | 2.5 | 2.7 | 2.9 | 5 | 110 | 120 | 1 |
| MM3Z3V0 | 1E | 2.8 | 3.0 | 3.2 | 5 | 120 | 50 | 1 |
| MM3Z3V3 | 1F | 3.1 | 3.3 | 3.5 | 5 | 130 | 20 | 1 |
| MM3Z3V6 | 1H | 3.4 | 3.6 | 3.8 | 5 | 130 | 10 | 1 |
| MM3Z3V9 | 1J | 3.7 | 3.9 | 4.1 | 5 | 130 | 5 | 1 |
| MM3Z4V3 | 1K | 4 | 4.3 | 4.6 | 5 | 130 | 5 | 1 |
| MM3Z4V7 | 1M | 4.4 | 4.7 | 5 | 5 | 130 | 2 | 1 |
| MM3Z5V1 | 1N | 4.8 | 5.1 | 5.4 | 5 | 130 | 2 | 1.5 |
| MM3Z5V6 | 1P | 5.2 | 5.6 | 6 | 5 | 80 | 1 | 2.5 |
| MM3Z6V2 | 1R | 5.8 | 6.2 | 6.6 | 5 | 50 | 1 | 3 |
| MM3Z6V8 | 1X | 6.4 | 6.8 | 7.2 | 5 | 30 | 0.5 | 3.5 |
| MM3Z7V5 | 1Y | 7 | 7.5 | 7.9 | 5 | 30 | 0.5 | 4 |
| MM3Z8V2 | 1Z | 7.7 | 8.2 | 8.7 | 5 | 30 | 0.5 | 5 |
| MM3Z9V1 | 2A | 8.5 | 9.1 | 9.6 | 5 | 30 | 0.5 | 6 |
| MM3Z10 | 2B | 9.4 | 10 | 10.6 | 5 | 30 | 0.1 | 7 |
| MM3Z11 | 2C | 10.4 | 11 | 11.6 | 5 | 30 | 0.1 | 8 |
| MM3Z12 | 2D | 11.4 | 12 | 12.7 | 5 | 35 | 0.1 | 9 |
| MM3Z13 | 2E | 12.4 | 13 | 14.1 | 5 | 35 | 0.1 | 10 |
| MM3Z15 | 2F | 13.8 | 15 | 15.6 | 5 | 40 | 0.1 | 11 |
| MM3Z16 | 2H | 15.3 | 16 | 17.1 | 5 | 40 | 0.1 | 12 |
| MM3Z18 | 2J | 16.8 | 18 | 19.1 | 5 | 45 | 0.1 | 13 |
| MM3Z20 | 2K | 18.8 | 20 | 21.2 | 5 | 50 | 0.1 | 15 |
| MM3Z22 | 2M | 20.8 | 22 | 23.3 | 5 | 55 | 0.1 | 17 |
| MM3Z24 | 2N | 22.8 | 24 | 25.6 | 5 | 60 | 0.1 | 19 |
| MM3Z27 | 2P | 25.1 | 27 | 28.9 | 2 | 70 | 0.1 | 21 |
| MM3Z30 | 2R | 28 | 30 | 32 | 2 | 80 | 0.1 | 23 |
| MM3Z33 | 2X | 31 | 33 | 35 | 2 | 80 | 0.1 | 25 |
| MM3Z36 | 2Y | 34 | 36 | 38 | 2 | 90 | 0.1 | 27 |
| MM3Z39 | 2Z | 37 | 39 | 41 | 2 | 100 | 0.1 | 30 |
| MM3Z43 | 3A | 40 | 43 | 46 | 2 | 130 | 0.1 | 33 |
| MM3Z47 | 3B | 44 | 47 | 50 | 2 | 150 | 0.1 | 36 |
| MM3Z51 | 3C | 48 | 51 | 54 | 2 | 180 | 0.1 | 39 |
| MM3Z56 | 3D | 52 | 56 | 60 | 2 | 200 | 0.1 | 43 |
| MM3Z62 | 3E | 58 | 62 | 66 | 2 | 215 | 0.1 | 47 |
| MM3Z68 | 3F | 64 | 68 | 72 | 2 | 240 | 0.1 | 52 |
| MM3Z75 | 3H | 70 | 75 | 79 | 2 | 265 | 0.1 | 56 |

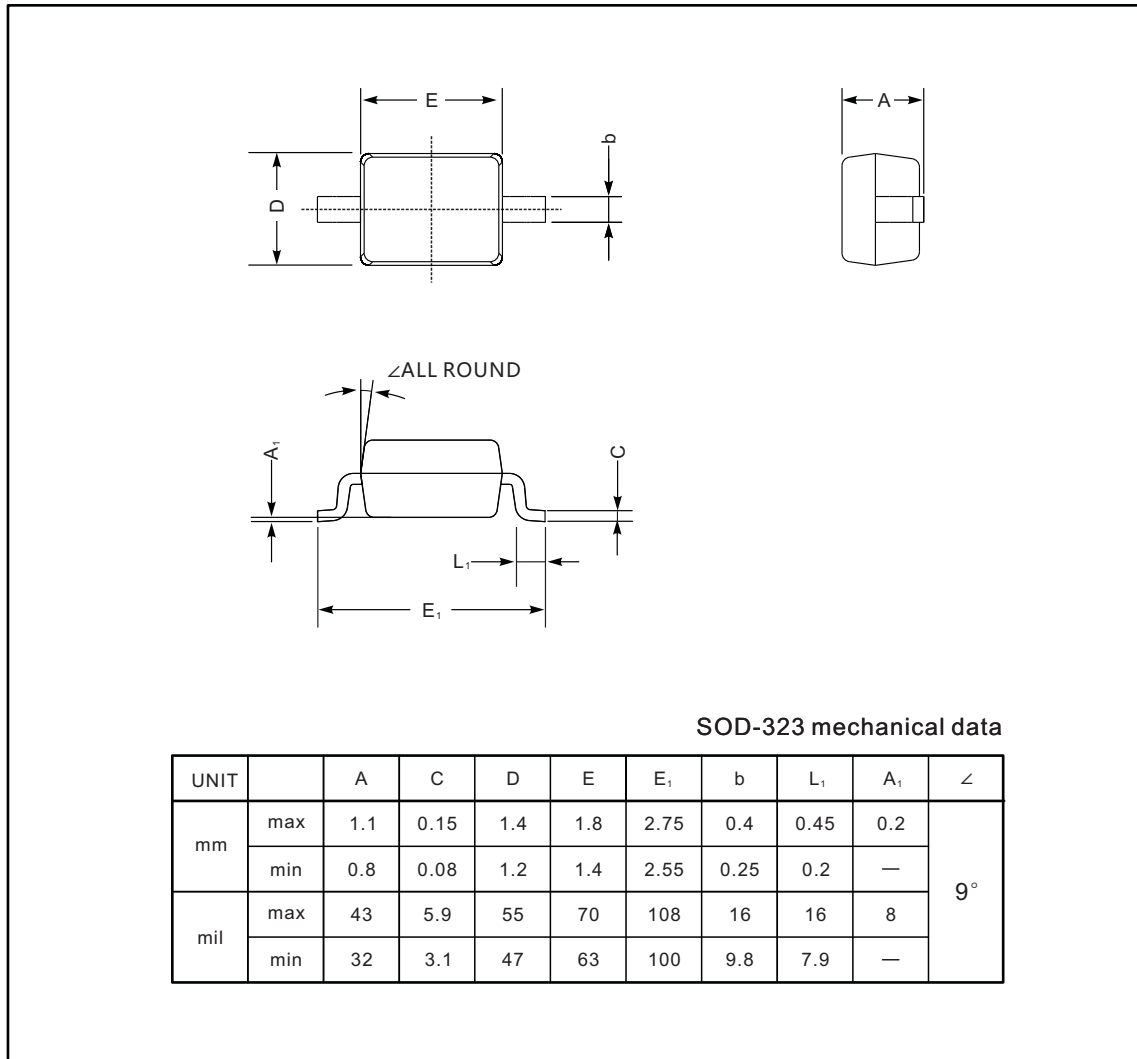
(1) V_{ZT} is tested with pulses (20 ms)



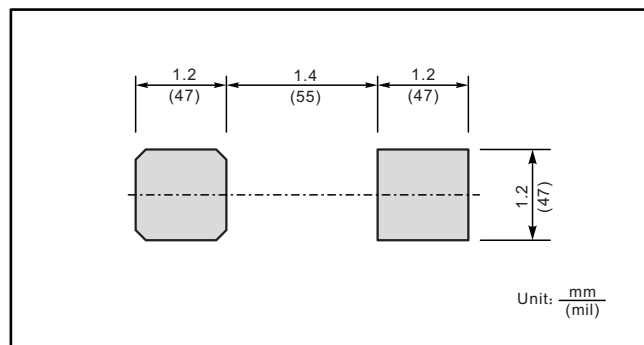
PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SOD-323



The recommended mounting pad size



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