

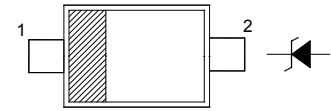
SILICON PLANAR ZENER DIODES

FEATURES

- Total power dissipation: max. 200 mW
- Small plastic package suitable for surface mounted design
- High reliability

DESCRIPTION

Silicon planar Zener diode in a small plastic SMD SOD-523 package



Top View

Simplified outline SOD-523 and symbol

PINNING

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

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

| Parameter | Symbol | Value | Unit |
|---------------------------|-----------|---------------|------------------|
| Power Dissipation | P_{tot} | 200 | mW |
| Junction Temperature | T_j | 150 | $^\circ\text{C}$ |
| Storage Temperature Range | T_{Stg} | - 55 to + 150 | $^\circ\text{C}$ |

Characteristics at $T_a = 25\text{ }^\circ\text{C}$

| Parameter | Symbol | Max. | Unit |
|--|-----------|------|---------------------------|
| Thermal Resistance Junction to Ambient Air | R_{thA} | 635 | $^\circ\text{C}/\text{W}$ |
| Forward Voltage at $I_F = 10\text{ mA}$ | V_F | 0.9 | V |

Characteristics at $T_a = 25\text{ }^\circ\text{C}$

| Type | Marking Code | Zener Voltage Range ¹⁾ | | | Dynamic Impedance ²⁾ | | Reverse Leakage Current | |
|----------|--------------|-----------------------------------|----------------|-------------------|---------------------------------|-------------------|-------------------------------|---------------|
| | | V_{znom} V | I_{ZT} mA | for V_{ZT} V | Z_{ZT} (Max.) Ω | at I_{ZT} mA | I_R (Max.) μA | at V_R V |
| MM5Z2V2B | RM | 2.2 | 5 | 2.1...2.4 | 100 | 5 | 120 | 0.7 |
| MM5Z2V4B | RN | 2.4 | 5 | 2.3...2.65 | 100 | 5 | 120 | 1 |
| MM5Z2V7B | RP | 2.7 | 5 | 2.65...2.95 | 110 | 5 | 120 | 1 |
| MM5Z3V0B | RR | 3.0 | 5 | 2.95...3.25 | 120 | 5 | 50 | 1 |
| MM5Z3V3B | RX | 3.3 | 5 | 3.25...3.55 | 120 | 5 | 20 | 1 |
| MM5Z3V6B | RY | 3.6 | 5 | 3.6...3.845 | 100 | 5 | 10 | 1 |
| MM5Z3V9B | JY | 3.9 | 5 | 3.89...4.16 | 100 | 5 | 5 | 1 |
| MM5Z4V3B | JZ | 4.3 | 5 | 4.17...4.43 | 100 | 5 | 5 | 1 |
| MM5Z4V7B | KA | 4.7 | 5 | 4.55...4.75 | 100 | 5 | 2 | 1 |
| MM5Z5V1B | KB | 5.1 | 5 | 4.98...5.2 | 80 | 5 | 2 | 1.5 |
| MM5Z5V6B | KC | 5.6 | 5 | 5.49...5.73 | 60 | 5 | 1 | 2.5 |
| MM5Z6V2B | KD | 6.2 | 5 | 6.06...6.33 | 60 | 5 | 1 | 3 |
| MM5Z6V8B | KE | 6.8 | 5 | 6.65...6.93 | 40 | 5 | 0.5 | 3.5 |
| MM5Z7V5B | KF | 7.5 | 5 | 7.28...7.6 | 30 | 5 | 0.5 | 4 |
| MM5Z8V2B | KH | 8.2 | 5 | 8.02...8.36 | 30 | 5 | 0.5 | 5 |
| MM5Z9V1B | KJ | 9.1 | 5 | 8.85...9.23 | 30 | 5 | 0.5 | 6 |
| MM5Z10B | KK | 10 | 5 | 9.77...10.21 | 30 | 5 | 0.1 | 7 |
| MM5Z11B | KM | 11 | 5 | 10.76...11.22 | 30 | 5 | 0.1 | 8 |
| MM5Z12B | KN | 12 | 5 | 11.74...12.24 | 30 | 5 | 0.1 | 9 |
| MM5Z13B | KP | 13 | 5 | 12.91...13.49 | 37 | 5 | 0.1 | 10 |
| MM5Z15B | KR | 15 | 5 | 14.34...14.98 | 42 | 5 | 0.1 | 11 |
| MM5Z16B | KX | 16 | 5 | 15.85...16.51 | 50 | 5 | 0.1 | 12 |
| MM5Z18B | KY | 18 | 5 | 17.56...18.35 | 65 | 5 | 0.1 | 13 |
| MM5Z20B | KZ | 20 | 5 | 19.52...20.39 | 85 | 5 | 0.1 | 15 |
| MM5Z22B | RZ | 22 | 5 | 21.54...22.47 | 100 | 5 | 0.1 | 17 |
| MM5Z24B | XA | 24 | 5 | 23.72...24.78 | 120 | 5 | 0.1 | 19 |
| MM5Z27B | XB | 27 | 5 | 26.19...27.53 | 150 | 5 | 0.1 | 21 |
| MM5Z30B | XC | 30 | 5 | 29.19...30.69 | 200 | 5 | 0.1 | 23 |
| MM5Z33B | XD | 33 | 5 | 32.15...33.79 | 250 | 5 | 0.1 | 25 |
| MM5Z36B | XE | 36 | 5 | 35.07...36.87 | 300 | 5 | 0.1 | 27 |
| MM5Z39B | XF | 39 | 5 | 37...41 | 100 | 5 | 2 | 30 |

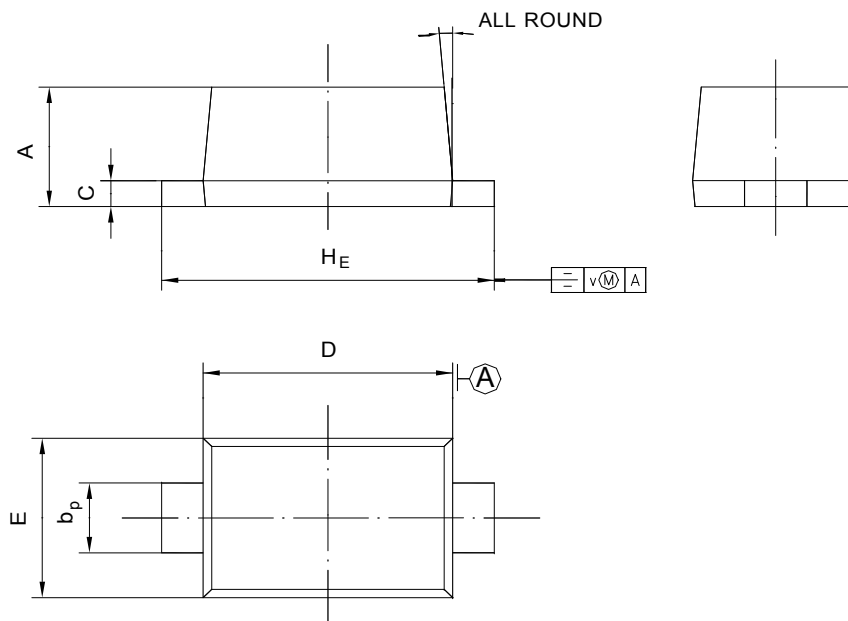
¹⁾ V_Z is tested with pulses (20 ms).

²⁾ Z_{ZT} is measured at I_Z by given a very small A.C. current signal.

PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SOD-523



| UNIT | A | b _p | C | D | E | H _E | V | |
|------|--------------|----------------|----------------|--------------|--------------|----------------|-----|----|
| mm | 0.70 0.60 | 0.4 0.3 | 0.135 0.100 | 1.25 1.15 | 0.85 0.75 | 1.7 1.5 | 0.1 | 5° |