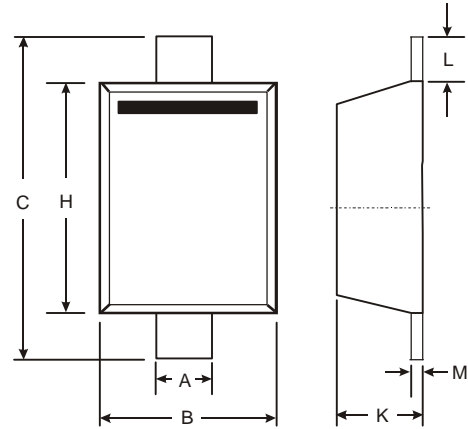


Features

- Steady State Power Rating of 200 mW
- Standard Zener Breakdown Voltage Range 2.4V to 75V
- Pb / RoHS Free

Mechanical Data

- LEAD FINISH : 100% Matte Sn (Tin)
- MOUNTING POSITION : Any
- QUALIFIED MAX REFLOW TEMPERATURE : 260 °C



| SOD-523 | | |
|----------------------|------|------|
| Dim | Min | Max |
| A | 0.25 | 0.35 |
| B | 0.70 | 0.90 |
| C | 1.50 | 1.70 |
| H | 1.10 | 1.30 |
| K | 0.55 | 0.65 |
| L | 0.10 | 0.30 |
| M | 0.10 | 0.12 |
| All Dimensions in mm | | |

Maximum Ratings and Electrical Characteristics @ T_A = 25°C unless otherwise specified

| Parameter | Symbol | Value | Unit |
|--|------------------|--------------|------|
| Total Device Dissipation FR-5 Board, at T _a = 25 °C | P _D | 200 | mW |
| Junction Temperature Range | T _J | -65 to + 150 | °C |
| Storage Temperature Range | T _{STG} | -65 to + 150 | °C |



ELECTRICAL CHARACTERISTICS

($T_a=25^\circ\text{C}$ unless otherwise noted, $V_F = 0.9\text{ V Max.}$ @ $I_F = 10\text{ mA}$ for all types)

| Type No. | Marking | Zener Voltage (Note 1) | | | Test Current | Zener Impedance | | Test Current | Leakage Current | | ΘV_Z (mV/k) @ I_{ZT} | | C @ $V_R = 0$ f = 1MHz |
|----------|---------|------------------------|-------|------|--------------|-----------------|---------------------|--------------|---------------------|----------|-----------------------------------|------|------------------------------|
| | | V_Z @ I_{ZT} (V) | | | | I_{ZT} | Z_{ZT} @ I_{ZT} | | Z_{ZT} @ I_{ZK} | I_{ZK} | I_R @ V_R | Min. | |
| | | Min. | Nom. | Max. | (mA) | (Ω) | (Ω) | (mA) | (μA) | (V) | | | pF |
| MM5Z2V4 | Z7 | 2.2 | 2.4 | 2.6 | 5 | 100 | 1000 | 1.0 | 50 | 1.0 | -3.5 | 0 | 450 |
| MM5Z2V7 | A8 | 2.5 | 2.7 | 2.9 | 5 | 100 | 1000 | 1.0 | 20 | 1.0 | -3.5 | 0 | 450 |
| MM5Z3V0 | B8 | 2.8 | 3.0 | 3.2 | 5 | 100 | 1000 | 1.0 | 10 | 1.0 | -3.5 | 0 | 450 |
| MM5Z3V3 | C8 | 3.1 | 3.3 | 3.5 | 5 | 95 | 1000 | 1.0 | 5 | 1.0 | -3.5 | 0 | 450 |
| MM5Z3V6 | D8 | 3.4 | 3.6 | 3.8 | 5 | 90 | 1000 | 1.0 | 5 | 1.0 | -3.5 | 0 | 450 |
| MM5Z3V9 | E8 | 3.7 | 3.9 | 4.1 | 5 | 90 | 1000 | 1.0 | 3 | 1.0 | -3.5 | -2.5 | 450 |
| MM5Z4V3 | F8 | 4.0 | 4.3 | 4.6 | 5 | 90 | 1000 | 1.0 | 3 | 1.0 | -3.5 | 0 | 450 |
| MM5Z4V7 | G8 | 4.4 | 4.7 | 5.0 | 5 | 80 | 800 | 1.0 | 3 | 2.0 | -3.5 | 0.2 | 260 |
| MM5Z5V1 | H8 | 4.8 | 5.1 | 5.4 | 5 | 60 | 500 | 1.0 | 2 | 2.0 | -2.7 | 1.2 | 225 |
| MM5Z5V6 | I8 | 5.2 | 5.6 | 6.0 | 5 | 40 | 200 | 1.0 | 1 | 2.0 | -2.0 | 2.5 | 200 |
| MM5Z6V2 | J8 | 5.8 | 6.2 | 6.6 | 5 | 10 | 100 | 1.0 | 3 | 4.0 | 0.4 | 3.7 | 185 |
| MM5Z6V8 | K8 | 6.4 | 6.8 | 7.2 | 5 | 15 | 160 | 1.0 | 2 | 4.0 | 1.2 | 4.5 | 155 |
| MM5Z7V5 | L8 | 7.0 | 7.5 | 7.9 | 5 | 15 | 160 | 1.0 | 1 | 5.0 | 2.5 | 5.3 | 140 |
| MM5Z8V2 | M8 | 7.7 | 8.2 | 8.7 | 5 | 15 | 160 | 1.0 | 0.7 | 5.0 | 3.2 | 6.2 | 135 |
| MM5Z9V1 | N8 | 8.5 | 9.1 | 9.6 | 5 | 15 | 160 | 1.0 | 0.2 | 7.0 | 3.8 | 7.0 | 130 |
| MM5Z10V | O8 | 9.4 | 10 | 10.6 | 5 | 20 | 160 | 1.0 | 0.1 | 8.0 | 4.5 | 8.0 | 130 |
| MM5Z11V | P8 | 10.4 | 11 | 11.6 | 5 | 20 | 160 | 1.0 | 0.1 | 8.0 | 5.4 | 9.0 | 130 |
| MM5Z12V | Q8 | 11.4 | 12 | 12.7 | 5 | 25 | 80 | 1.0 | 0.1 | 8.0 | 6.0 | 10.0 | 130 |
| MM5Z13V | R8 | 12.4 | 13.25 | 14.1 | 5 | 30 | 80 | 1.0 | 0.1 | 8.0 | 7.0 | 11.0 | 120 |
| MM5Z15V | S8 | 14.3 | 15 | 15.8 | 5 | 30 | 80 | 1.0 | 0.05 | 10.5 | 9.2 | 13.0 | 110 |
| MM5Z16V | T8 | 15.3 | 16.2 | 17.1 | 5 | 40 | 80 | 1.0 | 0.05 | 11.2 | 10.4 | 14.0 | 105 |
| MM5Z18V | U8 | 16.8 | 18 | 19.1 | 5 | 45 | 80 | 1.0 | 0.05 | 12.6 | 12.4 | 16.0 | 100 |
| MM5Z20V | V8 | 18.8 | 20 | 21.2 | 5 | 55 | 100 | 1.0 | 0.05 | 14.0 | 14.4 | 18.0 | 85 |
| MM5Z22V | W8 | 20.8 | 22 | 23.3 | 5 | 55 | 100 | 1.0 | 0.05 | 15.4 | 15.4 | 20.0 | 85 |
| MM5Z24V | X8 | 22.8 | 24.2 | 25.6 | 5 | 70 | 120 | 1.0 | 0.05 | 16.8 | 18.4 | 22.0 | 80 |
| MM5Z27V | Y8 | 25.1 | 27 | 28.9 | 2 | 80 | 300 | 1.0 | 0.05 | 18.9 | 21.4 | 25.3 | 70 |
| MM5Z30V | Z8 | 28 | 30 | 32 | 2 | 80 | 300 | 1.0 | 0.05 | 21.0 | 24.4 | 29.4 | 70 |
| MM5Z33V | A9 | 31 | 33 | 35 | 2 | 80 | 300 | 1.0 | 0.05 | 23.2 | 27.4 | 33.4 | 70 |
| MM5Z36V | B9 | 34 | 36 | 38 | 2 | 90 | 500 | 1.0 | 0.05 | 25.2 | 30.4 | 37.4 | 70 |
| MM5Z39V | C9 | 37 | 39 | 41 | 2 | 130 | 500 | 1.0 | 0.05 | 27.3 | 33.4 | 41.2 | 45 |
| MM5Z43V | D9 | 40 | 43 | 46 | 2 | 150 | 500 | 1.0 | 0.05 | 30.1 | 37.6 | 46.6 | 40 |
| MM5Z47V | E9 | 44 | 47 | 50 | 2 | 170 | 500 | 1.0 | 0.05 | 32.9 | 42.0 | 51.8 | 40 |
| MM5Z51V | F9 | 48 | 51 | 54 | 2 | 180 | 500 | 1.0 | 0.05 | 35.7 | 46.6 | 57.2 | 40 |
| MM5Z56V | G9 | 52 | 56 | 60 | 2 | 200 | 500 | 1.0 | 0.05 | 39.2 | 52.2 | 63.8 | 40 |
| MM5Z62V | H9 | 58 | 62 | 66 | 2 | 215 | 500 | 1.0 | 0.05 | 43.4 | 58.8 | 71.6 | 35 |
| MM5Z68V | I9 | 64 | 68 | 72 | 2 | 240 | 500 | 1.0 | 0.05 | 47.6 | 65.6 | 79.8 | 35 |
| MM5Z75V | J9 | 70 | 75 | 79 | 2 | 255 | 500 | 1.0 | 0.05 | 52.5 | 73.4 | 88.6 | 35 |

Note :

(1) Zener voltage is measured with a pulse test current I_Z at an ambient temperature of 25°C .