

RoHS Compliant Product

A suffix of "-C" specifies halogen & lead-free

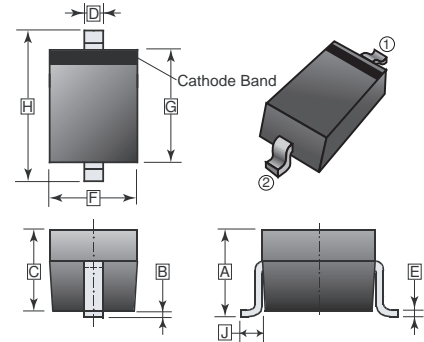
FEATURES

- Planar die construction
- 500mW power dissipation
- General purpose and medium current
- Ideally suited for automated assembly processes

APPLICATIONS

- Zener diode
- Ultra small surface mount package

SOD-123



| REF. | Millimeter | | REF. | Millimeter | |
|------|------------|------|------|------------|------|
| | Min. | Max. | | Min. | Max. |
| A | 0.94 | 1.35 | F | 1.40 | 1.80 |
| B | 0.10 | REF. | G | 2.54 | 2.85 |
| C | 1.00 | 1.30 | H | 3.55 | 3.86 |
| D | 0.30 | 0.78 | J | 0.50 | REF. |
| E | 0.08 | 0.25 | | | |

PACKAGE INFORMATION

| Package | MPQ | Leader Size |
|---------|-----|-------------|
| SOD-123 | 3K | 7 inch |

ABSOLUTE MAXIMUM RATINGS (T_A=25°C unless otherwise specified)

| Parameter | Symbol | Rating | Unit |
|--|-----------------------------------|--------------|--------|
| Forward Voltage@ I _F =10mA | V _F | 0.9 | V |
| Power Dissipation | P _D | 500 | mW |
| Thermal Resistance from Junction to Ambient Air | R _{θJA} | 350 | °C / W |
| Operating Junction and Storage Temperature Range | T _J , T _{STG} | 150, -65~150 | °C |

Notes:

1. The device is mounted on a ceramic PCB: 7.6mm x 9.4mm x 0.87mm with 25 mm² pad areas.
2. Tested with pulses: T_p ≤ 1ms.

ELECTRICAL CHARACTERISTICS ($T_A=25^\circ\text{C}$ unless otherwise specified)

| Part Number | Marking Code | Zener Voltage | | | | Maximum Zener Impedance | | Maximum Reverse Leakage Current | |
|-------------|--------------|----------------|-------|-------|----------|-------------------------|---------------------------------|---------------------------------|-------|
| | | $V_Z @ I_{ZT}$ | | | I_{ZT} | $Z_{ZT} @ I_{ZT}$ | $Z_{ZK} @ I_{ZK}=0.25\text{mA}$ | I_R | V_R |
| | | Nom | Min | Max | | | | | |
| | | V | V | V | mA | Ω | | μA | V |
| MMSZ5223B | C3 | 2.7 | 2.57 | 2.84 | 20 | 30 | 1300 | 75 | 1 |
| MMSZ5225B | C5 | 3 | 2.85 | 3.15 | 20 | 30 | 1600 | 50 | 1 |
| MMSZ5226B | G1 | 3.3 | 3.14 | 3.47 | 20 | 28 | 1600 | 25 | 1 |
| MMSZ5227B | G2 | 3.6 | 3.42 | 3.78 | 20 | 24 | 1700 | 15 | 1 |
| MMSZ5228B | G3 | 3.9 | 3.71 | 4.1 | 20 | 23 | 1900 | 10 | 1 |
| MMSZ5229B | G4 | 4.3 | 4.09 | 4.52 | 20 | 22 | 2000 | 5 | 1 |
| MMSZ5230B | G5 | 4.7 | 4.47 | 4.94 | 20 | 19 | 1900 | 5 | 2 |
| MMSZ5231B | E1 | 5.1 | 4.85 | 5.36 | 20 | 17 | 1600 | 5 | 2 |
| MMSZ5232B | E2 | 5.6 | 5.32 | 5.88 | 20 | 11 | 1600 | 5 | 3 |
| MMSZ5233B | E3 | 6 | 5.7 | 6.3 | 20 | 7 | 1600 | 5 | 3.5 |
| MMSZ5234B | E4 | 6.2 | 5.89 | 6.51 | 20 | 7 | 1000 | 3 | 4 |
| MMSZ5235B | E5 | 6.8 | 6.46 | 7.14 | 20 | 5 | 750 | 3 | 5 |
| MMSZ5236B | F1 | 7.5 | 7.13 | 7.88 | 20 | 6 | 500 | 3 | 6 |
| MMSZ5237B | F2 | 8.2 | 7.79 | 8.61 | 20 | 8 | 500 | 3 | 6.5 |
| MMSZ5238B | F3 | 8.7 | 8.27 | 9.14 | 20 | 8 | 600 | 3 | 6.5 |
| MMSZ5239B | F4 | 9.1 | 8.65 | 9.56 | 20 | 10 | 600 | 3 | 7 |
| MMSZ5240B | F5 | 10 | 9.5 | 10.5 | 20 | 17 | 600 | 2 | 8 |
| MMSZ5241B | H1 | 11 | 10.45 | 11.55 | 20 | 22 | 600 | 1 | 8.4 |
| MMSZ5242B | H2 | 12 | 11.4 | 12.6 | 20 | 30 | 600 | 0.5 | 9.1 |
| MMSZ5243B | H3 | 13 | 12.35 | 13.65 | 9.5 | 13 | 600 | 0.1 | 9.9 |
| MMSZ5244B | H4 | 14 | 13.3 | 14.7 | 9 | 15 | 600 | 0.1 | 10 |
| MMSZ5245B | H5 | 15 | 14.25 | 15.75 | 8.5 | 16 | 600 | 0.1 | 11 |
| MMSZ5246B | J1 | 16 | 15.2 | 16.8 | 7.8 | 17 | 600 | 0.1 | 12 |
| MMSZ5248B | J3 | 18 | 17.1 | 18.9 | 7 | 21 | 600 | 0.1 | 14 |
| MMSZ5250B | J5 | 20 | 19 | 21 | 6.2 | 25 | 600 | 0.1 | 15 |
| MMSZ5251B | K1 | 22 | 20.9 | 23.1 | 5.6 | 29 | 600 | 0.1 | 17 |
| MMSZ5252B | K2 | 24 | 22.8 | 25.2 | 5.2 | 33 | 600 | 0.1 | 18 |
| MMSZ5253B | K3 | 25 | 23.75 | 26.25 | 5 | 35 | 600 | 0.1 | 19 |
| MMSZ5254B | K4 | 27 | 25.65 | 28.35 | 5 | 41 | 600 | 0.1 | 21 |
| MMSZ5255B | K5 | 28 | 26.6 | 29.4 | 4.5 | 44 | 600 | 0.1 | 21 |
| MMSZ5256B | M1 | 30 | 28.5 | 31.5 | 4.2 | 49 | 600 | 0.1 | 23 |
| MMSZ5257B | M2 | 33 | 31.35 | 34.65 | 3.8 | 58 | 700 | 0.1 | 25 |
| MMSZ5258B | M3 | 36 | 34.2 | 37.8 | 3.4 | 70 | 700 | 0.1 | 27 |
| MMSZ5259B | M4 | 39 | 37.05 | 40.95 | 3.2 | 80 | 800 | 0.1 | 30 |
| MMSZ5260B | M5 | 43 | 40.85 | 45.15 | 3 | 93 | 900 | 0.1 | 33 |
| MMSZ5261B | N1 | 47 | 44.65 | 49.35 | 2.7 | 105 | 1000 | 0.1 | 36 |
| MMSZ5265B | N5 | 62 | 58.9 | 65.1 | 2 | 185 | 1400 | 0.1 | 47 |
| MMSZ5267B | P2 | 75 | 71.25 | 78.75 | 1.7 | 270 | 1700 | 0.1 | 56 |

CHARACTERISTIC CURVES

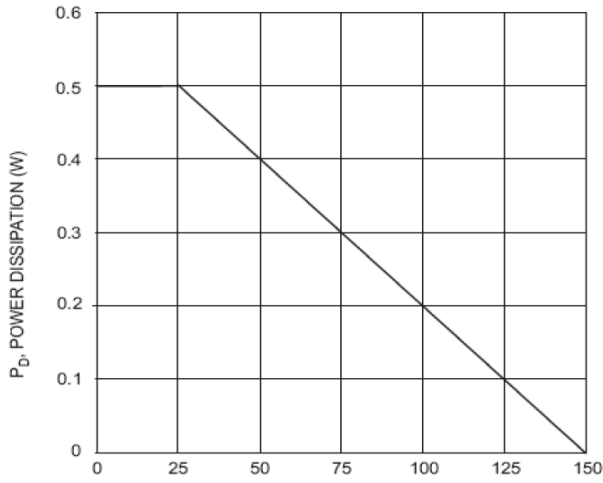


Fig. 1 Power Dissipation vs Ambient Temperature

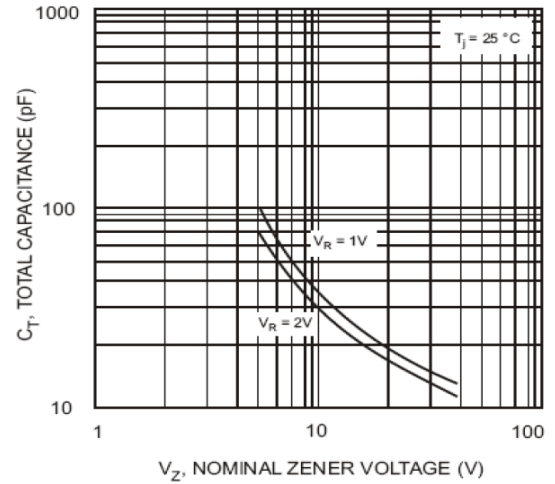


Fig. 2 Total Capacitance vs Nominal Zener Voltage

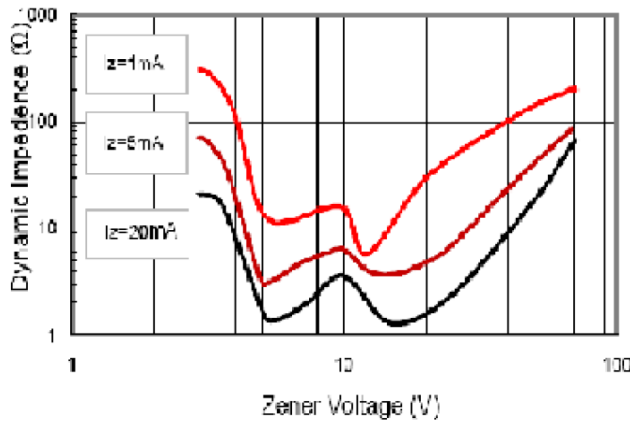


Fig. 3 Effect of Zener Voltage on Impedance

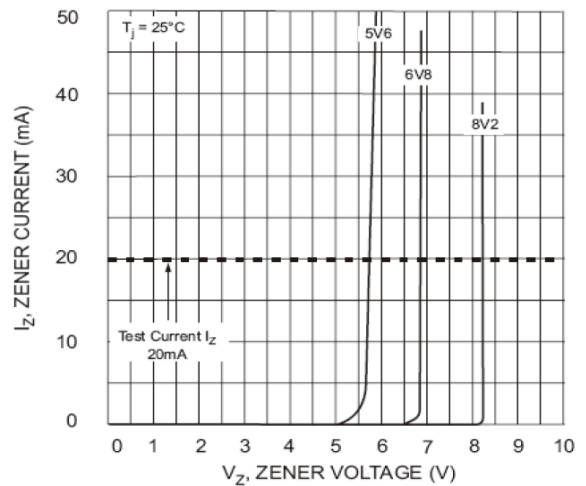


Fig. 4 Zener Breakdown Characteristics

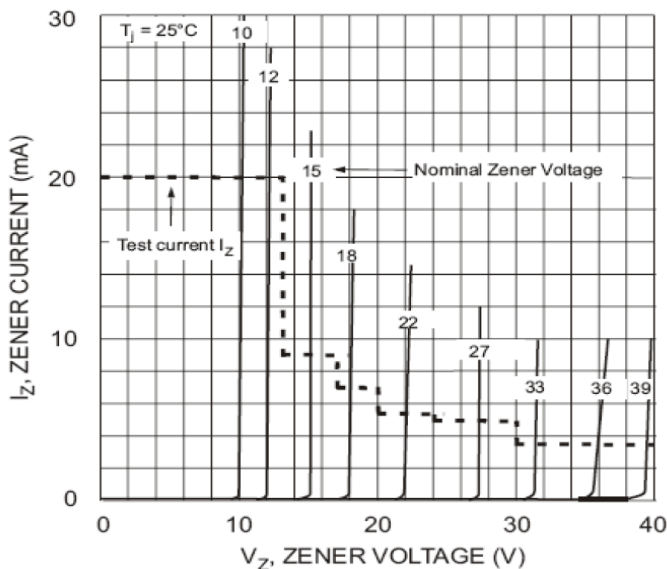


Fig. 5 Zener Breakdown Characteristics