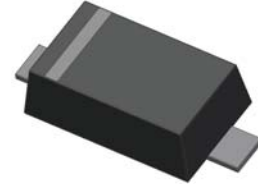


500mW SOD-123 SURFACE MOUNT Flat Lead Surface Mount Plastic Package Zener Voltage Regulators

Green Product



SOD-123 Flat Lead

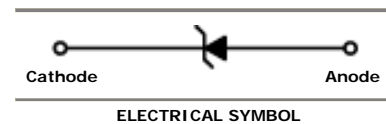
Absolute Maximum Ratings $T_A = 25^\circ\text{C}$ unless otherwise noted

| Symbol | Parameter | Value | Units |
|-----------|-----------------------------|-------------|------------------|
| P_D | Power Dissipation | 500 | mW |
| T_{STG} | Storage Temperature Range | -65 to +150 | $^\circ\text{C}$ |
| T_{OPR} | Operating Temperature Range | -65 to +150 | $^\circ\text{C}$ |

These ratings are limiting values above which the serviceability of the diode may be impaired.

Specification Features:

- Wide Zener Voltage Range Selection, 4.3V to 75V
- VZ Tolerance Selection of $\pm 2\%$
- Flat Lead SOD-123 Plastic Package
- Surface Device Type Mounting
- RoHS Compliant
- Green EMC
- Matte Tin(Sn) Lead Finish
- Band Indicates Cathode



Electrical Characteristics $T_A = 25^\circ\text{C}$ unless otherwise noted

| Device Type | Device Marking | $V_Z @ I_{ZT}$ (Volts) | | | I_{ZT} (mA) | $Z_{ZT} @ I_{ZT}$ (Ω) Max | $Z_{ZK} @ I_{ZK} = 0.25\text{mA}$ (Ω) Max | $I_R @ V_R$ (μA) Max | V_R (Volts) |
|-------------|----------------|---------------------------|-----|-------|------------------|--|--|---|------------------|
| | | Min | Nom | Max | | | | | |
| MMSZ5229CW | 229C | 4.214 | 4.3 | 4.386 | 20 | 22 | 2000 | 5 | 1 |
| MMSZ5230CW | 230C | 4.606 | 4.7 | 4.794 | 20 | 19 | 1900 | 5 | 2 |
| MMSZ5231CW | 231C | 4.998 | 5.1 | 5.202 | 20 | 17 | 1600 | 5 | 2 |
| MMSZ5232CW | 232C | 5.488 | 5.6 | 5.712 | 20 | 11 | 1600 | 5 | 3 |
| MMSZ5233CW | 233C | 5.88 | 6.0 | 6.12 | 20 | 7 | 1600 | 5 | 3.5 |
| MMSZ5234CW | 234C | 6.076 | 6.2 | 6.324 | 20 | 7 | 1000 | 5 | 4 |
| MMSZ5235CW | 235C | 6.664 | 6.8 | 6.936 | 20 | 5 | 750 | 3 | 5 |
| MMSZ5236CW | 236C | 7.35 | 7.5 | 7.65 | 20 | 6 | 500 | 3 | 6 |
| MMSZ5237CW | 237C | 8.036 | 8.2 | 8.364 | 20 | 8 | 500 | 3 | 6.5 |
| MMSZ5238CW | 238C | 8.526 | 8.7 | 8.874 | 20 | 8 | 600 | 3 | 6.5 |
| MMSZ5239CW | 239C | 8.918 | 9.1 | 9.282 | 20 | 10 | 600 | 3 | 7 |
| MMSZ5240CW | 240C | 9.8 | 10 | 10.2 | 20 | 17 | 600 | 3 | 8 |
| MMSZ5241CW | 241C | 10.78 | 11 | 11.22 | 20 | 22 | 600 | 2 | 8.4 |
| MMSZ5242CW | 242C | 11.76 | 12 | 12.24 | 20 | 30 | 600 | 1 | 9.1 |
| MMSZ5243CW | 243C | 12.74 | 13 | 13.26 | 9.5 | 13 | 600 | 0.5 | 9.9 |
| MMSZ5244CW | 244C | 13.72 | 14 | 14.28 | 9 | 15 | 600 | 0.1 | 10 |
| MMSZ5245CW | 245C | 14.7 | 15 | 15.3 | 8.5 | 16 | 600 | 0.1 | 11 |
| MMSZ5246CW | 246C | 15.68 | 16 | 16.32 | 7.8 | 17 | 600 | 0.1 | 12 |
| MMSZ5247CW | 247C | 16.66 | 17 | 17.34 | 7.4 | 19 | 600 | 0.1 | 13 |
| MMSZ5248CW | 248C | 17.64 | 18 | 18.36 | 7 | 21 | 600 | 0.1 | 14 |
| MMSZ5249CW | 249C | 18.62 | 19 | 19.38 | 6.6 | 23 | 600 | 0.1 | 14 |
| MMSZ5250CW | 250C | 19.6 | 20 | 20.4 | 6.2 | 25 | 600 | 0.1 | 15 |

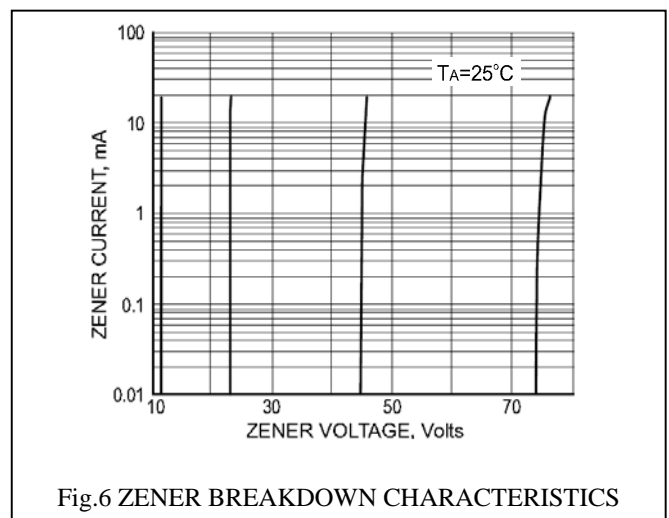
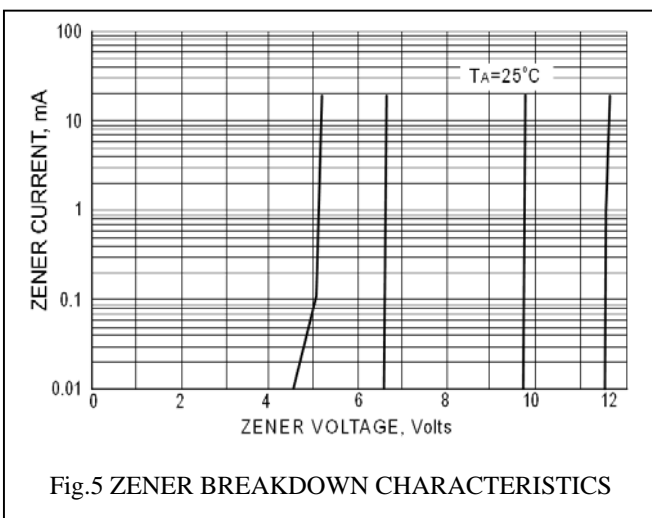
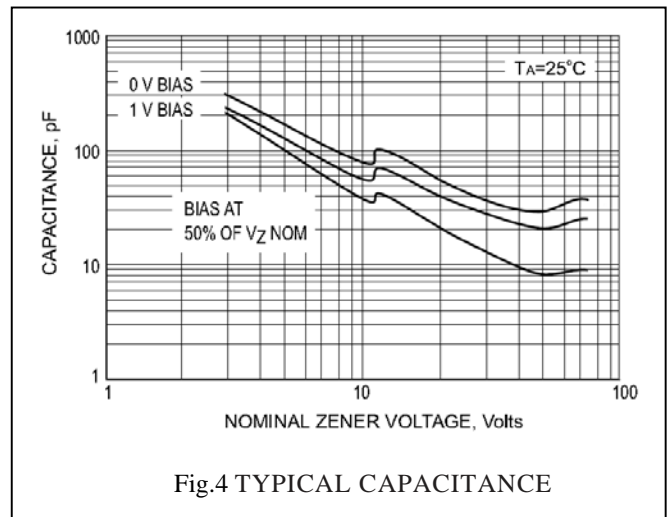
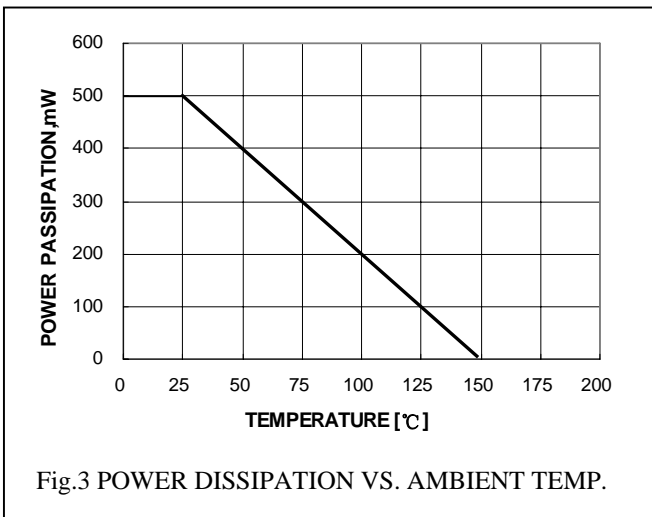
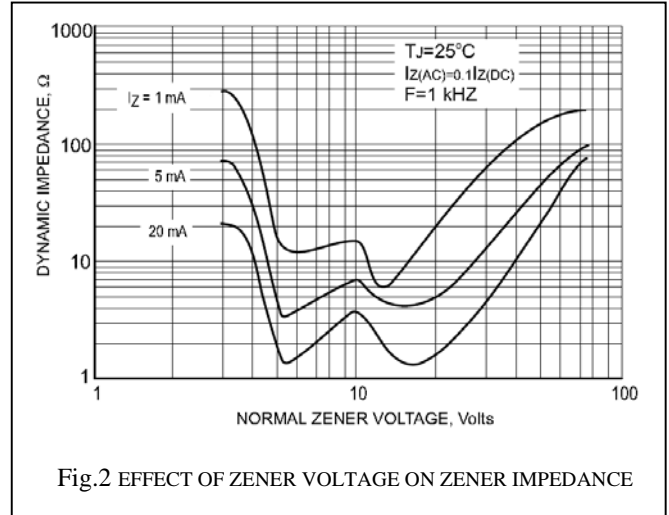
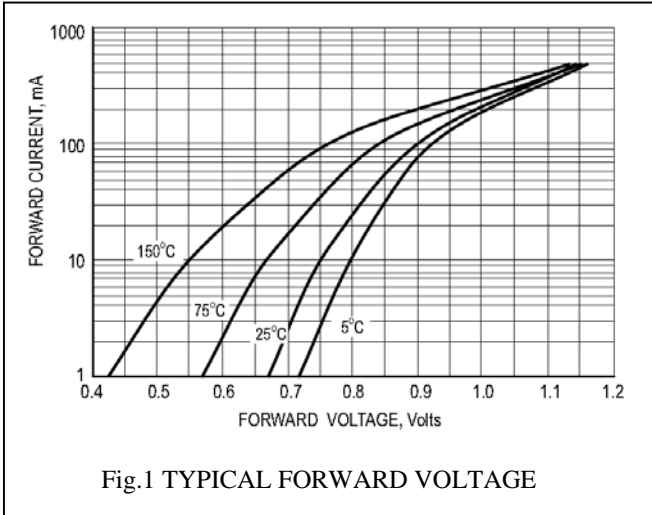
Electrical Characteristics $T_A = 25^\circ\text{C}$ unless otherwise noted

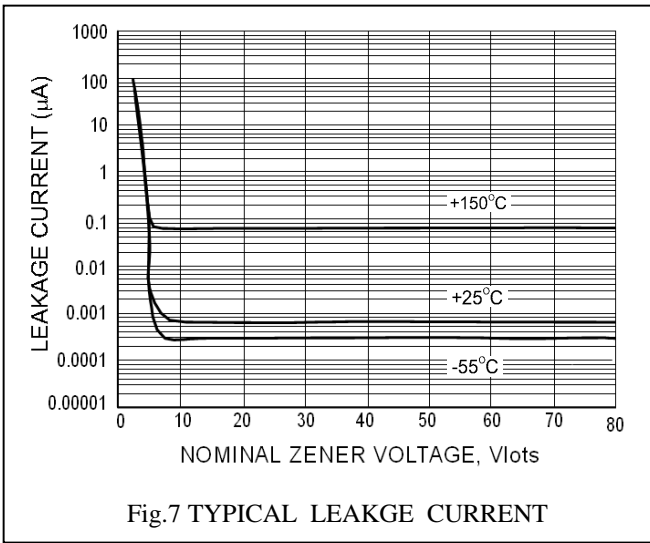
| Device Type | Device Marking | $V_Z @ I_{ZT}$ (Volts) | | | I_{ZT} (mA) | $Z_{ZT} @ I_{ZT}$ (Ω) Max | $Z_{ZK} @ I_{ZK} = 0.25\text{mA}$ (Ω) Max | $I_R @ V_R$ (μA) Max | V_R (Volts) |
|-------------|----------------|------------------------|-----|-------|---------------|------------------------------------|--|-----------------------------------|---------------|
| | | Min | Nom | Max | | | | | |
| MMSZ5251CW | 251C | 21.56 | 22 | 22.44 | 5.6 | 29 | 600 | 0.1 | 17 |
| MMSZ5252CW | 252C | 23.52 | 24 | 24.48 | 5.2 | 33 | 600 | 0.1 | 18 |
| MMSZ5253CW | 253C | 24.5 | 25 | 25.5 | 5 | 35 | 600 | 0.1 | 19 |
| MMSZ5254CW | 254C | 26.46 | 27 | 27.54 | 4.6 | 41 | 600 | 0.1 | 21 |
| MMSZ5255CW | 255C | 27.44 | 28 | 28.56 | 4.5 | 44 | 600 | 0.1 | 21 |
| MMSZ5256CW | 256C | 29.4 | 30 | 30.6 | 4.2 | 49 | 600 | 0.1 | 23 |
| MMSZ5257CW | 257C | 32.34 | 33 | 33.66 | 3.8 | 58 | 700 | 0.1 | 25 |
| MMSZ5258CW | 258C | 35.28 | 36 | 36.72 | 3.4 | 70 | 700 | 0.1 | 27 |
| MMSZ5259CW | 259C | 38.22 | 39 | 39.78 | 3.2 | 80 | 800 | 0.1 | 30 |
| MMSZ5260CW | 260C | 42.14 | 43 | 43.86 | 3 | 93 | 900 | 0.1 | 33 |
| MMSZ5261CW | 261C | 46.06 | 47 | 47.94 | 2.7 | 105 | 1000 | 0.1 | 36 |
| MMSZ5262CW | 262C | 49.98 | 51 | 52.02 | 2.5 | 125 | 1100 | 0.1 | 39 |
| MMSZ5263CW | 263C | 54.88 | 56 | 57.12 | 2.2 | 150 | 1300 | 0.1 | 43 |
| MMSZ5264CW | 264C | 58.8 | 60 | 61.2 | 2.1 | 170 | 1400 | 0.1 | 46 |
| MMSZ5265CW | 265C | 60.76 | 62 | 63.24 | 2.0 | 185 | 1400 | 0.1 | 47 |
| MMSZ5266CW | 266C | 66.64 | 68 | 69.36 | 1.8 | 230 | 1600 | 0.1 | 52 |
| MMSZ5267CW | 267C | 73.5 | 75 | 76.5 | 1.7 | 270 | 1700 | 0.1 | 56 |

 V_F Forward Voltage = 900mV Maximum @ $I_F = 10$ mA for all types

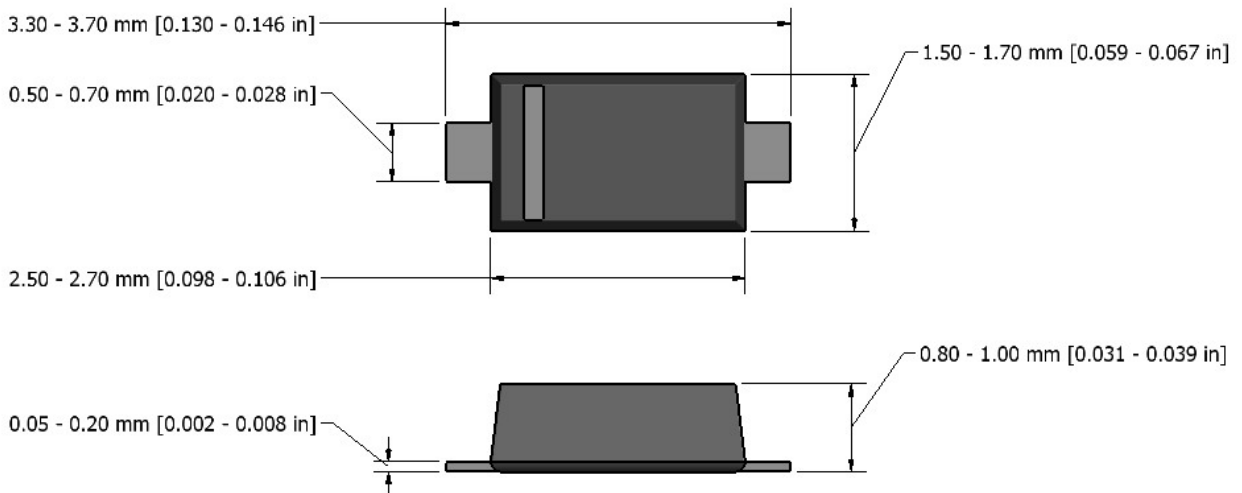
Notes:

1. The zener voltage (V_Z) is tested under pulse condition of 1mS.
2. The device numbers listed have a standard tolerance on the nominal zener voltage of $\pm 2\%$.
3. The zener impedance is derived from the 60-cycle ac voltage, which results when an ac current having an rms value equal to 10% of the dc zener current (I_{ZT} or I_{ZK}) is superimposed to I_{ZT} or I_{ZK} .
4. For detailed information on price, availability and delivery of nominal zener voltages between the voltages shown and tighter voltage tolerances, contact your nearest Tak Cheong Electronics representative.

TYPICAL CHARACTERISTIC CURVES




Flat Lead SOD-123 Package Outline



Note: Dimensions are exclusive of Currs, Mold Flash & Tie Car extrusions.

NOTICE

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The product listed herein is designed to be used with ordinary electronic equipment or devices, and not designed to be used with equipment or devices which require high level of reliability and the malfunction of which would directly endanger human life (such as medical instruments, transportation equipment, aerospace machinery, nuclear-reactor controllers, fuel controllers and other safety devices), Tak Cheong Semiconductor Co., Ltd., or anyone on its behalf, assumes no responsibility or liability for any damages resulting from such improper use of sale.

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