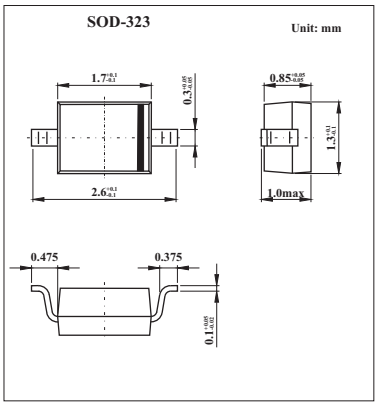
# Surface Mount Zener Diode

# MM3Z2V7S




## Features

Planar Die Construction

Ultra-Small Surface Mount Package

Ideally Suited for Automated Assembly Processes

## Absolute Maximum Ratings Ta = 25℃

| Parameter | Symbol | Rating | Unit |
|---|---|---|---|
| Power Dissipation (Note 1) | $P_D$ | 200 | mW |
| Forward Voltage @ $I_F$ = 10mA | $V_F$ | 0.9 | V |
| Thermal Resistance, Junction to Ambient Air (Note 1) | $R_{\theta JA}$ | 625 | ℃/W |
| Operating and Storage Temperature Range | $T_j$, $T_{STG}$ | -65 to +150 | ℃ |

Note: 1.Part mounted on FR-4 PC board with recommended pad layout.

## Electrical Characteristics @Ta=25℃ unless otherwise specified

| Type Number | Zener Voltage Range (Note 2) | | | | Maximum ZenerImpedance (Note 3) | | | Maximum Reverse Current (Note 2) | | Typical Temperature Coefficient @ $I_{ZT}$ mV/℃ | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Vz @ $I_{ZT}$ | | | $I_{ZT}$ | $Z_{ZT}$ @ $I_{ZT}$ | $Z_{ZK}$ @ $I_{ZK}$ | $I_{ZK}$ | $I_R$ @ $V_R$ | | | |
| | Min (V) | Nom (V) | Max (V) | mA | Ω | | mA | μA | V | Min | Max |
| MM3Z2V7S | 2.5 | 2.7 | 2.9 | 5 | 100 | 1000 | 0.5 | 20 | 1.0 | -3.5 | 0 |

Notes: 2. Short duration test pulse used to minimize self-heating effect.

3. f = 1kHz.

## Marking

| Marking | 1D |
|---|---|

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■ Typical Characteristics

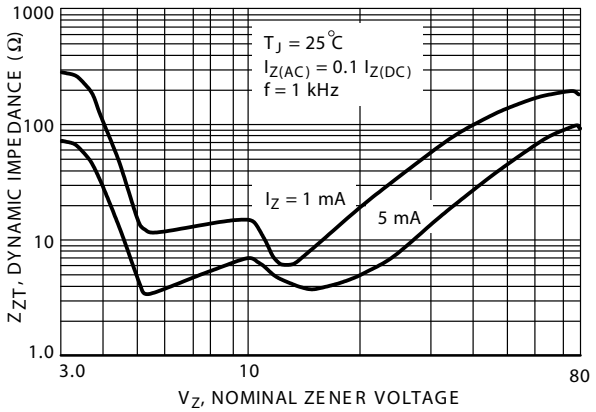


Fig.1 Effect of Zener Voltage on Zener Impedance

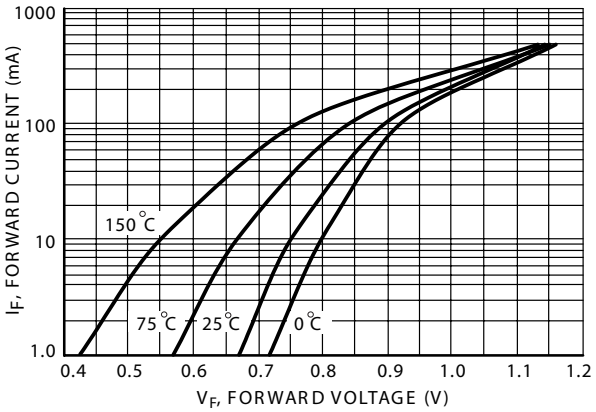


Fig.2 Typical Forward Voltage

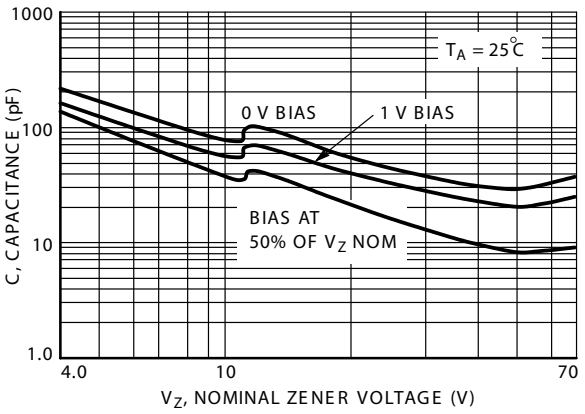


Fig.3 Typical Capacitance

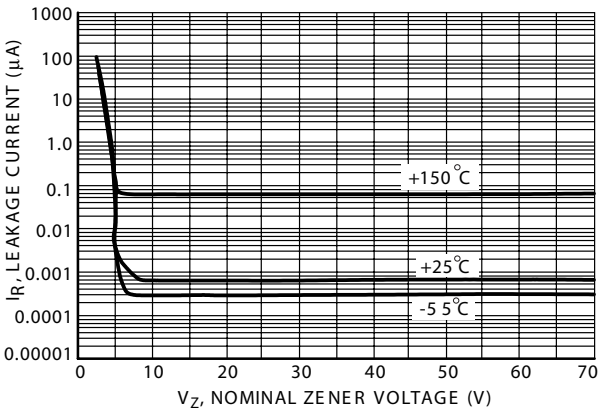


Fig.4 Typical Leakage Current

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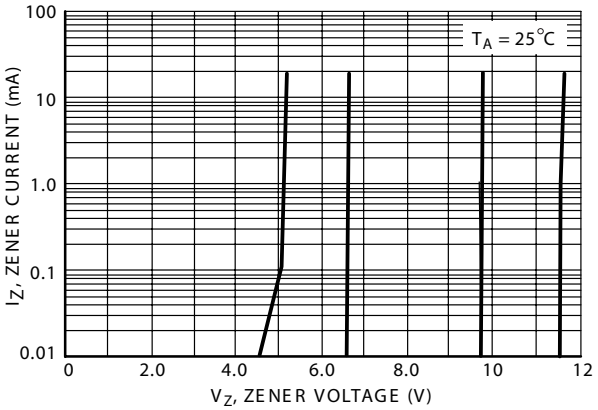



Fig.5 Zener Voltage versus Zener Current
(Vz Up to 12 V)

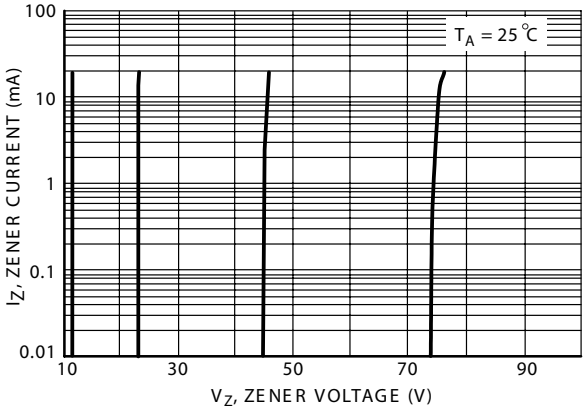
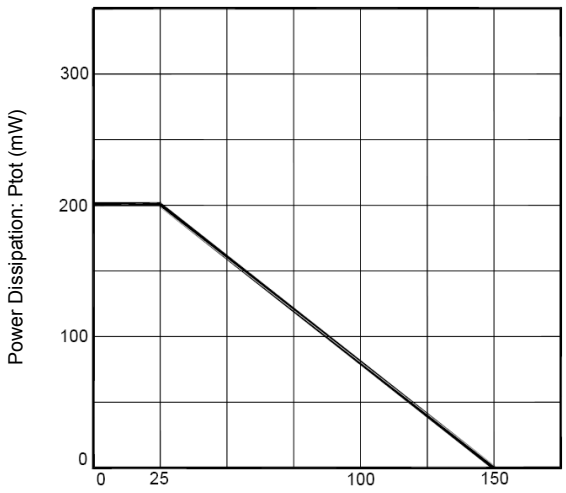



Fig.6 Zener Voltage versus Zener Current
(12 V to 75 V)




Derating Curve

Fig.7 Power Dissipation VS Ambient Temperature