

## Surface Mount Zener Diode

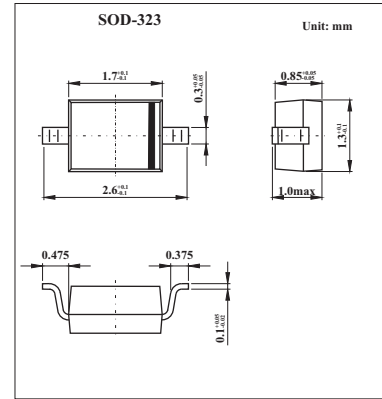
## MM3Z5V1S

## Features

Planar Die Construction

Ultra-Small Surface Mount Package

Ideally Suited for Automated Assembly Processes

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

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

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

Electrical Characteristics @ $T_a=25^\circ\text{C}$  unless otherwise specified

Type Number	Zener Voltage Range (Note 2)				Maximum Zener Impedance (Note 3)			Maximum Reverse Current (Note 2)		Typical Temperature Coefficient @ $I_{ZT}$ $\text{mV}/^\circ\text{C}$	
	$V_Z @ I_{ZT}$			$I_{ZT}$	$Z_{ZT} @ I_{ZT}$	$Z_{ZK} @ I_{ZK}$	$I_{ZK}$	$I_R @ V_R$		Min	Max
	Min (V)	Nom (V)	Max (V)	mA	$\Omega$	mA	$\mu\text{A}$	V			
MM3Z5V1S	4.8	5.1	5.4	5	60	500	0.5	2	2.0	-2.7	1.2

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

3.  $f = 1\text{kHz}$ .

## Marking

Marking	1N
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# MM3Z5V1S

■ Typical Characteristics

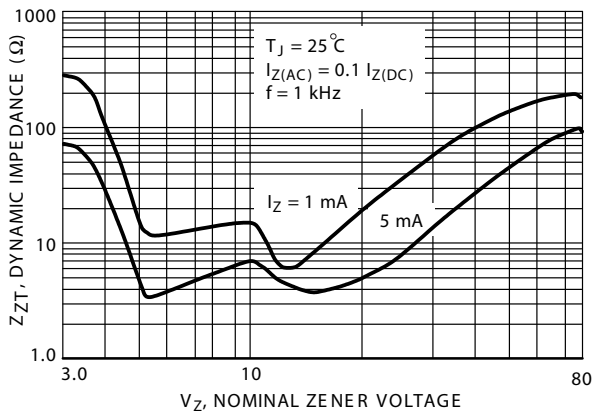


Fig.1 Effect of Zener Voltage on Zener Impedance

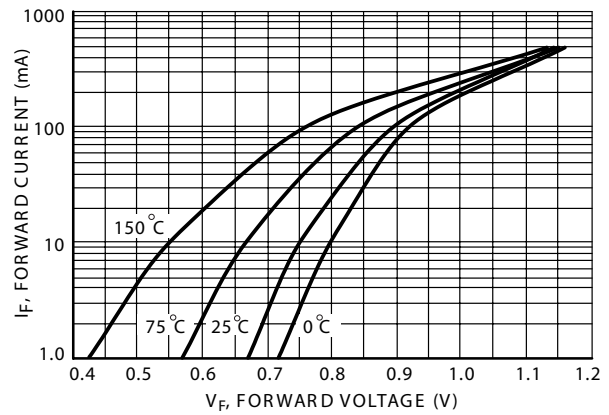


Fig.2 Typical Forward Voltage

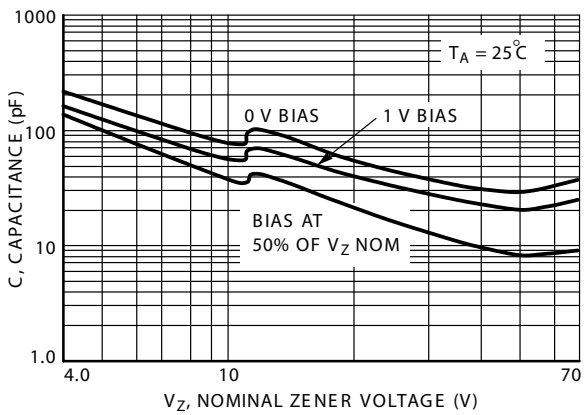


Fig.3 Typical Capacitance

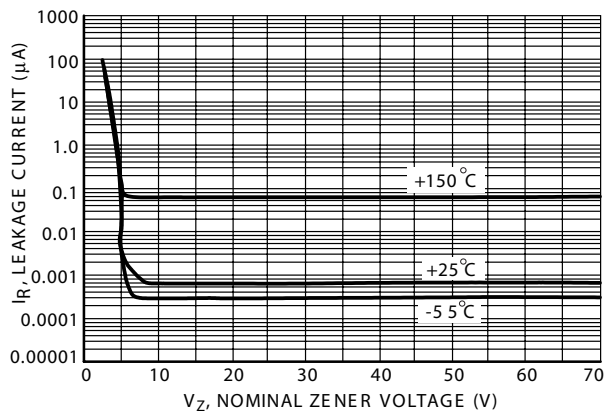


Fig.4 Typical Leakage Current

### MM3Z5V1S

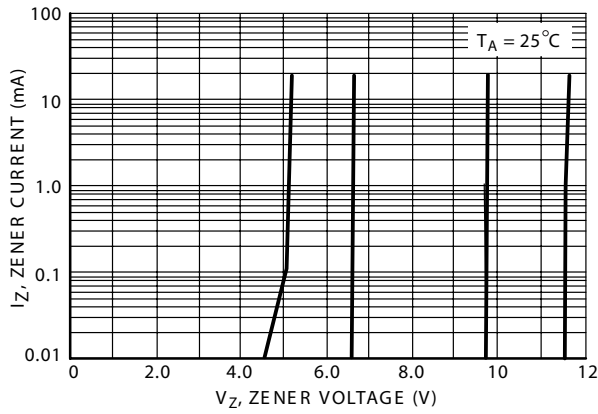


Fig.5 Zener Voltage versus Zener Current  
(Vz Up to 12 V)

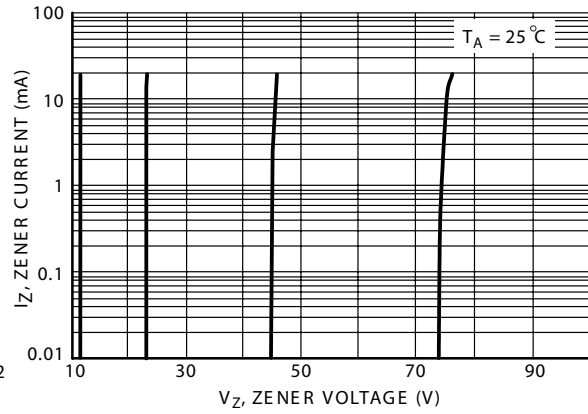


Fig.6 Zener Voltage versus Zener Current  
(12 V to 75 V)

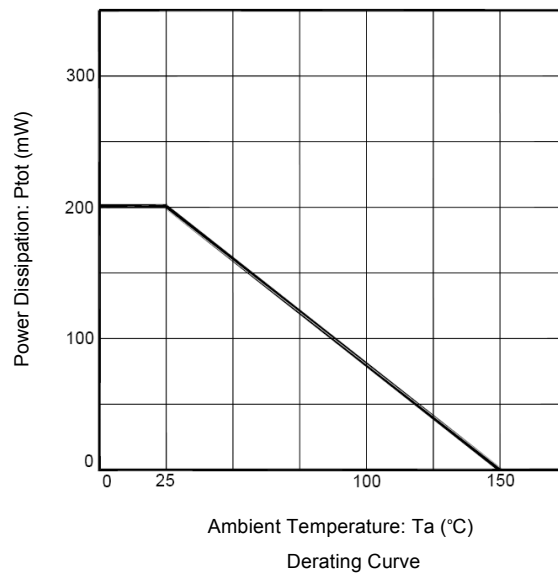


Fig.7 Power Dissipation VS Ambient Temperature