



Small Signal Zener Diodes



DESIGN SUPPORT TOOLS

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FEATURES

- Silicon planar Zener diodes
- Standard Zener voltage tolerance is $\pm 5\%$ with a "B" suffix (e.g.: MMSZ5225B-G), suffix "C" is $\pm 2\%$ tolerance
- AEC-Q101 qualified available (part number on request)
- ESD capability according to AEC-Q101: Human body model > 8 kV Machine model > 800 V
- Base P/N-G3 - green, commercial grade
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912



PRIMARY CHARACTERISTICS		
PARAMETER	VALUE	UNIT
V _Z range nom.	3 to 75	V
Test current I _{ZT}	1.7 to 20	mA
V _Z specification	Thermal equilibrium	
Circuit configuration	Single	

ORDERING INFORMATION			
DEVICE NAME	ORDERING CODE	TAPED UNITS PER REEL	MINIMUM ORDER QUANTITY
MMSZ5225-G to MMBZ5267-G	MMSZ5225B-G3-08 to MMSZ5267B-G3-08	3000 (8 mm tape on 7" reel)	15 000/box
	MMSZ5225C-G3-08 to MMSZ5267C-G3-08		
	MMSZ5225B-G3-18 to MMSZ5267B-G3-18	10 000 (8 mm tape on 13" reel)	10 000/box
	MMSZ5225C-G3-18 to MMSZ5267C-G3-18		

PACKAGE				
PACKAGE NAME	WEIGHT	MOLDING COMPOUND FLAMMABILITY RATING	MOISTURE SENSITIVITY LEVEL	SOLDERING CONDITIONS
SOD-123	10.3 mg	UL 94 V-0	MSL level 1 (according J-STD-020)	260 °C/10 s at terminals

ABSOLUTE MAXIMUM RATINGS (T _{amb} = 25 °C, unless otherwise specified)					
PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT	
Power dissipation	On FR - 4 or FR - 5 board with minimum recommended solder pad layout	P _{tot}	500	mW	
Zener current	See table "Electrical Characteristics"				
Thermal resistance junction to ambient air	On FR - 4 or FR - 5 board with minimum recommended solder pad layout	R _{thJA}	340	K/W	
Junction temperature, maximum		T _j	150	°C	
Storage temperature range		T _{stg}	-65 to +175	°C	
Operating temperature range		T _{op}	-55 to +150	°C	



ELECTRICAL CHARACTERISTICS (T_{amb} = 25 °C, unless otherwise specified)

Table with columns: PART NUMBER, MARKING CODE (± 2 %, ± 5 %), ZENER VOLTAGE RANGE (Vz at IZT1), TEST CURRENT (IZT1, IZT2), REVERSE LAEKAGE CURRENT (IR at VR), DYNAMIC RESISTANCE (Zz at IZT1, ZzK at IZT2), TEMPERATURE COEFFICIENT (αVZ). Rows list various part numbers from MMSZ5225-G to MMSZ5267-G with their respective specifications.

Notes

- Maximum VF = 0.9 V, at IF = 10 mA
(1) Measured with device junction in thermal equilibrium
(2) The Zener impedance is derived from the 1 kHz AC voltage which results when an AC current having an RMS value equal to 10 % of the Zener current (IZT1 or IZT2) is superimposed on IZT1 or IZT2. Zener Impedance is measured at two points to insure a sharp knee on the breakdown curve and to eliminate unstable units

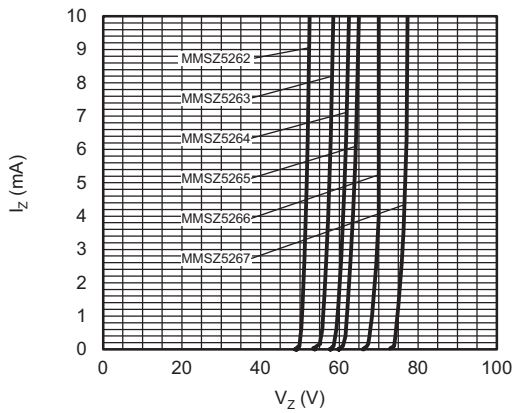


Fig. 1 - Breakdown Characteristics

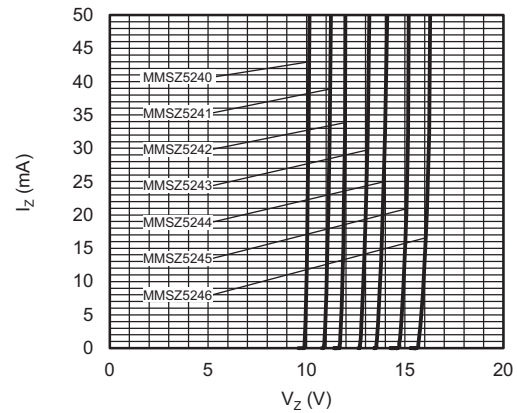


Fig. 4 - Breakdown Characteristics

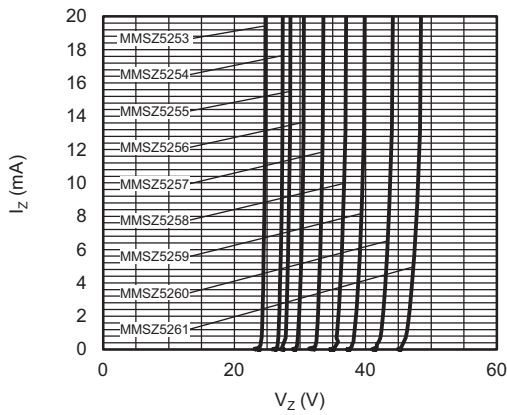


Fig. 2 - Breakdown Characteristics

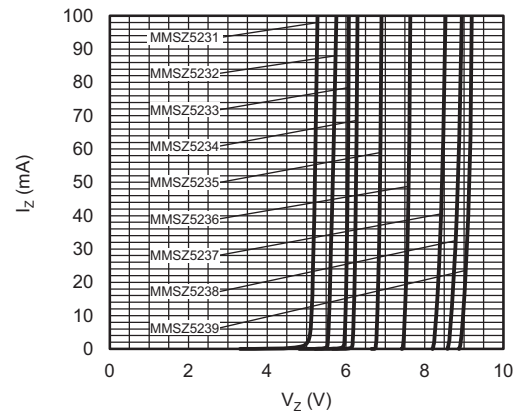


Fig. 5 - Breakdown Characteristics

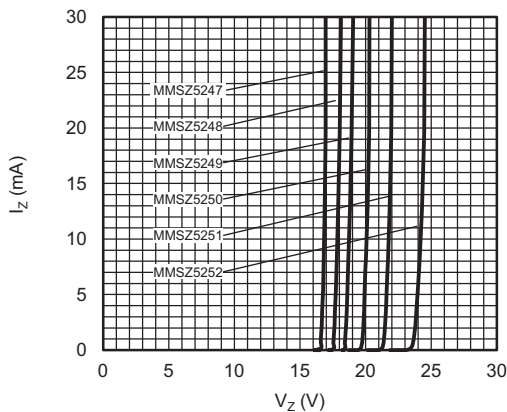


Fig. 3 - Breakdown Characteristics

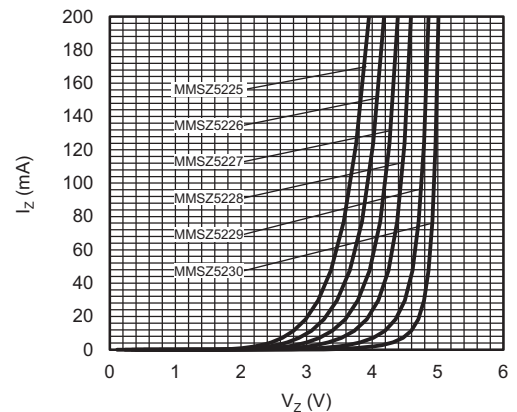
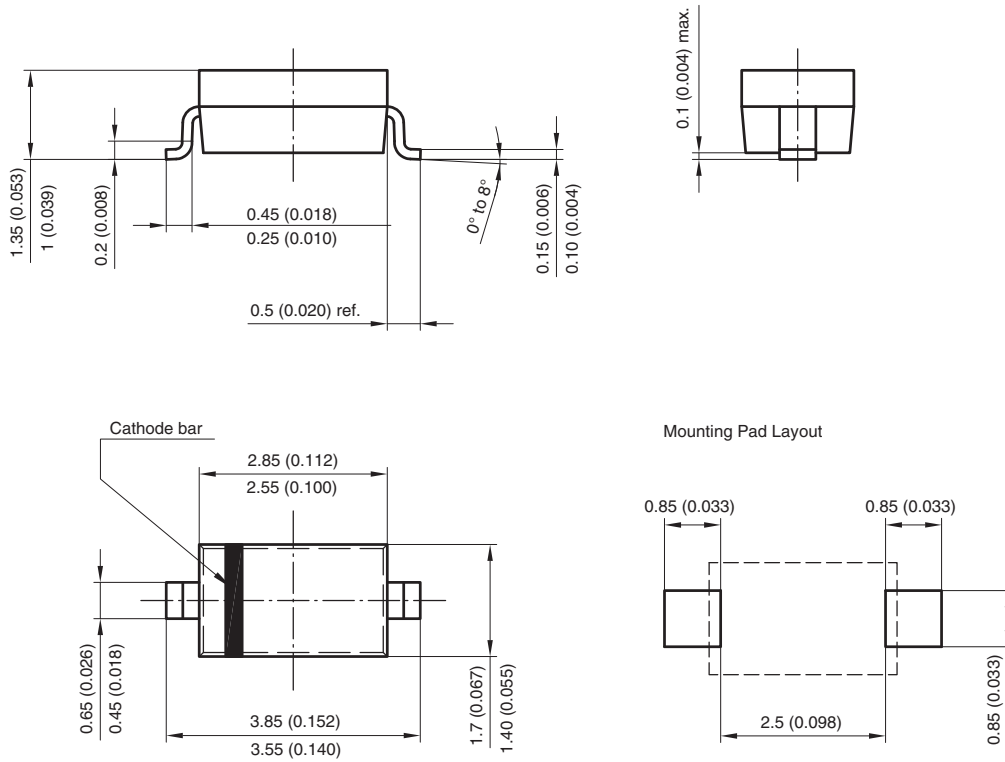


Fig. 6 - Breakdown Characteristics



PACKAGE DIMENSIONS in millimeters (inches): SOD-123



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