



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 (V_Z at I_ZT1), TEST CURRENT (I_ZT1, I_ZT2), REVERSE LAEKAGE CURRENT (I_R at V_R), DYNAMIC RESISTANCE (Z_Z at I_ZT1, Z_ZK at I_ZT2), TEMPERATURE COEFFICIENT (α_VZ). Rows list various part numbers from MMSZ5225-G to MMSZ5267-G with their respective specifications.

Notes

- Maximum V_F = 0.9 V, at I_F = 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 (I_ZT1 or I_ZT2) is superimposed on I_ZT1 or I_ZT2. Zener Impedance is measured at two points to insure a sharp knee on the breakdown curve and to eliminate unstable units

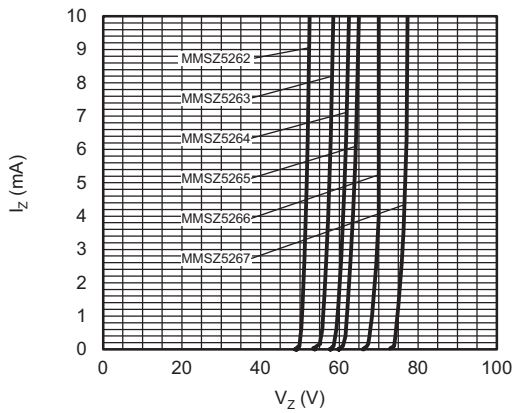


Fig. 1 - Breakdown Characteristics

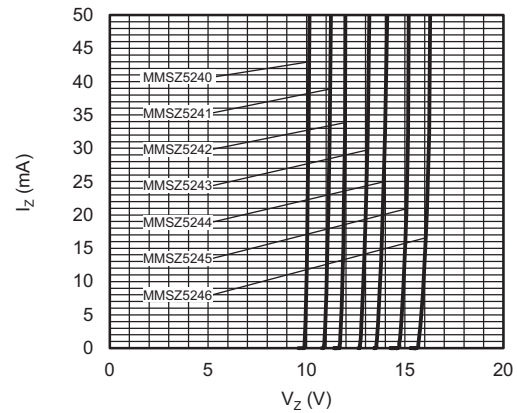


Fig. 4 - Breakdown Characteristics

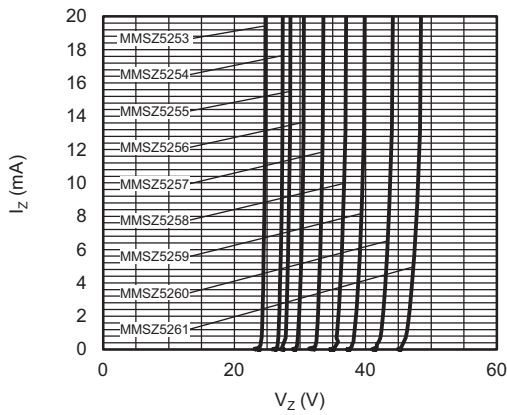


Fig. 2 - Breakdown Characteristics

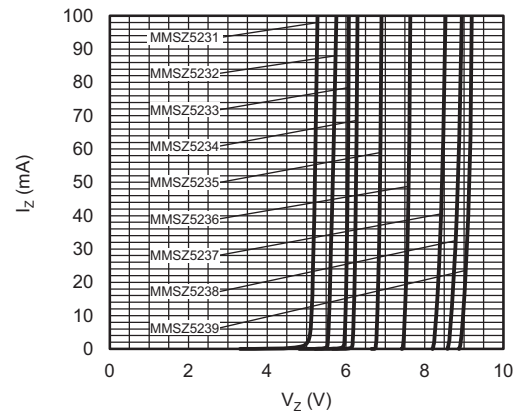


Fig. 5 - Breakdown Characteristics

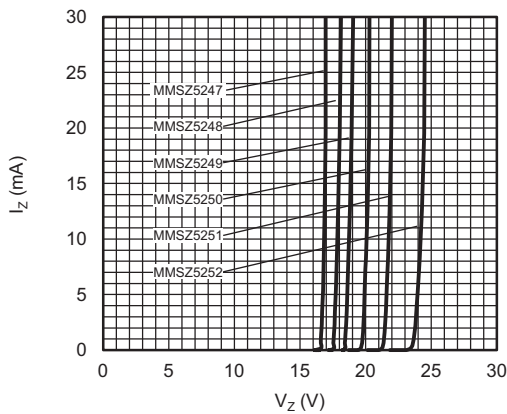


Fig. 3 - Breakdown Characteristics

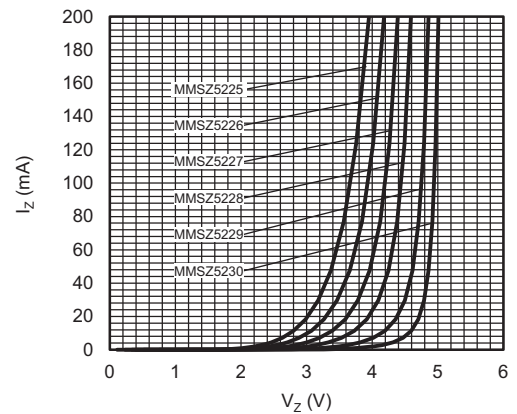
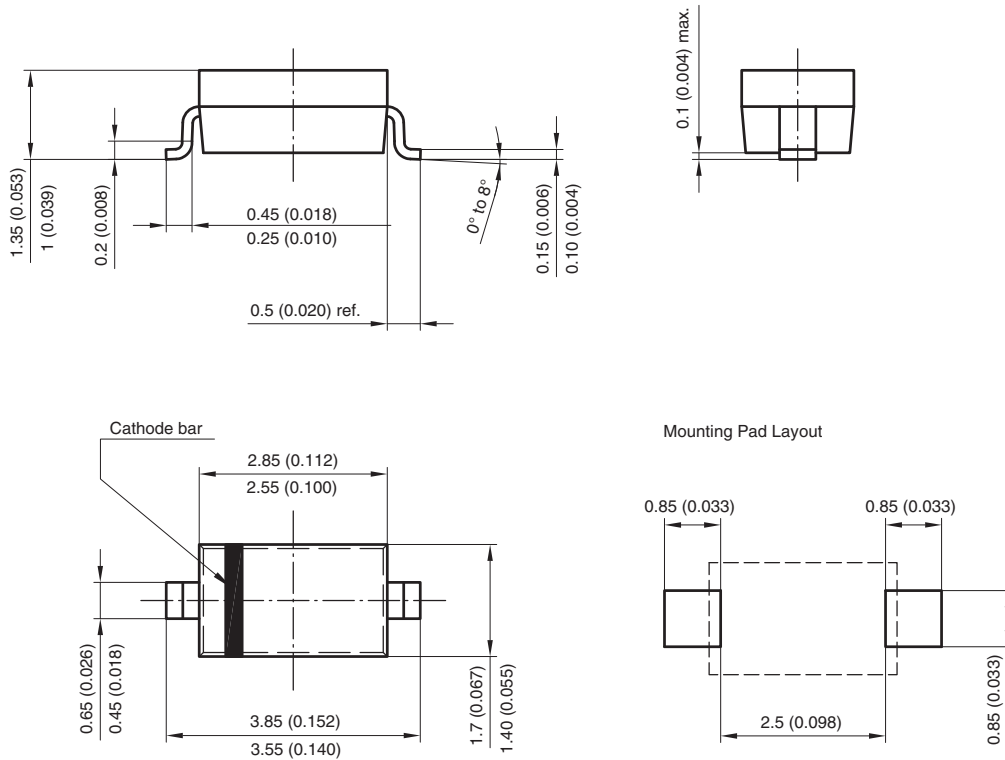


Fig. 6 - Breakdown Characteristics



PACKAGE DIMENSIONS in millimeters (inches): SOD-123



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