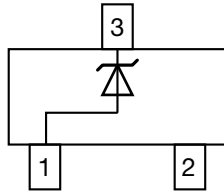
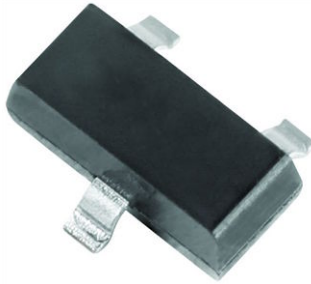


Small Signal Zener Diodes


DESIGN SUPPORT TOOLS
[click logo to get started](#)
3D
Models
Available

FEATURES

- Silicon planar power Zener diodes
- Standard Zener voltage tolerance is $\pm 5\%$ with a "B" suffix (e.g.: MMBZ5225B), suffix "C" is $\pm 2\%$ tolerance.
- High temperature soldering guaranteed: 260 °C/4 x 10 s at terminals
- AEC-Q101 qualified available
- ESD capability according to AEC-Q101: Human body model > 8 kV Machine model > 800 V
- Base P/N-E3 - RoHS-compliant, commercial grade
- Base P/N-HE3 - RoHS-compliant, AEC-Q101 qualified
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

 AUTOMOTIVE
GRADE
Available

RoHS
COMPLIANT

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
MMBZ5225 to MMBZ5267	MMBZ5225B-E3-08 to MMBZ5267B-E3-08	3000 (8 mm tape on 7" reel)	15 000/box
	MMBZ5225C-E3-08 to MMBZ5267C-E3-08		
	MMBZ5225B-HE3-08 to MMBZ5267B-HE3-08		
	MMBZ5225C-HE3-08 to MMBZ5267C-HE3-08		
	MMBZ5225B-E3-18 to MMBZ5267B-E3-18	10 000 (8 mm tape on 13" reel)	10 000/box
	MMBZ5225C-E3-18 to MMBZ5267C-E3-18		
	MMBZ5225B-HE3-18 to MMBZ5267B-HE3-18		
	MMBZ5225C-HE3-18 to MMBZ5267C-HE3-18		

PACKAGE

PACKAGE NAME	WEIGHT	MOLDING COMPOUND FLAMMABILITY RATING	MOISTURE SENSITIVITY LEVEL	SOLDERING CONDITIONS
SOT-23	8.8 mg	UL 94 V-0	MSL level 1 (according J-STD-020)	260 °C/10 s at terminals

ABSOLUTE MAXIMUM RATINGS ($T_{amb} = 25\text{ °C}$, unless otherwise specified)

PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Power dissipation	On FR - 5 board using recommended solder pad layout	P_{tot}	225	mW
	On alumina substrate	P_{tot}	300	mW
Zener current	See table "Electrical Characteristics"			
Thermal resistance, junction to ambient air	On FR - 5 board using recommended solder pad layout	R_{thJA}	556	K/W
Junction temperature		T_j	150	°C
Storage temperature range		T_{stg}	-65 to +150	°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, ZENER VOLTAGE RANGE (1), TEST CURRENT (I_ZT1, I_ZT2), REVERSE LEAKAGE CURRENT (I_R at V_R), DYNAMIC RESISTANCE (2) (Z_Z at I_ZT1, Z_ZK at I_ZT2), TEMPERATURE COEFFICIENT (alpha_VZ). Rows list part numbers from MMBZ5225 to MMBZ5267 with their respective electrical parameters.

Notes

- Maximum V_F = 0.9 V, at I_F = 10 mA
(1) Measured at 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

TYPICAL CHARACTERISTICS ($T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified)

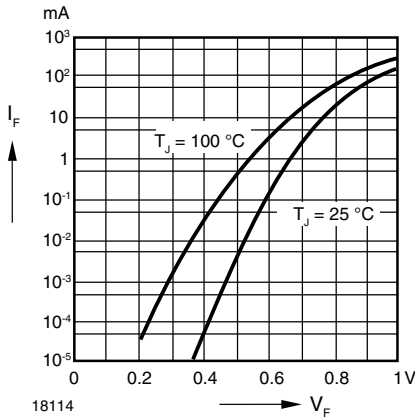


Fig. 1 - Forward Characteristics

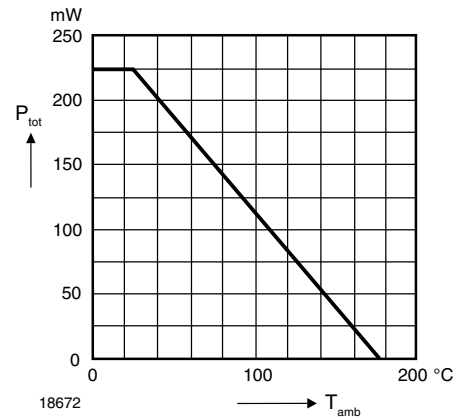
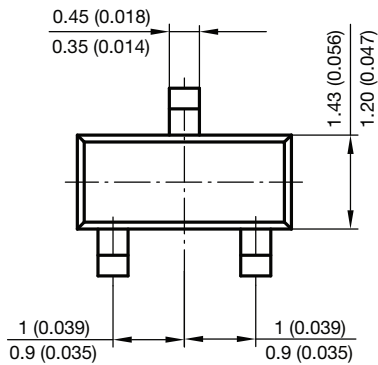
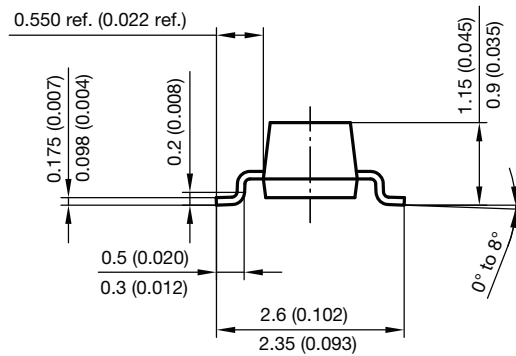
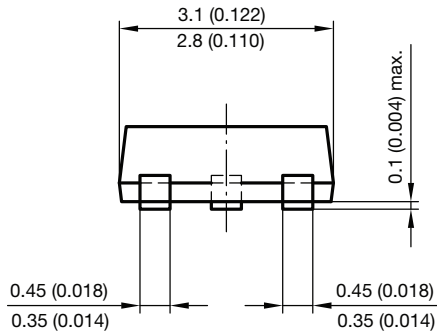
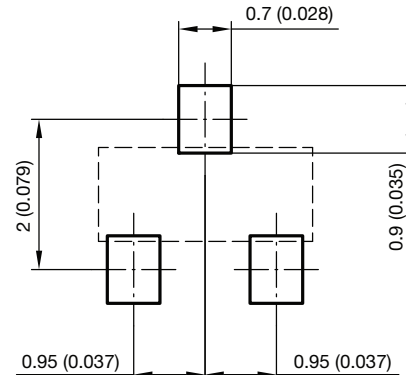


Fig. 2 - Admissible Power Dissipation vs. Ambient Temperature

PACKAGE DIMENSIONS in millimeters (inches): SOT-23



Foot print recommendation:





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