

**200mW SURFACE MOUNT SILICON ZENER DIODES 2.4V ~39V  
SOT-323 PACKAGE**

**Pb Free Product**

**FEATURES**

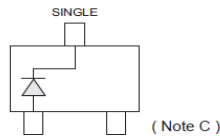
- \* Planar Die construction
- \* 200mW Power Dissipation
- \* Zener Voltages from 2.4V - 39V
- \* Ultra-Small Surface Mount Package Power dissipation

**MECHANICAL DATA**

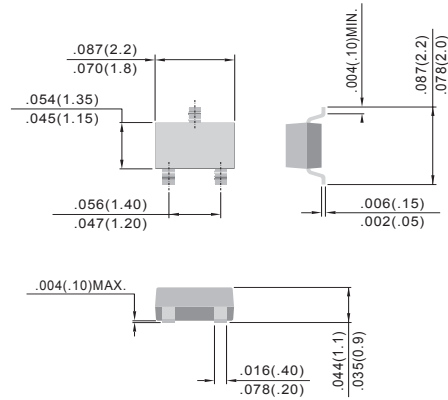
- \* Case: SOT-323, Molded Plastic
- \* Terminals: Solderable per MIL-STD-202E, Method 208
- \* Polarity: See Diagram Below
- \* Approx. Weight: 0.006 grams
- \* Mounting Position: Any

**ORDER INFORMATION**

- \* Packing information  
Packing information: -T - 3K per 7" plastic Reel
- \* Product Type Symbol  
RoHS product for packing code suffix "G"  
Halogen free product for packing code suffix "H"



**SOT-323**



Dimensions in inches and (millimeters)

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Ratings at 25°C ambient temperature unless otherwise specified.  
Single phase half wave, 60Hz, resistive of inductive load.  
For capacitive load, derate current by 20%

PARAMETER	SYMBOL	VALUE	UNIT
Power Dissipation (Note A) at Tamb=25°C	P <sub>TOT</sub>	200	mW
Operating Junction and Storage Temperature Range	T <sub>J</sub> , T <sub>S</sub>	-55 to +150	°C

Valid provided that leads at a distance of 10mm from case kept at ambient temperatur

NOTE :

A. Mounted on 5.0mm<sup>2</sup>(.013mm thick) land areas.

Part No.	Nominal Zener Voltage			Max. Zener Impedance				Max Reverse Leakage Current		Marking Code	Case
	V <sub>Z</sub> @ I <sub>ZT</sub>			Z <sub>ZT</sub> @ I <sub>ZT</sub>		Z <sub>ZK</sub> @ I <sub>ZK</sub>		I <sub>R</sub> @ V <sub>R</sub>			
	Nom. V	Min. V	Max. V	Ω	mA	Ω	mA	μA	V		
MMBZ5221BW	2.4	2.28	2.52	30	20.0	1200	0.25	100	1.0	C1/KC1	SOT-323
MMBZ5223BW	2.7	2.57	2.84	30	20.0	1300	0.25	75	1.0	C3/KC3	SOT-323
MMBZ5225BW	3.0	2.85	3.15	30	20.0	1600	0.25	50	1.0	C5/KC5	SOT-323
MMBZ5226BW	3.3	3.14	3.47	28	20.0	1600	0.25	25	1.0	D1/KG1	SOT-323
MMBZ5227BW	3.6	3.42	3.78	24	20.0	1700	0.25	15	1.0	D2/KG2	SOT-323
MMBZ5228BW	3.9	3.71	4.10	23	20.0	1900	0.25	10	1.0	D3/KG3	SOT-323
MMBZ5229BW	4.3	4.09	4.52	22	20.0	2000	0.25	5.0	1.0	D4/KG4	SOT-323
MMBZ5230BW	4.7	4.47	4.94	19	20.0	1900	0.25	5.0	2.0	D5/KG5	SOT-323
MMBZ5231BW	5.1	4.85	5.36	17	20.0	1600	0.25	5.0	2.0	E1/KE1	SOT-323
MMBZ5232BW	5.6	5.32	5.88	11	20.0	1600	0.25	5.0	3.0	E2/KE2	SOT-323
MMBZ5234BW	6.2	5.89	6.51	7	20.0	1000	0.25	5.0	4.0	E4/KE4	SOT-323
MMBZ5235BW	6.8	6.46	7.14	5	20.0	750	0.25	3.0	5.0	E5/KE5	SOT-323
MMBZ5236BW	7.5	7.13	7.88	6	20.0	500	0.25	3.0	6.0	F1/KF1	SOT-323
MMBZ5237BW	8.2	7.79	8.61	8	20.0	500	0.25	3.0	6.0	F2/KF2	SOT-323
MMBZ5238BW	8.7	8.27	9.14	8	20.0	600	0.25	3.0	6.5	F3/KF3	SOT-323
MMBZ5239BW	9.1	8.65	9.56	10	20.0	600	0.25	3.0	6.5	F4/KF4	SOT-323
MMBZ5240BW	10.0	9.50	10.50	17	20.0	600	0.25	3.0	8.0	F5/KF5	SOT-323
MMBZ5241BW	11.0	10.45	11.55	22	20.0	600	0.25	2.0	8.4	H1/KH1	SOT-323
MMBZ5242BW	12.0	11.40	12.60	30	20.0	600	0.25	1.0	9.1	H2/KH2	SOT-323
MMBZ5243BW	13.0	12.35	13.65	13	9.5	600	0.25	0.5	9.9	H3/KH3	SOT-323
MMBZ5244BW	14.0	13.30	14.70	15	9.0	600	0.25	0.1	10.5	H4/KH4	SOT-323
MMBZ5245BW	15.0	14.25	15.75	16	8.5	600	0.25	0.1	11.0	H5/KH5	SOT-323
MMBZ5246BW	16.0	15.20	16.80	17	7.8	600	0.25	0.1	12.0	J1/KJ1	SOT-323
MMBZ5248BW	18.0	17.10	18.90	21	7.0	600	0.25	0.1	14.0	J3/KJ3	SOT-323
MMBZ5250BW	20.0	19.00	21.00	25	6.2	600	0.25	0.1	15.0	J5/KJ5	SOT-323
MMBZ5251BW	22.0	20.90	23.10	29	5.6	600	0.25	0.1	17.0	K1/KK1	SOT-323
MMBZ5252BW	24.0	22.80	25.20	33	5.2	600	0.25	0.1	18.0	K2/KK2	SOT-323
MMBZ5254BW	27.0	25.65	28.35	41	5.0	600	0.25	0.1	21.0	K4/KK4	SOT-323
MMBZ5255BW	28.0	26.60	29.40	44	4.5	600	0.25	0.1	21.0	K5/KK5	SOT-323
MMBZ5256BW	30.0	28.50	31.50	49	4.2	600	0.25	0.1	23.0	M1/KM1	SOT-323
MMBZ5257BW	33.0	31.35	34.65	58	3.8	700	0.25	0.1	25.0	M2/KM2	SOT-323
MMBZ5258BW	36.0	34.20	37.80	70	3.4	700	0.25	0.1	27.0	M3/KM3	SOT-323
MMBZ5259BW	39.0	37.05	40.95	80	3.2	800	0.25	0.1	30.0	M4/KM4	SOT-323

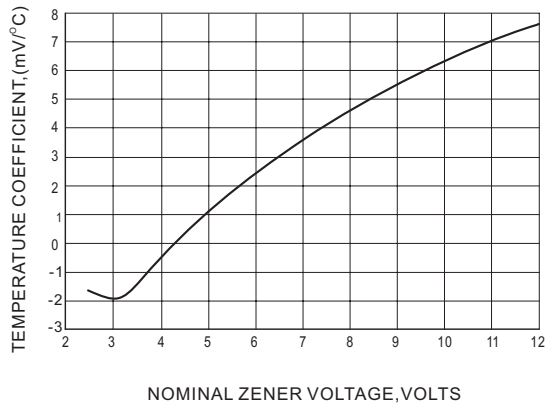


Fig. 1 TEMPERATURE COEFFICIENTS

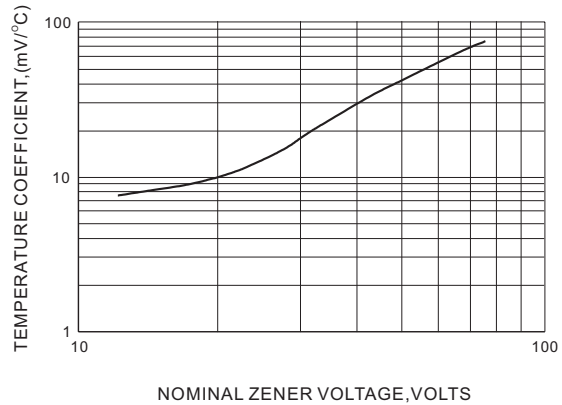


Fig. 2 TEMPERATURE COEFFICIENTS

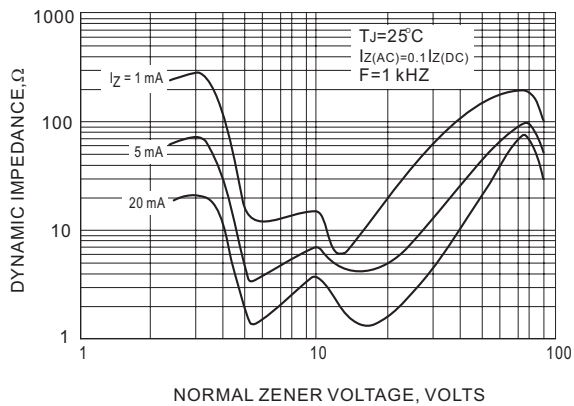


Fig. 3 EFFECT OF ZENER VOLTAGE ON ZENER IMPEDANCE

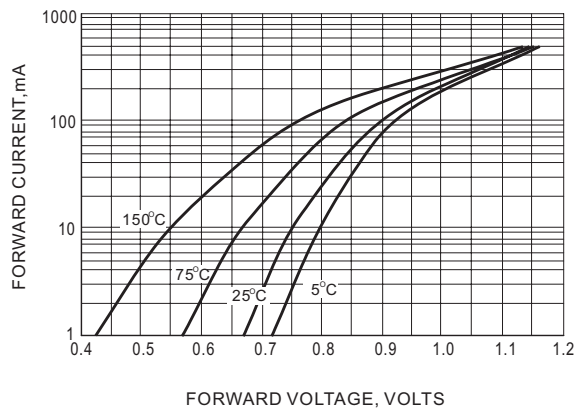


Fig. 4 TYPICAL FORWARD VOLTAGE

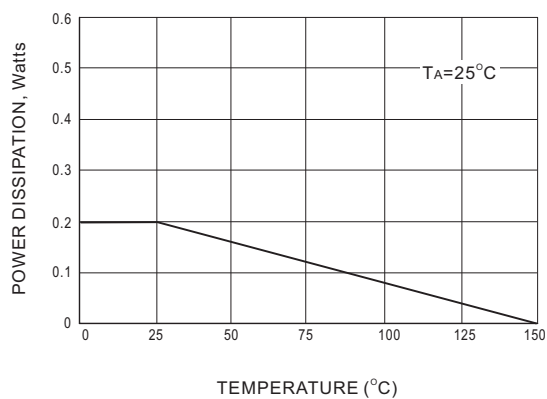


Fig. 5 STEADY STATE POWER DERATING

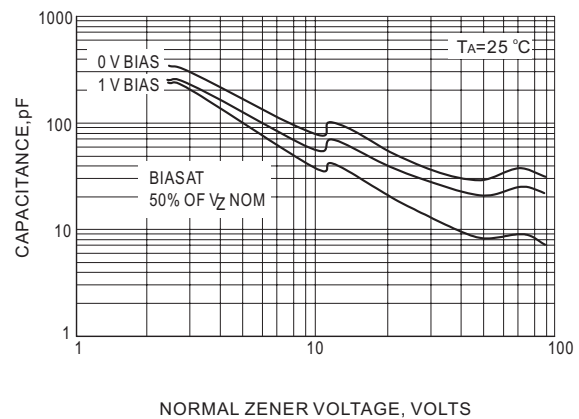
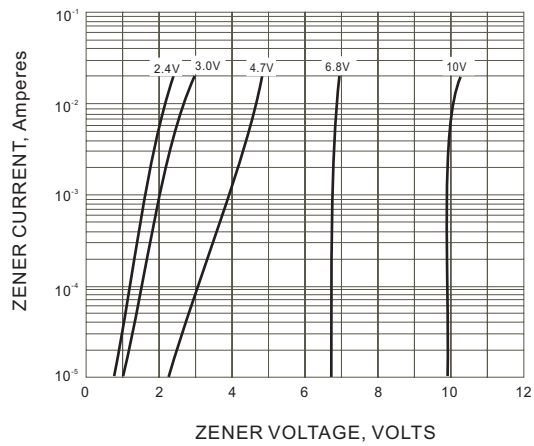
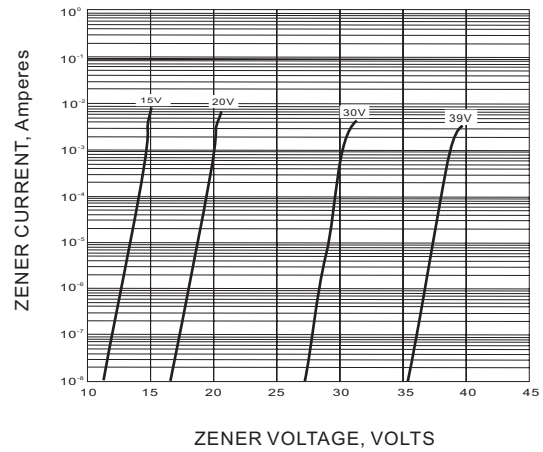
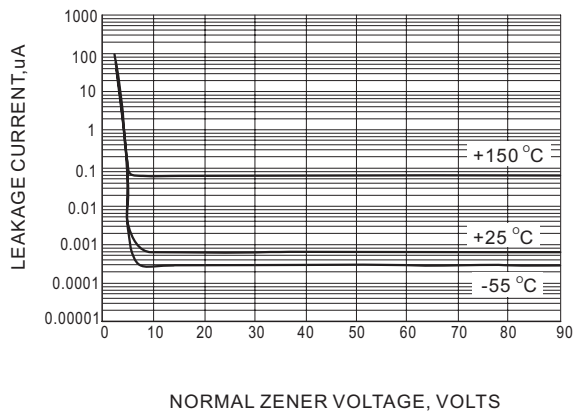


Fig. 6 TYPICAL CAPACITANCE


**Fig.7 ZENER VOLTAGE VERSUS ZENER CURRENT**

**Fig.8 ZENER VOLTAGE VERSUS ZENER CURRENT**

**Fig.9 TYPICAL LEAKAGE CURRENT**
**MOUNTING PAD LAYOUT**
