

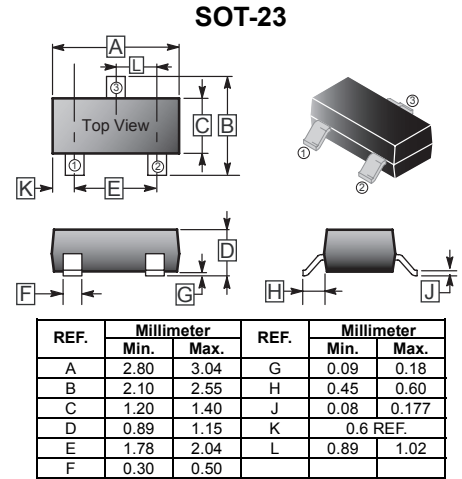
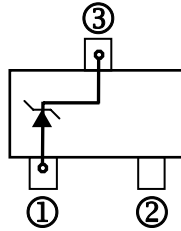
RoHS Compliant Product  
A suffix of "-C" specifies halogen & lead-free

## FEATURES

- Planar Die Construction
- 300 mW Power Dissipation on FR-4 PCB
- General Purpose, Medium Current
- Ideally Suited for Automated Assembly Process

## MECHANICAL DATA

- Case: SOT-23, Molded Plastic
- Terminals: Solderable per MIL-STD-202, Method 208
- Polarity: See Diagrams
- Weight: 0.008 grams (approx.)
- Marking : Marking Code (See Table On Page 2)



## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

PARAMETER	SYMBOL	VALUE	UNITS
Maximum Forward Voltage Diode at $I_F = 100$ mA	$V_F$	1.0	V
Maximum Power Dissipation (Notes 1) at 25°C	$P_D$	300	mW
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method) (Notes 2)	$I_{FSM}$	4.0	Amps
Operating Junction and Storage Temperature Range	$T_J$	-55~150	°C

1. Mounted on 5.0 mm<sup>2</sup> (.013mm thick) land areas. 2. Alumina = 0.4 X 0.3 X 0.024 in. 99.5% alumina.  
2. Measured on 8.3ms, single half sine-wave or equivalent square wave, duty cycle = 4 pulses per minute maximum.

## ELECTRICAL RATINGS

(Rating 25°C ambient temperature unless otherwise specified)

Part Number	Marking Code	Nominal Zener Voltage			Max. Zener Impedance				Max. Reverse Leakage Current	
		$V_Z @ I_{ZT}$			$Z_{ZT} @ I_{ZT}$		$Z_{ZK} @ I_{ZK}$		$I_R @ V_R$	
		Nom (V)	Min (V)	Max (V)	Ω	mA	Ω	mA	μA	V
<b>300 mW Zener Diodes</b>										
MMBZ5221B	C1 / KC1	2.4	2.28	2.52	30	20.0	1200	0.25	100	1.0
MMBZ5222B	C2	2.5	2.38	2.63	30	20.0	1250	0.25	100	1.0
MMBZ5223B	C3 / KC3	2.7	2.57	2.84	30	20.0	1300	0.25	75	1.0
MMBZ5225B	C5 / KC5	3	2.85	3.15	30	20.0	1600	0.25	50	1.0
MMBZ5226B	D1 / KG1	3.3	3.14	3.47	28	20.0	1600	0.25	25	1.0
MMBZ5227B	D2 / KG2	3.6	3.42	3.78	24	20.0	1700	0.25	15	1.0
MMBZ5228B	D3 / KG3	3.9	3.71	4.10	23	20.0	1900	0.25	10	1.0
MMBZ5229B	D4 / KG4	4.3	4.09	4.52	22	20.0	2000	0.25	5.0	1.0
MMBZ5230B	D5 / KG5	4.7	4.47	4.94	19	20.0	1900	0.25	5.0	2.0
MMBZ5231B	E1 / KE1	5.1	4.85	5.36	17	20.0	1600	0.25	5.0	2.0
MMBZ5232B	E2 / KE2	5.6	5.32	5.88	11	20.0	1600	0.25	5.0	3.0
MMBZ5233B	E3 / KE3	6	5.7	6.3	7	20.0	1600	0.25	5.0	3.5
MMBZ5234B	8J / KE4	6.2	5.89	6.51	7	20.0	1000	0.25	5.0	4.0
MMBZ5235B	E5 / KE5	6.8	6.46	7.14	5	20.0	750	0.25	3.0	5.0
MMBZ5236B	F1 / KF1	7.5	7.13	7.88	6	20.0	500	0.25	3.0	6.0
MMBZ5237B	F2 / KF2	8.2	7.79	8.61	8	20.0	500	0.25	3.0	6.0
MMBZ5238B	F3 / KF3	8.7	8.27	9.14	8	20.0	600	0.25	3.0	6.5
MMBZ5239B	F4 / KF4	9.1	8.65	9.56	10	20.0	600	0.25	3.0	6.5
MMBZ5240B	F5 / KF5	10	9.50	10.50	17	20.0	600	0.25	3.0	8.0
MMBZ5241B	H1 / KH1	11	10.45	11.55	22	20.0	600	0.25	3.0	8.4
MMBZ5242B	H2 / KH2	12	11.40	12.60	30	20.0	600	0.25	2.0	9.1
MMBZ5243B	H3 / KH3	13	12.35	13.65	13	9.5	600	0.25	1.0	9.9
MMBZ5245B	H5 / KH5	15	14.25	15.75	16	8.5	600	0.25	0.5	11.0

## ELECTRICAL RATINGS

(Rating 25°C ambient temperature unless otherwise specified)

Part Number	Marking Code	Nominal Zener Voltage			Max. Zener Impedance				Max. Reverse Leakage Current	
		$V_Z @ I_{ZT}$			$Z_{ZT} @ I_{ZT}$		$Z_{ZK} @ I_{ZK}$		$I_R @ V_R$	
		Nom (V)	Min (V)	Max (V)	$\Omega$	mA	$\Omega$	mA	$\mu A$	V
<b>300 mW Zener Diodes</b>										
MMBZ5246B	J1 / KJ1	16	15.20	16.80	17	7.8	600	0.25	0.1	12.0
MMBZ5247B	J2	17	16.15	17.85	19	7.4	600	0.25	0.1	13.0
MMBZ5248B	J3 / KJ3	18	17.10	18.90	21	7.0	600	0.25	0.1	14.0
MMBZ5249B	J4	19	18.05	19.95	23	6.6	600	0.25	0.1	14.0
MMBZ5250B	J5 / KJ5	20	19.00	21.00	25	6.2	600	0.25	0.1	15.0
MMBZ5251B	K1 / KK1	22	20.90	23.10	29	5.6	600	0.25	0.1	17.0
MMBZ5252B	K2 / KK2	24	22.80	25.20	33	5.2	600	0.25	0.1	18.0
MMBZ5253B	K3	25	23.75	26.25	35	5	600	0.25	0.1	19.0
MMBZ5254B	K4 / KK4	27	25.65	28.35	41	5.0	600	0.25	0.1	21.0
MMBZ5255B	K5 / KK5	28	26.60	29.40	44	4.5	600	0.25	0.1	21.0
MMBZ5256B	M1 / KM1	30	28.50	31.50	49	4.2	600	0.25	0.1	23.0
MMBZ5257B	M2 / KM2	33	31.35	34.65	58	3.8	700	0.25	0.1	25.0
MMBZ5258B	M3 / KM3	36	34.20	37.80	70	3.4	700	0.25	0.1	27.0
MMBZ5259B	M4 / KM4	39	37.05	40.95	80	3.2	800	0.25	0.1	30.0

**CHARACTERISTIC CURVES**

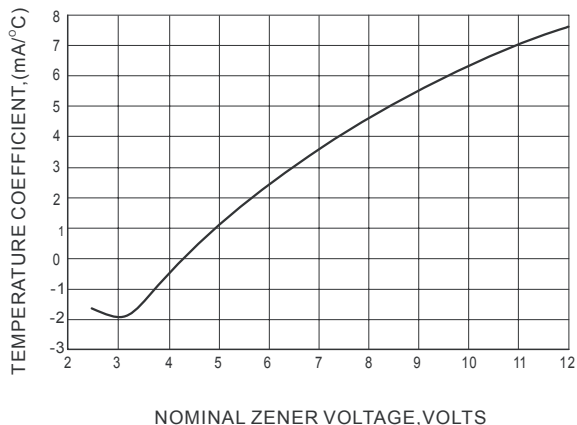


Fig. 1 TEMPERATURE COEFFICIENTS

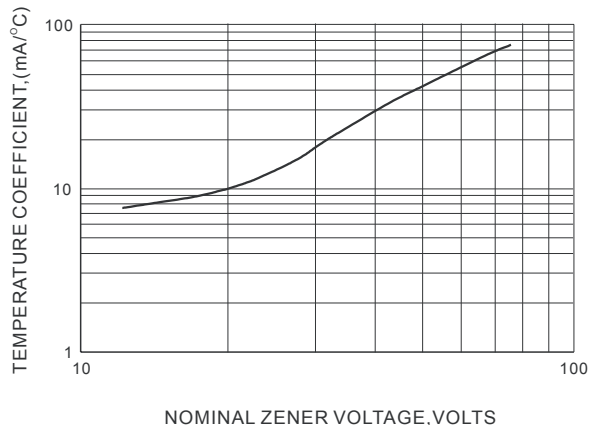


Fig. 2 TEMPERATURE COEFFICIENTS

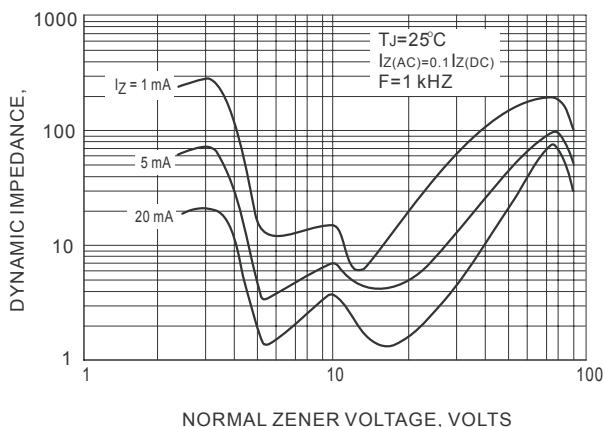


Fig. 3 EFFECT OF ZENER VOLTAGE ON ZENER IMPEDANCE

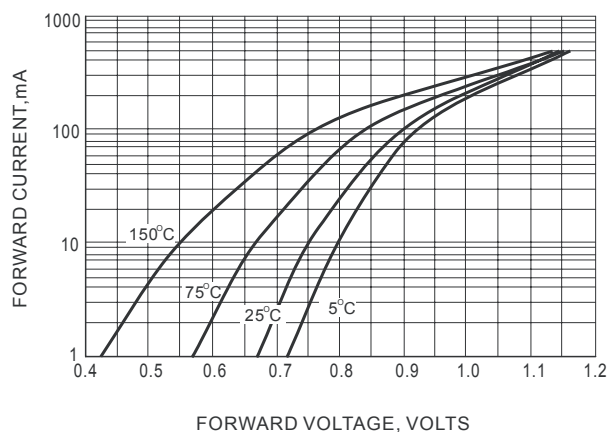


Fig. 4 TYPICAL FORWARD VOLTAGE

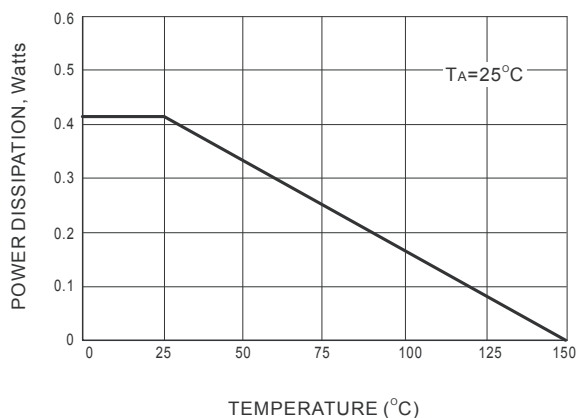


Fig. 5 STEADY STATE POWER DERATING

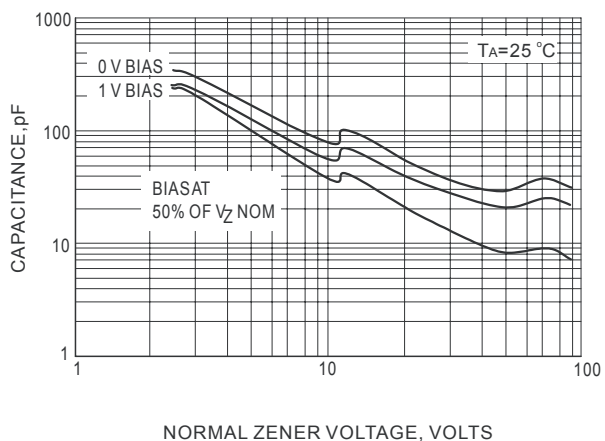


Fig. 6 TYPICAL CAPACITANCE

**CHARACTERISTIC CURVES (cont'd)**

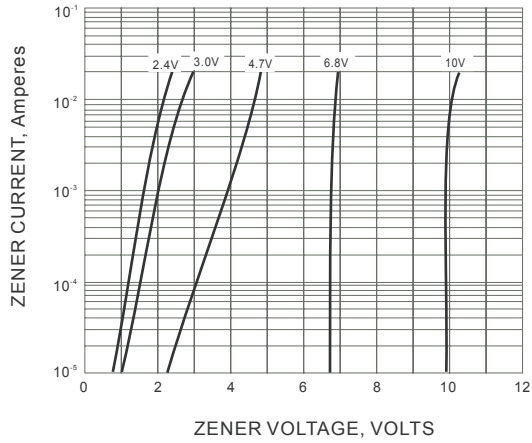


Fig.7 ZENER VOLTAGE VERSUS ZENER CURRENT

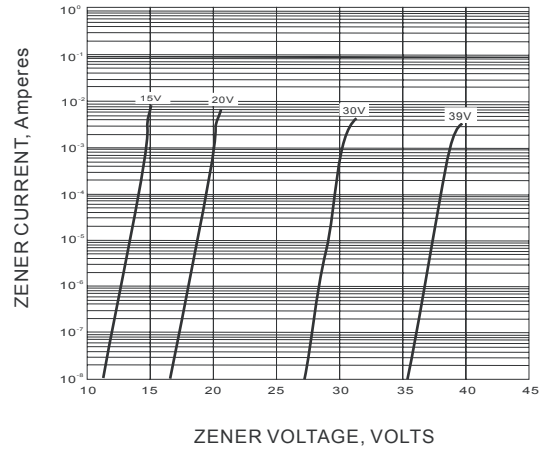


Fig.8 ZENER VOLTAGE VERSUS ZENER CURRENT

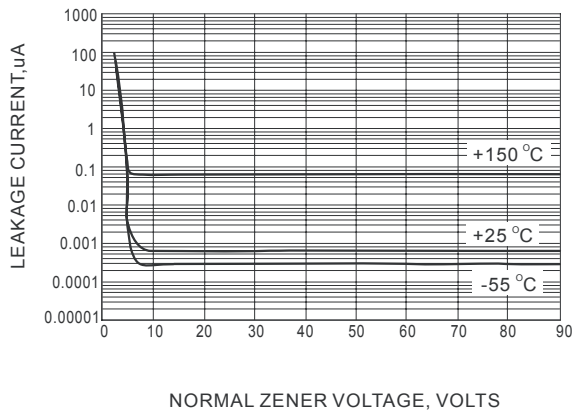


Fig.9 TYPICAL LEAKAGE CURRENT