

RoHS Compliant Product

A suffix of "-C" specifies halogen & lead-free

FEATURES

- Large Selection of Zener Voltage: 2.4V~75V
- Tight Voltage Tolerance: $\pm 5\%$
- Ultra low Profile Package Well Suited for Automated Assembly
- MSL Class 1 Compatible

SOD-123



MECHANICAL DATA

- Case: SOD-123
- Molding Compound: UL Flammability Rating 94V-0
- Terminals: Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band

APPLICATIONS

- General Voltage Regulating
- Mobile & Handheld Systems



PACKAGE INFORMATION

Package	MPQ	Leader Size
SOD-123	3K	7 inch

ORDER INFORMATION

Part Number	Type
MMSZ52xxB-C	Lead (Pb)-free and Halogen-free

ABSOLUTE MAXIMUM RATINGS ($T_A=25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Rating	Unit
Power Dissipation ¹	P_D	500	mW
Operating Junction Temperature Range	T_J	150	°C
Storage Temperature Range	T_{STG}	-55~150	

Note:

1. Diode on Ceramic Substrate 0.7mm, 5mm² Pad Areas.

ELECTRICAL CHARACTERISTICS ($T_A=25^\circ\text{C}$ unless otherwise specified)

Part Number	Marking	Zener Voltage Range ¹				Maximum Zener Impedance			Maximum Reverse Current	
		V _Z @ I _{ZT}			I _{ZT}	Z _{ZT} @ I _{ZT}	Z _{ZK} @ I _{ZK}	I _{ZK}	I _R	V _R
		Min.	Nom.	Max.						
		V			mA	Ω		mA	μA	V
MMSZ5221B-C	C1	2.28	2.4	2.52	20	30	1200	0.25	100	1
MMSZ5222B-C	C2	2.38	2.5	2.63	20	30	1200	0.25	100	1
MMSZ5223B-C	C3	2.57	2.7	2.84	20	30	1300	0.25	75	1
MMSZ5225B-C	C5	2.85	3	3.15	20	30	1600	0.25	50	1
MMSZ5226B-C	G1	3.14	3.3	3.47	20	28	1600	0.25	25	1
MMSZ5227B-C	G2	3.42	3.6	3.78	20	24	1700	0.25	15	1
MMSZ5228B-C	G3	3.71	3.9	4.1	20	23	1900	0.25	10	1
MMSZ5229B-C	G4	4.09	4.3	4.52	20	22	2000	0.25	5	1
MMSZ5230B-C	G5	4.47	4.7	4.94	20	19	1900	0.25	5	2
MMSZ5231B-C	E1	4.85	5.1	5.36	20	17	1600	0.25	5	2
MMSZ5232B-C	E2	5.32	5.6	5.88	20	11	1600	0.25	5	3
MMSZ5233B-C	E3	5.7	6	6.3	20	7	1600	0.25	5	3.5
MMSZ5234B-C	E4	5.89	6.2	6.51	20	7	1000	0.25	5	4
MMSZ5235B-C	E5	6.46	6.8	7.14	20	5	750	0.25	3	5
MMSZ5236B-C	F1	7.13	7.5	7.88	20	6	500	0.25	3	6
MMSZ5237B-C	F2	7.79	8.2	8.61	20	8	500	0.25	3	6.5
MMSZ5238B-C	F3	8.27	8.7	9.14	20	8	600	0.25	3	6.5
MMSZ5239B-C	F4	8.65	9.1	9.56	20	10	600	0.25	3	7
MMSZ5240B-C	F5	9.5	10	10.5	20	17	600	0.25	3	8
MMSZ5241B-C	H1	10.45	11	11.55	20	22	600	0.25	2	8.4
MMSZ5242B-C	H2	11.4	12	12.6	20	30	600	0.25	1	9.1
MMSZ5243B-C	H3	12.35	13	13.65	9.5	13	600	0.25	0.5	9.9
MMSZ5244B-C	H4	13.3	14	14.7	9	15	600	0.25	0.1	10
MMSZ5245B-C	H5	14.25	15	15.75	8.5	16	600	0.25	0.1	11
MMSZ5246B-C	J1	15.2	16	16.8	7.8	17	600	0.25	0.1	12
MMSZ5247B-C	J2	16.15	17	17.85	7.4	19	600	0.25	0.1	13
MMSZ5248B-C	J3	17.1	18	18.9	7	21	600	0.25	0.1	14
MMSZ5250B-C	J5	19	20	21	6.2	25	600	0.25	0.1	15

ELECTRICAL CHARACTERISTICS (T_A=25°C unless otherwise specified)

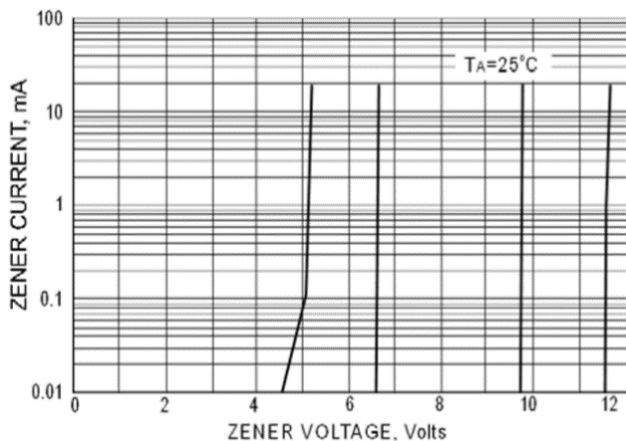
Part Number	Marking	Zener Voltage Range ¹				Maximum Zener Impedance			Maximum Reverse Current	
		V _Z @ I _{ZT}			I _{ZT}	Z _{ZT} @ I _{ZT}	Z _{ZK} @ I _{ZK}	I _{ZK}	I _R	V _R
		Min.	Nom.	Max.						
		V			mA	Ω	mA	μA	V	
MMSZ5251B-C	K1	20.9	22	23.1	5.6	29	600	0.25	0.1	17
MMSZ5252B-C	K2	22.8	24	25.2	5.2	33	600	0.25	0.1	18
MMSZ5253B-C	K3	23.75	25	26.25	5	35	600	0.25	0.1	19
MMSZ5254B-C	K4	25.65	27	28.35	5	41	600	0.25	0.1	21
MMSZ5255B-C	K5	26.6	28	29.4	4.5	44	600	0.25	0.1	21
MMSZ5256B-C	M1	28.5	30	31.5	4.2	49	600	0.25	0.1	23
MMSZ5257B-C	M2	31.35	33	34.65	3.8	58	700	0.25	0.1	25
MMSZ5258B-C	M3	34.2	36	37.8	3.4	70	700	0.25	0.1	27
MMSZ5259B-C	M4	37.05	39	40.95	3.2	80	800	0.25	0.1	30
MMSZ5260B-C	M5	40.85	43	45.15	3	93	900	0.25	0.1	33
MMSZ5261B-C	N1	44.65	47	49.35	2.7	105	1000	0.25	0.1	36
MMSZ5262B-C	N2	48.45	51	53.55	2.5	125	1100	0.25	0.1	39
MMSZ5263B-C	M8	53.2	56	58.8	2.2	150	1300	0.25	0.1	43
MMSZ5265B-C	N5	58.9	62	65.1	2	185	1400	0.25	0.1	47
MMSZ5267B-C	P2	71.25	75	78.75	1.7	270	1700	0.25	0.1	56

Note:

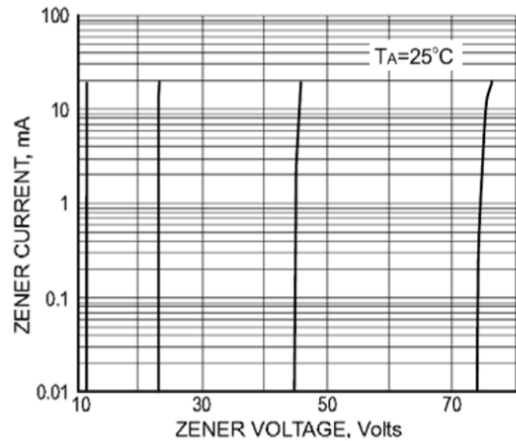
1. Pulse Width=10mS.

CHARACTERISTIC CURVES

Zener Breakdown Characteristic

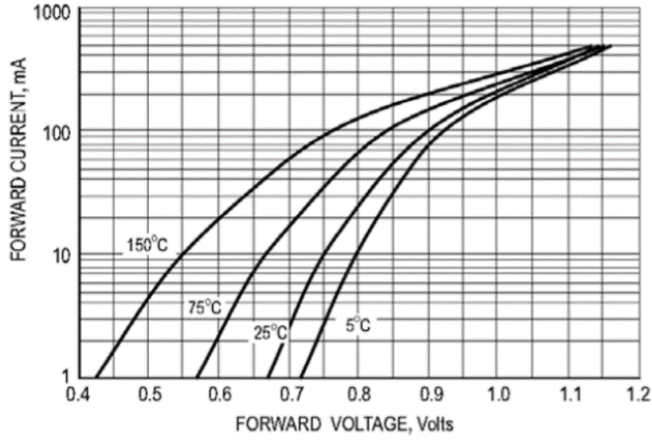


Zener Breakdown Characteristic

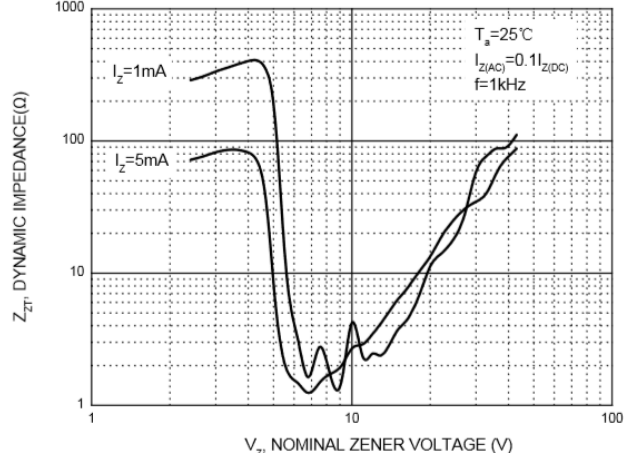


CHARACTERISTIC CURVES

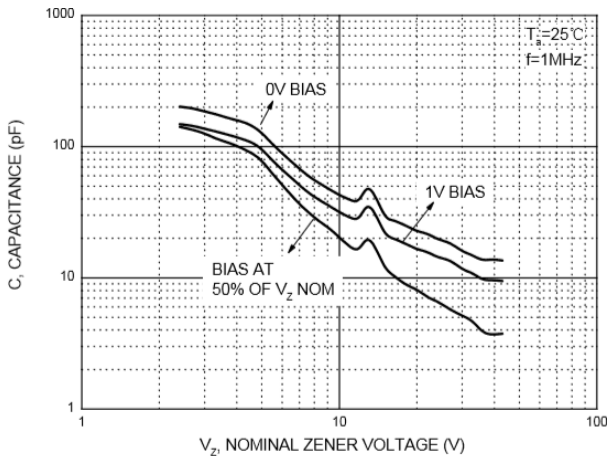
Typical Forward Voltage



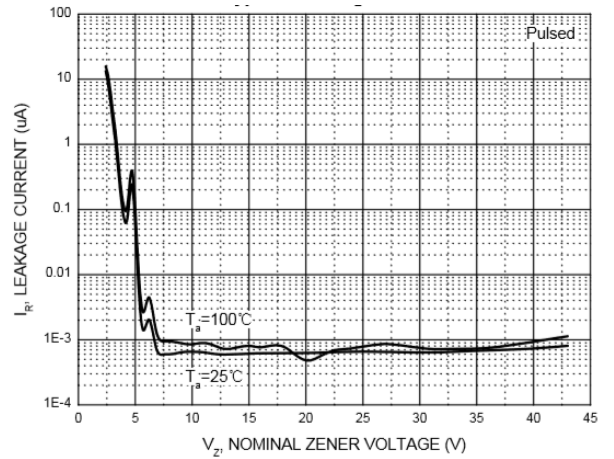
Effect of Zener Voltage on Zener Impedance



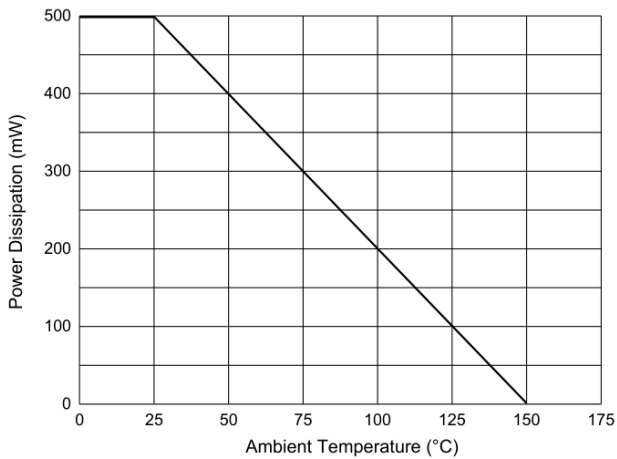
Typical Capacitance



Typical Leakage Current

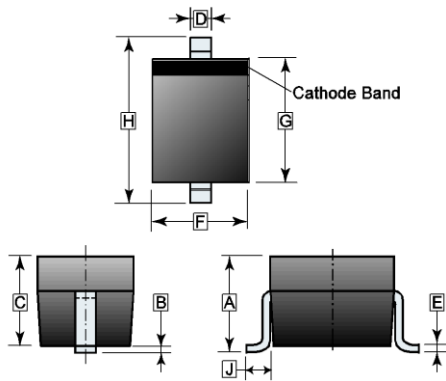


Power Dissipation Vs Ambient Temp



PACKAGE OUTLINE DIMENSIONS

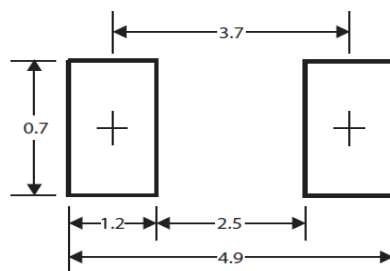
SOD-123



REF.	Millimeter	
	Min.	Max.
A	1.15 REF.	
B	0.10 REF.	
C	1.00	1.30
D	0.30	0.78
E	0.05	0.25
F	1.45	1.80
G	2.55	2.90
H	3.10	3.85
J	0.50 REF.	

MOUNTING PAD LAYOUT

SOD-123



*Dimensions in millimeters