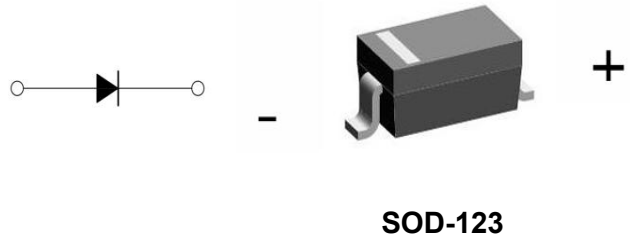


Plastic-Encapsulate Zener Diode

Parameter	Value	Unit
V_Z	2.4~75	V
P_D	500	mW

**Features**

- Planar Die Construction
- Ultra-Small Surface Mount Package
- General purpose, Medium Current
- Ideally Suited for Automated Assembly Processes

Applications

- Surge protection
- Voltage stabilization
- Polarity Protection

Absolute Maximum Ratings ($T_a=25^{\circ}\text{C}$ unless otherwise noted)

Parameter	Symbol	Value	Unit
Forward Voltage @ $I_F = 10\text{mA}$	V_F	0.9	V
Power Dissipation	P_D	500	mW
Junction Temperature	T_J	-55~+150	$^{\circ}\text{C}$
Storage Temperature Range	T_{STG}	-55~+150	$^{\circ}\text{C}$
Typical Thermal Resistance	$R_{\theta JA}$	340	$^{\circ}\text{C/W}$

Electrical Characteristics($T_a=25^{\circ}\text{C}$ unless otherwise noted)

Type Number	Marking	Nominal Zener Voltage				Maximum Zener Impedance	Maximum Leakage Current	
		V_Z			I_{ZT}	$Z_{ZT}@I_{ZT}=0.25\text{mA}$	$I_R@V_R$	
		Nom.(V)	Min.(V)	Max.(V)	(mA)	$Z_{ZT}(\Omega)$	$I_R(\mu\text{A})$	$V_R(\text{V})$
MMSZ5221B	C1	2.4	2.28	2.52	20	30	100	1.0
MMSZ5222B	C2	2.5	2.38	2.63	20	30	100	1.0
MMSZ5223B	C3	2.7	2.57	2.84	20	30	75	1.0
MMSZ5224B	C4	2.8	2.66	2.94	20	30	75	1.0
MMSZ5225B	C5	3.0	2.85	3.15	20	30	50	1.0
MMSZ5226B	G1	3.3	3.14	3.47	20	28	25	1.0
MMSZ5227B	G2	3.6	3.42	3.78	20	24	15	1.0
MMSZ5228B	G3	3.9	3.71	4.10	20	23	10	1.0
MMSZ5229B	G4	4.3	4.09	4.52	20	22	5.0	1.0
MMSZ5230B	G5	4.7	4.47	4.94	20	19	5.0	2.0
MMSZ5231B	E1	5.1	4.85	5.36	20	17	5.0	2.0
MMSZ5232B	E2	5.6	5.32	5.88	20	11	5.0	3.0
MMSZ5233B	E3	6.0	5.70	6.30	20	7	5.0	3.5
MMSZ5234B	E4	6.2	5.89	6.51	20	7	5.0	4.0
MMSZ5235B	E5	6.8	6.46	7.14	20	5	3	5.0
MMSZ5236B	F1	7.5	7.13	7.88	20	6	3	6.0
MMSZ5237B	F2	8.2	7.79	8.61	20	8	3	6.5
MMSZ5238B	F3	8.7	8.27	9.14	20	8	3	6.5
MMSZ5239B	F4	9.1	8.65	9.56	20	10	3	7.0
MMSZ5240B	F5	10.0	9.50	10.50	20	17	3	8.0
MMSZ5241B	H1	11.0	10.45	11.55	20	22	2.0	8.4
MMSZ5242B	H2	12.0	11.40	12.60	20	30	1.0	9.1
MMSZ5243B	H3	13.0	12.35	13.65	9.5	13	0.5	9.9
MMSZ5244B	H4	14.0	13.30	14.70	9.0	15	0.1	10.0
MMSZ5245B	H5	15.0	14.25	15.75	8.5	16	0.1	11.0
MMSZ5246B	J1	16.0	15.20	16.80	7.8	17	0.1	12.0
MMSZ5247B	J2	17.0	16.15	17.85	7.5	19	0.1	13.0
MMSZ5248B	J3	18.0	17.10	18.90	7.0	21	0.1	14.0
MMSZ5249B	J4	19.0	18.05	19.95	6.6	23	0.1	14.0
MMSZ5250B	J5	20.0	19.00	21.00	6.2	25	0.1	15.0
MMSZ5251B	K1	22.0	20.90	23.10	5.6	29	0.1	17.0
MMSZ5252B	K2	24.0	22.80	25.20	5.2	33	0.1	18.0
MMSZ5253B	K3	25.0	23.75	26.25	5.0	35	0.1	19.0

Type Number	Marking	Nominal Zener Voltage				Zener Impedance	Leakage Current	
		V _Z			I _{ZT}	Z _{ZT} @I _{ZT} =0.25mA	I _R @V _R	
		Nom.(V)	Min.(V)	Max.(V)	(mA)	Z _{ZT} (Ω)	I _R (μA)	V _R (V)
MMSZ5254B	K4	27.0	25.65	28.35	5.0	600	0.1	21
MMSZ5255B	K5	28.0	26.60	29.40	4.5	600	0.1	21
MMSZ5256B	M1	30.0	28.50	31.50	4.2	600	0.1	23
MMSZ5257B	M2	33.0	31.35	34.65	3.8	700	0.1	25
MMSZ5258B	M3	36.0	34.20	37.80	3.4	700	0.1	27
MMSZ5259B	M4	39.0	37.05	40.95	3.2	800	0.1	30
MMSZ5260B	M5	43.0	40.85	45.15	3.0	900	0.1	33
MMSZ5261B	N1	47.0	44.65	49.35	2.7	1000	0.1	36
MMSZ5262B	N2	51.0	48.45	53.55	2.5	1100	0.1	39
MMSZ5263B	N3	56.0	53.20	58.80	2.2	1300	0.1	43
MMSZ5264B	N4	60.0	57.00	63.00	2.1	1400	0.1	46
MMSZ5265B	N5	62.0	58.90	65.10	2.0	1400	0.1	47
MMSZ5266B	P1	68.0	64.60	71.40	1.8	1600	0.1	52
MMSZ5267B	P2	75.0	71.25	78.75	1.7	1700	0.1	56

Typical Characteristics

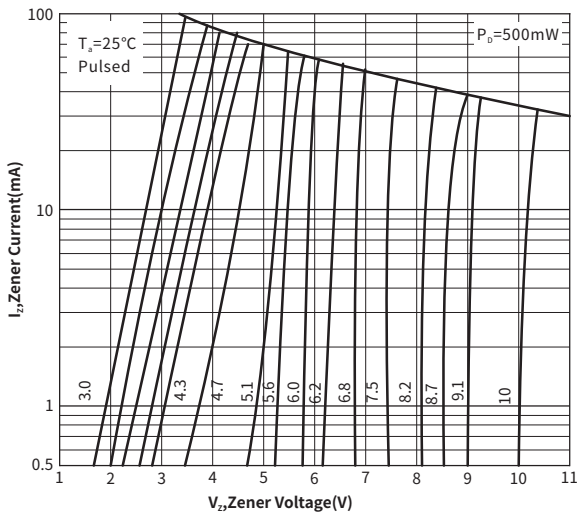


Fig. 1 Zener Characteristics(V_Z U_P to 10V)

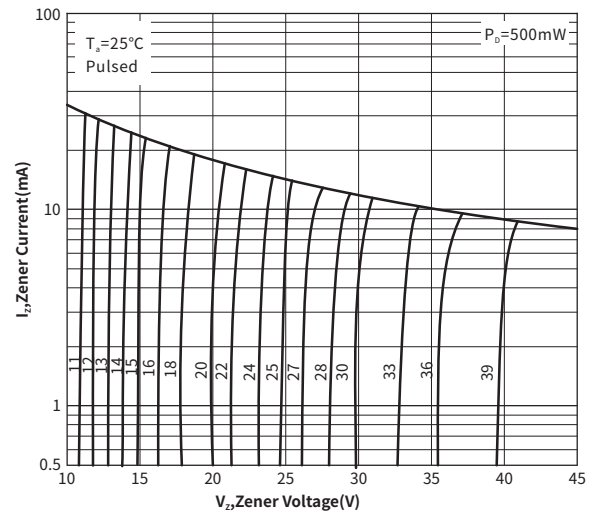


Fig.2 Zener Characteristics(V_Z 11V to 39V)

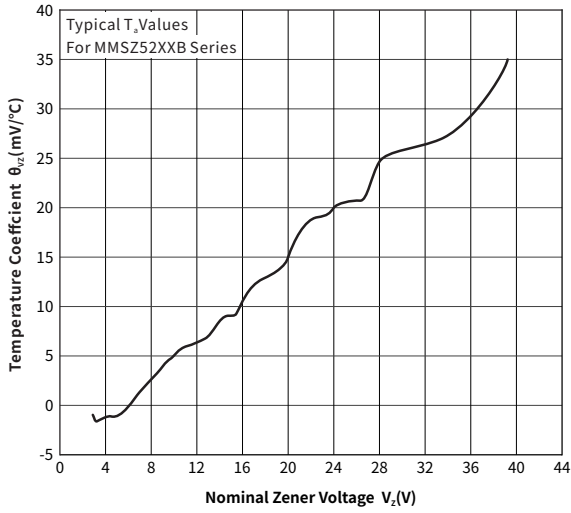


Fig.3 Temperature Coefficients

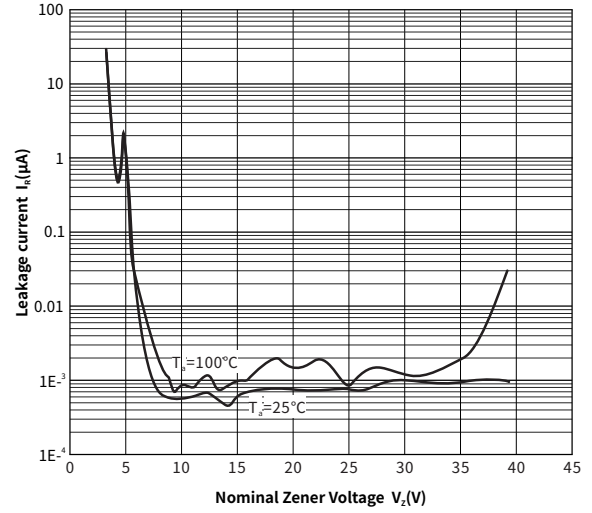


Fig.4 Typical Leakage Current

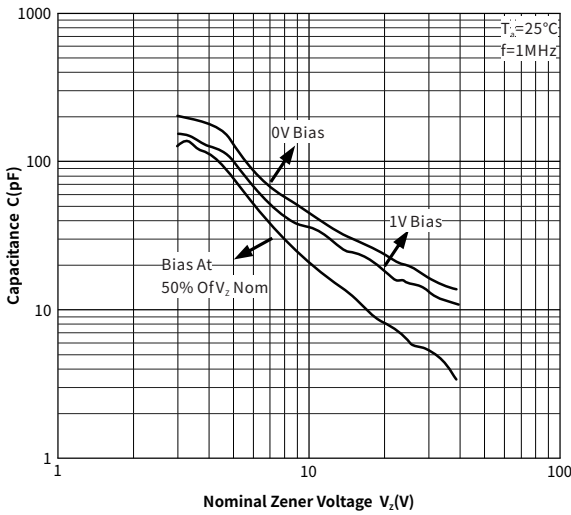


Fig.5 Typical Capacitance

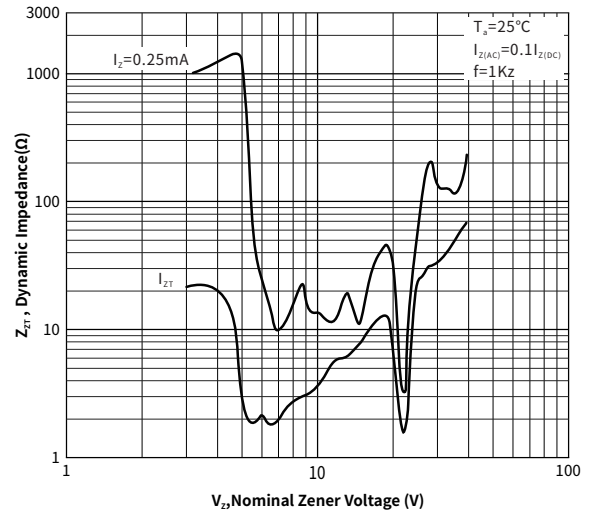


Fig.6 Effect of Zener Voltage on Zener Impedance

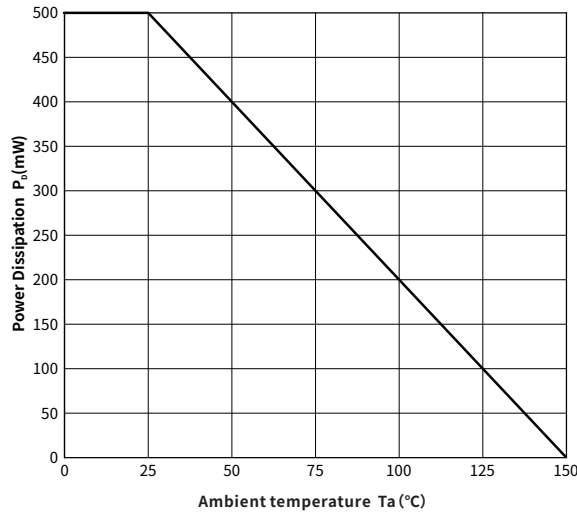
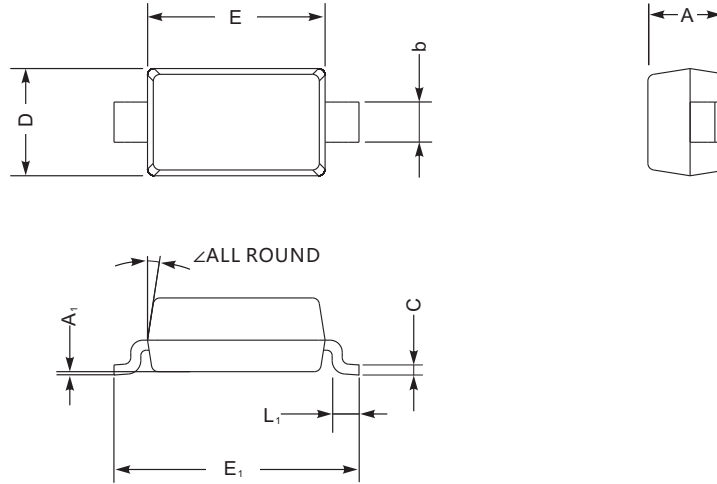


Fig.7 Power Derating Curve

Package Outlines(Dimensions in mm)

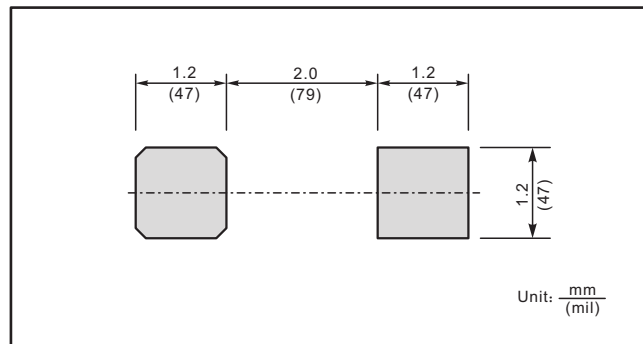
Plastic surface mounted package; 2 leads



SOD-123 mechanical data

UNIT		A	C	D	E	E ₁	L ₁	b	A ₁	∠
mm	max	1.3	0.22	1.8	2.8	3.9	0.45	0.7	0.2	9°
	min	0.9	0.09	1.5	2.5	3.6	0.25	0.5	—	
mil	max	51	8.7	71	110	154	18	28	8	
	min	35	3.5	59	98	142	10	20	—	

The recommended mounting pad size



***Important Usage Information and Disclaimer**

The specifications of Zhuhai Hypersemi Co., Ltd. products are not guarantees of product characteristics. They reflect typical performance expected in standard applications, which may vary with specific uses. Users must conduct prior testing for their applications and make necessary adjustments.

Users are responsible for the safety of applications utilizing our products and must implement adequate safety measures to prevent physical injury, fire, or other risks in case of product failure. It is the user's duty to ensure that application designs comply with all applicable laws and standards. Our products must not be used in any applications where a product failure could reasonably result in personal injury, unless specifically authorized in a signed document by Zhuhai Hypersemi Co., Ltd.

No representations or warranties are made regarding the accuracy or completeness of this information, including any claims of non-infringement of third-party intellectual property rights. Zhuhai Hypersemi Co., Ltd. assumes no liability for any applications or uses of its products and does not grant any licenses to its intellectual property rights or those of others. We also make no claims regarding non-infringement of third-party intellectual property rights that may arise from applications.

Due to technical requirements, our products may contain hazardous substances. For details, please contact your nearest sales office. This document replaces all previous information and may be updated. We reserve the right to make changes.