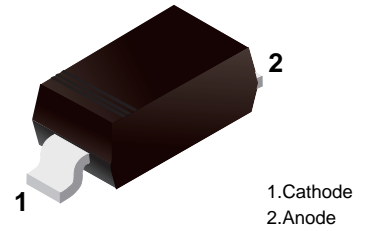


■ Silicon Planar Zener Diodes

■ Features

- Total power dissipation: Max. 500mW.
- Wide zener reverse voltage range 2.4V to 39V.
- Small plastic package suitable for surface mounted design.
- Tolerance approximately ±5%



■ Simplified outline(SOD-123)



■ Absolute Maximum Ratings And Characteristics Ta = 25°C

Parameter	Symbol	Value	Unit
Power Dissipation	$P_{tot}$	500	mW
Typical thermal resistance junction to ambient <sup>(1)</sup>	$R_{\theta JA}$	340	°C/W
Operating and Storage Temperature Range	$T_j, T_{stg}$	-55 ~ +150	°C

(1) Thermal resistance from junction to ambient at P.C.B. mounted with 2.0" X 2.0" (5 X 5 cm) copper areas pads.

Fig.1 Maximum Continuous Power Derating

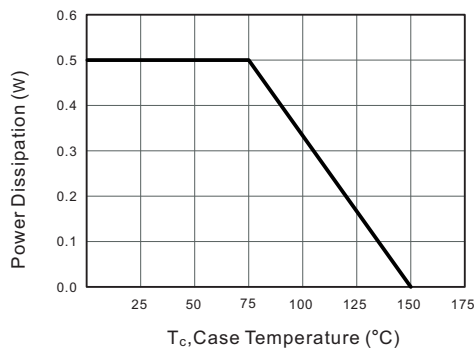
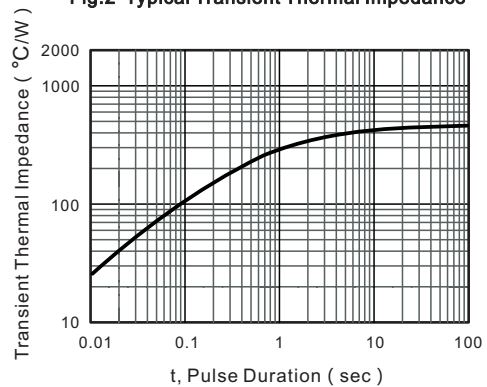


Fig.2 Typical Transient Thermal Impedance



Type	Mark	Zener Voltage Range <sup>(1)</sup>			Dynamic Impedance				Reverse Current	
		V <sub>ZT</sub> ( at I <sub>ZT</sub> )			I <sub>ZT</sub>	Z <sub>ZT</sub> ( at I <sub>ZT</sub> )	I <sub>ZK</sub>	Z <sub>ZK</sub> ( at I <sub>ZK</sub> )	I <sub>R</sub>	at V <sub>R</sub>
		Min ( V )	Nom ( V )	Max ( V )	(mA)	Max (Ω)	(mA)	Max (Ω)	Max ( nA )	( V )
MMSZ5221B	C1	2.28	2.4	2.52	20	30	0.25	1200	100	1
MMSZ5222B	C2	2.38	2.5	2.63	20	30	0.25	1250	100	1
MMSZ5223B	C3	2.57	2.7	2.84	20	30	0.25	1300	75	1
MMSZ5225B	C5	2.85	3	3.15	20	30	0.25	1600	50	1
MMSZ5226B	D1	3.14	3.3	3.47	20	28	0.25	1600	25	1
MMSZ5227B	D2	3.42	3.6	3.78	20	24	0.25	1700	15	1
MMSZ5228B	D3	3.71	3.9	4.1	20	23	0.25	1900	10	1
MMSZ5229B	D4	4.09	4.3	4.52	20	22	0.25	2000	5	1
MMSZ5230B	D5	4.47	4.7	4.94	20	19	0.25	1900	5	2
MMSZ5231B	E1	4.85	5.1	5.36	20	17	0.25	1600	5	2
MMSZ5232B	E2	5.32	5.6	5.88	20	11	0.25	1600	5	3
MMSZ5234B	E4	5.89	6.2	6.51	20	7	0.25	1000	5	4
MMSZ5235B	E5	6.46	6.8	7.14	20	5	0.25	750	3	5
MMSZ5236B	F1	7.13	7.5	7.88	20	6	0.25	500	3	6
MMSZ5237B	F2	7.79	8.2	8.61	20	8	0.25	500	3	6
MMSZ5239B	F4	8.65	9.1	9.56	20	10	0.25	600	3	6.5
MMSZ5240B	F5	9.5	10	10.5	20	17	0.25	600	3	8
MMSZ5241B	H1	10.45	11	11.55	20	22	0.25	600	3	8.4
MMSZ5242B	H2	11.4	12	12.6	20	30	0.25	600	2	9.1
MMSZ5243B	H3	12.35	13	13.65	9.5	13	0.25	600	1	9.9
MMSZ5245B	H5	14.25	15	15.75	8.5	16	0.25	600	0.5	11
MMSZ5246B	J1	15.2	16	16.8	7.8	17	0.25	600	0.1	12
MMSZ5248B	J3	17.1	18	18.9	7	21	0.25	600	0.1	14
MMSZ5250B	J5	19	20	21	6.2	25	0.25	600	0.1	15
MMSZ5251B	K1	20.9	22	23.1	5.6	29	0.25	600	0.1	17
MMSZ5252B	K2	22.8	24	25.2	5.2	33	0.25	600	0.1	18
MMSZ5254B	K4	25.65	27	28.35	5	41	0.25	600	0.1	21
MMSZ5255B	K5	26.6	28	29.4	4.5	44	0.25	600	0.1	21
MMSZ5256B	M1	28.5	30	31.5	4.2	49	0.25	600	0.1	23
MMSZ5257B	M2	31.35	33	34.65	3.8	58	0.25	700	0.1	25
MMSZ5258B	M3	34.2	36	37.8	3.4	70	0.25	700	0.1	27
MMSZ5259B	M4	37.05	39	40.95	3.2	80	0.25	800	0.1	30

( 1 ) V<sub>ZT</sub> is tested with pulses (20 ms)

**Package Outline SOD-123**

Plastic surface mounted package; 2 leads



UNIT		A	C	D	E	E <sub>1</sub>	L <sub>1</sub>	b	A <sub>1</sub>	∠
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**



Unit:  $\frac{\text{mm}}{\text{mil}}$

**Summary of Packing Options**

Package	Packing Description	Packing Quantity	Industry Standard
SOD-123	Tape/Reel, 7" reel	3000	EIA-481-1