

Silicon Planar Zener Diodes

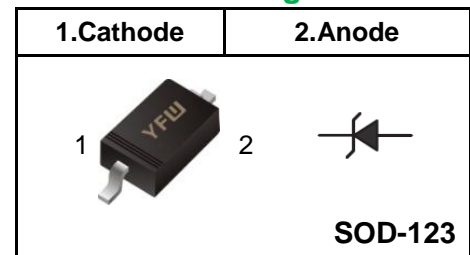
FEATURES

- ◆ Total power dissipation: Max. 350mW.
- ◆ Wide zener reverse voltage range 1.8V to 43V.
- ◆ Small plastic package suitable for surface mounted design.
- ◆ Tolerance approximately $\pm 5\%$.
- ◆ Lead free in comply with EU RoHS 2011/65/EU directives

MECHANICAL DATA

- ◆ Case: SOD-123
- ◆ Terminals: Solderable per MIL-STD-750, Method 2026
- ◆ Approx. Weight: 16mg / 0.00056oz

Pinning



Absolute Maximum Ratings And Characteristics (Ta = 25 °C)

Parameter	Symbol	Value	Unit
Power Dissipation	P_{tot}	350	mW
Forward Voltage at $I_F = 10\text{ mA}$	V_F	0.9	V
Typical thermal resistance junction to ambient ⁽¹⁾	$R_{\theta JA}$	357	$^{\circ}\text{C/W}$
Operating and Storage Temperature Range	T_j, T_{stg}	-55 ~ +150	$^{\circ}\text{C}$

(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

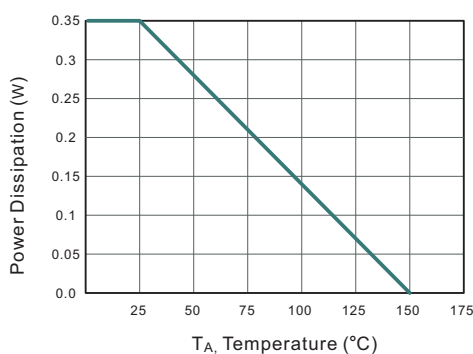
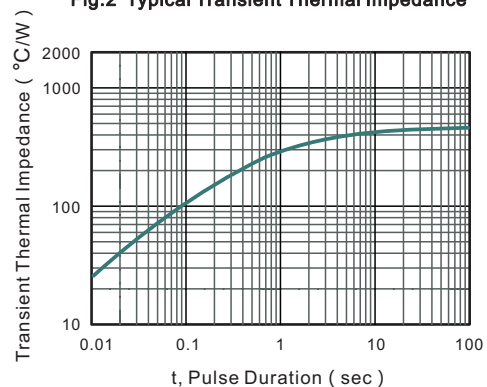


Fig.2 Typical Transient Thermal Impedance



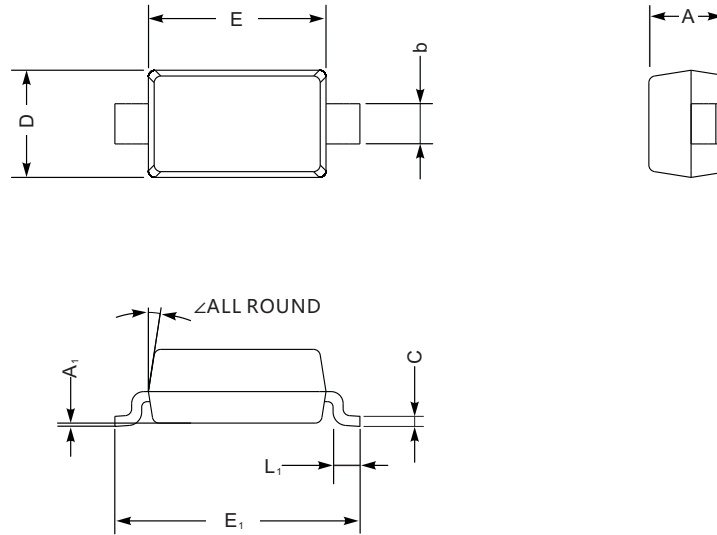
Characteristics at Ta = 25°C

Type	Marking	Zener Voltage Range			I _{ZT}	Reverse Current	
		V _{ZT} (at I _{ZT})				I _R	at V _R
		Min (V)	Nom (V)	Max (V)	(μ A)	Max (μ A)	(V)
MMSZ4678W	CC	1.71	1.8	1.89	50	7.5	1
MMSZ4679W	CD	1.9	2.0	2.1	50	5	1
MMSZ4680W	CE	2.09	2.2	2.31	50	4	1
MMSZ4681W	CF	2.28	2.4	2.52	50	2	1
MMSZ4682W	CH	2.57	2.7	2.84	50	1	1
MMSZ4683W	CJ	2.85	3	3.15	50	0.8	1
MMSZ4684W	CK	3.14	3.3	3.47	50	7.5	1.5
MMSZ4685W	CM	3.42	3.6	3.78	50	7.5	2
MMSZ4686W	CN	3.71	3.9	4.1	50	5	2
MMSZ4687W	CP	4.09	4.3	4.52	50	4	2
MMSZ4688W	CT	4.47	4.7	4.94	50	10	3
MMSZ4689W	CU	4.85	5.1	5.36	50	10	3
MMSZ4690W	CV	5.32	5.6	5.88	50	10	4
MMSZ4691W	CA	5.89	6.2	6.51	50	10	5
MMSZ4692W	CX	6.46	6.8	7.14	50	10	5.1
MMSZ4693W	CY	7.13	7.5	7.88	50	10	5.7
MMSZ4694W	CZ	7.79	8.2	8.61	50	1	6.2
MMSZ4695W	DC	8.27	8.7	9.14	50	1	6.6
MMSZ4696W	DD	8.65	9.1	9.56	50	1	6.9
MMSZ4697W	DE	9.5	10	10.5	50	1	7.6
MMSZ4698W	DF	10.5	11	11.6	50	0.05	8.4
MMSZ4699W	DH	11.4	12	12.6	50	0.05	9.1
MMSZ4700W	DJ	12.4	13	13.7	50	0.05	9.8
MMSZ4701W	DK	13.3	14	14.7	50	0.05	10.6
MMSZ4702W	DM	14.3	15	15.8	50	0.05	11.4
MMSZ4703W	DN	15.2	16	16.8	50	0.05	12.1
MMSZ4704W	DP	16.2	17	17.9	50	0.05	12.9
MMSZ4705W	DT	17.1	18	18.9	50	0.05	13.6
MMSZ4706W	DU	18.1	19	20	50	0.05	14.4
MMSZ4707W	DV	19	20	21	50	0.01	15.2
MMSZ4708W	DA	20.9	22	23.1	50	0.01	16.7
MMSZ4709W	DZ	22.8	24	25.2	50	0.01	18.2
MMSZ4710W	DY	23.8	25	26.3	50	0.01	19
MMSZ4711W	EA	25.7	27	28.4	50	0.01	20.4
MMSZ4712W	EC	26.6	28	29.4	50	0.01	21.2
MMSZ4713W	ED	28.5	30	31.5	50	0.01	22.8
MMSZ4714W	EE	31.4	33	34.7	50	0.01	25
MMSZ4715W	EF	34.2	36	37.8	50	0.01	27.3
MMSZ4716W	EH	37.1	39	41	50	0.01	29.6
MMSZ4717W	EJ	40.9	43	45.2	50	0.01	32.6

(1) Measured with device junction in thermal equilibrium

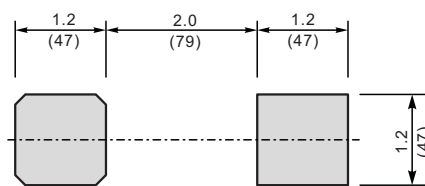
Package Outline SOD-123

Plastic surface mounted package; 2 leads



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



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

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