

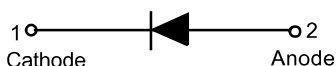
FEATURES

- Total power dissipation: Max. 500mW.
- Wide zener reverse voltage range 2.0 V to 39V.
- Small plastic package suitable for surface mounted design.

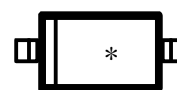
Schematic & PIN Configuration



SOD-123



Circuit



Marking

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

Parameter	Symbol	Value	Unit
Power Dissipation	P_D	500	mW
Forward Voltage at $I_F = 10\text{ mA}$	V_F	0.9	V
Typical thermal resistance junction to ambient ⁽¹⁾	$R_{\theta JA}$	305	°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 7.6mm X 9.4mm X 0.87mm copper areas pads.

Fig.1 Maximum Continuous Power Derating

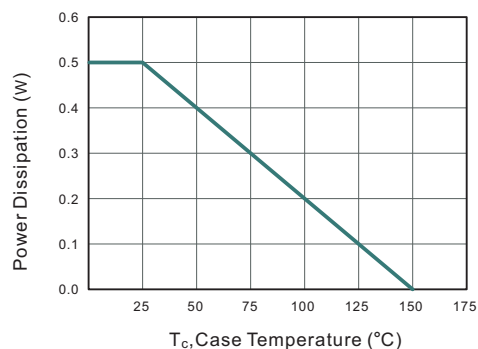
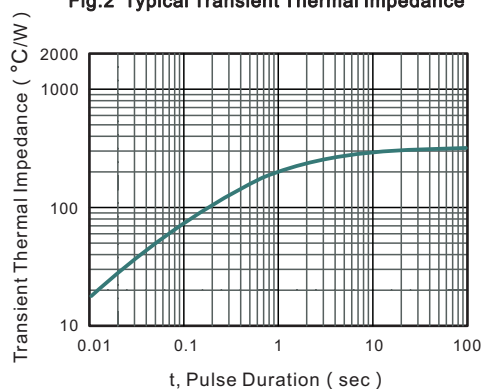


Fig.2 Typical Transient Thermal Impedance



ELECTRICAL CHARACTERISTICS

Characteristics at Ta = 25°C

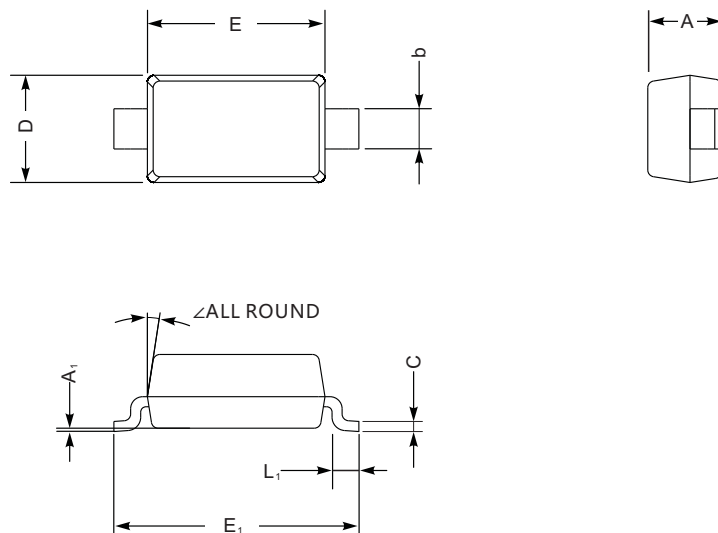
Type	Marking	Zener Voltage Range ⁽²⁾				Maximum Zener ⁽³⁾ Impedance			Reverse Current ⁽²⁾		Typical temperature coefficient @I _{ZTC} mV/°C		Test current I _{ZTC}
		V _{ZT} (at I _{ZT})			I _{ZT}	Z _{VT} @I _{ZT}	Z _{ZK} @I _{ZK}	I _{ZK}	I _R	@V _R	MIN	MAX	mA
		Min (V)	Nom (V)	Max (V)	(mA)	(Ω)	(mA)		μA	V			
SZ2V0HD122	WY	1.91	2.0	2.09	5	100	600	1	150	1.0	-3.5	0	5
SZ2V4HD122	WX	2.2	2.4	2.6	5	100	600	1	50	1.0	-3.5	0	5
SZ2V7HD122	W1	2.5	2.7	2.9	5	100	600	1	20	1.0	-3.5	0	5
SZ3V0HD122	W2	2.8	3.0	3.2	5	95	600	1	10	1.0	-3.5	0	5
SZ3V3HD122	W3	3.1	3.3	3.5	5	95	600	1	5.0	1.0	-3.5	0	5
SZ3V6HD122	W4	3.4	3.6	3.8	5	90	600	1	5.0	1.0	-3.5	0	5
SZ3V9HD122	W5	3.7	3.9	4.1	5	90	600	1	3.0	1.0	-3.5	0	5
SZ4V3HD122	W6	4.0	4.3	4.6	5	90	600	1	3.0	1.0	-3.5	0	5
SZ4V7HD122	W7	4.4	4.7	5.0	5	80	500	1	3.0	2.0	-3.5	0.2	5
SZ5V1HD122	W8	4.8	5.1	5.4	5	60	480	1	2.0	2.0	-2.7	1.2	5
SZ5V6HD122	W9	5.2	5.6	6.0	5	40	400	1	1.0	2.0	-2	2.5	5
SZ6V2HD122	WA	5.8	6.2	6.6	5	10	150	1	3.0	4.0	0.4	3.7	5
SZ6V8HD122	WB	6.4	6.8	7.2	5	15	80	1	2.0	4.0	1.2	4.5	5
SZ7V5HD122	WC	7.0	7.5	7.9	5	15	80	1	1.0	5.0	2.5	5.3	5
SZ8V2HD122	WD	7.7	8.2	8.7	5	15	80	1	0.7	5.0	3.2	6.2	5
SZ9V1HD122	WE	8.5	9.1	9.6	5	15	100	1	0.5	6.0	3.8	7.0	5
SZ10VHD122	WF	9.4	10	10.6	5	20	150	1	0.2	7.0	4.5	8.0	5
SZ11VHD122	WG	10.4	11	11.6	5	20	150	1	0.1	8.0	5.4	9.0	5
SZ12VHD122	WH	11.4	12	12.7	5	25	150	1	0.1	8.0	6.0	10.0	5
SZ13VHD122	WI	12.4	13	14.1	5	30	170	1	0.1	8.0	7.0	11.0	5
SZ15VHD122	WJ	13.8	15	15.6	5	30	200	1	0.1	10.5	9.2	13.0	5
SZ16VHD122	WK	15.3	16	17.1	5	40	200	1	0.1	11.2	10.4	14.0	5
SZ18VHD122	WL	16.8	18	19.1	5	45	225	1	0.1	12.6	12.4	16.0	5
SZ20VHD122	WM	18.8	20	21.2	5	55	225	11	0.1	14.0	14.4	18.0	5
SZ22VHD122	WN	20.8	22	23.3	5	55	250	1	0.1	15.4	16.4	20.0	5
SZ24VHD122	WO	22.8	24	25.6	5	70	250	1	0.1	16.8	18.4	22.0	5
SZ27VHD122	WP	25.1	27	28.9	2	80	300	0.5	0.1	18.9	21.4	25.3	2
SZ30VHD122	WQ	28.0	30	32.0	2	80	300	0.5	0.1	21.0	24.4	29.4	2
SZ33VHD122	WR	31.0	33	35.0	2	80	325	0.5	0.1	23.1	27.4	33.4	2
SZ36VHD122	WS	34.0	36	38.0	2	90	350	0.5	0.1	25.2	30.4	37.4	2
SZ39VHD122	WT	37.0	39	41.0	2	130	350	0.5	0.1	27.3	33.4	41.2	2

NOTES: (1) f=1KHz

(2) Short duration test pulse used to minimize self-heating effect.

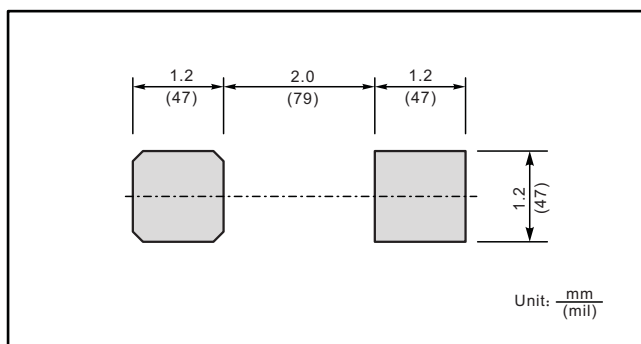
PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

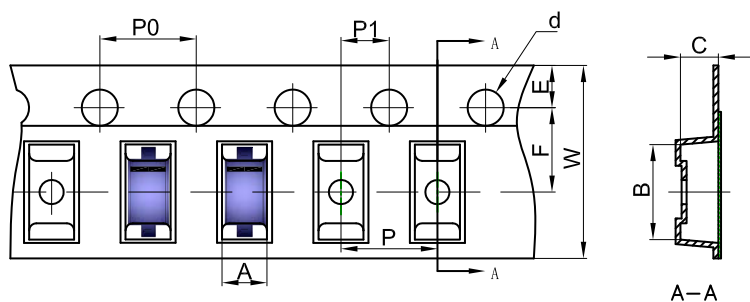
SOD-123


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	—	

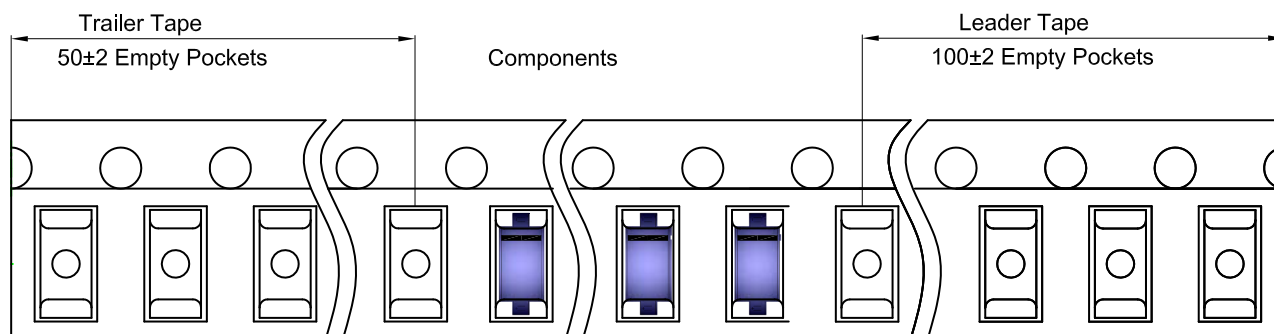
The recommended mounting pad size


SOD-123 Tape and Reel

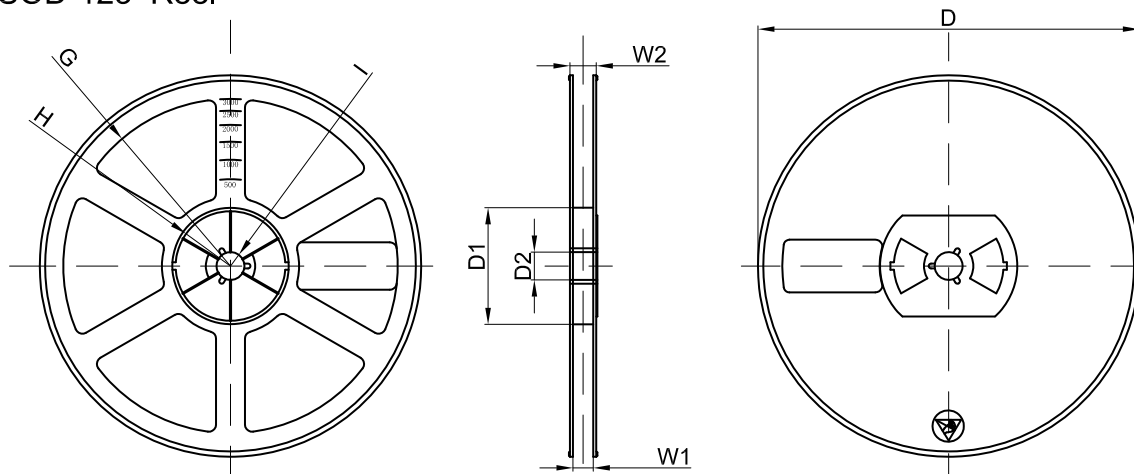


Dimensions are in millimeter										
Pkg type	A	B	C	d	E	F	P0	P	P1	W
SOD-123	1.85	3.95	1.57	Ø1.55	1.75	3.50	4.00	4.00	2.00	8.00

SOD-123 Tape Leader and Trailer



SOD-123 Reel



Dimensions are in millimeter								
Reel Option	D	D1	D2	G	H	I	W1	W2
7" Dia	Ø178.00	54.40	13.00	R78.00	R25.60	R6.50	9.50	12.30

REEL	Reel Size	Box	Box Size(mm)	Carton	Carton Size(mm)	G.W.(kg)
3000 pcs	7 inch	45,000 pcs	203×203×195	180,000 pcs	438×438×220	