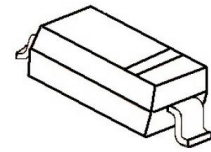


**Features**

- Low Zener Impedance
- Power Dissipation of 500mW
- High Stability and High Reliability

**SOD-123**



**Mechanical Data**

- SOD-123 Small Outline Plastic Package
- Color band denotes cathode end
- Mounting Position: Any

**Maximum Ratings & Thermal Characteristics**

(Ratings at 25°C ambient temperature unless otherwise specified.)

Parameters	Symbol	Value	Unit
Power Dissipation	Pd	0.5 <sub>1)</sub>	mW
Forward Voltage @IF=10mA	V <sub>F</sub>	0.9 <sub>2)</sub>	V
Storage temperature range	Ts	-65 - +150	° C

- 1) Device mounted on ceramic PCB: 7.6mm x 9.4mm x 0.87mm with pad areas 25mm<sup>2</sup>
- 2) Short duration test pulse used to minimize self-heating effect

**Electrical Characteristics** (Ratings at 25°C ambient temperature unless otherwise specified)

Device	Marking	Nominal Zener				Maximum Zener Impedance			Max Reverse Leakage Current	
		V <sub>Z</sub> @I <sub>ZT</sub>			I <sub>ZT</sub>	Z <sub>ZK</sub> @ I <sub>Z</sub>	Z <sub>ZT</sub> @ I <sub>Z</sub>	I <sub>ZK</sub>	I <sub>R</sub> @V <sub>R</sub>	
		Nom.V	Min. V	Max. V	mA	Ω	Ω	mA	uA	V
MMSZ2V4	WX	2.28	2.4	2.52	5	94	564	1	45	1
MMSZ2V7	W1	2.57	2.7	2.84	5	94	564	1	18	1
MMSZ3V0	W2	2.85	3	3.15	5	89	564	1	9	1
MMSZ3V3	W3	3.14	3.3	3.47	5	89	564	1	4.5	1
MMSZ3V6	W4	3.42	3.6	3.78	5	84	564	1	4.5	1
MMSZ3V9	W5	3.71	3.9	4.1	5	84	564	1	2.7	1
MMSZ4V3	W6	4.09	4.3	4.52	5	84	564	1	2.7	1
MMSZ4V7	W7	4.47	4.7	4.94	5	75	470	1	2.7	2
MMSZ5V1	W8	4.85	5.1	5.36	5	56	451	1	1.8	2
MMSZ5V6	W9	5.32	5.6	5.88	5	37	376	1	0.9	2
MMSZ6V2	WA	5.89	6.2	6.51	5	9	141	1	2.7	4
MMSZ6V8	WB	6.46	6.8	7.14	5	14	75	1	1.8	4
MMSZ7V5	WC	7.11	7.5	7.86	5	14	75	1	0.9	5
MMSZ8V2	WD	7.79	8.2	8.61	5	14	75	1	0.63	5

MMSZ9V1	WE	8.65	9.1	9.56	5	14	94	1	0.45	6
MMSZ10V	WF	9.5	10	10.5	5	18	141	1	0.18	7
MMSZ11V	WG	10.45	11	11.55	5	18	141	1	0.09	8
MMSZ12V	WH	11.4	12	12.6	5	23	141	1	0.09	8
MMSZ13V	WI	12.35	13	13.65	5	28	160	1	0.09	8
MMSZ15V	WJ	14.25	15	15.75	5	28	188	1	0.045	10.5
MMSZ16V	WK	15.2	16	16.8	5	37	188	1	0.045	11.2
MMSZ18V	WL	17.1	18	18.9	5	42	212	1	0.045	12.6
MMSZ20V	WM	19	20	21	5	51	212	1	0.045	14
MMSZ22V	WN	20.9	22	23.1	5	51	235	1	0.045	15.4
MMSZ24V	WO	22.8	24	25.2	5	65	235	1	0.045	16.8
MMSZ27V	WP	25.65	27	28.35	5	75	282	0.5	0.045	18.9
MMSZ30V	WQ	28.5	30	31.5	5	75	282	0.5	0.045	21
MMSZ33V	WR	31.35	33	34.65	5	75	306	0.5	0.045	23
MMSZ36V	WS	34.2	36	37.8	5	84	329	0.5	0.045	25.2
MMSZ39V	WT	37.05	39	40.95	5	122	329	0.5	0.045	27.3
MMSZ43V	WU	40.85	43	45.15	5	141	353	0.5	0.045	30.1
MMSZ47V	WV	44.65	47	49.35	5	160	353	0.5	0.045	33
MMSZ51V	WW	48.45	51	53.55	5	169	376	0.5	0.045	35.7
MMSZ56V	WX	53.2	56	58.8	5	188	400	0.5	0.045	39.2
MMSZ62V	WY	58.9	62	65.1	5	202	423	0.5	0.045	43.4
MMSZ68V	WZ	64.6	68	71.4	5	226	447	0.5	0.045	47.6
MMSZ75V	W0	71.25	75	78.75	5	240	470	0.5	0.045	52.5

Typical Performance Characteristics ( $T_A=25^\circ\text{C}$  unless otherwise Specified)

**Breakdown characteristics**  
at  $T_j=\text{constant}$  (pulsed)

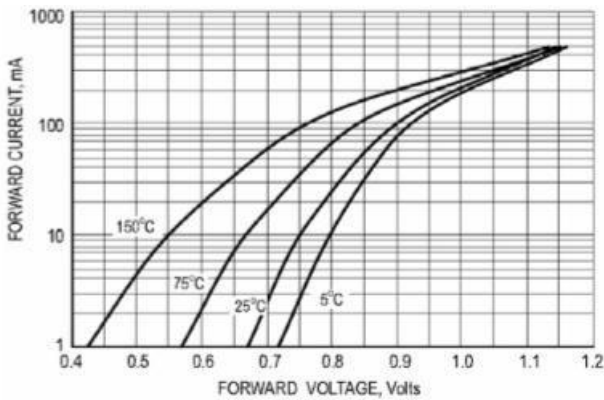


Fig.1 TYPICAL FORWARD VOLTAGE

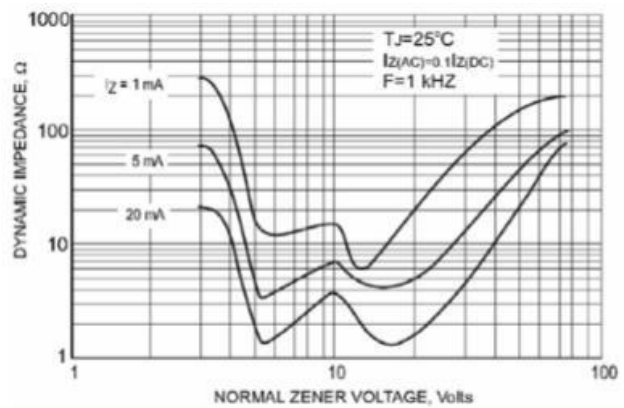


Fig.2 EFFECT OF ZENER VOLTAGE ON ZENER IMPEDANCE

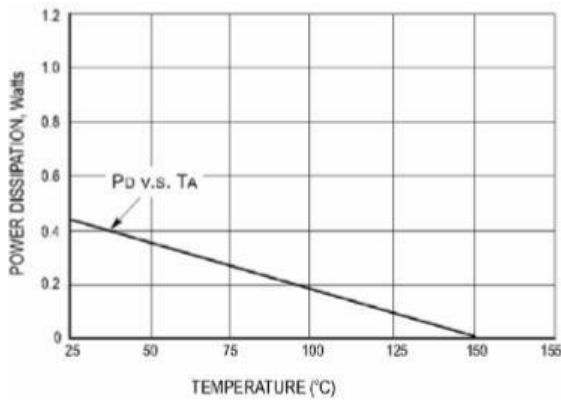


Fig.3 MAXIMUM NONREPETITIVE SURGE

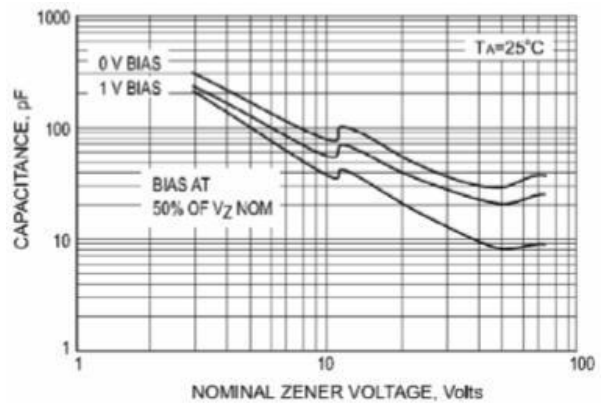


Fig.4 TYPICAL CAPACITANCE

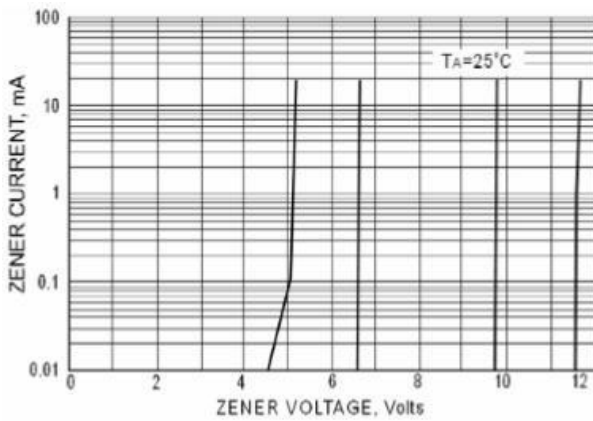


Fig.5 ZENER BREAKDOWN CHARACTERISTICS

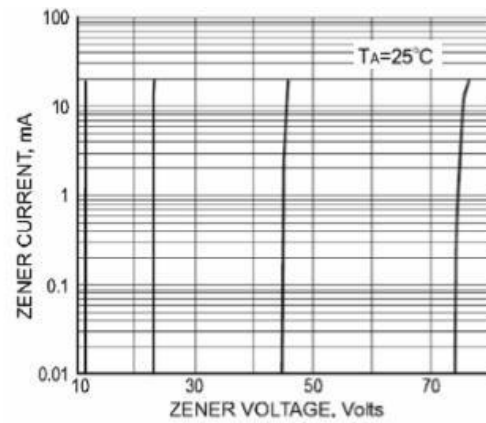


Fig.6 ZENER BREAKDOWN CHARACTERISTICS

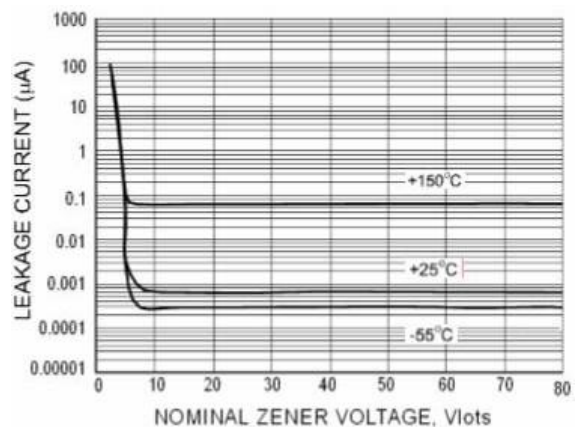
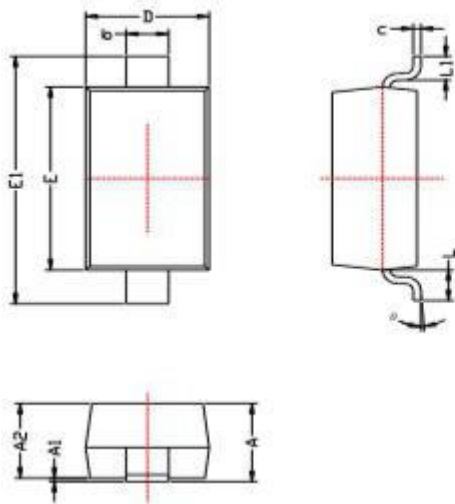


Fig.7 TYPICAL LEAKGE CURRENT

Package Mechanical Data(mm)



SYMBOL	DIMENSIONS	
	MIN.	MAX.
A	1.050	1.250
A1	0.000	0.100
A2	1.050	1.150
b	0.450	0.650
c	0.080	0.150
D	1.500	1.700
E	2.600	2.800
E1	3.550	3.850
L	0.500REF	
L1	0.250	0.450
$\theta$	0°	8°

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