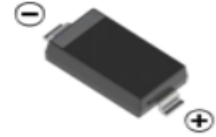


## GENERAL PURPOSE RECTIFIER DIODE

### FEATURES

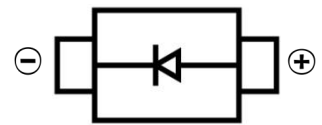
- Surface Mount device
- Low Reverse voltage leakage current
- Glass passivated junction
- High forward surge current capability
- Low forward voltage drop



SOD-123

### MECHANICAL DATA

- Case: SOD-123
- Case Material: Molded Plastic. UL flammability
- Classification Rating: 94V-0
- Weight: 0.0155 grams (approximate)



### MARKING:T1-T7

### MAXIMUM RATINGS (T<sub>A</sub> = 25°C unless otherwise noted)

Parameter	Symbol	1N4001W	1N4002W	1N4003W	1N4004W	1N4005W	1N4006W	1N4007W	Unit
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000	V
RMS Reverse Voltage	V <sub>R(RMS)</sub>	35	70	140	280	420	560	700	V
DC Blocking Reverse Voltage	V <sub>R</sub>	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current	I <sub>F</sub>	1							A
Non-Repetitive Peak Forward Surge Current (@t=8.3ms)	I <sub>FSM</sub>	30							A
Thermal Resistance From Junction To Ambient	R <sub>θJA</sub>	120							°C/W
Junction and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-50 ~+150							°C

### ELECTRICAL CHARACTERISTICS (T<sub>A</sub> = 25°C unless otherwise specified)

Parameter	Symbol	Min	Typ	Max	Unit	Conditions
Forward voltage	V <sub>F</sub>			1.1	V	I <sub>F</sub> =1A
Reverse current	I <sub>R</sub>			5	uA	V=V <sub>R</sub>
				50		V=V <sub>R</sub> , T <sub>a</sub> =125°C
Diode capacitance	C <sub>D</sub>		9		pF	V <sub>R</sub> =4V <sub>DC</sub> , f=1MHz

GENERAL PURPOSE RECTIFIER DIODE

Typical Characteristics

Fig.1 Forward Current Derating Curve

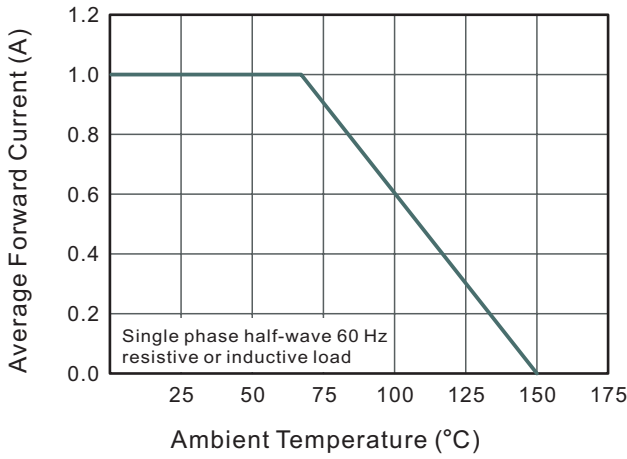


Fig.2 Typical Instantaneous Reverse Characteristics

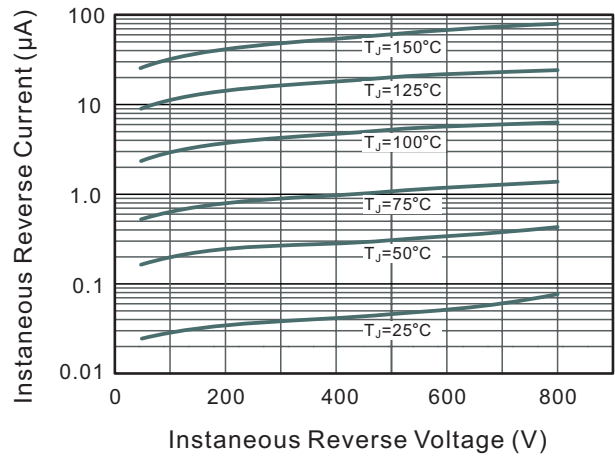


Fig.3 Typical Forward Characteristic

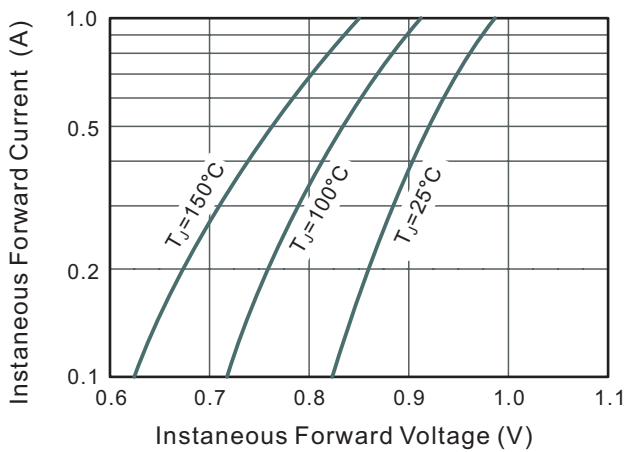


Fig.4 Typical Junction Capacitance

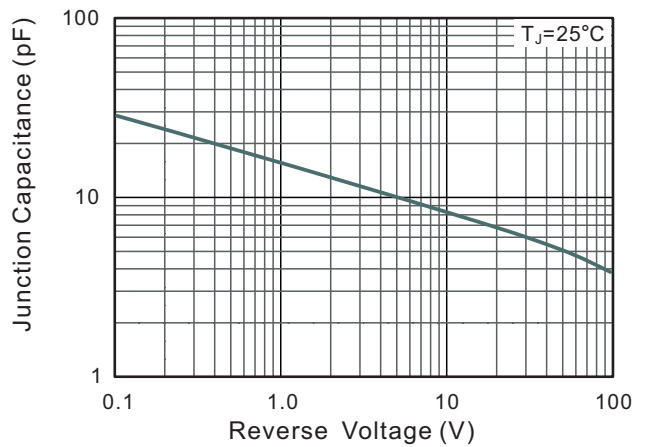
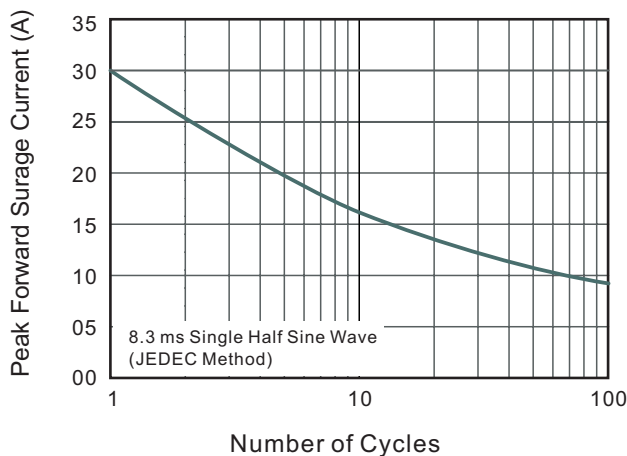
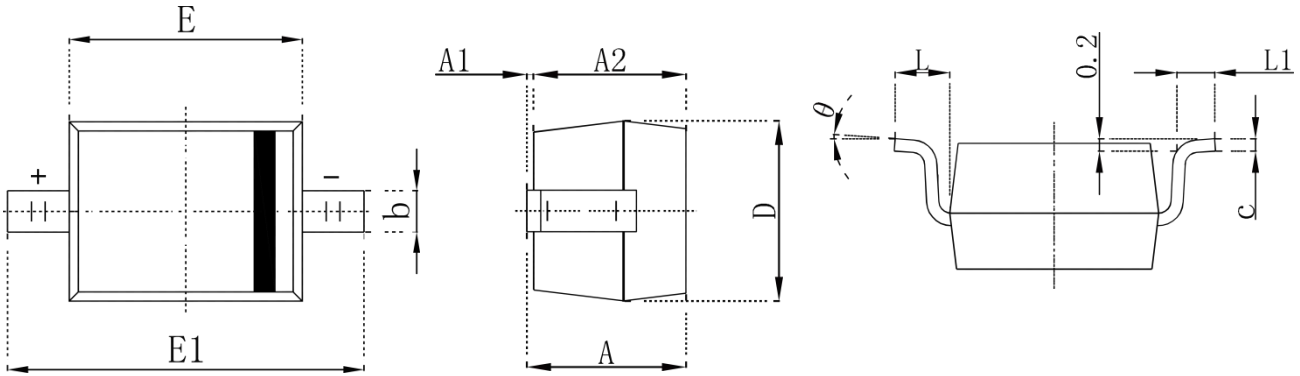


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current



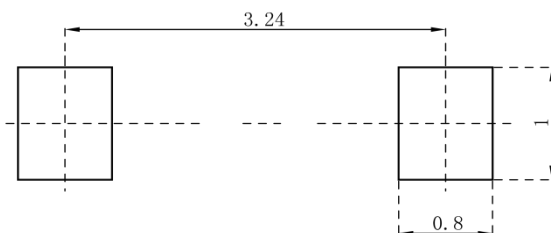
GENERAL PURPOSE RECTIFIER DIODE

**SOD-123 Package Outline Dimensions**



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	1.050	1.250	0.041	0.049
A1	0.000	0.100	0.000	0.004
A2	1.050	1.150	0.041	0.045
b	0.450	0.650	0.018	0.026
c	0.080	0.150	0.003	0.006
D	1.500	1.700	0.059	0.067
E	2.600	2.800	0.102	0.110
E1	3.550	3.850	0.140	0.152
L	0.500 REF		0.020 REF	
L1	0.250	0.450	0.010	0.018
θ	0°	8°	0°	8°

**SOD-123 Suggested Pad Layout**



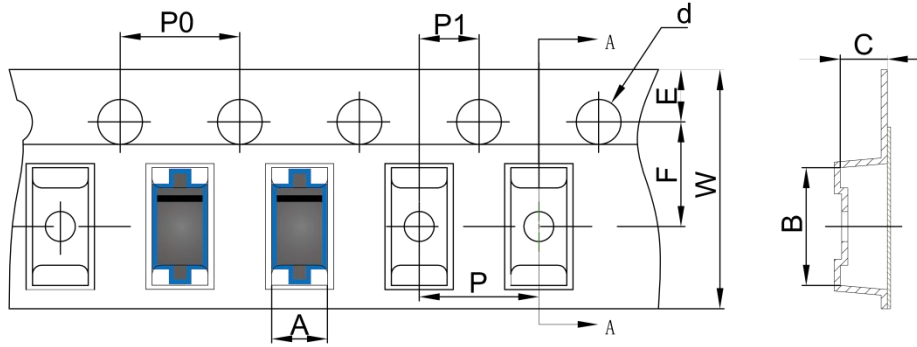
**Note:**

1. Controlling dimension: in millimeters
2. General tolerance:  $\pm 0.05\text{mm}$
3. The pad layout is for reference purposes only

GENERAL PURPOSE RECTIFIER DIODE

**SOD-123 Tape and Reel**

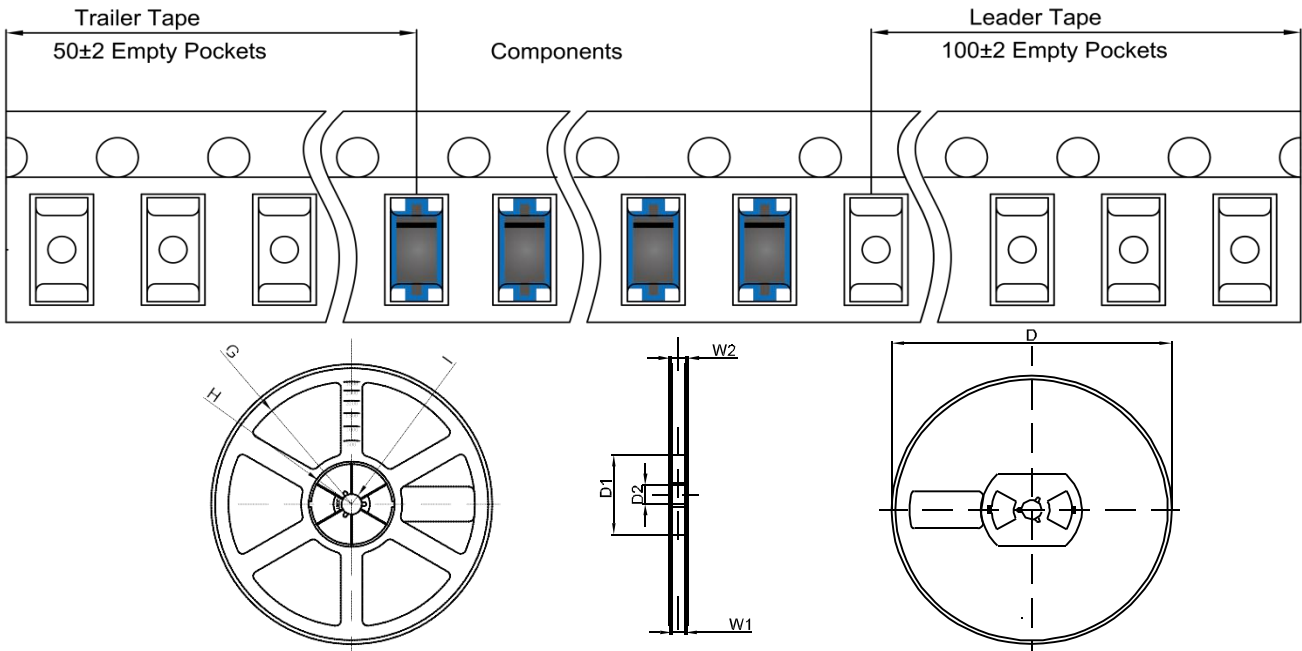
**SOD-123 Embossed Carrier Tape**



**SOD-123 Tape Leader and Trailer**

DIMENSIONS ARE IN MILLIMETER										
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
TOLERANCE	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1

**SOD-123 Reel**



DIMENSIONS ARE IN MILLIMETER								
REEL OPTION	D	D1	D2	G	H	I	W1	W2
7" DIA	Ø178	54.40	13.00	R78	R25.60	R6.50	9.50	12.30
TOLERANCE	±2	±1	±1	±1	±1	±1	±1	±1