

GENERAL PURPOSE RECTIFIER DIODE

FEATURES

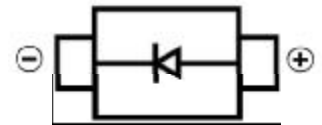
- Surface Mount device
- Low Reverse voltage leakage current
- Glass passivated junction
- High forward surge current capability
- Low forward voltage drop



SOD-323

MECHANICAL DATA

- Case: SOD-323
- Case Material: Molded Plastic, UL flammability
- Classification Rating: 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Weight: 0.0155 grams (approximate)



MARKING:T1-T7

MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	1N4001WS	1N4002WS	1N4003WS	1N4004WS	1N4005WS	1N4006WS	1N4007WS	Unit
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	V
RMS Reverse Voltage	$V_{R(RMS)}$	35	70	140	280	420	560	700	V
DC Blocking Reverse Voltage	V_R	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current	I_F	1							A
Non-Repetitive Peak Forward Surge Current (@ $t=8.3\text{ms}$)	I_{FSM}	25							A
Thermal Resistance From Junction To Ambient	$R_{\theta JA}$	55							$^\circ\text{C/W}$
Junction and Storage Temperature Range	T_J, T_{STG}	-50 ~+150							$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Min	Typ	Max	Unit	Conditions
Forward voltage	V_F			1.1	V	$I_F=1\text{A}$
Reverse current	I_R			5	uA	$V=V_R$
				50		$V=V_R, T_a=100^\circ\text{C}$
Diode capacitance	C_D		5		pF	$V_R=4V_{DC}, f=1\text{MHz}$
Typical reverse recovery time	T_{rr}	1800			ns	$I_F=0.5\text{A}, I_R=1\text{A}, I_{rr}=0.25\text{A}$

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Typical Characteristics

Fig.1 Forward Current Derating Curve

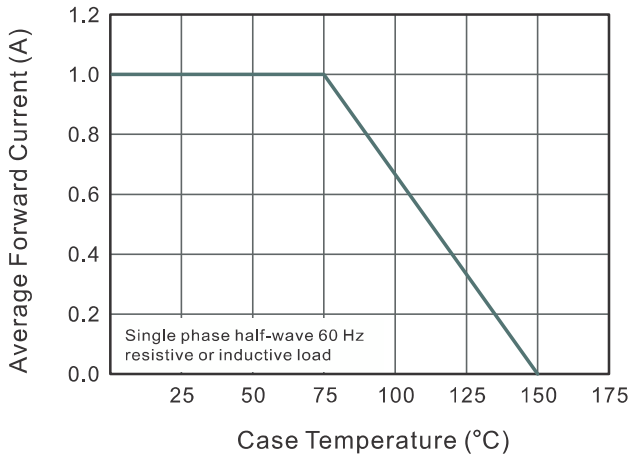


Fig.2 Typical Instaneous Reverse Characteristics

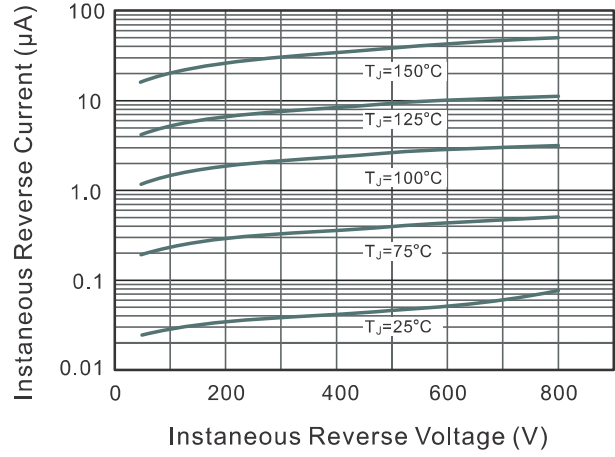


Fig.3 Typical Forward Characteristic

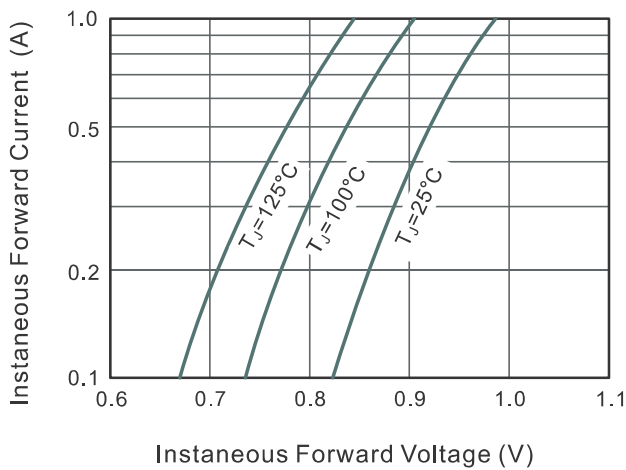


Fig.4 Typical Junction Capacitance

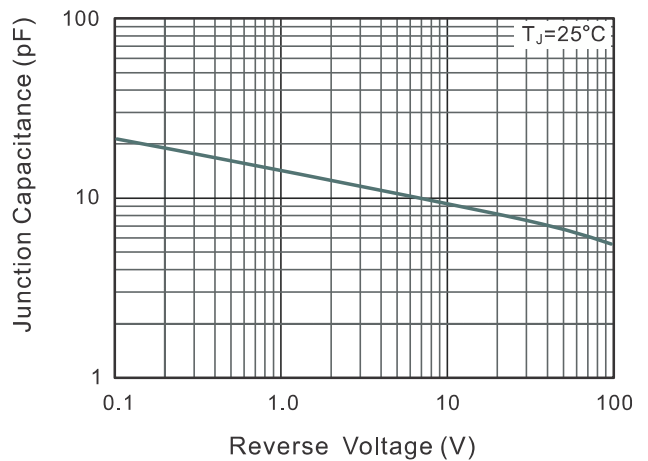
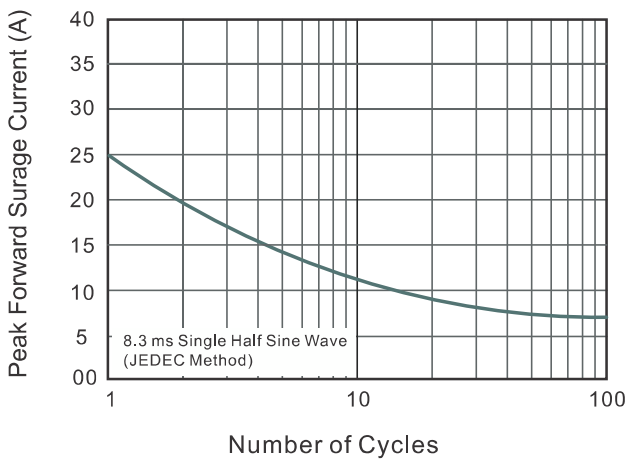
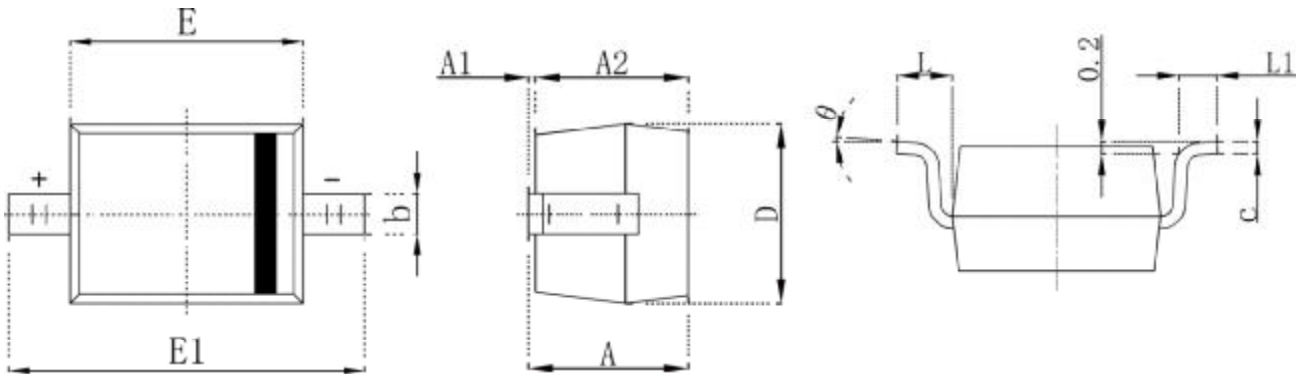


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current



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SOD-323 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A		1.000		0.039
A1	0.000	0.100	0.000	0.004
A2	0.800	0.900	0.031	0.035
b	0.250	0.350	0.010	0.014
c	0.080	0.150	0.003	0.006
D	1.200	1.400	0.047	0.055
E	1.600	1.800	0.063	0.071
E1	2.250	2.750	0.100	0.108
L	0.475 REF		0.019 REF	
L1	0.250	0.400	0.010	0.016
θ	0°	8°	0°	8°

SOD-323 Suggested Pad Layout



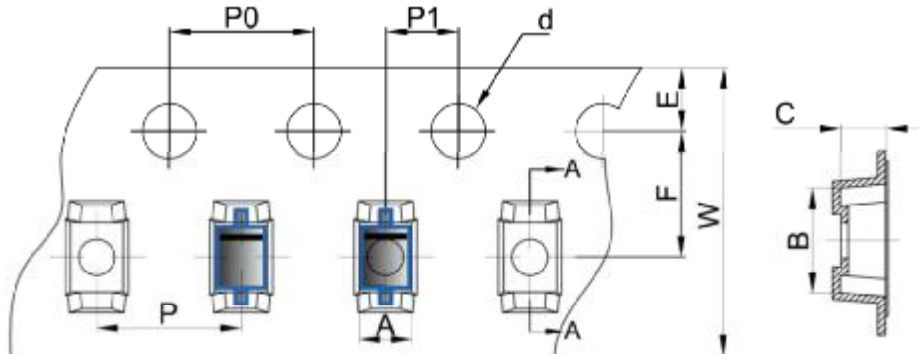
Note:

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

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SOD-323 Tape and Reel

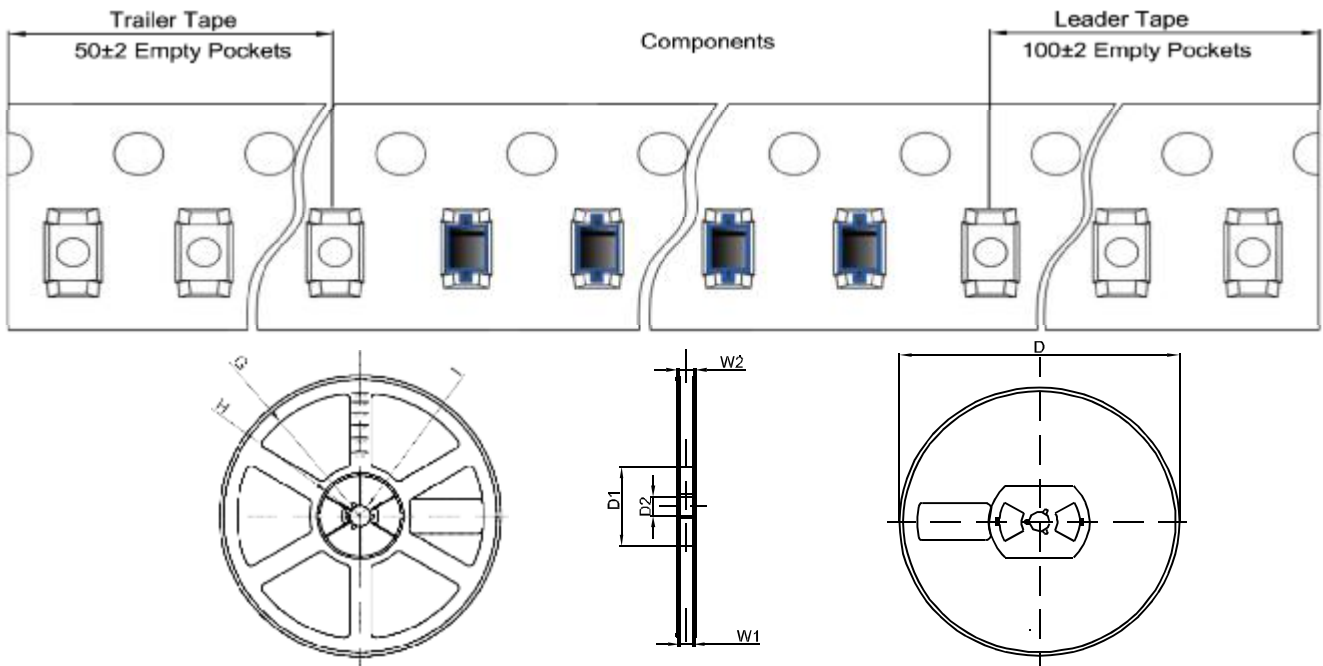
SOD-323 Embossed Carrier Tape



SOD-323 Tape Leader and Trailer

DIMENSIONS ARE IN MILLIMETER										
TYPE	A	B	C	d	E	F	P0	P	P1	W
SOD-323	1.48	3.3	1.25	Ø1.50	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-323 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