

1N4001WSX THRU 1N4007WSX

SURFACE MOUNT GENERAL PURPOSE RECTIFIER

SOD-323 Surface Mount General Purpose Rectifier

Features

- Ideal for automated placement
- Low forward voltage drop
- High forward surge current capability
- Glass passivated chip junctions
- Low leakage current

Applications

For use in general purpose rectification of power supplies, inverters, converters, and freewheeling diodes for consumer and telecommunication

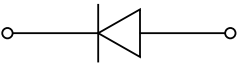
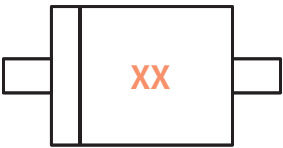
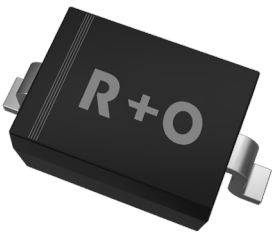
Mechanical Data

- Case: SOD-323
Molding compound meets UL 94V-0 flammability rating, RoHS-compliant, halogen-free
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: Cathode line denotes the cathode end

Function Diagram

Reverse Voltage
50-1000 V
Forward Current
1 Ampere

SOD-323



Maximum Ratings (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	1N4001 WSX	1N4002 WSX	1N4003 WSX	1N4004 WSX	1N4005 WSX	1N4006 WSX	1N4007 WSX
Device marking code			1A	2A	3A	4A	5A	6A	7A
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	V	50	100	200	400	600	800	1000
Maximum RMS Voltage	V_{RMS}	V	35	70	140	280	420	560	700
Maximum DC blocking Voltage	V_{DC}	V	50	100	200	400	600	800	1000
Maximum Average Forward Rectified Current @60Hz sinewave, Resistance load, TL (Fig.1)	$I_{F(AV)}$	A	1.0						
Non-repetitive Peak Forward Surge Current @ t=8.3ms Half-sine wave	I_{FSM}	A	15						
Storage temperature	T_{stg}	°C	-55 ~+150						
Junction temperature	T_j	°C	-55 ~+150						
	$R_{\theta J-L}$	°C /W	35						

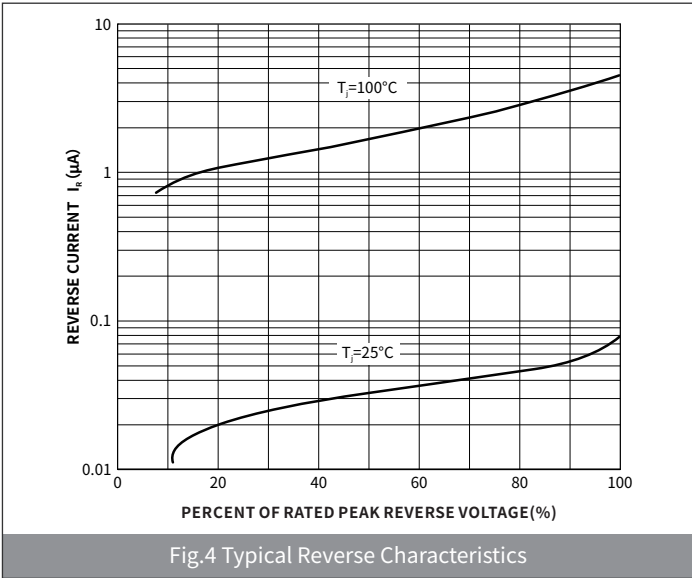
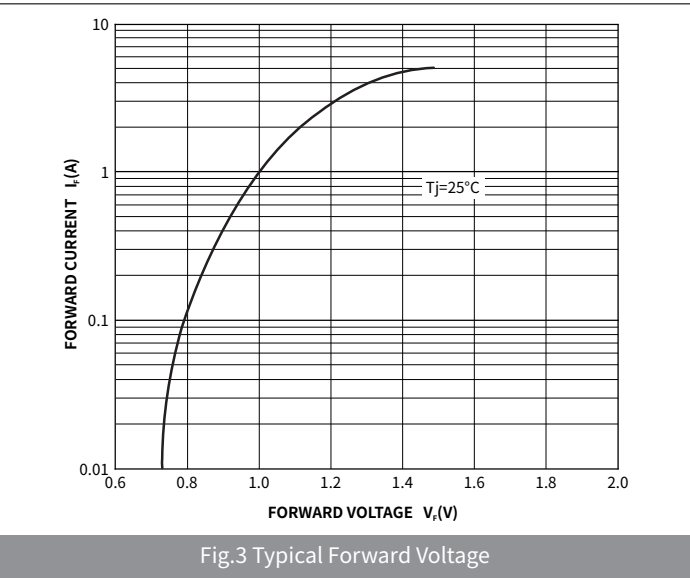
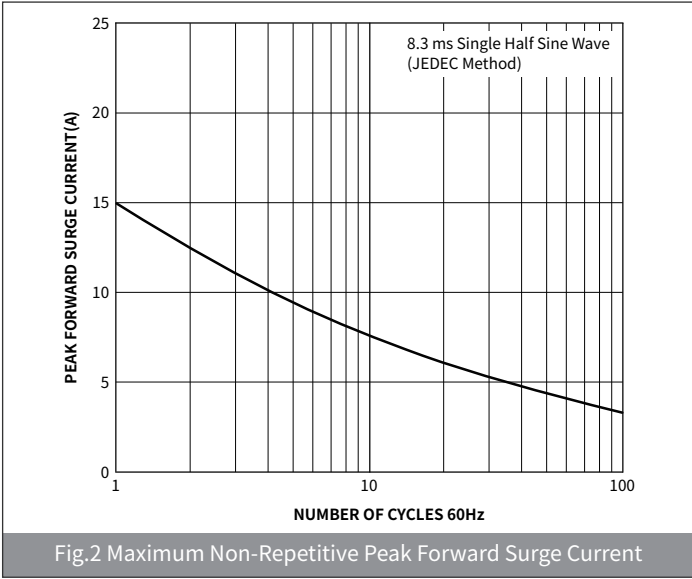
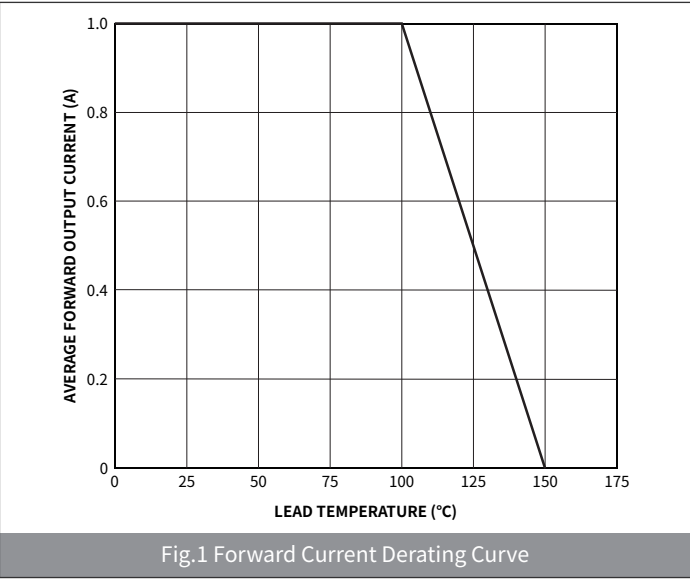
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● **Electrical Characteristics** (Ta=25°C Unless otherwise noted)

PARAMETER	TEST CONDITIONS	SYMBOL	UNIT	Min	Typ	Max
Maximum instantaneous forward voltage	$I_F=0.5A$	V_F	V	—	0.92	1.1
	$I_F=1.0A$			—	0.98	1.1
Maximum DC reverse current at rated DC blocking voltage	$V_R=V_{DC}, T_A=25^{\circ}C$	I_{R1}	μA	—	—	5
	$V_R=V_{DC}, T_A=125^{\circ}C$	I_{R2}		—	—	50

● **Ratings And Characteristics Curves** (Ta=25°C Unless otherwise specified)



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● Ordering Information

PACKAGE	PACKAGE CODE	UNIT WEIGHT(g)	REEL(pcs)	BOX(pcs)	CARTON(pcs)	DELIVERY MODE
SOD-323	R1	0.0048	3000	30000	180000	7"

● Package Outline Dimensions (SOD-323)

Symbol	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	1.40	1.80	0.055	0.071
B	0.25	0.40	0.010	0.016
C	2.30	2.80	0.091	0.110
D	0.80	1.10	0.031	0.043
D ₁	0.80	0.90	0.031	0.035
E	1.20	1.40	0.047	0.055
F	0.08	0.18	0.003	0.007
L	0.475REF		0.019REF	
L ₁	0.20	0.45	0.008	0.018
H	-	0.2	-	0.008

● Suggested Pad Layout

Symbol	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
X	0.65	0.75	0.026	0.030
Y	0.65	0.75	0.026	0.030
Z	2.10	2.20	0.084	0.088