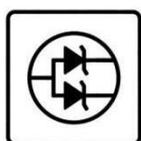


# MSKSEMI 美森科

SEMICONDUCTOR



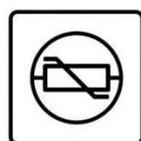
ESD



TVS



TSS



MOV



GDT



PLED

## 1N4001WS-1N4007WS

Product specification

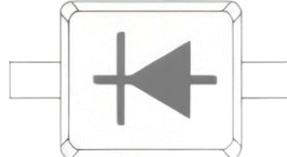
**FEATURES**

- Low profile space
- Ideal for automated placement
- Glass passivated chip junctions
- Low forward voltage drop
- Low leakage current
- High forward surge capability
- High temperature soldering : 260C/10 seconds at terminals

**MECHANICAL DATA**

- **Case:** SOD-323 molded plastic body over glass passivated chip
- **Terminals:** Solder plated, solderable per JESD22-B102
- **Polarity:** Laser band denotes cathode end

**Reference News**

PACKAGE OUTLINE	Circuit	PINNING	
		PIN	DESCRIPTION
 <p>SOD-323</p>		1	Cathode
		2	Anode

**Maximum Ratings & Thermal Characteristics**

(TA = 25 °C unless otherwise noted).

Items	Symbol	1N4001WS 1 A	1N4002WS 2 A	1N4003WS 3 A	1N4004WS 4 A	1N4005WS 5 A	1N4006WS 6 A	1N4007WS 7 A	UNIT
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000	V
Maximum RMS voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	V <sub>DC</sub>	50	100	200	400	600	800	1000	V
Maximum average forward rectified current at T <sub>L</sub> = 90 °C	I <sub>F(AV)</sub>	1							A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	I <sub>FSM</sub>	25							A
Thermal resistance from junction to lead(1)	R <sub>θJL</sub>	35							°C/W
Operating junction range	T <sub>J</sub>	-55 to +150							°C
Storage temperature range	T <sub>STG</sub>	-55 to +150							°C

Note 1: Mounted on PCB with 0.2 x 0.2" (5.0 x 5.0mm) copper pad areas .

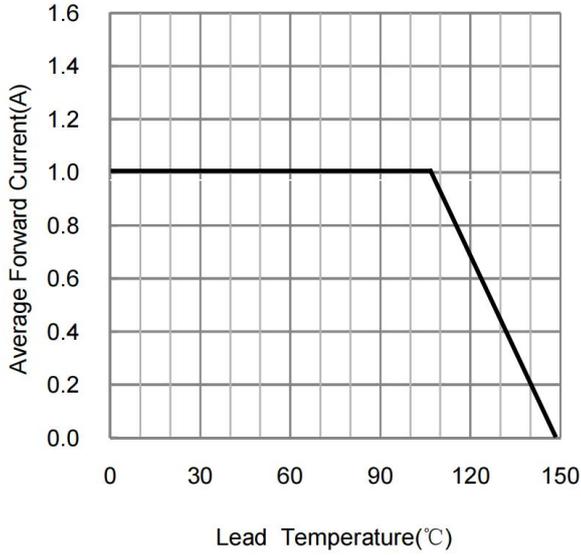
**Electrical Characteristics**(TA = 25 °C unless otherwise noted)

Items	Test conditions	Symbol	Min	Type	Max	UNIT
Instantaneous forward voltage	I <sub>F</sub> = 0.5A	V <sub>F</sub>	-	0.92	-	V
	I <sub>F</sub> = 1 A			0.98	1.1	
Reverse current	V <sub>R</sub> = V <sub>DC</sub>	I <sub>R</sub>			5	μ A
				T <sub>A</sub> = 125 °C	50	

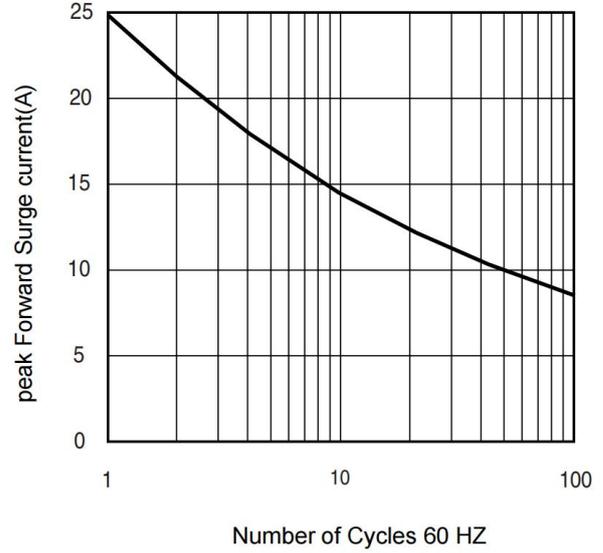
Note 2: Pulse test: 300 ps pulse width, 1% duty cycle.

**RATING AND CHARACTERISTIC CURVES (1N4001WS THRU 1N4007WS)**

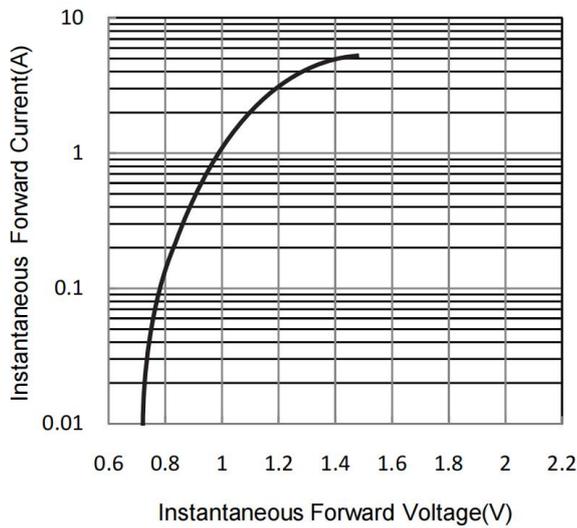
**Fig.1 Forward Current Derating Curve**



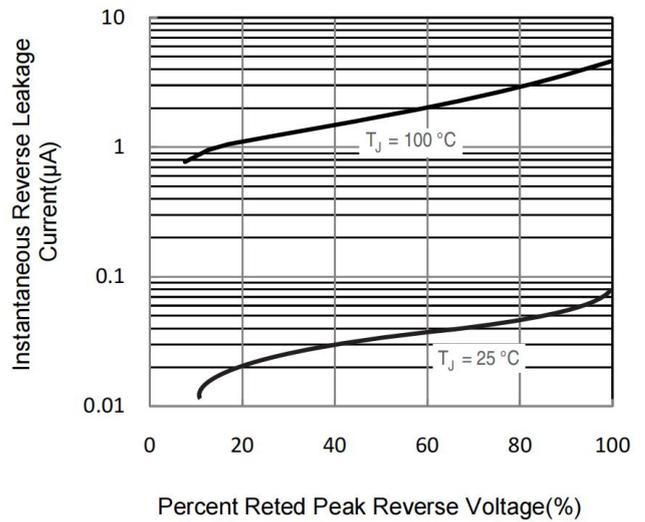
**Fig.2 Maximum Non-Repetitive Peak Forward Surge Current**



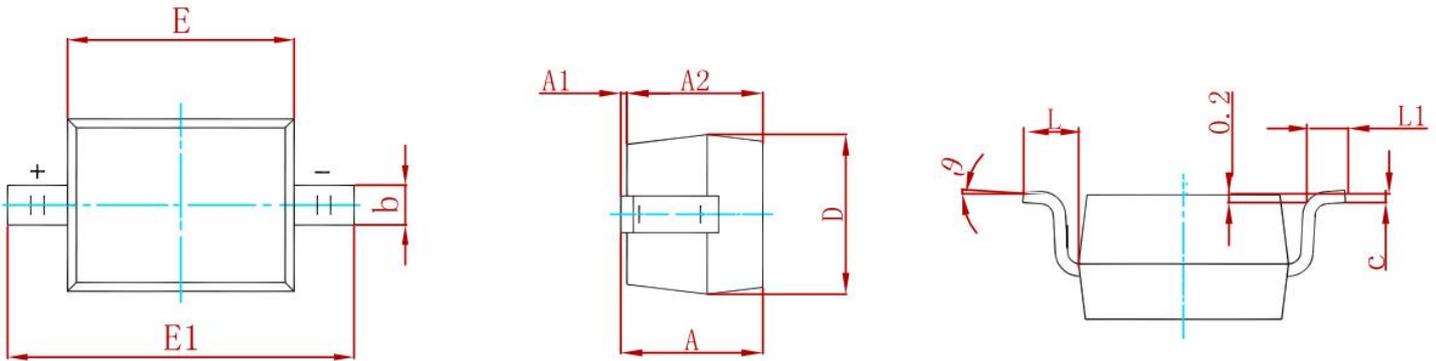
**Fig.3 Typical Instantaneous Forward Characteristics**



**Fig.4 Typical Reverse Leakage Characteristics**

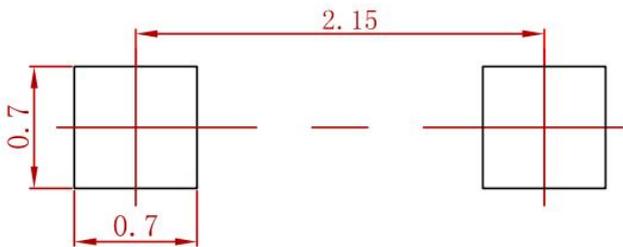


**PACKAGE MECHANICAL DATA**



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	2.550	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°

**Suggested Pad Layout**



**Note:**

- 1.Controlling dimension:in millimeters.
- 2.General tolerance:±0.05mm.
- 3.The pad layout is for reference purposes only.

**REEL SPECIFICATION**

P/N	PKG	QTY
1N4001WS-1N4007WS	SOD-323	3000

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