1N4001WS-1N4007WS

Surface Mount Standard Rectifiers

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：
  260℃/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

SOD-323

ROHS
COMPLIANT

Major Ratings and Characteristics

$I_{F(AV)}$	1 A
V_{RRM}	50 V to 1000 V
I_{FSM}	10A
I_R	5 μA
V_F	1.15V
T_j max.	125。C

Maximum Ratings & Thermal Characteristics

(T_A = 25 °C unless otherwise noted)

Items	Symbol	1N4001WS A1	1N4002WS A2	1N4003WS A3	1N4004WS A4	1N4005WS A5	1N4006WS A6	1N4007WS A7	UNIT
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	V
Maximum average forward rectified current at T_L =90 ℃	$I_{F(AV)}$	1							A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	I_{FSM}	10							A
Thermal resistance from junction to lead[1]	$R_{\theta JL}$	35							℃/ W
Operating junction range	T_J	–55 to +125							℃
storage temperature range	T_{STG}	–55 to +125							℃

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

Electrical Characteristics (T_A = 25 °C unless otherwise noted)

Items	Test conditions		Symbol	Min	Type	Max	UNIT
Instantaneous forward voltage	I_F=0.5A		V_F	-	0.95	-	V
	I_F=1A [2]				1	1.15	
Reverse current	V_R=V_{DC}	T_A=25℃	I_R	-	-	5	μA
		T_A=125℃				50	

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

Typical Characteristic Curves (T_A=25 ℃ unless otherwise noted)

Fig.1 Forward Current Derating Curve

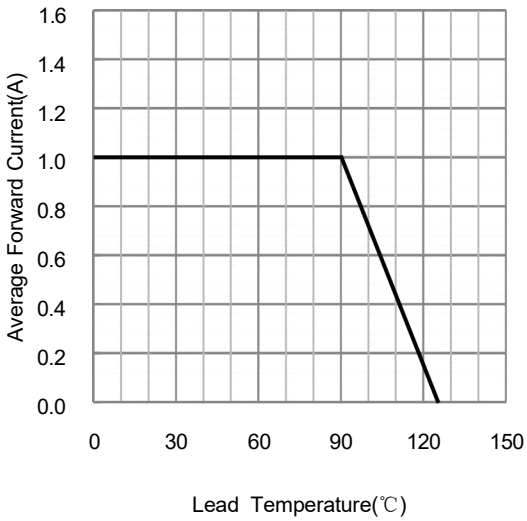


Fig.2 Maximum Non-Repetitive Peak Forward Surge Current

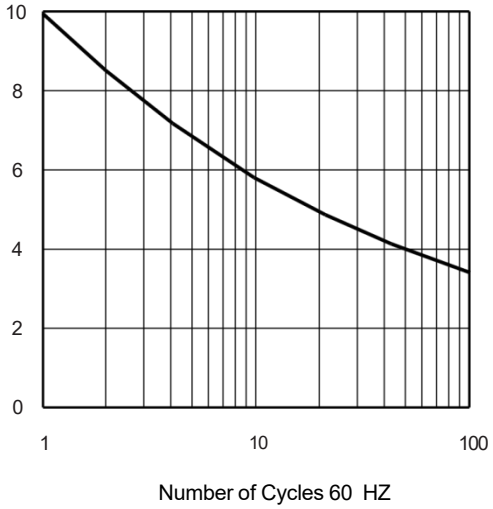


Fig.3 Typical Instantaneous Forward Characteristics

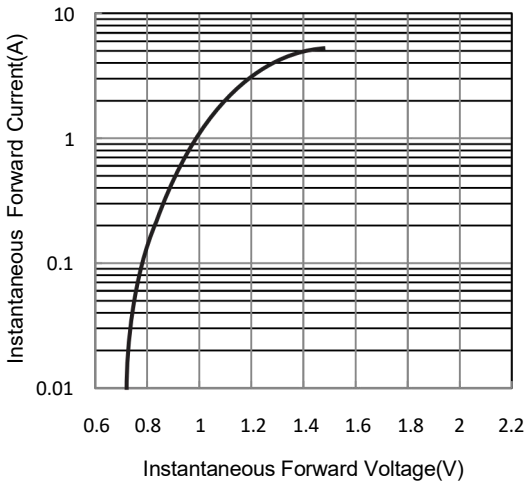
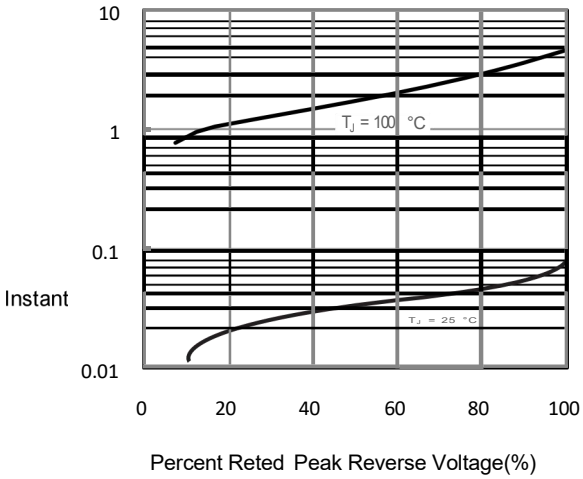
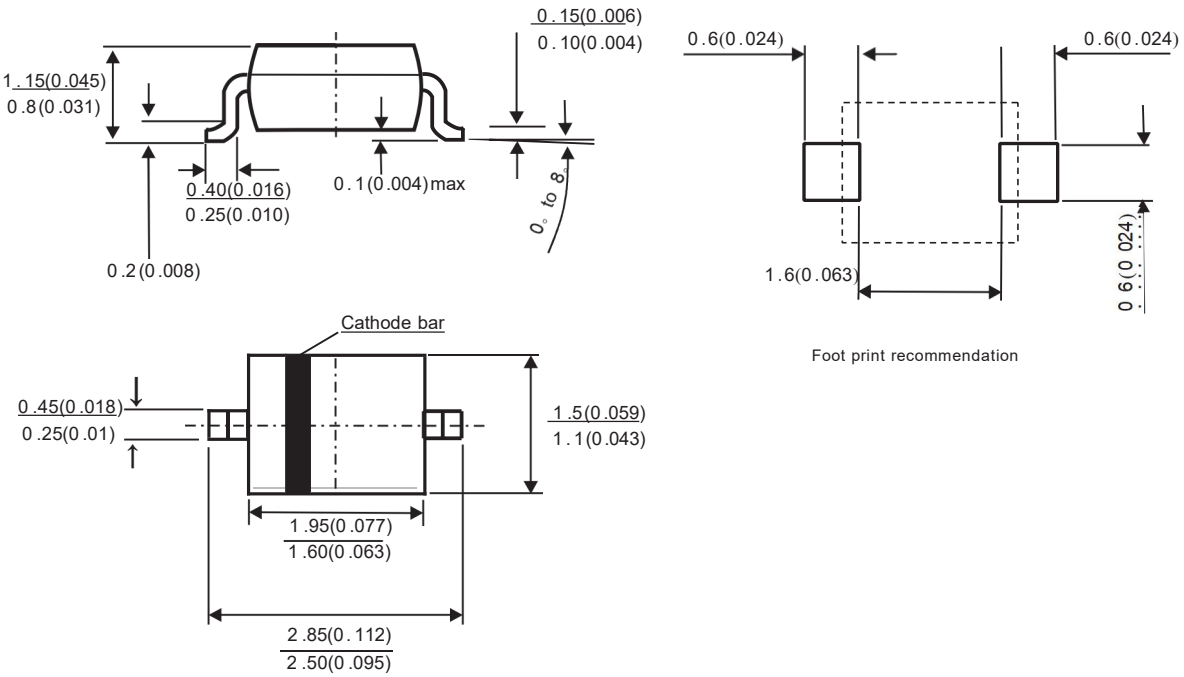


Fig.4 Typicl Reverse Leakage Characteristics



Package Outline



Dimensions in millimeters and (inches)