

Surface mount standard rectifiers

Features

- Low profile package
- Ideal for automated placement
- Glass passivated chip junctions
- Low forward voltage drop
- Low leakage current
- High forward surge capability
- High temperature soldering:
260°C/10 seconds at terminals
- Component in accordance to
RoHS 2011/65/EU and WEEE 2002/96/EC



SOD-323



RoHS
COMPLIANT

Mechanical Date

- **Case:** SOD-323
Molding compound meets
UL 94 V-0 flammability rating
- **Terminals:** Solder plated, solderable per
MIL-STD-750, Method 2026
- **Polarity:** Laser band denotes cathode end

Major Ratings and Characteristics

$I_{F(AV)}$	1A
V_{RRM}	50V to 1000V
I_{FSM}	10A
I_R	5 μ A
V_F	1.15V
$T_{jmax.}$	150°C

Maximum Ratings & Thermal Characteristics ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Item	Symbol	SGP 1A	SGP 2A	SGP 3A	SGP 4A	SGP 5A	SGP 6A	SGP 7A	Unit
Marking code		A1	A2	A3	A4	A5	A6	A7	
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 $T_L=115^\circ\text{C}$	$I_{F(AV)}$	1.0							A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	I_{FSM}	10							A
Operating and storage temperature range	T_J, T_{STG}	-55 to +150							°C
Thermal resistance from junction to lead ⁽¹⁾	$R_{\theta JL}$	35							°C/W

Note1: Mounted on PCB with 0.2x0.2" (5.0mmx5.0mm) copper pad areas.

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

Item	Test conditions	Symbol	Min	Typ	Max	Unit
Instantaneous forward voltage	$I_F=0.5\text{A}$	V_F	-	0.95	-	V
	$I_F=1.0\text{A}$		-	1.0	1.15	
Reverse current	$V_R=V_{DC}$	I_R	-	-	5.0	μA
			$T_J=125^\circ\text{C}$	-	-	



SGP1A ~ SGP7A

Fig.1 Forward Current Derating Curve

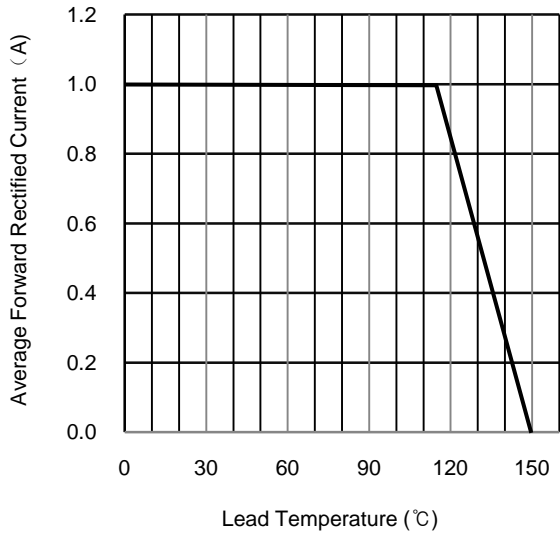


Fig.2 Maximum Non-Repetitive Peak Forward Surge Current

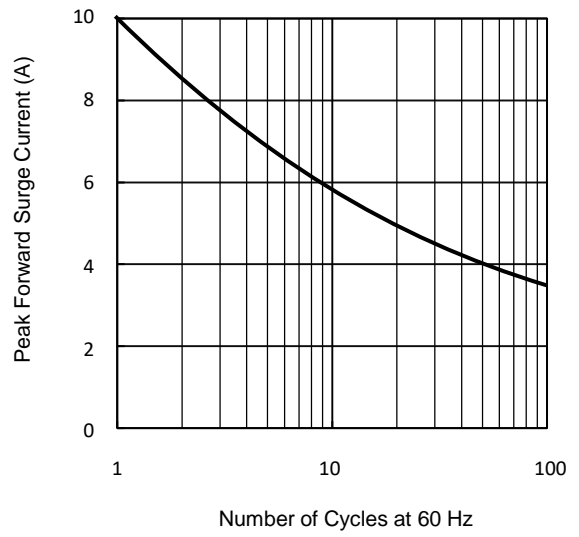


Fig.3 Typical Instantaneous Forward Characteristics

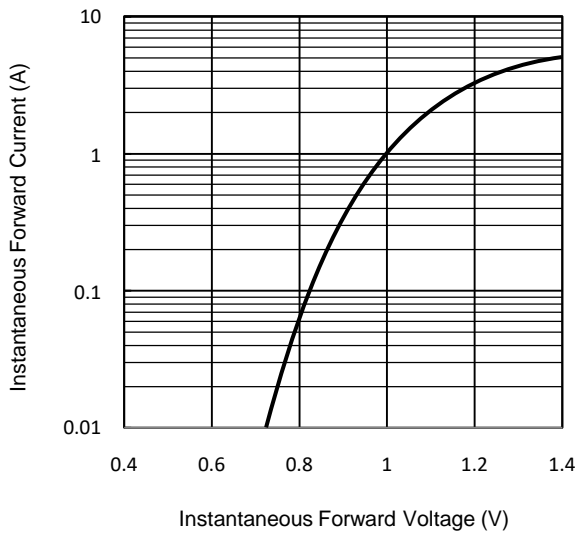
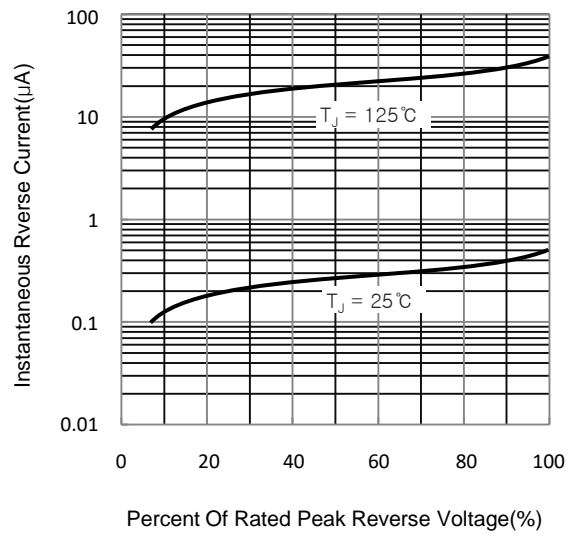
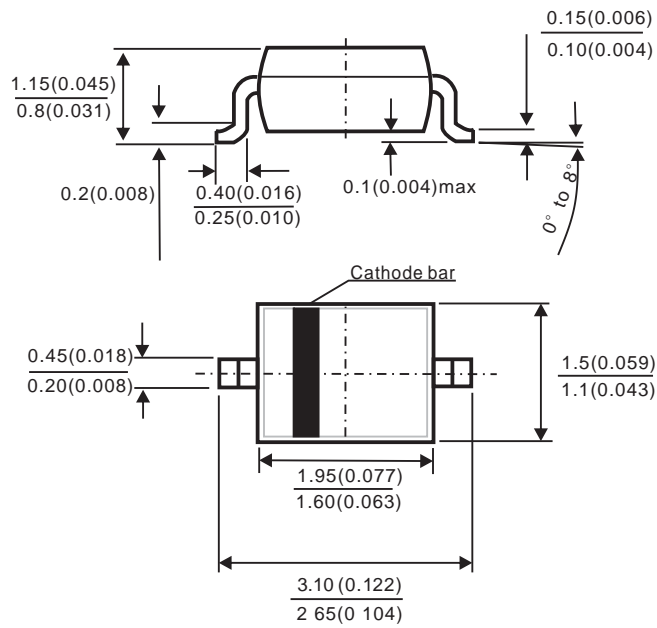


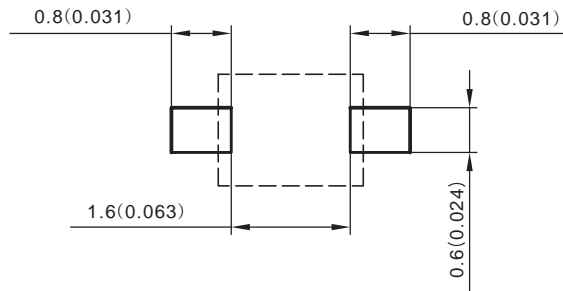
Fig.4 Typical Reverse Characteristics



SOD-323



Footprint recommendation:



Package dimensions in millimeters (inches)

Ordering Information

Outline	Reel (PCS)	Per Carton (PCS)	Reel Diameters (mm)
Taping	3,000	240,000	178/7"