

SOD-323



Major Ratings and Characteristics

$I_{F(AV)}$	1.0A
V_{RRM}	50V to 1000V
I_{FSM}	10A
I_R	5 μ A
V_F	1.3V
$T_{Jmax.}$	150°C

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

Mechanical Data

- **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

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

Item	Symbol	3DFR 1A	3DFR 1B	3DFR 1D	3DFR 1G	3DFR 1J	3DFR 1K	3DFR 1M	Unit
Marking code		R1	R2	R3	R4	R5	R6	R7	
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 $T_L=105^\circ\text{C}$	$I_{F(AV)}$	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	3DFR1A~ 3DFR1G	3DFR1J	3DFR1K~ 3DFR1M	Unit
Instantaneous forward voltage	I _F =1.0A		V _F	1.30			V
Maximum reverse current	V _R =V _{DC}	T _J =25°C	I _R	5.0			μA
		T _J =125°C		50			
Reverse recovery time	I _F =0.5A I _R =1.0A, I _{rr} =0.25A		t _{rr}	150	250	500	nS

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

Fig.1 Forward Current Derating Curve

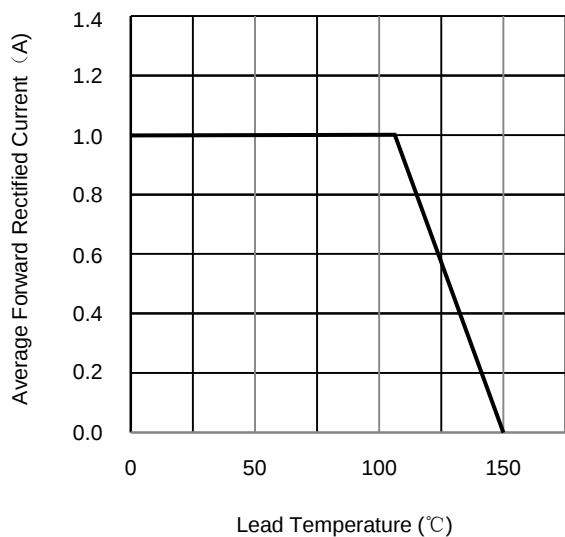


Fig.2 Maximum Non-Repetitive Peak Forward Surge Current

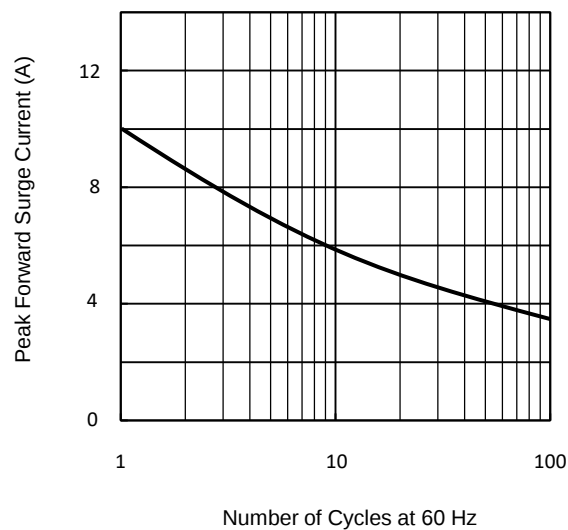


Fig.3 Typical Instantaneous Forward Characteristics

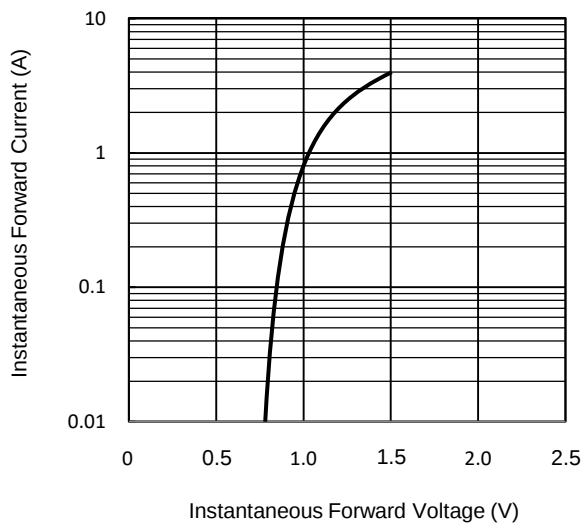
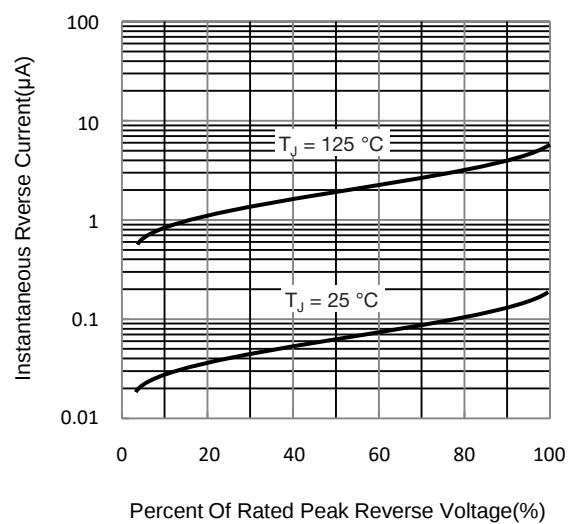
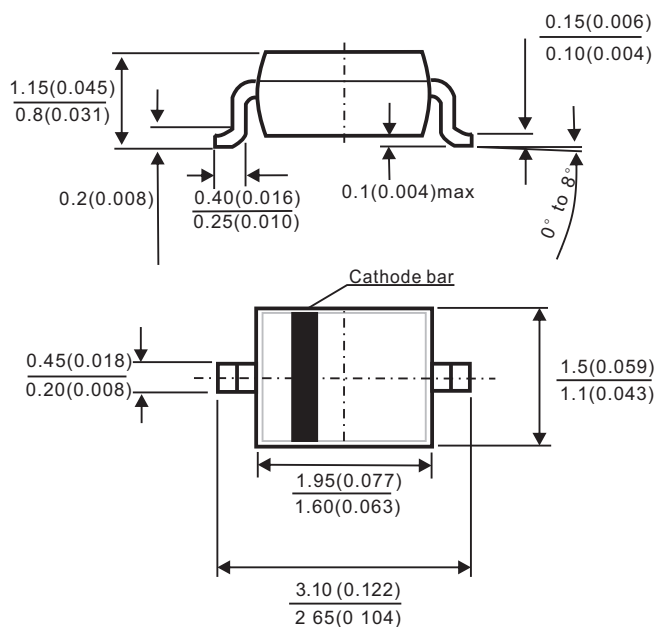


Fig.4 Typical Reverse Characteristics

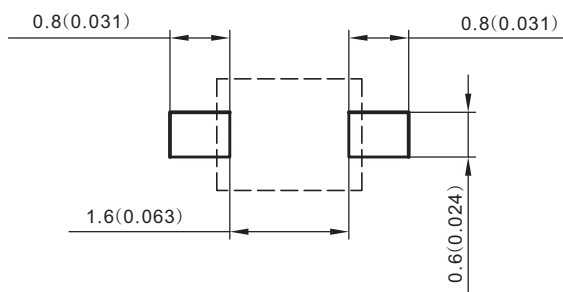


Package Outline

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"