

## SILICON RECTIFIERS

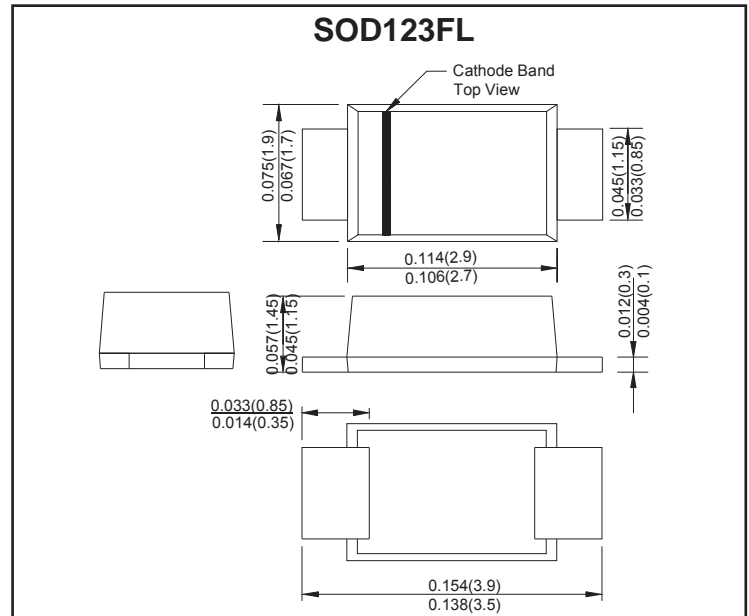
VOLTAGE RANGE: 50 --- 1000 V CURRENT: 1.0 A

### FEATURES

- Low profile space
- Ideal passivated chip junctions
- Low forward voltage drop
- High forward surge capability
- High temperature soldering guaranteed: 260 °C/10 seconds at terminals
- Component in accordance to RoHs 2002/95/EC and WEEE 2002/96/EC

### MECHANICAL DATA

- Case: SOD-123FL molded plastic body over glass passivated chip
- Terminals: Solder plated, solderable per J-STD-002B and JESD22-B102D
- Polarity: Color band denotes cathode end



### MAXIMUM RATINGS AND CHARACTERISTICS

@ 25°C Ambient Temperature (unless otherwise noted) Single phase, half wave, 60 Hz, resistive or inductive load.

For capacitive load, derate by 20%.

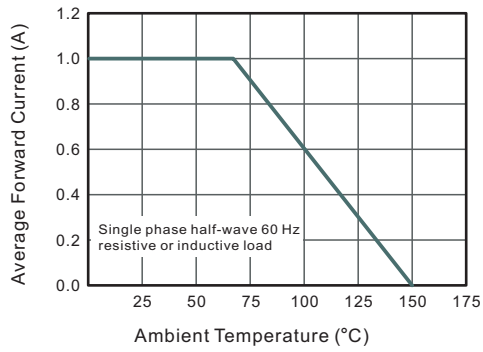
Characteristic	SYMBOLS	SOD4001	SOD4002	SOD4003	SOD4004	SOD4005	SOD4006	SOD4007	UNITS
		DSR1A	DSR1B	DSR1D	DSR1G	DSR1J	DSR1K	DSR1M	
Maximum recurrent peak reverse voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V
Maximum DC blocking voltage	$V_{DC}$								
Maximum RMS Voltage	$V_{R(RMS)}$	35	70	140	280	420	560	700	V
Average rectified output current	$I_{O(AV)}$	1.0							A
Non-Repetitive Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	25.0							A
Forward Voltage @IF=1.0A	$V_F$	1.1							V
Peak Reverse Current at rated DC blocking voltage	@T <sub>A</sub> =25	5.0							μA
	@T <sub>A</sub> =125	50.0							
Thermal resistance from junction to ambient (Note 1)	$R_{θJL}$	15							pF
Typical Thermal Resistance Junction to Ambient (Note 2)	$R_{θJA}$	50							°C/W
Operating Temperature Range	$T_j$	-65 to +175							°C

#### NOTES:

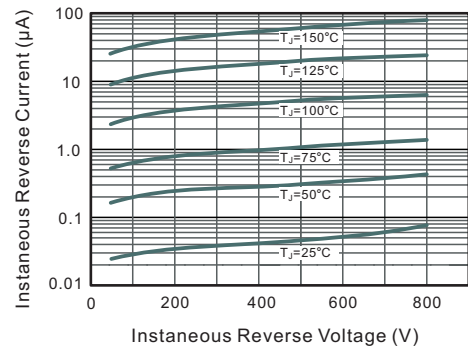
1. Mounted on FR-4 P.C.B. with 0.9×1.5mm copper pad areas (≈35μm thick)

# RATINGS AND CHARACTERISTIC CURVES

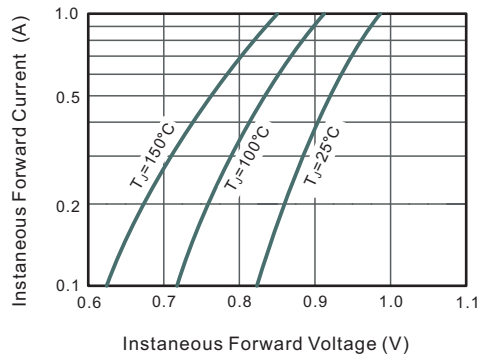
**Fig.1 Forward Current Derating Curve**



**Fig.2 Typical Instaneous Reverse Characteristics**



**Fig.3 Typical Forward Characteristic**



**Fig.4 Typical Junction Capacitance**

