

### PLASTIC SILICON RECTIFIER

REVERSE VOLTAGE: 50 - 1000 V

CURRENT: 1.0 A

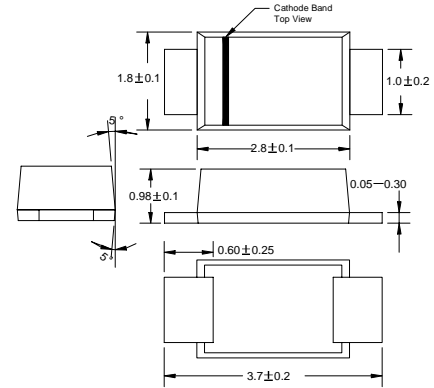
#### FEATURES

- Low forward surge current
- Ideal for surface mounted applications
- Low leakage current

#### MECHANICAL DATA

- Case: JEDEC SOD-123FL, molded plastic over passivated chip
- Terminals: Solder Plated, solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Weight: 0.006 ounces, 0.02 gram
- Mounting position: Any

SOD - 123FL



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

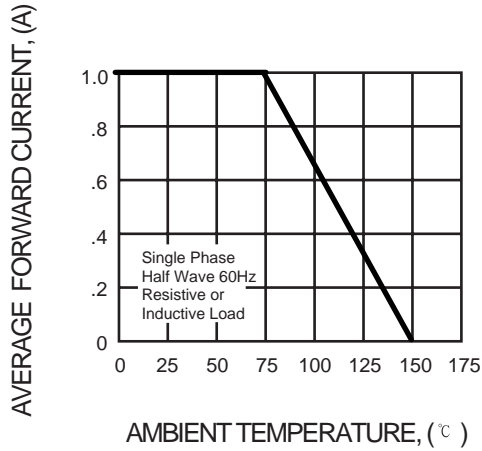
#### ABSOLUTE RATINGS

		SOD 4001	SOD 4002	SOD 4003	SOD 4004	SOD 4005	SOD 4006	SOD 4007	UNITS
Device marking code		D1	D2	D3	D4	D5	D6	D7	
Maximum recurrent 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 @ $T_A=75$	$I_{(AV)}$	1.0							A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load	$I_{FSM}$	25							A
Maximum instantaneous forward voltage @ $I_{FM}=1.0A$ (Note 1)	$V_F$	1.1							V
Maximum DC reverse current @ $T_A=25$ at rated DC blocking voltage @ $T_A=125$	$I_R$	5.0 50							$\mu A$
Typical junction capacitance measured at $f=1MHz, V_R=4.0V$	$C_J$	15							pF
Typical thermal resistance junction to lead	$R_{\theta JL}$	20							/W
Operating temperature range	$T_j$	- 55 --- + 150							
Storage temperature range	$T_{STG}$	- 55 --- + 150							

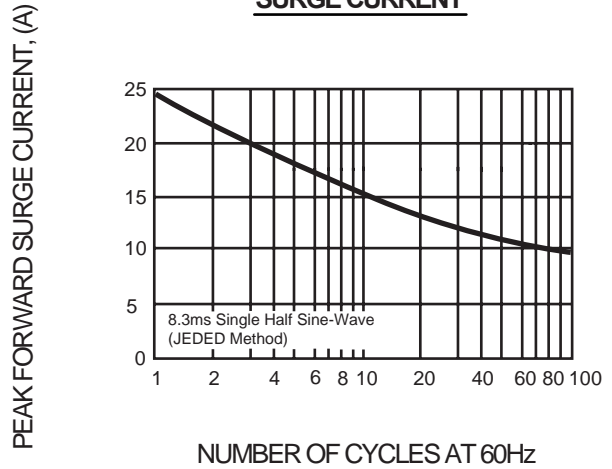
NOTE1. Pulse test: pulse width 300 $\mu$ sec, duty cycle 2%.

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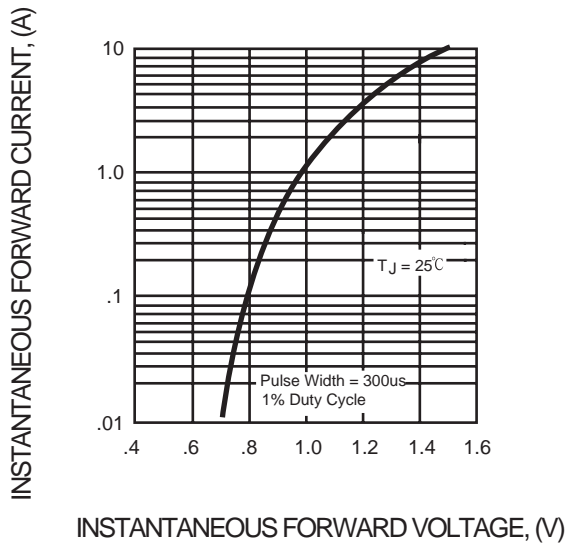
**FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE**



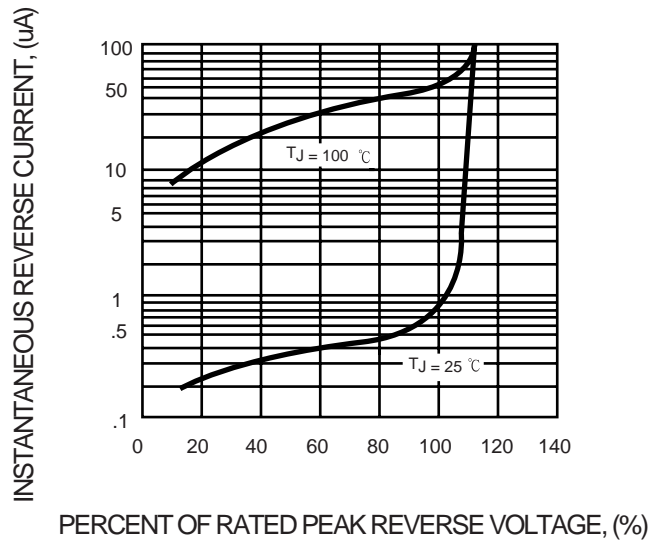
**FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT**



**FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**



**FIG. 4 - TYPICAL REVERSE CHARACTERISTICS**



**FIG. 5 - TYPICAL JUNCTION CAPACITANCE**

