

FAST RECOVERY RECTIFIERS

VOLTAGE RANGE: 100 --- 1000 V
CURRENT: 1.0 A

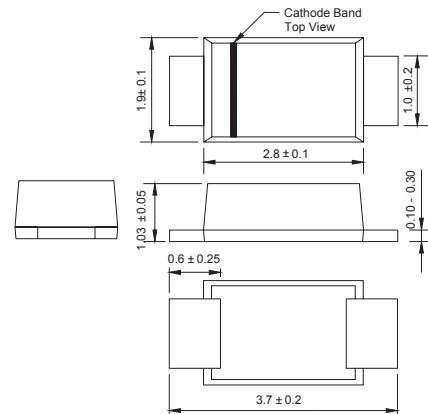
FEATURES

- ◇ Glass passivated device
- ◇ Ideal for surface mounted applications
- ◇ Low leakage current
- ◇ Metallurgically bonded construction
- ◇ High temperature soldering:
250°C/10 seconds at terminals

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: 0.0172 gram
- ◇ Mounting position: Any

SOD - 123FL



Dimensions in millimeters

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

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

Parameter	Symbols	RS1001FL	RS1002FL	RS1004FL	RS1006FL	RS1008FL	RS1010FL	Units
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	100	200	400	600	800	1000	V
Maximum RMS voltage	V_{RMS}	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V_{DC}	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current at $T_c = 125^\circ\text{C}$	$I_{F(AV)}$	1						A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load	I_{FSM}	30						A
Maximum Forward Voltage at 1 A	V_F	1.3						V
Maximum DC Reverse Current $T_a = 25^\circ\text{C}$ at Rated DC Blocking Voltage $T_a = 125^\circ\text{C}$	I_R	5 100						μA
Typical Junction Capacitance at $V_R = 4\text{V}$, $f = 1\text{MHz}$	C_j	15						pF
Maximum Reverse Recovery Time ⁽¹⁾	t_{rr}	150		250		500		ns
Typical Thermal Resistance ⁽²⁾	$R_{\theta JA}$	85						$^\circ\text{C/W}$
Operating and Storage Temperature Range	T_j, T_{stg}	-55 ~ +150						$^\circ\text{C}$

(1) Measured with $I_F = 0.5\text{A}$, $I_R = 1\text{A}$, $I_{rr} = 0.25\text{A}$.

(2) P.C.B. mounted with 2.0" X 2.0" (5 X 5 cm) copper pad areas.

Fig.1 Forward Current Derating Curve

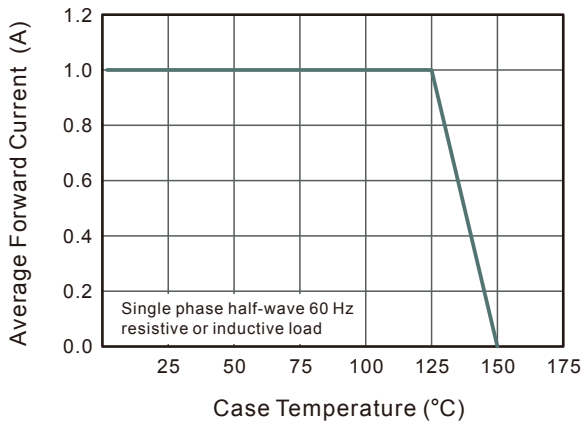


Fig.2 Typical Reverse Characteristics

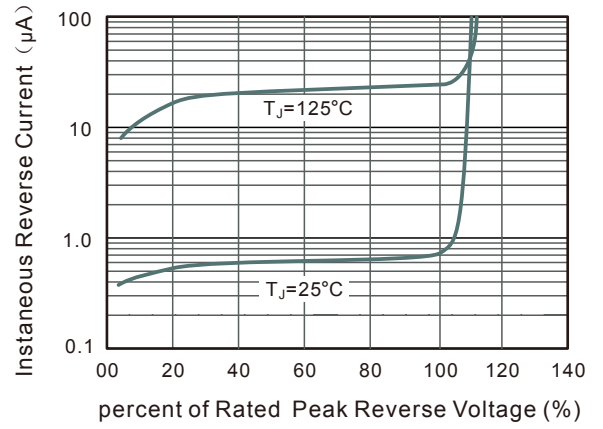


Fig.3 Typical Instantaneous Forward Characteristics

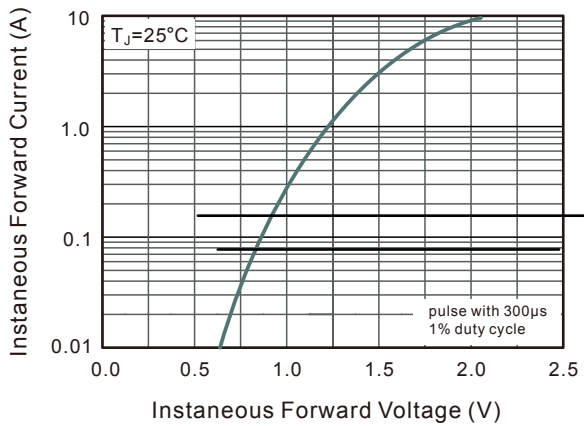


Fig.4 Typical Junction Capacitance

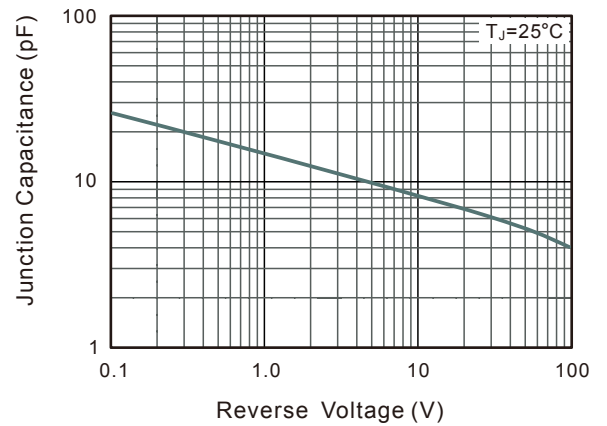
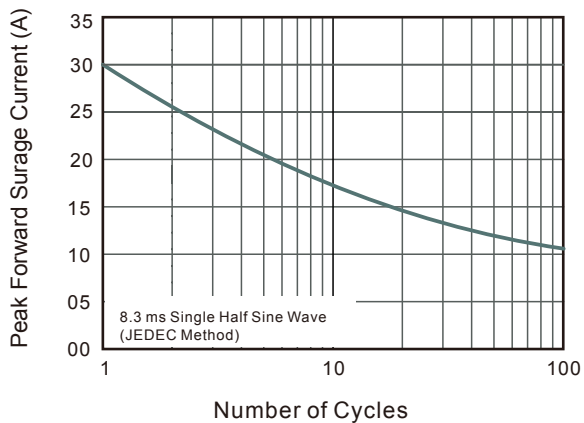


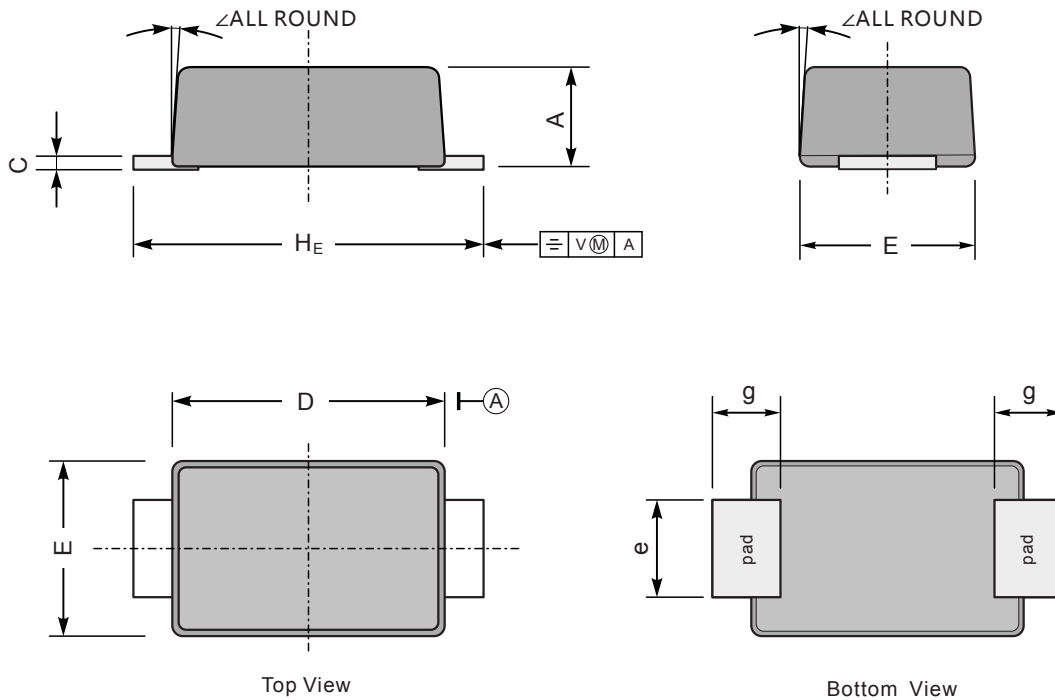
Fig.5 Maximum Non-Repetitive Peak Forward Surge Current



PACKAGE OUTLINE

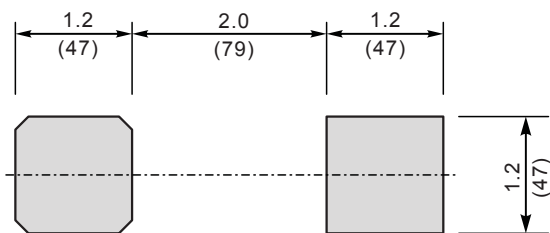
Plastic surface mounted package; 2 leads

SOD-123FL



UNIT		A	C	D	E	e	g	H _E	∠
mm	max	1.1	0.20	2.9	1.9	1.1	0.9	3.8	7°
	min	0.9	0.12	2.6	1.7	0.8	0.7	3.5	
mil	max	43	7.9	114	75	43	35	150	
	min	35	4.7	102	67	31	28	138	

The recommended mounting pad size



Unit: $\frac{\text{mm}}{\text{mil}}$

Marking

Type number	Marking code
RS1001FL	F2
RS1002FL	
RS1004FL	
RS1006FL	F5
RS1008FL	F7
RS1010FL	