

# FR101FL THRU FR107FL

## SURFACE MOUNT FAST RECOVERY RECTIFIERS

Forward Current-1A

Reverse Voltage-50V to 1000V

### FEATURES

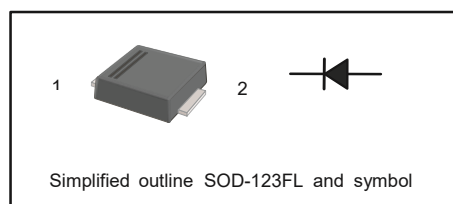
- ◆ For surface mount applications
- ◆ Glass passivated chip junction
- ◆ Low profile package
- ◆ Fast reverse recovery time
- ◆ Lead free in comply with EU RoHS2011/65/EU directives

### MECHANICAL DATA

- ◆ Case: SOD-123FL molded plastic body
- ◆ Terminals: Solderable per MIL-STD-750 , Method2026
- ◆ Weight: Approximated 0.015 grams

### PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase half-wave 60 Hz, resistive or inductive load, for capacitive load current derating by 20 %.

PARAMETER	SYMBOL	FR101FL	FR102FL	FR103FL	FR104FL	FR105FL	FR106FL	FR107FL	UNIT
Maximum Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V <sub>DC</sub>	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current at T <sub>C</sub> =125°C	I <sub>F(AV)</sub>	1							A
Peak Forward Surge Current (Note1)	I <sub>FSM</sub>	30							A
Maximum Forward Voltage at 1.0 A	V <sub>F</sub>	1.3							V
Maximum DC Reverse Current at Rated DC Blocking Voltage at T <sub>A</sub> =25°C T <sub>A</sub> =125°C	I <sub>R</sub>	5 100							uA
Typical Junction Capacitance at V <sub>R</sub> =4V, f=1MHz	C <sub>J</sub>	15							pF
Maximum Reverse Recovery Time (Note2)	T <sub>rr</sub>	150				250	500		nS
Typical Thermal Resistance (Note3)	R <sub>θJA</sub>	85							°C/W
Operating and Storage Temperature Range	T <sub>J</sub> ,T <sub>STG</sub>	-55 to +150							°C

Notes: 1. Measured at 8.3 ms single half sine wave superimposed on rated load (JEDEC Method).

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

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

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Rev:1.0

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## RATINGS AND CHARACTERISTIC CURVES

Fig.1 Forward Current Derating Curve

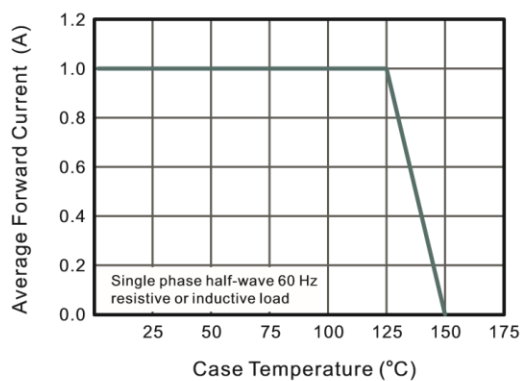


Fig.2 Typical Reverse Characteristics

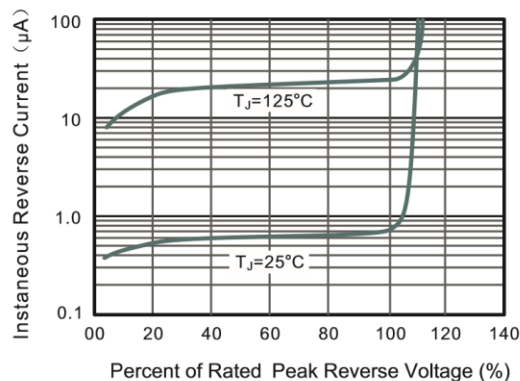


Fig.3 Typical Instantaneous Forward Characteristics

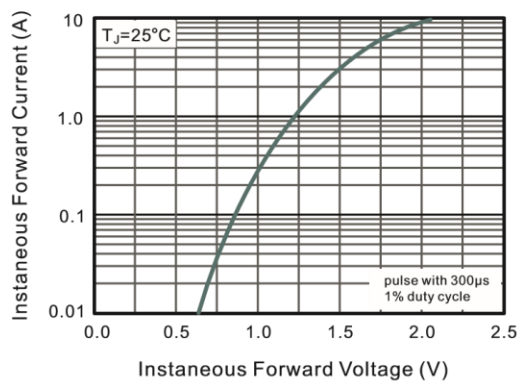


Fig.4 Typical Junction Capacitance

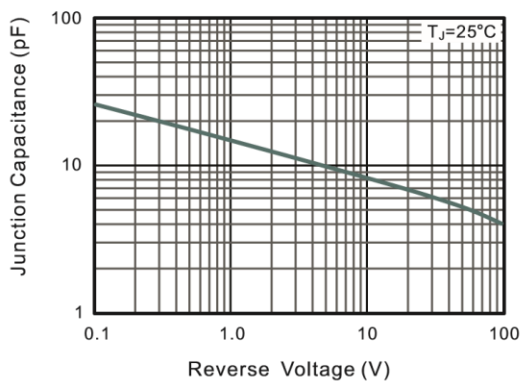
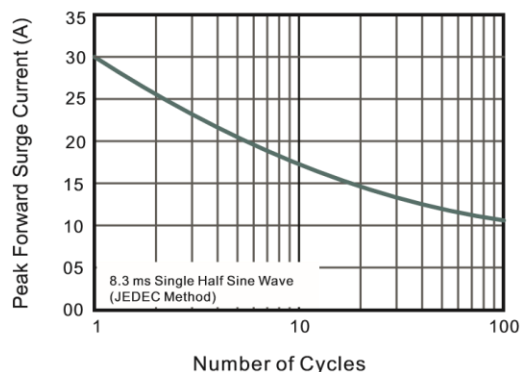


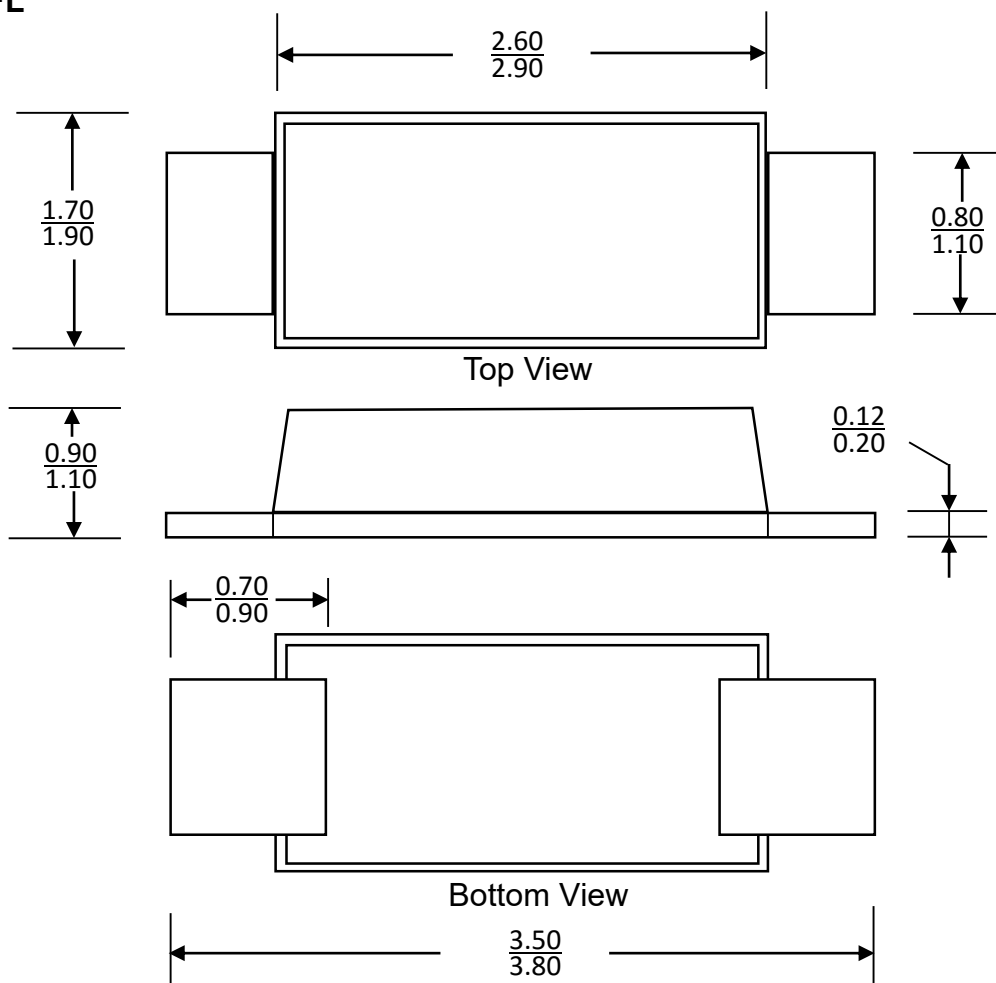
Fig.5 Maximum Non-Repetitive Peak Forward Surge Current



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## PACKAGE OUTLINE

### SOD-123FL



Dimensions in millimeters

### ORDERING INFORMATION

Device	Package	Shipping
FR101FL thru FR107FL	SOD-123FL	3,000/Tape & Reel (7 inches)

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