

## 3A, 40V - 200V Surface Mount Schottky Barrier Rectifiers

### FEATURES

- Low power loss, high efficiency
- Ideal for automated placement
- Guard ring for over-voltage protection
- High surge current capability
- Compliant to RoHS Directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21

### MECHANICAL DATA

Case: SOD-123FL

Molding compound: UL flammability classification rating 94V-0

Moisture sensitivity level: level 1, per J-STD-020

Terminal: Matte tin plated leads, solderable per J-STD-002

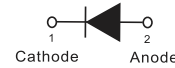
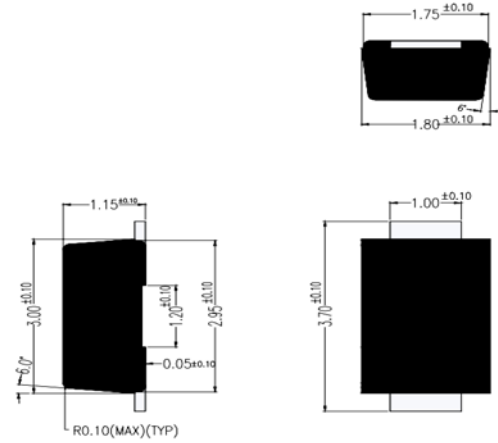
Meet JESD 201 class 2 whisker test

Polarity: Indicated by cathode band

Weight: 16 mg (approximately)

### SOD-123FL

Unit : inch(mm)



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T<sub>A</sub>=25°C unless otherwise noted)

PARAMETER	SYMBOL	SS3040 FL	SS3060 FL	SS30100 FL	SS30150 FL	SS30200 FL	UNIT
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	40	60	100	150	200	V
Maximum RMS voltage	V <sub>RMS</sub>	28	42	70	105	140	V
Maximum DC blocking voltage	V <sub>DC</sub>	40	60	100	150	200	V
Maximum average forward rectified current	I <sub>F(AV)</sub>	3					A
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load	I <sub>FSM</sub>	80					A
Maximum instantaneous forward voltage (Note 1) @ 3 A	V <sub>F</sub>	0.55	0.70	0.85	0.95		V
Maximum reverse current @ rated V <sub>R</sub> T <sub>J</sub> =25°C	I <sub>R</sub>	200		20	10		μA
Typical thermal resistance	R <sub>θJL</sub> R <sub>θJA</sub>	20 75					°C/W
Operating junction temperature range	T <sub>J</sub>	- 55 to +125		- 55 to +150			°C
Storage temperature range	T <sub>STG</sub>	- 55 to +125		- 55 to +150			°C

Note 1: Pulse test with PW=300μs, 1% duty cycle

**RATINGS AND CHARACTERISTICS CURVES** ( $T_A=25^\circ\text{C}$  unless otherwise noted)

FIG.1 FORWARD CURRENT DERATING CURVE

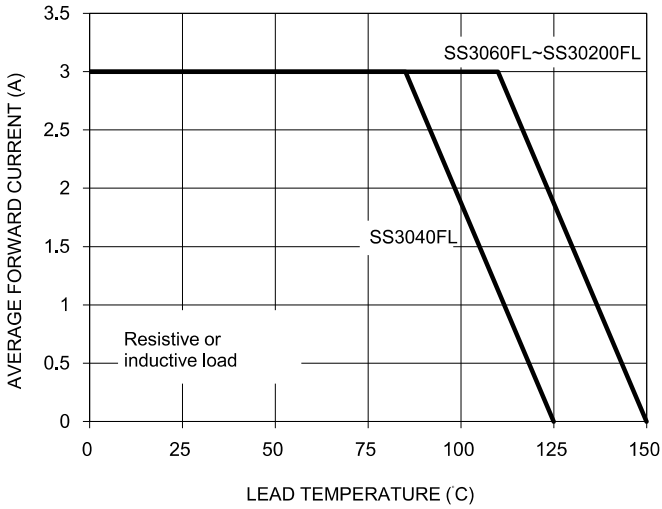


FIG. 2 TYPICAL FORWARD CHARACTERISTICS

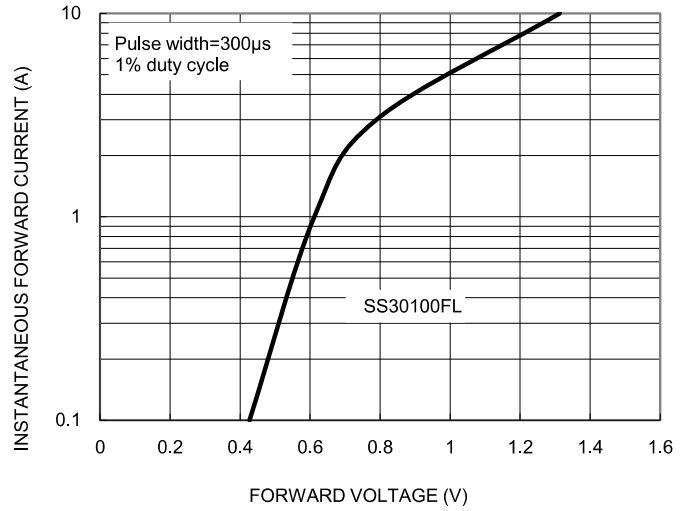


FIG. 3 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

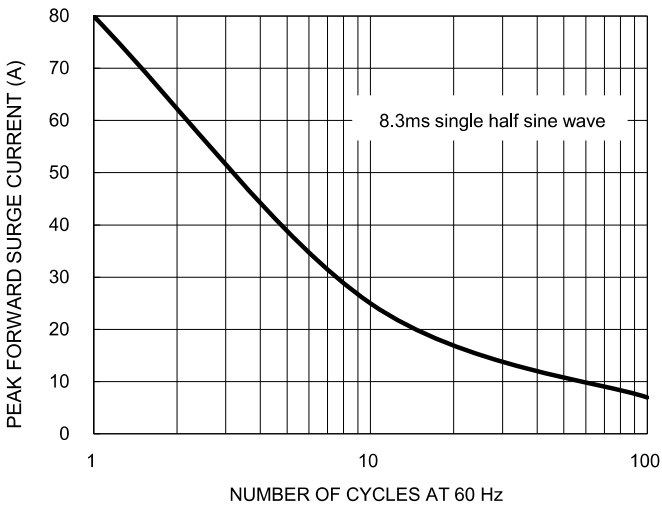


FIG. 4 TYPICAL REVERSE CHARACTERISTICS

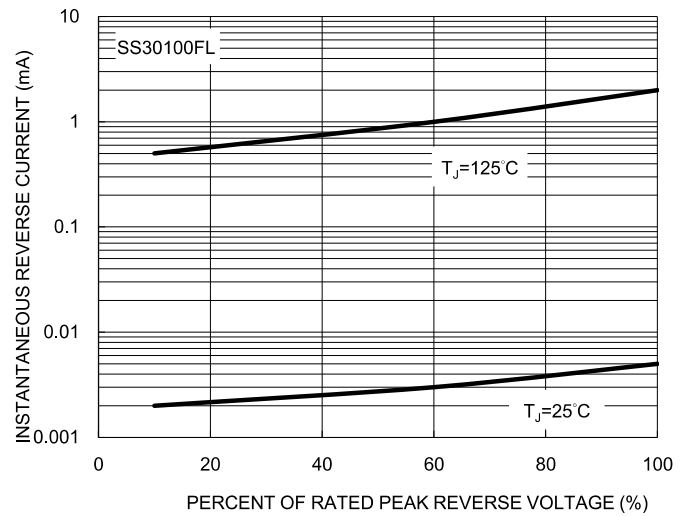


FIG. 5 TYPICAL JUNCTION CAPACITANCE

