

# MSKSEMI

SEMICONDUCTOR



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Product data sheet



SOD-123FL

## FEATURES

- \* Ideal for surface mount applications
- \* Easy pick and place
- \* Built-in strain relief
- \* High surge current capability

## MECHANICAL DATA

- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Terminals: Solder plated, solderable per MIL-STD-202F, method 208 guaranteed
- \* Polarity: Color band denotes cathode end
- \* Mounting position: Any

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating 25°C ambient temperature unless otherwise specified.  
Single phase half wave, 60Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.

	P/N	DSR1A S1A	DSR1B S1B	DSR1D S1D	DSR1G S1G	DSR1J S1J	DSR1K S1K	DSR1M S1M	UNITS
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>L</sub> = 100°C (NOTE 1)	I <sub>(AV)</sub>	1.0							A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load	I <sub>FSM</sub>	25.0							A
Maximum instantaneous forward voltage at 1.0A	V <sub>F</sub>	1.1							V
Maximum DC reverse current at rated DC blocking voltage T <sub>A</sub> = 25 C T <sub>A</sub> = 125 C	I <sub>R</sub>	10.0 50.0							μA
Typical junction capacitance (NOTE 2)	C <sub>J</sub>	4							pF
Typical thermal resistance (NOTE 3)	R <sub>θJA</sub>	95							°C/W
Operating junction and storage temperature range	T <sub>J</sub> , T <sub>STG</sub>	-55 to +150							C

### NOTES:

1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
2. Thermal Resistance from Junction to Ambient.

FIG.1-TYPICAL FORWARD CHARACTERISTICS

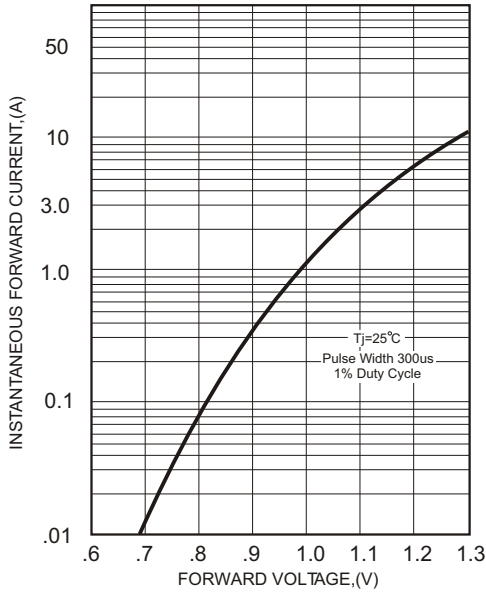


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

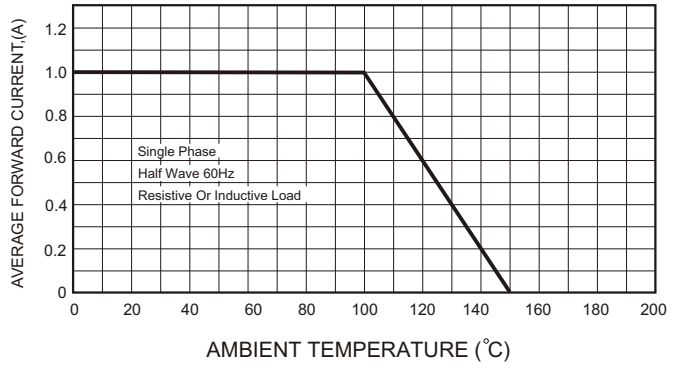


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

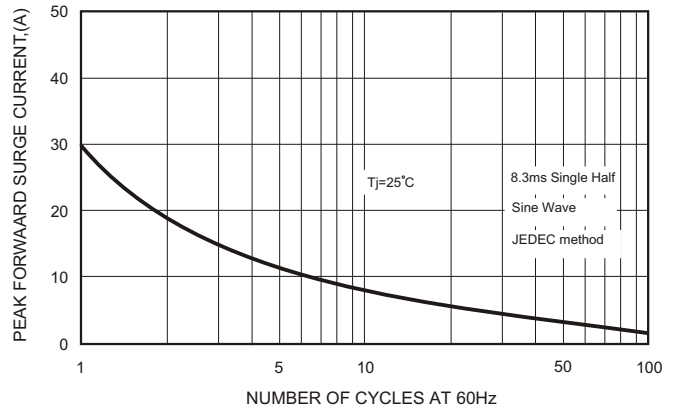


FIG.3 - TYPICAL REVERSE CHARACTERISTICS

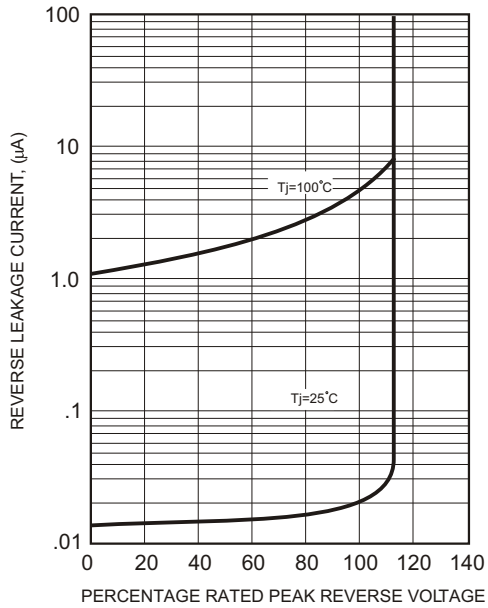
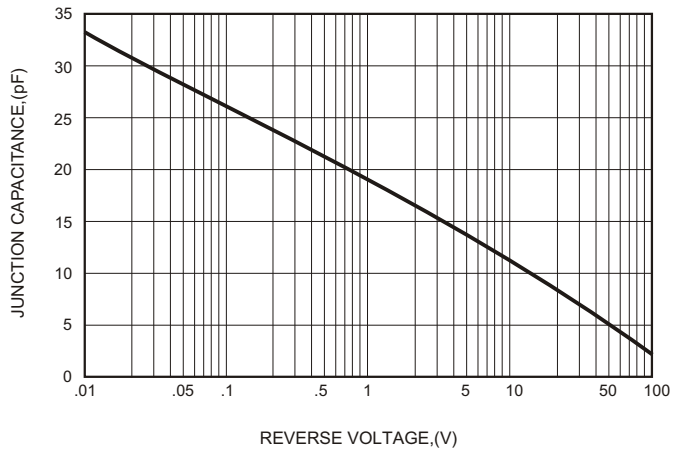
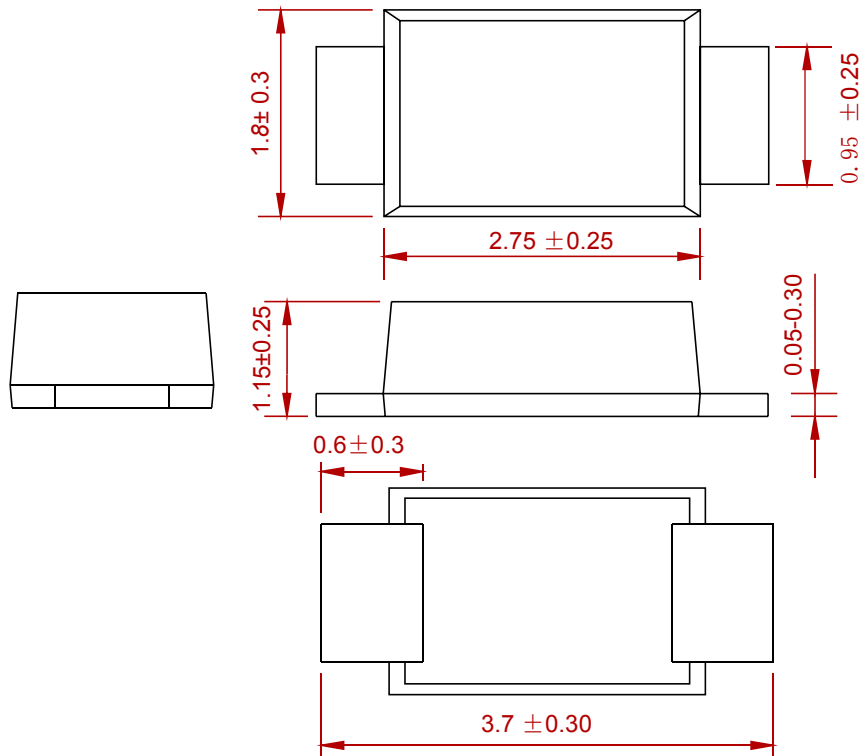


FIG.5-TYPICAL JUNCTION CAPACITANCE

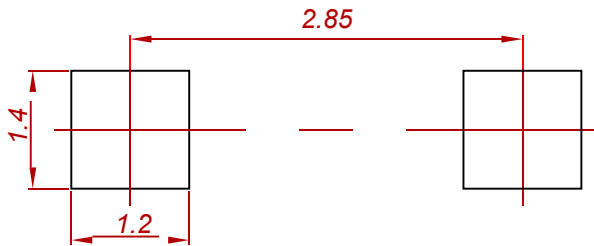


**PACKAGE MECHANICAL DATA**



*Dimensions in millimeters*

**Suggested Pad Layout**



**Note:**

1. Controlling dimension: in millimeters.
2. General tolerance:  $\pm 0.05$  mm.
3. The pad layout is for reference purposes only.

**REEL SPECIFICATION**

P/N	PKG	QTY
DSR1A TRHU DSR1M	SOD-123FL	3000

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