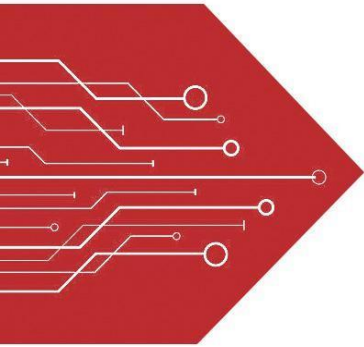


# MSKSEMI

SEMICONDUCTOR



ESD



TVS



TSS



MOV



GDT



PLED

Product data sheet

[www.msksemi.com](http://www.msksemi.com)

**FEATURES**

- ◆ Glass passivated device
- ◆ Ideal for surface mouted applications
- ◆ Low reverse leakage
- ◆ Metallurgically bonded construction
- ◆ High temperature soldering guaranteed:  
250°C/10 seconds,0.375"(9.5mm) lead length,  
5 lbs. (2.3kg) tension

**MECHANICAL DATA**

**Case:** JEDEC SOD-123FL molded plastic body over passivated chip  
**Terminals:** Solderable per MIL-STD-750, Method 2026  
**Polarity:** Color band denotes cathode end  
**Mounting Position:** Any  
**Weight:**0.0007 ounce, 0.02 grams

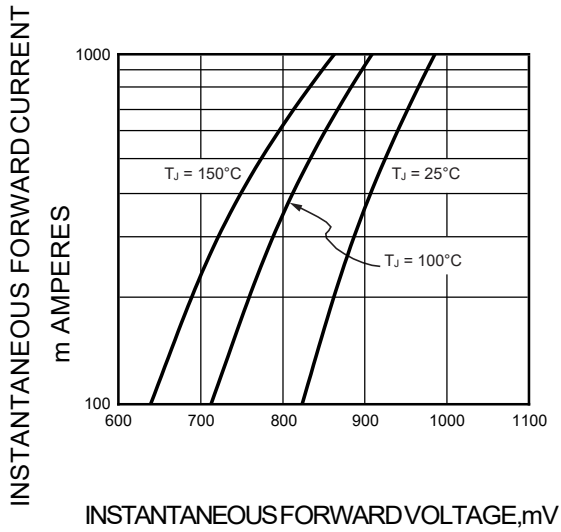
**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

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

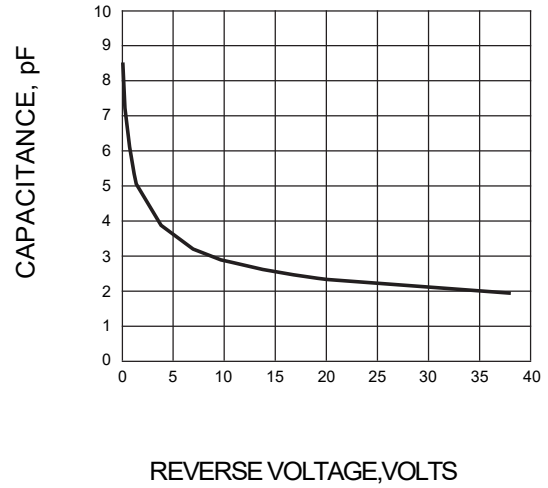
Symbol	SYMBOLS	1N4001 A1	1N4002 A2	1N4003 A3	1N4004 A4	1N4005 A5	1N4006 A6	1N4007 A7	UNITS
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000	VOLTS
Maximum RMS voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700	VOLTS
Maximum DC blocking voltage	V <sub>DC</sub>	50	100	200	400	600	800	1000	VOLTS
Maximum average forward rectified current at T <sub>A</sub> =65°C (NOTE 1)	I <sub>(AV)</sub>	1.0							Amp
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) T <sub>L</sub> =25 °C	I <sub>FSM</sub>	25.0							Amps
Maximum instantaneous forward voltage at 1.0A	V <sub>F</sub>	1.0							Volts
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>	180							K/W
Operating junction and storage temperature range	T <sub>J</sub> , T <sub>STG</sub>	-55 to +150							°C

- Note:** 1. Averaged over any 20ms period.  
 2. Measured at 1MHz and applied reverse voltage of 4.0V D.C.  
 3. Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length, P.C.B. mounted

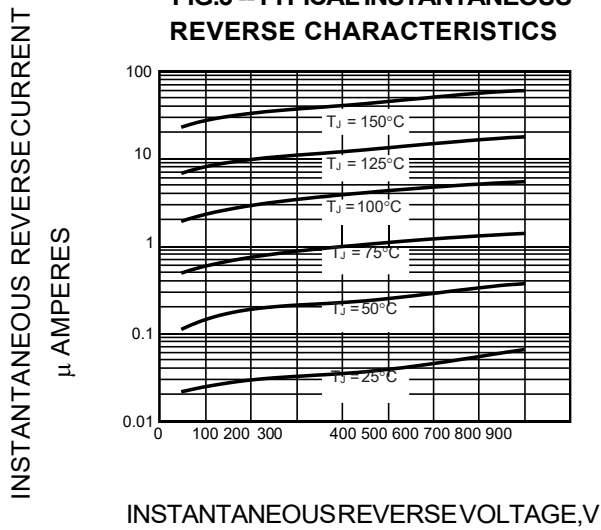
**FIG.1 --TYPICAL FORWARD CHARACTERISTIC**



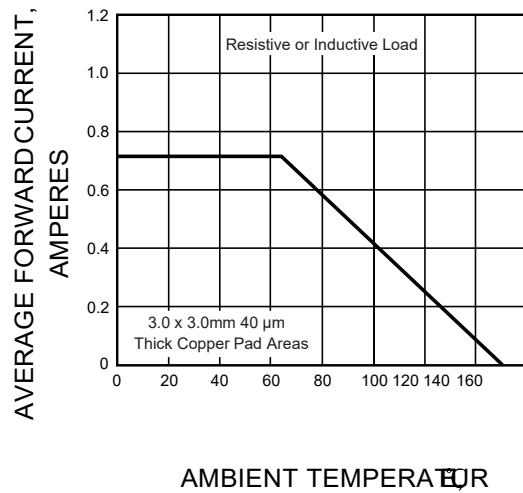
**FIG.2 -- TYPICAL JUNCTION CAPACITANCE**



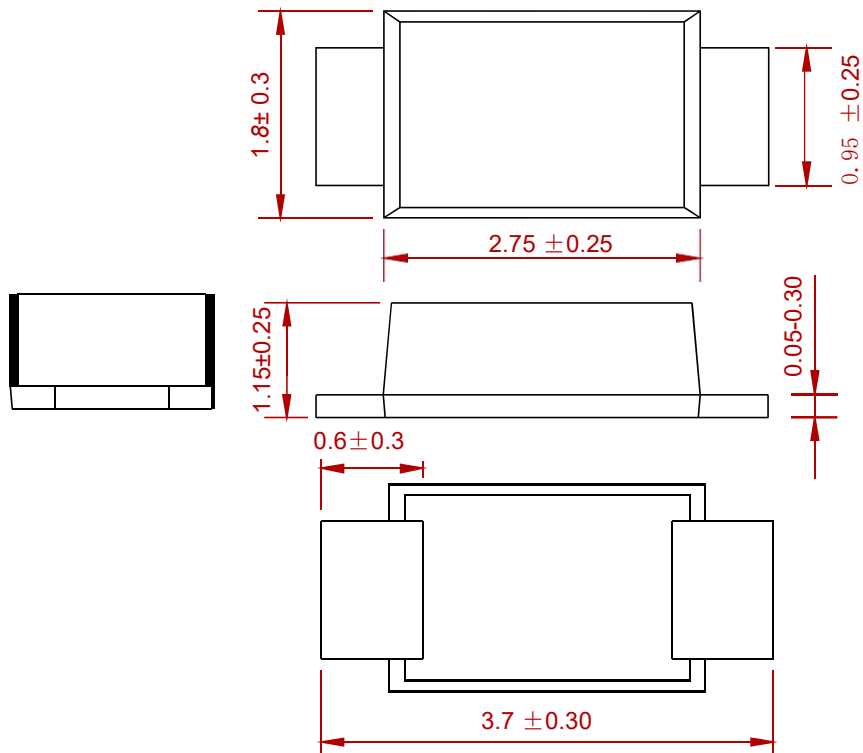
**FIG.3 -- TYPICAL INSTANTANEOUS REVERSE CHARACTERISTICS**



**FIG.4 -- FORWARD DERATING CURVE**

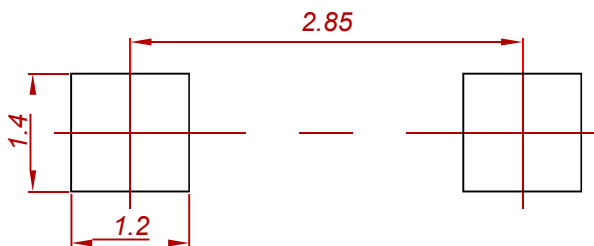


**PACKAGE MECHANICAL DATA**



*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
1N4001 THRU 1N4007	SOD-123FL	3000

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