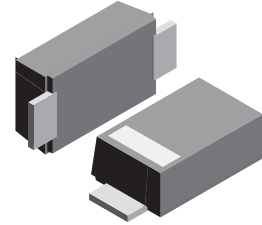


**VOLTAGE RANGE: 50 - 1000V**  
**CURRENT: 1.0A**

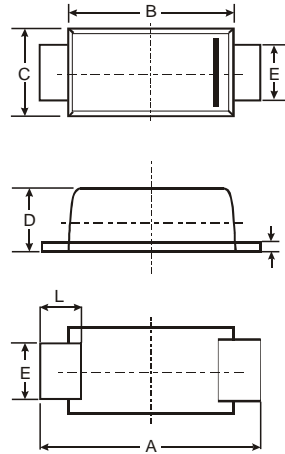


### Features

- Glass passivated device
- Ideal for surface mounted 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 junction
- Terminals : Plated axial leads,
- solderable per MIL-STD-750, Method 2026
- Polarity : Color band denotes cathode end
- Mounting Position : Any
- Weight: 0.0007 ounce, 0.02 grams



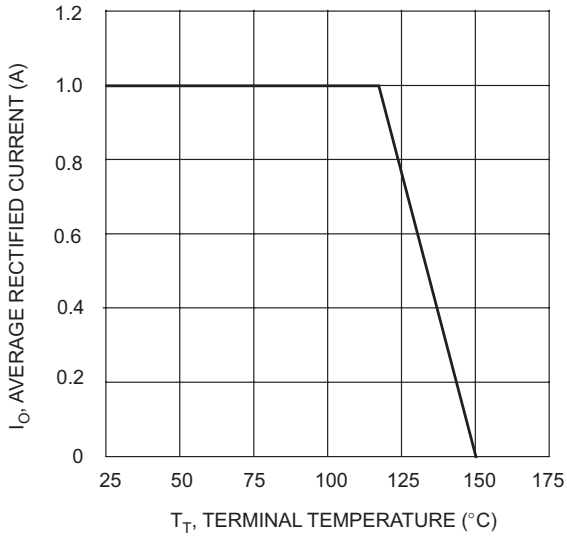
SOD-123FL			
Dim	Min	Max	Typ
A	3.50	3.90	3.70
B	2.60	3.00	2.80
C	1.63	1.93	1.78
D	0.93	1.00	0.98
E	0.85	1.25	1.00
H	0.15	0.25	0.20
L	0.55	0.75	0.65
All Dimensions in mm			

### Maximum Ratings and Electrical Characteristics T<sub>A</sub> = 25°C unless otherwise specified

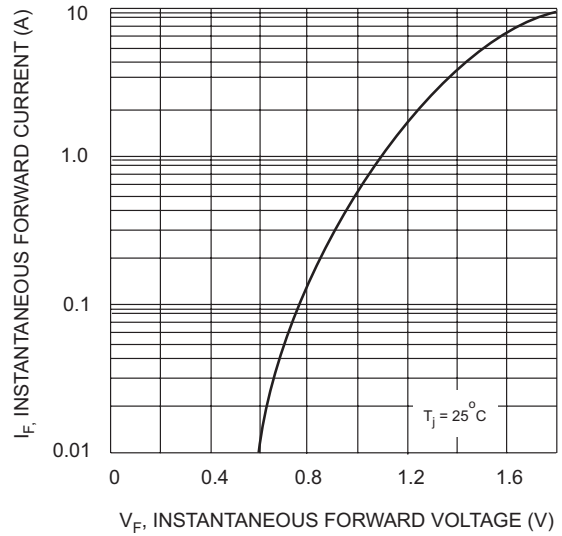
Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Characteristic	Symbol	SOD1F1	SOD1F2	SOD1F3	SOD1F4	SOD1F5	SOD1F6	SOD1F7	Unit
	Marking	F1	F2	F3	F4	F5	F6	F7	
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>A</sub> =65°C (NOTE 1)	I <sub>(AV)</sub>	1.0							A
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>	30.0							A
Maximum instantaneous forward voltage at 1.0A	V <sub>F</sub>	1.3							V
Maximum DC reverse current T <sub>A</sub> =25°C at rated DC blocking voltage T <sub>A</sub> =100°C	I <sub>R</sub>	5.0 100.0							μA
Maximum reverse recovery time (NOTE 2)	t <sub>rr</sub>	150				250	500		ns
Typical junction capacitance (NOTE 3)	C <sub>J</sub>	15							pF
Typical thermal resistance (NOTE 4)	R <sub>θJA</sub>	180							K/W
Operating junction and storage temperature range	T <sub>J</sub> , T <sub>STG</sub>	-50 to +150							°C

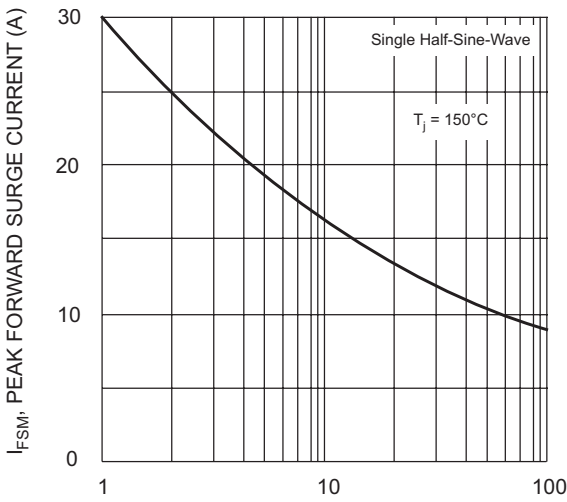
- Note:**
1. Averaged over any 20ms period.
  2. Measured with I<sub>F</sub>=0.5A, I<sub>R</sub>=1A, I<sub>rr</sub>=0.25A.
  3. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
  4. Thermal resistance junction to ambient, 6.0 mm<sup>2</sup> copper pads to each terminal.



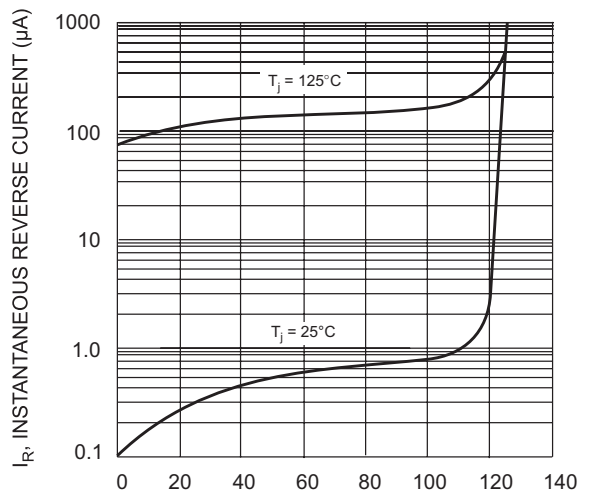
$T_T$ , TERMINAL TEMPERATURE (°C)  
Fig. 1 Forward Current Derating Curve



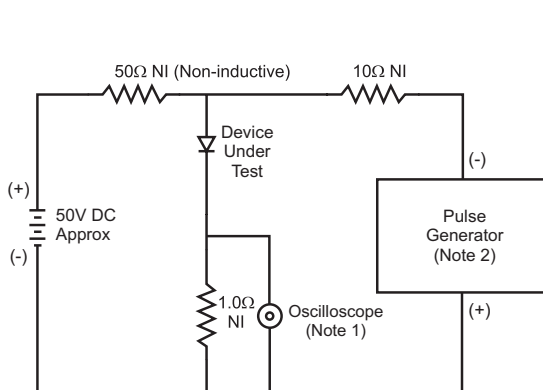
$V_F$ , INSTANTANEOUS FORWARD VOLTAGE (V)  
Fig. 2 Typical Forward Characteristics



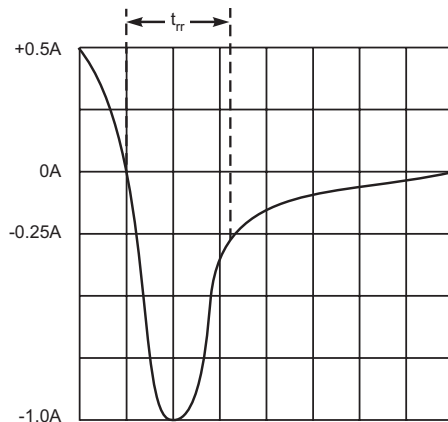
NUMBER OF CYCLES AT 60Hz  
Fig. 3 Forward Surge Current Derating Curve



PERCENT OF RATED PEAK REVERSE VOLTAGE (%)  
Fig. 4 Typical Reverse Characteristics



Notes:  
1. Rise Time = 7.0ns max. Input Impedance = 1.0M $\Omega$ , 22pF.  
2. Rise Time = 10ns max. Input Impedance = 50 $\Omega$ .



Set time base for 50/100 ns/cm

Fig. 5 Reverse Recovery Time Characteristic and Test Circuit