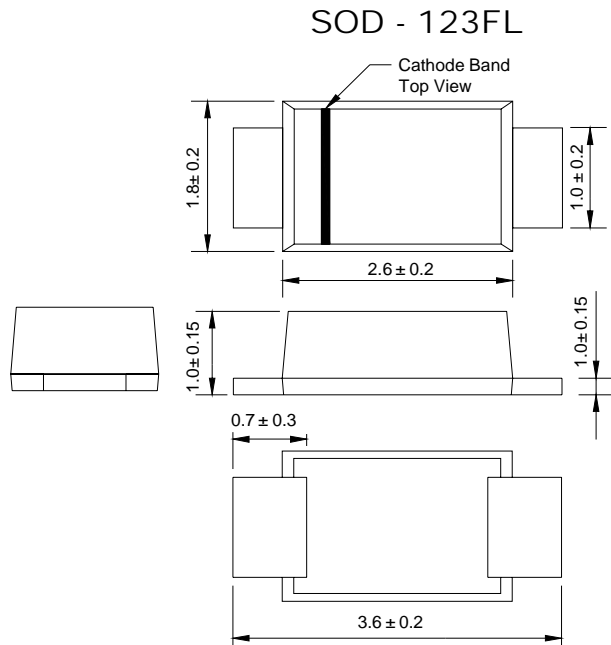


Features

- Glass passivated device
- Ideally Suited for Automatic Assembly
- Low Forward Voltage Drop, High Efficiency
- Surge Overload Rating to 25 A Peak
- Low Power Loss
- Ultra-Fast Recovery Time
- Plastic Case Material has UL Flammability
- Classification Rating 94V-O

Mechanical Data

- Case: SOD-123FL, Molded Plastic
- Terminals: Solder Plated, Solderable per MIL-STD-750, Method 2026
- Polarity: Cathode Band or Cathode Notch
- Marking: Type Number
- Weight: 0.01 grams (approx.)
- **Lead Free: For RoHS / Lead Free Version**



Dimensions in millimeters

Maximum Ratings and Electrical Characteristics @ $T_A=25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	US1000 FL	US1001 FL	US1002 FL	US1003 FL	US1004 FL	US1006 FL	US1008 FL	US1008 FL	UNITS	
Peak Repetitive Reverse Voltage	V_{RRM}	50	100	200	300	400	600	800	1000	V	
Working Peak Reverse Voltage	V_{RWM}										
DC Blocking Voltage	V_R										
RMS Reverse Voltage	$V_{R(RMS)}$	35	70	140	210	280	420	560	700	V	
Average Rectified Output Current @ $T_L = 100^\circ\text{C}$	I_O	1.0								A	
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	25								A	
Forward Voltage @ $I_F = 1.0\text{A}$	V_{FM}	1.0			1.3		1.7			V	
Peak Reverse Current @ $T_A = 25^\circ\text{C}$ At Rated DC Blocking Voltage @ $T_A = 100^\circ\text{C}$	I_{RM}						2.0		500		μA
Reverse Recovery Time (Note 2)	t_{rr}	50					75				nS
Typical Junction Capacitance (Note 2)	C_j	4									pF
Typical Thermal Resistance (Note 3)	$R_{\theta JL}$	30									$^\circ\text{C/W}$
Operating and Storage Temperature Range	T_j, T_{STG}	-55 to +150									$^\circ\text{C}$

Note: 1. Measured with $I_F = 0.5\text{A}$, $I_R = 1.0\text{A}$, $I_{rr} = 0.25\text{A}$. See figure 5.
 2. Measured at 1.0 MHz and applied reverse voltage of 4.0 V DC.
 3. Mounted on P.C. Board with 8.0mm² land area.

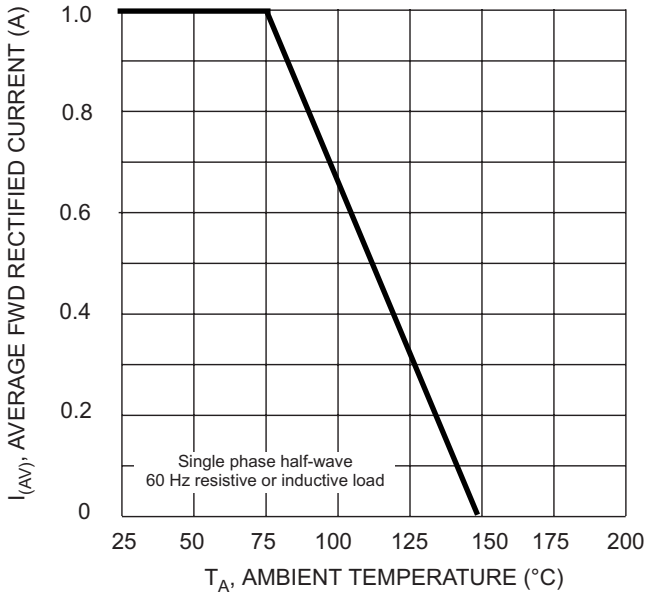


Fig. 1 Forward Derating Curve

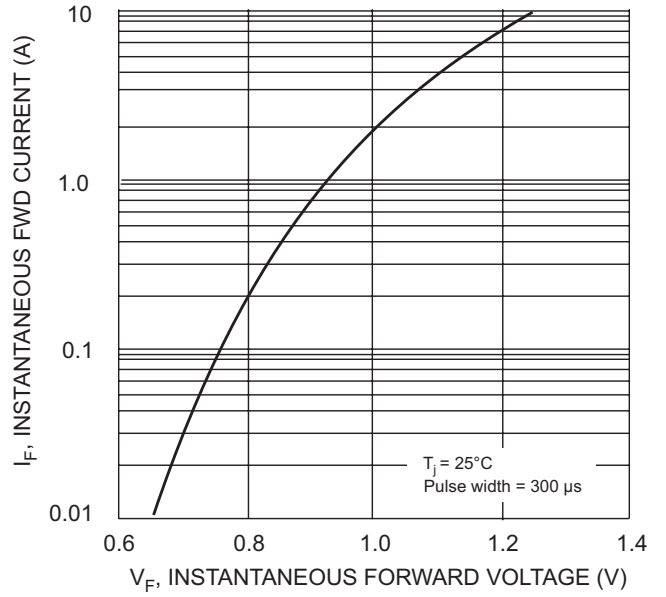


Fig. 2 Typical Forward Characteristics

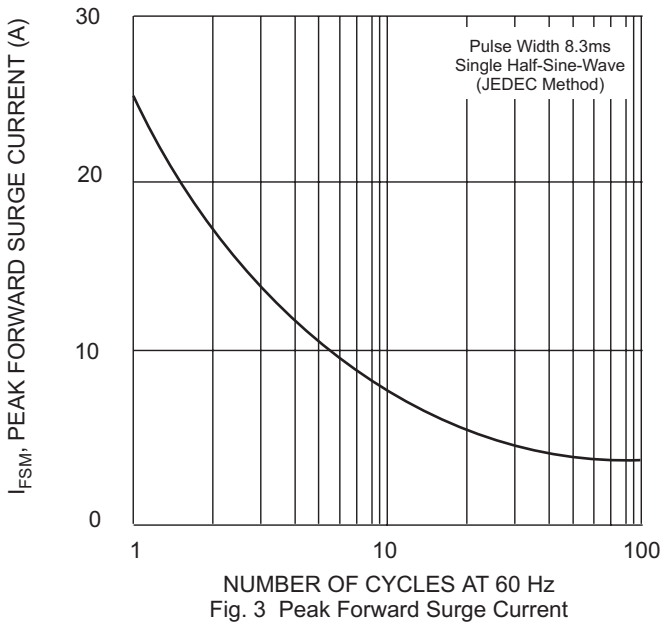


Fig. 3 Peak Forward Surge Current

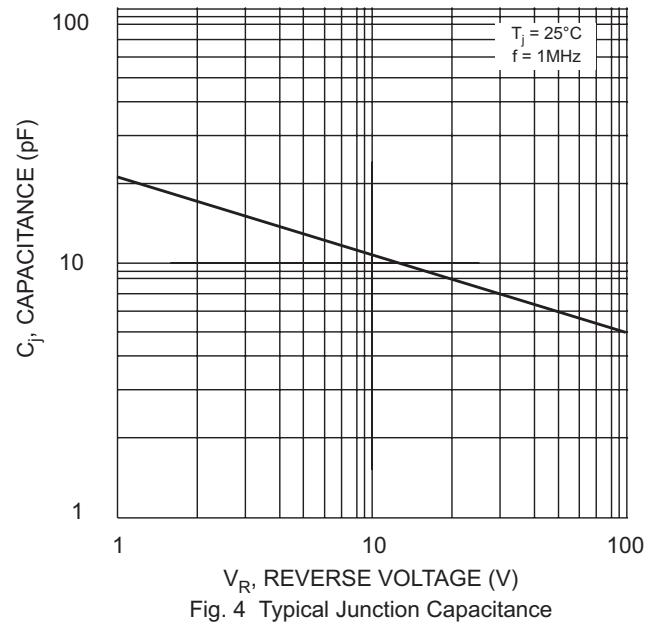
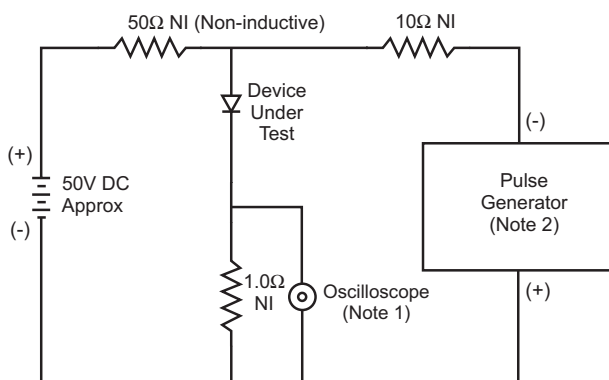
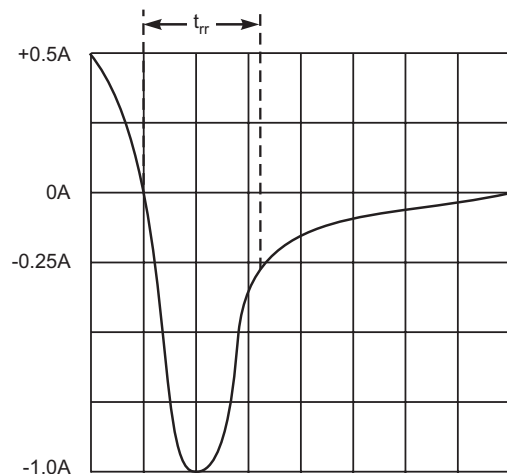


Fig. 4 Typical Junction Capacitance



- Notes:
1. Rise Time = 7.0ns max. Input Impedance = 1.0MΩ, 22pF.
 2. Rise Time = 10ns max. Input Impedance = 50Ω.



Set time base for 5/10ns/cm

Fig. 5 Reverse Recovery Time Characteristic and Test Circuit