

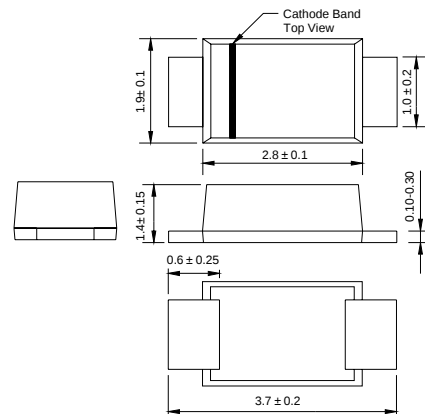
Features

- Glass passivated device
- Ideally Suited for Automatic Assembly
- Low Forward Voltage Drop, High Efficiency
- Surge Overload Rating to 50 A Peak
- Low Power Loss
- Ultra-Fast Recovery Time
- Plastic Case Material has UL Flammability
- Classification Rating 94V-0

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**

SOD - 123FL



Dimensions in millimeters

Maximum Ratings and Electrical Characteristics @T_A=25°C unless otherwise specified

Characteristic	Symbol	ES2AW	ES2BW	ES2CW	ES2DW	ES2EW	ES2GW	ES2HW	ES2JW	UNITS
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V _{RRM} V _{RWM} V _R	50	100	150	200	300	400	500	600	V
RMS Reverse Voltage	V _{R(RMS)}	35	70	105	140	210	280	350	420	V
Average Rectified Output Current @T _a = 55°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}	50								A
Forward Voltage @I _F = 2.0A	V _{FM}	1.0				1.3		1.7		V
Peak Reverse Current @T _A = 25°C At Rated DC Blocking Voltage @T _A = 100°C	I _{RM}	10 100								μA
Reverse Recovery Time (Note 2)	t _{rr}	35								nS
Typical Junction Capacitance (Note 2)	C _j	25								pF
Typical Thermal Resistance (Note 3)	R _{θJL}	90								°C/W
Operating and Storage Temperature Range	T _j , T _{STG}	-65 to +150								°C

Note: 1. Measured with I_F = 0.5A, I_R = 1.0A, t_{rr} = 0.25A. 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.

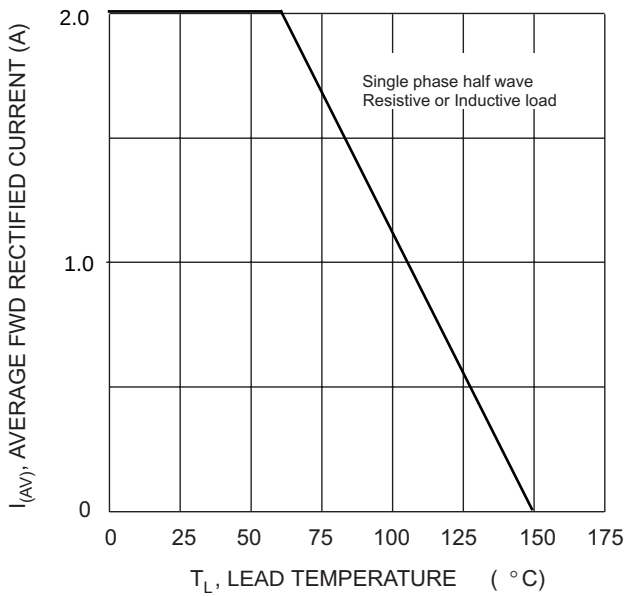


Fig. 1 Forward Current Derating Curve

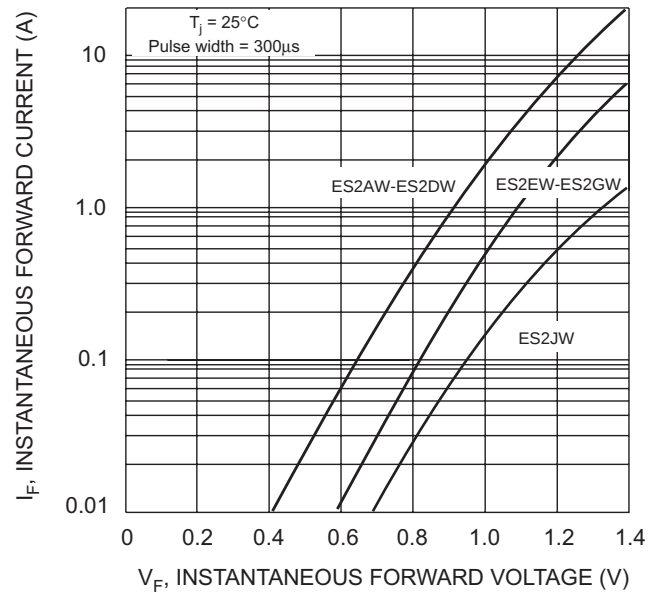


Fig. 2 Typical Forward Characteristics

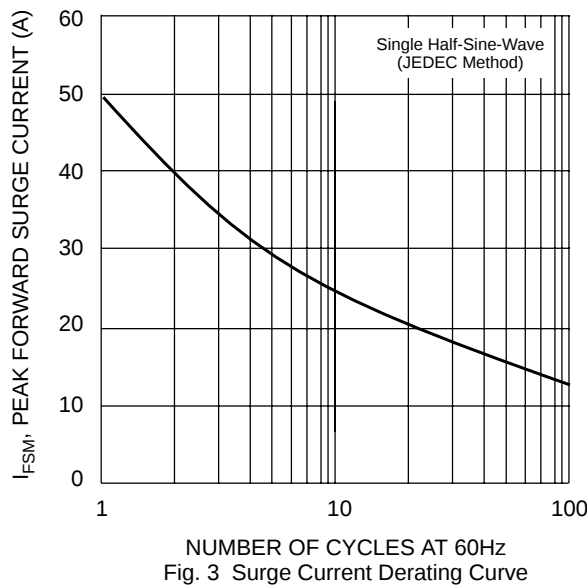


Fig. 3 Surge Current Derating Curve

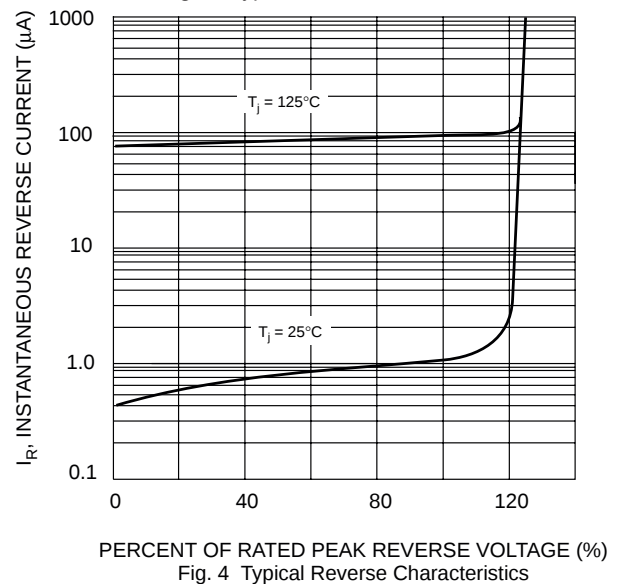
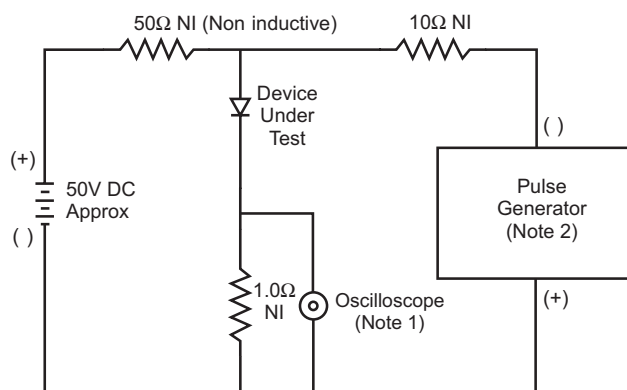


Fig. 4 Typical Reverse Characteristics



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

Fig. 5 Reverse Recovery Time Characteristic and Test Circuit

