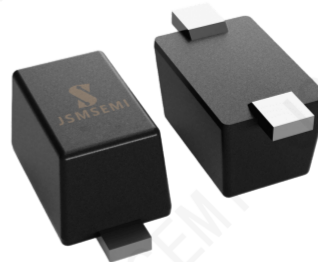


Features

- Glass passivated device
- Ideally Suited for Automatic Assembly
- Low Forward Voltage Drop, High Efficiency
- Surge Overload Rating to 2.5 A Peak
- Low Power Loss
- Ultra-Fast Recovery Time
- Plastic Case Material has UL Flammability
- Classification Rating 94V-0



SOD-123FL

Mechanical Data

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

Maximum Ratings and Electrical Characteristics

@T_A=25°C unless otherwise specified

Characteristic	Symbol	FR101	FR102	FR103	FR104	FR105	FR106	FR107	UNITS
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V _{RRM} V _{RWM} V _R	50	100	200	400	600	800	1000	V
RMS Reverse Voltage	V _{R(RMS)}	35	70	140	280	420	560	700	V
Average Rectified Output Current @T _L = 100°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 = 1.0A	V _{FM}	1.3							V
Peak Reverse Current @T _A = 25°C At Rated DC Blocking Voltage @T _A = 100°C	I _{RM}	10 500							μA
Reverse Recovery Time (Note 2)	t _{rr}	150				250	500		nS
Typical Junction Capacitance (Note 2)	C _j	4							pF
Typical Thermal Resistance (Note 3)	R _{θ JL}	180							°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, I_{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.

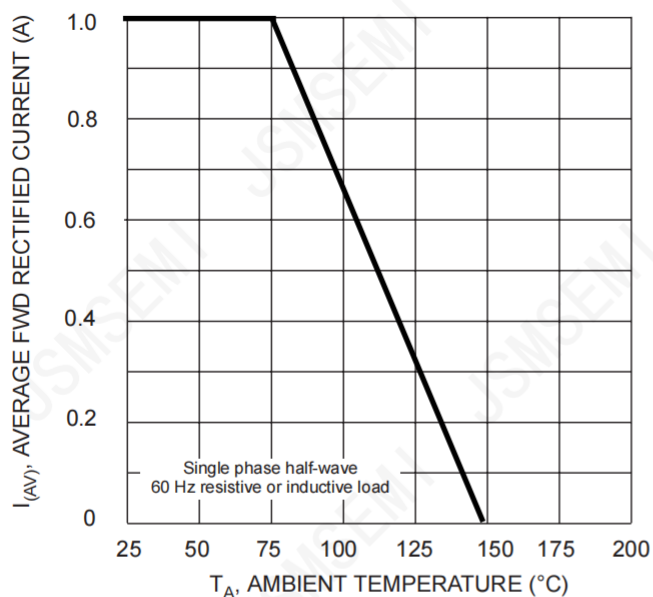


Fig. 1 Forward Derating Curve

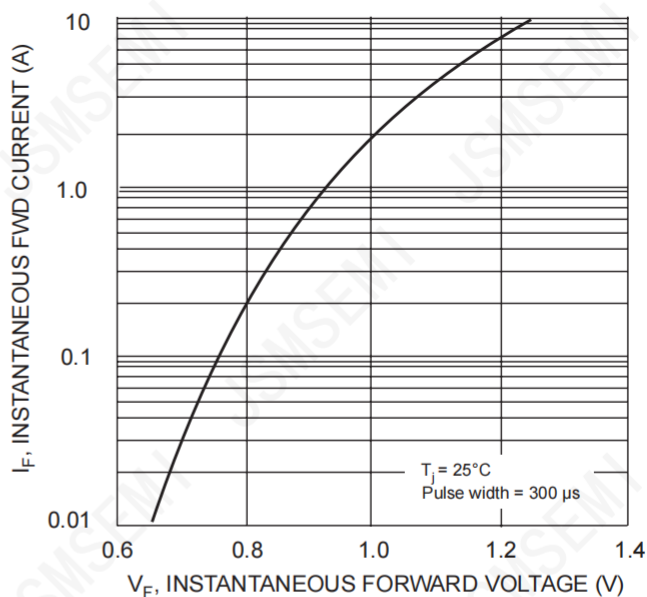


Fig. 2 Typical Forward Characteristics

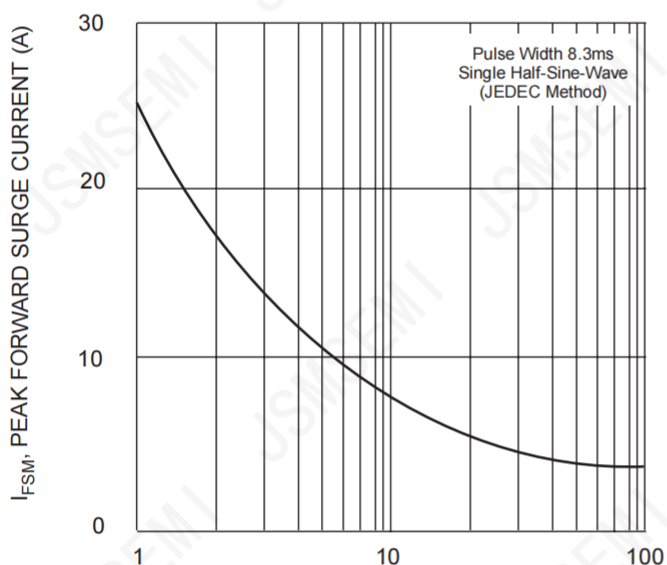


Fig. 3 Peak Forward Surge Current

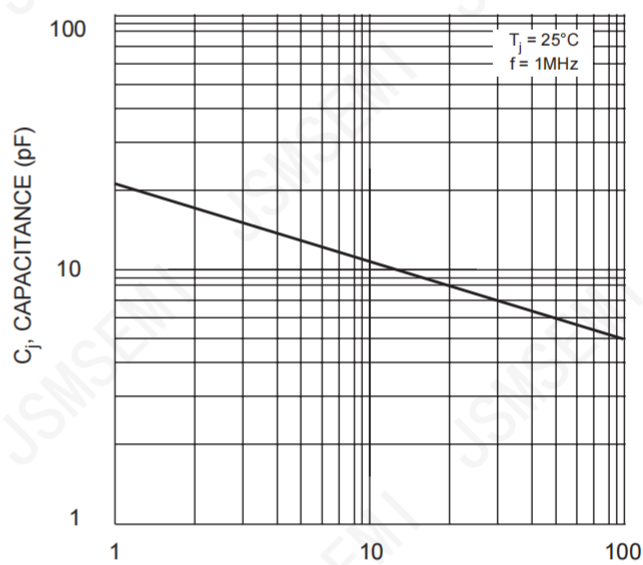
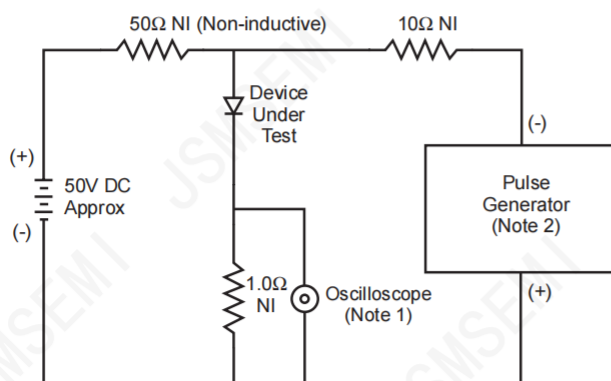
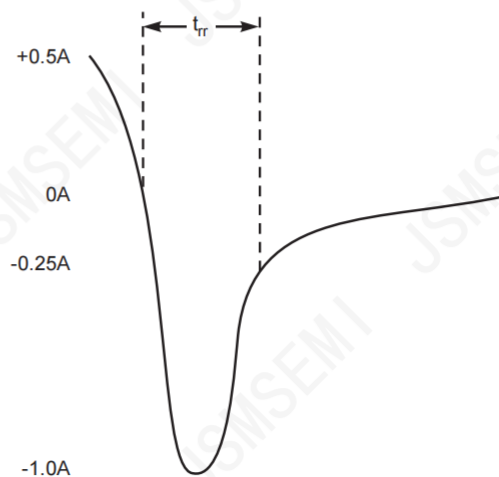


Fig. 4 Typical Junction Capacitance



Notes:

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

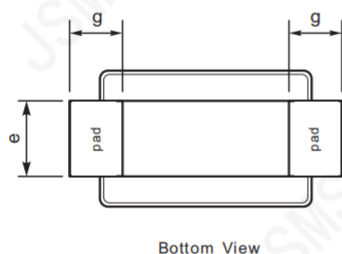
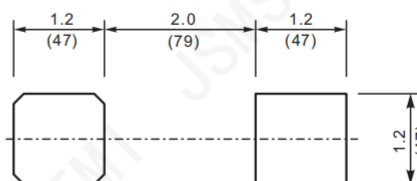
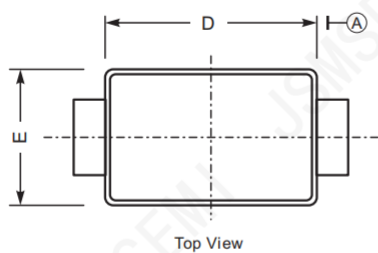


Set time base for 5/10ns/cm

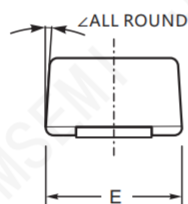
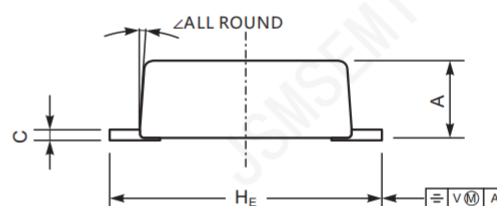
Fig. 5 Reverse Recovery Time Characteristic and Test Circuit

Package Information

SOD-123FL



RECOMMENDED LAND PATTERN (Unit: mm)



UNIT		A	C	D	E	e	g	H _E	∠
mm	max	1.1	0.20	2.9	1.9	1.1	0.9	3.8	7°
	min	0.9	0.12	2.6	1.7	0.8	0.7	3.5	
mil	max	43	7.9	114	75	43	35	150	
	min	35	4.7	102	67	31	28	138	