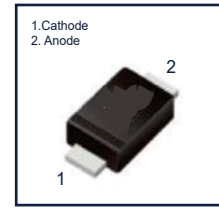




SOD-123FL SURFACE MOUNT FAST RECOVERY RECTIFIERS

Features

- Ideal for surface mount applications
- Easy pick and place
- Built-in strain relief
- Fast switching speed



SOD-123FL



Equivalent Circuit

MECHANICAL DATA

- Case: Molded plastic
- Epoxy: UL 94V-0 rate flame retardant
- Metallurgically bonded construction
- Mounting position: Any

Maximum Ratings and Electrical Characteristics

Rating 25 C ambient temperature unless otherwise specified. Single phase half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Parameter	Symbols	F7	Units
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	1000	V
Maximum RMS voltage	V_{RMS}	700	V
Maximum DC Blocking Voltage	V_{DC}	1000	V
Maximum Average Forward Rectified Current at $T_a=25^{\circ}C$	$I_{F(AV)}$	1.0	A
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	30	A
Max Instantaneous Forward Voltage at 1.0A	V_F	1.3	V
Maximum DC Reverse Current $T_a = 25^{\circ}C$ at Rated DC Reverse Voltage $T_a = 100^{\circ}C$	I_R	5.0	μA
		100	
Maximum Reverse Recovery Time ⁽¹⁾	T_{rr}	500	nS
Typical Junction Capacitance ⁽²⁾	C_j	15	pF
Typical Thermal Resistance Junction to Ambient ⁽³⁾	$R_{\theta JA}$	80	$^{\circ}C/W$
Operating and Storage Temperature Range	T_J, T_{stg}	-65~+150	$^{\circ}C$

(1) Reverse Recovery Test Conditions: $I_F=0.5A, I_R=1.0A, I_{RR}=0.25A$

(2) Measured at 1.0 MHz and Applied reverse Voltage of 4.0V D.C

(3) Thermal Resistance from Junction to Ambient.

Ordering information

Product ID	Pack	Naming rule	Marking	Qty(PCS)
F7	SOD-123FL	<div style="text-align: center;"> <div style="border: 1px solid black; display: inline-block; padding: 5px;">F7</div> ↓ 产品名称 product name </div>	F7	3000



Typical Characteristics

FIG.1-TYPICAL FORWARD CHARACTERISTICS

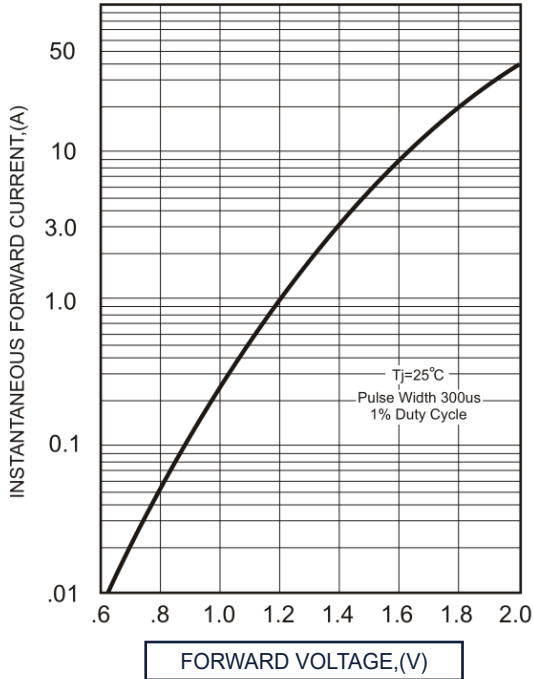


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

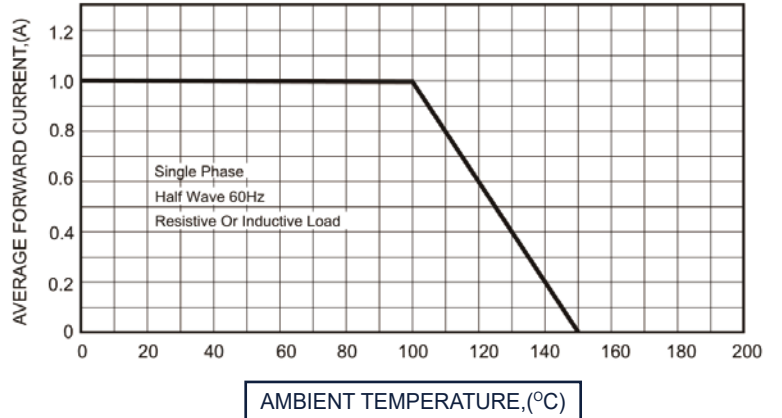


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

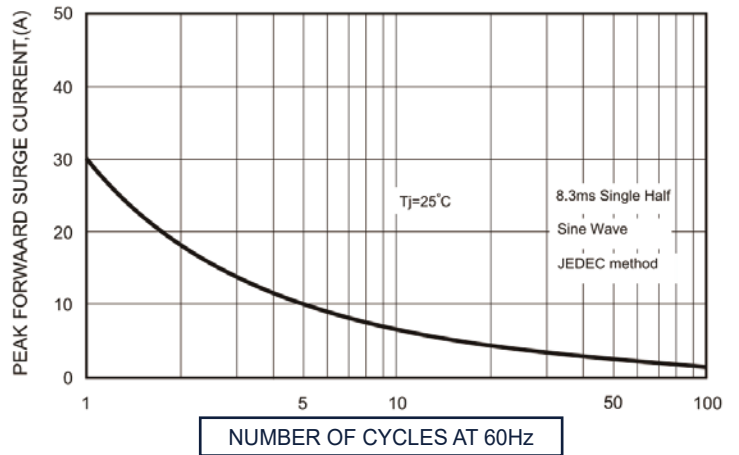
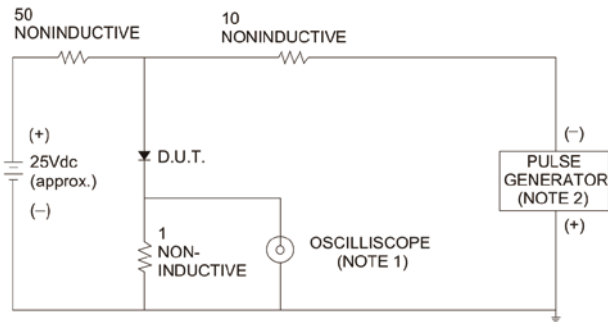


FIG.3- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS



- NOTES: 1. Rise Time= 7ns max., Input Impedance= 1 megohm.22pF.
- 2. Rise Time= 10ns max., Source Impedance= 50 ohms.

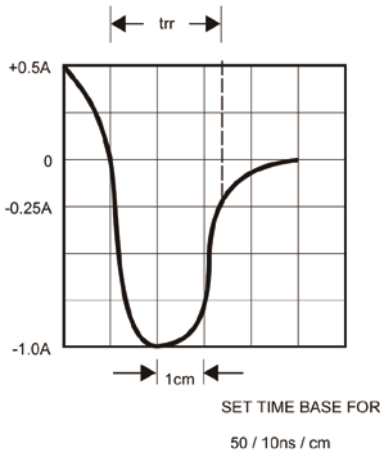
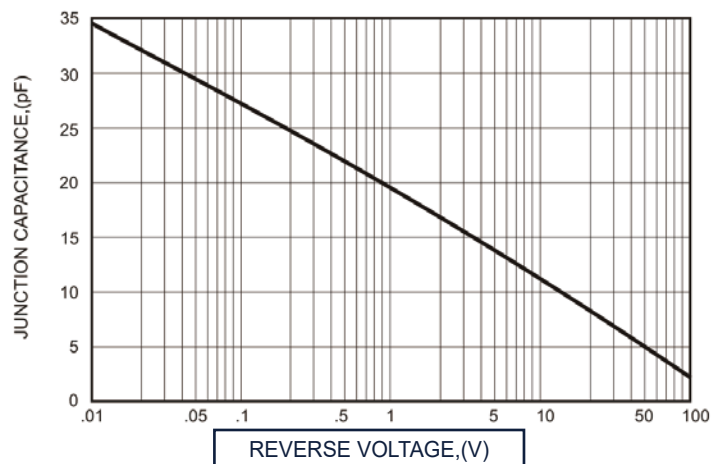


FIG.5-TYPICAL JUNCTION CAPACITANCE

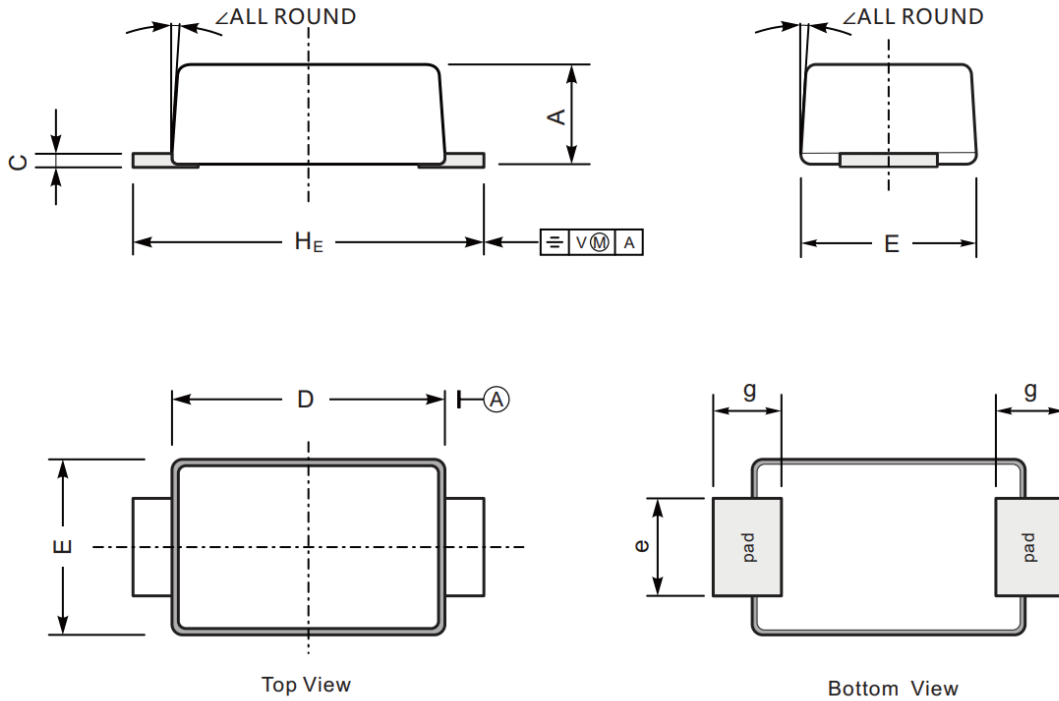




PACKAGE OUTLINE

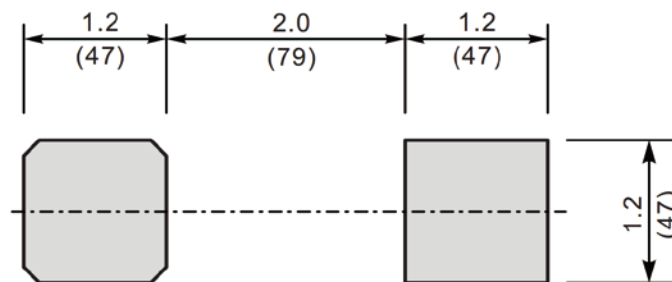
Plastic surface mounted package; 2 leads

SOD-123FL



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	

The recommended mounting pad size



Unit: $\frac{\text{mm}}{\text{mil}}$