

SOD-123FL Plastic-Encapsulate Diodes

Fast Recovery Rectifier Diodes

Features:

- $I_{F(AV)}$ 1A
- V_{RRM} 50V-1000V
- High surge current capability
- Polarity: Color band denotes cathode

Applications:

- Rectifier

Marking

- FMS1
- 1PL:F1; 2PL:F2; 3PL:F3; 4PL:F4; 5PL:F5; 6PL:F6; 7PL:F7

SOD-123FL



Limiting Values(Absolute Maximum Rating)

Item	Symbol	Unit	Test Conditions	FMS1						
				1PL	2PL	3PL	4PL	5PL	6PL	7PL
Repetitive Peak Reverse Voltage	V_{RRM}	V		50	100	200	450	650	800	1000
Maximum RMS Voltage	V_{RMS}	V		35	70	140	315	455	560	700
Average Forward Current	$I_{F(AV)}$	A	60Hz Half-sine wave · Resistance load · $T_a=90^{\circ}\text{C}$	1.0						
Surge(Non-repetitive)Forward Current	I_{FSM}	A	60Hz Half-sine wave · 1 cycle · $T_a=25^{\circ}\text{C}$	30						
Junction Temperature	T_J	$^{\circ}\text{C}$		-55 ~ +150						
Storage Temperature	T_{STG}	$^{\circ}\text{C}$		-55 ~ +150						

Electrical Characteristics ($T=25^{\circ}\text{C}$ Unless otherwise specified)

Item	Symbol	Unit	Test Condition		FMS1						
					1PL	2PL	3PL	4PL	5PL	6PL	7PL
Peak Forward Voltage	V _F	V	I _F =1.0A		1.3						
Maximum reverse recovery time	t _{rr}	ns	I _F =0.5A,I _R =1.0A,I _{rr} =0.25A		150			250		500	
Peak Reverse Current	I _{RRM1}	μA	V _{RM} =V _{RRM}	T _a =25℃	5						
	T _a =125℃			50							
Thermal Resistance(Typical)	R _{θJ-A}	℃/W	Between junction and ambient		70						
	R _{θJ-L}		Between junction and terminal		25						

Notes:

Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.2" x 0.2" (5.0 mm x 5.0 mm) copper pad areas

Typical Characteristics

FIG.1: FORWARD CURRENT DERATING CURVE

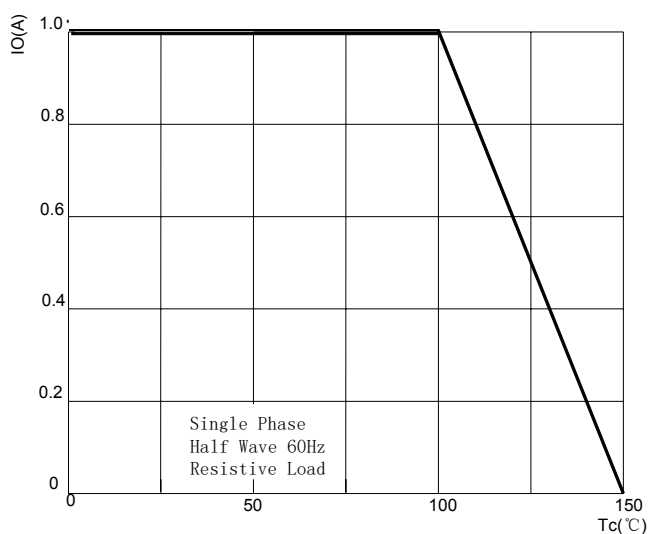


FIG.2: MAXIMUM NON-REPETITIVE FORWARD URGE CURRENT

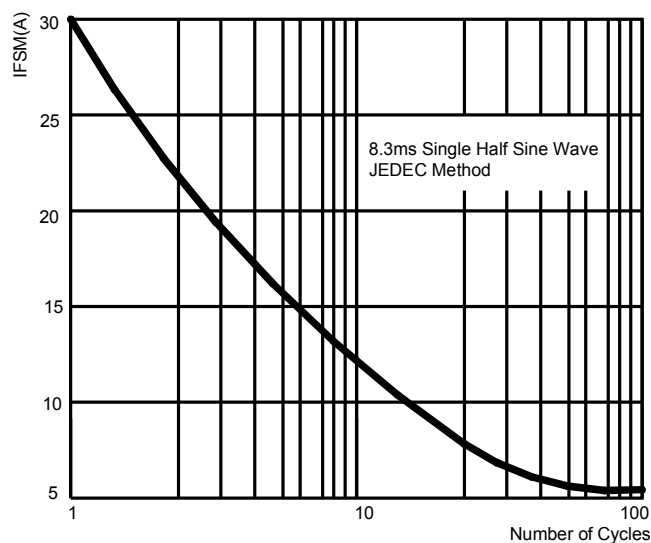


FIG.3: TYPICAL FORWARD CHARACTERISTICS

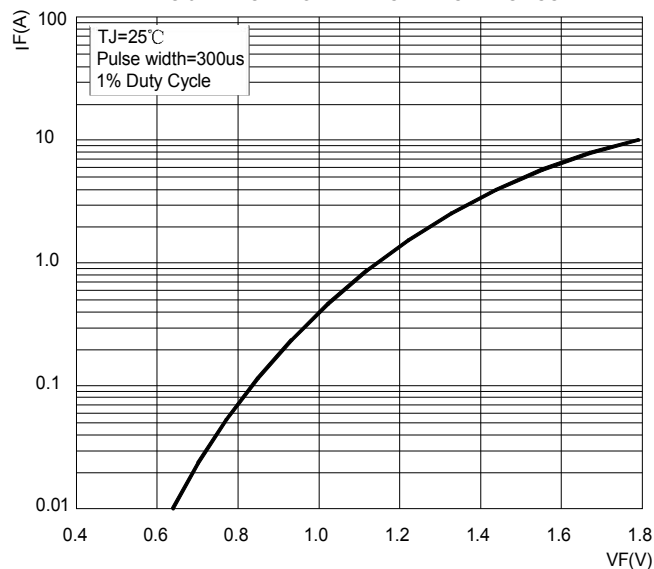


FIG.4: TYPICAL REVERSE CHARACTERISTICS

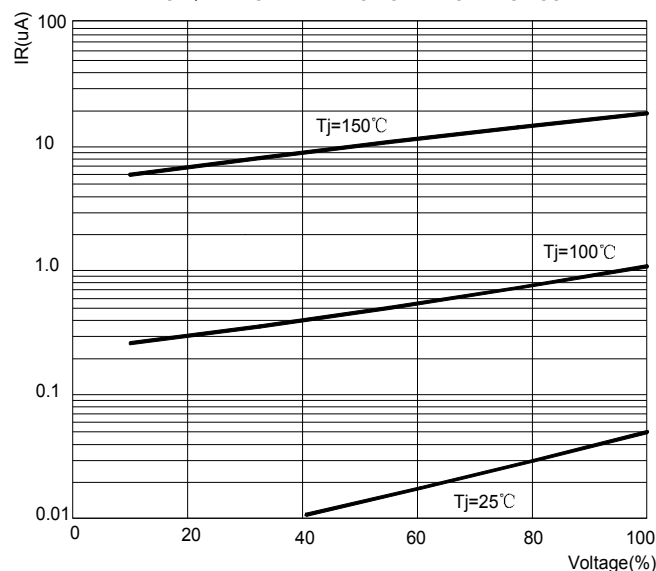
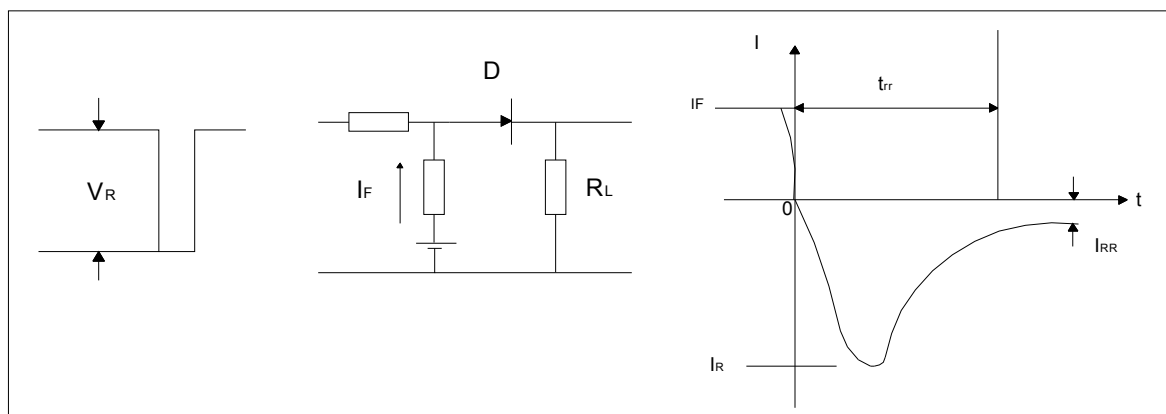
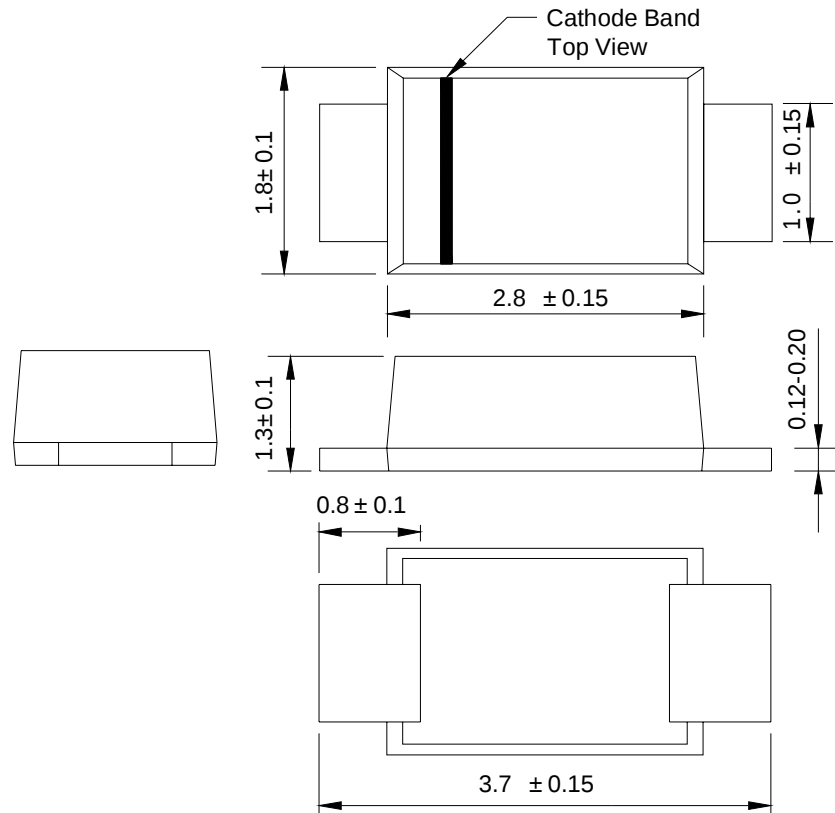


FIG.5: Diagram of circuit and Testing wave form of reverse recovery time

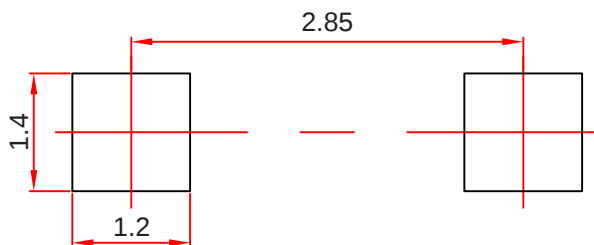


SOD-123FL Package Outline Dimensions



Dimensions in millimeters

SOD-123FL Suggested Pad Layout



Note:

1. Controlling dimension: in millimeters.
2. General tolerance: ± 0.05mm.
3. The pad layout is for reference purposes only.

Reel Taping Specifications For Surface Mount Devices-SOD-123FL

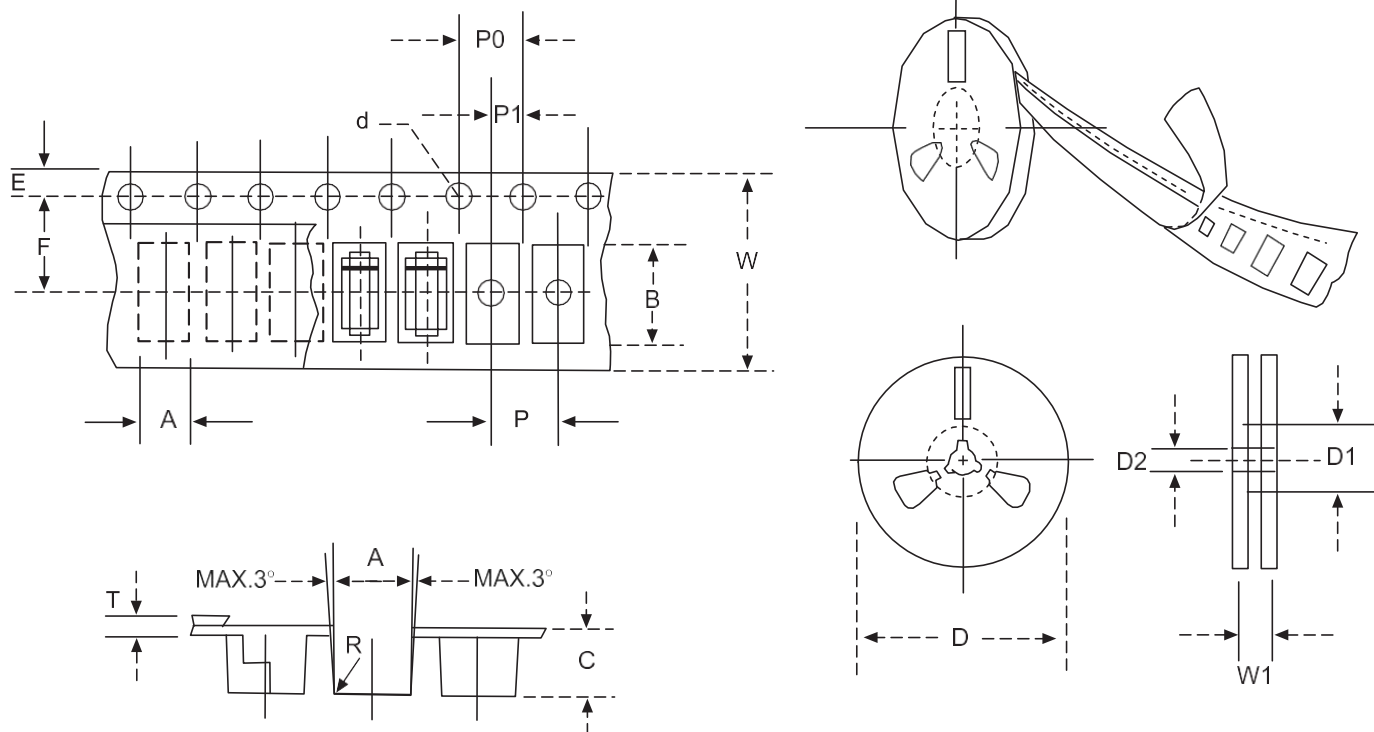


FIG:CONFIGURATION OF SURFACE MOUNTED DEVICES TAPING

ITEM	SYMBOL	SOD-123FLmm(inch)
Carrier width	A	2.05±0.1(0.081±0.004)
Carrier length	B	3.95±0.1(0.156±0.004)
Carrier depth	C	1.45±0.1(0.057±0.004)
Sprocket hole	d	1.55±0.05(0.061±0.002)
Reel outside diameter	D	178±2.0(7.0±0.079)
Reel inner diameter	D1	54±1.0(2.13±0.039)
Feed hole diameter	D2	13±0.5(0.512±0.020)
Strocket hole position	E	1.75±0.1(0.069±0.004)
Punch hole position	F	3.50±0.1(0.138±0.002)
Punch hole pitch	P	4.0±0.1(0.157±0.004)
Sprocket hole pitch	P0	4.0±0.1(0.157±0.004)
Embossment center	P1	2.0±0.1(0.079±0.004)
Totall tape thickness	T	0.21±0.25(0.008±0.010)
Tape width	W	8.0±0.2(0.315±0.008)
Reel width	W1	10.0±2.0(0.394±0.079)

NOTE:Devices are packed in accordance with EIA standard RS-481-A and specification given above.