

## SOD-123FL Plastic-Encapsulate Diodes

### General Purpose Rectifier

#### Features

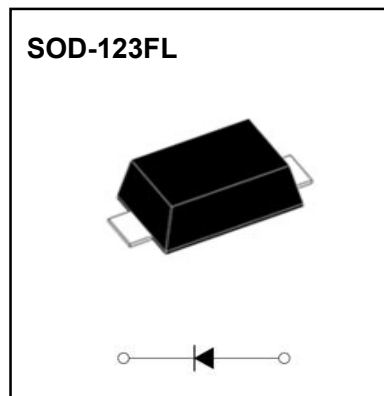
- $I_o$  1A
- $V_{RRM}$  50V-1000V
- High surge current capability
- Glass passivated chip
- Polarity: Color band denotes cathode

#### Applications

- Rectifier

#### Marking

- DSR1A-DSR1M : A1-A7



#### Limiting Values (Absolute Maximum Rating)

Item	Symbol	Unit	Conditions	DSR1						
				A	B	D	G	J	K	M
Repetitive Peak Reverse Voltage	$V_{RRM}$	V		50	100	200	400	600	800	1000
Maximum RMS Voltage	$V_{RMS}$	V		35	70	140	280	420	560	700
Average Forward Current	$I_{F(AV)}$	A	60Hz Half sine wave, Resistance load, $T_a$ (Fig.1)	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 ( $T_a=25^\circ\text{C}$ Unless otherwise specified)

Item	Symbol	Unit	Test Condition	Max	
Peak Forward Voltage	$V_{FM}$	V	$I_{FM}=1.0\text{A}$	1.0	
Peak Reverse Current	$I_{RRM1}$	$\mu\text{A}$	$V_{RM}=V_{RRM}$	$T_a=25^\circ\text{C}$	10
	$I_{RRM2}$			$T_a=125^\circ\text{C}$	50
Thermal Resistance(Typical)	$R_{\theta J-A}$	$^\circ\text{C/W}$	Between junction and ambient	70 <sup>1)</sup>	
	$R_{\theta J-L}$		Between junction and lead	25 <sup>1)</sup>	

#### Notes:

- (1) Thermal resistance between junction and ambient and between junction and lead mounted on P.C.B with 3mm\*3mm copper pad areas.

# Typical Characteristics

FIG.1: FORWARD CURRENT DERATING CURVE

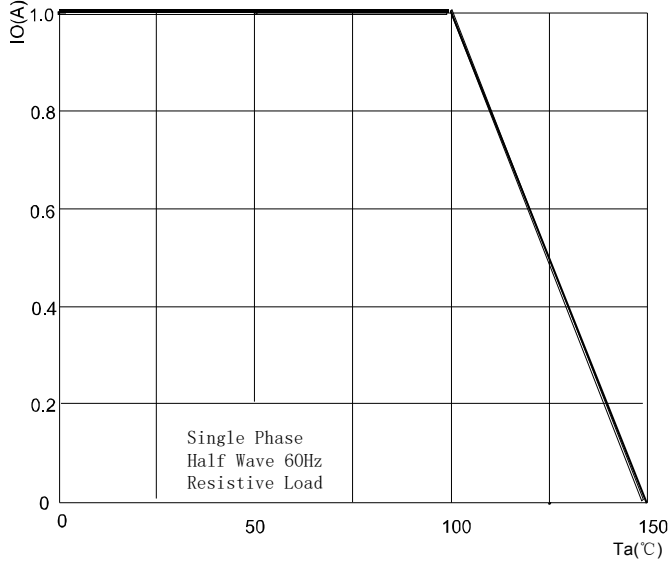


FIG.2: MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

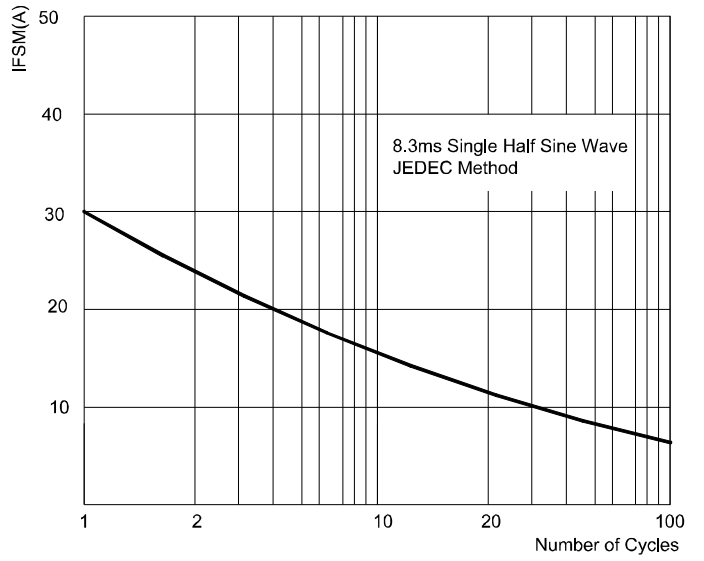


FIG.3: TYPICAL FORWARD CHARACTERISTICS

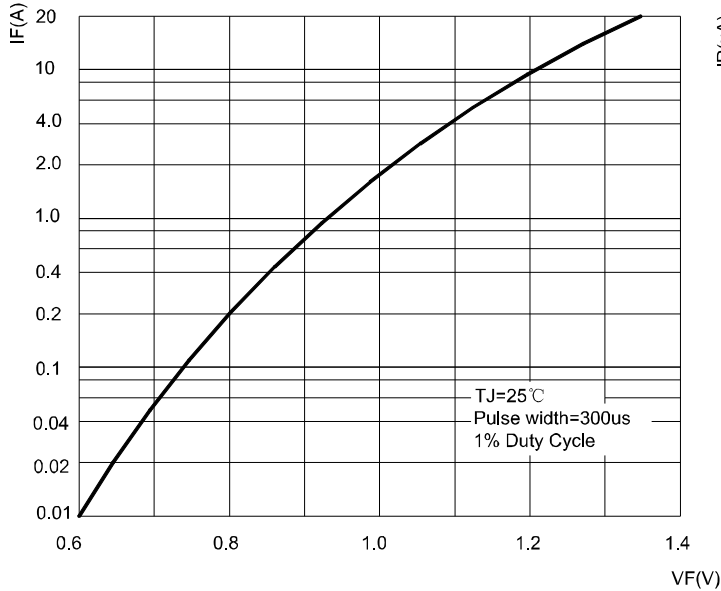
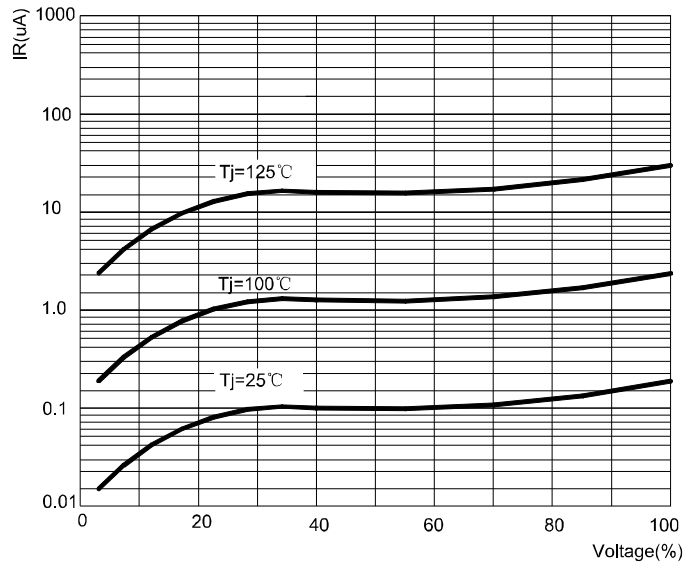
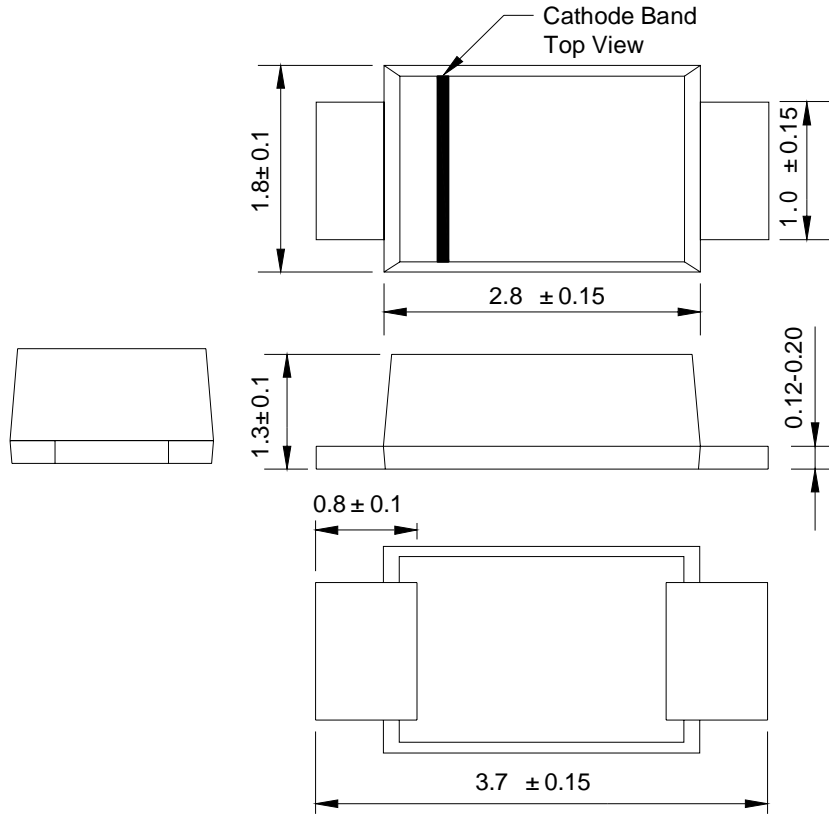


FIG.4: TYPICAL REVERSE CHARACTERISTICS

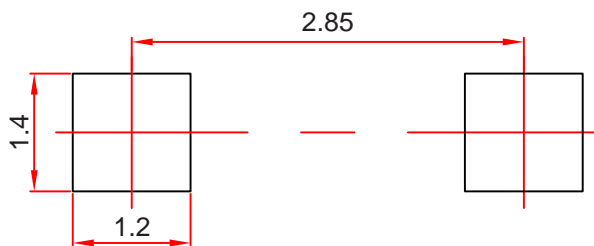


## SOD-123FL Package Outline Dimensions



Dimensions in millimeters

## SOD-123FL Suggested Pad Layout



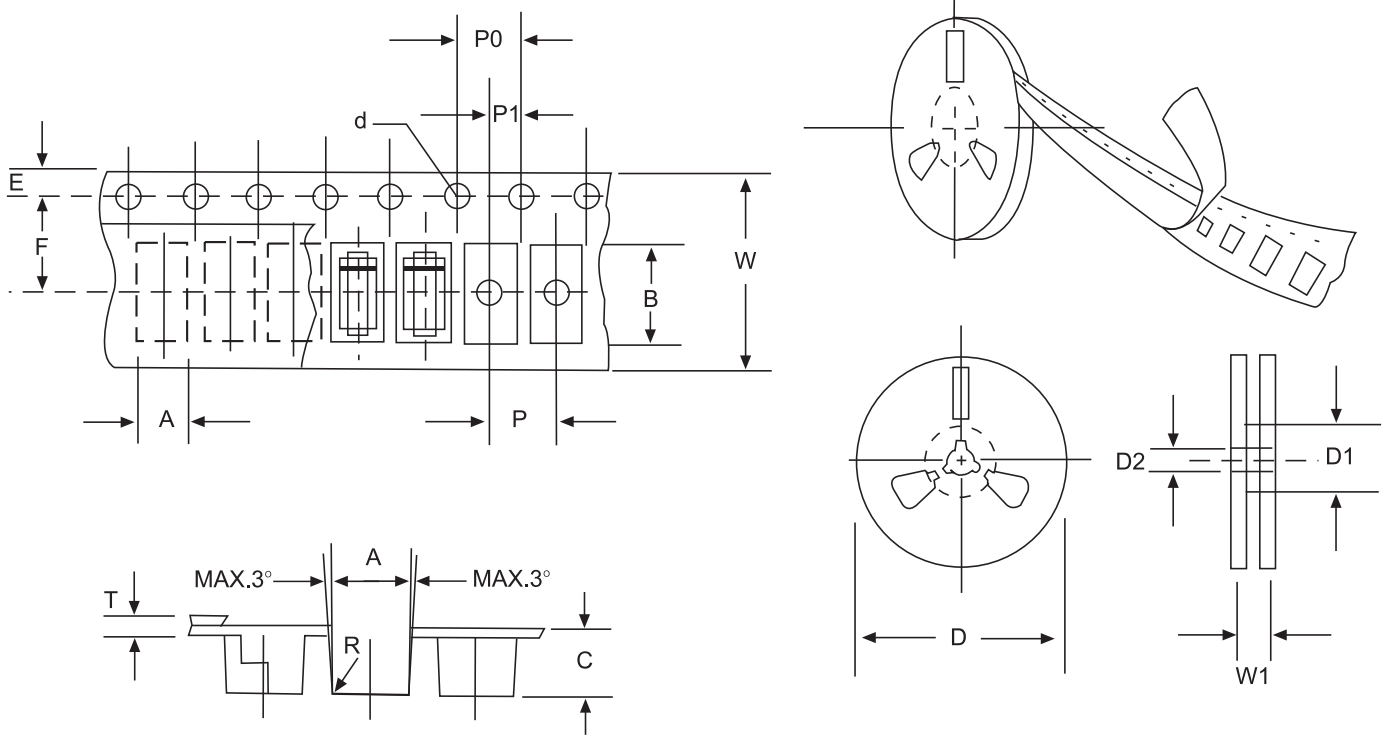
**Note:**

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

**NOTICE**

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



**FIG:CONFIGURATION OF AXIAL 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	280/178±2.0(11/7.0±0.079)
Reel inner diameter	D1	50±0.2(1.969±0.008)
Feed hole diameter	D2	13±0.5(0.512±0.020)
Sprocket 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)
Total 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.

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