

## SOD-123FL Plastic-Encapsulate Diode

### Schottky Rectifier Diodes

#### Features:

- $I_{F(AV)}$  1A
- $V_{RRM}$  20V-100V
- High surge current capability
- Polarity: Color band denotes cathode

#### Applications:

- Rectifier

#### Marking

- KDSK12-KDSK110:K2-K10

SOD-123FL



#### Limiting Values(Absolute Maximum Rating)

Item	Symbol	Unit	Test Conditions	KDSK1													
				2	3	4	5	6	8	9	10						
Repetitive Peak Reverse Voltage	$V_{RRM}$	V		20	30	40	50	60	80	90	100						
Maximum RMS Voltage	$V_{RMS}$	V		14	21	28	35	42	56	63	70						
Average Forward Current	$I_{F(AV)}$	A	60Hz Half-sine wave , Resistance load , FIG.1	1.0													
Surge(Non-repetitive)Forward Current	$I_{FSM}$	A	60Hz Half-sine wave , 1 cycle , $T_a=25^{\circ}C$	50													
Junction Temperature	$T_J$	$^{\circ}C$		-55~+150													
Storage Temperature	$T_{STG}$	$^{\circ}C$		-55 ~ +150													

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

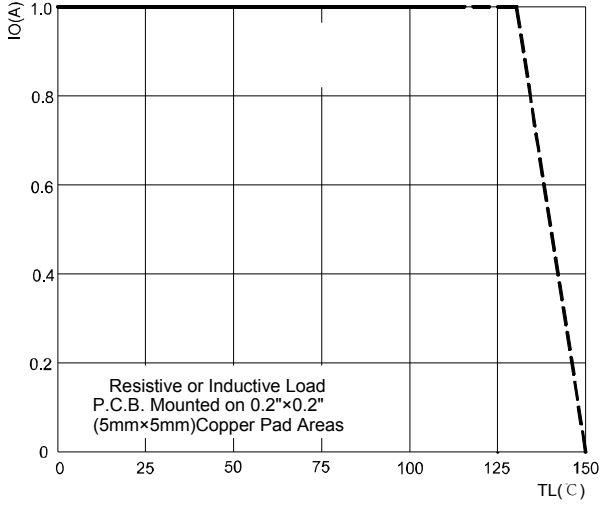
Item	Symbol	Unit	Test Condition	KDSK1													
				2	3	4	5	6	8	9	10						
Peak Forward Voltage	$V_F$	V	$I_F=1.0A$	0.47		0.52		0.78									
Peak Reverse Current	$I_{RRM1}$	mA	$V_{RM}=V_{RRM}$	$T_a=25^{\circ}C$		0.1											
	$I_{RRM2}$			$T_a=100^{\circ}C$		10		5.0									
Thermal Resistance(Typical)	$R_{\theta J-A}$	$^{\circ}C/W$	Between junction and ambient		88												
	$R_{\theta J-L}$		Between junction and terminal		28												

#### Notes:

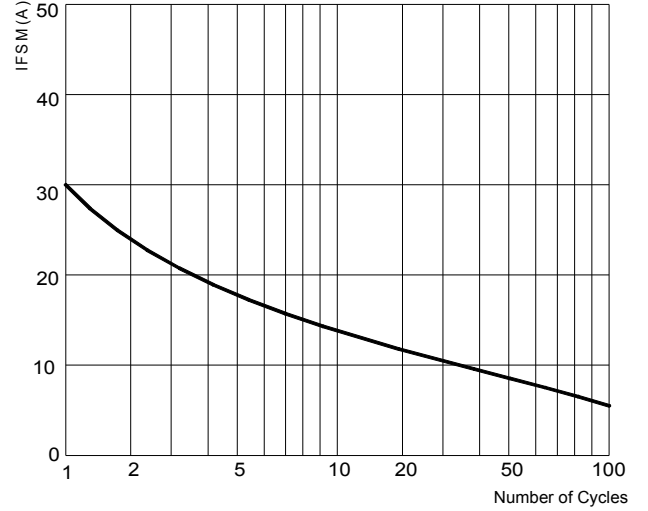
Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.2" x 0.2" (5.0 mm x 5.0 mm) copper pad areas

## Typical Characteristics

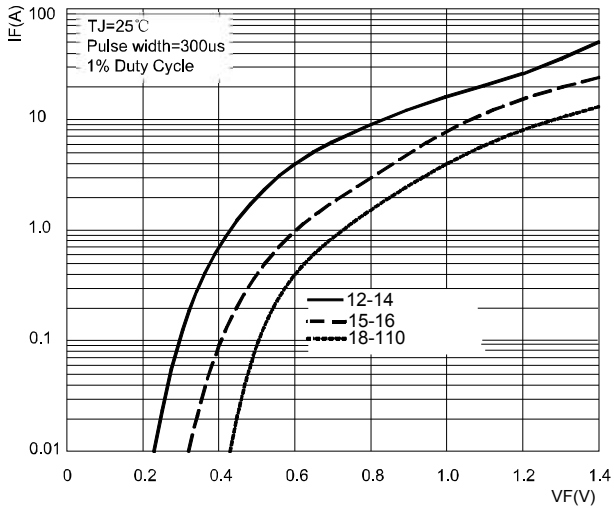
**FIG.1: FORWARD CURRENT DERATING CURVE**



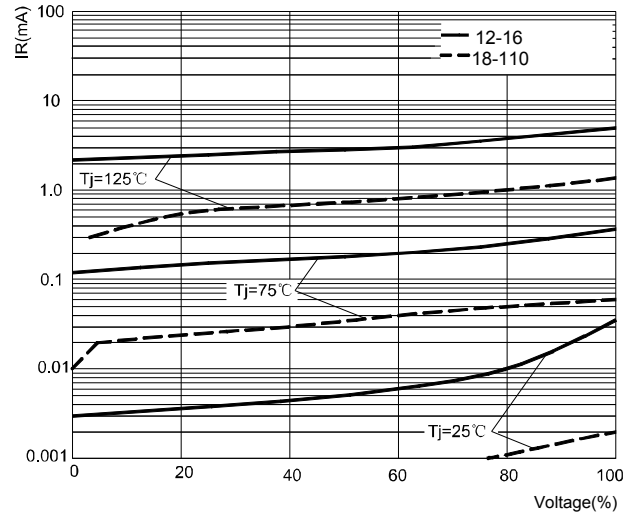
**FIG.2: MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT**



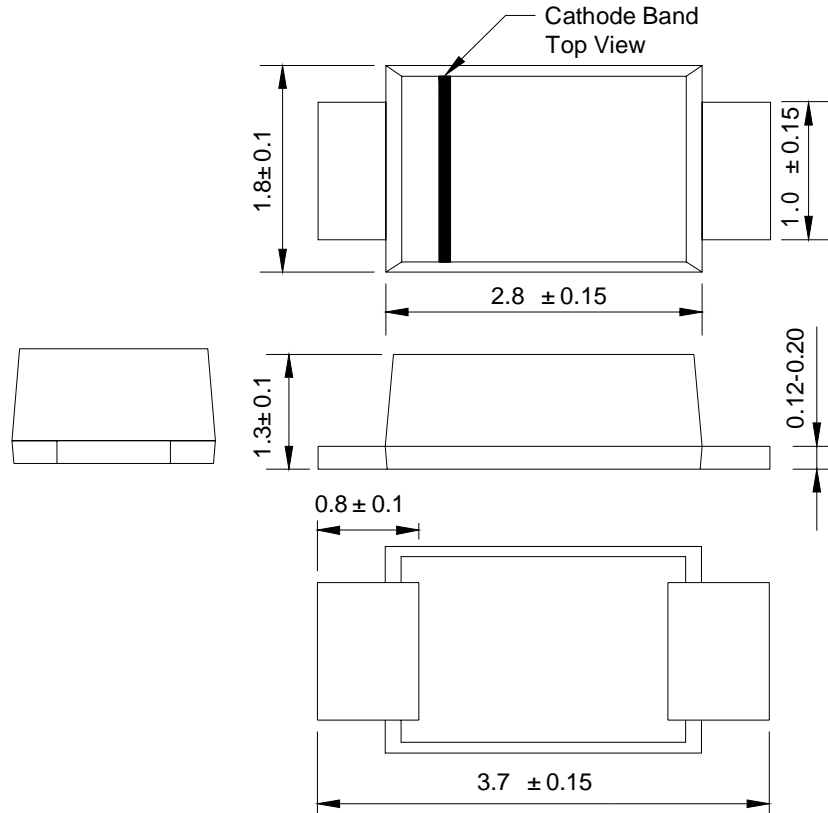
**FIG.3: TYPICAL FORWARD CHARACTERISTICS**



**FIG.4: TYPICAL REVERSE CHARACTERISTICS**

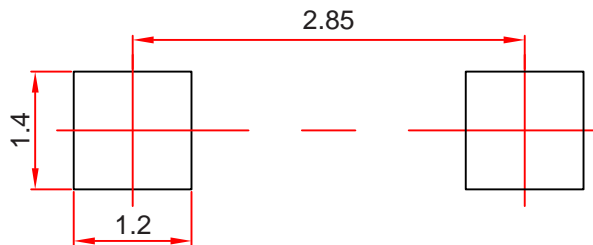


### SOD-123FL Package Outline Dimensions



Dimensions in millimeters

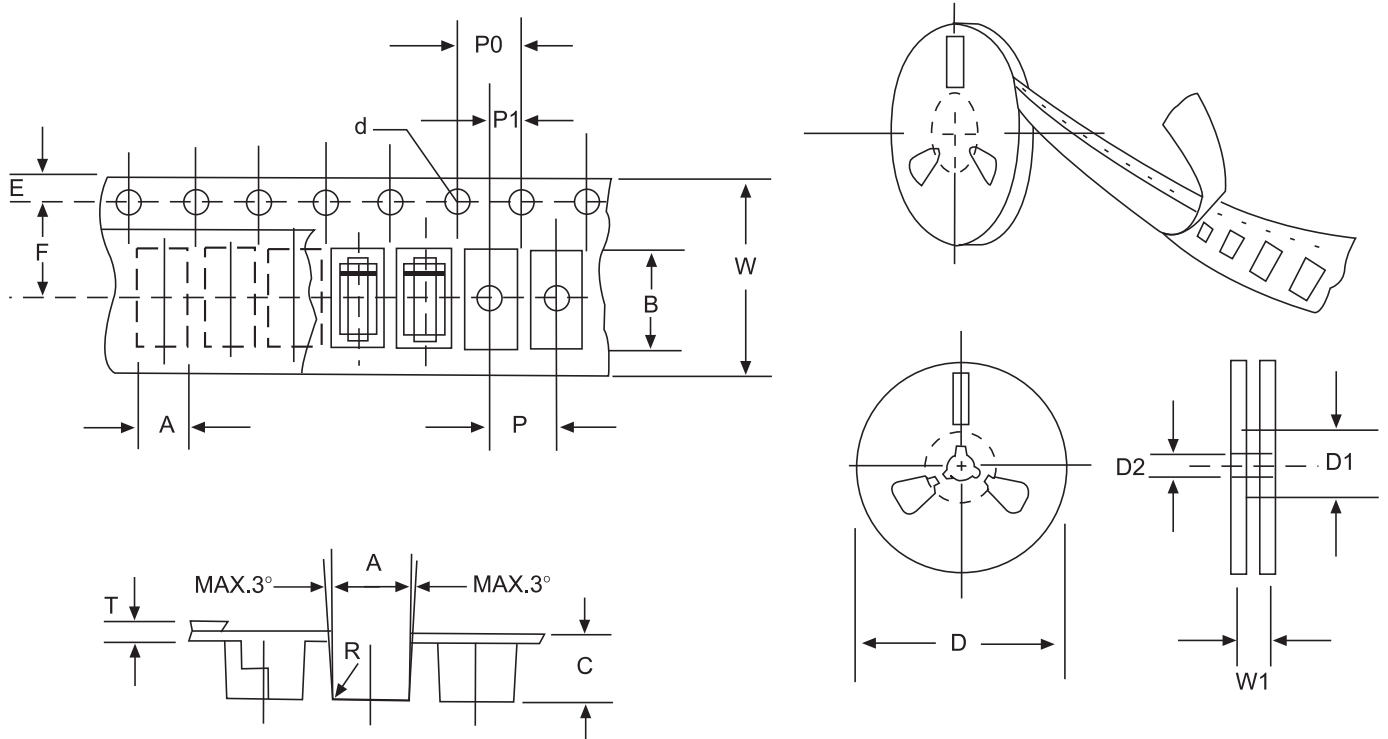
### SOD-123FL Suggested Pad Layout



**Note:**

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

**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)
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.