

## SOD-123FL Plastic-Encapsulate Diodes

### DSS22 THRU DSS220 Schottky Rectifier Diodes

#### Features

- $I_{F(AV)}$  2A
- $V_{RRM}$  20V-200V
- High surge current capability
- Polarity: Color band denotes cathode

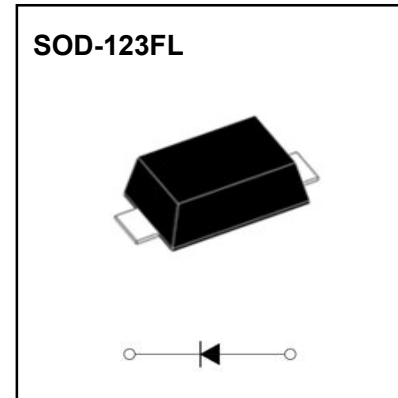
#### Applications

- Rectifier

#### Marking

- S2X

X : From 2 To 20



#### Limiting Values(Absolute Maximum Rating)

Item	Symbol	Unit	Test Conditions	DSS2														
				2	3	4	5	6	8	10	15	20						
Repetitive Peak Reverse Voltage	$V_{RRM}$	V		20	30	40	50	60	80	100	150	200						
Maximum RMS Voltage	$V_{RMS}$	V		14	21	28	35	42	56	70	105	140						
Average Forward Current	$I_{F(AV)}$	A	60Hz Half-sine wave, Resistance load	2.0														
Surge(Non-repetitive)Forward Current	$I_{FSM}$	A	60Hz Half-sine wave, 1 cycle, $T_a=25^\circ\text{C}$	50														
Junction Temperature	$T_J$	$^\circ\text{C}$		-55~+125					-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	DSS2														
				2	3	4	5	6	8	10	15	20						
Peak Forward Voltage	$V_F$	V	$I_F=2.0\text{A}$	0.55		0.70		0.85		0.95								
Peak Reverse Current	$I_{RRM1}$	mA	$V_{RM}=V_{RRM}$	$T_a=25^\circ\text{C}$		0.2		0.1										
	$I_{RRM2}$			$T_a=100^\circ\text{C}$		10		5.0										
Thermal Resistance(Typical)	$R_{\theta J-A}$	$^\circ\text{C}/\text{W}$	Between junction and ambient		54													
	$R_{\theta J-L}$		Between junction and lead		10													
Juction Capacitance (Typical)	$C_j$	pF	Measured at 1MHZ and Applied Reverse Voltage of 4.0 V.D.C		114		92		53		40							

#### Notes:

Thermal resistance from junction to ambient and from junction to lead mounted on FR4 PCB double sided copper mini pad

# Typical Characteristics

FIG.1: FORWARD CURRENT DERATING CURVE

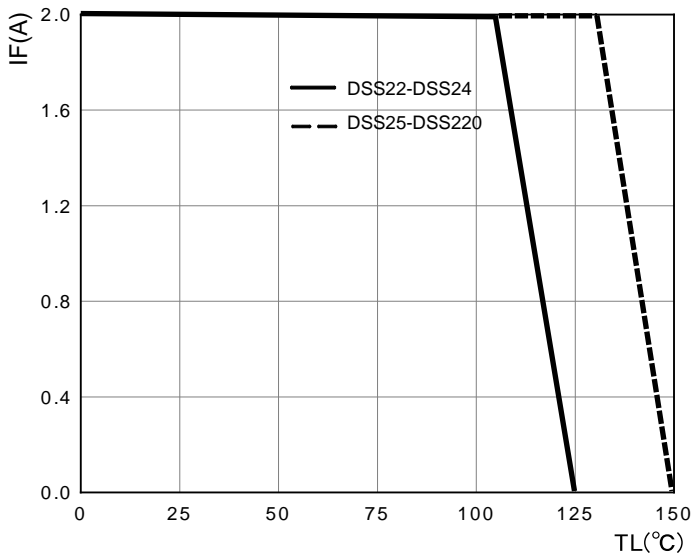
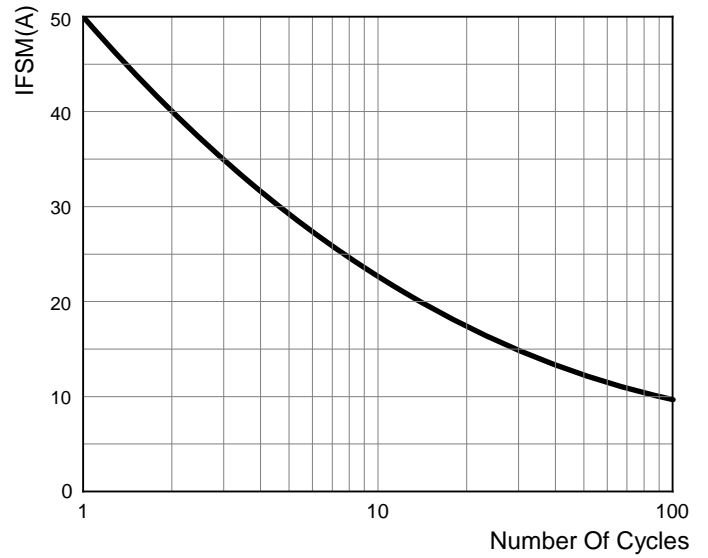
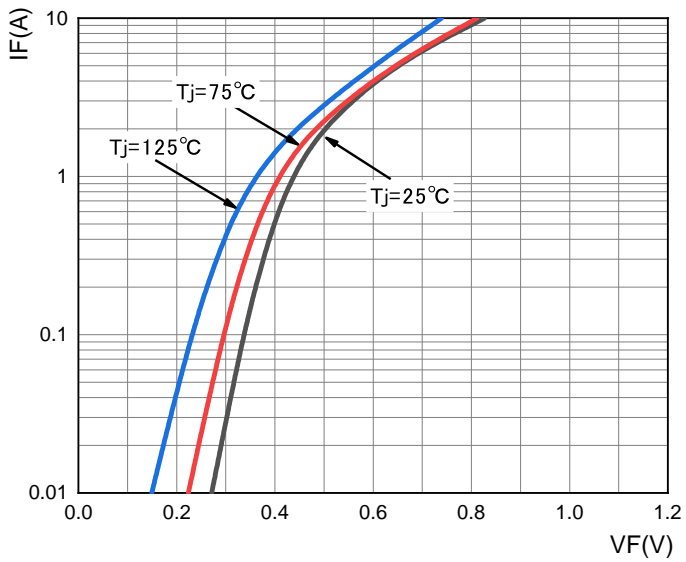


FIG 2: MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT



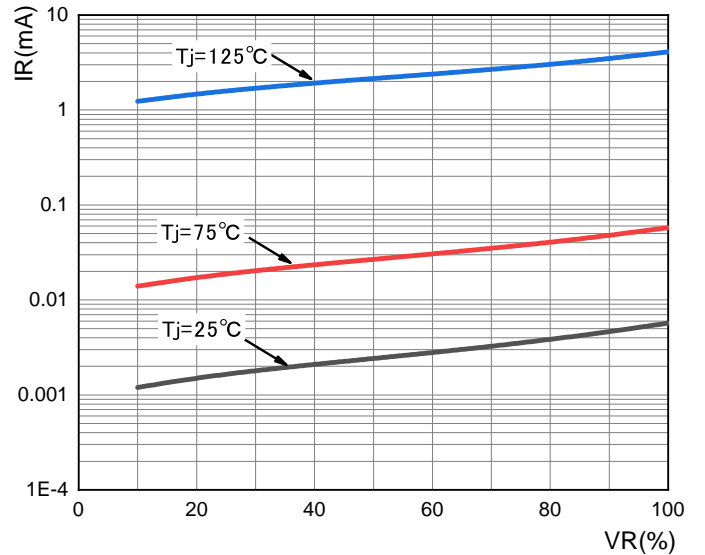
DSS22-DSS24

FIG.3: TYPICAL FORWARD CHARACTERISTICS



DSS22-DSS24

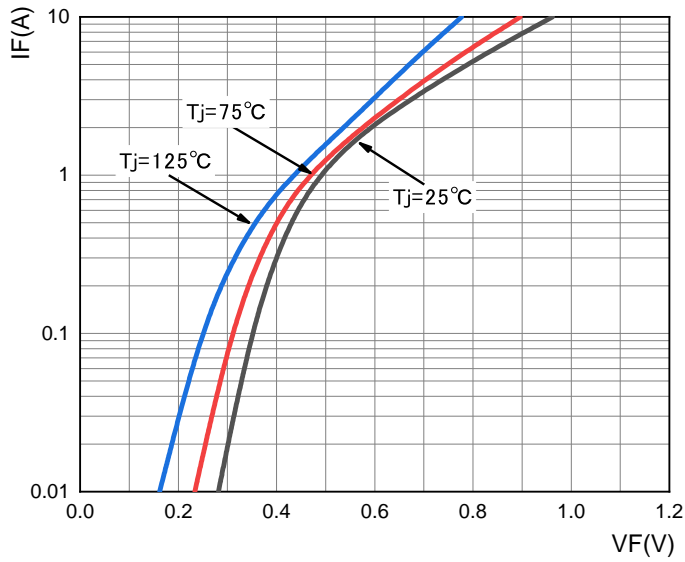
FIG.4: TYPICAL REVERSE CHARACTERISTICS



# Typical Characteristics

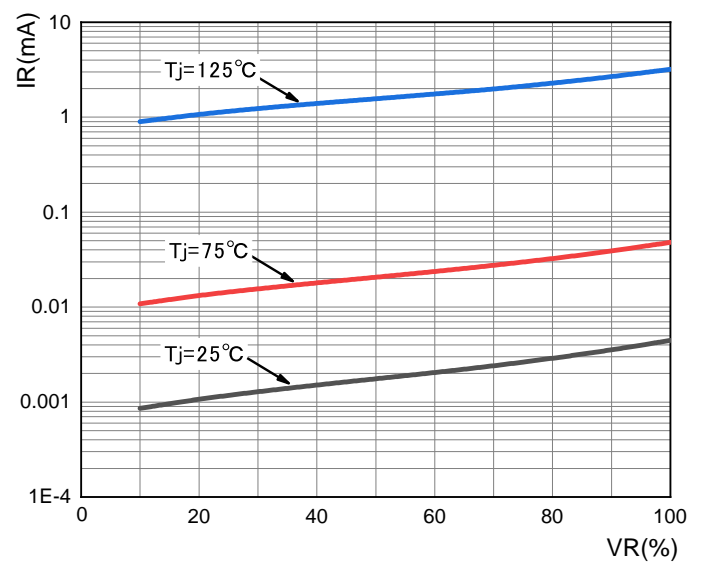
DSS25-DSS26

FIG.5: TYPICAL FORWARD CHARACTERISTICS



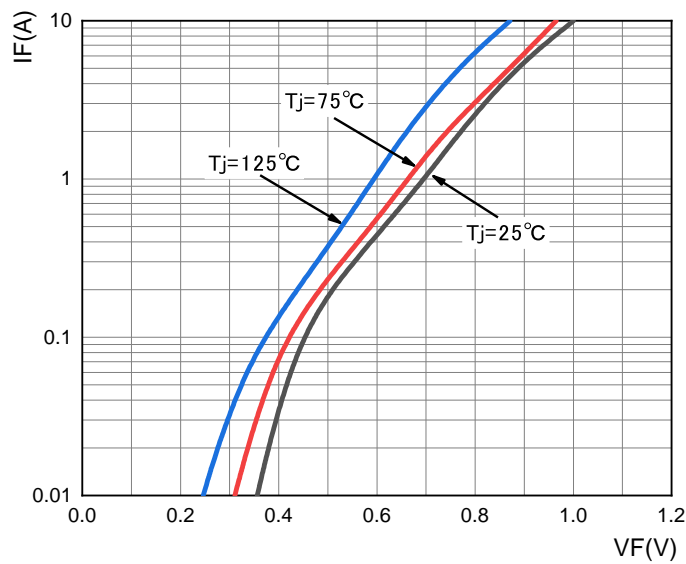
DSS25-DSS26

FIG.6: TYPICAL REVERSE CHARACTERISTICS



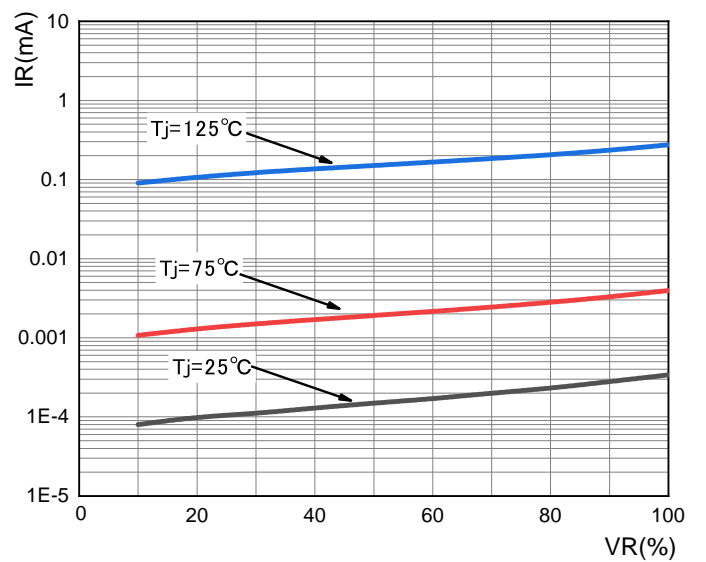
DSS28-DSS210

FIG.7: TYPICAL FORWARD CHARACTERISTICS



DSS28-DSS210

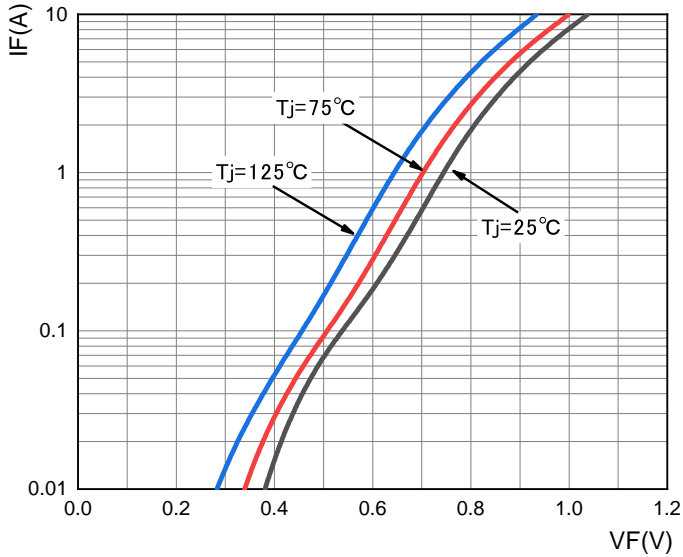
FIG.8: TYPICAL REVERSE CHARACTERISTICS



# Typical Characteristics

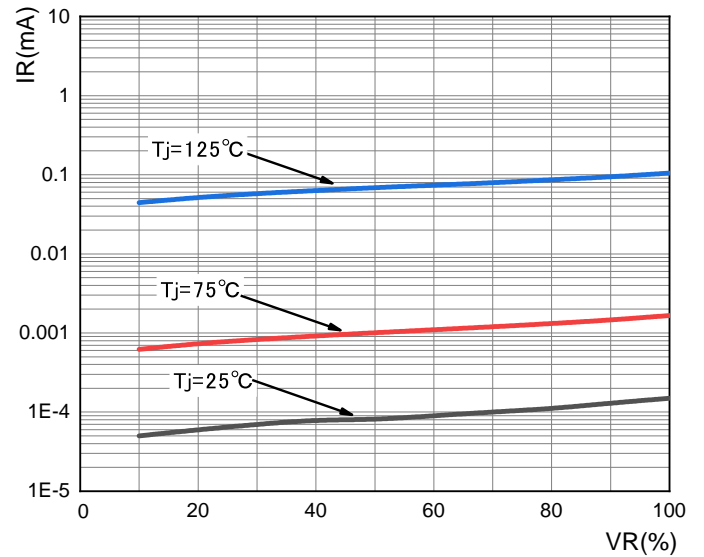
DSS215

FIG.9: TYPICAL FORWARD CHARACTERISTICS



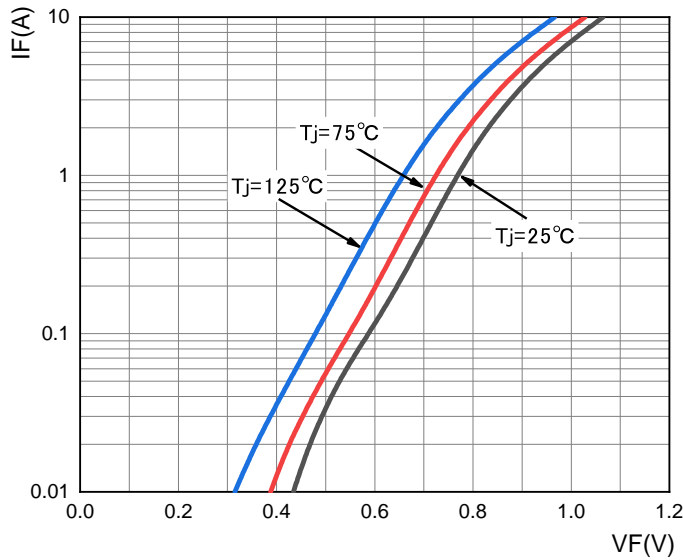
DSS215

FIG.10: TYPICAL REVERSE CHARACTERISTICS



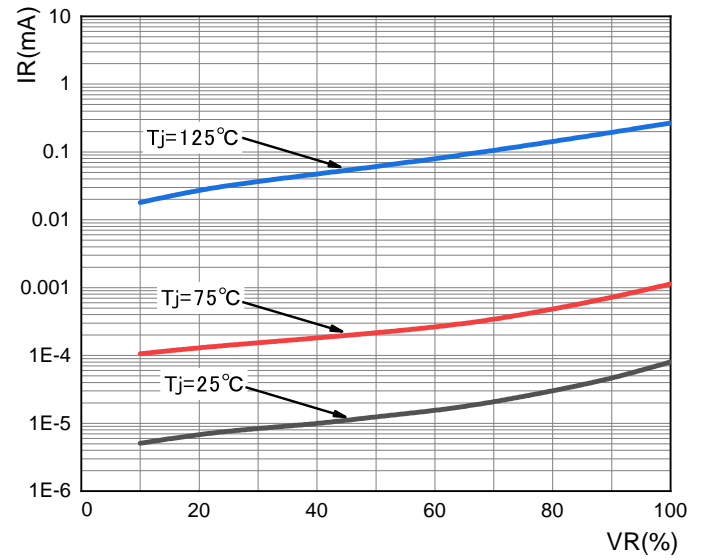
DSS220

FIG.11: TYPICAL FORWARD CHARACTERISTICS

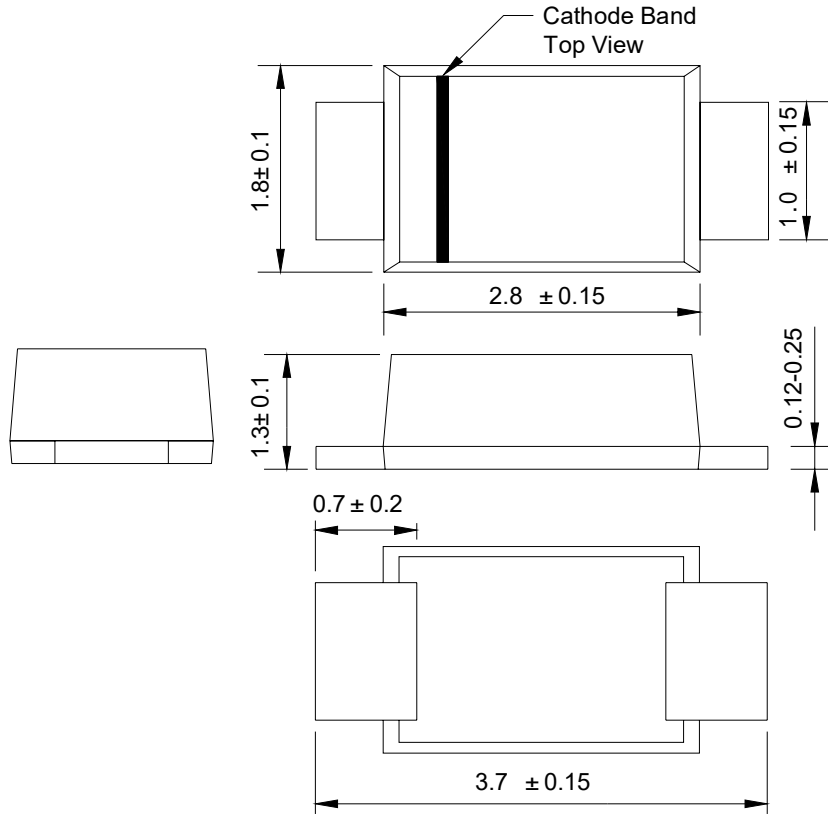


DSS220

FIG.12: TYPICAL REVERSE CHARACTERISTICS

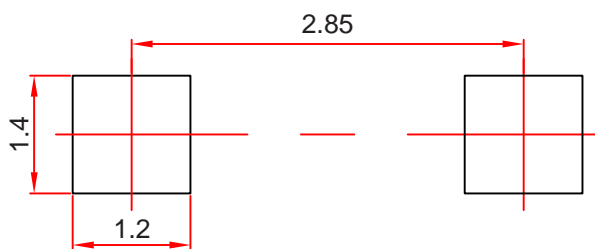


## SOD-123FL Package Outline Dimensions



Dimensions in millimeters

## SOD-123FL Suggested Pad Layout



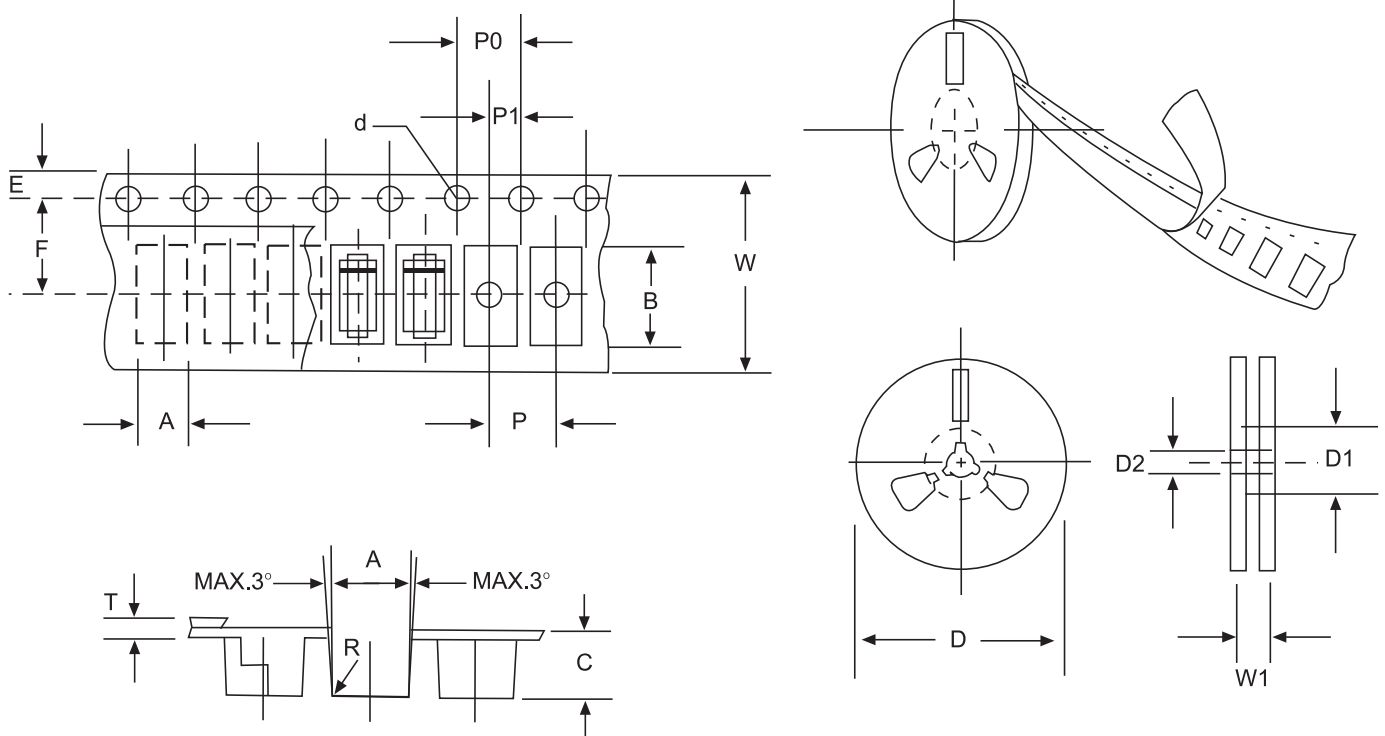
### Note:

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 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.