

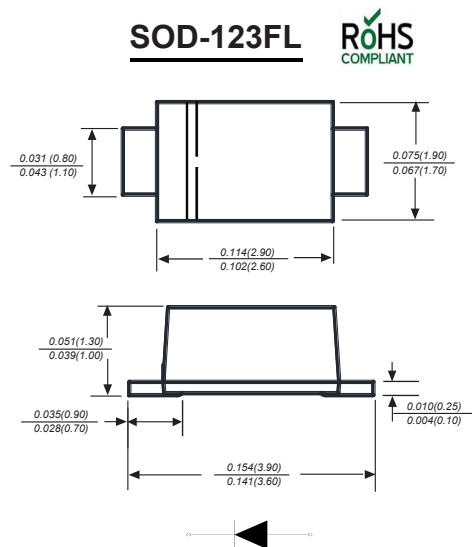
## SURFACE MOUNT STANDARD RECTIFIER

### Features

- ◆ Low profile space
- ◆ Ideal for automated placement
- ◆ Glass passivated chip junctions
- ◆ Low forward voltage drop Low leakage current
- ◆ High forward surge capability
- ◆ High temperature soldering:  
260°C/10 seconds at terminals Component in accordance to  
RoHS 2002/95/1 and WEEE 2002/96/EC

### Mechanical Data

Case : JEDEC UOD-123FL molded plastic body  
 Terminals : Solderable per MIL-STD-750, Method 2026A  
 Polarity : Polarity symbol marking on body  
 Mounting Position : Any  
 Weight : 0.0067 ounce, 0.02 grams



Dimensions in inches and (millimeters)

### Maximum Ratings And Electrical Characteristics

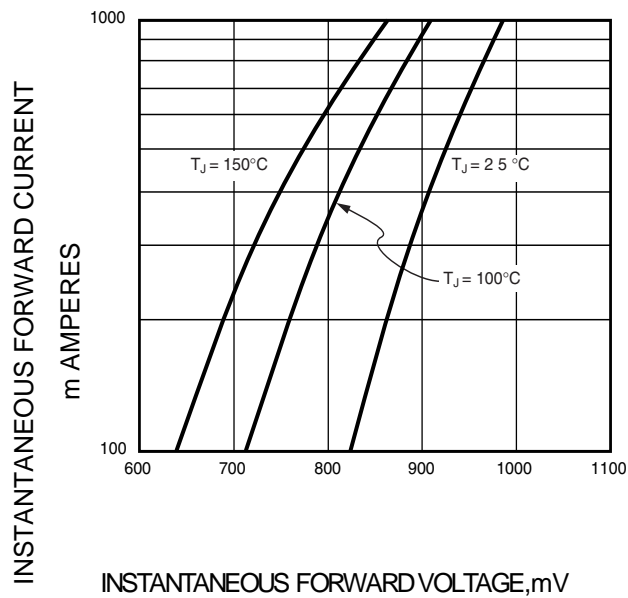
Ratings at 25°C ambient temperature unless otherwise specified.

Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

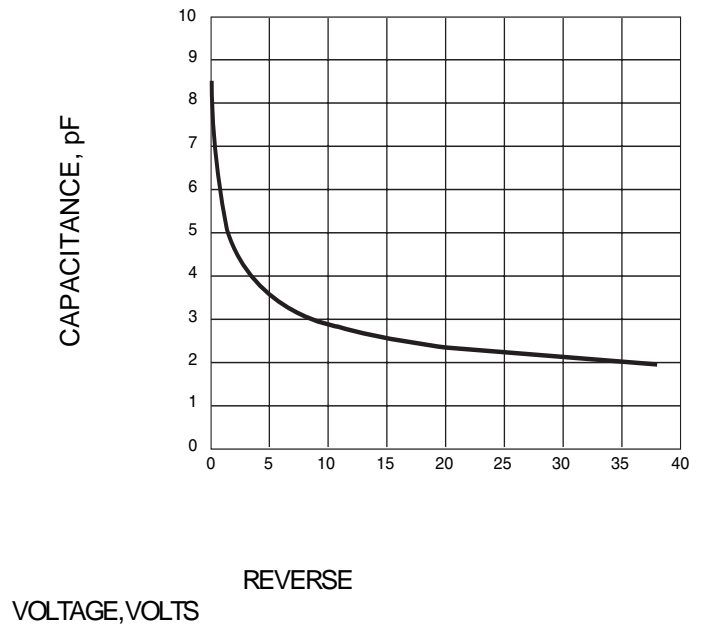
Parameter	SYMBOLS	DSR1A	DSR1B	DSR1D	DSR1G	DSR1J	DSR1K	DSR1M	UNITS
Marking Code		S1A	S1B	S1D	S1G	S1J	S1K	S1M	
Maximum repetitive peak reverse voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V
Maximum RMS voltage	$V_{RMS}$	35	70	105	280	420	560	700	V
Maximum DC blocking voltage	$V_{DC}$	50	100	200	400	600	800	1000	V
Maximum average forward rectified current at TL(NOTE 1)	$I_{(AV)}$	1.0							A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	25.0							A
Maximum instantaneous forward voltage at 0.5A	$V_F$	1.1							V
Maximum DC reverse current $T_A=25^\circ\text{C}$ at rated DC blocking voltage $T_A=125^\circ\text{C}$	$I_R$	10 50.0							$\mu\text{A}$
Typical junction capacitance (NOTE 2)	$C_J$	4							pF
Typical thermal resistance(NOTE 3)	$R_{\theta JA}$	- 5 0 t o + 1 5 0							$^\circ\text{C}$
Storage temperature range	$T_j$ $T_{STG}$	-55 to +150							$^\circ\text{C}$

## Typical Characteristics

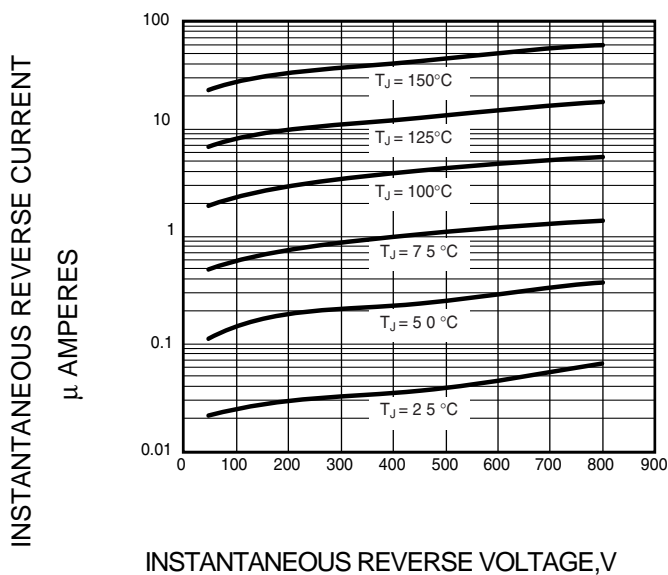
**FIG.1 – TYPICAL FORWARD CHARACTERISTIC**



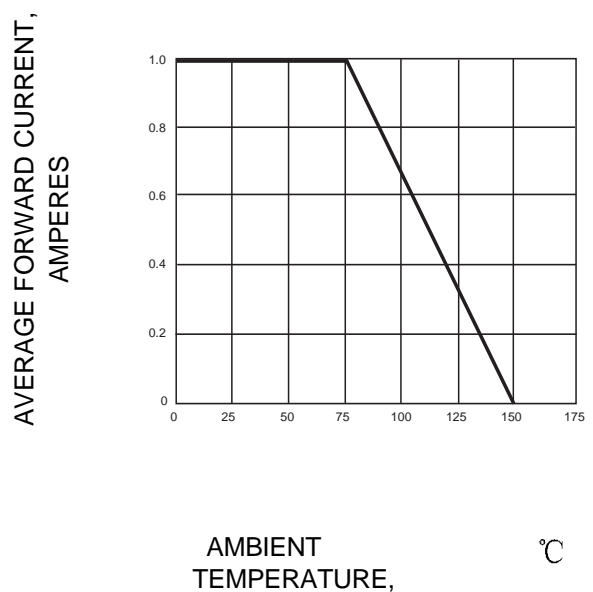
**FIG.2 – TYPICAL JUNCTION CAPACITANCE**



**FIG.3 – TYPICAL INSTANTANEOUS REVERSE CHARACTERISTICS**

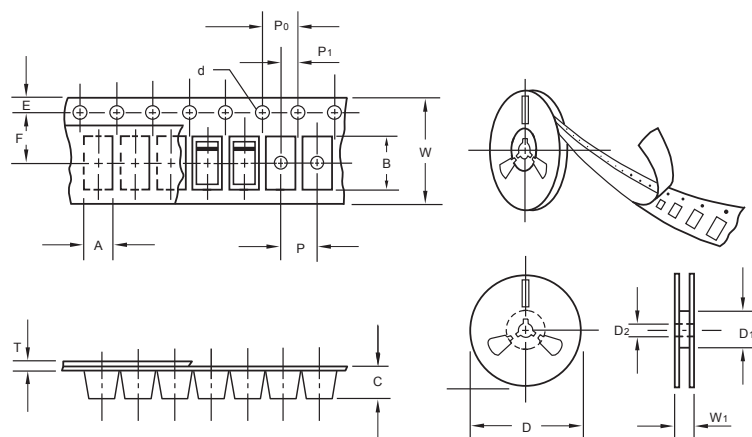


**FIG.4 – FORWARD DERATING CURVE**



The curve above is for reference only.

## Packing information



unit:mm

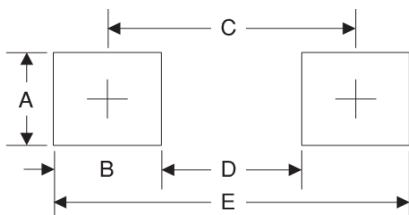
Item	Symbol	Tolerance	SOD-123FL
Carrier width	A	0.1	2.1
Carrier length	B	0.1	4.0
Carrier depth	C	0.1	1.60
Sprocket hole	d	0.05	1.55
7" Reel outside diameter	D	2.0	178.00
7" Reel inner diameter	D1	min	50.0
Feed hole diameter	D2	0.5	13.00
Sprocket hole position	E	0.1	1.75
Punch hole position	F	0.1	3.50
Punch hole pitch	P	0.1	4.00
Sprocket hole pitch	P0	0.1	4.00
Embossment center	P1	0.1	2.00
Overall tape thickness	T	0.1	0.25
Tape width	W	0.3	8.15
Reel width	W1	1.0	10.5

Note: Devices are packed in accordance with EIA standard RS-481-A and specifications listed above.

## Reel packing

PACKAGE	REEL SIZE	REEL (pcs)	COMPONENT SPACING (m/m)	BOX (pcs)	INNER BOX (m/m)	REEL DIA, (m/m)	CARTON SIZE (m/m)	CARTON (pcs)	APPROX. GROSS WEIGHT (kg)
SOD-123FL	7"	3,000	4.0	45,000	210*208*203	178	430*430*235	180,000	9.0

## Suggested Pad Layout



Symbol	Unit (mm)	Unit (inch)
A	1.2	0.047
B	1.2	0.047
C	3.2	0.126
D	2	0.079
E	4.4	0.173