

### SURFACE MOUNT RECTIFIER

**REVERSE VOLTAGE: 100 - 1000 V**  
**CURRENT: 1.0 A**

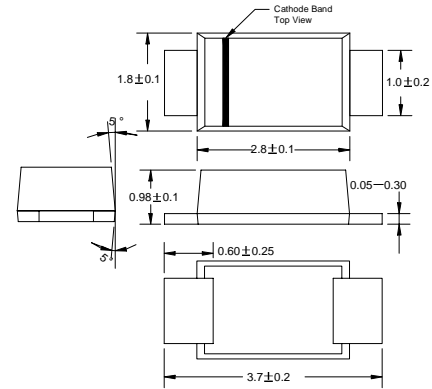
#### FEATURES

- Glass passivated device
- Ideal for surface mounted applications
- Low leakage current
- Metallurgically bonded construction
- High temperature soldering:  
250 /10 seconds at terminals

#### MECHANICAL DATA

- Case: JEDEC SOD-123FL, molded plastic over passivated chip
- Terminals: Solder Plated, solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Weight: 0.003 ounces, 0.01 gram
- Mounting position: Any

SOD - 123FL



### 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, derate current by 20%.

#### ABSOLUTE RATINGS

		SOD1F1	SOD1F2	SOD1F4	SOD1F6	SOD1F8	SOD1F10	UNITS
Device marking code		FB	FD	FG	FJ	FK	FM	
Maximum recurrent peak reverse voltage	$V_{RRM}$	100	200	400	600	800	1000	V
Maximum RMS voltage	$V_{RMS}$	70	140	280	420	560	700	V
Maximum DC blocking voltage	$V_{DC}$	100	200	400	600	800	1000	V
Maximum average forward rectified current $T_A=65$ (NOTE 1)	$I_{(AV)}$	1.0						A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load $T_L=25$	$I_{FSM}$	25						A
Typical thermal resistance (NOTE 2)	$R_{j0A}$	180						K/W
Maximum reverse recovery time (NOTE 3)	$t_{rr}$	150			250	500		ns
Operating temperature range	$T_j$	- 55 --- + 150						
Storage temperature range	$T_{STG}$	- 55 --- + 150						

NOTES: 1. Averaged over any 20 ms period.

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2. Thermal resistance junction to ambient, 6.0 mm<sup>2</sup> copper pads to each terminal.

3. Measured with  $I_F=0.5A$ ,  $I_R=1A$ ,  $I_{rr}=0.25A$ .

## ELECTRICAL CHARACTERISTICS

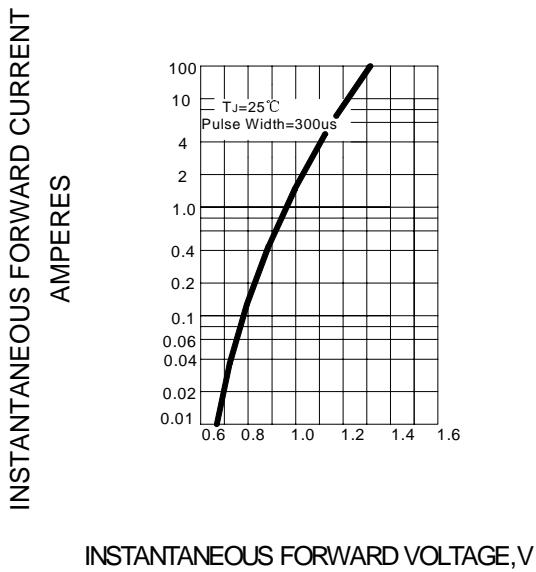
Parameter	Symbol	Min	Typ.	Max.	Unit
Maximum instantaneous (NOTE 4) forward voltage at 1.0A	$V_F$	-	-	1.3	V
Maximum DC reverse current @ $T_A=25$ at rated DC blockjng voltage @ $T_A=125$	$I_R$	- -	- -	5.0 50	$\mu A$
Typical junction capacitance (NOTE 5)	$C_j$	-	4	-	pF

NOTES: 4.Pulse test:300 $\mu s$  pulse width,1% duty cycle.

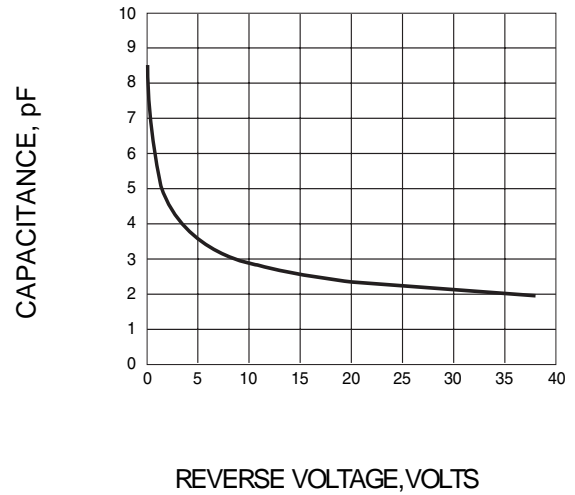
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5.Measured at 1.0MHz and applied average voltage of 4.0V DC.

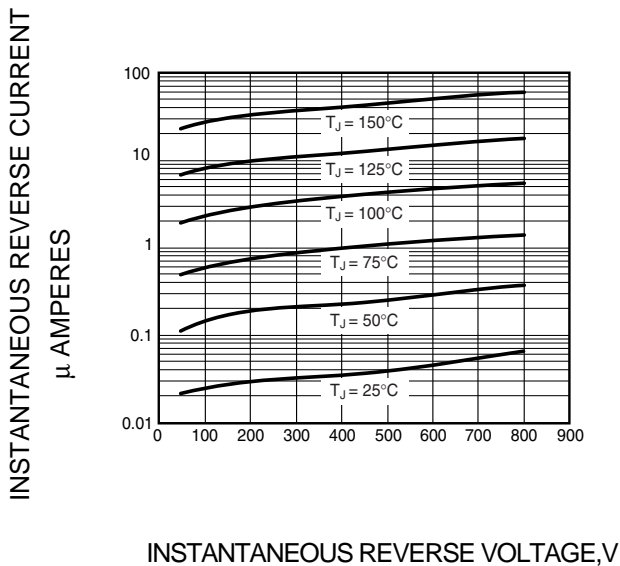
**FIG.1 – TYPICAL FORWARD CHARACTERISTIC**



**FIG.2 – TYPICAL JUNCTION CAPACITANCE**



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



**FIG.4 – FORWARD DERATING CURVE**

