

### SURFACE MOUNT RECTIFIERS

**REVERSE VOLTAGE: 100 - 1000 V**  
**CURRENT: 0.7 A**

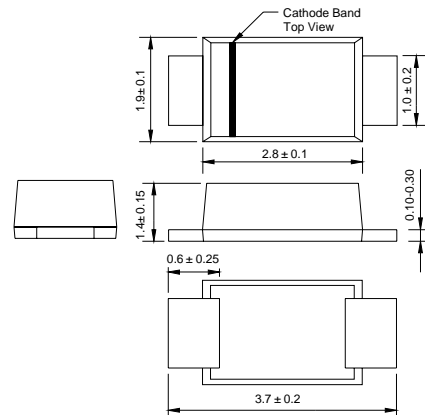
#### FEATURES

- 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: 0.006 ounces, 0.02 gram
- Mounting position: Any

SOD - 123FL



Dimensions in millimeters

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 ambient temperature unless otherwise specified.  
 Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

#### ABSOLUTE RATINGS

		S07B	S07D	S07G	S07J	S07M	UNITS
Device marking code		D2	D3	D4	D5	D7	
Maximum recurrent peak reverse voltage	$V_{RRM}$	100	200	400	600	1000	V
Maximum RMS voltage	$V_{RMS}$	70	140	280	420	700	V
Maximum DC blocking voltage	$V_{DC}$	100	200	400	600	1000	V
Maximum average forward rectified current $T_A=65$ (NOTE 1)	$I_{(AV)}$	0.7					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
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.

## ELECTRICAL CHARACTERISTICS

Parameter	Symbol	Min	Typ.	Max.	Unit
Maximum instantaneous (NOTE 3) forward voltage at 1.0A	$V_F$	-	-	1.1	V
Maximum DC reverse current @ $T_A=25$ at rated DC blocking voltage @ $T_A=125$	$I_R$	-	-	10.0 50	$\mu A$
Typical junction capacitance (NOTE 4)	$C_j$	-	4	-	pF
Maximum reverse recovery time (NOTE 5)	$t_{rr}$	-	-	1.8	$\mu s$

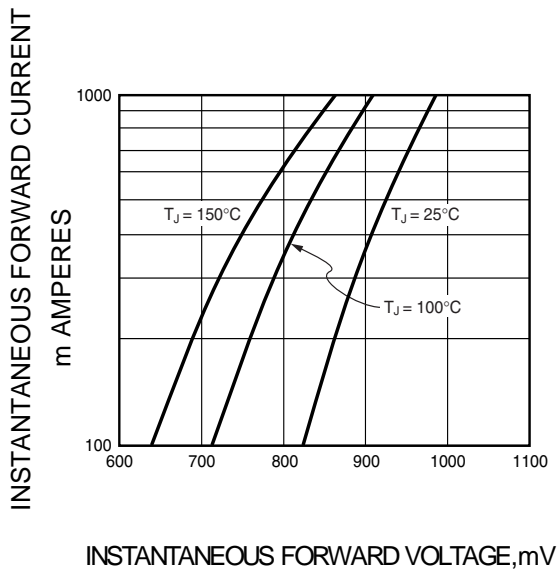
NOTES: 3.Pulse test:300 $\mu s$  pulse width,1% duty cycle.

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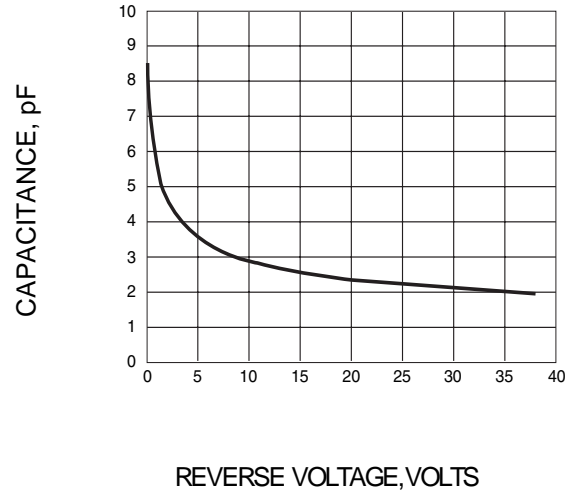
4.Measured at 1.0MHz and applied average voltage of 4.0V DC.

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

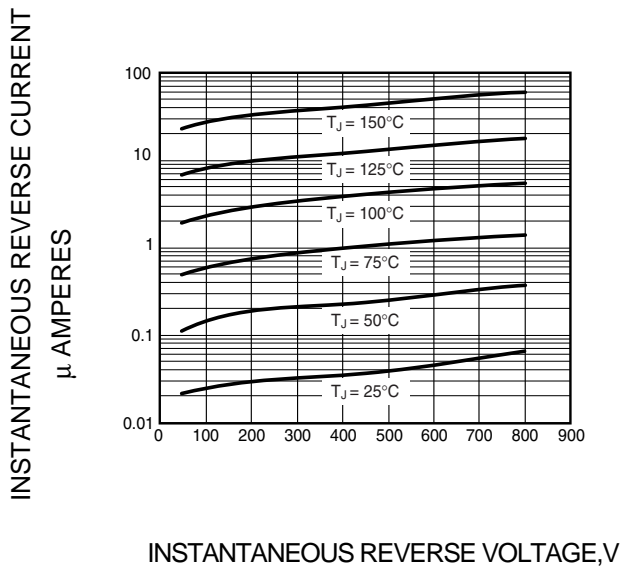
**FIG.1 – TYPICAL FORWARD CHARACTERISTIC**



**FIG.2 – TYPICAL JUNCTION CAPACITANCE**



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



**FIG.4 – FORWARD DERATING CURVE**

