

## SURFACE MOUNT FAST RECOVERY RECTIFIERS

REVERSE VOLTAGE - 50 to 1000 Volts  
FORWARD CURRENT - 1.0 Ampere

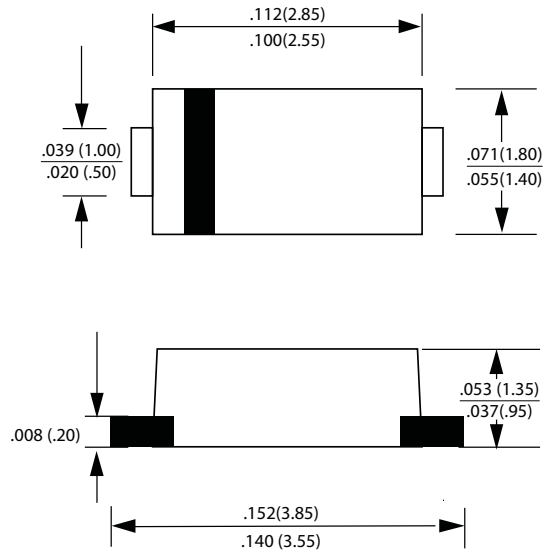
### FEATURES

- Glass passivated Junction
- For surface mounted applications
- Low reverse leakage current
- Low forward voltage drop
- High current capability
- Plastic material has UL flammability classification 94V-0

### MECHANICAL DATA

- Case : Molded plastic
- Polarity : Indicated by cathode band
- Weight : 0.018 grams

### 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%

CHARACTERISTICS	SYMBOL	PS1000FL	PS1001FL	PS1002FL	PS1004FL	PS1006FL	PS1008FL	PS1010FL	UNIT
Maximum Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V <sub>DC</sub>	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current @T <sub>L</sub> =90°C	I(AV)	1.0							A
Peak Forward Surge Current 8.3ms single half sine-wave super imposed on rated load (JEDEC METHOD)	I <sub>FSM</sub>	30							A
Maximum forward Voltage at 1.0A DC	V <sub>F</sub>	1.3							V
Maximum DC Reverse Current @T <sub>J</sub> =25°C at Rated DC Blocking Voltage @T <sub>J</sub> =125°C	I <sub>R</sub>	5.0 100							uA
Typical Junction Capacitance (Note1)	C <sub>J</sub>	10							pF
Typical Thermal Resistance (Note 2)	R <sub>θJL</sub>	30							°C/W
Maximum Reverse Recovery Time (Note 3)	T <sub>RR</sub>	150				250	500		ns
Operating & Storage Temperature Range	T <sub>J</sub>	-55 to +150							°C
Storage Temperature Range	T <sub>STG</sub>	-55 to +150							°C

NOTES : 1. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.  
2. Thermal Resistance Junction to Lead.  
3. Measured with :I<sub>F</sub>=0.5A, I<sub>R</sub>=1.0A, I<sub>RR</sub>=0.25A

RATNG AND CHARACTERISTIC CURVES

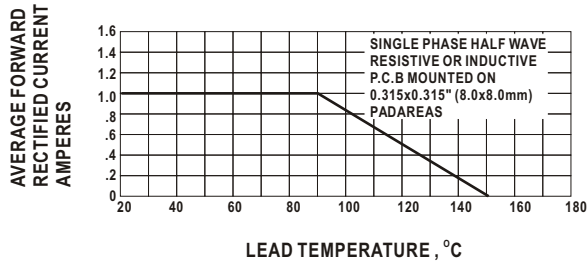


FIG. 1- FORWARD CURRENT DERATING CURVE

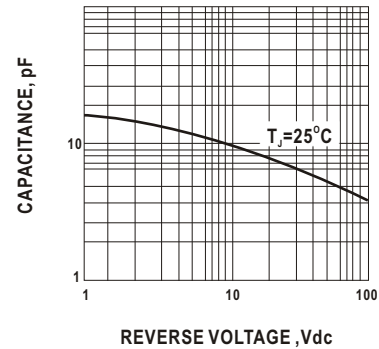


FIG. 2- TYPICAL JUNCTION CAPACITANCE

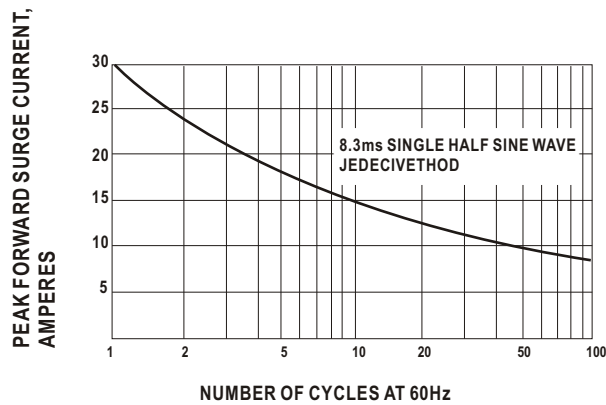


FIG. 3- PEAK FORWARD SURGE CURRENT

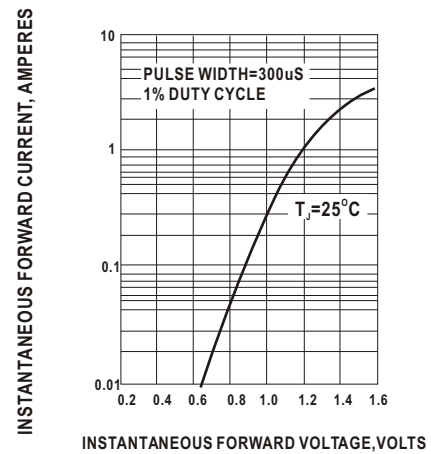
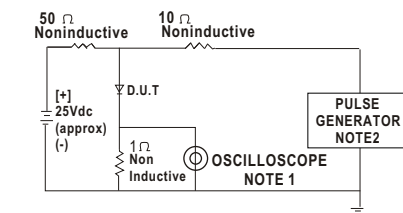


FIG.4-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



NOTE:1.Rise TIME=7ns max  
Input Impedance = 1 megohm 22 pF  
2.Rise Time = 10ns max  
Source Impedance = 50Ohms

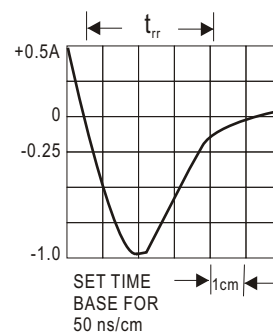


Fig. 5 - REVERSE FRCOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM