

## SURFACE MOUNT FAST RECOVERY RECTIFIER

Reverse Voltage - 50 to 1000 Volts Forward Current - 1.0Ampere

### FEATURES

- Glass passivated device
- Ideal for surface mounted applications
- Low reverse leakage
- Metallurgically bonded construction
- High temperature soldering guaranteed:  
260°C/10 seconds, 0.375" (9.5mm) lead length,  
5 lbs. (2.3kg) tension

### MECHANICAL DATA

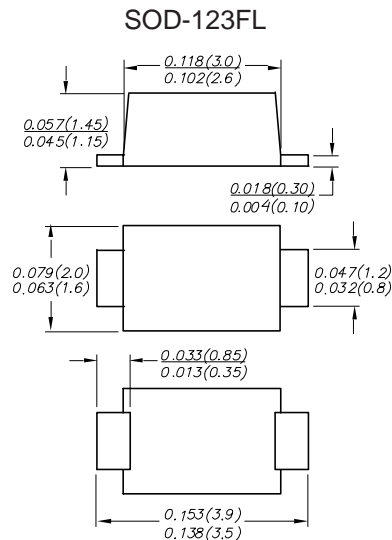
**Case:** SOD-123FL molded plastic body over passivated chip

**Terminals:** Plated axial leads, solderable per MIL-STD-750, Method 2026

**Polarity:** Color band denotes cathode end

**Mounting Position:** Any

**Weight:** 0.0007 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%.

	SYMBOLS	SOD1F1 F1	SOD1F2 F2	SOD1F3 F3	SOD1F4 F4	SOD1F5 F5	SOD1F6 F6	SOD1F7 F7	UNITS
Maximum repetitive peak reverse voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V
Maximum RMS voltage	$V_{RMS}$	35	70	140	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 $T_L=100^\circ\text{C}$ (NOTE 1)	$I_{AV}$	1.0							A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load	$I_{FSM}$	25.0							A
Maximum instantaneous forward voltage at 1.0A	$V_F$	1.3							V
Maximum DC reverse current $T_A=25^\circ\text{C}$ at rated DC blocking voltage $T_A=125^\circ\text{C}$	$I_R$	5.0 50.0							$\mu\text{A}$
Maximum reverse recovery time (NOTE 2)	$t_{rr}$	150			250		500		ns
Typical junction capacitance (NOTE 3)	$C_J$	15							pF
Typical thermal resistance (NOTE 4)	$R_{\theta JA}$	95							$^\circ\text{C}/\text{W}$
Operating junction and storage temperature range	$T_J, T_{STG}$	-55 to +150							$^\circ\text{C}$

**Note:** 1. Averaged over any 20ms period.

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

3. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

4. P.C.B. mounted with 0.2x0.2" (5.0x5.0mm) copper pad areas

## SURFACE MOUNT FAST RECOVERY RECTIFIER

AVERAGE FORWARD RECTIFIED CURRENT,  
AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE

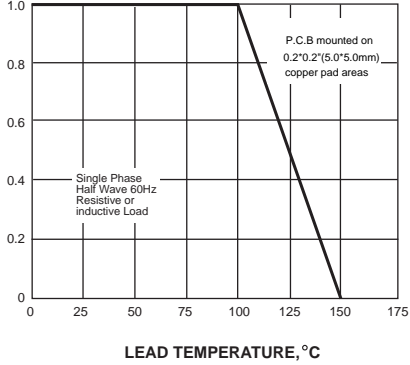


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

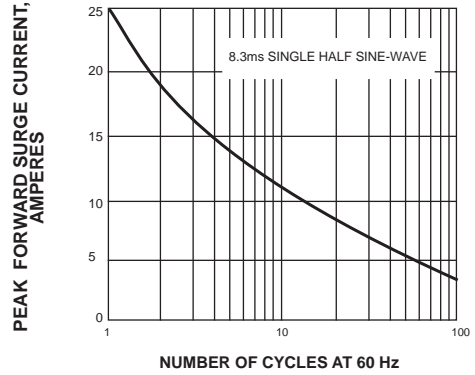


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

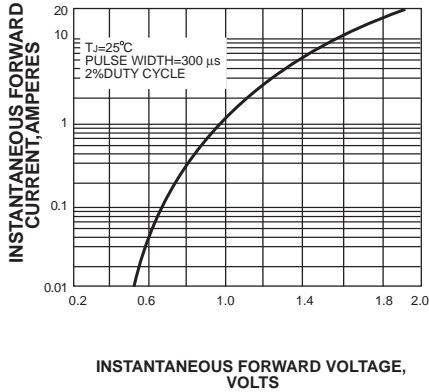


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

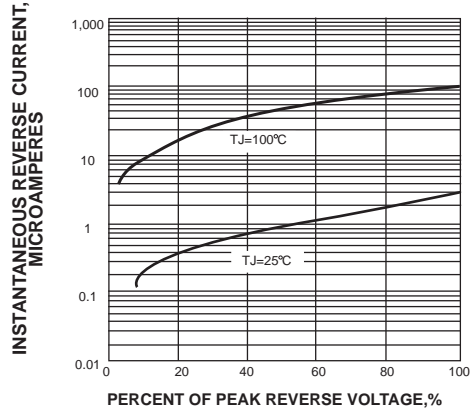


FIG. 5-TYPICAL JUNCTION CAPACITANCE

