

## F1 THRU F7

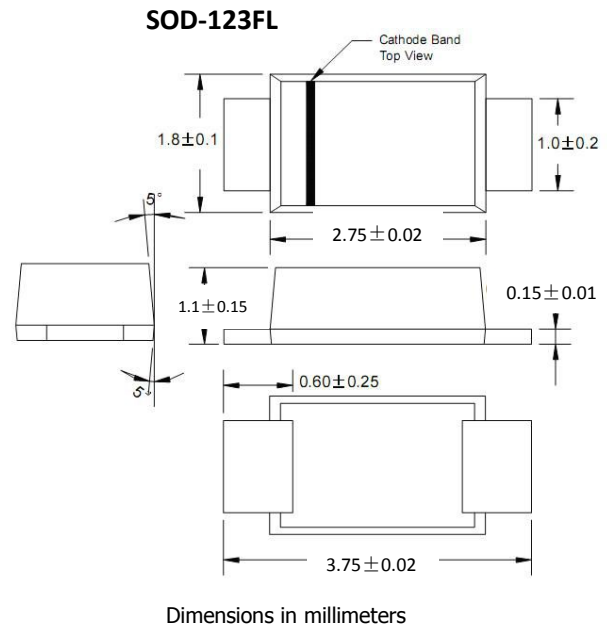
### 1.0 AMP. SURFACE MOUNT GENERAL PURPOSE FAST RECOVERY RECTIFIERS

#### FEATURES

- Glass passivated device
- Ideal for surface mounted applications
- Low reverse leakage
- Metallurgically bonded construction
- High temperature soldering guaranteed: 250°C/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



#### 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%.

Type Number	SYMBOL	F1	F2	F3	F4	F5	F6	F7	units
	marking								
Maximum Recurrent 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 $T_A = 65^\circ\text{C}$ (Note 1)	$I_{F(AV)}$	1.0							A
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rate load (JEDEC method)	$I_{FSM}$	25							A
Maximum Instantaneous forward Voltage at 0.7A DC	$V_F$	1.3							V
Maximum DC Reverse Current @ $T_A = 25^\circ\text{C}$ at rated DC blocking voltage @ $T_A = 125^\circ\text{C}$	$I_R$	10							$\mu\text{A}$
		50.0							
Maximum Reverse Recovery Time (Note 2)	$t_r$	150			250	500		nS	
Typical Junction Capacitance (Note 3)	$C_j$	4							pF
Typical thermal resistance (Note 4)	$R_{(JA)}$	180							$^\circ\text{C}/\text{W}$
Storage Temperature Range	$T_{STG}$	-55 to +150							$^\circ\text{C}$
Operation Temperature Range	$T_j$	-55 to +150							$^\circ\text{C}$

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

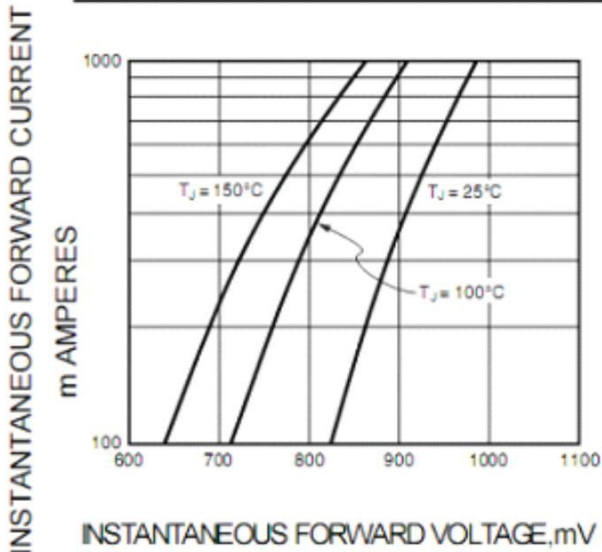
2. Test Conditions:  $I_F = 0.5\text{A}$ ,  $I_R = 1.0\text{A}$ ,  $I_{RR} = 0.25\text{A}$

3. Measured at 1MHz and applied reverse voltage of 4.0 volts d.c.

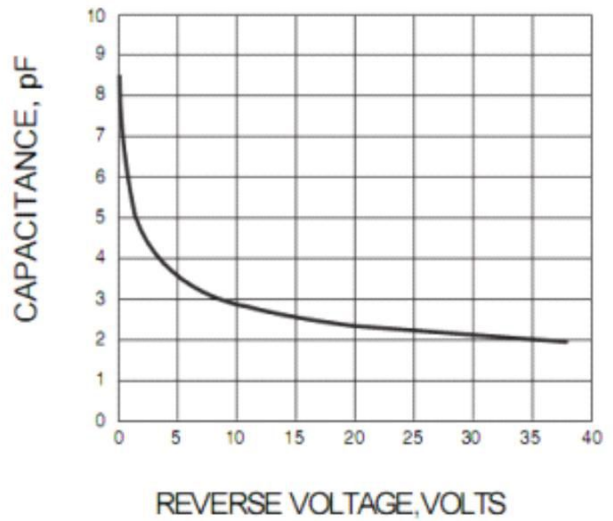
4. Measured on P.C.Board with  $0.2 \times 0.2$ " ( $5.0 \times 5.0\text{mm}$ ) Copper Pad Areas

## RATING AND CHARACTERISTIC CURVES (F1 THRU F7)

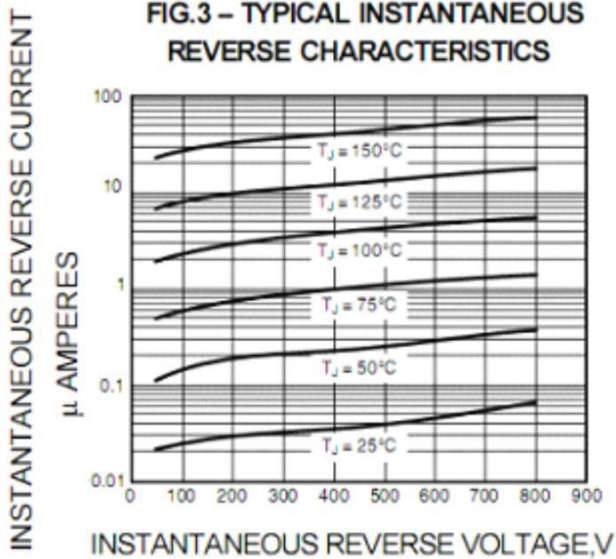
**FIG.1 – TYPICAL FORWARD CHARACTERISTIC**



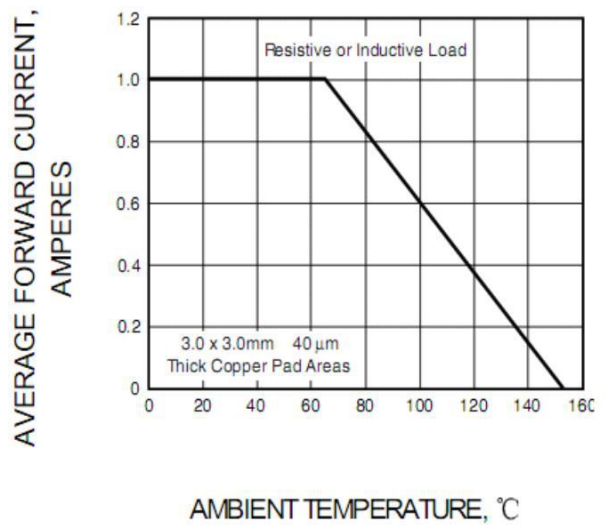
**FIG.2 – TYPICAL JUNCTION CAPACITANCE**



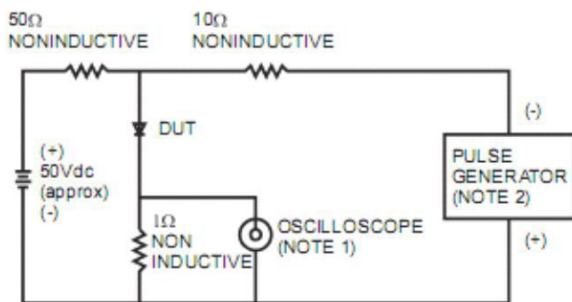
**FIG.3 – TYPICAL INSTANTANEOUS REVERSE CHARACTERISTICS**



**FIG.4 – FORWARD DERATING CURVE**



**FIG.5-- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM**



- NOTES: 1. Rise Time=7ns max. Input Impedance=1 megohm 22pf  
2. Rise Time=10ns max. Source Impedance=50 ohms

