



# F1A THRU F1M

## 1.0AMP Surface Mount Fast Recovery Rectifier

Features	Case: SOD-123FL
<ul style="list-style-type: none"> <li>Glass passivated die construction</li> <li>Ideal for surface mounted applications</li> <li>Low reverse leakage</li> <li>Metallurgically bonded construction</li> <li>High temperature soldering guaranteed: 260°C/10 seconds, 0.375"(9.5mm) lead length, 5 lbs. (2.3kg) tension</li> <li>Plastic material-UL flammability 94V-0</li> </ul>	
<b>Mechanical Data</b> <ul style="list-style-type: none"> <li>Case: SOD-123FL, molded plastic</li> <li>Terminals: plated leads solderable per MIL-STD-750, Method 2026</li> <li>Polarity: Color band denotes cathode end</li> <li>Mounting position: Any</li> </ul>	

Dimensions in millimeters

### Maximum Ratings and Electrical Characteristics

Rating 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	F1A	F1B	F1D	F1G	F1J	F1K	F1M	UNITS
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	$V_{RRM}$								
	$V_{RWM}$	50	100	200	400	600	800	1000	V
	$V_{DC}$								
RMS Reverse Voltage	$V_{RMS}$	35	70	140	280	420	560	700	V
Average Rectified Output Current @ $T_L = 75^\circ C$	$I_{F(AV)}$	1.0							A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	30							A
$I^2t$ Rating for Fusing ( $t < 8.3ms$ )	$I^2t$	3.735							A <sup>2</sup> s
Forward Voltage per element @ $I_F = 1.0A$	$V_{FM}$	1.3							V
Peak Reverse Current @ $T_A = 25^\circ C$ At Rated DC Blocking Voltage @ $T_A = 125^\circ C$	$I_R$	5.0 200							uA
Maximum reverse recovery time (Note 1)	$t_{rr}$	150			250		500		ns
Typical Junction Capacitance (Note 2)	$C_J$	10							pF
Typical thermal resistance	$R_{\theta JA}$	180							°C/W
Operating and Storage Temperature Range	$T_J, T_{STG}$	-55to+150							°C

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

2. Measured at 1.0 MHz and Applied reverse Voltage of 4.0V D.C.

3. Measured on P.C.Board with 0.2x0.2"(5.0x5.0mm)Copper Pad Area

Fig. 1 Typical Forward Current Derating Curve

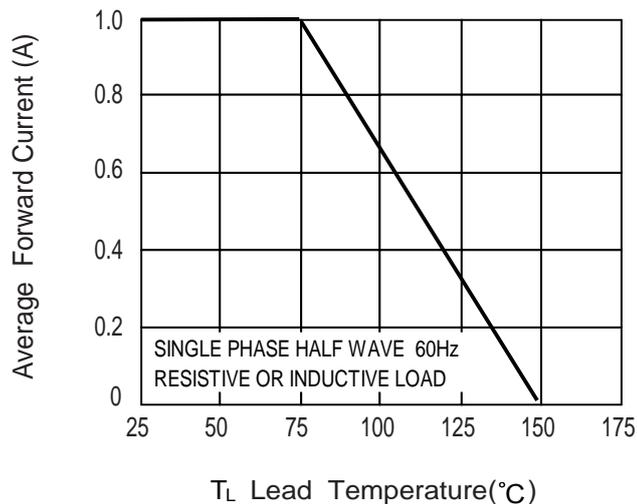


Fig. 2 Typical Instantaneous Forward Characteristics

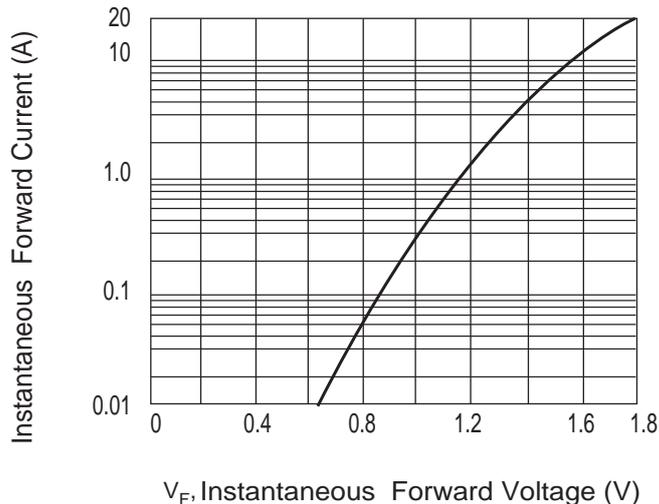


Fig. 3 Max Non-Repetitive Peak Fwd Surge Current

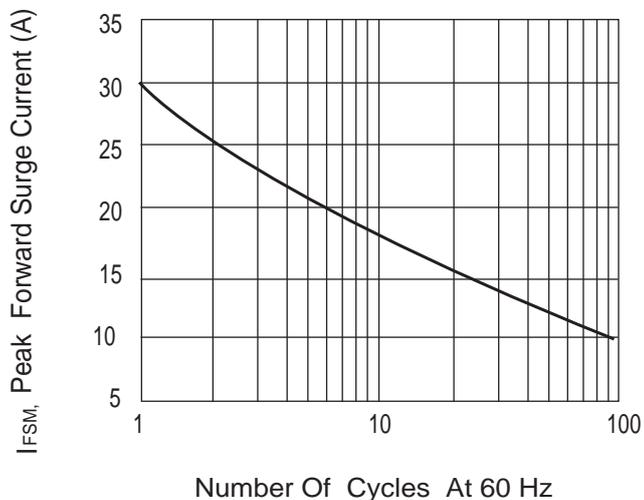


Fig.4 Typical Reverse Characteristics

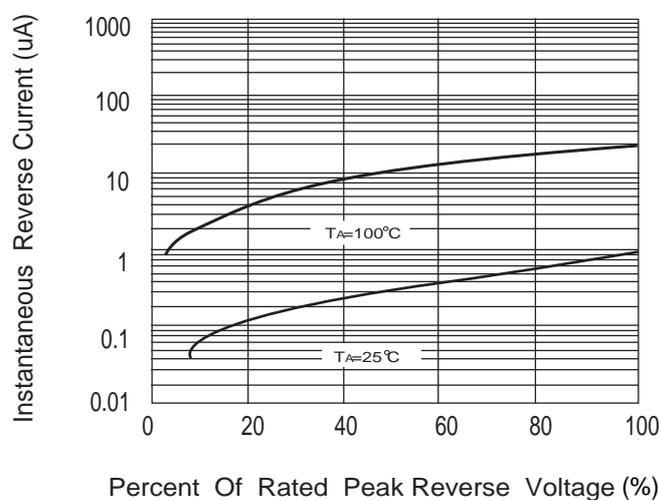


Fig.5 Typical Capacitance

