

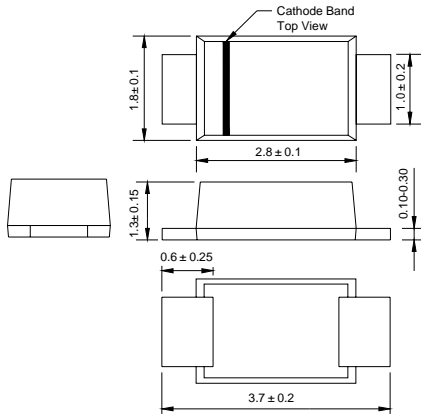


# SFM11-M THRU SFM18-M

## SURFACE MOUNT SUPER FAST RECTIFIER

Reverse Voltage - 50 to 600 Volts Forward Current - 1.0 Ampere

### SOD-123FL



### FEATURES

- ◆ Glass passivated device
- ◆ Ideal for surface mounted applications
- ◆ Low reverse leakage
- ◆ Metallurgically bonded construction
- ◆ High temperature soldering guaranteed:  
250°C/10 seconds, 0.375" (9.5mm) lead length,  
5 lbs. (2.3kg) tension

### MECHANICAL DATA

**Case:** JEDEC 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

## 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%.

MDD Catalog Number	SYMBOLS	SFM11-M	SFM12-M	SFM13-M	SFM14-M	SFM15-M	SFM16-M	SFM18-M	UNITS
		E1A	E1B	E1C	E1D	E1E	E1G	E1J	
Maximum repetitive peak reverse voltage	$V_{RRM}$	50	100	150	200	300	400	600	VOLTS
Maximum RMS voltage	$V_{RMS}$	35	70	105	140	210	280	420	VOLTS
Maximum DC blocking voltage	$V_{DC}$	50	100	150	200	300	400	600	VOLTS
Maximum average forward rectified current	$I_{(AV)}$	1.0							Amp
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	25.0							Amps
Maximum instantaneous forward voltage at 1.0A	$V_F$	0.95				1.25		1.7	Volts
Maximum DC reverse current $T_A=25^\circ C$ at rated DC blocking voltage $T_A=100^\circ C$	$I_R$					5.0		100.0	$\mu A$
Maximum reverse recovery time (NOTE 1)	$t_{rr}$					35			ns
Typical junction capacitance (NOTE 2)	$C_J$					10			pF
Typical thermal resistance (NOTE 3)	$R_{\theta JA}$					85			K/W
Operating junction and storage temperature range	$T_J, T_{STG}$	-55 to +150							$^\circ C$

**Note:** 1. Measured with  $I_F=0.5A$ ,  $I_R=1A$ ,  $I_{rr}=0.25A$ .  
 2. Measured at 1MHz and applied reverse voltage of 4.0V D.C.  
 3. PCB mounted on 0.2\*0.2" (5.0\*5.0mm) copper pad area.

# RATINGS AND CHARACTERISTIC CURVES SFM11-M THRU SFM18-M

FIG. 1- FORWARD CURRENT DERATING CURVE

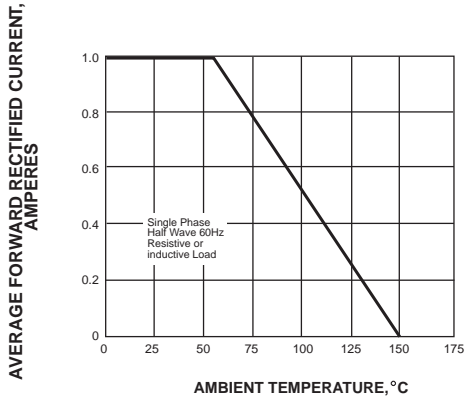


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

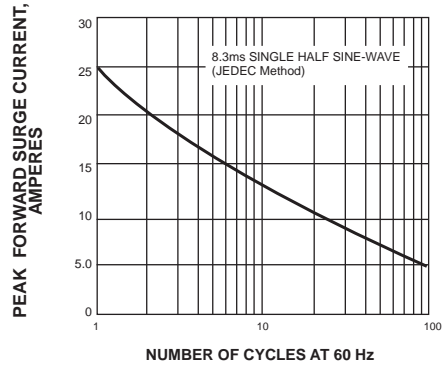


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

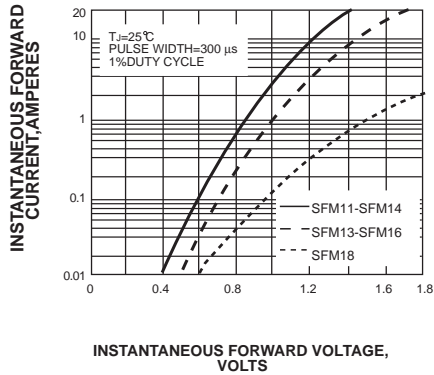


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

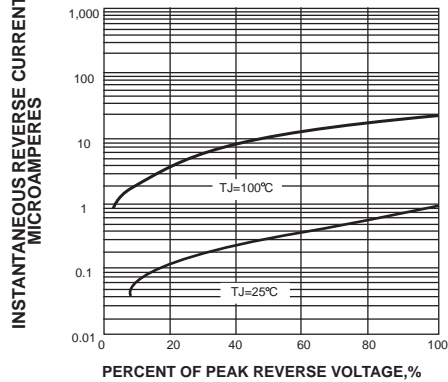


FIG. 5-TYPICAL JUNCTION CAPACITANCE

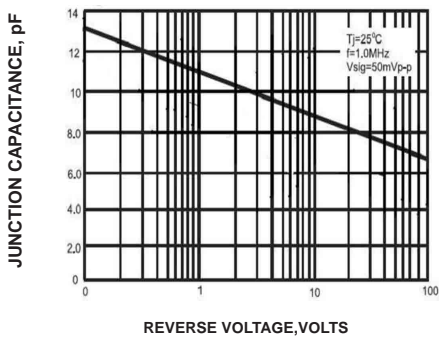


FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

