



Micro Commercial Components



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# SFM11PL THRU SFM18PL

## Features

- For Surface Mount Applications
- Low Power Loss, High Efficiency
- High Temp Soldering: 260°C for 10 Seconds At Terminals
- Halogen free available upon request by adding suffix "-HF"
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Lead Free Finish/RoHS Compliant (Note1)("P" Suffix designates Compliant. See ordering information)
- Welding Iron Temp: 350°C for 3s max.
- Storage Condition: Less than 30°C, RH < 70%

## 1 Amp Super Fast Recovery Silicon Rectifier 50 to 600 Volts

## Maximum Ratings

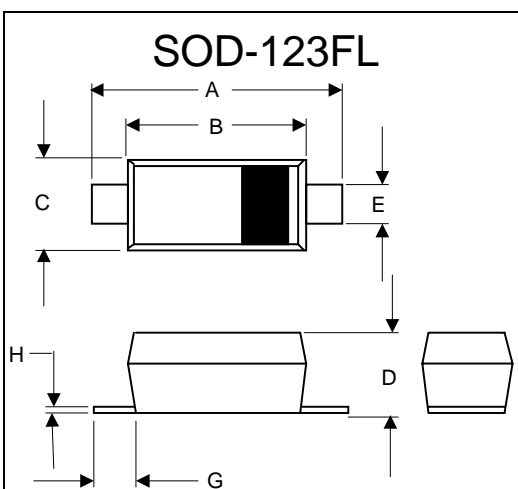
- Operating Temperature: -50°C to +150°C
- Storage Temperature: -50°C to +150°C
- Maximum Thermal Resistance; 75°C/W Junction To Ambient.

MCC Part Number	Device Marking	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
SFM11PL	S1	50V	35V	50V
SFM12PL	S2	100V	70V	100V
SFM13PL	S3	150V	105V	150V
SFM14PL	S4	200V	140V	200V
SFM15PL	S5	300V	210V	300V
SFM16PL	S6	400V	280V	400V
SFM17PL	S7	500V	350V	500V
SFM18PL	S8	600V	420V	600V

## Electrical Characteristics @ 25°C Unless Otherwise Specified

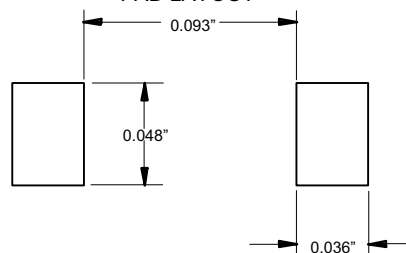
Average Forward Current	$I_{F(AV)}$	1.0A	$T_a = 50^\circ\text{C}$
Peak Forward Surge Current	$I_{FSM}$	30A	8.3ms, half sine
Maximum Instantaneous Forward Voltage	$V_F$	.95V 1.25V 1.70V	$I_{FM} = 1.0A;$ $T_a = 25^\circ\text{C}$
Maximum DC Reverse Current At Rated DC Blocking Voltage	$I_R$	5μA 100μA	$T_a = 25^\circ\text{C}$ $T_a = 100^\circ\text{C}$
Maximum Reverse Recovery Time	$T_{rr}$	35ns	$I_F = 0.5A, I_R = 1.0A,$ $I_{rr} = 0.25A$
Typical Junction Capacitance	$C_J$	10pF	Measured at 1.0MHz, $V_R = 4.0V$

Note: 1. High Temperature Solder Exemption Applied, see EU Directive Annex 7.



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.140	.152	3.55	3.85	
B	.100	.122	2.55	3.10	
C	.055	.075	1.40	1.90	
D	.035	.053	0.90	1.35	
E	.020	.041	0.50	1.05	
G	.010	-----	0.25	-----	
H	-----	.010	----	.25	

### SUGGESTED SOLDER PAD LAYOUT



# SFM11PL THRU SFM18PL

## RATING AND CHARACTERISTIC CURVES

FIG.1-TYPICAL FORWARD CHARACTERISTICS

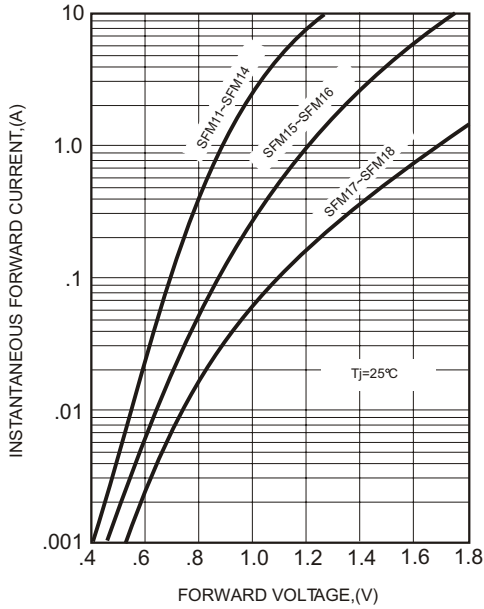


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

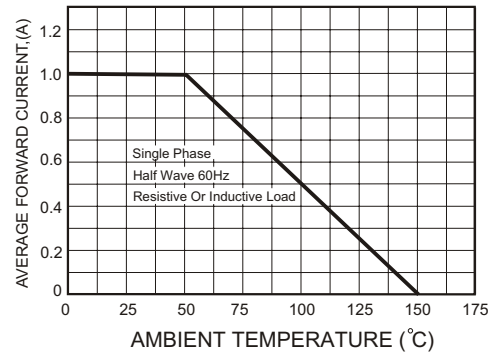
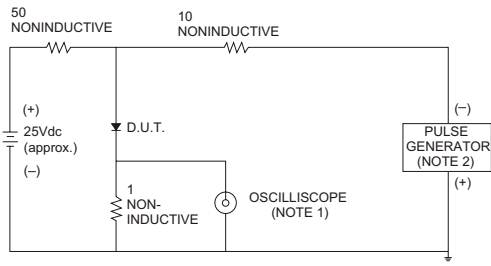


FIG.3- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS



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

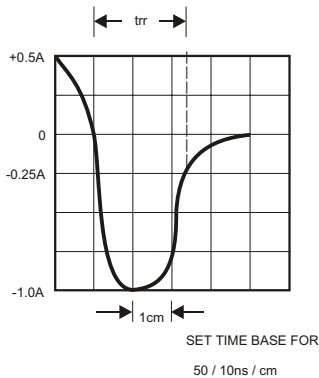


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

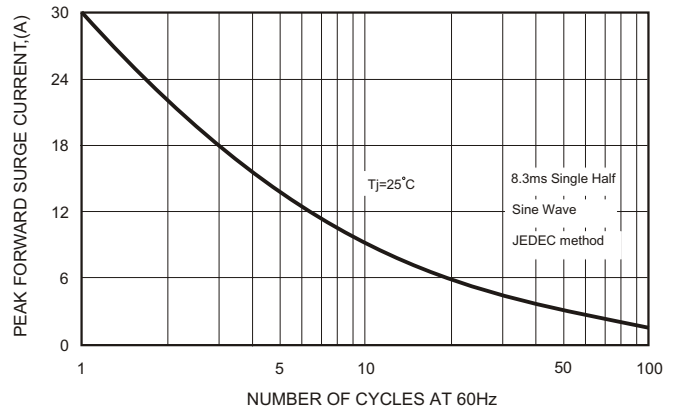
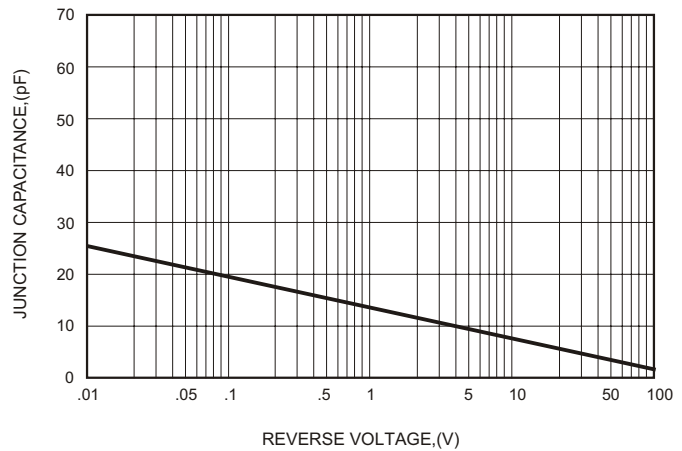


FIG.5-TYPICAL JUNCTION CAPACITANCE





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### Ordering Information :

Device	Packing
Part Number-TP	Tape&Reel: 2.5Kpcs/Reel

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

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