

## Features

- For Surface Mount Applications
- Low Power Loss, High Efficiency
- Halogen Free. "Green" Device (Note 1)
- Epoxy Meets UL 94 V-0 Flammability Rating
- Moisture Sensitivity Level 1
- Lead Free Finish/RoHS Compliant(Note 2) ("P" Suffix Designates Compliant. See Ordering Information)

## Maximum Ratings

- Operating Junction Temperature Range: -50°C to +150°C
- Storage Temperature Range: -50°C to +150°C
- Typical Thermal Resistance: 80°C/W Junction to Ambient(Note 3)

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

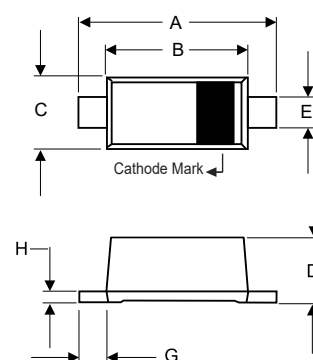
## Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	1.0A	See Fig. 1
Peak Forward Surge Current	$I_{FSM}$	30A	8.3ms, Half Sine
Maximum Instantaneous Forward Voltage	$V_F$	0.95V 1.25V 1.7V	$I_{FM}=1.0A$ ; $T_A=25^\circ C$
Maximum DC Reverse Current At Rated DC Blocking Voltage	$I_R$	5.0 $\mu A$ 100 $\mu A$	$T_A=25^\circ C$ ; $T_A=100^\circ C$
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. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.  
2. High Temperature Solder Exemption Applied, See EU Directive Annex 7a.  
3. Mounted on an FR4 PCB, 15mm x 20mm, 2oz, single-sided copper, with 4mm x 6mm copper pad area.

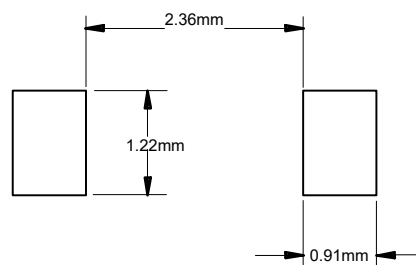
# 1 Amp Super Fast Recovery Silicon Rectifier 50 to 600 Volts

## SOD-123FL



DIM	DIMENSIONS				NOTE
	INCHES		MM		
	MIN	MAX	MIN	MAX	
A	0.130	0.152	3.30	3.85	
B	0.100	0.122	2.55	3.10	
C	0.055	0.075	1.40	1.90	
D	0.035	0.053	0.90	1.35	
E	0.020	0.041	0.50	1.05	
G	0.010	----	0.25	----	
H	----	0.010	----	0.25	

## Suggested Solder Pad Layout



**Curve Characteristics**

Fig. 1 - Forward Current Derating Curve

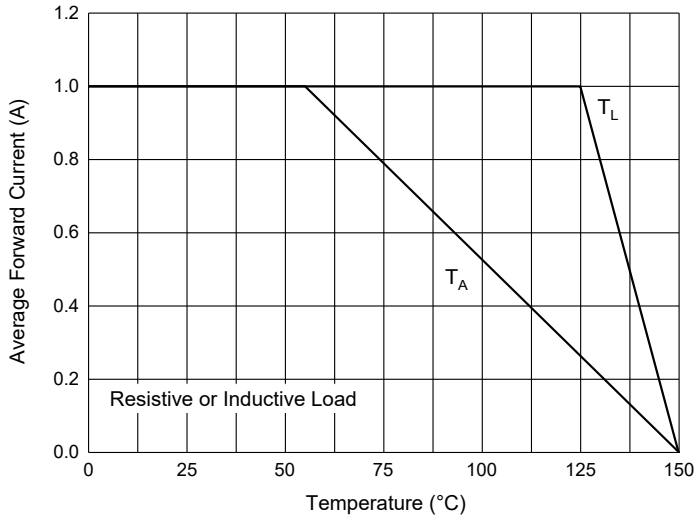


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

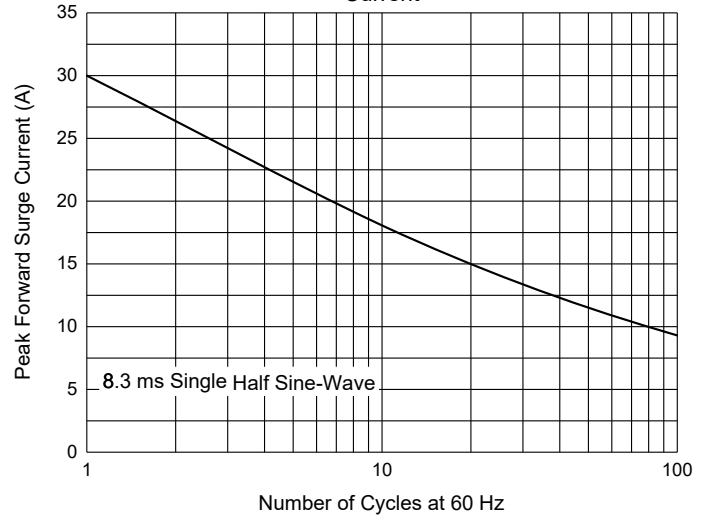


Fig. 3 - Typical Instantaneous Forward Characteristics

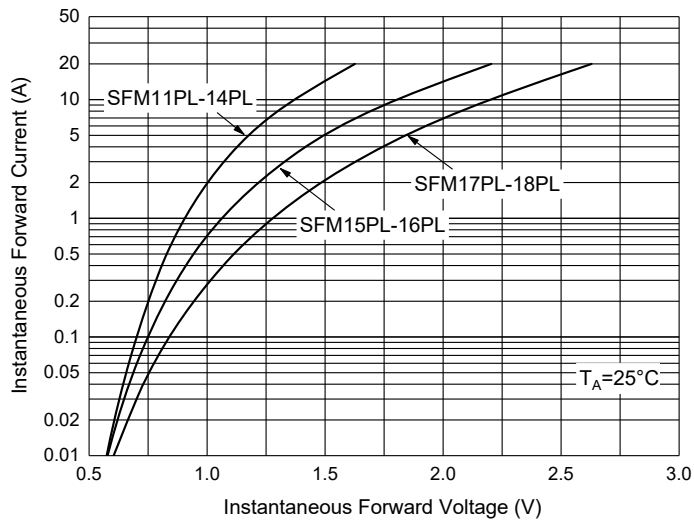
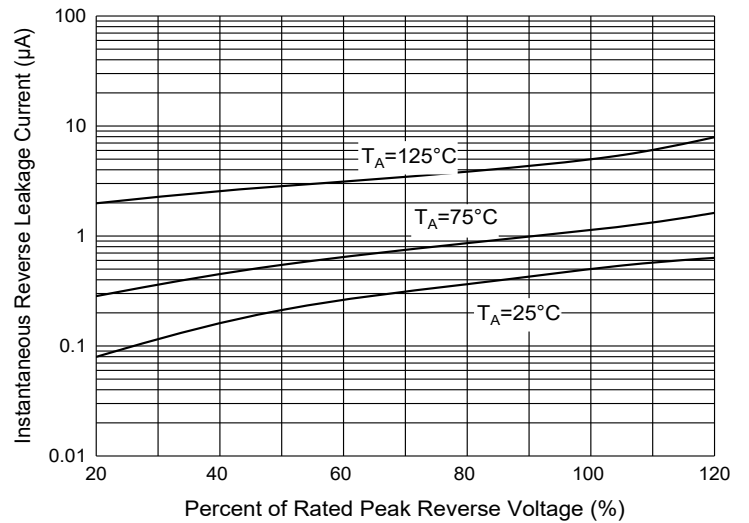


Fig. 4 - Typical Reverse Leakage Characteristics



## Ordering Information

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

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