

## Features

- High Surge Capability
- Low Forward Voltage
- Low Profile Package
- Epoxy Meets UL 94 V-0 Flammability Rating
- Moisture Sensitivity Level 1
- Halogen Free. "Green" Device (Note 1)
- Lead Free Finish/RoHS Compliant(Note 2) ("P" Suffix Designates Compliant. See Ordering Information)

## Maximum Ratings

- Operating Junction Temperature Range: -65°C to +125°C
- Storage Temperature Range: -65°C to +125°C
- Typical Thermal Resistance(Note3):88°C/W Junction to Ambient
- Typical Thermal Resistance(Note3):43°C/W Junction to Case
- Typical Thermal Resistance(Note3):30°C/W Junction to Lead

MCC Part Number	Device Marking	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
SM5817PL	K2	20V	14V	20V
SM5818PL	K3	30V	21V	30V
SM5819PL	K4	40V	28V	40V

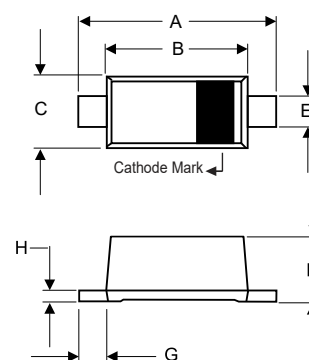
## Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	1.0A	$T_L=90^\circ\text{C}$
Repetitive Peak Forward Current	$I_{FRM}$	1.2A(Min) 1.5A(Max)	
Peak Forward Surge Current	$I_{FSM}$	30A	t=8.3ms
Power Dissipation	$P_D$	1.14W	
Forward Voltage	$V_F$	0.45V(Max) 0.53V(Max) 0.33V(Typ) 0.375V(Max) 0.45V(Max)	$I_F=1\text{A}$ $I_F=1\text{A}$ $I_F=0.1\text{A}$ $I_F=0.1\text{A}$ $I_F=0.5\text{A}$
Maximum DC Reverse Current At Rated DC Blocking Voltage	$I_R$	0.05mA 9.0mA 20µA	$T_J=25^\circ\text{C}$ $T_J=100^\circ\text{C}$ $V_R=15\text{V}$
Typical Junction Capacitance	$C_J$	50pF	f=1.0MHz, Vr=4V

- 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 Notes 7a.  
3. Thermal Resistance:PC Board Mounted on 0.2\*0.2"(5\*5mm) copper pad area.

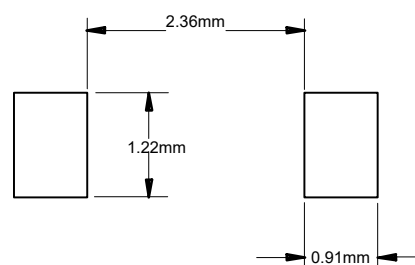
# Schottky Barrier Diodes 20 to 40 Volts

## 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

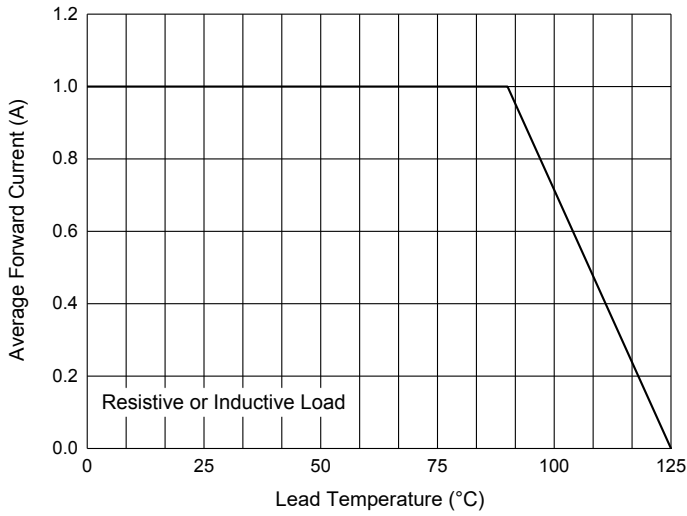


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

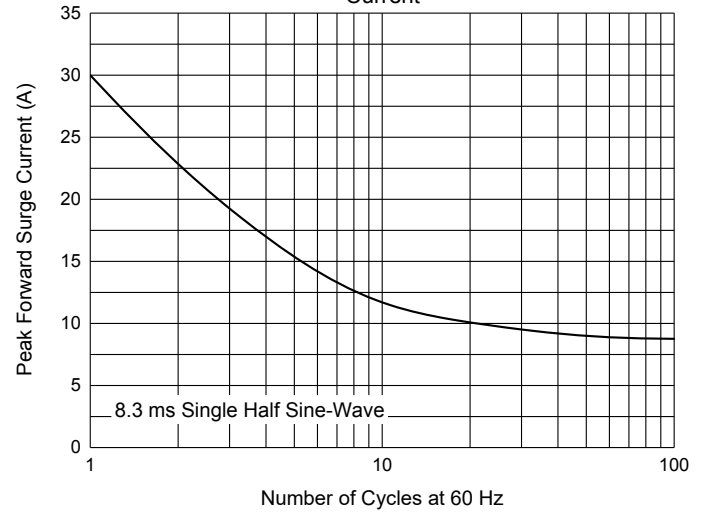


Fig. 3 - Typical Instantaneous Forward Characteristics

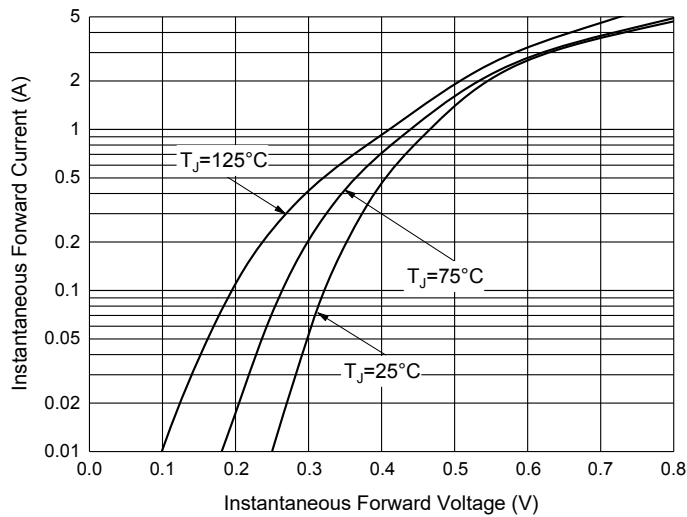
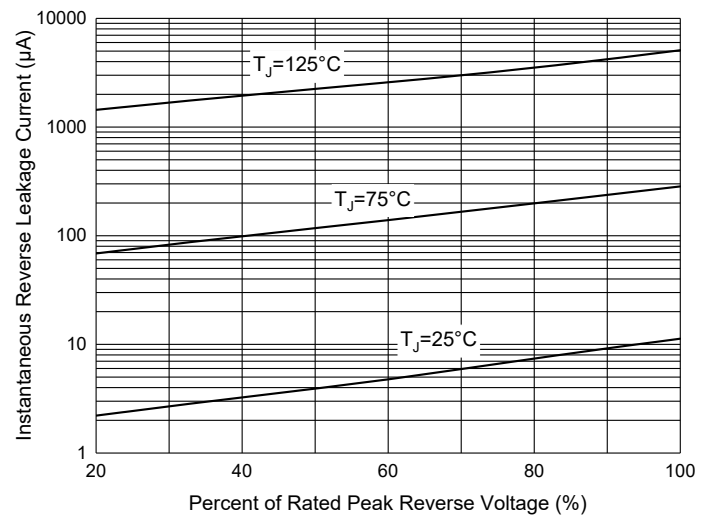


Fig. 4 - Typical Reverse Leakage Characteristics



## Ordering Information

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

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