

Features

- High Surge Capability
- Low Forward Voltage
- Low Profile Package
- Epoxy Meets UL 94 V-0 Flammability Rating
- Moisture Sensitivity Level 1
- Halogen Free Available Upon Request By Adding Suffix "-HF"
- Lead Free Finish/RoHS Compliant(Note 1) ("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(Note2):88°C/W Junction to Ambient
- Typical Thermal Resistance(Note2):43°C/W Junction to Case
- Typical Thermal Resistance(Note2):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

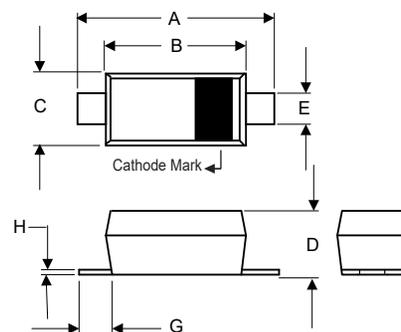
Average Forward Current	$I_{F(AV)}$	1.0A	$T_L=90^\circ\text{C}$
Repetitive Peak Forward Current	I_{FRM}	1.2A(Min) 1.5A(Max)	
Peak Forward Surge Current	I_{FSM}	30A	t=8.3ms
Power Dissipation	P_D	1.14W	
Forward Voltage	V_F	0.45V(Max) 0.53V(Max) 0.33V(Typ) 0.375V(Max) 0.45V(Max)	$I_F=1\text{A}$ $I_F=1\text{A}$ $I_F=0.1\text{A}$ $I_F=0.1\text{A}$ $I_F=0.5\text{A}$
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. High Temperature Solder Exemption Applied, see EU Directive Annex Notes 7a.

2. Thermal Resistance:PC Board Mounted on 0.2*0.2"(5*5mm) copper pad area.

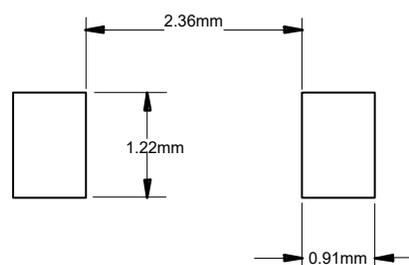
Schottky Barrier Diodes 20 to 40 Volts

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

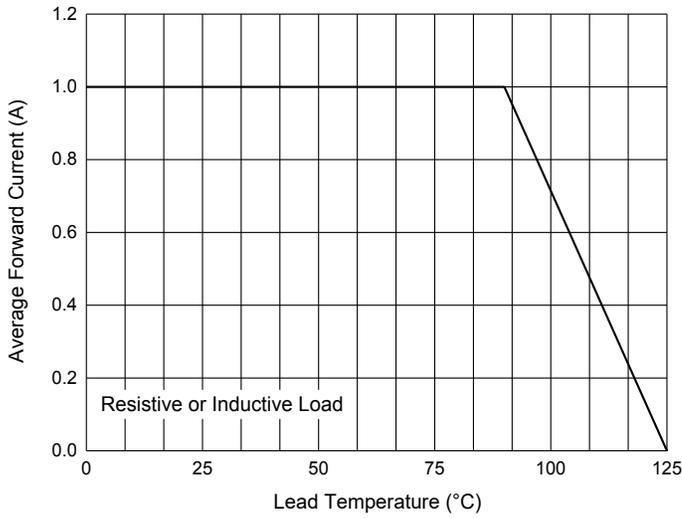


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

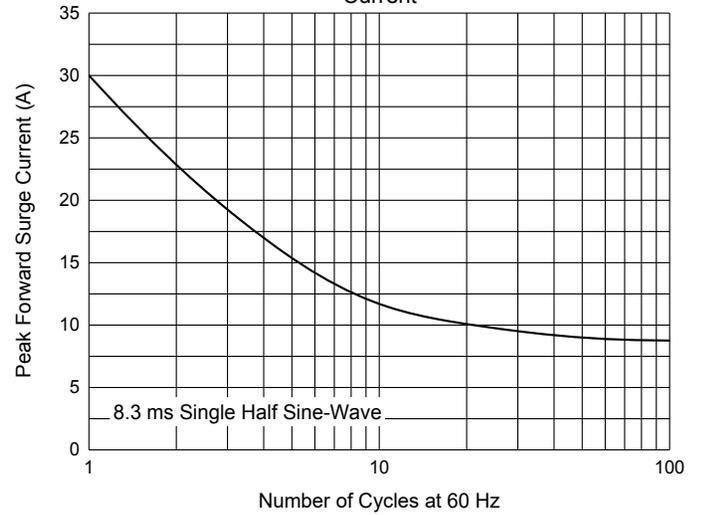


Fig. 3 - Typical Instantaneous Forward Characteristics

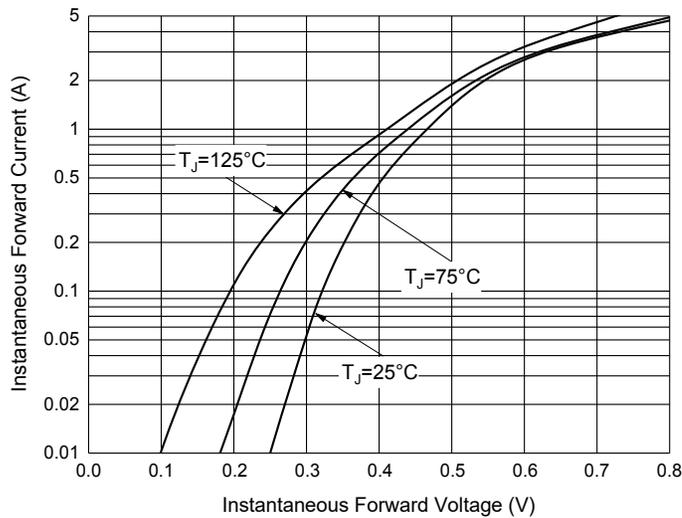
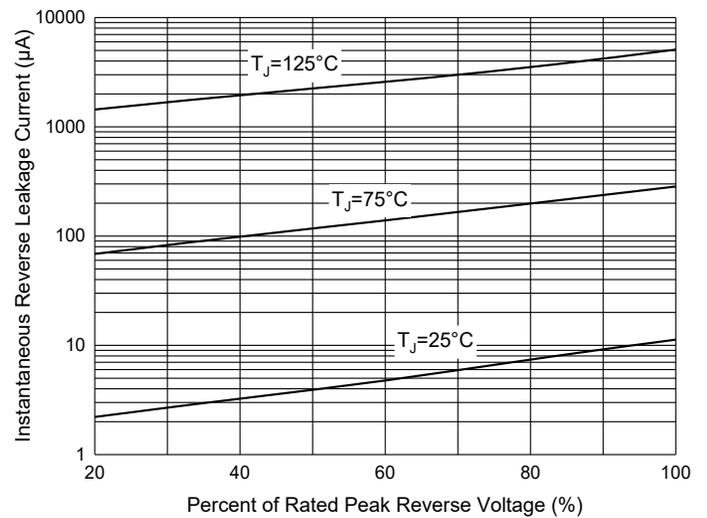


Fig. 4 - Typical Reverse Leakage Characteristics



Ordering Information

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

Note : Adding "-HF" Suffix For Halogen Free, eg. Part Number-TP-HF

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