

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

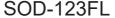
Electrical Characteristics @ 25°C Unless Otherwise Specified

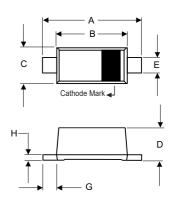
Average Forward Current	$I_{F(AV)}$	1.0A	T _L =90°C
Repetitive Peak Forward	I _{FRM}	1.2A(Min)	
Current	'FRM	1.5A(Max)	
Peak Forward Surge Current	I _{FSM}	30A	t=8.3ms
Power Dissipation	P_D	1.14W	
Forward Voltage			
SM5817PL		0.45V(Max)	I _F =1A
SM5818PL-5819PL		0.53V(Max)	I _F =1A
SM5818PL-5819PL	V _F	0.33V(Typ)	I _F =0.1A
SM5818PL-5819PL		0.375V(Max)	I _F =0.1A
SM5818PL-5819PL		0.45V(Max)	I _F =0.5A
Maximum DC Reverse			
Current At Rated DC	I _R	0.05mA	T _J =25°C
Blocking Voltage		9.0mA	T _J =100°C
SM5818PL-5819PL		20μΑ	V _R =15V
Typical Junction Capacitance	CJ	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.

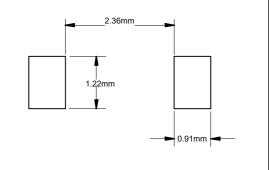
Schottky Barrier Diodes 20 to 40 Volts





DIMENSIONS							
DIM	INCHES		MM		NOTE		
ואווט	MIN	MAX	MIN	MAX	NOTE		
Α	0.130	0.152	3.30	3.85			
В	0.100	0.122	2.55	3.10			
С	0.055	0.075	1.40	1.90			
D	0.035	0.053	0.90	1.35			
Е	0.020	0.041	0.50	1.05			
G	0.010		0.25				
Η		0.010		0.25			

SUGGESTED SOLDER PAD LAYOUT





Curve Characteristics

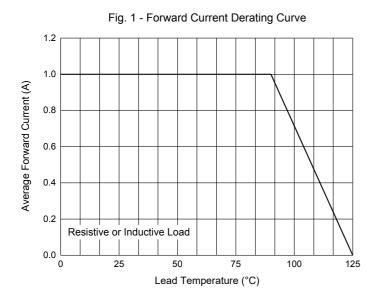


Fig. 3 - Typical Instantaneous Forward Characteristics

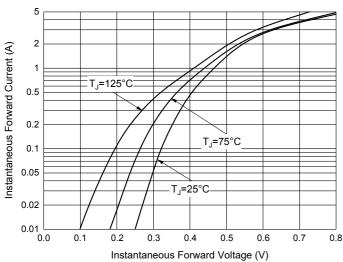
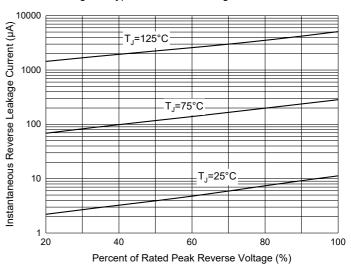


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge
Current

35
30
25
15
10
5
8.3 ms Single Half Sine-Wave
0
1 10 100
Number of Cycles at 60 Hz

Fig. 4 - Typical Reverse Leakage Characteristics





Ordering Information

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

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