

Features

- Halogen Free. "Green" Device (Note 1)
- AEC-Q101 Qualified
- High Surge Capability
- Low Forward Voltage
- Low Profile Package
- 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: -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
SM5817PLHE3	K2	20V	14V	20V
SM5818PLHE3	K3	30V	21V	30V
SM5819PLHE3	K4	40V	28V	40V

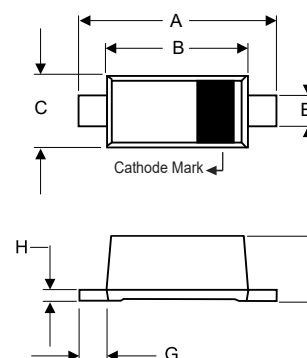
Electrical Characteristics @ 25°C Unless Otherwise Specified

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.

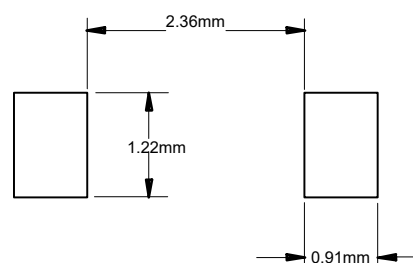
Schottky Barrier Diodes 20 to 40 Volts

SOD-123FL



DIM	INCHES		MM		NOTE
	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

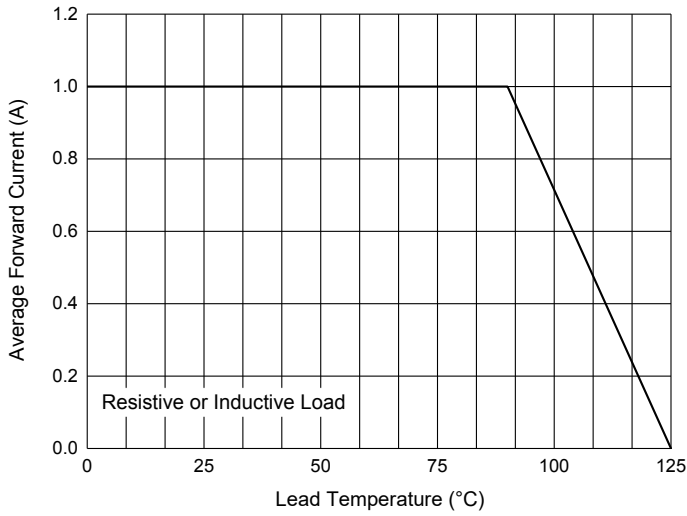


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

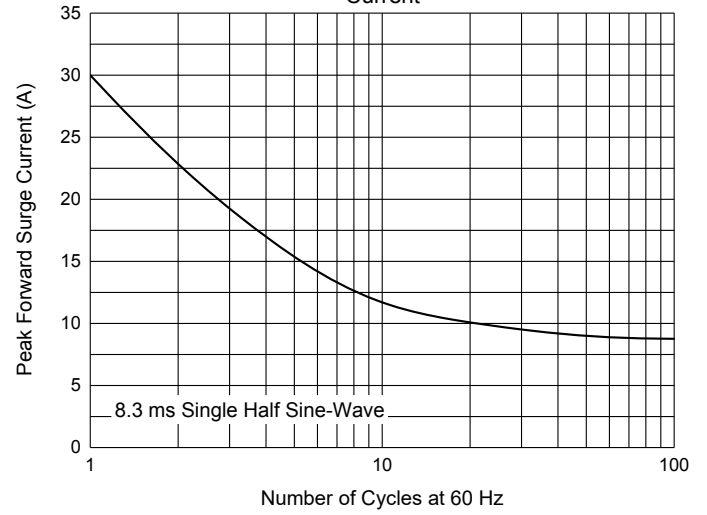


Fig. 3 - Typical Instantaneous Forward Characteristics

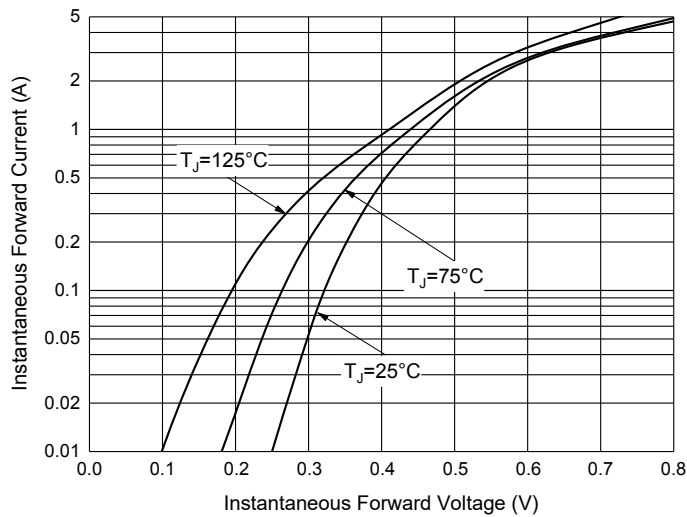
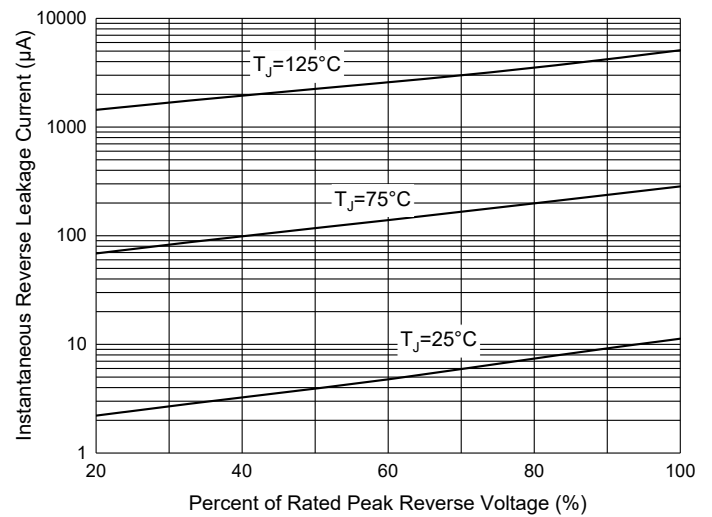


Fig. 4 - Typical Reverse Leakage Characteristics



Ordering Information

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

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