

Features

- Halogen Free. "Green" Device (Note 1)
- High Current Capability
- 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 RoHS Compliant. See Ordering Information)

Maximum Ratings @ 25°C (Unless Otherwise Specified)

Parameter	Symbol	Value			Unit
		SM5817PL	SM5818PL	SM5819PL	
Peak Repetitive Reverse Voltage	V_{RRM}	20	30	40	V
Working Peak Reverse Voltage	V_{RWM}				
DC Blocking Voltage	V_R				
RMS Reverse Voltage	V_{RMS}	14	21	28	V
Average Rectified Forward Current	$I_{F(AV)}$	1			A
Non-Repetitive Peak Surge Current @ 8.3ms Half Sine Wave	I_{FSM}	30			A
Current Squared Time @ $1ms \leq t \leq 8.3ms$	I^2t	3.735			A ² s

1 Amp
Gi fZUW'Ac i bh
GW ch_mIF YWjZyf
20 to 40 Volts

Marking Code

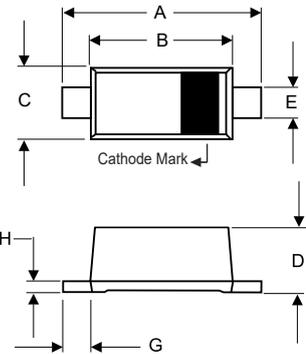
Part Number	Marking Code
SM5817PL	K2
SM5818PL	K3
SM5819PL	K4

Internal Structure

Pin	Description	Simplified Outline	Graphic Symbol
1	Cathode	<p>XX = Marking code</p>	
2	Anode		

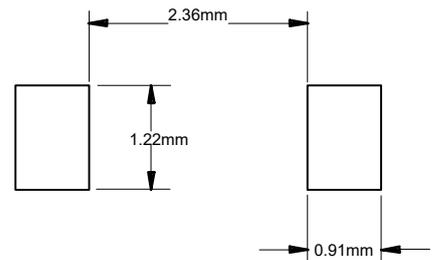
Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
2. High temperature solder exemption applied, see EU directive annex 7a.

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



Thermal characteristics

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
T_J	Operating Junction Temperature Range		-55		125	°C
T_{stg}	Storage Temperature Range		-55		150	°C
$R_{th(J-L)}$	Thermal Resistance from Junction to Lead	Note 1		30		°C/W
$R_{th(J-A)}$	Thermal Resistance from Junction to Ambient	Note 1		88		°C/W

Note:

1. Mounted on P.C.B. with 5mm*5mm copper pad areas.

Electrical Characteristics @ 25°C Unless Otherwise Specified

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Forward Voltage SM5817PL SM5818PL~SM5819PL	V_F	$I_F=1A; T_J=25^{\circ}C$			0.45 0.53	V
Reverse Current	I_R	at Rated $V_R; T_J=25^{\circ}C$ at Rated $V_R; T_J=100^{\circ}C$			0.05 9	mA
Junction Capacitance SM5817PL SM5818PL~SM5819PL	C_J	$V_R=4V; f=1MHz; T_J=25^{\circ}C$		75 50		pF

Curve Characteristics

Fig. 1 - Forward Current Derating Curve

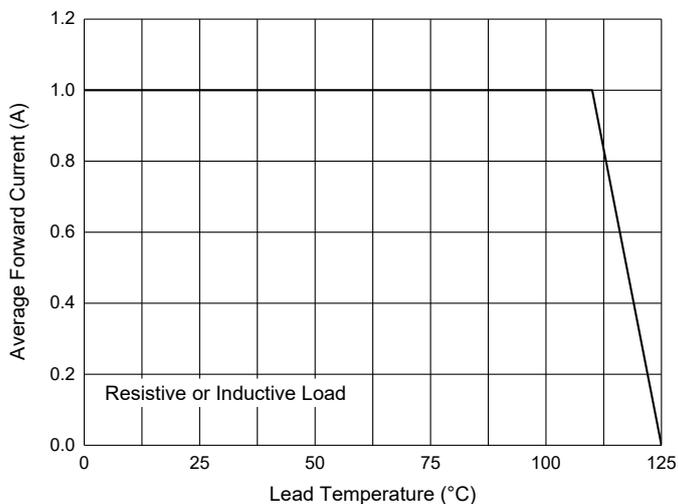


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

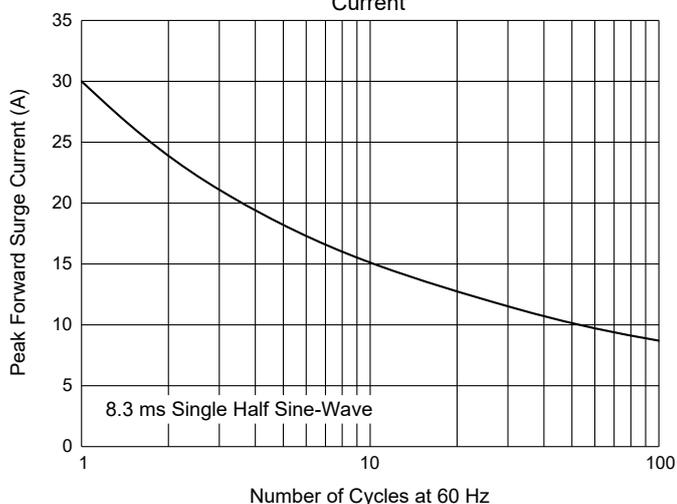


Fig. 3 - Typical Forward Characteristics

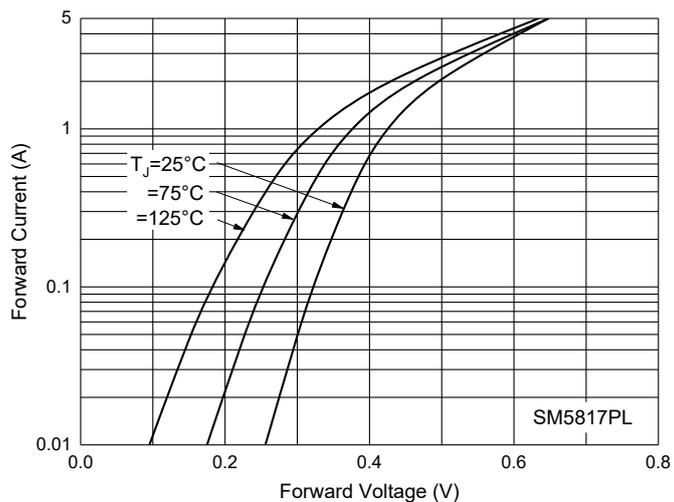


Fig. 4 - Typical Forward Characteristics

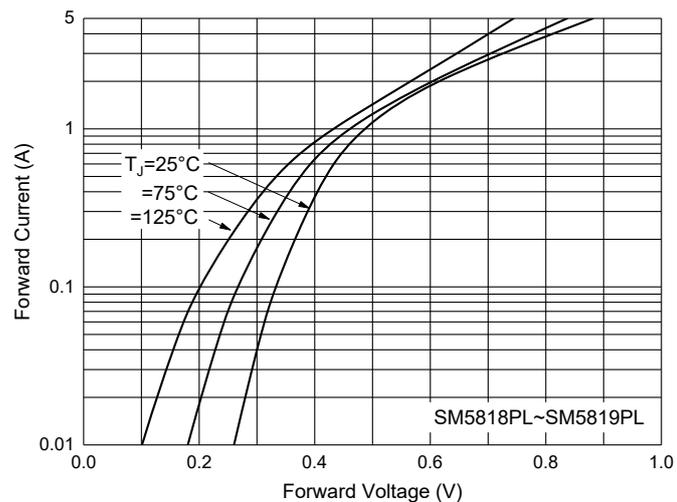


Fig. 5 - Typical Reverse Leakage Characteristics

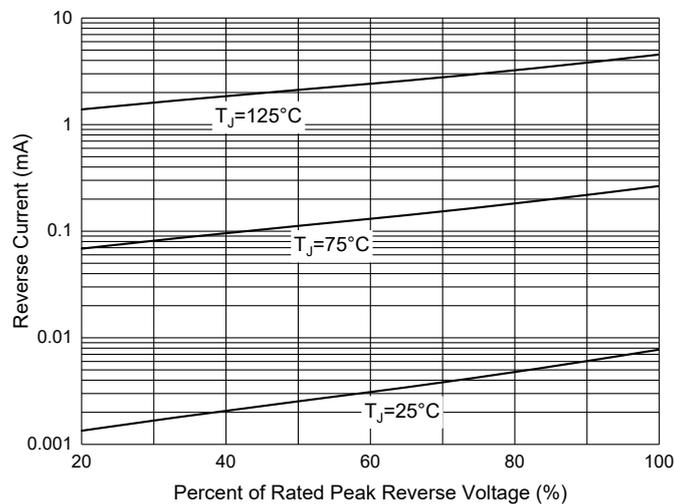
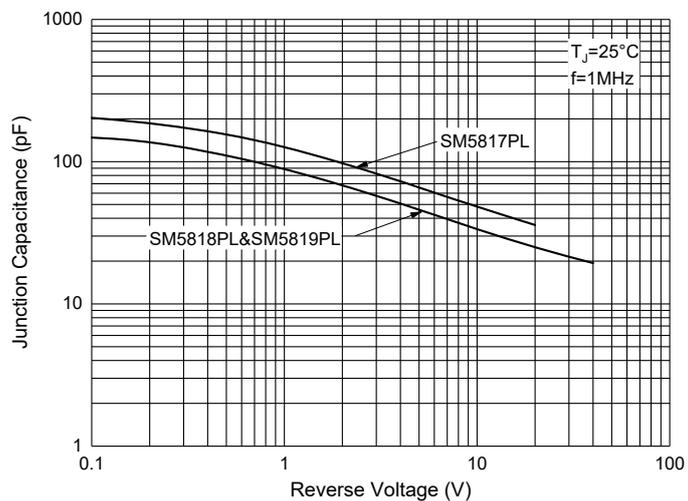


Fig. 6 - Typical Capacitance Characteristics



Ordering Information

Device	Packing
Part Number-TP	Tape&Reel:2.5Kpcs/Reel
Part Number-13P	Tape&Reel:10Kpcs/Reel

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