

## 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)

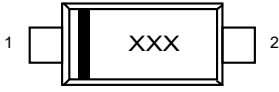

## Maximum Ratings @ 25°C (Unless Otherwise Specified)

Parameter	Symbol	Value						Unit
		SMD 15PL	SMD 16PL	SMD 18PL	SMD 110PL	SMD 1150PL	SMD 1200PL	
Peak Repetitive Reverse Voltage	$V_{RRM}$							V
Working Peak Reverse Voltage	$V_{RWM}$	50	60	80	100	150	200	
DC Blocking Voltage	$V_R$							
RMS Reverse Voltage	$V_{RMS}$	35	42	56	70	105	140	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 ≤ t ≤ 8.3ms	$I^2t$	3.735						A <sup>2</sup> s

## Marking code

Part Number	Marking Code
SMD15PL	D5
SMD16PL	D6
SMD18PL	D8
SMD110PL	D10
SMD1150PL	D15
SMD1200PL	D20

## Internal Structure

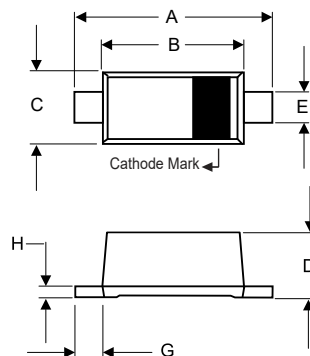
Pin	Description	Simplified Outline	Graphic Symbol
1	Cathode	 XXX = Marking code	
2	Anode		

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.

**1 Amp**  
**50 to 200 Volts**

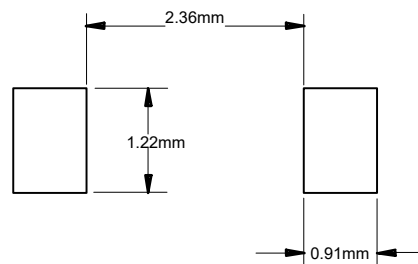
## SOD-123FL



## DIMENSIONS

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		150	°C
$T_{stg}$	Storage Temperature Range		-55		150	°C
$R_{th(J-L)}$	Thermal Resistance from Junction to Lead	Note 1		25		°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 SMD15PL~SMD16PL SMD18PL~SMD1150PL SMD1200PL	$V_F$	$I_F=1A; T_J=25^{\circ}C$			0.70 0.85 0.95	V
Reverse Current SMD15PL~SMD16PL SMD18PL~SMD1200PL	$I_R$	at Rated $V_R; T_J=25^{\circ}C$ at Rated $V_R; T_J=125^{\circ}C$ at Rated $V_R; T_J=25^{\circ}C$ at Rated $V_R; T_J=125^{\circ}C$			0.1 20 0.01 5	mA
Junction Capacitance SMD15PL~SMD16PL SMD18PL~SMD110PL SMD1150PL~SMD1200PL	$C_J$	$V_R=4V; f=1MHz; T_J=25^{\circ}C$		40 30 20		pF

## Curve Characteristics

Fig. 1 - Forward Current Derating Curve

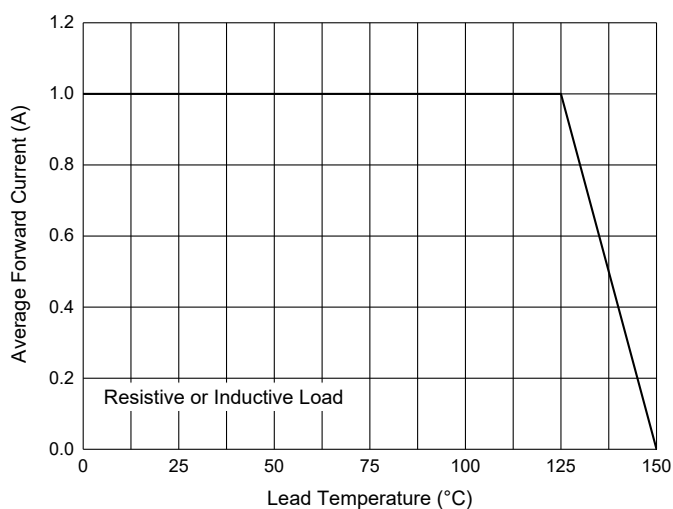


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

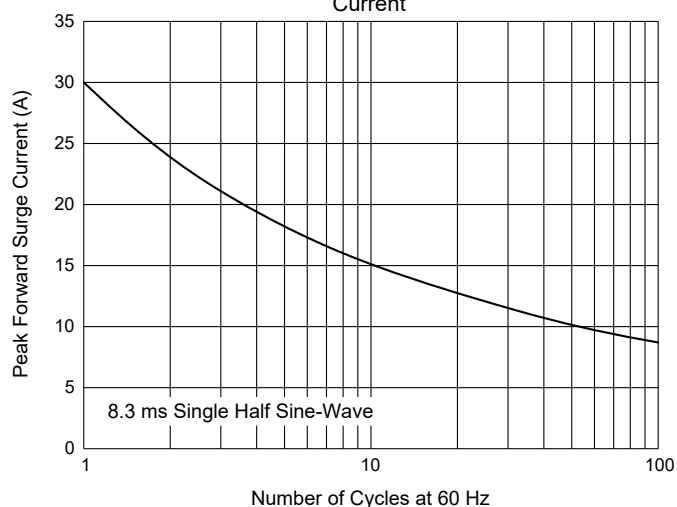


Fig. 3 - Typical Forward Characteristics

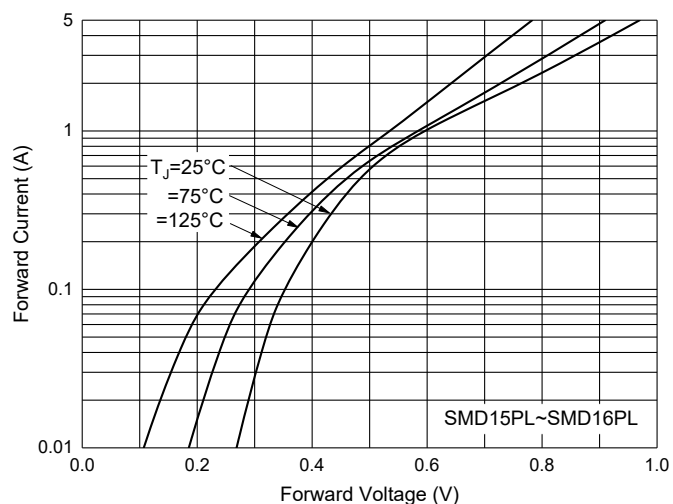


Fig. 4 - Typical Reverse Leakage Characteristics

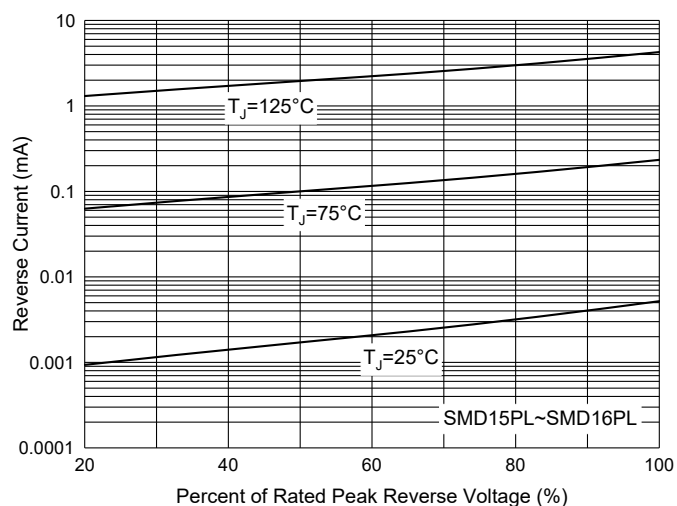


Fig. 5 - Typical Forward Characteristics

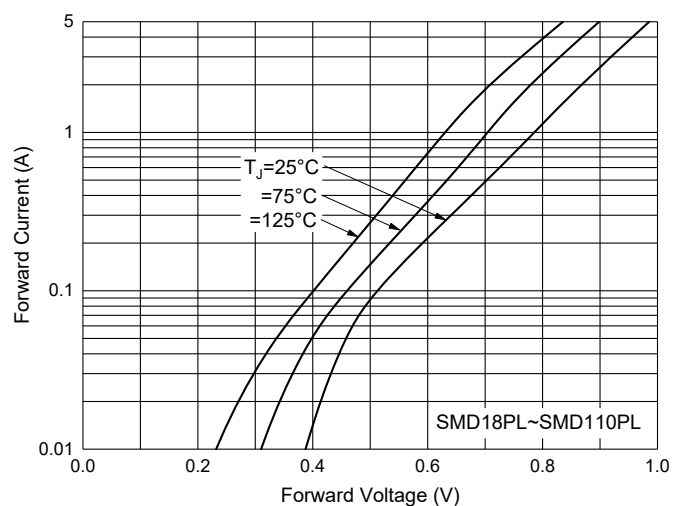
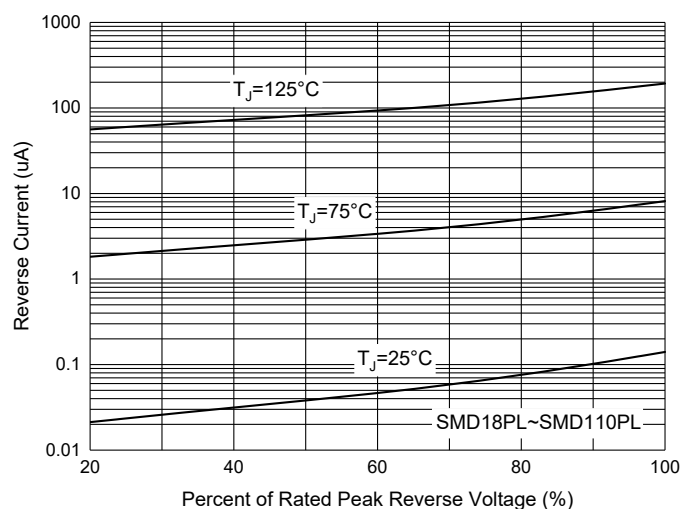


Fig. 6 - Typical Reverse Leakage Characteristics



## Curve Characteristics

Fig. 7 - Typical Forward Characteristics

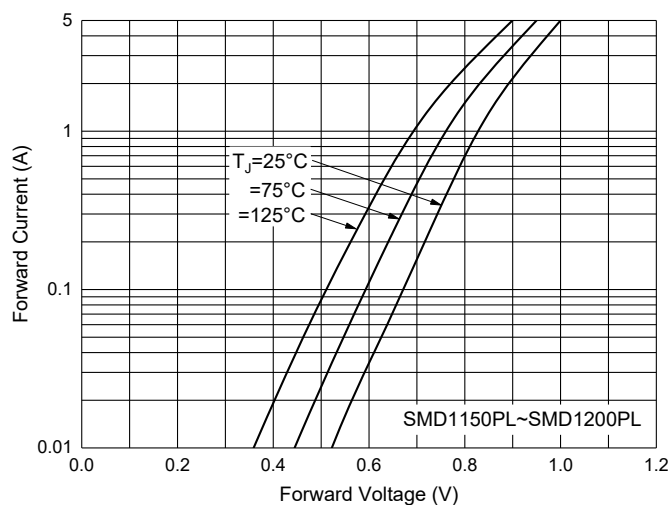


Fig. 8 - Typical Reverse Leakage Characteristics

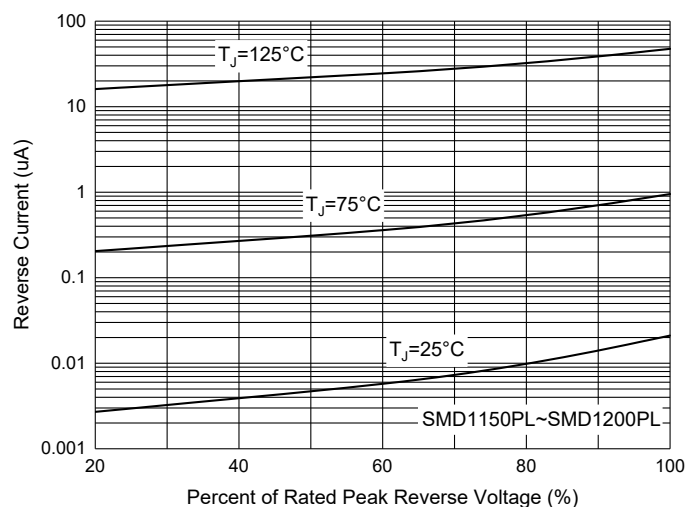


Fig. 9 - Typical Capacitance Characteristics

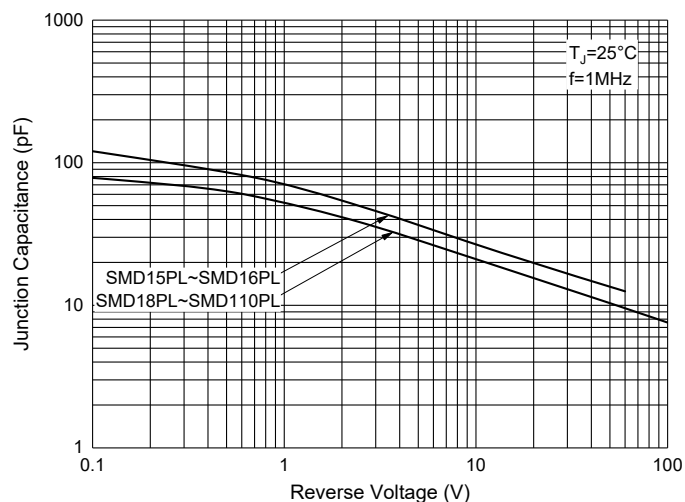
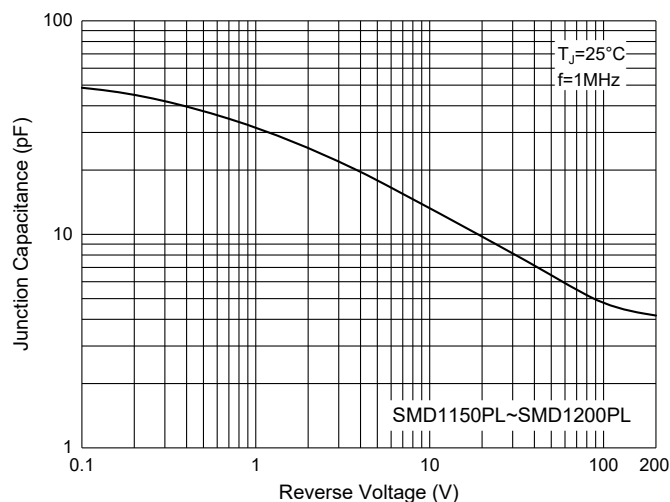


Fig. 10 - Typical Capacitance Characteristics



## Ordering Information

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

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