

## Features

- Halogen Free. "Green" Device (Note 1)
- Fully Automotive Qualified to AEC-Q101
- Low Profile Package
- High Surge Capability
- 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)

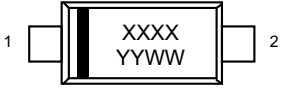

## Maximum Ratings @ 25°C (Unless Otherwise Specified)

Parameter	Symbol	Value		Unit
		SMD110PLQ	SMD120PLQ	
Peak Repetitive Reverse Voltage	$V_{RRM}$	100	200	V
Working Peak Reverse Voltage	$V_{RWM}$			
DC Blocking Voltage	$V_R$			
RMS Reverse Voltage	$V_{RMS}$	70	140	V
Average Rectified Forward Current @ $T_L=140^\circ\text{C}$	$I_{F(AV)}$	1		A
Non-Repetitive Peak Surge Current @ 8.3ms Half Sine Wave	$I_{FSM}$	40		A
Current Squared Time @ $1\text{ms} \leq t \leq 8.3\text{ms}$	$I^2t$	6.64		A <sup>2</sup> s

## Marking code

Part Number	Marking code
SMD110PLQ	D10
SMD120PLQ	D20

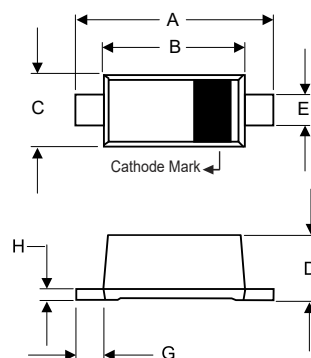
## Internal Structure

Pin	Description	Simplified outline	Graphic symbol
1	cathode	 <p>XXXX = Marking code YYWW = Date 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.

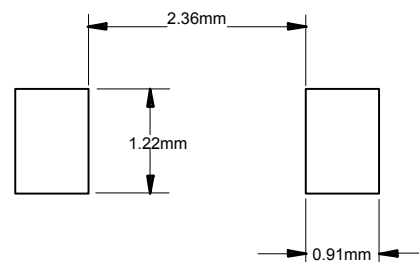
# 1 Amp Surface Mount Schottky Rectifier 100 to 200 Volts

## 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



## Thermal characteristics

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
$T_J$	Operating Junction Temperature Range		-55		175	°C
$T_{stg}$	Storage Temperature Range		-55		175	°C
$R_{th(J-L)}$	Thermal Resistance from Junction to Lead	Note 1		35		°C/W
$R_{th(J-A)}$	Thermal Resistance from Junction to Ambient	Note 1		85		°C/W

Note:

1. Mounted on P.C.B. with 3mm\*3mm copper pad areas.

## Electrical Characteristics @ 25°C Unless Otherwise Specified

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Forward Voltage						
SMD110PLQ	$V_F$	$I_F=1A; T_J=25^{\circ}C$		0.73	0.77	V
		$I_F=1A; T_J=125^{\circ}C$		0.58	0.68	
SMD120PLQ		$I_F=1A; T_J=25^{\circ}C$		0.79	0.90	
		$I_F=1A; T_J=125^{\circ}C$		0.65	0.78	
Reverse Current						
SMD110PLQ	$I_R$	at Rated $V_R; T_J=25^{\circ}C$			1	uA
		at Rated $V_R; T_J=125^{\circ}C$			500	
SMD120PLQ		at Rated $V_R; T_J=25^{\circ}C$			1	
		at Rated $V_R; T_J=125^{\circ}C$			500	
Junction Capacitance						
SMD110PLQ	$C_J$	$V_R=4V; f=1MHz; T_J=25^{\circ}C$		50		pF
SMD120PLQ				35		

## Curve Characteristics

Fig. 1 - Forward Current Derating Curve

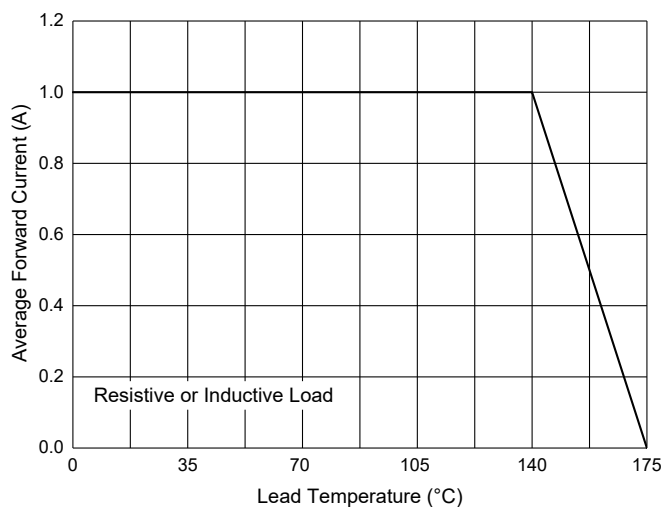


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

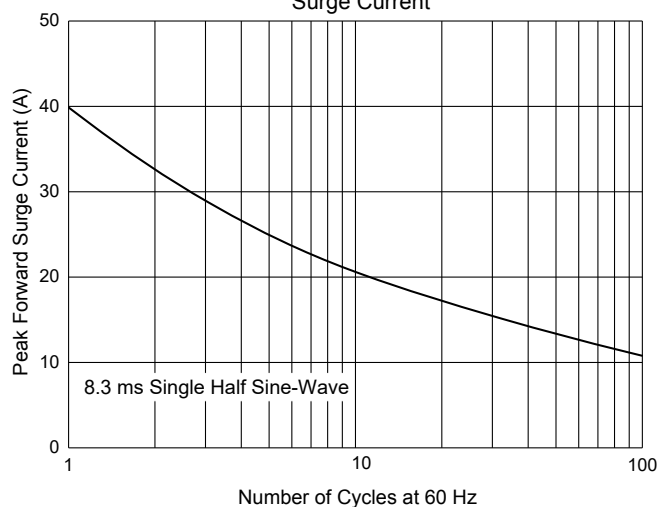


Fig. 3 - Typical Forward Characteristics

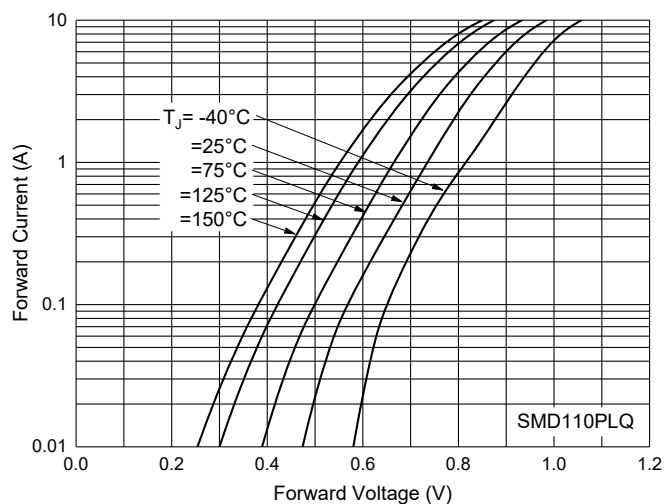


Fig. 4 - Typical Reverse Leakage Characteristics

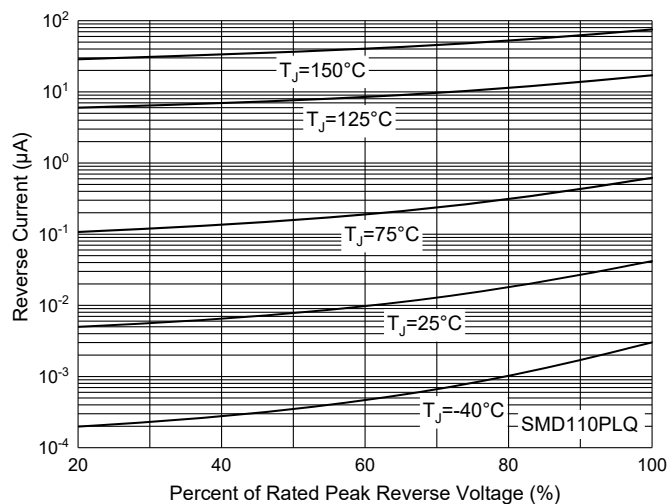


Fig. 5 - Typical Forward Characteristics

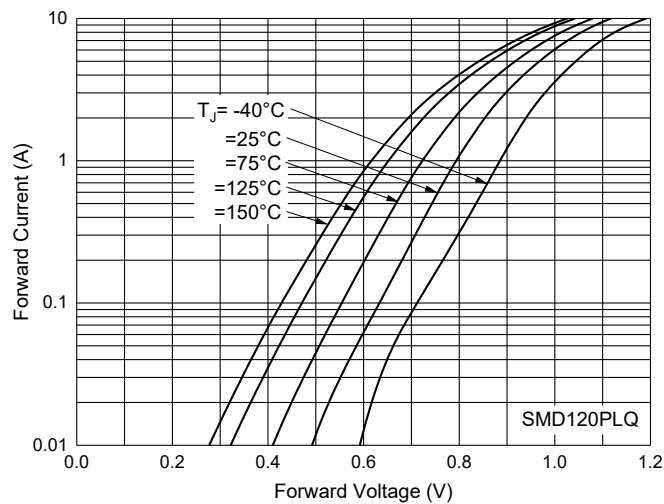
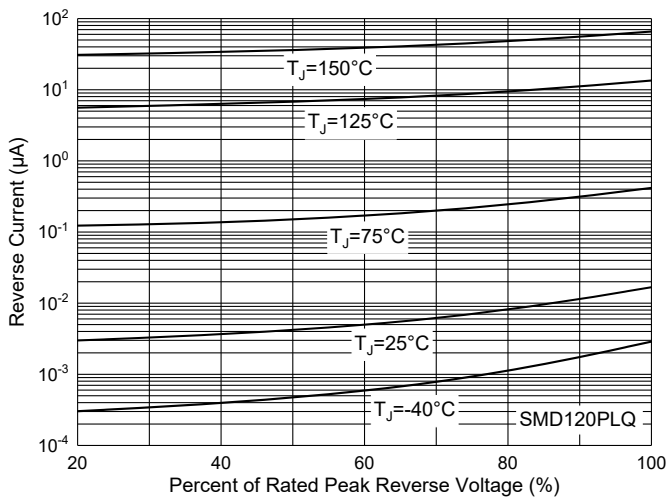


Fig. 6 - Typical Reverse Leakage Characteristics



## Curve Characteristics

Fig. 7 - Capacitance Characteristics

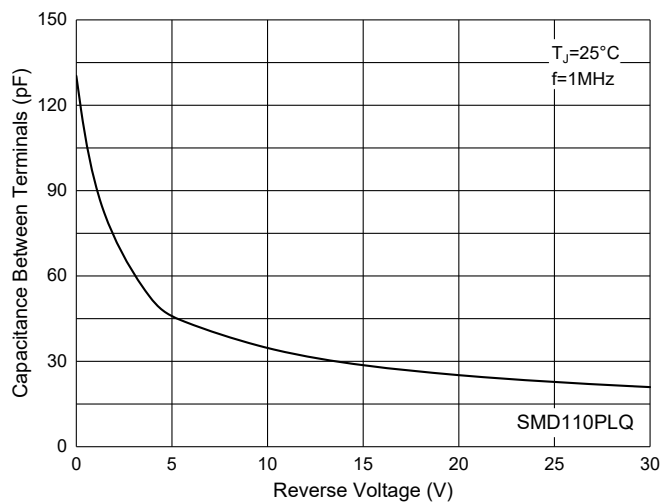
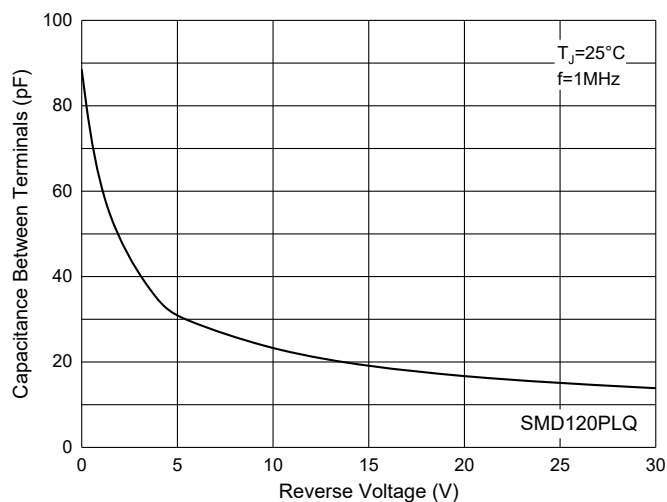


Fig. 8 - Capacitance Characteristics



## Ordering Information

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

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