

## 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
		SS16HL	SS110HL	SS120HL	
Peak Repetitive Reverse Voltage	$V_{RRM}$	60	100	200	V
Working Peak Reverse Voltage	$V_{RWM}$				
DC Blocking Voltage	$V_R$				
RMS Reverse Voltage	$V_{RMS}$	42	70	140	V
Average Rectified Forward Current	$I_{F(AV)}$	1			A
Non-Repetitive Peak Surge Current @ 8.3ms Half Sine Wave	$I_{FSM}$	25			A
Current Squared Time @ 1ms ≤ t ≤ 8.3ms	$I^2t$	2.6			A <sup>2</sup> s

## Marking Code

Part Number	Marking Code
SS16HL	FM16
SS110HL	FM110
SS120HL	FM120

## Internal Structure

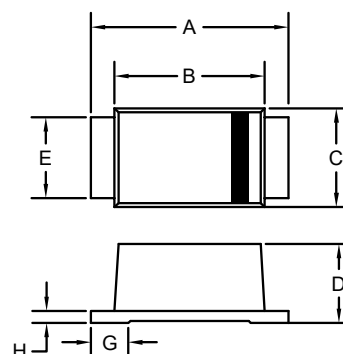
Pin	Description	Simplified Outline	Graphic Symbol
1	Cathode	 XXXX = Marking code	
2	Anode		

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.

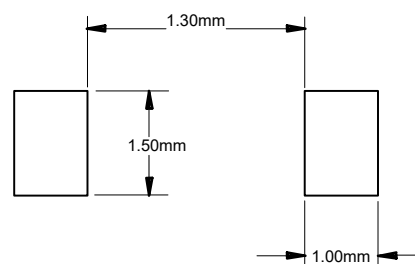
**1 Amp**  
**60 to 200 Volts**

## SOD-323HL



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.091	0.106	2.30	2.70	
B	0.067	0.083	1.70	2.10	
C	0.041	0.057	1.05	1.45	
D	0.031	0.047	0.80	1.20	
E	0.035	0.045	0.90	1.15	
G	0.010	0.028	0.25	0.70	
H	0.002	0.010	0.05	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 Case	Note 1		45		°C/W
$R_{th(J-A)}$	Thermal Resistance from Junction to Ambient	Note 1		90		°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	$V_F$	$I_F=1A; T_J=25^{\circ}C$ $I_F=1A; T_J=125^{\circ}C$ $I_F=1A; T_J=25^{\circ}C$ $I_F=1A; T_J=125^{\circ}C$ $I_F=1A; T_J=25^{\circ}C$ $I_F=1A; T_J=125^{\circ}C$			0.70 0.65 0.85 0.70 0.90 0.82	V
Reverse Current	$I_R$	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	$C_J$	$V_R=4V; f=1MHz; T_J=25^{\circ}C$		40 30 20		pF

## Curve Characteristics

Fig. 1 - Forward Current Derating Curve

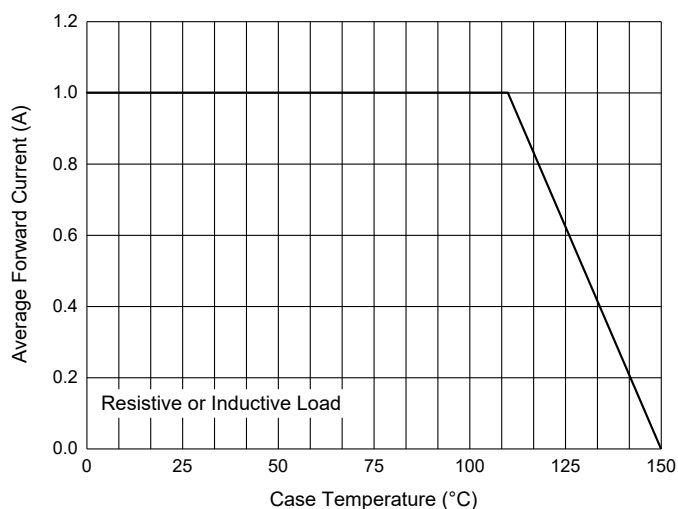


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

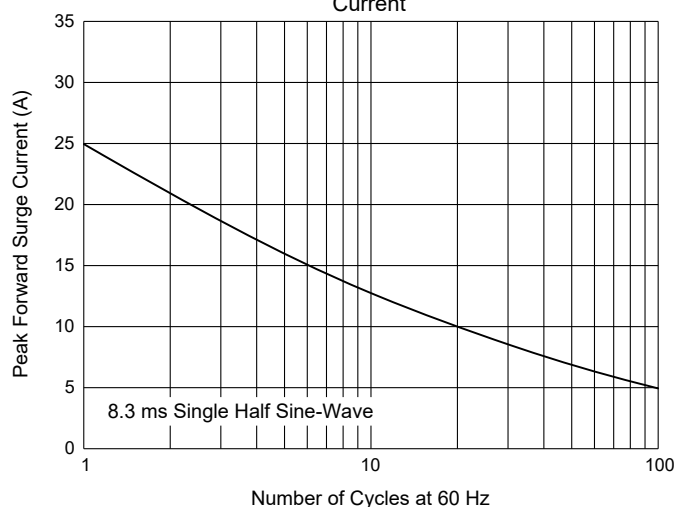


Fig. 3 - Typical Forward Characteristics

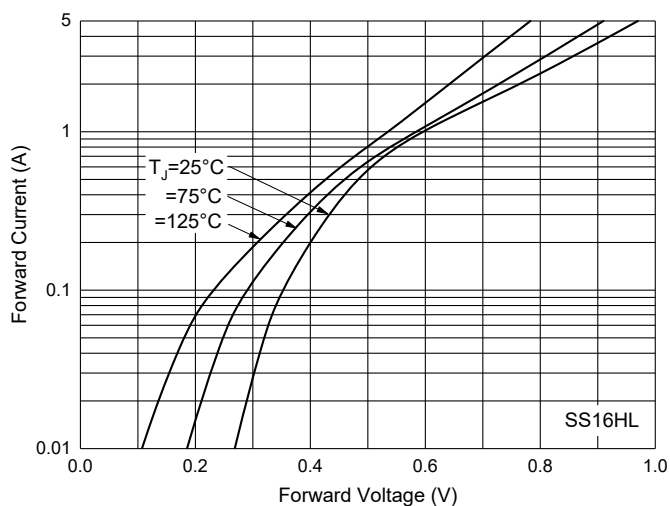


Fig. 4 - Typical Forward Characteristics

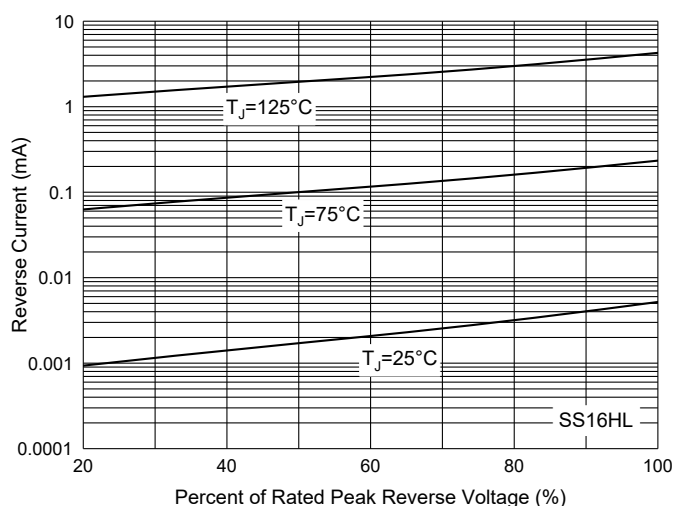


Fig. 5 - Typical Reverse Leakage Characteristics

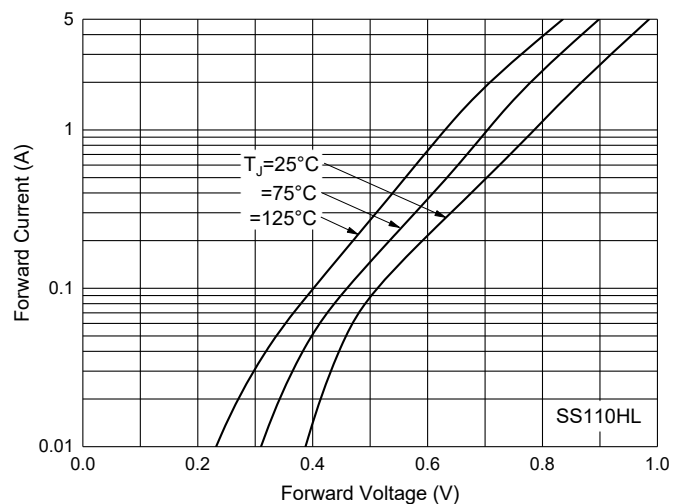
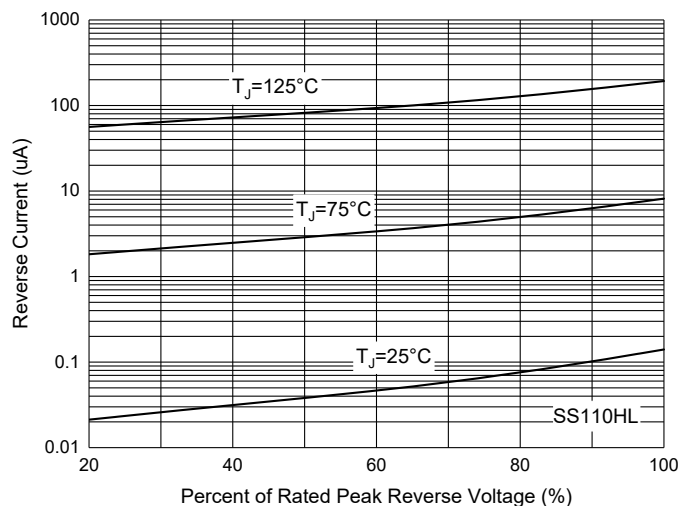


Fig. 6 - Typical Capacitance Characteristics



## Curve Characteristics

Fig. 7 - Typical Forward Characteristics

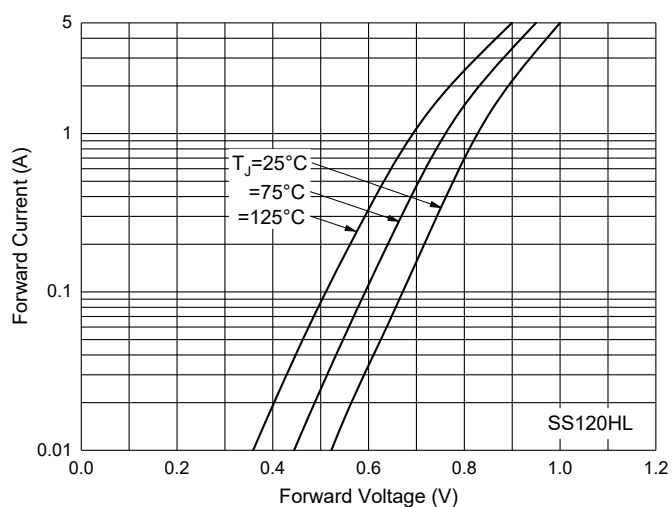


Fig. 8 - Typical Reverse Leakage Characteristics

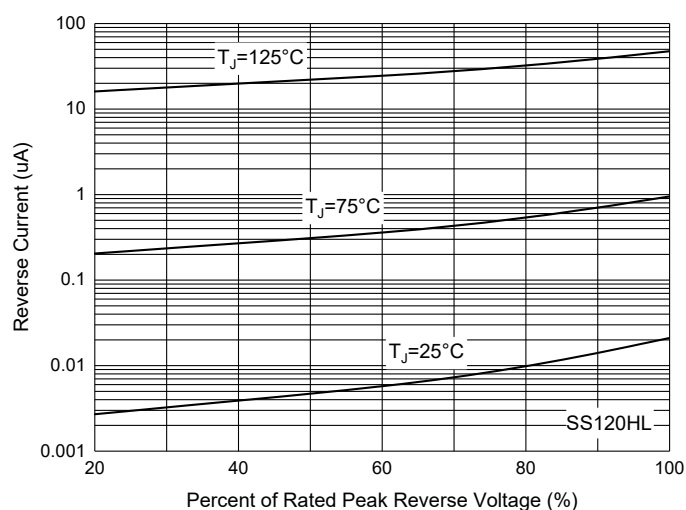


Fig. 11 - Typical Capacitance Characteristics

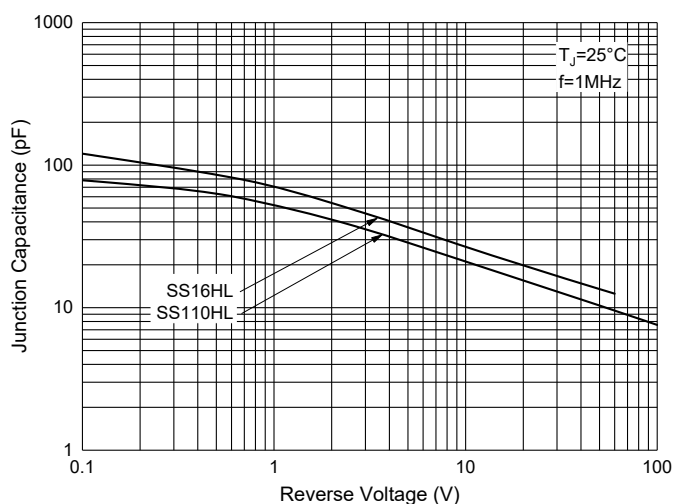
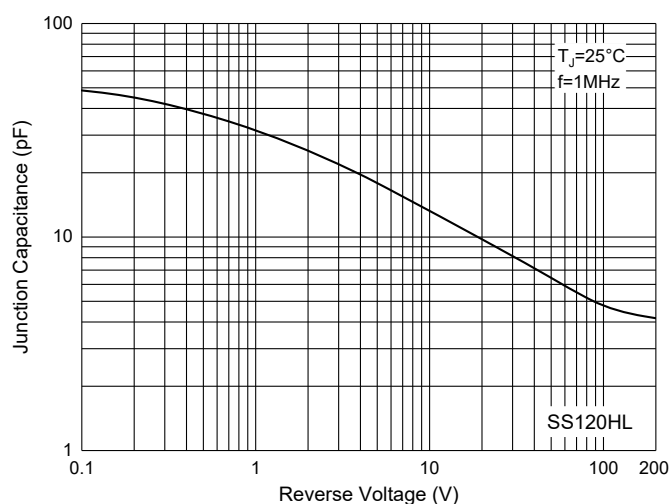


Fig. 12 - Typical Capacitance Characteristics



## Ordering Information

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

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