

## 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
		SS 12FL	SS 13FL	SS 14FL	SS 15FL	SS 16FL	SS 18FL	SS 110FL	SS 1150FL	SS 1200FL	
Peak Repetitive Reverse Voltage	V <sub>RRM</sub>	20	30	40	50	60	80	100	150	200	V
Working Peak Reverse Voltage	V <sub>RWM</sub>										
DC Blocking Voltage	V <sub>R</sub>										
RMS Reverse Voltage	V <sub>RMS</sub>	14	21	28	35	42	56	70	105	140	V
Average Rectified Forward Current	I <sub>F(AV)</sub>	1									A
Non-Repetitive Peak Surge Current @ 8.3ms Half Sine Wave	I <sub>FSM</sub>	30									A
Current Squared Time @1ms≤t≤8.3ms	I <sup>2</sup> t	3.735									A <sup>2</sup> s

## Marking code

Part Number	Marking Code
SS12FL	SS12
SS13FL	SS13
SS14FL	SS14
SS15FL	SS15
SS16FL	SS16
SS18FL	SS18
SS110FL	SS110
SS1150FL	S1150
SS1200FL	S1200

## Internal Structure

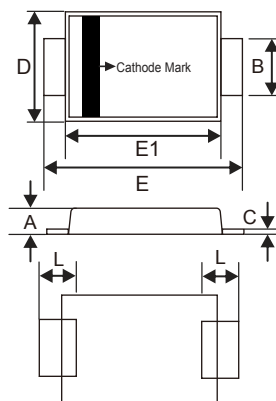
Pin	Description	Simplified Outline	Graphic Symbol
1	Cathode	<p>XXXX = Marking code</p>	
2	Anode		

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.

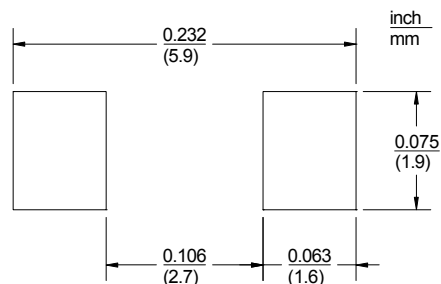
**1 Amp**  
**Gi fZUW'Ac i bh**  
**GW ch\_mIF YWjZyf**  
**&0 to &00 Volts**

## DO-221AC(SMA-FL)



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.035	0.049	0.90	1.25	
B	0.049	0.065	1.25	1.65	
C	0.004	0.016	0.10	0.40	
D	0.089	0.116	2.25	2.95	
E	0.173	0.220	4.40	5.60	
E1	0.126	0.181	3.20	4.60	
L	0.020	0.059	0.50	1.50	

## Suggested Solder Pad Layout



## Thermal characteristics

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
$T_J$	Operating Junction Temperature Range	SS12FL ~ SS14FL	-55		125	°C
$T_J$	Operating Junction Temperature Range	SS15FL ~ SS1200FL	-55		150	°C
$T_{stg}$	Storage Temperature Range		-55		150	°C
$R_{th(J-L)}$	Thermal Resistance from Junction to Lead	Note 1		18		°C/W
$R_{th(J-A)}$	Thermal Resistance from Junction to Ambient	Note 1		70		°C/W

Note:

1. Mounted on P.C.B. with 8mm\*8mm copper pad areas.

## Electrical Characteristics @ 25°C Unless Otherwise Specified

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Forward Voltage SS12FL ~ SS14FL SS15FL ~ SS16FL SS18FL ~ SS110FL SS1150FL ~ SS1200FL	$V_F$	$I_F=1A; T_J=25^{\circ}C$			0.50 0.70 0.85 0.90	V
Reverse Current SS12FL ~ SS16FL SS18FL ~ SS1200FL	$I_R$	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 SS12FL ~ SS14FL SS15FL ~ SS16FL SS18FL ~ SS110FL SS1150FL ~ SS1200FL	$C_J$	$V_R=4V; f=1MHz; T_J=25^{\circ}C$		125 90 60 50		pF

## Curve Characteristics

Fig. 1 - Forward Current Derating Curve

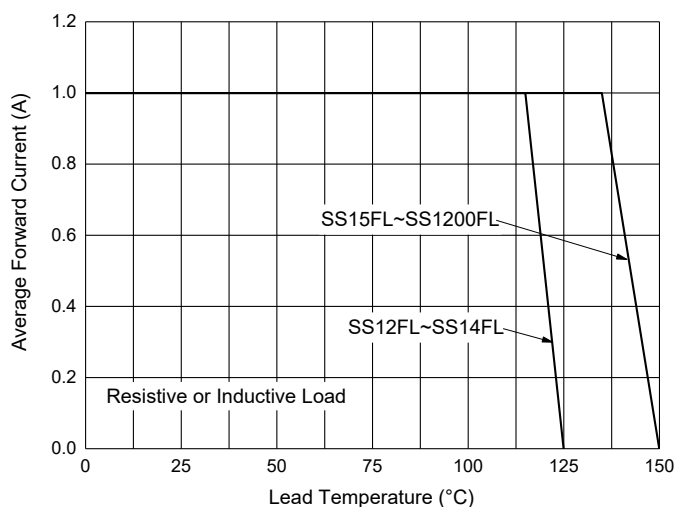


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

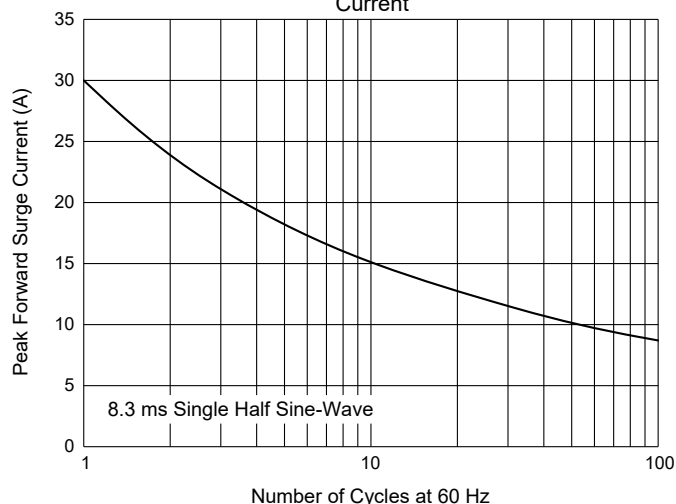


Fig. 3 - Typical Forward Characteristics

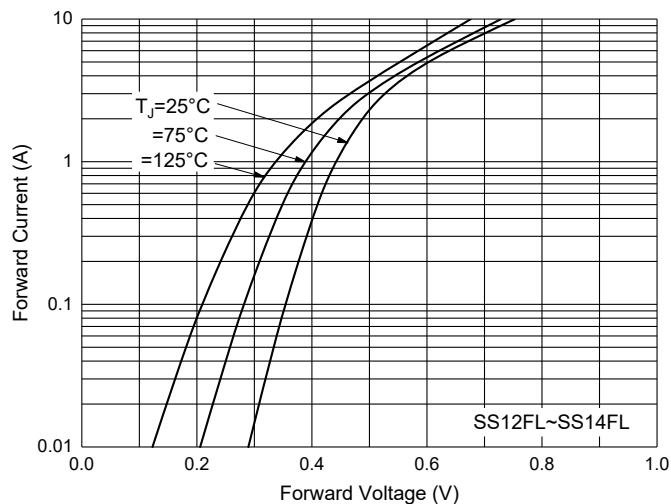


Fig. 4 - Typical Reverse Leakage Characteristics

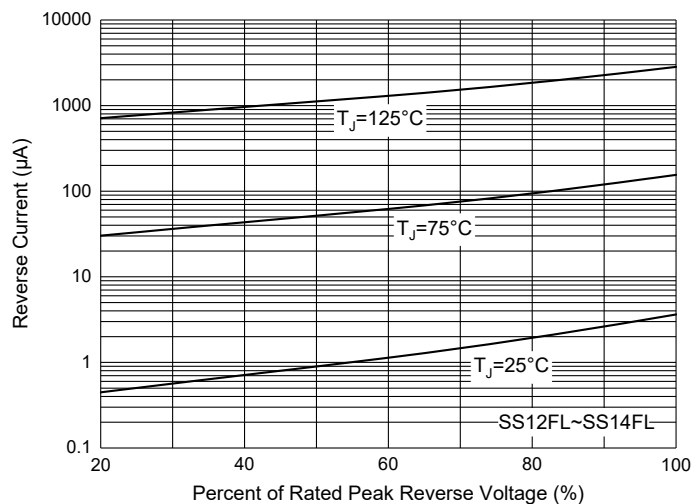


Fig. 5 - Typical Forward Characteristics

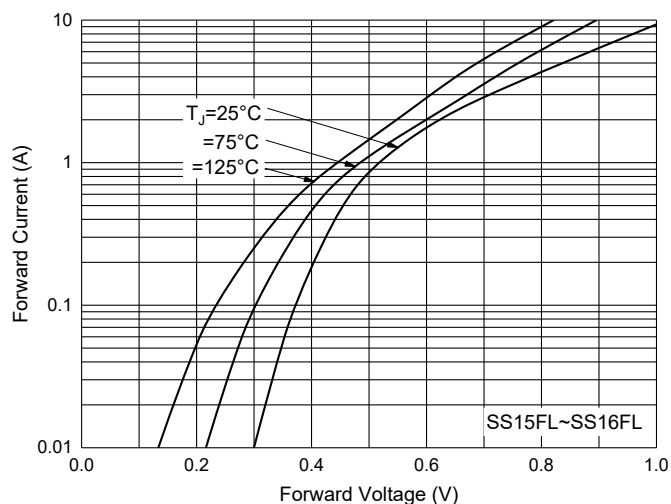
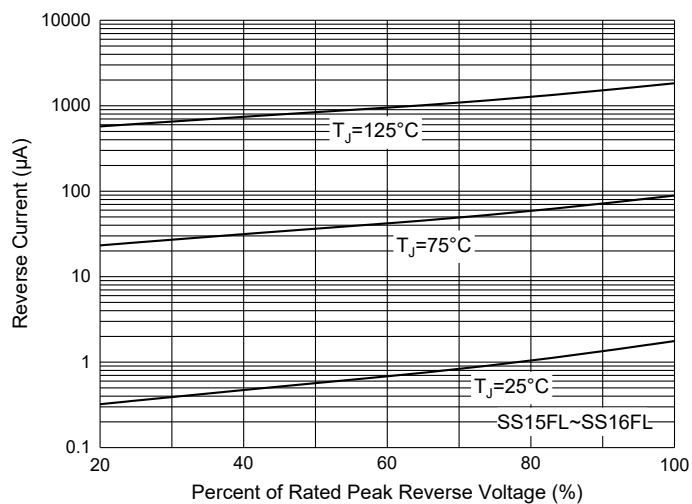


Fig. 6 - Typical Reverse Leakage Characteristics



## Curve Characteristics

Fig. 7 - Typical Forward Characteristics

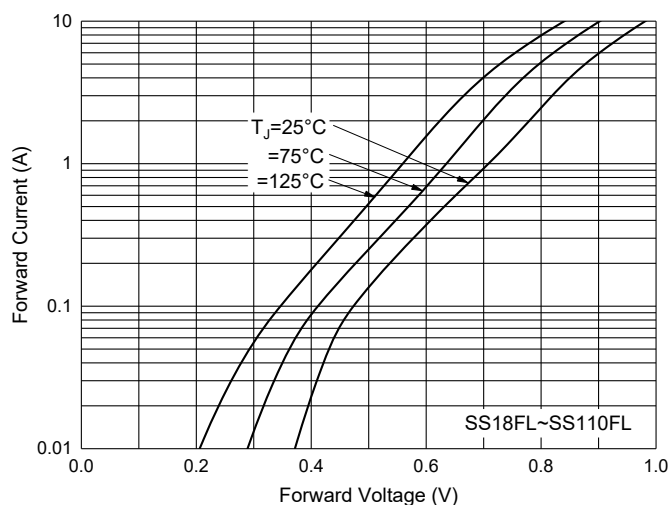


Fig. 8 - Typical Reverse Leakage Characteristics

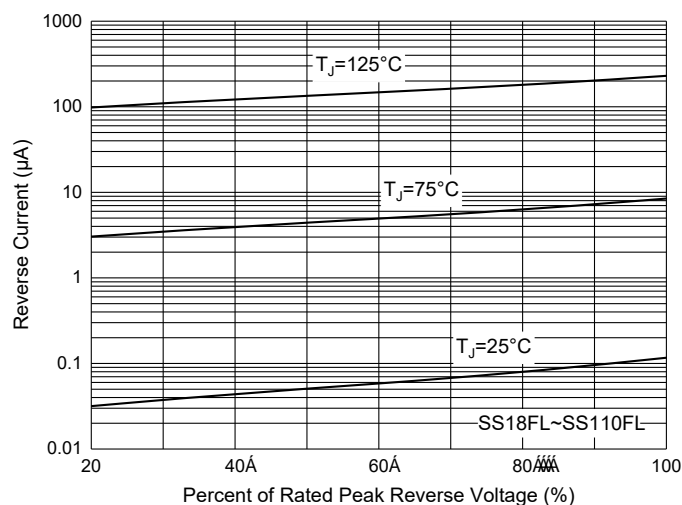


Fig. 9 - Typical Forward Characteristics

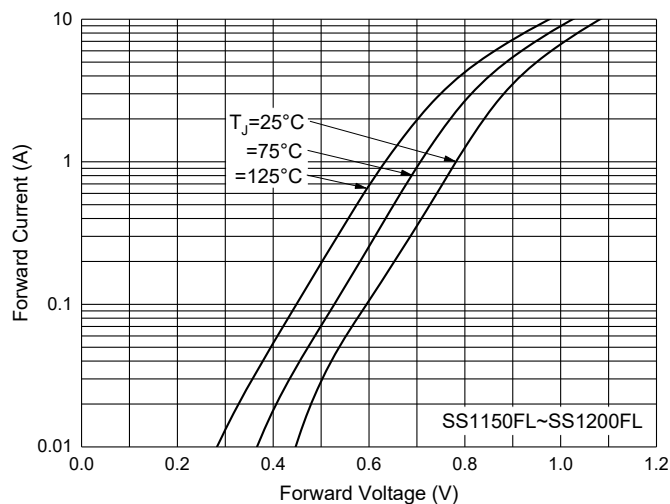


Fig. 10 - Typical Reverse Leakage Characteristics

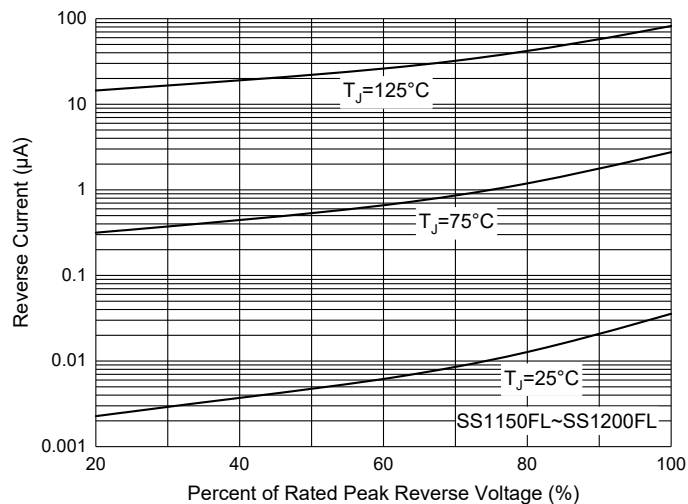
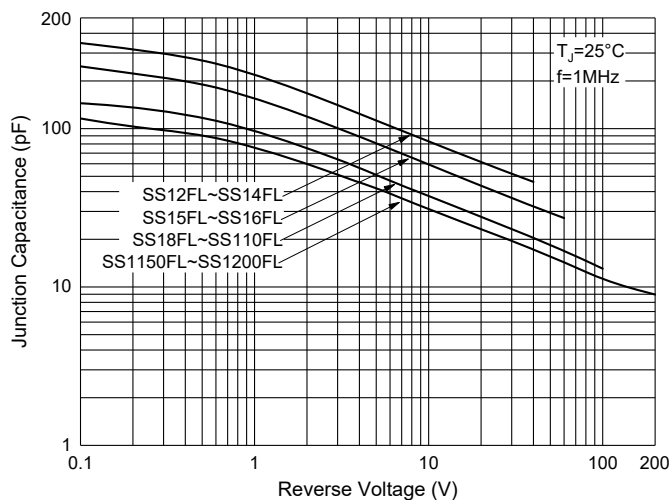


Fig. 11 - Typical Capacitance Characteristics



## Ordering Information

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

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