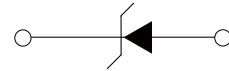


## FEATURES

- | For Surface Mounted Applications
- | Built-in Strain Relief, Ideal For Automated Placement
- | Low Reverse Leakage
- | High Forward Surge Current Capability
- | Terminals



SOD-123FL



Schematic Symbol

## MECHANICAL DATA

- | Case : Molded Plastic Body
- | Polarity : Polarity Symbol Marking On Body
- | Mounting Position : Any

## APPROVALS

<b>RoHS</b>	Compliance with 2011/65/EU
<b>HF</b>	Compliance with IEC61249-2-21:2003

## MAXIMUM RATINGS (T<sub>A</sub> = 25°C )

Parameter	Symbol	SS 12D	SS 13D	SS 14D	SS 15D	SS 16D	SS 17D	SS 18D	SS 19D	SS 110D	SS 115D	SS 120D	Unit	
Marking		D12	D13	D14	D15	D16	D17	D18	D19	D110	D115	D120		
Maximum Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	20	30	40	50	60	70	80	90	100	150	200	V	
Maximum RMS Voltage	V <sub>RMS</sub>	14	21	28	35	42	49	56	63	70	105	140	V	
Maximum DC Blocking Voltage	V <sub>DC</sub>	20	30	40	50	60	70	80	90	100	150	200	V	
Maximum Average Forward Rectified Current at T <sub>L</sub> = 100°C	I <sub>F(AV)</sub>	1.0											A	
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed On Rated Load	I <sub>FSM</sub>	30											A	
Maximum Instantaneous Forward Voltage at 1.0A	V <sub>F</sub>	0.55			0.70			0.85			0.95			V
Maximum DC Reverse Current at Rated DC Blocking Voltage	I <sub>R</sub>	0.2					0.05					mA		
		20					5					mA		
Typical Thermal Resistance	R <sub>θJA</sub>	85											°C/W	
Operating Junction Temperature Range	T <sub>J</sub>	-55 to +125						-55 to +150						°C
Storage Temperature Range	T <sub>STG</sub>	-55 to +150											°C	

# CHARACTERISTIC CURVES

Fig. 1- Derating Curve Output Rectified Current

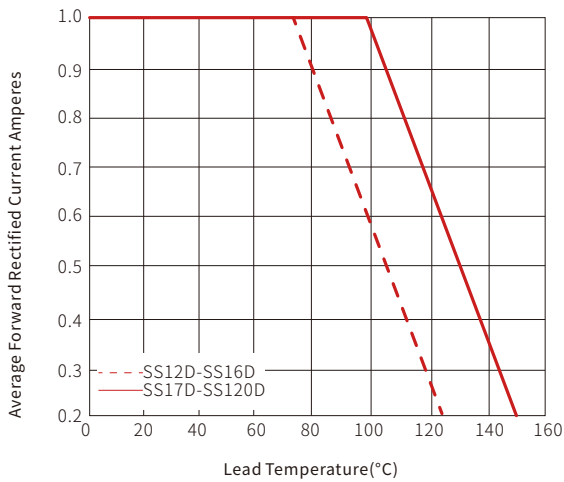


Fig. 2-Maximum Non-repetitive Peak Forward Surge Current Perleg

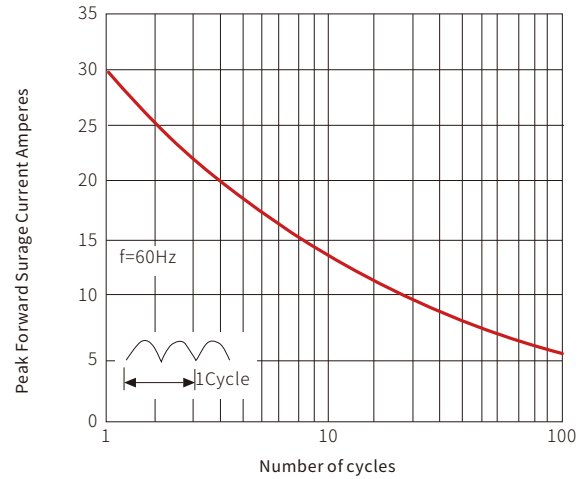


Fig. 3-Typical Forward Voltage Characteristics

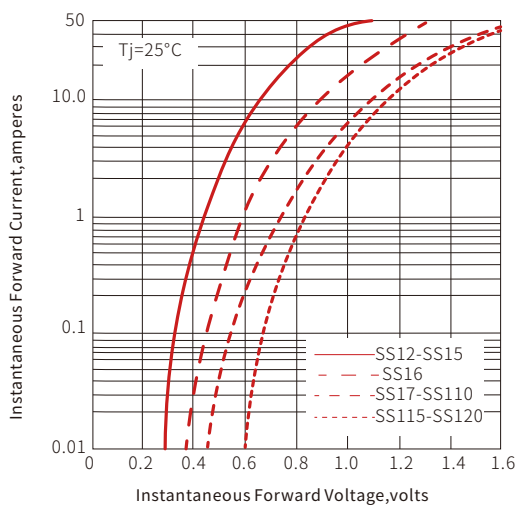
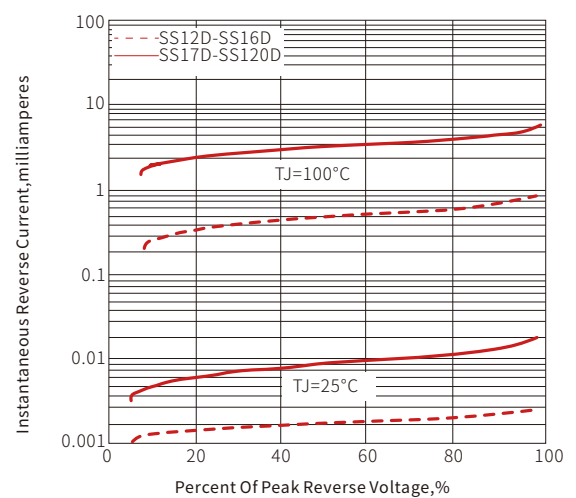
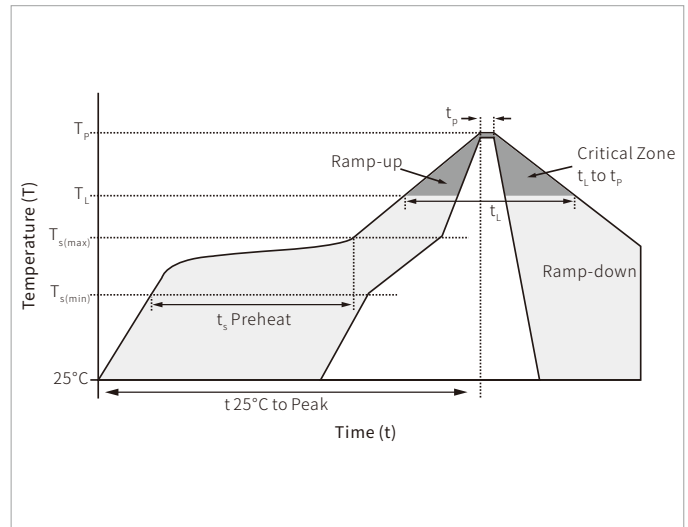


Fig. 4-Typical Reverse Leakage Characteristics

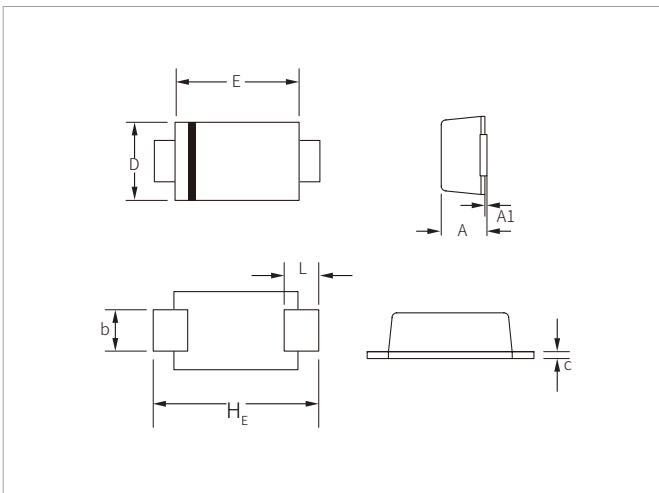


## SOLDERING PARAMETERS

Reflow Condition		Lead-free assembly
Pre Heat	Temperature Max ( $T_{s(min)}$ )	150°C
	Temperature Max ( $T_{s(max)}$ )	200°C
	Time (min to max) ( $t_s$ )	60 – 180 secs
Average ramp up rate (Liquidus Temp ( $T_L$ ) to peak)		3°C/second max
$T_{s(max)}$ to $T_L$ - Ramp-up Rate		3°C/second max
Reflow	Temperature ( $T_L$ ) (Liquidus)	217°C
	Time (min to max) ( $t_l$ )	60 – 150 seconds
Peak Temperature ( $T_p$ )		260°C
Time within 5°C of actual peak Temperature ( $t_p$ )		20 – 40 seconds
Ramp-down Rate		6°C/second max
Time 25°C to peak Temperature ( $T_p$ )		8 minutes max.
Do not exceed		260°C

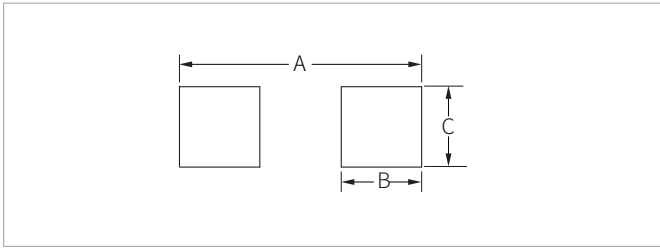


## SOD-123FL PACKAGE INFORMATION



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	0.95	1.45	0.037	0.057
A1	0.00	0.10	0.000	0.004
b	0.70	1.20	0.028	0.047
c	0.05	0.30	0.002	0.012
D	1.50	2.00	0.059	0.079
E	2.50	2.90	0.098	0.114
L	0.35	0.90	0.014	0.035
$H_E$	3.40	3.90	0.134	0.154

## RECOMMENDED PAD LAYOUT DIMENSIONS



Ref.	Millimeters	Inches
A	4.20	0.165
B	1.50	0.059
C	1.20	0.047

## ORDERING INFORMATION

Part Number	Component Package	QTY/Reel	Reel Size
SS12D-SS120D	SOD-123FL	3000PCS	7"

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