

## FEATURES

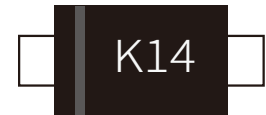
- | Low Forward Voltage Drop
- | Low Reverse Leakage
- | Surface Mount Package Ideally Suited For Automatic Insertion



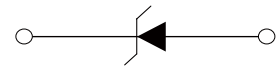
SOD-123FL

## MECHANICAL DATA

- | Encapsulation: SOD-123FL Small Outline Plastic Package
- | Polarity: Color Band Denotes Cathode end
- | Mounting Position: Any



Marking



Schematic Symbol

## 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	Value	Unit	
Maximum Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	40	V	
Maximum RMS voltage	V <sub>RMS</sub>	28	V	
Maximum DC Blocking Voltage	V <sub>DC</sub>	40	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 (JEDEC method)	I <sub>FSM</sub>	30	A	
Max Instantaneous Forward Voltage at 1 A	V <sub>F</sub>	0.55	V	
Maximum DC Reverse Current at Rated DC Reverse Voltage	I <sub>R</sub>	T <sub>a</sub> = 25°C	0.2	mA
		T <sub>a</sub> = 100°C	20	mA
Typical Thermal Resistance <sup>(2)</sup>	R <sub>θJA</sub>	85	°C/W	
Operating Junction Temperature Range	T <sub>J</sub>	-55 to +125	°C	
Storage Temperature Range	T <sub>STG</sub>	-55 to +150	°C	

(1) Measured at 1 MHz and applied reverse voltage of 4 V D.C

(2) P.C.B. mounted with 2.0" X 2.0" (5 X 5 cm) copper pad areas.

# CHARACTERISTIC CURVES

Fig. 1- Derating Curve Output Rectified Current

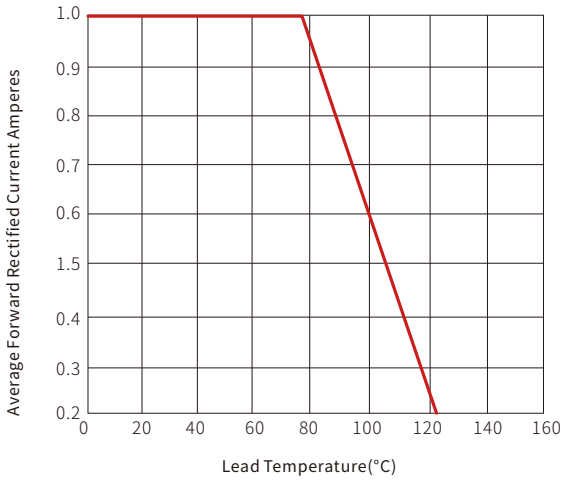


Fig. 2- Maximum Non-repetitive Peak Forward Surge Current Perleg

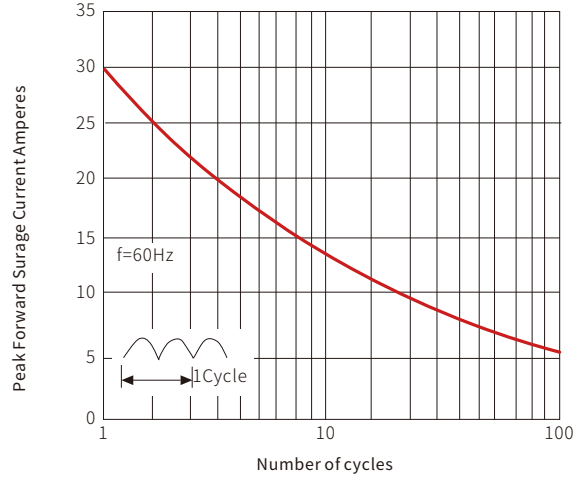


Fig. 3- Typical Forward Voltage Characteristics

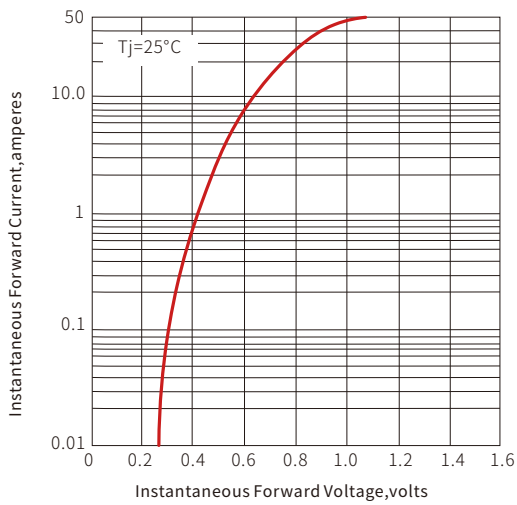
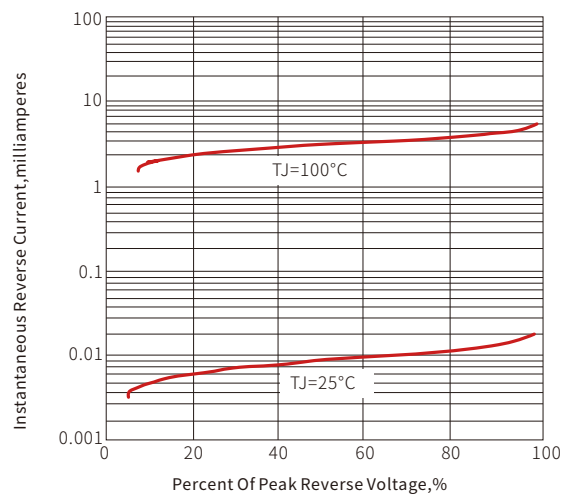
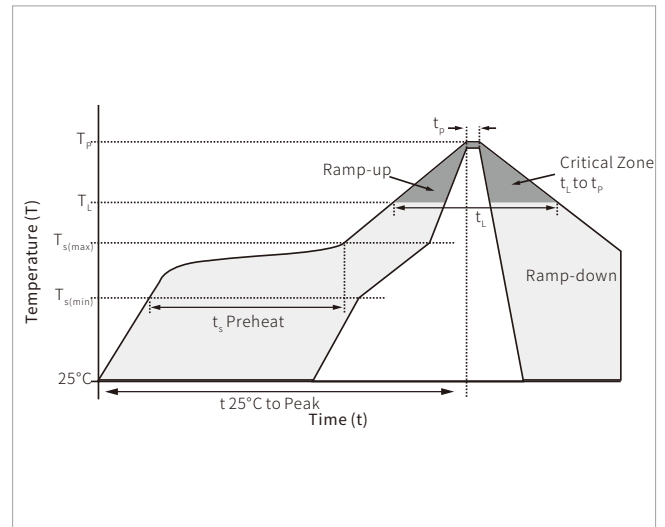


Fig. 4- Typical Reverse Leakage Characteristics

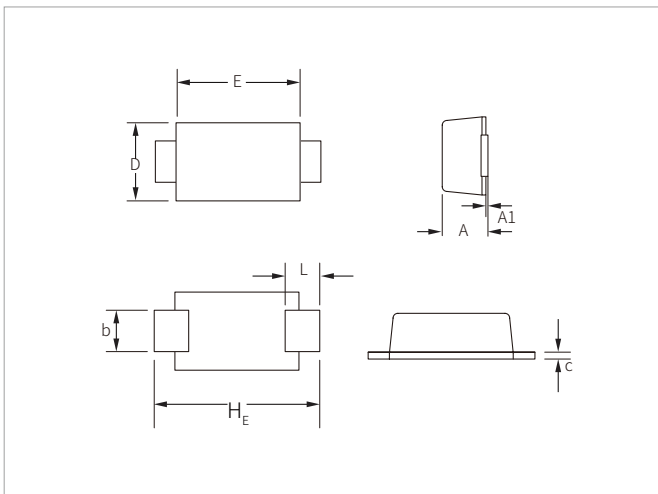


## SOLDERING PARAMETERS

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

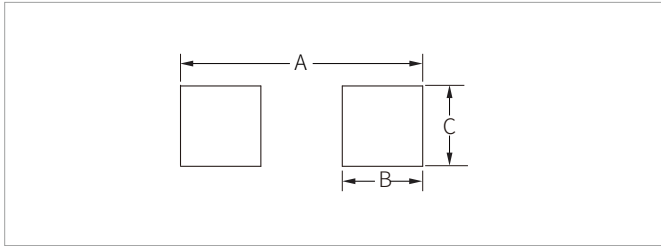


## SOD-123FL PACKAGE INFORMATION



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 <sub>E</sub>	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
1N5819	SOD-123FL	3000PCS	7"

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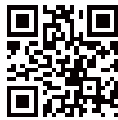
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