

FEATURES

- | Low Forward Voltage Drop

- | Low Reverse Leakage

- | Surface Mount Package Ideally Suited For Automatic Insertion



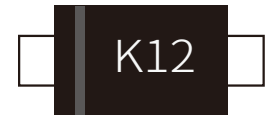
SOD-123FL

MECHANICAL DATA

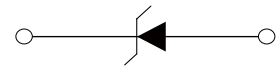
- | Encapsulation: SOD-123FL Small Outline Plastic Package

- | Polarity: Color Band Denotes Cathode end

- | Mounting Position: Any



Marking



Schematic Symbol

APPROVALS

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

MAXIMUM RATINGS (T_A = 25°C)

Parameter	Symbol	Value	Unit	
Maximum Repetitive Peak Reverse Voltage	V _{RRM}	20	V	
Maximum RMS voltage	V _{RMS}	14	V	
Maximum DC Blocking Voltage	V _{DC}	20	V	
Maximum Average Forward Rectified Current at T _L = 100°C	I _{F(AV)}	1.0	A	
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I _{FSM}	30	A	
Max Instantaneous Forward Voltage at 1 A	V _F	0.55	V	
Maximum DC Reverse Current at Rated DC Reverse Voltage	I _R	T _a = 25°C	0.2	mA
		T _a = 100°C	20	mA
Typical Thermal Resistance ⁽²⁾	R _{θJA}	85	°C/W	
Operating Junction Temperature Range	T _J	-55 to +125	°C	
Storage Temperature Range	T _{STG}	-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

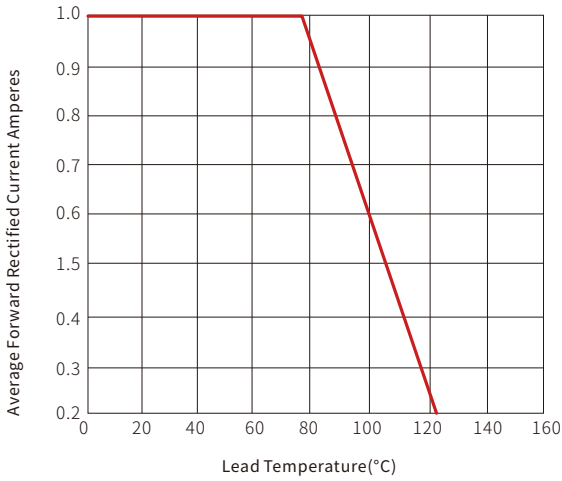


Fig. 2-maximum Non-repetitive Peak Forward Surge Current Perleg

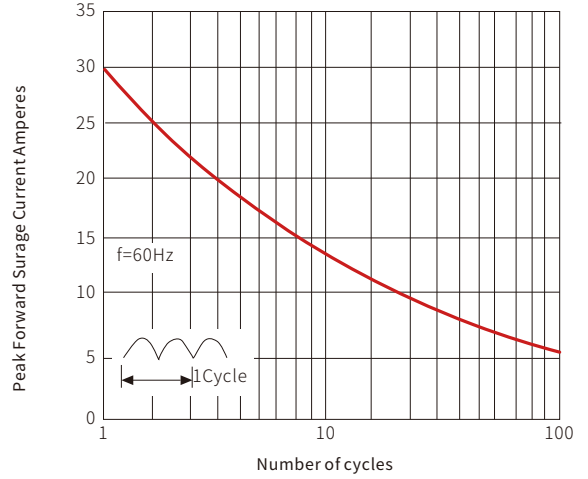


Fig. 3-typical Forward Voltage Characteristics

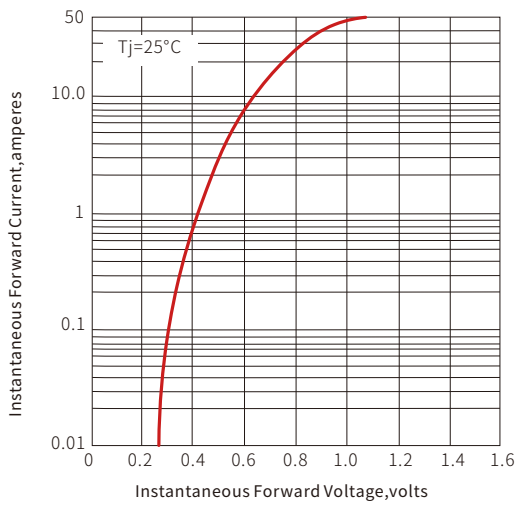
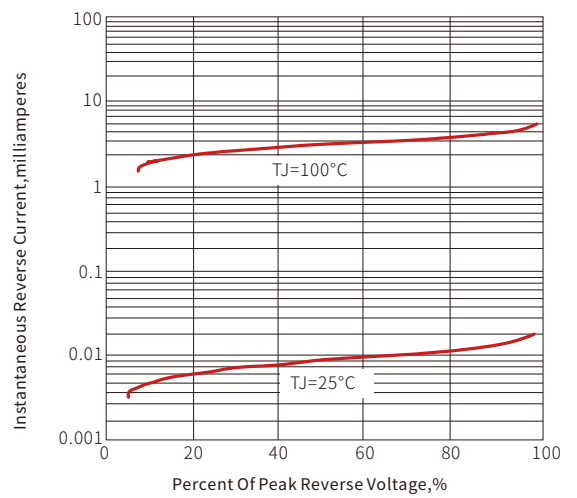
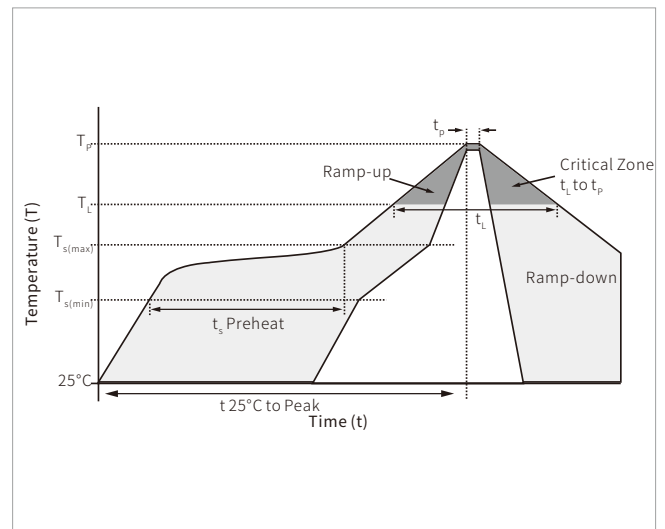


Fig. 4-typical Reverse Leakage Characteristics

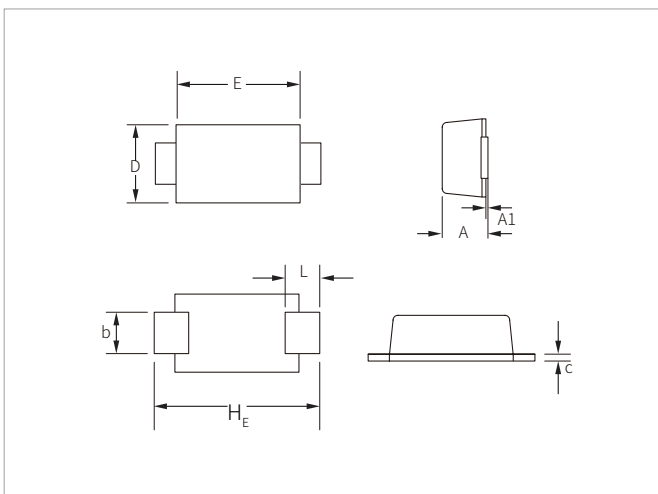


SOLDERING PARAMETERS

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

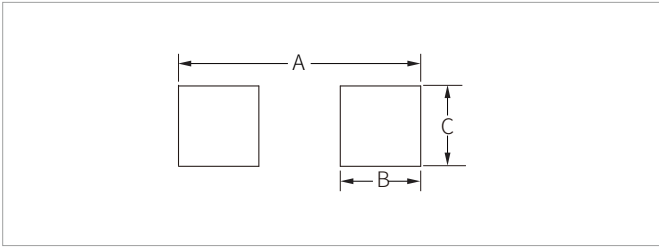


SOD-123FL PACKAGE INFORMATION



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 _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
1N5817	SOD-123FL	3000PCS	7"

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