

FEATURES

- For surface mounted applications
- Ideal for automated placement
- High forward surge current capability
- Meet AEC-Q101 Requirements



SOD-123FL



Schematic Symbol

APPLICATIONS

- For Use In General Purpose Switching Rectification of Power Supply, Inverters, Converters, and Freewheeling Diodes For Consumer and Telecommunication.

APPROVALS

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

MAXIMUM RATINGS AND CHARACTERISTICS ($T_A=25^{\circ}\text{C}$)

Parameter		Symbol	A1Q	A2Q	A3Q	A4Q	A5Q	A6Q	A7Q	Unit
Marking			A1	A2	A3	A4	A5	A6	A7	
Maximum Repetitive Peak Reverse Voltage		V _{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS Voltage		V _{RMS}	35	70	140	280	420	560	700	
Maximum DC Blocking Voltage		V _{DC}	50	100	200	400	600	800	1000	
Maximum Average Forward Rectified Current at T _L =100°C		I _{F(AV)}	1.0							A
Surge Peak Forward Current,8.3ms Single Half Sine-Wave Superimposed On Rated Load		I _{FSM}	30.0							
Maximum Instantaneous Forward Voltage at 1.0A		V _F	1.0							V
Maximum DC Reverse Current at Rated DC Blocking Voltage	T _A =25°C	I _R	2.0							μA
	T _A =125°C		100							
Maximum Reverse Recovery Time		T _{rr}	1600							ns
Typical Junction Capacitance (Note1)		C _J	6.5							pF
Typical Thermal Resistance(Note2)		R _{θJA}	70							°C/W
Operating Junction And Storage Temperature Range		T _J ,T _{STG}	-55 to +150							°C

Note:

1. Measured at 1MHz and applied reverse voltage of 4.0V D.C

2. Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.3" x 0.3" (8.0 mm x 8.0 mm) copper pad areas

CHARACTERISTIC CURVES

Fig.1 Derating Curve Output Rectified Current

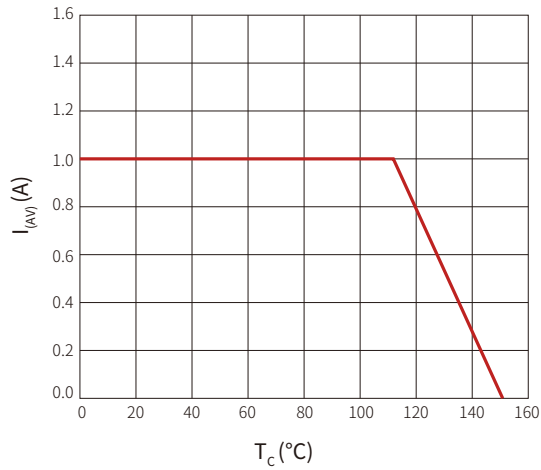


Fig.2 Maximum Non-Repetitive Peak Forward Surge Current Perleg

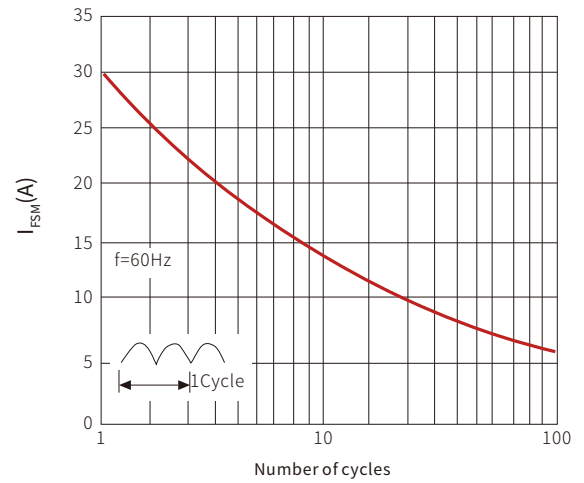


Fig.3 Typical Forward Voltage Characteristics

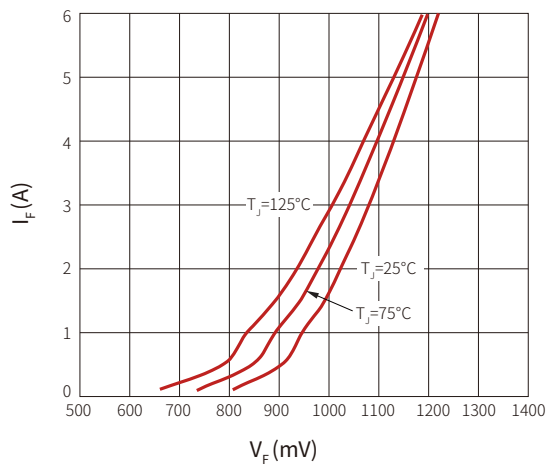
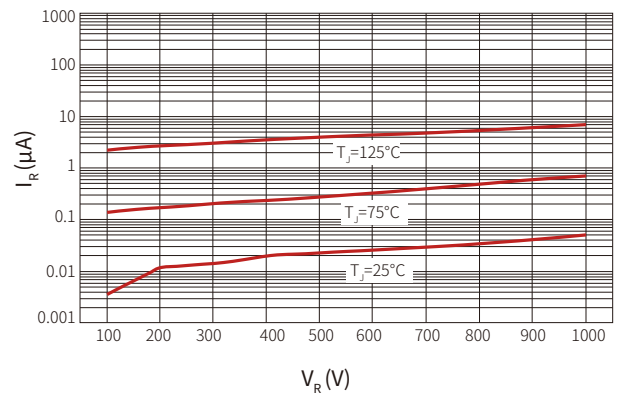
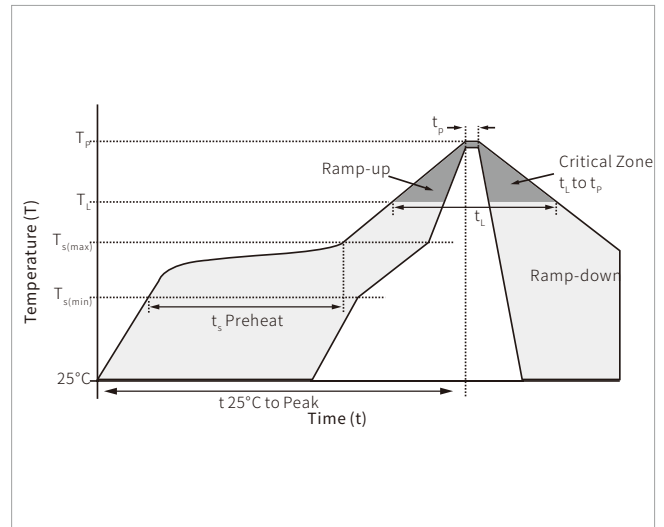


Fig.4 Typical Reverse Leakage Characteristics

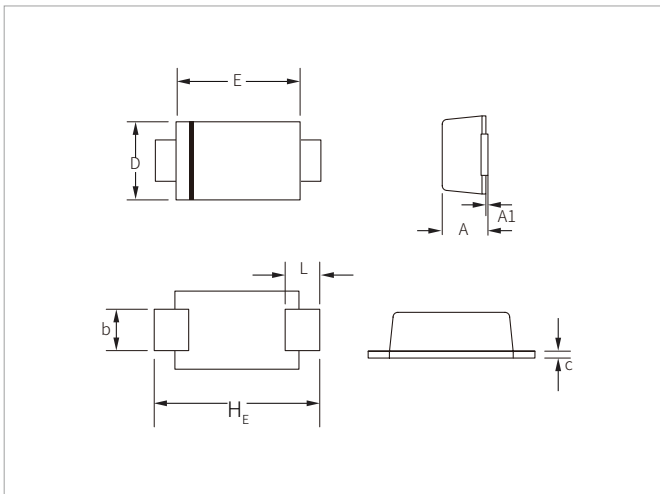


SOLDERING PARAMETERS

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

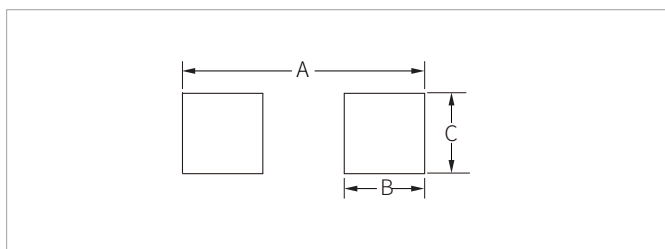


SOD-123FL PACKAGE INFORMATION



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	3.10	0.098	0.122
L	0.35	0.90	0.014	0.035
HE	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
A1Q-A7Q	SOD-123FL	3000PCS	7"

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By QR Code

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Wechat

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