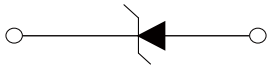
FEATURES

- Lowprofilepackage
- Idealforautomatedplacement
- Glasspassivatedchipjuncon
- Highforwardsurgecapability
- MeetsMSLlevel1,perJ-STD-020

SOD-123FL



Schematic Symbol

MECHANICAL DATA

- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Polarity: Cathode line denotes the cathode end

APPROVALS

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

MAXIMUM RATINGS AND CHARACTERISTICS (T_A=25°C)

Parameter		Symbol	GS1004FL	GS1006FL	GS1010FL	Unit
Marking			A4	A5	A7	
Maximum repetitive peak reverse voltage		V_{RRM}	400	600	1000	V
Maximum RMS voltage		V_{RMS}	280	420	700	
Maximum DC blocking voltage		V_{DC}	400	600	1000	
Maximum average forward rectified current		$I_{F(AV)}$	1			A
Surge(non-repetitive)forward current@60Hz Half-sine wave,1 cycle,Ta=25°C		I_{FSM}	30			
Typical Junction capacitance(Note 2)		C_J	7			pF
Maximum instantaneous forward voltage drop per diode@1A(Note 1)		V_F	1.1			V
Maximum reverse current @rated V_R	T_J=25°C	I_R	1			uA
	T_J=125°C		50			
Typical Thermal Resistance		$R_{\theta J\text{-}A}$	85			°C/W
Typical Thermal Resistance		$R_{\theta J\text{-}L}$	25			
Operating junction temperature rang		T_J	-55~+150			°C
Storage temperature rang		T_{STG}	-55~+150			

Note 1: Pulse test with PW=0.3mS
Note 2: Pulse test with PW=30mS

CHARACTERISTIC CURVES

Fig.1 Forward Current Derating Curve

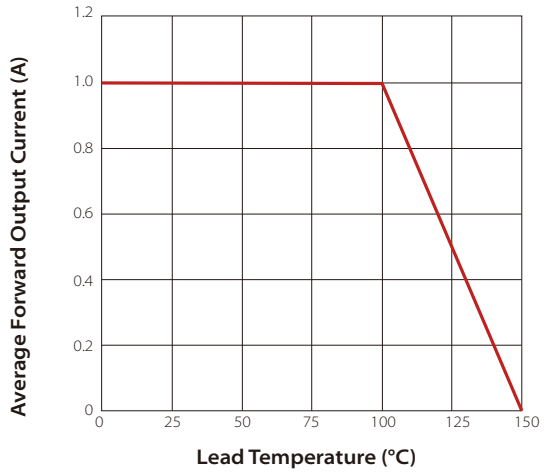


Fig.2 Typical Junction Capacitance

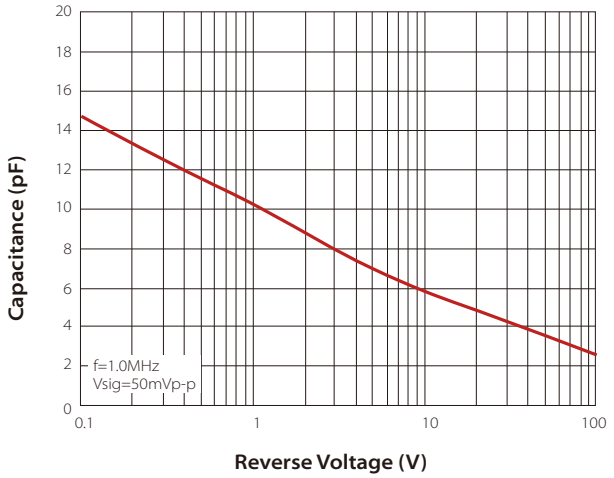


Fig.3 Typical Reverse Characteristics

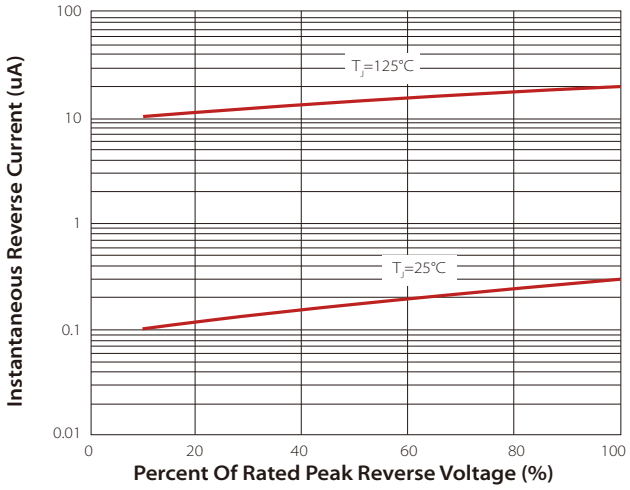
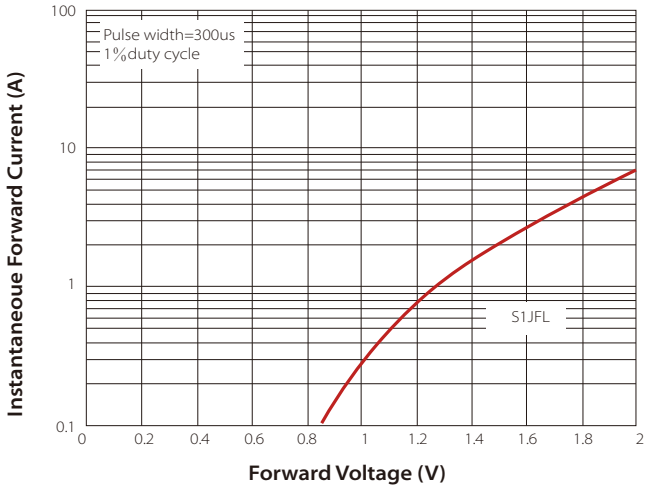
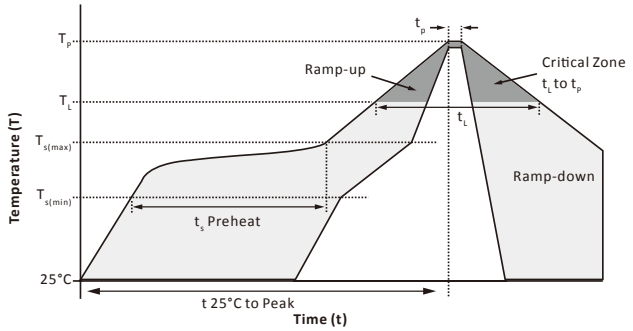


Fig.4 Typical Reverse Characteristics

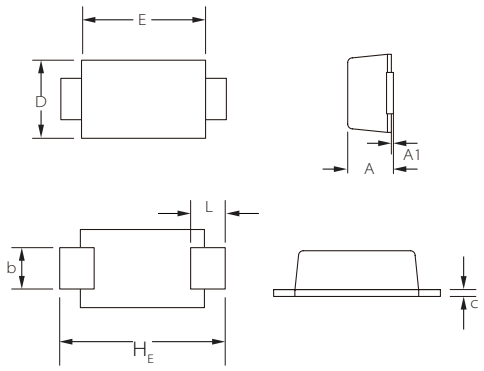


SOLDERING PARAMETERS

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

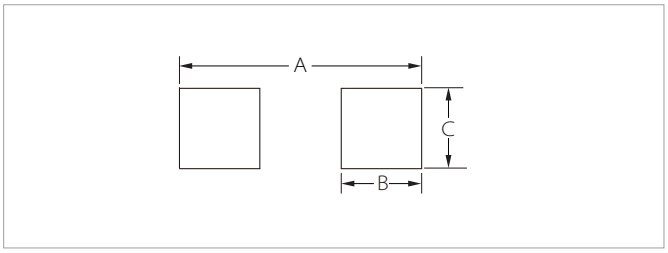


SOD-123FL PACKAGE INFORMATION



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
GS1004FL-GS1010FL	SOD-123FL	3000PCS	7″

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