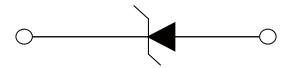


FEATURES

- | Low profile package
- | Ideal for automated placement
- | Glass passivated chip junction
- | High forward surge capability
- | Meets MSL level 1, per J-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

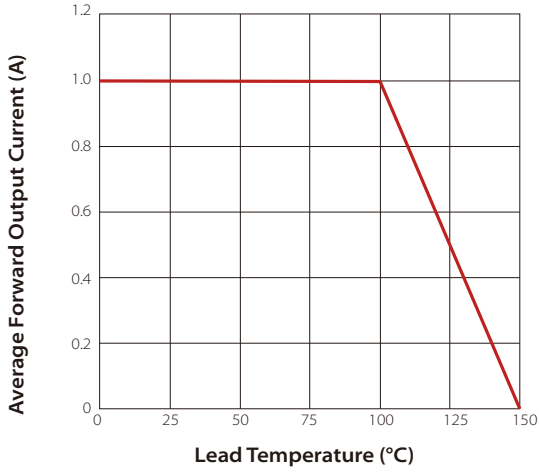
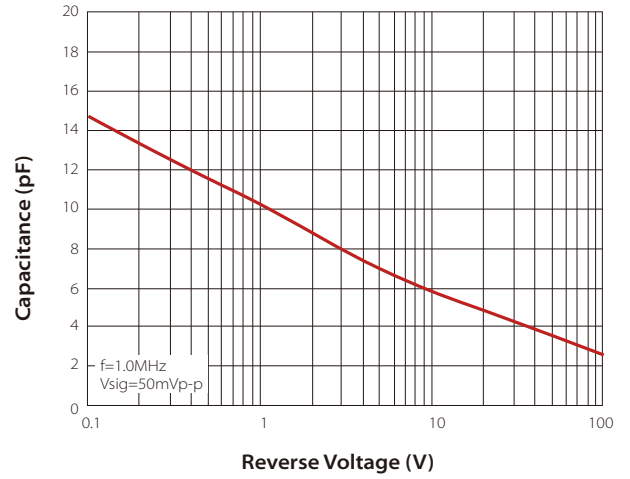
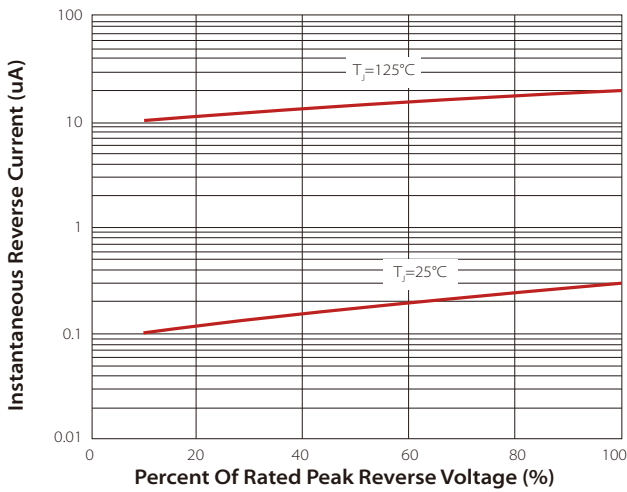
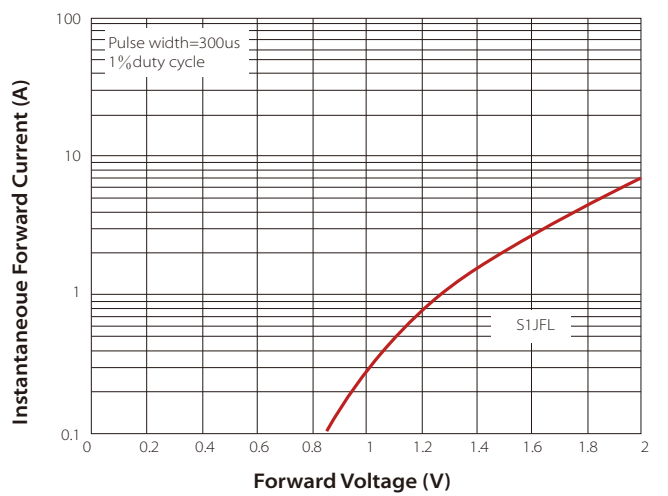
MAXIMUM RATINGS AND CHARACTERISTICS (T_A = 25°C)

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, T _a = 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 _{θJ-A}	85			°C/W
Typical Thermal Resistance	R _{θJ-L}	25			
Operating junction temperature range	T _J	-55~+150			°C
Storage temperature range	T _{STG}	-55~+150			

Note 1: Pulse test with PW=0.3mS

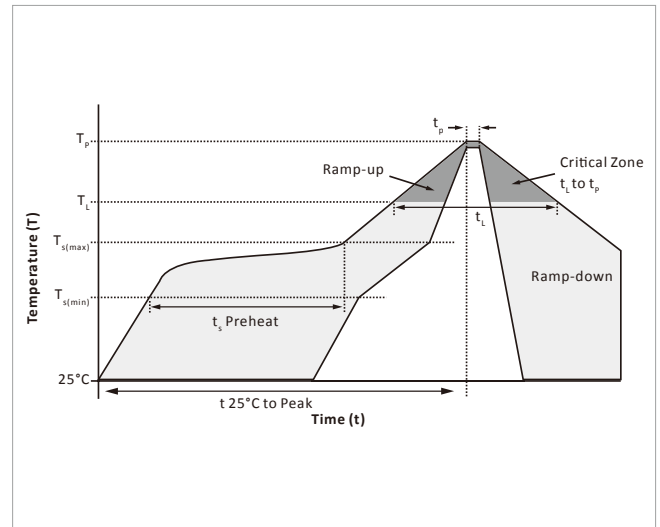
Note 2: Pulse test with PW=30mS

CHARACTERISTIC CURVES

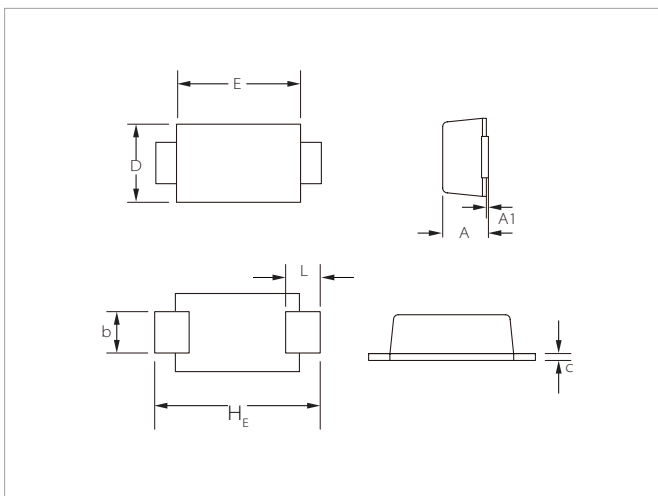
Fig.1 Forward Current Derating Curve

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_p)	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

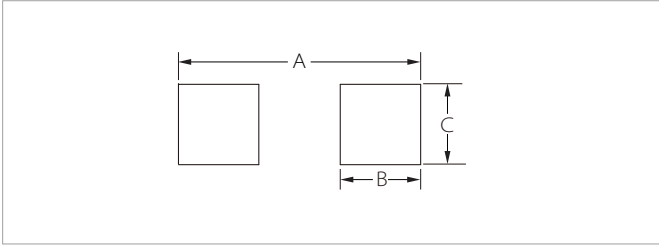


SOD-123FL PACKAGE INFORMATION



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"

Headquarters

No.3387 Shendu Road Pujiang
I&E Park
Minhang Shanghai China
201000

Hotline

400-021-5756

Web

<https://www.semiware.com>

Sales Center

Tel: 86-21-3463-7458
Email: sales18@semiware.com

Customer Service

Tel: 86-21-5484-1001
Email: sales17@semiware.com

Technical Support

Tel: 86-21-3463-7654
Email: fae01@semiware.com

Complaint & Suggestions

Tel: 86-21-3463-7172
Ext: 8868
Email: cs03@semiware.com

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