

## FEATURES

- | Ideal For Automated Placement
- | Glass Passivated Chip Junction
- | High Forward Surge Capability
- | Meets MSL Level1,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

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

## MAXIMUM RATINGS AND CHARACTERISTICS (T<sub>A</sub>=25°C)

Parameter	Symbol	GS1004FL	GS1006FL	GS1010FL	Unit
Marking		A4	A5	A7	
Maximum Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	400	600	1000	V
Maximum RMS Voltage	V <sub>RMS</sub>	280	420	700	
Maximum DC Blocking Voltage	V <sub>DC</sub>	400	600	1000	
Maximum Average Forward Rectified Current	I <sub>F(AV)</sub>	1			A
Surge(Non-Repetitive)Forward Current@60Hz Half-Sine Wave,1 Cycle,Ta=25°C	I <sub>FSM</sub>	30			
Typical Junction Capacitance(Note 2)	C <sub>J</sub>	7			pF
Maximum Instantaneous Forward Voltage Drop Per Diode@1A <sup>(Note 1)</sup>	V <sub>F</sub>	1.1			V
Maximum Reverse Current @Rated V <sub>R</sub>	I <sub>R</sub>	T <sub>J</sub> =25°C	1		μA
		T <sub>J</sub> =125°C	50		
Typical Thermal Resistance	R <sub>θJ-A</sub>	85			°C/W
Typical Thermal Resistance	R <sub>θJ-L</sub>	25			
Operating Junction Temperature Rang	T <sub>J</sub>	-55~+150			°C
Storage Temperature Rang	T <sub>STG</sub>	-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

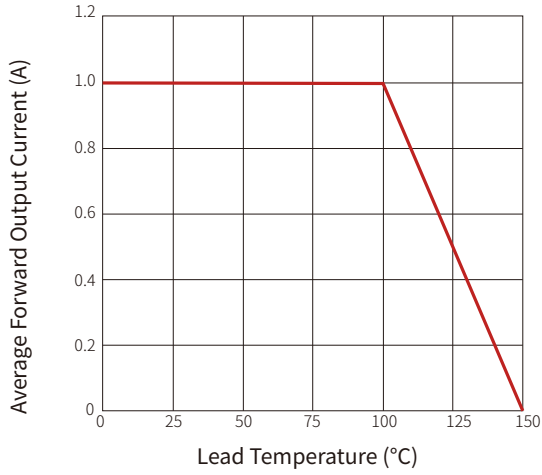


Fig.2 Typical Junction Capacitance

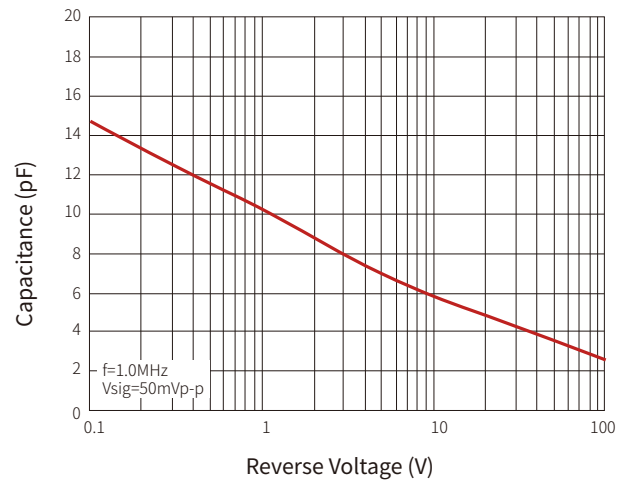


Fig.3 Typical Reverse Characteristics

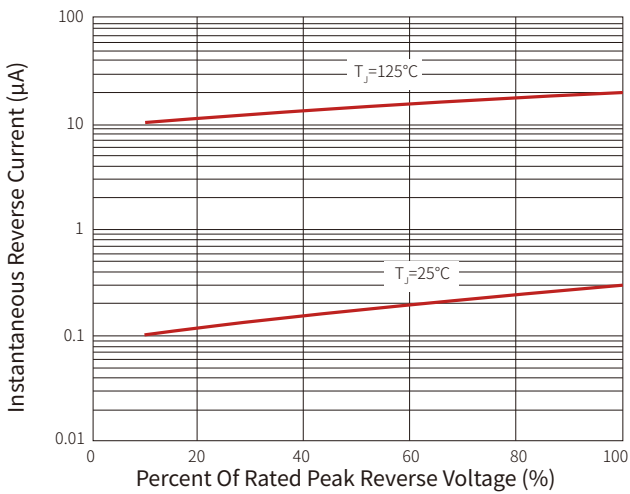
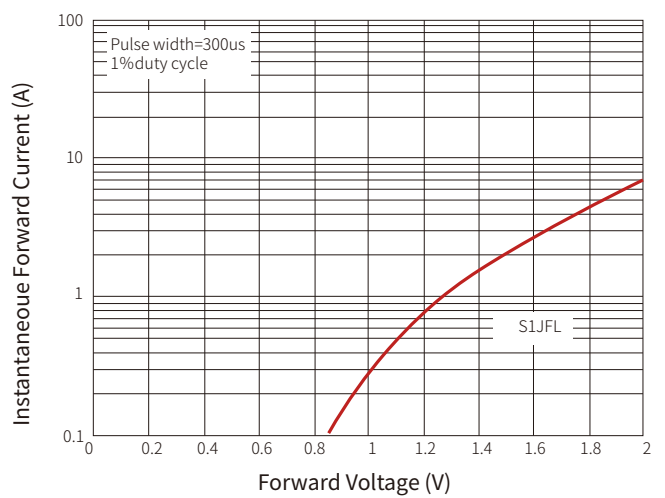
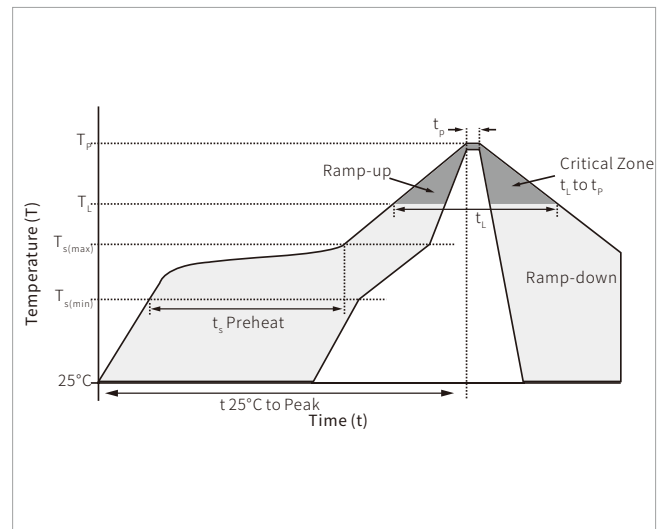


Fig.4 Typical Reverse Characteristics

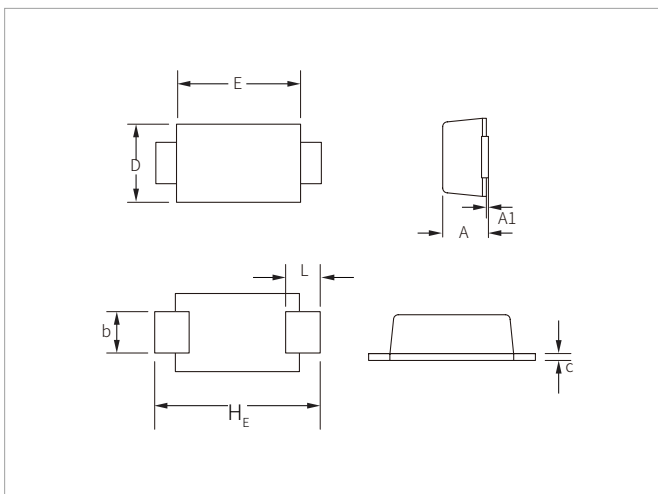


## SOLDERING PARAMETERS

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

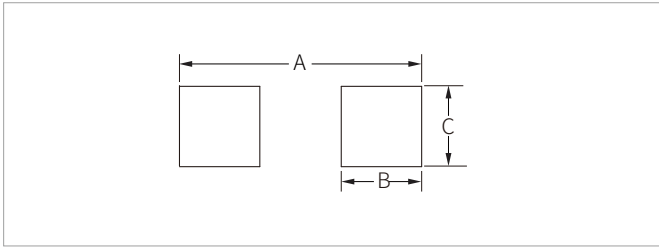


## SOD-123FL PACKAGE INFORMATION



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	3.10	0.098	0.122
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
GS1004FL-GS1010FL	SOD-123FL	3000PCS	7"

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