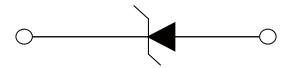


FEATURES

- | 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

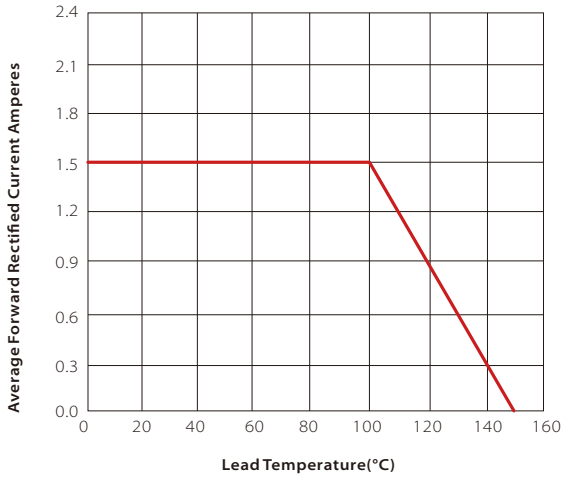
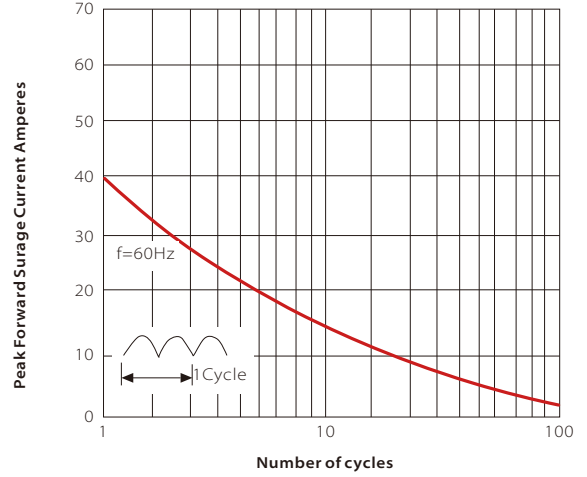
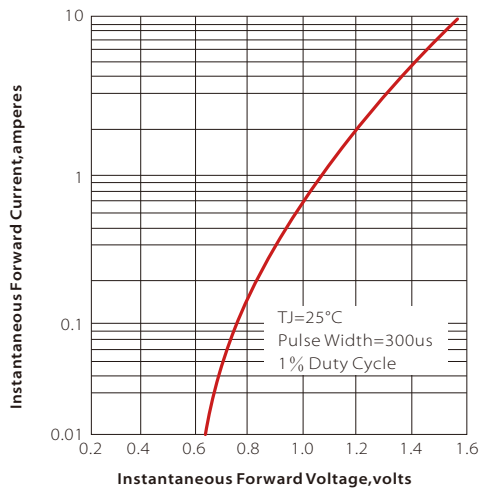
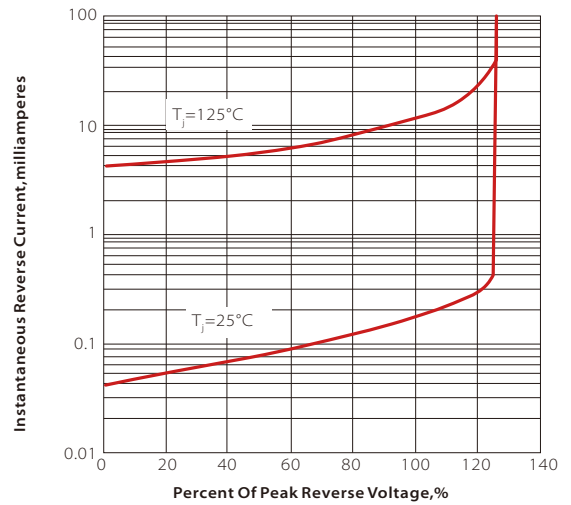
MAXIMUM RATINGS AND CHARACTERISTICS (T_A = 25°C)

Parameter	Symbol	RS2002FL	RS2004FL	RS2006FL	RS2008FL	RS2010FL	Unit
Marking		R2D	R2G	R2J	R2K	R2M	
Maximum repetitive peak reverse voltage	V _{RRM}	200	400	600	800	1000	V
Maximum RMS voltage	V _{RMS}	140	280	420	560	700	
Maximum DC blocking voltage	V _{DC}	200	400	600	800	1000	
Maximum average forward rectified current	I _{F(AV)}	2					A
Surge peak forward current, 8.3ms single half sine-wave superimposed on rated load per diode	I _{FSM}	40					
Maximum forward voltage @ I _F =1.5A, T _J =25°C (Note 1)	V _F	1.3					V
Maximum reverse current @ rated V _R	T _J =25°C	5					uA
	T _J =125°C						
Typical Thermal Resistance	R _{θJA}	105					°C/W
Typical Thermal Resistance	R _{θJL}	32					
Operating junction temperature rang	T _J	-55 to +150					°C
Storage temperature rang	T _{STG}	-55 to +150					
Maximum reverse recovery time @ I _F =0.5A, I _R =1.0A, I _{RR} =0.25A	t _{rr}	250			500		ns

Note 1: Pulse test with PW=0.3mS

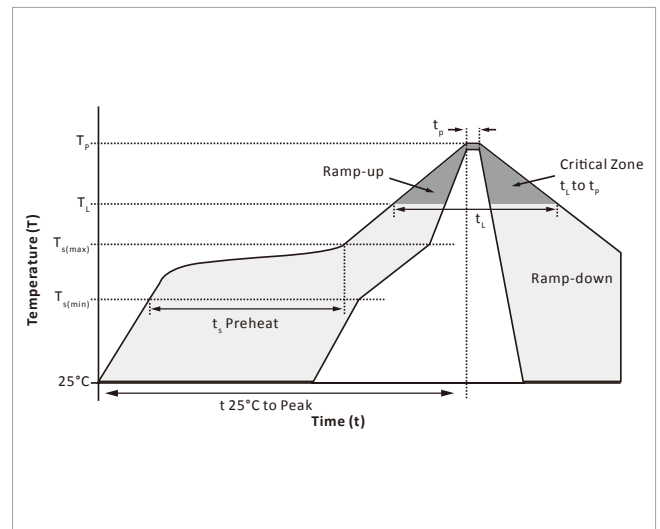
Note 2: Pulse test with PW=30mS

CHARACTERISTIC CURVES

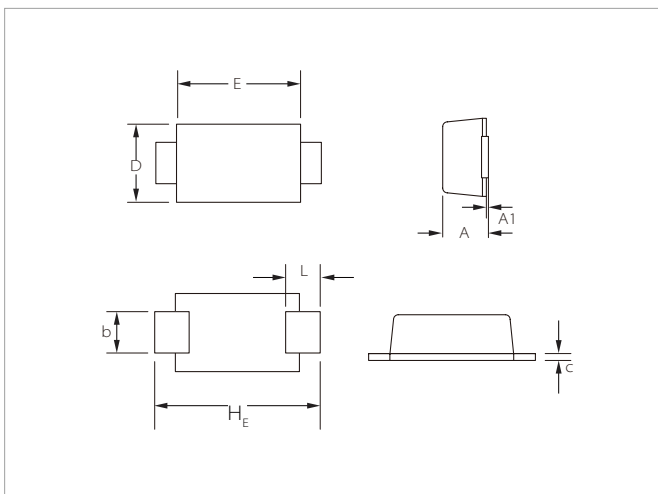
Fig. 1- Derating Curve Output Rectified Current

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_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

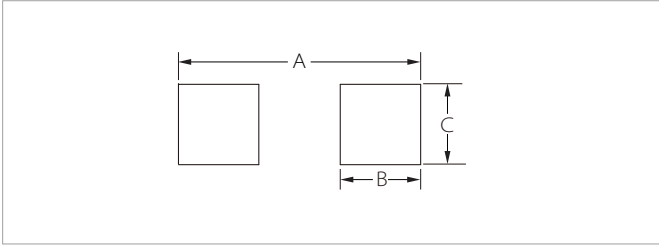


SOD-123FL PACKAGE INFORMATION



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
RS2002FL-RS2010FL	SOD-123FL	3000PCS	7"
		10000PCS	13"

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