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

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(Note1)		V_F	1.3					V
Maximum Reverse Current @rated V_R	T_J=25°C	I_R	5					μA
	T_J=125°C		50					
Typical Thermal Resistance		$R_{\theta J-A}$	105					°C/W
Typical Thermal Resistance		$R_{\theta J-L}$	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

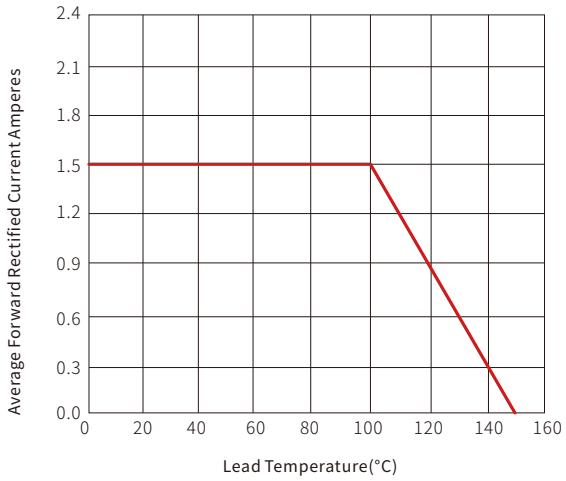


Fig. 2-maximum Non-repetitive Peak Forward Surge Current Perleg

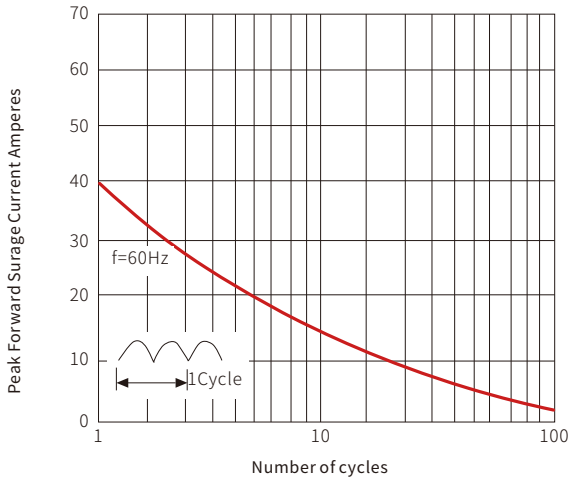


Fig. 3-Typical Forward Voltage Characteristics

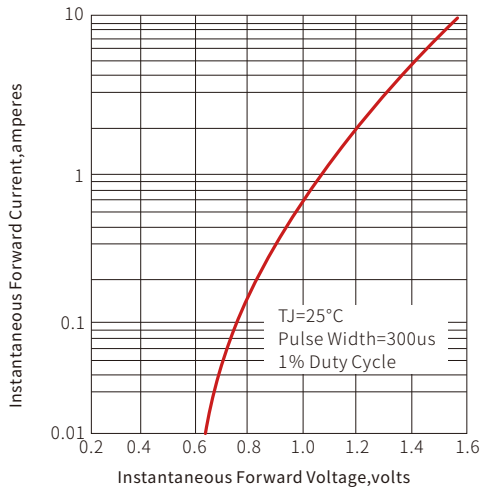
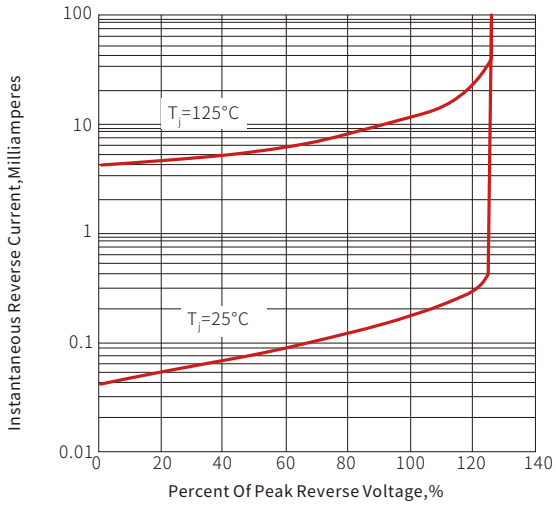
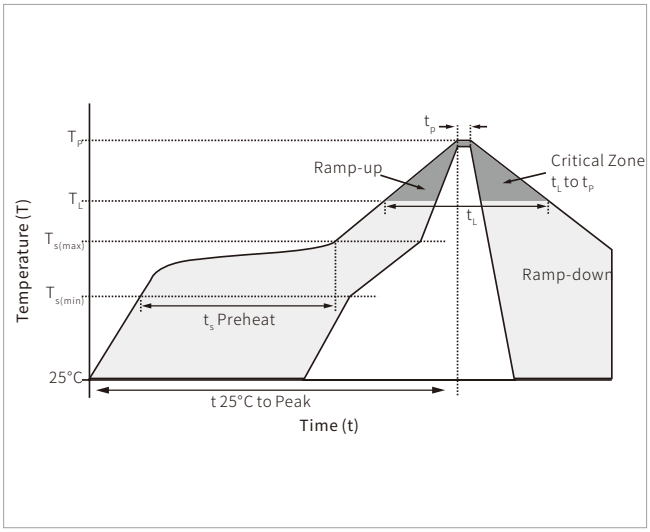


Fig. 4-Typical Reverse Leakage Characteristics

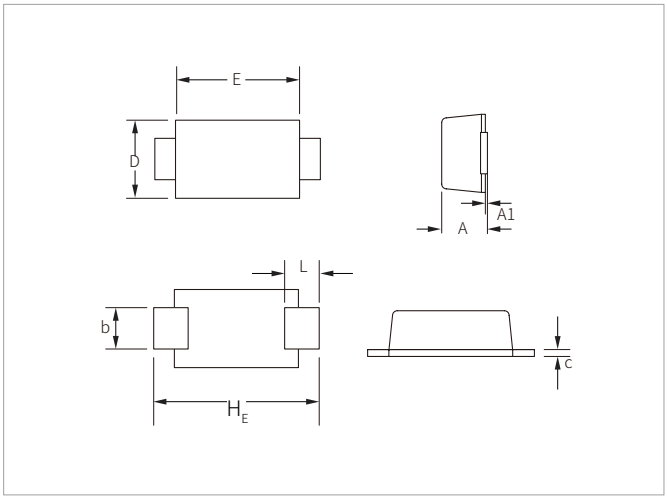


SOLDERING PARAMETERS

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_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

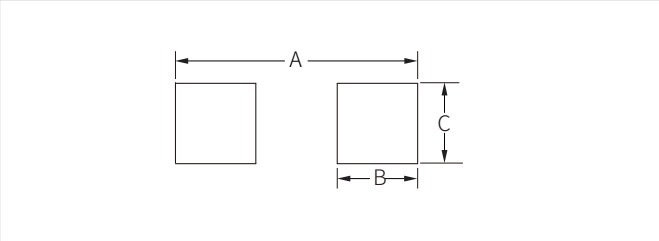


SOD-123FL PACKAGE INFORMATION



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_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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