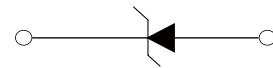


FEATURES

- | Low profile package
- | Ideal for automated placement
- | 5000 Watt peak pulse power capability with a 8/20 μ s waveform
- | For surface mounted applicatons to optimize board space
- | Excellent clamping capability
- | Very fast response time
- | Low incremental surge resistance



SOD-123FL



Schematic Symbol

APPLICATIONS

- | Power supply protection
- | Automotive application
- | Industrial application
- | Power management

APPROVALS

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

MAXIMUM RATINGS (T_A=25°C)

Parameter	Symbol	Value	Unit
Peak Pulse Power Dissipation on 8/20 μ s waveform (Note 1)	P _{PPM}	5000	Watts
Steady State Power Dissipation at T _L =75°C	P _D	2.8	Watts

Notes : 1.Non-repetitive current pulse,T_A=25°C.
 2.8.3ms single half sine-wave, or equivalent square wave, Duty cycle = 4 pulses per minutes maximum

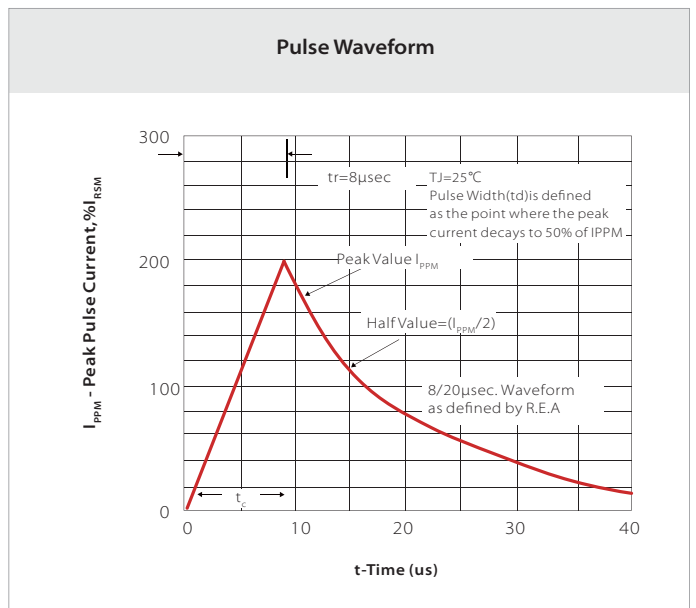
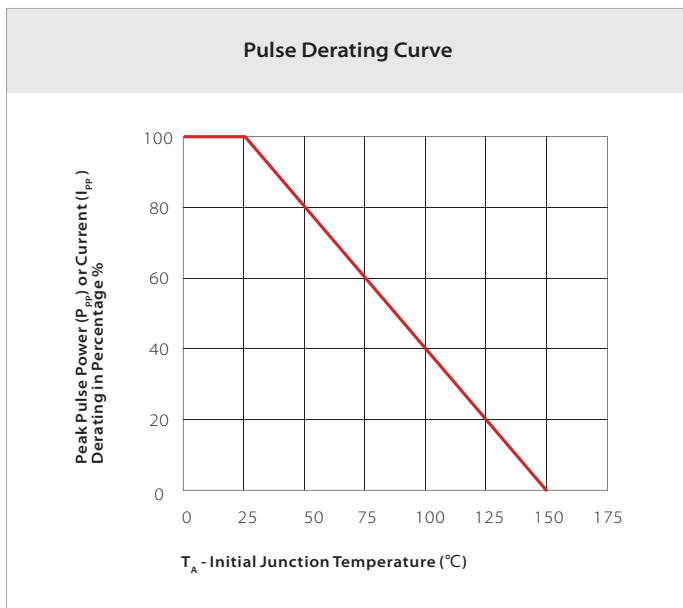
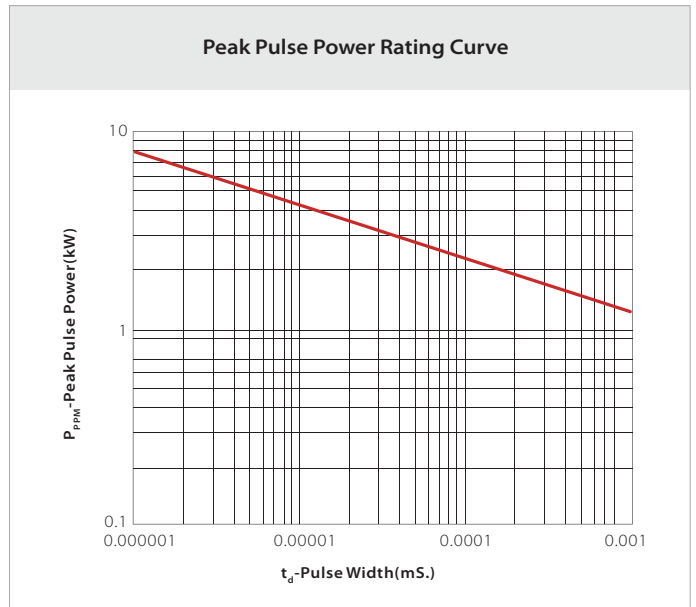
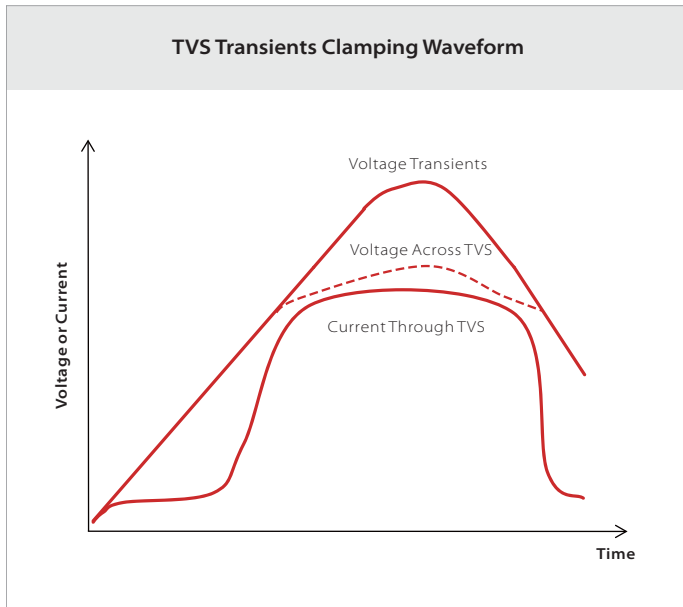
THERMAL CONSIDERATIONS

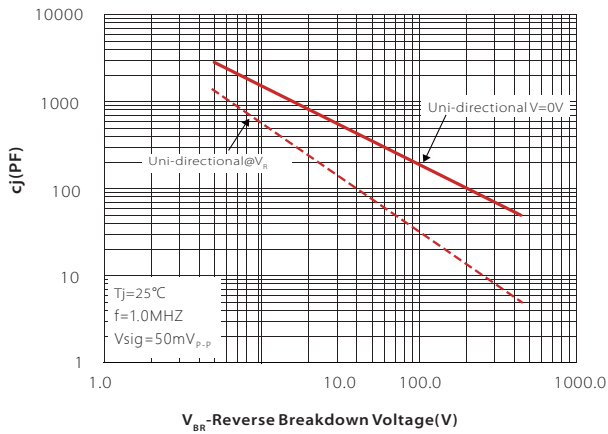
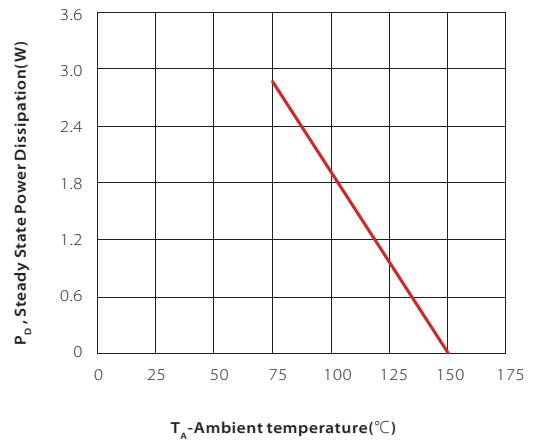
Parameter	Symbol	Value	Unit
Operating junction Temperature	T _J	-55 to +150	°C
Storage Temperature Range	T _S	-55 to +150	°C
Junction to Ambient on Printed circuit	R _{θJA}	220	°C/W

ELECTRICAL CHARACTERISTICS

Part Number	Device Marking Code	Reverse Stand-off Voltage	Breakdown Voltage Min.@I _T	Breakdown Voltage Max.@I _T	Test Current	Maximum Clamping Voltage @I _{PP}	Maximum Peak Pulse Current	Maximum Reverse Leakage @V _{RWM}
		V _{RWM} (V)	V _{BR} (V)	V _{BR} (V)	I _T (mA)	V _C (V)	I _{PP} (A)	I _R (μA)
SVF500U12	LE	12.0	13.3	14.7	1.0	25.0	200.0	1.0

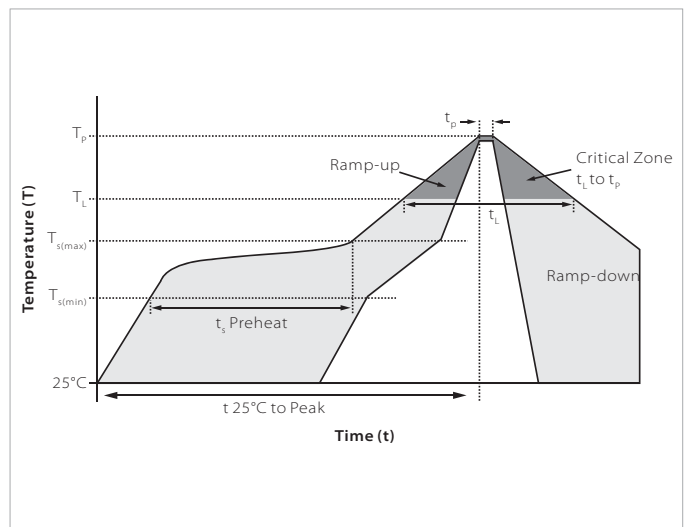
CHARACTERISTIC CURVES



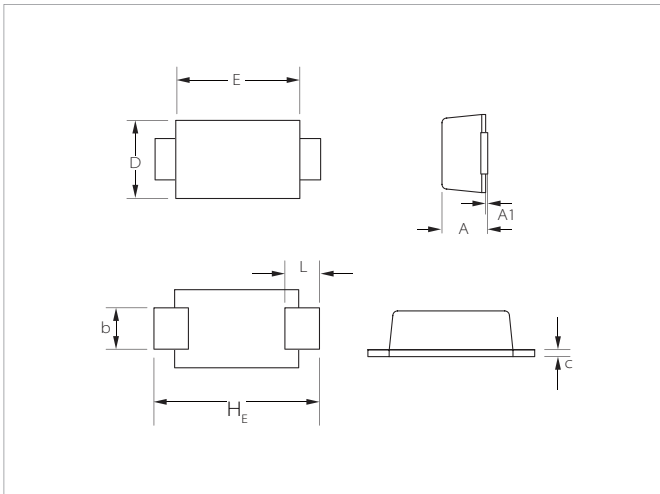
Typical Junction Capacitance

Steady State Power Dissipation Derating Curve


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_r)	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

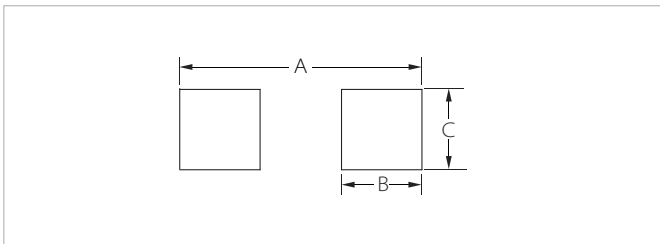


SOD-123FL PACKAGE INFORMATION



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
SVF500U12	SOD-123FL	3000PCS	7"

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