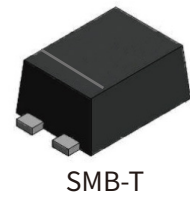


FEATURES

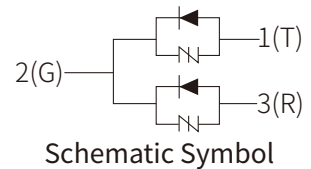
- Excellent capability of absorbing transient surge
- Quick response to surge voltage (nS Level)
- Eliminates overvoltage caused by fast rising transients
- Moisture sensitivity level: level 1
- Non degenerative
- Uni-directional



SMB-T



Marking



Schematic Symbol

APPLICATIONS

- SLIC

APPROVALS

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

ELECTRICAL CHARACTERISTICS

Part Number	V_{DRM} Pin2,1-3	$V_S^{①}$ Pin2,1-3	V_T Pin2,1-3	I_{DRM} Pin2,1-3	I_S Pin2,1-3	I_T Pin2,1-3	V_F Pin1,3-2	I_F Pin1,3-2	I_H Pin2,1-3	$C_o^{②}$ Pin2,1-3
	Min. (V)	Max. (V)	Max. (V)	Max. (μA)	mA	Max. (A)	Max. (V)	(mA)	Min. (mA)	Max.(pF)
STB50U90-2C	90	130	4	5	800	2.2	1	10	120	200

① V_S is measured at 100KV/S

② Off-state Capacitance is measured at $V_{DC}=2V$, $V_{RMS}=1V$, $f=1MHz$

SURGE RATINGS

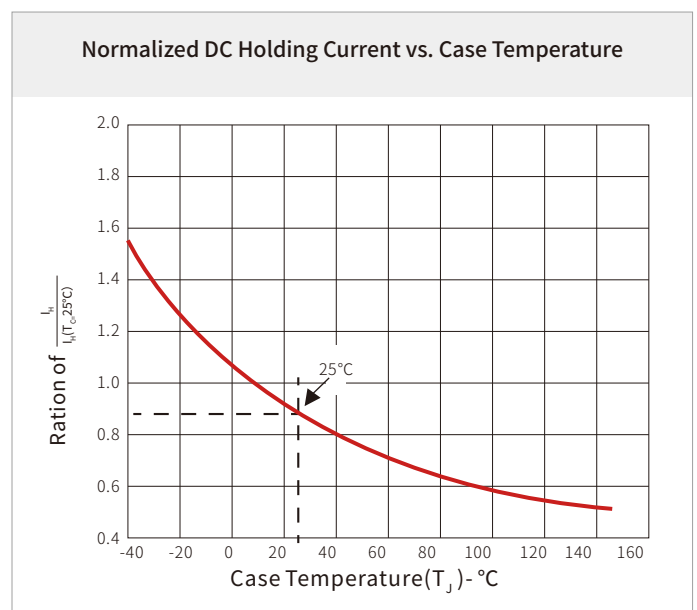
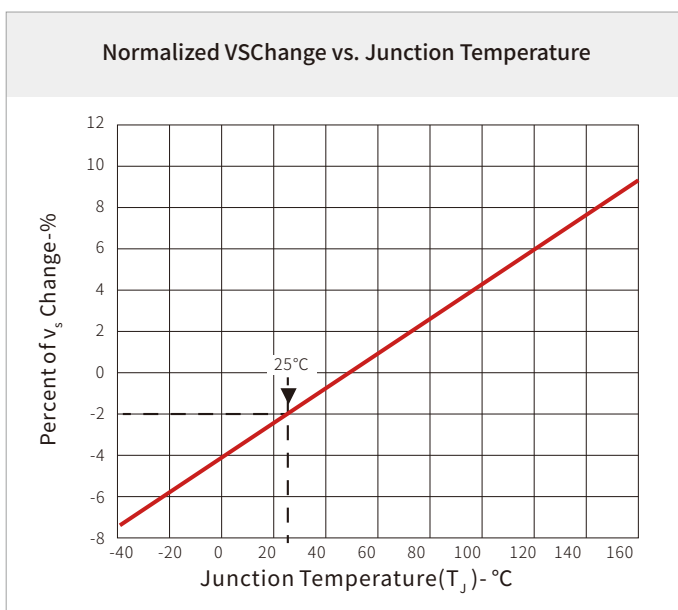
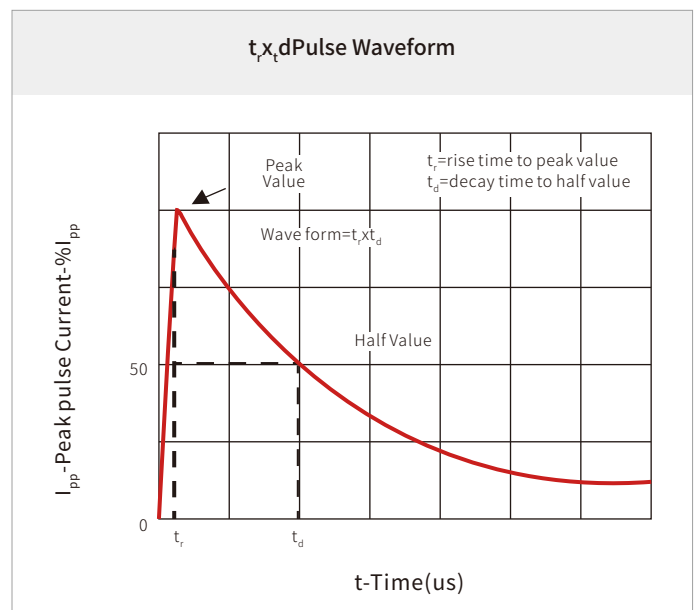
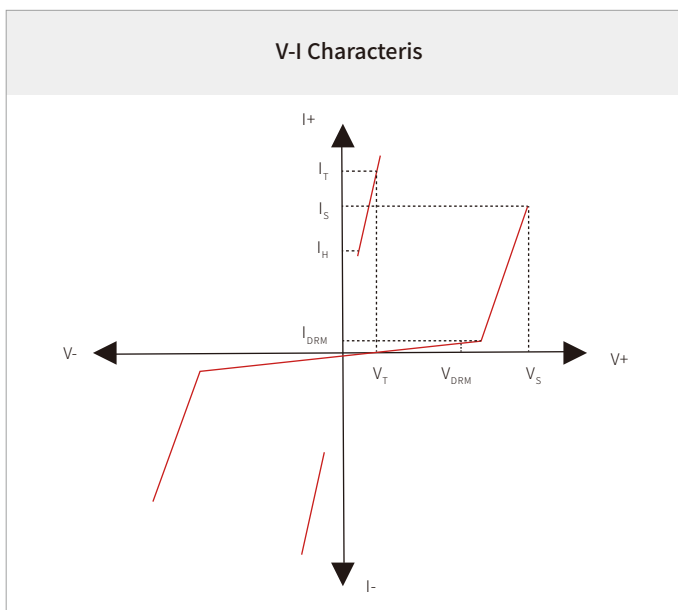
Current Waveform	5x320μs*
Voltage Waveform	10x700μs*
I_{PP}	50A

*Peak pulse current rating (IPP) is repetitive and guaranteed for the life of the product

THERMAL CONSIDERATIONS

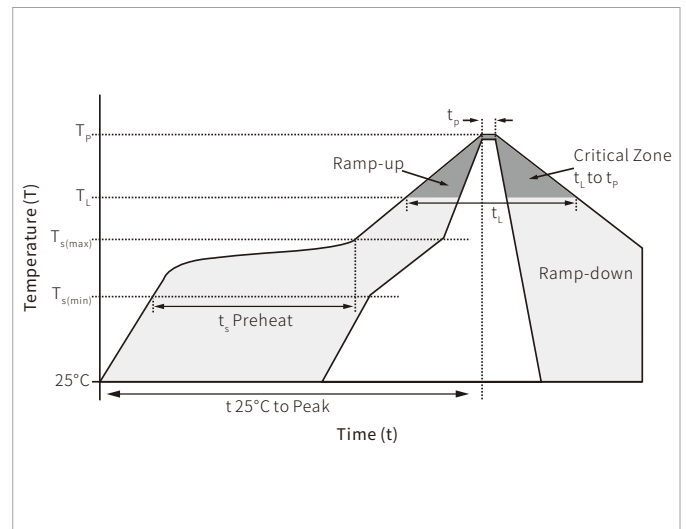
Symbol	Parameter	Value	Unit
T_J	Operating Junction Temperature	-40 to +150	°C
T_{STG}	Storage Temperature Range	-60 to +150	°C

RATINGS AND CHARACTERISTIC CURVES ($T_A=25^\circ\text{C}$)

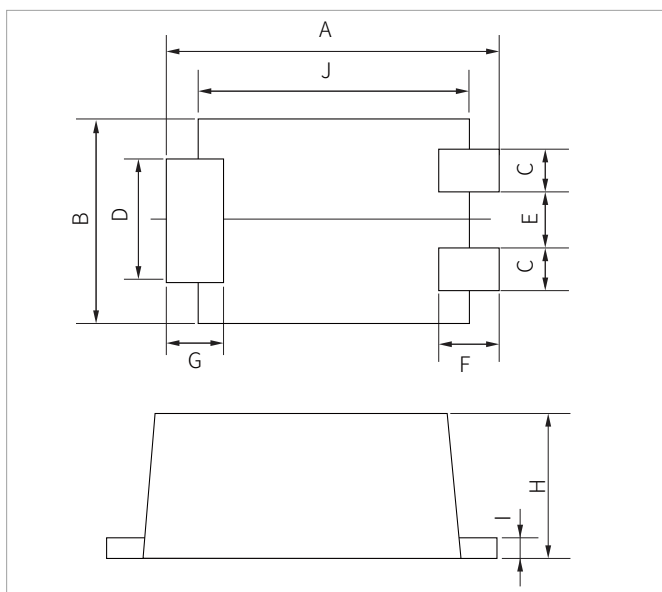


SOLDERING PARAMETERS

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

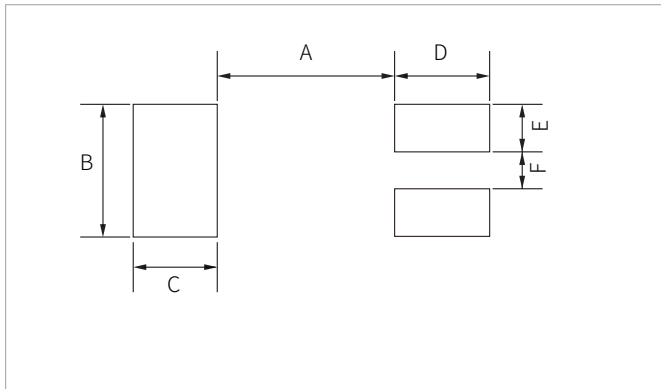


SMB-T PACKAGE INFORMATION



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	5.10	5.70	0.201	0.224
B	3.00	3.60	0.118	0.142
C	0.60	0.80	0.024	0.031
D	1.80	2.20	0.071	0.087
E	0.70	1.10	0.028	0.043
F	0.55	1.15	0.022	0.045
G	0.60	1.20	0.024	0.047
H	1.70	2.30	0.067	0.091
I	0.20	0.30	0.008	0.012
J	4.20	4.60	0.165	0.181

RECOMMENDED PAD LAYOUT DIMENSIONS



Ref.	Dimensions	
	Millimeters	Inches
A	3.4	0.134
B	2.5	0.098
C	1.6	0.063
D	1.8	0.071
E	0.9	0.035
F	0.7	0.028

ORDERING INFORMATION

Part Number	Component Package	QTY/Reel	Reel Size
STB50U90-2C	SMB-T	3000PCS	13"

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By QR Code

Website



Wechat

To find your local partner within Semiware's global website: www.semiware.com

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