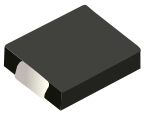
SVC600B58

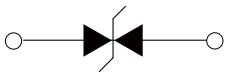
Surface Mount Transient Voltage Suppressor

FEATURES

- Glass Passivated Die Construction
- HI Power TVS Design in SMD package
- 1000A Maximum Reverse Pulse Peak Current
- Bi-Directional Versions Available
- Low clamping and slope resistance
- Ideal for Automatic pick and place assembly
- Reduce the manufacturing cost and increase the soldering quality compared to Axial leads package
- Have complete independent property rights and patents



DO-214AB(SMC)



Schematic Symbol

GENERAL INFORMATION

- High Current Bidirectional Power TVS diodes are desigh for use in high power DC Bus clamping applications
- Available with standoff voltage rating 58V
- compliant and meet IEC 61000-4-5 8/20us current surge requirements

MECHANICAL DATA

- Case : SMC,Molded plastic
- Terminals : Solder plated, solderable

APPROVALS

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

MAXIMUM RATINGS (T_A=25°C)

Parameter	Symbol	Value	Unit
Repetitive Standoff Voltage	V_{WM}	58	V
Peak Current Rating per 8/20 us IEC 61000-4-5	I_{PPM}	1000	A
Operating Junction Temperature Range	T_J	-55 to +125	°C
Storage Temperature Range	T_{STG}	-55 to +125	°C

ELECTRICAL CHARACTERISTICS (T_A=25°C)

Part Number	Standoff Voltage (V_{WM}) (V)	Max. Reverse Leakage (I_R) @V_{WM} (uA)	Reverse Breakdown Voltage V_{BR}@I_T		Test Current I_T	Max.Clamping Voltage V_{CL}Peak Pulse Current (I_{PP})				
						V_{CL} Volts	I_{PP} (8/20us) (A)		I_{PP} (10/1000us) (A)	
			Min Volts	Max Volts	(mA)		Min.	Typ.	Min.	Typ.
SVC600B58	58.0	10.0	64.0	70.0	10.0	93.5	1000	-	60.0	-

CHARACTERISTIC CURVES

Fig.1 V- I curve characteristics

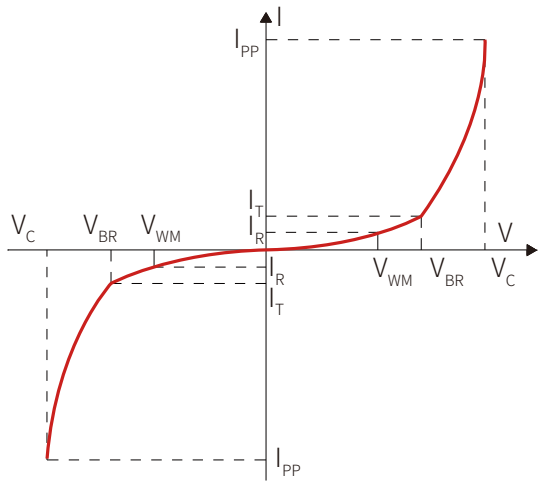


Fig.2 Typical V_{BR} vs. Junction Temperature

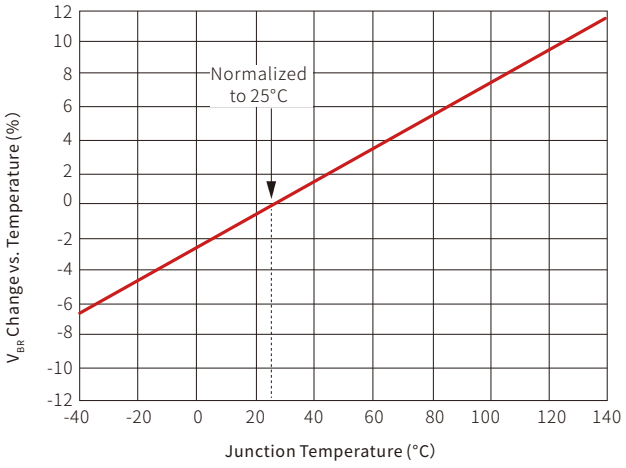


Fig.3 Peak Power Derating Curve

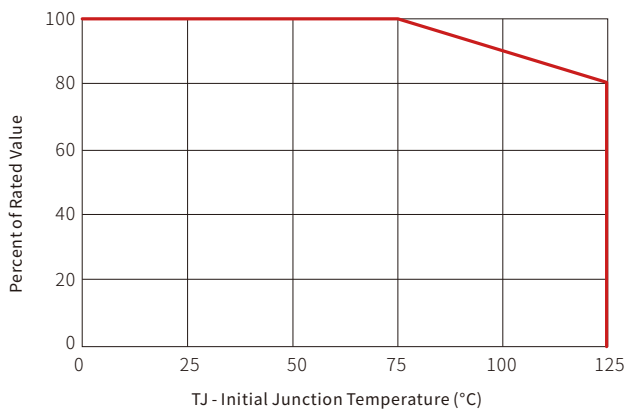
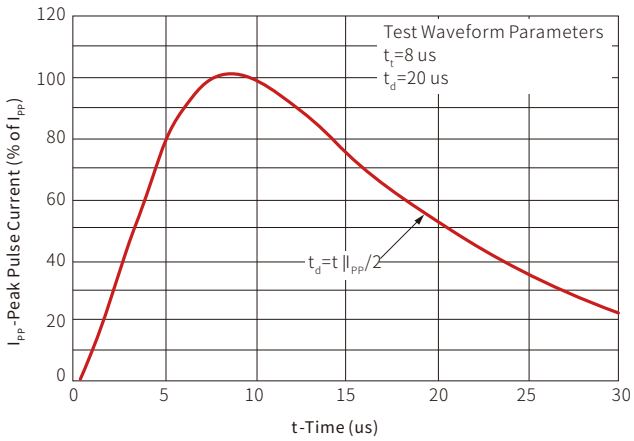
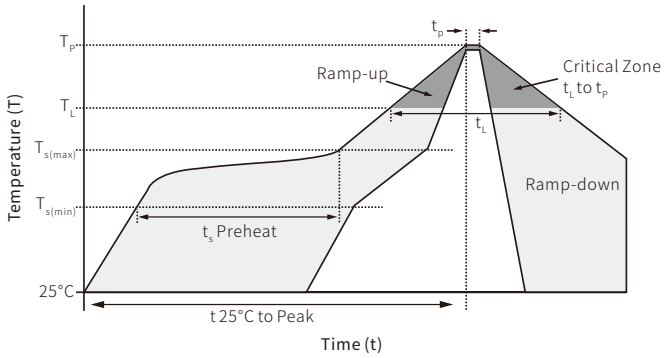


Fig.4 Current 8/20 us Waveform per IEC 61000-4-5

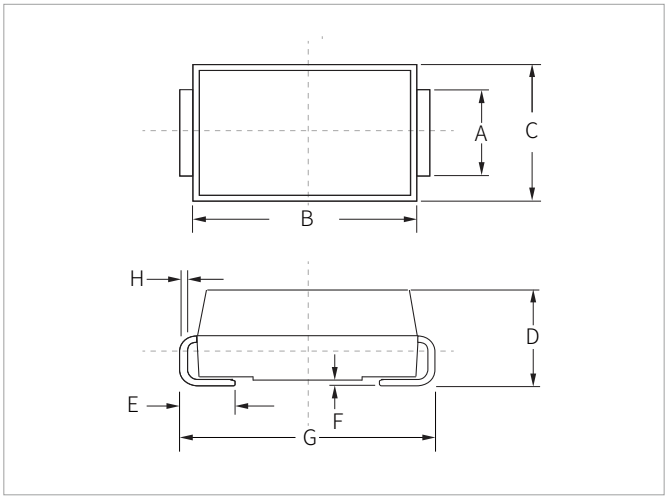


SOLDERING PARAMETERS

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

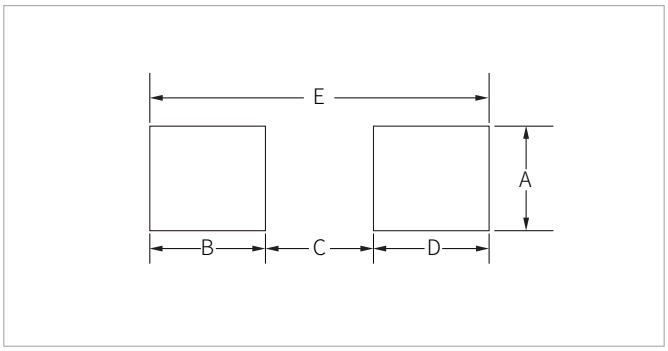


DO-214AB(SMC) PACKAGE INFORMATION



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	2.80	3.20	0.110	0.126
B	6.60	7.20	0.260	0.283
C	5.70	6.10	0.224	0.240
D	2.15	2.75	0.085	0.108
E	1.00	1.60	0.039	0.063
F	0.02	0.20	0.000	0.008
G	7.60	8.00	0.299	0.315
H	0.15	0.30	0.006	0.012

RECOMMENDED PAD LAYOUT DIMENSIONS



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	3.30	-	0.129	-
B	2.40	-	0.094	-
C	-	4.20	-	0.165
D	2.40	-	0.094	-
E	8.20REF		0.323REF	

ORDERING INFORMATION

Part Number	Component Package	QTY/Reel	Reel Size
SVC600B58	DO-214AB(SMC)	3000PCS	13"

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