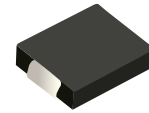
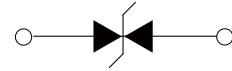


## FEATURES

- | 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 design 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

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

## MAXIMUM RATINGS ( $T_A=25^{\circ}\text{C}$ )

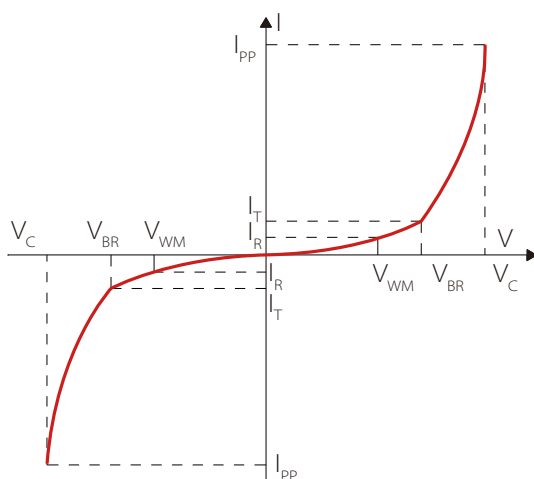
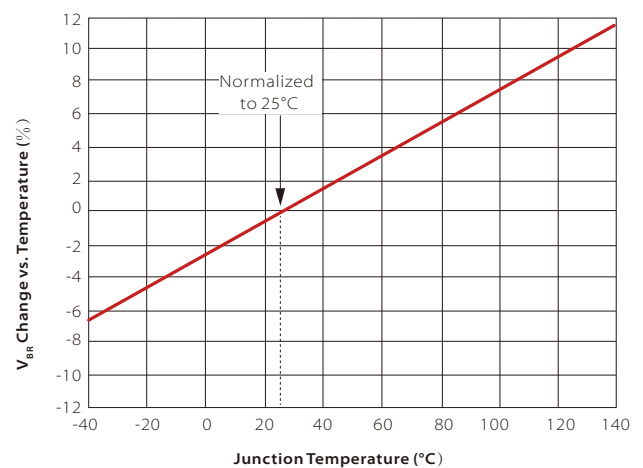
Parameter	Symbo	Value	Unit
Repetitive Standoff Voltage	$V_{WM}$	58	V
Peak Current Rating per 8/20 us IEC 61000-4-5	$I_{PPM}$	1000	A
Operating Junction Temperature Range	$T_J$	-55 to +125	$^{\circ}\text{C}$
Storage Temperature Range	$T_{STG}$	-55 to +125	$^{\circ}\text{C}$

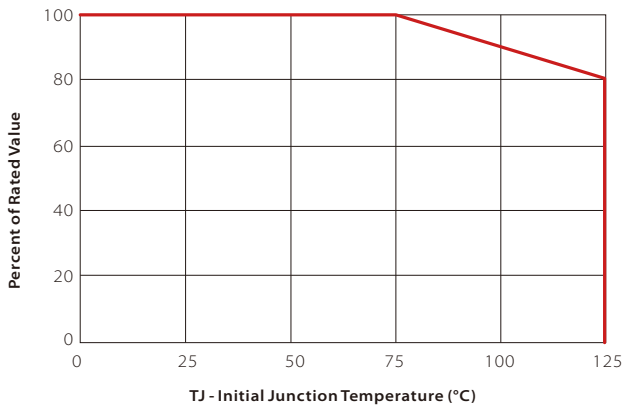
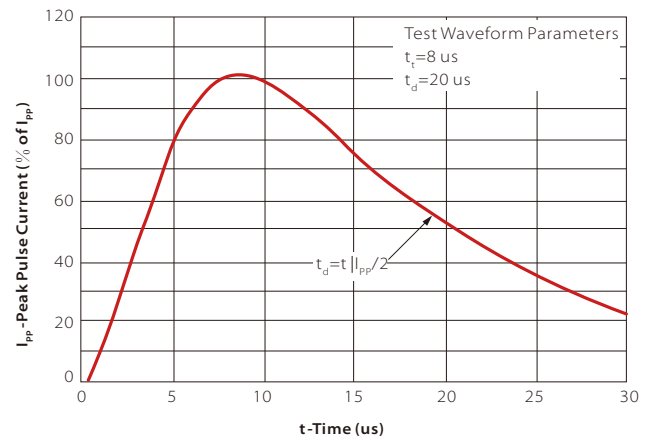
## ELECTRICAL CHARACTERISTICS ( $T_A=25^{\circ}\text{C}$ )

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

## CHARACTERISTIC CURVES

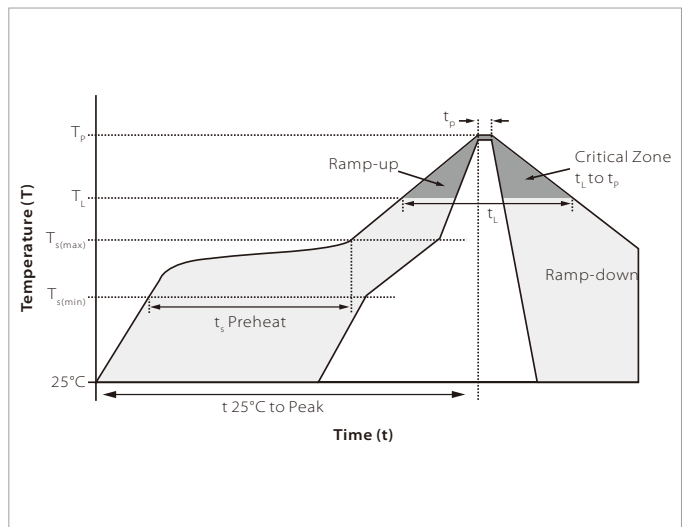
Fig.1 V- I curve characteristics


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


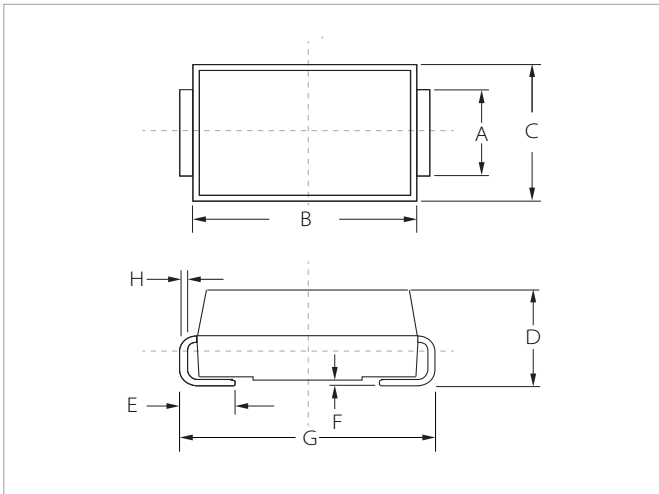
**Fig.3 Peak Power Derating Curve**

**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

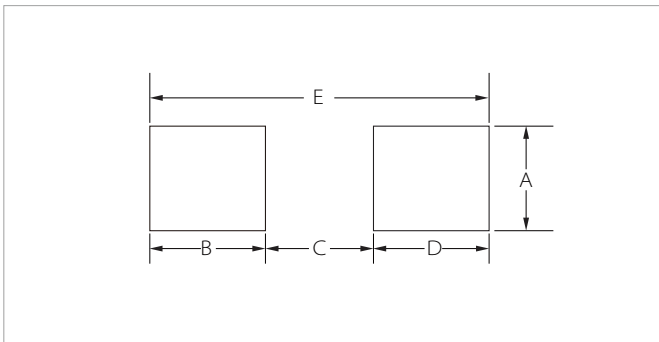


## DO-214AB(SMC) PACKAGE INFORMATION



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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