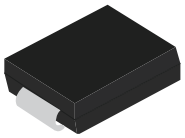
FEATURES

- Low profile package
- Ideal for automated placement
- Available in Bi-direconal
- 5000W peak pulse power capability with a 10/1000 μs waveform
- For surface mounted applicaons to opmize board space
- Excellent clamping capability
- Very fast response time
- Low incremental surge resistance



DO-214AB(SMC)

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

MAXIMUMRATINGS (T_A=25°C)

Parameter	Symbo	Value	Unit
Peak Pulse Power Dissipation on 10/1000us waveform (Note1, Note2,Fig.2)	P_{PPM}	5000	Watts
Steady state power dissipaon at T_A=50°C (Fig.5)	$P_{M(AV)}$	6.5	Watts

Notes : 1. Non-repeve current pulse, per Fig.3 and derated above T_A=25°C per Fig.4.
2. Mounted on 8.0mm×8.0mm copper pads to each terminal.

THERMAL CONSIDERATIONS

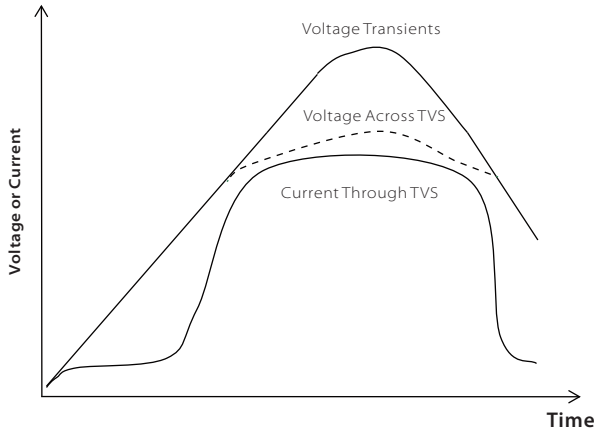
Parameter	Symbol	Value	Unit
Operating Junction Temperature	T_J	-55 to +150	℃
Storage Temperature Range	T_{STG}	-55 to +150	℃
Junction to Ambient on printed circuit	$R_{\theta JA}$	75	℃/W

ELECTRICAL CHARACTERISTICS (TA=25℃)

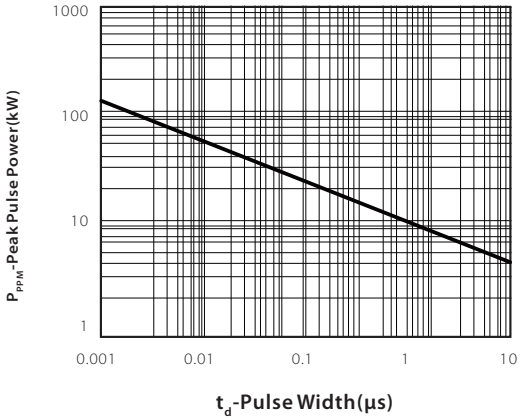
Part Number	Device Marking Code	Reverse Stand-off Voltage	Breakdown Voltage Min.@I_T	Breakdown Voltage Max.@I_T	Test Current	Maximum Clamping Voltage @I_{PP}	Peak Pulse Current	Reverse Leakage @V_{RWM}
		V_{RWM}(V)	V_{BR}(V)	V_{BR}(V)	I_T(mA)	V_C(V)	I_{PP}(A)	I_R(uA)
SVC500B58	5BGG	58.0	64.4	71.2	1.0	93.6	53.5	5.0

CHARACTERISTIC CURVES

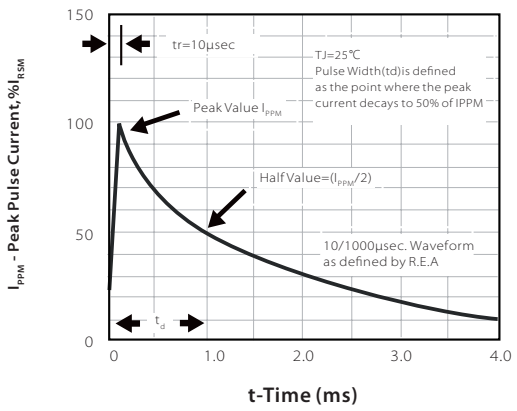
TVS Transients Clamping Waveform



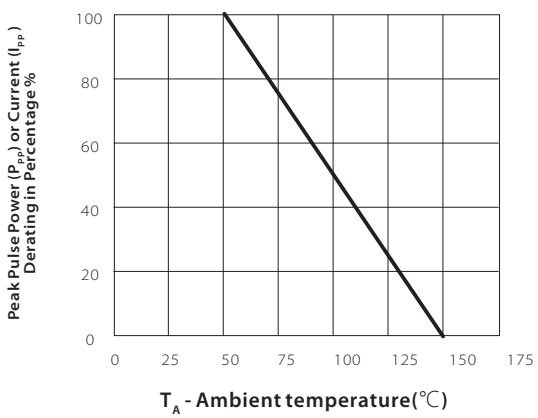
Peak Pulse Power Rating Curve



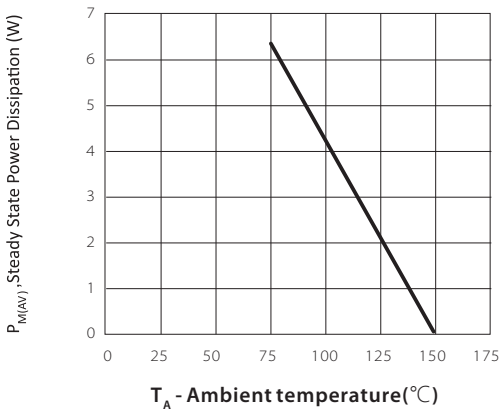
Pulse Waveform



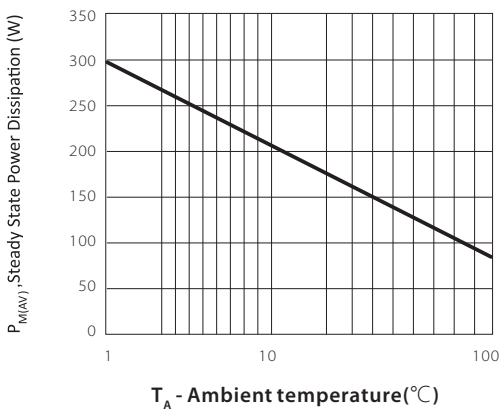
Pulse Derang Curve



Steady State Power Dissipaon Derang Curve

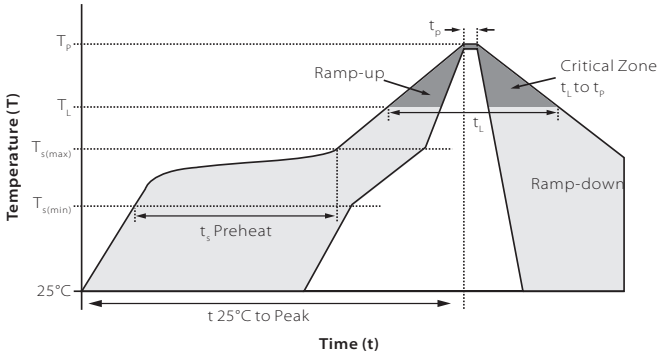


Maximum Non-Repeve Forward Surge Current Uni-Direconal Only

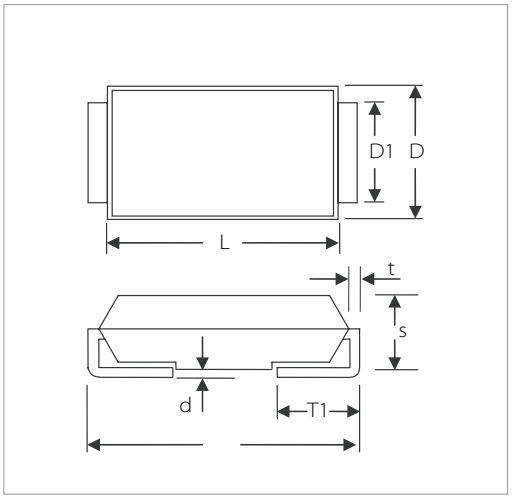


SOLDERING PARAMETERS

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 (tp)		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

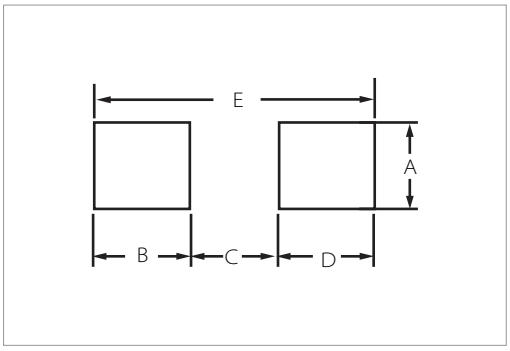


DO-214AB(SMC) PACKAGE DIMENSIONS



Item	Millimeters		Inches	
	Min.	Max.	Min.	Max.
L	6.60	7.11	0.260	0.280
D	5.59	6.22	0.220	0.245
D1	2.90	3.20	0.114	0.126
T	7.75	8.13	0.305	0.320
T1	0.76	1.52	0.030	0.060
d	-	0.20	-	0.008
s	2.06	2.62	0.079	0.103
t	0.152	0.31	0.006	0.012

RECOMMENDED PAD LAYOUT DIMENSIONS



Dim	Millimeters		Inches	
	Min	Max	Min	Max
A	3.300	-	0.129	-
B	2.400	-	0.094	-
C	-	4.200	-	0.165
D	2.400	-	0.094	-
E	8.13 REF		0.320 REF	

ORDERING INFORMATION

Part Number	Size	QTY/Reel	Reel Size
SVC500B58	DO-214AB(SMC)	3000PCS	13"

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