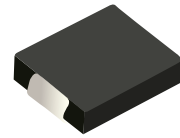
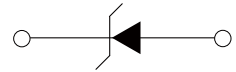


FEATURES

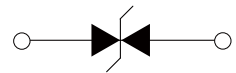
- | Low profile package
- | Ideal for automated placement
- | 5000 Watt peak pulse power capability with a 10/1000µs waveform
- | For surface mounted applications to optimize board space
- | Excellent clamping capability
- | Very fast response time
- | Low incremental surge resistance
- | Meet AEC-Q101 Requirements



DO-214AB(SMC)



Uni-directional



Bi-directional

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

Parameter	Symbol	Value	Unit
Peak Pulse Power Dissipation on 10/1000us waveform (Note1, Note2).	P_{PPM}	5000	Watts
Steady State Power Dissipation at $T_L=50^{\circ}\text{C}$, Lead lengths.375" (9.5mm) (Note2)	P_D	6.5	Watts

Notes : 1.Non-repetitive current pulse, $T_A=25^{\circ}\text{C}$.
 2.Mounted on 5.0mm*5.0mm (0.03mm thick) Copper Pads to each terminal.

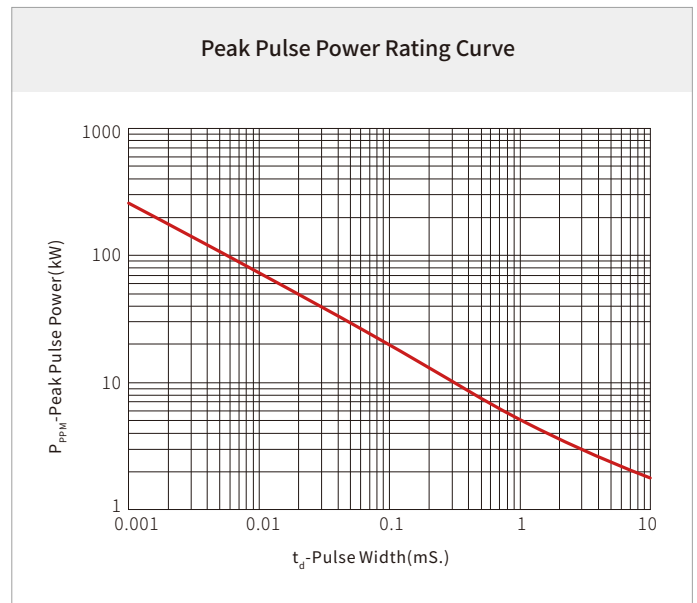
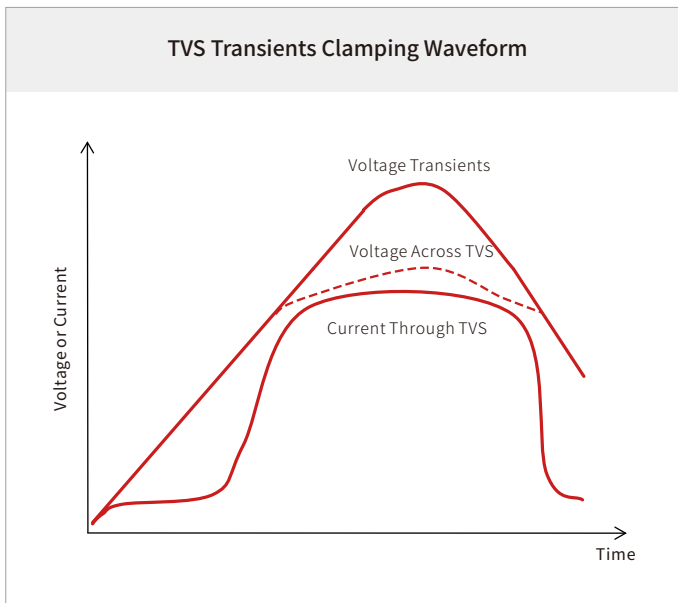
THERMAL CONSIDERATIONS

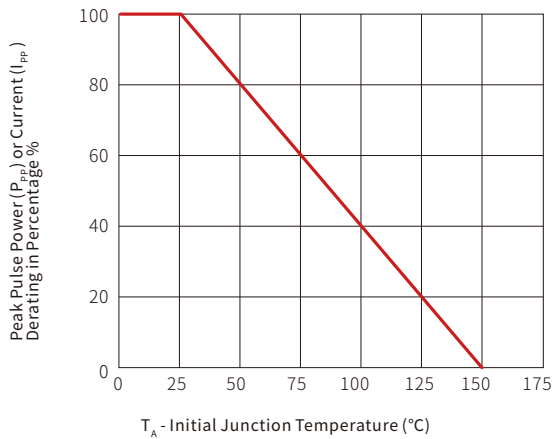
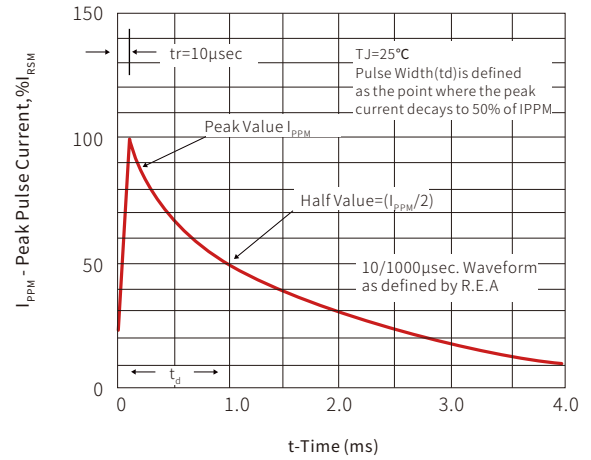
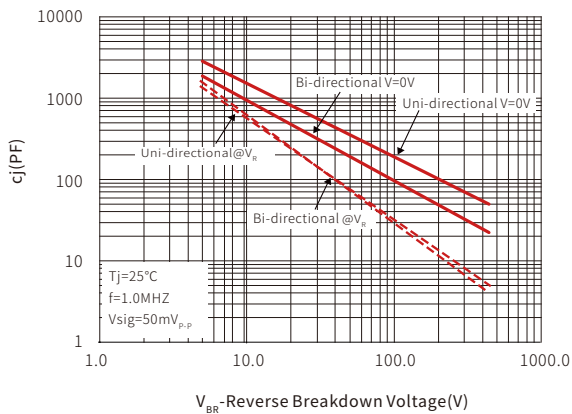
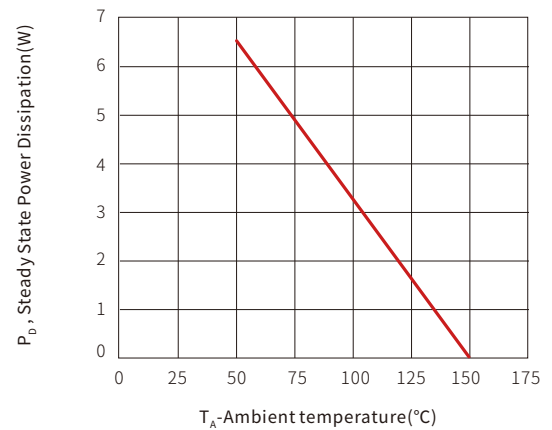
Parameter	Symbol	Value	Unit
Operating Junction Temperature	T_J	-55 to +150	$^{\circ}\text{C}$
Storage Temperature Range	T_{STG}	-55 to +150	$^{\circ}\text{C}$
Junction to Ambient on printed circuit	$R_{\theta JA}$	75	$^{\circ}\text{C/W}$

ELECTRICAL CHARACTERISTICS (T_A=25°C)

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}
Uni-Polar	Bi-Polar	Uni	Bi	V _{RWM} (V)	V _{BR} (V)	V _{BR} (V)	I _T (mA)	V _C (V)	I _{PP} (A)	I _R (uA)
TPSVC550U30	TPSVC550B30	5SBM	5DBM	30.0	33.30	36.80	1	48.4	103.0	1
TPSVC550U33	TPSVC550B33	5SBP	5DBP	33.0	36.70	40.60	1	53.3	93.9	1
TPSVC550U36	TPSVC550B36	5SBR	5DBR	36.0	40.00	44.20	1	58.1	86.1	1
TPSVC550U40	TPSVC550B40	5SBT	5DBT	40.0	44.40	49.10	1	64.5	77.6	1
TPSVC550U43	TPSVC550B43	5SBV	5DBV	43.0	47.80	52.80	1	69.4	72.1	1
TPSVC550U45	TPSVC550B45	5SBX	5DBX	45.0	50.00	55.30	1	72.7	68.8	1
TPSVC550U48	TPSVC550B48	5SBZ	5DBZ	48.0	53.30	58.90	1	77.4	64.7	1
TPSVC550U51	TPSVC550B51	5SCE	5DCE	51.0	56.70	62.70	1	82.4	60.7	1
TPSVC550U54	TPSVC550B54	5SCF	5DCF	54.0	60.00	66.30	1	87.1	57.5	1
TPSVC550U58	TPSVC550B58	5SCG	5DCG	58.0	64.40	71.20	1	93.6	53.5	1

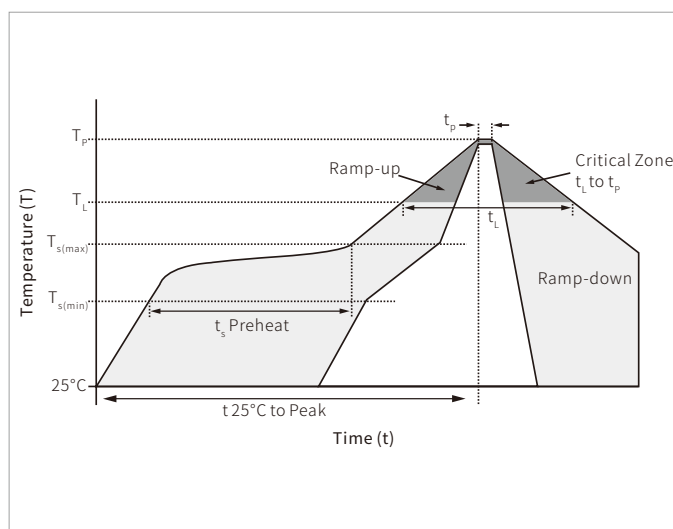
CHARACTERISTIC CURVES



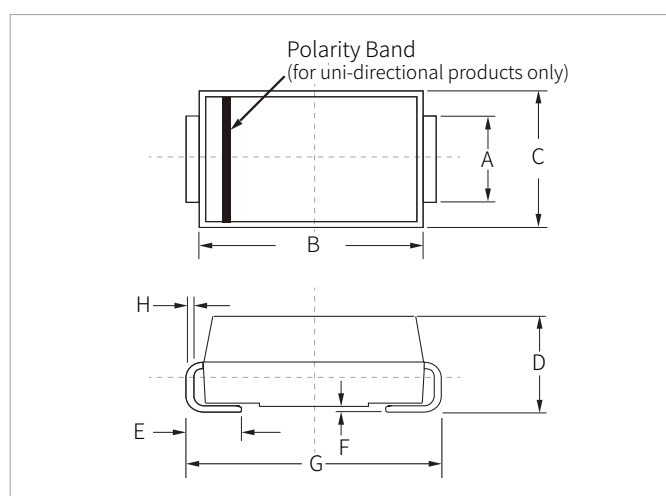
Pulse Derating Curve

Pulse Waveform

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_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

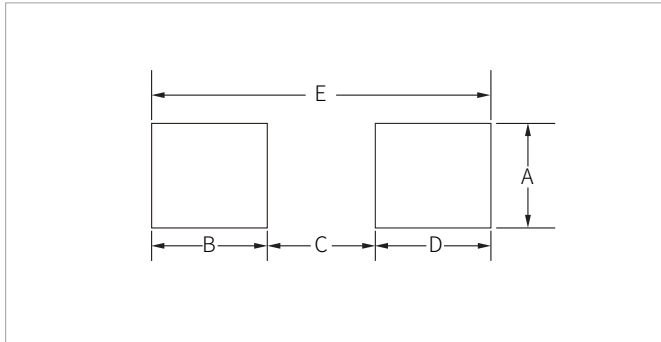


DO-214AB(SMC) PACKAGE INFORMATION



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
TPSVC550	DO-214AB(SMC)	3000PCS	13"

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