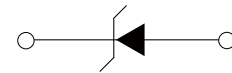


FEATURES

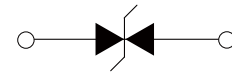
- | Low profile package
- | Ideal for automated placement
- | 5000 Watt peak pulse power capability with a 10/1000 μ s waveform
- | For surface mounted applications to optimize board space
- | Excellent clamping capability
- | Very fast response time
- | Low incremental surge resistance



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 10/1000 μ s waveform (Note1, Note2).	P_{PPM}	5000	W
Steady State Power Dissipation at $T_L=50^{\circ}\text{C}$, Lead lengths.375" (9.5mm) (Note2)	P_D	6.5	W
Peak Forward Surge Current, 8.3ms Single Half Sine Wave (Note 3)	I_{FSM}	300	A
Maximum Instantaneous Forward Voltage at 100A for Unidirectional Only	V_F	5.0	V

- 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.
3. Measured on 8.3ms single half sine wave or equivalent square wave for unidirectional component only, duty cycle = 4 per minute maximum

THERMAL CONSIDERATIONS

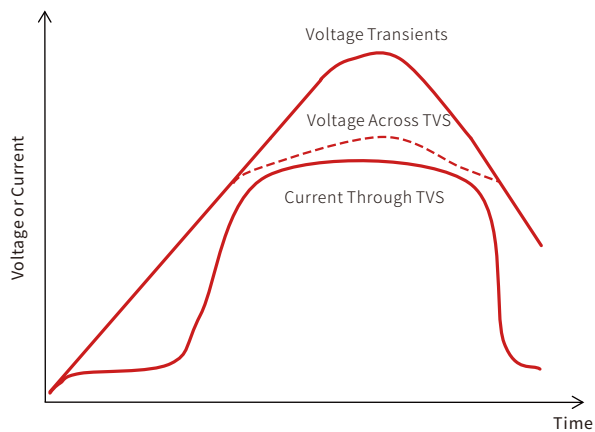
Parameter	Symbol	Value	Unit
Operating Junction Temperature	T_J	-65 to +150	$^{\circ}\text{C}$
Storage Temperature Range	T_{STG}	-65 to +175	$^{\circ}\text{C}$
Junction to Ambient on printed circuit	$R_{\theta JA}$	75	$^{\circ}\text{C/W}$

ELECTRICAL CHARACTERISTICS (T_A=25°C)

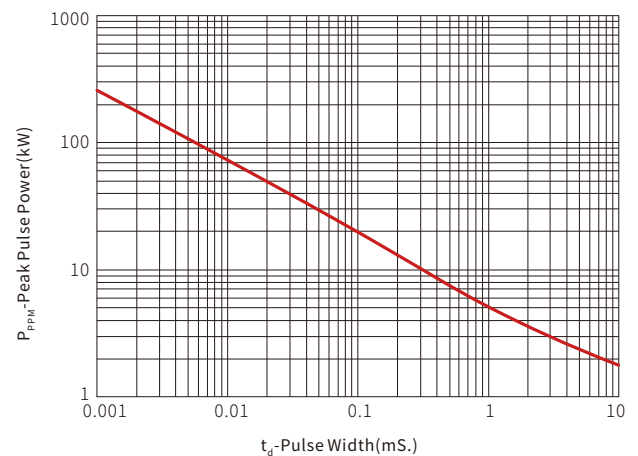
Part Number		Device Marking Code		Reverse Stand-off Voltage	Breakdown Voltage Min.@I _T	Breakdown Voltage Max.@I _T	Test Current	Maximum Clamping Voltage @I _{PP}	Peak Pulse Current	Reverse Leakage @V _{RWM}
Uni-Polar	Bi-Polar	Uni	Bi	V _{RWM} (V)	V _{BR} (V)	V _{BR} (V)	I _T (mA)	V _C (V)	I _{PP} (A)	I _R (uA)
SVC550U30	SVC550B30	5PFK	5BFK	30.0	33.30	36.80	1	48.4	103.0	5.0
SVC550U33	SVC550B33	5PFM	5BFM	33.0	36.70	40.60	1	53.3	93.9	5.0
SVC550U36	SVC550B36	5PFP	5BFP	36.0	40.00	44.20	1	58.1	86.1	5.0
SVC550U40	SVC550B40	5PFR	5BFR	40.0	44.40	49.10	1	64.5	77.6	5.0
SVC550U43	SVC550B43	5PFT	5BFT	43.0	47.80	52.80	1	69.4	72.1	5.0
SVC550U45	SVC550B45	5PFV	5BFV	45.0	50.00	55.30	1	72.7	68.8	5.0
SVC550U48	SVC550B48	5PFX	5BFX	48.0	53.30	58.90	1	77.4	64.7	5.0
SVC550U51	SVC550B51	5PFZ	5BFZ	51.0	56.70	62.70	1	82.4	60.7	5.0
SVC550U54	SVC550B54	5PGE	5BGE	54.0	60.00	66.30	1	87.1	57.5	5.0
SVC550U58	SVC550B58	5PGG	5BGG	58.0	64.40	71.20	1	93.6	53.5	5.0
SVC550U60	SVC550B60	5PGK	5BGK	60.0	66.70	73.70	1	96.8	51.7	5.0
SVC550U64	SVC550B64	5PGM	5BGM	64.0	71.10	78.60	1	103.0	48.6	5.0
SVC550U70	SVC550B70	5PGP	5BGP	70.0	77.80	86.00	1	113.0	44.3	5.0
SVC550U75	SVC550B75	5PGR	5BGR	75.0	83.30	92.10	1	121.0	41.4	5.0
SVC550U78	SVC550B78	5PGT	5BGT	78.0	86.70	95.80	1	126.0	39.7	5.0
SVC550U85	SVC550B85	5PGV	5BGV	85.0	94.40	104.00	1	137.0	36.5	5.0
SVC550U90	SVC550B90	5PGX	5BGX	90.0	100.00	111.00	1	146.0	34.3	5.0
SVC550U100	SVC550B100	5PGZ	5BGZ	100.0	111.00	123.00	1	162.0	30.9	5.0
SVC550U110	SVC550B110	5PHE	5BHE	110.0	122.00	135.00	1	177.0	28.3	5.0

CHARACTERISTIC CURVES

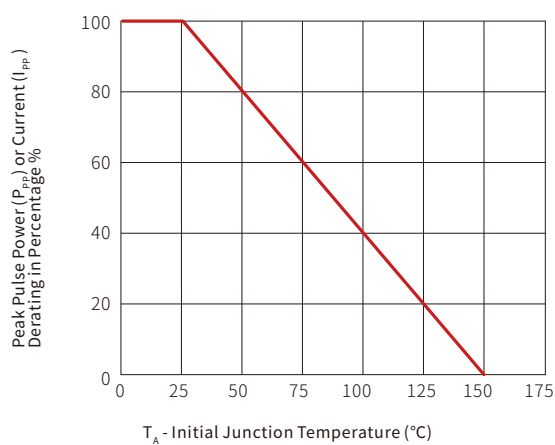
TVS Transients Clamping Waveform



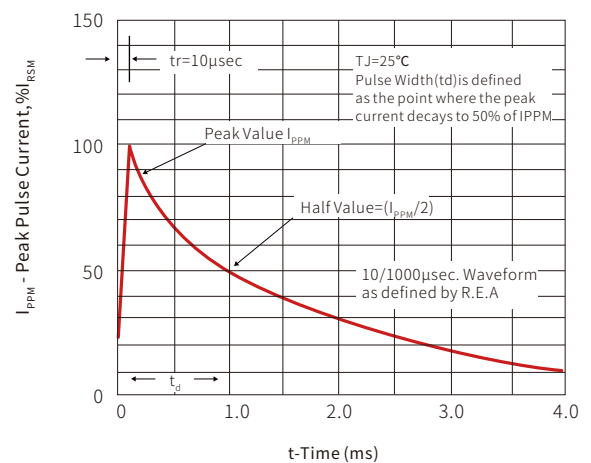
Peak Pulse Power Rating Curve



Pulse Derating Curve

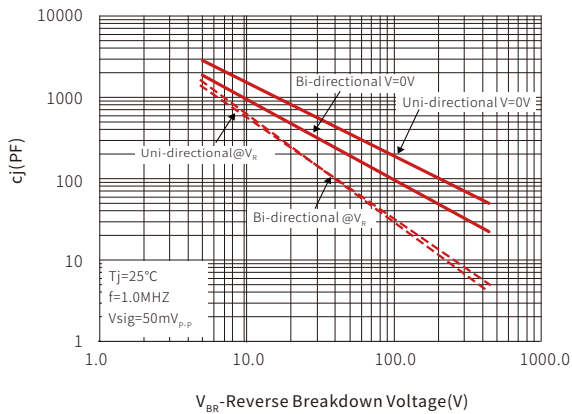


Pulse Waveform

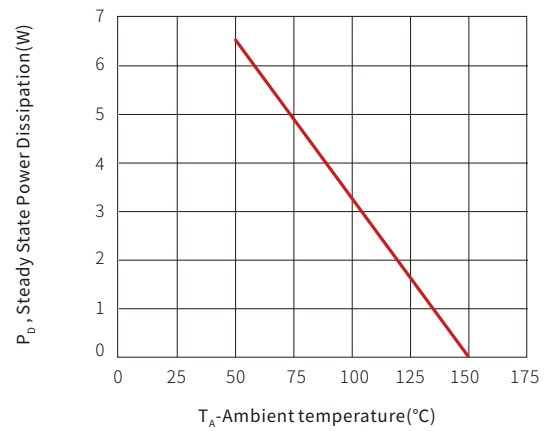




Typical Junction Capacitance

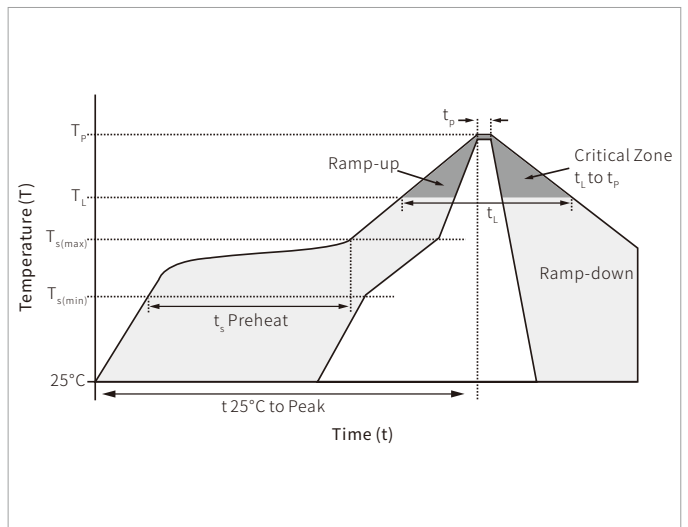


Steady State Power Dissipation Derating Curve

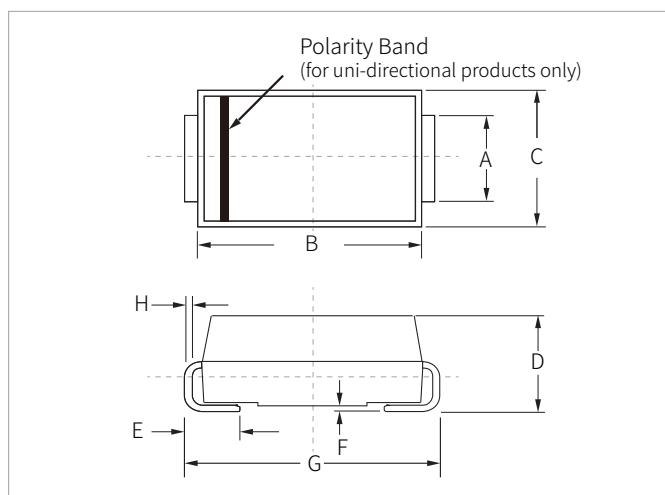


SOLDERING PARAMETERS

Reflow Condition		Lead-free assembly
Pre Heat	Temperature Max ($T_{s(min)}$)	150 $^\circ\text{C}$
	Temperature Max ($T_{s(max)}$)	200 $^\circ\text{C}$
	Time (min to max) (t_s)	60 – 180 secs
Average ramp up rate (Liquidus Temp (T_L) to peak)		3 $^\circ\text{C}/\text{second}$ max
$T_{s(max)}$ to T_L - Ramp-up Rate		3 $^\circ\text{C}/\text{second}$ max
Reflow	Temperature (T_L) (Liquidus)	217 $^\circ\text{C}$
	Time (min to max) (t_L)	60 – 150 seconds
Peak Temperature (T_p)		260 $^\circ\text{C}$
Time within 5 $^\circ\text{C}$ of actual peak Temperature (t_p)		20 – 40 seconds
Ramp-down Rate		6 $^\circ\text{C}/\text{second}$ max
Time 25 $^\circ\text{C}$ to peak Temperature (T_p)		8 minutes max.
Do not exceed		260 $^\circ\text{C}$

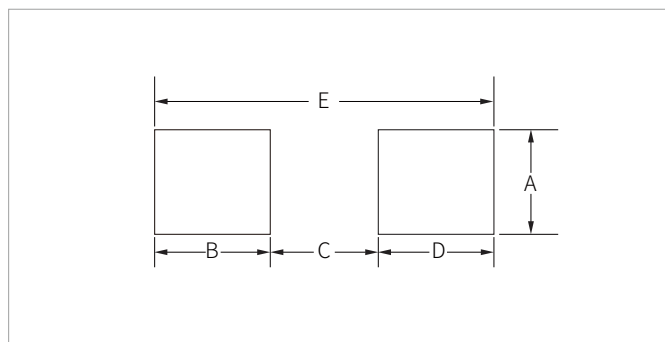


DO-214AB(SMC) PACKAGE INFORMATION



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
SVC500xxx	DO-214AB(SMC)	3000PCS	13"

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