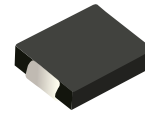
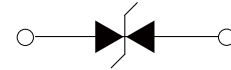


FEATURES

- | Low profile package
- | Ideal for automated placement
- | 8000 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
- | Meet AEC-Q101 Requirements



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

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}	8000	Watts
Steady State Power Dissipation at $T_L=50^{\circ}\text{C}$, Lead lengths.375" (9.5mm) (Note2)	P_D	10	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.

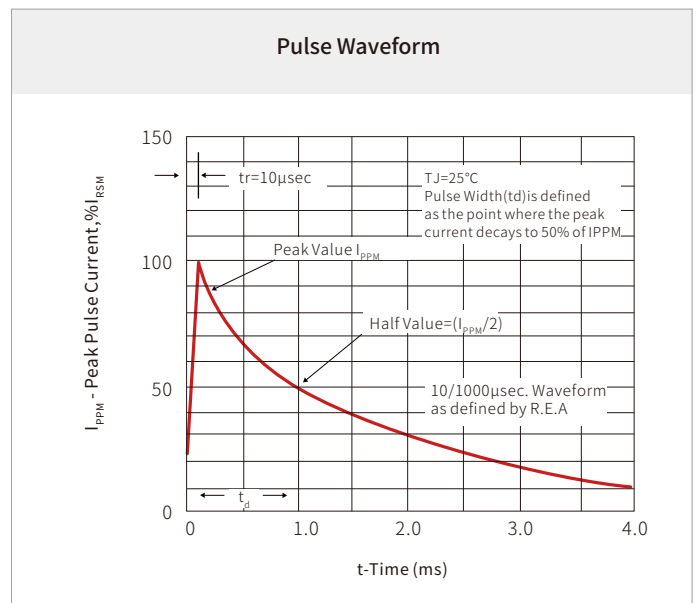
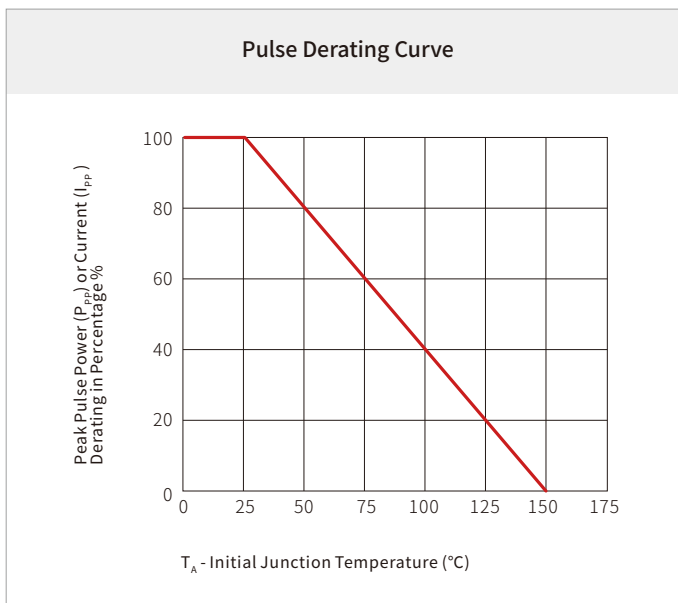
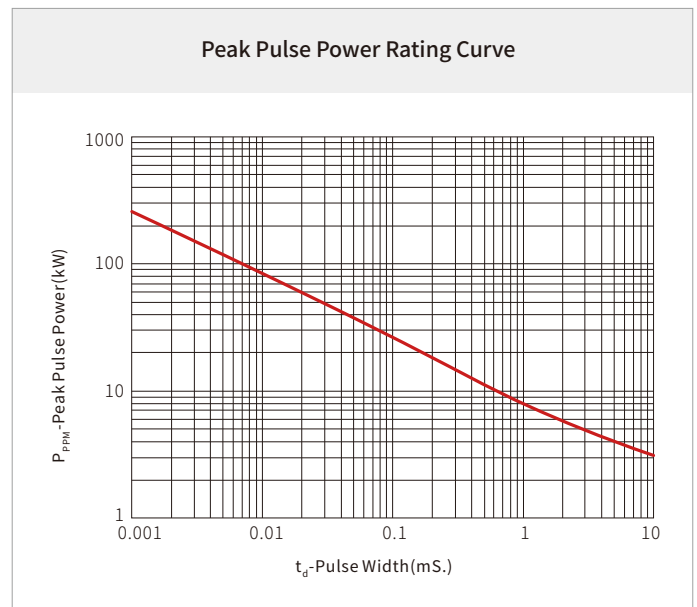
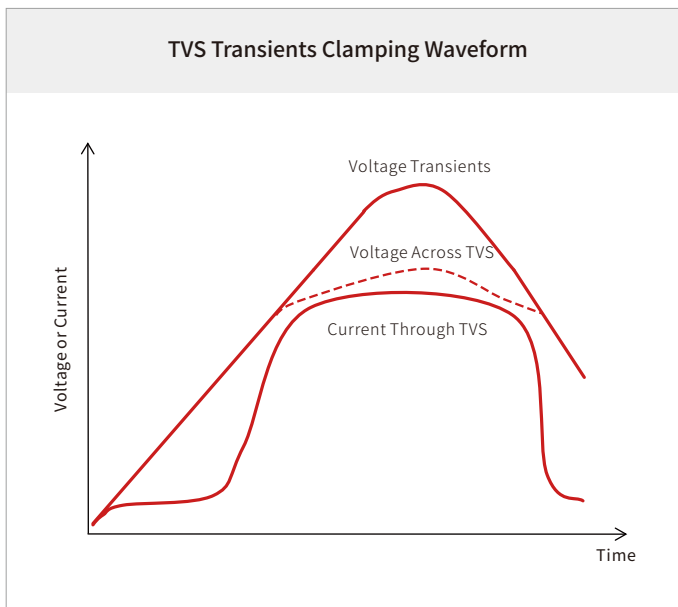
THERMAL CONSIDERATIONS

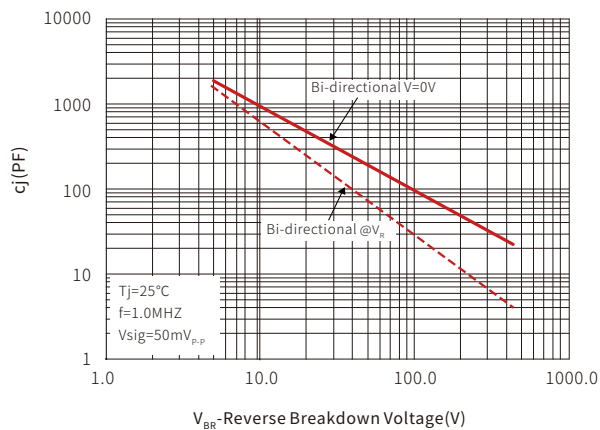
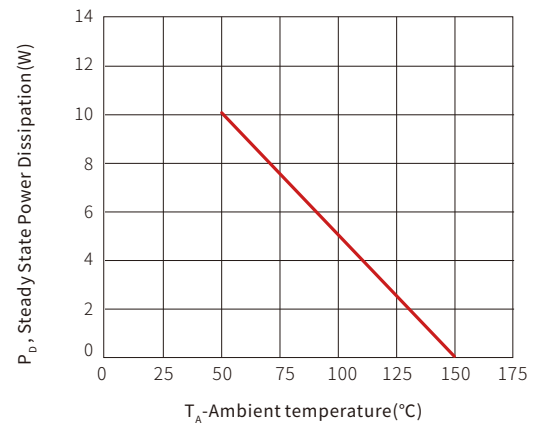
Parameter	Symbol	Value	Unit
Operating Junction Temperature	T_J	-55 to +150	$^{\circ}\text{C}$
Storage Temperature Range	T_{STG}	-55 to +150	$^{\circ}\text{C}$
Junction to Ambient on printed circuit	$R_{\theta JA}$	75	$^{\circ}\text{C/W}$

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}
		V _{RWM} (V)	V _{BR} (V)	V _{BR} (V)	I _T (mA)	V _C (V)	I _{PP} (A)	I _R (uA)
TPSVC800B20	8DAZ	20.0	22.5	25.3	10	34.2	292.6	10

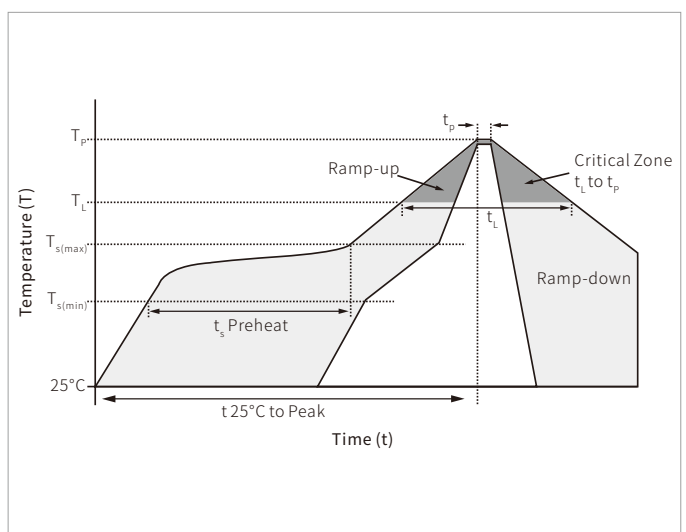
CHARACTERISTIC CURVES



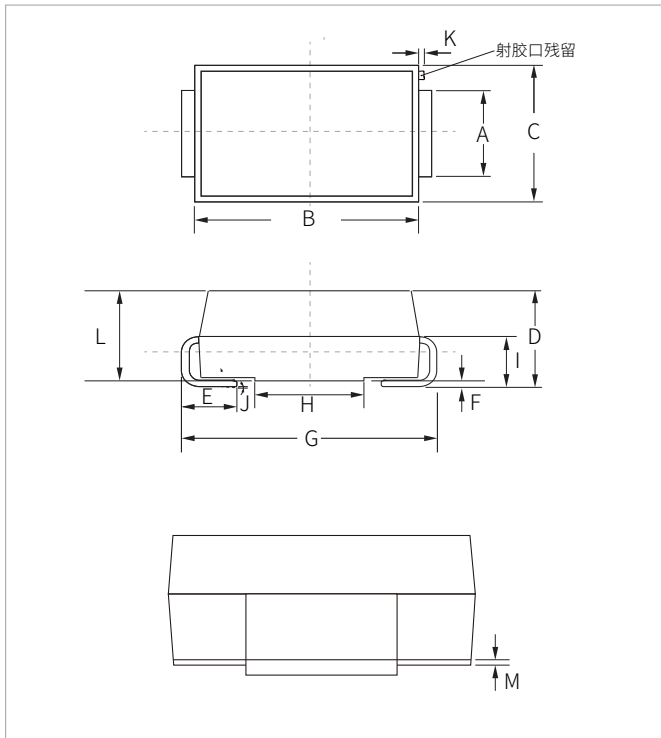
Typical Junction Capacitance

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

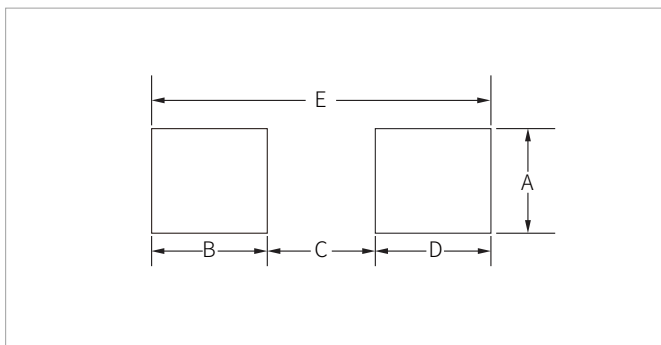


DO-214AB(SMC) PACKAGE INFORMATION



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	2.80	3.20	0.110	0.126
B	6.75	7.05	0.266	0.278
C	5.85	6.15	0.230	0.242
D	2.45	2.95	0.096	0.116
E	0.90	1.60	0.035	0.063
F	0.15	0.25	0.006	0.010
G	7.75	8.25	0.305	0.325
H	4.5		0.177	
I	1.6		0.063	
J	≤5°C		≤197°C	
K	≤0.4		≤0.016	
L	7.75	8.25	0.305	0.325
M	0.02	0.18	0.000	0.007

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
TPSVC800B20	DO-214AB(SMC)	3000PCS	13"

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