



2.0SMCJ22A SERIES

SURFACE MOUNT TRANSIENT VOLTAGE SUPPRESSOR PEAK PULSE POWER 2000 Watt

STAND-OFF VOLTAGE

22~24 Volt

SMC / DO-214AB

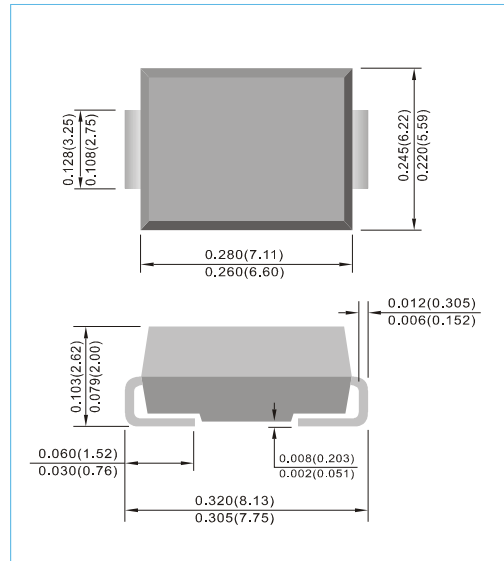
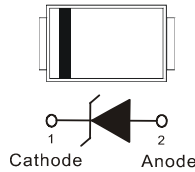
Unit : inch(mm)

FEATURES

- For surface mounted applications in order to optimize board space.
- Low inductance
- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- High temperature soldering : 260°C /10 seconds at terminals
- ESD IEC-61000-4-2 Air ± 30kV, Contact ± 30kV
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

MECHANICAL DATA

- Case: JEDEC DO-214AB, Molded plastic over passivated junction.
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Standard Packaging: 16mm tape (EIA-481)
- Weight: 0.008 ounce, 0.023 gram



MAXIMUM RATINGS AND CHARACTERISTICS

Rating at 25°C ambient temperature unless otherwise specified. Resistive or inductive load, 60Hz.
For Capacitive load derate current by 20%.

Rating	Symbol	Value	Units
Peak Pulse Power Dissipation ($I_{PP} \times V_{C_{MAX}}$) at $T_A = 25^\circ\text{C}$ (Notes 1,2,4)	P_{PP}	2000	Watts
Peak Pulse Current on $t_p = 10/1000\mu\text{s}$ waveform (Notes 1)	I_{PPM}	See table	Amps
Peak Forward Surge Current, 8.3ms Single Half Sine-Wave Superimposed on Rated Load (Notes 3)	I_{FSM}	200	Amps
Typical Thermal Resistance Junction to Air (Notes 2)	$R_{\theta JA}$	82	$^\circ\text{C} / \text{W}$
ESD IEC-61000-4-2 (Air) ESD IEC-61000-4-2 (Contact)	V_{ESD}	± 30 ± 30	kV
Operating Junction and Storage Temperature Range	T_J, T_{STG}	-55 to +150	$^\circ\text{C}$

Part Number	Reverse Stand-off Voltage	Breakdown Voltage		Test Current	Reverse Leakage	Max. Clamp Voltage 10/1000 μs	Peak Pulse Current 10/1000 μs	Marking Code
		$V_{BR} @ I_T$						
		Min.	Max.					
	V_{RWM} (Notes 5)			I_T	$I_R @ V_{RWM}$	$V_C @ I_{PP}$	I_{PP}	
	V	V	V	mA	μA	V	A	
2.0SMCJ22A	22	24.4	28	1	1	35.5	56.3	AEX
2.0SMCJ24A	24	26.7	30.7	1	1	38.9	51.4	AEZ

NOTES :

1. Non-repetitive current pulse.
2. Mounted on 2mm² (0.013mm thick) land areas.
3. Measured on 8.3ms , single half sine-wave or equivalent square wave , duty cycle= 4 pulses per minutes maximum.
4. Peak pulse power waveform is 10/1000 μs .
5. A transient suppressor is selected according to the working peak reverse voltage (V_{RWM}), which should be equal to or greater than the DC or continuous peak operating voltage level.



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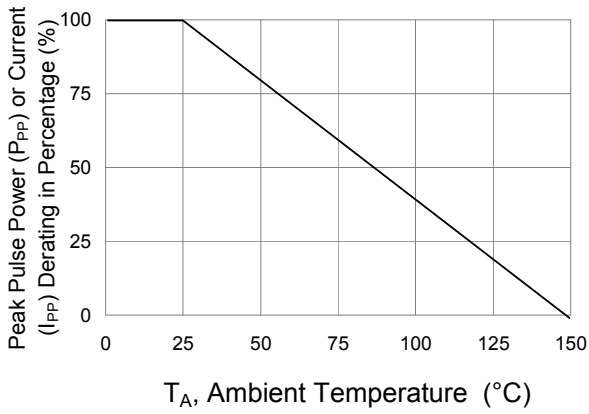


Fig.1 Forward Current Derating Curve

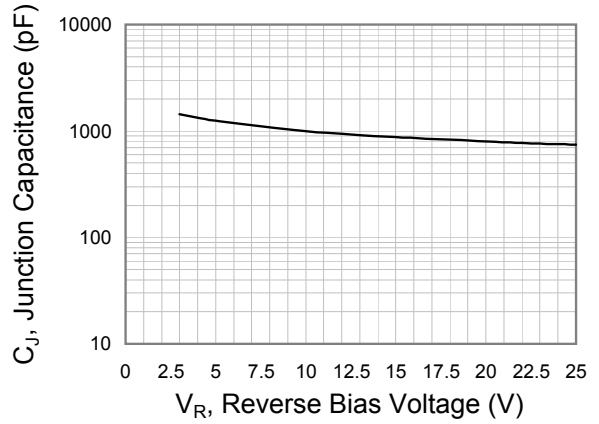


Fig.2 Typical Junction Capacitance

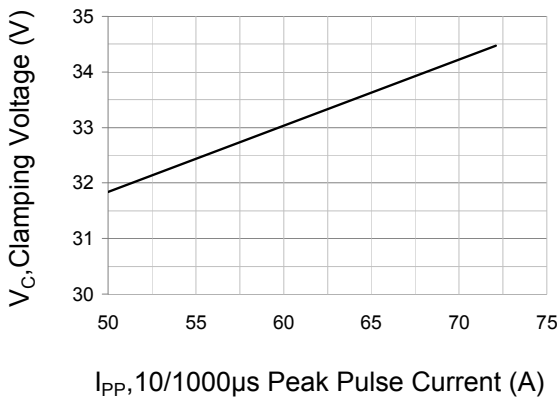


Fig.3 Typical Peak Clamping Voltage

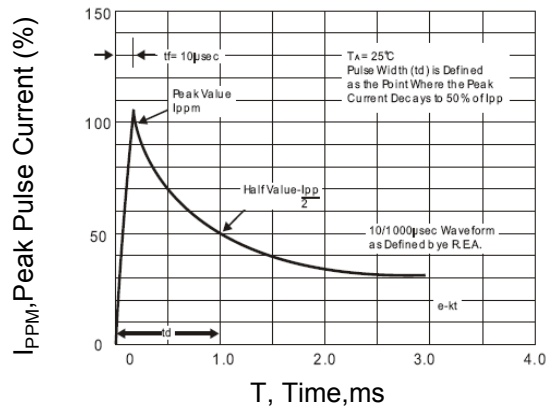


Fig.4 Pulse Waveform

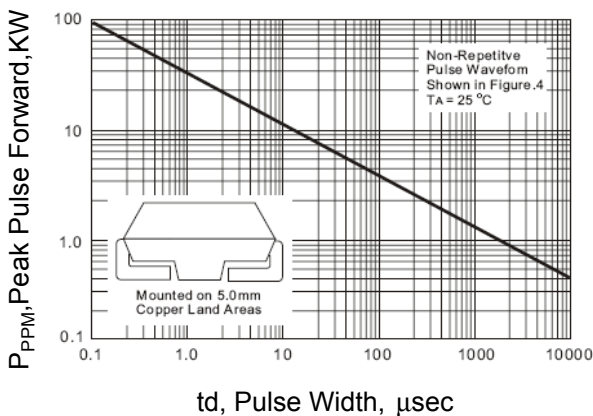
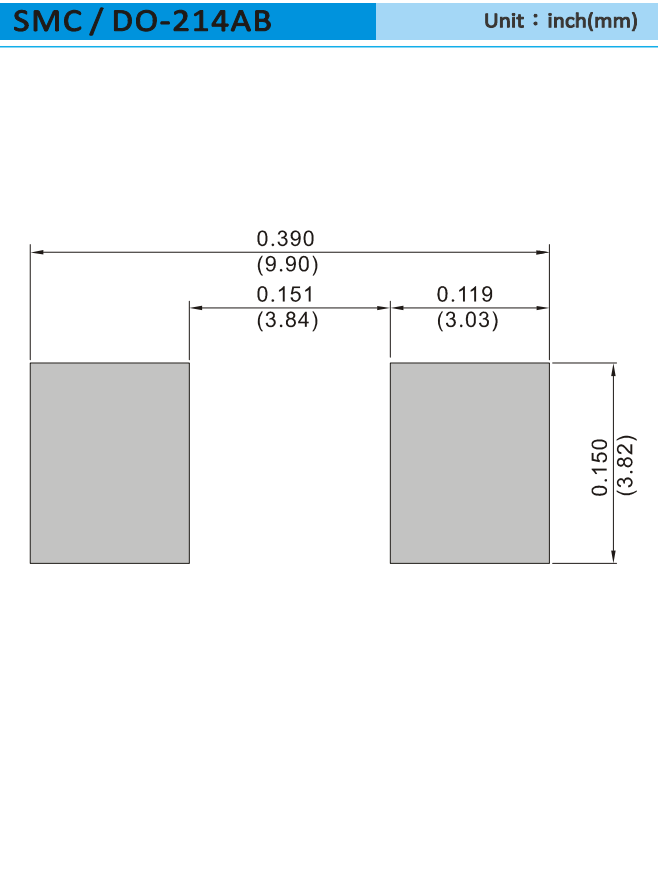


Fig.5 Peak Pulse Power Rating Curve



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MOUNTING PAD LAYOUT



ORDER INFORMATION

- Packing information
 - T/R - 3K per 13" plastic Reel
 - T/R - 0.8K per 7" plastic Reel



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Part No_packing code_Version

2.0SMCJ22A_R1_00001

2.0SMCJ22A_R2_00001

For example :

RB500V-40_R2_00001



Packing Code XX				Version Code XXXXX		
Packing type	1 st Code	Packing size code	2 nd Code	HF or RoHS	1 st Code	2 nd ~5 th Code
Tape and Ammunition Box (T/B)	A	N/A	0	HF	0	serial number
Tape and Reel (T/R)	R	7"	1	RoHS	1	serial number
Bulk Packing (B/P)	B	13"	2			
Tube Packing (T/P)	T	26mm	X			
Tape and Reel (Right Oriented) (TRR)	S	52mm	Y			
Tape and Reel (Left Oriented) (TRL)	L	PANASERT T/B CATHODE UP (PBCU)	U			
FORMING	F	PANASERT T/B CATHODE DOWN (PBCD)	D			



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