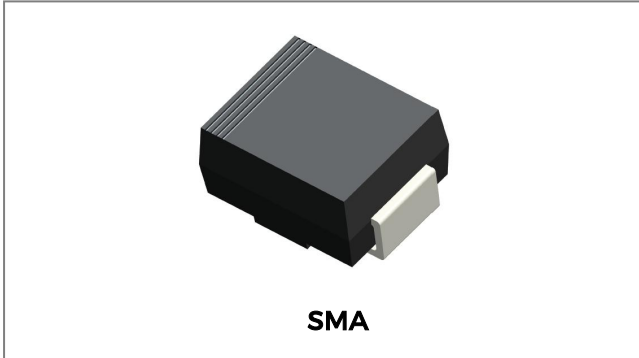


SMAJ250A SURFACE MOUNT TRANSIENT VOLTAGE SUPPRESSOR



Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- 400W peak pulse power capability
- Excellent clamping capability
- Low incremental surge resistance
- This is a Pb - Free Device
- All SMC Parts are Traceable to the Wafer Lot
- Additional testing can be offered upon request

Circuit Diagram



Mechanical Data

- Case: SMA Low Profile Molded Plastic
- Terminals: Solder Plated , Solderable per MIL-STD 750, Method 2026
- Polarity: Color band denotes cathode except Bipolar
- Mounting Position: Any

Maximum Ratings and Thermal Characteristics@T_A=25°C unless otherwise specified

Parameter	Symbol	Value	Units
Junction and Storage Temperature Range	T _J , T _{STG}	-55 to +150	°C
Typical Thermal Resistance Junction to Lead	R _{θJL}	30	°C/W
Typical Thermal Resistance Junction to Ambient	R _{θJA}	120	°C/W
Peak Pulse Power Dissipation at T _A =25°C by 10x1000µs Waveform (Fig.1)(Note 1)	P _{PPM}	Minimum 400	W
Peak Forward Surge Current, 8.3ms Single Half Sine Wave (Note 2)	I _{FSM}	60	A
Power Dissipation on Infinite Heat Sink at T _L =75°C (Fig.5)	P _{M(AV)}	3.3	W

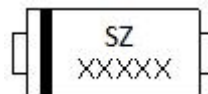
- Notes:** 1. Non-repetitive current pulse, per Fig. 3 and derated above T_A = 25°C per Fig. 2.
2. 8.3ms single half sine-wave, or equivalent square wave, Duty cycle = 4 pulses per minutes maximum.

Ordering Information

Device	Package	Shipping
SMAJ250A	SMA (Pb-Free)	5000pcs / reel

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

Marking Diagram



Where XXXXX is YYWWL

SZ = Part Name
YY = Year
WW = Week
L = Lot Number

Cautions: Molding resin
Epoxy resin UL94V-0

Electrical Characteristics @ $T_A=25^\circ\text{C}$ unless otherwise specified

Part Number	Marking	Reverse Stand off Voltage V_R	Breakdown Voltage V_{BR} (Volts) @ I_R		Test Current I_R	Maximum Clamping Voltage V_C @ I_{pp}	Maximum Peak Pulse Current I_{pp}	Maximum Reverse Leakage I_R @ V_R
		(Volts)	MIN.	MAX.	(mA)	(Volts)	(A)	(μA)
SMAJ250A	SZ	250.0	279	309	1	405	1	1

Ratings and Characteristics Curves

Figure 1 - Peak Pulse Power Rating Curve

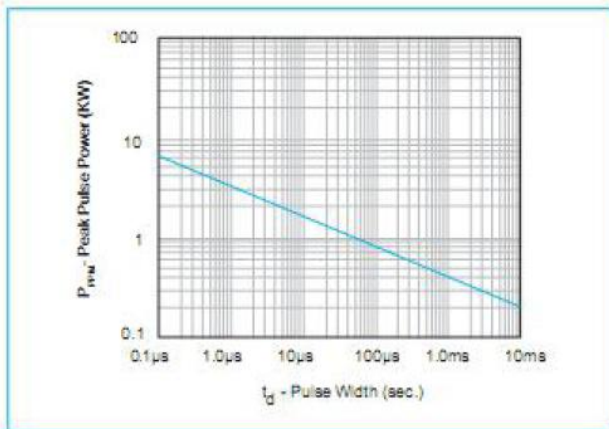


Figure 2 - Pulse Derating Curve

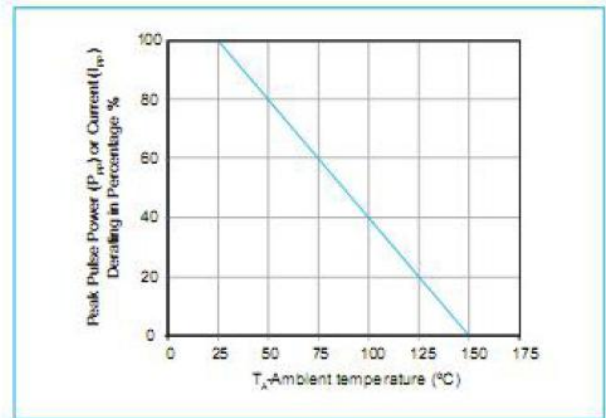


Figure 3 - Pulse Waveform

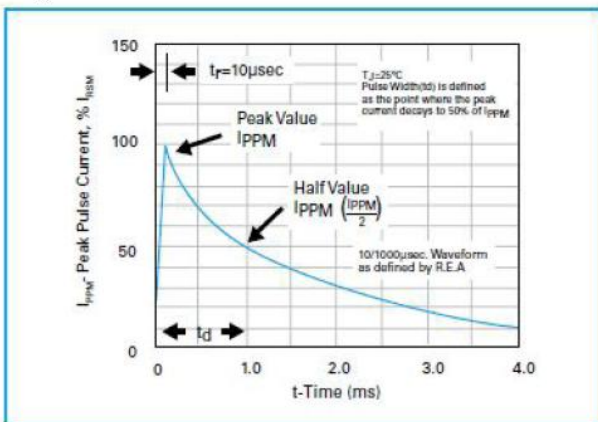


Figure 4 - Typical Junction Capacitance

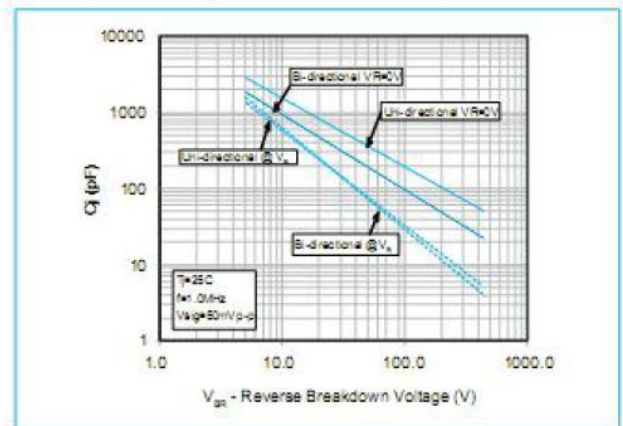
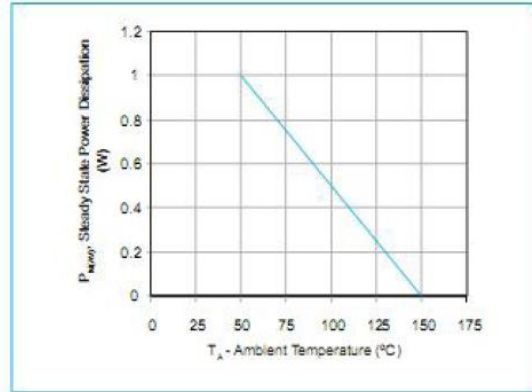
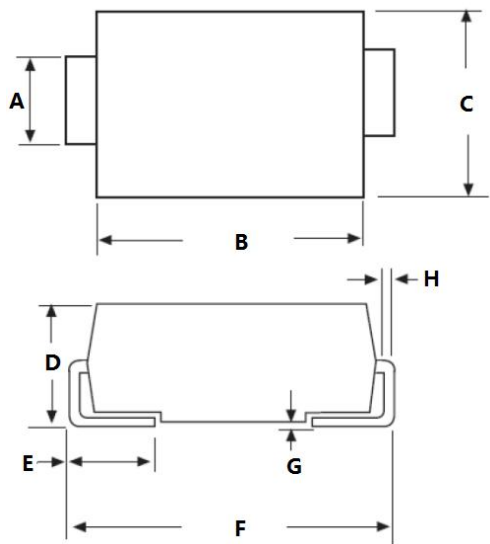


Figure 5 - Steady State Power Dissipation Derating Curve

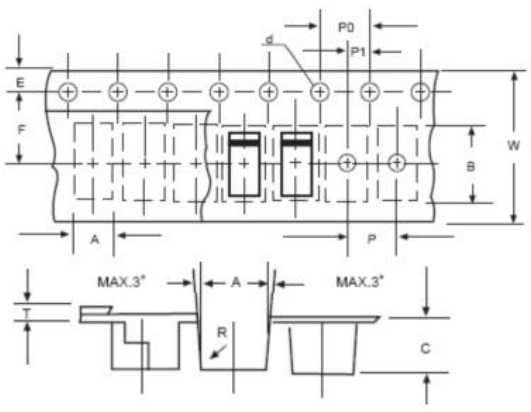


Mechanical Dimensions SMA(Inches/Millimeters)



SYMBOL	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	1.25	1.65	0.049	0.065
B	3.95	4.60	0.156	0.181
C	2.25	2.95	0.089	0.116
D	1.95	2.90	0.077	0.114
E	0.75	1.60	0.030	0.063
F	4.80	5.60	0.189	0.220
G	0.05	0.20	0.002	0.008
H	0.15	0.41	0.006	0.016

Carrier Tape Specification SMA



SYMBOL	Millimeters	
	Min.	Max.
A	2.97	3.17
B	5.70	5.90
C	2.32	2.52
d	1.40	1.60
E	1.40	1.60
F	5.60	5.70
P	3.90	4.10
P0	3.90	4.10
P1	1.90	2.10
T	0.25	0.35
W	11.80	12.20

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