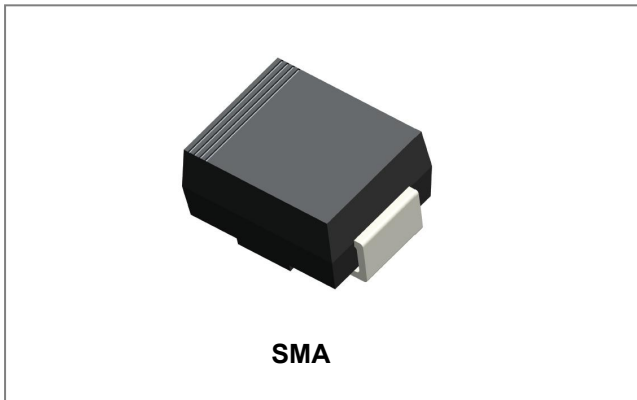


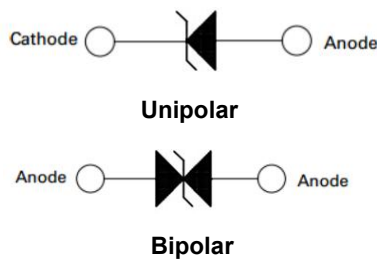
SMAJ5.0A THRU SMAJ300CA SURFACE MOUNT TRANSIENT VOLTAGE SUPPRESSOR



Features

- Glass Passivated Die Construction
- 400W Peak Pulse Power Dissipation
- 5.0V- 300V Standoff Voltage
- Uni- and Bi-Directional Versions Available
- Excellent Clamping Capability
- Fast Response Time
- Plastic Case Material has UL Flammability Classification Rating 94V-0
- ROHS Compliant
- All SMC Parts are Traceable to the Wafer Lot
- Additional testing can be offered upon request
- “-A” suffix is for Automotive qualified

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
- Weight:0.064 grams(approx.)

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

Parameter	Symbol	Value	Unit
Peak Pulse Power Dissipation at T _A =25°C by 10x1000µs Waveform (Fig.2)(Note 1, 2)	P _{PPM}	400	W
Peak Forward Surge Current, 8.3ms Single Half Sine Wave (Fig.7),(Note 3)	I _{FSM}	40	A
Power Dissipation on Infinite Heat Sink at T _A =50°C	P _{M(AV)}	3.3	W
Operating 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

- Notes:**
1. Non-repetitive current pulse, per Fig. 3 and derated above T_A = 25°C per Fig. 2.
 2. Mounted on 5.0mm² copper pads to each terminal.
 3. Measured on 8.3ms single half sine wave or equivalent square wavefor unidirectional device only.

**Technical Data
Data Sheet N0223, Rev. C**

For bidirectional type having VRWM of 10 volts and less, the IR limit is double.
For parts without A (VBR is + 10% and VC is 5% higher than with A parts).

Ratings and Characteristics Curves

Figure 1 - TVS Transients Clamping Waveform

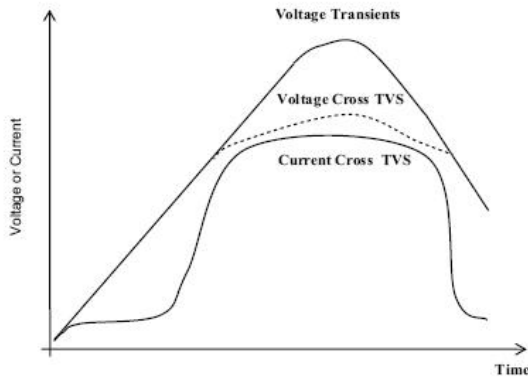


Figure 2 - Peak Pulse Power Rating Curve

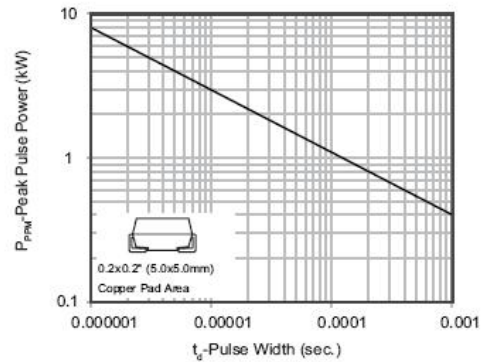


Figure 3 - Pulse Derating Curve

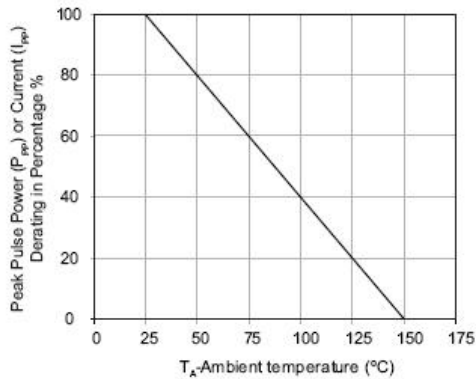


Figure 4 - Pulse Waveform

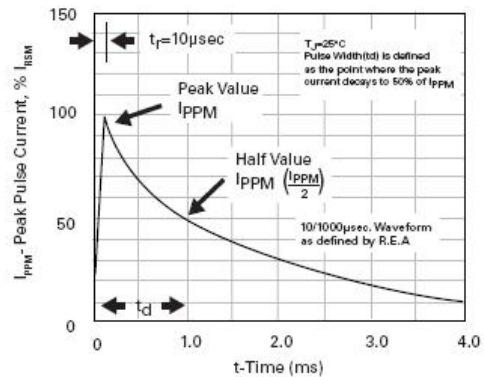


Figure 5 - Typical Junction Capacitance

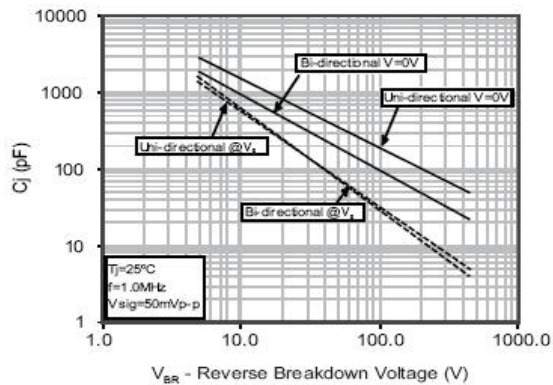


Figure 6 - Steady State Power Dissipation Derating Curve

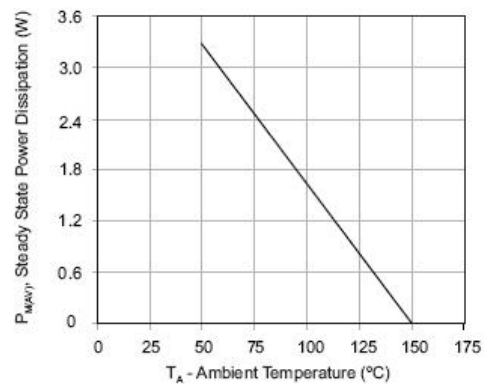
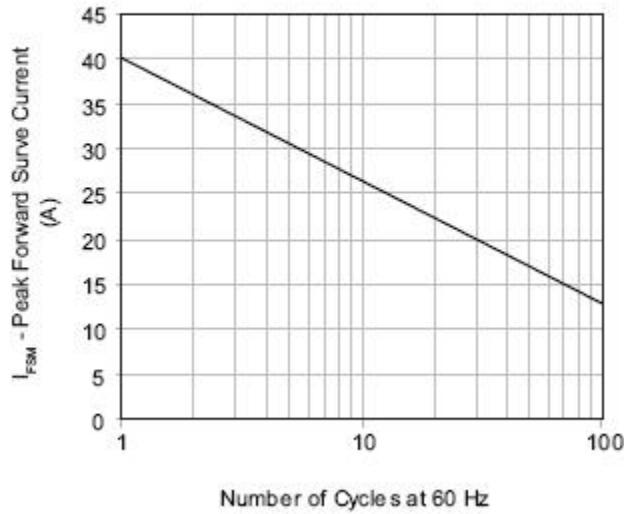
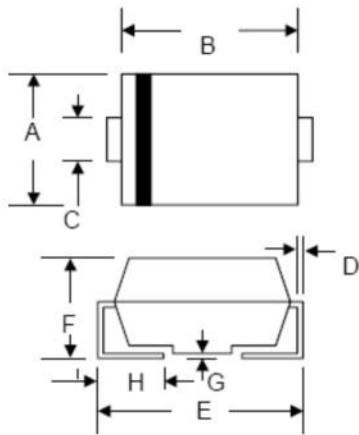


Figure 7 - Maximum Non-Repetitive Forward Surge Current Uni-Directional Only



Mechanical Dimensions SMA

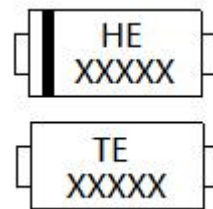


SYMBOL	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	2.40	2.84	0.094	0.112
B	3.99	4.75	0.157	0.187
C	1.05	1.70	0.041	0.067
D	0.15	0.51	0.006	0.020
E	4.80	5.28	0.189	0.208
F	2.00	2.44	0.078	0.098
G	0.05	0.203	0.002	0.008
H	0.76	1.52	0.030	0.600

Ordering Information

Device	Package	Shipping
SMAJ5.0A THRU SMAJ300CA	SMA (Pb-Free)	5000pcs / reel
SMAJ5.0ATR THRU SMAJ300CATR	SMA (Pb-Free)	5000pcs / reel

Marking Diagram



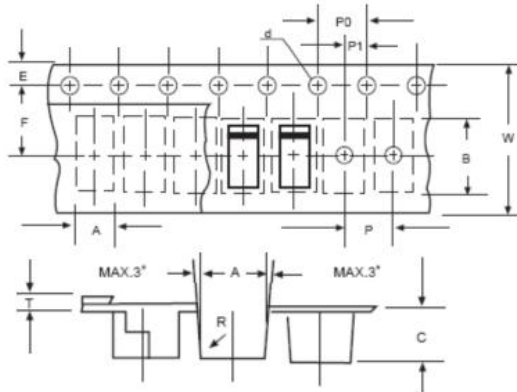
Where XXXXX is YYWWL

- HE/TE = Marking code
- YY = Year
- WW = Week
- L = Lot Number

Cautions: Molding resin
Epoxy resin UL:94V-0

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

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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