

SMAJ440CA SURFACE MOUNT TRANSIENT VOLTAGE SUPPRESSOR



Features

- For surface mounted applications in order to optimize board space
- Low profile package
- Built-in strain relief
- Glass passivated junction
- Low inductance
- Excellent clamping capability
- Repetition rate (duty cycle): 0.01%
- High temperature soldering: 250°C/10 seconds at terminals
- Plastic package has Underwriters Laboratory Flammability Classification 94 V-0

Mechanical Data

- Case: SMA Low Profile Molded Plastic
- Terminals: Solder Plated , Solderable per MIL-STD-750, Method 2026
- Mounting Position: Any
- Polarity: Bipolar
- Weight: 0.064 grams (approx.)

Maximum Ratings and Thermal Characteristics @ $T_A=25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	Value	Unit
Junction Temperature Range	T_J	-65 to +150	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-65 to +150	$^\circ\text{C}$
Peak Pulse Power (with 10/1000 μs waveform) (Fig.1)(Note 1), (Note 2)	P_{PPM}	400	W
Typical Thermal Resistance Junction to Lead	$R_{\theta JL}$	30	$^\circ\text{C/W}$
Typical Thermal Resistance Junction to Ambient	$R_{\theta JA}$	120	$^\circ\text{C/W}$

Note: 1. Non-repetitive current pulse, per Fig.3 and derated above $T_A=25^\circ\text{C}$ per Fig.2.
2. Mounted on Copper Pad area of 5.0x5.0 mm to each terminal.

Ordering Information

Device	Package	Shipping
SMAJ440CA	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

UM = Marking code
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 code	Reverse Stand off Voltage V_R	Breakdown Voltage V_{BR} (Volts) @ I_T		Test Current I_T	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)
SMAJ440CA	UM	440	492	543	1	713	0.6	5

Ratings and Characteristics Curves

Fig. 1 - Peak Pulse Power Rating

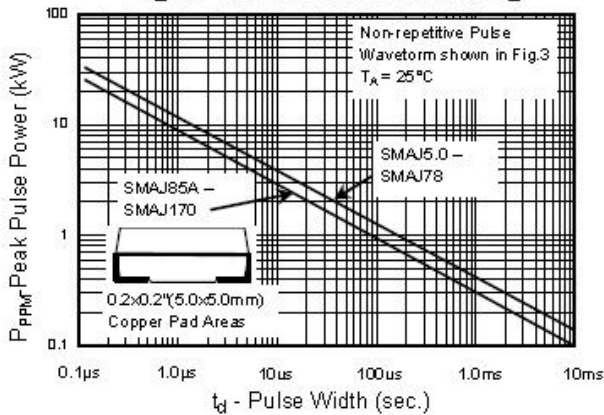


Fig.2 - Pulse Derating Curve

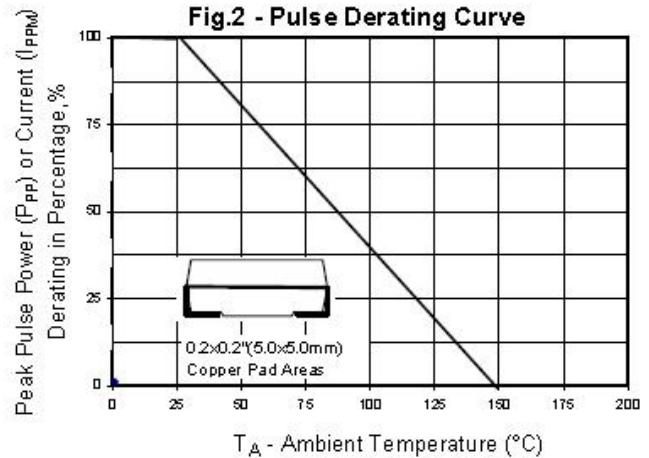


Fig.3 - Pulse Waveform

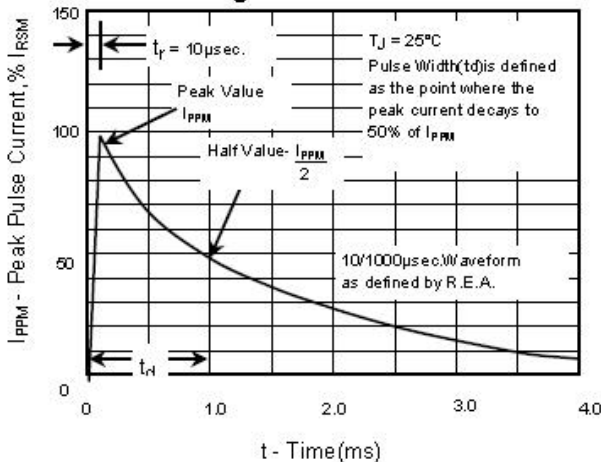
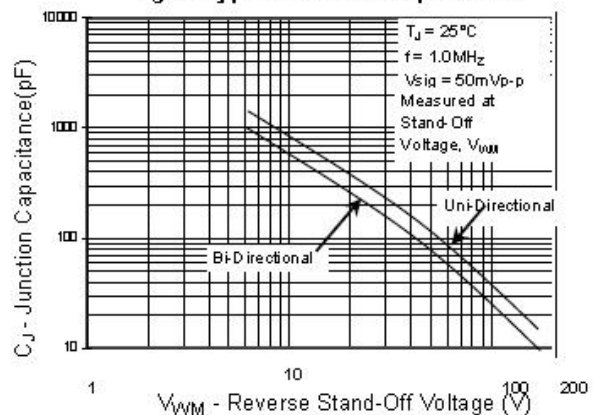
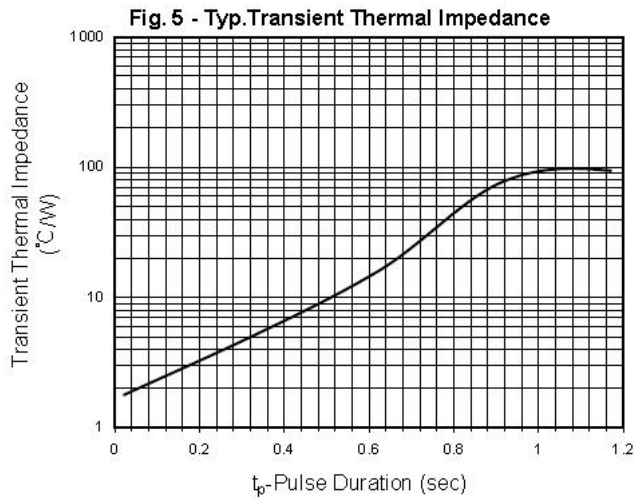
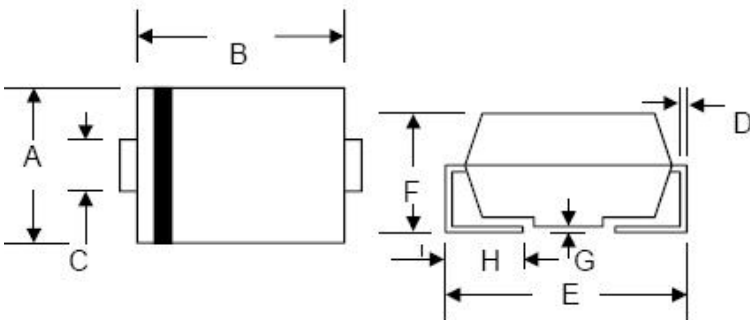


Fig.4 - Typical Junction Capacitance



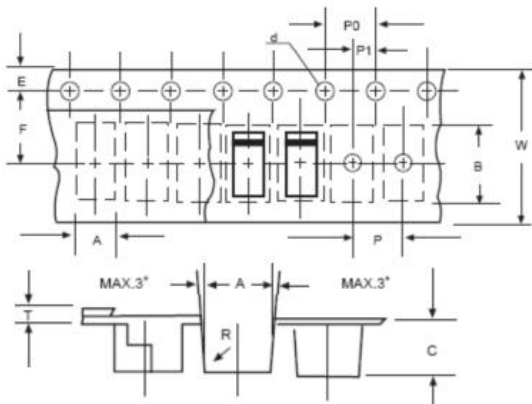


Mechanical Dimensions SMA(Inches/Millimeters)



Dim.	SMA/DO-214AC			
	Min.	Max.	Min.	Max.
A	2.40	2.90	0.094	0.114
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	5.66	0.189	0.223
F	1.90	2.95	0.075	0.116
G	0.05	0.203	0.002	0.008
H	0.76	1.52	0.030	0.600
	In mm		In inch	

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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