

Surface Mount Transient Voltage Suppressors

SMAJ3V3A 400W

Description

The SMAJ3V3A series is designed specifically to protect sensitive electronic equipment from voltage transients induced by lightning and other transient voltage events.

Working Voltage: 3.3V

Peak Pulse Power: 400 W

Features

- ◆ Glass passivated chip
- ◆ 400 W peak pulse power capability with a 10/1000 us waveform, repetitive rate (duty cycle): 0.01 %
- ◆ Low leakage
- ◆ Uni and Bidirectional unit
- ◆ Excellent clamping capability
- ◆ Very fast response time
- ◆ RoHS compliant

Applications

TVS devices are ideal for the protection of I/O interfaces, V_{CC} bus and other vulnerable circuits used in Telecom, Computer, Industrial and Consumer electronic applications.



Mechanical Data

- ◆ Case: Molded plastic
- ◆ Epoxy: UL 94V-0 rate flame retardant
- ◆ Lead: Solderable per MIL-STD-750, method 2026
- ◆ Polarity: Color band denotes cathode end except Bipolar
- ◆ Mounting position: Any

Maximum Ratings and Thermal Characteristics (T_A = 25 °C unless otherwise noted)

Parameter	Symbol	Value	Units
Peak Pulse Power Dissipation with a 10/1000µs waveform	P _{PP}	400	Watts
Breakdown voltage @ I _T = 10mA	V _{BR}	5.2-6.0	Volts
Working Peak Reverse Voltage	V _{RWM}	3.3	Volts
Maximum Reverse Leakage @ V _{RWM}	I _R	600	µAmps
Peak pulse current with a 10/1000 µ s waveform	I _{PP}	43.8	Amps.
Maximum Clamping Voltage @ I _{PP}	V _C	8.0	Volts
Power dissipation on infinite heatsink at T _L = 75 ° C	P _D	1.0	Watts
Peak forward surge current, 8.3 ms single half sine-wave	I _{FSM}	40	Amps.
Maximum instantaneous forward voltage at 50A for	V _F	3.5	Volts
Operating junction and storage temperature range	T _J , T _{STG}	- 55 to +150	°C

Note: (1) Measured on 8.3 ms single half sine-wave or equivalent square wave, duty cycle = 4 pulses per minute maximum.

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Ratings and Characteristics Curves ($T_A=25^\circ\text{C}$ unless otherwise noted)

Figure 1 – Pulse Derating Curve

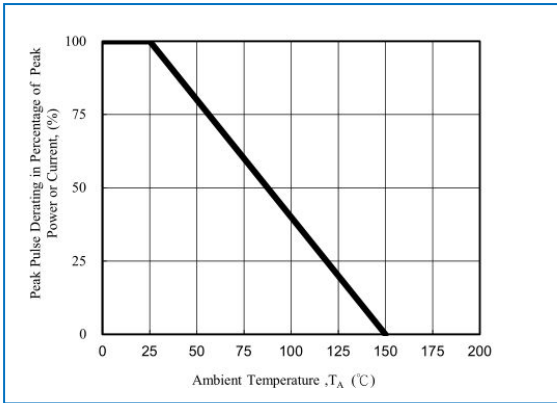


Figure 2 - Maximum Non-Repetitive Surge Current

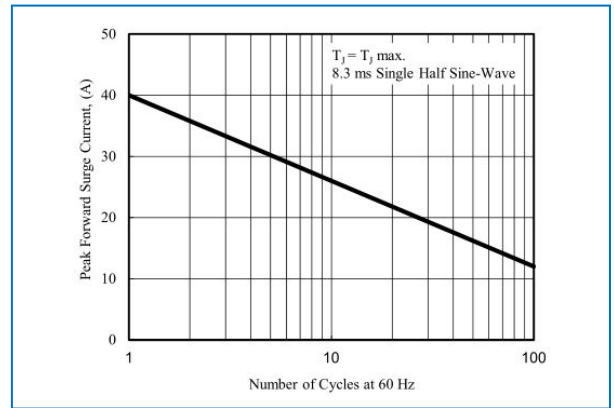


Figure 3 - Pulse Waveform

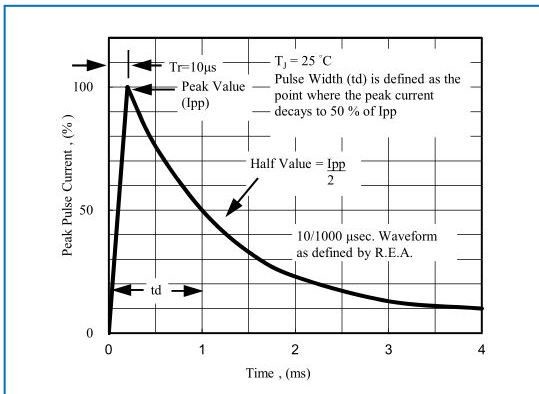


Figure 4 - Typical Junction Capacitance

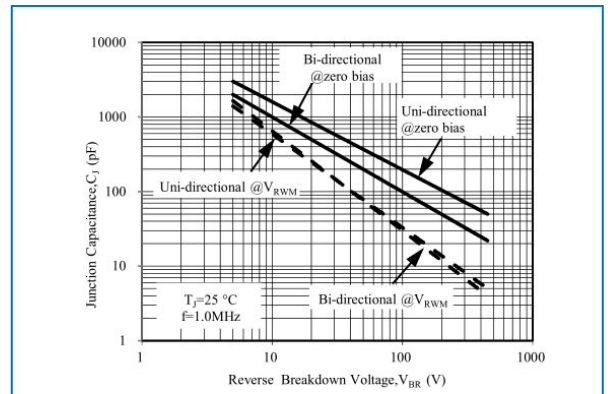


Figure 5 - Steady State Power Derating Curve

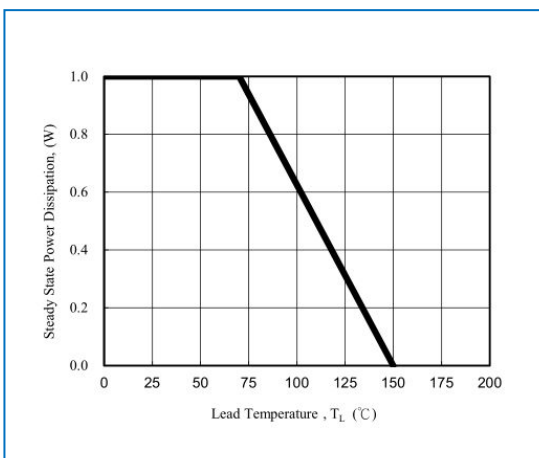
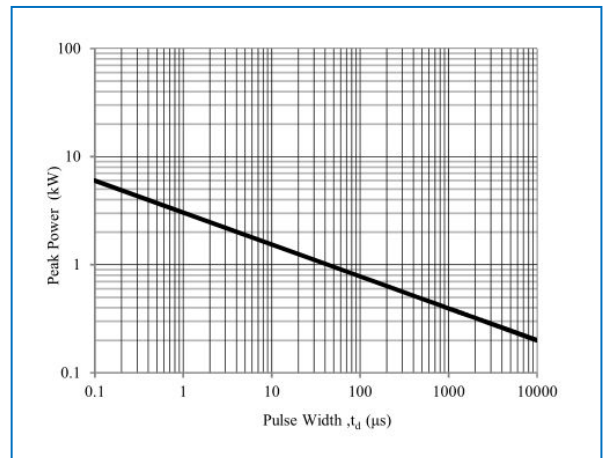


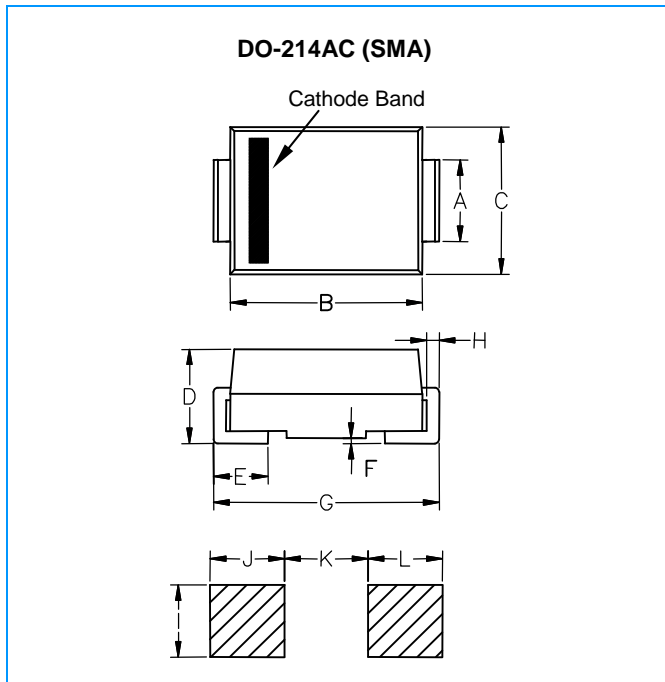
Figure 6 - Peak Pulse Power Rating Curve



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SMA/ DO-214AC Package Outline Dimensions Unit: inches (millimeters)



Dimensions	Inches		Millimeters	
	Min	Max	Min	Max
A	0.049	0.064	1.230	1.630
B	0.162	0.179	4.10	4.550
C	0.099	0.109	2.510	2.760
D	0.077	0.089	1.960	2.260
E	0.030	0.060	0.750	1.510
F	-	0.008	-	0.203
G	0.192	0.206	4.87	5.220
H	0.006	0.012	0.152	0.305
I	0.070	-	1.800	-
J	0.082	-	2.100	-
K	-	0.090	-	2.300
L	0.082	-	2.100	-