Unidirectional and Bidirectional
Surface Mount Transient Voltage Suppressor

Features:

- Rating to 200V V_{BR}
- For surface mounted applications
- Reliable low cost construction utilizing molded plastic technique
- Plastic material has UL recognition 94V-0
- Typical I_R less than 1µA above 10V
- Fast response time : typically less than 1.0ns for Uni-direction, less than 5.0ns of Bi-direction, from 0 Volts to BV min

Mechanical Data:

Case : Molded Plastic
Polarity : Cathode band denotes uni-directional device
No cathode band denotes bi-directional device
Weight : 0.002 ounces, 0.053 grams
Reverse Voltage : 17 Volts
Power Dissipation : 400 Watts

Maximum Ratings and Electrical Characteristics:

Rating at 25°C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%

Characteristics	Symbol	Values	Unit
Peak Power Dissipation at T_A = 25°C TP = 1ms (Note 1, 2)	P_{PK}	400 (Min.)	Watts
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Super Imposed on Rated Load (JEDEC Method)	I_{FSM}	40	Amps
Steady State Power Dissipation at T_L = 75°C	$P_{M(AV)}$	1	Watts
Max. Instantaneous Forward Voltage at 50A for Uni-Directional Devices Only (Note 3)	V_F	3.5	Volts
Operating Temperature Range	T_J	-55 to +150	°C
Storage Temperature Range	T_{STG}	-55 to +175	°C

Notes:

1. Non-repetitive current pulse ,per Fig. 3 and derated above T_A = 25°C per Fig. 1.
2. Thermal Resistance junction to Lead.
3. 8.3ms single half-wave duty cycle=4 pulses per minutes maximum (uni-directional units only).

Part Number		Working Peak Reverse Voltage	Breakdown Voltage VBR Volts			Max. Reverse Voltage at I_{RSM} (Clamping Voltage)	Max. Reverse Surge Current	Max. Reverse Leakage at V_{RWM}
Device Uni-directional	Device Bi-directional	V_{RWM} (V)	Min. (V)	Max. (V)	I_T(mA)	V_{RSM} (V)	I_{RSM} (Amps)	IR (µA)
SMAJ17A+	-	17	18.9	20.9	1	27.6	14.5	5

Ratings and Characteristic Curves

FIG.1-PULSE DERATING CURVE

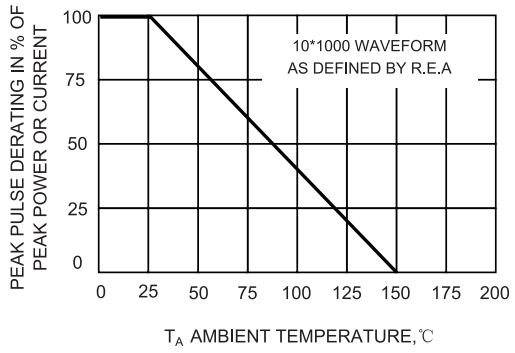


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

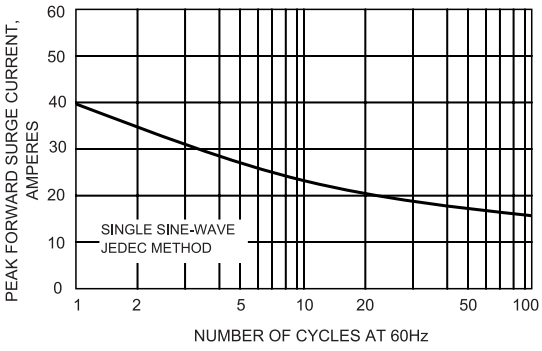


FIG.3-PULSE WAVEFORM

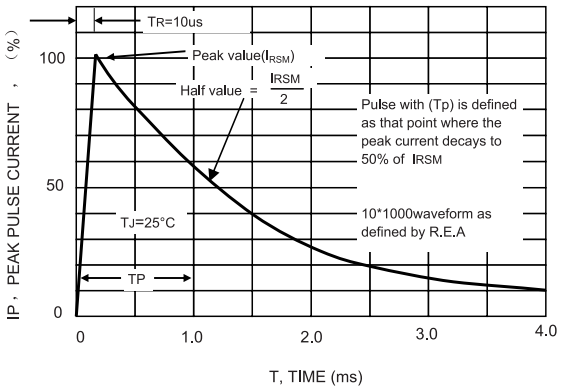


FIG.4-TYPICAL JUNCTION CAPACITANCE

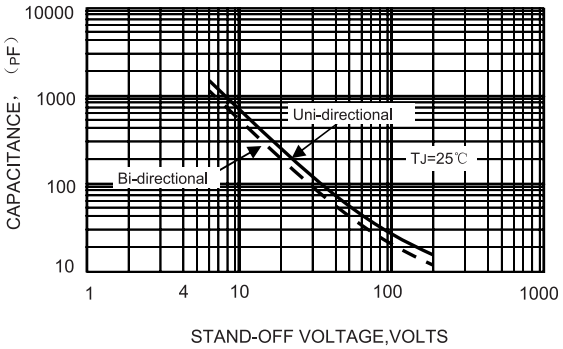


FIG.5-PULSE RATING CURVE

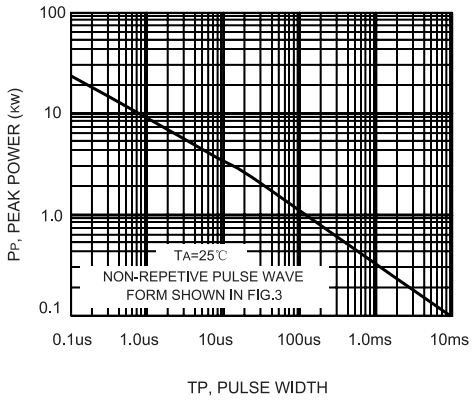
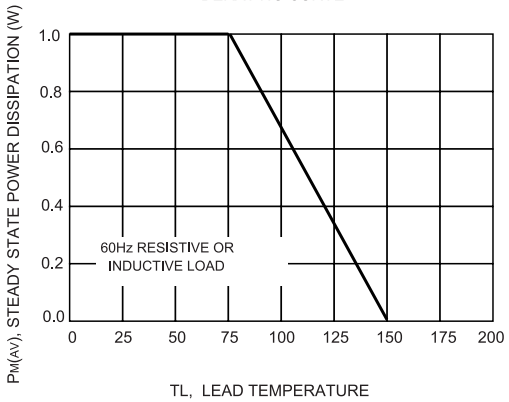
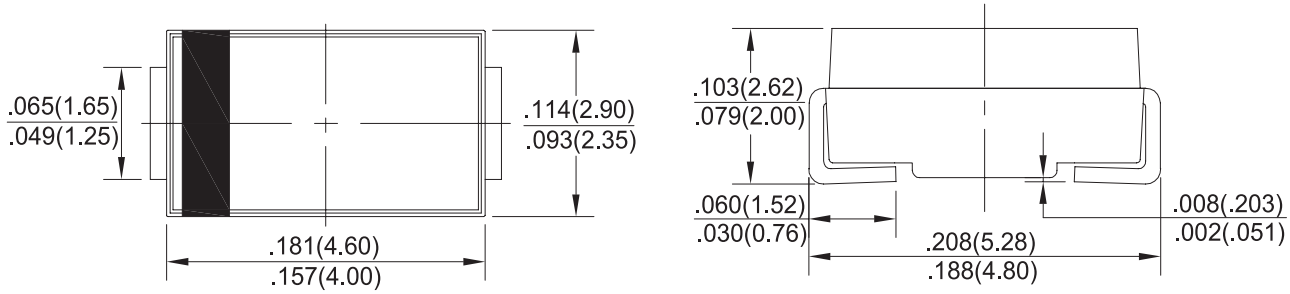


FIG.6-STEADY STATE POWER DERATING CURVE



Dimensions:

SMA



Dimensions : Inches (Millimetres)

Part Number Table

Description	Part Number
TVS - Diodes 400W 17V Unidirectional	SMAJ17A+