

SuperTVS – 400W Transient Voltage Suppressor





1. Features

- Glass passivated chip
- 400 W peak pulse power capability with a 10/1000 us waveform, repetitive rate (duty cycle):0.01 %
- Excellent clamping capability
- IEC 61000-4-2(ESD)  $\pm 30\text{KV}(\text{air})$ ,  $\pm 30\text{KV}(\text{contact})$
- Low reverse leakage
- Very fast response time
- Lead and body according with RoHS standard

2. Mechanical Data

- Case: DO-214AC/SMA Molded plastic
- Lead: Solderable per MIL-STD-750, method 2026
- Epoxy: UL 94V-0 rate flame retardant
- Polarity: Color band denotes cathode end except Bipolar
- Mounting position: Any

3. Marking Information

BI- directional	UNI-directional	Marking
		XXXX= Product type marking code (See Electrical Characteristics Table)
		

## SMAJ3.3A/CA

Rev-1.2

## 4. Maximum Ratings and Characteristics

Ratings at 25° ambient temperature unless otherwise specified

Rating	Symbol	Value	Units
Peak pulse power dissipation at 10/1000us waveform (Note1)	$P_{PP}$	400	W
Peak pulse current of at 10/1000us waveform (Note1)	$I_{PP}$	43.8	A
Power dissipation on infinite heatsink at $T_L = 75\text{ }^{\circ}\text{C}$	$P_D$	1.0	W
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) (Note2)	$I_{FSM}$	40	A
Maximum instantaneous forward voltage at 10 A for unidirectional only	$V_F$	3.5/5.0	V
Operating junction and Storage Temperature Range	$T_J, T_{STG}$	-55 to +150	$^{\circ}\text{C}$

Notes:

1. Non-repetitive current pulse, per Fig.5 and derated above  $T_A=25^{\circ}\text{C}$  per Fig.1.
2. 8.3ms single half sine-wave, or equivalent square wave, duty cycle=4 pulses per minutes maximum.

Part Number	Part Number	Marking		Reverse Stand off Voltage VR	Breakdown Voltage VBR (Volts) @ IT		Test Current IT	Maximum Clamping Voltage VC @ Ipp	Maximum Peak Pulse Current Ipp	Maximum Reverse Leakage IR @ VR
UNI	BI	UNI	BI	(V)	MIN	MAX	(mA)	(V)	(A)	( $\mu\text{A}$ )
SMAJ 3.3A	SMAJ 3.3CA	3V3	3V 3C	3.3	5.0	6.5	10	8.0	43.8	600

## 5. Ratings and Characteristic Curves ( $T_A = 25^\circ\text{C}$ unless otherwise noted)

Figure 1 Pulse Derating Curve

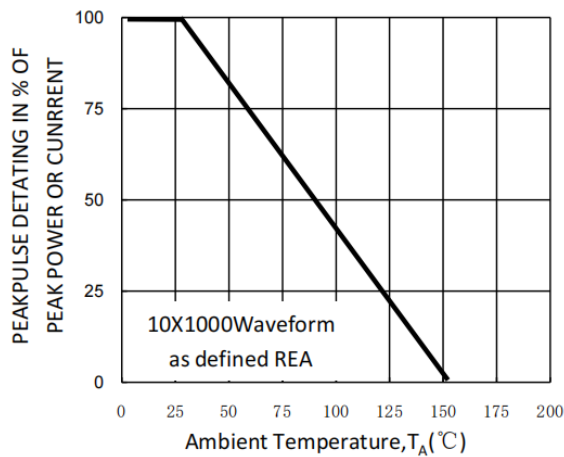


Figure 2 Maximum Non-Repetitive Surge Current

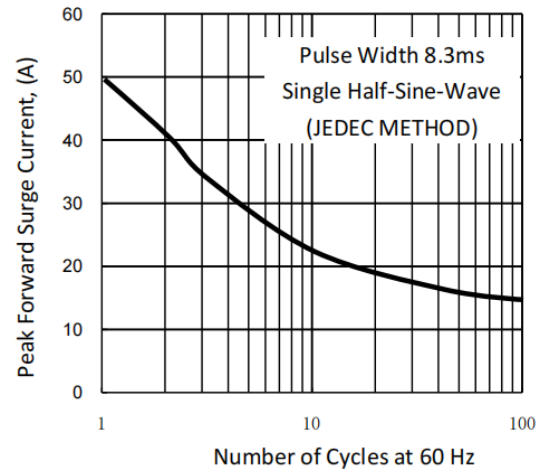


Figure 3 Steady State Power Derating Curve

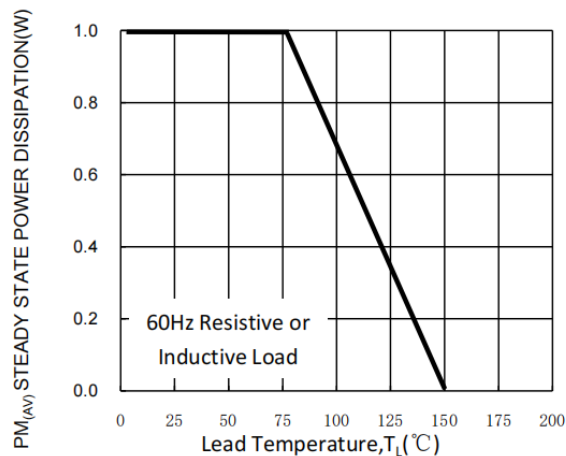


Figure 4 Peak Pulse Power Rating Curve

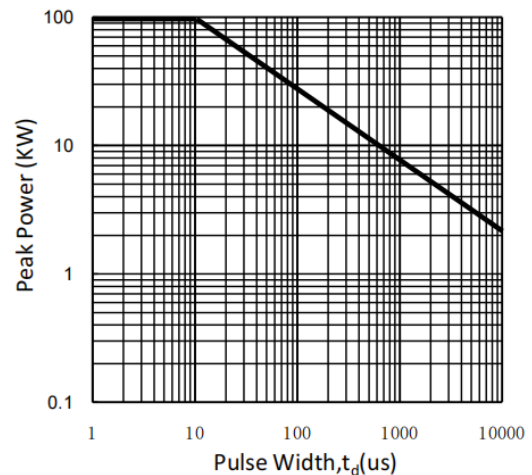


Figure 5 Pulse Waveform

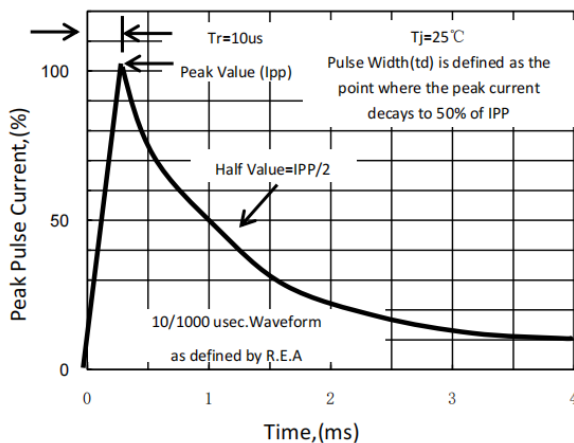
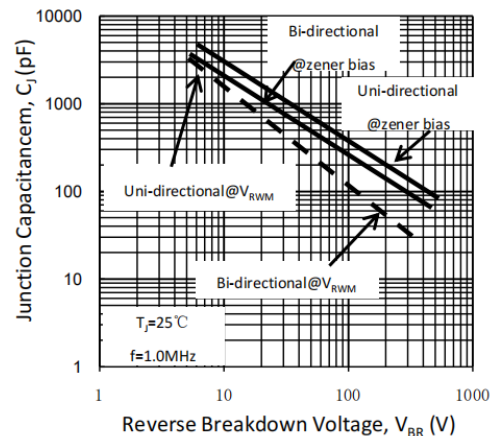
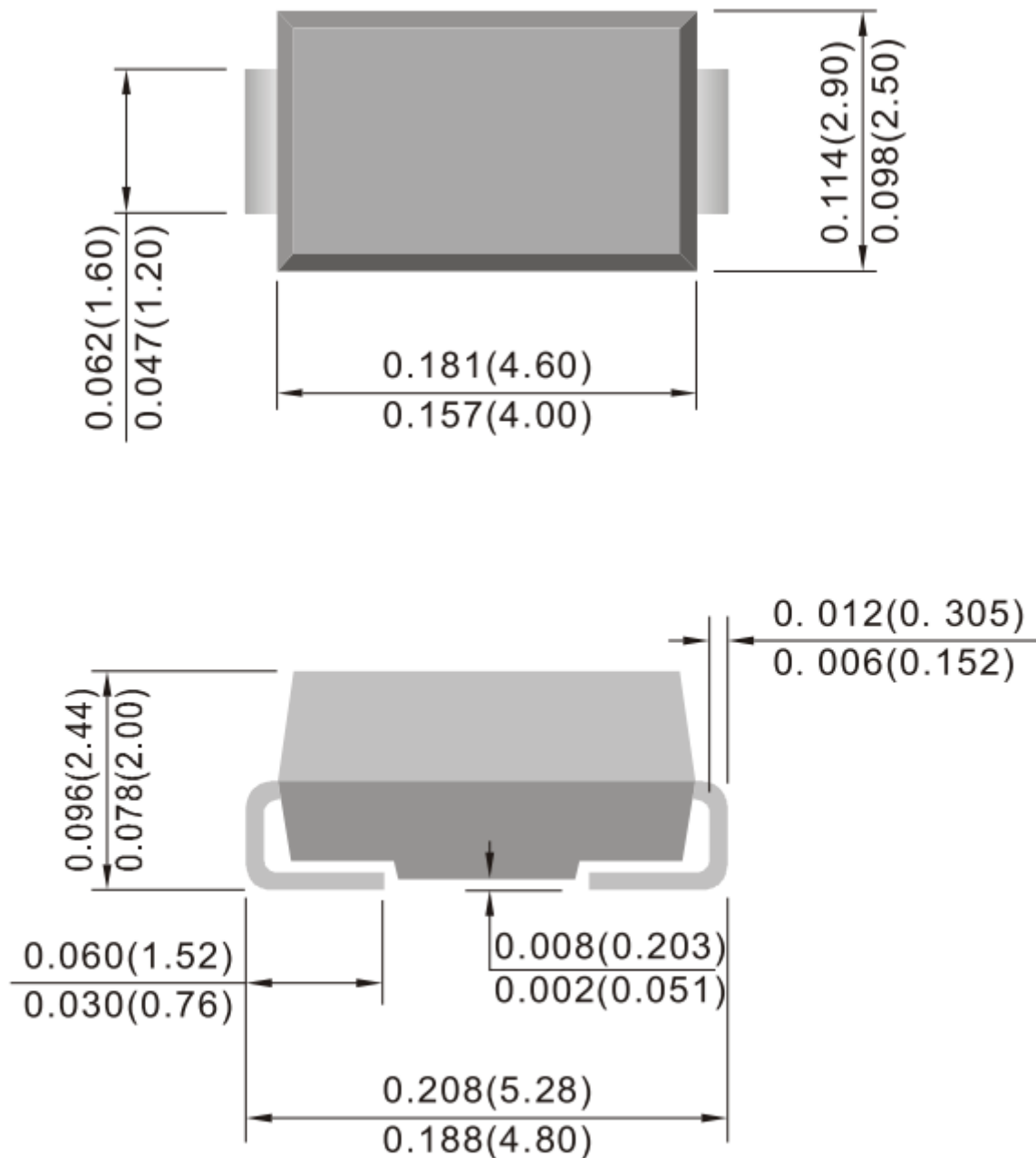


Figure 6 Typical Junction Capacitance



## 6. Dimension (SMA/DO-214AC)



Unit : inch(mm)

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