SMAJ6.8(C)A

Transient Voltage Suppressor

Features

- Low profile package
- Built-in strain relief
- Glass passivated junction
- Low inductance
- Excellent clamping capability
- Repetition rate (duty cycle): 0.01%
- Fast response time

SMA
(DO-214AC)

Mechanical Data

- Case: JEDEC DO-214AC/SMA molded plastic body
- Terminals: Solderable per MIL-STD-750,Method 2026
- Polarity: Polarity symbol marking on body
- Mounting Position: Any
- Weight: 0.07 grams

Applications

- I/O interface
- AC/DC power supply
- Low frequency signal transmission line (RS232,RS485,etc.)

Maxmim Ratings (Ta=25°C unless otherwise noted)

Peak pulse power dissipation at 10/1000μs waveform (Note1, Note2, Fig.1)	P_{PPM}	400	W
Peak pulse current of at 10/1000μs waveform (Note 1, Fig.3)	I_{PPM}	39	A
Steady state power dissipation at T_A=50℃ (Fig.5)	$P_{M(AV)}$	3.3	W
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load, (JEDEC Method) (Note3, Fig.6)	I_{FSM}	60	A
Operating junction and Storage Temperature Range.	T_J,T_{STG}	-65 to +150	°C
Typical thermal resistance junction to lead	$R_{\theta JL}$	30	°C/W
Typical thermal resistance junction to ambient	$R_{\theta JA}$	120	°C/W

Notes:1. Non-repetitive current pulse, per Fig.3 and derated above TA=25℃ per Fig.2.
2. Mounted on 5.0mm×5.0mm (0.03mm thick) copper pads to each terminal.
3. 8.3ms single half sine-wave, or equivalent square wave, duty cycle=4 pulses per minutes maximum.

Electrical Characteristics (Ta=25°C)

Part Number		Device Marking Code		Reverse Stand- Off Voltage	Breakdown Voltage @I_T	Test Current	Maximum Clamping Voltage @I_{PP}	Peak Pulse Current	Reverse Leakage @V_{RWM}
Unidirectional	Bidirectional	UNI	BI	V_{RWM}(V)	V_{BR}(V)	I_T(mA)	V_C(V)	I_{PP}(A)	I_R(μA)
SMAJ6.8A	SMAJ6.8CA	6V8A	6V8C	5.80	6.45-7.14	10	10.5	39	1000

Ratings and Characteristic Curves (T_A=25°C unless otherwise noted)

Figure 1. Peak Pulse Power Rating Curve

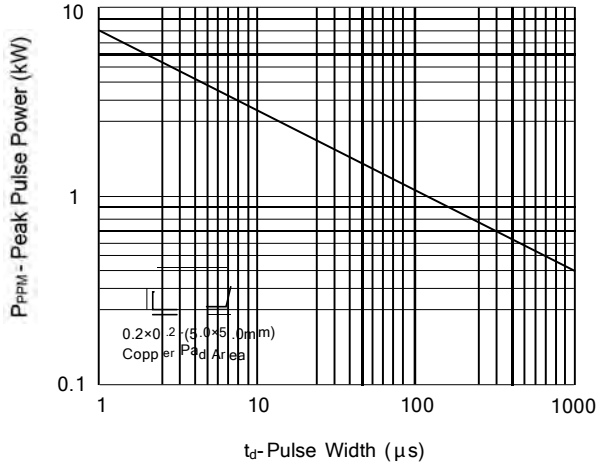


Figure 2. Pulse Derating Curve

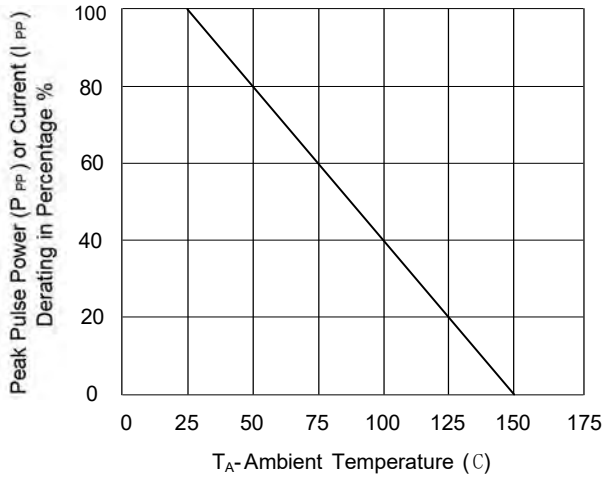


Figure 3. Pulse Waveform

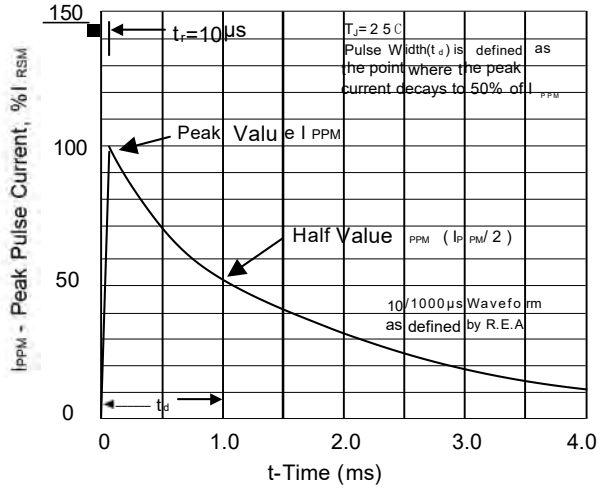


Figure 4. Typical Junction Capacitance

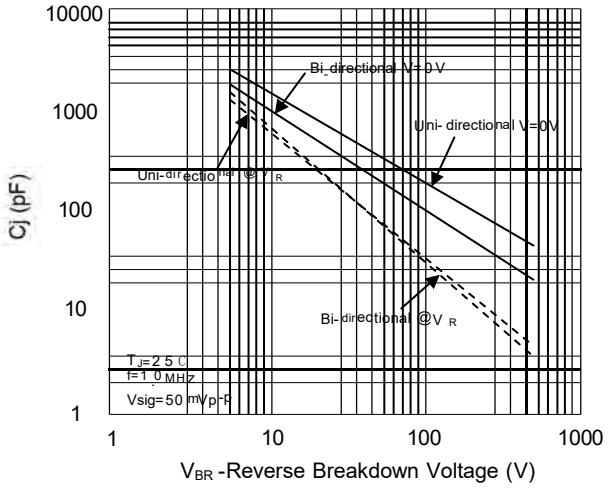


Figure 5. Steady State Power Dissipation Derating Curve

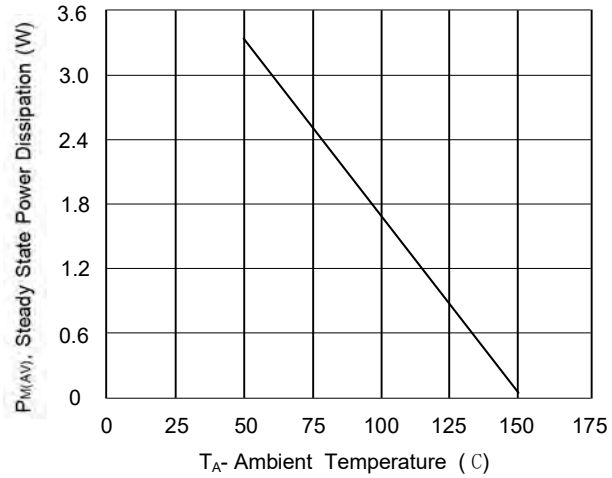
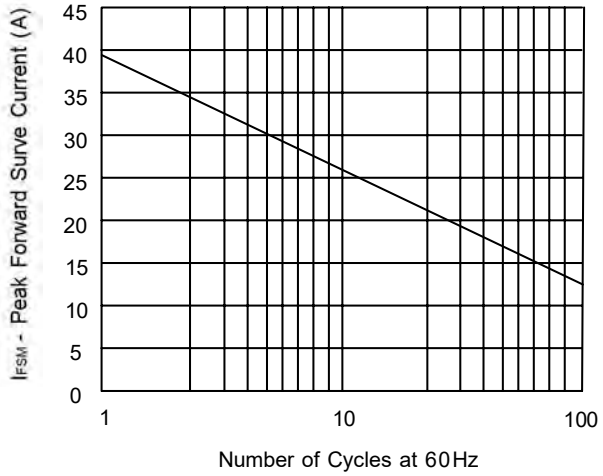
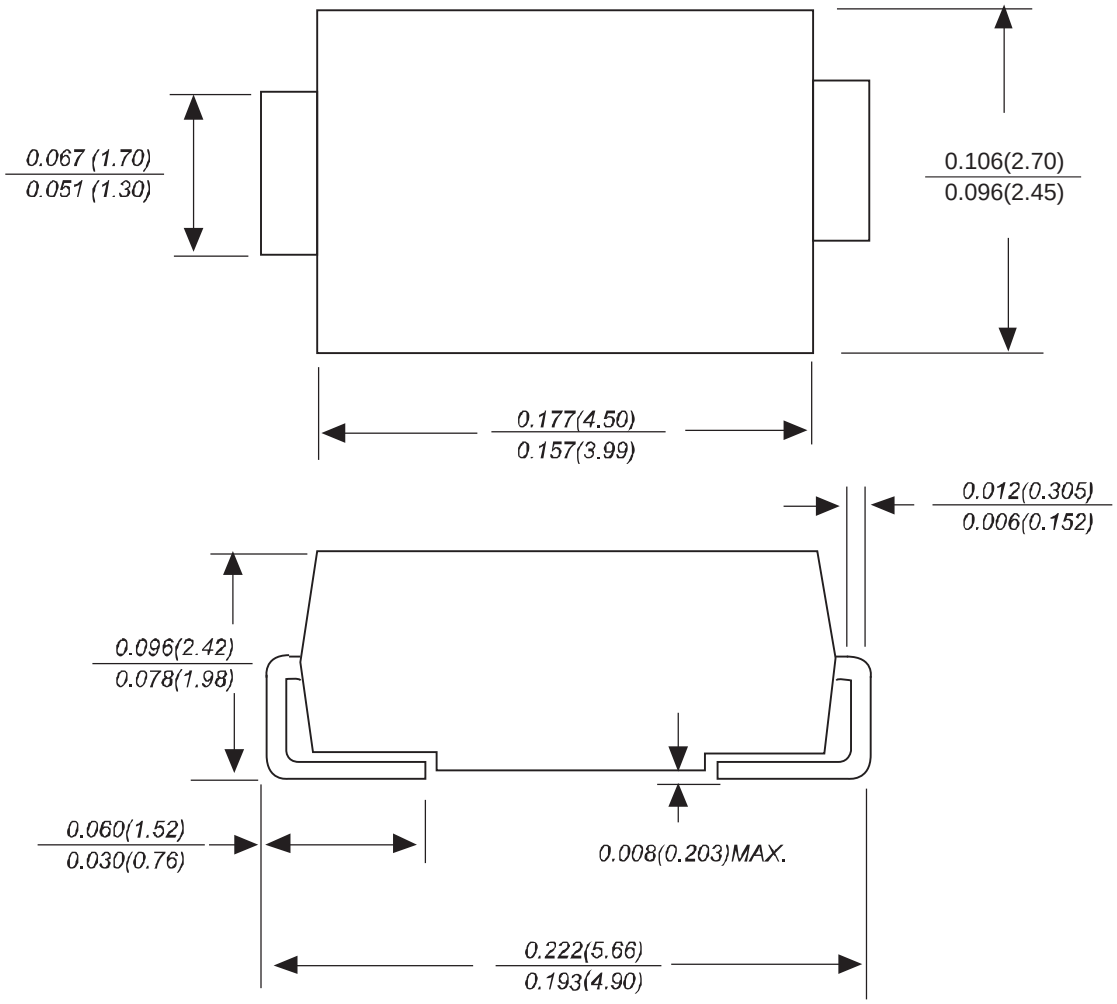


Figure 6. Maximum Non-Repetitive Forward Surge Current Uni-Directional Only



Package Outline Dimensions

SMA(DO-214AC)



Dimensions in inches and (millimeters)

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