



Features:

- Glass passivated junction
- Low incremental surge resistance, excellent clamping capability
- 1,500W peak pulse power capability with a 10/1,000 μ s waveform, repetition rate (duty cycle): 0.01%
- Very fast response time
- High temperature soldering guaranteed : 250°C/10 secs at terminals

Mechanical Data:

- Case : JEDEC DO-214AB moulded plastic over glass passivated junction
- Polarity : For uni-directional types the colour band denotes the cathode, which is positive with respect to the anode under normal TVS operation
- Weight : 0.007 ounces, 0.21 grams
- Flammability : epoxy is rated UL 94V-0

Maximum Ratings & Characteristics: Tamb = 25°C, unless otherwise specified.

Description	Symbol	Values	Unit
Peak power dissipation with a 10/1,000 μ s waveform (Note1 & 2,)	PPPM	1.500 (Min.)	W
Peak pulse current with a 10/1,000 μ s waveform (Note1)	IPPM	See table below	A
Peak forward surge current, 8.3ms single half sine-wave unidirectional only (Note 2)	IFSM	200	A
Typical thermal resistance, junction to ambient (Note 3)	R _{thJA}	100	°C/W
Typical thermal resistance, junction to lead	R _{thJL}	20	°C/W
Operational junction and storage temperature range	T _J , T _{STG}	-55 to +150	°C

Notes:

1. Non-repetitive current pulses, per fig.3 and derated above TA = 25°C per fig.2
2. Mounted on 0.2 × 0.2" (5.0 × 5.0mm) copper pads to each terminal
3. Mounted on minimum recommended pad layout

Bi-Directional 1,500 Watt Surface Mount TVS

Part Number	Marking	Stand-off Voltage V _{WM} (V)	Breakdown Voltage V _{BR} (V) Min. at IT	Breakdown Voltage V _{BR} (V) Max. at IT	Test Current I _{test} (mA)	Max. Clamping Voltage V _{clamp} (V)	Peak Pulse Current I _{PP} (A)
SMCJ6.0CA+	BDG	6	6.67	7.67	10	10.3	145.6
SMCJ9.0CA+	BDV	9	10	11.5	1	15.4	97.4

Ratings & Characteristic Curves

FIG.1 – PEAK PULSE POWER RATING CURVE

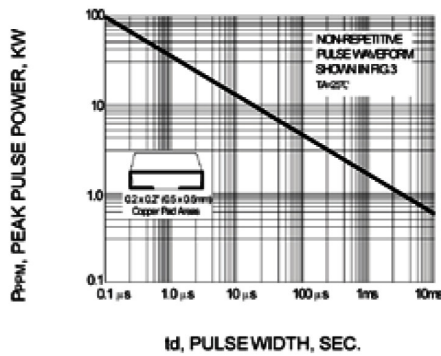


FIG.2 – PULSE DERATING CURVE

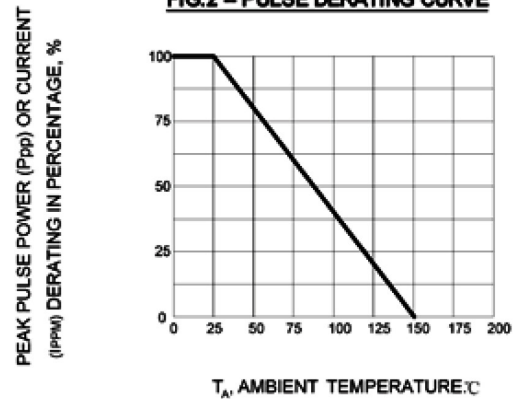


FIG.3 – PULSE WAVEFORM

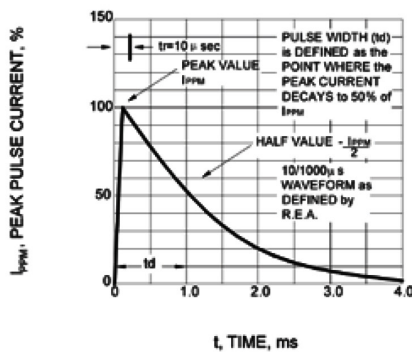


FIG.4 – TYPICAL JUNCTION CAPACITANCE UNIDIRECTIONAL

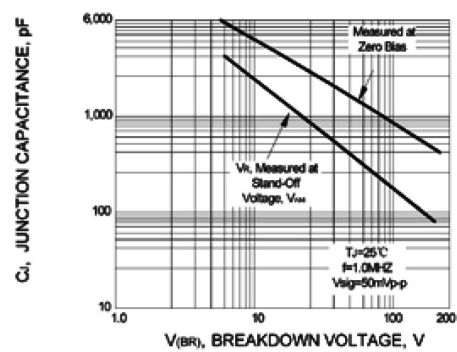


FIG.5 – TYPICAL TRANSIENT THERMAL IMPEDANCE

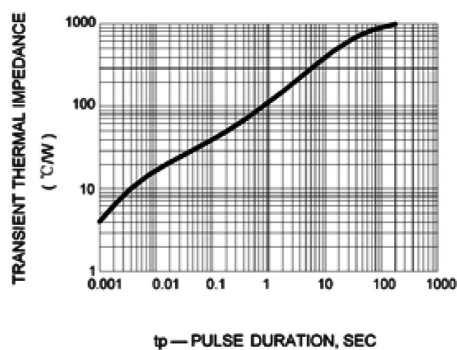
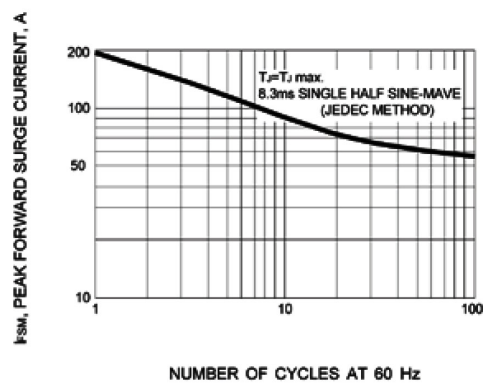
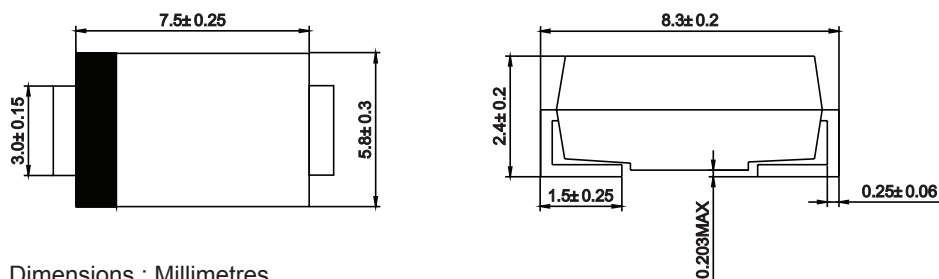


FIG.6 – MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT



DO-214AB(SMC)



Dimensions : Millimetres

Part Number Table

Description	Part Number
Transient Voltage Suppressor, Bi-Directional 1,500 Watt	SMCJ6.0CA+
	SMCJ9.0CA+

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