TRANSIENT VOLTAGE SUPPRESSOR

FEATURE

- Plastic package.
- Glass passivated chip junction in SMB Package
- Excellent clamping capability.
- Low zener impedance.
- 600W peak pulse power capability on 10/1000μs waveform.
- Typical IR less than 1μA above 13V.
- Fast response time: typically less than 1.0ps from 0 Volts to BV min.
- High temperature soldering guaranteed: 265℃/10 seconds

MECHANICAL DATE

- Case: JEDEC SMB Molded Plastic.
- Terminals: Axial leads, solderable per MIL-STD-750, Method 2026.
- Polarity: Color band denoted cathode except bidirectional.
- Mounting Position: Any.

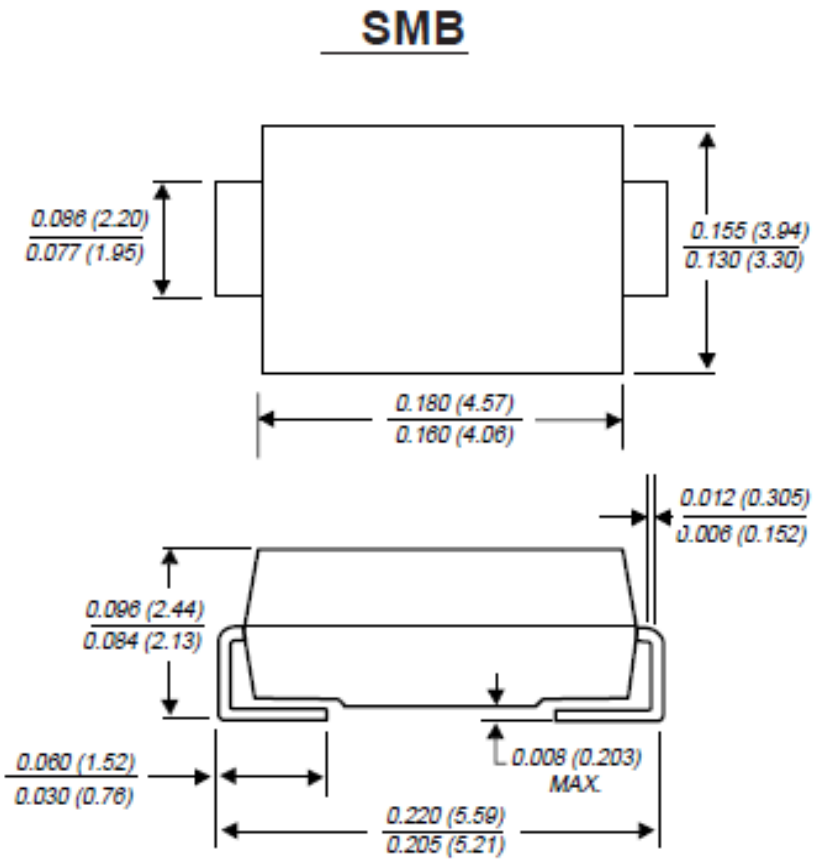
MAXIMUM RATINGS AND CHRACTERISTICS

Ratings at 25ć ambient temperature unless otherwise specified.

RATING	SYMBOL	VALUE	UNITS
Peak Pulse Power Dissipation on 10/1000us waveform (Note1, Fig.1).	P_{PPM}	Minimum 600	Watts
Peak Pulse Current of on 10/1000us waveform. (Note1, Fig.3)	I_{PPM}	See Table	Amps
Steady State Power Dissipation at TL =75℃, Lead lengths.375″, (9.5mm) (Fig.5).	$P_{M(AV)}$	5.0	Watts
Peak Forward Surge Current, 8.3ms Single Half Sine-Wave Superimposed on Rated Load, (JEDEC Method) (Note 2, Fig.6).	I_{FSM}	100	Amps
Operating junction and Storage Temperature Range.	T_J, T_{STG}	-55 to +150	℃

Notes:

1. Non-repetitive current pulse, per Fig. 3 and derated above TA = 25℃ per Fig. 2.
2. 8.3ms single half sine-wave, or equivalent square wave, Duty cycle = 4 pulses per minutes maximum.



ELECTRICAL CHARACTERISTICS

Part Number	Marking	Reverse Stand-Off Voltage	Breakdown Voltage NIN.@IT	Breakdown Voltage MAX.@IT	Reverse Leakage @VRWM	Test Current	Peak Pulse Current	Maximum Clamping Voltage
BI	BI	VR(V)	VBL(V)	VBH(V)	IR(uA)	IT(mA)	IPP(A)	VCH(V)
SMBJ6.8CA	AK	6.8	7.22	7.98	500	10	53.6	11.2

RATINGS AND CHARACTERISTIC CURVES (TA=25℃ unless otherwise noted)

Fig. 1 – Peak Pulse Power Rating Curve

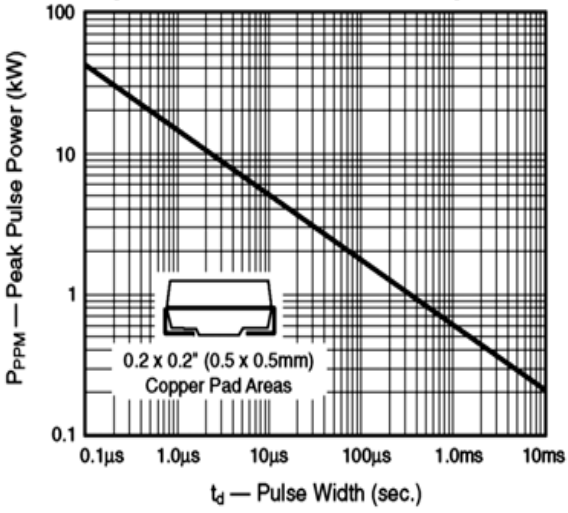


Fig. 2 – Pulse Derating Curve

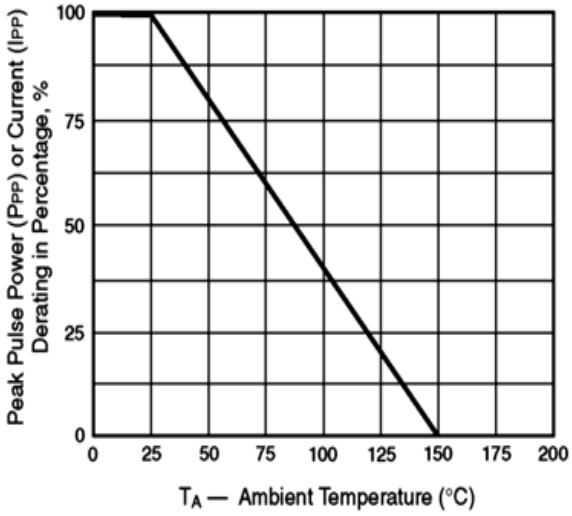


Fig. 3 – Pulse Waveform

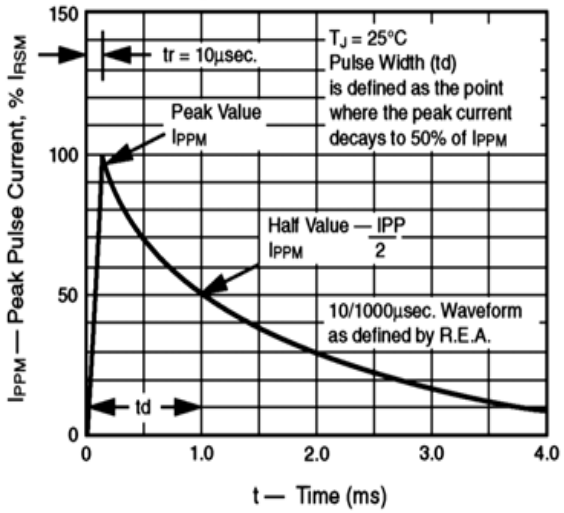


Fig. 4 – Typical Junction Capacitance

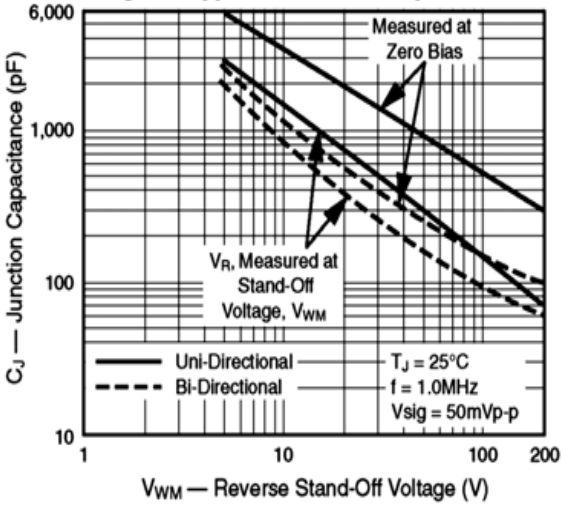


Fig. 5 – Typical Transient Thermal Impedance

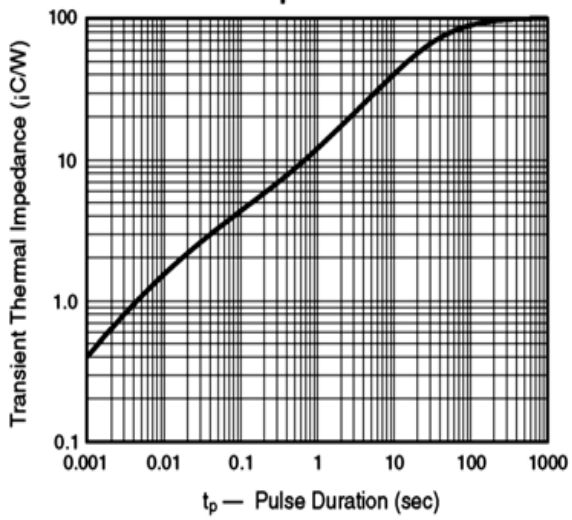


Fig. 6 – Maximum Non-Repetitive Peak Forward Surge Current

