SMBJ6.8(C)A

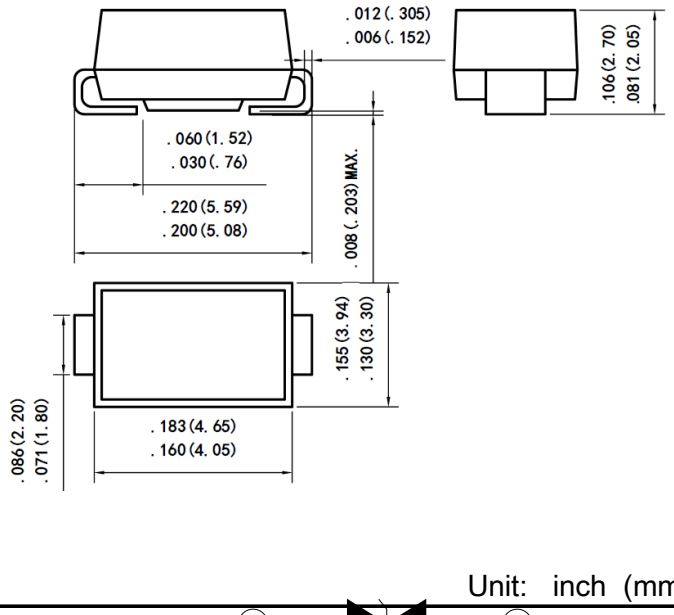
Features

- Glass passivated chip
- 600 W peak pulse power capability with a 10/1000 us waveform, repetitive rate (duty cycle):0.01 %
- Excellent clamping capability
- Low reverse leakage
- Very fast response time
- Lead and body according with RoHS standard
- High temperature soldering guaranteed: 260℃/10seconds

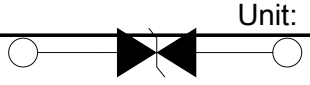
Mechanical Data

- Case: DO-214AA/(SMB) Molded plastic
- Lead: Solderable per MIL-STD-750, method 2026
- Epoxy: UL 94V-0 rate flame retardant
- System: Accreditation through IATF16949 System
- Mounting position: Any

DO-214AA/(SMB)

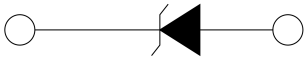


Unit: inch (mm)



Bi-directional

Cathode Anode



Uni-directional

Mechanical Characteristics

- CASE: SMB (DO-214AA) Molded Plastic over glass passivated junction.
- Mounting Position: Any
- Polarity: by cathode band denotes uni-directional device, none cathode band denotes bi-directional device.
- Terminal: Solder plated.

Maximum Ratings and Characteristics @ 25°C Ambient Temperature (unless otherwise noted)

Parameter	Symbol	Value	Units
Peak Pulse Power Dissipation on 10/1000 us Waveform (Note 1, 2, FIG.1)	P_{PPM}	Min 600	W
Power Dissipation on Infinite Heat Sink at T_L=50°C	P_D	3	W
Peak Pulse Current of on 10/1000us Waveform (Note 1, FIG.3)	I_{PPM}	See Table 1	A
Peak Forward Surge Current, 8.3ms Single Half Sine-Wave (Note 2. 3)	I_{FSM}	100	A
Operating Junction Temperature Range	T_J	-55 to 150	°C
Storage Temperature Range	T_{STG}	-55 to 150	°C

Notes:

1. Non-repetitive current pulse, per Fig.3 and derated above T_A=25°C per Fig.2.
2. Mounted on 5.0x5.0mm^2 (0.03mm thick) Copper Pads to each terminal.
3. Measured on 8.3ms single half sine-wave, or equivalent square wave, for Unidirectional device only.

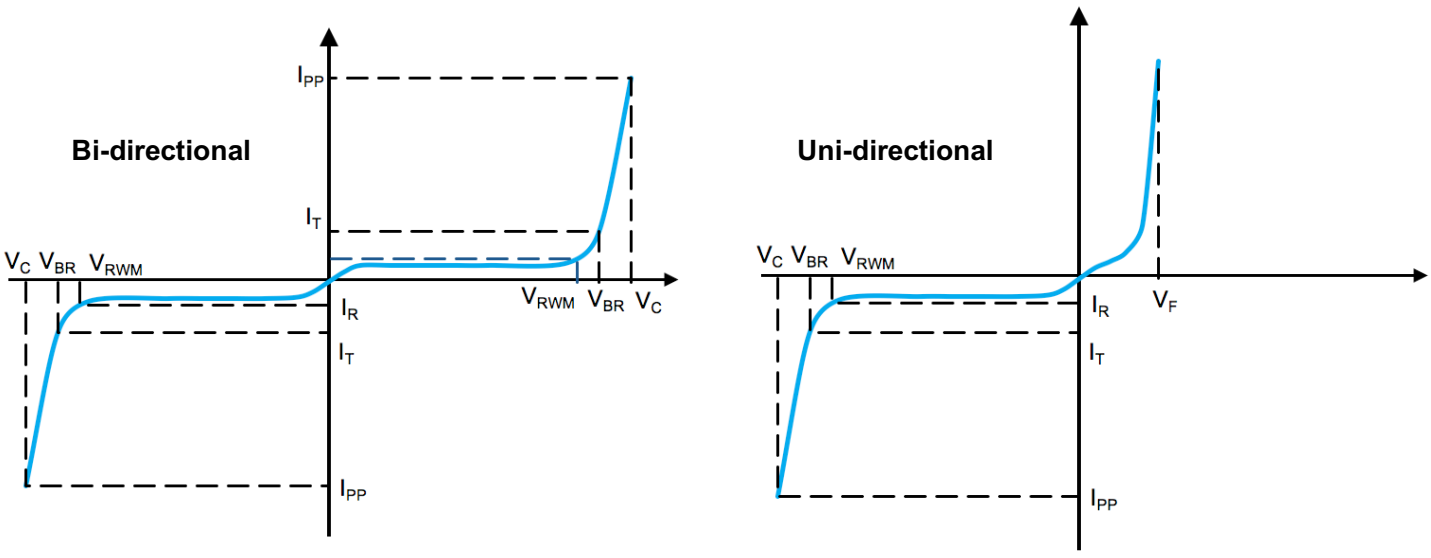
Electrical Specification @ Tamb 25°C

Type Number		Type Code		Reverse Stand-Off Voltage	Breakdown Voltage Min. @I_T	Breakdown Voltage Max. @ I_T	Test Current	Maximum Clamping Voltage @I_{PP}	Peak Pulse Current	Reverse Leakage @V_{RMW}
(Uni)	(Bi)	(Uni)	(Bi)	V_{RMW}(V)	$V_{BR\ MIN}$(V)	$V_{BR\ MAX}$(V)	I_T (mA)	V_C(V)	I_{PP}(A)	I_R(uA)
SMBJ6.8A	SMBJ6.8CA	6V8A	6V8CA	5.80	6.45	7.14	10	10.5	58.1	300

※ For Bi-directional type having V_{RWM} of 10 Volts and less, the I_R limit is double.

※ For parts without A, the VBR is ± 10% and VC is 5% higher than with A parts.

I-V Curve Characteristics



P_{PPM} **Peak Pulse Power Dissipation** - Max power dissipation

V_{RWM} **Reverse Stand-off Voltage** - Maximum voltage that can be applied to TVS without operation

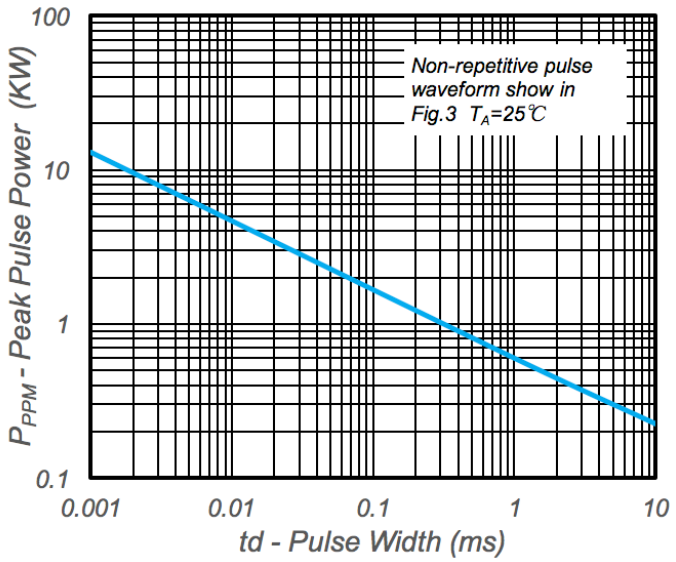
V_{BR} **Breakdown Voltage** – Maximum voltage that flows though the TVS at a specified current (I_T)

V_C **Clamping Voltage** – Peak voltage measured across the TVS at a specified I_{PPM} (peak impulse current)

I_R **Reverse Leakage Current** – Current measured at V_R

V_F **Forward Voltage Drop for Uni-directional**

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



Tp-Pulse Width(ms)

Fig.1 - Peak Pulse Power Rating

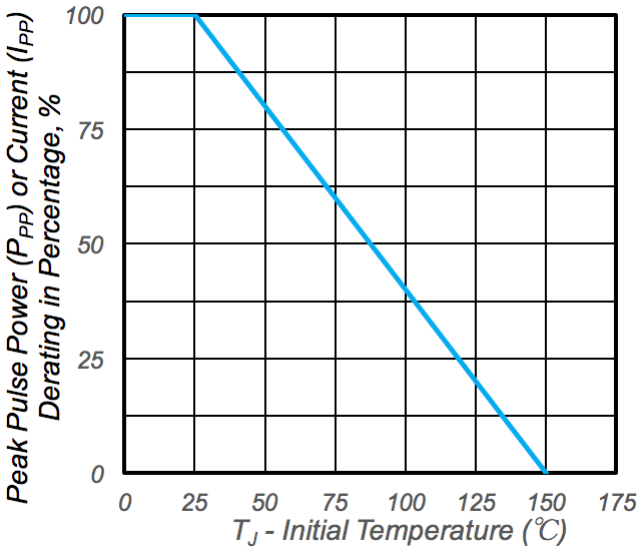


Fig.2 - Pulse Derating Cure

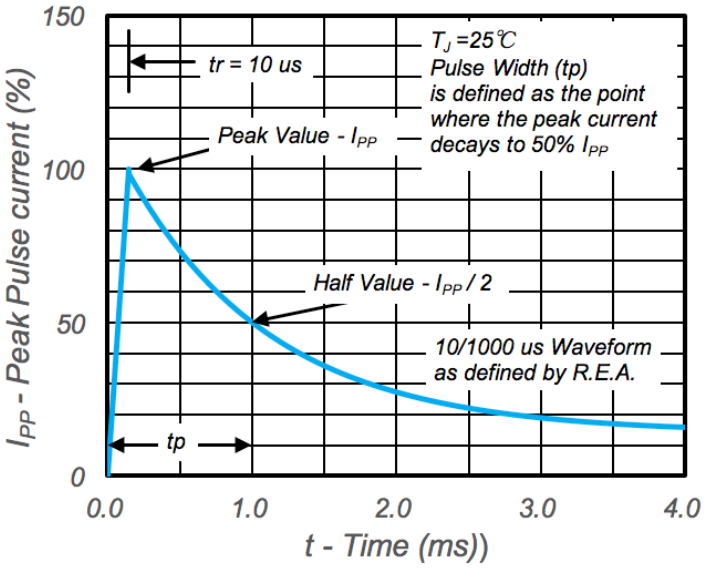


Fig.3 – Pulse Waveform

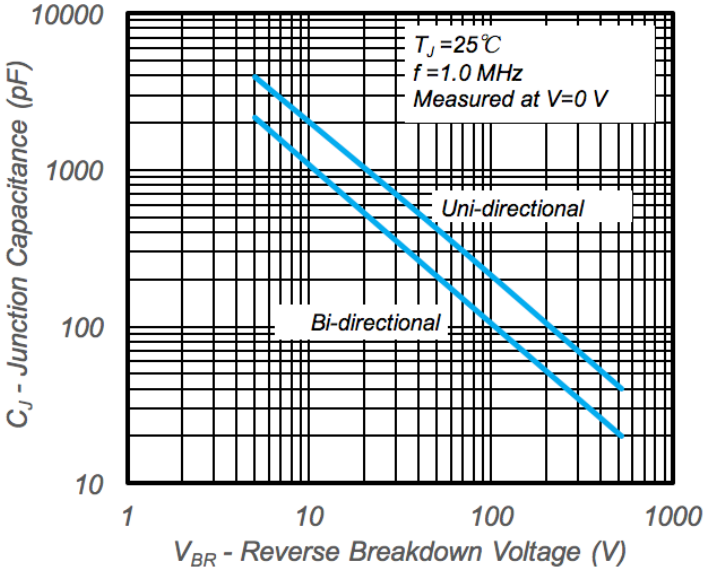


Fig.4 - Typical Junction Capacitance