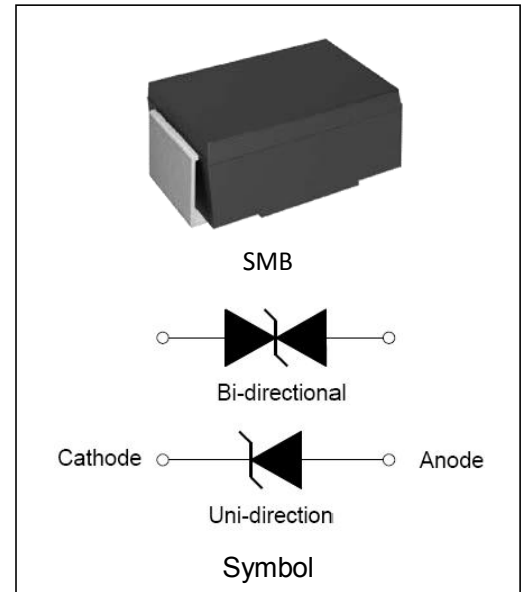


»Features

- Peak power dissipation 600W @10 x 1000 us Pulse
- Low profile package.
- Excellent clamping capability.
- Glass passivated junction.
- Fast response time: typically less than 1ps from 0 Volts to BV min
- IEC 61000-4-2 ESD 30KV(Air), 30KV(Contact)
- ESD protection of data lines in accordance with IEC 61000-4-2
- EFT protection of data lines in accordance with IEC 61000-4-4
- Halogen free and RoHS compliant
- Lead-free finish



»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

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	5	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.

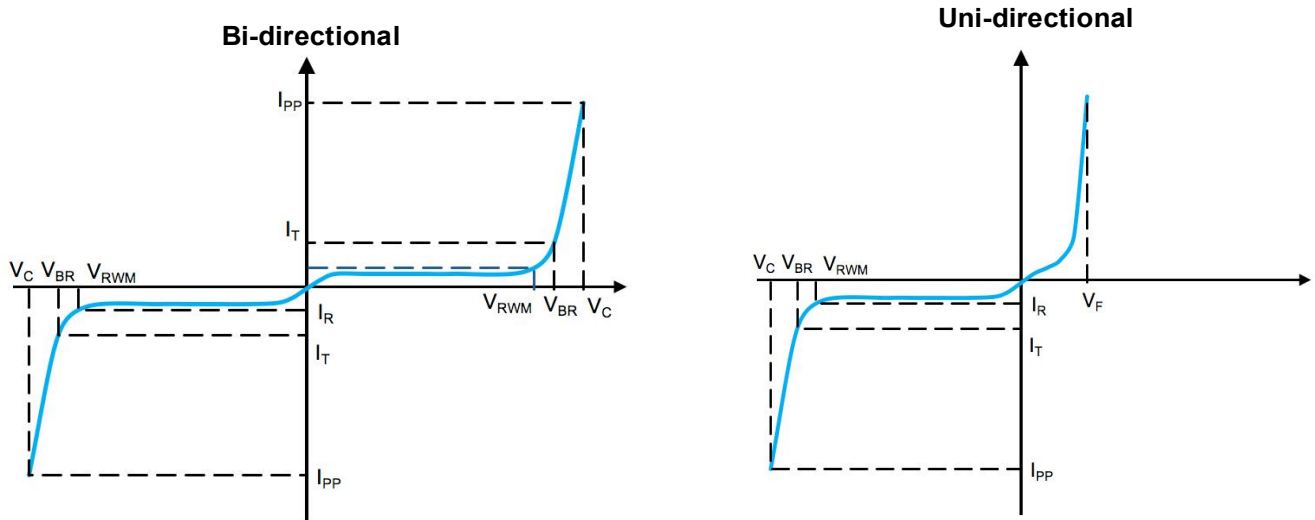
2. Mounted on 5.0x5.0mm² (0.03mm thick) Copper Pads to each terminal.

3. Measured on 8.3ms single half sine-wave, or equivalent square wave, for Unidirectional device only.

»Electrical Specification @ Tamb 25°C

Type Number		Marking		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	SMBJ6.8A	SMBJ6.8CA	5.8	6.45	7.14	10	10.5	58.1	500

»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 ($T_A=25^\circ\text{C}$ unless otherwise noted)

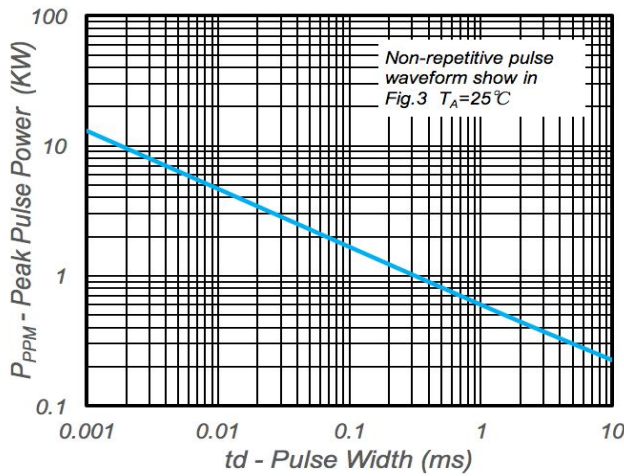


Fig. 1 - Peak Pulse Power Rating

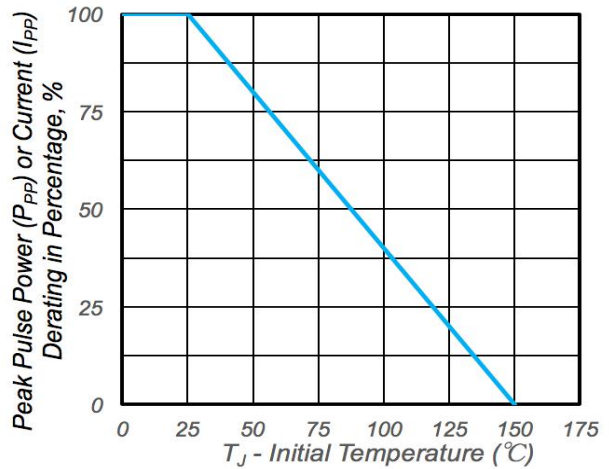


Fig. 2 - Pulse Derating Curve

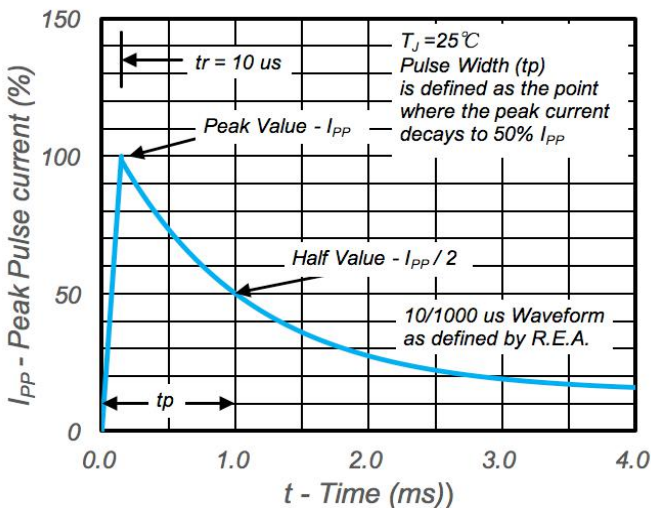


Fig. 3 – Pulse Waveform

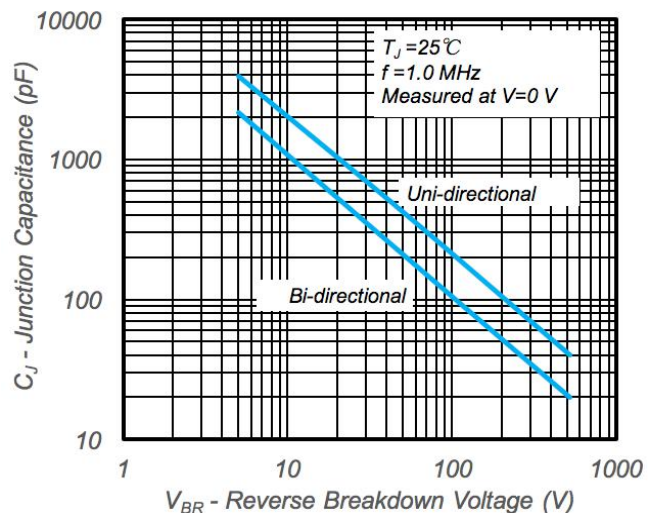
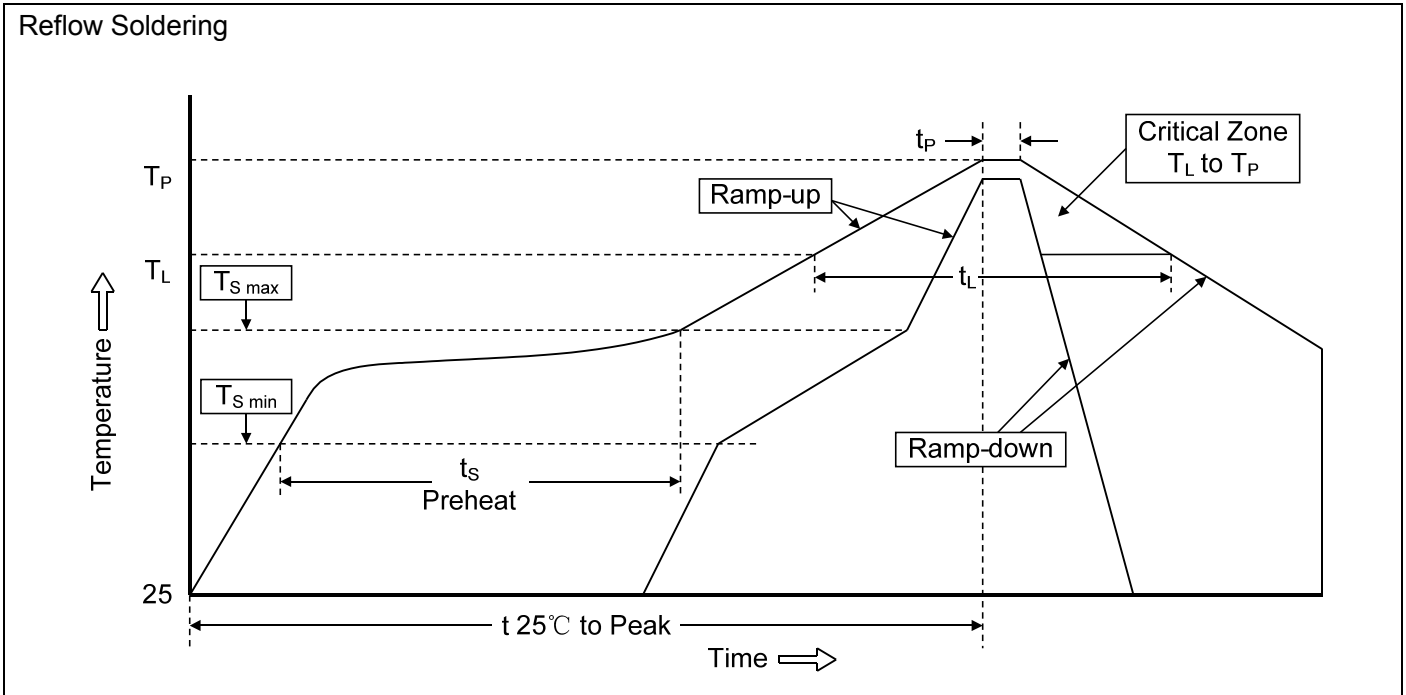


Fig. 4 - Typical Junction Capacitance

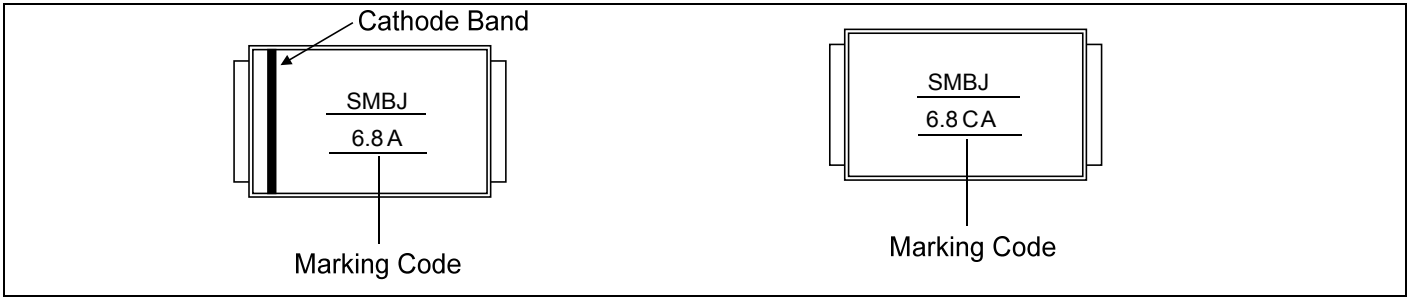
»Recommended Soldering Conditons



Recommended Conditions

Profile Feature	Pb-Free Assembly
Average ramp-up rate (T_L to T_P)	3°C/second max.
Preheat -Temperature Min ($T_{S\ min}$) -Temperature Max ($T_{S\ max}$) -Time (min to max) (t_s)	150°C 200°C 60-180 seconds
$T_{S\ max}$ to T_L -Ramp-up Rate	3°C/second max.
Time maintained above: -Temperature (T_L) -Time (t_L)	217°C 60-150 seconds
Peak Temperature (T_P)	260°C
Time within 5°C of actual Peak Temperature (t_p)	20-40 seconds
Ramp-down Rate	6°C/second max.
Time 25°C to Peak Temperature	8 minutes max.

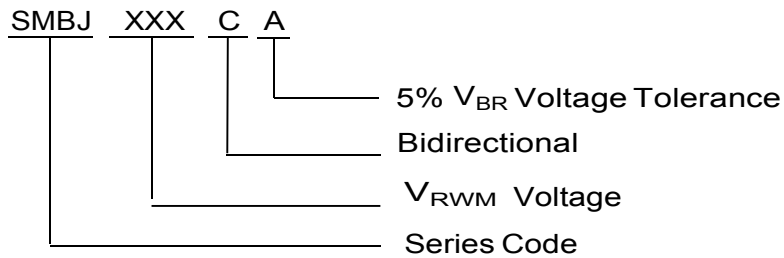
»Marking Code



»Package Outline Dimensions and Pad Layouts (DO-214AA)

Dim	Millimeters		Inches	
	Min	Max	Min	Max
L	4.29	4.70	0.169	0.186
D	3.40	3.79	0.134	0.150
D1	1.85	2.25	0.073	0.089
T	5.10	5.48	0.201	0.216
T1	0.76	1.52	0.030	0.060
d	-	0.203	-	0.008
H	2.00	2.50	0.079	0.098
H1	1.98	2.29	0.078	0.090

»Ordering Information



»Packaging

Tape		Symbol	Dimension(mm)
		W	12.00±0.20
		P0	4.00±0.10
		P1	8.00±0.10
		P2	2.00±0.10
		D0	Φ1.55±0.10
		D1	Φ1.5±0.10
		E	1.75±0.10
		F	5.50±0.10
		A0	3.86±0.15
		B0	5.65±0.10
		K0	2.75±0.15
		T	0.25±0.05
		<p>7" Reel</p>	
D3	Φ50.0Min.		
D4	Φ13.0±0.5		
W1	16.0±2.0		
Quantity: 500PCS			
<p>13" Reel</p>		D5	Φ330.0±2.0
		D6	Φ13.5±0.5
		H	2.5±1.0
		W2	16.0±2.0
		Quantity: 3000PCS	