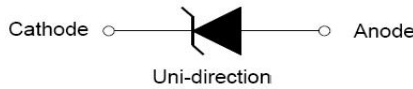


SMB



Bi-directional



Uni-direction

Symbol

Features

Peak power dissipation 600W@10 x 1000 us Pulse

Low incremental surge resistance

Excellent clamping capability

Glass passivated junction

Fast response time

Halogen free and RoHS compliant

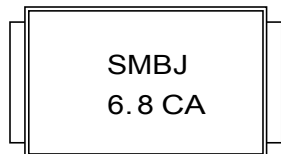
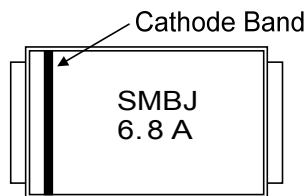
Mechanical Data

CASE: SMBJ(DO-214AA) Molded Plastic

Polarity: By cathode band denotes uni-directional device,
none cathode band denotes bi-directional device

Mounting Position: Any

Making Code & information



Package	Packing Description	Packing Quantity
SMB	Tape/Reel, 13" reel	3000

SMBJ	XXX	C	A	
				5% V_{BR} Voltage Tolerance
				Bidirectional
				V_{RWM} Voltage
				Series Code

Maximum Ratings & Thermal Characteristics

(Ratings at 25°C ambient temperature unless otherwise specified.)

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 $T_L=50^\circ\text{C}$	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	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55 to 150	$^\circ\text{C}$

Notes: 1. Non-repetitive current pulse, per Fig.3 and derated above $T_A=25^\circ\text{C}$ 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 Characteristics

(Ratings at 25°C ambient temperature unless otherwise specified.)

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_{RWM}
(Uni)	(Bi)	(Uni)	(Bi)	$V_{RWM}(V)$	$V_{BR\ MIN}(V)$	$V_{BR\ MAX}(V)$	$I_T\ (mA)$	$V_C(V)$	$I_{PP}(A)$	$I_R(\mu A)$
SMBJ6.8A	SMBJ6.8CA	SMBJ 6.8A	SMBJ 6.8CA	5.8	6.45	7.14	10	10.5	58.1	500

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

For parts without A, the V_{BR} is $\pm 10\%$ and V_C is 5% higher than with A parts.

Ratings and Characteristic Curves

(Ratings at 25°C ambient temperature unless otherwise specified).

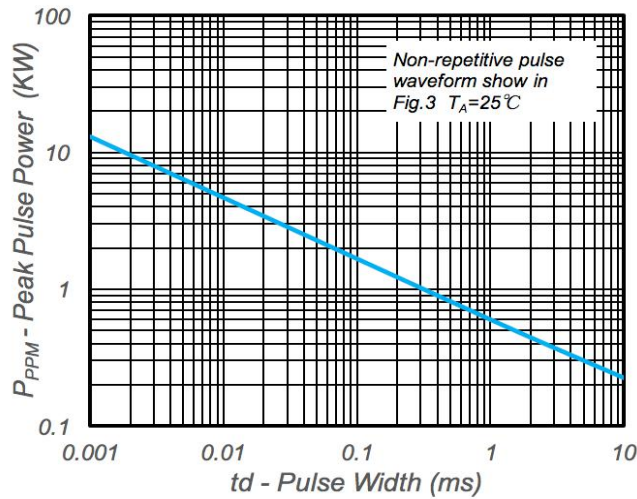


Fig. 1 - Peak Pulse Power Rating

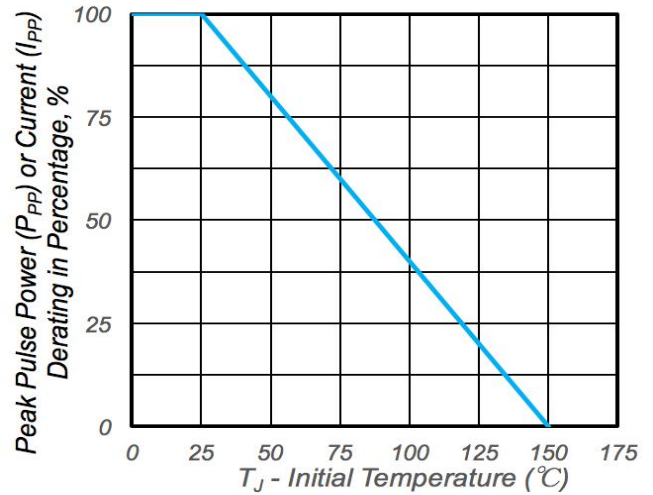


Fig. 2 - Pulse Derating Curve

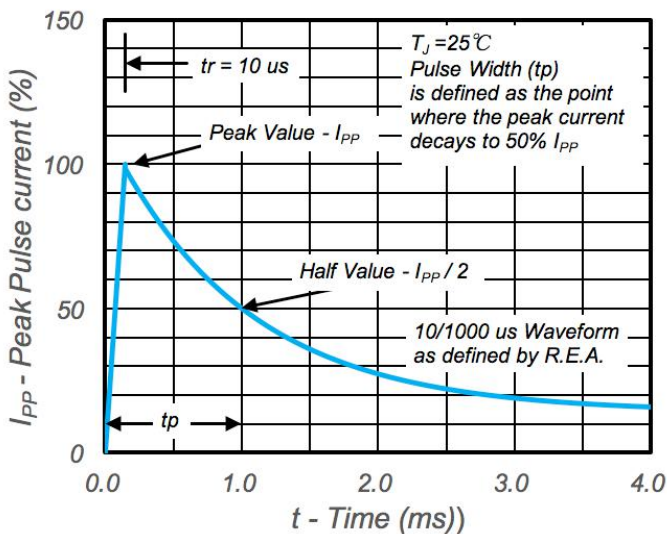


Fig. 3 - Pulse Waveform

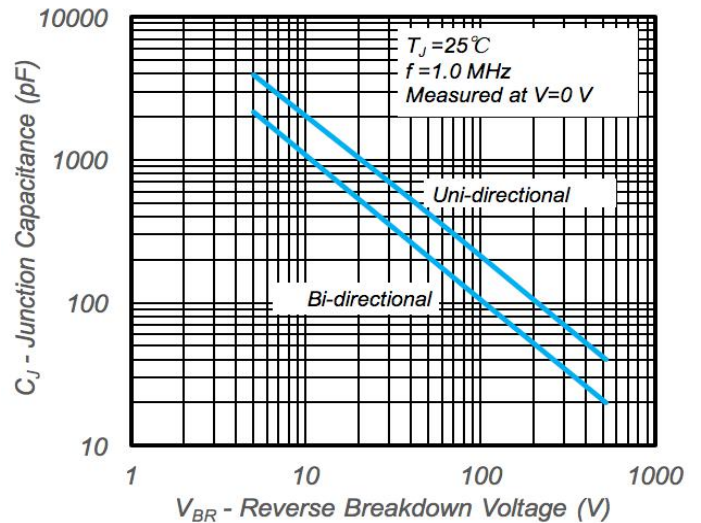


Fig. 4 - Typical Junction Capacitance

Package Outline Dimensions: SMB(DO-214AA)

Dim	Millimeters		Inches	
	Min	Max	Min	Max
L	4.4	4.6	0.173	0.181
D	3.5	3.7	0.138	0.146
D1	1.9	2.1	0.075	0.083
T	5.1	5.48	0.201	0.216
T1	1.0	1.6	0.039	0.063
d	-	0.2	-	0.008
H	2.2	2.45	0.087	0.096
H1	2.15	2.35	0.085	0.093