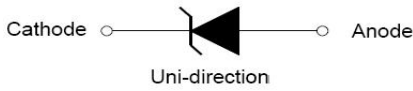


**SMB**


Symbol

**Features**

- Peak power dissipation 600W@10 x 1000 us Pluse
- 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**

Cathode Band

SMBJ  
6.8 A

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

SMBJ 6.8 CA

SMBJ    XXX    C    A

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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	°C
Storage Temperature Range	$T_{STG}$	-55 to 150	°C

- Notes: 1. Non-repetitive current pulse, per Fig.3 and derated above  $T_A=25^\circ\text{C}$  per Fig.2.  
 2. Mounted on  $5.0 \times 5.0 \text{mm}^2$  (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 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)	$V_{RMW}(V)$	$V_{BR \text{ MIN}}(V)$	$V_{BR \text{ MAX}}(V)$	$I_T (mA)$	$V_C(V)$	$I_{PP}(A)$	$I_R(\mu A)$
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).

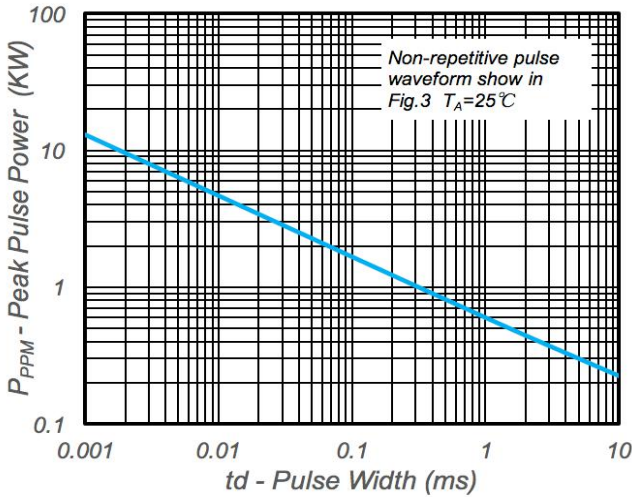


Fig. 1 - Peak Pulse Power Rating

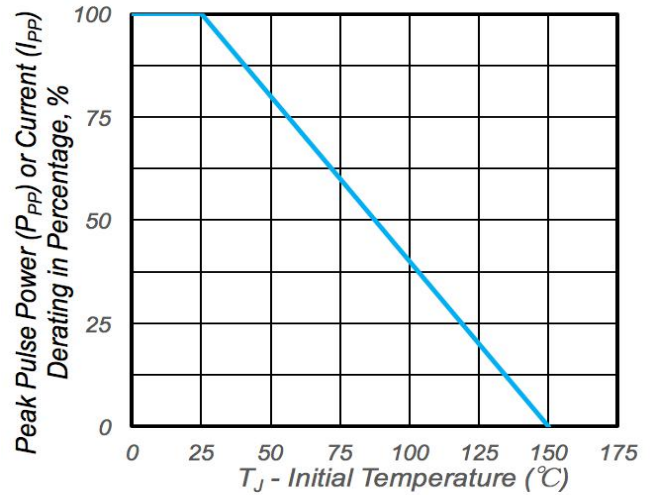


Fig. 2 - Pulse Derating Curve

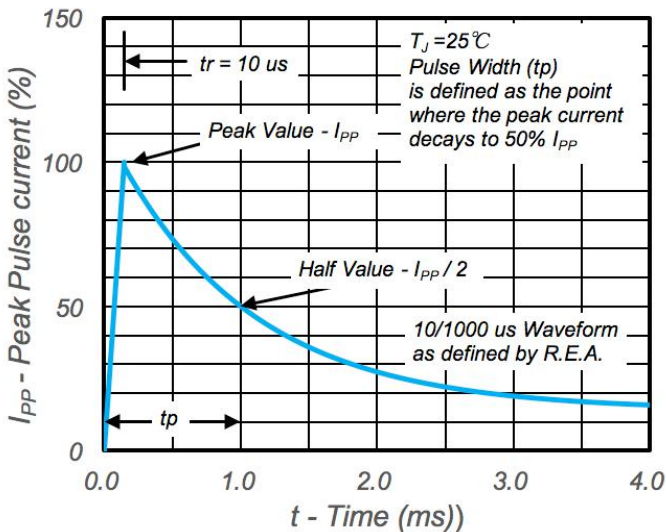


Fig. 3 - Pulse Waveform

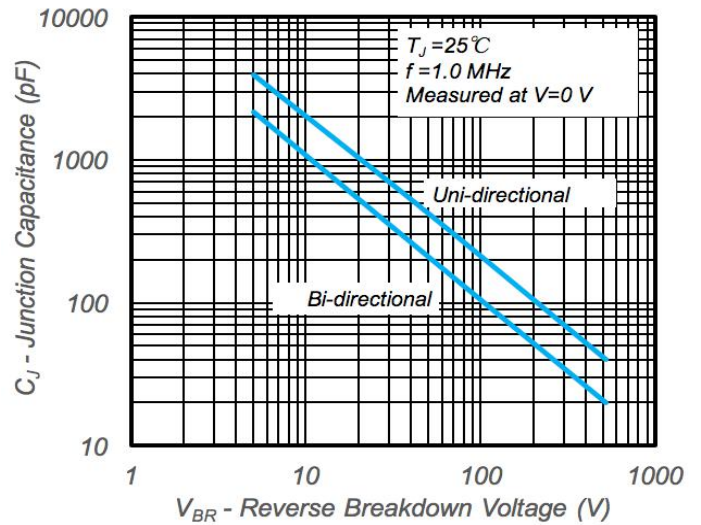


Fig. 4 - Typical Junction Capacitance

## 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