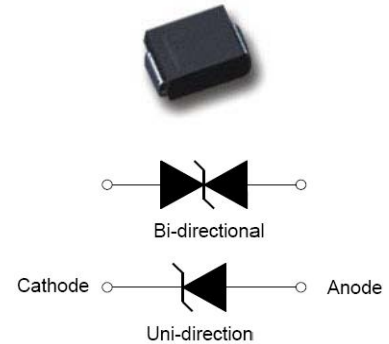


Features

- For surface mounted applications
- Low-profile package
- Ideal for automated placement
- Available in Unidirectional and Bidirectional
- 600 W peak pulse power capability with a 10/1000 μ s waveform
- Low incremental surge resistance, excellent clamping capability
- Very fast response time
- High temperature soldering guaranteed: 260 °C/10 s at terminals
- Meets MSL level 1

SMB/DO-214AA



Mechanical Data

- **Package:** DO-214AA (SMB)
Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant, halogen-free
- **Terminals:** Matte tin plated leads, solderable per J-STD-002B and JESD22-B102D
- **Polarity:** For uni-directional types the band denotes cathode end, no marking on bi-directional types

Order information

Device	Marking	Shipping
SMBJ6.8CA(Bi)	6V8C	500/Tape&Reel
SMBJ6.8A(Uni)	6V8A	500/Tape&Reel

Typical Applications

Use in sensitive electronics protection against voltage transients induced by inductive load switching and lighting on ICs, MOSFET, signal lines of sensor units for consumer, computer, industrial, telecommunication.

■ Maximum Ratings ($T_A=25^\circ\text{C}$ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	Max
Peak power dissipation, with a 10/1000us waveform (1) (2) (Fig.1)	PPPM	W	600
Peak pulse current, with a 10/1000us waveform(1)	I _{PPM}	A	See Next Table
Peak forward surge current, 8.3 ms single half sine-wave unidirectional only (2)	I _{FSM}	A	100
Operating junction and storage temperature range	T _J ,T _{STG}	°C	-55 to +150

Notes:

- (1) Non-repetitive current pulse, per Fig. 3 and derated above $T_A = 25^\circ\text{C}$ per Fig.2.
- (2) Mounted on 0.2 x 0.2" (5.0 x 5.0 mm) copper pads to each terminal.

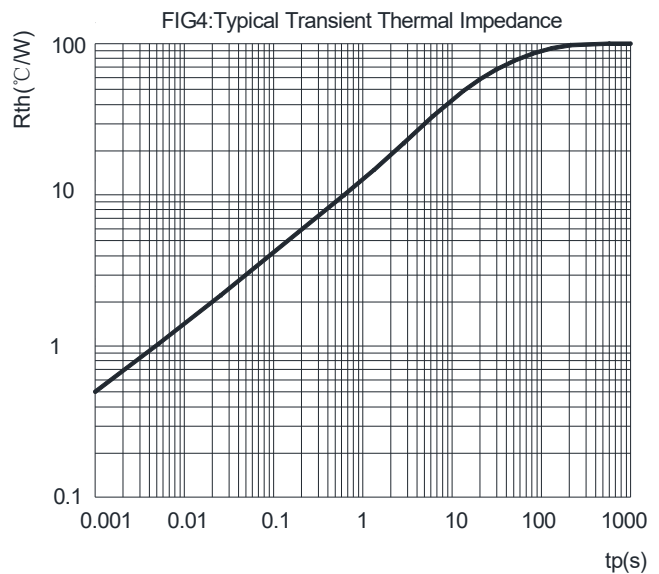
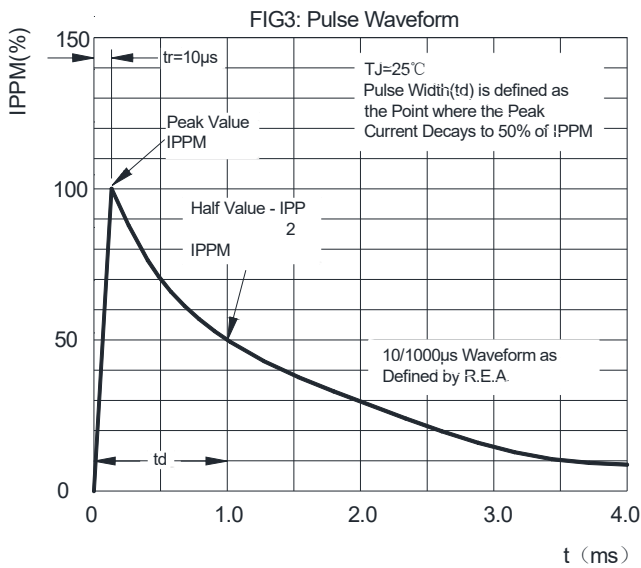
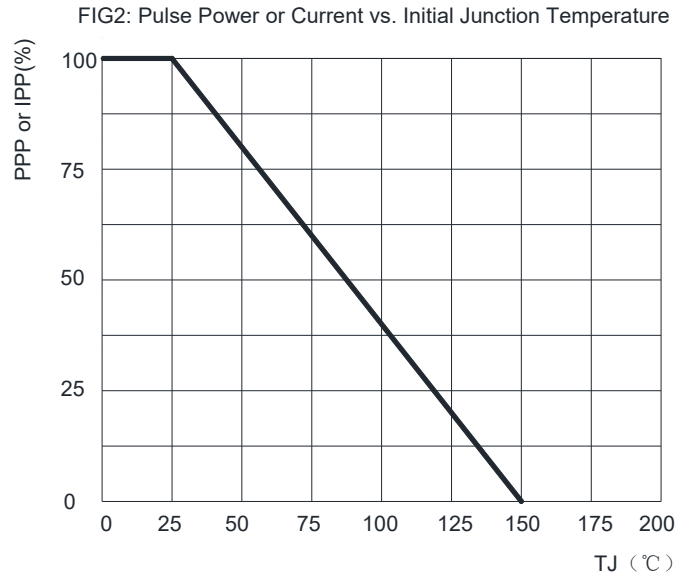
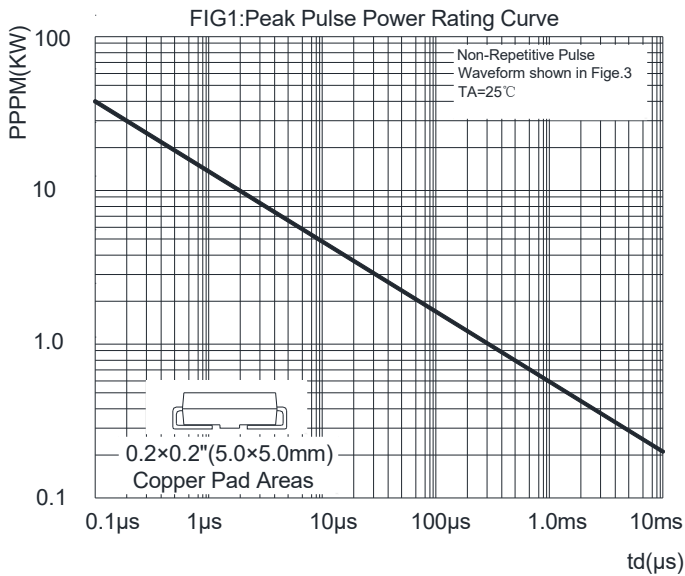
■ Electrical Characteristics ($T_a=25^\circ\text{C}$ Unless otherwise specified)

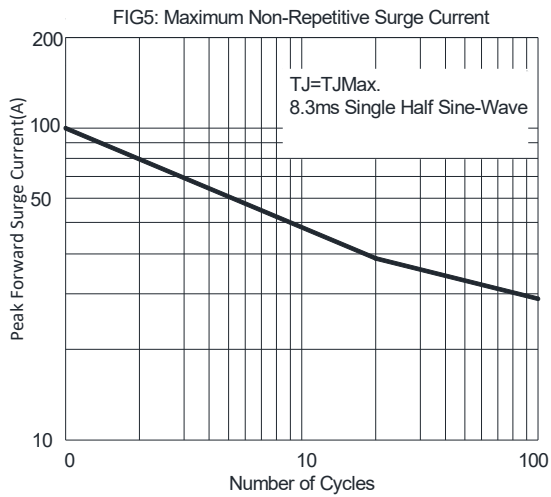
Part Number	Breakdown Voltage $V_{BR}@I_T$			Maximum Reverse Leakage $I_R^{(6)}$ @ V_{RWM} (μA)	Working Peak Reverse Voltage V_{RWM} (V)	Maximum Reverse Surge Current $I_{PP}^{(5)}$ (A)	Maximum Clamping Voltage V_c @ I_{PP} (V)
	Min(V)	Max (V)	$I_T^{(4)}$ (mA)				
SMBJ6.8CA	6.46	7.14	10	1000	5.8	57.14	10.5
SMBJ6.8A	6.46	7.14	10	1000	5.8	57.14	10.5

Notes:

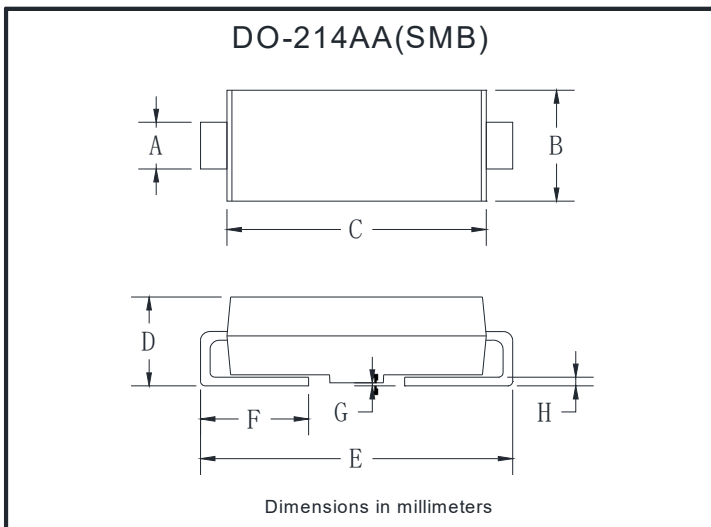
- (4) Pulse test: $t_p \leq 50\text{ms}$.
- (5) Surge current waveform per Fig. 3 and derated per Fig.2.
- (6) For bi-directional types having V_{RWM} of 10 V and less, the I_R limit is doubled.

■ Characteristics (Typical)



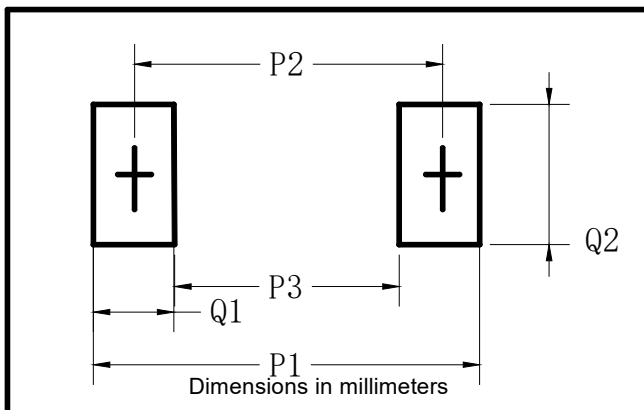


■ Outline Dimensions



DO-214AA(SMB)		
Dim	Min	Max
A	1.85	2.15
B	3.30	3.94
C	4.25	4.75
D	1.99	2.61
E	5.21	5.59
F	0.90	1.41
G	0.10	0.20
H	0.15	0.31

■ Suggested pad layout



DO-214AA(SMB)	
Dim	Millimeters
P1	6.8
P2	4.3
P3	1.8
Q1	2.5
Q2	2.3