

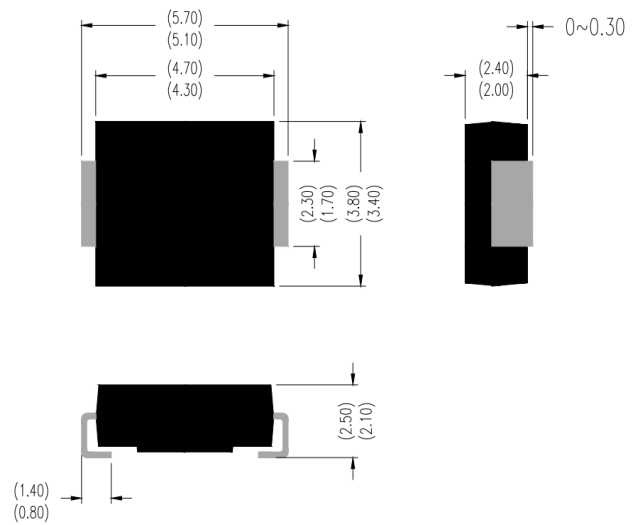
■ Features

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

■ Mechanical Data

- Case: SMB/DO-214AA Molded plastic
- Lead: Solderable per MIL-STD-750, method 2026
- Epoxy: UL 94V-0 rate flame retardant
- Polarity: Color band denotes cathode end except Bipolar
- Mounting position: Any

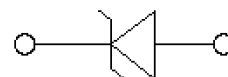
SMB/DO-214AA



Dimensions: inch[mm]

Uni-directional

Bi-directional



■ Absolute Maximum Ratings ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

Parameter	Symbol	Value	Unit
Peak power dissipation with a 10/1000 us waveform ⁽¹⁾	P _{PP}	600	W
Peak pulse current with a 10/1000 us waveform ⁽¹⁾	I _{PP}	57.14	A
Power dissipation on infinite heatsink at T _L = 75 °C	P _D	5.0	W
Peak forward surge current, 8.3 ms single half sinewave unidirectional only(2)	I _{FSM}	100	A
Maximum instantaneous forward voltage at 10 A for unidirectional only	V _F	3.5/5.0	V
Operating junction and storage temperature range	T _J , T _{STG}	-55 to +150	°C

Note:

1)Non-repetitive current pulse per Fig.5 and derated above T_A= 25 °C per Fig.1 ;

2)Measured on 8.3 ms single half sine-wave or equivalent square wave, duty cycle = 4 pulses per minute maximum ;

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

Part Number		Device Marking Code		Reverse Stand-off Voltage	Breakdown Voltage V _{BR} @ I _T		Test Current	Max. Clamping Voltage @ I _{PP}	Max. Peak Pulse Current	Max. Reverse Leakage @ V _{RWM}
UNI-POLAR	BI-POLAR	UNI	BI	V _{RWM} (V)	Min.(V)	Max.(V)	I _T (mA)	V _C MAX.(V)	I _{PP} (A)	I _R (μ A)
SMBJ6.8A	SMBJ6.8CA	6V8A	6V8C	5.8	6.46	7.14	10	10.5	57.14	1000



■ Ratings and Characteristics Curves ($T_A = 25^\circ\text{C}$ unless otherwise noted)

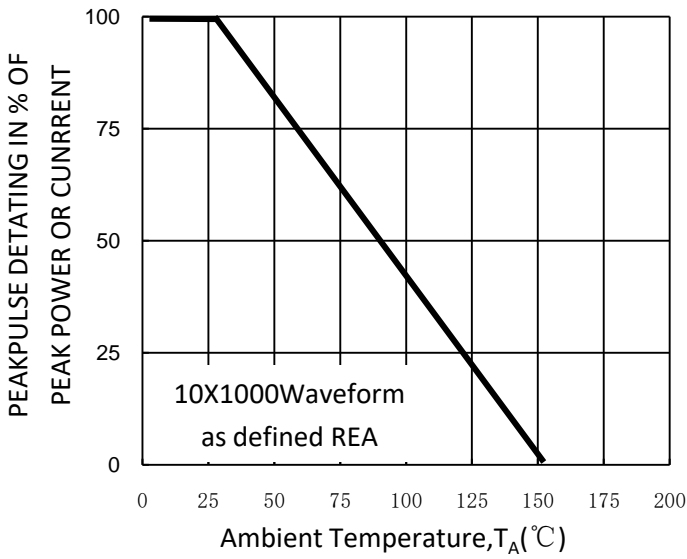


Fig. 1-Pulse Derating Curve

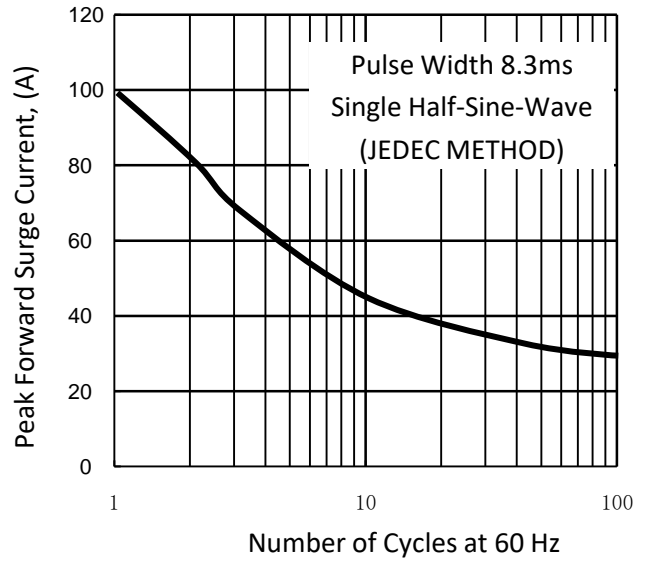


Fig. 2-Maximum Non-Repetitive Surge Current

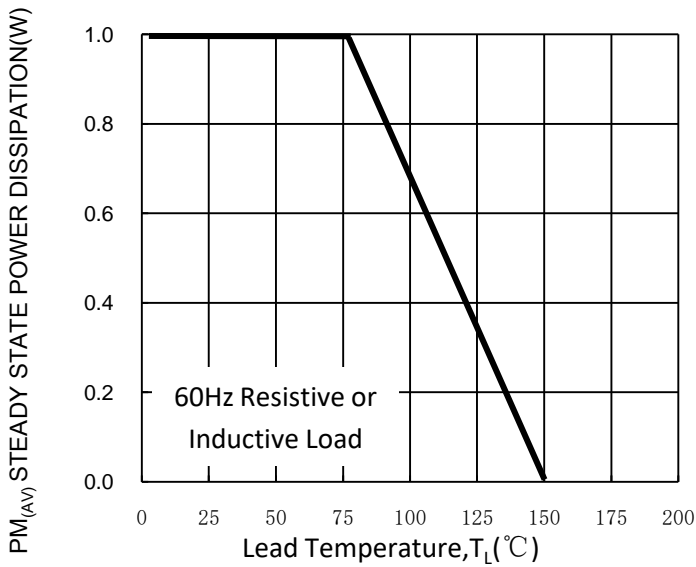


Fig. 3-Steady State Power Derating Curve

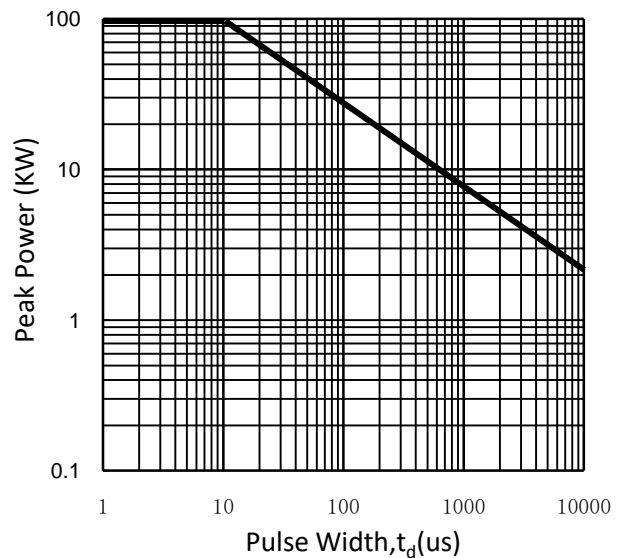


Fig. 4-Peak Pulse Power Rating Curve

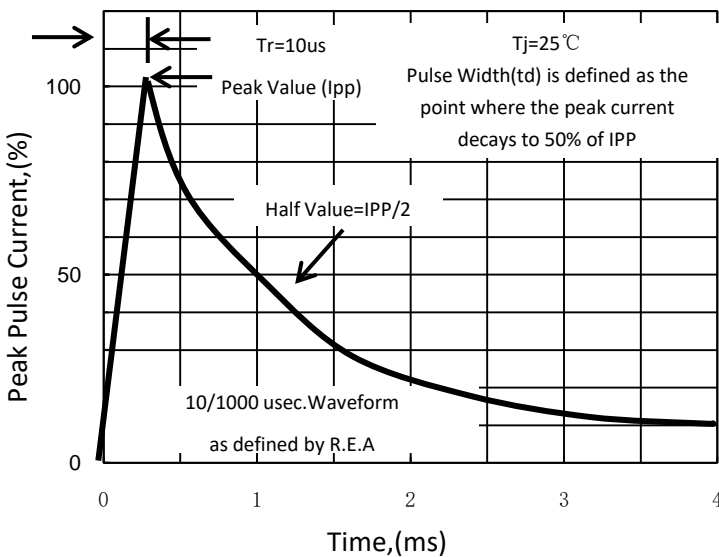


Fig. 5-Pulse Waveform

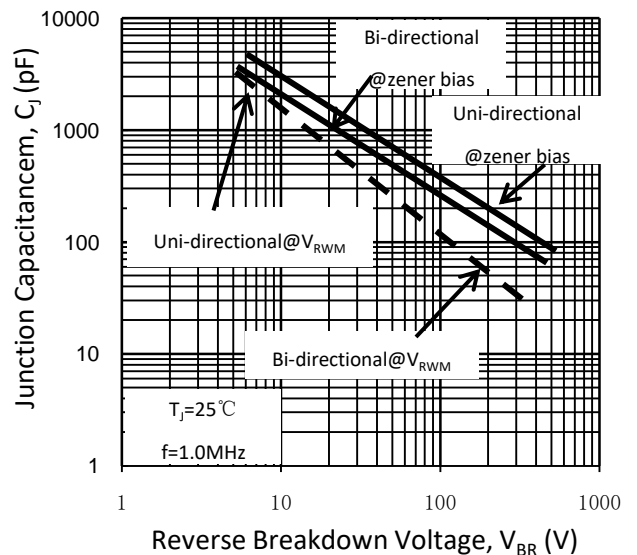


Fig. 6-Typical Junction Capacitance