



Features

400W Peak Pulse Power Dissipation
6.8V - 550V Standoff Voltages
Uni- and Bi-Directional Versions Available Excellent Clamping Capability
Glass Passivated Die Construction
Low inductance
Fast Response Time
Plastic Material: UL Flammability Classification Rating 94V-0



SMB

Mechanical Data

Case : SMB Molded plastic body

Terminals : Solderable per MIL-STD-750,Method 2026

Maximum Ratings And Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.			
Parameter	Symbol	Value	Unit
Peak Pulse Power Dissipation on TA=25°C (Note 1,2,4, Fig1)	P_{PPM}	800	W
Peak Forward Surge Current (Note 3, Fig4)	I_{FSM}	100	A
Peak Pulse Current on 10/1000 us waveform (Note 1)	I_{PPM}	57.1	A
ESD Voltage per IEC6100-4-2	Contact	V_{ESD1}	± 30
	Air	V_{ESD2}	± 30
Typical Thermal Resistance Junction to Ambient(Note 2)	$R_{\theta JA}$	100	°C/W
Operating Junction Temperature and Storage Temperature Range)	T_j, T_{stg}	-55 ~ +150	°C

NOTES:

1. Non-repetitive current pulse, per Fig.3 and derated above TA = 25°C per Fig. 2.
2. Mounted on 5mm² copper pads to each terminal.
3. Peak Forward Surge Current : 8.3ms single half sine-wave Superimposed on rated load (JEDEC method).
4. Peak pulse power waveform is 10/1000µs.

Electrical Characteristics (TA=25°C)

Part Number	Device Marking Code		Reverse Stand-Off Voltage	Breakdown Voltage @I _T	Test Current	Maximum Clamping Voltage @I _{PP}	Peak Pulse Current	Reverse Leakage @V _{RWM}
	UNI	BI	V _{RWM} (V)	V _{BR} (V)	I _T (mA)	V _C (V)	I _{PP} (A)	I _R (µA)
SMBJ6.8CA	6.8A	6V8C	5.80	6.45~7.14	10	10.5	57.1	1000



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

Figure 1. Peak Pulse Power Rating Curve

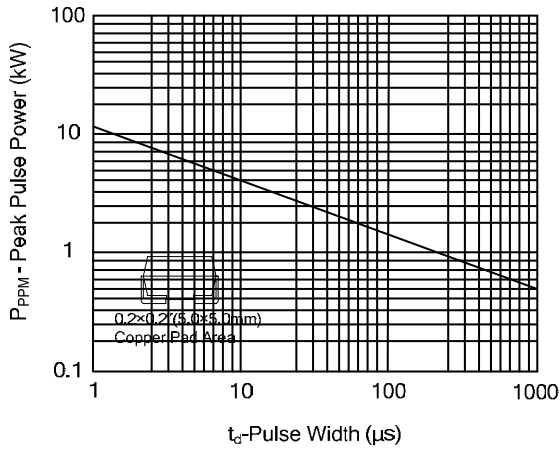


Figure 2. Pulse Derating Curve

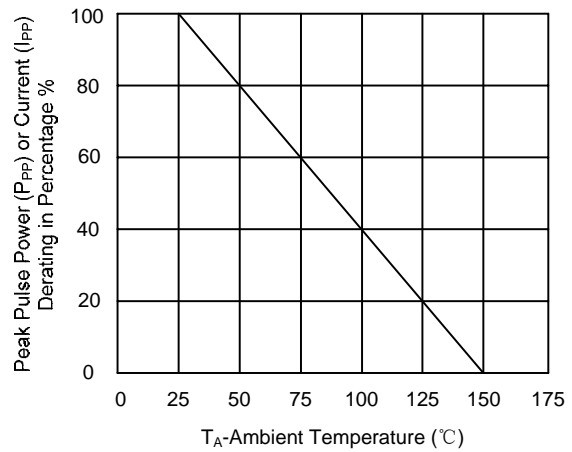


Figure 3. Pulse Waveform

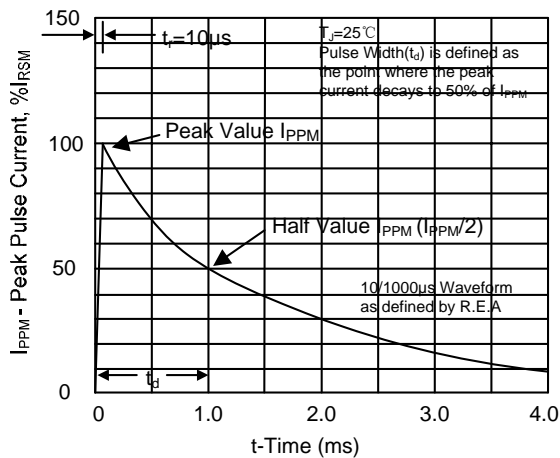


Figure 4. Typical Junction Capacitance

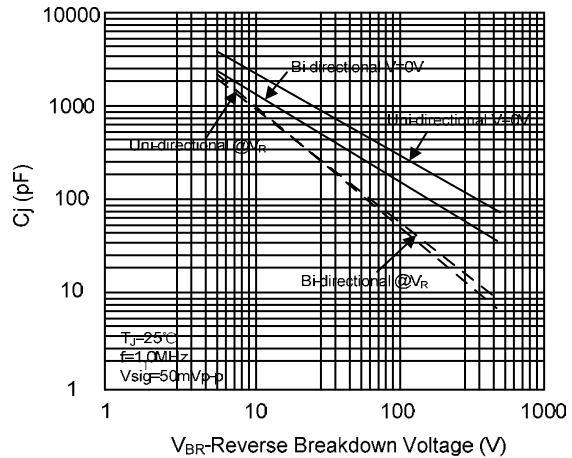


Figure 5. Steady State Power Dissipation Derating Curve

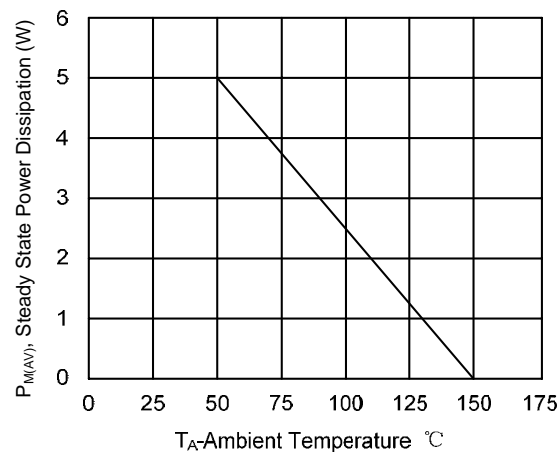
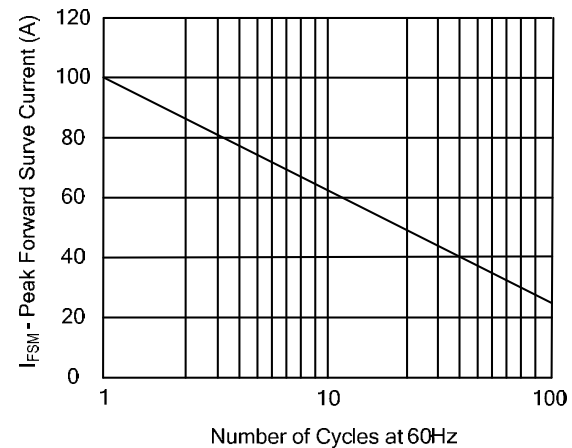
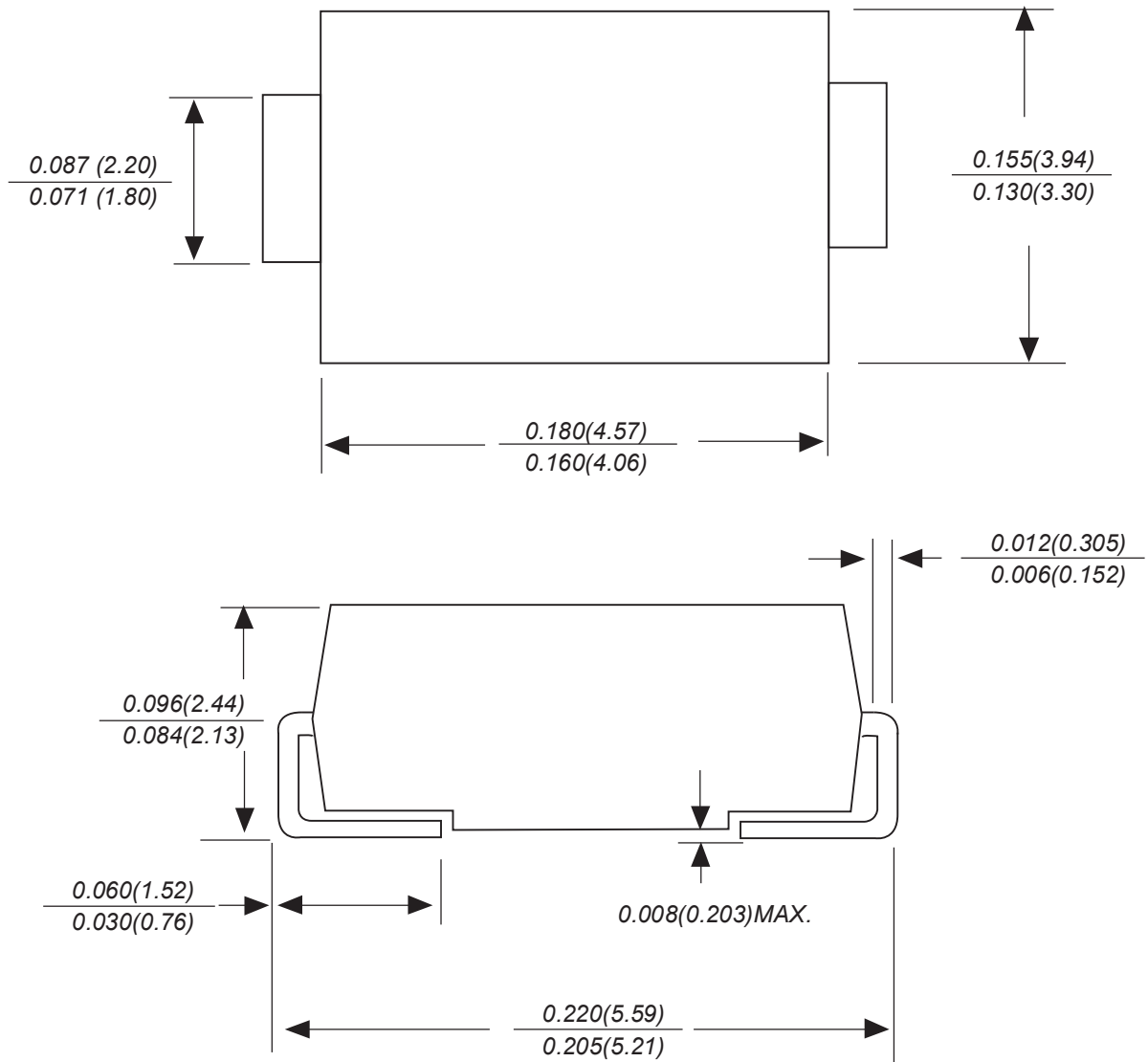


Figure 6. Maximum Non-Repetitive Forward Surge Current Uni-Directional Only





SMB Package Outline Dimensions



Dimensions in inches and (millimeters)



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