Features

- 800W Peak Pulse Power Dissipation
- 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
(DO-214AA)

Mechanical Data

- Case: SMB Molded plastic body
- Terminals: Solderable per MIL-STD-750,Method 2026

Applications

- I/O interface
- AC/DC power supply
- Low frequency signal transmission line
  (RS232,RS485,etc.)

Maximum Ratings (Ta=25°C unless otherwise noted)

Peak pulse power dissipation at 10/1000μs waveform (Note1, Note2, Fig.1)	P_{PPM}	800	W
Peak pulse current	I_{PP}	53.6	A
Steady state power dissipation at T_A=50℃ (Fig.5)	$P_{M(AV)}$	1	W
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load, (JEDEC Method) (Note3, Fig.6)	I_{FSM}	100	A
Operating junction and Storage Temperature Range.	T_J,T_{STG}	-55 to +150	°C
Typical thermal resistance junction to lead	$R_{\theta JL}$	30	°C/W
Typical thermal resistance junction to ambient	$R_{\theta JA}$	100	°C/W

Notes:1. Non-repetitive current pulse, per Fig.3 and derated above T_A=25℃ per Fig.2.
2. Mounted on 5.0mm×5.0mm (0.03mm thick) copper pads to each terminal.
3. 8.3ms single half sine-wave, or equivalent square wave, duty cycle=4 pulses per minutes maximum.

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}
Unidirectional	Bidirectional	UNI	BI	V_{RWM}(V)	V_{BR}(V)	I_T(mA)	V_C(V)	I_{PP}(A)	I_R(μA)
SMBJ6.5A/TR13	SMBJ6.5CA/TR13	KK	AK	6.5	6.67-7.37	10	11.2	53.6	500

Ratings and Characteristic Curves (T_A=25℃ unless otherwise noted)

Figure 1. Peak Pulse Power Rating Curve

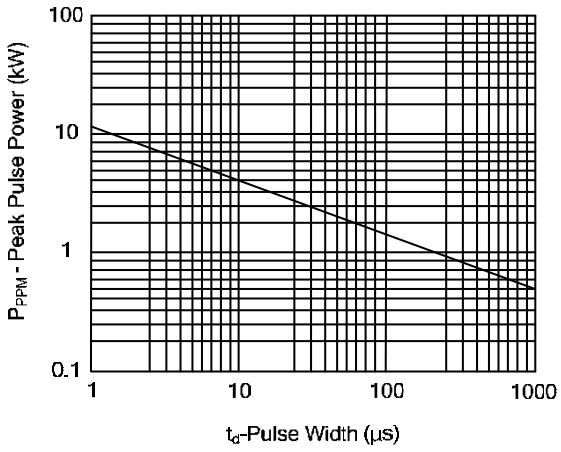


Figure 2. Pulse Derating Curve

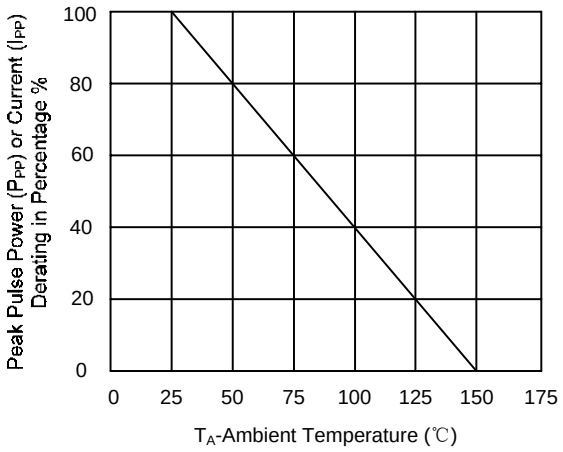


Figure 3. Pulse Waveform

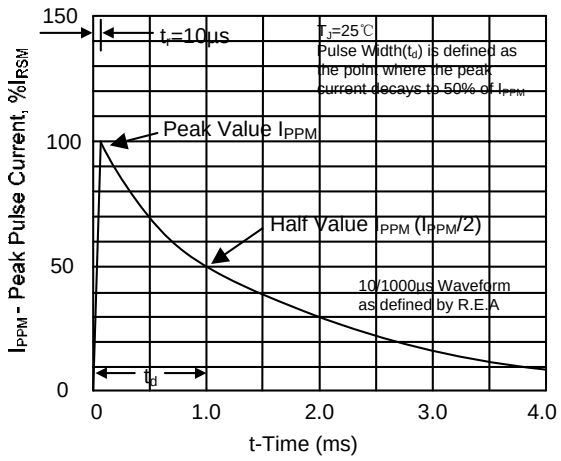


Figure 4. Typical Junction Capacitance

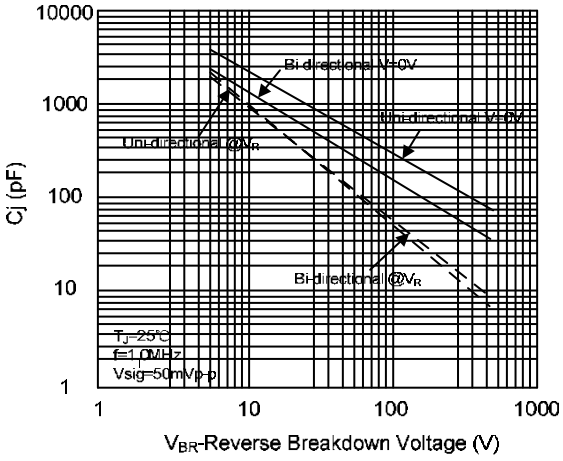


Figure 5. Steady State Power Dissipation Derating Curve

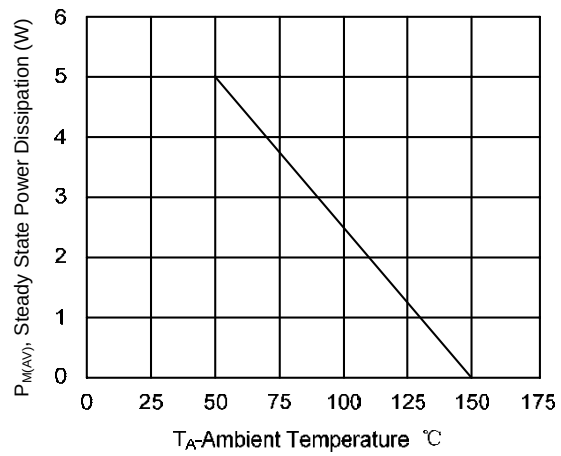
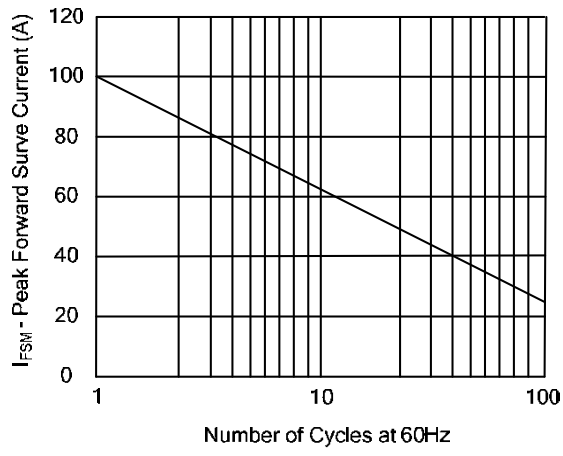
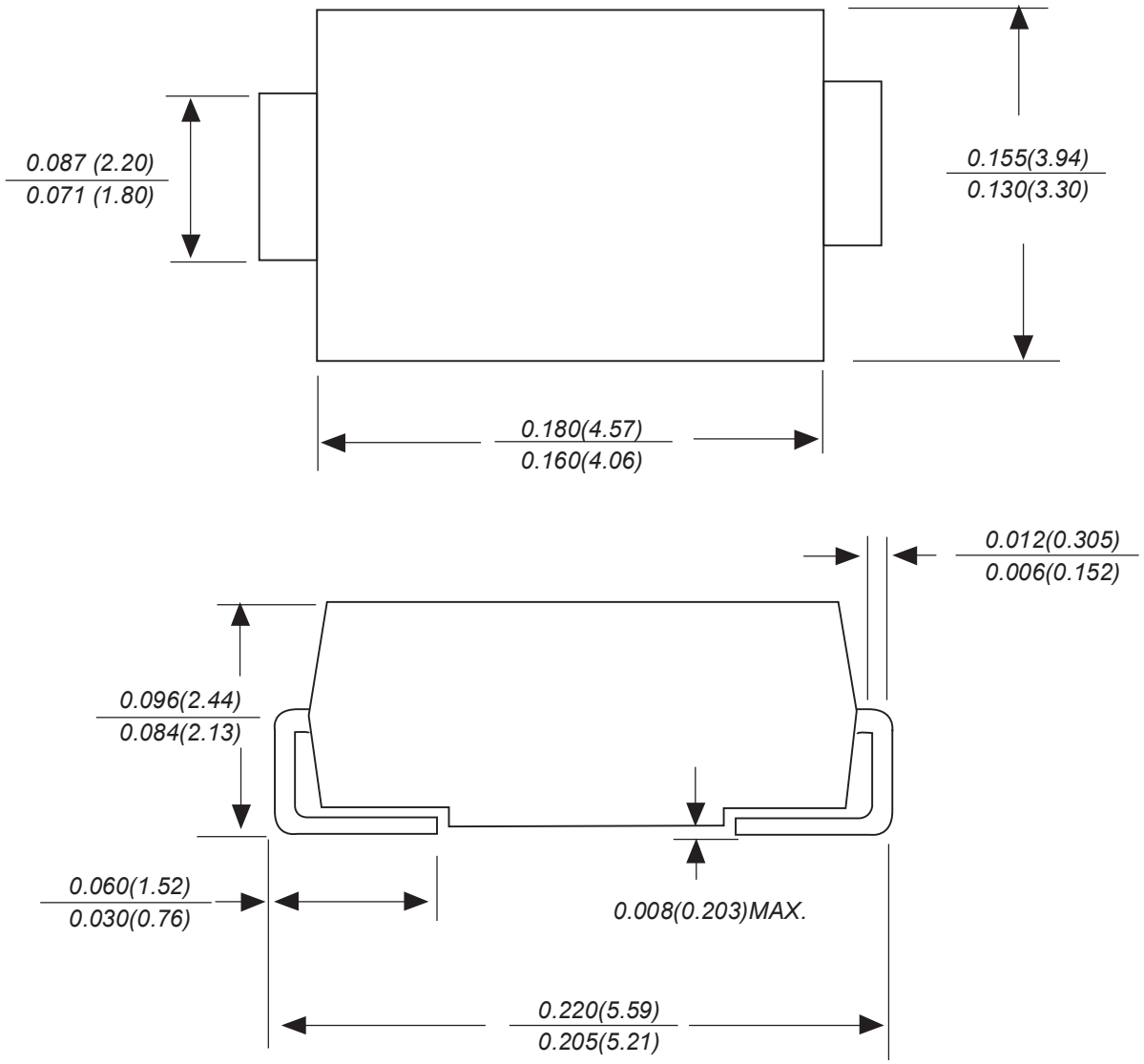


Figure 6. Maximum Non-Repetitive Forward Surge Current Uni-Directional Only



Package Outline Dimensions

SMB(DO-214AA)



Dimensions in inches and (millimeters)

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