

SMB



Symbol

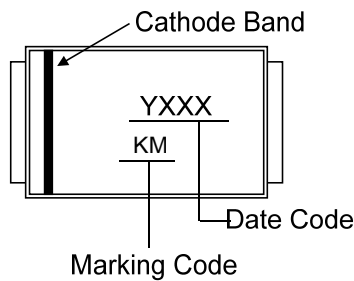
Features

- Peak power dissipation 600W@10 x 1000 us Pulse
- Low incremental surge resistance
- Excellent clamping capability
- Glass passivated junction
- Fast response time
- Typical IR less than 1uA above 13V
- 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



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

Maximum Ratings & Thermal Characteristics

(Ratings at 25°C ambient temperature unless otherwise specified.)

Parameter	Symbol	Value	Units	Remarks
Peak Pulse Power Dissipation	P_{PPM}	600	W	(Note1)(Note2)
Steady State Power Dissipation	P_D	5	W	(Note3)
Peak Forward Surge Current	I_{FSM}	100	A	(Note4)
Maximum Instantaneous Forward Voltage at 50A	V_{FM}	3.5/5	V	(Note5)
Typical Thermal Resistance Junction to Lead	$R_{\theta JL}$	20	°C/W	
Typical Thermal Resistance Junction to Ambient	$R_{\theta JA}$	100	°C/W	
Operating Temperature Range	T_J	-55 to 150	°C	
Storage Temperature Range	T_{STG}	-55 to 150	°C	

Notes1: Non-repetitive current pulse , 10/1000us Waveform.

Notes2: Mounted on copper pad area of 5×5mm to each terminal.

Notes3: Infinite HeatSink at $T_A=50^\circ C$

Notes4: Measured on 8.3ms single half sine wave or equivalent square wave, duty cycle=4 perminute maximum.

Notes5: For UnidirectionalOnly, $V_{FM}<3.5V$ for $V_{BR} \leq 200V$ and $V_{FM}<6.5V$ for $V_{BR} \geq 201V$.

Electrical Characteristics

(Ratings at 25°C ambient temperature unless otherwise specified).

Part Number	Marking Code	Reverse Stand off Voltage V_R (V)	Breakdown Voltage V_{BR} @ I_T (V)		Test Current I_T (mA)	Maximum Clamping Voltage $V_C @ I_{PP}$ (V)	Maximum Peak Pulse Current I_{PP} (A)	Maximum Reverse Leakage $I_R @ V_R$ (μA)
			Min	Max				
SMBJ6.8A	KM	5.8	6.45	7.14	10	10.5	58.1	500

Ratings and Characteristic Curves

(Ratings at 25°C ambient temperature unless otherwise specified).

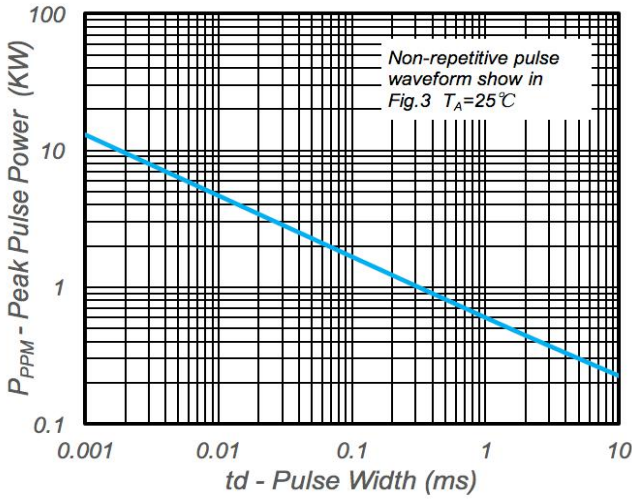


Fig. 1 - Peak Pulse Power Rating

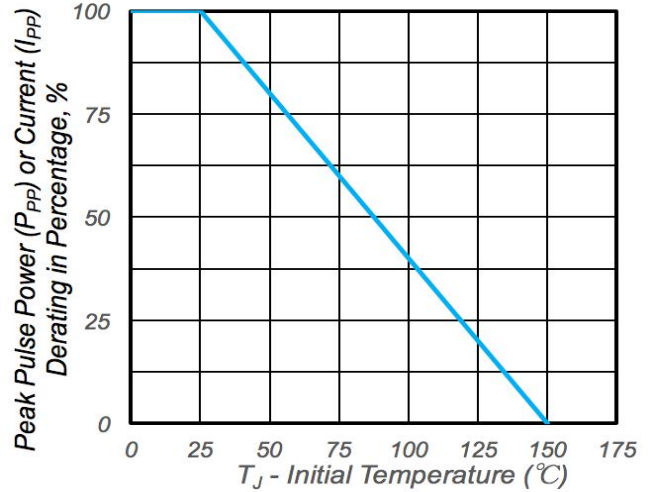


Fig. 2 - Pulse Derating Curve

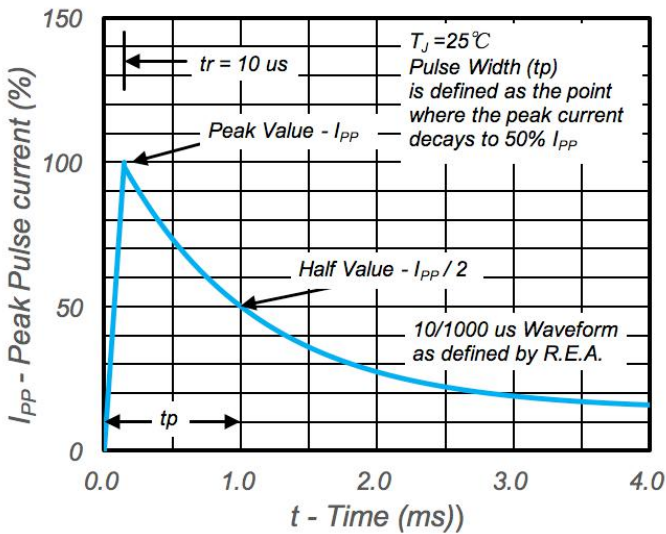


Fig. 3 - Pulse Waveform

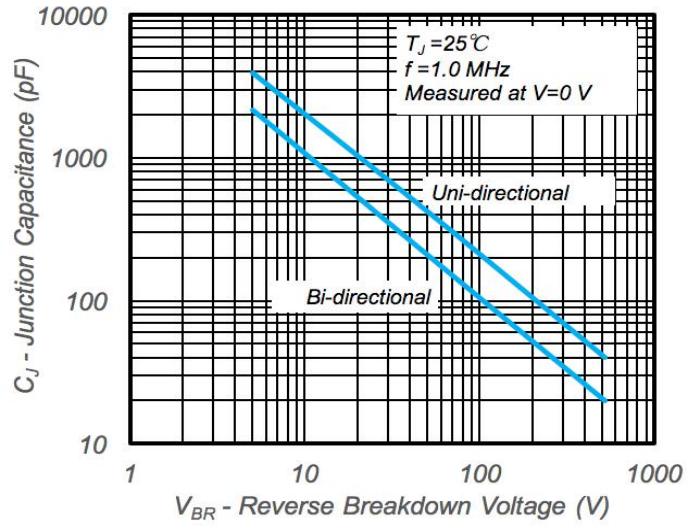


Fig. 4 - Typical Junction Capacitance

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