600W Surface Mount Transinet Voltage Suppression **SMB6.8A Series**

SMB

Symbol

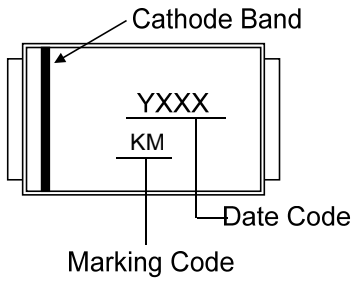
Features

Peak power disspatiom 600W@10 x 1000 us Pluse
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 denites uni-directional decice, 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℃ 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	℃/W	
Typical Thermal Resistance Junction to Ambient	$R_{\theta JA}$	100	℃/W	
Operating Temperature Range	T_J	-55 to 150	℃	
Storage Temperature Range	T_{STG}	-55 to 150	℃	

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°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} ≤200V and V_{FM}<6.5V for V_{BR}≥201V.

Electrical Characteristics

（Ratings at 25℃ 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)	Maximun Reverse Leakage I_R @ V_R (μA)
	Uni		Min	Max				
SMBJ6.8A	KM	5.8	6.45	7.14	10	10.5	58.1	500

Ratings and Characteristic Curves

（Ratings at 25℃ ambient temperature unless otherwise specified).

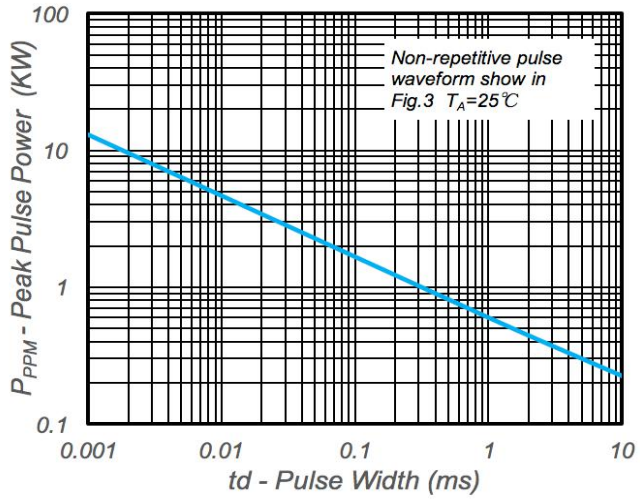


Fig.1 - Peak Pulse Power Rating

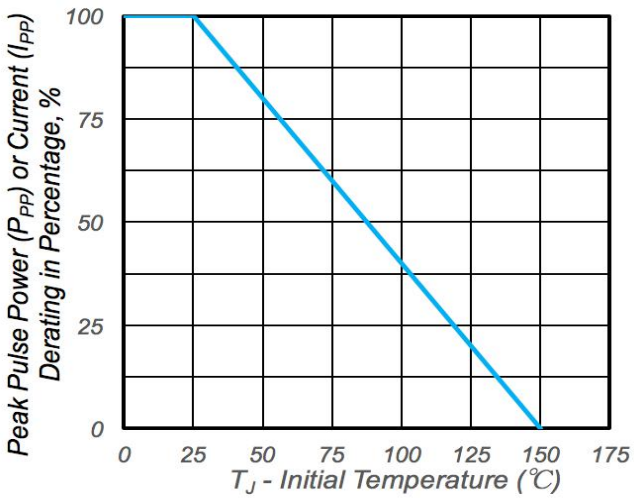


Fig.2 - Pulse Derating Cure

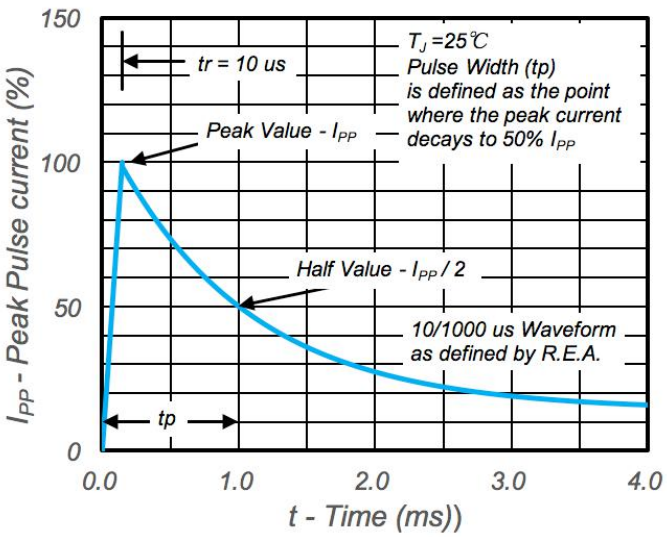


Fig.3 – Pulse Waveform

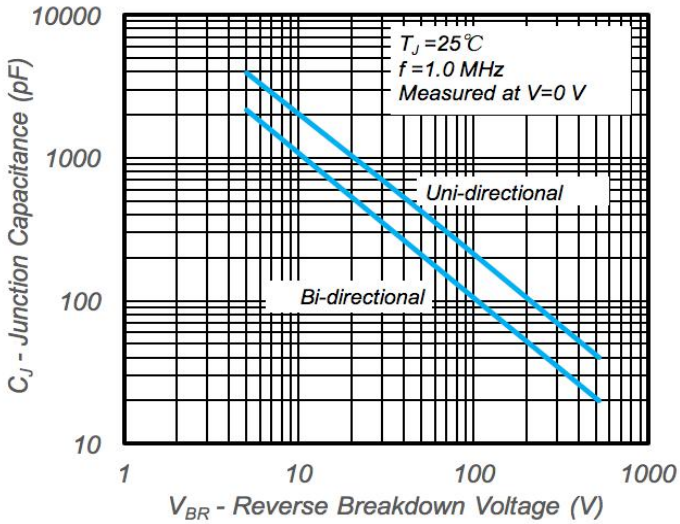
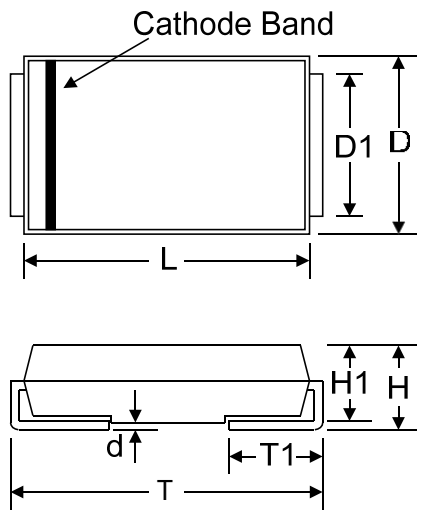


Fig.4 - Typical Junction Capacitance

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