

**SURFACE MOUNT
UNIDIRECTIONAL AND BIDIRECTIONAL
TRANSIENT VOLTAGE SUPPRESSORS**

REVERSE VOLTAGE - **6.8 to 440** Volts
POWER DISSIPATION - **600** WATTS

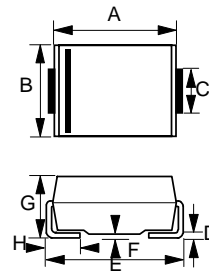
FEATURES

- For surface mounted applications
- Reliable low cost construction utilizing molded plastic technique
- Plastic material has UL flammability classification 94V-O
- Typical IR less than 1uA above 10V
- Fast response time: typically less than 1.0ns for Uni-direction,less than 5.0ns for Bi-direction,form 0 Volts to BV min
- RoHS compliant
- IEC61000-4-2 ESD Contact ($\pm 30KV$) / Air ($\pm 30KV$)
- Meets MSL level 1, per J-STD-020

MECHANICAL DATA

- Case : Molded plastic
- Polarity : by cathode band denotes uni-directional device none cathode band denotes bi-directional device
- Weight : 0.003 ounces, 0.093 gram

SMB



SMB		
DIM.	MIN.	MAX.
A	4.06	4.57
B	3.30	3.94
C	1.96	2.21
D	0.15	0.31
E	5.21	5.59
F	0.05	0.20
G	2.01	2.50
H	0.76	1.52

All Dimensions in millimeter

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

CHARACTERISTICS	SYMBOLS	VALUE	UNIT
PEAK POWER DISSIPATION AT T _J = 25°C, TP = 1ms (Note 1)	P _{PK}	600	WATTS
Peak Forward Surge Current 8.3ms single half sine-wave@T _J =25°C (Note 2)	I _{FSM}	100	AMPS.
Steady State Power Dissipation at T _L =120°C lead lengths 0.375" (9.5mm) , see fig.4 Without Heatshink	P _{M(AV)}	1.5	WATTS
Maximum Instantaneous forward voltage at 16A for unidirectional devices only	V _F	NOTE 3	Volts
Typical Thermal Resistance (Note 4)	R _{θJA}	90	°C/W
	R _{θJL}	21	
	R _{θJC}	25	
Operating Temperature Range	T _J	-55 to +175	°C
Storage Temperature Range	T _{STG}	-55 to +175	°C

NOTES : 1. Non-repetitive current pulse, per fig. 3 and derated above T_J= 25 °C per fig.1.

2. Only for unidirectional units.

3. V_F= 2.5V on PSMBJ6.8A thru 180A devices and V_F= 3.0V on PSMBJ200A thru 440A devices. Thermal resistance from junction to ambient, lead and case.

REV. 4, Mar-2017, KSIB04

FIG.1 - PULSE DERATING CURVE

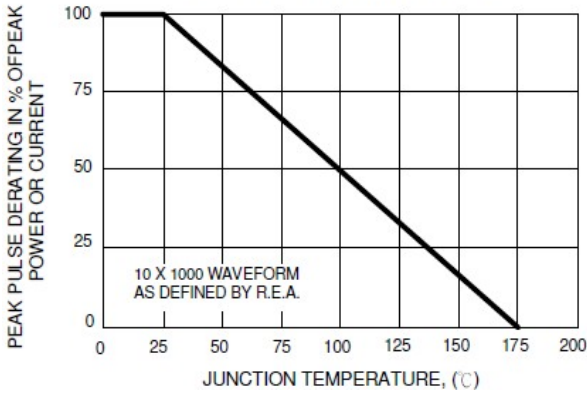


FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

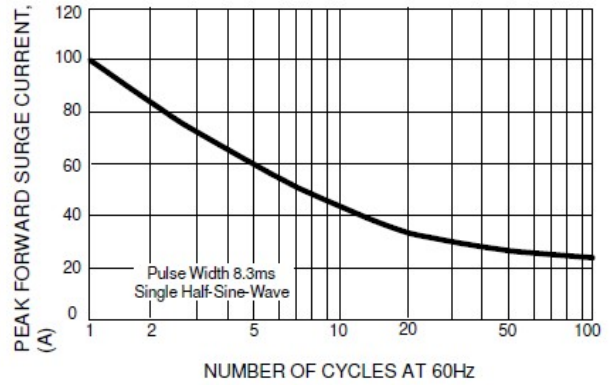


FIG.3 - PULSE WAVEFORM

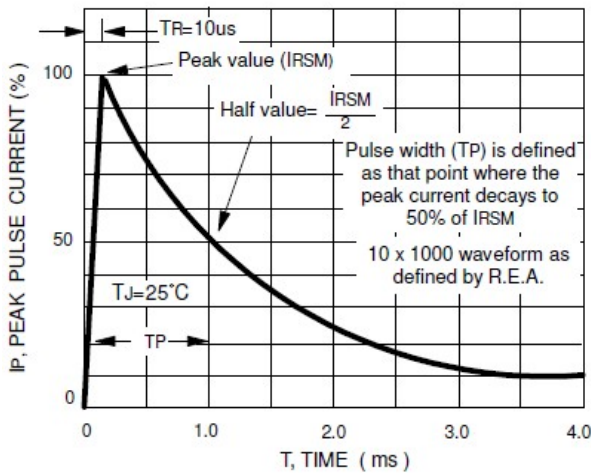


FIG.4 - TYPICAL JUNCTION CAPACITANCE

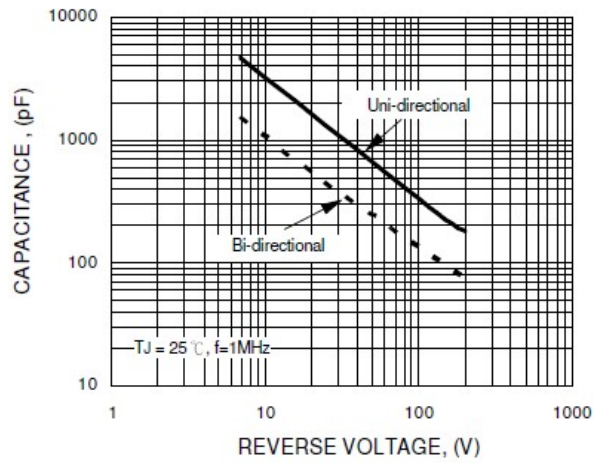


FIG.5 - PULSE RATING CURVE

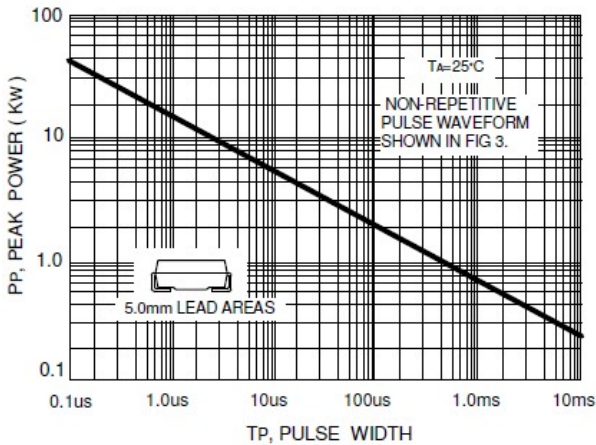
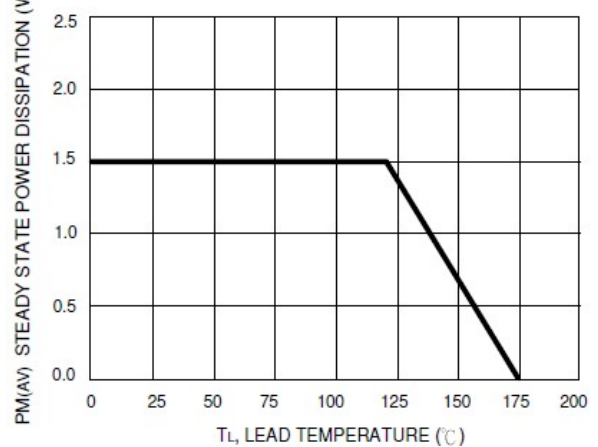


FIG.6 - STEADY STATE POWER DERATING CURVE



Type Number	Type Number	Device Marking code		Reverse Standoff Voltage	Breakdown Voltage BV Volts @It			Max. Reverse Leakage @VR	Max. Peak Pulse Current	Max. Clamping Voltage @Ipp
		(UNI)	(BI)		VR (V)	Min (V)	Max (V)			
PSMBJ6.8A	PSMBJ6.8CA	6V8A	6V8C	5.8	6.45	7.13	10	1000	57.1	10.5
PSMBJ7.5A	PSMBJ7.5CA	7V5A	7V5C	6.4	7.13	7.88	10	500	53.1	11.3
PSMBJ8.2A	PSMBJ8.2CA	8V2A	8V2C	7.0	7.79	8.61	10	200	49.6	12.1
PSMBJ9.1A	PSMBJ9.1CA	9V1A	9V1C	7.8	8.65	9.56	1	50	44.8	13.4
PSMBJ10A	PSMBJ10CA	10A	10C	8.6	9.50	10.50	1	10	41.4	14.5
PSMBJ11A	PSMBJ11CA	11A	11C	9.4	10.5	11.6	1	5	38.5	15.6
PSMBJ12A	PSMBJ12CA	12A	12C	10.2	11.4	12.6	1	0.5	35.9	16.7
PSMBJ13A	PSMBJ13CA	13A	13C	11.1	12.4	13.7	1	0.5	33.0	18.2
PSMBJ15A	PSMBJ15CA	15A	15C	12.8	14.3	15.8	1	0.5	28.3	21.2
PSMBJ16A	PSMBJ16CA	16A	16C	13.6	15.2	16.8	1	0.5	26.7	22.5
PSMBJ18A	PSMBJ18CA	18A	18C	15.3	17.1	18.9	1	0.5	23.8	25.2
PSMBJ20A	PSMBJ20CA	20A	20C	17.1	19.0	21.0	1	0.5	21.7	27.7
PSMBJ22A	PSMBJ22CA	22A	22C	18.8	20.9	23.1	1	0.5	19.6	30.6
PSMBJ24A	PSMBJ24CA	24A	24C	20.5	22.8	25.2	1	0.5	18.1	33.2
PSMBJ27A	PSMBJ27CA	27A	27C	23.1	25.7	28.4	1	0.5	16.0	37.5
PSMBJ30A	PSMBJ30CA	30A	30C	25.6	28.5	31.5	1	0.5	14.5	41.4
PSMBJ33A	PSMBJ33CA	33A	33C	28.2	31.4	34.7	1	0.5	13.1	45.7
PSMBJ36A	PSMBJ36CA	36A	36C	30.8	34.2	37.8	1	0.5	12.0	49.9
PSMBJ39A	PSMBJ39CA	39A	39C	33.3	37.1	41.0	1	0.5	11.1	53.9
PSMBJ43A	PSMBJ43CA	43A	43C	36.8	40.9	45.2	1	0.5	10.1	59.3
PSMBJ47A	PSMBJ47CA	47A	47C	40.2	44.7	49.4	1	0.5	9.3	64.8
PSMBJ51A	PSMBJ51CA	51A	51C	43.6	48.5	53.6	1	0.5	8.6	70.1
PSMBJ56A	PSMBJ56CA	56A	56C	47.8	53.2	58.8	1	0.5	7.8	77.0
PSMBJ62A	PSMBJ62CA	62A	62C	53.0	58.9	65.1	1	0.5	7.1	85.0
PSMBJ68A	PSMBJ68CA	68A	68C	58.1	64.6	71.4	1	0.5	6.5	92.0
PSMBJ75A	PSMBJ75CA	75A	75C	64.7	71.3	78.8	1	0.5	5.8	103.0
PSMBJ82A	PSMBJ82CA	82A	82C	70.1	77.9	86.1	1	0.5	5.3	113.0
PSMBJ91A	PSMBJ91CA	91A	91C	77.8	86.5	95.6	1	0.5	4.8	125.0
PSMBJ100A	PSMBJ100CA	100A	100C	85.5	95.0	105.0	1	0.5	4.4	137.0
PSMBJ110A	PSMBJ110CA	110A	110C	94.0	105.0	116.1	1	0.5	3.9	152.0
PSMBJ120A	PSMBJ120CA	120A	120C	102.0	114.0	126.0	1	0.5	3.6	165.0
PSMBJ130A	PSMBJ130CA	130A	130C	111.0	124.0	137.1	1	0.5	3.4	179.0
PSMBJ150A	PSMBJ150CA	150A	150C	128.0	143.0	158.1	1	0.5	2.9	207.0
PSMBJ160A	PSMBJ160CA	160A	160C	136.0	152.0	168.0	1	0.5	2.7	219.0
PSMBJ170A	PSMBJ170CA	170A	170C	145.0	162.0	179.1	1	0.5	2.6	234.0
PSMBJ180A	PSMBJ180CA	180A	180C	154.0	171.0	189.0	1	0.5	2.4	246.0
PSMBJ200A	PSMBJ200CA	200A	200C	171.0	190.0	210.0	1	0.5	2.2	274.0
PSMBJ220A	PSMBJ220CA	220A	220C	185.0	209.0	231.0	1	0.5	1.8	328.0
PSMBJ250A	PSMBJ250CA	250A	250C	214.0	237.0	262.0	1	0.5	1.7	344.0
PSMBJ300A	PSMBJ300CA	300A	300C	256.0	285.0	315.0	1	0.5	1.4	414.0
PSMBJ350A	PSMBJ350CA	350A	350C	300.0	332.0	367.0	1	0.5	1.2	482.0
PSMBJ400A	PSMBJ400CA	400A	400C	342.0	380.0	420.0	1	0.5	1.1	548.0
PSMBJ440A	PSMBJ440CA	440A	440C	376.0	418.0	462.0	1	0.5	1.0	600.0

NOTE :

Suffix 'A' denotes 5% tolerance device.

1. Add suffix 'C' or 'CA' after part number to specify Bi-directional devices.
2. The IR limit is double for Bi-Directional devices.

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