

**(Pb) Lead(Pb)-Free**

**Feature:**

- \* 600 Watt Peak Power Dissipation
- \* Glass Passivated Die Construction
- \* Excellent Clamping Capability Fast Response Time
- \* Plastic Material Has UL Flammability Classification Rating 94V-O



**SMB(DO-214AA)**

**Mechanical Data**

- \* Case: Transfer Molded Epoxy
- \* Polarity: Indicator by Cathode Band  
(Bi-directional Devices Has no Polarity Indicator)
- \* Terminals: Solderable per MIL-STD-202 Method 208
- \* Weight: 0.1grams(approx)

**Maximum Ratings**

Characteristics	Symbol	Value	Unit
Peak Pulse Power Dissipation on 10/1000us Waveform(1)(2)(FIG1)	$P_{PPM}$	600	W
Peak Pulse Current of on 10/1000us Waveform(1)(FIG3)	$I_{PPM}$	see Table	A
Peak Forward Surge Current 8.3ms Single Half Sine-Wave, Superimposed on Rated Load(JEDEC Method)(3)	$I_{FSM}$	100	A
Operating and Storage Junction Temperature Range	$T_J, T_{STG}$	-55 to -150	°C

NOTE: 1. Non-Repetitive Current Pulse, per FIG3 and Derated above  $T_A=25^{\circ}\text{C}$  per FIG2  
 2. Mounted on 5.0mm<sup>2</sup> Copper Pads to each Terminal  
 3. 8.3ms Single Half Sine-Wave, or equivalent Square Wave, Duty Cycle=4 pulses per minutes Maximum.

**Transient Voltage Suppressors**
**Electrical characteristics**

P6SMB PART NUMBER		REVERSE STAND- OFF VOLTAGE $V_{RWM}(V)$	BREAK DOWN VOLTAGE		TEST CURRE NT $I_T$ (mA)	MAXIMUM CLAMPING VOLTAGE $@I_{pp} V_c(V)$	PEAK PULSE CURRENT $I_{pp}$ (A)	REVERSE LEAKAGE @ $V_{RWM}$ $I_R(\mu A)(3)$
UNI- POLAR	BI-POLAR(1)		$V_{BR}(V)(1)$ MIN. @ $I_T$	$V_{BR}(V)(2)$ MAX. @ $I_T$				
P6SMB6.8A	P6SMB6.8CA	5.80	6.45	7.14	10	10.5	58.1	1000
P6SMB7.5A	P6SMB7.5CA	6.40	7.13	7.88	10	11.3	54.0	800
P6SMB8.2A	P6SMB8.2CA	7.02	7.79	8.61	10	12.1	50.4	200
P6SMB9.1A	P6SMB9.1CA	7.78	8.65	9.55	10	13.4	45.5	50
P6SMB10A	P6SMB10CA	8.55	9.50	10.50	1	14.5	42.1	10
P6SMB11A	P6SMB11CA	9.40	10.50	11.60	1	15.6	39.1	5
P6SMB12A	P6SMB12CA	10.20	11.40	12.50	1	16.7	36.5	5
P6SMB13A	P6SMB13CA	11.10	12.40	13.70	1	18.2	33.5	5
P6SMB15A	P6SMB15CA	12.80	14.30	15.80	1	21.2	28.8	5
P6SMB16A	P6SMB16CA	13.60	15.20	16.80	1	22.5	27.1	5
P6SMB18A	P6SMB18CA	15.30	17.10	18.90	1	25.5	24.2	5
P6SMB20A	P6SMB20CA	17.10	19.00	21.00	1	27.7	22.0	5
P6SMB22A	P6SMB22CA	18.80	20.90	23.10	1	30.6	19.9	5
P6SMB24A	P6SMB24CA	20.50	22.80	25.20	1	33.2	18.4	5
P6SMB27A	P6SMB27CA	23.10	25.70	28.40	1	37.5	16.3	5
P6SMB30A	P6SMB30CA	25.60	28.50	31.50	1	41.4	14.7	5
P6SMB33A	P6SMB33CA	28.20	31.40	34.70	1	45.7	13.3	5
P6SMB36A	P6SMB36CA	30.80	34.20	37.80	1	49.9	12.2	5
P6SMB39A	P6SMB39CA	33.30	37.10	41.00	1	53.9	11.3	5
P6SMB43A	P6SMB43CA	36.80	40.90	45.20	1	59.3	10.3	5
P6SMB47A	P6SMB47CA	40.20	44.70	49.40	1	64.8	9.4	5
P6SMB51A	P6SMB51CA	43.60	48.50	53.60	1	70.1	8.7	5
P6SMB56A	P6SMB56CA	47.80	53.20	58.80	1	77.0	7.9	5
P6SMB62A	P6SMB62CA	53.00	58.90	65.10	1	85.0	7.2	5
P6SMB68A	P6SMB68CA	58.10	64.60	71.40	1	92.0	6.6	5
P6SMB75A	P6SMB75CA	64.10	71.30	78.80	1	103.0	5.9	5
P6SMB82A	P6SMB82CA	70.10	77.90	86.10	1	113.0	5.4	5
P6SMB91A	P6SMB91CA	77.80	86.50	95.50	1	125.0	4.9	5
P6SMB100A	P6SMB100CA	85.50	95.00	105.00	1	137.0	4.5	5
P6SMB110A	P6SMB110CA	94.00	105.00	116.00	1	152.0	4.0	5
P6SMB120A	P6SMB120CA	102.00	114.00	126.00	1	165.0	3.7	5
P6SMB130A	P6SMB130CA	111.00	124.00	137.00	1	179.0	3.4	5
P6SMB150A	P6SMB150CA	128.00	143.00	158.00	1	207.0	2.9	5
P6SMB160A	P6SMB160CA	136.00	152.00	168.00	1	219.0	2.8	5
P6SMB170A	P6SMB170CA	145.00	162.00	179.00	1	234.0	2.6	5
P6SMB180A	P6SMB180CA	154.00	171.00	189.00	1	246.0	2.5	5
P6SMB200A	P6SMB200CA	171.00	190.00	210.00	1	274.0	2.2	5
P6SMB220A	P6SMB220CA	185.00	209.00	231.00	1	328.0	1.9	5
P6SMB250A	P6SMB250CA	214.00	237.00	263.00	1	344.0	1.8	5
P6SMB300A	P6SMB300CA	256.00	285.00	315.00	1	414.0	1.5	5
P6SMB350A	P6SMB350CA	300.00	332.00	368.00	1	482.0	1.3	5
P6SMB400A	P6SMB400CA	342.00	380.00	420.00	1	548.0	1.1	5
P6SMB440A	P6SMB440CA	376.00	418.00	462.00	1	602.0	1.0	5
P6SMB480A	P6SMB480CA	408.00	456.00	504.00	1	658.0	0.9	5
P6SMB510A	P6SMB510CA	434.00	485.00	535.00	1	698.0	0.9	5
P6SMB530A	P6SMB530CA	450.00	503.50	556.50	1	725.0	0.8	5
P6SMB540A	P6SMB540CA	459.00	513.00	567.00	1	740.0	0.8	5
P6SMB550A	P6SMB550CA	467.00	522.50	577.50	1	760.0	0.8	5

NOTE: 1. Suffix C denotes Bi-direction device, Suffix A denotes the  $V_{BRIS} \pm 5\%$  for parts without A, the  $V_{BR}$  is  $\pm 10\%$ .

2.  $V_{BR}$  measured with  $I_T$  Current pulse=300us.

3. For bidirectional type having  $V_{rwm}$  of 10 volts and less, the IR limit is double.

Ratings and Characteristic Curves

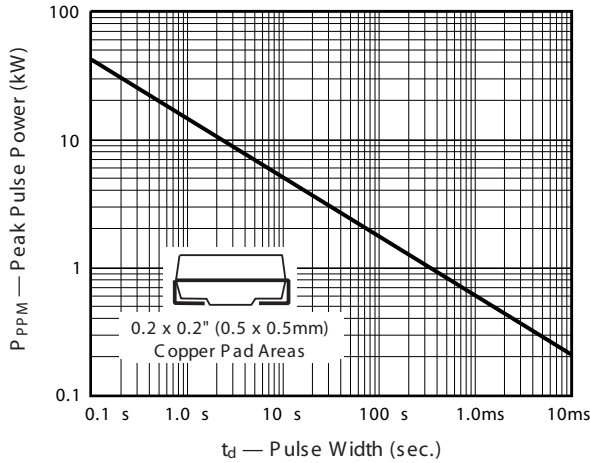


FIG. 1- Peak Pulse Power Rating Curve

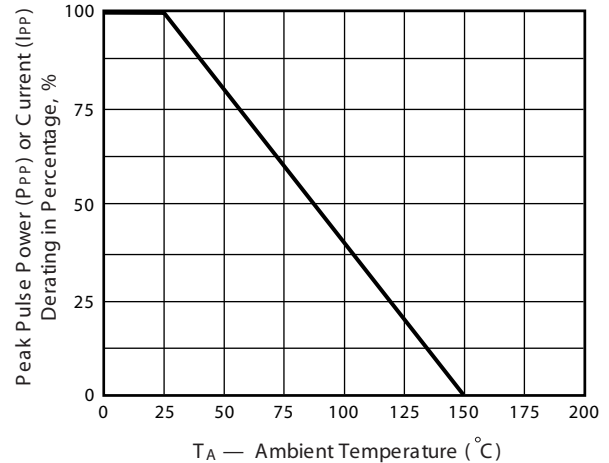


FIG. 2- Pulse Derating Curve

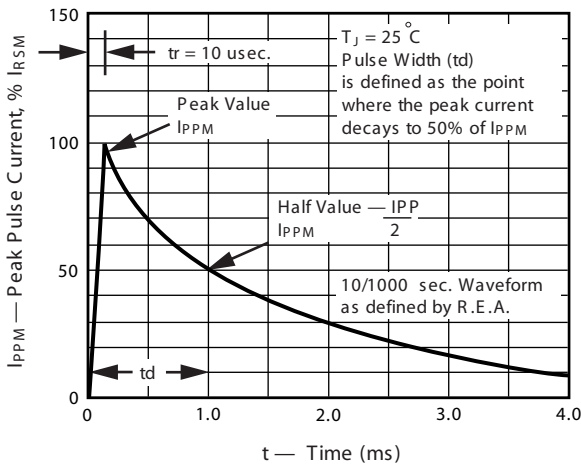


FIG. 3- Pulse Waveform

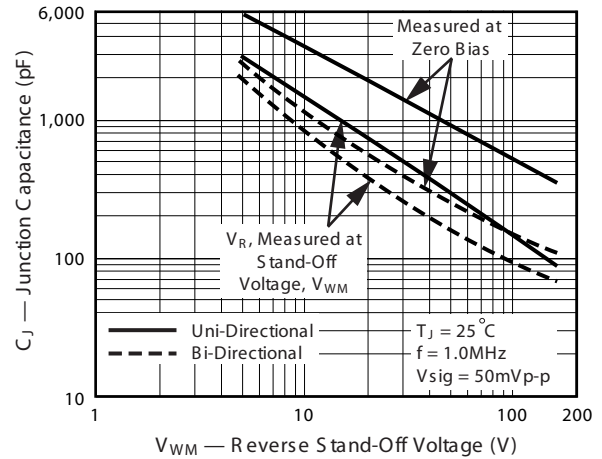


FIG. 4 - Typical Junction Capacitance

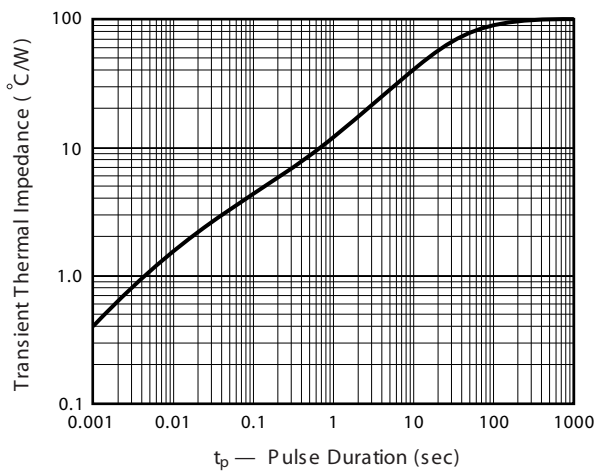


FIG. 5 - Typical Transient Thermal Impedance

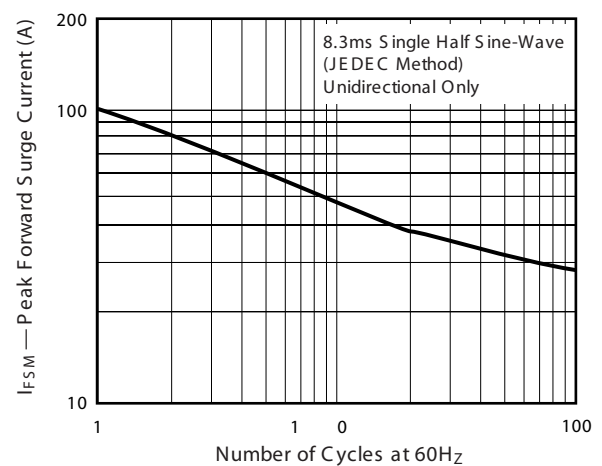
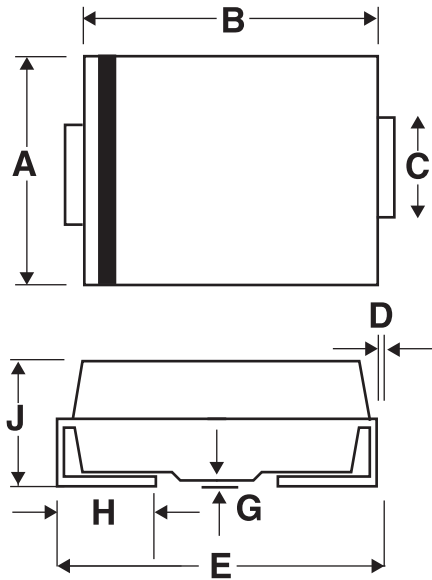


FIG. 6 - Maximum Non-Repetitive Peak Forward Surge Current

**SMB Outline Dimension**

Unit:mm



<b>SMB</b>		
<b>Dim</b>	<b>Min</b>	<b>Max</b>
<b>A</b>	3.30	3.94
<b>B</b>	4.06	4.80
<b>C</b>	1.96	2.21
<b>D</b>	0.15	0.31
<b>E</b>	5.00	5.59
<b>G</b>	0.10	0.20
<b>H</b>	0.76	1.52
<b>J</b>	2.00	2.62