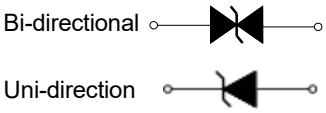
SMB

Features

- P_{PP} 600W
- V_{RWM} 5.8V- 513V
- Glass passivated chip

Applications

- Clamping Voltage



Limiting values (Absolute Maximum Rating)

Item	Symbol	Unit	Conditions	Max
Peak pulse power dissipation	P_{PPM}	W	with a 10/1000us waveform	600
Peak pulse current (1)	I_{PPM}	A	with a 10/1000us waveform	See Next Table
Power dissipation	P_D	W	On infinite heat sink at T_L=75℃	5.0
Peak forward surge current(2)	I_{FSM}	A	8.3 ms single half sine-wave unidirectional only	100
Operatingjunction and storage temperature range	T_J,T_{STG}	℃		-55 to +150

Electrical Characteristics（Ta=25℃ Unless otherwise specified）

Item	Symbol	Unit	Conditions	Max
Maximum instantaneous forward Voltage (3)	V_F	V	at 35A for unidirectional only	3.5/5.0
Thermal resistance	$R_{\theta JL}$	℃/W	junction to lead	20
	$R_{\theta JA}$	℃/W	junction to ambient，L_{Lead} = 10 mm	100

Electrical Characteristics (T_A=25℃unless otherwise noted)

Number UNI		Number BI		Breakdown Voltage V_{BR}@I_T			Reverse Leakage I_{R}@ V_{WM} (μA)	Working Peak Reverse Voltage V_{RWM} (V)	Reverse Surge Current IPP (A)	Clamping Voltage Vc @ I_{PP} (V)
				Min(V)	Max (V)	IT (mA)				
P6SMB6.8A	6V8A	P6SMB6.8CA	6V8C	6.46	7.14	10	1000	5.8	57.1	10.5
P6SMB7.5A	7V5A	P6SMB7.5CA	7V5C	7.13	7.88	10	500	6.4	53.1	11.3
P6SMB8.2A	8V2A	P6SMB8.2CA	8V2C	7.79	8.61	10	200	7.0	49.6	12.1
P6SMB9.1A	9V1A	P6SMB9.1CA	9V1C	8.65	9.56	1	50	7.8	44.7	13.4
P6SMB10A	10A	P6SMB10CA	10C	9.50	10.50	1	10	8.6	41.3	14.5
P6SMB11A	11A	P6SMB11CA	11C	10.45	11.55	1	5	9.4	38.4	15.6
P6SMB12A	12A	P6SMB12CA	12C	11.40	12.60	1	5	10.2	35.9	16.7
P6SMB13A	13A	P6SMB13CA	13C	12.35	13.65	1	5	11.1	32.9	18.2
P6SMB15A	15A	P6SMB15CA	15C	14.25	15.75	1	5	12.8	28.3	21.2
P6SMB16A	16A	P6SMB16CA	16C	15.20	16.80	1	5	13.6	26.6	22.5
P6SMB18A	18A	P6SMB18CA	18C	17.10	18.90	1	5	15.3	23.8	25.2
P6SMB20A	20A	P6SMB20CA	20C	19.00	21.00	1	5	17.1	21.6	27.7
P6SMB22A	22A	P6SMB22CA	22C	20.90	23.10	1	5	18.8	19.6	30.6
P6SMB24A	24A	P6SMB24CA	24C	22.80	25.20	1	5	20.5	18.1	33.2
P6SMB27A	27A	P6SMB27CA	27C	25.65	28.35	1	5	23.1	16.0	37.5
P6SMB30A	30A	P6SMB30CA	30C	28.50	31.50	1	5	25.6	14.5	41.4
P6SMB33A	33A	P6SMB33CA	33C	31.35	34.65	1	5	28.2	13.1	45.7
P6SMB36A	36A	P6SMB36CA	36C	34.20	37.80	1	5	30.8	12.0	49.9
P6SMB39A	39A	P6SMB39CA	39C	37.05	40.95	1	5	33.3	11.1	53.9
P6SMB43A	43A	P6SMB43CA	43C	40.85	45.15	1	5	36.8	10.1	59.3
P6SMB47A	47A	P6SMB47CA	47C	44.65	49.35	1	5	40.2	9.2	64.8
P6SMB51A	51A	P6SMB51CA	51C	48.45	53.55	1	5	43.6	8.5	70.1
P6SMB56A	56A	P6SMB56CA	56C	53.20	58.80	1	5	47.8	7.8	77.0
P6SMB62A	62A	P6SMB62CA	62C	58.90	65.10	1	5	53.0	7.0	85.0
P6SMB68A	68A	P6SMB68CA	68C	64.60	71.40	1	5	58.1	6.5	92.0
P6SMB75A	75A	P6SMB75CA	75C	71.25	78.75	1	5	64.1	5.8	103.0
P6SMB82A	82A	P6SMB82CA	82C	77.90	86.10	1	5	70.1	5.3	113.0
P6SMB91A	91A	P6SMB91CA	91C	86.45	95.35	1	5	77.8	4.8	125.0
P6SMB100A	100A	P6SMB100CA	100C	95.00	105.00	1	5	85.5	4.3	137.0
P6SMB110A	110A	P6SMB110CA	110C	104.50	115.50	1	5	94.0	3.9	152.0
P6SMB120A	120A	P6SMB120CA	120C	114.00	126.00	1	5	102.0	3.6	165.0
P6SMB130A	130A	P6SMB130CA	130C	123.50	136.50	1	5	111.0	3.3	179.0
P6SMB150A	150A	P6SMB150CA	150C	142.50	157.50	1	5	128.0	2.9	207.0
P6SMB160A	160A	P6SMB160CA	160C	152.00	168.00	1	5	136.0	2.7	219.0
P6SMB170A	170A	P6SMB170CA	170C	161.50	178.50	1	5	145.0	2.5	234.0
P6SMB180A	180A	P6SMB180CA	180C	171.00	189.00	1	5	154.0	2.4	246.0
P6SMB200A	200A	P6SMB200CA	200C	190.00	210.00	1	5	171.0	2.2	274.0
P6SMB220A	220A	P6SMB220CA	220C	209.00	231.00	1	5	185.0	1.8	328.0
P6SMB250A	250A	P6SMB250CA	250C	237.50	262.50	1	5	214.0	1.7	344.0
P6SMB300A	300A	P6SMB300CA	300C	285.00	315.00	1	5	256.0	1.4	414.0
P6SMB350A	350A	P6SMB350CA	350C	332.50	367.50	1	5	299.3	1.2	482.0
P6SMB400A	400A	P6SMB400CA	400C	380.00	420.00	1	5	342.0	1.1	548.0
P6SMB440A	440A	P6SMB440CA	440C	418.00	462.00	1	5	376.2	1.0	607.2
P6SMB480A	480A	P6SMB480CA	480C	456.00	504.00	1	5	408.0	0.9	658.0
P6SMB510A	510A	P6SMB510CA	510C	485.00	535.00	1	5	434.5	0.9	698.0
P6SMB530A	530A	P6SMB530CA	530C	503.50	556.50	1	5	451.6	0.8	725.0
P6SMB540A	540A	P6SMB540CA	540C	513.00	567.00	1	5	460.0	0.8	740.0
P6SMB550A	550A	P6SMB550CA	550C	522.50	577.50	1	5	470.3	0.8	759.0
P6SMB600A	600A	P6SMB600CA	600C	570.00	630.00	1	5	513.0	0.7	828.0

Typical Characteristics

FIG1:Peak Pulse Power Rating Curve

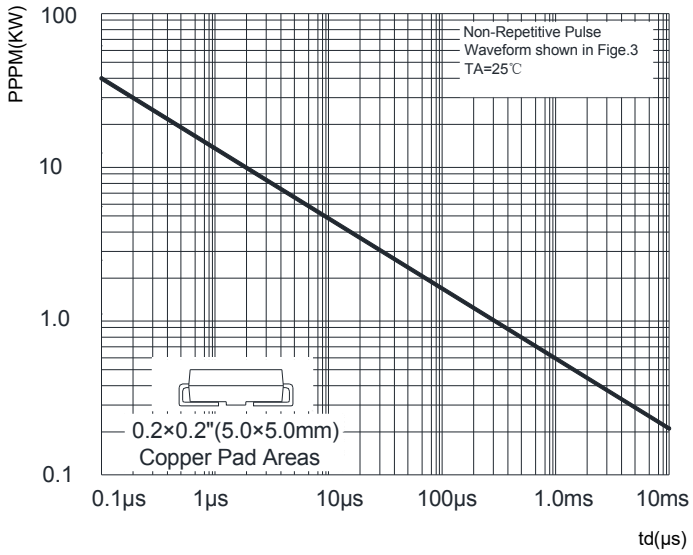


FIG2: Pulse Power or Current vs. Initial Junction Temperature

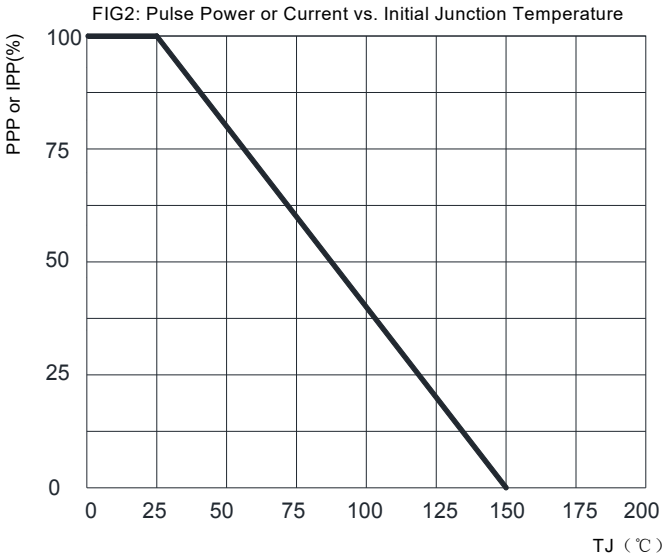


FIG3: Pulse Waveform

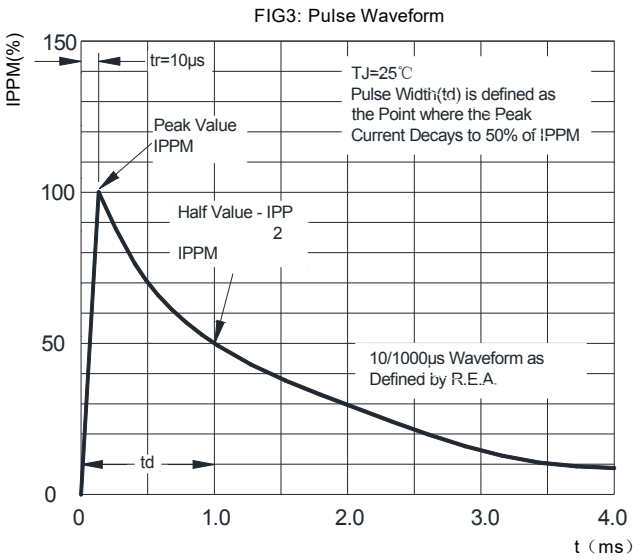


FIG4:Typical Transient Thermal Impedance

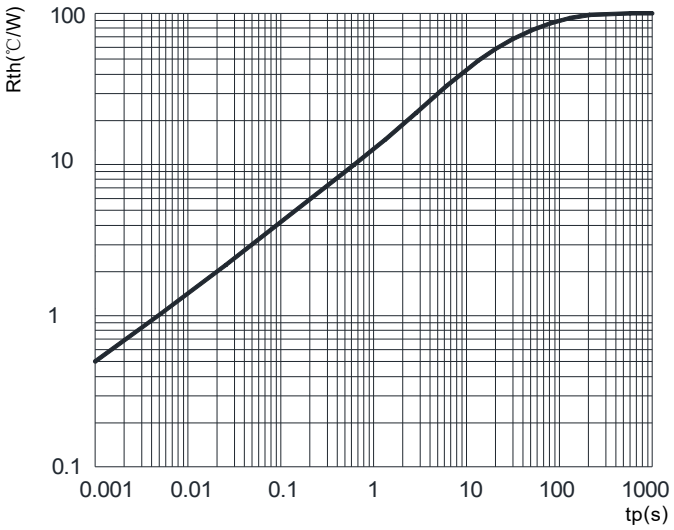
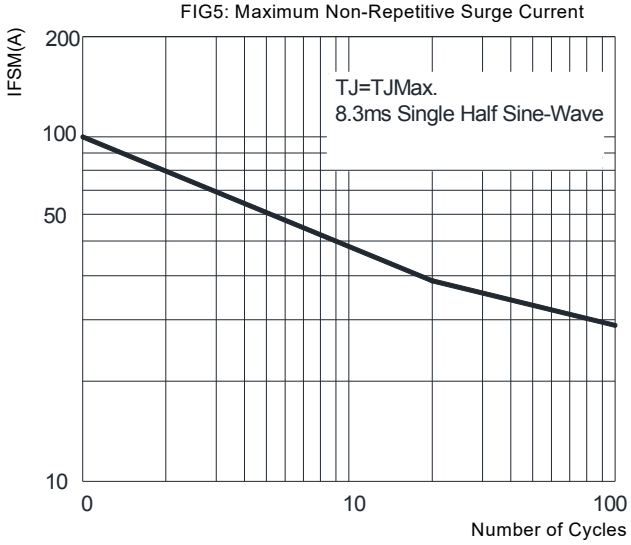
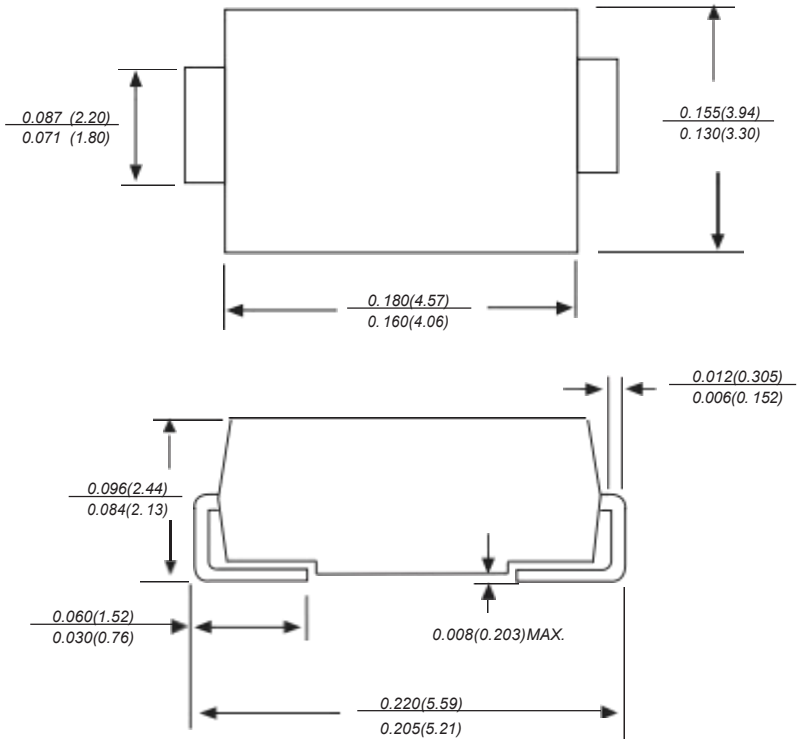


FIG5: Maximum Non-Repetitive Surge Current

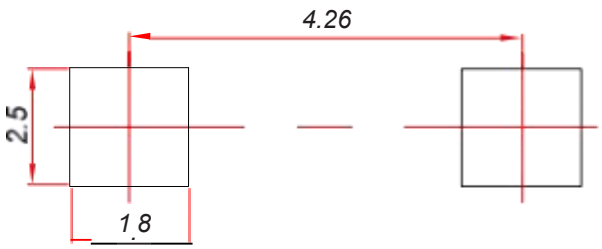


SMB Package outline Dimensions



Dimensions in inches and (millimeters)

SMB Suggested pad Layout



Note:
1. Controlling dimension: In millimeters.
2. General tolerance: ±0.05mm.
3. The pad layout is for reference purposes only.