

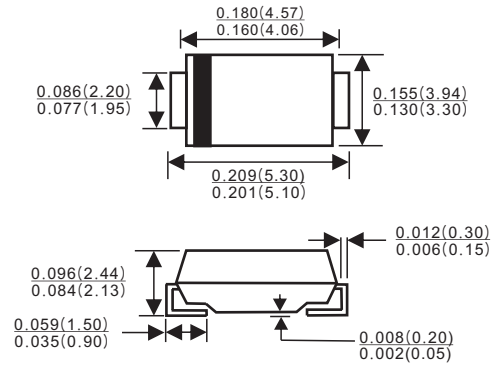
VOLTAGE - 6.8 TO 550 Volts
600 Watt Peak Pulse Power



Features

- ✧ For surface mounted applications in order to optimize board space
- ✧ Glass passivated junction
- ✧ Built-in strain relief
- ✧ Excellent clamping capability
- ✧ Low profile package
- ✧ Low inductance
- ✧ Excellent clamping capability
- ✧ Fast response time: typically less than 1.0 ps from 0 volts to BV min
- ✧ Typical IR less than 1μA above 10V
- ✧ High temperature soldering guaranteed: 250°C/10 seconds at terminals

SMB/DO-214AA



Mechanical Data

Dimensions in inches and(millimeters)

Case: JEDEC DO-214AA Molded plastic
Terminal : Solder plated, solderable per MIL-STD-750, Method 2026
Polarity: Color band denoted positive end (cathode) except Bipolar
Standard Packaging: 12mm tape(EIA STD RS-481)
Weight: 0.003 ounces, 0.093 grams

DEVICES FOR BIPOLAR APPLICATIONS

For Bidirectional use CA Suffix for types P6SMB6.8CA thru types P6SMB550CA Electrical characteristics apply in both directions.

MAXIMUM RATINGS AND CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

RATING	SYMBOL	VALUE	UNITS
Peak Pulse Power Dissipation at TA = 25 °C, TP = 1ms (Note 1)	P _{PPM}	Minimum 600	Watts
Peak Pulse Current of on 10/1000 μs waveform (Note 1)	I _{PPM}	SEE TABLE 1	Amps
Steady State Power Dissipation at TL = 75°C Lead lengths .375", 9.5mm (Note 2)	P _{M(AV)}	1.0	Watts
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load, (JEDEC Method)(Note 3)	I _{FSM}	100	Amps
Operatings and Storage Temperature Range	T _J , T _{STG}	-55 +150	°C

NOTES:

1. Non-repetitive current pulse, per Fig.3 and derated above Ta=25 °C per Fig.2.
2. Mounted on 5.0mm² (0.03mm thick) Copper Pads to each termina
3. 8.3ms single half sine-wave, or equivalent square wave, Duty cycle=4 pulses per minutes maximum.

P6SMB PART NUMBER			REVERSE STAND- OFF VOLTAGE $V_{RWM}(V)$	BREAKDOWN VOLTAGE $V_{BR}(V)$ MIN.@ I_T	BREAKDOWN VOLTAGE $V_{BR}(V)$ MAX.@ I_T	TEST CURRENT I_T (mA)	MAXIMUM CLAMPING VOLTAGE @ I_{pp} Vc(V)	PEAK PULSE CURRENT I_{pp} (A)	REVERSE LEAKAGE @ VR_{WM} IR(μA)
P6SMB	6.8A	6.8CA	5.80	6.45	7.14	10	10.5	58.1	1000
P6SMB	7.5A	7.5CA	6.40	7.13	7.88	10	11.3	54.0	500
P6SMB	8.2A	8.2CA	7.02	7.79	8.61	10	12.1	50.4	200
P6SMB	9.1A	9.1CA	7.78	8.65	9.55	1	13.4	45.5	50
P6SMB	10A	10CA	8.55	9.50	10.50	1	14.5	42.1	10
P6SMB	11A	11CA	9.40	10.50	11.60	1	15.6	39.1	5
P6SMB	12A	12CA	10.20	11.40	12.60	1	16.7	36.5	5
P6SMB	13A	13CA	11.10	12.40	13.70	1	18.2	33.5	5
P6SMB	15A	15CA	12.80	14.30	15.80	1	21.2	28.8	5
P6SMB	16A	16CA	13.60	15.20	16.80	1	22.5	27.1	5
P6SMB	18A	18CA	15.30	17.10	18.90	1	25.5	24.2	5
P6SMB	20A	20CA	17.10	19.00	21.00	1	27.7	22.0	5
P6SMB	22A	22CA	18.80	20.90	23.10	1	30.6	19.9	5
P6SMB	24A	24CA	20.50	22.80	25.20	1	33.2	18.4	5
P6SMB	27A	27CA	23.10	25.70	28.40	1	37.5	16.3	5
P6SMB	30A	30CA	25.60	28.50	31.50	1	41.4	14.7	5
P6SMB	33A	33CA	28.20	31.40	34.70	1	45.7	13.3	5
P6SMB	36A	36CA	30.80	34.20	37.80	1	49.9	12.2	5
P6SMB	39A	39CA	33.30	37.10	41.00	1	53.9	11.3	5
P6SMB	43A	43CA	36.80	40.90	45.20	1	59.3	10.3	5
P6SMB	47A	47CA	40.20	44.70	49.40	1	64.8	9.4	5
P6SMB	51A	51CA	43.60	48.50	53.60	1	70.1	8.7	5
P6SMB	56A	56CA	47.80	53.20	58.80	1	77.0	7.9	5
P6SMB	62A	62CA	53.00	58.90	65.10	1	85.0	7.2	5
P6SMB	68A	68CA	58.10	64.60	71.40	1	92.0	6.6	5
P6SMB	75A	75CA	64.10	71.30	78.80	1	103.0	5.9	5
P6SMB	82A	82CA	70.10	77.90	86.10	1	113.0	5.4	5
P6SMB	91A	91CA	77.80	86.50	95.50	1	125.0	4.9	5
P6SMB	100A	100CA	85.50	95.00	105.00	1	137.0	4.5	5
P6SMB	110A	110CA	94.00	105.00	116.00	1	152.0	4.0	5
P6SMB	120A	120CA	102.00	114.00	126.00	1	165.0	3.7	5
P6SMB	130A	130CA	111.00	124.00	137.00	1	179.0	3.4	5
P6SMB	150A	150CA	128.00	143.00	158.00	1	207.0	2.9	5
P6SMB	160A	160CA	136.00	152.00	168.00	1	219.0	2.7	5
P6SMB	170A	170CA	145.00	162.00	179.00	1	234.0	2.6	5
P6SMB	180A	180CA	154.00	171.00	189.00	1	246.0	2.5	5
P6SMB	200A	200CA	171.00	190.00	210.00	1	274.0	2.2	5
P6SMB	220A	220CA	185.00	209.00	231.00	1	328.0	1.9	5
P6SMB	250A	250CA	214.00	237.00	263.00	1	344.0	1.8	5
P6SMB	300A	300CA	256.00	285.00	315.00	1	414.0	1.5	5
P6SMB	350A	350CA	300.00	332.00	368.00	1	482.0	1.3	5
P6SMB	400A	400CA	342.00	380.00	420.00	1	548.0	1.1	5
P6SMB	440A	440CA	376.00	418.00	462.00	1	602.0	1	5
P6SMB	480A	480CA	408.00	456.00	504.00	1	658.0	0.9	5
P6SMB	510A	510CA	434.00	485.00	535.00	1	698.0	0.9	5
P6SMB	530A	530CA	450.00	503.50	556.50	1	725.0	0.8	5
P6SMB	540A	540CA	459.00	513.00	567.00	1	740.0	0.8	5
P6SMB	550A	550CA	467.00	522.50	577.50	1	760.0	0.8	5

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

RATING AND CHARACTERISTIC CURVES P6SMB SERIES

Fig. 1 - Peak Pulse Power Rating Curve

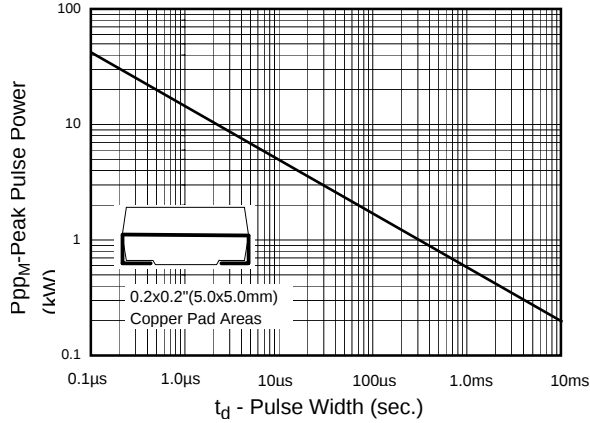


Fig.2 - Pulse Derating Curve

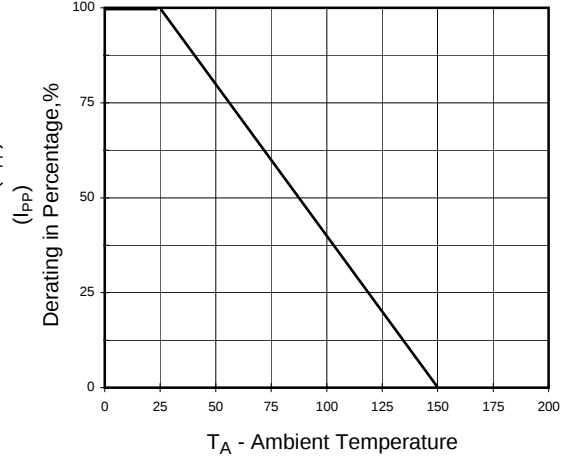


Fig.3 - Pulse Waveform

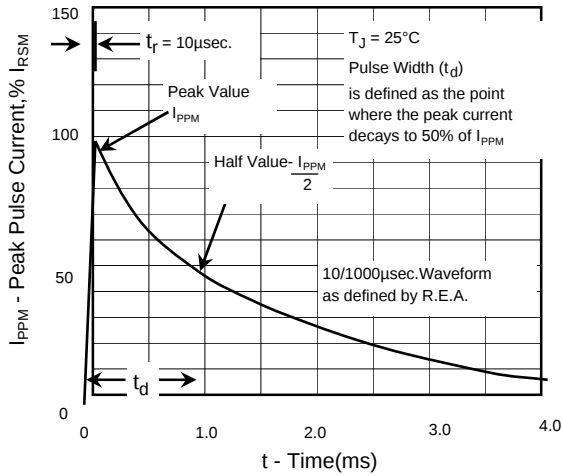


Fig.4 - Typical Junction Capacitance

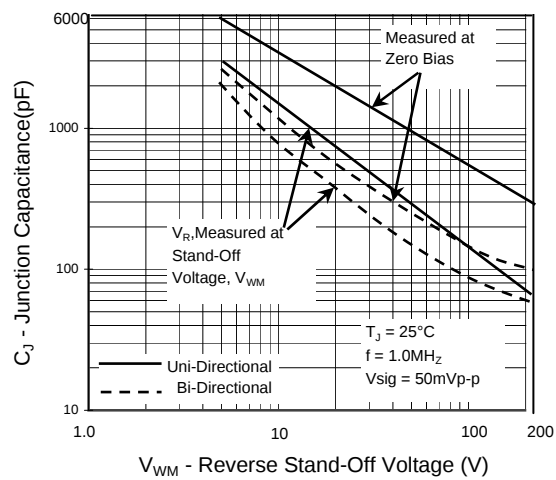


Fig. 5 - Typ. Transient Thermal Impedance

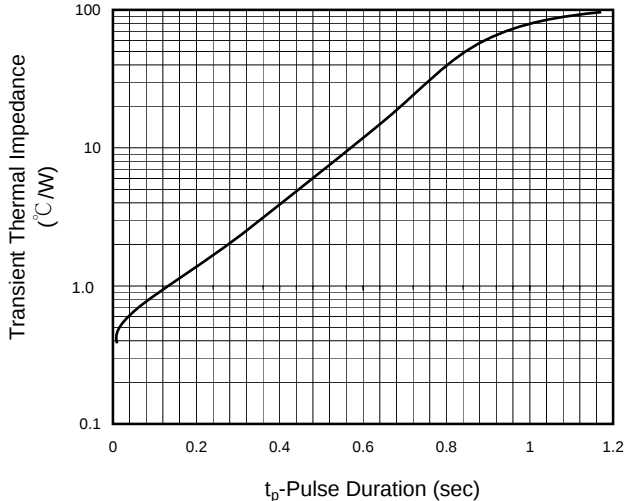


Fig.6 - Maximum Non-Repetitive Peak Forward Surge Current

