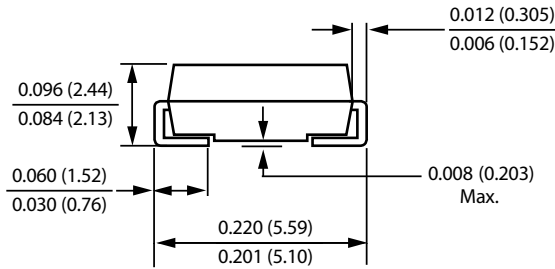
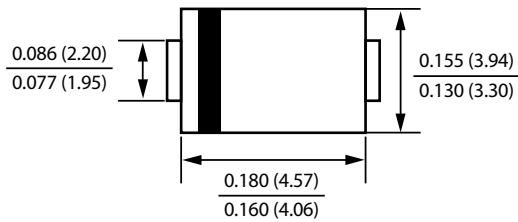




Transient Voltage Suppressors(600W)



DO-214AA(SMB)

Dimensions in inches and (millimeters)

Ordering Information	
Part Number	Compound
P6SMB SERIES	General
P6SMB SERIES-H	Halogen Free
P6SMB SERIES-Q	Automotive

PRIMARY CHARACTERISTICS	
V _{BR}	6.8~600V
P _{PPM}	600W
P _D	5W
T _J max	150°C

Features

- Constructed with Glass Passivated Die
- 600W peak pulse power Dissipation
- Excellent clamping capability
- Uni and Bidirectional unit
- Very fast response time
- Component in accordance to RoHS 2002/95/EC
- AEC-Q101 Qualified

Mechanical Data

- Cases: DO-214AA(SMB)
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Terminals: Lead free Plating (Tin Finish)
Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Weight: 0.095 grams (approximate)

MAXIMUM RATINGS (TA=25°C unless otherwise noted)

PARAMETER	SYMBOL	VALUE	UNIT
Peak power dissipation with a 10/1000μs waveform	P _{PP}	Minimum 600	W
Power dissipation on infinite heatsink at T _L =75°C	P _D	5	W
Peak forward surge current, 8.3ms single half sine-wave unidirectional	I _{FSM}	100	A
Maximum instantaneous forward voltage at 50 A for unidirectional only	V _F	3.5	V
Operating and Storage Temperature Range	T _J , T _{STG}	-55 ~ +150	°C

Note:

- (1) Measured on 8.3 ms single half sine-wave or equivalent square wave, duty cycle = 4 pulses per minute maximum.
- (2) V_F < 3.5V for devices of V_{BR} < 200V and V_F < 5.0V for devices of V_{BR} > 201V



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Part Number		Marking		Reverse Stand-off Voltage	Break-down Voltage Min@I _T	Break-down Voltage Max@I _T	Test Current	Max Clamping Voltage V _C @I _{PP}	Peak Pulse Current	Reverse Leakage I _R @V _{RRM}
DIRECTIONAL				V _{RRM}	V _{BR}	V _{BR}	I _T	V _C	I _{PP}	I _R
UNI	BI	UNI	BI	V	V	V	mA	V	A	uA
P6SMB6.8A	P6SMB6.8CA	6V8A	6V8C	5.80	6.46	7.14	10.0	10.5	57.14	1000
P6SMB7.5A	P6SMB7.5CA	7V5A	7V5C	6.40	7.13	7.88	10.0	11.3	53.10	500
P6SMB8.2A	P6SMB8.2CA	8V2A	8V2C	7.00	7.79	8.61	10.0	12.1	49.59	200
P6SMB9.1A	P6SMB9.1CA	9V1A	9V1C	7.80	8.65	9.56	1.0	13.4	44.78	50
P6SMB10A	P6SMB10CA	10A	10C	8.60	9.50	10.50	1.0	14.5	41.38	10
P6SMB11A	P6SMB11CA	11A	11C	9.40	10.45	11.55	1.0	15.6	38.46	5
P6SMB12A	P6SMB12CA	12A	12C	10.20	11.40	12.60	1.0	16.7	35.93	5
P6SMB13A	P6SMB13CA	13A	13C	11.10	12.35	13.65	1.0	18.2	32.97	5
P6SMB15A	P6SMB15CA	15A	15C	12.80	14.25	15.75	1.0	21.2	28.30	5
P6SMB16A	P6SMB16CA	16A	16C	13.60	15.20	16.80	1.0	22.5	26.67	5
P6SMB18A	P6SMB18CA	18A	18C	15.30	17.10	18.90	1.0	25.2	23.81	5
P6SMB20A	P6SMB20CA	20A	20C	17.10	19.00	21.00	1.0	27.7	21.66	5
P6SMB22A	P6SMB22CA	22A	22C	18.80	20.90	23.10	1.0	30.6	19.61	5
P6SMB24A	P6SMB24CA	24A	24C	20.50	22.80	25.20	1.0	33.2	18.07	5
P6SMB27A	P6SMB27CA	27A	27C	23.10	25.65	28.35	1.0	37.5	16.00	5
P6SMB30A	P6SMB30CA	30A	30C	25.60	28.50	31.50	1.0	41.4	14.49	5
P6SMB33A	P6SMB33CA	33A	33C	28.20	31.35	34.65	1.0	45.7	13.13	5
P6SMB36A	P6SMB36CA	36A	36C	30.80	34.20	37.80	1.0	49.9	12.02	5
P6SMB39A	P6SMB39CA	39A	39C	33.30	37.05	40.95	1.0	53.9	11.13	5
P6SMB43A	P6SMB43CA	43A	43C	36.80	40.85	45.15	1.0	59.3	10.12	5
P6SMB47A	P6SMB47CA	47A	47C	40.20	44.65	49.35	1.0	64.8	9.26	5
P6SMB51A	P6SMB51CA	51A	51C	43.60	48.45	53.55	1.0	70.1	8.56	5
P6SMB56A	P6SMB56CA	56A	56C	47.80	53.20	58.80	1.0	77.0	7.79	5
P6SMB62A	P6SMB62CA	62A	62C	53.00	58.90	65.10	1.0	85.0	7.06	5
P6SMB68A	P6SMB68CA	68A	68C	58.10	64.60	71.40	1.0	92.0	6.52	5
P6SMB75A	P6SMB75CA	75A	75C	64.10	71.25	78.75	1.0	103.0	5.83	5
P6SMB82A	P6SMB82CA	82A	82C	70.10	77.90	86.10	1.0	113.0	5.31	5
P6SMB91A	P6SMB91CA	91A	91C	77.80	86.45	95.55	1.0	125.0	4.80	5
P6SMB100A	P6SMB100CA	100A	100C	85.50	95.00	105.00	1.0	137.0	4.38	5
P6SMB110A	P6SMB110CA	110A	110C	94.00	104.50	115.50	1.0	152.0	3.95	5
P6SMB120A	P6SMB120CA	120A	120C	102.00	114.00	126.00	1.0	165.0	3.64	5
P6SMB130A	P6SMB130CA	130A	130C	111.00	123.50	136.50	1.0	179.0	3.35	5
P6SMB150A	P6SMB150CA	150A	150C	128.00	142.50	157.50	1.0	207.0	2.90	5
P6SMB160A	P6SMB160CA	160A	160C	136.00	152.00	168.00	1.0	219.0	2.74	5
P6SMB170A	P6SMB170CA	170A	170C	145.00	161.50	178.50	1.0	234.0	2.56	5
P6SMB180A	P6SMB180CA	180A	180C	154.00	171.00	189.00	1.0	246.0	2.44	5
P6SMB200A	P6SMB200CA	200A	200C	171.00	190.00	210.00	1.0	274.0	2.19	5
P6SMB220A	P6SMB220CA	220A	220C	185.00	209.00	231.00	1.0	328.0	1.83	5
P6SMB250A	P6SMB250CA	250A	250C	214.00	237.50	262.50	1.0	344.0	1.74	5
P6SMB300A	P6SMB300CA	300A	300C	256.00	285.00	315.00	1.0	414.0	1.45	5
P6SMB350A	P6SMB350CA	350A	350C	299.30	332.50	367.50	1.0	482.0	1.24	5



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Part Number		Marking		Reverse Stand-off Voltage	Break-down Voltage Min@I _T	Break-down Voltage Max@I _T	Test Current	Max Clamping Voltage V _C @I _{PP}	Peak Pulse Current	Reverse Leakage I _R @V _{RRM}
DIRECTIONAL				V _{RRM}	V _{BR}	V _{BR}	I _T	V _C	I _{PP}	I _R
UNI	BI	UNI	BI	V	V	V	mA	V	A	uA
P6SMB380A	P6SMB380CA	380A	380C	324.90	361.00	399.00	1.0	524.4	1.14	5
P6SMB400A	P6SMB400CA	400A	400C	342.00	380.00	420.00	1.0	548.0	1.09	5
P6SMB440A	P6SMB440CA	440A	440C	376.20	418.00	462.00	1.0	607.2	0.99	5
P6SMB450A	P6SMB450CA	450A	450C	427.50	475.00	525.00	1.0	690.0	0.87	5
P6SMB520A	P6SMB520CA	552A	520C	444.60	494.00	546.00	1.0	717.6	0.84	5
P6SMB550A	P6SMB550CA	550A	550C	470.30	522.50	577.50	1.0	759.0	0.79	5
P6SMB600A	P6SMB600CA	600A	600C	513.00	570.00	630.00	1.0	828.0	0.72	5

Note:

1. Suffix 'A' denotes 5% tolerance device.
2. Add suffix 'CA' after part number to specify Bi-directional devices.
3. For Bi-Directional devices having VR of 10 volts and under, the IR limit is double .



Transient Voltage Suppressors(600W)

Fig. 1 - Pulse Derating Curve

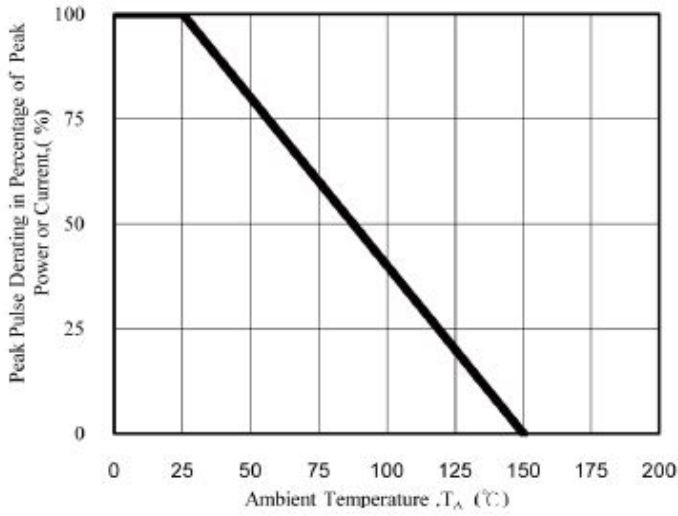


Fig. 2 - Maximum Non-Repetitive Surge Current

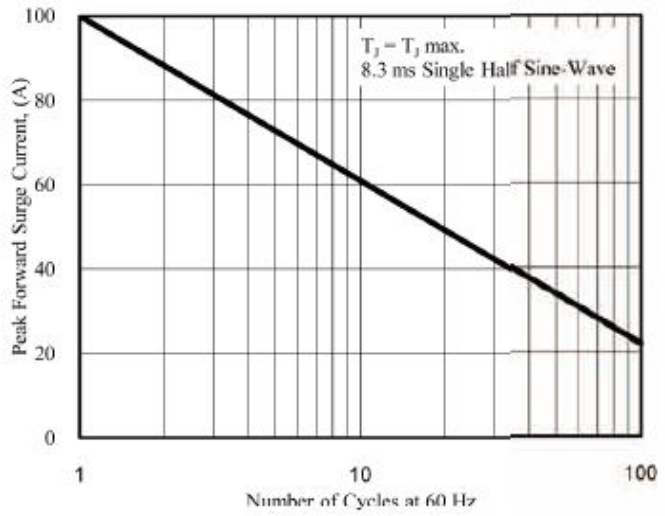


Fig. 3 - Steady State Power Derating Curve

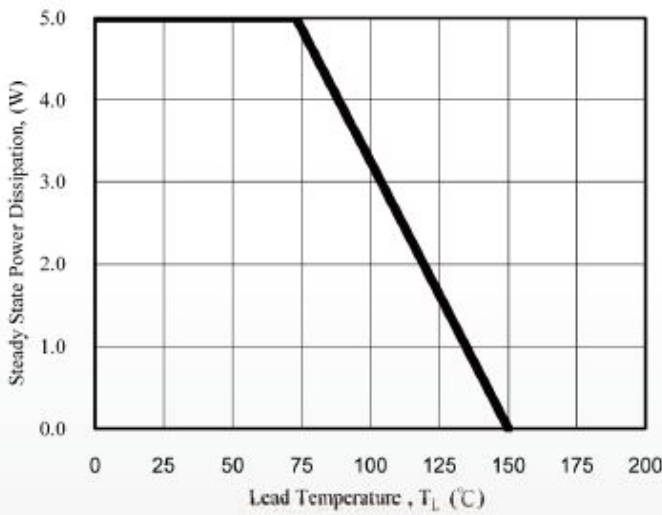


Fig. 4 - Peak Pulse Power Rating Curve

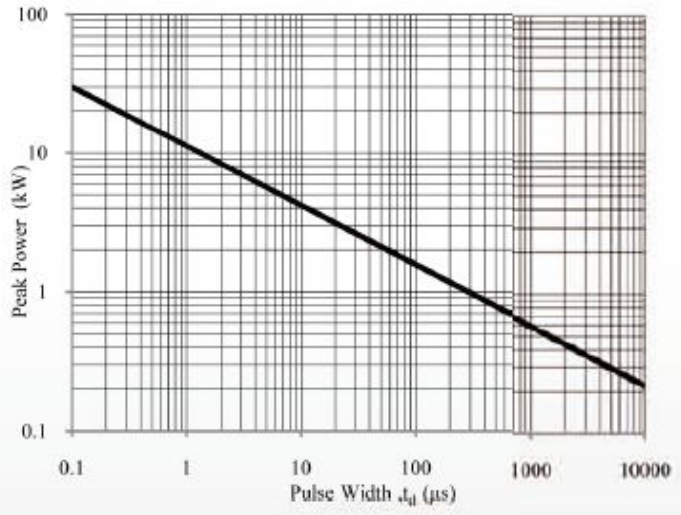


Fig. 5 - Pulse Waveform

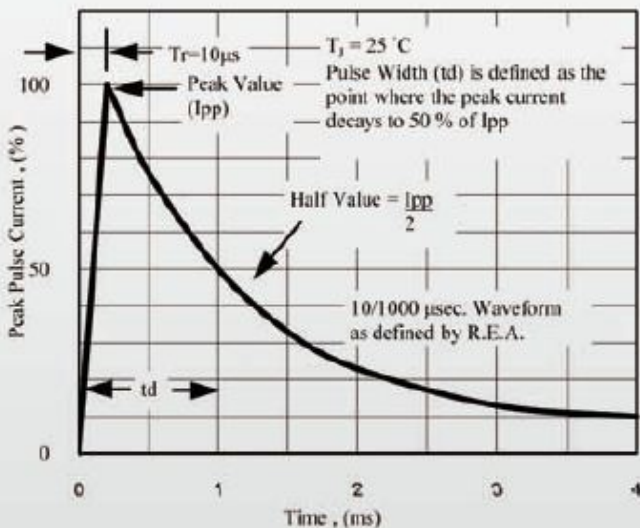


Fig. 6 - Typical junction Capacitance

