

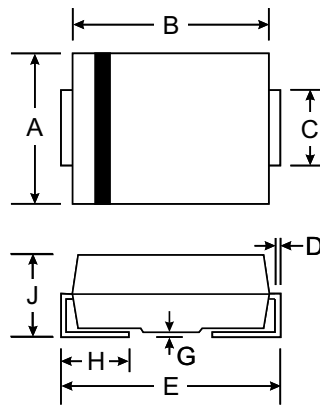
**VOLTAGE RANGE: 6.8 - 440 V**  
**POWER: 600Watts**

### Features

- Glass Passivated Die Construction
- Uni- and Bi-Directional Versions Available
- Excellent Clamping Capability
- Fast Response Time
- Plastic Material: UL Flammability Classification Rating 94V-0

### Mechanical Data

- Case: SMB/DO-214AA, Molded Plastic
- Terminals: Solder Plated, Solderable per MIL-STD-750, Method 2026
- Polarity: Cathode Band or Cathode Notch
- Marking: Type Number
- Weight: 0.093 grams (approx.)



SMB(DO-214AA)		
Dim	Min	Max
A	3.30	3.94
B	4.06	4.70
C	1.91	2.21
D	0.15	0.31
E	5.00	5.59
G	0.10	0.20
H	0.76	1.52
J	2.00	2.62
All Dimensions in mm		

### Maximum Ratings @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	Value	Unit
Peak Pulse Power Dissipation (Non repetitive current pulse derated above $T_A = 25^\circ\text{C}$ ) (Note 1)	$P_{PK}$	600	W
Peak Forward Surge Current, 8.3ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method) (Notes 1, 2, & 3)	$I_{FSM}$	100	A
Instantaneous Forward Voltage @ $I_{PP} = 35\text{A}$ (Notes 1, 2, & 3)	$V_F$	3.5 5.0	V V
Operating and Storage Temperature Range	$T_j, T_{STG}$	-55 to +150	$^\circ\text{C}$

- Notes:
1. Valid provided that terminals are kept at ambient temperature.
  2. Measured with 8.3ms single half sine-wave. Duty cycle = 4 pulses per minute maximum.
  3. Unidirectional units only.



TYPE		Marking		Reverse Stand-Off Voltage	Breakdown Voltage Min. @I <sub>T</sub>	Breakdown Voltage Max. @ I <sub>T</sub>	Test Current	Maximum Clamping Voltage @I <sub>PP</sub>	Peak Pulse Current	Reverse Leakage @V <sub>RWM</sub>
(UNI)	(BI)	(UNI)	(BI)	V <sub>RWM</sub> (V)	V <sub>BR MIN</sub> (V)	V <sub>BR MAX</sub> (V)	I <sub>T</sub> (mA)	V <sub>C</sub> (V)	I <sub>PP</sub> (A)	I <sub>R</sub> (uA)
P6SMB6.8	P6SMB6.8C	KD	AD	5.50	6.12	7.48	10.0	10.8	55.6	1000.0
P6SMB6.8A	P6SMB6.8CA	KE	AE	5.80	6.45	7.14	10.0	10.5	57.1	1000.0
P6SMB7.5	P6SMB7.5C	KF	AF	6.05	6.75	8.25	10.0	11.7	51.3	500.0
P6SMB7.5A	P6SMB7.5CA	KG	AG	6.40	7.13	7.88	10.0	11.3	53.1	500.0
P6SMB8.2	P6SMB8.2C	KL	AL	6.63	7.38	9.02	10.0	12.5	48.0	200.0
P6SMB8.2A	P6SMB8.2CA	KM	AM	7.02	7.79	8.61	10.0	12.1	49.6	200.0
P6SMB9.1	P6SMB9.1C	KQ	AQ	7.37	8.19	10.0	1.0	13.8	43.5	50.0
P6SMB9.1A	P6SMB9.1CA	KR	AR	7.78	8.65	9.55	1.0	13.4	44.8	50.0
P6SMB10	P6SMB10C	KS	AS	8.10	9.00	11.0	1.0	15.0	40.0	10.0
P6SMB10A	P6SMB10CA	KT	AT	8.55	9.50	10.5	1.0	14.5	41.4	10.0
P6SMB11	P6SMB11C	KW	AW	8.92	9.90	12.1	1.0	16.2	37.0	5.0
P6SMB11A	P6SMB11CA	KX	AX	9.40	10.5	11.6	1.0	15.6	38.5	5.0
P6SMB12	P6SMB12C	KY	AY	9.72	10.8	13.2	1.0	17.3	34.7	5.0
P6SMB12A	P6SMB12CA	KZ	AZ	10.2	11.4	12.6	1.0	16.7	35.9	5.0
P6SMB13	P6SMB13C	LD	BD	10.5	11.7	14.3	1.0	19.0	31.6	5.0
P6SMB13A	P6SMB13CA	LE	BE	11.1	12.4	13.7	1.0	18.2	33.0	5.0
P6SMB15	P6SMB15C	LH	BH	12.1	13.5	16.5	1.0	22.0	27.3	5.0
P6SMB15A	P6SMB15CA	LK	BK	12.8	14.3	15.8	1.0	21.2	28.3	5.0
P6SMB16	P6SMB16C	LL	BL	12.9	14.4	17.6	1.0	23.5	25.5	5.0
P6SMB16A	P6SMB16CA	LM	BM	13.6	15.2	16.8	1.0	22.5	26.7	5.0
P6SMB18	P6SMB18C	LN	BN	14.5	16.2	19.8	1.0	26.5	22.6	5.0
P6SMB18A	P6SMB18CA	LP	BP	15.3	17.1	18.9	1.0	25.2	23.8	5.0
P6SMB20	P6SMB20C	LS	BS	16.2	18.0	22.0	1.0	29.1	20.6	5.0
P6SMB20A	P6SMB20CA	LT	BT	17.1	19.0	21.0	1.0	27.7	21.7	5.0
P6SMB22	P6SMB22C	LU	BU	17.8	19.8	24.2	1.0	31.9	18.8	5.0
P6SMB22A	P6SMB22CA	LV	BV	18.8	20.9	23.1	1.0	30.6	19.6	5.0
P6SMB24	P6SMB24C	LW	BW	19.4	21.6	26.4	1.0	34.7	17.3	5.0
P6SMB24A	P6SMB24CA	LX	BX	20.5	22.8	25.2	1.0	33.2	18.1	5.0
P6SMB27	P6SMB27C	LY	BY	21.8	24.3	29.7	1.0	39.1	15.3	5.0
P6SMB27A	P6SMB27CA	LZ	BZ	23.1	25.7	28.4	1.0	37.5	16.0	5.0
P6SMB30	P6SMB30C	MF	CF	24.3	27.0	33.0	1.0	43.5	13.8	5.0
P6SMB30A	P6SMB30CA	MG	CG	25.6	28.5	31.5	1.0	41.4	14.5	5.0
P6SMB33	P6SMB33C	MH	CH	26.8	29.7	36.3	1.0	47.7	12.6	5.0
P6SMB33A	P6SMB33CA	MK	CK	28.2	31.4	34.7	1.0	45.7	13.1	5.0
P6SMB36	P6SMB36C	ML	CL	29.1	32.4	39.6	1.0	52.0	11.5	5.0
P6SMB36A	P6SMB36CA	MM	CM	30.8	34.2	37.8	1.0	49.9	12.0	5.0
P6SMB39	P6SMB39C	MN	CN	31.6	35.1	42.9	1.0	56.4	10.6	5.0
P6SMB39A	P6SMB39CA	MP	CP	33.3	37.1	41.0	1.0	53.9	11.1	5.0
P6SMB43	P6SMB43C	MQ	CQ	34.8	38.7	47.3	1.0	61.9	9.7	5.0
P6SMB43A	P6SMB43CA	MR	CR	36.8	40.9	45.2	1.0	59.3	10.1	5.0
P6SMB47	P6SMB47C	MU	CU	38.1	42.3	51.7	1.0	67.8	8.8	5.0
P6SMB47A	P6SMB47CA	MV	CV	40.2	44.7	49.4	1.0	64.8	9.3	5.0
P6SMB51	P6SMB51C	MW	CW	41.3	45.9	56.1	1.0	73.5	8.2	5.0



TYPE		Marking		Reverse Stand-Off Voltage	Breakdown Voltage Min. @I <sub>T</sub>	Breakdown Voltage Max. @ I <sub>T</sub>	Test Current	Maximum Clamping Voltage @I <sub>PP</sub>	Peak Pulse Current	Reverse Leakage @V <sub>RWM</sub>
(UNI)	(BI)	(UNI)	(BI)	V <sub>RWM</sub> (V)	V <sub>BR MIN</sub> (V)	V <sub>BR MAX</sub> (V)	I <sub>T</sub> (mA)	V <sub>C</sub> (V)	I <sub>PP</sub> (A)	I <sub>R</sub> (uA)
P6SMB51A	P6SMB51CA	MX	CX	43.6	48.5	53.6	1.0	70.1	8.6	5.0
P6SMB56	P6SMB56C	MY	CY	45.4	50.4	61.6	1.0	80.5	7.5	5.0
P6SMB56A	P6SMB56CA	MZ	CZ	47.8	53.2	58.8	1.0	77.0	7.8	5.0
P6SMB62	P6SMB62C	ND	DD	50.2	55.8	68.2	1.0	89.0	6.7	5.0
P6SMB62A	P6SMB62CA	NE	DE	53.0	58.9	65.1	1.0	85.0	7.1	5.0
P6SMB68	P6SMB68C	NF	DF	55.1	61.2	74.8	1.0	98.0	6.1	5.0
P6SMB68A	P6SMB68CA	NG	DG	58.1	64.6	71.4	1.0	92.0	6.5	5.0
P6SMB75	P6SMB75C	NN	DN	60.7	67.5	82.5	1.0	108	5.6	5.0
P6SMB75A	P6SMB75CA	NP	DP	64.1	71.3	78.8	1.0	103	5.8	5.0
P6SMB82	P6SMB82C	NQ	DQ	66.4	73.8	90.2	1.0	118	5.1	5.0
P6SMB82A	P6SMB82CA	NR	DR	70.1	77.9	86.1	1.0	113	5.3	5.0
P6SMB91	P6SMB91C	NU	DU	73.7	81.9	100	1.0	131	4.6	5.0
P6SMB91A	P6SMB91CA	NV	DV	77.8	86.5	95.5	1.0	125	4.8	5.0
P6SMB100	P6SMB100C	NW	DW	81.0	90.0	110	1.0	144	4.2	5.0
P6SMB100A	P6SMB100CA	NX	DX	85.5	95.0	105	1.0	137	4.4	5.0
P6SMB110	P6SMB110C	NY	DY	89.2	99.0	121	1.0	158	3.8	5.0
P6SMB110A	P6SMB110CA	NZ	DZ	94.0	105	116	1.0	152	3.9	5.0
P6SMB120	P6SMB120C	PD	ED	97.2	108	132	1.0	173	3.5	5.0
P6SMB120A	P6SMB120CA	PE	EE	102	114	126	1.0	165	3.6	5.0
P6SMB130	P6SMB130C	PF	EF	105	117	143	1.0	187	3.2	5.0
P6SMB130A	P6SMB130CA	PG	EG	111	124	137	1.0	179	3.4	5.0
P6SMB150	P6SMB150C	PH	EH	121	135	165	1.0	215	2.8	5.0
P6SMB150A	P6SMB150CA	PK	EK	128	143	158	1.0	207	2.9	5.0
P6SMB160	P6SMB160C	PL	EL	130	144	176	1.0	230	2.6	5.0
P6SMB160A	P6SMB160CA	PM	EM	136	152	168	1.0	219	2.7	5.0
P6SMB170	P6SMB170C	PN	EN	138	153	187	1.0	244	2.5	5.0
P6SMB170A	P6SMB170CA	PP	EP	145	162	179	1.0	234	2.6	5.0
P6SMB180	P6SMB180C	PQ	EQ	146	162	198	1.0	258	2.3	5.0
P6SMB180A	P6SMB180CA	PR	ER	154	171	189	1.0	246	2.4	5.0
P6SMB200	P6SMB200C	PS	ES	162	180	220	1.0	287	2.1	5.0
P6SMB200A	P6SMB200CA	PT	ET	171	190	210	1.0	274	2.2	5.0
P6SMB220	P6SMB220C	PW	EW	175	198	242	1.0	344	1.7	5.0
P6SMB220A	P6SMB220CA	PX	EX	185	209	231	1.0	328	1.8	5.0
P6SMB250	P6SMB250C	QD	FD	202	225	275	1.0	360	1.7	5.0
P6SMB250A	P6SMB250CA	QE	FE	214	237	263	1.0	344	1.7	5.0
P6SMB300	P6SMB300C	QF	FF	243	270	330	1.0	430	1.4	5.0
P6SMB300A	P6SMB300CA	QG	FG	256	285	315	1.0	414	1.4	5.0
P6SMB350	P6SMB350C	QH	FH	284	315	385	1.0	504	1.2	5.0
P6SMB350A	P6SMB350CA	QK	FK	300	333	368	1.0	482	1.2	5.0
P6SMB400	P6SMB400C	QL	FL	324	360	440	1.0	574	1.0	5.0
P6SMB400A	P6SMB400CA	QM	FM	342	380	420	1.0	548	1.1	5.0
P6SMB440	P6SMB440C	QN	FN	356	396	484	1.0	631	0.95	5.0
P6SMB440A	P6SMB440CA	QP	FP	376	418	462	1.0	602	1.0	5.0

## Ratings and Characteristic Curves $T_A=25^\circ\text{C}$ unless otherwise noted

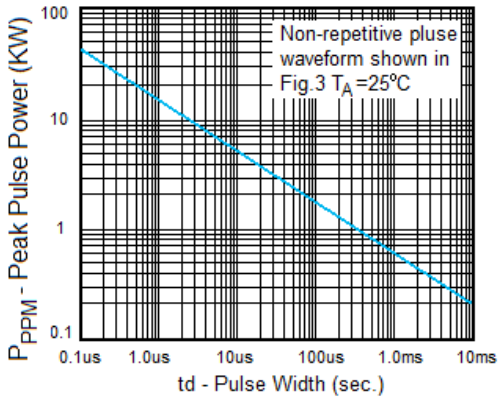


Fig. 1 Peak Pulse Power Rating

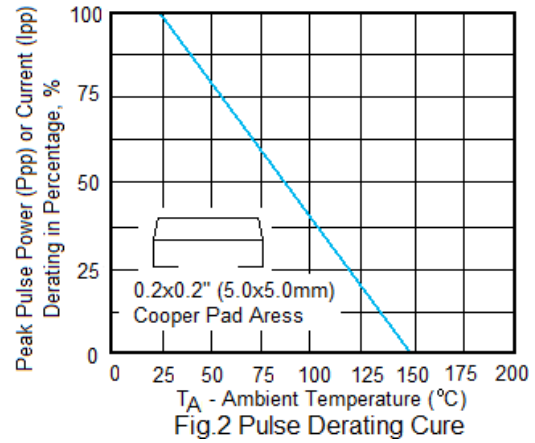


Fig. 2 Pulse Derating Curve

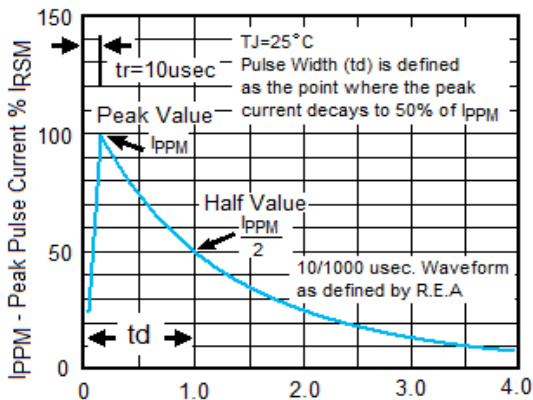


Fig. 3 Pulse Waveform

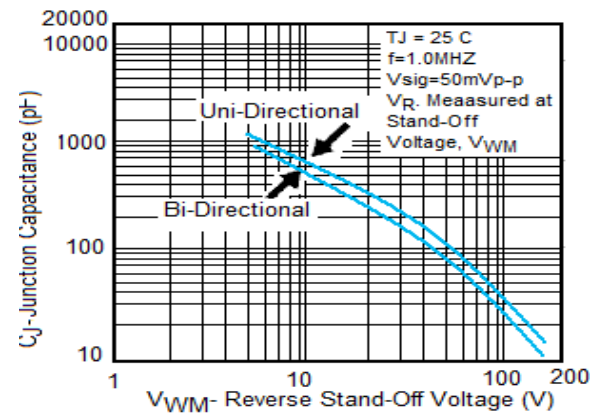


Fig. 4- Typical Junction Capacitance