

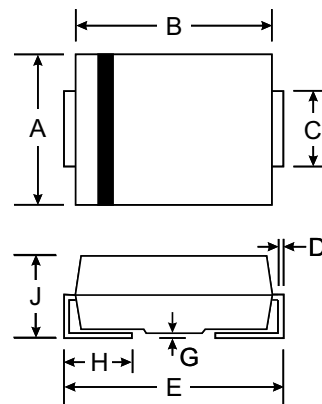
**VOLTAGE RANGE: 6.8 - 440 V**  
**POWER: 600Watts**

### 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: DO-214AA(SMB), Transfer Molded Epoxy
- Terminals: Solderable per MIL-STD-202, Method 208
- Polarity Indicator: Cathode Band  
(Note: Bi-directional devices have no polarity indicator.)
- Weight: 0.1 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)	$V_F$	$V_{BR} < 100\text{V}$ : 3.5 $V_{BR} \geq 100\text{V}$ : 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>RMW</sub>
(UNI)	(BI)	(UNI)	(BI)	V <sub>RMW</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)
P6SMBJ6.8	P6SMBJ6.8C	6.8	6.8C	5.50	6.12	7.48	10.0	10.8	55.6	1000.0
P6SMBJ6.8A	P6SMBJ6.8CA	6.8A	6.8CA	5.80	6.45	7.14	10.0	10.5	57.1	1000.0
P6SMBJ7.5	P6SMBJ7.5C	7.5	7.5C	6.05	6.75	8.25	10.0	11.7	51.3	500.0
P6SMBJ7.5A	P6SMBJ7.5CA	7.5A	7.5CA	6.40	7.13	7.88	10.0	11.3	53.1	500.0
P6SMBJ8.2	P6SMBJ8.2C	8.2	8.2C	6.63	7.38	9.02	10.0	12.5	48.0	200.0
P6SMBJ8.2A	P6SMBJ8.2CA	8.2A	8.2CA	7.02	7.79	8.61	10.0	12.1	49.6	200.0
P6SMBJ9.1	P6SMBJ9.1C	9.1	9.1C	7.37	8.19	10.0	1.0	13.8	43.5	50.0
P6SMBJ9.1A	P6SMBJ9.1CA	9.1A	9.1CA	7.78	8.65	9.55	1.0	13.4	44.8	50.0
P6SMBJ10	P6SMBJ10C	10	10C	8.10	9.00	11.0	1.0	15.0	40.0	10.0
P6SMBJ10A	P6SMBJ10CA	10A	10CA	8.55	9.50	10.5	1.0	14.5	41.4	10.0
P6SMBJ11	P6SMBJ11C	11	11C	8.92	9.90	12.1	1.0	16.2	37.0	5.0
P6SMBJ11A	P6SMBJ11CA	11A	11CA	9.40	10.5	11.6	1.0	15.6	38.5	5.0
P6SMBJ12	P6SMBJ12C	12	12C	9.72	10.8	13.2	1.0	17.3	34.7	5.0
P6SMBJ12A	P6SMBJ12CA	12A	12CA	10.2	11.4	12.6	1.0	16.7	35.9	5.0
P6SMBJ13	P6SMBJ13C	13	13C	10.5	11.7	14.3	1.0	19.0	31.6	5.0
P6SMBJ13A	P6SMBJ13CA	13A	13CA	11.1	12.4	13.7	1.0	18.2	33.0	5.0
P6SMBJ15	P6SMBJ15C	15	15C	12.1	13.5	16.5	1.0	22.0	27.3	5.0
P6SMBJ15A	P6SMBJ15CA	15A	15CA	12.8	14.3	15.8	1.0	21.2	28.3	5.0
P6SMBJ16	P6SMBJ16C	16	16C	12.9	14.4	17.6	1.0	23.5	25.5	5.0
P6SMBJ16A	P6SMBJ16CA	16A	16CA	13.6	15.2	16.8	1.0	22.5	26.7	5.0
P6SMBJ18	P6SMBJ18C	18	18C	14.5	16.2	19.8	1.0	26.5	22.6	5.0
P6SMBJ18A	P6SMBJ18CA	18A	18CA	15.3	17.1	18.9	1.0	25.2	23.8	5.0
P6SMBJ20	P6SMBJ20C	20	20C	16.2	18.0	22.0	1.0	29.1	20.6	5.0
P6SMBJ20A	P6SMBJ20CA	20	20CA	17.1	19.0	21.0	1.0	27.7	21.7	5.0
P6SMBJ22	P6SMBJ22C	22	22C	17.8	19.8	24.2	1.0	31.9	18.8	5.0
P6SMBJ22A	P6SMBJ22CA	22A	22CA	18.8	20.9	23.1	1.0	30.6	19.6	5.0
P6SMBJ24	P6SMBJ24C	24	24C	19.4	21.6	26.4	1.0	34.7	17.3	5.0
P6SMBJ24A	P6SMBJ24CA	24A	24CA	20.5	22.8	25.2	1.0	33.2	18.1	5.0
P6SMBJ27	P6SMBJ27C	27	27C	21.8	24.3	29.7	1.0	39.1	15.3	5.0
P6SMBJ27A	P6SMBJ27CA	27A	27CA	23.1	25.7	28.4	1.0	37.5	16.0	5.0
P6SMBJ30	P6SMBJ30C	30	30C	24.3	27.0	33.0	1.0	43.5	13.8	5.0
P6SMBJ30A	P6SMBJ30CA	30A	30CA	25.6	28.5	31.5	1.0	41.4	14.5	5.0
P6SMBJ33	P6SMBJ33C	33	33C	26.8	29.7	36.3	1.0	47.7	12.6	5.0
P6SMBJ33A	P6SMBJ33CA	33A	33CA	28.2	31.4	34.7	1.0	45.7	13.1	5.0
P6SMBJ36	P6SMBJ36C	36	36C	29.1	32.4	39.6	1.0	52.0	11.5	5.0
P6SMBJ36A	P6SMBJ36CA	36A	36CA	30.8	34.2	37.8	1.0	49.9	12.0	5.0
P6SMBJ39	P6SMBJ39C	39	39C	31.6	35.1	42.9	1.0	56.4	10.6	5.0
P6SMBJ39A	P6SMBJ39CA	39A	39CA	33.3	37.1	41.0	1.0	53.9	11.1	5.0
P6SMBJ43	P6SMBJ43C	43	43C	34.8	38.7	47.3	1.0	61.9	9.7	5.0
P6SMBJ43A	P6SMBJ43CA	43A	43CA	36.8	40.9	45.2	1.0	59.3	10.1	5.0
P6SMBJ47	P6SMBJ47C	47	47C	38.1	42.3	51.7	1.0	67.8	8.8	5.0
P6SMBJ47A	P6SMBJ47CA	47A	47CA	40.2	44.7	49.4	1.0	64.8	9.3	5.0
P6SMBJ51	P6SMBJ51C	51	51C	41.3	45.9	56.1	1.0	73.5	8.2	5.0
P6SMBJ51A	P6SMBJ51CA	51A	51CA	43.6	48.5	53.6	1.0	70.1	8.6	5.0
P6SMBJ56	P6SMBJ56C	56	56C	45.4	50.4	61.6	1.0	80.5	7.5	5.0
P6SMBJ56A	P6SMBJ56CA	56A	56CA	47.8	53.2	58.8	1.0	77.0	7.8	5.0
P6SMBJ62	P6SMBJ62C	62	62C	50.2	55.8	68.2	1.0	89.0	6.7	5.0
P6SMBJ62A	P6SMBJ62CA	62A	62CA	53.0	58.9	65.1	1.0	85.0	7.1	5.0
P6SMBJ68	P6SMBJ68C	68	68C	55.1	61.2	74.8	1.0	98.0	6.1	5.0
P6SMBJ68A	P6SMBJ68CA	68A	68CA	58.1	64.6	71.4	1.0	92.0	6.5	5.0
P6SMBJ75	P6SMBJ75C	75	75C	60.7	67.5	82.5	1.0	108	5.6	5.0
P6SMBJ75A	P6SMBJ75CA	75A	75CA	64.1	71.3	78.8	1.0	103	5.8	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>RMW</sub>
(UNI)	(BI)	(UNI)	(BI)	V <sub>RMW</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)
P6SMBJ82	P6SMBJ82C	82	82C	66.4	73.8	90.2	1.0	118	5.1	5.0
P6SMBJ82A	P6SMBJ82CA	82A	82CA	70.1	77.9	86.1	1.0	113	5.3	5.0
P6SMBJ91	P6SMBJ91C	91	91C	73.7	81.9	100	1.0	131	4.6	5.0
P6SMBJ91A	P6SMBJ91CA	91A	91CA	77.8	86.5	95.5	1.0	125	4.8	5.0
P6SMBJ100	P6SMBJ100C	100	100C	81.0	90.0	110	1.0	144	4.2	5.0
P6SMBJ100A	P6SMBJ100CA	100A	100CA	85.5	95.0	105	1.0	137	4.4	5.0
P6SMBJ110	P6SMBJ110C	110	110C	89.2	99.0	121	1.0	158	3.8	5.0
P6SMBJ110A	P6SMBJ110CA	110A	110CA	94.0	105	116	1.0	152	3.9	5.0
P6SMBJ120	P6SMBJ120C	120	120C	97.2	108	132	1.0	173	3.5	5.0
P6SMBJ120A	P6SMBJ120CA	120A	120CA	102	114	126	1.0	165	3.6	5.0
P6SMBJ130	P6SMBJ130C	130	130C	105	117	143	1.0	187	3.2	5.0
P6SMBJ130A	P6SMBJ130CA	130A	130CA	111	124	137	1.0	179	3.4	5.0
P6SMBJ150	P6SMBJ150C	150	150C	121	135	165	1.0	215	2.8	5.0
P6SMBJ150A	P6SMBJ150CA	150A	150CA	128	143	158	1.0	207	2.9	5.0
P6SMBJ160	P6SMBJ160C	160	160C	130	144	176	1.0	230	2.6	5.0
P6SMBJ160A	P6SMBJ160CA	160A	160CA	136	152	168	1.0	219	2.7	5.0
P6SMBJ170	P6SMBJ170C	170	170C	138	153	187	1.0	244	2.5	5.0
P6SMBJ170A	P6SMBJ170CA	170A	170CA	145	162	179	1.0	234	2.6	5.0
P6SMBJ180	P6SMBJ180C	180	180C	146	162	198	1.0	258	2.3	5.0
P6SMBJ180A	P6SMBJ180CA	180A	180CA	154	171	189	1.0	246	2.4	5.0
P6SMBJ200	P6SMBJ200C	200	200C	162	180	220	1.0	287	2.1	5.0
P6SMBJ200A	P6SMBJ200CA	200A	200CA	171	190	210	1.0	274	2.2	5.0
P6SMBJ220	P6SMBJ220C	220	220C	175	198	242	1.0	344	1.7	5.0
P6SMBJ220A	P6SMBJ220CA	220A	220CA	185	209	231	1.0	328	1.8	5.0
P6SMBJ250	P6SMBJ250C	250	250C	202	225	275	1.0	360	1.7	5.0
P6SMBJ250A	P6SMBJ250CA	250A	250CA	214	237	263	1.0	344	1.7	5.0
P6SMBJ300	P6SMBJ300C	300	300C	243	270	330	1.0	430	1.4	5.0
P6SMBJ300A	P6SMBJ300CA	300A	300CA	256	285	315	1.0	414	1.4	5.0
P6SMBJ350	P6SMBJ350C	350	350C	284	315	385	1.0	504	1.2	5.0
P6SMBJ350A	P6SMBJ350CA	350A	350CA	300	333	368	1.0	482	1.2	5.0
P6SMBJ400	P6SMBJ400C	400	400C	324	360	440	1.0	574	1.0	5.0
P6SMBJ400A	P6SMBJ400CA	400A	400CA	342	380	420	1.0	548	1.1	5.0
P6SMBJ440	P6SMBJ440C	440	440C	356	396	484	1.0	631	0.95	5.0
P6SMBJ440A	P6SMBJ440CA	440A	440CA	376	418	462	1.0	602	1.0	5.0

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

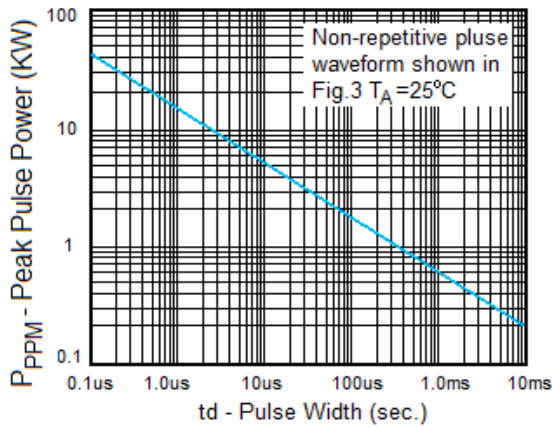


Fig. 1 Peak Pulse Power Rating

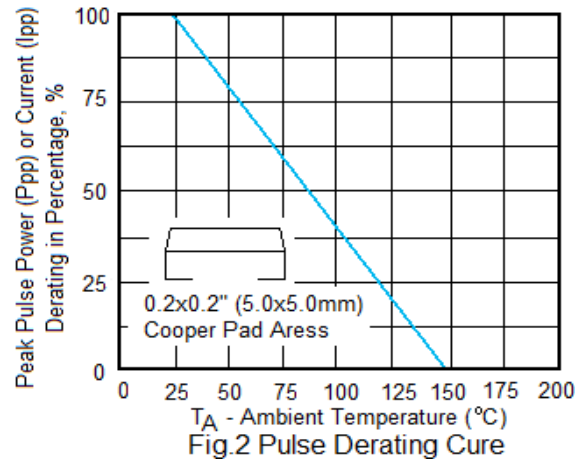


Fig. 2 Pulse Derating Curve

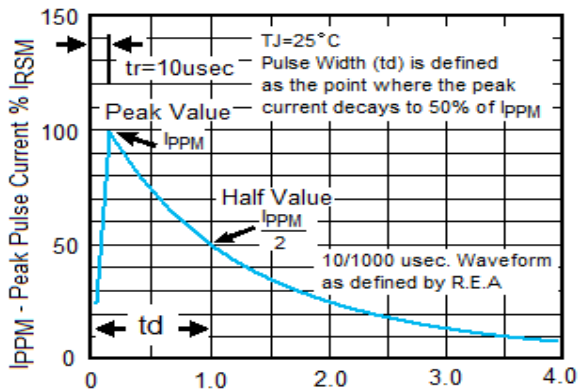


Fig. 3 Pulse Waveform

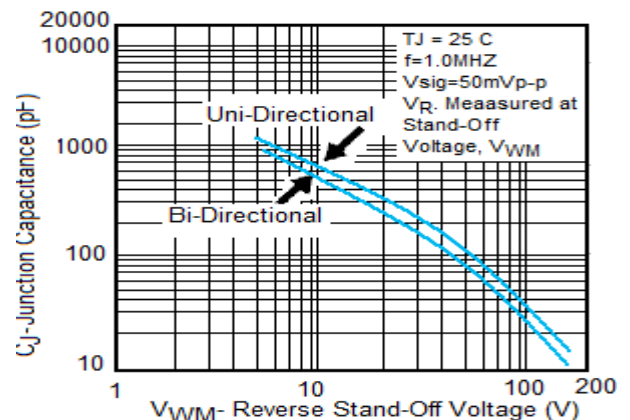


Fig. 4- Typical Junction Capacitance