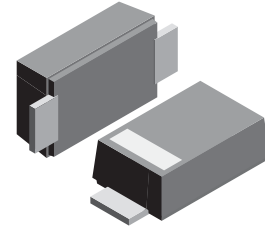


**VOLTAGE RANGE: 6.8 - 440 V**  
**POWER: 600Watts**

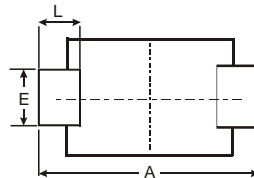
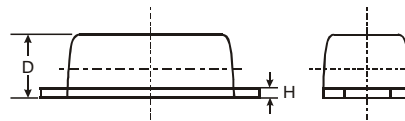
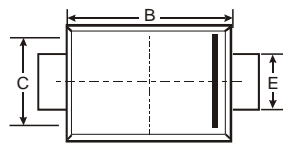


### Features

- 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: SMBF , Molded Plastic
- Terminals: Solder Plated, Solderable per MIL-STD-750, Method 2026
- Polarity: Cathode Band or Cathode Notch
- Marking: Type Number
- Weight: 0.0018 ounces, 0.05grams



SMBF			
Dim	Min	Max	Typ
A	5.45	5.55	5.50
B	4.27	4.33	4.30
C	3.57	3.63	3.60
D	1.32	1.38	1.35
E	1.96	2.00	1.98
H	0.019	0.021	0.20
L	0.73	0.77	0.75
All Dimensions in mm			

### Maximum Ratings @ T<sub>A</sub> = 25°C unless otherwise specified

Characteristic	Symbol	Value	Unit
Peak Pulse Power Dissipation (Non repetitive current pulse derated above T <sub>A</sub> = 25°C) (Note 1)	P <sub>PK</sub>	600	W
Peak Forward Surge Current, 8.3ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method) (Notes 1, 2, & 3)	I <sub>FSM</sub>	100	A
Instantaneous Forward Voltage @ I <sub>PP</sub> = 35A (Notes 1, 2, & 3)	V <sub>F</sub>	3.5 5.0	V V
Operating and Storage Temperature Range	T <sub>j</sub> , T <sub>STG</sub>	-55 to +150	°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		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)	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)
SMBF6.8	SMBF6.8C	5.50	6.12	7.48	10.0	10.8	55.6	1000.0
SMBF6.8A	SMBF6.8CA	5.80	6.45	7.14	10.0	10.5	57.1	1000.0
SMBF7.5	SMBF7.5C	6.05	6.75	8.25	10.0	11.7	51.3	500.0
SMBF7.5A	SMBF7.5CA	6.40	7.13	7.88	10.0	11.3	53.1	500.0
SMBF8.2	SMBF8.2C	6.63	7.38	9.02	10.0	12.5	48.0	200.0
SMBF8.2A	SMBF8.2CA	7.02	7.79	8.61	10.0	12.1	49.6	200.0
SMBF9.1	SMBF9.1C	7.37	8.19	10.0	1.0	13.8	43.5	50.0
SMBF9.1A	SMBF9.1CA	7.78	8.65	9.55	1.0	13.4	44.8	50.0
SMBF10	SMBF10C	8.10	9.00	11.0	1.0	15.0	40.0	10.0
SMBF10A	SMBF10CA	8.55	9.50	10.5	1.0	14.5	41.4	10.0
SMBF11	SMBF11C	8.92	9.90	12.1	1.0	16.2	37.0	5.0
SMBF11A	SMBF11CA	9.40	10.5	11.6	1.0	15.6	38.5	5.0
SMBF12	SMBF12C	9.72	10.8	13.2	1.0	17.3	34.7	5.0
SMBF12A	SMBF12CA	10.2	11.4	12.6	1.0	16.7	35.9	5.0
SMBF13	SMBF13C	10.5	11.7	14.3	1.0	19.0	31.6	5.0
SMBF13A	SMBF13CA	11.1	12.4	13.7	1.0	18.2	33.0	5.0
SMBF15	SMBF15C	12.1	13.5	16.5	1.0	22.0	27.3	5.0
SMBF15A	SMBF15CA	12.8	14.3	15.8	1.0	21.2	28.3	5.0
SMBF16	SMBF16C	12.9	14.4	17.6	1.0	23.5	25.5	5.0
SMBF16A	SMBF16CA	13.6	15.2	16.8	1.0	22.5	26.7	5.0
SMBF18	SMBF18C	14.5	16.2	19.8	1.0	26.5	22.6	5.0
SMBF18A	SMBF18CA	15.3	17.1	18.9	1.0	25.2	23.8	5.0
SMBF20	SMBF20C	16.2	18.0	22.0	1.0	29.1	20.6	5.0
SMBF20A	SMBF20CA	17.1	19.0	21.0	1.0	27.7	21.7	5.0
SMBF22	SMBF22C	17.8	19.8	24.2	1.0	31.9	18.8	5.0
SMBF22A	SMBF22CA	18.8	20.9	23.1	1.0	30.6	19.6	5.0
SMBF24	SMBF24C	19.4	21.6	26.4	1.0	34.7	17.3	5.0
SMBF24A	SMBF24CA	20.5	22.8	25.2	1.0	33.2	18.1	5.0
SMBF27	SMBF27C	21.8	24.3	29.7	1.0	39.1	15.3	5.0
SMBF27A	SMBF27CA	23.1	25.7	28.4	1.0	37.5	16.0	5.0
SMBF30	SMBF30C	24.3	27.0	33.0	1.0	43.5	13.8	5.0
SMBF30A	SMBF30CA	25.6	28.5	31.5	1.0	41.4	14.5	5.0
SMBF33	SMBF33C	26.8	29.7	36.3	1.0	47.7	12.6	5.0
SMBF33A	SMBF33CA	28.2	31.4	34.7	1.0	45.7	13.1	5.0
SMBF36	SMBF36C	29.1	32.4	39.6	1.0	52.0	11.5	5.0
SMBF36A	SMBF36CA	30.8	34.2	37.8	1.0	49.9	12.0	5.0
SMBF39	SMBF39C	31.6	35.1	42.9	1.0	56.4	10.6	5.0
SMBF39A	SMBF39CA	33.3	37.1	41.0	1.0	53.9	11.1	5.0
SMBF43	SMBF43C	34.8	38.7	47.3	1.0	61.9	9.7	5.0
SMBF43A	SMBF43CA	36.8	40.9	45.2	1.0	59.3	10.1	5.0
SMBF47	SMBF47C	38.1	42.3	51.7	1.0	67.8	8.8	5.0
SMBF47A	SMBF47CA	40.2	44.7	49.4	1.0	64.8	9.3	5.0
SMBF51	SMBF51C	41.3	45.9	56.1	1.0	73.5	8.2	5.0
SMBF51A	SMBF51CA	43.6	48.5	53.6	1.0	70.1	8.6	5.0
SMBF56	SMBF56C	45.4	50.4	61.6	1.0	80.5	7.5	5.0
SMBF56A	SMBF56CA	47.8	53.2	58.8	1.0	77.0	7.8	5.0
SMBF62	SMBF62C	50.2	55.8	68.2	1.0	89.0	6.7	5.0
SMBF62A	SMBF62CA	53.0	58.9	65.1	1.0	85.0	7.1	5.0
SMBF68	SMBF68C	55.1	61.2	74.8	1.0	98.0	6.1	5.0
SMBF68A	SMBF68CA	58.1	64.6	71.4	1.0	92.0	6.5	5.0
SMBF75	SMBF75C	60.7	67.5	82.5	1.0	108	5.6	5.0
SMBF75A	SMBF75CA	64.1	71.3	78.8	1.0	103	5.8	5.0

TYPE		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)	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)
SMBF82	SMBF82C	66.4	73.8	90.2	1.0	118	5.1	5.0
SMBF82A	SMBF82CA	70.1	77.9	86.1	1.0	113	5.3	5.0
SMBF91	SMBF91C	73.7	81.9	100	1.0	131	4.6	5.0
SMBF91A	SMBF91CA	77.8	86.5	95.5	1.0	125	4.8	5.0
SMBF100	SMBF100C	81.0	90.0	110	1.0	144	4.2	5.0
SMBF100A	SMBF100CA	85.5	95.0	105	1.0	137	4.4	5.0
SMBF110	SMBF110C	89.2	99.0	121	1.0	158	3.8	5.0
SMBF110A	SMBF110CA	94.0	105	116	1.0	152	3.9	5.0
SMBF120	SMBF120C	97.2	108	132	1.0	173	3.5	5.0
SMBF120A	SMBF120CA	102	114	126	1.0	165	3.6	5.0
SMBF130	SMBF130C	105	117	143	1.0	187	3.2	5.0
SMBF130A	SMBF130CA	111	124	137	1.0	179	3.4	5.0
SMBF150	SMBF150C	121	135	165	1.0	215	2.8	5.0
SMBF150A	SMBF150CA	128	143	158	1.0	207	2.9	5.0
SMBF160	SMBF160C	130	144	176	1.0	230	2.6	5.0
SMBF160A	SMBF160CA	136	152	168	1.0	219	2.7	5.0
SMBF170	SMBF170C	138	153	187	1.0	244	2.5	5.0
SMBF170A	SMBF170CA	145	162	179	1.0	234	2.6	5.0
SMBF180	SMBF180C	146	162	198	1.0	258	2.3	5.0
SMBF180A	SMBF180CA	154	171	189	1.0	246	2.4	5.0
SMBF200	SMBF200C	162	180	220	1.0	287	2.1	5.0
SMBF200A	SMBF200CA	171	190	210	1.0	274	2.2	5.0
SMBF220	SMBF220C	175	198	242	1.0	344	1.7	5.0
SMBF220A	SMBF220CA	185	209	231	1.0	328	1.8	5.0
SMBF250	SMBF250C	202	225	275	1.0	360	1.7	5.0
SMBF250A	SMBF250CA	214	237	263	1.0	344	1.7	5.0
SMBF300	SMBF300C	243	270	330	1.0	430	1.4	5.0
SMBF300A	SMBF300CA	256	285	315	1.0	414	1.4	5.0
SMBF350	SMBF350C	284	315	385	1.0	504	1.2	5.0
SMBF350A	SMBF350CA	300	333	368	1.0	482	1.2	5.0
SMBF400	SMBF400C	324	360	440	1.0	574	1.0	5.0
SMBF400A	SMBF400CA	342	380	420	1.0	548	1.1	5.0
SMBF440	SMBF440C	356	396	484	1.0	631	0.95	5.0
SMBF440A	SMBF440CA	376	418	462	1.0	602	1.0	5.0

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

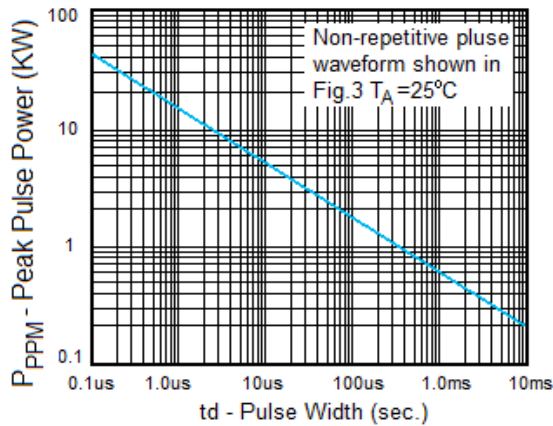


Fig. 1 Peak Pulse Power Rating

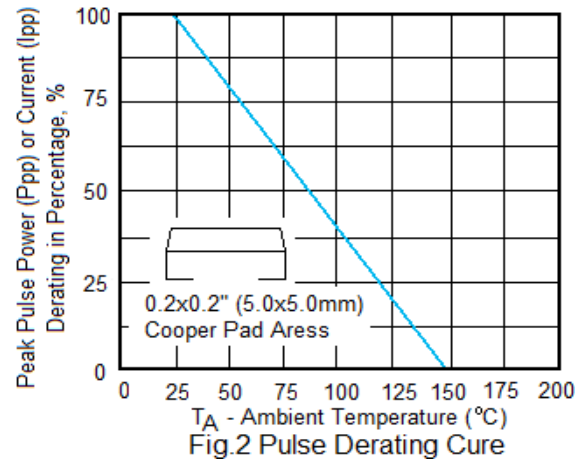


Fig.2 Pulse Derating Curve

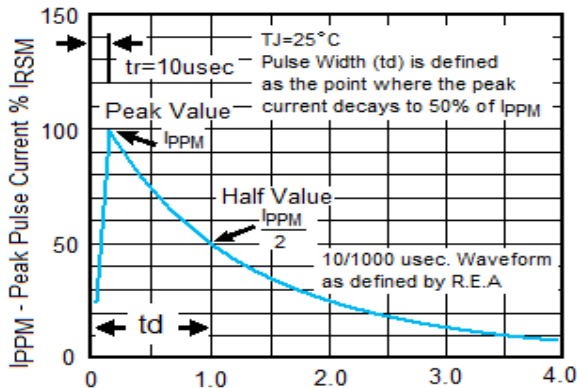


Fig.3 Pulse Waveform

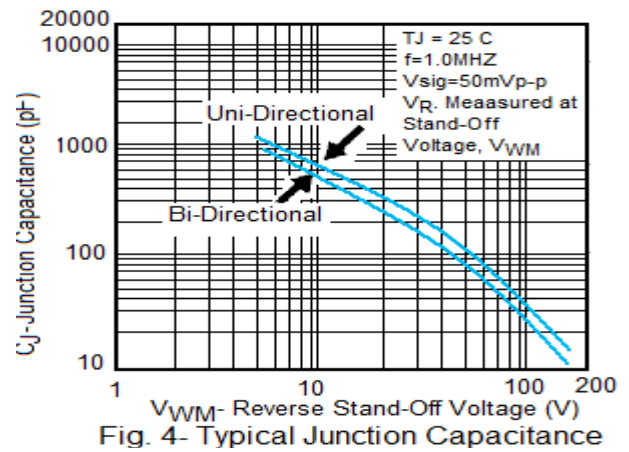


Fig. 4- Typical Junction Capacitance