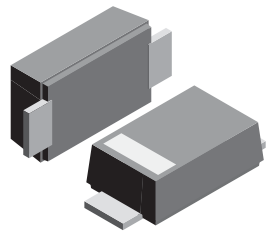
P6SMBF6.8A(CA) - P6SMBF440A(CA)

SURFACE MOUNT TRANSIENT VOLAGE SUPPRRESSOR DIODE

VOLTAGE RANGE: 6.8 - 440 V
POWER: 600Watts



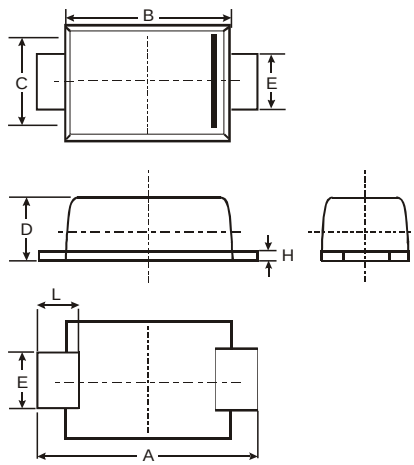
Features

- 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

RoHS COMPLIANT



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_A = 25°C unless otherwise specified

Characteristic	Symbol	Value	Unit
Peak Pulse Power Dissipation (Non repetitive current pulse derated above T_A = 25°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} = 35A (V_{BR}<100V) (V_{BR}≥100V) (Notes 1, 2, & 3)	V_F	3.5 5.0	V V
Operating and Storage Temperature Range	T_j, T_{STG}	-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_T	Breakdown Voltage Max. @ I_T	Test Current	Maximum Clamping Voltage @I_{PP}	Peak Pulse Current	Reverse Leakage @V_{RWM}
(Uni)	(Bi)	V_{RWM}(V)	$V_{BR\ MIN}$(V)	$V_{BR\ MAX}$(V)	I_T (mA)	V_C(V)	I_{PP}(A)	I_R(uA)
P6SMBF6.8	P6SMBF6.8C	5.50	6.12	7.48	10.0	10.8	55.6	1000.0
P6SMBF6.8A	P6SMBF6.8CA	5.80	6.45	7.14	10.0	10.5	57.1	1000.0
P6SMBF7.5	P6SMBF7.5C	6.05	6.75	8.25	10.0	11.7	51.3	500.0
P6SMBF7.5A	P6SMBF7.5CA	6.40	7.13	7.88	10.0	11.3	53.1	500.0
P6SMBF8.2	P6SMBF8.2C	6.63	7.38	9.02	10.0	12.5	48.0	200.0
P6SMBF8.2A	P6SMBF8.2CA	7.02	7.79	8.61	10.0	12.1	49.6	200.0
P6SMBF9.1	P6SMBF9.1C	7.37	8.19	10.0	1.0	13.8	43.5	50.0
P6SMBF9.1A	P6SMBF9.1CA	7.78	8.65	9.55	1.0	13.4	44.8	50.0
P6SMBF10	P6SMBF10C	8.10	9.00	11.0	1.0	15.0	40.0	10.0
P6SMBF10A	P6SMBF10CA	8.55	9.50	10.5	1.0	14.5	41.4	10.0
P6SMBF11	P6SMBF11C	8.92	9.90	12.1	1.0	16.2	37.0	5.0
P6SMBF11A	P6SMBF11CA	9.40	10.5	11.6	1.0	15.6	38.5	5.0
P6SMBF12	P6SMBF12C	9.72	10.8	13.2	1.0	17.3	34.7	5.0
P6SMBF12A	P6SMBF12CA	10.2	11.4	12.6	1.0	16.7	35.9	5.0
P6SMBF13	P6SMBF13C	10.5	11.7	14.3	1.0	19.0	31.6	5.0
P6SMBF13A	P6SMBF13CA	11.1	12.4	13.7	1.0	18.2	33.0	5.0
P6SMBF15	P6SMBF15C	12.1	13.5	16.5	1.0	22.0	27.3	5.0
P6SMBF15A	P6SMBF15CA	12.8	14.3	15.8	1.0	21.2	28.3	5.0
P6SMBF16	P6SMBF16C	12.9	14.4	17.6	1.0	23.5	25.5	5.0
P6SMBF16A	P6SMBF16CA	13.6	15.2	16.8	1.0	22.5	26.7	5.0
P6SMBF18	P6SMBF18C	14.5	16.2	19.8	1.0	26.5	22.6	5.0
P6SMBF18A	P6SMBF18CA	15.3	17.1	18.9	1.0	25.2	23.8	5.0
P6SMBF20	P6SMBF20C	16.2	18.0	22.0	1.0	29.1	20.6	5.0
P6SMBF20A	P6SMBF20CA	17.1	19.0	21.0	1.0	27.7	21.7	5.0
P6SMBF22	P6SMBF22C	17.8	19.8	24.2	1.0	31.9	18.8	5.0
P6SMBF22A	P6SMBF22CA	18.8	20.9	23.1	1.0	30.6	19.6	5.0
P6SMBF24	P6SMBF24C	19.4	21.6	26.4	1.0	34.7	17.3	5.0
P6SMBF24A	P6SMBF24CA	20.5	22.8	25.2	1.0	33.2	18.1	5.0
P6SMBF27	P6SMBF27C	21.8	24.3	29.7	1.0	39.1	15.3	5.0
P6SMBF27A	P6SMBF27CA	23.1	25.7	28.4	1.0	37.5	16.0	5.0
P6SMBF30	P6SMBF30C	24.3	27.0	33.0	1.0	43.5	13.8	5.0
P6SMBF30A	P6SMBF30CA	25.6	28.5	31.5	1.0	41.4	14.5	5.0
P6SMBF33	P6SMBF33C	26.8	29.7	36.3	1.0	47.7	12.6	5.0
P6SMBF33A	P6SMBF33CA	28.2	31.4	34.7	1.0	45.7	13.1	5.0
P6SMBF36	P6SMBF36C	29.1	32.4	39.6	1.0	52.0	11.5	5.0
P6SMBF36A	P6SMBF36CA	30.8	34.2	37.8	1.0	49.9	12.0	5.0
P6SMBF39	P6SMBF39C	31.6	35.1	42.9	1.0	56.4	10.6	5.0
P6SMBF39A	P6SMBF39CA	33.3	37.1	41.0	1.0	53.9	11.1	5.0
P6SMBF43	P6SMBF43C	34.8	38.7	47.3	1.0	61.9	9.7	5.0
P6SMBF43A	P6SMBF43CA	36.8	40.9	45.2	1.0	59.3	10.1	5.0
P6SMBF47	P6SMBF47C	38.1	42.3	51.7	1.0	67.8	8.8	5.0
P6SMBF47A	P6SMBF47CA	40.2	44.7	49.4	1.0	64.8	9.3	5.0
P6SMBF51	P6SMBF51C	41.3	45.9	56.1	1.0	73.5	8.2	5.0
P6SMBF51A	P6SMBF51CA	43.6	48.5	53.6	1.0	70.1	8.6	5.0
P6SMBF56	P6SMBF56C	45.4	50.4	61.6	1.0	80.5	7.5	5.0
P6SMBF56A	P6SMBF56CA	47.8	53.2	58.8	1.0	77.0	7.8	5.0
P6SMBF62	P6SMBF62C	50.2	55.8	68.2	1.0	89.0	6.7	5.0
P6SMBF62A	P6SMBF62CA	53.0	58.9	65.1	1.0	85.0	7.1	5.0
P6SMBF68	P6SMBF68C	55.1	61.2	74.8	1.0	98.0	6.1	5.0
P6SMBF68A	P6SMBF68CA	58.1	64.6	71.4	1.0	92.0	6.5	5.0
P6SMBF75	P6SMBF75C	60.7	67.5	82.5	1.0	108	5.6	5.0
P6SMBF75A	P6SMBF75CA	64.1	71.3	78.8	1.0	103	5.8	5.0

TYPE		Reverse Stand-Off Voltage	Breakdown Voltage Min. @I_T	Breakdown Voltage Max. @ I_T	Test Current	Maximum Clamping Voltage @I_{PP}	Peak Pulse Current	Reverse Leakage @V_{RWM}
(Uni)	(Bi)	V_{RWM}(V)	$V_{BR\ MIN}$(V)	$V_{BR\ MAX}$(V)	I_T (mA)	V_C(V)	I_{PP}(A)	I_R(uA)
P6SMBF82	P6SMBF82C	66.4	73.8	90.2	1.0	118	5.1	5.0
P6SMBF82A	P6SMBF82CA	70.1	77.9	86.1	1.0	113	5.3	5.0
P6SMBF91	P6SMBF91C	73.7	81.9	100	1.0	131	4.6	5.0
P6SMBF91A	P6SMBF91CA	77.8	86.5	95.5	1.0	125	4.8	5.0
P6SMBF100	P6SMBF100C	81.0	90.0	110	1.0	144	4.2	5.0
P6SMBF100A	P6SMBF100CA	85.5	95.0	105	1.0	137	4.4	5.0
P6SMBF110	P6SMBF110C	89.2	99.0	121	1.0	158	3.8	5.0
P6SMBF110A	P6SMBF110CA	94.0	105	116	1.0	152	3.9	5.0
P6SMBF120	P6SMBF120C	97.2	108	132	1.0	173	3.5	5.0
P6SMBF120A	P6SMBF120CA	102	114	126	1.0	165	3.6	5.0
P6SMBF130	P6SMBF130C	105	117	143	1.0	187	3.2	5.0
P6SMBF130A	P6SMBF130CA	111	124	137	1.0	179	3.4	5.0
P6SMBF150	P6SMBF150C	121	135	165	1.0	215	2.8	5.0
P6SMBF150A	P6SMBF150CA	128	143	158	1.0	207	2.9	5.0
P6SMBF160	P6SMBF160C	130	144	176	1.0	230	2.6	5.0
P6SMBF160A	P6SMBF160CA	136	152	168	1.0	219	2.7	5.0
P6SMBF170	P6SMBF170C	138	153	187	1.0	244	2.5	5.0
P6SMBF170A	P6SMBF170CA	145	162	179	1.0	234	2.6	5.0
P6SMBF180	P6SMBF180C	146	162	198	1.0	258	2.3	5.0
P6SMBF180A	P6SMBF180CA	154	171	189	1.0	246	2.4	5.0
P6SMBF200	P6SMBF200C	162	180	220	1.0	287	2.1	5.0
P6SMBF200A	P6SMBF200CA	171	190	210	1.0	274	2.2	5.0
P6SMBF220	P6SMBF220C	175	198	242	1.0	344	1.7	5.0
P6SMBF220A	P6SMBF220CA	185	209	231	1.0	328	1.8	5.0
P6SMBF250	P6SMBF250C	202	225	275	1.0	360	1.7	5.0
P6SMBF250A	P6SMBF250CA	214	237	263	1.0	344	1.7	5.0
P6SMBF300	P6SMBF300C	243	270	330	1.0	430	1.4	5.0
P6SMBF300A	P6SMBF300CA	256	285	315	1.0	414	1.4	5.0
P6SMBF350	P6SMBF350C	284	315	385	1.0	504	1.2	5.0
P6SMBF350A	P6SMBF350CA	300	333	368	1.0	482	1.2	5.0
P6SMBF400	P6SMBF400C	324	360	440	1.0	574	1.0	5.0
P6SMBF400A	P6SMBF400CA	342	380	420	1.0	548	1.1	5.0
P6SMBF440	P6SMBF440C	356	396	484	1.0	631	0.95	5.0
P6SMBF440A	P6SMBF440CA	376	418	462	1.0	602	1.0	5.0

Ratings and Characteristic Curves T_A=25°C unless otherwise noted

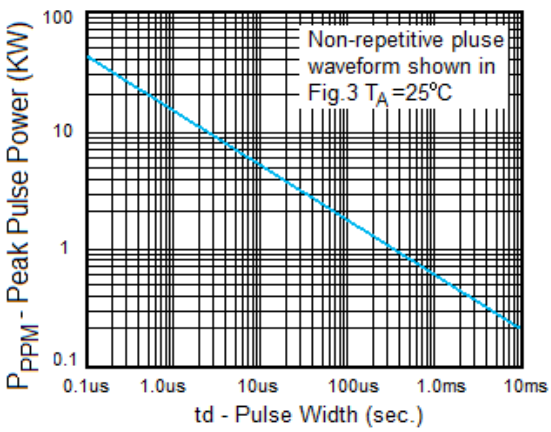


Fig. 1 Peak Pulse Power Rating

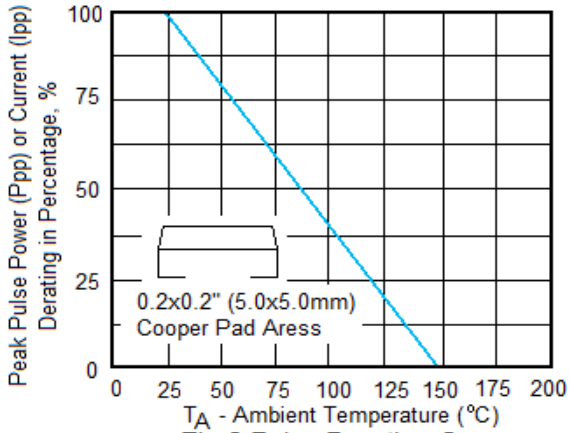


Fig.2 Pulse Derating Cure

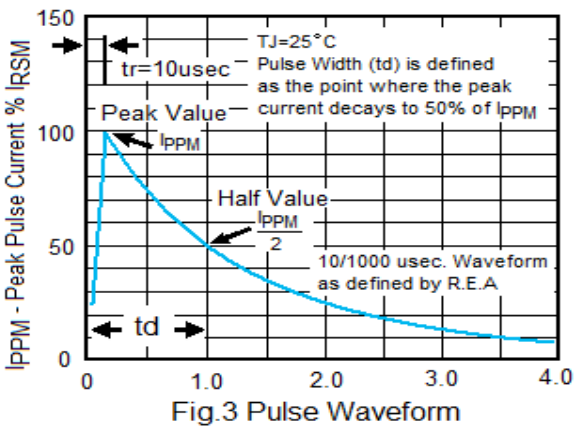


Fig.3 Pulse Waveform

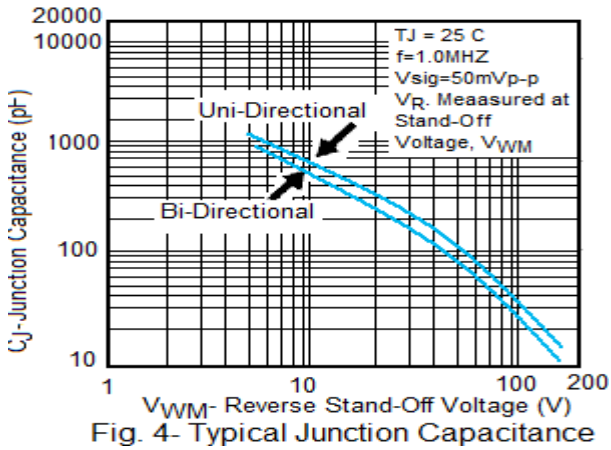


Fig. 4- Typical Junction Capacitance