

P6SMBF SERIES

SURFACE MOUNT TRANSIENT VOLTAGE SUPPRESSORS

Power Dissipation-600W

Stand-off Voltage-6.8V to 550V

FEATURES

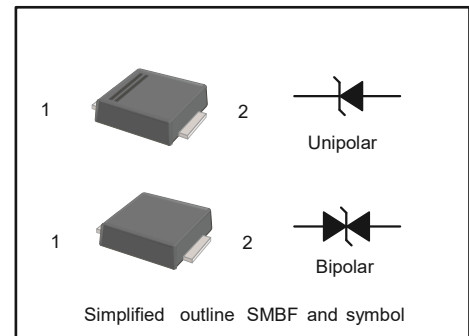
- ◆ For surface mount applications
- ◆ Glass passivated chip junction
- ◆ Low profile package
- ◆ Low induction
- ◆ Plastic package has UL Flammability Classification 94V-0

MECHANICAL DATA

- ◆ Case: SMBF molded plastic body
- ◆ Terminals: Solderable per MIL-STD-750, Method 2026
- ◆ Weight: Approximated 0.057 grams

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at $T_A = 25^\circ\text{C}$ unless otherwise specified.

PARAMETER	SYMBOL	VALUE	UNIT
Peak Pulse Power Dissipation on 10/1000 s Waveform (Note1, Note2, Fig.1)	P_{PPM}	600	W
Peak Forward Surge Current (Note3, Fig.4)	I_{FSM} (UNI)	100	A
Peak Pulse Current on 10/1000 us Waveform (Note1, Fig.2)	I_{PP}	see TABLE 1	A
Typical Thermal Resistance (Note2)	$R_{\theta JA}$	70	$^\circ\text{C/W}$
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +150	$^\circ\text{C}$

Notes: 1. Non-repetitive current pulse, per Fig.3 and derated above $T_A = 25^\circ\text{C}$ per Fig.2.
2. Mounted on FR-4 PCB single-sided copper pad.
3. Measured at 8.3ms single half sine-wave superimposed on rated load (JEDEC method).

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CHARACTERISTICS at $T_A = 25^\circ\text{C}$

TABLE1

Type		Reverse Stand-off Voltage	Breakdown Voltage		Test Current	Reverse Leakage		Clamp Voltage	Peak Pulse Current
		V_{RWM}	$V_{(BR)}$ at I_T		I_T	I_R at V_{RWM}		V_C at I_{PP}	I_{PP}
			Min.	Max.		UNI	BI		
UNI	BI	V	V	V	mA	μA	μA	V	A
P6SMBF6.8AT	P6SMBF6.8CAT	5.8	6.45	7.14	10	1000	1000	10.5	58.1
P6SMBF7.5AT	P6SMBF7.5CAT	6.4	7.13	7.88	10	500	500	11.3	54
P6SMBF8.2AT	P6SMBF8.2CAT	7.02	7.79	8.61	10	200	200	12.1	50.4
P6SMBF9.1AT	P6SMBF9.1CAT	7.78	8.65	9.55	1	50	50	13.4	45.5
P6SMBF10AT	P6SMBF10CAT	8.55	9.5	10.5	1	10	10	14.5	42.1
P6SMBF11AT	P6SMBF11CAT	9.4	10.5	11.6	1	5	5	15.6	39.1
P6SMBF12AT	P6SMBF12CAT	10.2	11.4	12.6	1	5	5	16.7	36.5
P6SMBF13AT	P6SMBF13CAT	11.1	12.4	13.7	1	1	1	18.2	33.5
P6SMBF15AT	P6SMBF15CAT	12.8	14.3	15.8	1	1	1	21.2	28.8
P6SMBF16AT	P6SMBF16CAT	13.6	15.2	16.8	1	1	1	22.5	27.1
P6SMBF18AT	P6SMBF18CAT	15.3	17.1	18.9	1	1	1	25.2	24.2
P6SMBF20AT	P6SMBF20CAT	17.1	19	21	1	1	1	27.7	22
P6SMBF22AT	P6SMBF22CAT	18.8	20.9	23.1	1	1	1	30.6	19.9
P6SMBF24AT	P6SMBF24CAT	20.5	22.8	25.2	1	1	1	33.2	18.4
P6SMBF27AT	P6SMBF27CAT	23.1	25.7	28.4	1	1	1	37.5	16.3
P6SMBF30AT	P6SMBF30CAT	25.6	28.5	31.5	1	1	1	41.4	14.7
P6SMBF33AT	P6SMBF33CAT	28.2	31.4	34.7	1	1	1	45.7	13.3
P6SMBF36AT	P6SMBF36CAT	30.8	34.2	37.8	1	1	1	49.9	12.2
P6SMBF39AT	P6SMBF39CAT	33.3	37.1	41	1	1	1	53.9	11.3
P6SMBF43AT	P6SMBF43CAT	36.8	40.9	45.2	1	1	1	59.3	10.3
P6SMBF47AT	P6SMBF47CAT	40.2	44.7	49.4	1	1	1	64.8	9.4
P6SMBF51AT	P6SMBF51CAT	43.6	48.5	53.6	1	1	1	70.1	8.7
P6SMBF56AT	P6SMBF56CAT	47.8	53.2	58.8	1	1	1	77	7.9

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P6SMBF62AT	P6SMBF62CAT	53	58.9	65.1	1	1	1	85	7.2
P6SMBF68AT	P6SMBF68CAT	58.1	64.6	71.4	1	1	1	92	6.6
P6SMBF75AT	P6SMBF75CAT	64.1	71.3	78.8	1	1	1	103	5.9
P6SMBF82AT	P6SMBF82CAT	70.1	77.9	86.1	1	1	1	113	5.4
P6SMBF91AT	P6SMBF91CAT	77.8	86.5	95.5	1	1	1	125	4.9
P6SMBF100AT	P6SMBF100CAT	85.5	95	105	1	1	1	137	4.5
P6SMBF110AT	P6SMBF110CAT	94	105	116	1	1	1	152	4
P6SMBF120AT	P6SMBF120CAT	102	114	126	1	1	1	165	3.7
P6SMBF130AT	P6SMBF130CAT	111	124	137	1	1	1	179	3.4
P6SMBF150AT	P6SMBF150CAT	128	143	158	1	1	1	207	2.9
P6SMBF160AT	P6SMBF160CAT	136	152	168	1	1	1	219	2.8
P6SMBF170AT	P6SMBF170CAT	145	162	179	1	1	1	234	2.6
P6SMBF180AT	P6SMBF180CAT	154	171	189	1	1	1	246	2.5
P6SMBF200AT	P6SMBF200CAT	171	190	210	1	1	1	274	2.2
P6SMBF220AT	P6SMBF220CAT	185	209	231	1	1	1	328	1.9
P6SMBF250AT	P6SMBF250CAT	214	237	263	1	1	1	344	1.8
P6SMBF300AT	P6SMBF300CAT	256	285	315	1	1	1	414	1.5
P6SMBF350AT	P6SMBF350CAT	300	332	368	1	1	1	482	1.3
P6SMBF400AT	P6SMBF400CAT	342	380	420	1	1	1	548	1.1
P6SMBF440AT	P6SMBF440CAT	376	418	462	1	1	1	602	1
P6SMBF480AT	P6SMBF480CAT	408	456	504	1	1	1	658	0.9
P6SMBF510AT	P6SMBF510CAT	434	485	535	1	1	1	698	0.9
P6SMBF530AT	P6SMBF530CAT	477	503.5	556.5	1	1	1	725	0.8
P6SMBF540AT	P6SMBF540CAT	486	513	567	1	1	1	740	0.8
P6SMBF550AT	P6SMBF550CAT	495	522.5	577.5	1	1	1	760	0.8

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RATINGS AND CHARACTERISTIC CURVES

Fig.1 Peak Pulse Power Rating Curve

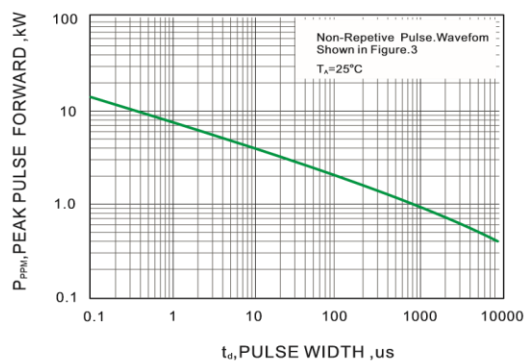


Fig.2 Forward Current Derating Curve

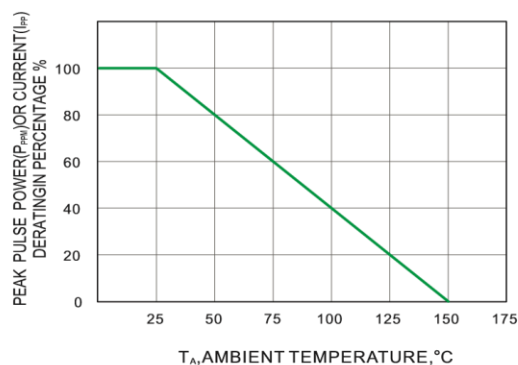


Fig.3 Pulse Waveform

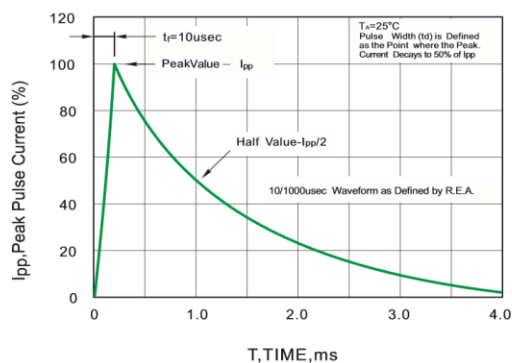
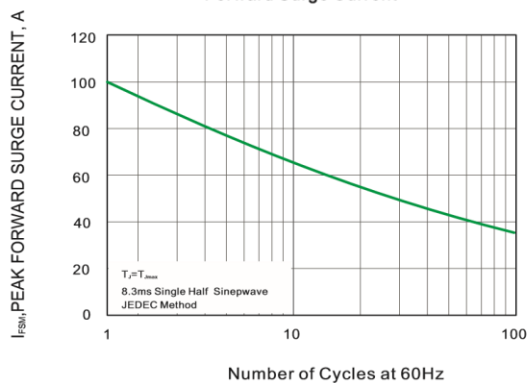


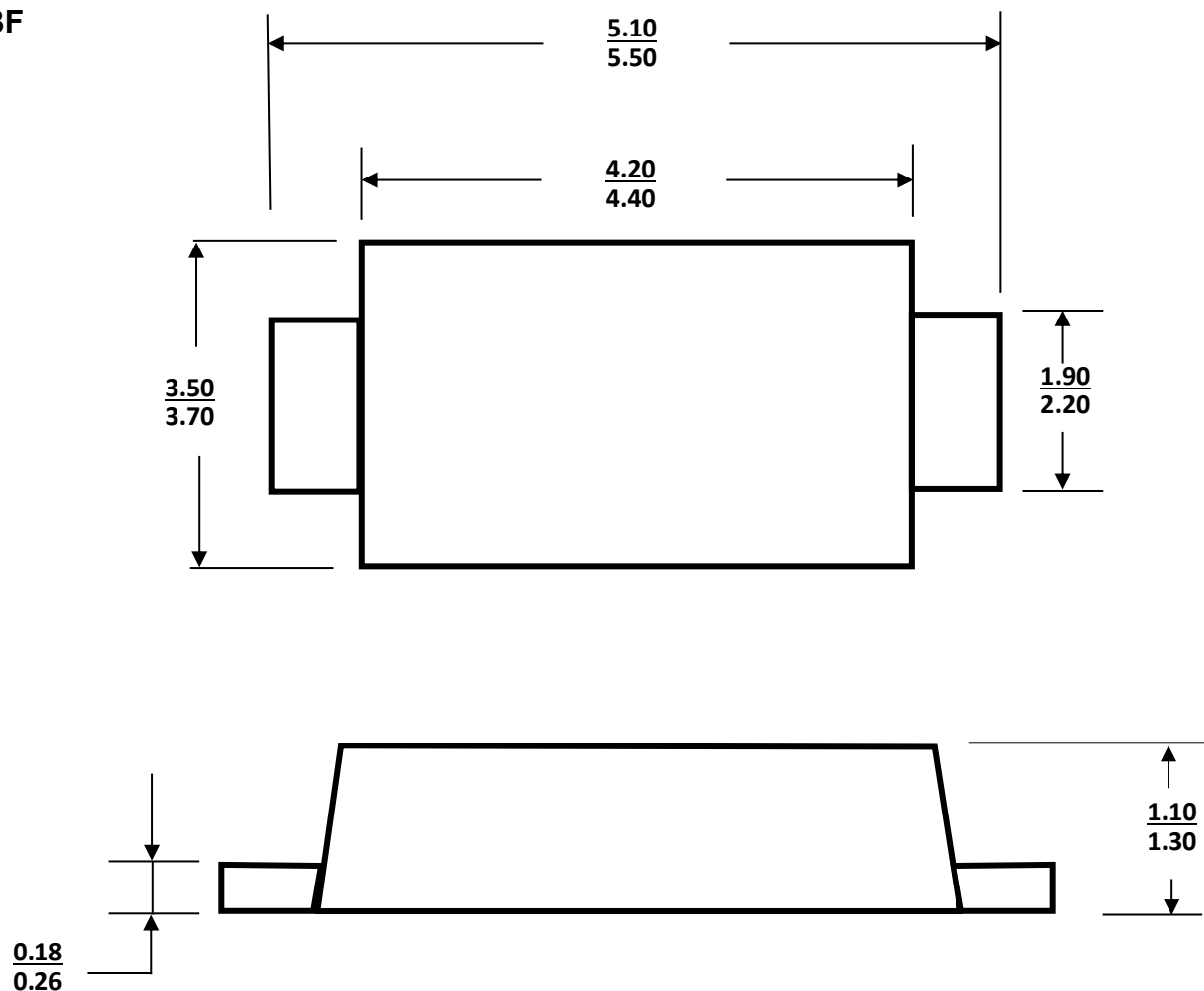
Fig.4 Maximum Non-Repetitive Peak Forward Surge Current



P6SMBF SERIES

PACKAGE OUTLINE

SMBF



Dimensions in millimeters

ORDERING INFORMATION

Device	Package	Shipping
P6SMBF SERIES	SMBF	5,000/Tape & Reel (13 inches)

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