

Surface mount transient voltage suppressor power 600 watts

Stand-Off Voltage : 6.8V~550V

FEATURES

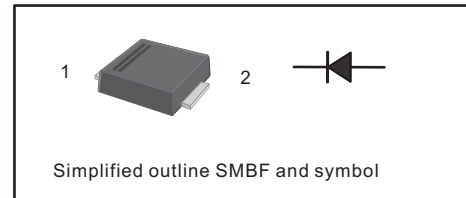
- For surface mounted applications in order to optimize board space.
- Low profile package
- Glass passivated junction
- Low inductance
- Plastic package has Underwriters Laboratory Flammability

MECHANICAL DATA

- Case: SMBF
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 57mg / 0.002oz

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



Maximum Ratings and Electrical characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

Parameter	Symbol	Value	Unit
Peak Pulse Power Dissipation on 10/1000 s waveform (Note1,Note2, Fig.1).	P_{PPM}	Minimum 600	W
Peak Forward Surge Current, 8.3ms Single Half Sine-Wave Superimposed on Rated Load, (JEDEC Method) (Note 3, Fig4).	I_{FSM}	100	A
Peak Pulse Current on 10/1000 us waveform (Note 1, Fig 2)	I_{PPM}	see Table 1	A
Typical Junction capacitance at VR=4V, f=1MHz	C_J	390	pF
ESD Voltage per IEC6100-4-2 Contact Air	V_{ESD1} V_{ESD2}	± 8 ± 15	kV
Typical Thermal Resistance Junction to Ambient(Note 2)	$R_{\theta JA}$	150	°C/W
Operating Junction Temperature and Storage Temperature Range	T_j, T_{stg}	-55 ~ +150	°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, mini pad.
3. Peak Forward Surge Current : 8.3ms single half sine-wave Superimposed on rated load (JEDEC method).
4. Peak pulse power waveform is 10/1000 μs .

Characteristics at Ta = 25°C

Type	Marking	Reverse Stand-off Voltage	Breakdown Voltage		Test Current	Reverse Leakage	Max. Clamp Voltage	Peak Pulse Current
		V _{RWM}	V _{BR} @ I _T		I _T	I _R @ V _{RWM}	V _C @ I _{PP}	I _{PP}
			Min	Max				
		V	V	V	mA	µA	V	A
P6SMBF6.8A	6V8A	5.8	6.45	7.14	10	1000	10.5	58.1
P6SMBF7.5A	7V5A	6.4	7.13	7.88	10	500	11.3	54
P6SMBF8.2A	8V2A	7.02	7.79	8.61	10	200	12.1	50.4
P6SMBF9.1A	9V1A	7.78	8.65	9.55	1	50	13.4	45.5
P6SMBF10A	10A	8.55	9.5	10.5	1	10	14.5	42.1
P6SMBF11A	11A	9.4	10.5	11.6	1	5	15.6	39.1
P6SMBF12A	12A	10.2	11.4	12.6	1	5	16.7	36.5
P6SMBF13A	13A	11.1	12.4	13.7	1	1	18.2	33.5
P6SMBF15A	15A	12.8	14.3	15.8	1	1	21.2	28.8
P6SMBF16A	16A	13.6	15.2	16.8	1	1	22.5	27.1
P6SMBF18A	18A	15.3	17.1	18.9	1	1	25.2	24.2
P6SMBF20A	20A	17.1	19	21	1	1	27.7	22
P6SMBF22A	22A	18.8	20.9	23.1	1	1	30.6	19.9
P6SMBF24A	24A	20.5	22.8	25.2	1	1	33.2	18.4
P6SMBF27A	27A	23.1	25.7	28.4	1	1	37.5	16.3
P6SMBF30A	30A	25.6	28.5	31.5	1	1	41.4	14.7
P6SMBF33A	33A	28.2	31.4	34.7	1	1	45.7	13.3
P6SMBF36A	36A	30.8	34.2	37.8	1	1	49.9	12.2
P6SMBF39A	39A	33.3	37.1	41	1	1	53.9	11.3
P6SMBF43A	43A	36.8	40.9	45.2	1	1	59.3	10.3
P6SMBF47A	47A	40.2	44.7	49.4	1	1	64.8	9.4
P6SMBF51A	51A	43.6	48.5	53.6	1	1	70.1	8.7
P6SMBF56A	56A	47.8	53.2	58.8	1	1	77	7.9
P6SMBF62A	62A	53	58.9	65.1	1	1	85	7.2
P6SMBF68A	68A	58.1	64.6	71.4	1	1	92	6.6
P6SMBF75A	75A	64.1	71.3	78.8	1	1	103	5.9
P6SMBF82A	82A	70.1	77.9	86.1	1	1	113	5.4
P6SMBF91A	91A	77.8	86.5	95.5	1	1	125	4.9
P6SMBF100A	100A	85.5	95	105	1	1	137	4.5
P6SMBF110A	110A	94	105	116	1	1	152	4
P6SMBF120A	120A	102	114	126	1	1	165	3.7
P6SMBF130A	130A	111	124	137	1	1	179	3.4
P6SMBF150A	150A	128	143	158	1	1	207	2.9
P6SMBF160A	160A	136	152	168	1	1	219	2.8
P6SMBF170A	170A	145	162	179	1	1	234	2.6
P6SMBF180A	180A	154	171	189	1	1	246	2.5
P6SMBF200A	200A	171	190	210	1	1	274	2.2
P6SMBF220A	220A	185	209	231	1	1	328	1.9
P6SMBF250A	250A	214	237	263	1	1	344	1.8
P6SMBF300A	300A	256	285	315	1	1	414	1.5
P6SMBF350A	350A	300	332	368	1	1	482	1.3
P6SMBF400A	400A	342	380	420	1	1	548	1.1
P6SMBF440A	440A	376	418	462	1	1	602	1
P6SMBF480A	480A	408	456	504	1	1	658	0.9
P6SMBF510A	510A	434	485	535	1	1	698	0.9
P6SMBF530A	530A	450	503.5	556.5	1	1	725	0.8
P6SMBF540A	540A	459	513	567	1	1	740	0.8
P6SMBF550A	550A	467	522.5	577.5	1	1	760	0.8

Fig.1 Peak Pulse Power Rating Curve

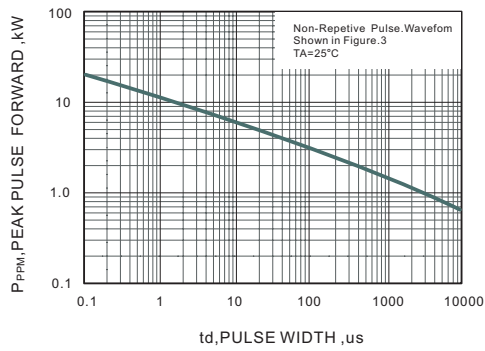


Fig.2 Forward Current Derating Curve

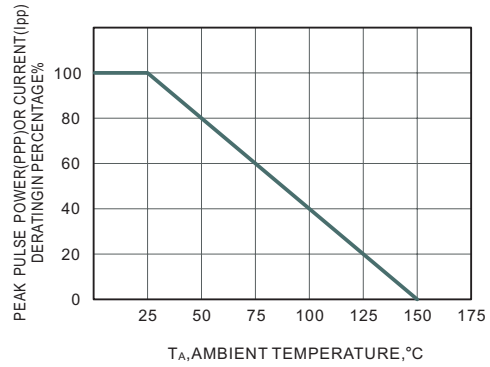


Fig.3 Pulse Waveform

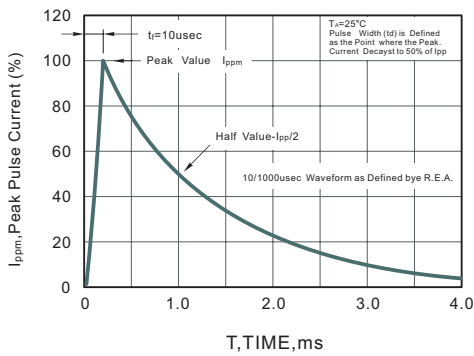
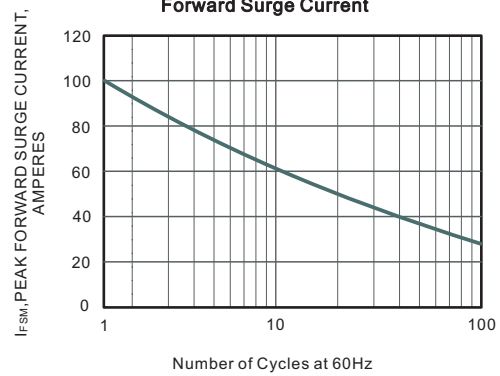


Fig.4 Maximum Non-Repetitive Peak Forward Surge Current

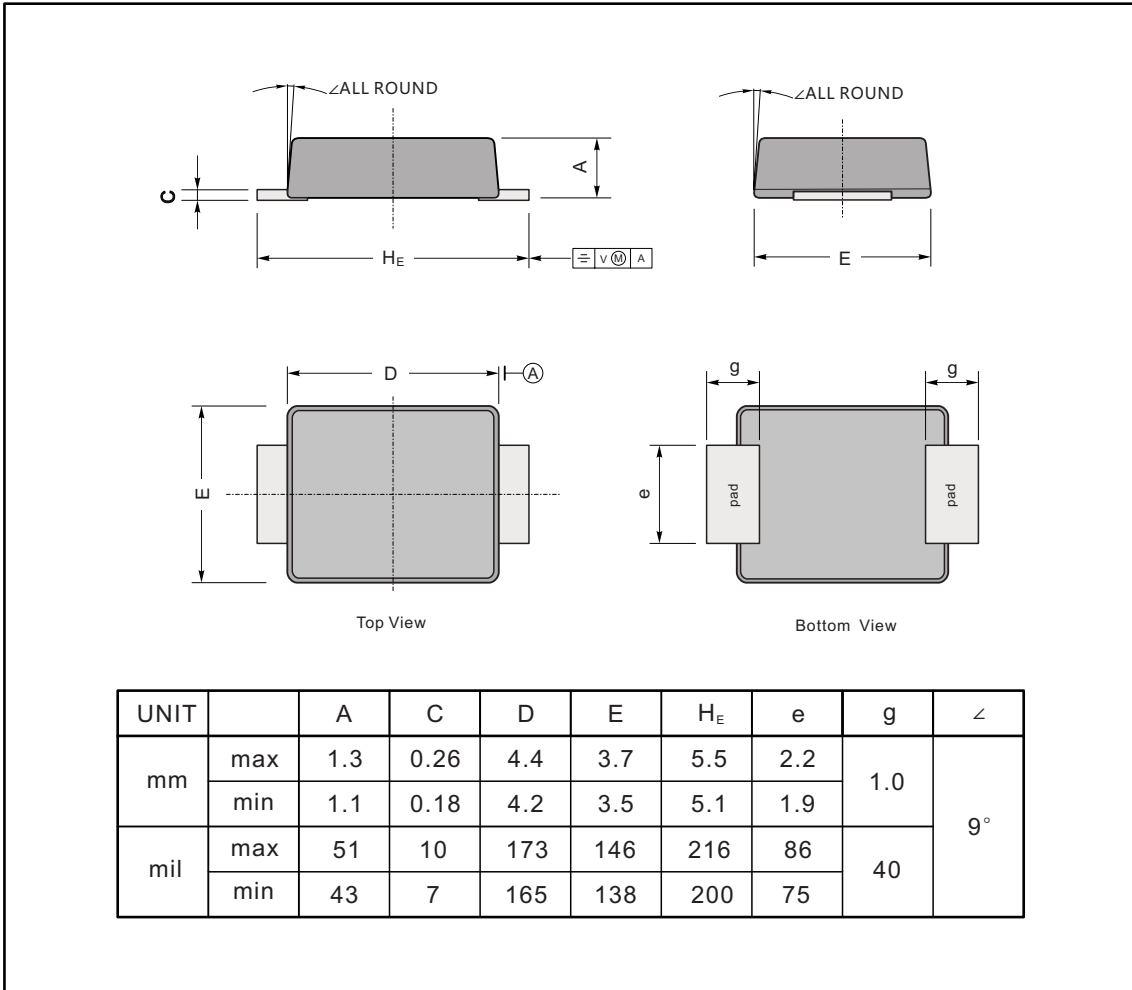


T_J=T_{Jmax}
8.3ms Single Half Sinepulse
JEDEC Method

PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SMBF



The recommended mounting pad size

