



## P6SMBJ8.5AS ~ P6SMBJ220AS Series

### Surface Mount Transient Voltage Suppressor

**Voltage** 8.5~220 V **Power** 600 W

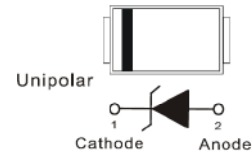
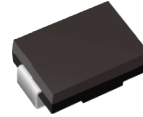
#### Features

- For surface mounted applications in order to optimize board space.
- Ultra thin profile package for space constrained utilization.
- Package suitable for automated handling
- Low inductance
- High temperature soldering : 260°C/10 seconds at terminals
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

#### Mechanical Data

- Case: Molded plastic, SMB
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.0032 ounces, 0.092 grams

SMB



### Maximum Ratings and Thermal Characteristics (T<sub>A</sub> = 25 °C unless otherwise noted)

PARAMETER	SYMBOL	LIMIT	UNITS
Peak Pulse Power Dissipation(tp = 10 / 1000 us)	P <sub>PP</sub> <sup>(1) (2)</sup>	600	W
Peak Pulse Current on tp = 10 / 1000 us waveform <sup>(Fig.2)</sup>	I <sub>PPM</sub> <sup>(1)</sup>	See table 1	A
Power Dissipation on Infinite Heat Sink at T <sub>L</sub> = 50 °C	P <sub>D</sub>	5	W
ESD IEC61000-4-2(Air)	V <sub>ESD</sub>	±15	kV
ESD IEC61000-4-2(Contact)		±8	
Typical Thermal Resistance Junction to Ambient	R <sub>θJA</sub> <sup>(3)</sup>	150	°C/W
Operating Junction Temperature Range	T <sub>J</sub>	-55~150	°C
Storage Temperature Range	T <sub>STG</sub>	-55~150	°C



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### Electrical Characteristics (T<sub>A</sub> = 25 °C unless otherwise noted)

Part Number	V <sub>RWM</sub>	V <sub>BR</sub>			I <sub>R</sub>	V <sub>C@I<sub>PP</sub></sub>		Marking Code
		Min.	Max.	I <sub>T</sub>	@V <sub>RWM</sub>	V	A	
	V	V	V	mA	uA			
600W Transient Voltage Suppressor								
P6SMBJ8.5AS	8.5	9.44	10.4	1	10	14.4	41.7	B8V5AS
P6SMBJ9.0AS	9	10	11.1	1	5	15.4	39	B9V0AS
P6SMBJ10AS	10	11.1	12.3	1	5	17	35.3	B10AS
P6SMBJ11AS	11	12.2	13.5	1	5	18.2	33	B11AS
P6SMBJ12AS	12	13.3	14.7	1	1	19.9	30.2	B12AS
P6SMBJ13AS	13	14.4	15.9	1	1	21.5	28	B13AS
P6SMBJ14AS	14	15.6	17.2	1	1	23.2	25.9	B14AS
P6SMBJ15AS	15	16.7	18.5	1	1	24.4	24.6	B15AS
P6SMBJ16AS	16	17.8	19.7	1	1	26	23.1	B16AS
P6SMBJ17AS	17	18.9	20.9	1	1	27.6	21.8	B17AS
P6SMBJ18AS	18	20	22.1	1	1	29.2	20.6	B18AS
P6SMBJ20AS	20	22.2	24.5	1	1	32.4	18.6	B20AS
P6SMBJ22AS	22	24.4	26.9	1	1	35.5	16.9	B22AS
P6SMBJ24AS	24	26.7	29.5	1	1	38.9	15.5	B24AS
P6SMBJ26AS	26	28.9	31.9	1	1	42.1	14.3	B26AS
P6SMBJ28AS	28	31.1	34.4	1	1	45.4	13.3	B28AS
P6SMBJ30AS	30	33.3	36.8	1	1	48.4	12.4	B30AS
P6SMBJ33AS	33	36.7	40.6	1	1	53.3	11.3	B33AS
P6SMBJ36AS	36	40	44.2	1	1	58.1	10.4	B36AS
P6SMBJ40AS	40	44.4	49.1	1	1	64.5	9.3	B40AS
P6SMBJ43AS	43	47.8	52.8	1	1	69.4	8.7	B43AS
P6SMBJ45AS	45	50	55.3	1	1	72.7	8.7	B45AS
P6SMBJ48AS	48	53.3	58.9	1	1	77.4	8.3	B48AS
P6SMBJ51AS	51	56.7	62.7	1	1	82.4	7.3	B51AS
P6SMBJ54AS	54	60	66.3	1	1	87.1	6.9	B54AS
P6SMBJ58AS	58	64.4	71.2	1	1	93.6	6.5	B58AS
P6SMBJ60AS	60	66.7	73.7	1	1	96.8	6.2	B60AS
P6SMBJ64AS	64	71.1	78.6	1	1	103	5.9	B64AS
P6SMBJ70AS	70	77.8	86	1	1	113	5.3	B70AS
P6SMBJ75AS	75	83.3	92.1	1	1	121	5	B75AS



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### Electrical Characteristics (T<sub>A</sub> = 25 °C unless otherwise noted)

Part Number	V <sub>RWM</sub>	V <sub>BR</sub>			I <sub>R</sub>	V <sub>C@I<sub>PP</sub></sub>		Marking Code
		Min.	Max.	I <sub>T</sub>	@V <sub>RWM</sub>	V	A	
	V	V	V	mA	uA			
600W Transient Voltage Suppressor								
P6SMBJ78AS	78	86.7	95.8	1	1	126	4.8	B78AS
P6SMBJ85AS	85	94.4	104	1	1	137	4.4	B85AS
P6SMBJ90AS	90	100	111	1	1	147	4.1	B90AS
P6SMBJ100AS	100	111	123	1	1	162	3.7	B100AS
P6SMBJ110AS	110	122	135	1	1	177	3.4	B110AS
P6SMBJ120AS	120	133	147	1	1	193	3.1	B120AS
P6SMBJ130AS	130	144	159	1	1	209	2.9	B130AS
P6SMBJ150AS	150	167	185	1	1	243	2.5	B150AS
P6SMBJ160AS	160	178	197	1	1	259	2.3	B160AS
P6SMBJ170AS	170	189	209	1	1	275	2.2	B170AS
P6SMBJ180AS	180	198	222	1	1	292	2.1	B180AS
P6SMBJ190AS	190	209	243.2	1	1	308	2	B190AS
P6SMBJ200AS	200	220	247	1	1	324	1.9	B200AS
P6SMBJ210AS	210	231	268.8	1	1	340	1.8	B210AS
P6SMBJ220AS	220	242	272	1	1	356	1.7	B220AS

**Note:**

1. Non-repetitive current pulse, per Fig.3 and derated above T<sub>A</sub>=25°C per Fig.2
2. Mounted on 100cm<sup>2</sup> copper pads to each terminal
3. Mounted on a FR4 PCB, single-sided copper, mini pad



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## TYPICAL CHARACTERISTIC CURVES

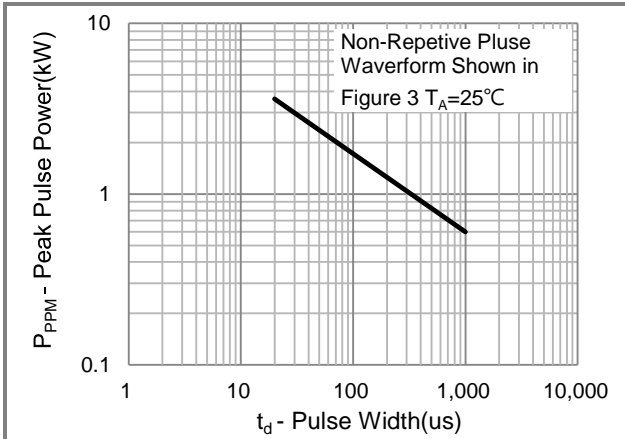


Fig.1 Pulse Power Rating Curve

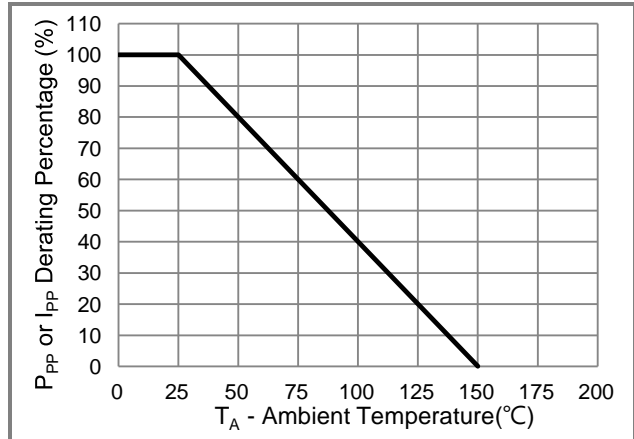


Fig.2 Derating Curve

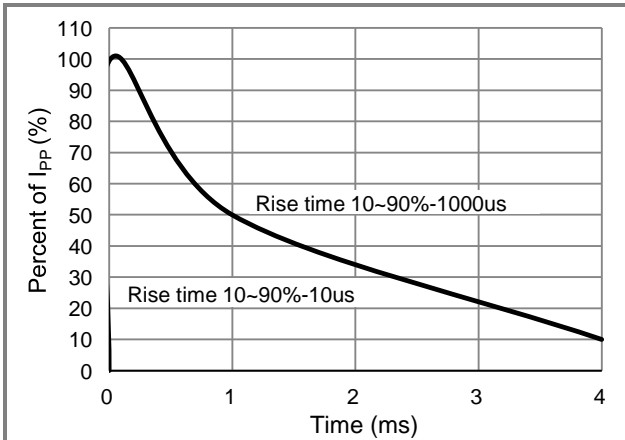


Fig.3 10/1000us Pulse Waveform

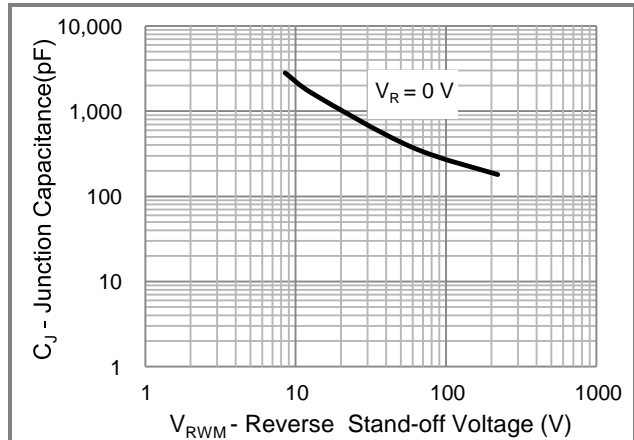


Fig.4 Typical Capacitance

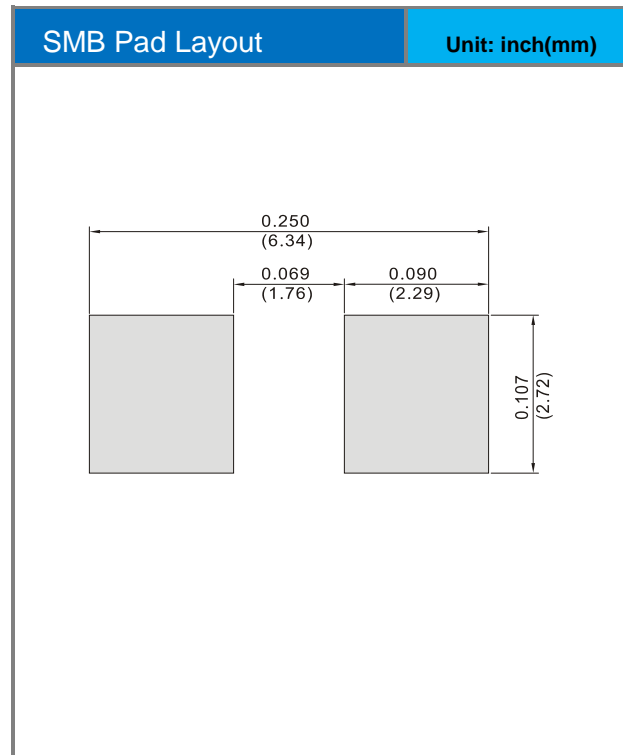
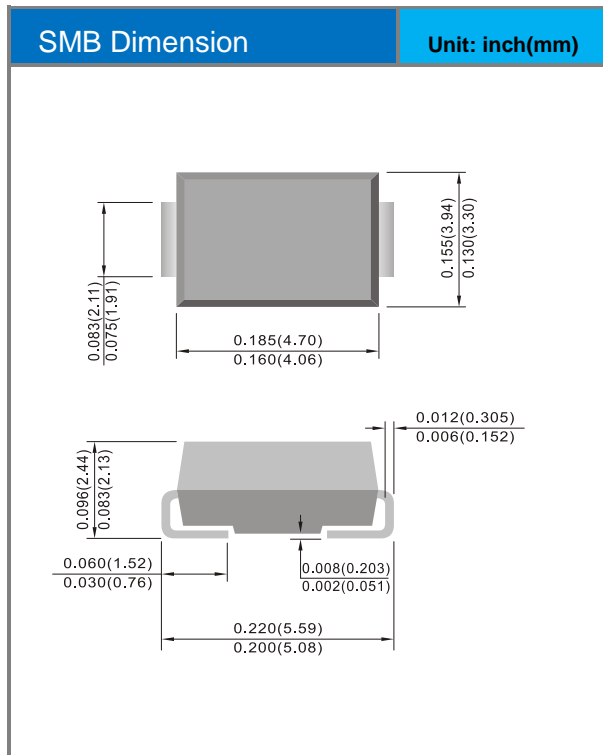


## P6SMBJ8.5AS ~ P6SMBJ220AS Series

### Part No Packing Code Version

Part No Packing Code	Package Type	Packing Type	Marking	Version
P6SMBJxxxAS_R1_00001	SMB	0.8K pcs / 7" reel	See Table	Halogen free

### Packaging Information & Mounting Pad Layout





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