



# P6SMB10AS ~ P6SMB250AS Series

## Surface Mount Transient Voltage Suppressor

**Voltage** 10~250 V **Power** 600 W

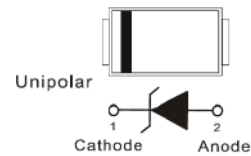
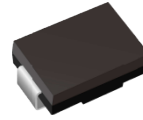
### Features

- 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@IPP</sub>		Marking Code
		Min.	Max.	I <sub>T</sub>	@V <sub>RWM</sub>	V	A	
	V	V	V	mA	uA			
600W Transient Voltage Suppressor								
P6SMB10AS	8.55	9.5	10.5	1	10	14.5	41	MBAA
P6SMB11AS	9.4	10.5	11.6	1	5	15.6	38	MBAB
P6SMB12AS	10.2	11.4	12.6	1	5	16.7	36	MBAC
P6SMB13AS	11.1	12.4	13.7	1	1	18.2	33	MBAD
P6SMB15AS	12.8	14.3	15.8	1	1	21.2	28	MBAE
P6SMB16AS	13.6	15.2	16.8	1	1	22.5	27	MBAF
P6SMB18AS	15.3	17.1	18.9	1	1	25.2	24	MBAG
P6SMB20AS	17.1	19	21	1	1	27.7	22	MBAH
P6SMB22AS	18.8	20.9	23.1	1	1	30.6	20	MBAJ
P6SMB24AS	20.5	22.8	25.2	1	1	33.2	18	MBAK
P6SMB27AS	23.1	25.7	28.4	1	1	37.5	16	MBAL
P6SMB30AS	25.6	28.5	31.5	1	1	41.4	14.4	MBAM
P6SMB33AS	28.2	31.4	34.7	1	1	45.7	13.2	MBAN
P6SMB36AS	30.8	34.2	37.8	1	1	49.9	12	MBAP
P6SMB39AS	33.3	37.1	41	1	1	53.9	11.2	MBAR
P6SMB43AS	36.8	40.9	45.2	1	1	59.3	10.1	MBAS
P6SMB47AS	40.2	44.7	49.4	1	1	64.8	9.3	MBAT
P6SMB51AS	43.6	48.5	53.6	1	1	70.1	8.6	MBAU
P6SMB56AS	47.8	53.2	58.8	1	1	77	7.8	MBAV
P6SMB62AS	53	58.9	65.1	1	1	85	7.1	MBAW
P6SMB68AS	58.1	64.6	71.4	1	1	92	6.5	MBAX
P6SMB75AS	64.1	71.3	78.8	1	1	103	5.8	MBAY
P6SMB82AS	70.1	77.9	86.1	1	1	113	5.3	MBAZ
P6SMB91AS	77.8	86.5	95.5	1	1	125	4.8	MBBA
P6SMB100AS	85.5	95	105	1	1	137	4.4	MBBB
P6SMB110AS	94	105	116	1	1	152	4	MBBC
P6SMB120AS	102	114	126	1	1	165	3.6	MBBD
P6SMB130AS	111	124	137	1	1	179	3.3	MBBE
P6SMB150AS	128	143	158	1	1	207	2.9	MBBF
P6SMB160AS	136	152	168	1	1	219	2.7	MBBG



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Part Number	V <sub>RWM</sub>	V <sub>BR</sub>			I <sub>R</sub>	V <sub>C@IPP</sub>		Marking Code
		Min.	Max.	I <sub>T</sub>	@ V <sub>RWM</sub>	V	A	
	V	V	V	mA	uA			
600W Transient Voltage Suppressor								
P6SMB170AS	145	162	179	1	1	234	2.6	MBBH
P6SMB180AS	154	171	189	1	1	246	2.4	MBBJ
P6SMB200AS	171	190	210	1	1	274	2.2	MBBK
P6SMB220AS	185	209	231	1	1	328	1.9	MBBL
P6SMB250AS	214	237	263	1	1	344	1.8	MBBM

**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

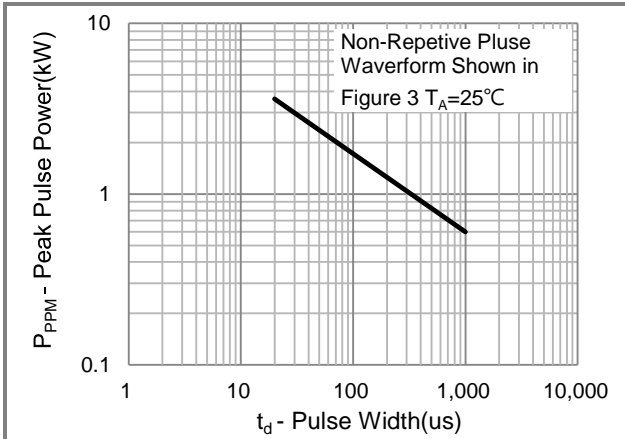


Fig.1 Pulse Power Rating Curve

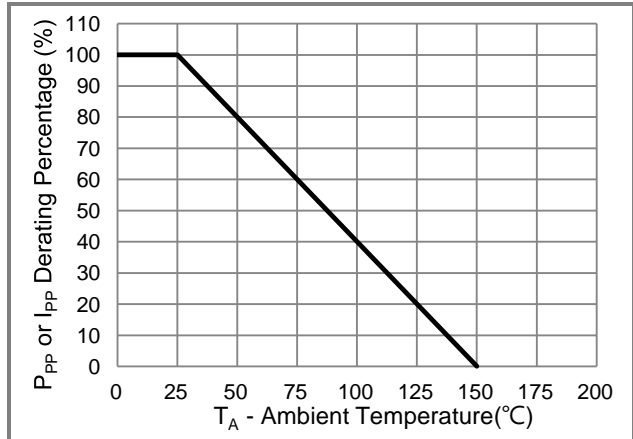


Fig.2 Derating Curve

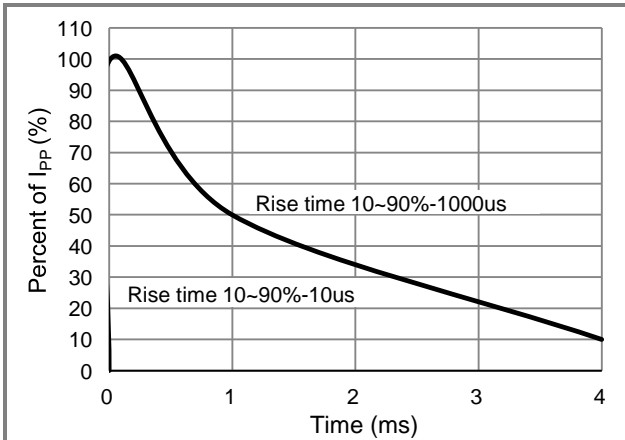


Fig.3 10/1000us Pulse Waveform

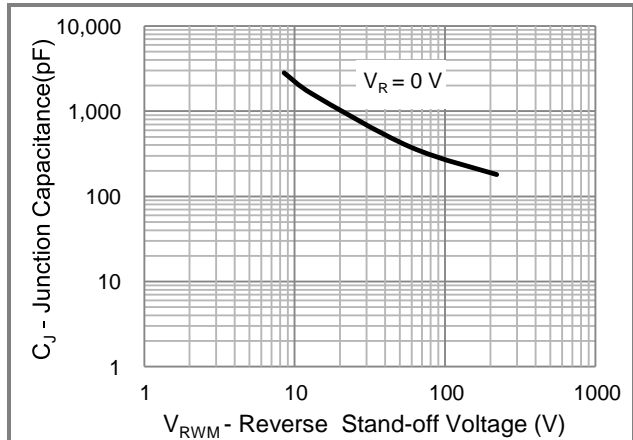


Fig.4 Typical Capacitance

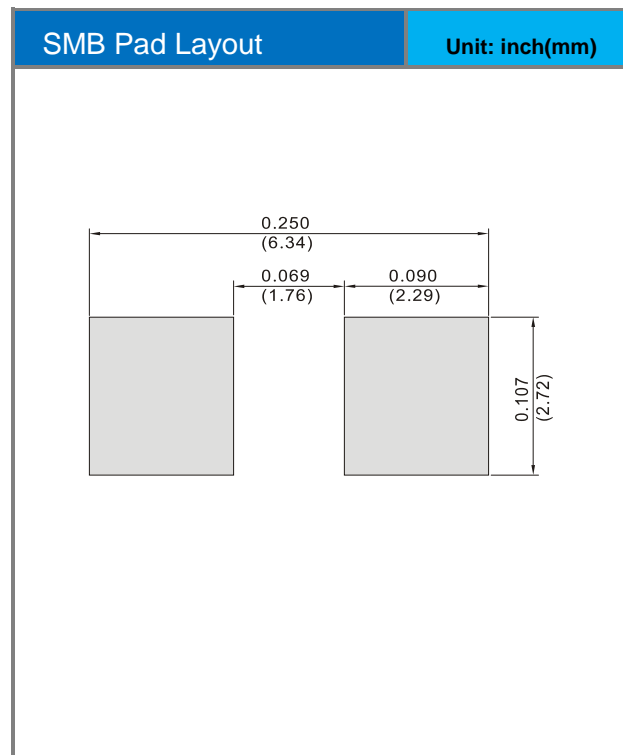
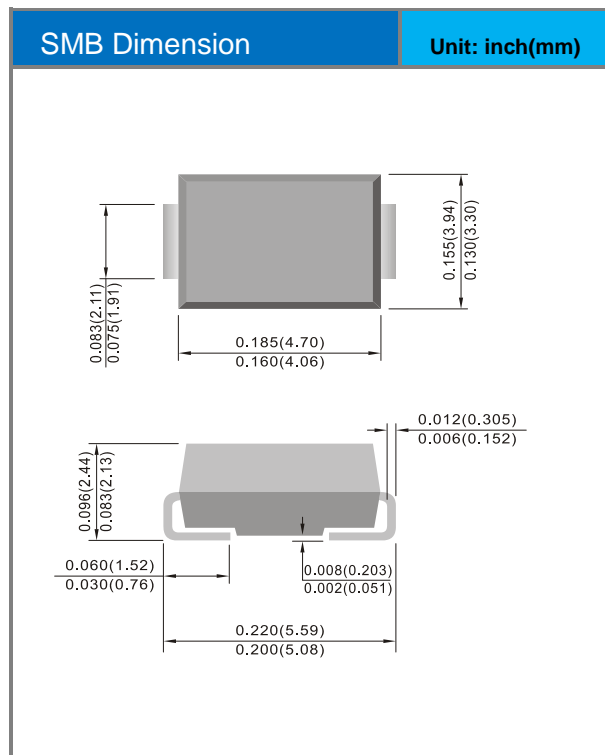


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### Part No Packing Code Version

Part No Packing Code	Package Type	Packing Type	Marking	Version
P6SMBxxxAS_R1_00001	SMB	0.8K pcs / 7" reel	See Table	Halogen free

### Packaging Information & Mounting Pad Layout





## **P6SMB10AS ~ P6SMB250AS Series**

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