



# P6SMB10AS ~ P6SMB250CAS Series

## Transient Voltage Suppressor

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

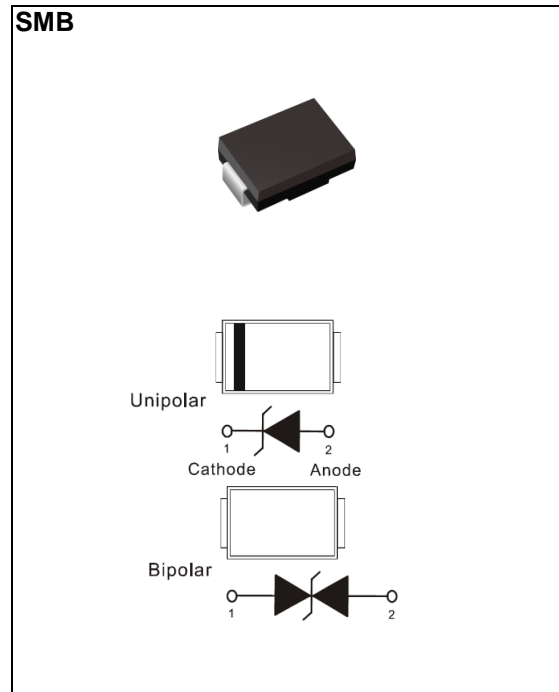
### Features

- Fast response time
- Low incremental surge resistance
- Ultra thin profile package for space constrained utilization.
- 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>	±30	kV
ESD IEC61000-4-2(Contact)		±30	
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>					
UNI	BI	V	V	V	mA	UNI	BI	V	A	UNI	BI
600W Transient Voltage Suppressor											
P6SMB10AS	P6SMB10CAS	8.55	9.5	10.5	1	10	20	14.5	41	MBAA	MBBN
P6SMB11AS	P6SMB11CAS	9.4	10.5	11.6	1	5	10	15.6	38	MBAB	MBBP
P6SMB12AS	P6SMB12CAS	10.2	11.4	12.6	1	5	5	16.7	36	MBAC	MBBR
P6SMB13AS	P6SMB13CAS	11.1	12.4	13.7	1	1	1	18.2	33	MBAD	MBBS
P6SMB15AS	P6SMB15CAS	12.8	14.3	15.8	1	1	1	21.2	28	MBAE	MBBT
P6SMB16AS	P6SMB16CAS	13.6	15.2	16.8	1	1	1	22.5	27	MBAF	MBBU
P6SMB18AS	P6SMB18CAS	15.3	17.1	18.9	1	1	1	25.2	24	MBAG	MBBV
P6SMB20AS	P6SMB20CAS	17.1	19	21	1	1	1	27.7	22	MBAH	MBBW
P6SMB22AS	P6SMB22CAS	18.8	20.9	23.1	1	1	1	30.6	20	MBAJ	MBBX
P6SMB24AS	P6SMB24CAS	20.5	22.8	25.2	1	1	1	33.2	18	MBAK	MBBY
P6SMB27AS	P6SMB27CAS	23.1	25.7	28.4	1	1	1	37.5	16	MBAL	MBBZ
P6SMB30AS	P6SMB30CAS	25.6	28.5	31.5	1	1	1	41.4	14.4	MBAM	MBCA
P6SMB33AS	P6SMB33CAS	28.2	31.4	34.7	1	1	1	45.7	13.2	MBAN	MBCB
P6SMB36AS	P6SMB36CAS	30.8	34.2	37.8	1	1	1	49.9	12	MBAP	MBCC
P6SMB39AS	P6SMB39CAS	33.3	37.1	41	1	1	1	53.9	11.2	MBAR	MBCD
P6SMB43AS	P6SMB43CAS	36.8	40.9	45.2	1	1	1	59.3	10.1	MBAS	MBC E
P6SMB47AS	P6SMB47CAS	40.2	44.7	49.4	1	1	1	64.8	9.3	MBAT	MBCF
P6SMB51AS	P6SMB51CAS	43.6	48.5	53.6	1	1	1	70.1	8.6	MBAU	MBCG
P6SMB56AS	P6SMB56CAS	47.8	53.2	58.8	1	1	1	77	7.8	MBAV	MBC H
P6SMB62AS	P6SMB62CAS	53	58.9	65.1	1	1	1	85	7.1	MBAW	MBCJ
P6SMB68AS	P6SMB68CAS	58.1	64.6	71.4	1	1	1	92	6.5	MBAX	MBCK
P6SMB75AS	P6SMB75CAS	64.1	71.3	78.8	1	1	1	103	5.8	MBAY	MBC L
P6SMB82AS	P6SMB82CAS	70.1	77.9	86.1	1	1	1	113	5.3	MBAZ	MBCM
P6SMB91AS	P6SMB91CAS	77.8	86.5	95.5	1	1	1	125	4.8	MBBA	MBCN
P6SMB100AS	P6SMB100CAS	85.5	95	105	1	1	1	137	4.4	MBBB	MBCP
P6SMB110AS	P6SMB110CAS	94	105	116	1	1	1	152	4	MBBC	MBCR
P6SMB120AS	P6SMB120CAS	102	114	126	1	1	1	165	3.6	MBBD	MBCS
P6SMB130AS	P6SMB130CAS	111	124	137	1	1	1	179	3.3	MBBE	MBC T
P6SMB150AS	P6SMB150CAS	128	143	158	1	1	1	207	2.9	MBBF	MBCU
P6SMB160AS	P6SMB160CAS	136	152	168	1	1	1	219	2.7	MBBG	MBCV



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### Electrical Characteristics ( $T_A = 25^\circ\text{C}$ unless otherwise noted)

Part Number		$V_{RWM}$	$V_{BR}$			$I_R$		$V_C@I_{PP}$		Marking Code	
			Min.	Max.	$I_T$	@ $V_{RWM}$	$\mu\text{A}$				
UNI	BI	V	V	V	mA	UNI	BI	V	A	UNI	BI
600W Transient Voltage Suppressor											
P6SMB170AS	P6SMB170CAS	145	162	179	1	1	1	234	2.6	MBBH	MBCW
P6SMB180AS	P6SMB180CAS	154	171	189	1	1	1	246	2.4	MBBJ	MBCX
P6SMB200AS	P6SMB200CAS	171	190	210	1	1	1	274	2.2	MBBK	MBCY
P6SMB220AS	P6SMB220CAS	185	209	231	1	1	1	328	1.9	MBBL	MBCZ
P6SMB250AS	P6SMB250CAS	214	237	263	1	1	1	344	1.8	MBBM	MBDA

Notes :

1. Non-repetitive current pulse, per Fig.3 and derated above  $T_A=25^\circ\text{C}$  per Fig.2
2. Mounted on  $100\text{cm}^2$  copper pads to each terminal
3. Mounted on a FR4 PCB, single-sided copper, standard footprint



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## TYPICAL CHARACTERISTIC CURVES

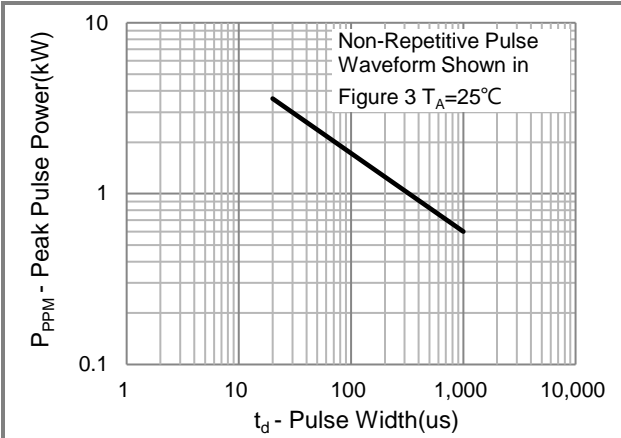


Fig.1 Pulse Power Rating Curve

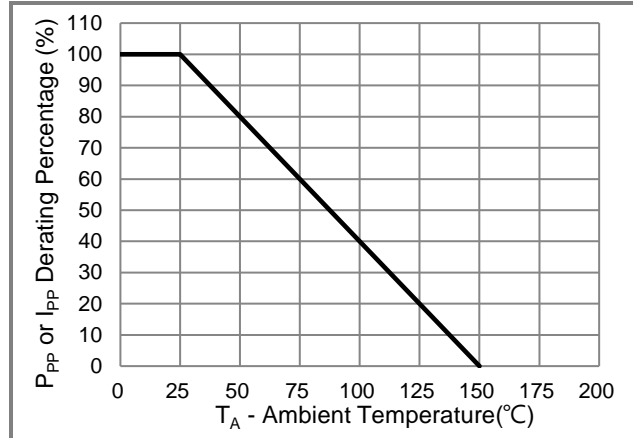


Fig.2 Derating Curve

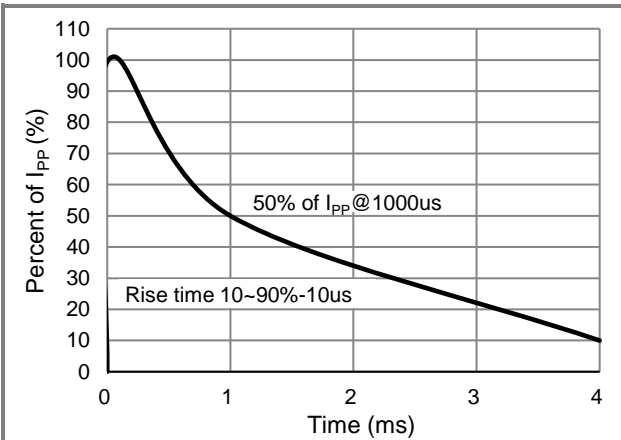


Fig.3 10/1000us Pulse Waveform

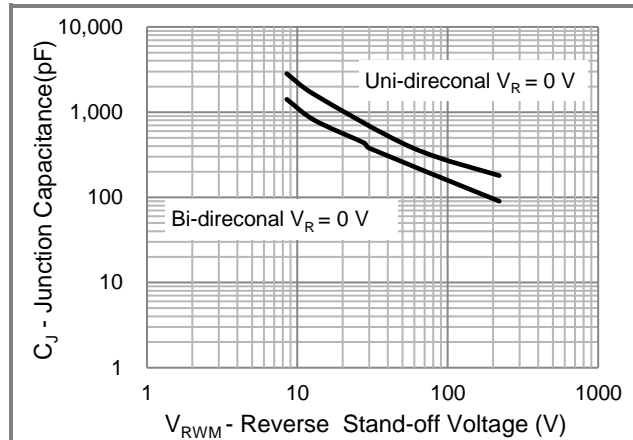


Fig.4 Typical Capacitance



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### Part No. Packing Code Version

Part No. Packing Code	Package Type	Packing Type	Marking	Version
P6SMBxxxxAS_R1_00001	SMB	0.8K pcs / 7" reel	See Table	Halogen free RoHS compliant

### Packaging Information & Mounting Pad Layout

