

P6SMB10AS ~ P6SMB250CAS Series

Transient Voltage Suppressor

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

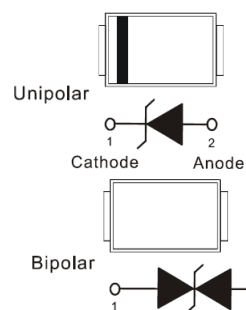
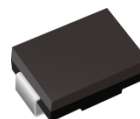
Features

- 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_A = 25 °C unless otherwise noted)

PARAMETER	SYMBOL	LIMIT	UNITS
Peak Pulse Power Dissipation(tp = 10 / 1000 us)	P _{PP} (1) (2)	600	W
Peak Pulse Current on tp = 10 / 1000 us waveform ^(Fig.2)	I _{PPM} (1)	See table 1	A
Power Dissipation on Infinite Heat Sink at T _L = 50 °C	P _D	5	W
ESD IEC61000-4-2(Air)	V _{ESD}	±30	kV
ESD IEC61000-4-2(Contact)		±30	
Typical Thermal Resistance Junction to Ambient	R _{θJA} (3)	150	°C/W
Operating Junction Temperature Range	T _J	-55~150	°C
Storage Temperature Range	T _{STG}	-55~150	°C

P6SMB10AS ~ P6SMB250CAS Series

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}	uA				
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	MBCD
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	MBCD
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	MBCD
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	MBCD
P6SMB75AS	P6SMB75CAS	64.1	71.3	78.8	1	1	1	103	5.8	MBAY	MBCD
P6SMB82AS	P6SMB82CAS	70.1	77.9	86.1	1	1	1	113	5.3	MBAZ	MBCD
P6SMB91AS	P6SMB91CAS	77.8	86.5	95.5	1	1	1	125	4.8	MBBA	MBCD
P6SMB100AS	P6SMB100CAS	85.5	95	105	1	1	1	137	4.4	MBBB	MBCD
P6SMB110AS	P6SMB110CAS	94	105	116	1	1	1	152	4	MBBC	MBCD
P6SMB120AS	P6SMB120CAS	102	114	126	1	1	1	165	3.6	MBBD	MBCD
P6SMB130AS	P6SMB130CAS	111	124	137	1	1	1	179	3.3	MBBE	MBCD
P6SMB150AS	P6SMB150CAS	128	143	158	1	1	1	207	2.9	MBBF	MBCD
P6SMB160AS	P6SMB160CAS	136	152	168	1	1	1	219	2.7	MBBG	MBCD

P6SMB10AS ~ P6SMB250CAS Series

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}	μA				
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 100cm² copper pads to each terminal
3. Mounted on a FR4 PCB, single-sided copper, standard footprint

P6SMB10AS ~ P6SMB250CAS Series

TYPICAL CHARACTERISTIC CURVES

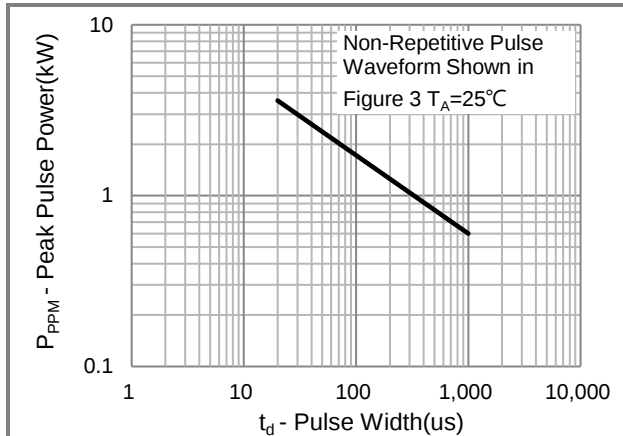


Fig.1 Pulse Power Rating Curve

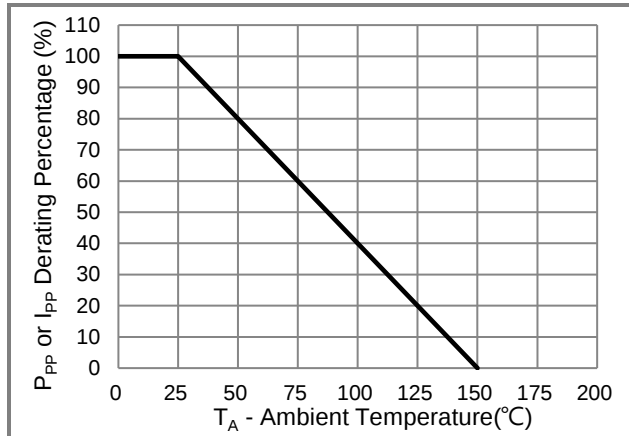


Fig.2 Derating Curve

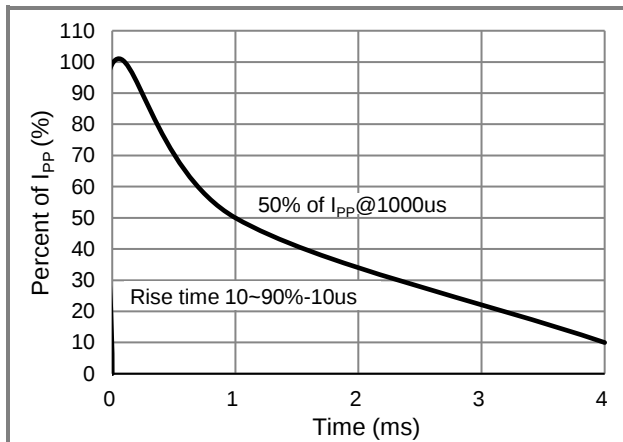


Fig.3 10/1000us Pulse Waveform

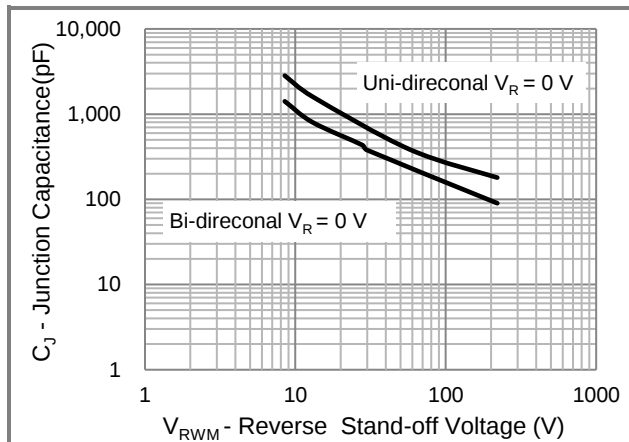


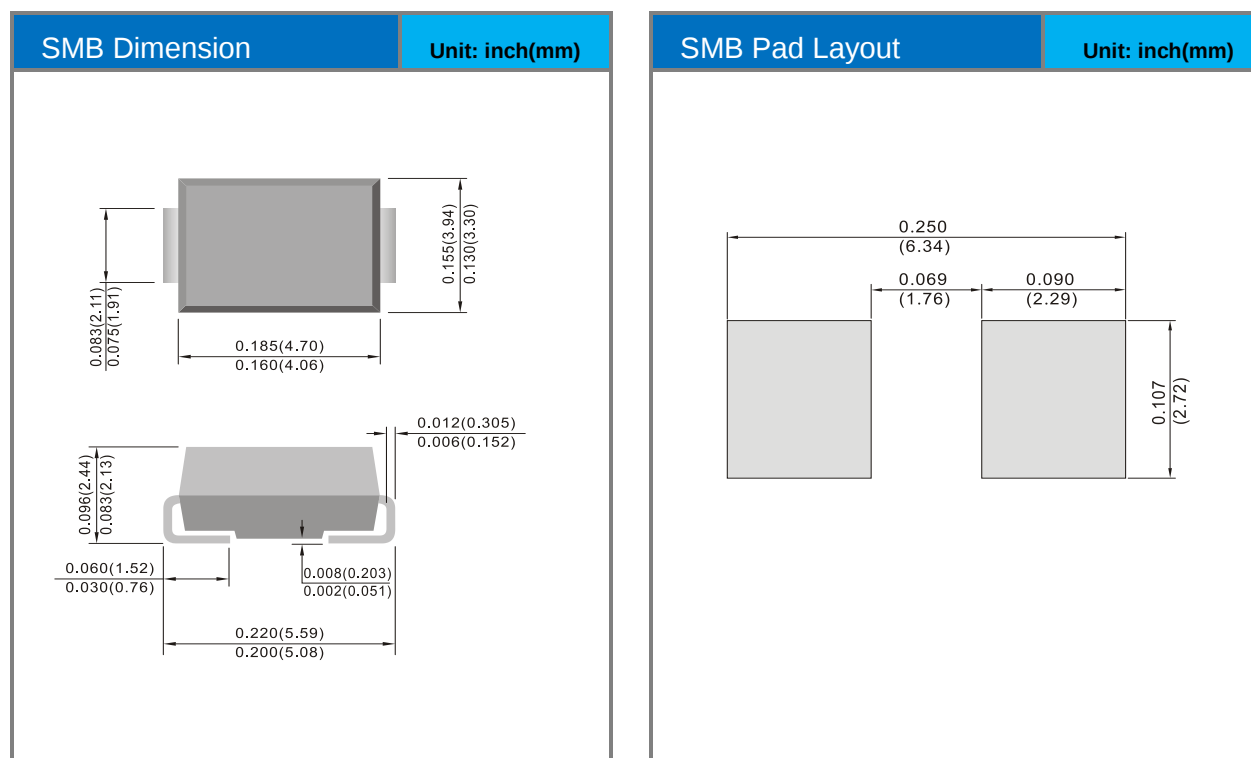
Fig.4 Typical Capacitance

P6SMB10AS ~ P6SMB250CAS Series

Product and Packing Information

Part No.	Package Type	Packing Type	Marking
P6SMBxxxxAS	SMB	0.8K pcs / 7" reel	See Table

Packaging Information & Mounting Pad Layout



P6SMB10AS ~ P6SMB250CAS Series

Disclaimer

- Reproducing and modifying information of the document is prohibited without permission from Panjit International Inc..
- Panjit International Inc. reserves the rights to make changes of the content herein the document anytime without notification. Please refer to our website for the latest document.
- Panjit International Inc. disclaims any and all liability arising out of the application or use of any product including damages incidentally and consequentially occurred.
- Panjit International Inc. does not assume any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.
- Applications shown on the herein document are examples of standard use and operation. Customers are responsible in comprehending the suitable use in particular applications. Panjit International Inc. makes no representation or warranty that such applications will be suitable for the specified use without further testing or modification.
- The products shown herein are not designed and authorized for equipments requiring high level of reliability or relating to human life and for any applications concerning life-saving or life-sustaining, such as medical instruments, transportation equipment, aerospace machinery et cetera. Customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify Panjit International Inc. for any damages resulting from such improper use or sale.
- Since Panjit uses lot number as the tracking base, please provide the lot number for tracking when complaining.

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[Panjit:](#)

[P6SMB180AS_R1_00001](#)