



## P6SMB6.8A-AU ~ P6SMB82CA-AU Series

### SURFACE MOUNT TRANSIENT VOLTAGE SUPPRESSOR

**Voltage**

**6.8~82 V**

**Power**

**600 W**

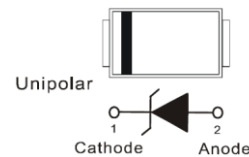
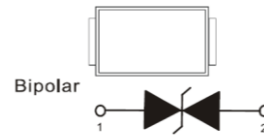
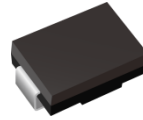
#### Features

- ISO10605(C=330 pF,R=330Ω): ± 30kV Air, ± 30kV Contact
- HBM ≥ ± 8 kV & CDM ≥ ± 2 kV
- AEC-Q101 qualified
- 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 Forward Surge Current(8.3 ms single half sine-wave)	I <sub>FSM</sub>	100	A
Peak Pulse Current on tp = 10 / 1000 us waveform <sup>(Fig.2)</sup>	I <sub>PPM</sub> <sup>(1)</sup>	See table 1	A
ISO10605(C = 330 pF, R = 330 Ω) (Air)	V <sub>ESD</sub>	±30	kV
ISO10605(C = 330 pF, R = 330 Ω) (Contact)		±30	
Typical Thermal Resistance Junction to Ambient	R <sub>θJA</sub> <sup>(3)</sup>	60	°C/W
Operating Junction Temperature Range	T <sub>J</sub>	-55~150	°C
Storage Temperature Range	T <sub>STG</sub>	-55~150	°C



## P6SMB6.8A-AU ~ P6SMB82CA-AU Series

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

Part Number		$V_{RWM}$	$V_{BR}$			$I_R$ @ $V_{RWM}$		$V_C @ I_{PP}$		Marking Code	
			Min.	Max.	$I_T$	uA					
UNI	BI	V	V	V	mA	UNI	BI	V	A	UNI	BI
600W Transient Voltage Suppressor											
P6SMB6.8A-AU	P6SMB6.8CA-AU	5.8	6.45	7.14	10	1000	2000	10.5	57	EZB	DZB
P6SMB7.5A-AU	P6SMB7.5CA-AU	6.4	7.13	7.88	10	500	1000	11.3	53	EZD	DZD
P6SMB8.2A-AU	P6SMB8.2CA-AU	7.02	7.79	8.61	10	200	400	12.1	50	EZF	DZF
P6SMB9.1A-AU	P6SMB9.1CA-AU	7.78	8.65	9.5	1	50	100	13.4	45	EZH	DZH
P6SMB10A-AU	P6SMB10CA-AU	8.55	9.5	10.5	1	10	20	14.5	41	EZK	DZK
P6SMB11A-AU	P6SMB11CA-AU	9.4	10.5	11.6	1	5	10	15.6	38	EZM	DZM
P6SMB12A-AU	P6SMB12CA-AU	10.2	11.4	12.6	1	5	5	16.7	36	EZP	DZP
P6SMB13A-AU	P6SMB13CA-AU	11.1	12.4	13.7	1	1	1	18.2	33	EZR	DZR
P6SMB15A-AU	P6SMB15CA-AU	12.8	14.3	15.8	1	1	1	21.2	28	EZT	DZT
P6SMB16A-AU	P6SMB16CA-AU	13.6	15.2	16.8	1	1	1	22.5	27	EZV	DZV
P6SMB18A-AU	P6SMB18CA-AU	15.3	17.1	18.9	1	1	1	25.2	24	EZX	DZX
P6SMB20A-AU	P6SMB20CA-AU	17.1	19	21	1	1	1	27.7	22	EZZ	DZZ
P6SMB22A-AU	P6SMB22CA-AU	18.8	20.9	23.1	1	1	1	30.6	20	EXB	DXB
P6SMB24A-AU	P6SMB24CA-AU	20.5	22.8	25.2	1	1	1	33.2	18	EXD	DXD
P6SMB27A-AU	P6SMB27CA-AU	23.1	25.7	28.4	1	1	1	37.5	16	EXF	DXF
P6SMB30A-AU	P6SMB30CA-AU	25.6	28.5	31.5	1	1	1	41.4	14.4	EXH	DXH
P6SMB33A-AU	P6SMB33CA-AU	28.2	31.4	34.7	1	1	1	45.7	13.2	EXK	DXK
P6SMB36A-AU	P6SMB36CA-AU	30.8	34.2	37.8	1	1	1	49.9	12	EXM	DXM
P6SMB39A-AU	P6SMB39CA-AU	33.3	37.1	41	1	1	1	53.9	11.2	EXP	DXP
P6SMB43A-AU	P6SMB43CA-AU	36.8	40.9	45.2	1	1	1	59.3	10.1	EXR	DXR
P6SMB47A-AU	P6SMB47CA-AU	40.2	44.7	49.4	1	1	1	64.8	9.3	EXT	DXT
P6SMB51A-AU	P6SMB51CA-AU	43.6	48.5	53.6	1	1	1	70.1	8.6	EXV	DXV
P6SMB56A-AU	P6SMB56CA-AU	47.8	53.2	58.8	1	1	1	77	7.8	EXX	DXX
P6SMB62A-AU	P6SMB62CA-AU	53	58.9	65.1	1	1	1	85	7.1	EXZ	DXZ
P6SMB68A-AU	P6SMB68CA-AU	58.1	64.6	71.4	1	1	1	92	6.5	EYB	DYB
P6SMB75A-AU	P6SMB75CA-AU	64.1	71.3	78.8	1	1	1	103	5.8	EYD	DYD
P6SMB82A-AU	P6SMB82CA-AU	70.1	77.9	86.1	1	1	1	113	5.3	EYF	DYF

Note:

1. Non-repetitive current pulse, per Fig.3 and derated above  $T_A=25^\circ\text{C}$  per Fig.2
2. Mounted on  $5\text{mm}^2$  copper pads to each terminal
3. Mounted on a FR4 PCB, single-sided copper, mini pad



# P6SMB6.8A-AU ~ P6SMB82CA-AU Series

## TYPICAL CHARACTERISTIC CURVES

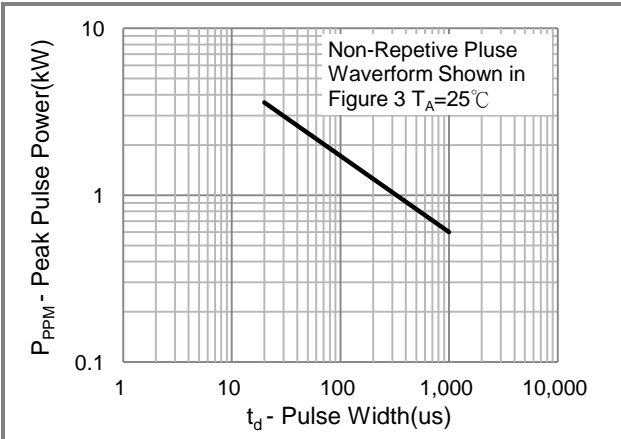


Fig.1 Pulse Power Rating Curve

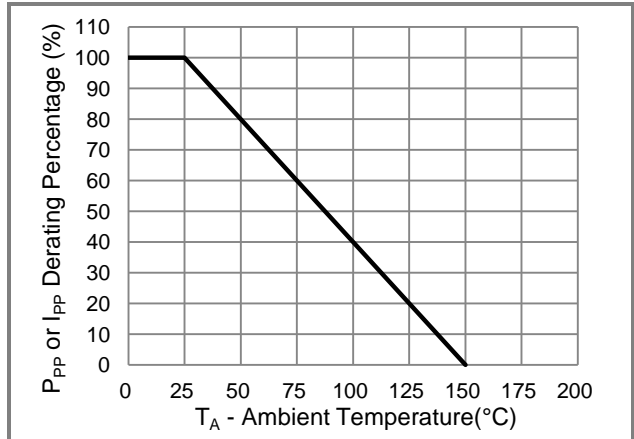


Fig.2 Derating Curve

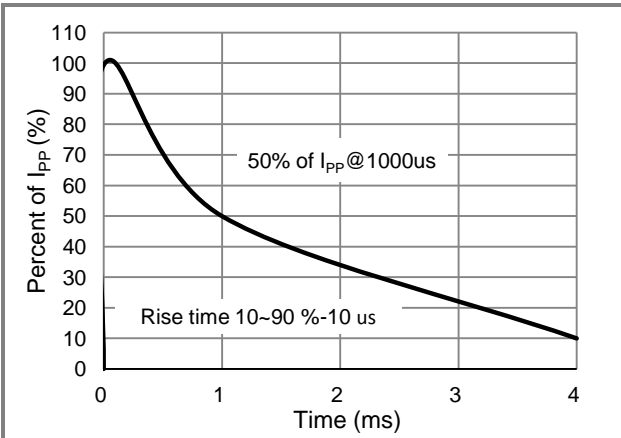


Fig.3 10/1000us Pulse Waveform

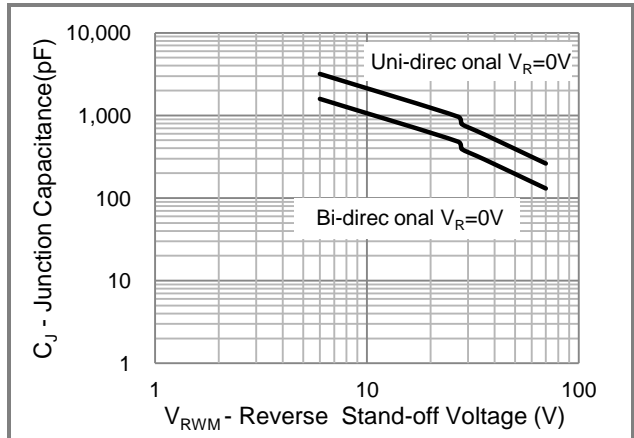


Fig.4 Typical Capacitance

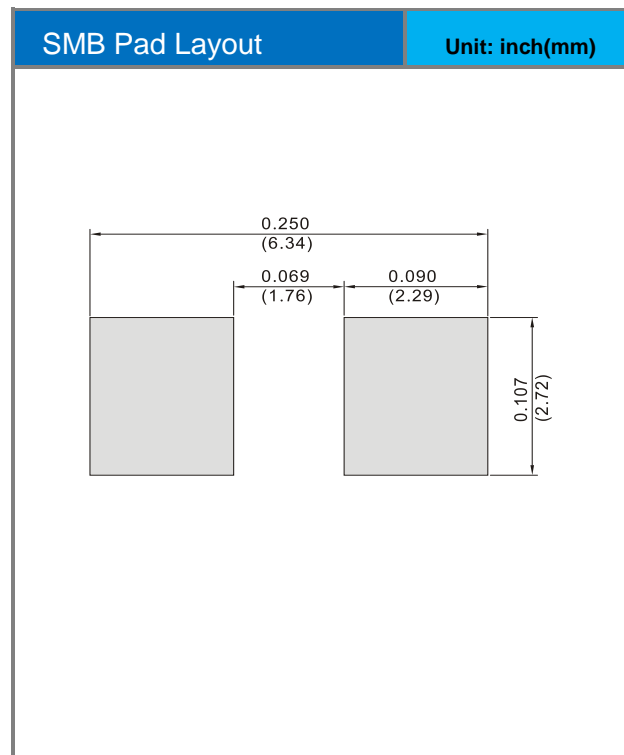
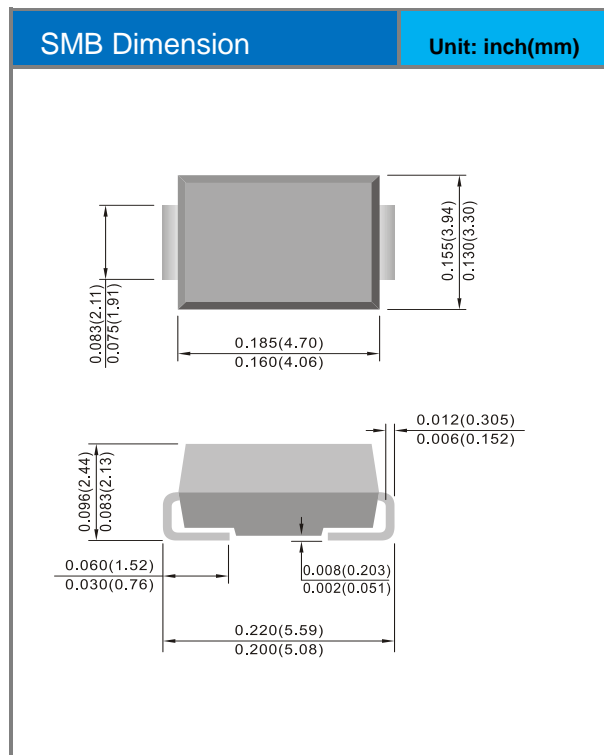


## P6SMB6.8A-AU ~ P6SMB82CA-AU Series

### Part No Packing Code Version

Part No Packing Code	Package Type	Packing Type	Marking	Version
P6SMBxxxx-AU_R2_000A1	SMB	3K pcs / 13" reel	See Table	Halogen free

### Packaging Information & Mounting Pad Layout





## **P6SMB6.8A-AU ~ P6SMB82CA-AU 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 relating to human life and for any applications concerning life-saving or life-sustaining, such as medical instruments, 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:](#)

[P6SMB33CA-AU\\_R1\\_000A1](#) [P6SMB33CA-AU\\_R2\\_000A1](#) [P6SMB33CA-AU\\_R3\\_000A1](#)