

P6SMBJ5.0A ~ P6SMBJ220CA Series

SURFACE MOUNT TRANSIENT VOLTAGE SUPPRESSOR POWER 600 Watt

STAND-OFF VOLTAGE

5 to 220 Volt

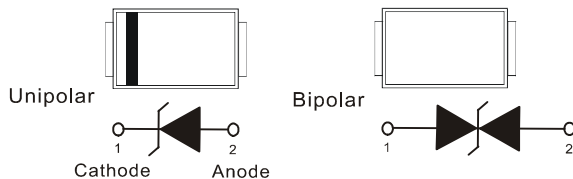
Recongnized File # E210467 (P6SMBJ5.0A~P6SMBJ170A)

FEATURES

- For surface mounted applications in order to optimize board space
- Glass passivated junction
- Low inductance
- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- High temperature soldering : 260°C /10 seconds at terminals
- ESD IEC-61000-4-2 Air $\pm$ 30kV, Contact $\pm$ 30kV
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

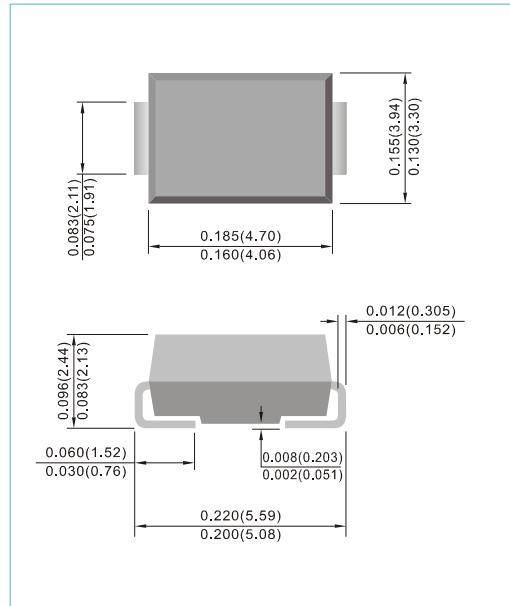
MECHANICAL DATA

- Case : JEDEC DO-214AA, Molded plastic over passivated junction.
- Terminals : Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity : Color band denotes cathode end
- Standard Packaging : 12mm tape (EIA-481)
- Approx. Weight : 0.092 grams



SMB / DO-214AA

Unit : inch(mm)



DEVICES FOR BIPOLAR APPLICATIONS

For Bidirectional use CA Suffix for types P6SMBJ5.0CA thru types P6SMBJ220CA
Electrical characteristics apply in both directions.

MAXIMUM RATINGS AND CHARACTERISTICS

Rating at 25°C ambient temperature unless otherwise specified. Resistive or inductive load, 60Hz.
For Capacitive load derate current by 20%.

Rating	Symbol	Value	Units
Peak Pulse Power Dissipation on $t_p=10/1000\mu s$ waveform (Note 1,2, Fig.1)	P_{PP}	600	Watts
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (Note 2,3)	I_{FSM}	100	Amps
Peak Pulse Current on $t_p=10/1000\mu s$ waveform (Note 1) Fig.3	I_{PPM}	see Table 1	Amps
Typical Thermal Resistance Junction to Air (Note 2)	$R_{\theta JA}$	60	°C / W
ESD IEC-61000-4-2 (Air) ESD IEC-61000-4-2 (Contact)	V_{ESD}	± 30 ± 30	kV
Operating Junction and Storage Temperature Range	T_J, T_{STG}	-55 to +150	°C

NOTES :

1. Non-repetitive current pulse, per Fig.3 and derated above $T_A = 25^\circ C$ per Fig. 2.
2. Mounted on $5mm^2$ (0.13mm thick) land areas.
3. Measured on 8.3ms, single half sine-wave or equivalent square wave, duty cycle = 4 pulses per minute maximum.
4. A transient suppressor is selected according to the working peak reverse voltage (V_{RWM}), which should be equal to or greater than the DC or continuous peak operating voltage level.

P6SMBJ5.0A ~ P6SMBJ220CA Series

Part Number		Reverse Stand-off Voltage	Breakdown Voltage		Test Current	Reverse Leakage		Max. Clamp Voltage 10/1000us	Peak Pulse Current 10/1000us	Marking Code	
			V _{BR} @ I _T			I _R @ V _{RWM}					
		V _{RWM} (Note 4)	Min.	Max.	I _T	UNI	BI	V _C @ I _{PP}	I _P		
UNI	BI	V	V	V	mA	uA	uA	V	A	UNI	BI
600W Transient Voltage Suppressor											
P6SMBJ5.0A	P6SMBJ5.0CA	5	6.4	7.07	10	800	1600	9.2	65.2	KE	AE
P6SMBJ6.0A	P6SMBJ6.0CA	6	6.67	7.37	10	800	1600	10.3	58.3	KG	AG
P6SMBJ6.5A	P6SMBJ6.5CA	6.5	7.22	7.98	10	500	1000	11.2	53.6	KK	AK
P6SMBJ7.0A	P6SMBJ7.0CA	7	7.78	8.6	10	200	400	12.0	50	KM	AM
P6SMBJ7.5A	P6SMBJ7.5CA	7.5	8.33	9.21	1	100	200	12.9	46.5	KP	AP
P6SMBJ8.0A	P6SMBJ8.0CA	8	8.89	9.83	1	50	100	13.6	44.1	KR	AR
P6SMBJ8.5A	P6SMBJ8.5CA	8.5	9.44	10.4	1	10	20	14.4	41.7	KT	AT
P6SMBJ9.0A	P6SMBJ9.0CA	9	10	11.1	1	5	5	15.4	39	KV	AV
P6SMBJ10A	P6SMBJ10CA	10	11.1	12.3	1	5	5	17	35.3	KX	AX
P6SMBJ11A	P6SMBJ11CA	11	12.2	13.5	1	1	1	18.2	33	KZ	AZ
P6SMBJ12A	P6SMBJ12CA	12	13.3	14.7	1	1	1	19.9	30.2	LE	BE
P6SMBJ13A	P6SMBJ13CA	13	14.4	15.9	1	1	1	21.5	27.9	LG	BG
P6SMBJ14A	P6SMBJ14CA	14	15.6	17.2	1	1	1	23.2	25.8	LK	BK
P6SMBJ15A	P6SMBJ15CA	15	16.7	18.5	1	1	1	24.4	24	LM	BM
P6SMBJ16A	P6SMBJ16CA	16	17.8	19.7	1	1	1	26	23.1	LP	BP
P6SMBJ17A	P6SMBJ17CA	17	18.9	20.9	1	1	1	27.6	21.7	LR	BR
P6SMBJ18A	P6SMBJ18CA	18	20	22.1	1	1	1	29.2	20.5	LT	BT
P6SMBJ20A	P6SMBJ20CA	20	22.2	24.5	1	1	1	32.4	18.5	LV	BV
P6SMBJ22A	P6SMBJ22CA	22	24.4	27	1	1	1	35.5	16.9	LX	BX
P6SMBJ24A	P6SMBJ24CA	24	26.7	29.5	1	1	1	38.9	15.4	LZ	BZ
P6SMBJ26A	P6SMBJ26CA	26	28.9	31.9	1	1	1	42.1	14.2	ME	CE
P6SMBJ28A	P6SMBJ28CA	28	31.1	34.4	1	1	1	45.4	13.2	MG	CG
P6SMBJ30A	P6SMBJ30CA	30	33.3	36.8	1	1	1	48.4	12.4	MK	CK
P6SMBJ33A	P6SMBJ33CA	33	36.7	40.6	1	1	1	53.3	11.3	MM	CM
P6SMBJ36A	P6SMBJ36CA	36	40	44.2	1	1	1	58.1	10.3	MP	CP
P6SMBJ40A	P6SMBJ40CA	40	44.4	49.1	1	1	1	64.5	9.3	MR	CR
P6SMBJ43A	P6SMBJ43CA	43	47.8	52.8	1	1	1	69.4	8.6	MT	CT
P6SMBJ45A	P6SMBJ45CA	45	50	55.3	1	1	1	72.7	8.3	MV	CV
P6SMBJ48A	P6SMBJ48CA	48	53.3	58.9	1	1	1	77.4	7.7	MX	CX
P6SMBJ51A	P6SMBJ51CA	51	56.7	62.7	1	1	1	82.4	7.3	MZ	CZ
P6SMBJ54A	P6SMBJ54CA	54	60	66.3	1	1	1	87.1	6.9	NE	DE
P6SMBJ58A	P6SMBJ58CA	58	64.4	71.2	1	1	1	93.6	6.4	NG	DG
P6SMBJ60A	P6SMBJ60CA	60	66.7	73.7	1	1	1	96.8	6.2	NK	DK
P6SMBJ64A	P6SMBJ64CA	64	71.1	78.6	1	1	1	103	5.8	NM	DM
P6SMBJ70A	P6SMBJ70CA	70	77.8	86	1	1	1	113	5.3	NP	DP
P6SMBJ75A	P6SMBJ75CA	75	83.3	92.1	1	1	1	121	4.9	NR	DR
P6SMBJ78A	P6SMBJ78CA	78	86.7	95.8	1	1	1	126	4.7	NT	DT
P6SMBJ85A	P6SMBJ85CA	85	94.4	104	1	1	1	137	4.4	NV	DV
P6SMBJ90A	P6SMBJ90CA	90	100	111	1	1	1	146	4.1	NX	DX
P6SMBJ100A	P6SMBJ100CA	100	111	123	1	1	1	162	3.7	NZ	DZ
P6SMBJ110A	P6SMBJ110CA	110	122	135	1	1	1	177	3.4	PE	EE
P6SMBJ120A	P6SMBJ120CA	120	133	147	1	1	1	193	3.1	PG	EG
P6SMBJ130A	P6SMBJ130CA	130	144	159	1	1	1	209	2.9	PK	EK
P6SMBJ150A	P6SMBJ150CA	150	167	185	1	1	1	243	2.5	PM	EM
P6SMBJ160A	P6SMBJ160CA	160	178	197	1	1	1	259	2.3	PP	EP
P6SMBJ170A	P6SMBJ170CA	170	189	209	1	1	1	275	2.2	PR	ER
P6SMBJ180A	P6SMBJ180CA	180	198	222	1	1	1	292	2.1	PT	ET
P6SMBJ190A	P6SMBJ190CA	190	209	243.2	1	1	1	308	2	PV	EV
P6SMBJ200A	P6SMBJ200CA	200	220	247	1	1	1	324	1.9	PX	EX
P6SMBJ210A	P6SMBJ210CA	210	231	268.8	1	1	1	340	1.8	PZ	EZ
P6SMBJ220A	P6SMBJ220CA	220	242	272	1	1	1	356	1.7	QE	FE

P6SMBJ5.0A ~ P6SMBJ220CA Series

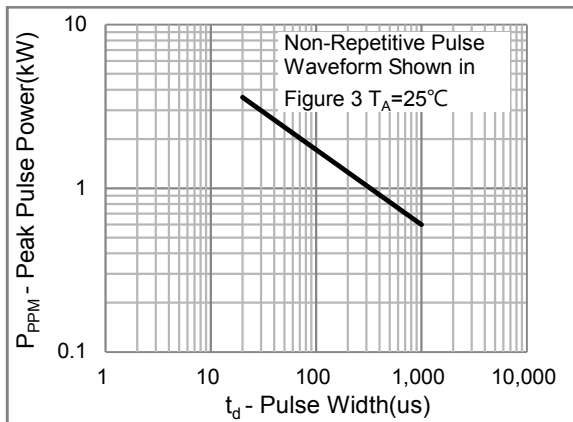


Fig.1 Peak Pulse Power Rating

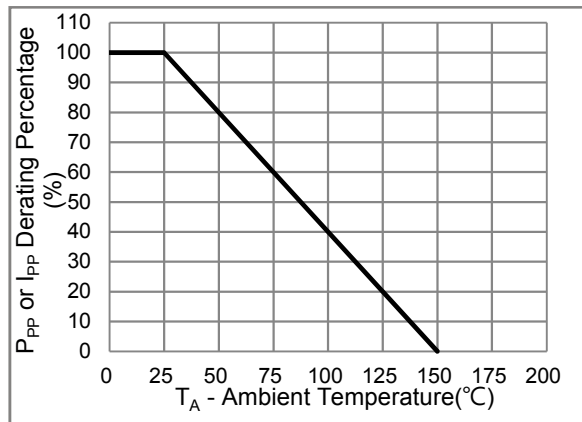


Fig.2 Derating Curve

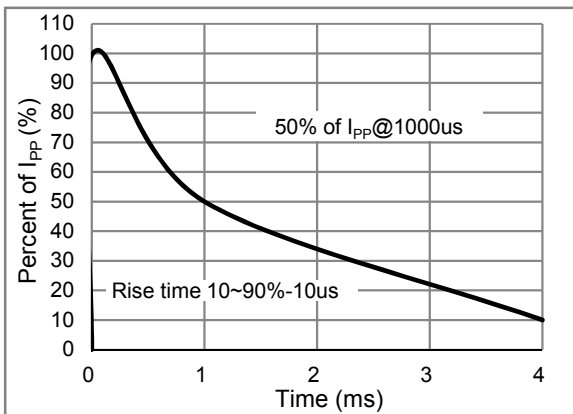


Fig.3 10/1000us Pulse Waveform

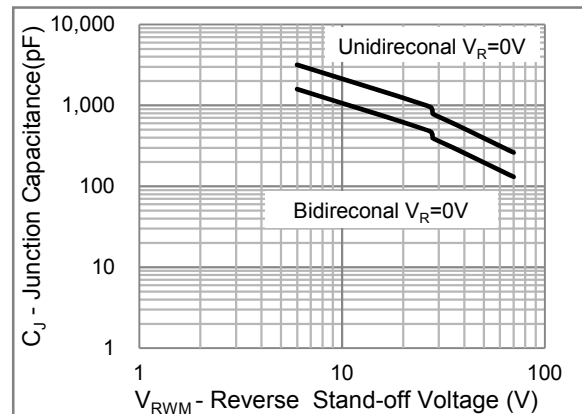


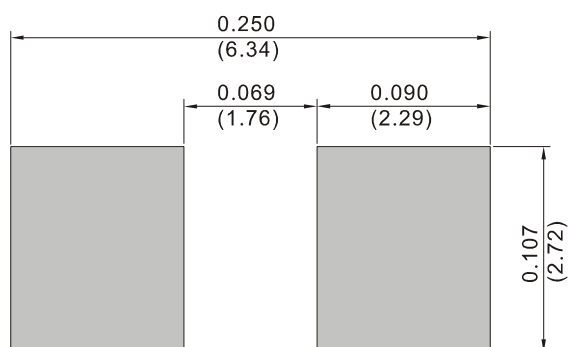
Fig.4 Typical Capacitance

P6SMBJ5.0A ~ P6SMBJ220CA Series

MOUNTING PAD LAYOUT

SMB / DO-214AA

Unit : inch(mm)



ORDER INFORMATION

- Packing information
 - T/R - 3K per 13" plastic Reel
 - T/R - 0.8K per 7" plastic Reel

P6SMBJ5.0A ~ P6SMBJ220CA 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:](#)

[P6SMBJ170A_R3_00001](#) [P6SMBJ170A_R1_00001](#) [P6SMBJ170A_R2_00001](#)