PANJIT SEMI CONDUCTOR

P6SMBJ5.0A ~ P6SMBJ220CA Series

SURFACE MOUNT TRANSIENT VOLTAGE SUPPRESSOR POWER 600 Watt

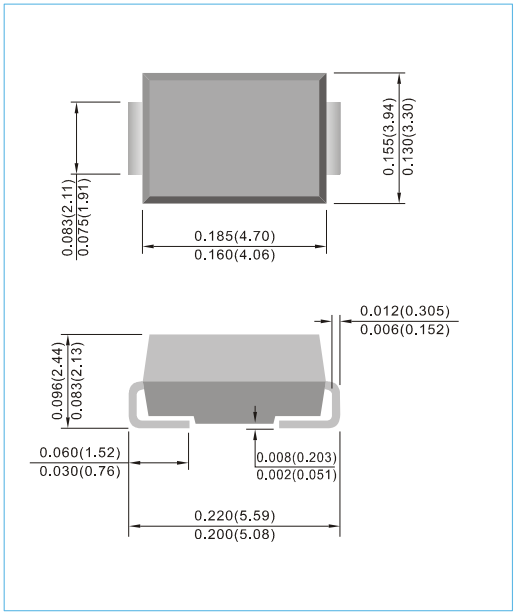
STAND-OFF VOLTAGE **5 to 220 Volt**

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

FEATURES

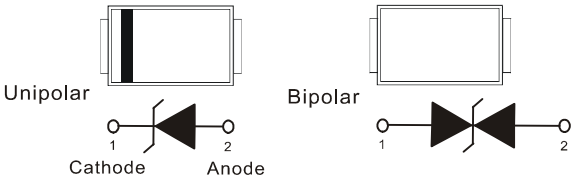
- For surface mounted applications in order to optimize board space
- Glass passivated junction
- Low inductance
- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- High temperature soldering : 260°C /10 seconds at terminals
- ESD IEC-61000-4-2 Air ± 30kV, Contact ± 30kV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

SMB / DO-214AA Unit : inch(mm)



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



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°Cambient 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 tp=10/1000μs 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 tp=10/1000μs 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°C per Fig. 2.
2. Mounted on 5mm² (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.

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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_{RWM} (Note 4)	V_{BR} @ I_T		I_T	I_R @ V_{RWM}		V_C @ I_{PP}	I_P		
			Min.	Max.		UNI	BI				
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

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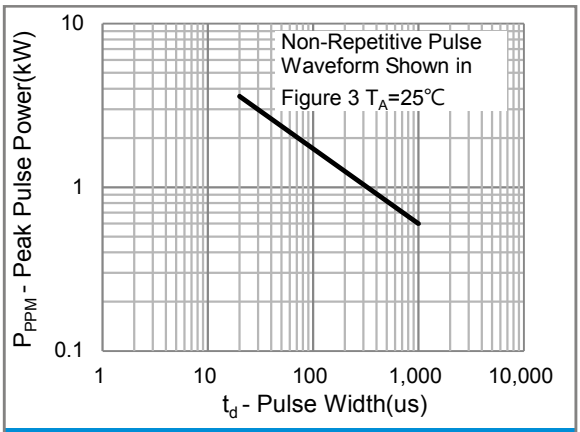

Fig.1 Peak Pulse Power Rating

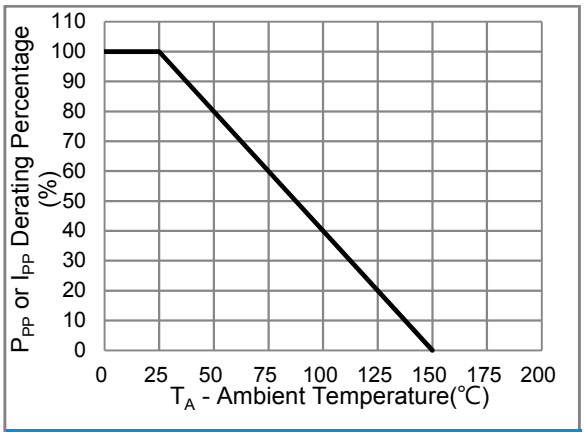

Fig.2 Derating Curve

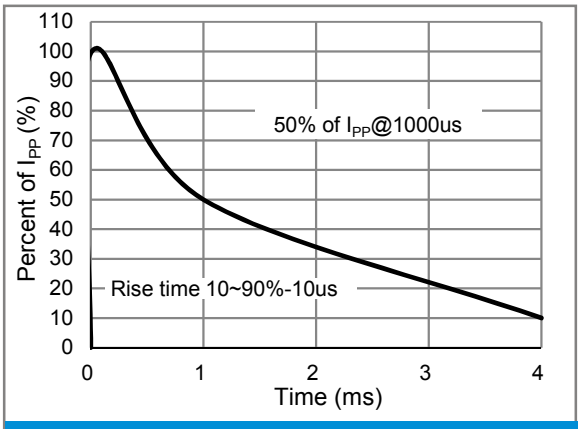

Fig.3 10/1000us Pulse Waveform

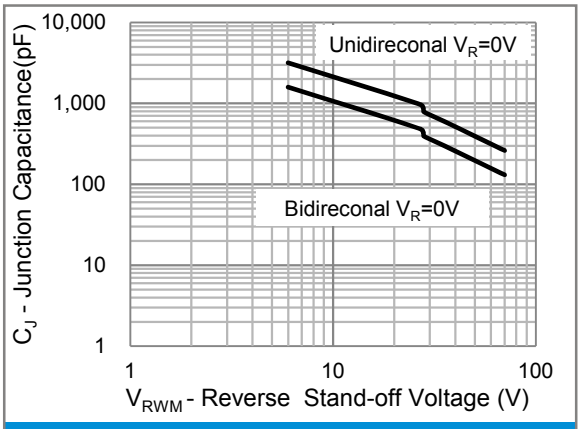

Fig.4 Typical Capacitance

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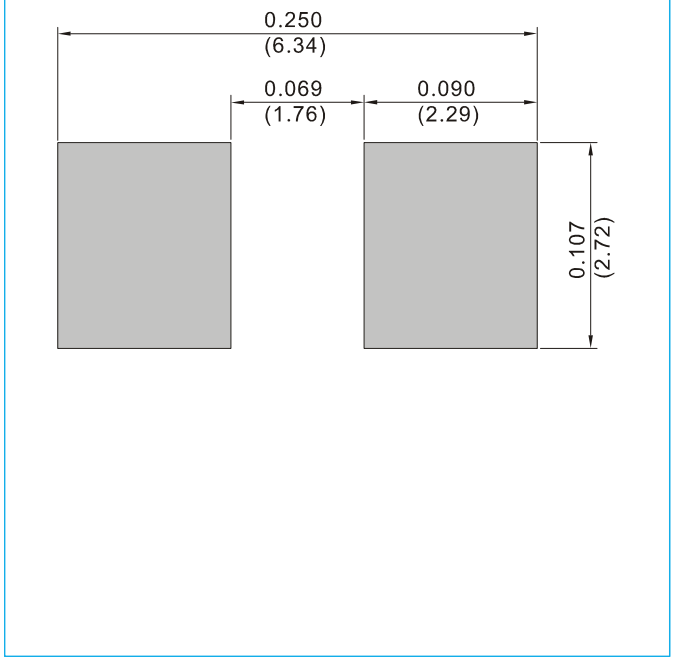
MOUNTING PAD LAYOUT

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

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