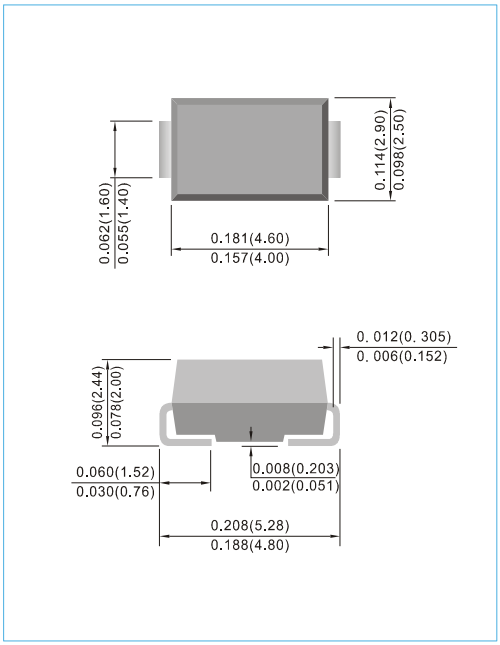
PANJIT SEMI CONDUCTOR

P4SMAJ5.0A ~ P4SMAJ220CA Series

SURFACE MOUNT TRANSIENT VOLTAGE SUPPRESSOR POWER 400 Watt

STAND-OFF VOLTAGE | **5 to 220 Volt** | **SMA / DO-214AC** | Unit : inch(mm)

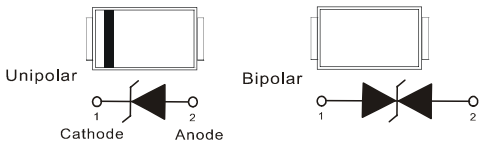


FEATURES

- 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

MECHANICAL DATA

- Case : JEDEC DO-214AC,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 : 0.0679 grams



DEVICES FOR BIPOLAR APPLICATIONS

For Bidirectional use CA Suffix for types P4SMAJ5.0CA thru types P4SMAJ220CA
Electrical characteristics apply in both directions.

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Rating	Symbol	Value	Units
Peak Pulse Power Dissipation on T_A = 25°C (Notes 1,2,5, Fig.1)	P_{PP}	400	Watts
Peak Forward Surge Current per Fig.5 (Notes 3)	I_{FSM}	40	Amps
Peak Pulse Current on tp=10/1000μs waveform (Notes 1) Fig.2	I_{PPM}	see Table 1	Amps
Typical Thermal Resistance Junction to Air (Notes 2)	$R_{\theta JA}$	70	°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 copper pads to each terminal.
3. 8.3ms single half sine-wave, or equivalent square wave, duty cycle = 4 pulses per minutes maximum.
4. Lead temperature at 75°C = T_L.
5. Peak pulse power waveform is 10/1000 μs.
6. 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 10/1000μs	Peak Pulse Current 10/1000μs	Marking Code	
		V_{RWM} (Note 6)	V_{BR} @ I_T		I_T	I_R @ V_{RWM}		V_C @ I_{PP}	I_{PP}		
			Min.	Max.		UNI	BI				
UNI	BI	V	V	V	mA	uA	uA	V	A	UNI	BI
P4SMAJ5.0A	P4SMAJ5.0CA	5	6.4	7	10	800	1600	9.2	43.5	HE	TE
P4SMAJ6.0A	P4SMAJ6.0CA	6	6.67	7.37	10	800	1600	10.3	38.8	HG	TG
P4SMAJ6.5A	P4SMAJ6.5CA	6.5	7.22	7.98	10	500	1000	11.2	35.7	HK	TK
P4SMAJ7.0A	P4SMAJ7.0CA	7	7.78	8.6	10	200	400	12	33.3	HM	TM
P4SMAJ7.5A	P4SMAJ7.5CA	7.5	8.33	9.21	1	100	200	12.9	31	HP	TP
P4SMAJ8.0A	P4SMAJ8.0CA	8	8.89	9.83	1	50	100	13.6	29.4	HR	TR
P4SMAJ8.5A	P4SMAJ8.5CA	8.50	9.44	10.4	1	10	20	14.4	27.7	HT	TT
P4SMAJ9.0A	P4SMAJ9.0CA	9	10	11.1	1	5	5	15.4	26	HV	TV
P4SMAJ10A	P4SMAJ10CA	10	11.1	12.3	1	5	5	17	23.5	HX	TX
P4SMAJ11A	P4SMAJ11CA	11	12.2	13.5	1	1	1	18.2	22	HZ	TZ
P4SMAJ12A	P4SMAJ12CA	12	13.3	14.7	1	1	1	19.9	20.1	IE	UE
P4SMAJ13A	P4SMAJ13CA	13	14.4	15.9	1	1	1	21.5	18.6	IG	UG
P4SMAJ14A	P4SMAJ14CA	14	15.6	17.2	1	1	1	23.2	17.2	IK	UK
P4SMAJ15A	P4SMAJ15CA	15	16.7	18.5	1	1	1	24.4	16.4	IM	UM
P4SMAJ16A	P4SMAJ16CA	16	17.8	19.7	1	1	1	26	15.3	IP	UP
P4SMAJ17A	P4SMAJ17CA	17	18.9	20.9	1	1	1	27.6	14.5	IR	UR
P4SMAJ18A	P4SMAJ18CA	18	20	22.1	1	1	1	29.2	13.7	IT	UT
P4SMAJ20A	P4SMAJ20CA	20	22.2	24.5	1	1	1	32.4	12.3	IV	UV
P4SMAJ22A	P4SMAJ22CA	22	24.4	26.9	1	1	1	35.5	11.2	IX	UX
P4SMAJ24A	P4SMAJ24CA	24	26.7	29.5	1	1	1	38.9	10.3	IZ	UZ
P4SMAJ26A	P4SMAJ26CA	26	28.9	31.9	1	1	1	42.1	9.5	JE	VE
P4SMAJ28A	P4SMAJ28CA	28	31.1	34.4	1	1	1	45.4	8.8	JG	VG
P4SMAJ30A	P4SMAJ30CA	30	33.3	36.8	1	1	1	48.4	8.3	JK	VK
P4SMAJ33A	P4SMAJ33CA	33	36.7	40.6	1	1	1	53.3	7.5	JM	VM
P4SMAJ36A	P4SMAJ36CA	36	40	44.2	1	1	1	58.1	6.9	JP	VP
P4SMAJ40A	P4SMAJ40CA	40	44.4	49.1	1	1	1	64.5	6.2	JR	VR
P4SMAJ43A	P4SMAJ43CA	43	47.8	52.8	1	1	1	69.4	5.7	JT	VT
P4SMAJ45A	P4SMAJ45CA	45	50	55.3	1	1	1	72.7	5.5	JV	VV
P4SMAJ48A	P4SMAJ48CA	48	53.3	58.9	1	1	1	77.4	5.2	JX	VX
P4SMAJ51A	P4SMAJ51CA	51	56.7	62.7	1	1	1	82.4	4.9	JZ	VZ
P4SMAJ54A	P4SMAJ54CA	54	60	66.3	1	1	1	87.1	4.6	RE	WE
P4SMAJ58A	P4SMAJ58CA	58	64.4	71.2	1	1	1	93.6	4.3	RG	WG
P4SMAJ60A	P4SMAJ60CA	60	66.7	73.7	1	1	1	96.8	4.1	RK	WK
P4SMAJ64A	P4SMAJ64CA	64	71.1	78.6	1	1	1	103	3.9	RM	WM
P4SMAJ70A	P4SMAJ70CA	70	77.8	86	1	1	1	113	3.5	RP	WP
P4SMAJ75A	P4SMAJ75CA	75	83.3	92.1	1	1	1	121	3.3	RR	WR
P4SMAJ78A	P4SMAJ78CA	78	86.7	95.8	1	1	1	126	3.2	RT	WT
P4SMAJ85A	P4SMAJ85CA	85	94.4	104	1	1	1	137	2.9	RV	WV
P4SMAJ90A	P4SMAJ90CA	90	100	111	1	1	1	146	2.7	RX	WX
P4SMAJ100A	P4SMAJ100CA	100	111	123	1	1	1	162	2.5	RZ	WZ
P4SMAJ110A	P4SMAJ110CA	110	122	135	1	1	1	177	2.3	SE	XE
P4SMAJ120A	P4SMAJ120CA	120	133	147	1	1	1	193	2	SG	XG
P4SMAJ130A	P4SMAJ130CA	130	144	159	1	1	1	209	1.9	SK	XK
P4SMAJ150A	P4SMAJ150CA	150	167	185	1	1	1	243	1.6	SM	XM
P4SMAJ160A	P4SMAJ160CA	160	178	197	1	1	1	259	1.5	SP	XP
P4SMAJ170A	P4SMAJ170CA	170	189	209	1	1	1	275	1.4	SR	XR
P4SMAJ180A	P4SMAJ180CA	180	198	222	1	1	1	292	1.3	ST	YT
P4SMAJ190A	P4SMAJ190CA	190	209	243.2	1	1	1	308	1.3	SV	YV
P4SMAJ200A	P4SMAJ200CA	200	220	247	1	1	1	324	1.2	SX	YX
P4SMAJ210A	P4SMAJ210CA	210	231	268.8	1	1	1	340	1.2	SZ	YZ
P4SMAJ220A	P4SMAJ220CA	220	242	272	1	1	1	356	1.1	GE	ZE

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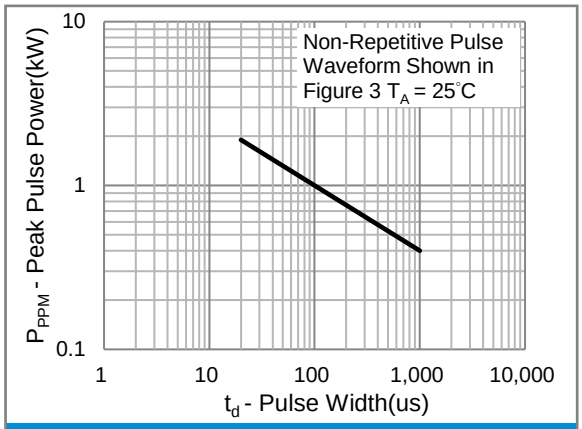

Fig.1 Peak Pulse Power Rating

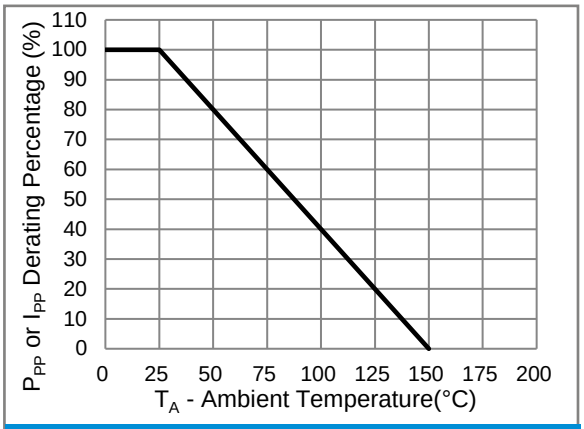

Fig.2 Derating Curve

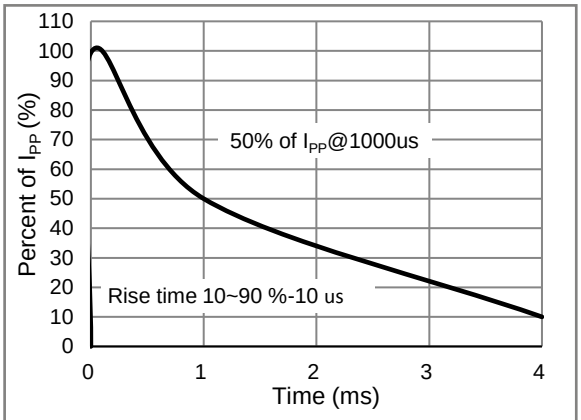

Fig.3 Pulse Waveform

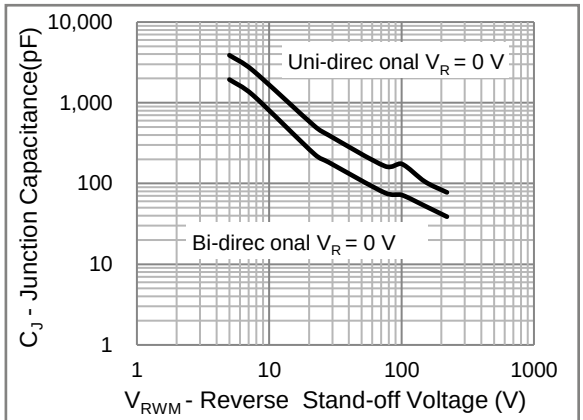

Fig.4 Typical Capacitance

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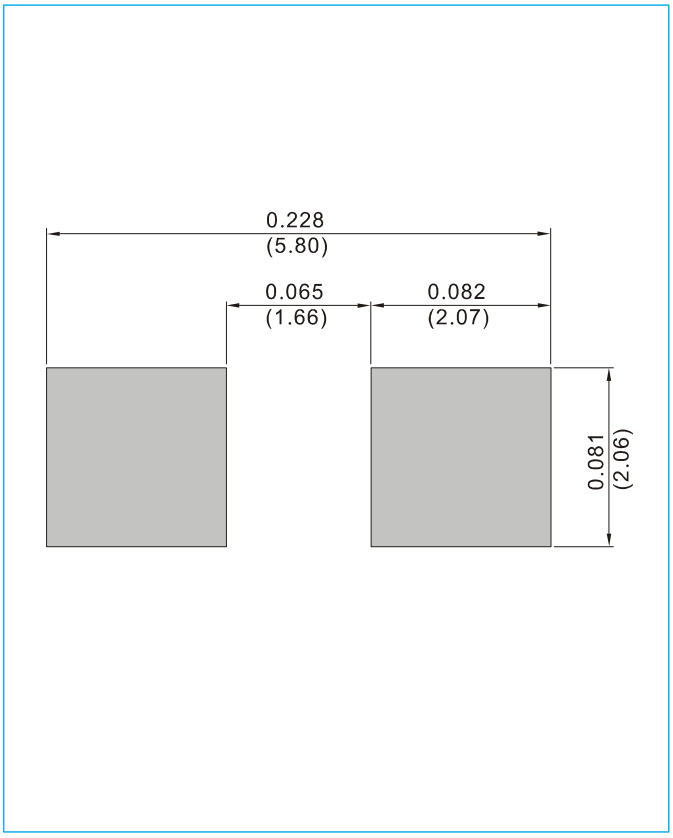
MOUNTING PAD LAYOUT

SMA / DO-214AC Unit : inch(mm)



ORDER INFORMATION

- Packing information

  T/R - 7.5K per 13" plastic Reel

  T/R - 1.8K per 7" plastic Reel

P4SMAJ5.0A ~ P4SMAJ220CA Series

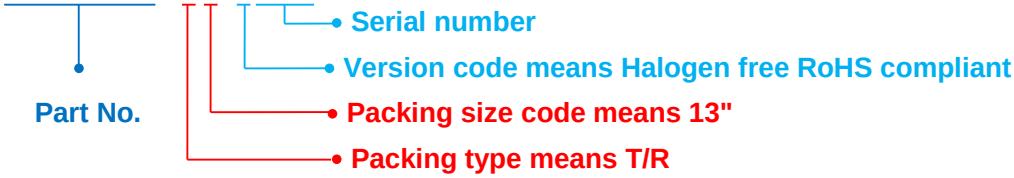
Part No._packing code_Version

P4SMAJ5.0_R1_00001

P4SMAJ5.0_R2_00001

For example :

RB500V-40_R2_00001



Packing Code XX				Version Code X		Serial number XXXX
Packing type	1st Code	Packing size code	2nd Code	HSF Level	1st Code	2nd~5th Code
Tape and Ammunition Box (T/B)	A	N/A	0	Halogen free RoHS compliant	0	serial number
Tape and Reel (T/R)	R	7"	1	RoHS compliant	1	serial number
Bulk Packing (B/P)	B	13"	2			
Tube Packing (T/P)	T	26mm	X			
Tape and Reel (Right Oriented) (TRR)	S	52mm	Y			
Tape and Reel (Left Oriented) (TRL)	L	PANASERT T/B CATHODE UP (PBCU)	U			
FORMING	F	PANASERT T/B CATHODE DOWN (PBCD)	D			

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