



**THE DATASHEET OF
P4SMAJ18A_R1_00001**



P4SMAJ5.0A ~ P4SMAJ220CA Series

SURFACE MOUNT TRANSIENT VOLTAGE SUPPRESSOR POWER 400 Watt

STAND-OFF VOLTAGE

5 to 220 Volt

SMA / DO-214AC

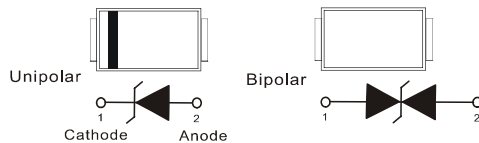
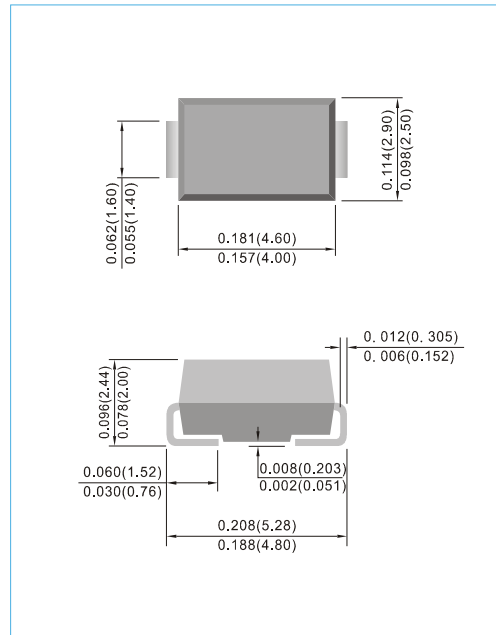
Unit : inch(mm)

FEATURES

- For surface mounted applications in order to optimize board space.
- Glass passivated junction
- Low inductance
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- 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-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 $T_A = 25^\circ\text{C}$ (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 $t_p=10/1000\mu\text{s}$ waveform (Notes 1) Fig.2	I_{PPM}	see Table 1	Amps
Typical Thermal Resistance Junction to Air (Notes 2)	$R_{\theta JA}$	70	$^\circ\text{C} / \text{W}$
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	$^\circ\text{C}$

NOTES :

1. Non-repetitive current pulse, per Fig.3 and derated above $T_A = 25^\circ\text{C}$ 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.

P4SMAJ5.0A ~ P4SMAJ220CA Series

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 _{BR} @ I _T			I _R @ V _{RWM}					
		V _{RWM} (Note 6)	Min.	Max.	I _T	UNI	BI	V _C @ I _{PP}	I _{PP}		
UNI	BI	V	V	V	mA	µA	µA	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

P4SMAJ5.0A ~ P4SMAJ220CA Series

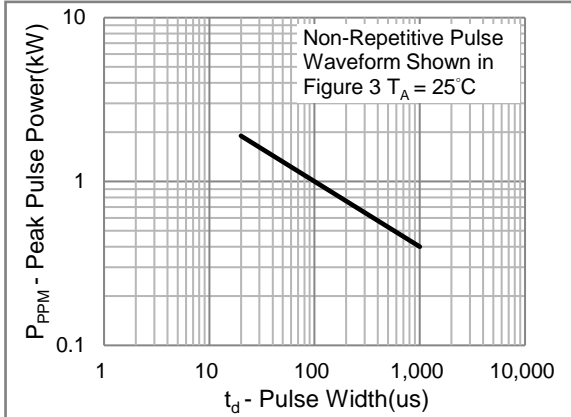


Fig.1 Peak Pulse Power Rating

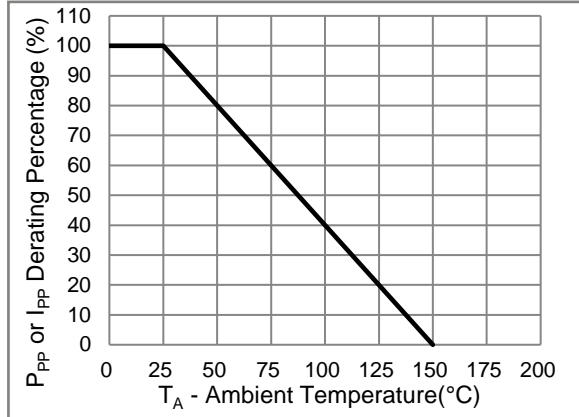


Fig.2 Derating Curve

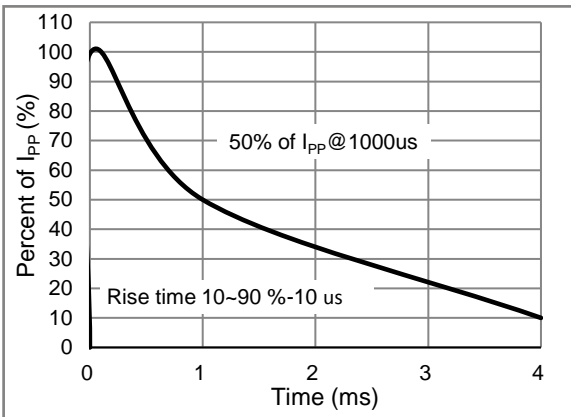


Fig.3 Pulse Waveform

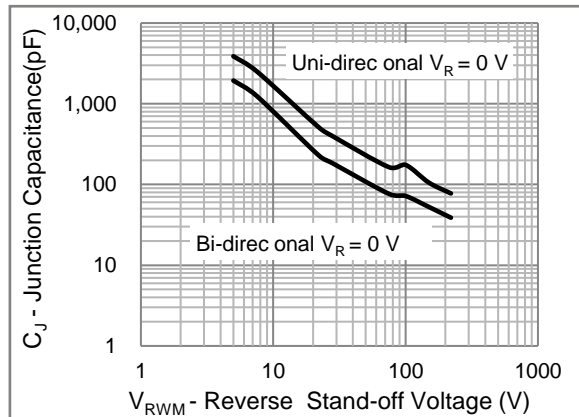


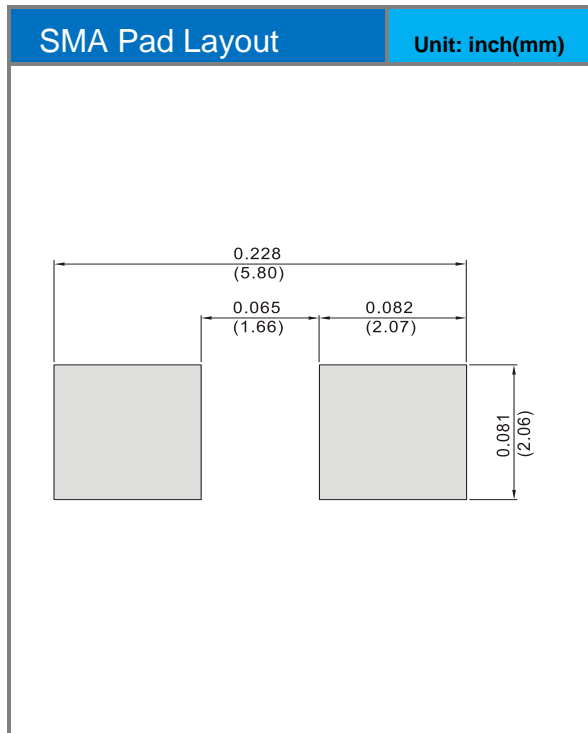
Fig.4 Typical Capacitance

P4SMAJ5.0A ~ P4SMAJ220CA Series

Product and Packing Information

Part No.	Package Type	Packing Type	Marking
P4SMAJxxxCA	SMA	7.5K pcs / 13" reel	See Table

Mounting Pad Layout





P4SMAJ5.0A ~ P4SMAJ220CA 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.

Looking for pricing, stock, or lifecycle information?

Click below to explore more details on WIN SOURCE:

-  [View P4SMAJ18A_R1_00001 on WIN SOURCE](#)
-  [Panjit Information](#)

Optimize Your Supply Chain with WIN SOURCE Solutions

-  Global Sourcing Solution
-  Obsolete Management
-  Cost Control Management
-  Shortage Management
-  Alternative Solution
-  Excess Inventory Management