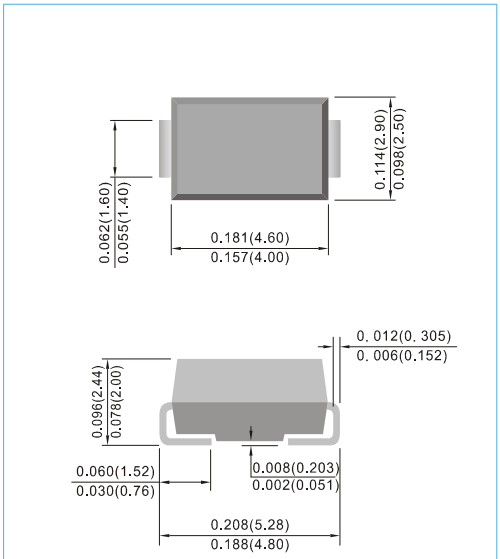
PANJIT SEMI CONDUCTOR

P4SMA6.8A ~ P4SMA250CA Series

SURFACE MOUNT TRANSIENT VOLTAGE SUPPRESSOR POWER 400 Watt

BREAK DOWN VOLTAGE | **6.8 to 250 Volt**

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

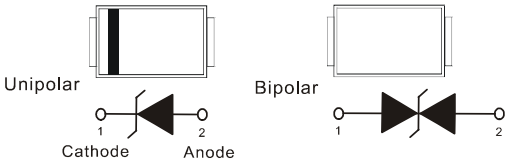


FEATURES

- 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 P4SMA6.8CA thru types P4SMA250CA
Electrical characteristics apply in both directions.

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Rating	Symbol	Value	Unit
Peak Pulse Power Dissipation on T_A = 25°C (Notes 1,2,5, Fig.1)	P_{PP}	400	Watts
ESD IEC-61000-4-2 (Air) ESD IEC-61000-4-2 (Contact)	V_{ESD}	±30 ±30	kV
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
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 10/1000μs.
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
400W Transient Voltage Suppressor											
P4SMA6.8A	P4SMA6.8CA	5.8	6.45	7.14	10	1000	2000	10.5	40	MZB	NZB
P4SMA7.5A	P4SMA7.5CA	6.4	7.13	7.88	10	500	1000	11.3	37	MZD	NZD
P4SMA8.2A	P4SMA8.2CA	7.02	7.79	8.61	10	200	400	12.1	35	MZF	NZF
P4SMA9.1A	P4SMA9.1CA	7.78	8.65	9.5	1	50	100	13.4	31	MZH	NZH
P4SMA10A	P4SMA10CA	8.55	9.5	10.5	1	10	20	14.5	29	MZK	NZK
P4SMA11A	P4SMA11CA	9.4	10.5	11.6	1	5	10	15.6	27	MZM	NZM
P4SMA12A	P4SMA12CA	10.2	11.4	12.6	1	1	1	16.7	25	MZP	NZP
P4SMA13A	P4SMA13CA	11.1	12.4	13.7	1	1	1	18.2	23	MZR	NZR
P4SMA15A	P4SMA15CA	12.8	14.3	15.8	1	1	1	21.2	20	MZT	NZT
P4SMA16A	P4SMA16CA	13.6	15.2	16.8	1	1	1	22.5	19	MZV	NZV
P4SMA18A	P4SMA18CA	15.3	17.1	18.9	1	1	1	25.2	17	MZX	NZX
P4SMA20A	P4SMA20CA	17.1	19	21	1	1	1	27.7	15	MZZ	NZZ
P4SMA22A	P4SMA22CA	18.8	20.9	23.1	1	1	1	30.6	14	MXB	NXB
P4SMA24A	P4SMA24CA	20.5	22.8	25.2	1	1	1	33.2	13	MXD	NXD
P4SMA27A	P4SMA27CA	23.1	25.7	28.4	1	1	1	37.5	11.2	MXF	NXF
P4SMA30A	P4SMA30CA	25.6	28.5	31.5	1	1	1	41.4	10	MXH	NXH
P4SMA33A	P4SMA33CA	28.2	31.4	34.7	1	1	1	45.7	9	MXK	NXK
P4SMA36A	P4SMA36CA	30.8	34.2	37.8	1	1	1	49.9	8.4	MXM	NXM
P4SMA39A	P4SMA39CA	33.3	37.1	41	1	1	1	53.9	7.8	MXP	NXP
P4SMA43A	P4SMA43CA	36.8	40.9	45.2	1	1	1	59.3	7.1	MXR	NXR
P4SMA47A	P4SMA47CA	40.2	44.7	49.4	1	1	1	64.8	5	MXT	NXT
P4SMA51A	P4SMA51CA	43.6	48.5	53.6	1	1	1	70.1	6	MXV	NXV
P4SMA56A	P4SMA56CA	47.8	53.2	58.8	1	1	1	77	5.5	MXX	NXX
P4SMA62A	P4SMA62CA	53	58.9	65.1	1	1	1	85	5	MXZ	NXZ
P4SMA68A	P4SMA68CA	58.1	64.6	71.4	1	1	1	92	4.6	MYB	NYB
P4SMA75A	P4SMA75CA	64.1	71.3	78.8	1	1	1	103	4.1	MYD	NYD
P4SMA82A	P4SMA82CA	70.1	77.9	86.1	1	1	1	113	3.7	MYF	NYF
P4SMA91A	P4SMA91CA	77.8	86.5	95.5	1	1	1	125	3.4	MYH	NYH
P4SMA100A	P4SMA100CA	85.5	95	105	1	1	1	137	3.1	MYK	NYK
P4SMA110A	P4SMA110CA	94	105	116	1	1	1	152	2.8	MYM	NYM
P4SMA120A	P4SMA120CA	102	114	126	1	1	1	165	2.5	MYP	NYP
P4SMA130A	P4SMA130CA	111	124	137	1	1	1	179	2.3	MYR	NYR
P4SMA150A	P4SMA150CA	128	143	158	1	1	1	207	2	MYT	NYT
P4SMA160A	P4SMA160CA	136	152	168	1	1	1	219	1.9	MYV	NYV
P4SMA170A	P4SMA170CA	145	162	179	1	1	1	234	1.8	MYX	NYX
P4SMA180A	P4SMA180CA	154	171	189	1	1	1	246	1.7	MYZ	NYZ
P4SMA200A	P4SMA200CA	171	190	210	1	1	1	274	1.5	MWB	NWB
P4SMA220A	P4SMA220CA	185	209	231	1	1	1	328	1.2	MWD	NWD
P4SMA250A	P4SMA250CA	214	237	263	1	1	1	344	1.2	MWF	NWF

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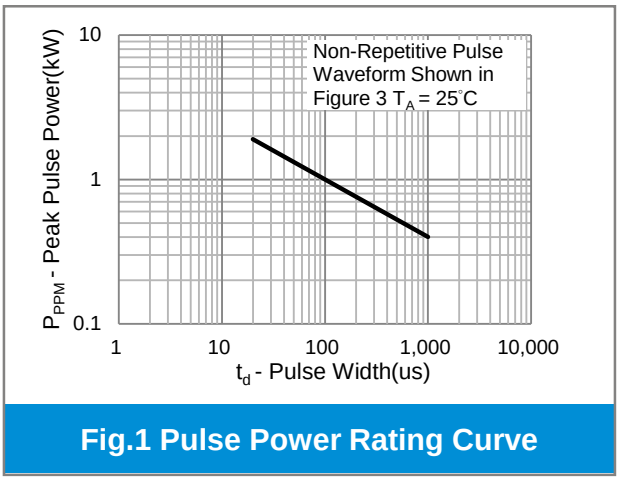

Fig.1 Pulse Power Rating Curve

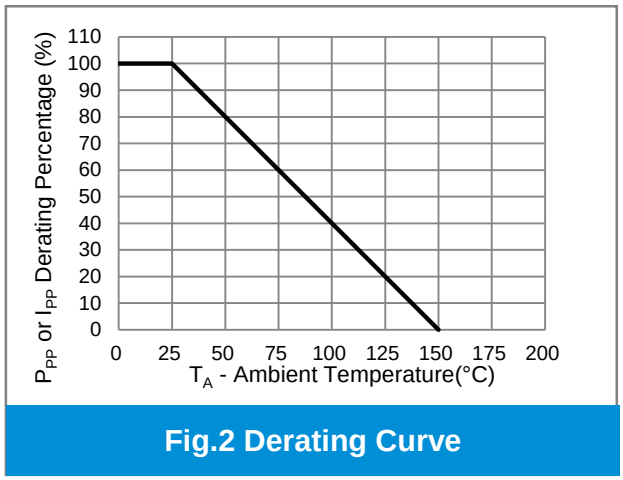

Fig.2 Derating Curve

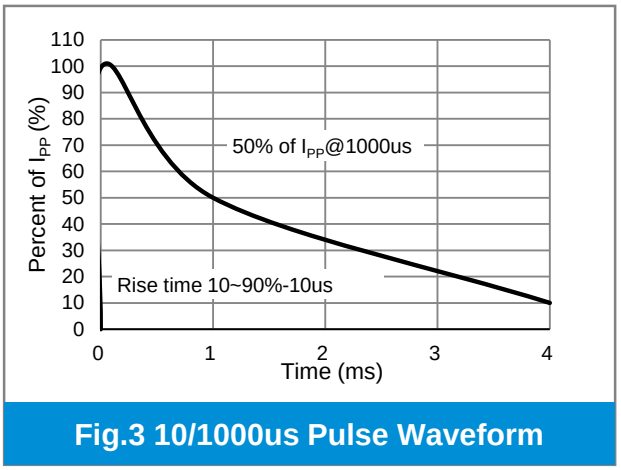

Fig.3 10/1000us Pulse Waveform

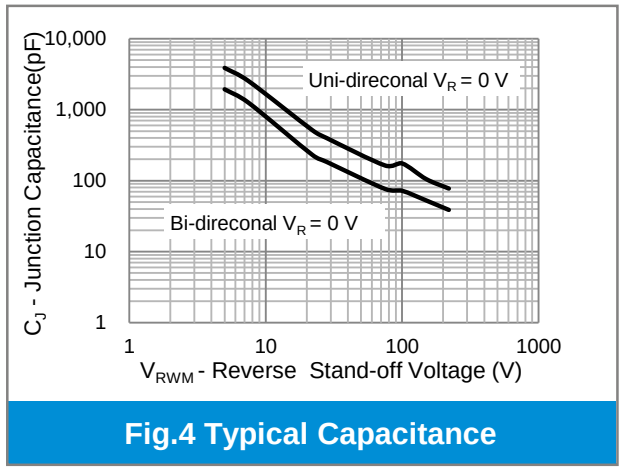

Fig.4 Typical Capacitance

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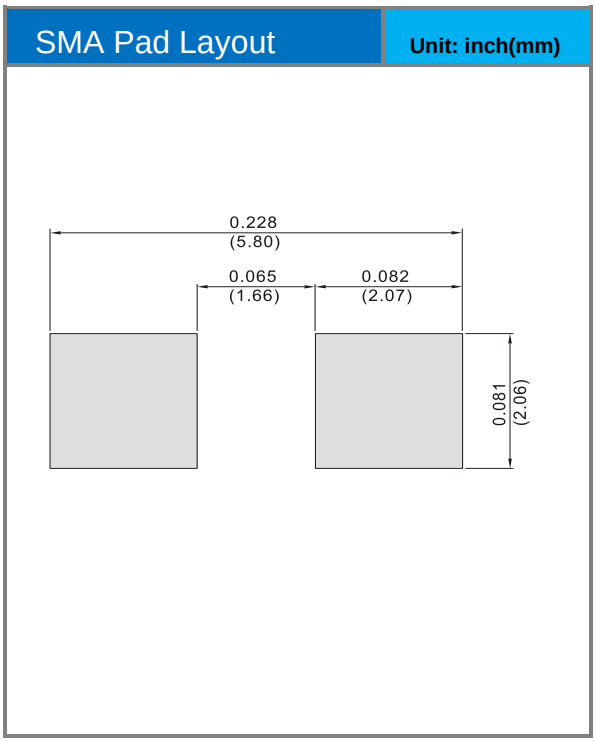
Product and Packing Information

Part No.	Package Type	Packing Type	Marking
P4SMAxxxxA	SMA	1.8K pcs / 7” reel	See Table
P4SMAxxxxA	SMA	7.5K pcs / 13” reel	See Table

Mounting Pad Layout



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