



## P4SMAJ8.5AS ~ P4SMAJ220CAS Series

### Surface Mount Transient Voltage Suppressor

**Voltage** 8.5~220 V **Power** 400 W

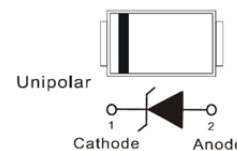
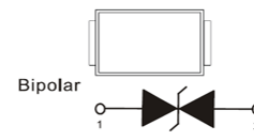
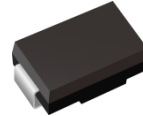
#### Features

- For surface mounted applications in order to optimize board space.
- Package suitable for automated handling
- Low inductance
- High temperature soldering : 260°C/10 seconds at terminals
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

#### Mechanical Data

- Case : Molded plastic, SMA
- Terminals : Solderable per MIL-STD-750, Method 2026
- Approx. Weight : 0.0024 ounces, 0.0679 grams

SMA



### Maximum Ratings and Thermal Characteristics (T<sub>A</sub> = 25 °C unless otherwise noted)

PARAMETER	SYMBOL	LIMIT	UNITS
Peak Pulse Power Dissipation(tp = 10 / 1000 us)	P <sub>PP</sub> <sup>(1) (2)</sup>	400	W
Peak Pulse Current on tp = 10 / 1000 us waveform <sup>(Fig.2)</sup>	I <sub>PPM</sub> <sup>(1)</sup>	See table 1	A
Power Dissipation on Infinite Heat Sink at T <sub>L</sub> = 50 °C	P <sub>D</sub>	3.3	W
ESD IEC61000-4-2(Air)	V <sub>ESD</sub>	±30	kV
ESD IEC61000-4-2(Contact)		±30	
Typical Thermal Resistance Junction to Ambient	R <sub>θJA</sub> <sup>(3)</sup>	150	°C/W
Operating Junction Temperature Range	T <sub>J</sub>	-55~150	°C
Storage Temperature Range	T <sub>STG</sub>	-55~150	°C



## P4SMAJ8.5AS ~ P4SMAJ220CAS Series

### Electrical Characteristics (T<sub>A</sub> = 25 °C unless otherwise noted)

Part Number		V <sub>RWM</sub>	V <sub>BR</sub>			I <sub>R</sub>		V <sub>C@IPP</sub>		Marking Code	
			Min.	Max.	I <sub>T</sub>	@ V <sub>RWM</sub>	uA				
UNI	BI	V	V	V	mA	UNI	BI	V	A	UNI	BI
400W Transient Voltage Suppressor											
P4SMAJ8.5AS	P4SMAJ8.5CAS	8.5	9.44	10.4	1	10	20	14.4	27.7	PZA	RZX
P4SMAJ9.0AS	P4SMAJ9.0CAS	9	10	11.1	1	5	5	15.4	26	PZB	RZY
P4SMAJ10AS	P4SMAJ10CAS	10	11.1	12.3	1	5	5	17	23.5	PZC	RZZ
P4SMAJ11AS	P4SMAJ11CAS	11	12.2	13.5	1	1	1	18.2	22	PZD	SZA
P4SMAJ12AS	P4SMAJ12CAS	12	13.3	14.7	1	1	1	19.9	20.1	PZE	SZB
P4SMAJ13AS	P4SMAJ13CAS	13	14.4	15.9	1	1	1	21.5	18.6	PZF	SZC
P4SMAJ14AS	P4SMAJ14CAS	14	15.6	17.2	1	1	1	23.2	17.2	PZG	SZD
P4SMAJ15AS	P4SMAJ15CAS	15	16.7	18.5	1	1	1	24.4	16.4	PZH	SZE
P4SMAJ16AS	P4SMAJ16CAS	16	17.8	19.7	1	1	1	26	15.3	PZJ	SZF
P4SMAJ17AS	P4SMAJ17CAS	17	18.9	20.9	1	1	1	27.6	14.5	PZK	SZG
P4SMAJ18AS	P4SMAJ18CAS	18	20	22.1	1	1	1	29.2	13.7	PZL	SZH
P4SMAJ20AS	P4SMAJ20CAS	20	22.2	24.5	1	1	1	32.4	12.3	PZM	SZJ
P4SMAJ22AS	P4SMAJ22CAS	22	24.4	26.9	1	1	1	35.5	11.2	PZN	SZK
P4SMAJ24AS	P4SMAJ24CAS	24	26.7	29.5	1	1	1	38.9	10.3	PZP	SZL
P4SMAJ26AS	P4SMAJ26CAS	26	28.9	31.9	1	1	1	42.1	9.5	PZQ	SZM
P4SMAJ28AS	P4SMAJ28CAS	28	31.1	34.4	1	1	1	45.4	8.8	PZR	SZN
P4SMAJ30AS	P4SMAJ30CAS	30	33.3	36.8	1	1	1	48.4	8.3	PZS	SZP
P4SMAJ33AS	P4SMAJ33CAS	33	36.7	40.6	1	1	1	53.3	7.5	PZT	SZQ
P4SMAJ36AS	P4SMAJ36CAS	36	40	44.2	1	1	1	58.1	6.9	PZU	SZR
P4SMAJ40AS	P4SMAJ40CAS	40	44.4	49.1	1	1	1	64.5	6.2	PZV	SZS
P4SMAJ43AS	P4SMAJ43CAS	43	47.8	52.8	1	1	1	69.4	5.7	PZW	SZT
P4SMAJ45AS	P4SMAJ45CAS	45	50	55.3	1	1	1	72.7	5.5	PZX	SZU
P4SMAJ48AS	P4SMAJ48CAS	48	53.3	58.9	1	1	1	77.4	5.2	PZY	SZV
P4SMAJ51AS	P4SMAJ51CAS	51	56.7	62.7	1	1	1	82.4	4.9	PZZ	SZW
P4SMAJ54AS	P4SMAJ54CAS	54	60	66.3	1	1	1	87.1	4.6	RZA	SZX
P4SMAJ58AS	P4SMAJ58CAS	58	64.4	71.2	1	1	1	93.6	4.3	RZB	SZY
P4SMAJ60AS	P4SMAJ60CAS	60	66.7	73.7	1	1	1	96.8	4.1	RZC	SZZ
P4SMAJ64AS	P4SMAJ64CAS	64	71.1	78.6	1	1	1	103	3.9	RZD	TZA
P4SMAJ70AS	P4SMAJ70CAS	70	77.8	86	1	1	1	113	3.5	RZE	TZB



## P4SMAJ8.5AS ~ P4SMAJ220CAS Series

### Electrical Characteristics ( $T_A = 25^\circ\text{C}$ unless otherwise noted)

Part Number		$V_{RWM}$	$V_{BR}$			$I_R$ @ $V_{RWM}$		$V_C @ I_{PP}$		Marking Code	
			Min.	Max.	$I_T$	$\mu\text{A}$					
UNI	BI	V	V	V	mA	UNI	BI	V	A	UNI	BI
400W Transient Voltage Suppressor											
P4SMAJ75AS	P4SMAJ75CAS	75	83.3	92.1	1	1	1	121	3.3	RZF	TZC
P4SMAJ78AS	P4SMAJ78CAS	78	86.7	95.8	1	1	1	126	3.2	RZG	TZD
P4SMAJ85AS	P4SMAJ85CAS	85	94.4	104	1	1	1	137	2.9	RZH	TZE
P4SMAJ90AS	P4SMAJ90CAS	90	100	111	1	1	1	146	2.7	RZJ	TZF
P4SMAJ100AS	P4SMAJ100CAS	100	111	123	1	1	1	162	2.5	RZK	TZG
P4SMAJ110AS	P4SMAJ110CAS	110	122	135	1	1	1	177	2.3	RZL	TZH
P4SMAJ120AS	P4SMAJ120CAS	120	133	147	1	1	1	193	2	RZM	TZJ
P4SMAJ130AS	P4SMAJ130CAS	130	144	159	1	1	1	209	1.9	RZN	TZK
P4SMAJ150AS	P4SMAJ150CAS	150	167	185	1	1	1	243	1.6	RZP	TZL
P4SMAJ160AS	P4SMAJ160CAS	160	178	197	1	1	1	259	1.5	RZQ	TZM
P4SMAJ170AS	P4SMAJ170CAS	170	189	209	1	1	1	275	1.4	RZR	TZN
P4SMAJ180AS	P4SMAJ180CAS	180	198	222	1	1	1	292	1.3	RZS	TZP
P4SMAJ190AS	P4SMAJ190CAS	190	209	243.2	1	1	1	308	1.3	RZT	TZQ
P4SMAJ200AS	P4SMAJ200CAS	200	220	247	1	1	1	324	1.2	RZU	TZR
P4SMAJ210AS	P4SMAJ210CAS	210	231	268.8	1	1	1	340	1.2	RZV	TZS
P4SMAJ220AS	P4SMAJ220CAS	220	242	272	1	1	1	356	1.1	RZW	TZT

**Notes :**

1. Non-repetitive current pulse, per Fig.3 and derated above  $T_A=25^\circ\text{C}$  per Fig.2
2. Mounted on 100cm<sup>2</sup> copper pads to each terminal
3. Mounted on a FR4 PCB, single-sided copper, standard footprint



# P4SMAJ8.5AS ~ P4SMAJ220CAS Series

## TYPICAL CHARACTERISTIC CURVES

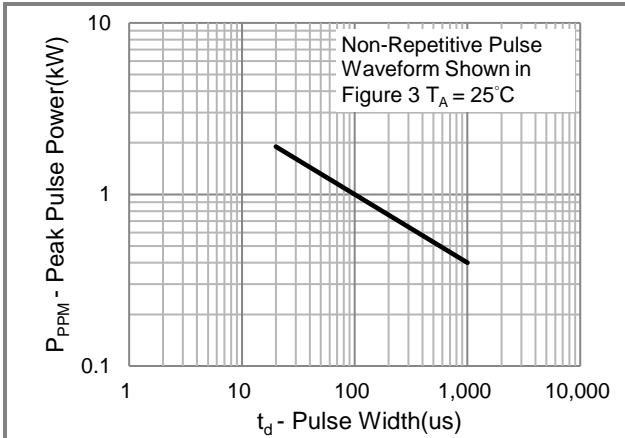


Fig.1 Pulse Power Rating Curve

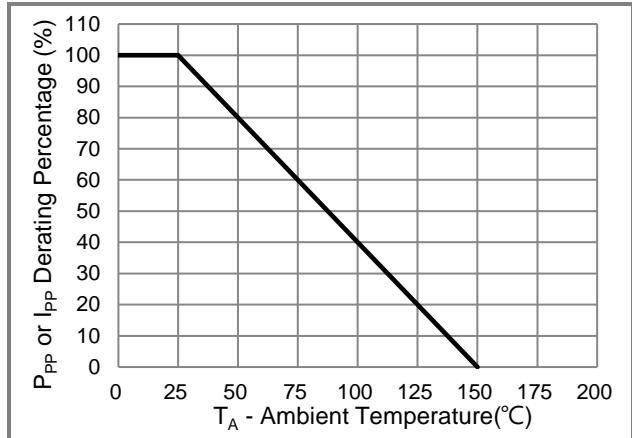


Fig.2 Derating Curve

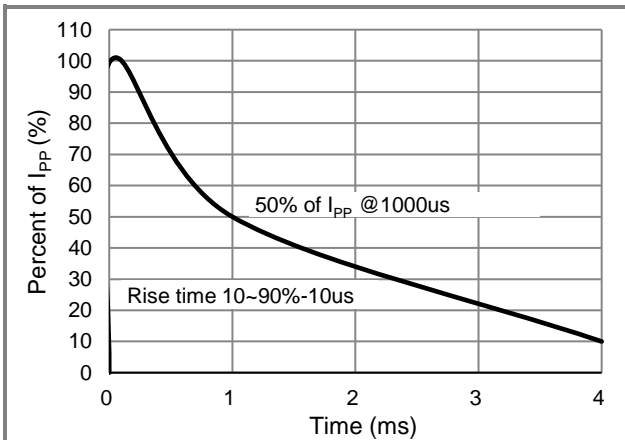


Fig.3 10/1000us Pulse Waveform

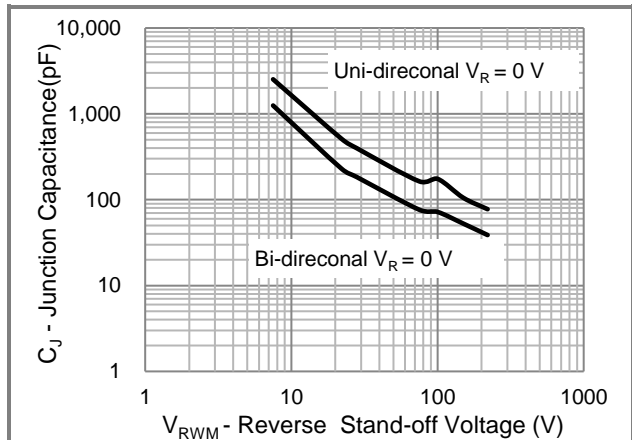


Fig.4 Typical Capacitance

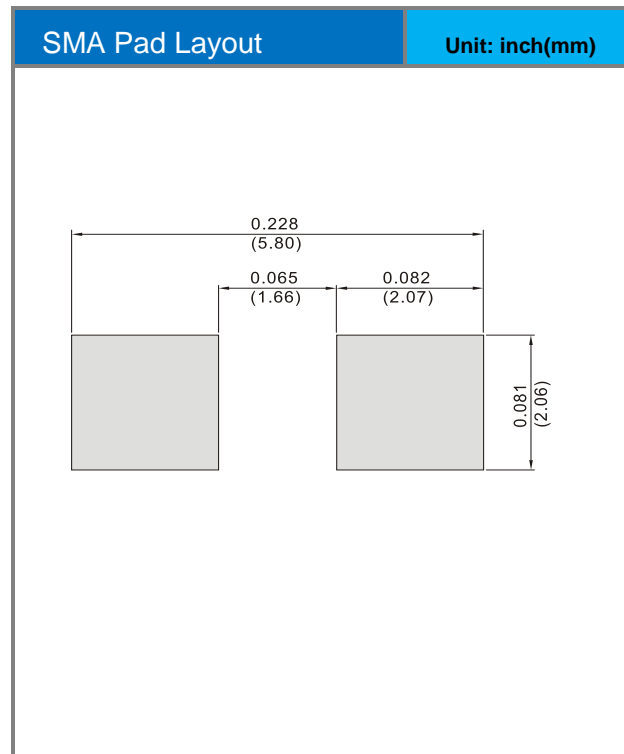
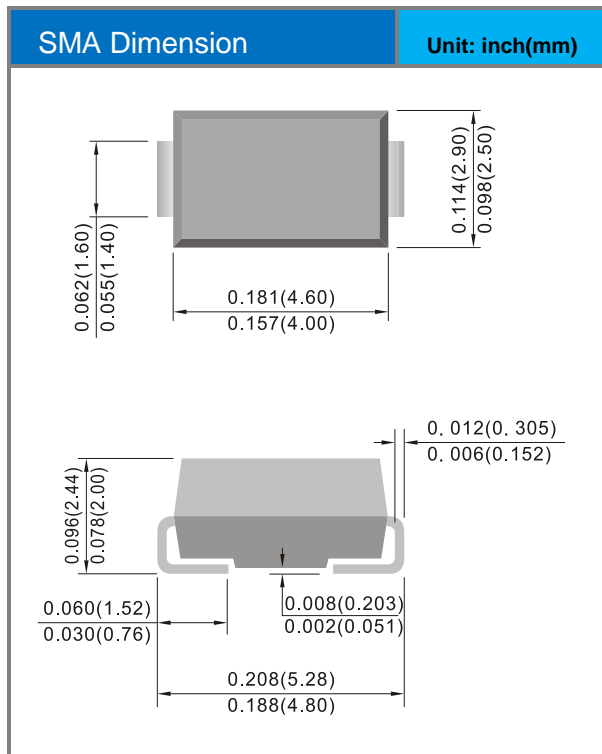


## P4SMAJ8.5AS ~ P4SMAJ220CAS Series

Part No. Packing Code Version

Part No. Packing Code	Package Type	Packing Type	Marking	Version
P4SMAJxxxxAS_R1_00001	SMA	1.8K pcs / 7" reel	See Table	Halogen free RoHS compliant

### Packaging Information & Mounting Pad Layout





## **P4SMAJ8.5AS ~ P4SMAJ220CAS 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.