

# P4SMAJ5.0A-AU ~ P4SMAJ70CA-AU Series

## SURFACE MOUNT TRANSIENT VOLTAGE SUPPRESSOR

**Voltage**

**5~70 V**

**Power**

**400 W**

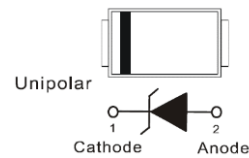
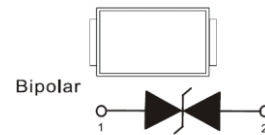
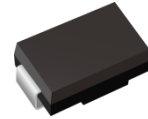
### Features

- ISO10605(C=330 pF,R=330Ω): ± 30kV Air, ± 30kV Contact
- HBM ≥ ± 8 kV & CDM ≥ ± 2 kV
- AEC-Q101 qualified
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

### Mechanical Data

- Case: Molded plastic, SMA
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.0024 ounces, 0.068 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=10/1000us)	P <sub>PP</sub> <sup>(1) (2)</sup>	400	W
Power Dissipation on Infinite Heat Sink at T <sub>L</sub> =50°C	P <sub>D</sub>	3.3	W
Peak Forward Surge Current(8.3ms single half sine-wave)	I <sub>FSM</sub>	40	A
Peak Pulse Current on tp=10/1000us waveform <sup>(Fig.2)</sup>	I <sub>PPM</sub> <sup>(1)</sup>	See table 1	A
ISO10605(C=330pF, R=330Ω) (Air)	V <sub>ESD</sub>	±30	kV
ISO10605(C=330pF, R=330Ω) (Contact)		±30	
Typical Thermal Resistance Junction to Ambient	R <sub>θJA</sub> <sup>(3)</sup>	70	°C/W
Operating Junction Temperature Range	T <sub>J</sub>	-55~150	°C
Storage Temperature Range	T <sub>STG</sub>	-55~150	°C

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### 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</sub> @I <sub>PP</sub>		Marking Code	
			Min.	Max.	I <sub>T</sub>	@V <sub>RWM</sub>					
UNI	BI	V	V	V	mA	UNI	BI	V	A	UNI	BI
400W Transient Voltage Suppressor											
P4SMAJ5.0A-AU	P4SMAJ5.0CA-AU	5	6.4	7	10	800	1600	9.2	43.5	HE	TE
P4SMAJ6.0A-AU	P4SMAJ6.0CA-AU	6	6.67	7.37	10	800	1600	10.3	38.8	HG	TG
P4SMAJ6.5A-AU	P4SMAJ6.5CA-AU	6.5	7.22	7.98	10	500	1000	11.2	35.7	HK	TK
P4SMAJ7.0A-AU	P4SMAJ7.0CA-AU	7	7.78	8.6	10	200	400	12	33.3	HM	TM
P4SMAJ7.5A-AU	P4SMAJ7.5CA-AU	7.5	8.33	9.21	1	100	200	12.9	31	HP	TP
P4SMAJ8.0A-AU	P4SMAJ8.0CA-AU	8	8.89	9.83	1	50	100	13.6	29.4	HR	TR
P4SMAJ8.5A-AU	P4SMAJ8.5CA-AU	8.5	9.44	10.4	1	10	20	14.4	27.7	HT	TT
P4SMAJ9.0A-AU	P4SMAJ9.0CA-AU	9	10	11.1	1	5	5	15.4	26	HV	TV
P4SMAJ10A-AU	P4SMAJ10CA-AU	10	11.1	12.3	1	5	5	17	23.5	HX	TX
P4SMAJ11A-AU	P4SMAJ11CA-AU	11	12.2	13.5	1	1	1	18.2	22	HZ	TZ
P4SMAJ12A-AU	P4SMAJ12CA-AU	12	13.3	14.7	1	1	1	19.9	20.1	IE	UE
P4SMAJ13A-AU	P4SMAJ13CA-AU	13	14.4	15.9	1	1	1	21.5	18.6	IG	UG
P4SMAJ14A-AU	P4SMAJ14CA-AU	14	15.6	17.2	1	1	1	23.2	17.2	IK	UK
P4SMAJ15A-AU	P4SMAJ15CA-AU	15	16.7	18.5	1	1	1	24.4	16.4	IM	UM
P4SMAJ16A-AU	P4SMAJ16CA-AU	16	17.8	19.7	1	1	1	26	15.3	IP	UP
P4SMAJ17A-AU	P4SMAJ17CA-AU	17	18.9	20.9	1	1	1	27.6	14.5	IR	UR
P4SMAJ18A-AU	P4SMAJ18CA-AU	18	20	22.1	1	1	1	29.2	13.7	IT	UT
P4SMAJ20A-AU	P4SMAJ20CA-AU	20	22.2	24.5	1	1	1	32.4	12.3	IV	UV
P4SMAJ22A-AU	P4SMAJ22CA-AU	22	24.4	26.9	1	1	1	35.5	11.2	IX	UX
P4SMAJ24A-AU	P4SMAJ24CA-AU	24	26.7	29.5	1	1	1	38.9	10.3	IZ	UZ
P4SMAJ26A-AU	P4SMAJ26CA-AU	26	28.9	31.9	1	1	1	42.1	9.5	JE	VE
P4SMAJ28A-AU	P4SMAJ28CA-AU	28	31.1	34.4	1	1	1	45.4	8.8	JG	VG
P4SMAJ30A-AU	P4SMAJ30CA-AU	30	33.3	36.8	1	1	1	48.4	8.3	JK	VK
P4SMAJ33A-AU	P4SMAJ33CA-AU	33	36.7	40.6	1	1	1	53.3	7.5	JM	VM
P4SMAJ36A-AU	P4SMAJ36CA-AU	36	40	44.2	1	1	1	58.1	6.9	JP	VP
P4SMAJ40A-AU	P4SMAJ40CA-AU	40	44.4	49.1	1	1	1	64.5	6.2	JR	VR
P4SMAJ43A-AU	P4SMAJ43CA-AU	43	47.8	52.8	1	1	1	69.4	5.7	JT	VT
P4SMAJ45A-AU	P4SMAJ45CA-AU	45	50	55.3	1	1	1	72.7	5.5	JV	VV
P4SMAJ48A-AU	P4SMAJ48CA-AU	48	53.3	58.9	1	1	1	77.4	5.2	JX	VX
P4SMAJ51A-AU	P4SMAJ51CA-AU	51	56.7	62.7	1	1	1	82.4	4.9	JZ	VZ

## P4SMAJ5.0A-AU ~ P4SMAJ70CA-AU 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.	$I_T$	uA					
UNI	BI	V	V	V	mA	UNI	BI	V	A	UNI	BI
400W Transient Voltage Suppressor											
P4SMAJ54A-AU	P4SMAJ54CA-AU	54	60	66.3	1	1	1	87.1	4.6	RE	WE
P4SMAJ58A-AU	P4SMAJ58CA-AU	58	64.4	71.2	1	1	1	93.6	4.3	RG	WG
P4SMAJ60A-AU	P4SMAJ60CA-AU	60	66.7	73.7	1	1	1	96.8	4.1	RK	WK
P4SMAJ64A-AU	P4SMAJ64CA-AU	64	71.1	78.6	1	1	1	103	3.9	RM	WM
P4SMAJ70A-AU	P4SMAJ70CA-AU	70	77.8	86	1	1	1	113	3.5	RP	WP

Note:

1. Non-repetitive current pulse, per Fig.3 and derated above  $T_A=25^\circ\text{C}$  per Fig.2
2. Mounted on  $5\text{mm}^2$  copper pads to each terminal
3. Mounted on a FR4 PCB, single-sided copper, mini pad

# P4SMAJ5.0A-AU ~ P4SMAJ70CA-AU Series

## TYPICAL CHARACTERISTIC CURVES

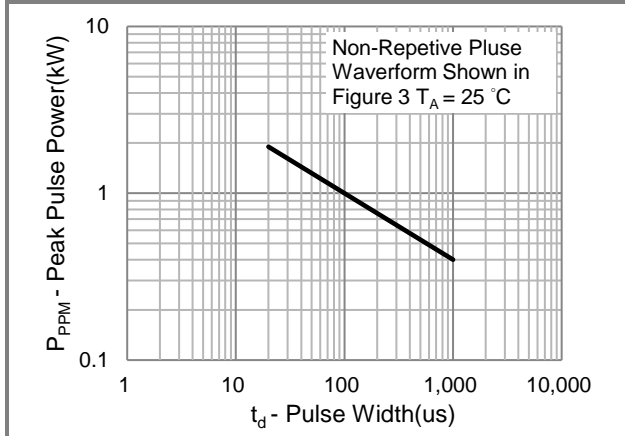


Fig.1 Pulse Power Rating Curve

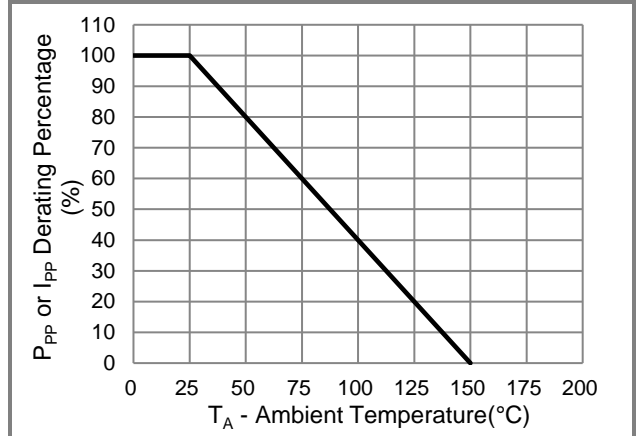


Fig.2 Derating Curve

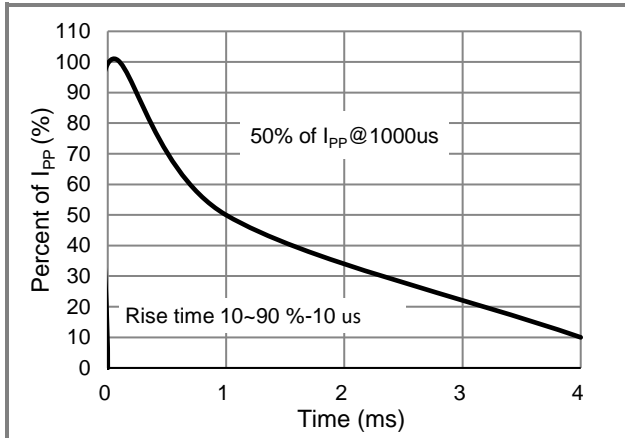


Fig.3 10/1000us Pulse Waveform

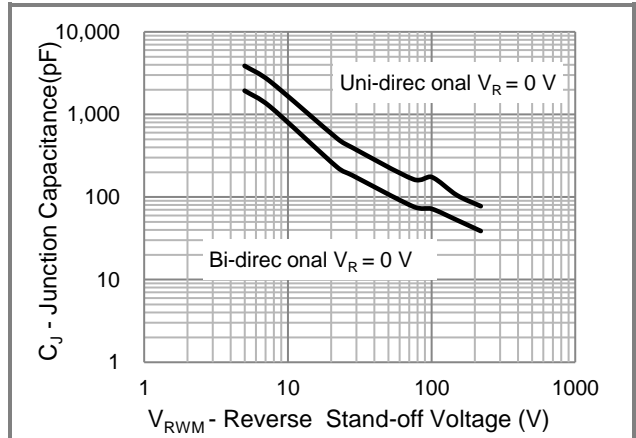


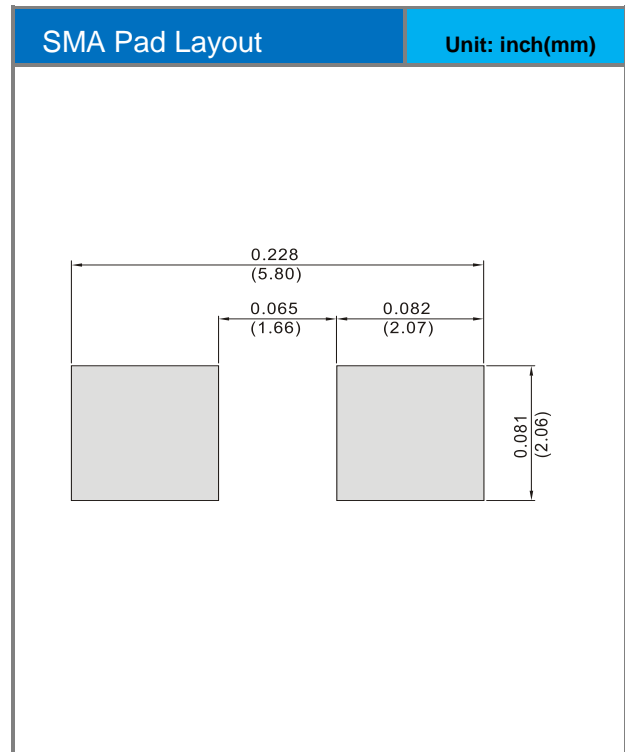
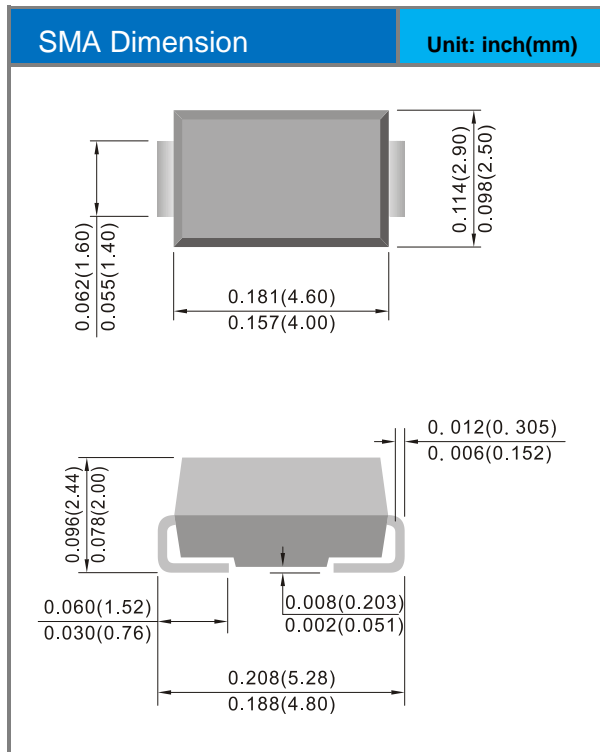
Fig.4 Typical Capacitance

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### Product and Packing Information

Part No.	Package Type	Packing Type	Marking
P4SMAJxxxx-AU	SMA	7.5K pcs / 13" reel	See Table

### Packaging Information & Mounting Pad Layout



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