

P4SMAJ5.0A-AU ~ P4SMAJ70CA-AU Series

SURFACE MOUNT TRANSIENT VOLTAGE SUPPRESSOR

Voltage 5~70 V **Power** 400 W

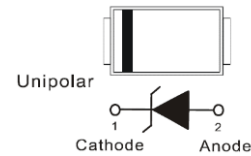
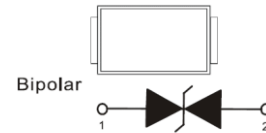
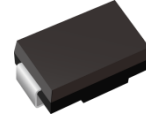
Features

- ISO10605(C=330 pF,R=330Ω): $\pm 30\text{kV}$ Air, $\pm 30\text{kV}$ Contact
- HBM $\geq \pm 8\text{ kV}$ & CDM $\geq \pm 2\text{ kV}$
- 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 ($T_A=25^\circ\text{C}$ unless otherwise noted)

PARAMETER	SYMBOL	LIMIT	UNITS
Peak Pulse Power Dissipation($t_p=10/1000\mu\text{s}$)	$P_{PP}^{(1)(2)}$	400	W
Power Dissipation on Infinite Heat Sink at $T_L=50^\circ\text{C}$	P_D	3.3	W
Peak Forward Surge Current(8.3ms single half sine-wave)	I_{FSM}	40	A
Peak Pulse Current on $t_p=10/1000\mu\text{s}$ waveform(Fig.2)	$I_{PPM}^{(1)}$	See table 1	A
ISO10605(C=330pF, R=330Ω) (Air)	V_{ESD}	± 30	kV
ISO10605(C=330pF, R=330Ω) (Contact)		± 30	
Typical Thermal Resistance Junction to Ambient	$R_{\theta JA}^{(3)}$	70	$^\circ\text{C/W}$
Operating Junction Temperature Range	T_J	-55~150	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55~150	$^\circ\text{C}$

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Electrical Characteristics (T_A=25°C unless otherwise noted)

Part Number		V _{RWM}	V _{BR}			I _R		V _{C@I_{PP}}		Marking Code	
			Min.	Max.	I _T	@V _{RWM} uA					
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

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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 5mm² copper pads to each terminal
3. Mounted on a FR4 PCB, single-sided copper, mini pad

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TYPICAL CHARACTERISTIC CURVES

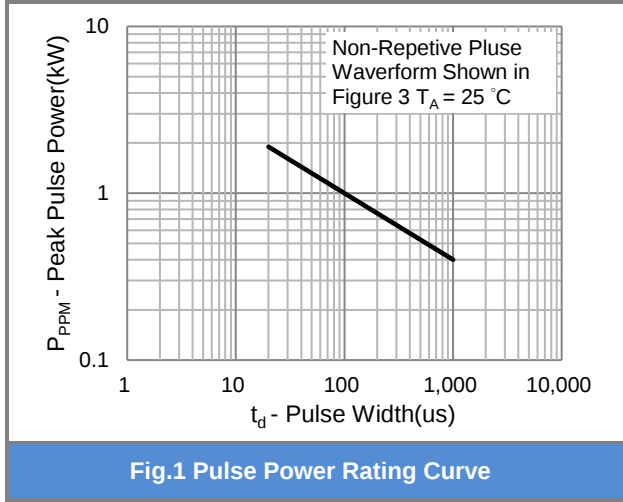


Fig.1 Pulse Power Rating Curve

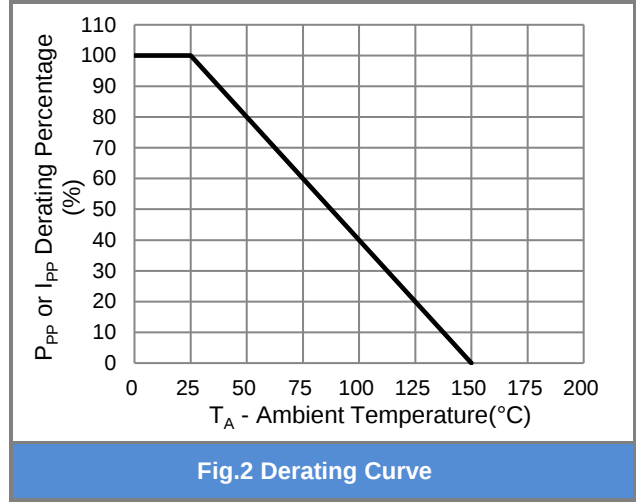


Fig.2 Derating Curve

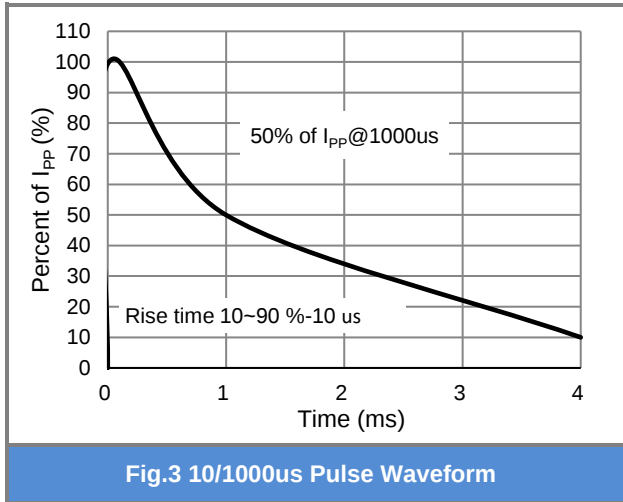


Fig.3 10/1000us Pulse Waveform

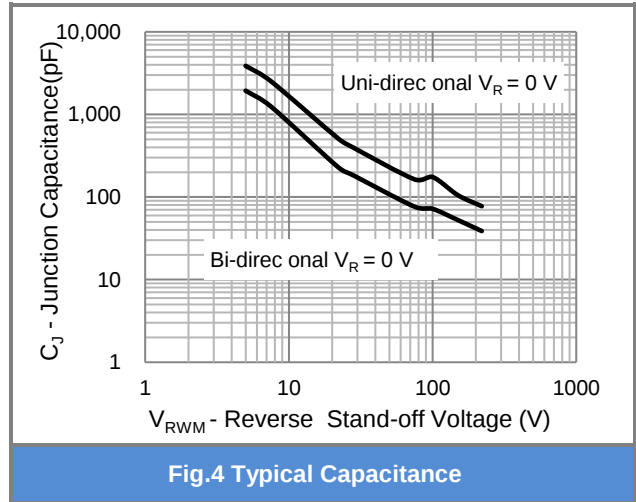


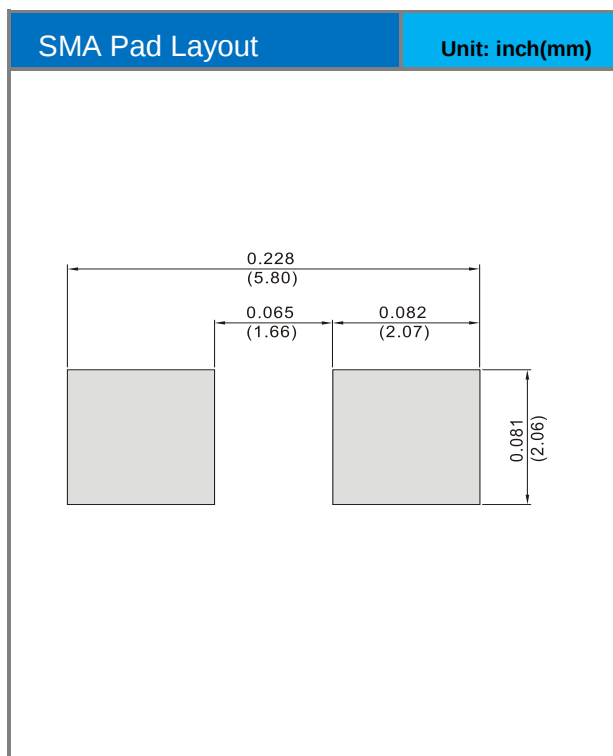
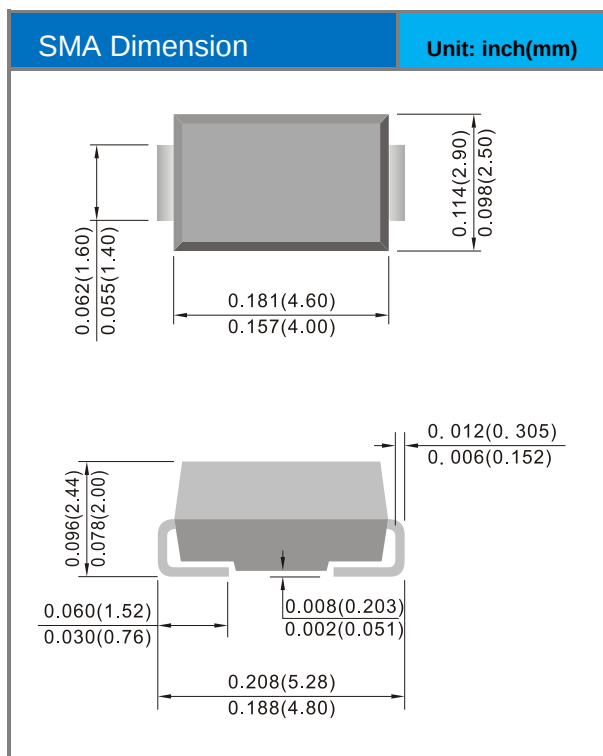
Fig.4 Typical Capacitance

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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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