



# P4SMA6.8A-AU ~ P4SMA82CA-AU Series

## SURFACE MOUNT TRANSIENT VOLTAGE SUPPRESSOR

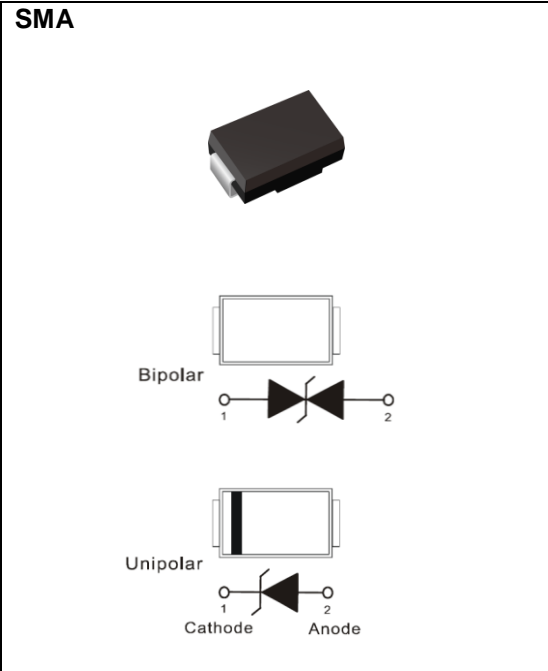
**Voltage** 6.8~82 V **Power** 400 W

### 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



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

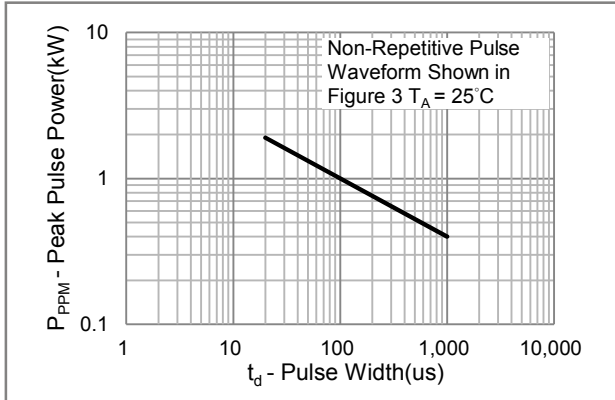
Part Number		$V_{RWM}$	$V_{BR}$			$I_R$		$V_C@I_{PP}$		Marking Code	
			Min.	Max.	$I_T$	@ $V_{RWM}$	uA				
UNI	BI	V	V	V	mA	UNI	BI	V	A	UNI	BI
400W Transient Voltage Suppressor											
P4SMA6.8A-AU	P4SMA6.8CA-AU	5.8	6.45	7.14	10	1000	2000	10.5	40	MZB	NZB
P4SMA7.5A-AU	P4SMA7.5CA-AU	6.4	7.13	7.88	10	500	1000	11.3	37	MZD	NZD
P4SMA8.2A-AU	P4SMA8.2CA-AU	7.02	7.79	8.61	10	200	400	12.1	35	MZF	NZF
P4SMA9.1A-AU	P4SMA9.1CA-AU	7.78	8.65	9.5	1	50	100	13.4	31	MZH	NZH
P4SMA10A-AU	P4SMA10CA-AU	8.55	9.5	10.5	1	10	20	14.5	29	MZK	NZK
P4SMA11A-AU	P4SMA11CA-AU	9.4	10.5	11.6	1	5	10	15.6	27	MZM	NZM
P4SMA12A-AU	P4SMA12CA-AU	10.2	11.4	12.6	1	1	1	16.7	25	MZP	NZP
P4SMA13A-AU	P4SMA13CA-AU	11.1	12.4	13.7	1	1	1	18.2	23	MZR	NZR
P4SMA15A-AU	P4SMA15CA-AU	12.8	14.3	15.8	1	1	1	21.2	20	MZT	NZT
P4SMA16A-AU	P4SMA16CA-AU	13.6	15.2	16.8	1	1	1	22.5	19	MZV	NZV
P4SMA18A-AU	P4SMA18CA-AU	15.3	17.1	18.9	1	1	1	25.2	17	MZX	NZX
P4SMA20A-AU	P4SMA20CA-AU	17.1	19	21	1	1	1	27.7	15	MZZ	NZZ
P4SMA22A-AU	P4SMA22CA-AU	18.8	20.9	23.1	1	1	1	30.6	14	MXB	NXB
P4SMA24A-AU	P4SMA24CA-AU	20.5	22.8	25.2	1	1	1	33.2	13	MXD	NXD
P4SMA27A-AU	P4SMA27CA-AU	23.1	25.7	28.4	1	1	1	37.5	11.2	MXF	NXF
P4SMA30A-AU	P4SMA30CA-AU	25.6	28.5	31.5	1	1	1	41.4	10	MXH	NXH
P4SMA33A-AU	P4SMA33CA-AU	28.2	31.4	34.7	1	1	1	45.7	9	MXK	NXK
P4SMA36A-AU	P4SMA36CA-AU	30.8	34.2	37.8	1	1	1	49.9	8.4	MXM	NXM
P4SMA39A-AU	P4SMA39CA-AU	33.3	37.1	41	1	1	1	53.9	7.8	MXP	NXP
P4SMA43A-AU	P4SMA43CA-AU	36.8	40.9	45.2	1	1	1	59.3	7.1	MXR	NXR
P4SMA47A-AU	P4SMA47CA-AU	40.2	44.7	49.4	1	1	1	64.8	5	MXT	NXT
P4SMA51A-AU	P4SMA51CA-AU	43.6	48.5	53.6	1	1	1	70.1	6	MXV	NXV
P4SMA56A-AU	P4SMA56CA-AU	47.8	53.2	58.8	1	1	1	77	5.5	MXX	NXX
P4SMA62A-AU	P4SMA62CA-AU	53	58.9	65.1	1	1	1	85	5	MXZ	NXZ
P4SMA68A-AU	P4SMA68CA-AU	58.1	64.6	71.4	1	1	1	92	4.6	MYB	NYB
P4SMA75A-AU	P4SMA75CA-AU	64.1	71.3	78.8	1	1	1	103	4.1	MYD	NYD
P4SMA82A-AU	P4SMA82CA-AU	70.1	77.9	86.1	1	1	1	113	3.7	MYF	NYF

**Note:**

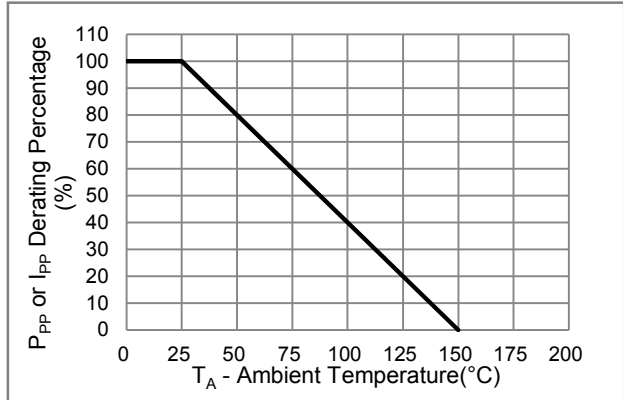
1. Non-repetitive current pulse, per Fig.3 and derated above  $T_A=25^{\circ}\text{C}$  per Fig.2
2. Mounted on 5mm x 5mm copper pads to each terminal
3. Mounted on a FR4 PCB, single-sided copper, mini pad



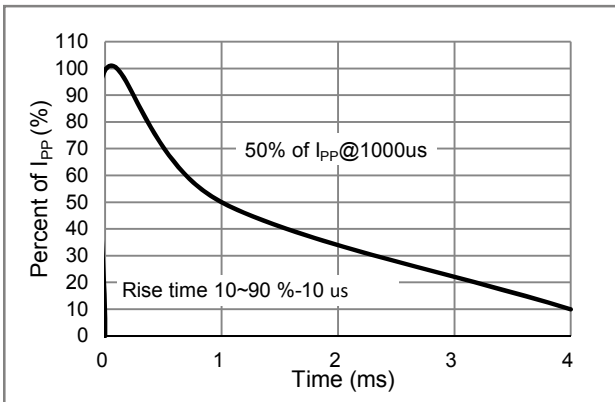
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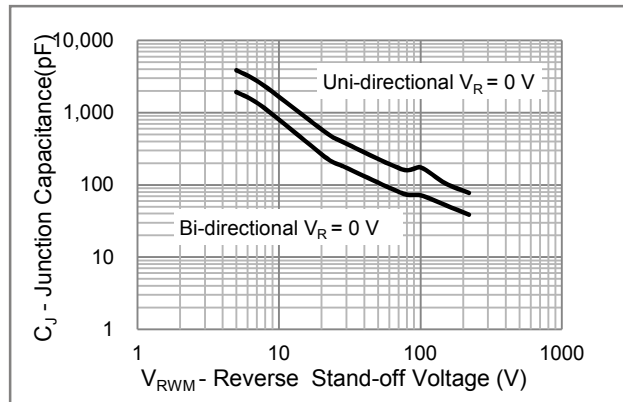
**Fig.1 Pulse Power Rating Curve**



**Fig.2 Derating Curve**



**Fig.3 10/1000us Pulse Waveform**



**Fig.4 Typical Capacitance**

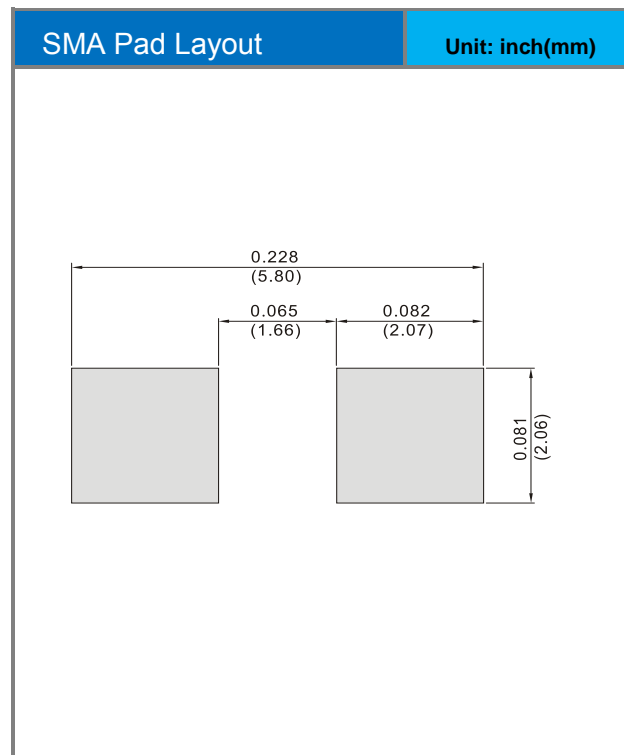
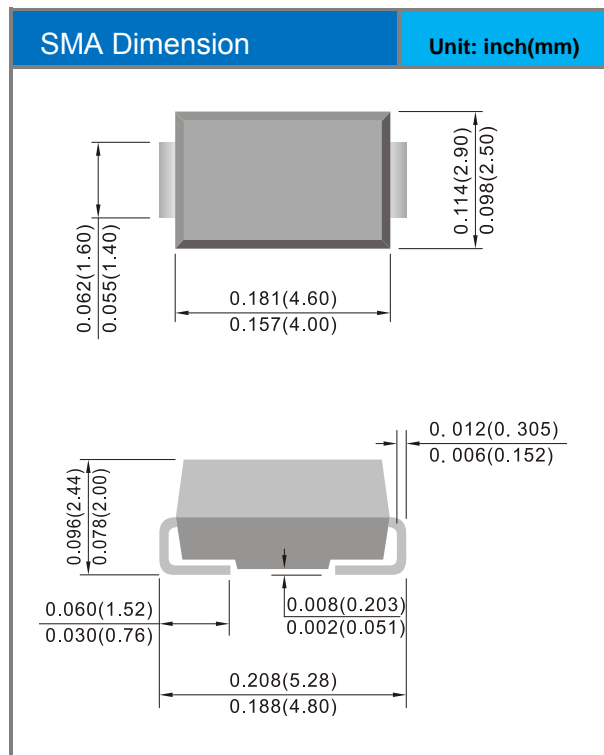


## P4SMA6.8A-AU ~ P4SMA82CA-AU Series

Part No. Packing Code Version

Part No. Packing Code	Package Type	Packing Type	Marking	Version
P4SMAxxxx-AU_R1_000A1	SMA	1.8K pcs / 7" reel	See Table	Halogen free

### Packaging Information & Mounting Pad Layout





## **P4SMA6.8A-AU ~ P4SMA82CA-AU Series**

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