

# EVVOSEMI<sup>®</sup>

THINK CHANGE DO



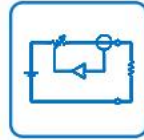
ESD



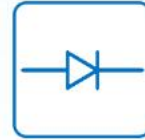
TVS



MOS



LDO



Diode



Sensor



DC-DC

## Product Specification

▶ Domestic	Part Number	P4SMA Series
▶ Overseas	Part Number	P4SMA Series
▶ Equivalent	Part Number	P4SMA Series

EV is the abbreviation of name EVVO

## Surface mount transient voltage suppressor power 400 watts

Stand-Off Voltage : 5.8V~468V

### FEATURES

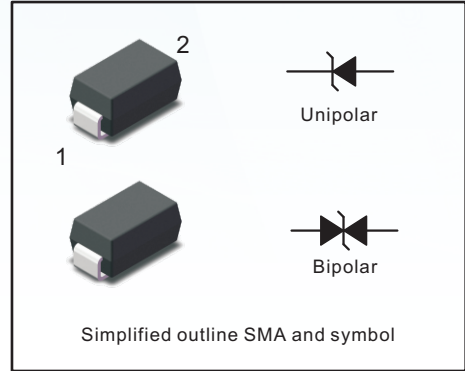
- For surface mounted applications in order to optimize board space.
- Low profile package
- Glass passivated junction
- Low inductance
- Plastic package has Underwriters Laboratory Flammability

### MECHANICAL DATA

- Case: SMA
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.055g / 0.002oz

### PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



### Maximum Ratings and Electrical characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

Parameter	Symbol	Value	Unit
Peak Pulse Power Dissipation on $T_A=25^{\circ}\text{C}$ (Note 1,2,4, Fig1)	$P_{PPM}$	400	W
Peak Forward Surge Current (Note 3, Fig 4)	$I_{FSM}$ (UNI)	60	A
Peak Pulse Current on 10/1000 us waveform (Note 1, Fig 3)	$I_{PPM}$	see Table 1	A
ESD Voltage per IEC6100-4-2 Contact Air	$V_{ESD1}$ $V_{ESD2}$	$\pm 30$ $\pm 30$	kV
Typical Thermal Resistance Junction to Ambient(Note 2)	$R_{\theta JA}$	120	$^{\circ}\text{C}/\text{W}$
Operating Junction Temperature and Storage Temperature Range	$T_j, T_{stg}$	-55 ~ +150	$^{\circ}\text{C}$

### NOTES:

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. Peak Forward Surge Current : 8.3ms single half sine-wave Superimposed on rated load (JEDEC method).
4. Peak pulse power waveform is 10/1000 $\mu\text{S}$ .

Characteristics at Ta = 25°C

Table 1

Type		Reverse Stand-off Voltage	Breakdown Voltage		Test Current	Reverse Leakage	Max. Clamp Voltage	Peak Pulse Current	Package	
			V <sub>BR</sub> @ I <sub>T</sub>						SMA	
			V <sub>RWM</sub>	Min	Max	I <sub>T</sub>	I <sub>R</sub> @ V <sub>RWM</sub>	V <sub>C</sub> @ I <sub>PP</sub>	I <sub>PP</sub>	Device Marking Ccode
UNI	BI	V	V	V	mA	µA	V	A	UNI	BI
P4SMA6.8A	P4SMA6.8CA	5.8	6.45	7.14	10	1000	10.5	39	6V8	6V8C
P4SMA7.5A	P4SMA7.5CA	6.4	7.13	7.88	10	500	11.3	36.3	7V5	7V5C
P4SMA8.2A	P4SMA8.2CA	7.02	7.79	8.61	10	200	12.1	33.9	8V2	8V2C
P4SMA9.1A	P4SMA9.1CA	7.78	8.65	9.55	1	50	13.4	30.6	9V1	9V1C
P4SMA10A	P4SMA10CA	8.55	9.5	10.5	1	10	14.5	28.3	10	10C
P4SMA11A	P4SMA11CA	9.4	10.5	11.6	1	5	15.6	26.3	11	11C
P4SMA12A	P4SMA12CA	10.2	11.4	12.6	1	5	16.7	24.6	12	12C
P4SMA13A	P4SMA13CA	11.1	12.4	13.7	1	1	18.2	22.5	13	13C
P4SMA15A	P4SMA15CA	12.8	14.3	15.8	1	1	21.2	19.3	15	15C
P4SMA16A	P4SMA16CA	13.6	15.2	16.8	1	1	22.5	18.2	16	16C
P4SMA18A	P4SMA18CA	15.3	17.1	18.9	1	1	25.5	16.1	18	18C
P4SMA20A	P4SMA20CA	17.1	19	21	1	1	27.7	14.8	20	20C
P4SMA22A	P4SMA22CA	18.8	20.9	23.1	1	1	30.6	13.4	22	22C
P4SMA24A	P4SMA24CA	20.5	22.8	25.2	1	1	33.2	12.3	24	24C
P4SMA27A	P4SMA27CA	23.1	25.7	28.4	1	1	37.5	10.9	27	27C
P4SMA30A	P4SMA30CA	25.6	28.5	31.5	1	1	41.4	9.9	30	30C
P4SMA33A	P4SMA33CA	28.2	31.4	34.7	1	1	45.7	9	33	33C
P4SMA36A	P4SMA36CA	30.8	34.2	37.8	1	1	49.9	8.2	36	36C
P4SMA39A	P4SMA39CA	33.3	37.1	41	1	1	53.9	7.6	39	39C
P4SMA43A	P4SMA43CA	36.8	40.9	45.2	1	1	59.3	6.9	43	43C
P4SMA47A	P4SMA47CA	40.2	44.7	49.4	1	1	64.8	6.3	47	47C
P4SMA51A	P4SMA51CA	43.6	48.5	53.6	1	1	70.1	5.8	51	51C
P4SMA56A	P4SMA56CA	47.8	53.2	58.8	1	1	77	5.3	56	56C
P4SMA62A	P4SMA62CA	53	58.9	65.1	1	1	85	4.8	62	62C
P4SMA68A	P4SMA68CA	58.1	64.6	71.4	1	1	92	4.5	68	68C
P4SMA75A	P4SMA75CA	64.1	71.3	78.8	1	1	103	4	75	75C
P4SMA82A	P4SMA82CA	70.1	77.9	86.1	1	1	113	3.6	82	82C
P4SMA91A	P4SMA91CA	77.8	86.5	95.5	1	1	125	3.3	91	91C
P4SMA100A	P4SMA100CA	85.5	95	105	1	1	137	3	100	100C
P4SMA110A	P4SMA110CA	94	105	116	1	1	152	2.7	110	110C
P4SMA120A	P4SMA120CA	102	114	126	1	1	165	2.5	120	120C
P4SMA130A	P4SMA130CA	111	124	137	1	1	179	2.3	130	130C
P4SMA150A	P4SMA150CA	128	143	158	1	1	207	2	150	150C
P4SMA160A	P4SMA160CA	136	152	168	1	1	219	1.9	160	160C
P4SMA170A	P4SMA170CA	145	162	179	1	1	234	1.8	170	170C
P4SMA180A	P4SMA180CA	154	171	189	1	1	246	1.7	180	180C
P4SMA200A	P4SMA200CA	171	190	210	1	1	274	1.5	200	200C
P4SMA220A	P4SMA220CA	185	209	231	1	1	328	1.3	220	220C
P4SMA250A	P4SMA250CA	214	237	263	1	1	344	1.2	250	250C
P4SMA300A	P4SMA300CA	256	285	315	1	1	414	1	300	300C
P4SMA350A	P4SMA350CA	300	332	368	1	1	482	0.9	350	350C
P4SMA400A	P4SMA400CA	342	380	420	1	1	548	0.8	400	400C
P4SMA440A	P4SMA440CA	376	418	462	1	1	602	0.7	440	440C
P4SMA480A	P4SMA480CA	408	456	504	1	1	658	0.6	480	480C
P4SMA510A	P4SMA510CA	434	485	535	1	1	698	0.6	510	510C
P4SMA530A	P4SMA530CA	451	503.5	556.5	1	1	725	0.6	530	530C
P4SMA540A	P4SMA540CA	460	513	567	1	1	740	0.5	540	540C
P4SMA550A	P4SMA550CA	468	522.5	577.5	1	1	760	0.5	550	550C

Fig.1 Peak Pulse Power Rating Curve

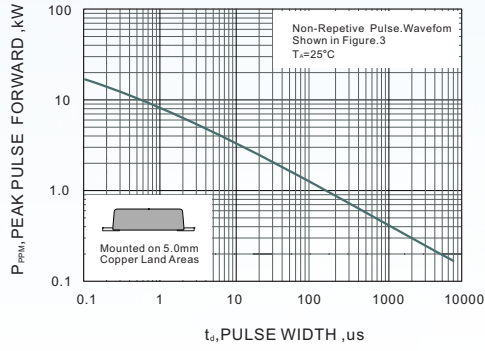


Fig.2 Forward Current Derating Curve

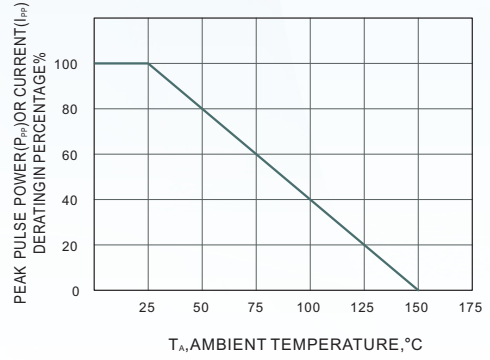


Fig.3 Pulse Waveform

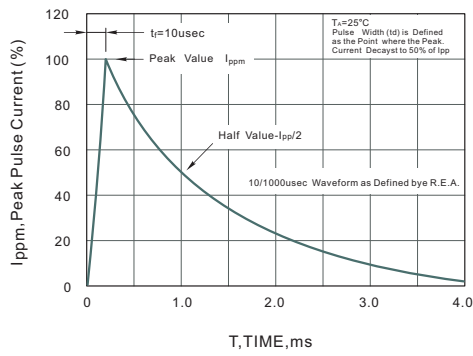
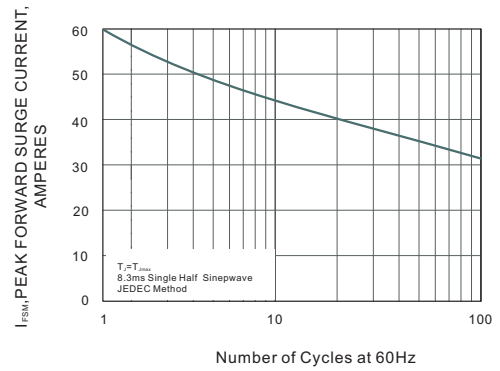


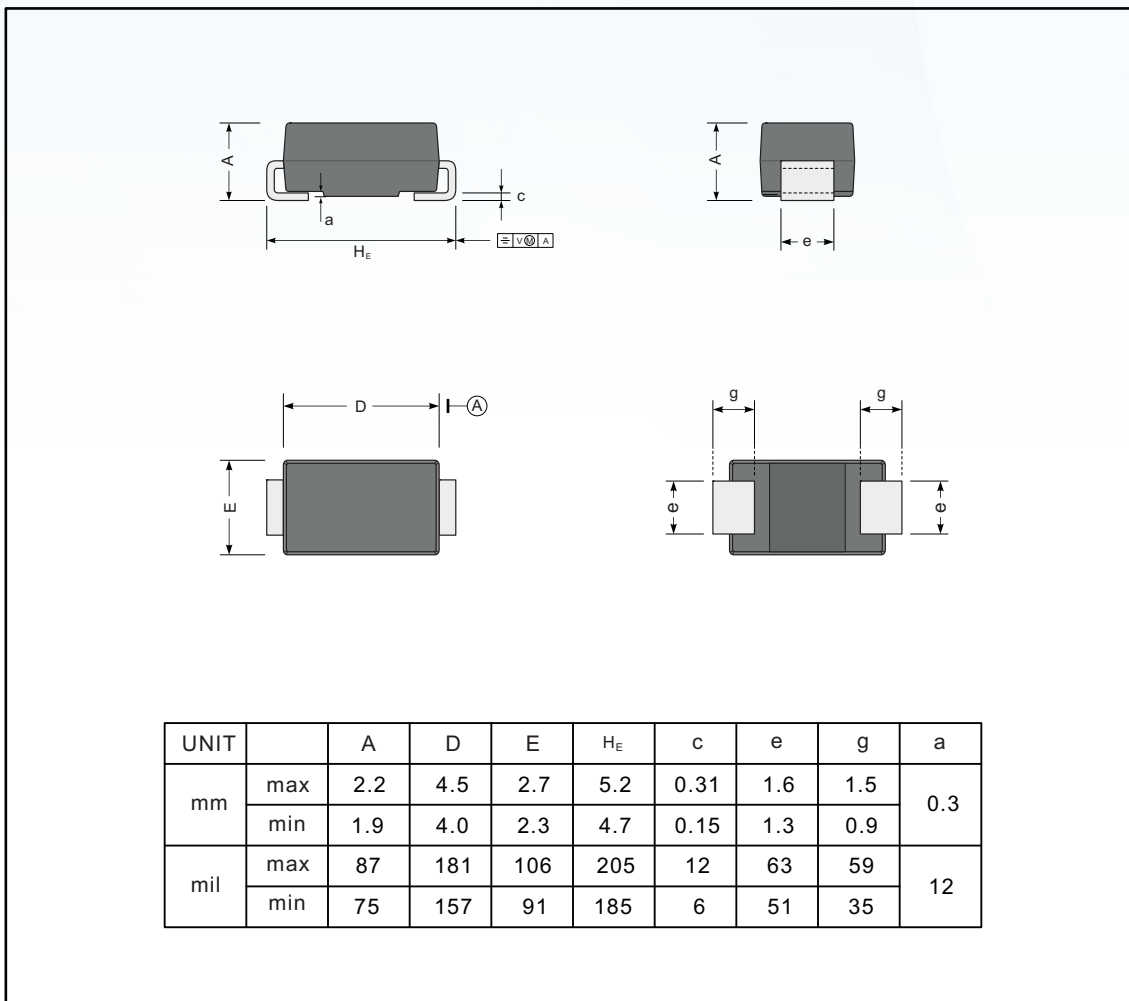
Fig.4 Maximum Non-Repetitive Peak Forward Surge Current



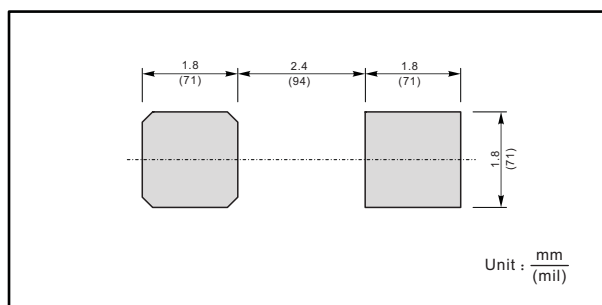
**PACKAGE OUTLINE**

Plastic surface mounted package; 2 leads

SMA



**The recommended mounting pad size**



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