

### Description

The PSM8S Series are designed specifically to protect sensitive electronic equipment from voltage transients induced by lightning and other transient voltage events.



### Feature

- Surface mount package.
- Excellent clamping capability.
- Glass passivated junction.
- Fast response time: Less than 1 ns for Uni-direction, from 0 Volts to BV min
- Plastic material has UL flammability classification 94V-O
- RoHS compliant in lead-free versions

### Mechanical Date

CASE : SOD-BLOCK Molded Plastic over glass passivated junction.  
Polarity : . Heatsink is anode.

### Absolute maximum rating@25°C

Parameter	Symbol	Value	Unit
Peak Pulse Power Dissipation on 10/1000μs waveform(Note 1, FIG. 1)	P <sub>PPM</sub>	6600	W
Peak Forward Surge Current, 8.3ms Single Half Sine-Wave Superimposed on Rated Load, (JEDEC Method) (Note 2. 3)	I <sub>FSM</sub>	700	A
Operating junction Temperature Range	T <sub>J</sub>	-55 to 150	°C
Storage Temperature Range	T <sub>STG</sub>	-55 to 150	°C

**Notes:**

- 1.Non-repetitive current pulse, per Fig.1 and derated above TA=25°C per Fig.2.
- 2.Mounted on 5.0mm<sup>2</sup> (0.03mm thick) Copper Pads to each terminal.
- 3.8.3 ms single half sine-wave, or equivalent square wave, Duty cycle=4 pluses per minute maximum.

## Electrical characteristics

Part Number (Uni)	Reverse Stand off Voltage $V_R$ (V)	Breakdown Voltage $V_{BR} @ I_T$ (V)		Test Current $I_T$ (mA)	Maximum Clamping Voltage $V_C$ @ $I_{PP}$ (V)	Maximum Peak Pulse Current $I_{PP}$ (A) (A)	Maximum Reverse Leakage $I_R @ V_R$ ( $\mu A$ )
		MIN	MAX				
PSM8S10	10	11.1	14.1	5.0	18.8	351	15.0
PSM8S10A	10	11.1	12.8	5.0	17.0	388	15.0
PSM8S11	11	12.2	15.4	5.0	20.1	328	10.0
PSM8S11A	11	12.2	14.0	5.0	18.2	363	10.0
PSM8S12	12	13.3	16.9	5.0	22.0	300	10.0
PSM8S12A	12	13.3	15.3	5.0	19.9	332	10.0
PSM8S13	13	14.4	18.2	5.0	23.8	277	10.0
PSM8S13A	13	14.4	16.5	5.0	21.5	307	10.0
PSM8S14	14	15.6	19.8	5.0	25.8	256	10.0
PSM8S14A	14	15.6	17.9	5.0	23.2	284	10.0
PSM8S15	15	16.7	21.1	5.0	26.9	245	10.0
PSM8S15A	15	16.7	19.2	5.0	24.4	270	10.0
PSM8S16	16	17.8	22.6	5.0	28.8	229	10.0
PSM8S16A	16	17.8	20.5	5.0	26.0	254	10.0
PSM8S17	17	18.9	23.9	5.0	30.5	216	10.0
PSM8S17A	17	18.9	21.7	5.0	27.6	239	10.0
PSM8S18	18	20.0	25.3	5.0	32.2	205	10.0
PSM8S18A	18	20.0	23.3	5.0	29.2	226	10.0
PSM8S20	20	22.2	28.1	5.0	35.8	184	10.0
PSM8S20A	20	22.2	25.5	5.0	32.4	204	10.0
PSM8S22	22	24.4	30.9	5.0	39.4	168	10.0
PSM8S22A	22	24.4	28.0	5.0	35.5	186	10.0
PSM8S24	24	26.7	33.8	5.0	43.0	153	10.0
PSM8S24A	24	26.7	30.7	5.0	38.9	170	10.0
PSM8S26	26	28.9	36.6	5.0	46.6	142	10.0
PSM8S26A	26	28.9	33.2	5.0	42.1	157	10.0
PSM8S28	28	31.1	39.4	5.0	50.0	132	10.0
PSM8S28A	28	31.1	35.8	5.0	45.4	145	10.0
PSM8S30	30	33.3	42.2	5.0	53.5	123	10.0
PSM8S30A	30	33.3	38.3	5.0	48.4	136	10.0
PSM8S33	33	36.7	46.5	5.0	59.0	112	10.0
PSM8S33A	33	36.7	42.2	5.0	53.3	124	10.0
PSM8S36	36	40.0	50.7	5.0	64.3	103	10.0
PSM8S36A	36	40.0	46.0	5.0	58.1	114	10.0
PSM8S40	40	44.4	56.3	5.0	71.4	92.4	10.0
PSM8S40A	40	44.4	51.1	5.0	64.5	102	10.0

Ratings and Characteristic Curves  $T_A=25^\circ\text{C}$  unless otherwise noted

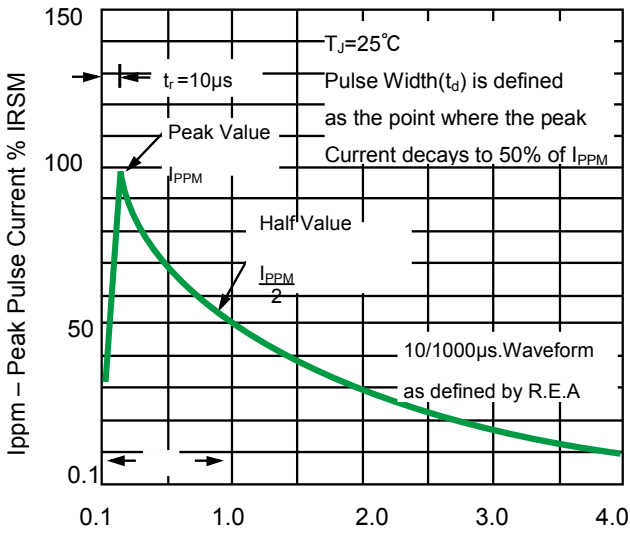


Fig.1 Pulse Waveform

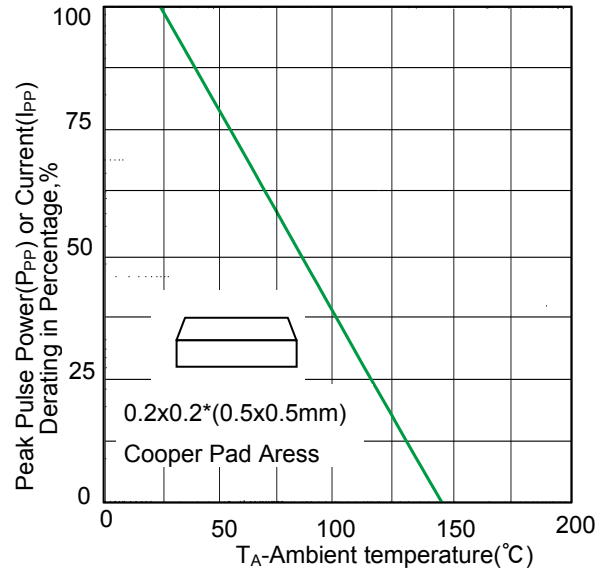
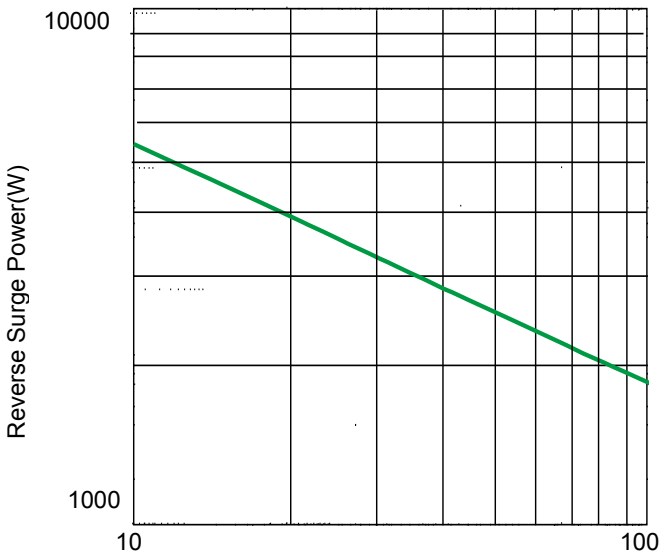


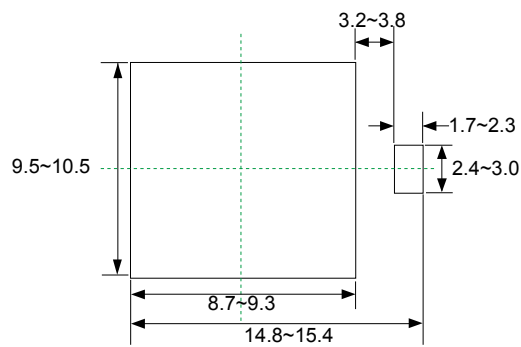
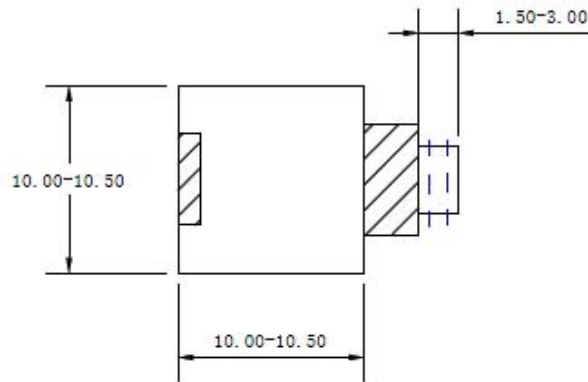
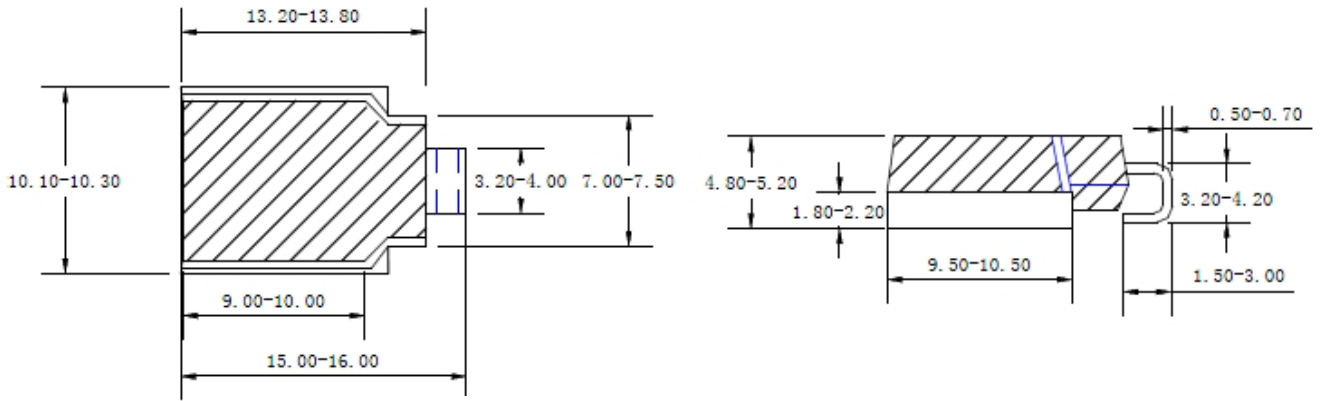
Figure 2-Pulse Derating Curve



Pulse Width (ms) -1/2 Ipp Exponential Waveform

Figure 3.Reverse Power Capability


Product dimension (SMD-BLOCK (mm))



Recommended Soldering Pad

Unit:mm


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