

High Surge Protection Devices Super High Voltage (SV) Series

Features:

- SMD type body size 0806, 1206, 1208, 1210, 1812, 2220 and 3220
- Bidirectional and symmetrical V/I characteristics
- Meet IEC61000-4-5 Standard
- Large withstanding surge voltage capability - 0.5~2KV (@1.2/50 μ s, 2 Ω)
- Large withstanding surge current capability - 100~1000A (@8/20 μ s)
- Multilayer construction provides higher power dissipation
- RoHS compliant

Application Fields:

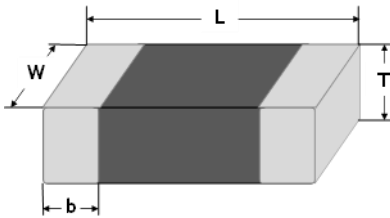
- LED lighting
- Power board
- Base station
- AC power supply
- Industrial equipment and controllers

Agency Approval:

Recognized under the components program of UL and CSA
File number: E475014

Shape and Dimensions:

Unit (mm)	0806	1206	1210	1812	2220	3220
Length (L)	2.20 \pm 0.20	3.20+0.60/-0.20	3.20+0.60/-0.20	4.50+0.60/-0.20	6.00+0.70/-0.30	8.10+0.70/-0.30
Width (W)	1.70 \pm 0.20	1.60+0.40/-0.20	2.50+0.40/-0.20	3.20+0.50/-0.20	5.30+0.50/-0.30	5.30+0.60/-0.30
Thickness (T)	1.80 Max.	1.90 Max.	2.60 Max.	3.50 Max.	3.60 Max.	3.70 Max.
Termination bandwidth (b)	0.25 \pm 0.10	0.50 \pm 0.20	0.50 \pm 0.25	0.50+0.35/-0.10	0.50+0.35/-0.10	0.80+0.50/-0.10



Product Identification:

HSP	2220	SV	390V	0800
<u>Category Code</u>	<u>Size Code</u>	<u>Application Code</u>	<u>Breakdown Voltage Code</u>	<u>Surge Current Code</u>
HSP = High Surge Protection Device	Inch 0806 1206 1210 1812 2220 3220	SV = Super High Voltage	240V = 240V 270V = 270V 390V = 390V 430V = 430V 470V = 470V	0100 = 100A 0200 = 200A 0350 = 350A 0500 = 500A 0800 = 800A 1000 = 1000A

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Electrical Characteristics:

Operating temperature: -55 to +85°C

Part Number	Size	Working Voltage		Breakdown Voltage ¹ @1mA (V)	Clamping Voltage ² (V)	Surge Voltage ³ @1.2/50µs, 2Ω (kV)	Surge Current ³ @8/20µs (A)		Safety Certification	
		Vac	Vdc				1 time	15 times	UL ⁵	CSA ⁶
HSP2220SV270V0500	2220	175	225	270 (±10%)	450	1.0	500	250	✓	
HSP2220SV390V0500	2220	250	320	390 (±10%)	647	1.0	500	250	✓	
HSP2220SV430V0500	2220	275	350	430 (±10%)	705	1.0	500	250	✓	
HSP2220SV470V0500	2220	300	385	470 (±10%)	775	1.0	500	250	✓	
HSP2220SV240V0800	2220	139	195	240 (±10%)	395	2.0	800	500	✓	✓
HSP2220SV390V0800	2220	250	320	390 (±10%)	647	2.0	800	500	✓	
HSP2220SV430V0800	2220	275	350	430 (±10%)	705	2.0	800	500	✓	✓
HSP2220SV470V0800	2220	300	385	470 (±10%)	775	2.0	800	500	✓	✓
HSP3220SV430V1000	3220	275	350	430 (±10%)	705	2.0	1000	500	✓	✓
HSP3220SV470V1000	3220	300	385	470 (±10%)	775	2.0	1000	500	✓	✓

¹ The breakdown voltage was measured at 1 mA current.

² The clamping voltage was measured at standard current 1210 (2.5A), 1812 (5A), 2220 (10A) and 3220 (10A).

³ The surge voltage was tested at 1.2/50 µs waveform and 2Ω. The surge current was tested at 8/20 µs waveform.

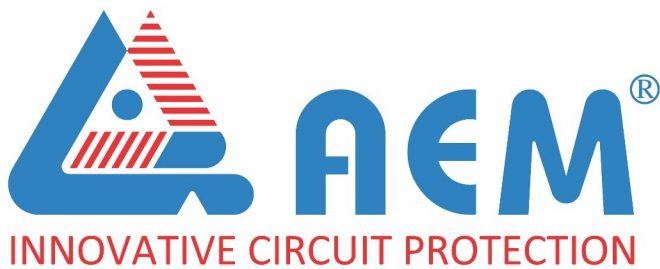
⁴ The capacitance value only for customer reference, it's not formal specification.

⁵ The UL safety approval complies with standard UL1449 3rd.

⁶ The CSA safety approval complies with standard CSA C22.2 No. 8.

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