

High Surge Protection Devices Super High Current (SC) Series

Features:

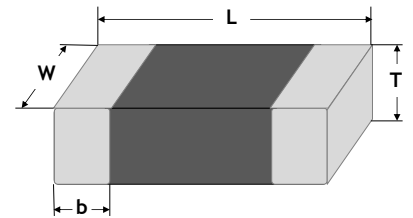
- SMD type – 1206~2220 sizes
- Bidirectional and symmetrical V/I characteristics
- Meet IEC61000-4-5/K21 standard
- Large withstanding surge current capability à 500~8000A (@8/20 μ s)
- Excellent low leakage current <15 μ A
- Multilayer construction provides higher power dissipation
- RoHS compliant

Application Fields:

- Telecom equipment RJ45, LAN connector, Ethernet
- Outdoor/Indoor AP/IAD
- Security system IP CAM
- Low voltage power line
- Base station

Shape and Dimensions:

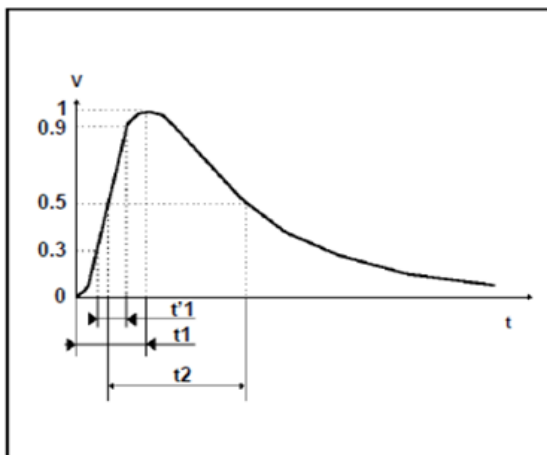
Unit (mm)	1206	1210	1812	2220
Length (L)	3.2 +0.6/-0.2	3.2 +0.6/-0.2	4.5 +0.6/-0.2	6.0 +0.7/-0.3
Width (W)	1.6 +0.4/-0.2	2.5 +0.4/-0.2	3.2 +0.5/-0.2	5.3 +0.5/-0.3
Thickness (T)	1.90 Max.	2.60 Max.	3.50 Max.	3.60 Max.
Termination band-width (b)	0.5 \pm 0.20	0.5 \pm 0.25	0.5 +0.35/-0.1	0.5 +0.35/-0.1



Product Identification:

HSP	1206	SC	012V	0500
Category Code	Size Code	Application Code	Breakdown Voltage Code	Surge Current Code
HSP = High Surge Protection Device	Inch 1206 1210 1812 2220	SC = Super High Current	012V = 12V 024V = 24V 047V = 47V 056V = 56V 075V = 75V 082V = 82V	0500 = 500A 1000 = 1000A 2000 = 2000A 3000 = 3000A 5000 = 5000A 8000 = 8000A

Surge Waveform:



Severity Level	t1 (=1.67t'1)	t2
1	8 μ s	20 μ s

 Fig. 1 8/20 μ s surge definition

High Surge Protection Devices

Super High Current (SC) Series

Electrical Characteristics:

Part Number	Size	Working Voltage		Breakdown Voltage @1mA (V) ¹	Clamping Voltage (V) ²	Surge Current @ 8/20 μ s (A) ³
		VAC	VDC			
HSP1206SC012V0500	1206	6	9	12 (12~20)	<25	500
HSP1206SC024V0500	1206	14	18	24 (\pm 10%)	<45	500
HSP1206SC047V0500	1206	30	38	47 (\pm 10%)	<85	500
HSP1206SC075V0500	1206	48	60	75 (\pm 10%)	<100	500
HSP1210SC024V1000	1210	14	18	24 (\pm 10%)	<45	1000
HSP1210SC047V1000	1210	30	38	47 (\pm 10%)	<85	1000
HSP1812SC047V2000	1812	30	38	47 (\pm 10%)	<85	2000
HSP2220SC047V5000	2220	30	38	47 (\pm 10%)	<85	5000
HSP2220SC047V8000	2220	30	38	47 (\pm 10%)	<85	8000
HSP1210SC075V1000	1210	48	60	75 (\pm 10%)	<100	1000
HSP1812SC075V2000	1812	48	60	75 (\pm 10%)	<100	2000
HSP2220SC075V3000	2220	48	60	75 (\pm 10%)	<100	3000

¹ The breakdown voltage was measured at 1 mA current

² The clamping voltage was measured at standard current 1206 (1A), 1210 (2.5A), 1812 (5A) and 2220 (10A)

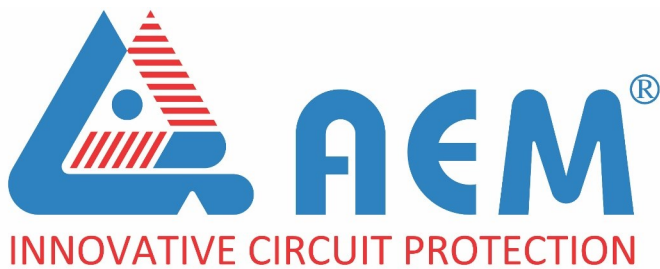
³ The surge current was tested at 8/20 μ s waveform

Part Number	Non-linear Coefficient (α)	Leakage Current (μ A)		Capacitance ⁴ @ 1kHz (pF)	Response Time (T _{rise})	Operating Temperature (°C)	Storage Temperature (°C)
		Before Surge Test	After Surge Test				
HSP1206SC012V0500	20	<10	<80	3500	< 1ns	-55 to +125	-55~+150
HSP1206SC024V0500	20	<10	<80	2300			
HSP1206SC047V0500	30	<10	<80	690			
HSP1206SC075V0500	30	<10	<80	300			
HSP1210SC024V1000	20	<15	<80	2300			
HSP1210SC047V1000	30	<10	<80	1550			
HSP1210SC075V1000	30	<10	<80	930			
HSP1812SC047V2000	30	<15	<80	2100			
HSP1812SC075V2000	30	<15	<80	1650			
HSP2220SC047V5000	35	<15	<80	9900			
HSP2220SC047V8000	35	<15	<80	7500			
HSP2220SC075V3000	40	<15	<80	2000			

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

Disclaimer

Specifications are subject to change without notice. AEM products are designed for specific applications and should not be used for any purpose (including, without limitation, automotive, aerospace, medical, life-saving applications, or any other application which requires especially high reliability for the prevention of such defect as may directly cause damage to the third party's life, body or property) not expressly set forth in applicable AEM product documentation. It is the customer's responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application. Warranties granted by AEM shall be deemed void for products used for any purpose not expressly set forth in applicable AEM product documentation. AEM shall not be liable for any claims or damages arising out of products used in applications not expressly intended by AEM as set forth in applicable AEM product documentation. The sale and use of AEM products is subject to AEM terms and conditions of sale. Please refer to AEM's website for updated catalog and terms and conditions of sale.



AEM Components (Suzhou) Co., Ltd

**461 Zhongnan Street,
China-Singapore Suzhou Industrial Park
Jiangsu, P. R. China, 215026**

Tel: 86-512-6258-0028
Fax: 86-512-6258-0018
Email: sales@aemchina.com

AEM Components (USA), Inc.

6670 Cobra Way, San Diego, CA 92121, USA

Tel: 1-858-750-6100
Fax: 1-858-481-1123
Email: sales@aemcomponents.com