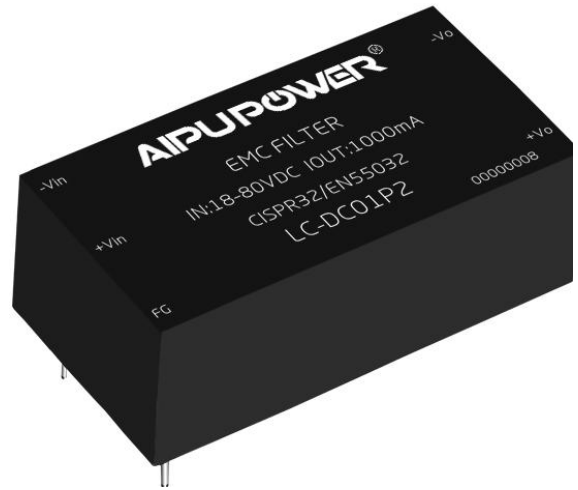


Typical Features

- ◆ Input voltage range: 18-80VDC
- ◆ Ensure the power supply module to meet EMI CLASS-B limit requirements
- ◆ Used with power modules to withstand surges: DM-1KV, CM-4KV
- ◆ Operating temperature: -40℃~+70℃
- ◆ Small size, suitable for direct plug-in installation on PCB board
- ◆ Enclosed plastic housing, compliant with UL94V-0



Application Field

LC-AC01P2 series---- is a small-volume DC-DC filter module that Aipu provides to customers that complies with EMC. The product is suitable for analog circuits and other places that are sensitive to noise. Adding this module to the input end of the DC-DC module can make the product meet the surge requirements of ±1KV (2Ω internal resistance)/±4KV (12Ω internal resistance) in the IEC/EN61000-4-5 standard, and at the same time make the supporting power module meet the EMI limit requirements of CISPR32/EN55032 CLASS-B. When used with Aipu DC-DC module power supply, the maximum input voltage of the DC-DC module power supply should not be greater than the maximum operating voltage of the EMC filter, and the maximum input current of the DC-DC module power supply should be less than the rated operating current of the EMC filter.

Typical Product List

Part No	Input voltage Range (VAC)	Rated Current (mA @ MAX)	Standards Compliant
LC-DC01P2	18-80	1000	EN61000-4-5
			EN55032

Note 1: Complies with EMC standards IEC/EN61000-4-5 and CISPR32/EN55032.-

Note 2: This filter module is compatible with our DC-DC power module input 18-80VDC, output 3-12W products meet MEC standard requirements.

Input Specification

Item	Operating Condition	Min.	Typ.	Max.	Unit
Input Voltage Range	DC Input	18	50	80	VDC
Input no-load Current	50VDC	--	10	--	mA

General Specification

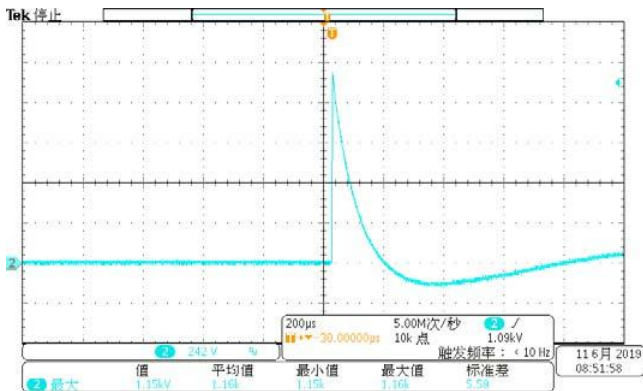
Item	Operating Condition	Min.	Typ.	Max.	Unit
Operating Temperature	--	-40	--	+70	℃
Storage Temperature	--	-50	--	+100	
Case Temperature	18VDC@0.4A	--	--	25	
	50VDC@0.8A	--	--	40	
	80VDC@1.0A	--	--	45	
Soldering Temperature	Wave soldering	260±4℃, time 5-10S			℃
	Manual soldering	360±8℃, time 4-7S			

Relative Humidity	--	10	--	90	%RH
Insulation Voltage	Input- PE, test 1 min, leakage current ≤ 5mA	--	--	1000	VAC
Vibration	--	10-55Hz, 10G, 30Min, along X, Y, Z			
Case Class	--	UL94V-0			

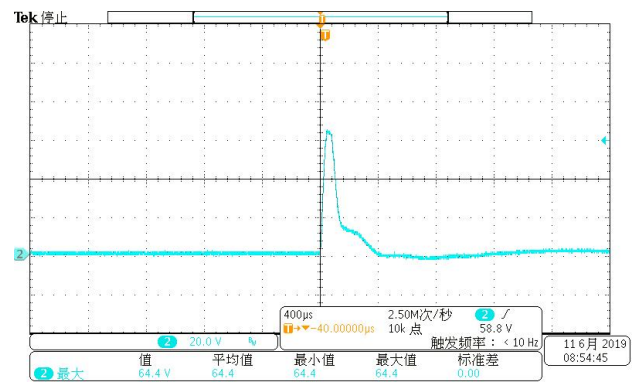
Design Reference Standards

When used with our DC-DC power module, the power module can meet the ±1KV (2Ω internal resistance)/±4KV (12Ω internal resistance) surge level requirements of the IEC/EN61000-4-5 standard, as well as the limit requirements of CISPR32, EN55032, and CLASS-B.

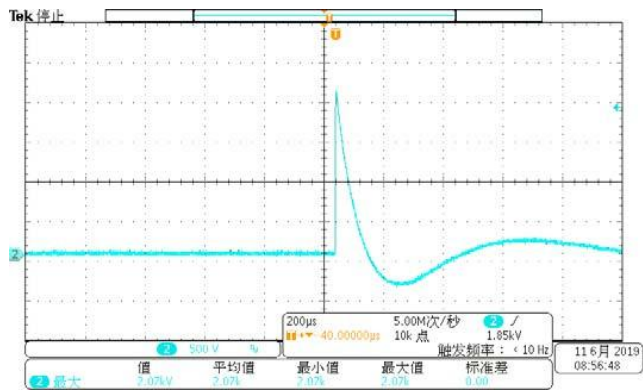
EMC Characteristics (SURRE test results)



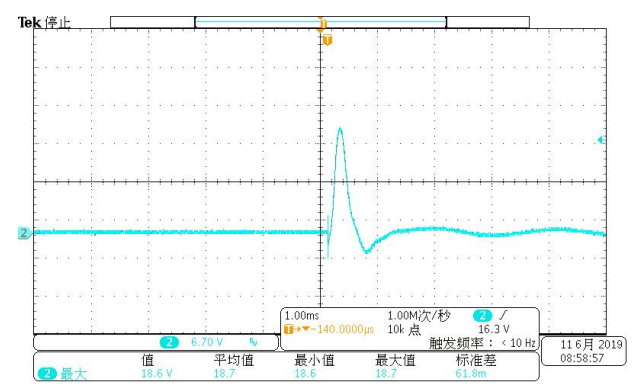
Input terminal voltage waveform
(differential mode 1.15KV)



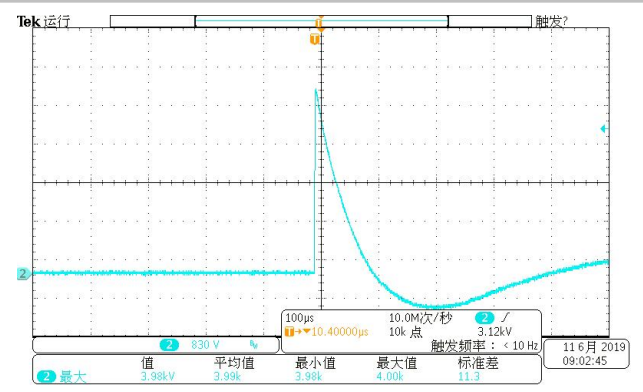
Output residual voltage waveform
(differential mode 64.4V)



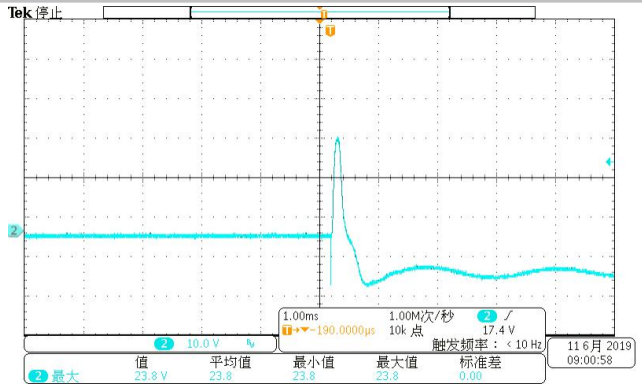
Input terminal voltage waveform
(differential mode 2.07KV)



Output residual voltage waveform
(differential mode 18.6V)



Input terminal voltage waveform
(differential mode 4.00KV)

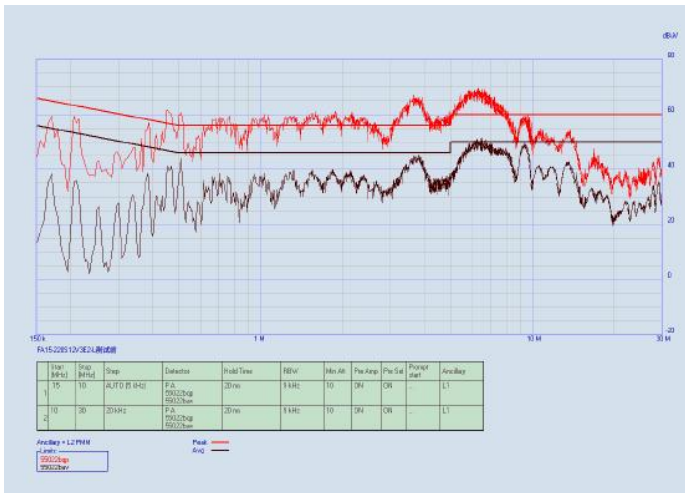


Output residual voltage waveform
(differential mode 23.8V)

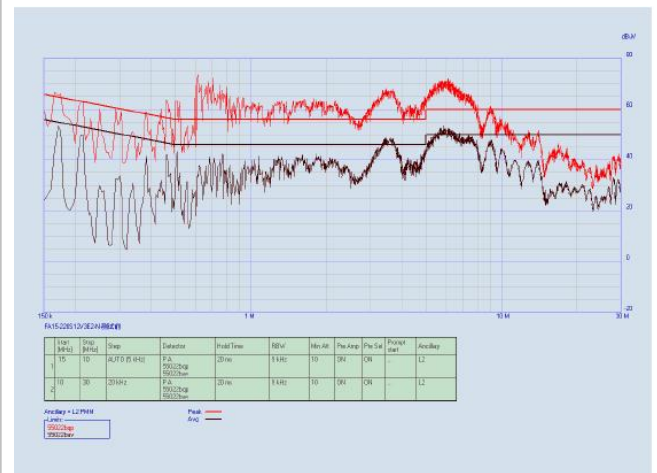
Note 1: The surge results of the above tests were measured under the open circuit condition of LC-DC01P2.

Note 2: The above tests were measured according to the requirements of standard IEC/EN-61000-4-5.

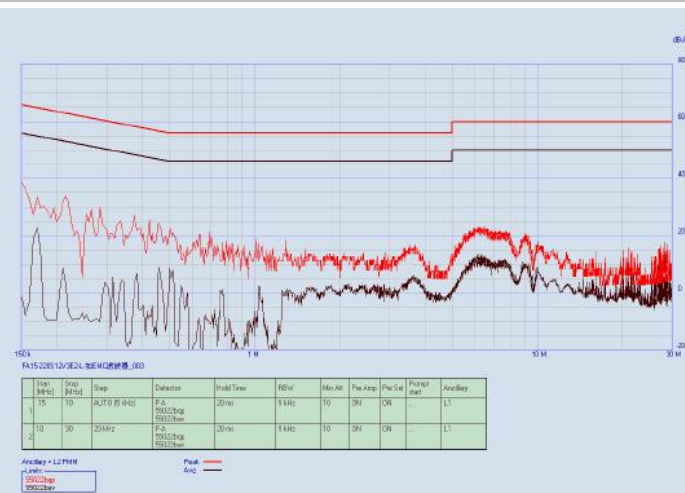
EMI Characteristics (CE test results)



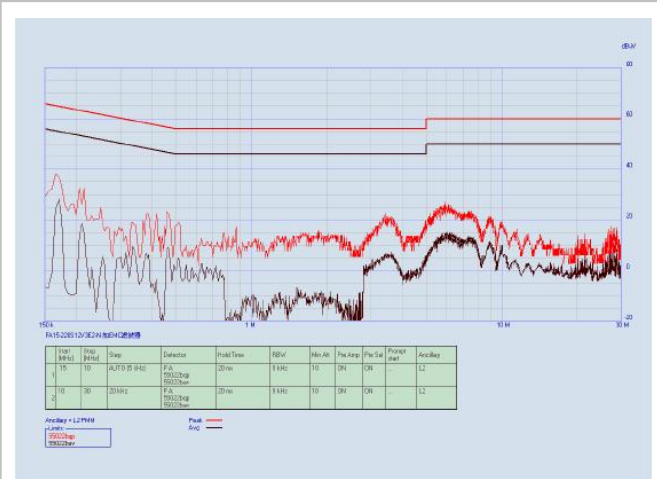
Input L line (no filter added) to test CE waveform



Input N line (no filter added) to test CE waveform



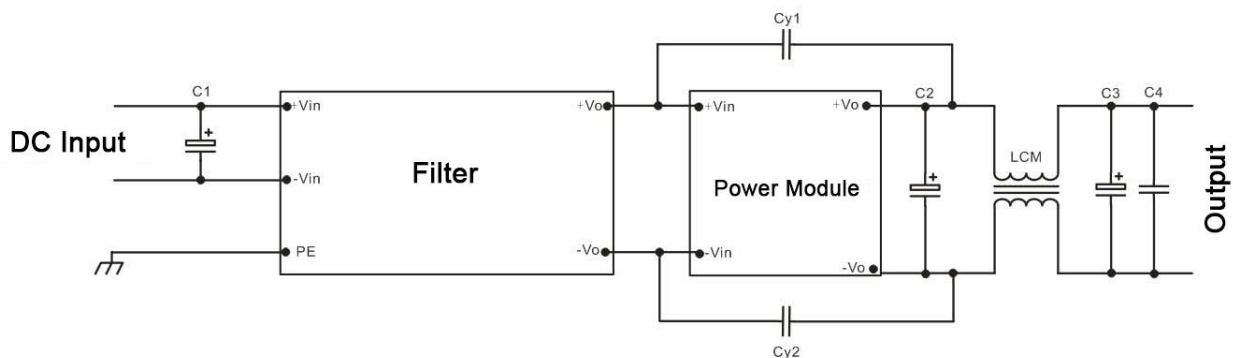
Input L line (with EMC filter) to test CE waveform



Input N line (with EMC filter) to test CE waveform

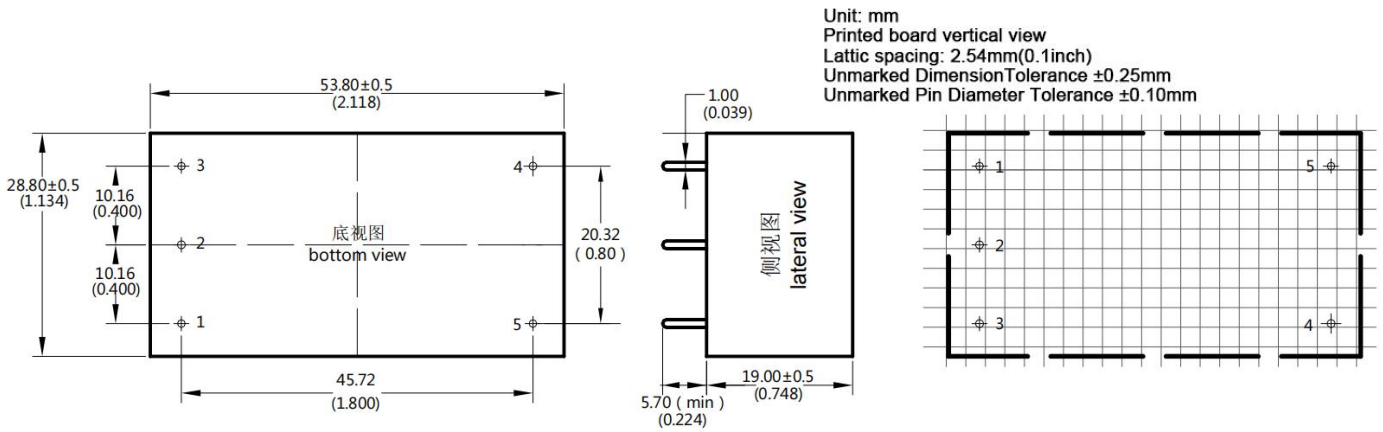
Note 1: The test is based on the limit requirements of standard EN55032/CLASS-B.

Filter and Module Connection Diagram



Component	Quantity	Specification
C1	1	470UF/200V
C2/C3	2	220UF/50V
C4	1	2.2UF/50V/1206
LCM	1	100UH/1A
Cy1/Cy2	2	102M/400VAC

LC-AC01F2 Dimension



Part No.		L x W x H				
P2		53.80X28.80X19.00mm			2.118X1.134X0.748inch	
Pin	1	2	3	4	8	
Definition	FG	+Vin	-Vin	-Vo	+Vo	

Note: If the pin definitions of the power module are inconsistent with those in the selection manual, the markings on the actual label shall prevail.

Physical Characteristics

Case Material		Black flame retardant and heat resistant plastic (UL94V-0)
Dimension	Horizontal packaging	53.8X28.8X19.0mm
Weight		52g (TYP)

Note:

1. Unless otherwise specified, the above data are measured at Ta=25°C, humidity<75%, and nominal input voltage;
2. Product specifications are subject to change without prior notice. Please pay attention to the latest manual published on our official website.

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