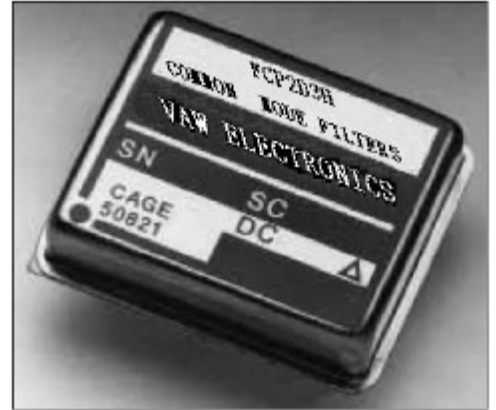


FCP Series High-temperature Common Mode Filters

Features:

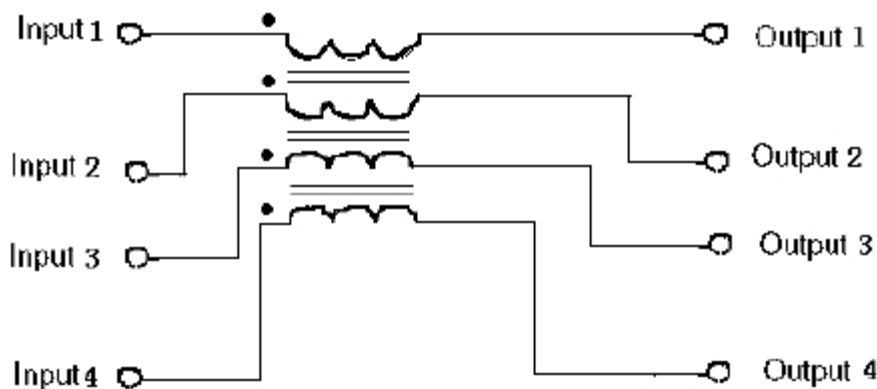
- : High operating temperature (ambient temperature: $-55^{\circ}\text{C} \sim +200^{\circ}\text{C}$ and max. shell temperature: $+225^{\circ}\text{C}$)
- : Small size (L: $16.2 \times$ W: $12.6 \times$ H: 6.5MM.)
- : High operating frequency (300KHZ)
- : Normal working voltage: $0 \sim 250\text{V}$, $0 \sim 650\text{V}$
- : Sealed metal casting (impact and moist resistance and electromagnetic radiation protection)
- : Multi-filtering channel (up to four channels)
- : Each channel passes 1A, 3A current
- : Voltage drop at max. current less than 0.3V



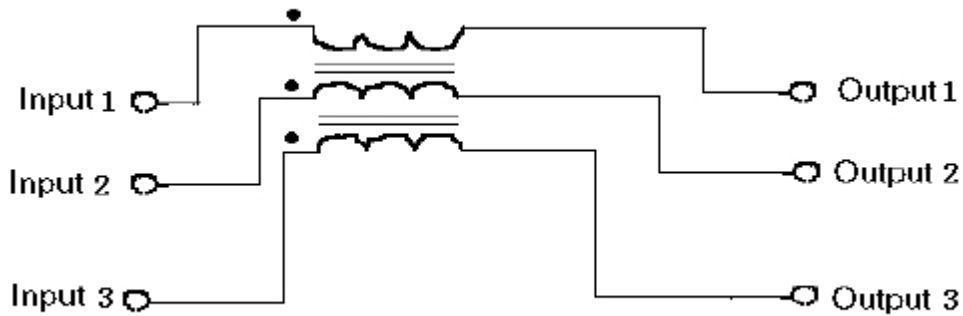
Description

FCP series high-temperature common mode filter provide two, three and four-common mode channels with common magnetic core and phase. It is designed to provide EMI input/output filter for AC/DC and DC/DC modules that work in harsh condition. It is able to continuously work at shell temperature 225°C . It has in-built nano ultracrystallite magnetic core. Due to the scale of our company, manufacturer's technology was specially altered as per the requirements of VAW on small size and resistance of high temperature and impact. The magnetic core has excellent temperature characteristics, high initial magnetoconductivity, high magnetic induction and maximum size. It can continuously work at an ambient temperature of $-55^{\circ}\text{C} \sim +200^{\circ}\text{C}$ without reduction of magnetic property. For the convenience of assembly, we wind coil and pack it into a metal shell with height less than 8.5mm. In this way, it can be directly welded on a PCB plate as a IC device, which not only simplifies the production process but also beautifies the appearance of circuit board.

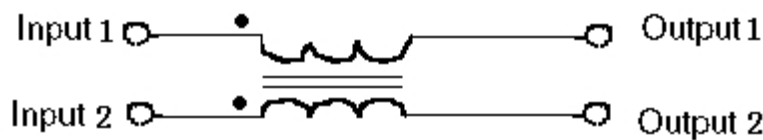
The inductance value of each common mode channel is 100uH minimum and 33mH maximum. Customized production is acceptable. For the same shell, higher the current becomes, less the inductance of each common mode becomes. For the same current, larger the shell is, higher the inductance of common mode becomes.



FCP4 Schematic diagram



FCP3 Schematic diagram



FCP2 Schematic diagram

Type selection:

FCP3A1L—500U

Family code

FCP series

Common mode channel

2 (two channels)

3 (three channels)

4 (four channels)

Shell code

A (L: 16.2×W: 12.6×H: 6.5MM.)

B (L: 19.8×W: 14.8×H: 8.5MM.)

C (L: 21.8×W: 16.8×H: 8.5MM.)

D (L: 23.8×W: 18.8×H: 8.5MM.)

Inductance value of common mode

500U (500UH)

1M (1MH)

2.0M (2.0MH)

3.0M (3.0MH)

5.0M (5.0MH)

10.0M (10.0MH)

Working voltage

L (0~250V)

H (0~650V)

Rated current

1 (1A)

3 (3A)

Technical parameters:

(1) Operating temperature: -55℃~+204℃ Maximum shell temperature: +225℃.

(2) Input voltage: 0~250V, 0~650V

(3) DC current: less than 0.3A

(4) Shock resistance: 25G, 0~300Hz

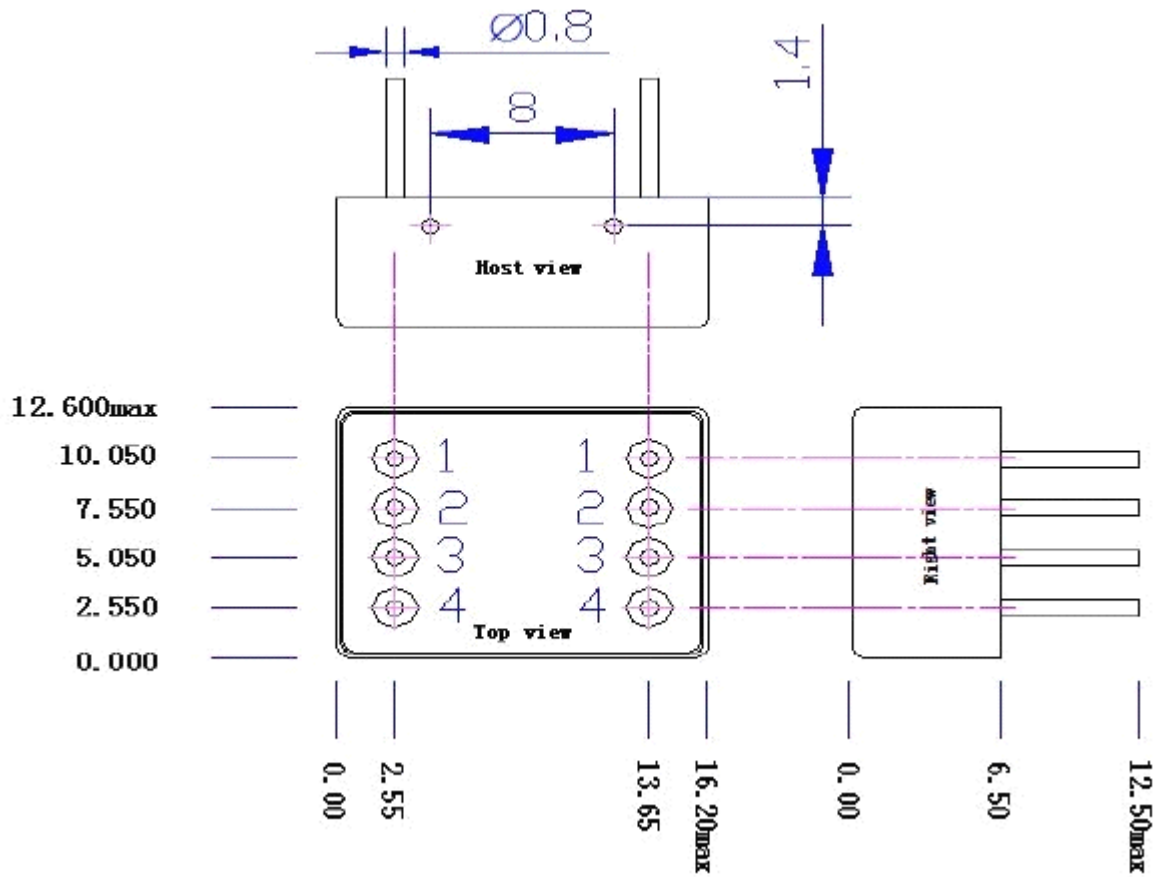
(5) Mechanical dimensions: A: (L: 16.2×W: 12.6×H: 6.5MM.) B: (L: 19.8×W: 14.8×H: 8.5MM.)

C: (L: 21.8×W: 16.8×H: 8.5MM.) D: (L: 23.8×W: 18.8×H: 8.5MM.)

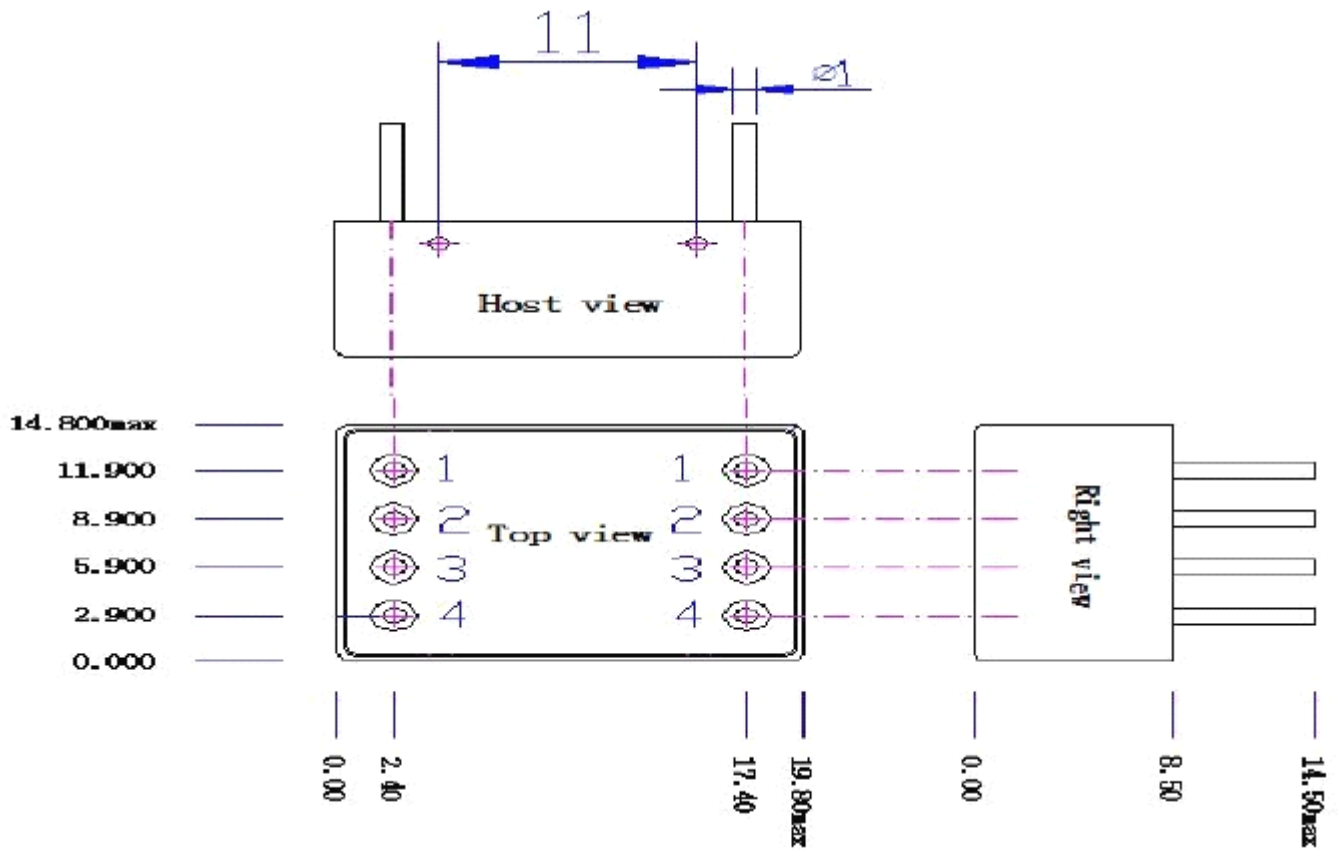
Service Requirements:

The shell of module is in suspended and it can be connected to the ground for use. This filtering module should be connected to its input DC/DC or AC/DC nearby, which makes it possible to reduce the antenna effect as a result of over long input line and radiation for no filtering input line. To our FH series AC/DC, DC/DC modules and achieve a better filtering effect, the shell of AC/DC and DC/DC modules should not be connected to the ground and input/output ground wire, instead it should be suspended.

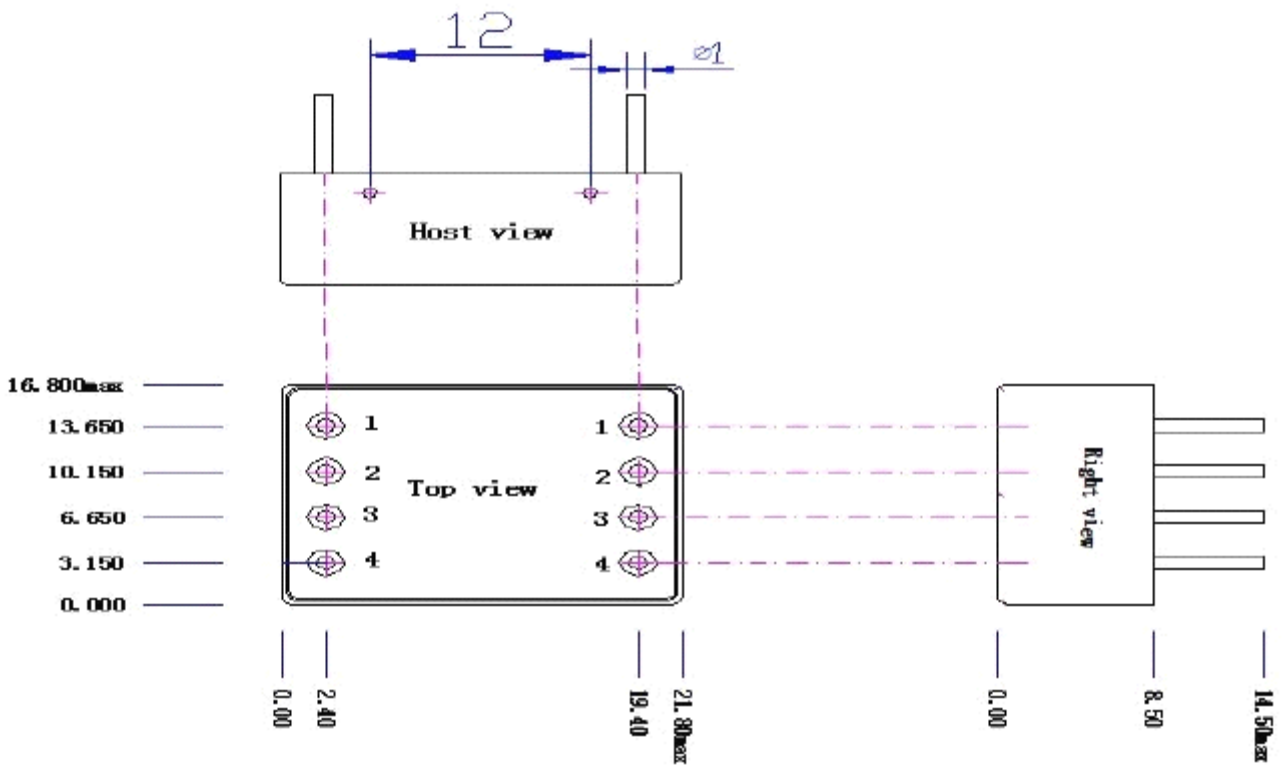
Outline diagram:



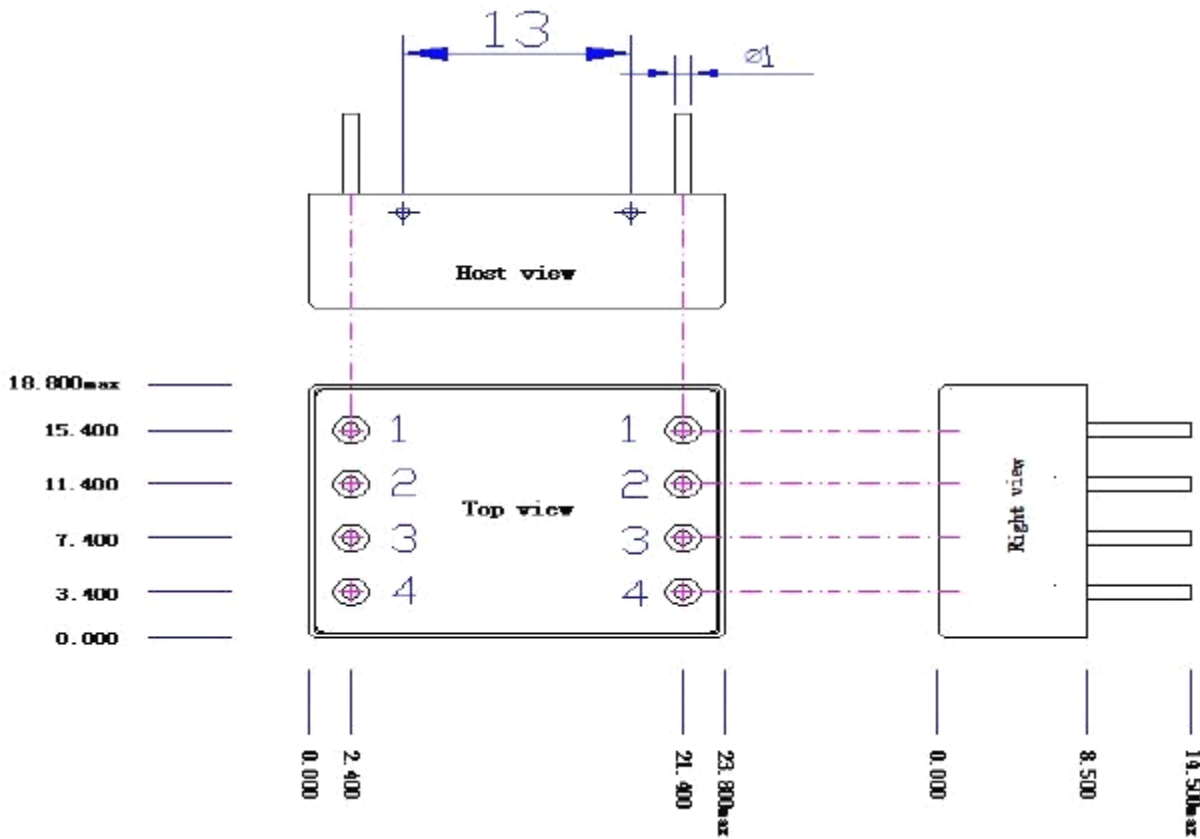
Mechanical diagram of type A shell (top view)



Mechanical diagram of type B shell (top view)



Mechanical diagram of type C shell (top view)



Mechanical diagram of type D shell (top view)

Pin No.		Definition of FCP2 output	Definition of FCP3 output	Definition of FCP4 output
Left	Left			
1		INPUT1	INPUT1	INPUT1
2		NC	INPUT2	INPUT2
3		NC	NC	INPUT3
4		INPUT2	INPUT3	INPUT4
	1	OUTPUT1	OUTPUT1	OUTPUT1
	2	NC	OUTPUT2	OUTPUT2
	3	NC	NC	OUTPUT3
	4	OUTPUT4	OUTPUT3	OUTPUT4

Regular mode:

FCP2A1H-1000U	FCP2A3H-300U	FCP3A3L-500U-	FCP4A3L-100U	FCP2B3H-1M
FCP2A1L-1400U	FCP3A1L-1400U	FCP4A1L-1000U	FCP2B1L-3M	FCP3B1L-3M
FCP4B1L-2.7M	FCP2D3L-5.0M	FCP3D3L-2.8M	FCP4D3L-2.0M	FCP2D1H-33M

(Product performance, reliability and information are subject to change without prior notice)
August, 18, 2010