

## Low Profile Filter Modules

6 AMPS, 10 AMPS, 14 AMPS  
CF506EX, CF510EX, CF514EX

### FEATURES

- Current ratings up to 14 AMPS
- Low profile 0.5" high
- Compact case size 2.4" x 4.6" x 0.5"
- PCB or chassis mountable
- UL, CSA approval (Pending)\*

### APPLICATIONS

- Low profile with high performance
- Applications where space is a premium
- PCB mountable
- Chassis and heat sink mountable

### DESCRIPTION

Core Technology's series of single phase line filters provides a low profile solution for a wide range of general purpose filtering requirements. Utilizing high performance capacitive and magnetic components allows this series of filters to maintain an industry standard form factor of 2.4" x 4.6" x 0.5". This filter has been developed as one of the building blocks for Core Technology's line of power conversion products. A chassis mountable metal housing with input, output and chassis pins allows easy integration into the same side of the PCB as the other 1/2 inch high power conversion building blocks. Designed for 115/250VAC, 47-63hz operation these filters can be utilized in many applications which require low profile and high performance in a compact form factor.

\* UL is a registered trademark of the Underwriters Laboratories, Inc.  
CSA is a registered trademark of the Canadian Standards Association.  
This product is intended for integration into end-use equipment. All the required procedures for CE marking of end-use equipment should be followed. (The CE mark is placed on selected products.)

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## ELECTRICAL SPECIFICATION

Parameter	Symbol	Units	CF506EX	CF510EX	CF514EX	Notes
Input Voltage	Vac	Volts	115 / 250	115 / 250	115 / 250	
Max Current @ 120	I	AMPS	6A	10A	14A	
Max Current @ 240	I	AMPS	4A	7A	10A	
Frequency	f	Hz	47 / 63 HZ	47 / 63 HZ	47 / 63 HZ	
Current Overload	I <sub>m</sub>	AMPS	6 x Rated for 8-Sec	6 x Rated for 8-Sec	6 x Rated for 8-Sec	
Leakage @ 115 /60HZ	I <sub>L</sub>	mA	0.25	0.25	0.25	
Leakage Current @ 250 50/HZ	I <sub>L</sub>	mA	0.40	0.40	0.40	
Ambient Temperature Range	T <sub>a</sub>	°C	-20°C to +40°C	-20°C to +40C	-20°C to +40°C	
Maximum Case Temperature	T <sub>cs</sub>	°C	-20C to +75C	-20C to +75C	-20C to +75C	
Humidity Range	%	%R.H.	0% to 95%	0% to 95%	0% to 95%	

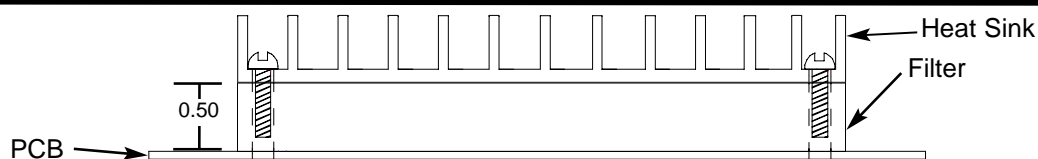
## ISOLATION

Insulation Resistance	R	OHMS	9000 Megohms	9000 Megohms	9000 Megohms	Minimum
Line to GND Isolation	VAC	VOLTS	1500 Vac	1500 Vac	1500 Vac	1 Minute
Line to Line Isolation	VAC	VOLTS	1768 Vac	1768 Vac	1768 Vac	1 Minute

## INSERTION LOSS

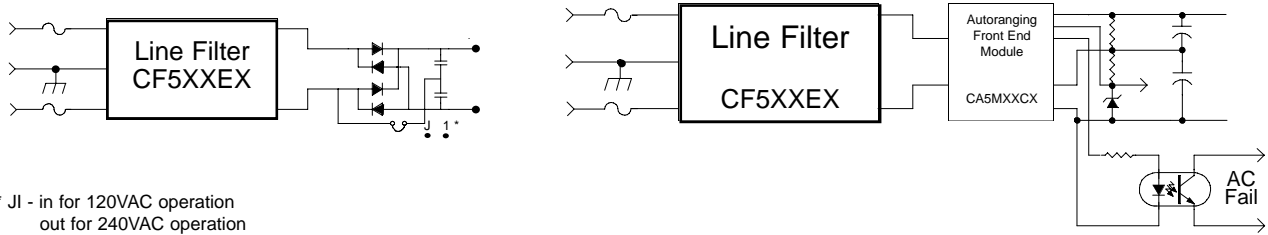
Nominal Current Rating	Part No	INSERTION LOSS - dB (50 OHM CIRCUIT)								
		Mode	Frequency - MHZ							
			.01	.05	.15	.5	1.0	5.0	10	30
6	CF506EX	Common	15	25	35	40	45	50	50	45
		Differential	05	15	20	55	60	60	60	55
10	CF510EX	Common	9	19	29	34	39	54	54	49
		Differential	5	15	20	55	60	60	60	55
14	CF514EX	Common	5	15	25	30	35	50	50	45
		Differential	5	15	20	45	55	60	60	60

## TYPICAL MOUNTING



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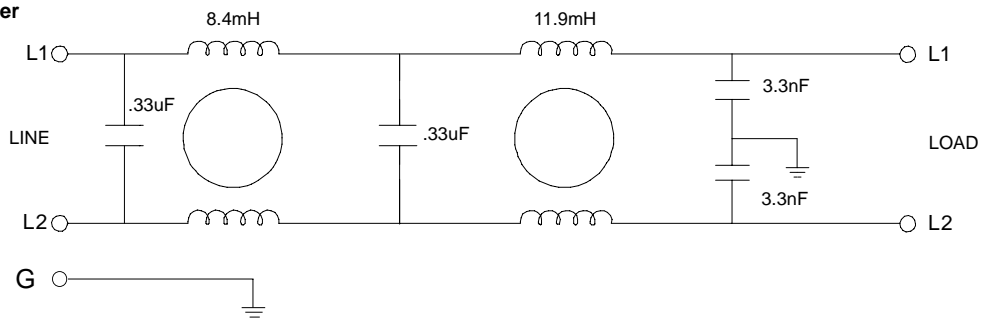
## TYPICAL APPLICATION



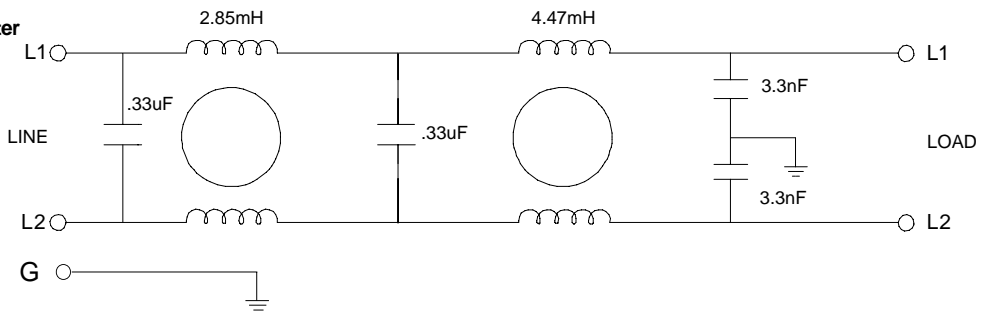
\* J1 - in for 120VAC operation  
out for 240VAC operation

## FILTER SCHEMATIC

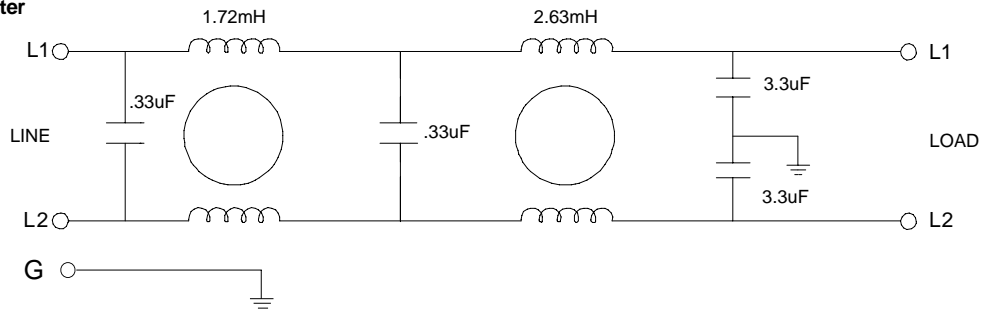
**CF506EX 6 AMP Line Filter**



**CF510EX 10 AMP Line Filter**



**CF514EX 14 AMP Line Filter**

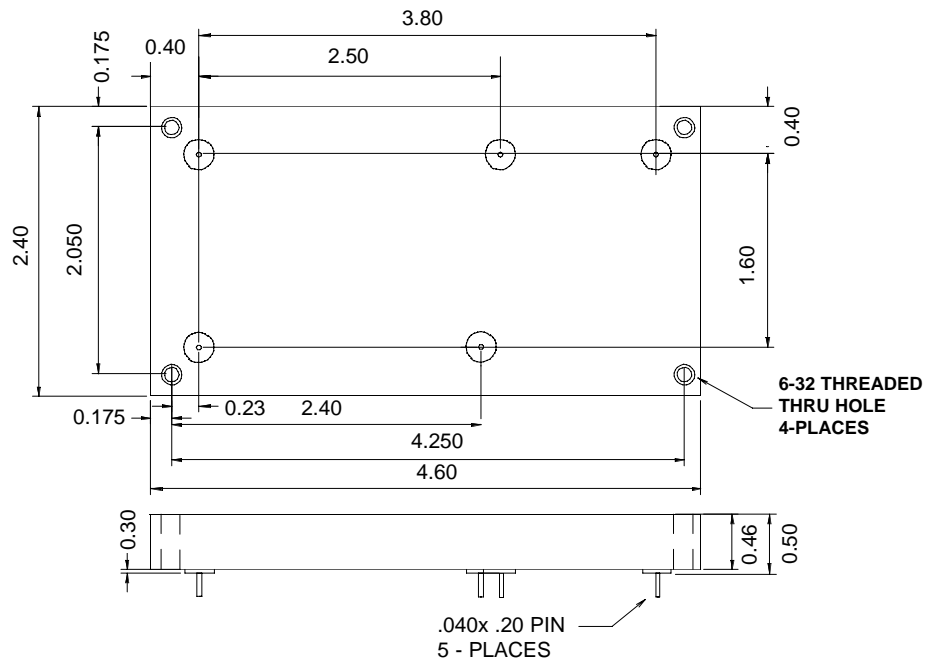


## Outline Drawing

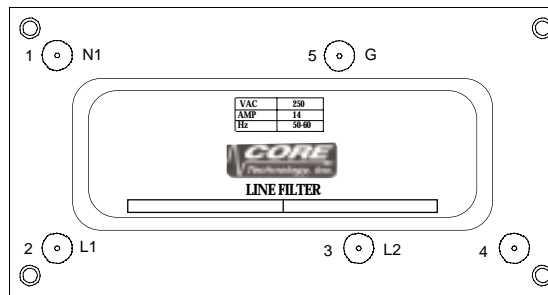
### Connector Pin Assignment

1	N1 (Load)
2	L1 (Load)
3	L2 (Line)
4	N2 (Line)
5	GND

### PCB LAYOUT



### BOTTOM VIEW



## Ordering Information

Part Numbering Scheme for  
CF5XXEX Low Profile Filter Modules

C	TYPE	IN VOLTS	AMPS	PACKAGE SIZE	HEAT SINK TYPE
	F = Filter	5 = 115/250 VAC	06 = 6 AMPS 10 = 10 AMPS 14 = 14 AMPS	E = Full Size	Blank = No Sink L02=0.25" Longitudinal L05= 0.5" Longitudinal L10=1.0" Longitudinal T02=0.25" Transverse T05=0.5" Transverse T10=1.0" Transverse
C	F	5	14	E	L05

**EXAMPLE** - To order a filter with an input of 115/250VAC, current capability of 14 Amps, full size case and a 1/2 "longitudinal heat sink, use the part number CF514EL05.

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