



# Data Sheet

## FM48™ FiltMod

### Input Filter Module



Shown actual size:  
2.28 x 1.45 x 0.5 in  
57,9 x 36,8 x 12,7 mm

### Features

- Low Profile Mounting Option
- EMI Filtering
- 8 and 12 Amp versions
- CE Marked
- Micro Sized Module

### Products Highlights

The FM48 input filter module enables designers to meet the conducted emission limits of EN55022 level B and FCC level B when used with Vicor's 48 Volt 2nd Generation of DC-DC converters. FiltMods accept an input voltage of 36 to 76 Vdc with a transient withstand capability of 100Vdc for 100 msec. The FiltMods are packaged in an industry standard "quarter-brick" module measuring 2.28" x 1.45" x 0.5" and are available in either 8 or 12 Ampere capacity. Both versions may be on-board or in-board mounted for height critical applications. The FiltMods can be teamed with Vicor's IAM48 for transient and surge protection.

### Compatible Products

- IAM48
- 2nd Generation 48V input DC-DC converters

### Part Numbers

- FM4808C11: 8 Amp – Short Pins
- FM4808C12: 8 Amp – Long Pins
- FM4812C11: 12 Amp – Short Pins
- FM4812C12: 12 Amp – Long Pins

### FM48-FiltMod Specifications

(typical at  $T_{BP} = 25^{\circ}\text{C}$ , nominal line, 75% load, unless otherwise specified)

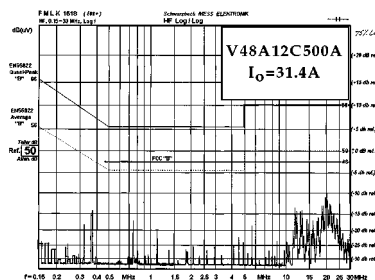
Parameter	Min	Typ	Max	Remarks
Input Voltage	36Vdc	48Vdc	76Vdc	
Safety Approvals	UL 1950, CSA 22.2-950, EN 60950			
Dielectric Withstand	1,500VRMS			Input/Output to Base
EMI/RFI	Bellcore GR-001089-Core Issue 2 EN 55022 Level B FCC Part 15 Level B			When used with Vicor 2nd Generation 48Vin DC-DC converters
Output Current				
FM4808C12			8A	Delivered current to any combination of Vicor's 2nd Generation 48Vin DC-DC Converter
FM4812C12			12A	
Reverse Polarity Protection				No damage to unit, external fusing required
Weight	2.1 Ounces (60 Grams)			

### Product Grade Specifications

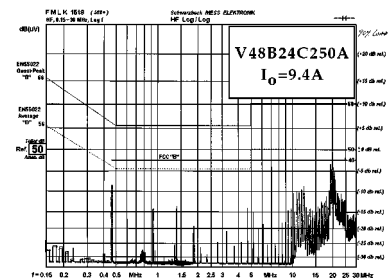
Parameter	C-Grade	T-Grade
Storage Temp.	-40°C to +125°C	-40°C to +125°C
Operating Temp. (Baseplate)	-20°C to +100°C	-40°C to +100°C
Warranty	2 years	2 years

Note: For alternative product grades, change the "C" in the part number to "T".

### Conducted Noise



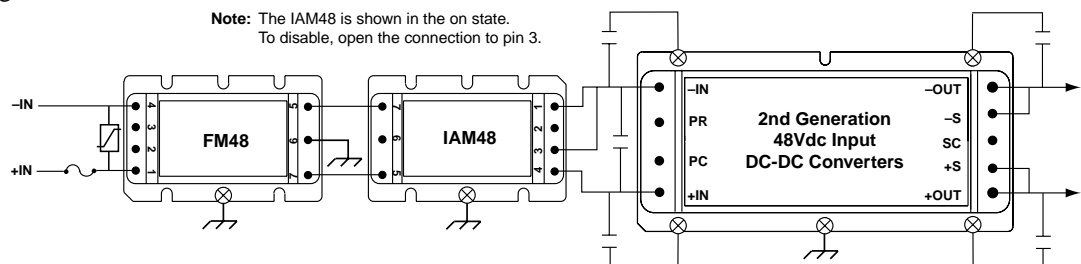
FM4812C12 and Model V48A12C500A DC-DC Converter.



FM4812C12 and Model V48B24C250A DC-DC Converter.

### Typical transient, surge protection and filtering solution

Note: The IAM48 is shown in the on state.  
To disable, open the connection to pin 3.






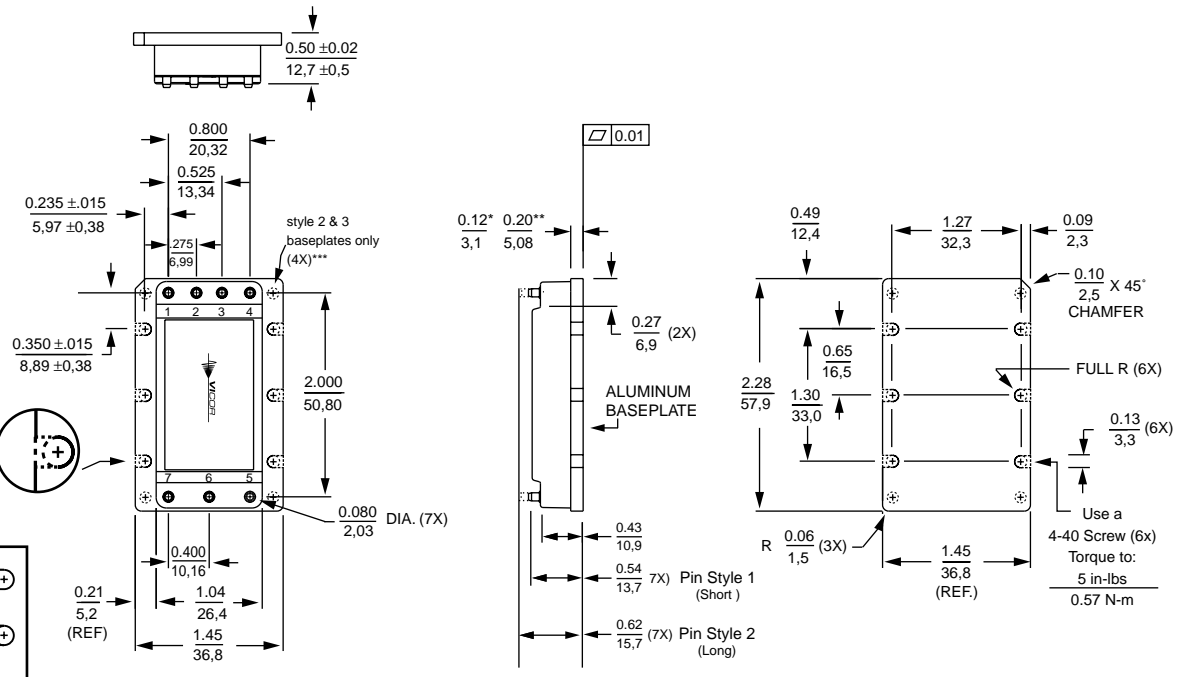
# Mechanical Drawings (FM48-FiltMod)

## Module Outline

PIN OUTS		
No.	Function	Label
1	+Vin	+V
2	N/C	
3	N/C	
4	-Vin	-V
5	-Vout	-V
6	Ground	GND
7	+Vout	+V

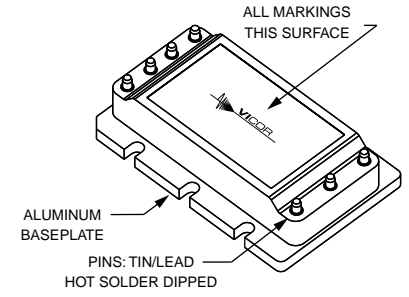
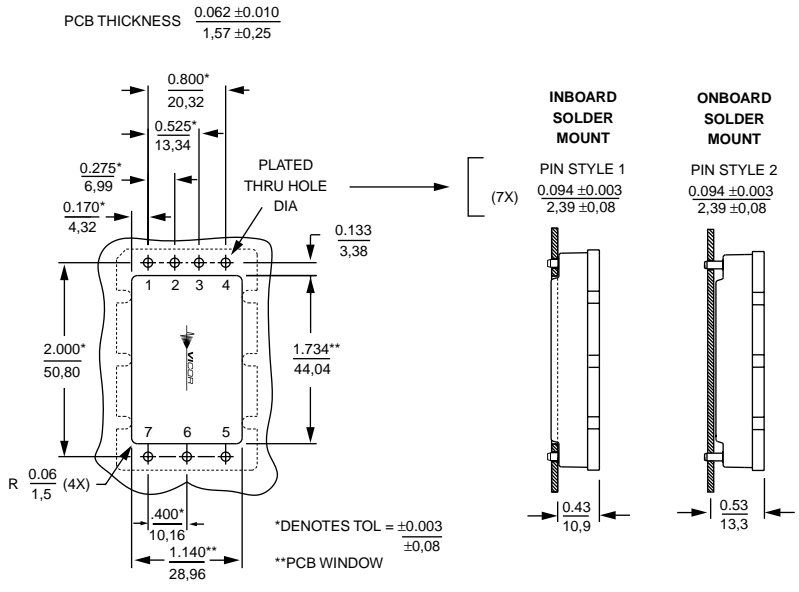
PINS: TIN/LEAD  
HOT SOLDER DIP

- Slotted (Style 1) 
- or
- Threaded (Style 2) 
- 4-40 UNC-2B (6X)
- or
- Thru Hole (Style 3) 
- #30 Drill Thru (6X)  
(0.1285)



\* Style 1 baseplate only  
 \*\* Style 2 & 3 baseplates  
 \*\*\* Reserved for Vicor accessories

## PCB Mounting Specifications



Unless otherwise specified, dimensions are in inches		
Decimals	Tol.	Angles
0.XX	±0.01	±1°
	±0.25	
0.XXX	±0.005	
	±0.127	