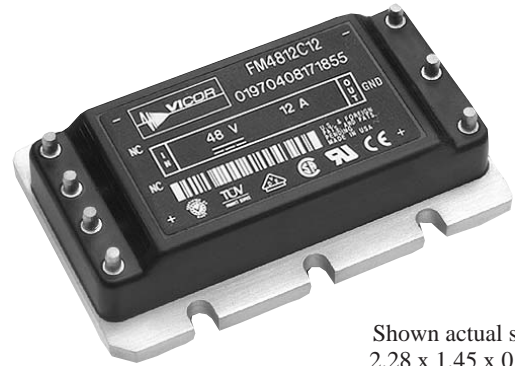




# Data Sheet

## 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

- EMI filtering
- 8 and 12 Amp versions
- CE Marked
- Micro-size package
- Low profile mounting option

#### 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 76Vdc with a transient withstand capability of 100 Vdc 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 used with Vicor's IAM48 for transient and surge protection.

#### Compatible Products

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

#### Absolute Maximum Rating

Parameter	Rating	Unit	Notes
+In to -In	80	Vdc	Continuous
+In to -In	100	V	100 ms
+Out to -Out	75	Vdc	Continuous
Mounting torque	5 (0.57)	in-lbs (N-M)	<5 sec, wave solder
Pin soldering temperature	500 (260)	°F(°C)	<7 sec, hand solder
Pin soldering temperature	750 (390)	°F(°C)	
Storage temperature C-,T-Grade	-40 to +125	°C	
Operating temperature C-Grade	-20 to +100	°C	Baseplate
Operating temperature T-Grade	-40 to +100	°C	Baseplate

#### FM48-FiltMod Specifications

(At T<sub>BP</sub> = 25°C, nominal line, 75% load, unless otherwise specified)

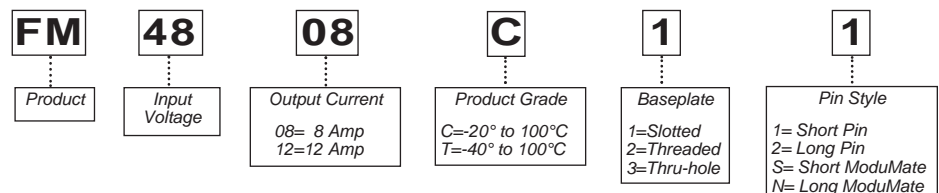
Parameter	Min	Typ	Max	Remarks
Input voltage	36 Vdc	48 Vdc	76 Vdc	
Safety approvals	UL 1950, CSA 22.2-950, EN 60950			
Dielectric withstand	1,500 Vrms			Input/Output to base
EMI/ RFI	Telcordia GR-001089-Core Issue 2 EN 55022 Level B FCC Part 15 Level B			When used with Vicor 2nd Generation 48Vin DC-DC converters
Output current				
FM4808C12			8 A	Delivered current to any combination of Vicor's 2nd Generation 48Vin DC-DC converter
FM4812C12			12 A	
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".

#### Part Numbers



# Conducted Noise

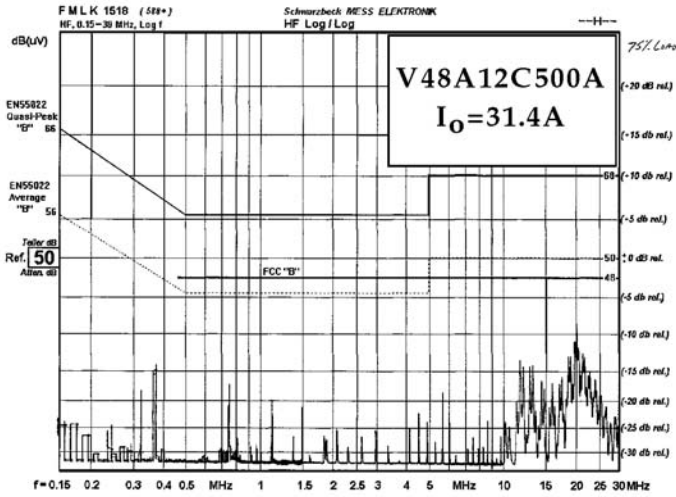


Figure 1— FM4812C12 and Model V48A12C500A DC-DC converter.

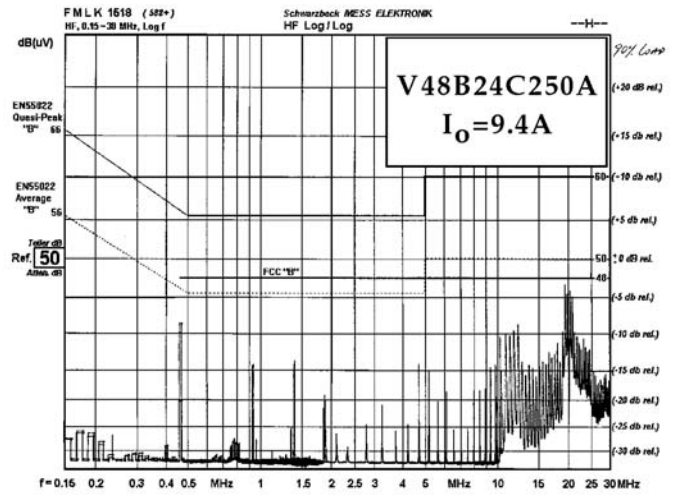


Figure 2— FM4812C12 and Model V48B24C250A DC-DC converter.

# Typical Transient, Surge Protection and Filtering Solution

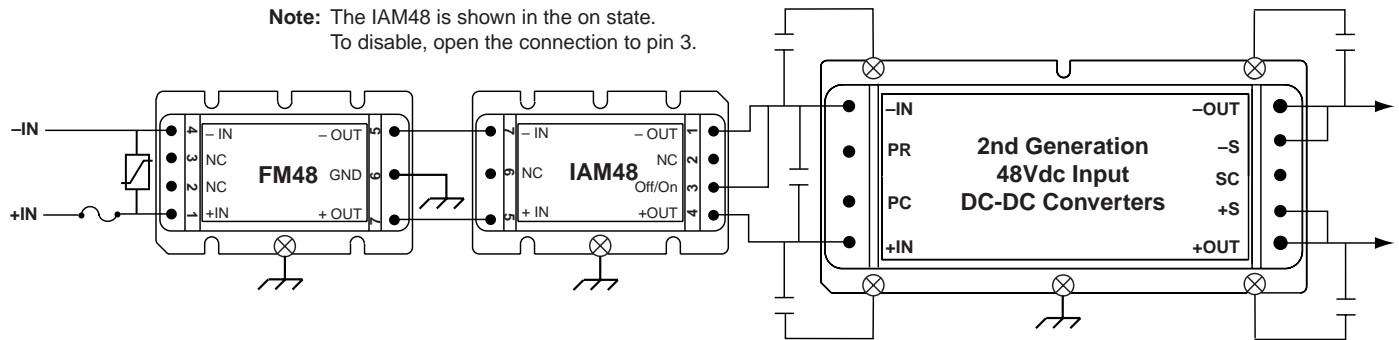
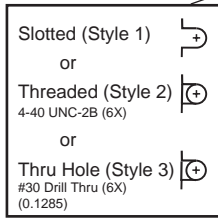
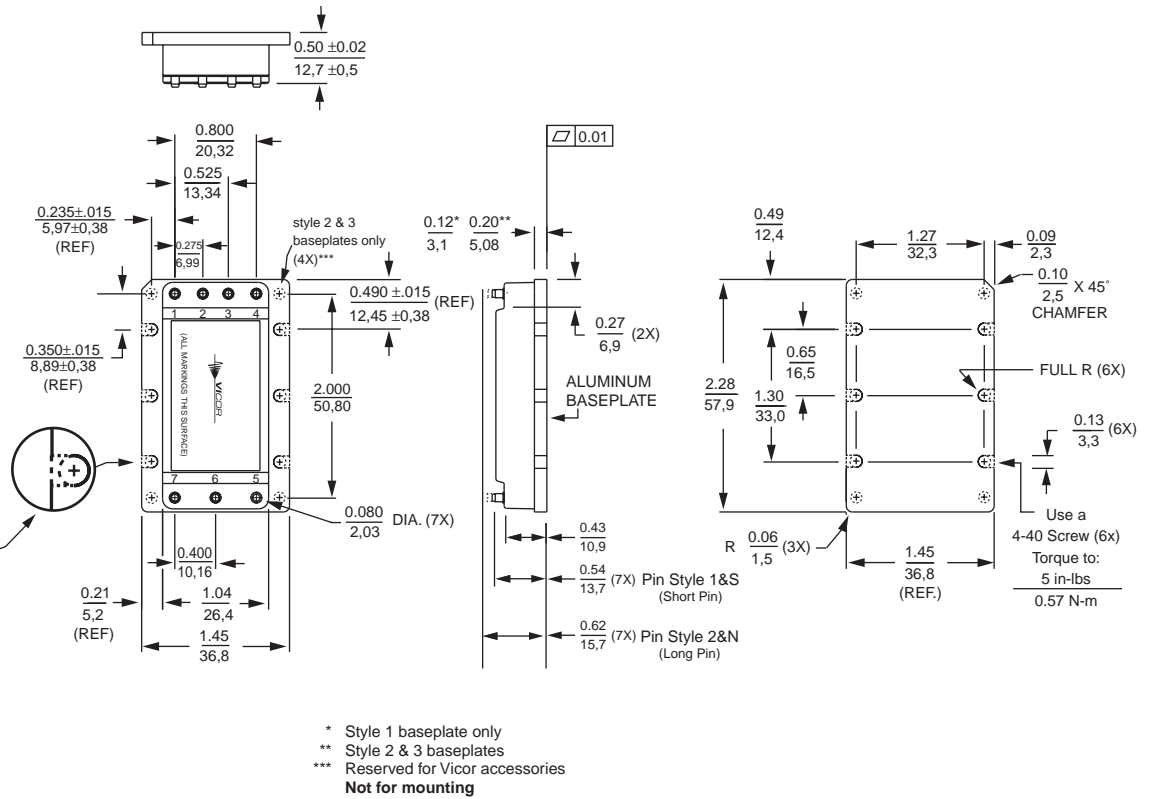


Figure 3

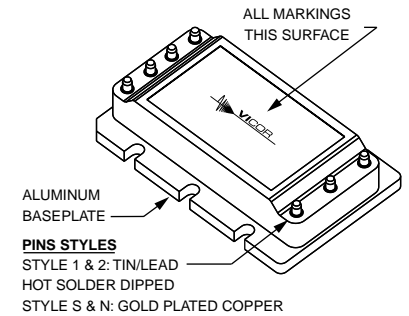
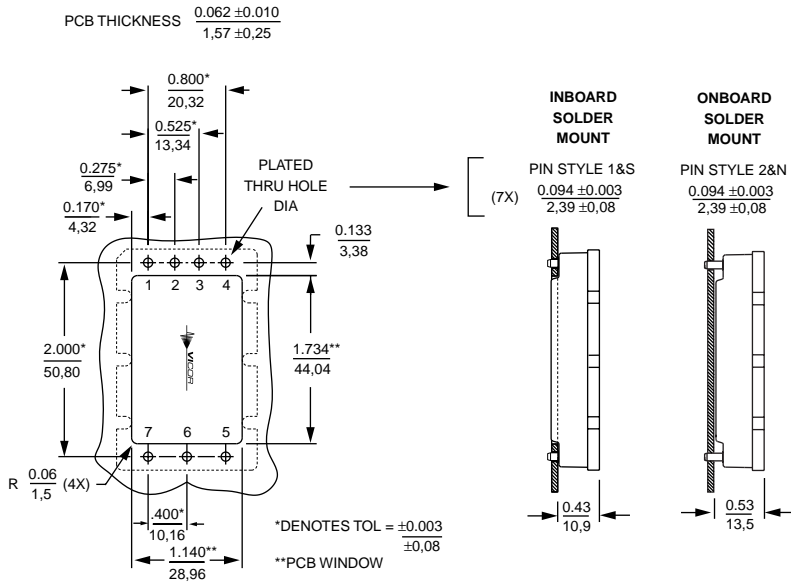
# Mechanical Drawings (FM48-FiltMod)

## 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



## PCB Mounting Specifications



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

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