



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_{BP} = 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

FM	48	08	C	1	1
Product	Input Voltage	Output Current 08= 8 Amp 12=12 Amp	Product Grade C=-20° to 100°C T=-40° to 100°C	Baseplate 1=Slotted 2=Threaded 3=Thru-hole	Pin Style 1= Short Pin 2= Long Pin S= Short ModuMate N= Long ModuMate

Conducted Noise

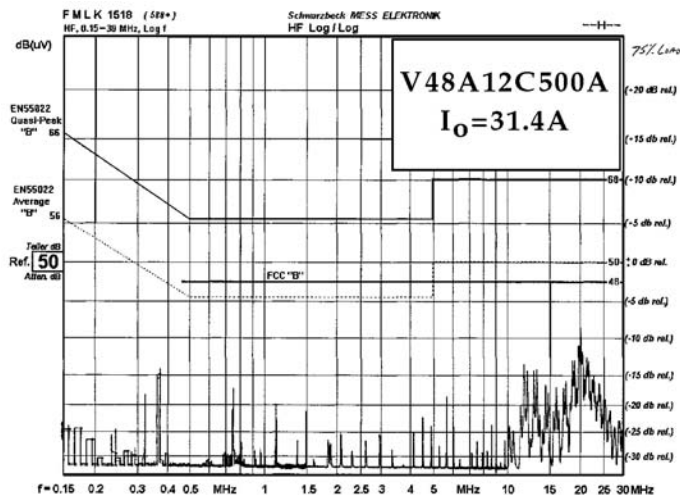


Figure 1—FM4812C12 and Model V48A12C500A DC-DC converter.

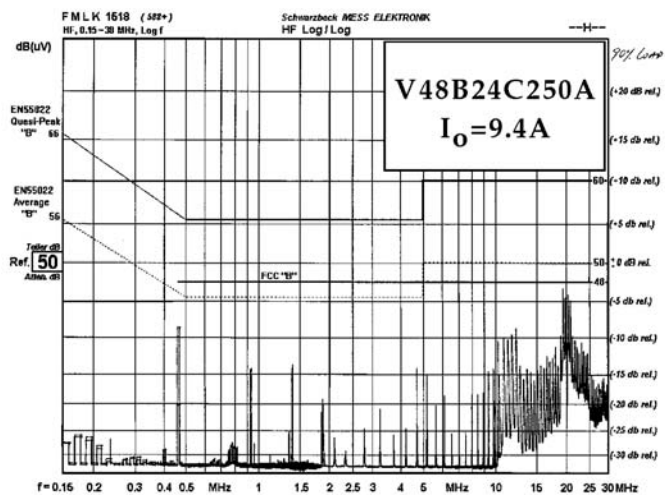


Figure 2—FM4812C12 and Model V48B24C250A DC-DC converter.

Typical Transient, Surge Protection and Filtering Solution

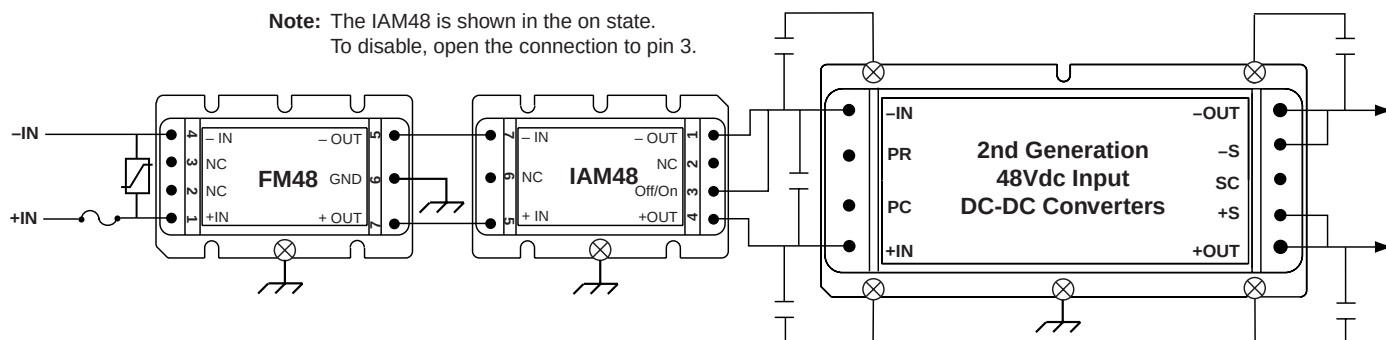
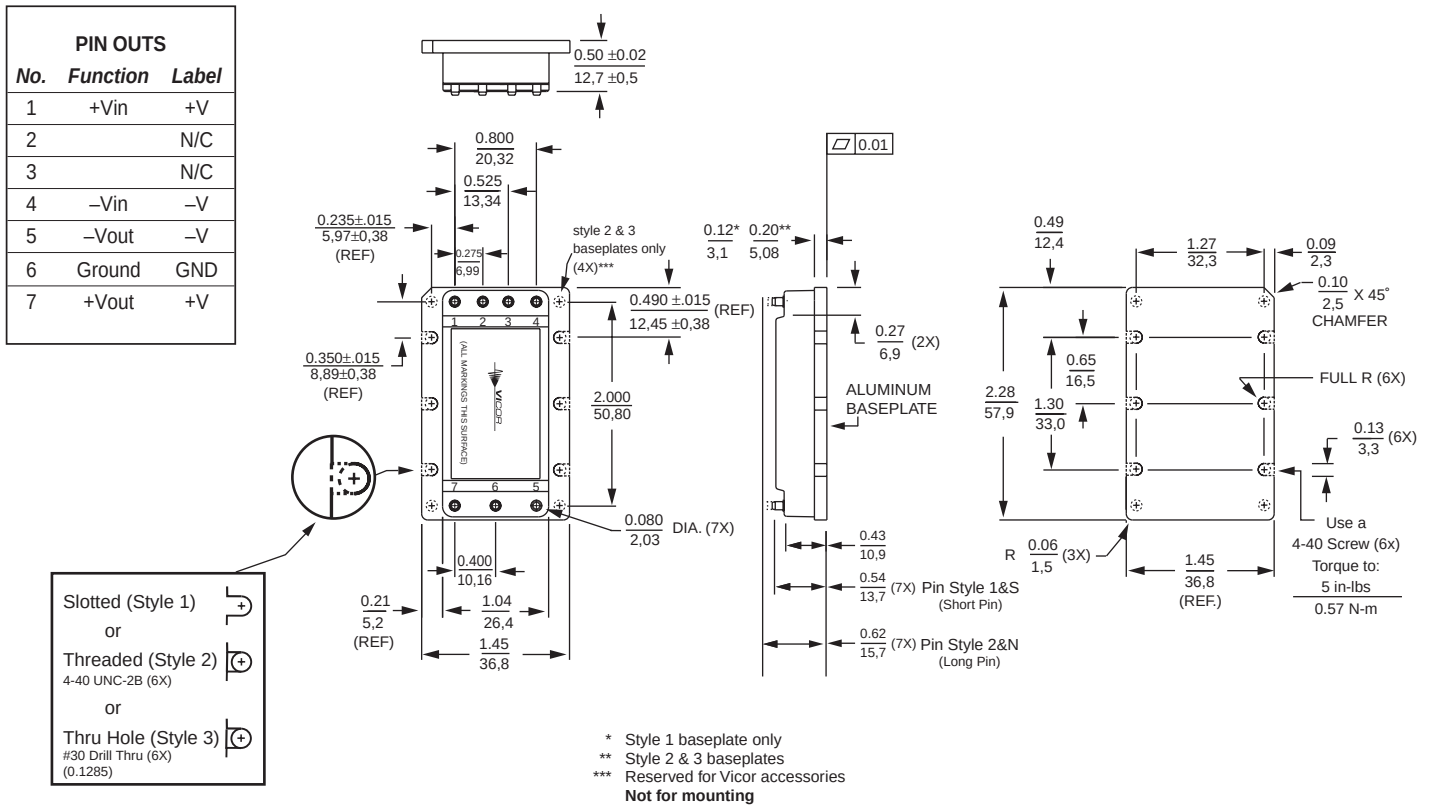


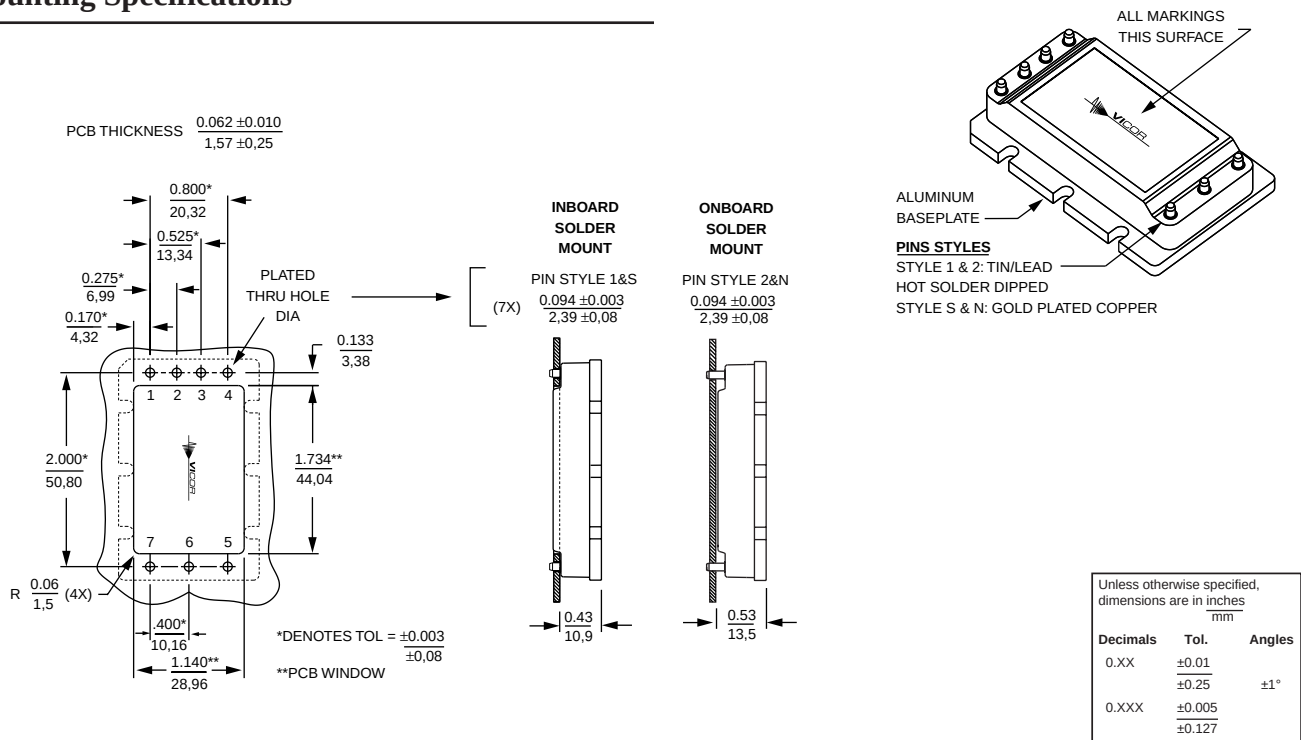
Figure 3

Mechanical Drawings (FM48-FiltMod)

Module Outline



PCB Mounting Specifications



Vicor's comprehensive line of power solutions includes high density AC-DC and DC-DC modules and accessory components, fully configurable AC-DC and DC-DC power supplies, and complete custom power systems.

Information furnished by Vicor is believed to be accurate and reliable. However, no responsibility is assumed by Vicor for its use. Vicor components are not designed to be used in applications, such as life support systems, wherein a failure or malfunction could result in injury or death. All sales are subject to Vicor's Terms and Conditions of Sale, which are available upon request.

Specifications are subject to change without notice.



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