

## FC SERIES - 5A, 10A, 20A, FILTER

### DESCRIPTION

FC100 industry standard input filter modules provide up to 30 dB of common mode and differential mode filtering at 500 kHz. The FC100's are available in 5A, 10A, and 20A versions and are optimized for operation with Power-One's high density, board-mounted products. The filters can be operated with up to 100 VDC input and have 1000 VDC isolation.

### FEATURES

- Meets Class B Conducted Limits
- Optimized For Power-One's High Density, Board-Mounted Products
- PCB Mountable
- Common Mode and Differential Mode Filtering
- Industry Standard Pinout
- -40°C to 100°C Case Operation
- >30 dB Insertion Loss at 500 kHz
- 100 VDC Operation

### TECHNICAL SPECIFICATIONS

Input	
Maximum Input Voltage	100 VDC
Line-to-Case Operation	1000 VDC
Input Frequency	100 Hz

Output	
Maximum Average Current	
400 LFM Airflow	$I_{out}$ Max.
Natural Convection	70% $I_{out}$

General	
Isolation	
Input - Case	1000 VDC
Case Temperature	
Operating Range @ $I_{out}$ Max.	-40 to +60°C
Operating Range @ 70% $I_{out}$ Max.	-40 to +80°C
Storage Range	-40 to +125°C
Humidity Max., Non-Condensing	95%
Vibration, 3 Axes, 5 Min Each	5 g, 10 - 55 Hz
MTBF† (Bellcore TR-NWT-000332)	Consult Factory
Safety	Consult Factory



Notes
† MTBF predictions may vary slightly from model to model.
Specifications typically at 25°C, normal line, and full load, unless otherwise stated.
Soldering Conditions: I/O pins, 260°C, ten seconds; fully compatible with commercial wave-soldering equipment.
Safety: Agency approvals may vary from model to model. Please consult factory for specific model information.

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MODELS - (See the last page of Section C for options.)

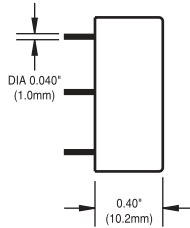
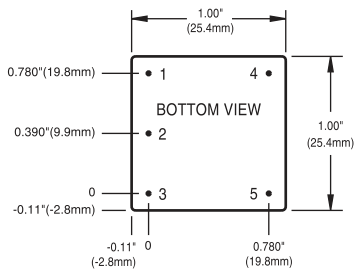
Operating Current (Amps)	Insertion Loss* Differential Mode (dB)	Insertion Loss* Common Mode (dB)	Typical Resistance** (mOhms)	Model
5	28	30	27	FC100V5A
10	31	28	17	FC100V10A
20	26	32	6.6	FC100V20A

\* Typical loss at 500 kHz (50 Ohms)

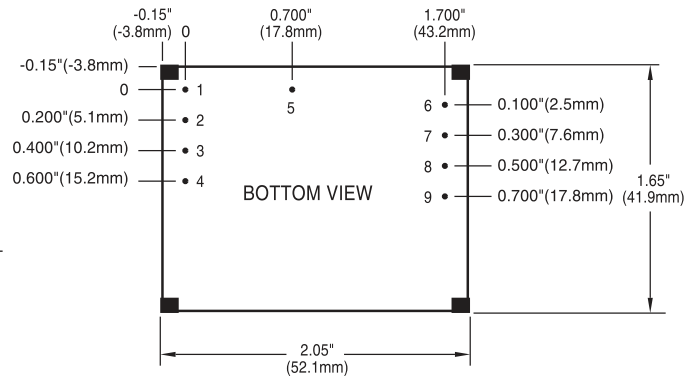
\*\* Resistance Per Leg

### MECHANICAL DRAWING

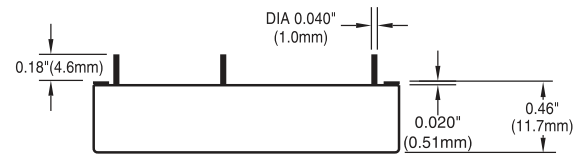
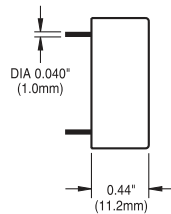
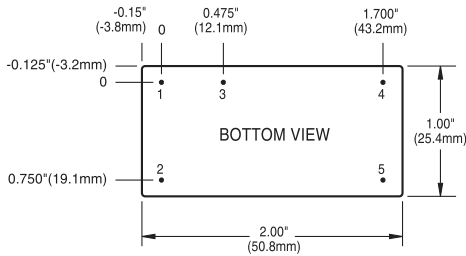
**FC100V5A**



**FC100V20A**



**FC100V10A**



Pin	Function
<b>5A Module</b>	
1	+V <sub>in</sub>
2	Ground
3	-V <sub>in</sub>
4	+V <sub>out</sub>
5	-V <sub>out</sub>

Pin	Function
<b>10A Module</b>	
1	+V <sub>in</sub>
2	-V <sub>in</sub>
3	Ground
4	+V <sub>out</sub>
5	-V <sub>out</sub>

Pin	Function
<b>20A Module</b>	
1	-V <sub>in</sub>
2	-V <sub>in</sub>
3	+V <sub>in</sub>
4	+V <sub>in</sub>
5	Ground
6	-V <sub>out</sub>
7	-V <sub>out</sub>
8	+V <sub>out</sub>
9	+V <sub>out</sub>

Tolerances	
Inches:	(Millimeters)
.XX ± 0.020	.X ± 0.5
.XXX ± 0.010	.XX ± 0.25
Pin:	± 0.05
(Dimensions as listed unless otherwise specified.)	