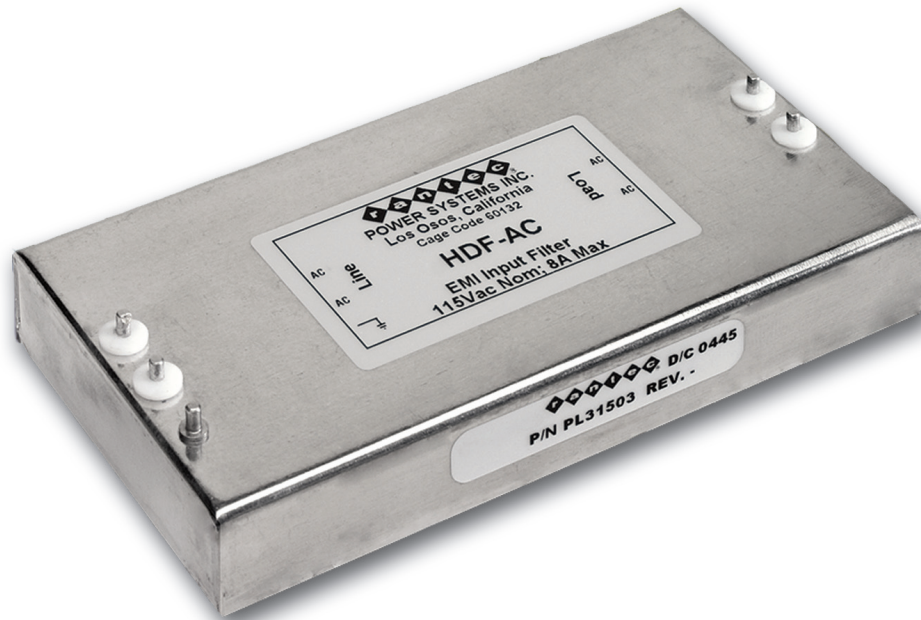


**Power Systems from**  
**COTS+**  
**Building Blocks**



Rantec's HDF-AC is a complementary building block used to develop performance based "Power System Solutions" in today's military environment. Rantec's HDF-AC EMI filters allow the system designer to develop power systems which comply with the stringent requirements of MIL-STD-461, while employing the cost and schedule philosophies of Commercial Off-The-Shelf (COTS). These filters are specifically designed to interface with Rantec's HDF power factor correction module, and thereby the HDM DC-DC converter line, providing both differential and common mode filtering.

# HDF-AC

## AC EMI Filter Module

- Input 85 to 265 VAC 60 Hz (400Hz with reduced specs)
- Up to 8A
- Matched to Rantec's HDA PFC Module
- EMI Compliant MIL-STD-461D-E: CE101 & CE102
- Low Input Voltage Drop
- Isolated Case
- Low Internal Dissipation
- Operating temperature range: -55°C to +95°C
- Conduction Cooled
- MIL-S-901C Shock
- MIL-STD-810C
- MIL-STD-1399 Compliant (with external transorb)
- Competitively Priced



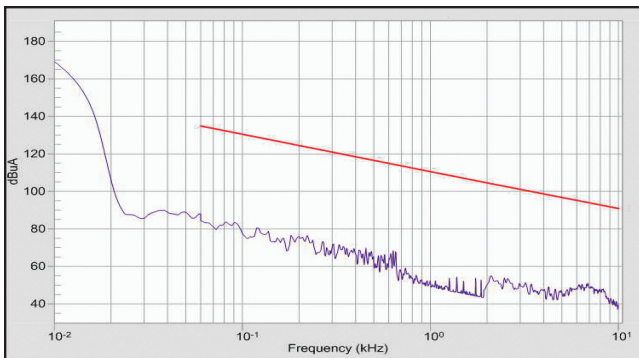
Rantec Power Systems Inc.

1173 Los Olivos Ave.  
 Los Osos, CA 93402

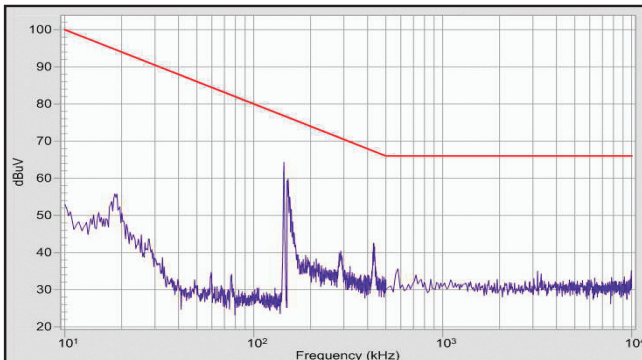
powersys@rantec.com  
 www.rantec.com  
 (805) 596-6000  
 Fax (805) 596-6006

### HDF-AC EMI FILTER MODULE

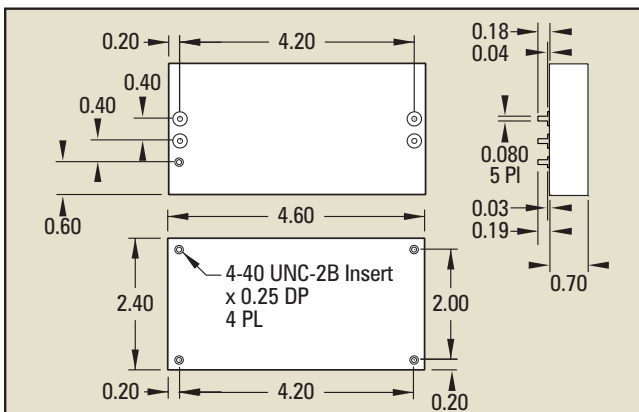
MODEL	PART NUMBER	INPUT	CURRENT
<b>HDF-AC</b>	PL31503	85 - 265 VAC	8A max



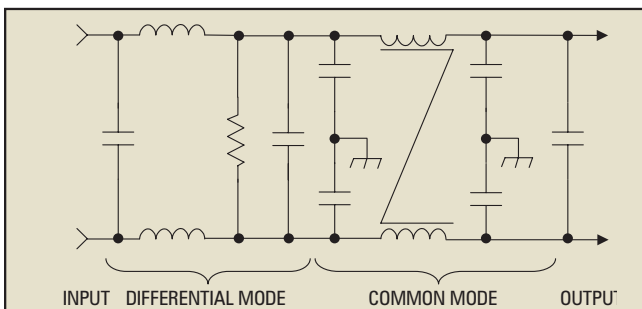
**MIL-STD-461E 115V CE101**  
HDA-600-31, HDF-AC EMI Filter, 820µf Cap



**MIL-STD-461E 115V CE102**  
HDA-600-31, HDF-AC EMI Filter, 820µf Cap



**OUTLINE & MOUNTING DIAGRAM**  
Dimensions are for reference only



**SCHEMATIC**

# HDF-AC

## AC EMI Filter Modules

### MECHANICAL

Construction	Fully shielded
Dimensions	See diagram
Mounting	See diagram
I/O Connection	Solder pins
Weight	13 oz. max.

### ENVIRONMENTAL

Cooling	Conductively cooled baseplate, +95°C max
Operating Temperature	-55°C to +95°C, baseplate
Storage Temperature	-55°C to +125°C
Humidity	MIL-STD-810C, Method 507.1, Proc. IV
Altitude	up to 70,000 ft
Shock	MIL-S-901C, Grade A, Type A, Class 1 High impact shock
Vibration	MIL-E-5400, Curve IVa, 5 to 2kHz
Salt Spray	MIL-STD-810C, Method 509, Proc 1
MTBF	9,255,851 hours @ 55°C Naval Sheltered per MIL-STD-217F Note 2

### INPUT

PARAMETER		COMMENTS
Voltage	85-265 VAC	MIL-STD-1399 Compliant (with external transorb)
Current	8A max	
Efficiency	>99%	Power ≥ 10W
Power Factor	0.99	Power ≥ 50W
Surge Rating	350VAC	Up to 500mSec
Isolation	Input to Output	Not Isolated
	Input & Output to Case	10MΩ minimum @ 1000VDC
EMI Management	Suppresses conducted emissions from connected HDA/HDM modules operating at maximum power. Specific limits defined by the constraints of MIL-STD-461 D-E, CE101 and CE102.	

## Rantec Power Teaming Engineers Offer Technical Assistance to:

Evaluate Power System Requirements  
Develop Power System Architecture  
Reduce Time to Market



**Rantec Power Systems Inc.**

1173 Los Olivos Ave.; Los Osos, CA 93402  
powersys@rantec.com • www.rantec.com  
(805) 596-6000 • Fax (805) 596-6006