

Power Solutions for Today's Military

Power Systems from **COTS+** Building Blocks

HDF-DC500

DC Input
EMI Filter Module

- ◆ 270VDC Input
- ◆ Matched to Rantec HDM+, HDM-200, & HDM-LLP Series
- ◆ EMI Compliant
 - MIL-STD-461C:
CE01 & CE03
 - 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
- ◆ Light Weight
- ◆ Competitively Priced
- ◆ MIL-S-901C-D Shock
- ◆ MIL-STD-810C-F
- ◆ MIL-STD-704A-F Compliant (Including Transients)



Rantec's HDF-DC500 Filter is a complementary building block used to develop performance based "Power System Solutions" in today's tactical military environment. Rantec's HDF EMI filters allow the system designer to develop power systems which comply with the stringent requirements of MIL-STD-461C-E, while employing the cost and schedule philosophies of Commercial-Off-The-Shelf (COTS). These filters are specifically designed to interface with Rantec's HDM+, HDM-200 and HDM-LLP series DC-DC converters, providing both differential and common mode filtering in order to meet MIL-STD-461.

HDF SERIES MODELS

MODEL	PART NUMBER	INPUT VDC	CURRENT (MAX)	DISSIPATION
HDF-DC500	PL31751	270VDC	2.5A	<5W

The System Designer's Choice



Rantec Power Systems Inc.

**Rantec Power Team Engineers
Offer Technical Assistance to:**
Evaluate Power System Requirements
Develop Power System Architecture
Reduce Time to Market

HDF-DC500

DC Input
EMI Filter Module

INPUT

PARAMETER	MIN	TYP	MAX	UNIT	COMMENTS
Voltage	200	270	400	VDC	
Transients	125		475	VDC	Per 704A-F

OUTPUT

PARAMETER	
Voltage	<2V below input voltage @ steady state, rated load
Current	2.5A
Internal Dissipation	<5W

ISOLATION

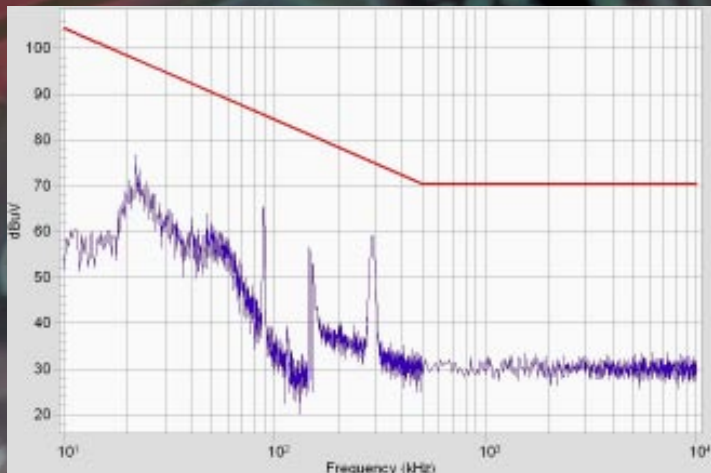
PARAMETER	
Input to Output	Not Isolated
Input & Output to Case	10MΩ minimum @ 1000VDC

MECHANICAL

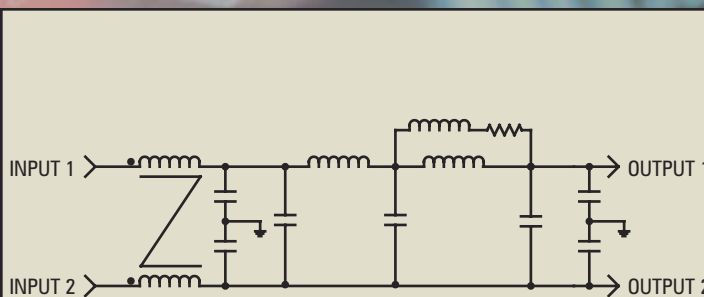
Construction	Surface mount, Mu metal shield, conformal coated
Dimensions	2.3" x 2.4" x .5"
Mounting	See Outline & Mounting diagram
I/O Connection	Solderable pins
Weight	2.25 oz. maximum

ENVIRONMENTAL

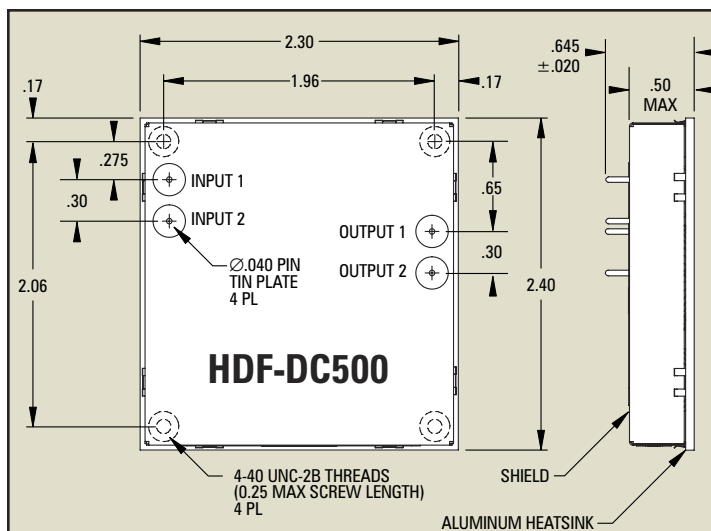
Cooling	Conductively cooled baseplate, +95°C max
Operating Temperature	-55°C to +95°C, baseplate
Storage Temperature	-55°C to +125°C
Humidity	MIL-STD-810C, Method 507.1, Proc. IV MIL-STD-810F, Method 507.4
Altitude	up to 70,000 ft
EMI	Mu metal electric and magnetic shield
Shock	MIL-S-901C, Grade A, Type A, Class 1 High impact shock
Salt Fog	MIL-STD-810C, Method 509.1, Proc. I MIL-STD-810F, Method 509.4
Vibration	MIL-E-5400T, Curve IVa, 5Hz to 2KHz
MTBF	65,951,693 hours MIL-STD-217F Note 2, Airborne Uninhabited Cargo



MIL-STD-461E CE102
500W load with HDM-200 converters



HDF-DC500 SCHEMATIC DIAGRAM
Common and Differential Mode Filtering



OUTLINE & MOUNTING DIAGRAM
Dimensions are in inches, for reference only.

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1173 LOS OLIVOS AVE
LOS OSOS CA 93402
FAX 805 596 6006
powersys@rantec.com
www.rantec.com
805-596-6000



Rantec Power Systems Inc.