

# Power Solutions for Today's Military

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

## HDF SERIES

DC Input  
EMI Filter Modules

- ◆ 28VDC Input
- ◆ Matched to Rantec HDM Series
- ◆ MIL-STD-461C (CE01, CE03) Compliant
- ◆ Low Input Voltage Drop
- ◆ Isolated Case
- ◆ Low Internal Dissipation
- ◆ Operating temperature range: -55°C to +95°C
- ◆ Conduction Cooled
- ◆ Lightweight
- ◆ Competitively Priced
- ◆ MIL-S-901C Shock
- ◆ MIL-STD-810C
- ◆ MIL-STD-704A Transients



Rantec's HDF Series are complementary building blocks used to develop performance based "Power System Solutions" in today's 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, while employing the cost and schedule philosophies of Commercial off-the-shelf (COTS). These filters are specifically designed to interface with Rantec's HDM Series DC-DC converters, providing both differential and common mode filtering.

### HDF SERIES MODELS

MODEL	PART NUMBER	INPUT	CURRENT (MAX)	DISSIPATION
HDF-22	23896	28VDC	16.0A	< 6W
HDF-25	24367	28VDC	32.0A	< 12W

*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 SERIES

## DC Input EMI Filter Modules

### ELECTRICAL

PARAMETER	MIN	TYP	MAX	UNIT	COMMENTS
Input Voltage	16	28	40	VDC	Withstands MIL-STD-704A transients.
Output			0.4	VDC	Below input voltage.
Current	Refer to table on front side for specific model				
Internal Dissipation	Refer to table on front side for specific model				
I/O Protection	Recommended external input fuse provided by user				
Isolation	Input to Output	Not Isolated			
	Input & Output to Case	10MΩ minimum @ 200VDC			
EMI Management	Suppresses conducted emissions from connected HDM modules operating at maximum power. Specific limits defined by the constraints of MIL-STD-461C.				

### MECHANICAL

Construction	Fully Shielded / Encapsulated				
Dimensions	Model specific. See table and diagram.				
Weight	HDF-22	11 oz.			
	HDF-25	20 oz.			

### DIMENSIONS

MODEL	A	B	C	D	E	F
HDF-22	3.60	2.40	0.70	0.35	0.80	0.35
HDF-25	4.60	2.40	1.00	0.50	0.56	0.50

### MOUNTING

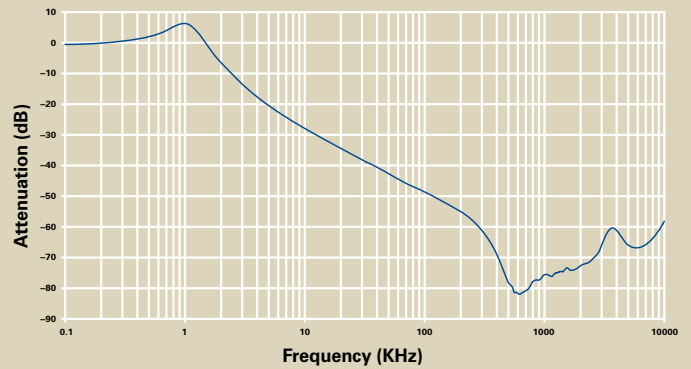
MODEL	G	H	I	J	K
HDF-22	3.20	2.00	1.20	1 @ 4-40	2 @ 4-40
HDF-25	4.16	1.96	1.20	1 @ 8-32	2 @ 8-32

### CONNECTIONS

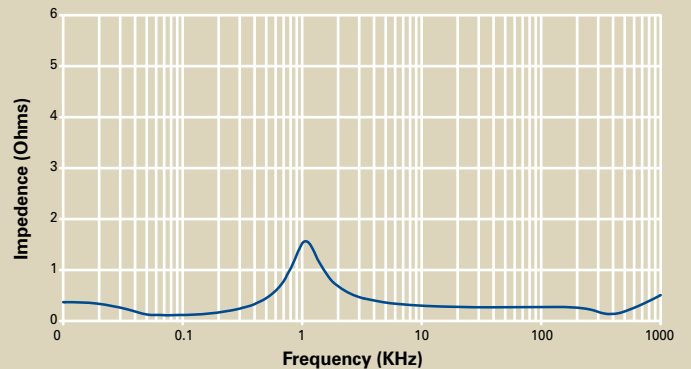
MODEL	L	M	N
HDF-22	4 @ 6-32	0.58	0.62
HDF-25	4 @ 8-32	0.62	0.62

### ENVIRONMENTAL

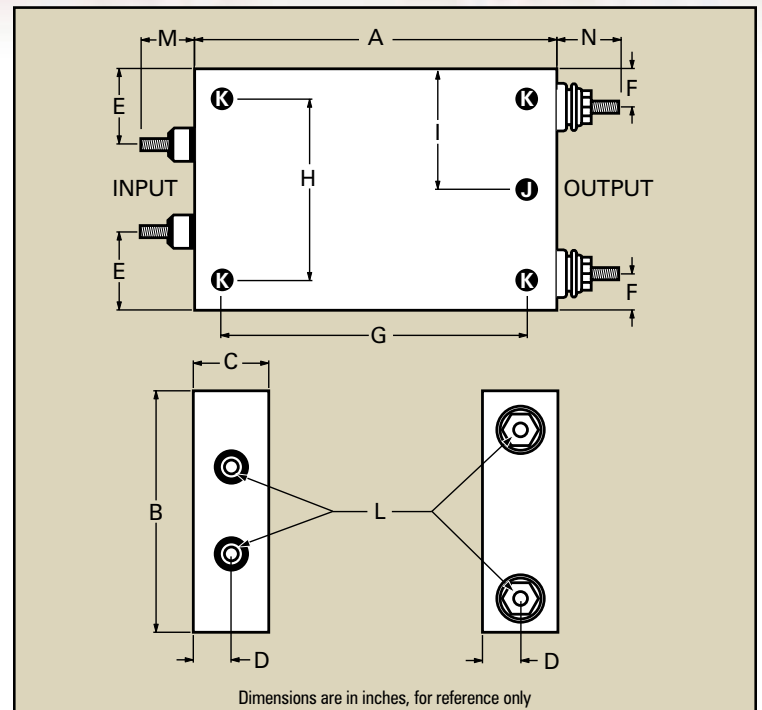
Cooling	Conductively cooled baseplate, +95°C max
Operating Temp.	-55°C to +95°C, baseplate
Storage Temp.	-55°C to +125°C
Humidity	MIL-STD-810C, Method 507.1, Proc. IV
Altitude	up to 70,000 ft
Shock	MIL-S-901C, Grade A, Type A, Class 1 High impact shock
Vibration	MIL-E-5400, Curve IVa, 5 to 2kHz
Salt Spray	MIL-STD-810C, Method 509, Proc 1



**ATTENUATION CURVE**  
HDF-22 EMI Filter



**IMPEDANCE CURVE**  
HDF-22 EMI Filter



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