



NB100S

100 Watts Output Power
SINGLE AND DUAL OUTPUTS



How to Order:

NB 100 D I / 5 / 15 - A - D

Series	Output Voltages: One number is for single out or two numbers for dual output. Maximum current as stated in selection chart.	Options: A- pins out side of unit B- pins out bottom of unit C- pins out top of unit D- through hole inserts (STD threaded) I - M2.5 inserts
Total Output Power		
Single (S), Dual (D) Output		
Industrial (I) or Military (M)		

Model Numbering Example:

To order a 100 watt, 15 V out (single output), industrial grade power supply with pins out the side, the model number would be: NB100SI/15-A. Military grade would be NB100SM/15-A. To order a 100 watt, dual output, 15 V and 15 V, industrial grade power supply with pins out the top, the model number would be NB100DI/15/15-C. Dual output, 12 V and 15 V, military grade, would be NB100DM/12/15-C. When ordering a dual output unit, the first output voltage in the model number is located on channel 1, and the second output voltage in the model number is located on channel 2 (see case drawing for details).

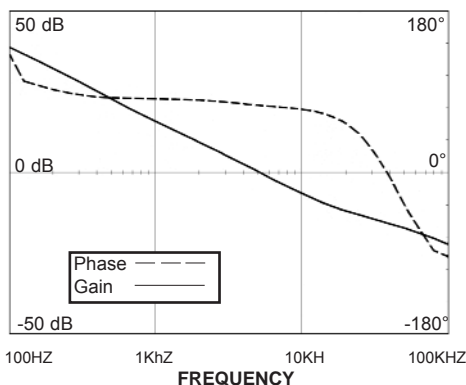
INPUT CHARACTERISTICS

	PER CHANNEL			Units
	Min.	Typ.	Max.	
Input Voltage	14	28	40	Vdc
Brown Out (75% of Full Load) [fig. I]*		12		Vdc
No Load Power Dissipation		2	4	Watt
Inrush Charge [fig. VII]*			2	mc
Reflective Ripple Current [fig. VIII]*		15		%
Logic Disable Current (Sink)		100	150	µA
Logic Disable Power In		1.2	2.5	W
Input Ripple Rejection (120 Hz)		55		dB
Input Ripple Rejection (800 Hz)		45		dB
Efficiency (FL) [fig. II & III]*	73	78-84		%
3.3 Vdc Output (FL)	67	74		%
2 Vdc Output (FL)	62	67		%

EMI: Units conform to MIL-STD-461D (on the input leads) with companion filter

Input Transient: Units conform to MIL-STD-704D for transients up to 50V for 0.1 second

STABILITY



All specifications are typical @+25°C with nominal input voltage under full output load conditions, unless otherwise noted. Specifications subject to change without notice.

FEATURES

- .38 Inch Profile
- Synchronization
- Remote Turn On (TTL)
- Output Voltage Trim Pin
- Over Temperature Protection
- Output Overvoltage/Overcurrent Protection
- Built-In Test (Output Power Good; Main Output)
- 100% Environmental Screening (Military Version)
- Outputs Isolated Allowing Any Combination of Output Voltages

SELECTION CHART

Output Voltage and Output Current

Nominal Output Voltage	Single Output	Dual Per Channel
	Current (Amps)	Current (Amps)
2	20	10
3.3	20	10
5	20	10
5.2	19.2	9.6
12	8.3	4.2
15	6.7	3.3
24	4.2	2.1
28	3.6	1.8

OUTPUT CHARACTERISTICS

	PER CHANNEL			
	Min.	Typ.	Max.	Units
Set Point Accuracy			1 †	% V _{out}
Load Regulation		5	0.2% ¹	mV
Line Regulation		5	0.2% ¹	mV
Ripple P-P (10 MHz) (2V-24) [fig. IV]*		45	150	mV
Ripple P-P (10 MHz) (28V)[fig. IV]*		.2%	1%	% V _{out}
Trim Range	100		110	% V _{out}
Remote Sense Compensation			0.5	Vdc
Overvoltage Protection (2V, 3.3V)		140		% V _{out}
Overvoltage Protection (5V-28)		125		% V _{out}
Current Sharing		±10		% I _{out}
Transient Response (V _{out} 1%) Time/Overshoot [fig. V & VI]*				
20-80% Load		350/300		µS/mV
Low Line - High Line		300/350		µS/mV
50-100% Load		250/300		µS/mV
Temperature Drift	0.01		0.05	%/°C
Long Term Drift	0.01		0.02	%/1KHrs
Current Limit	105	125	150	% I _{out}
Short Circuit Current	25		75	% I _{out}
Turn On Time [fig. XI]*		1.5		mS
Logic Turn On Time [fig. IX]*		1.5		mS

† 1% or 50mV, whichever is greater

* figures on page 21 represents per channel

¹ .2% or 25mv whichever is greater



NBF150

EMI Filter



How to Order:

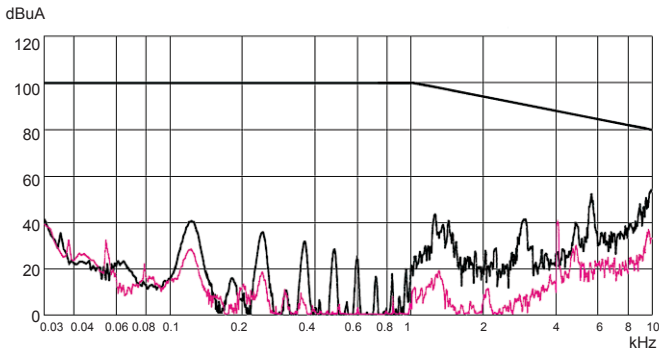
NBF 150 - A - D

Series
Total Output Power

- Options:
 A- pins out side of unit
 B- pins out bottom of unit
 C- pins out top of unit
 D- through hole inserts (STD threaded)
 I - M2.5 inserts

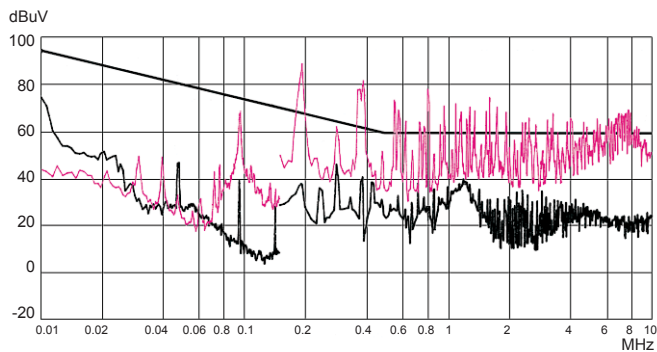
EMI COMPARISON GRAPHS

28V_{in} - 150 watts
MIL-STD-461D, CE101-4



28V_{in} - 150 watts
MIL-STD-461D, CE102

■ With NBF50
 ■ Without NBF50



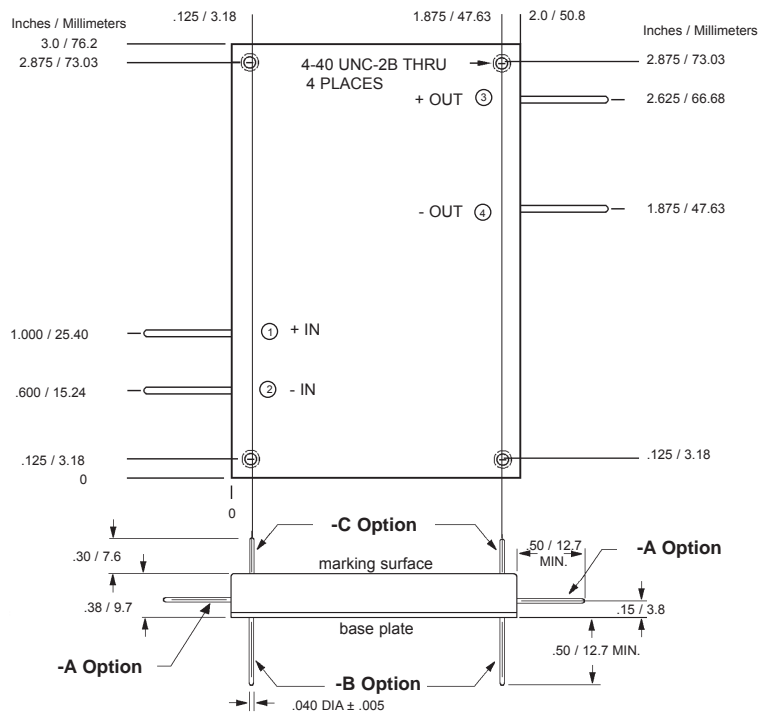
FEATURES

- MIL-STD-461D Compliance CE101 and CE102
- Does Not Require External Components
- Meets Environmental Requirements of MIL-STD-810E and MIL-S-901
- For Use With NB80, NB100, NB150 Series DC/DC Converters

SPECIFICATIONS

Input Voltage (maximum)	50	Vdc
Rated Output Current	15	A
Isolation (Input/Output to Case)	500	Vdc
Operating Temperature	-55 to +100	°C
Storage Temperature	-55 to +125	°C
Insulation Resistance (measured at 50Vdc)	50	M Ohm
Weight	4.2	oz.
	120	grams
Size	3.0 x 2.0 x 0.38	inch
	76.2 x 50.8 x 9.7	mm
Volume	2.28	inch ³
	37.5	cm ³
Material	Pin	Brass (Solder Plating)
	Baseplate	Aluminum 5052-H32
	Case	28 Gauge Steel (cold rolled)
Finish		Nickel Plating
Mounting	Standard	4-40 inserts provided in baseplate
	I Option	M2.5 metric inserts (4 places)
	D Option	0.115 DIA thru holes (4 places)

CASE DRAWINGS



Tolerances:

inches	-	x.xx	= ±0.03
		x.xxx	= ±0.015
mm	-	x.x	= ±0.8
		x.xx	= ±0.40

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