

NB50T

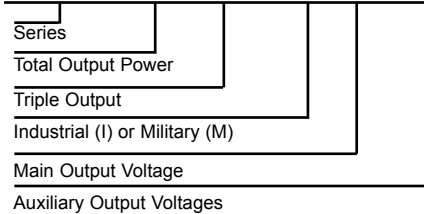
50 Watts Output Power

TRIPLE OUTPUT



How to Order:

NB 50 T M / 5 / 15 - A - D



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

INPUT CHARACTERISTICS

	Min.	Typ.	Max.	Units
Input Voltage	14	28	40	Vdc
Brown Out (75% of Full Load) [fig. I]*		12		Vdc
No Load Power Dissipation		3	5	Watt
Inrush Charge [fig. VII]*			2	mc
Reflective Ripple Current [fig. VIII]*		10		%
Logic Disable Current (Sink)		100	150	µA
Logic Disable Power In		1.2	2.5	W
Input Ripple Rejection (120 Hz)		50		dB
Input Ripple Rejection (800 Hz)		40		dB
Efficiency (FL) [fig. II & III]*	64	68		%

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

INPUT CHARACTERISTICS

	+5V Output			Auxiliary Outputs			Units
	Min.	Typ.	Max.	Min.	Typ.	Max.	
Set Point Accuracy		1 †	2			1	% V _{out}
Load Regulation		0.1	0.5		0.3	1	% V _{out}
Line Regulation		0.1	0.5		0.2	1	% V _{out}
Ripple P-P (10 MHz) [fig. IV]*		50	125		50	150	mV
Trim Range	100		110				% V _{out}
Remote Sense Compensation		0.5					Vdc
Overshoot Protection		125					% V _{out}
Transient Response (V _{out} 1%) Time/Overshoot [fig. V & VI]*							µS/mV
20-80% Load		350/200			200/30		µS/mV
Low Line - High Line		500/350			500/50		µS/mV
50-100% Load		300/150			200/30		µS/mV
Temperature Drift		0.01	0.05		0.02	0.05	%/°C
Long Term Drift		0.01	0.02		0.01	0.02	%/1Khrs
Current Limit	105	125	150	105	125	150	% I _{out}
Short Circuit Current	25		75	25		75	% I _{out}
Turn On Time [fig. X, XI, XII]*		1.0			1.0		mS
Logic Turn On Time [fig. IX]*		1.0			1.0		mS

† 1% or 50mV, whichever is greater
* figures on page 22

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

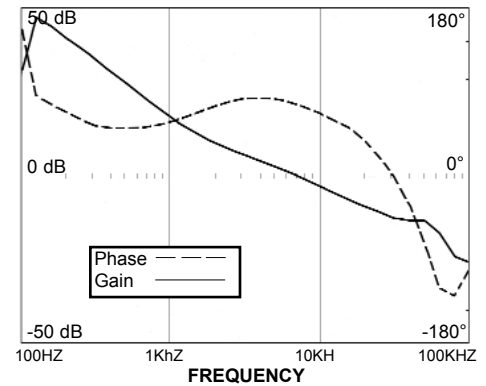
- .38 Inch Profile
- Synchronization
- Remote Turn On (TTL)
- Output Voltage Trim Pin
- Over Temperature Protection
- Built-In Test (Output Power Good)
- Output Overvoltage/Overcurrent Protection
- 100% Environmental Screening (Military Version)

SELECTION CHART

Main Output		Auxiliary Output		Model Number
Voltage	Current	Voltage	Current	
5	5.0A	±12	1.04A	NB50TI/5/12-A
5	5.0A	±15	0.83A	NB50TI/5/15-A

The above model number is for the Industrial grade power supply. For the Military grade power supply replace the 'I' with 'M'.

STABILITY



HIGH DENSITY DC TO DC CONVERTERS

Industrial & Military Grades

TEMPERATURE CHARACTERISTICS

	Min.	Typ.	Max.	Units
Operating				
Industrial Grade	-40		+71	°C
Military Grade	-55		+100	°C
Storage (Ambient)	-55		+125	°C
Over Temperature Shutdown				
Industrial Grade		+75		°C
Military Grade		+105		°C
Thermal Resistance Case - Ambient		11		°C/W

MILITARY GRADE - Environmental Screening

All "Mil" Grade units receive the following:

- Stabilization Bake: +125°C for 24 hours per Mil-Std-883, M1108, Condition B
 - Temperature Cycling: 10 cycles at -55°C to +125°C (transition period 36 minutes) per Mil-Std-883, M1010, Condition B
 - Burn-in: 160 hours at +85°C min.
 - Final Testing
- See "Guide to Operation" for full details

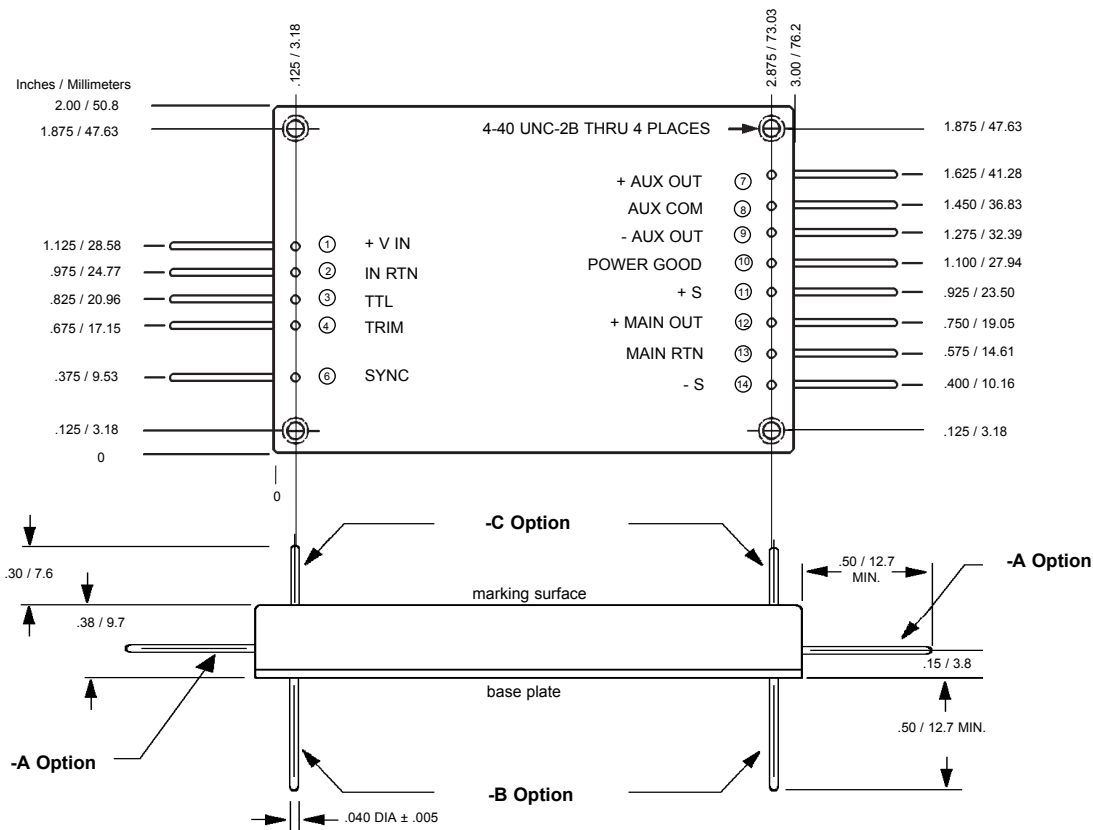
ISOLATION CHARACTERISTICS

	Min.	Typ.	Units
Isolation:			
Input to Output	500		Vdc
Output to Base	250		Vdc
Input to Base	250		Vdc
Input to Output Capacitance		0.022	µf
Insulation Resistance (@50 Vdc)	50		MOhm

MECHANICAL CHARACTERISTICS

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

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