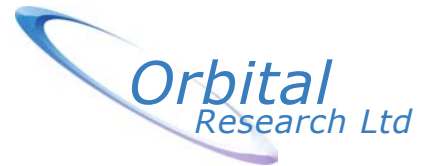




813 SERIES

PREMIUM Ku BAND PLL LNB



40 to 65 dB gain, 250 to 1050 MHz bandwidth, any Ku satellite

Base Model
LNB813

How to order an LNB813

Frequencies (GHz):

Band	Input	Output	LO
P	11.45 to 11.95	.95 to 1.45	10.50
A	11.70 to 12.20	.95 to 1.45	10.75
AW	11.70 to 12.75	.95 to 2.00	10.75

Input Connector
Ku LNB is WR-75

Output Connector
F - F, 75 ohm
N - N, 50 ohm
S - SMA, 50 ohm
T - TNC, 50 ohm

LNB813AW-W-N-50-b

Gain

40	- 40 dB
50	- 50 dB
55	- 55 dB
60	- 60 dB
65	- 65 dB

Optional DC Input Connector
(blank) - No external DC
f - F
b - BNC
ft - Feedthrough



Orbital Flexibility:

Engineered using the highest quality components insures you from failure due to environmental extremes, such as arctic cold, Saharan heat, and rain-forest humidity. Our LNB is protected from man-made conditions such as shock, vibration, low power, over-voltage, surges, transients, and static discharge. Performance is consistent and replacements will match or exceed your original device. Market leading specifications yield some of the best phase noise on the market.

"Mass-Custom" Solution

Orbital starts with a proven performance product that is extremely well engineered with the development costs amortized over hundreds of thousands of units and the parts costs reduced by volume discounts. We then customize the mass produced LNB into what you want at 1/100 the cost of designing and building from scratch.

Orbital Features:

Custom Engineering

- Begin with the low noise figure of a proven quality LNB
- Optimize Input and Output for superior VSWR
- Modify LO frequencies preserving phase noise and stability
- Modify and tune RF & IF filters for optimum response
- Tune for very low bandpass ripple
- Optimize Gain distribution for your system parameters

Environmental

- O ring sealed connectors for weather resistant operation
- Preserve the environmental engineering of the original LNB

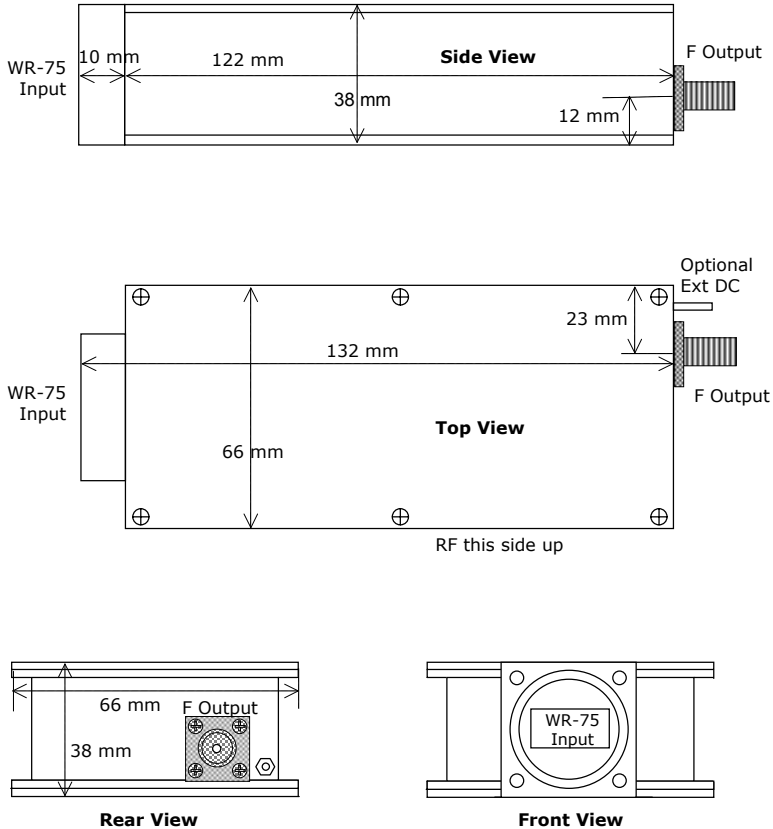
Options

- Various Ext DC connector options
- Special Dual DC option via output coax and ext DC port
- Custom alarm options for redundant switch operations
- Available in 40, 50, 55, 60 and 65 dB gain
- Custom L band output bandwidth available up to 1050 MHz
- Full test documentation available
- External Reference models available for ultimate stability
- Custom design and labeling requirements welcomed

1160 Yew Street, Blaine, WA 98230 USA
For further information, price and delivery,
Tel: (604) 856-0305, Fax: (604) 856-0315
answers@orbitalresearch.net

Orbital LNB813 Series Ku Band PLL LNB Specifications

Mechanical Drawing



Note - Optional external DC can be a side mounted F connector, a BNC connector, or an end mount feedthrough capacitor with ground lug.

Electrical Specifications

Input

Frequency: 11.45 to 12.75 GHz
 Bandwidth: up to 1.05 GHz
 Noise Figure: 0.8dB maximum
 Ripple: ± 0.5 dB max /27MHz segment
 Input VSWR: 2.5 : 1 maximum

Output

Bandpass: 950 up to 2000 MHz
 Output VSWR: 2.0 : 1 maximum
 Gain: 40 to 65dB, 65dB standard
 LO Stability: ± 25 kHz maximum
 LO Phase Noise: -85dBc/Hz@1 kHz maximum
 Compression: +9dBm minimum,
 3rd Order Intercept: +19 dBm minimum,

Power

DC Input: 12 to 24 VDC, 280 mA
 Filtering: Transient, over and reverse voltage protected

Mechanical Specifications

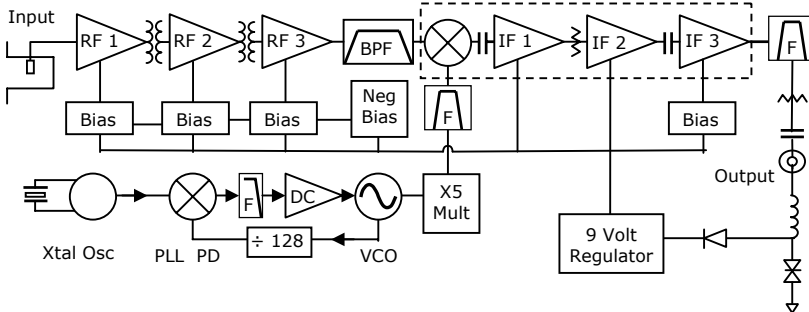
Size: 149 x 66 x 42 mm
 Weight: 468 grams
 Paint: Brilliant White Enamel

Environmental Specifications

Operating Temp: -40 to +60 °Celsius
 Relative Humidity: Up to 100% condensation and frost

- Custom Frequencies
- Any Connectors
- Dual Power Option
- Special Color
- Private Labeling
- Rack Mounting Option

Block Diagram



Enhancing Standard Product

Mass-production means low-cost, reliable, repeatable products. Engineers design these products well within margins on component specifications so that individual tuning is not required to meet desired specifications.

As we modify product, we also tweak the design and components to optimize them for their inherent capabilities. Effectively, we bring out the full potential of the product by adjusting components to their full capability.

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