

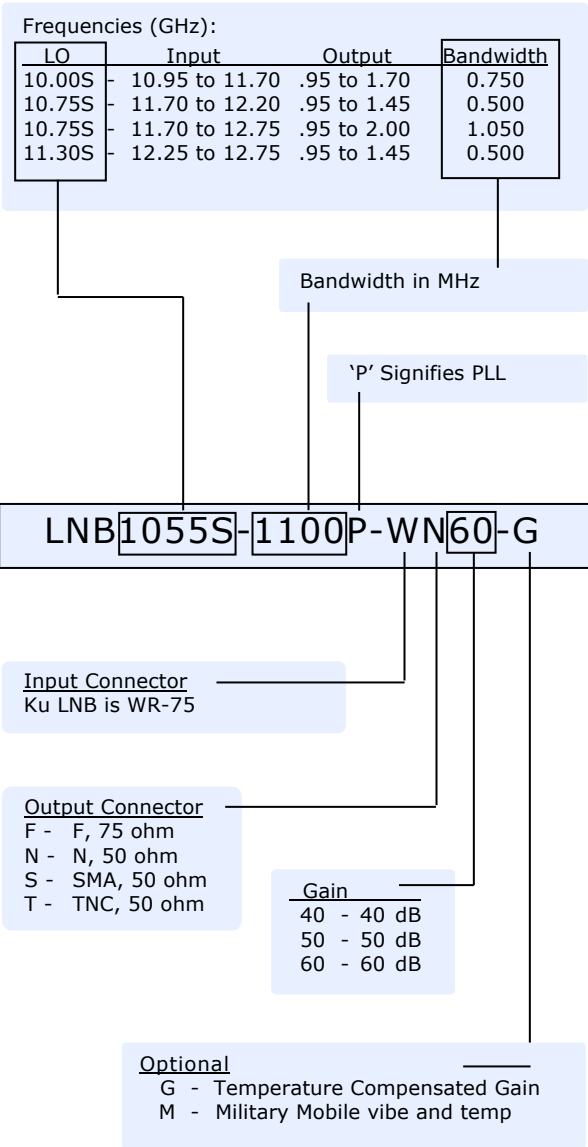


Orbital 5300 Series Ku PLL Modified LNB



40 to 60 dB gain, 250 to 1050 MHz bandwidth, any Ku satellite

How to order an Orbital 5300 Series Ku PLL modified LNB



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.

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

- Custom alarm options for redundant switch operations
- Full test documentation available
- Temperature Compensated Gain Variation
- Military Mobile Vibration and Temperature specs
- RoHS & REACH compliant
- **Can be ruggedized for Airborne application: DO160E B1 cabin rating and DO160E C1 fuselage**

Sales contact:

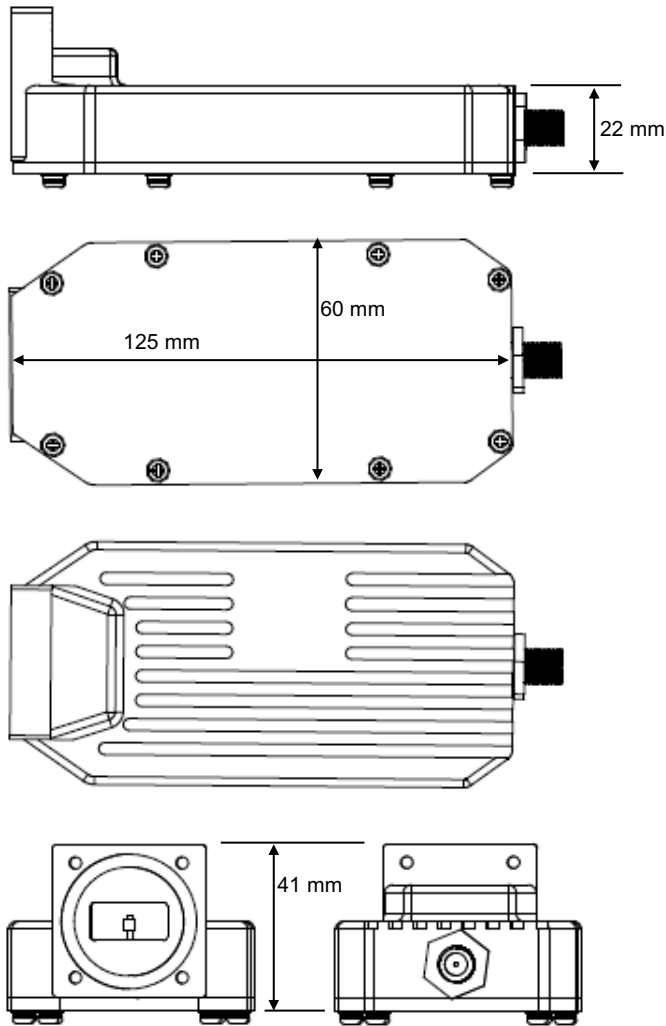
sales@orbitalresearch.net

1 604 419-8585

www.orbitalresearch.net

Orbital 5300 Series Ku PLL Modified LNB Specifications

Mechanical Drawing



Electrical Specifications

Input

Frequency: Various, over range:
10.7 to 12.75 GHz
Bandwidth: up to 1.05 GHz
Interface: WR-75, Waterproof
Noise Figure: 0.7 dB typical for standard bandwidth
0.8 dB typical for wideband
Ripple: ± 0.5 dB max /36MHz segment
Input VSWR: 2.2 : 1 typical

Output

Bandpass: 950 up to 2100 MHz
Output VSWR: 1.5 : 1 typical
Connector: F standard, N, SMA, TNC optional
LO Stability: ± 10 kHz
Phase Noise:
100 Hz offset: -70 dBc/Hz
1 kHz offset: -80 dBc/Hz
10 kHz offset: -85 dBc/Hz
100 kHz offset: -105 dBc/Hz
Compression: +10 dBm min., standard bandwidth
+7 dBm min., for wideband
3rd Order Intercept: +20 dBm min., standard bandwidth
+17 dBm min., for wideband
Spurious:
Non-Signal related:
-95 dBm max over freq band
Signal related:
-85 dBc max over freq band

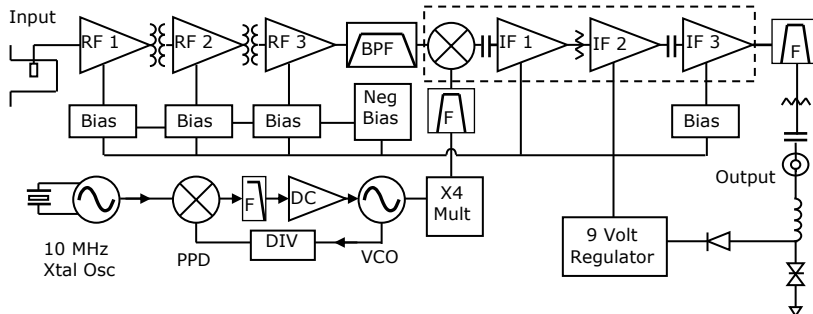
Gain

Typical: 60 dB
Options: 40 dB, 50 dB, 60 dB
Ripple: 1 dB p-p max per 36 MHz segment

Optional

Temperature Compensated Gain Variation (optional):
 ± 0.75 dB max over frequency band
and -20 to +55°C
Military Mobile Spec:
Meets 810F chapter 514.5C-1 vbe spec
Temperature range: -30 to +70°C

Block Diagram



Environmental Specifications

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

Power

DC Input: 12 to 24 VDC, 220 mA
nominal
Filtering: Transient, over and reverse
voltage protected

Mechanical Specifications

Size: 125 x 60 x 41 mm
Weight: 200 grams
Paint: Brilliant White Enamel
RoHs & REACH Compliant

Orbital Research Ltd. designs and builds products for satellite communications applications.
Orbital website: www.orbitalresearch.net. Copyright © 2017 Genie in the Bottle Enterprises
Inc. All rights reserved. Specifications subject to change without notice.

Orbital_5300_Series_Ku_PLL-Modified_LNB-180502

orbital[™]
RESEARCH