



Orbital 5400X Series Ku-Band External Reference Modified LNB



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

How to order an Orbital 5400X Series Ku External Reference modified LNB

Frequencies (GHz):

LO	Input	Output	Bandwidth
9.75S	- 10.70 to 11.70	.95 to 1.95	1.000
10.00S	- 10.95 to 11.70	.95 to 1.70	0.750
10.15S	- 11.70 to 12.20	1.55 to 2.05	0.500
10.25S	- 11.20 to 11.70	.95 to 1.45	0.500
10.50S	- 11.45 to 11.95	.95 to 1.45	0.500
10.50S	- 11.45 to 12.20	.95 to 1.70	0.750
10.60S	- 11.70 to 12.20	1.10 to 1.60	0.500
10.75S	- 11.70 to 12.20	.95 to 1.45	0.500
10.75S	- 11.70 to 12.75	.95 to 2.00	1.050
11.25S	- 12.20 to 12.75	.95 to 1.50	0.550
11.30S	- 12.25 to 12.75	.95 to 1.45	0.500

Bandwidth in MHz

'X' Signifies External Reference

LNB1075S-1050X-WN60-G

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

Gain
50 - 50 dB
60 - 60 dB (typical)

Optional
G- Temperature Compensated Gain Flatness

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

- External DC connector -Feedthrough
- External 10 MHz Input Connector - SMA
- Special Dual DC option via output coax and ext DC port
- Full test documentation available
- Temperature Compensation Gain Flatness
- RoHS & REACH compliant
- **Can be ruggedized for Airborne application: DO160E B1 cabin rating and DO160E C1 fuselage**

Sales contact:

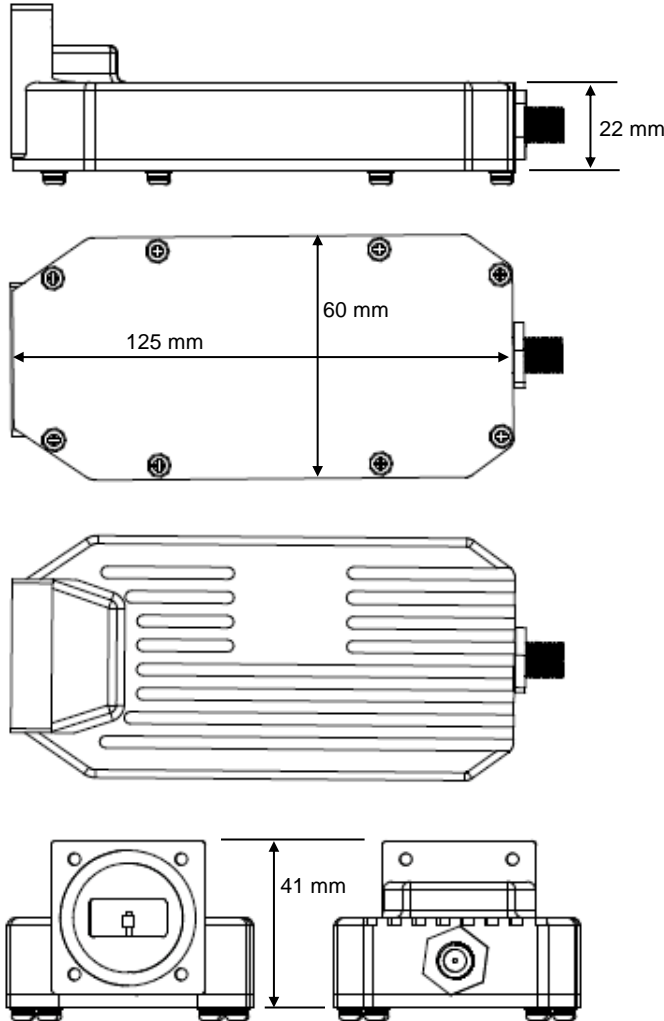
sales@orbitalresearch.net

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Orbital 5400X Series Ku Ext Ref Modified LNB Specifications

Mechanical Drawing



Electrical Specifications

Input

Frequency: Various, over range:
10.7 to 12.75 GHz
Bandwidth: up to 1.05 GHz
Noise Figure: 0.7 dB typical for standard band
0.8 dB typical for wide band
Ripple: ± 0.5 dB max /36MHz segment
Input VSWR: 2.2 : 1 typical
10 MHz input window: -8 dBm to 0 dBm

Output

Bandpass: 950 up to 2100 MHz
Output VSWR: 1.5 : 1 typical
LO Stability: dependent on 10MHz source
Compression: +10 dBm min (standard band),
+7 dBm min (wideband)

3rd Order Intercept: +20 dBm min., standard band
+17 dBm min., 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
Ripple: 1 dB p-p max per 36 MHz segment
Temp Compensated Gain Variation (optional)
 ± 0.75 dB max over Frequency band and -20 to +55°C

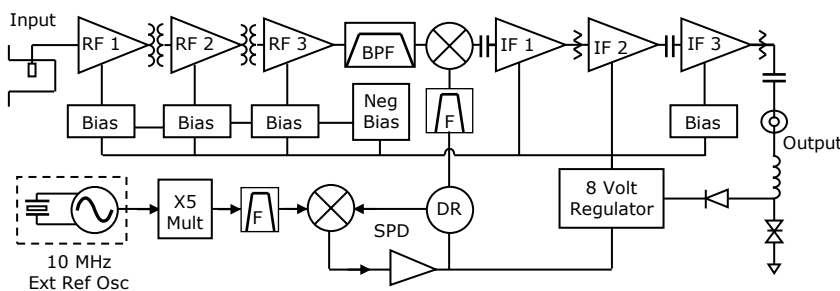
Power

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

Environmental Specifications

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

Block Diagram



Mechanical Specifications

Size: 125 x 60 x 41 mm
Weight: 350 grams
Paint: Brilliant White Enamel
RoHs & REACH Compliant

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