



# 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:**

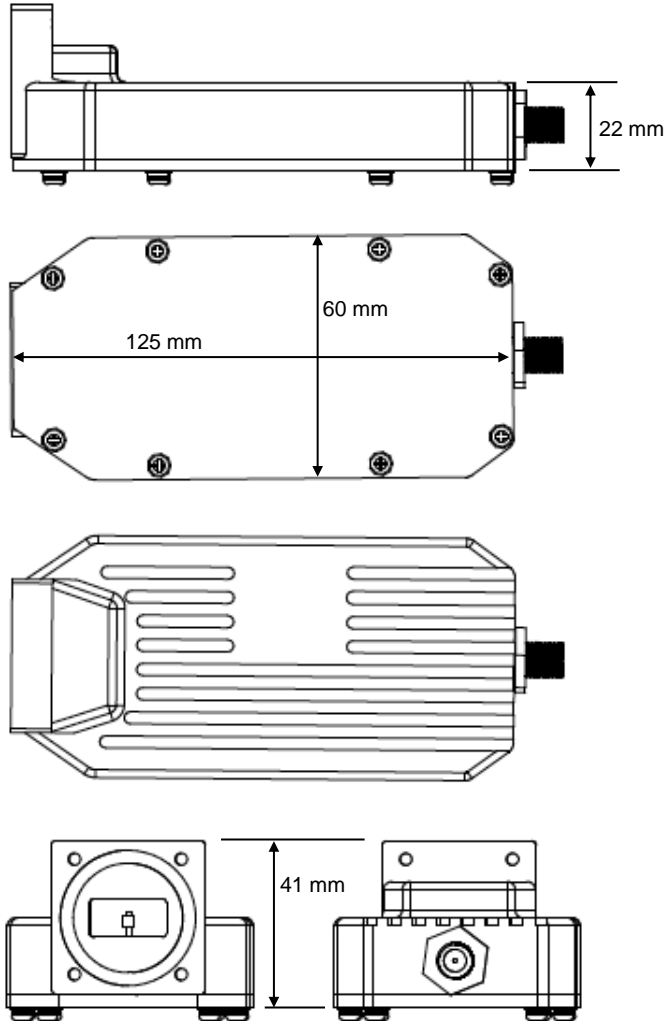
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# Orbital 5400X Series Ku Ext Ref Modified LNB Specifications

## 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:  $\pm 0.5$  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: Signal related:  
-55 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)  
 $\pm 0.75$  dB max over Frequency band and -20 to +55°C

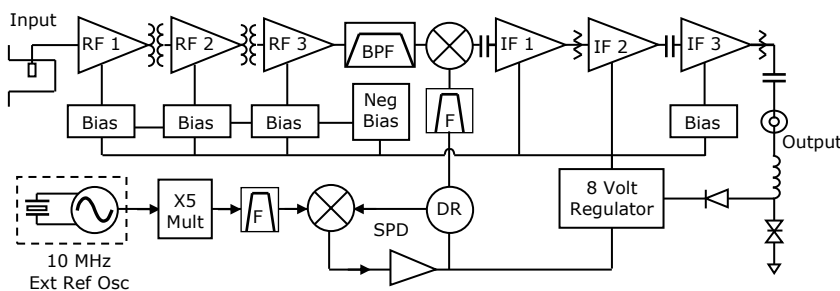
## Power

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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