

## Orbital Ku-Band LNB with Fixed Local Oscillator

ISO 9001:2015-certified QMS

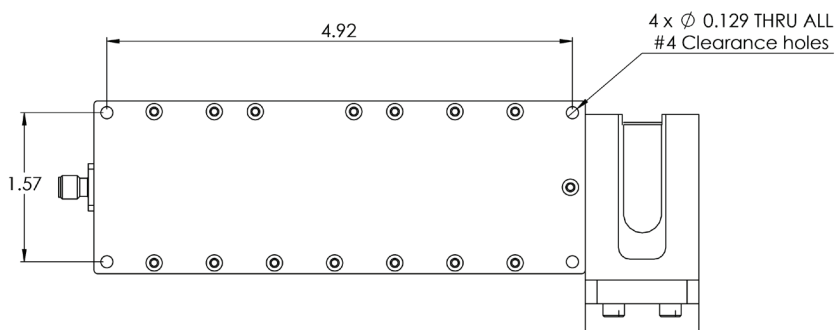


This Ku-band LNB is tuned to the exact frequency you require. It provides user bandwidth of up to 1.05 GHz in the 10.7 GHz to 12.75 GHz range – and offers exceptional performance for both commercial and military satellite communication (SATCOM) applications. 2.05 GHz wideband output versions are also available.

It offers:

- Exceptionally flat frequency response
- High data throughput and low bit error rate
- External isolator for impedance matching and maximum signal transfer
- Options for high temperatures and temperature-compensated gain
- External reference or PLL variants
- Airborne version available for in-flight connectivity

The LNB supports global Ku frequency bands across all ITU regions as well as commercially available Ku High Throughput Satellites (HTS). It delivers the gain, phase noise and linearity needed to handle higher-order modulation schemes in the GEO, MEO and LEO satellite markets.



#### Connections

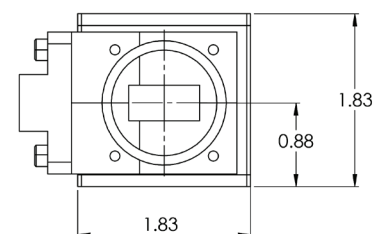
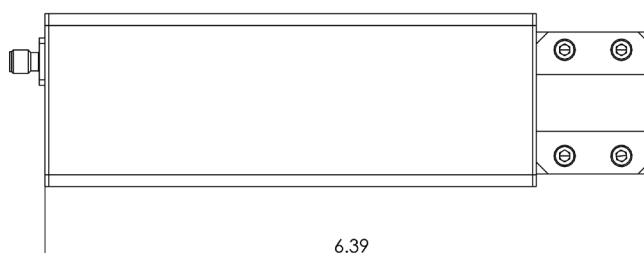
J1: RF in (WR75-FBM, SQ. Grooved)  
J2: IF out, DC in & 10M in (N female - 50ohm)

#### Mounting

1) 4x #4 clearance holes  
2) isolator input #6-32 Clearance holes

#### Weight

LNB: approx 500g  
Isolator: approx 60g  
Total weight: approx 560g



## FREQUENCY RANGE

RF Frequency Band (GHz)	10.7 to 12.75
IF Frequency Band (MHz)	950 to 3000
Bandwidth (MHz)	1000 to 2050 max
Local Oscillator (GHz)	9.75 to 10.75
Noise Figure (dB)	0.8 @ 25C
LO Stability	Locked to external reference
LO Phase Noise	Locked to external reference

## 10 MHz REFERENCE

Insertion	via input connector
Input Level	-2 dBm to +8 dBm

## VSWR

Input	1.4:1 nominal with isolator
Output	1.3:1 nominal

## GAIN

Gain (dB)	60
Flatness	+/- 0.5 over 10 MHz
Ripple	+/- 2.5 dB over 1 GHz
Stability	+/- 3.0 dB temperature

## OTHER SPECS

Image Rejection	> 40 dBc max
1 dB Compression	+13 dB min
OIP3	+23 dBm min

## ENVIRONMENTAL

Operating Temp	-40°C to +65°C
Non-Operating Temp Range	-50C to +80C
Humidity	100% condensing
MTBF	> 125,000 hours
Standards	MIL-STD-810F for vibration, IP67, RoHS and REACH

## POWER<sup>1</sup>

Current Draw	350 mA at 18 VDC
Input Voltage Range	+17 to +24 VDC

## MECHANICAL

Weight (grams)	675 without isolator
Length (mm)	132
Width (mm)	47
Depth (mm)	47
Input Connector	WR-75
Output Connector	SMA, N

## OPTIONS

PLL/Internal TCXO Reference
Gain modifications, 40 and 50 dB
Temperature compensated gain +/-0.75 dB over freq and -20C to +55C
Custom LO's available
Wideband 2.05 GHz output versions available
Extended temperature ranges
Isolators for improved VSWR or flat interfaces
High OIP3/P1dB
Airborne version available

Please contact Orbital Research for ordering information: [sales@orbitalresearch.net](mailto:sales@orbitalresearch.net)

<sup>1</sup> Power supplies must meet 100 mV maximum ripple and noise