

Orbital Ku-Band LNB with Fixed Local Oscillator

ISO 9001:2015-certified QMS

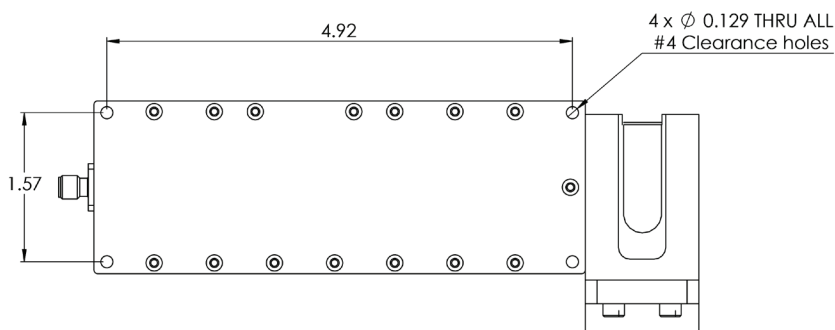


This Ku-band LNB is tuned to the exact frequency you require. It provides user bandwidth of up to 1.05 GHz in the 10.7 GHz to 12.75 GHz range – and offers exceptional performance for both commercial and military satellite communication (SATCOM) applications. 2.05 GHz wideband output versions are also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

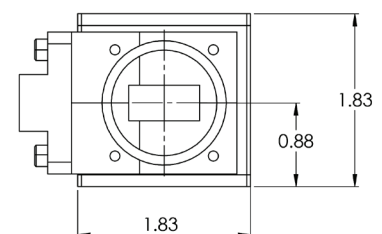
J1: RF in (WR75-FBM, SQ. Grooved)
J2: IF out, DC in & 10M in (N female - 50ohm)

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) | 55 nominal |
| Flatness | +/- 2.5 over frequency |
| Ripple | +/- 0.5 dB over any 10 MHz |
| Stability | +/- 0.25 dB over 24 hrs @ 25C |

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 |

POWER¹

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

MECHANICAL

| | |
|------------------|----------------------|
| Weight (grams) | 675 without isolator |
| Length (mm) | 157mm/6.17 inches |
| Width (mm) | 47mm/1.83 inches |
| Depth (mm) | 47mm/1.83 inches |
| 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

¹ Power supplies must meet 100 mV maximum ripple and noise