



Orbital 3400X Series Modified C-Band External Reference LNB



40 to 60 dB gain, 250 to 800 MHz bandwidth

How to order an Orbital 3400X Series C-Band External Reference LNB

Frequencies (GHz):

LO	Input	Output	Bandwidth
5.15S	- 3.70 to 4.20	.95 to 1.45	0.500
5.15S	- 3.60 to 4.20	.95 to 1.55	0.600
5.15S	- 3.40 to 4.20	.95 to 1.75	0.800

Bandwidth in MHz

'X' Signifies External Reference

LNB **515S** - **800** X-WN **40** -G

Input Connector
C Band LNB is CPR-229G

Output Connector
F - F, 75 ohm (standard)
N - N, 50 ohm
S - SMA, 50 ohm
T - TNC, 50 ohm

Gain
40 - 40 dB
50 - 50 dB
60 - 60 dB

Optional
G - Temperature Compensated Gain

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.

"Mass-Custom" Solution

Orbital starts with a proven performance of our standard 3400X Series C-Band External Reference LNB, which is extremely well engineered. We then customize the mass produced LNB into what you want at 1/100 the cost of designing and building from scratch.

Orbital Features:

Custom Engineering

- 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
- RoHS & REACH compliant

Options

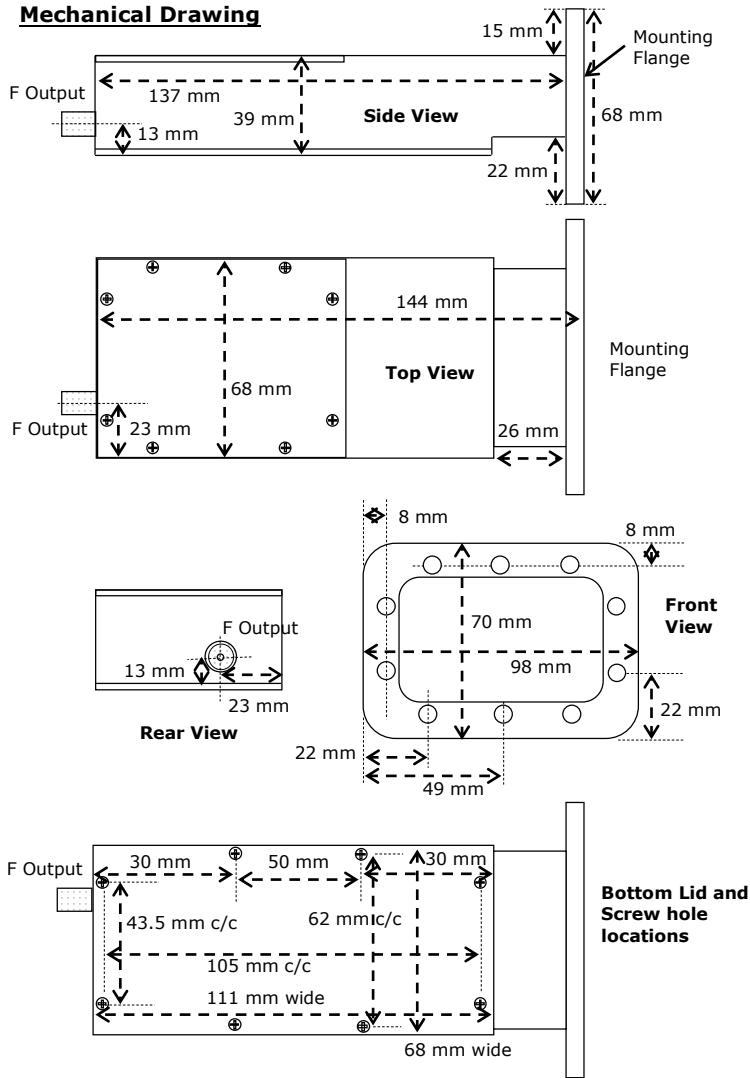
- Change output connector, gain or LO frequency, etc
- External DC & 10 MHz connector: F, N, BNC or Feedthrough
- Temperature Compensated Gain Variation
- Full test documentation available

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Orbital 3400X Series C Band External Reference LNB Specs

Mechanical Drawing



Electrical Specifications

Input

Frequency: 3.4-4.2, 3.7-4.2, GHz
 Bandwidth: up to 800 MHz
 Noise Temp: 25 K typical
 Ripple: ± 0.5 dB max /36 MHz segment
 Input VSWR: 2.2 : 1 max
 10 MHz input window:
 -8 dBm to 0 dBm (for best phase noise)

Output

Bandpass: 950 up to 1750 MHz
 Output VSWR: 1.5 : 1 typical at 75 Ω
 Gain: 40 to 60 dB
 LO Stability: dependent on 10 MHz source
 Compression: +10dBm (standard bandwidth)
 3rd Order Intercept: +20 dBm (standard bandwidth)

Gain

Typical: 60 dB
 Options: 40 dB, 50 dB
 Ripple: 1dB p-p max per 36 MHz segment
 Temperature Compensated Gain Variation (optional)
 +0.75 dB max over frequency band and -20 to +55 $^{\circ}$ C

Power

DC Input: 12 to 24 VDC, 300 mA
 Filtering: Transient, over and reverse voltage protected

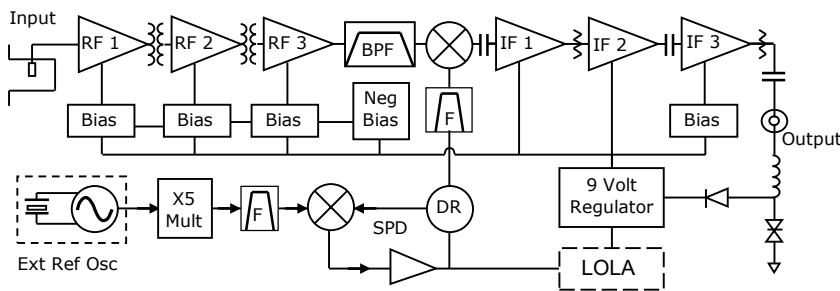
Mechanical Specifications

Size: 144(L) x 68(W) x 39(H) mm
 (5.7 x 2.7 x 1.5 in)
 Weight: 560 grams
 Paint: Brilliant White Enamel
 RoHs & REACH Compliant

Environmental Specifications

Operating Temp: -40 to +60 $^{\circ}$ Celsius
 Relative Humidity: Up to 100% condensation & frost

Block Diagram



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