

Orbital 3300 Series Modified C-Band PLL LNB



40 to 60 dB gain, 250 to 800 MHz bandwidth, any C band satellite

How to order an Orbital 3300 Series C-Band PLL 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

'P' Signifies PLL -
Phase Lock Loop

LNB **515S** - **800** P-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, extremely well engineered 3300 Series C-Band PLL LNB. 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 connector - F, N, BNC or Feedthrough
- Special Dual DC option via output coax and ext DC port
- Full test documentation

Sales Contact

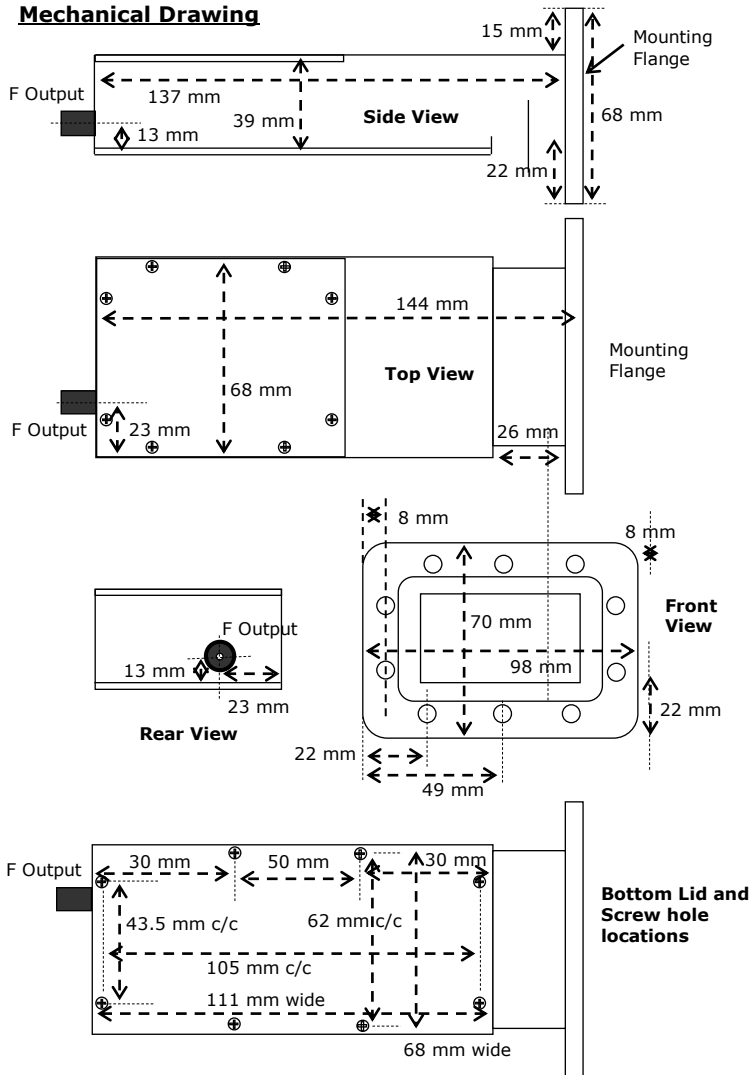
sales@orbitalresearch.net

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Orbital 3300 Series C Band PLL LNB Specifications

Mechanical Drawing



Electrical Specifications

Input

Frequency: 3.4-4.2, 3.7-4.2 GHz
 Bandwidth: up to 800 MHz
 Noise Temp: 20 deg K typical
 Ripple: ± 0.5 dB max /36 MHz segment
 Input VSWR: 2.2 : 1 max

Output

Bandpass: 950 up to 1750 MHz
 Output VSWR: 1.5 : 1 typical at 75 Ω
 Gain: 40 to 60 dB (60 dB standard)
 LO Stability: ± 5 kHz over temperature
 Compression: +10dBm
 3rd Order Intercept: +20 dBm

Power

DC Input: 12 to 24 VDC, 250 mA nominal
 Filtering: Transient, over and reverse voltage protected

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 $^{\circ}$ C

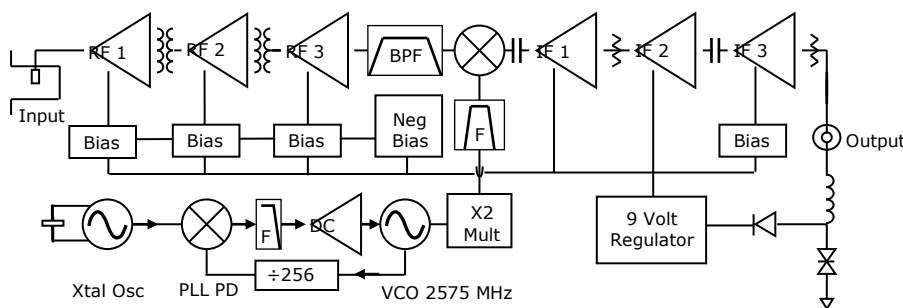
Mechanical Specifications

Size: 144(L) x 68(W) x 39(H) mm
 (5.6 x 2.6 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 and frost

Block Diagram



Enhancing Standard Product

Mass-production means low-cost, reliable, repeatable products. Engineers design these products well within margins on component specifications so that individual tuning is not required to meet desired specifications.

As we modify product, we also tweak the design and components to optimize them for their inherent capabilities. Effectively, we bring out the full potential of the product by adjusting components to their full capability.

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