

Orbital 3400X Series

C-BAND EXTERNAL REFERENCE BLOCK DOWN CONVERTER



10 to 40 dB gain, 250 to 800 MHz bandwidth

How to order a 3400X Series C-Band External Reference BDC

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

BDC 515S - 800 X-SF 20 -G

Input Connector
S - SMA, 50 ohm

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

Gain
20 - 20 dB

Optional
G - Temperature Compensated Gain

Orbital Flexibility:

With an LNA that covers your satellite, simply order a custom Orbital BDC to cover the bandwidth that you need. You can specify input and output connector types, external DC input, coaxial DC input, or dual power option. Most importantly, we can customize your gain to optimize compression point and noise distribution. Just tell us your needs and we will build a mass-custom solution in a unique, cost effective way.

"Mass-Custom" Solution

Orbital starts with a proven performance product that is extremely well engineered with the development costs amortized over hundreds of thousands of units and the parts costs reduced by volume discounts. 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

- 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
- RoHS & REACH compliant

Options

- External DC connector - F, N, BNC or Feedthrough
- External 10 MHz connector - SMA
- Temperature Compensated Gain
- Full test documentation available

Sales contact:

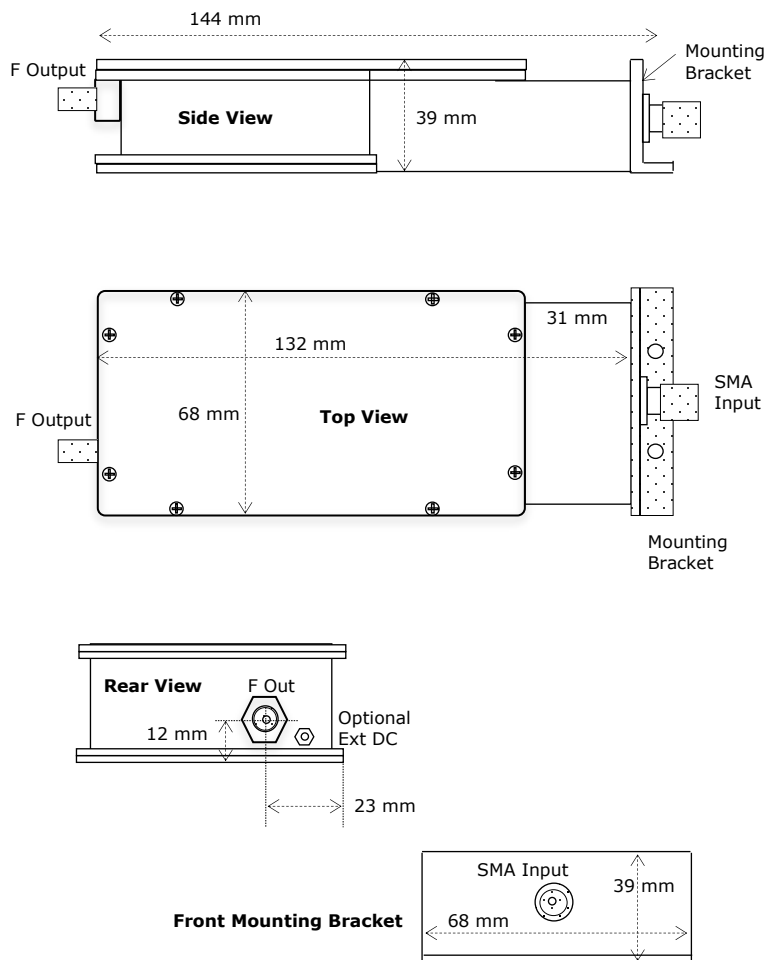
sales@orbitalresearch.net

1 604 419-8585

www.orbitalresearch.net

Orbital 3400X Series C Band Ext Ref BDC Specifications

Mechanical Drawing



Electrical Specifications

Input

Frequency: See front page for the most popular frequency ranges, others available
 Bandwidth: up to 800 MHz
 Noise Figure: 10 dB max (dependent on gain and bandwidth)
 Input VSWR: 1.5 : 1 typical

Output

Bandpass: 950 up to 1750 MHz
 Output VSWR: 1.5 : 1 typical
 LO Stability: dependent on 10 MHz Source
 Compression: +10 dBm minimum, 3rd Order
 Intercept: +20 dBm minimum,
Gain
 Gain: 20 dB
 Ripple: 1dB p-p max/36 MHz segment
 Temperature Compensated Gain Variation (optional)
 ±0.5 dB max over frequency band

Power¹

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

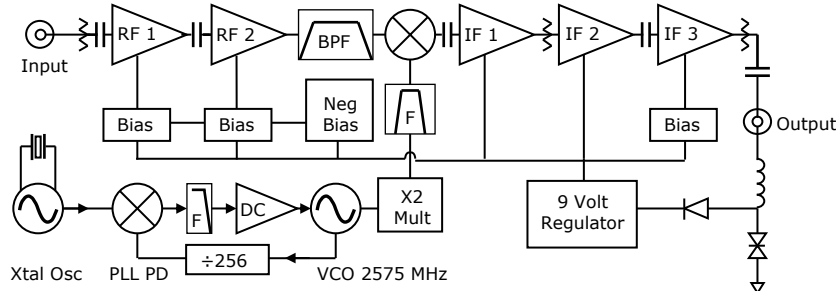
Mechanical Specifications

Size: 144 x 68 x 39 mm
 5.7 x 2.7 x 1.5 inches
 Weight: approx. 550 grams
 19.4 ounces
 Paint: Brilliant White Enamel
 RoHs & REACH Compliant

Environmental Specifications

Operating Temp: -40 to +60° Space Celsius
 Relative Humidity: Up to 100% condensation and frost

Block Diagram



Orbital Research Ltd. designs and builds products for satellite communications applications. Orbital sells directly and from its website www.orbitalresearch.net.
 1 - Power supplies must meet 100 mV Maximum Ripple and Noise