

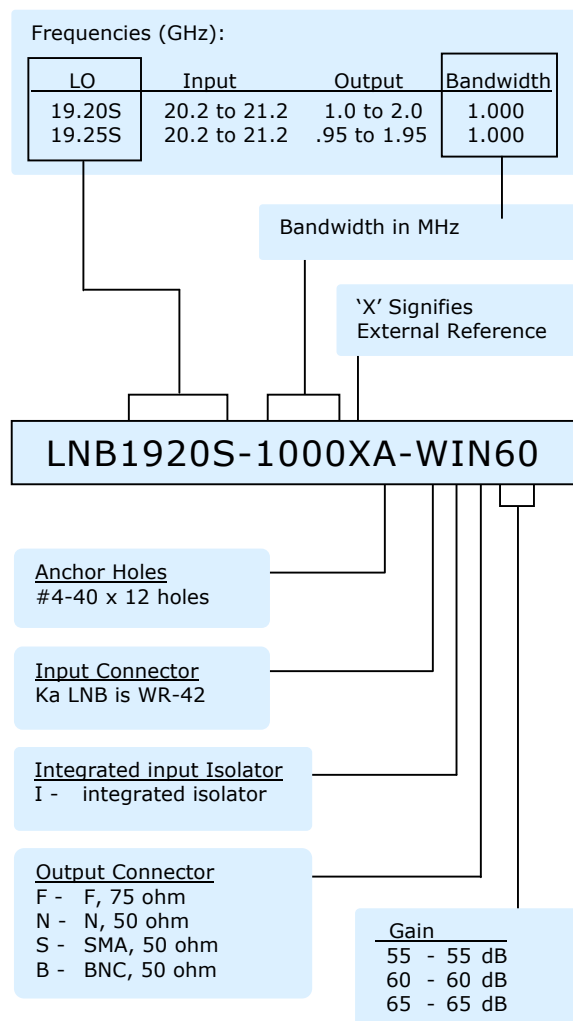
Orbital Ka-ISO

Ext Ref Ka LNB with integrated isolator



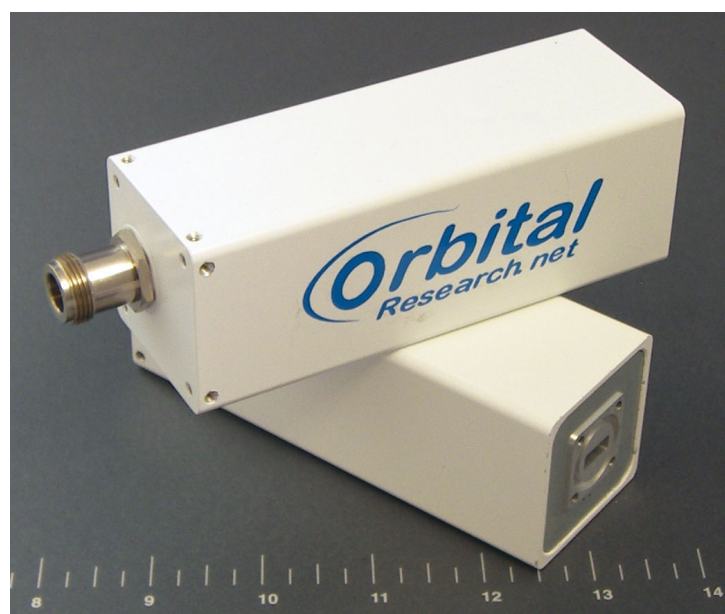
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Part number generator



Ka-ISO Features:

- Integrated input isolator ensures good match
- Has a switching power supply to give an input range of 9 to 30 VDC. Meets Mil Spec 1275E. Runs cooler and uses less than 4 Watts power
- The DC and 10 MHz are multiplexed onto the output L-Band signal.
- With internal, input isolator, the input VSWR is only 1.4:1 max, nominal 1.25:1 - and the noise figure is 1.4 dB max, nominal 1.3 dB.
- Anchor holes on back of LNB for mounting support



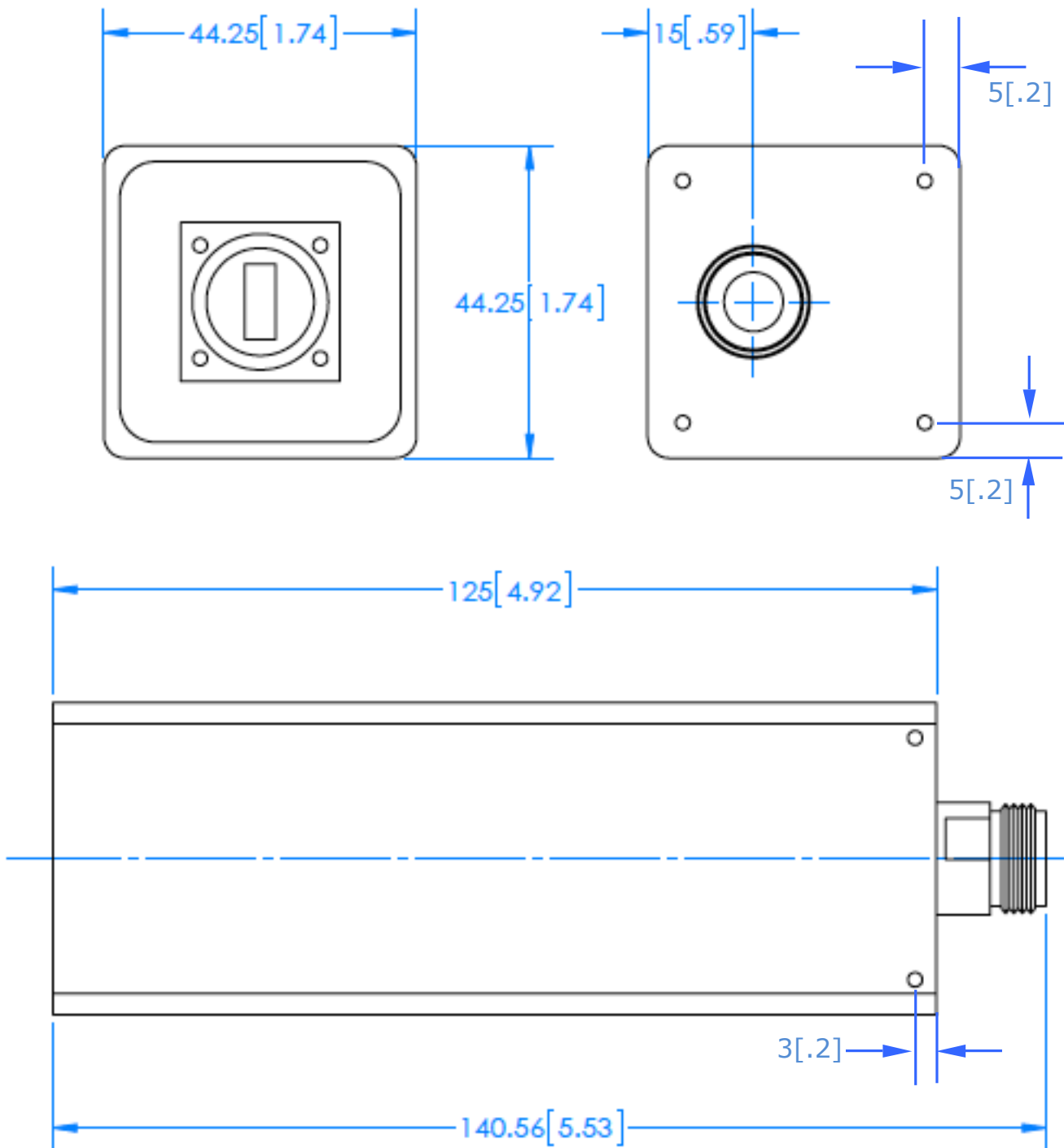
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Mechanical and Description

Mechanical Diagram



Specifications

Frequency Range:

Input RF Frequency: 20.20 to 21.20 GHz
Output IF Frequency: 950 to 1950 MHz, or
1000 to 2000 MHz
Local Frequency: 19.20 or 19.25 GHz
LO Stability: Phase locked to external
10 MHz reference

Gain:

Gain: 60 dB $\pm$ 4dB max. over temp & freq
Flatness: $\pm$ 1.5 dB max over freq
Ripple: $\pm$ 0.15 dB per 10 MHz
Stability: $\pm$ 0.25dB max over 24hr @ +25°C

VSWR:

Input: 1.4:1 max (integrated input isolator)
1.25:1 nominal
Output: 1.8:1 max

Amplitude Response:

10 MHz Band: $\pm$ 0.3dB max
120 MHz Band: $\pm$ 1.0dB max
Receive Band: $\pm$ 1.5dB max

Interfaces:

Input: WR-42 waveguide flange with O-
ring groove & threaded screw holes
(#4-40 UNC x .38 deep thread)
Output: N, 50 Ω female coax connector.
Optional: SMA (50 Ω) & F (75 Ω)

Environmental:

Operating Temp: -40°C to +60°C
Operating Altitude: 10,000 ft ASL
Operating Rel Humidity: 100% condensing
Non-operating Temp: -50°C to +70°C
F Shock: 10g, 11ms, half sine
MTBF: >125,000 hours
Standards Compliant to: RoHS & REACH

10 MHz Reference:

Insertion: Multiplexed onto the IF
coaxial connector
Input Level: -3 to +3 dBm
Phase Noise: -135dBc/Hz max. @ 100 Hz
-148dBc/Hz max. @ 1 kHz
-152dBc/Hz max. @ 10 kHz
-155 dBc/Hz max. @ 100 kHz

Mechanical:

Dimensions: 44 x 44 x 125 mm
Color: White (standard)
Weight: 400 grams
Anchor holes: #4 threaded (4-40) x 12

LNB 10 MHz Phase Noise:

-62 dBc/Hz max. @ 100 Hz
-72 dBc/Hz max. @ 1 kHz
-82 dBc/Hz max. @ 10 kHz
-92 dBc/Hz max. @ 100 kHz
-102 dBc/Hz max. @ 1 MHz

Noise Figure:

1.4 dB max. @ +23°C
(1.3 dB nominal)

Power:

DC in: +9 to +30 VDC
Power: <4 Watts
Interface: DC power is multiplexed with
the IF & 10 MHz reference
signals on the output connector

Other Specs:

LO Leakage: Output: -45 dBm min
Input: -45 dBm max at
waveguide flange
Image Rejection: -45 dB min
P1 dB comp pt: +10 dBm min
3rd order ICP: +20 dBm min
Overdrive: -20 dBm, non-damaging
Spurious: Input Spurious level of -85
dBm equates to <-140 dBm
Desense level: -50dBm transmit signal level
results in no more than
0.1dB of NF degradation

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