

Data Sheet

Ka-Band 25.5 – 27.0GHz Low Noise Amplifier (LNA) - P/N 3220-02

LNA for Satellite Ground Stations

Callisto has more than 20 years of experience producing low noise amplifier systems for satellite ground stations, and has launched its next generation of LNA products for Ka-Band.

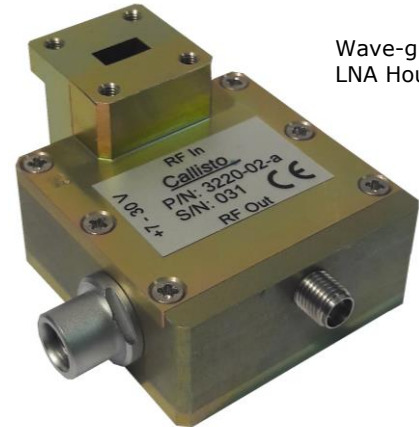
- Available with waveguide input
- State-of-the-art RF low noise and stability performance
- Optimised for next generation Earth Observation applications

Performance

Callisto strives to provide the best level of performance across a number of critical parameters such as noise factor / noise temperature, Gain stability and Input Return Loss.

	LNA at 23°C (25.5–27.0GHz)
Noise Temperature (K)	155K max (140K typical)
Noise Figure	1.83dB max (1.7dB Typical)

Key Features



Wave-guide input LNA Housing

- Noise Figure of = 1.83dB max. (or 155K) between 25.5 – 27.0GHz at 23°C
- Waveguide input / coax output
- Earth Observation applications
- **European Source**

RF Specifications

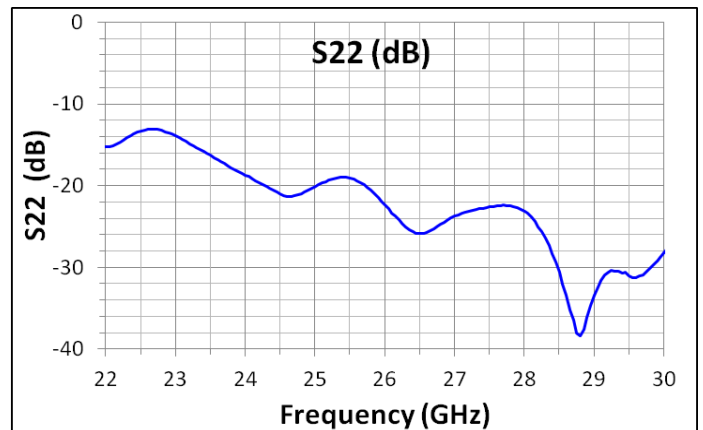
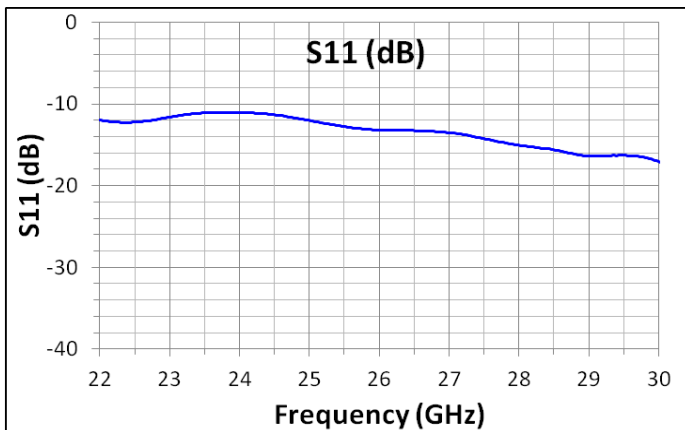
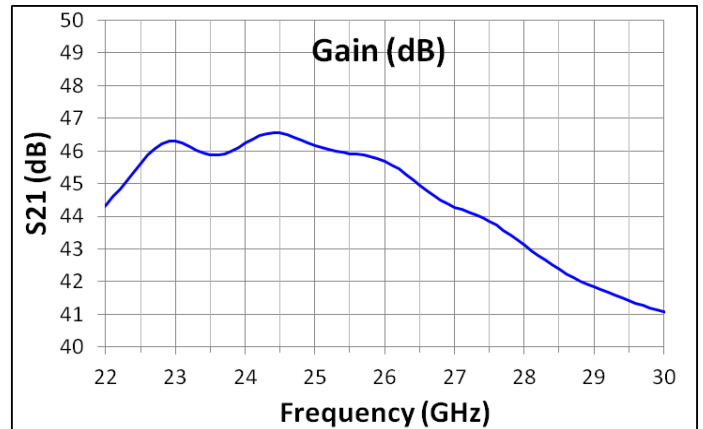
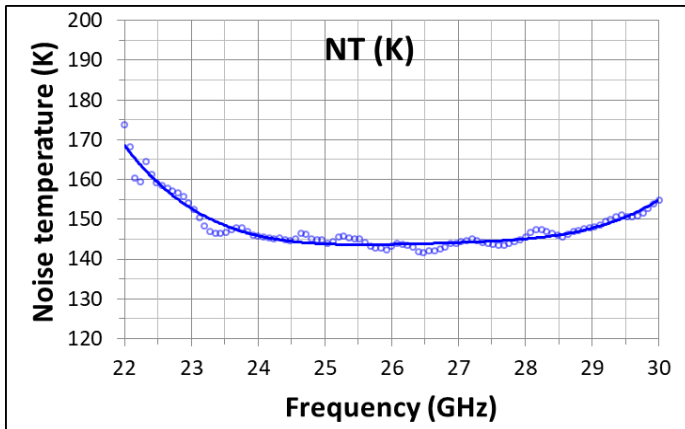
Frequency Range	25.5 – 27.0GHz
Gain	43dB min
Gain Flatness (Full Band)	2.0dBpp max
Gain Flatness (per 40MHz)	0.1dBpp max
Gain Variation	0.03dB/°C (-40 to +60°C)
Group Delay Variation	±40ps (full band)
Input VSWR	1.6:1 max
Output VSWR	1.5:1 max
P1dB	+14dBm min
Max Input Power	0dBm
Output IP3	+24dBm

Physical Specifications & Interfaces

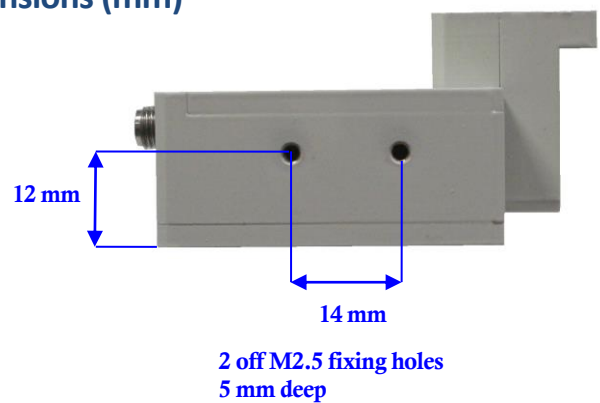
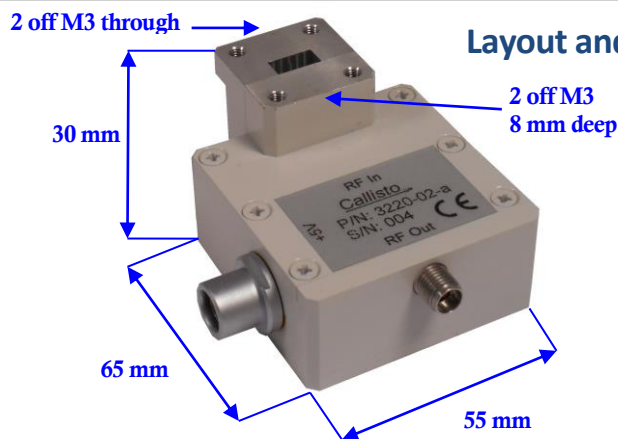
Overall Dimension	65 x 55 x 30mm
Weight	<120g
Temperature Range	-40°C to +60°C
Waveguide Leak rate	0.1mbar.L/s
Mounting	2 x M2.5
Material/Finish	Alodined Aluminium (Paint as an Option)
RF Input	WR34 – UBR260
RF Output	2.92mm coax-F
DC Connector	DBEU 102 A051-130
DC Power	+7V to +30V DC +12V/ 150mA nominal Reverse Voltage Protection
DC Cable	1m long

The specifications provided in this data sheet are preliminary and intended as a guide only. Callisto reserves the right to modify specifications without notice.

Typical Measurements



Layout and Dimensions (mm)



Available Options

- Cryogenically cooled option.
- Redundancy Control Systems: 1:1 or 1:2. Designed to offer continuous operation without disruption of the signal reception. Automatic switching in case of LNA failure. Consists of waveguide switch assembly and rack-mounted indoor