

### Data Sheet

## K-Band 18.2 – 21.2GHz Low Noise Amplifier (LNA) - P/N 3210-03

### LNA for Satcoms Applications

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

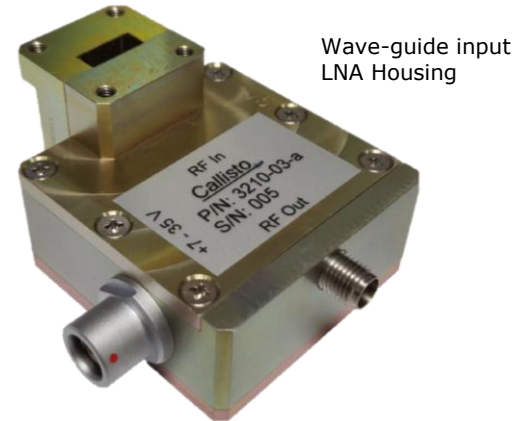
- Optimised for high-end Satcom applications
- Covering civil and military frequencies
- State-of-the-art noise temperature performance

### Performance

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

	LNA at 23°C (18.2–21.2GHz)
Noise Temperature (K)	135K max (120K mean)
Noise Figure	1.65dB max (1.5dB mean).

### Key Features



Wave-guide input  
LNA Housing

- Based on Callisto's own MMIC LNA chip design
- Noise Figure of = 1.5dB mean (or 120K) between 18.2 – 21.2GHz at 23°C
- Waveguide input / coax output
- Satcom applications military and civil
- **European Source**

### RF Specifications

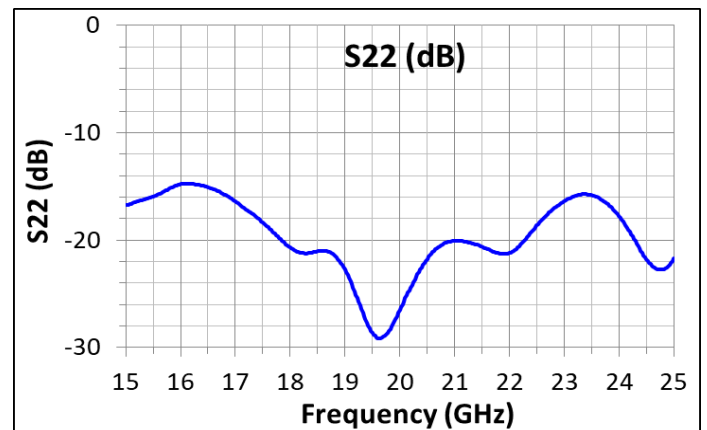
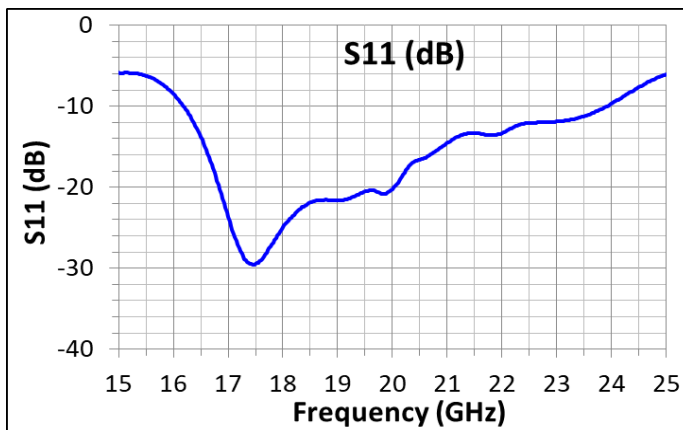
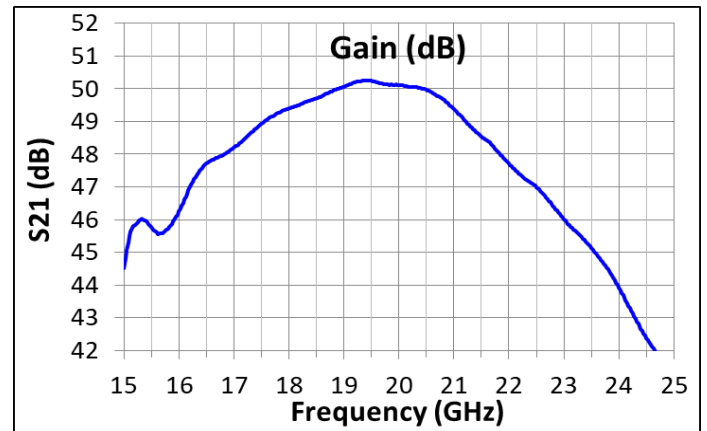
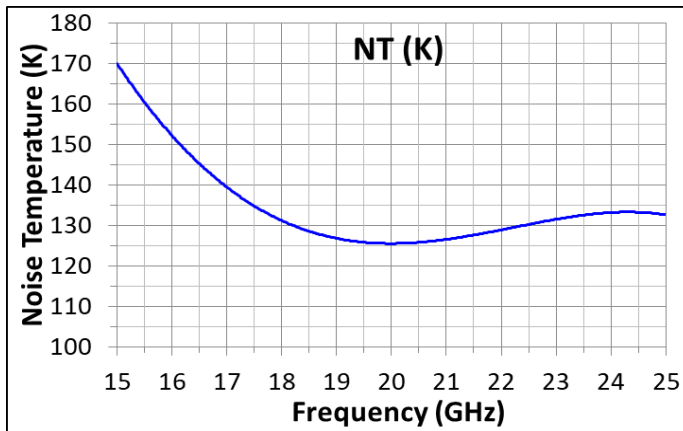
Frequency Range	18.2 – 21.2GHz
Gain	48dB min
Gain Flatness (per 1GHz)	2.0dBpp max
Gain Flatness (per 40MHz)	0.25dBpp max
Gain Variation	0.05dB/°C (-40 to +60°C)
Group Delay Variation	±20ps (full band)
Input VSWR	1.6:1 max
Output VSWR	1.45:1 max
P1dB	+10dBm min
Max Input Power	0dBm
Output IP3	+20dBm

### Physical Specifications & Interfaces

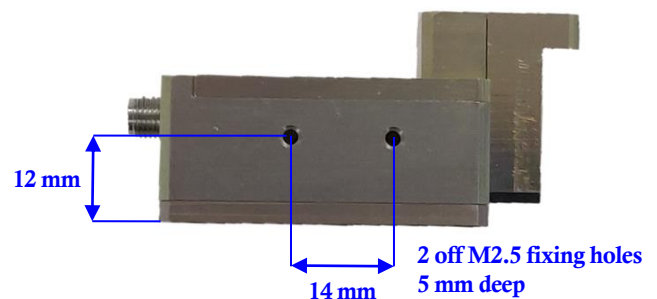
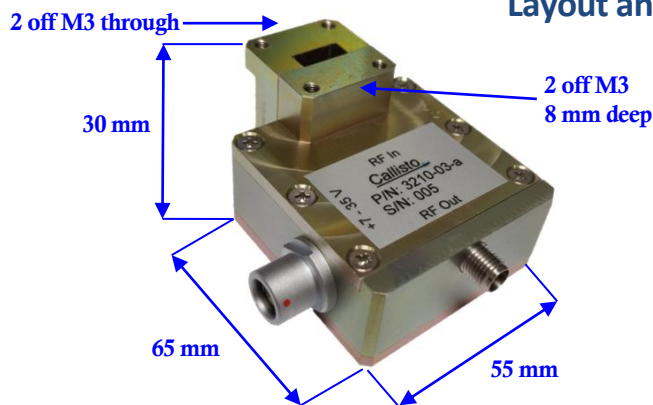
Overall Dimension	65 x 55 x 30mm
Weight	<120g
Temperature Range	-40°C to +60°C
Waveguide Leak rate	0.1mbar.L/s
Mounting	2 x M2.5
Material/Finish	Alodined Aluminium (Paint as an Option)
RF Input	WR42 – UBR220
RF Output	2.92mm coax-F
DC Connector	DBEU 102 A051-130
DC Power	+7V to +30V DC +12V/ 100mA nominal Reverse Voltage Protection
DC Cable (option)	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.