

# Low Noise Amplifier

## 21-31 GHz



Preliminary Datasheet

### Ka-LNA-2131-M

Multi-stage modular low noise amplifier.

#### Overview

The Ka-LNA-2131-M is a multi-stage modular low noise amplifier that covers frequencies from 21 GHz to 31 GHz\*. The LNA provides up to 34 dB gain with a noise figure of 2.5 dB from a single supply voltage from 7 V to 40 V. The LNA incorporates an enable/disable, current and temperature sensor function allowing for remote fault analysis.

The LNA is fully enclosed in a housing with 2.92 RF connections and D-Sub for DC power, enable, current and temperature sensor connection.



\*Operates from 17 GHz with reduced gain



#### Features

- 21-31 GHz frequency range\*
- 34 dB gain
- 2.5 dB noise figure
- Unconditionally stable
- No negative DC supply requirement



#### Applications

- High speed data communications
- Space communications
- IOT
- Security
- 5G

# Low Noise Amplifier

## 21-31 GHz



Preliminary Datasheet

### Specification Overview

Parameter	Min	Typ	Max	Units
Frequency	21		31	GHz
Gain	30	32	34	dB
Input Return Loss	5	15		dB
Output Return Loss	7	12		dB
Noise Figure		2.5	2.8	dB
Voltage	7		40	V

#### Notes

All tests are carried out at 25°C

Tests have been performed with 100 pF de-coupling capacitors on all bias pads.

### Absolute Maximum Ratings

Parameter	Rating
Drain Voltage	40 V
Drain Current	200 mA
RF Input Power	7 dBm
Storage Temperature	-65 °C to +150 °C
Operating Temperature	-40 °C to +85 °C



ESD (electrostatic discharge) sensitive device. Charged devices and circuit boards can discharge without detection. Although this product features proprietary protection circuitry, damage may occur on devices subjected to ESD. Proper ESD precautions should be taken to avoid performance degradation or loss of functionality.

# Low Noise Amplifier

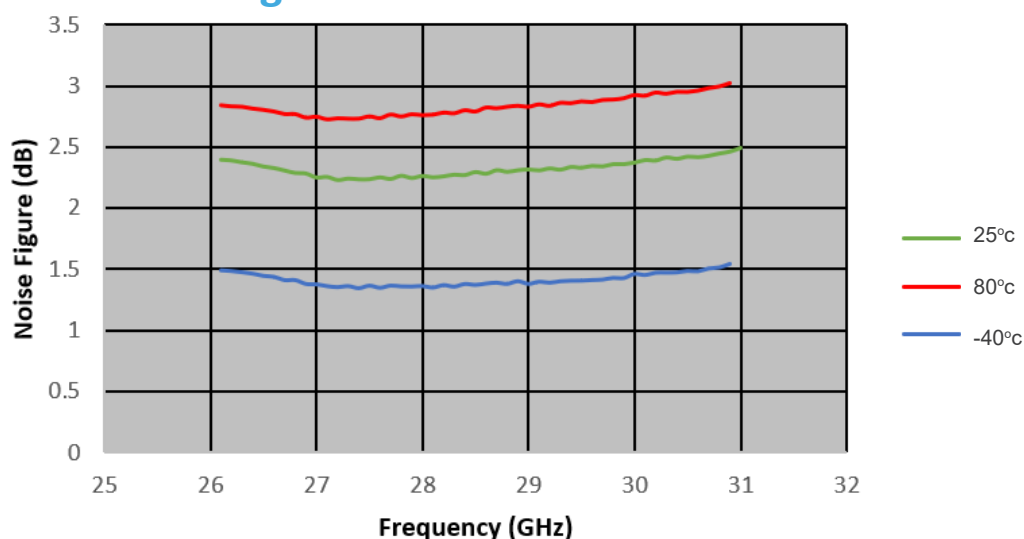
## 21-31 GHz



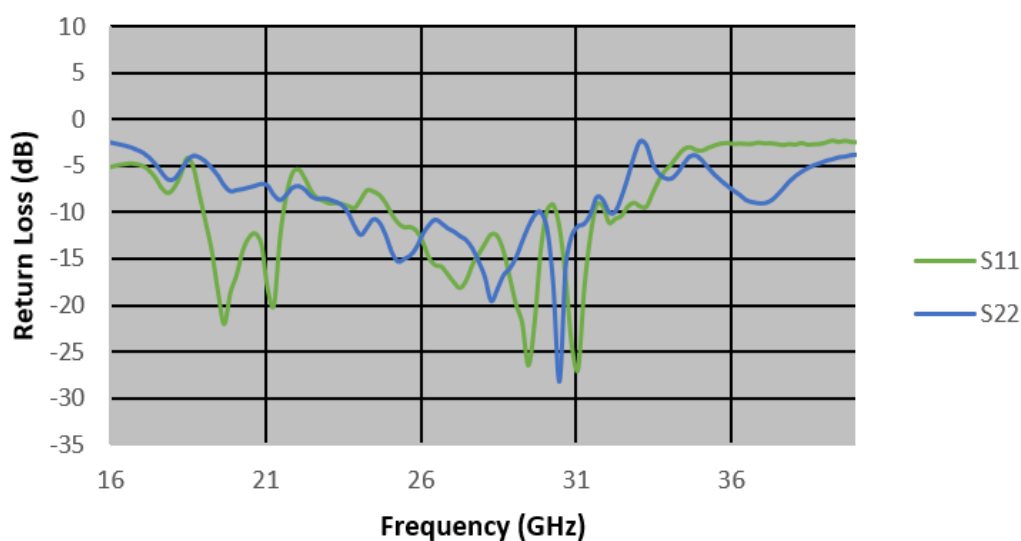
Preliminary Datasheet

### Measured Performance Data

#### Noise Figure



#### Return Loss



# Low Noise Amplifier

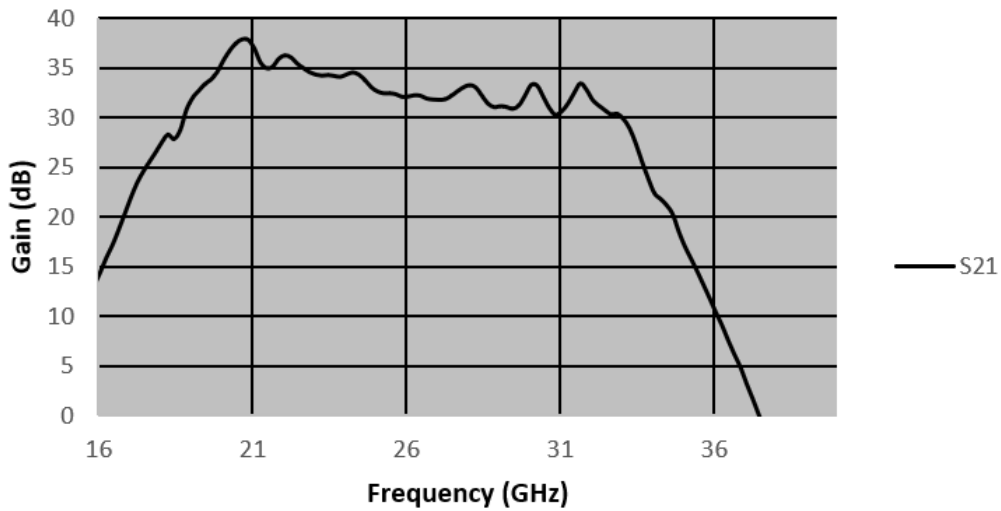
## 21-31 GHz



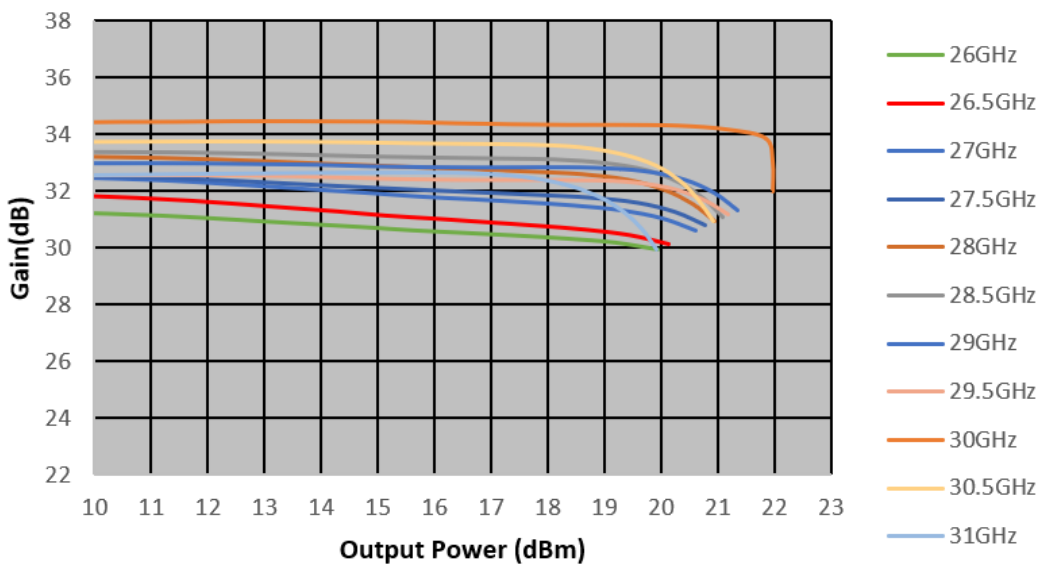
Preliminary Datasheet

### Measured Performance Data

#### S21



### Gain VS Output Power



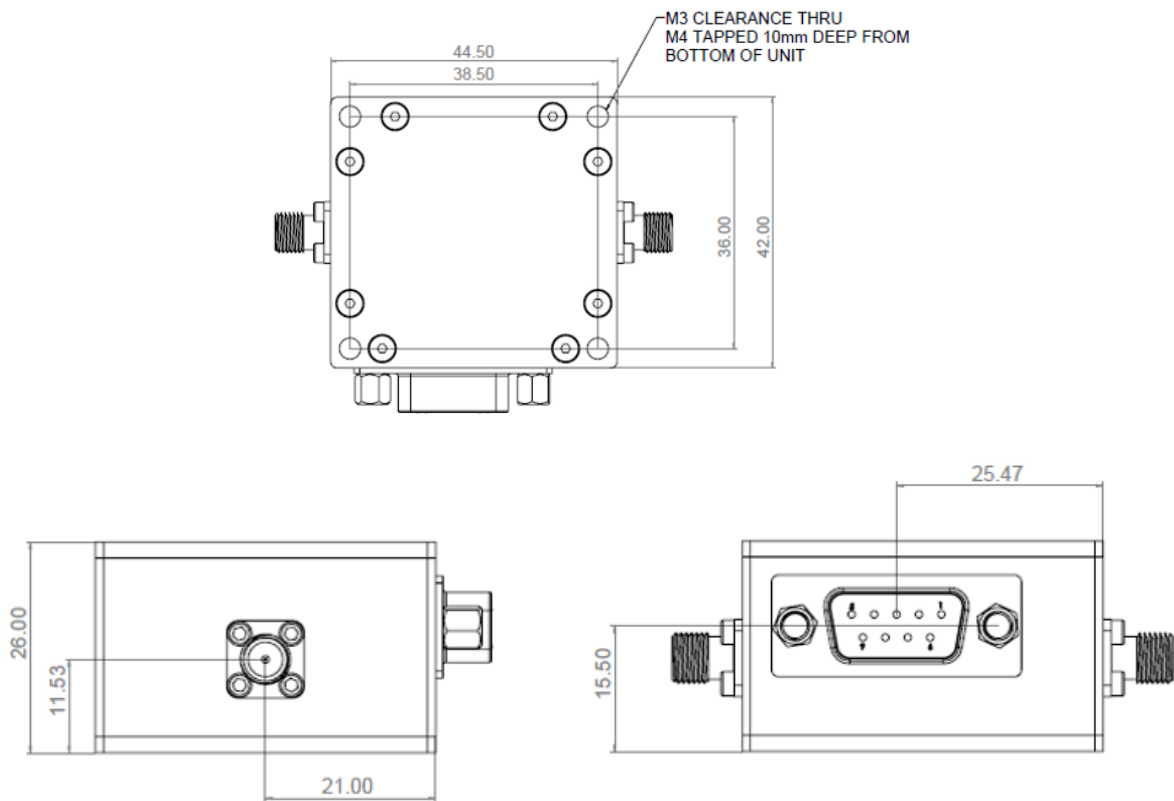
# Low Noise Amplifier

## 21-31 GHz

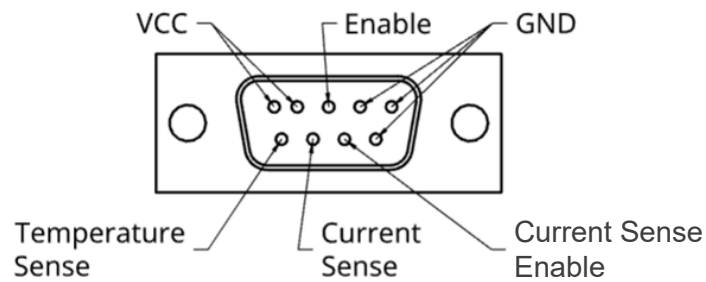


Preliminary Datasheet

### Outline Drawings



### Connection Configurations



# Low Noise Amplifier

## 21-31 GHz



Preliminary Datasheet

### Disclaimer

The information contained herein is believed to be reliable; however, ReliaSat makes no warranties regarding the information and assumes no responsibility or liability whatsoever for the use of the information contained herein. All information is subject to change without notice, therefore customers should obtain the latest relevant information before placing orders for ReliaSat products.

The information contained herein does not grant, explicitly or implicitly, to any party any patent rights, licenses, or any other intellectual property rights. This information does not constitute a warranty with respect to the product described, and ReliaSat disclaims any and all warranties either expressed or implied, relating to sale and/or use of ReliaSat products including liability or warranties relating to fitness for a particular purpose, consequential or incidental damages, merchantability, or infringement of any patent, copyright or other intellectual property right.

Without limiting the generality of the foregoing, ReliaSat products are not warranted or authorized for use as critical components in medical, life-saving, or life-sustaining applications, or other applications where a failure would reasonably be expected to cause severe personal injury or death.

©2023 ReliaSat Ltd. All rights reserved. Trademarks and registered trademarks are the property of their respective owners.

ReliaSat European Offices

[sales@reliasat.com](mailto:sales@reliasat.com)

[www.reliasat.com](http://www.reliasat.com)

ReliaSat Space Office

[emilie.schmitz@reliasat.com](mailto:emilie.schmitz@reliasat.com)