LNF-LNC4_16B

4-16 GHz Cryogenic Low Noise Amplifier

Rev: May 2018

Absolute maximum ratings

Parameter	Min	Max
V_{ds}	-0.5 V	3 V
I_{ds}		100 mA
V_{gs}	-20 V	+20 V
RF Input drive level		-10 dBm
DC voltage on RF input and output	-30V	30V

Product features

- RF bandwidth: 4-16 GHz
- Noise Temperature: 3.6 K typical
- Noise Figure: 0.054 dB typical
- Gain: 36 dB
- DC-power: V_d=0.90 V, I_d=20 mA
- One gate and one drain supply only
- RF-connectors: female SMA
- DC-connector: 9-pin female Nano-D

Typical RF Characteristics

Parameter	Test Condition	Value	Unit
Gain	4-16GHz	36	dB
Noise	4-16 GHz	3.6	K
IRL	4-16 GHz	12	dB
ORL	4-16 GHz	20	dB
P_{1dB}	10 GHz	-12	dBm
OIP3	10 GHz	-2	dBm

Product description

LNF-LNC4_16A is an ultra-low noise cryogenic amplifier operating in the 4-16 GHz frequency range. The LNA is packaged in a coaxial module using industry standard SMA and Nano-D connectors. The lightweight gold plated aluminum module measures 22.0*19.6*7.80 mm excluding the connectors.

Typical DC Characteristics

Parameter	Value	Unit
Vds	0.9	V
Ids	20	mA
Vgs	-0.2	V
Igs	20	µA
P_{dc}	18	mW

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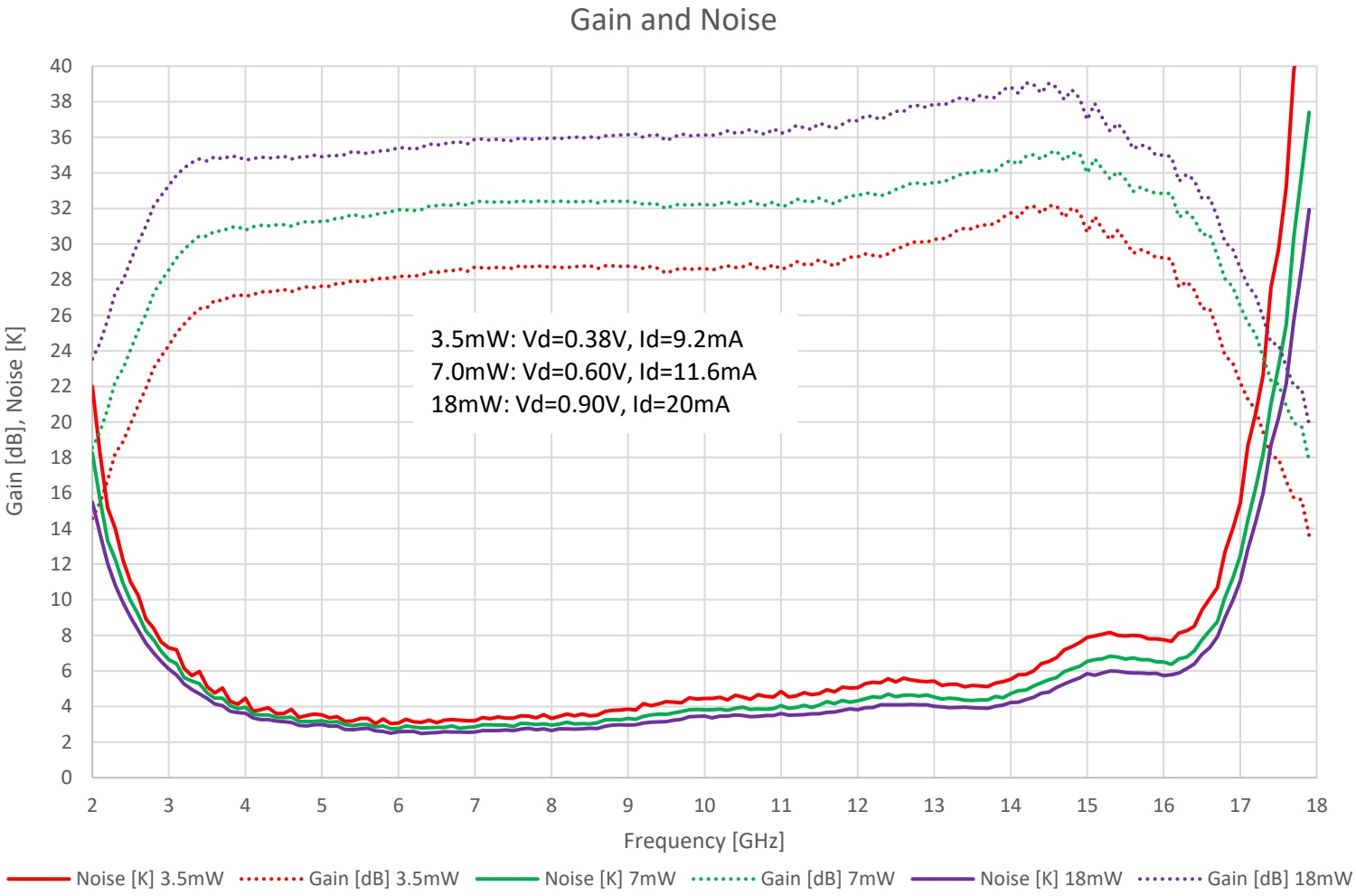
Measured typical data T_{amb}=4 K



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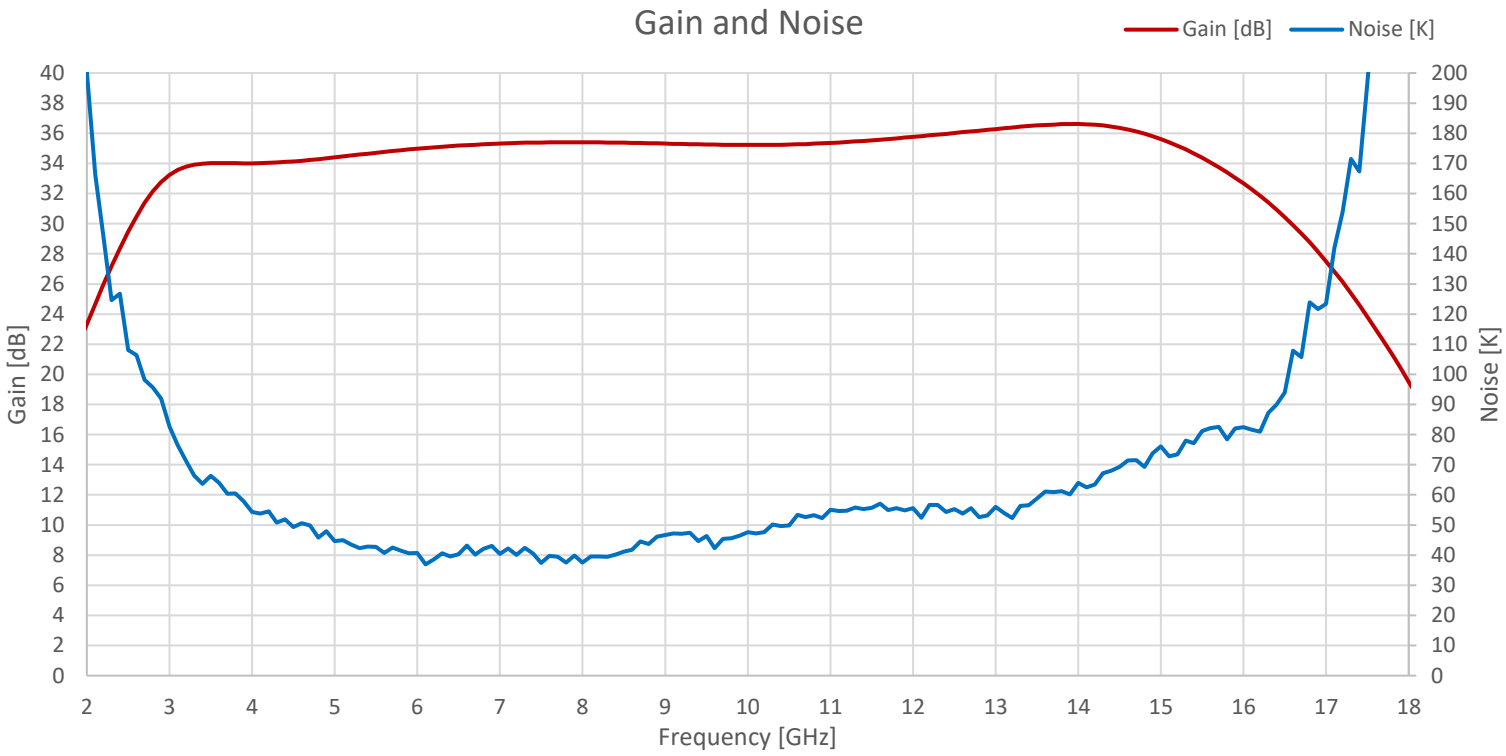
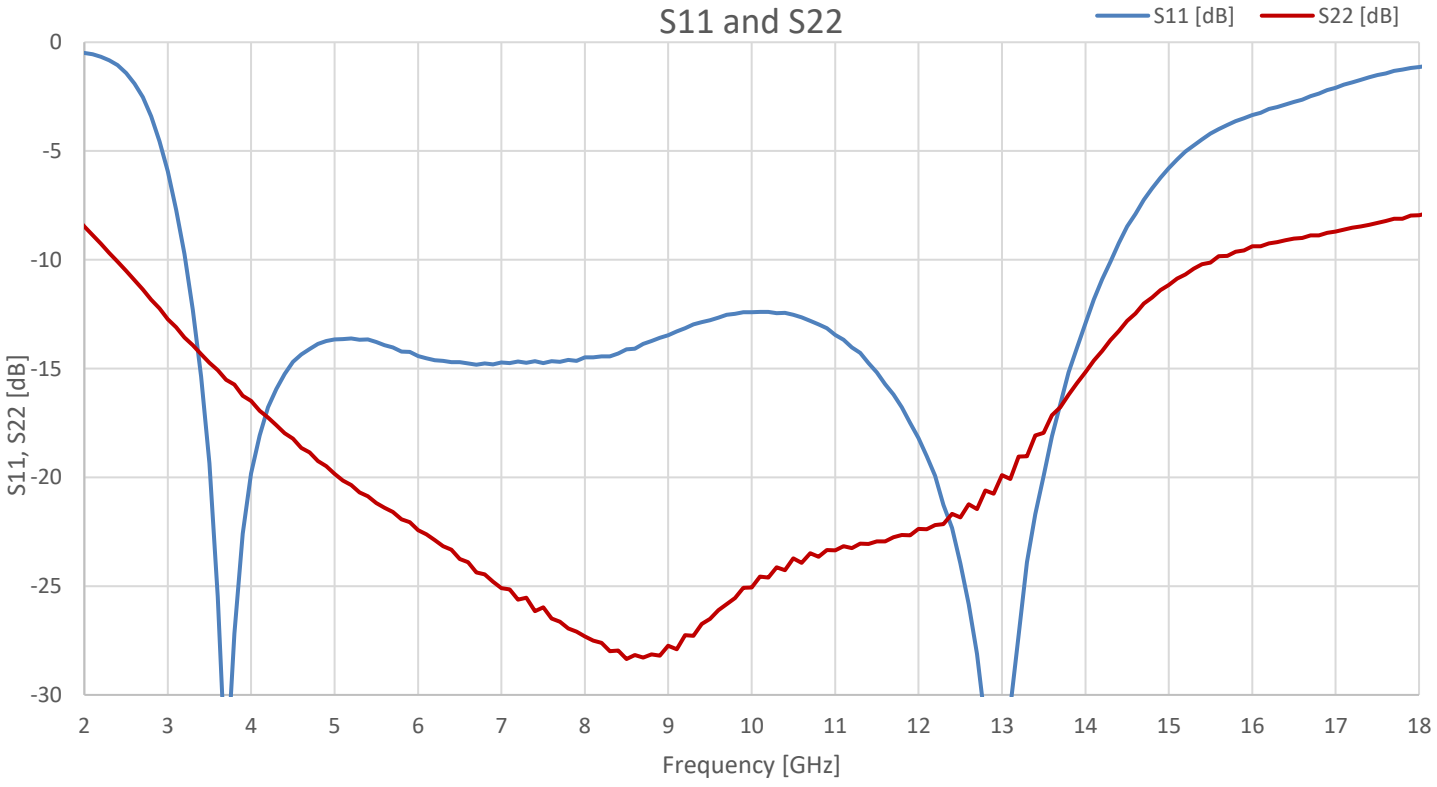
Measured typical data @ T_{amb}=296 K





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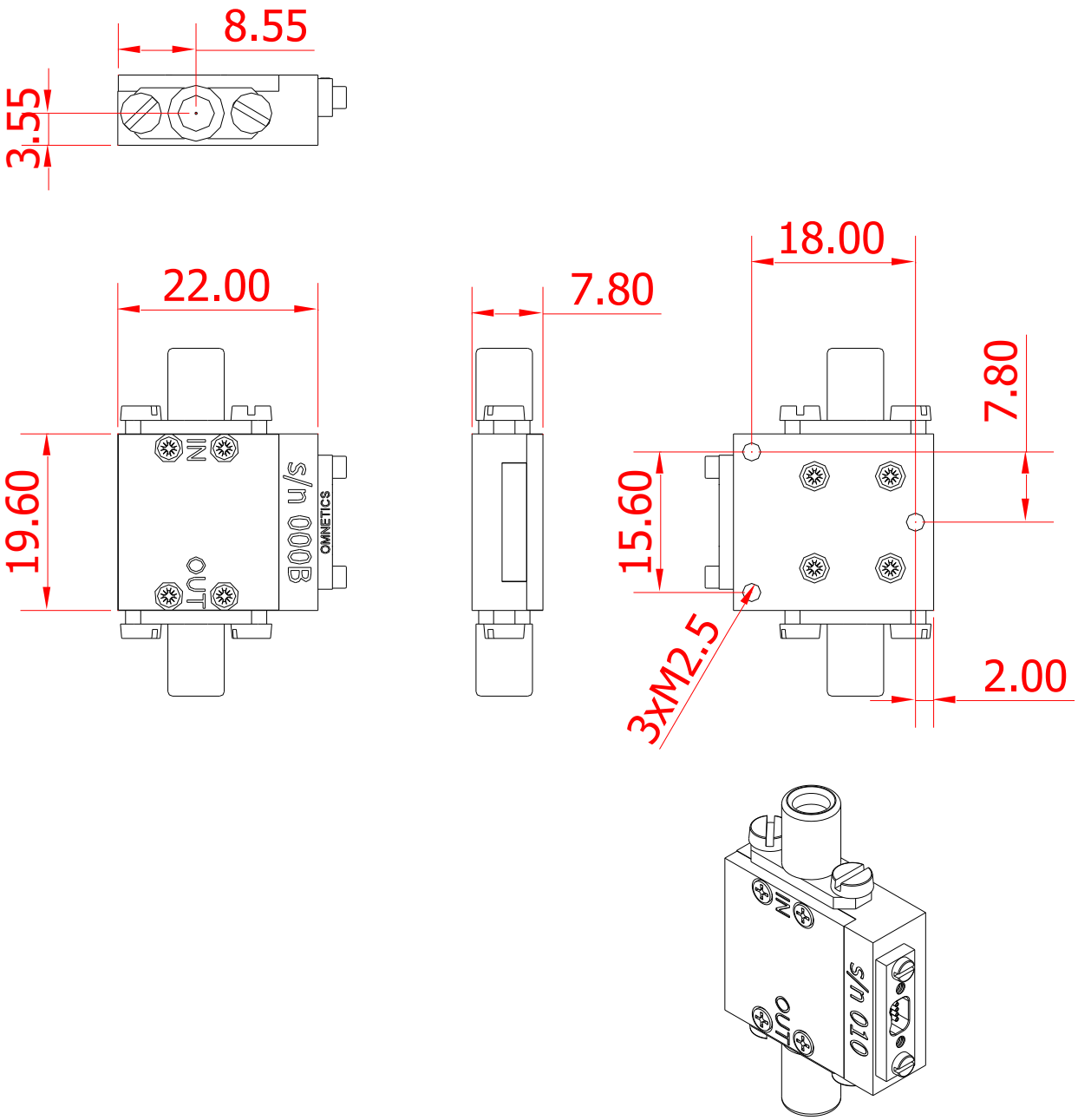
Drawings



Dimensions are in millimeters