LOW NOISE FACTORY
www.lownoisefactory.com

LNF-LNC2_4A
2-4 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: 2-4 GHz
- Noise Temperature: 1.5 K typical
- Noise Figure: 0.022 dB typical
- Gain: 35 dB
- DC-power: V_d=1.00 V, I_d=18 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	2-4GHz	35	dB
Noise	2-4 GHz	1.5	K
IRL	2-4 GHz	4	dB
ORL	17	25	dB
P_{1dB}	3 GHz	-10	dBm
OIP3	3 GHz	0	dBm

Product description

LNF-LNC2_4A is an ultra-low noise cryogenic amplifier operating in the 2-4 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 33.0*19.75*7.80 mm excluding the connectors.

Typical DC Characteristics

Parameter	Value	Unit
Vds	1.00	V
Ids	18	mA
Vgs	-0.30	V
Igs	30	µA
P_{dc}	18	mW

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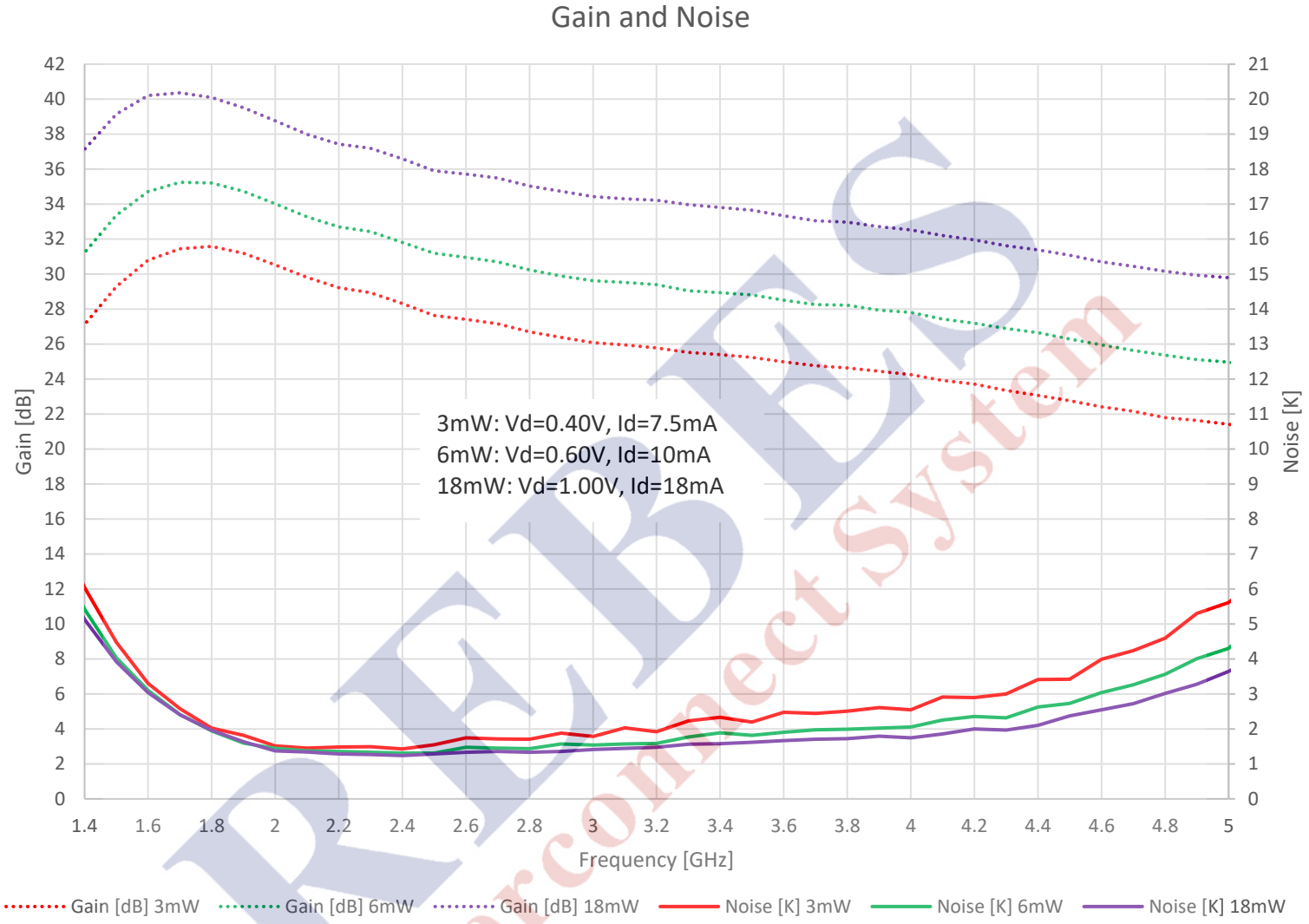
Measured typical data T_{amb}=4 K



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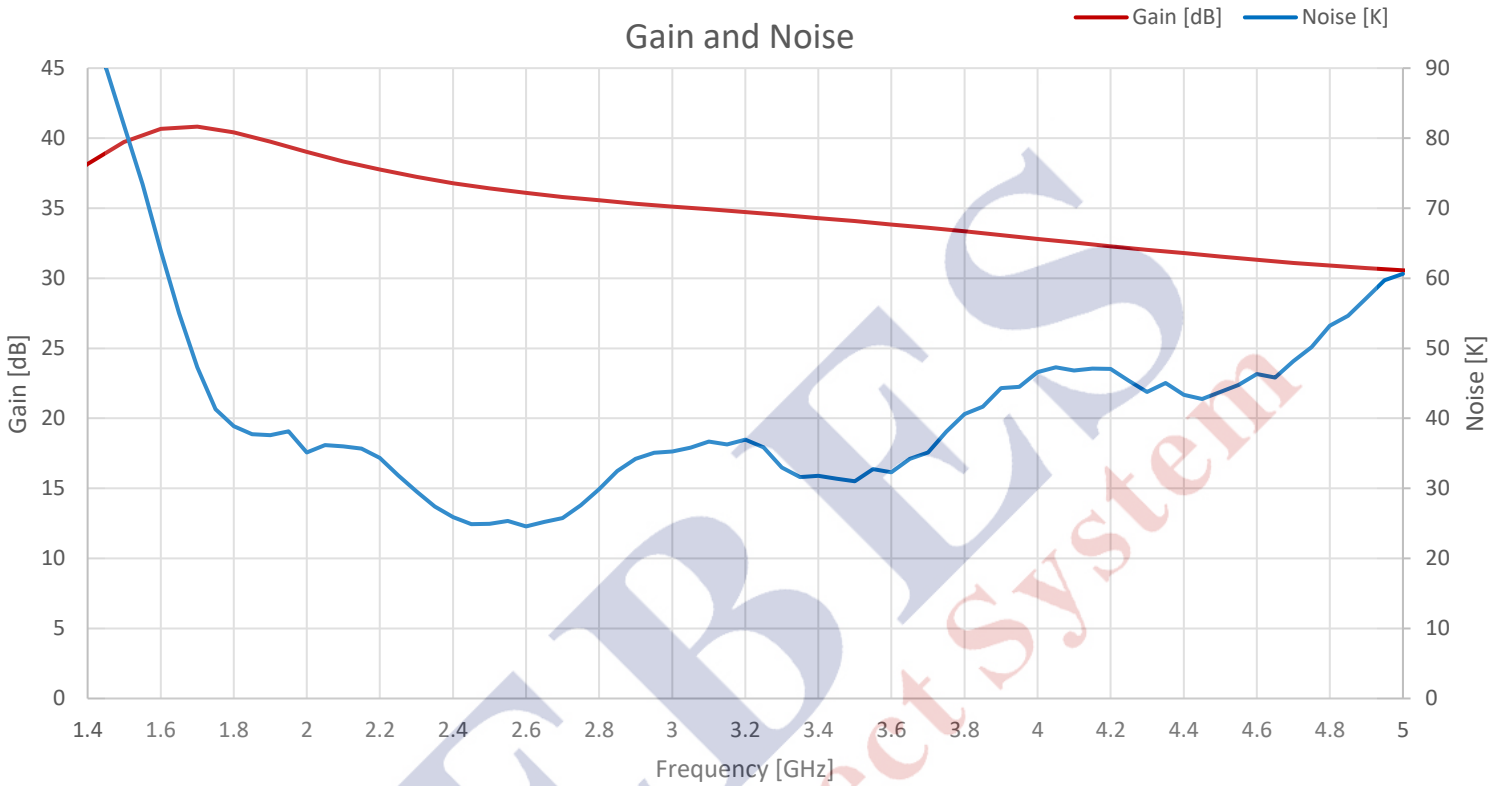
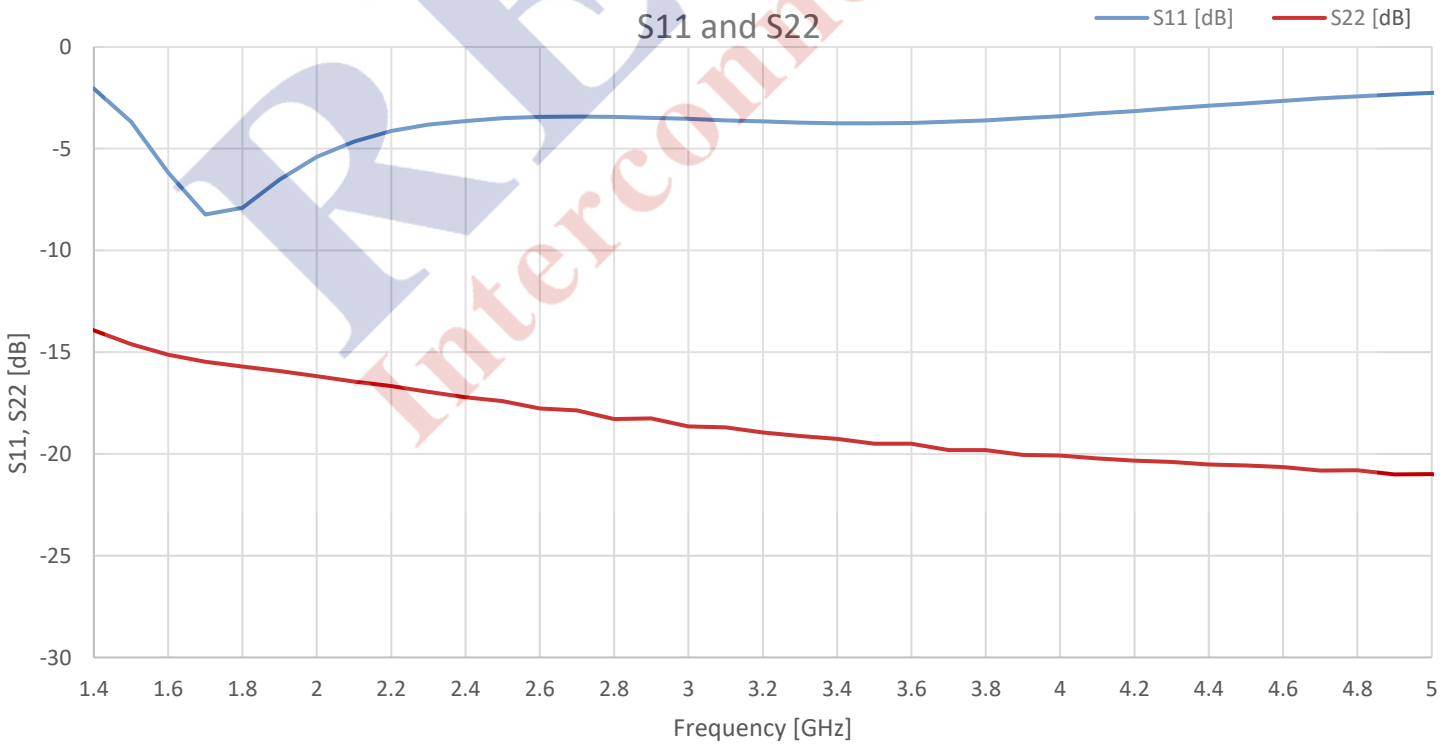
Measured typical data @ T_{amb}=296 K





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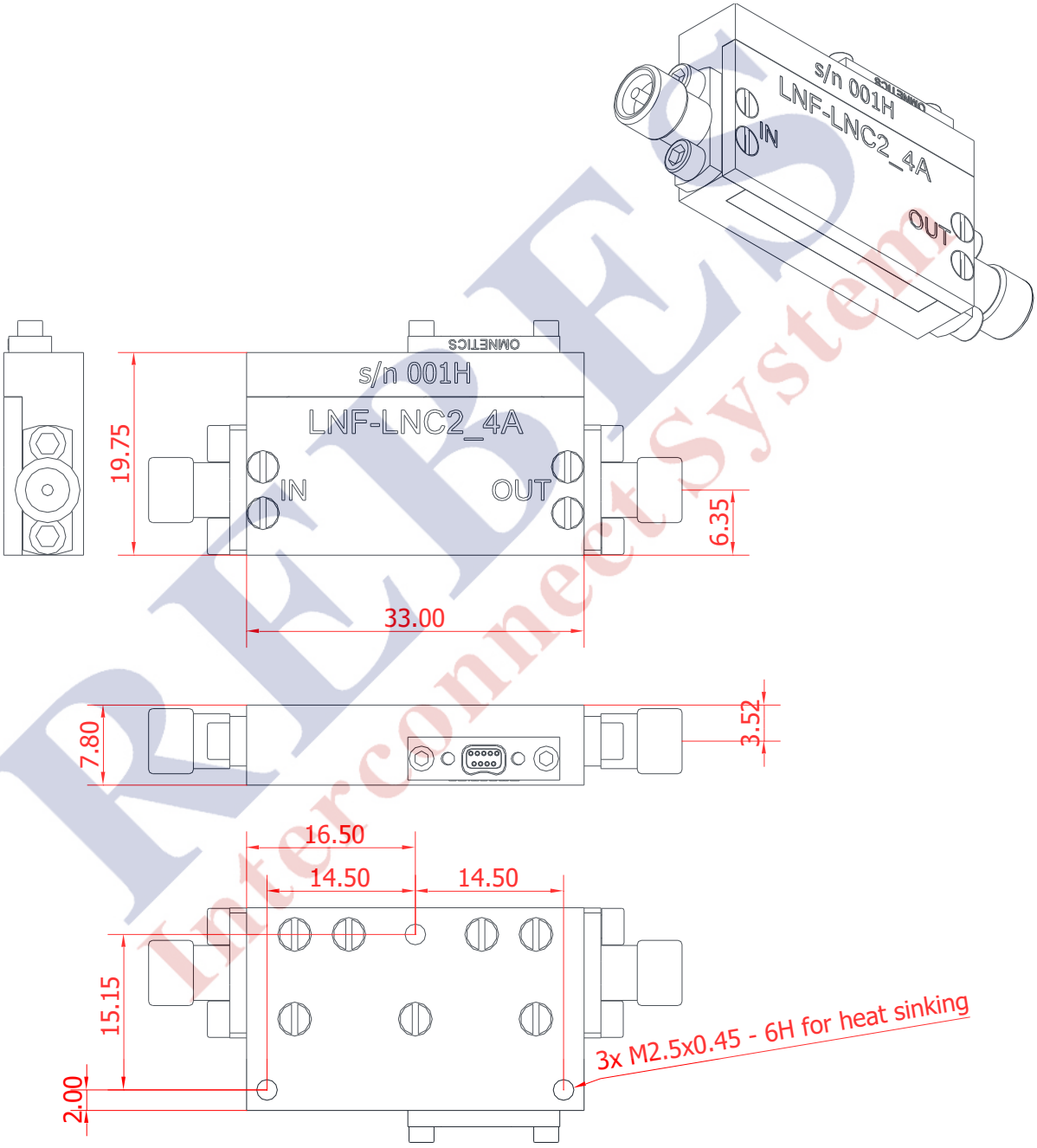
Drawings



Dimensions are in millimeters