

LNF-LNC7_10A

7-10 GHz Cryogenic Low Noise Amplifier

Rev: Feb 2017



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

Product features

- RF bandwidth: 7-10 GHz
- Noise Temperature: 4.7 K typical
- Noise Figure: 0.070 dB typical
- Gain: 35 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	7-10 GHz	35	dB
Noise	7-10 GHz	4.7	K
IRL	7-10 GHz	17	dB
ORL	7-10 GHz	20	dB
P_{1dB}	8.5 GHz	0	dBm
OIP3	8.5 GHz	10	dBm

Product description

LNF-LNC7_10A is an ultra-low noise cryogenic amplifier operating in the 7-10 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 22.00*19.60*7.80 mm excluding the connectors. MMIC technology ensures reliable and repeatable unit-to-unit result.

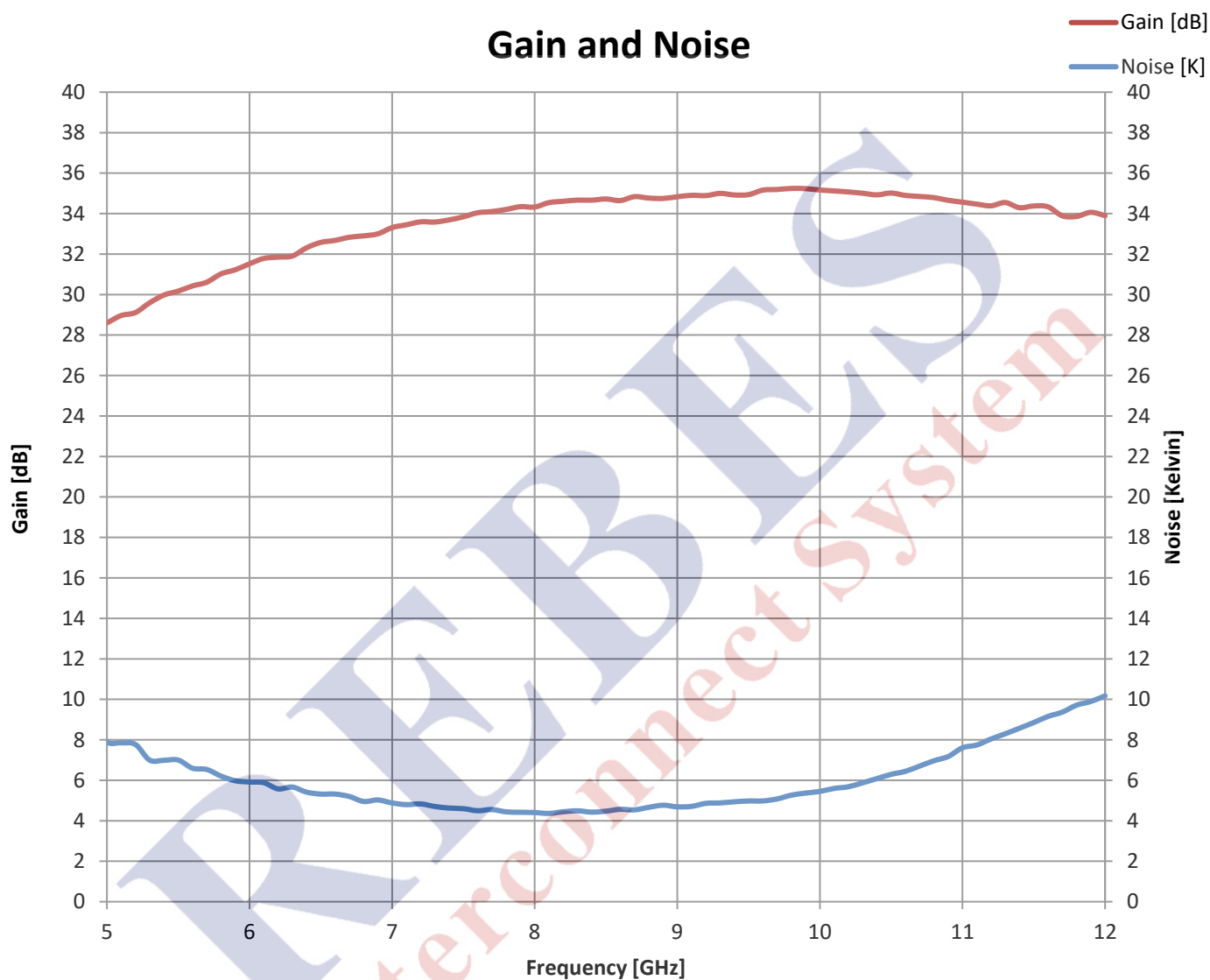
Typical DC Characteristics

Parameter	Value	Unit
V_{ds}	0.90	V
I_{ds}	20	mA
V_{gs}	-4.2 V	V
I_{gs}	-400	μ A
P_{dc}	18	mW

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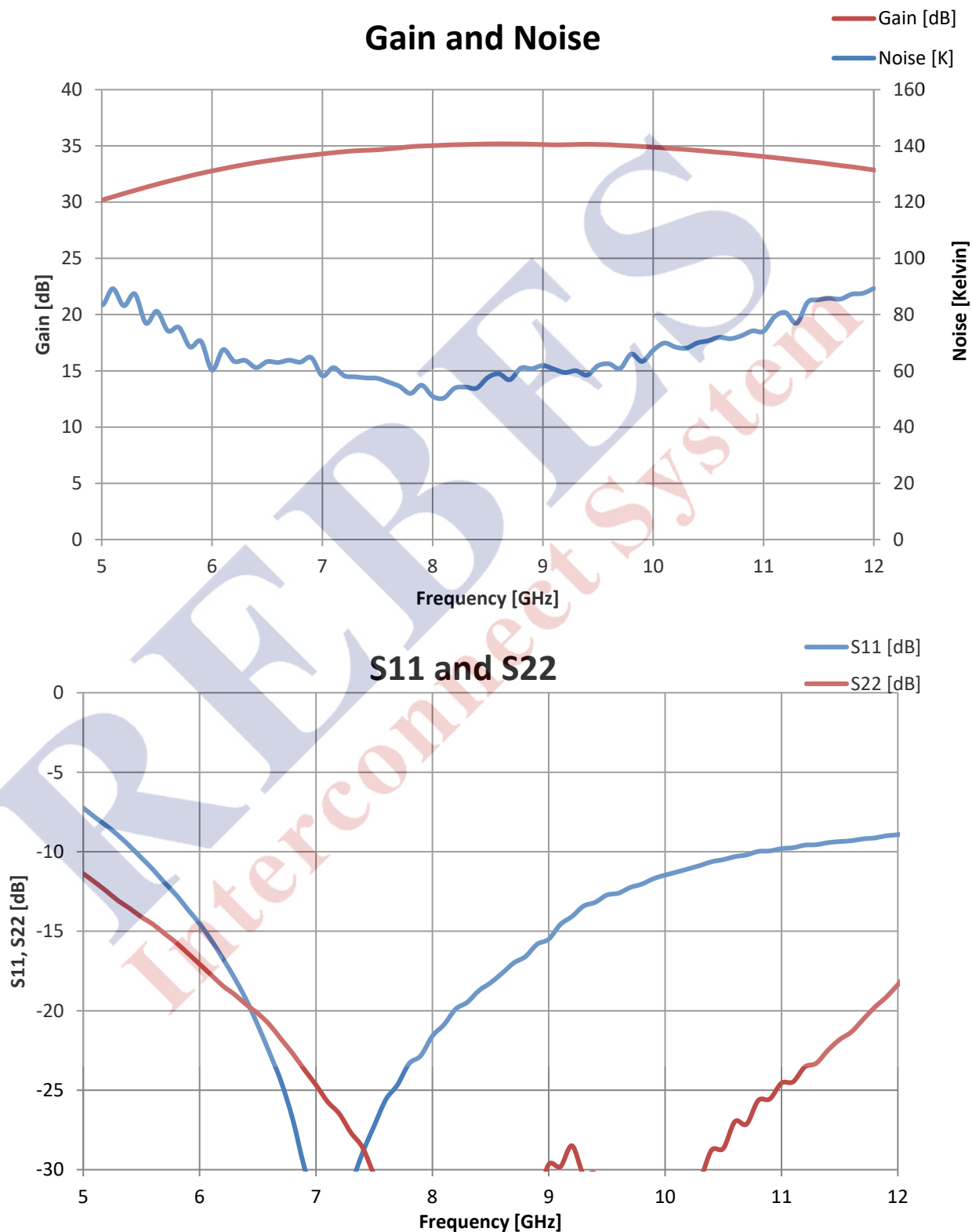
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Measured typical data $T_{amb}=5\text{ K}$ 

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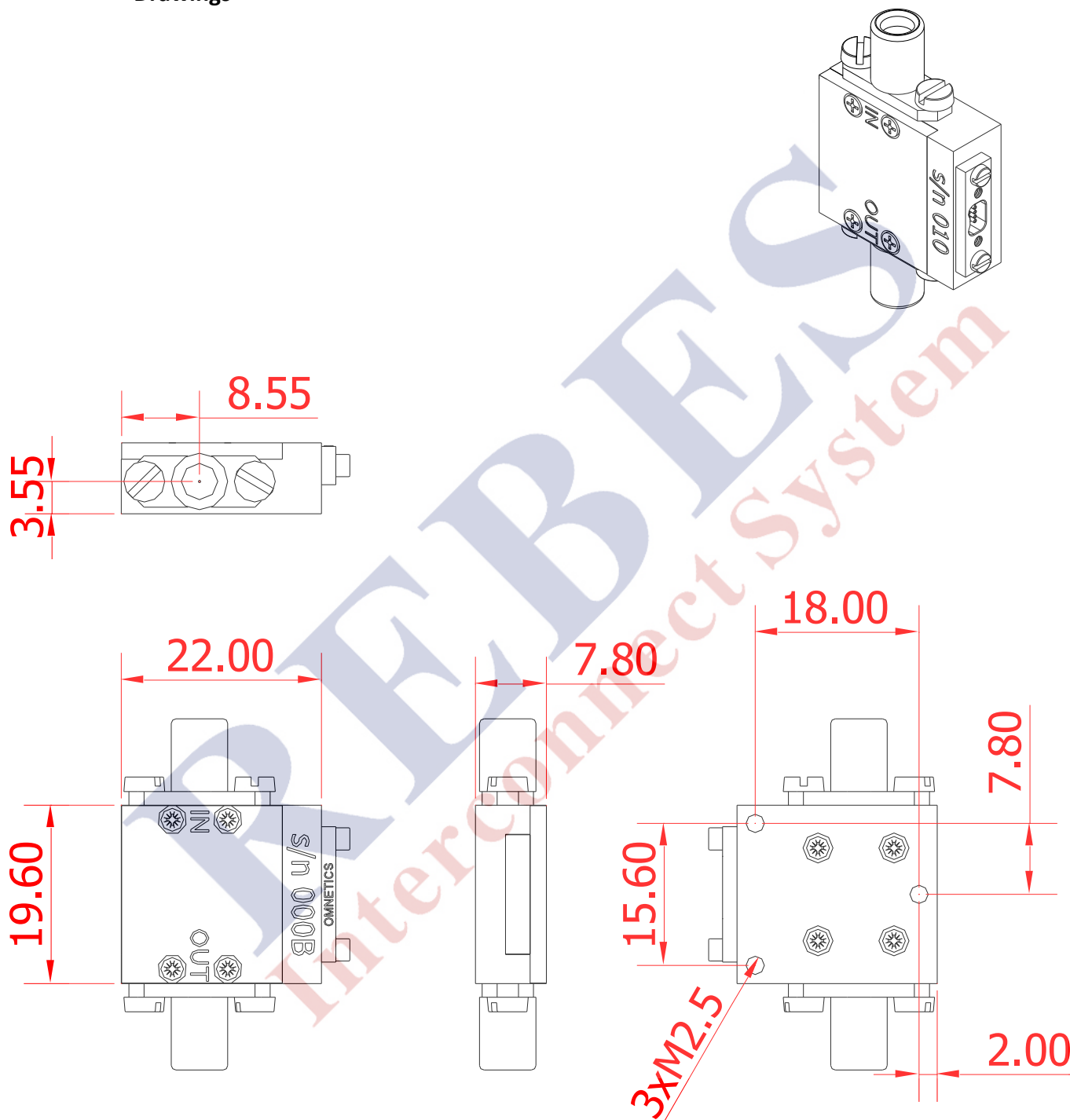
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Measured typical data @ $T_{amb}=296K$ 

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Drawings



Dimensions are in millimeters