



Product features

- RF bandwidth: 1-12 GHz
- Noise: 5.5K typical
- Gain: 39dB
- DC-power: $V_d=1.00V$ @ 15mA
- One gate and one drain supply only
- RF-connectors: female SMA
- DC-connector: 9-pin female Nano-D

Product description

LNF-LNC1_12A is an ultra-low noise cryogenic amplifier operating in the 1-12 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*19.6*7.8 mm excluding the connectors. MMIC technology ensures reliable and repeatable unit-to-unit result.

Absolute maximum ratings

Parameter	Min	Max
V_{ds}	-0.5 V	3 V
I_{ds}		100 mA
V_{gs}	-12 V	+12 V
RF Input drive level		0 dBm

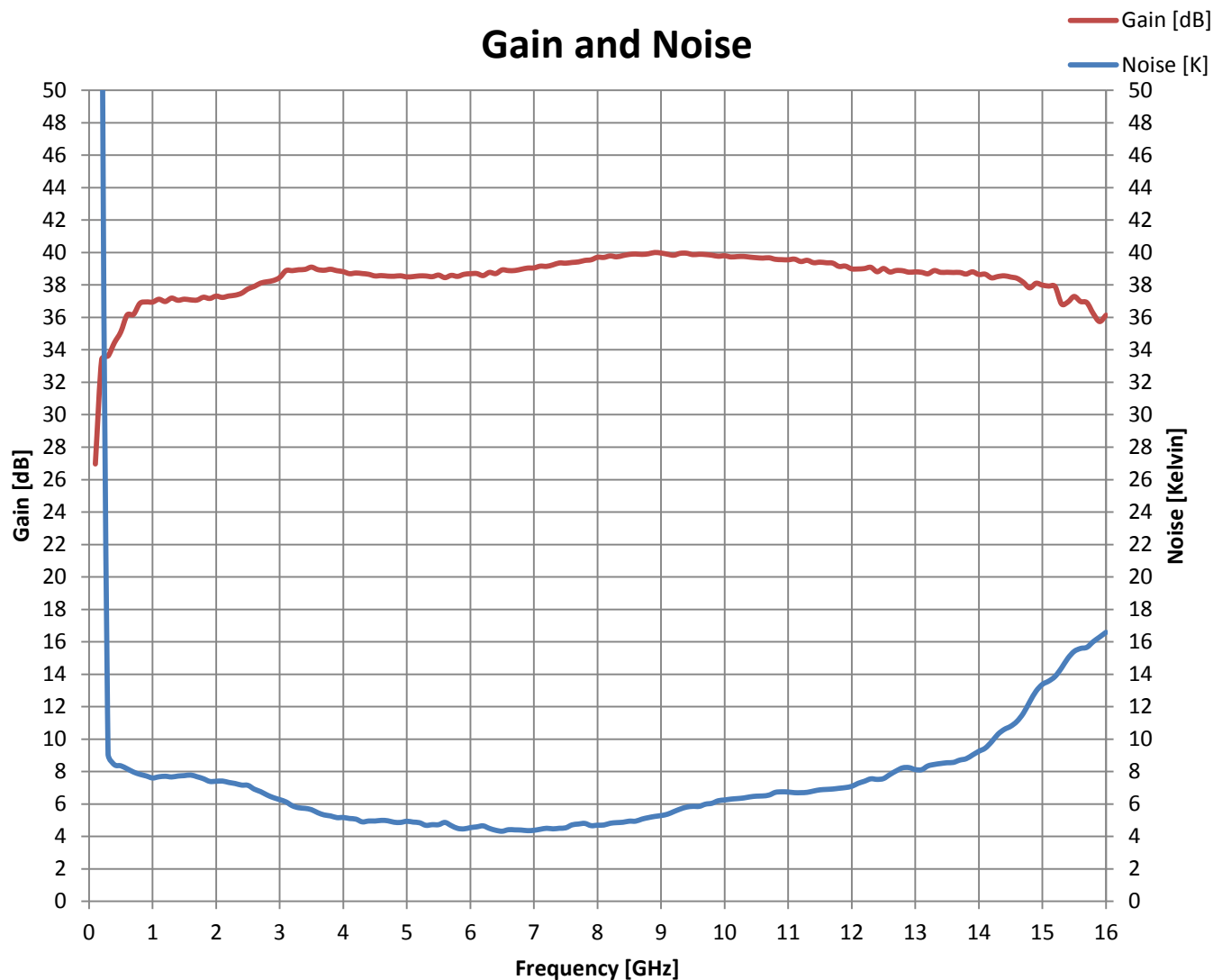
Typical RF Characteristics

Parameter	Test Condition	Value	Unit
Gain	1-12 GHz	39	dB
Noise	1-12 GHz	5.5	K
IRL	4-13 GHz	12	dB
ORL	1-12 GHz	20	dB
P_{1dB}	1-12 GHz	0	dBm
OIP3	1-12 GHz	10	dBm

Typical DC Characteristics

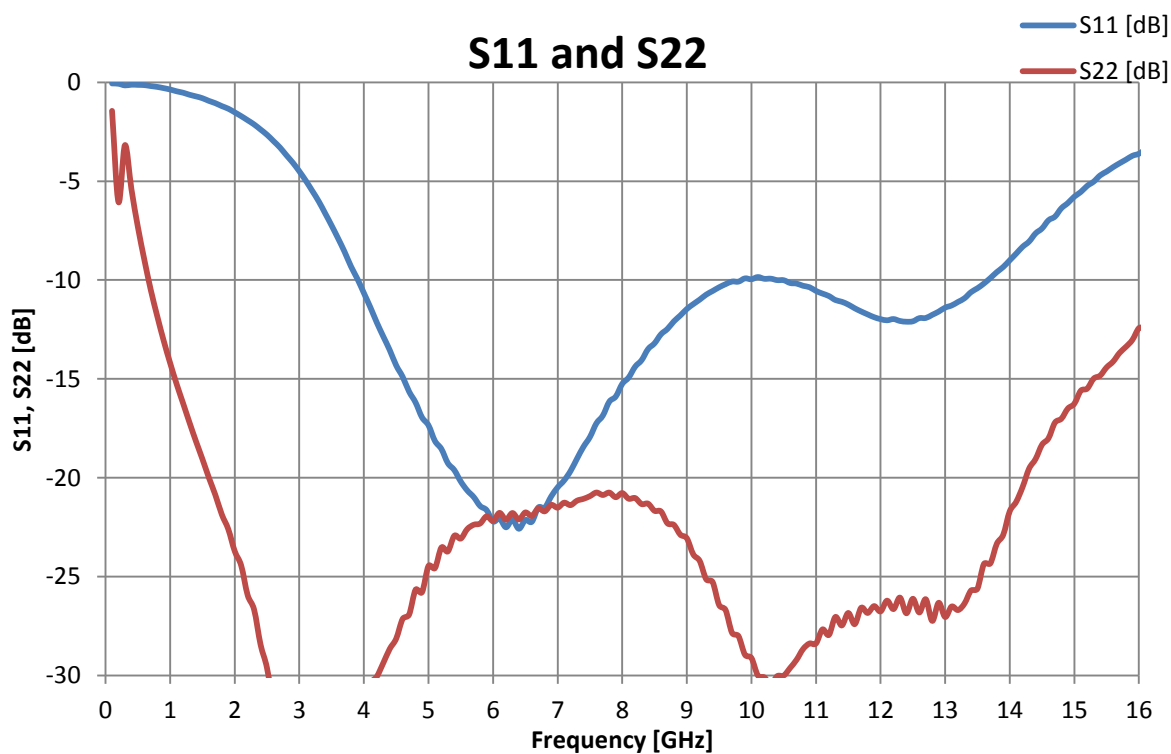
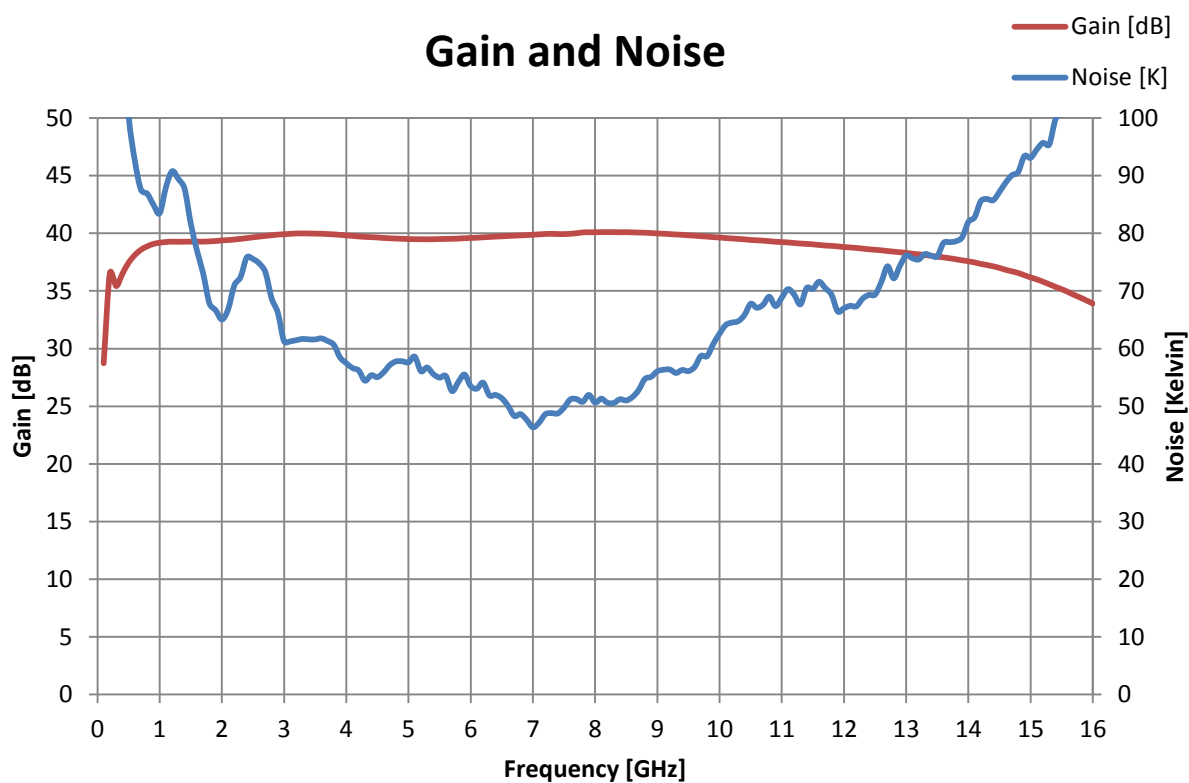
Parameter	Value	Unit
V_{ds}	1.00	V
I_{ds}	15	mA
V_{gs}	-4.0V	V
I_{gs}	360	μA
P_{dc}	15	mW

Measured typical data $T_{amb}=12K$

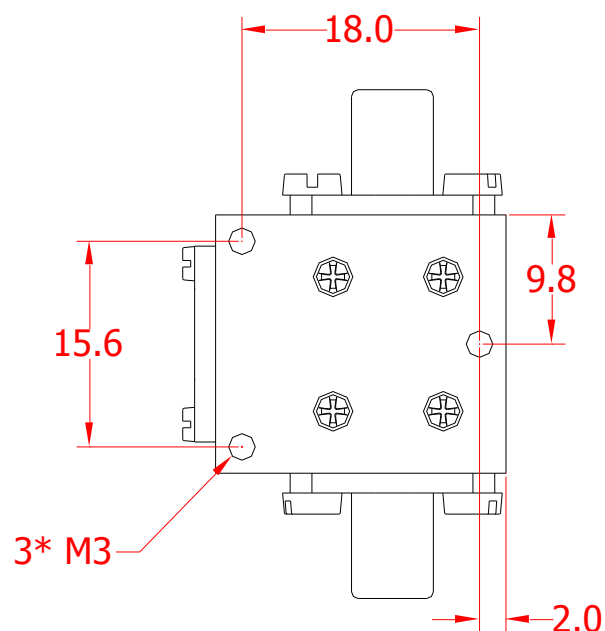
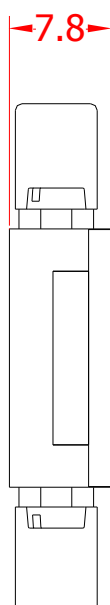
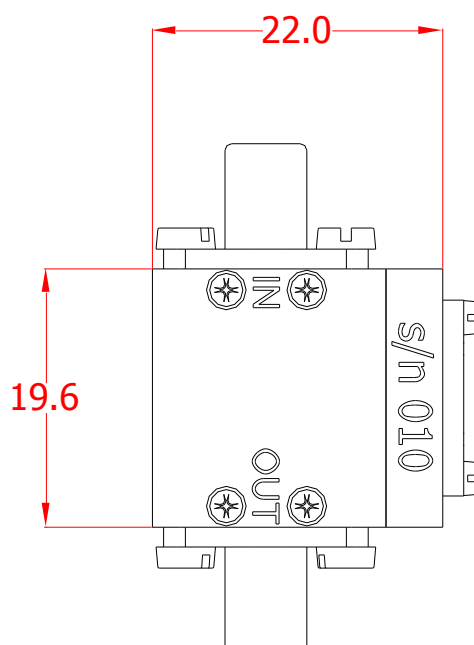
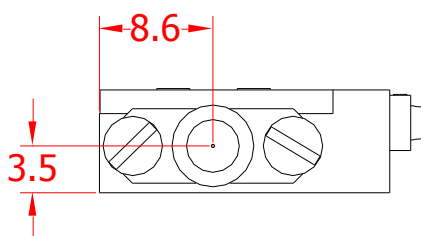
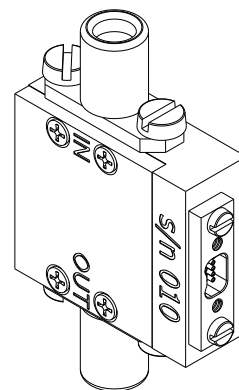


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Measured typical data @ $T_{amb}=296K$



Drawings



Dimensions are in millimeters