LOW NOISE FACTORY
www.lownoisefactory.com

LNF-LNC28_52WB

28-52 GHz Cryogenic Low Noise Amplifier

Rev: Feb 2017

Product features

- RF bandwidth: 28-52 GHz
- Noise Temperature: 10 K typical
- Noise Figure: 0.15 dB typical
- Gain: 34 dB
- DC-power: V_d=1.00 V, I_d=10 mA
- One gate and one drain supply only
- RF-connectors: WR22, UG599/U
- DC-connector: 9-pin female Nano-D

Product description

LNF-LNC28_52WB is an ultra-low noise cryogenic amplifier operating in the 28-52 GHz frequency range. The LNA is packaged in a waveguide module using industry standard WR22 and Nano-D connectors. The lightweight gold plated aluminum module measures 28.0*19.52*19.2 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	2.5 V
I_{ds}		100 mA
V_{gs}	-20 V	+20 V
RF Input drive level		-10 dBm

Typical RF Characteristics

Parameter	Test Condition	Value	Unit
Gain	28-52 GHz	34	dB
Noise	28-52 GHz	10	K
IRL	28-52 GHz	13	dB
ORL	28-52 GHz	15	dB
P_{1dB}	28-52 GHz		dBm
OIP3	28-52 GHz		dBm

Typical DC Characteristics

Parameter	Value	Unit
Vds	1.00	V
Ids	10	mA
Vgs	0.1	V
Igs	9	µA
P_{dc}	10	mW

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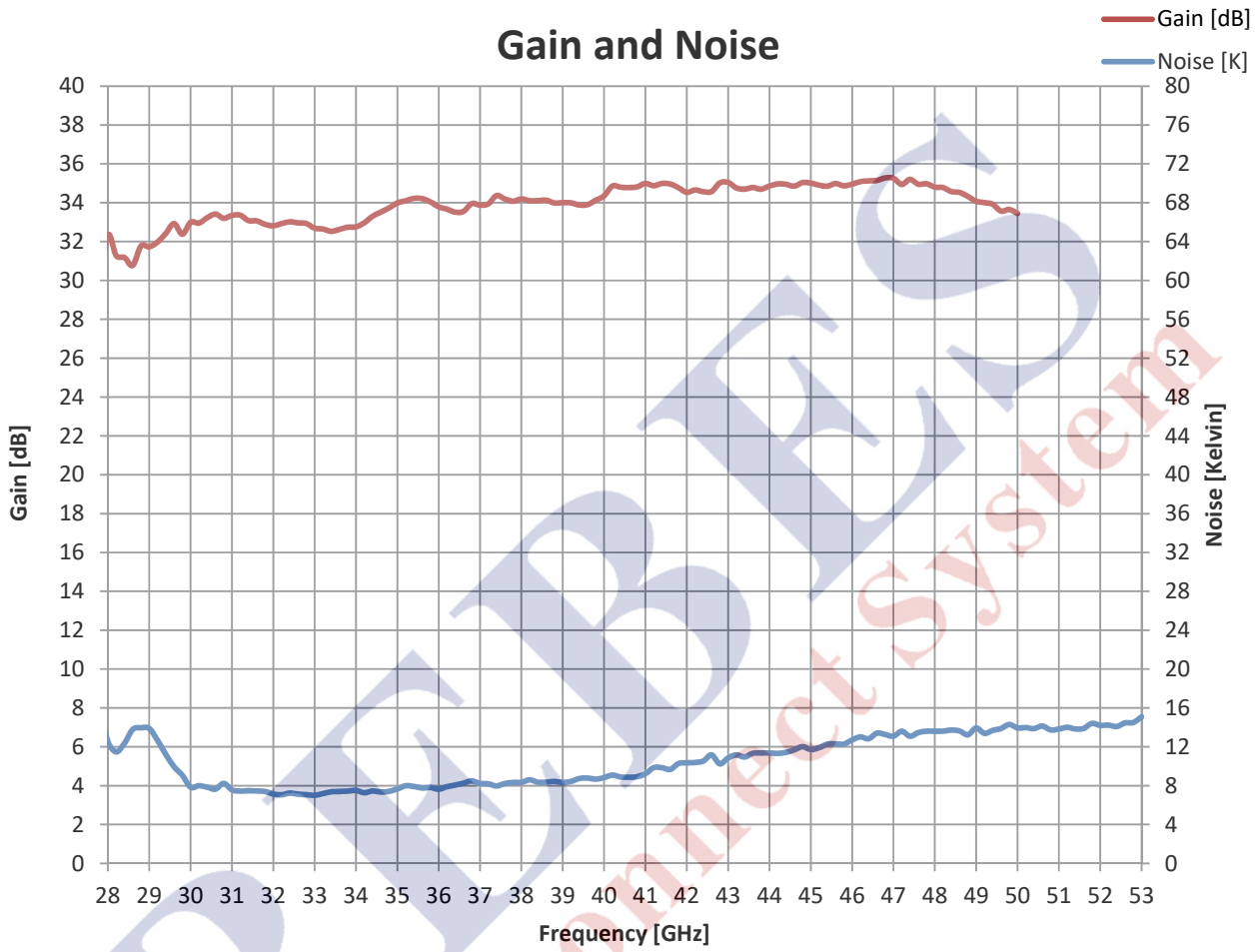
Measured typical data T_{amb}=5 K



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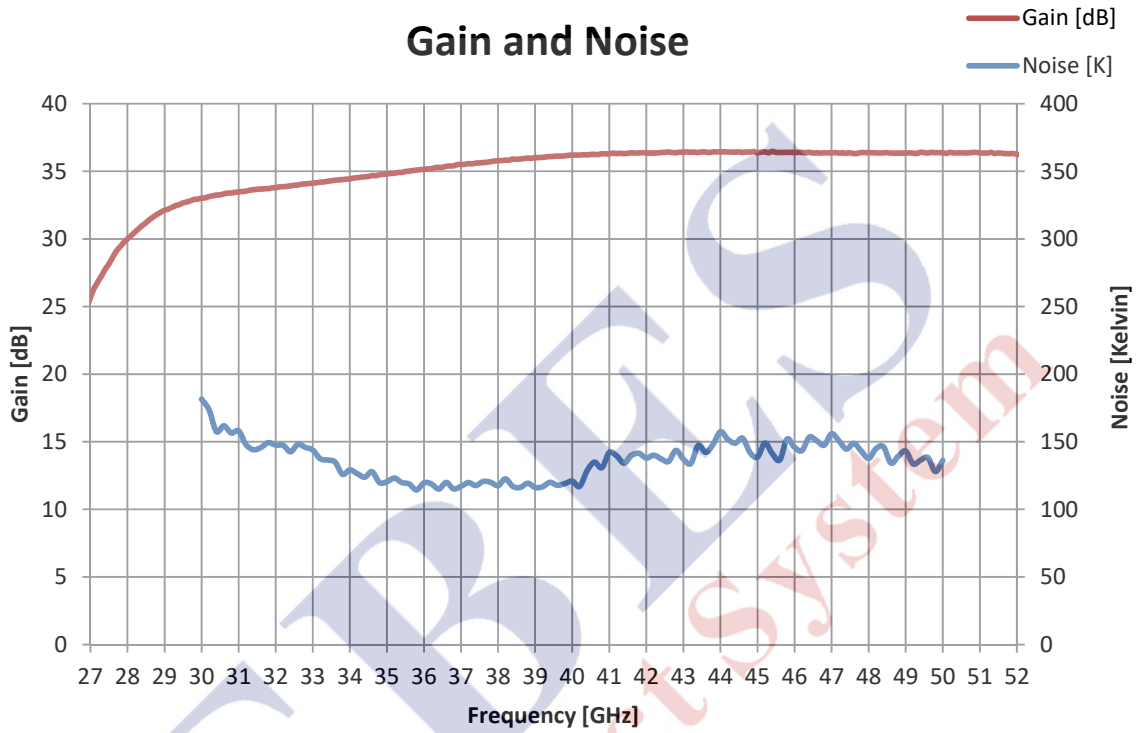
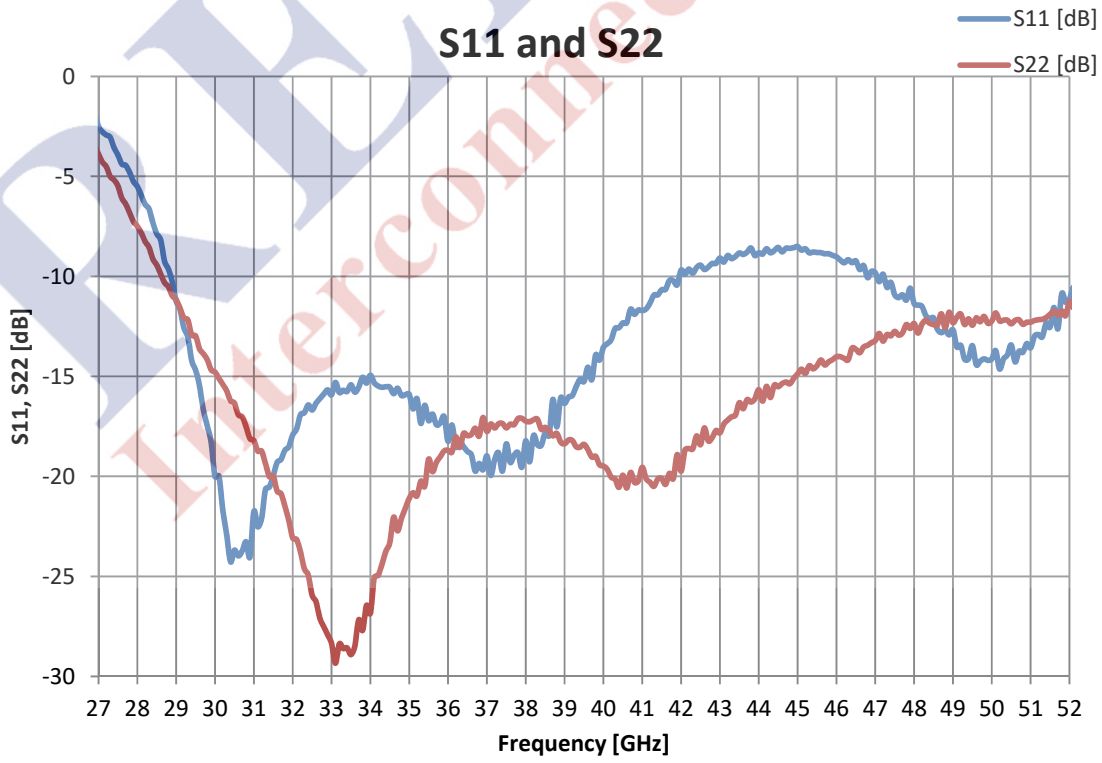
Measured typical data @ T_{amb}=296 K





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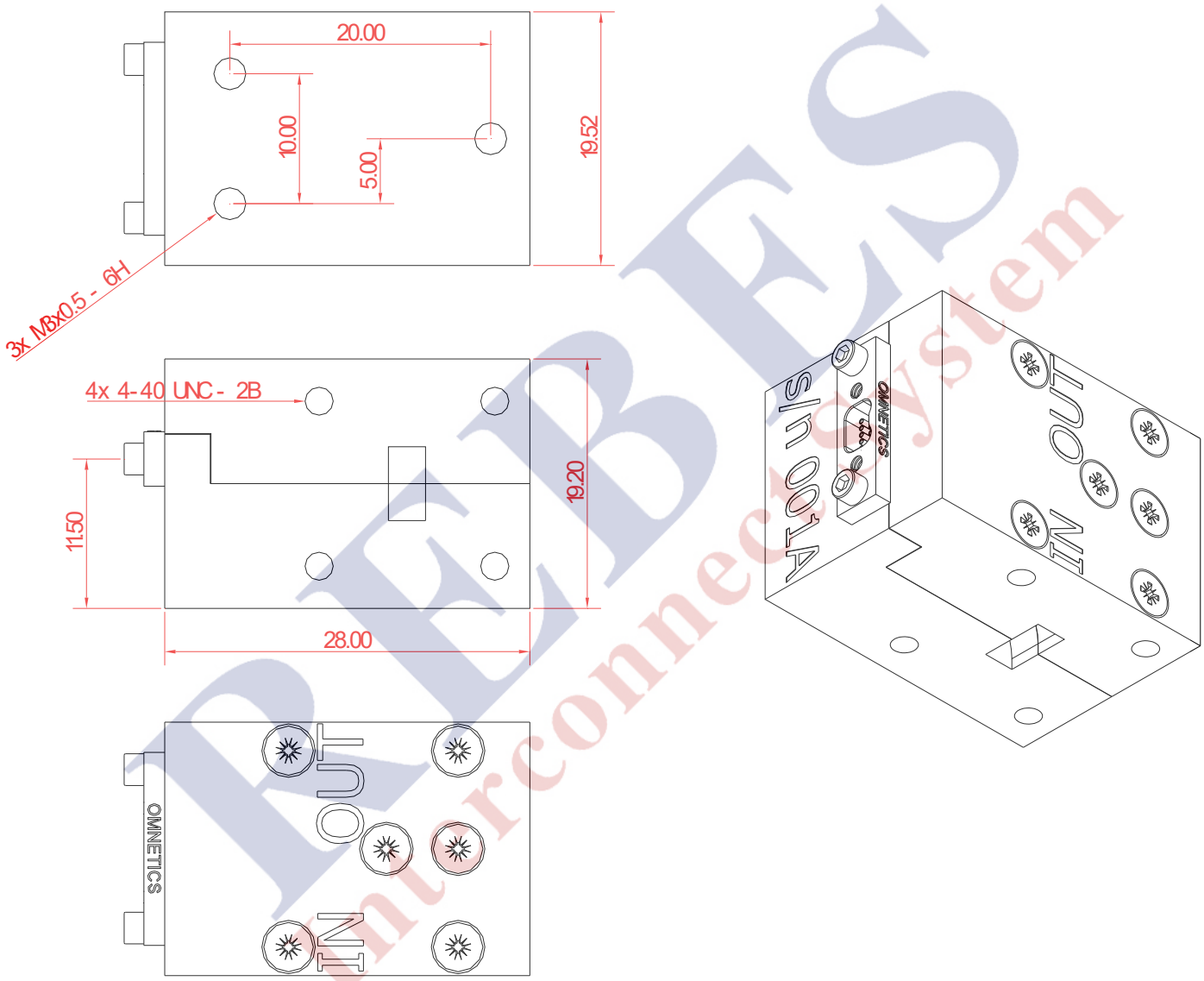
Drawings



Dimensions are in millimeters