

LNF-LNC16_28WB

16-28 GHz Cryogenic Low Noise Amplifier

Rev: Feb 2017



Absolute maximum ratings

Parameter	Min	Max
V_{ds}	-0.5 V	2 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: 16-28 GHz
- Noise Temperature: 6.3 K typical
- Noise Figure: 0.093 dB typical
- Gain: 32 dB
- DC-power: $V_d=0.50$ V, $I_d=8$ mA
- One gate and one drain supply only
- RF-input connector: WR42, UBR 220
- RF-output connector: 2.92 mm coaxial (K)
- DC-connector: 9-pin female Nano-D

Typical RF Characteristics

Parameter	Test Condition	Value	Unit
Gain	16-28GHz	32	dB
Noise	16-28GHz	6.3	K
IRL	16-28GHz	17	dB
ORL	16-28GHz	10	dB
P_{1dB}	16-28GHz	-12	dBm
OIP3	16-28GHz	-2	dBm

Product description

LNF-LNC16_28WB is an ultra-low noise cryogenic amplifier operating in the 16-28 GHz frequency range. The LNA is packaged in a coaxial/waveguide module using industry standard WR42, 2.92 mm and Nano-D connectors. The lightweight gold plated aluminum module measures 24.79*34.43*23.20 mm excluding the connectors.

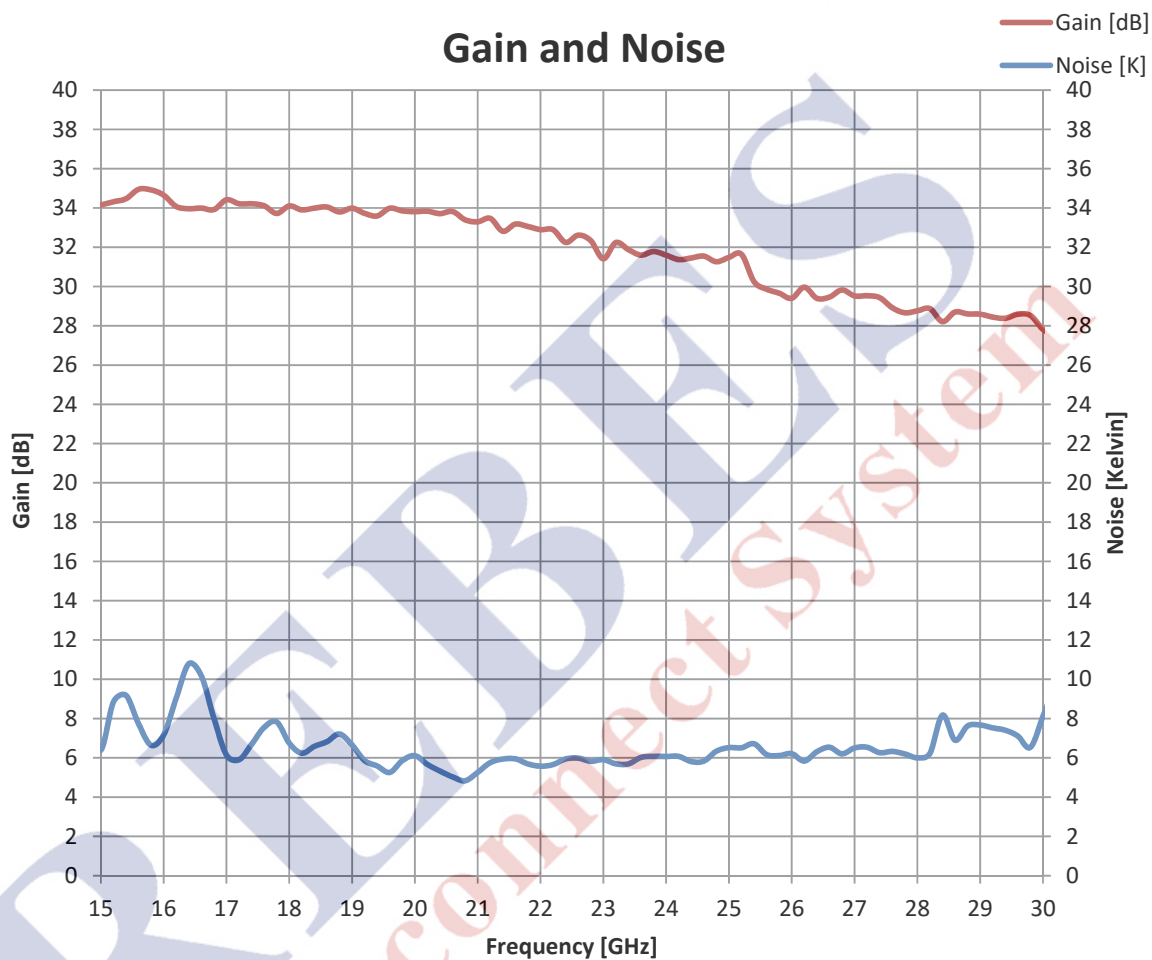
Typical DC Characteristics

Parameter	Value	Unit
V_{ds}	0.50	V
I_{ds}	8	mA
V_{gs}	+0.3	V
I_{gs}	30	μ A
P_{dc}	4	mW

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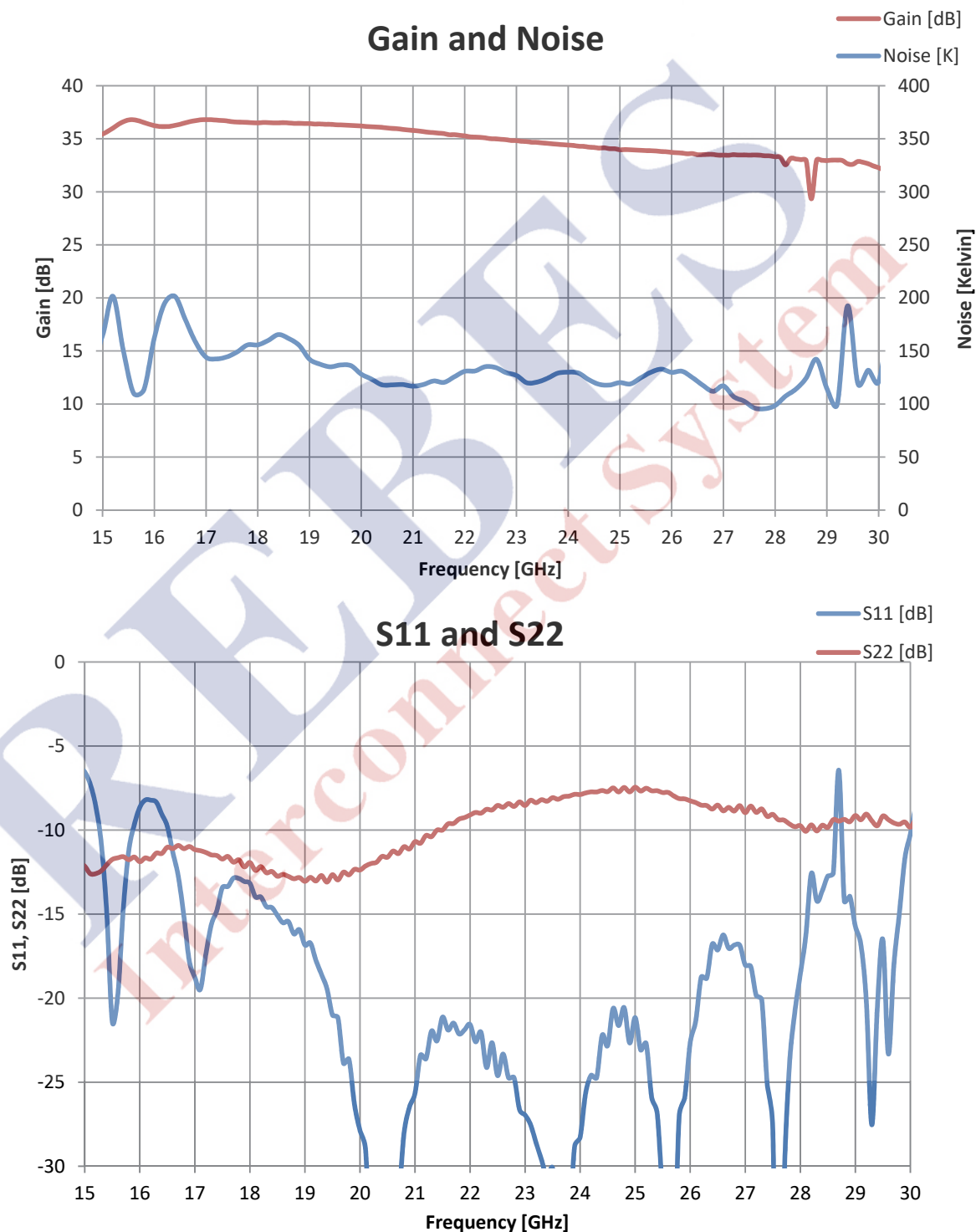
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Measured typical data $T_{amb}=5\text{ K}$ 

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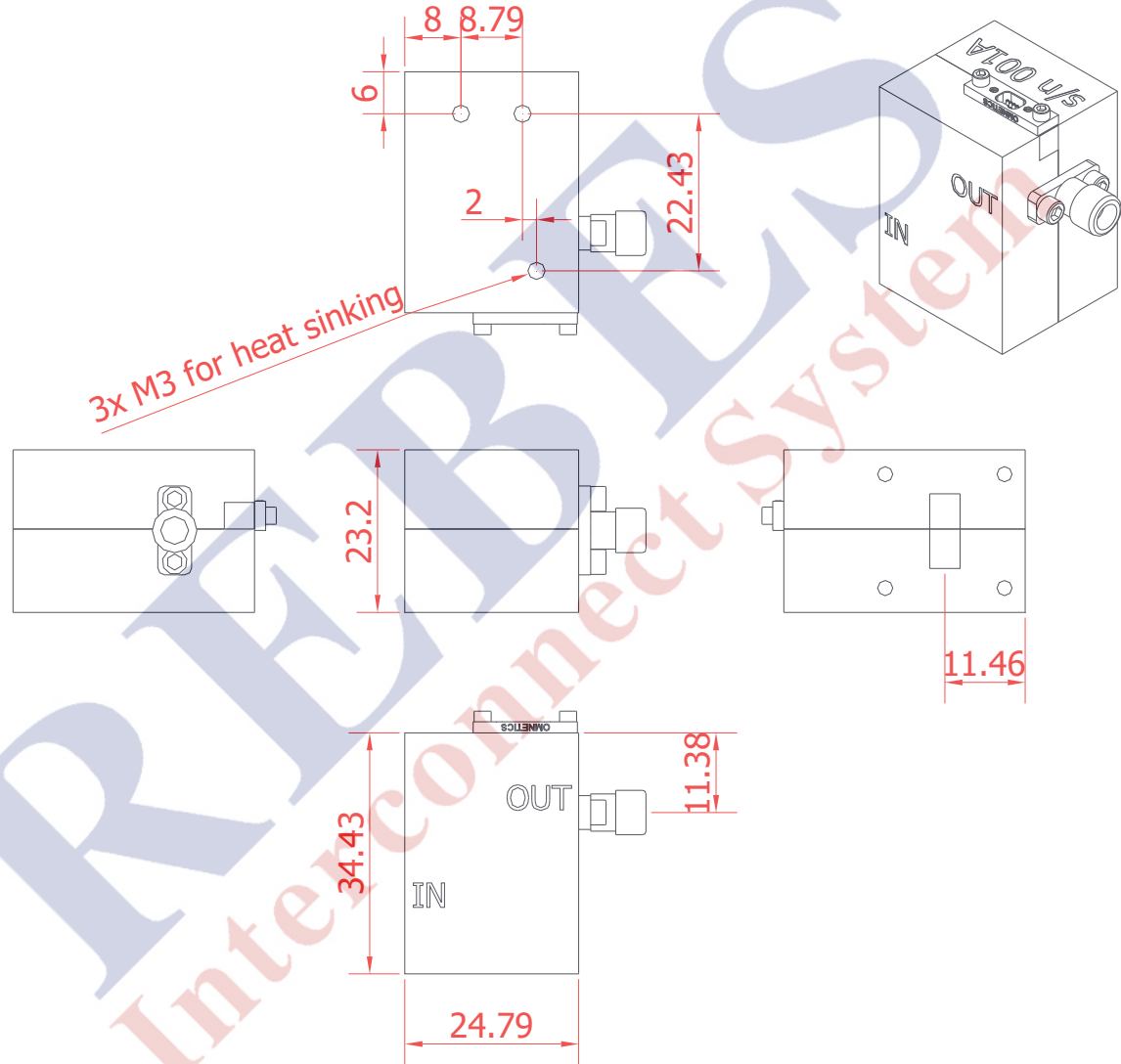
Measured typical data @ $T_{\text{amb}}=296\text{ K}$ 

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Drawings



Dimensions are in millimeters