



### Product features

- RF bandwidth: 0.3-14 GHz
- Noise Temperature: 4.2 K typical
- Noise Figure: 0.062 dB typical
- Gain: 36 dB
- DC-power:  $V_d=1.00$  V,  $I_d=22$  mA
- One gate and one drain supply only
- RF-connectors: female SMA
- DC-connector: 9-pin female Nano-D

### Product description

LNF-LNC0.3\_14A is an ultra-low noise cryogenic amplifier operating in the 0.3-14 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 22.0\*19.6\*7.80 mm excluding the connectors.

### 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

### Typical RF Characteristics

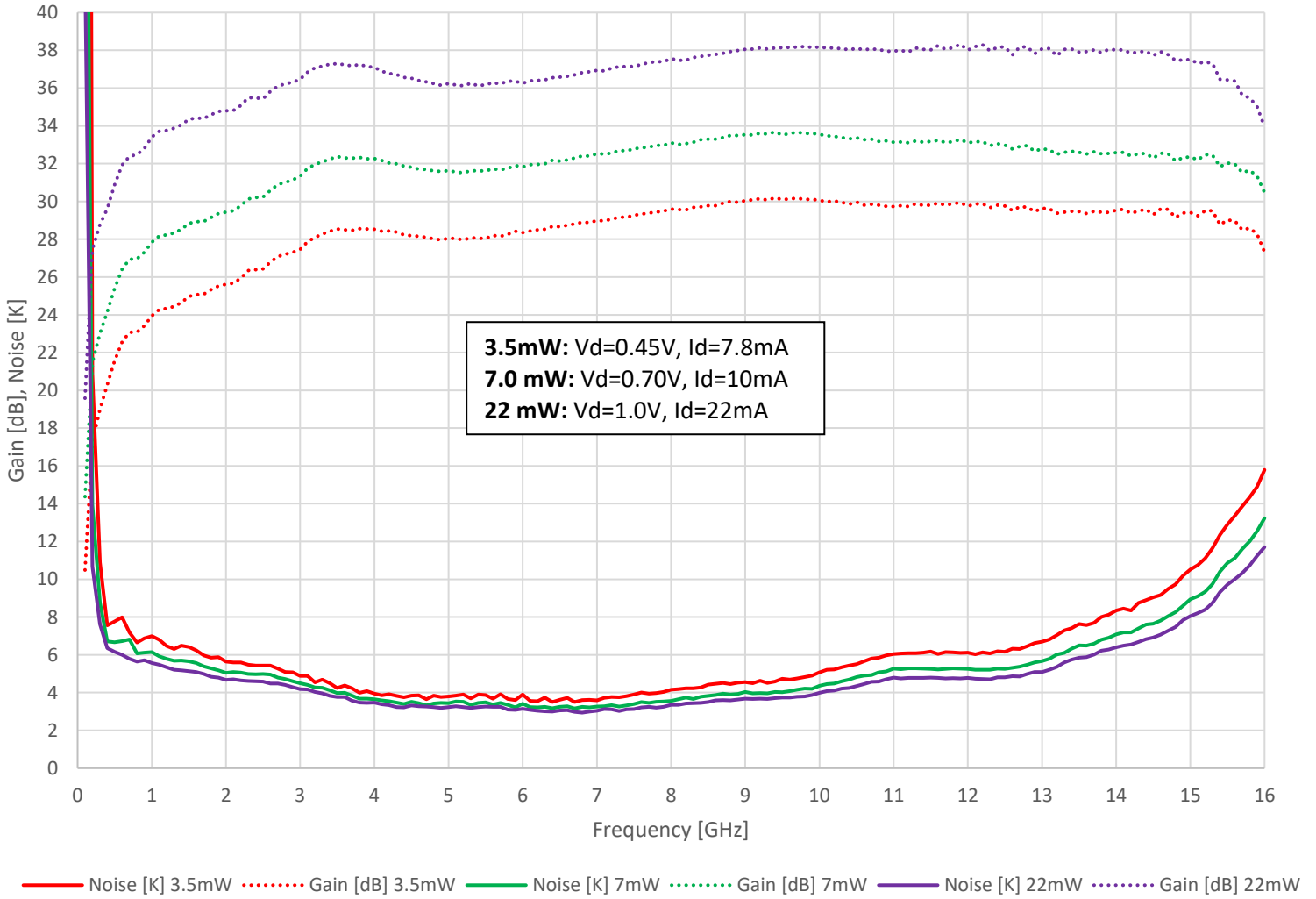
Parameter	Test Condition	Value	Unit
Gain	2-14GHz	36	dB
Noise	0.3-14 GHz	4.2	K
IRL	4-14 GHz	15	dB
ORL	1-14 GHz	20	dB
$P_{1dB}$	5 GHz	-10	dBm
OIP3	5 GHz	0	dBm

### Typical DC Characteristics

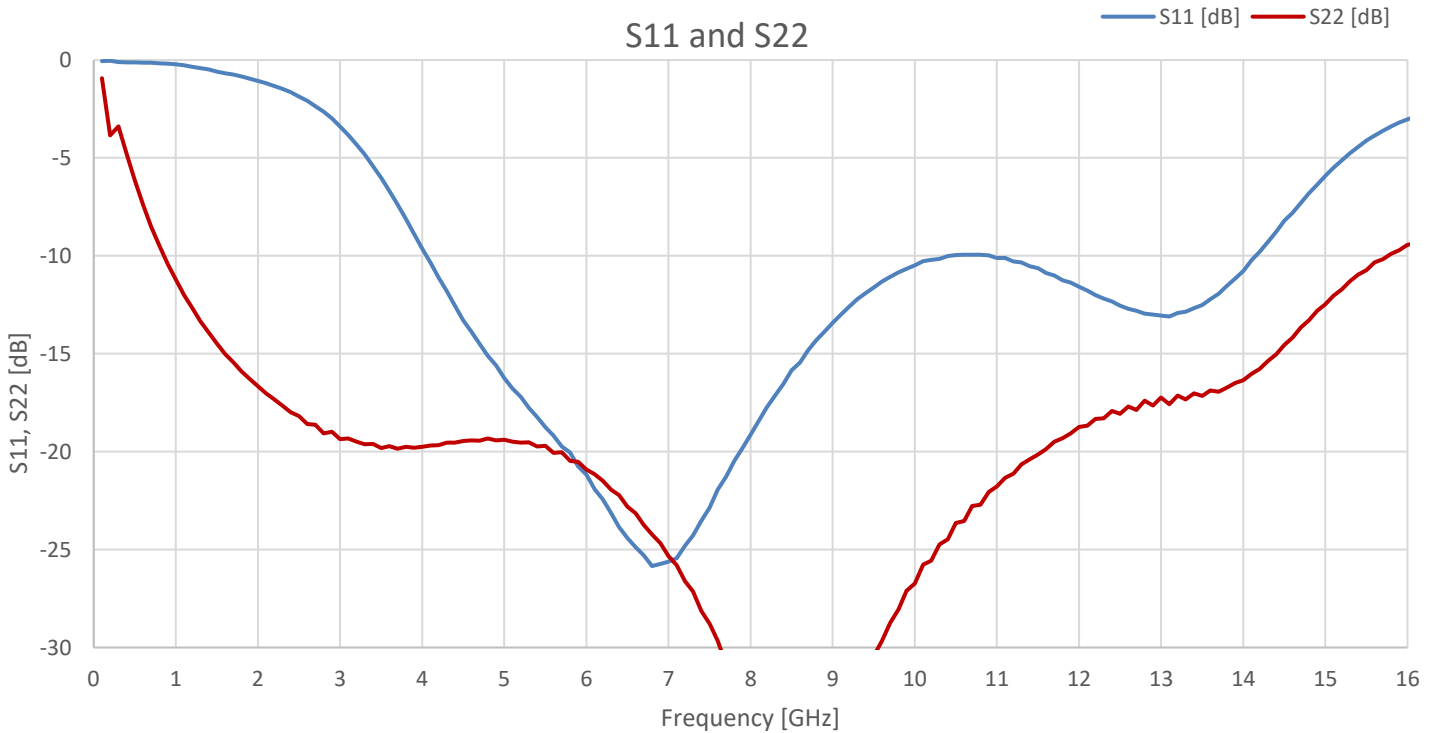
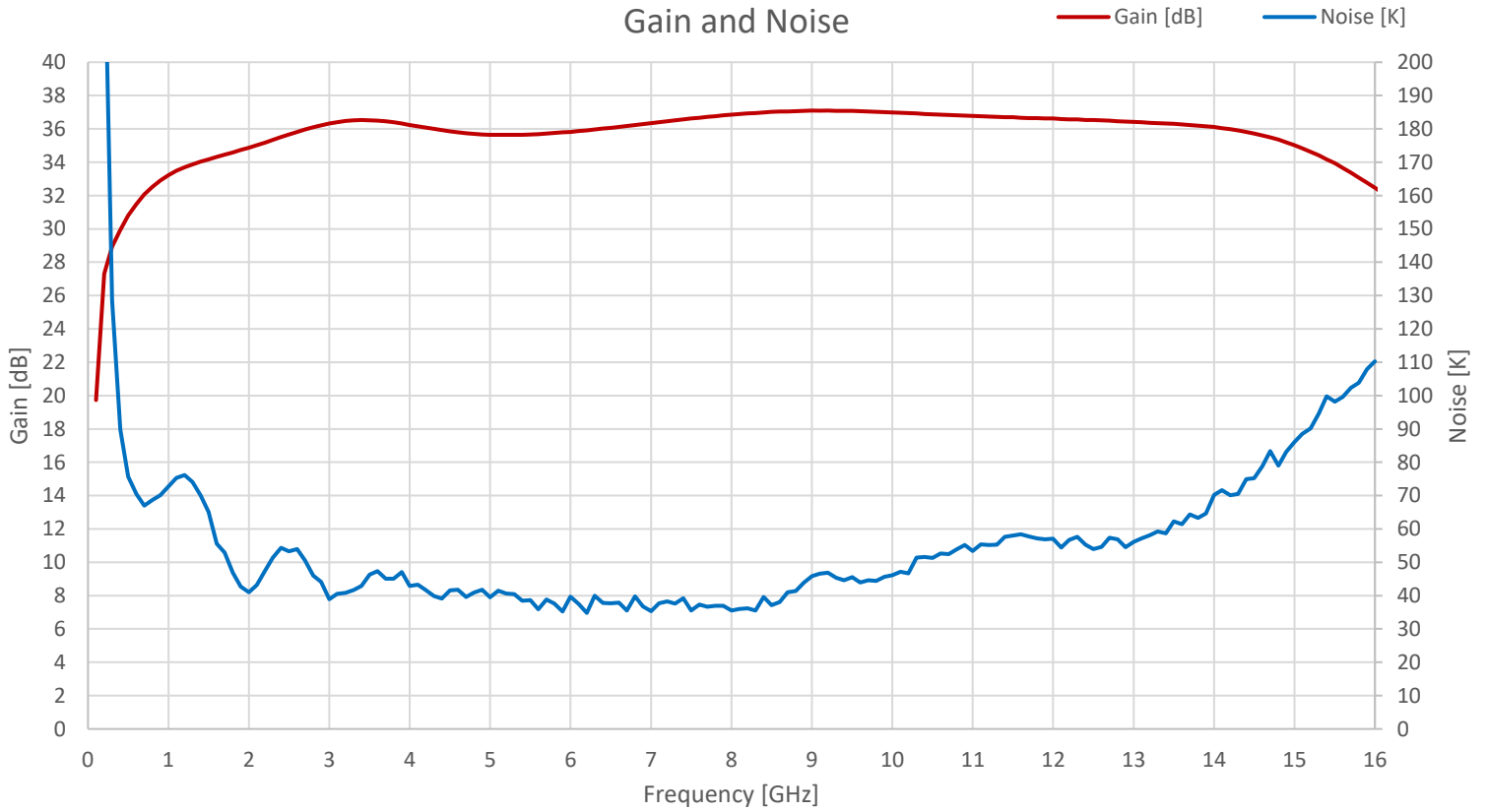
Parameter	Value	Unit
$V_{ds}$	1.0	V
$I_{ds}$	22	mA
$V_{gs}$	-0.1	V
$I_{gs}$	10	$\mu$ A
$P_{dc}$	22	mW

Measured typical data  $T_{amb}=4\text{ K}$

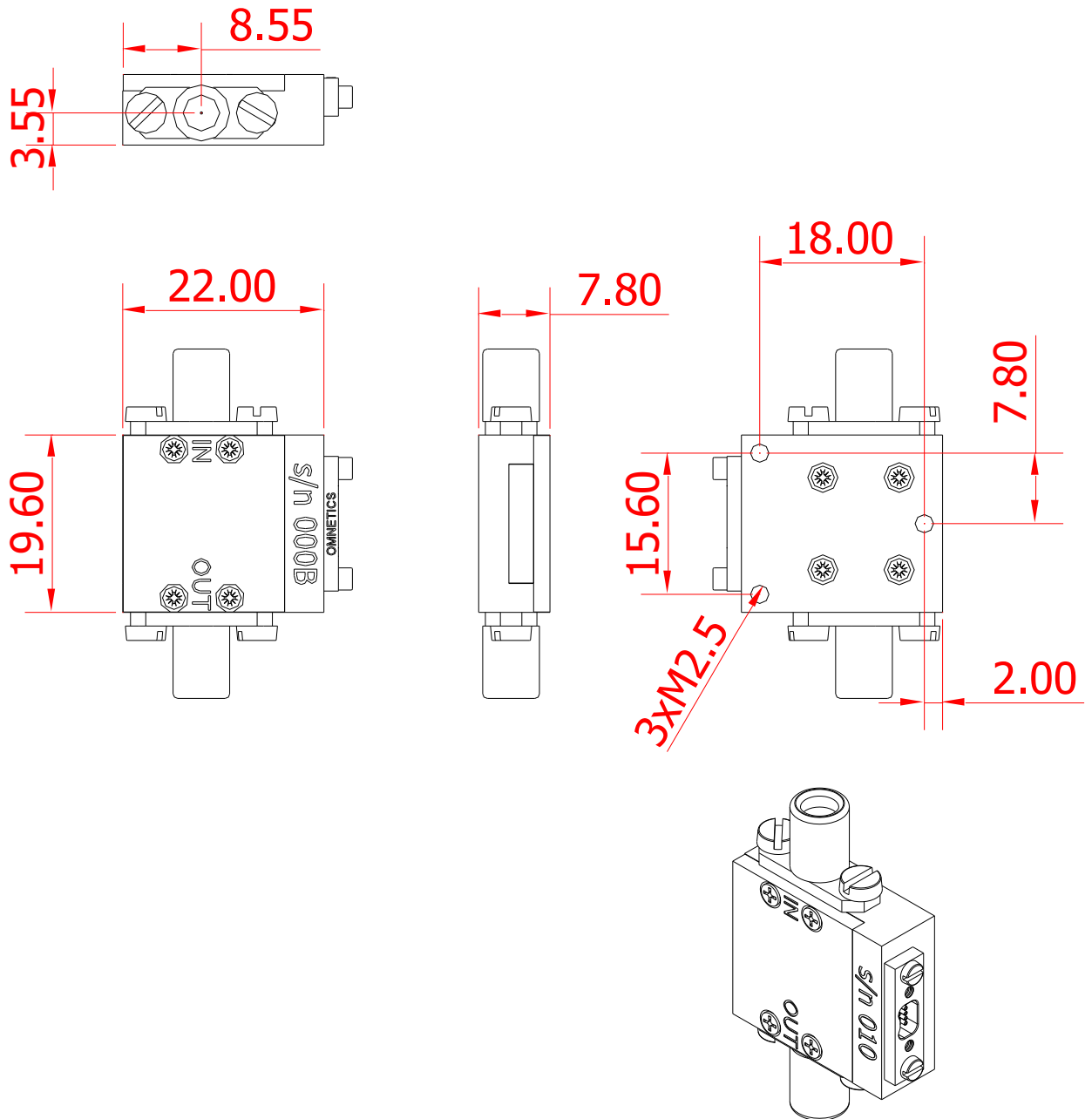
Gain and Noise



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



**Drawings**



Dimensions are in millimeters