



### Product features

- RF bandwidth: 19-34 GHz
- Noise Temperature: 11.8 K typical
- Noise Figure: 0.173 dB typical
- Gain: 27 dB
- DC-power:  $V_d=1$  V,  $I_d=14$  mA
- One gate and one drain supply only
- RF-connector: WR34, UG1530/U
- DC-connector: 9-pin female Nano-D

### Product description

LNF-LNC19\_34WA is an ultra-low noise cryogenic amplifier operating in the 19-34 GHz frequency range. The LNA is packaged in a waveguide module using industry standard WR34 and Nano-D connectors. The lightweight gold plated aluminum module measures 27.39\*33.56\*22.50 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

### Typical RF Characteristics

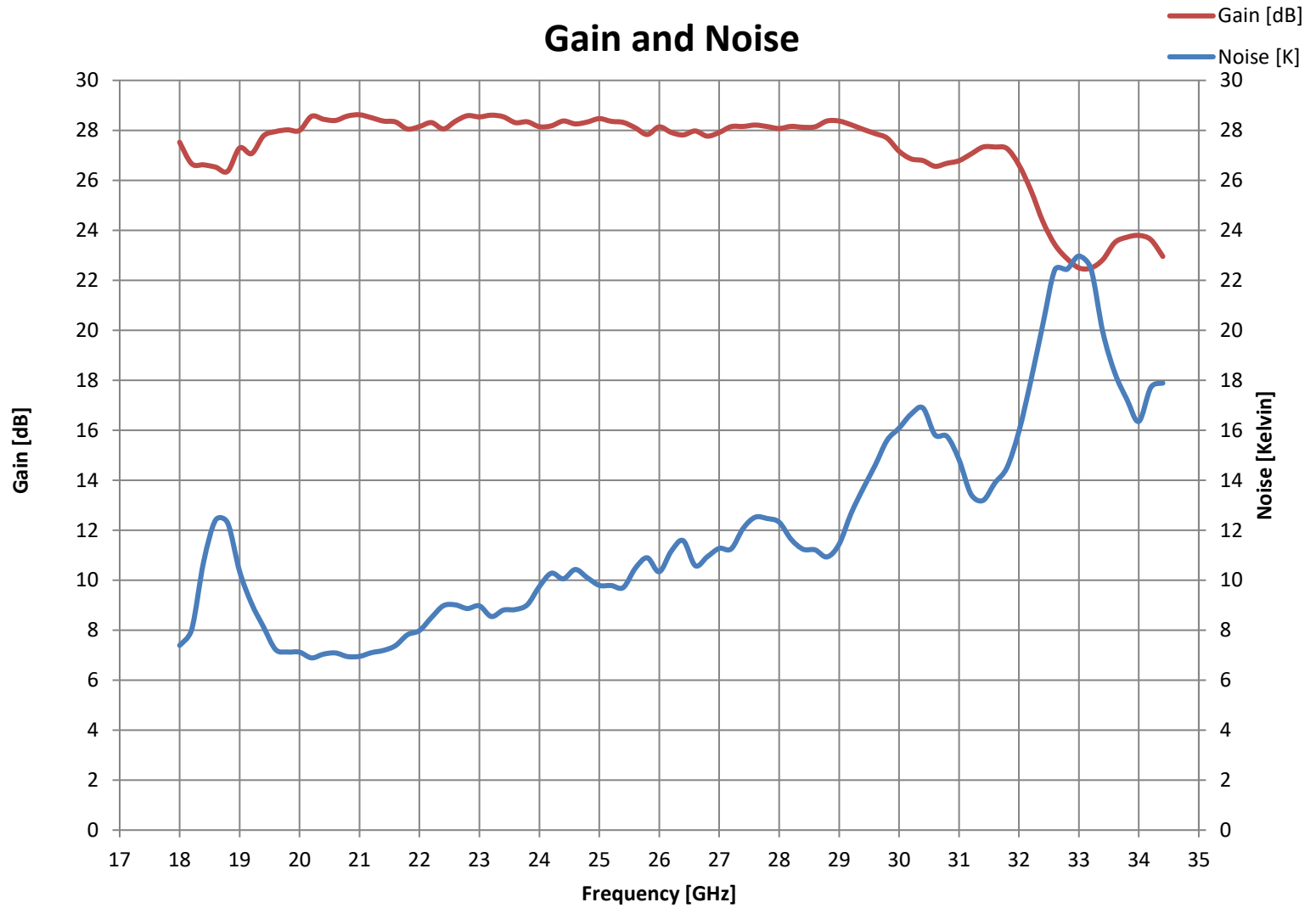
Parameter	Test Condition	Value	Unit
Gain	19-34 GHz	27	dB
Noise	19-34 GHz	11.8	K
IRL	19-34 GHz	12	dB
ORL	19-34 GHz	17	dB

### Typical DC Characteristics

Parameter	Value	Unit
$V_{ds}$	1	V
$I_{ds}$	14	mA
$V_{gs}$	-0.1	V
$I_{gs}$	9	$\mu$ A
$P_{dc}$	14	mW

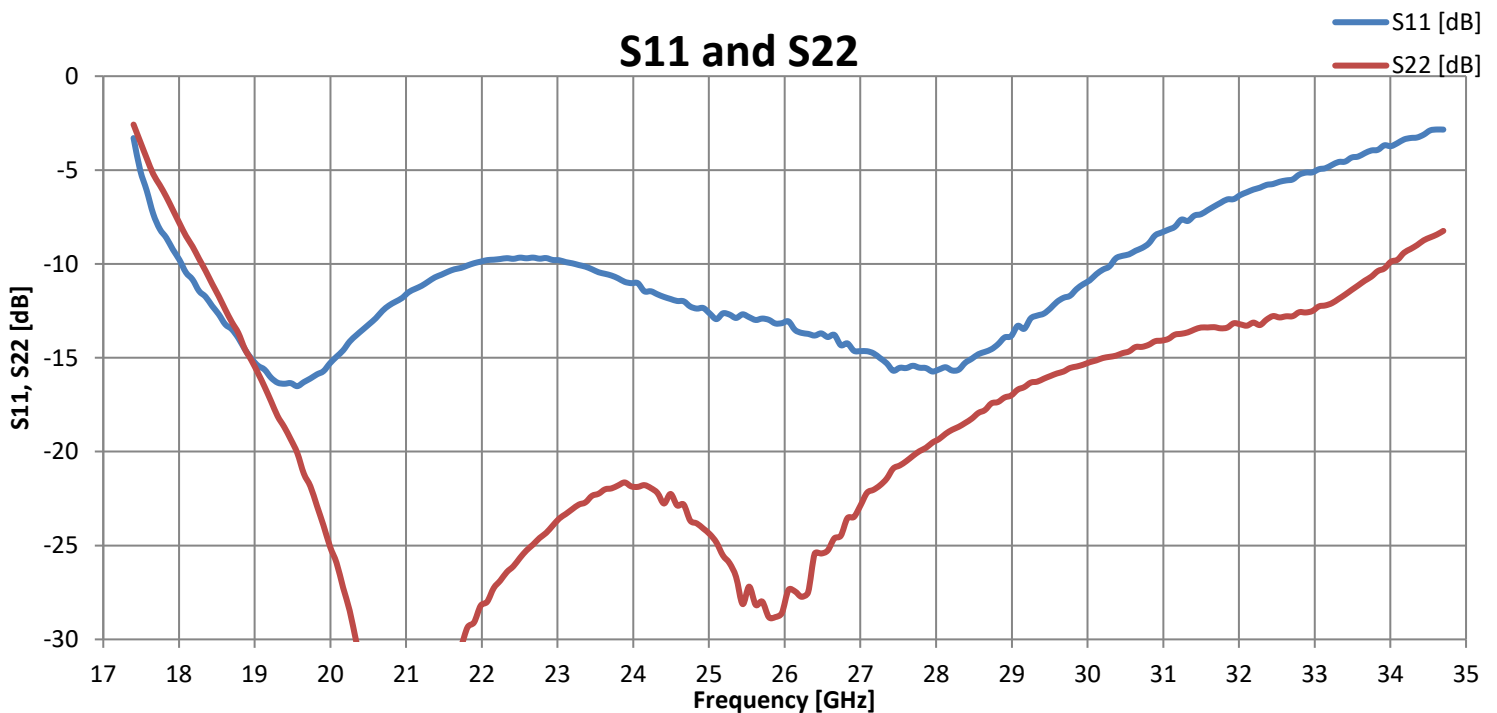
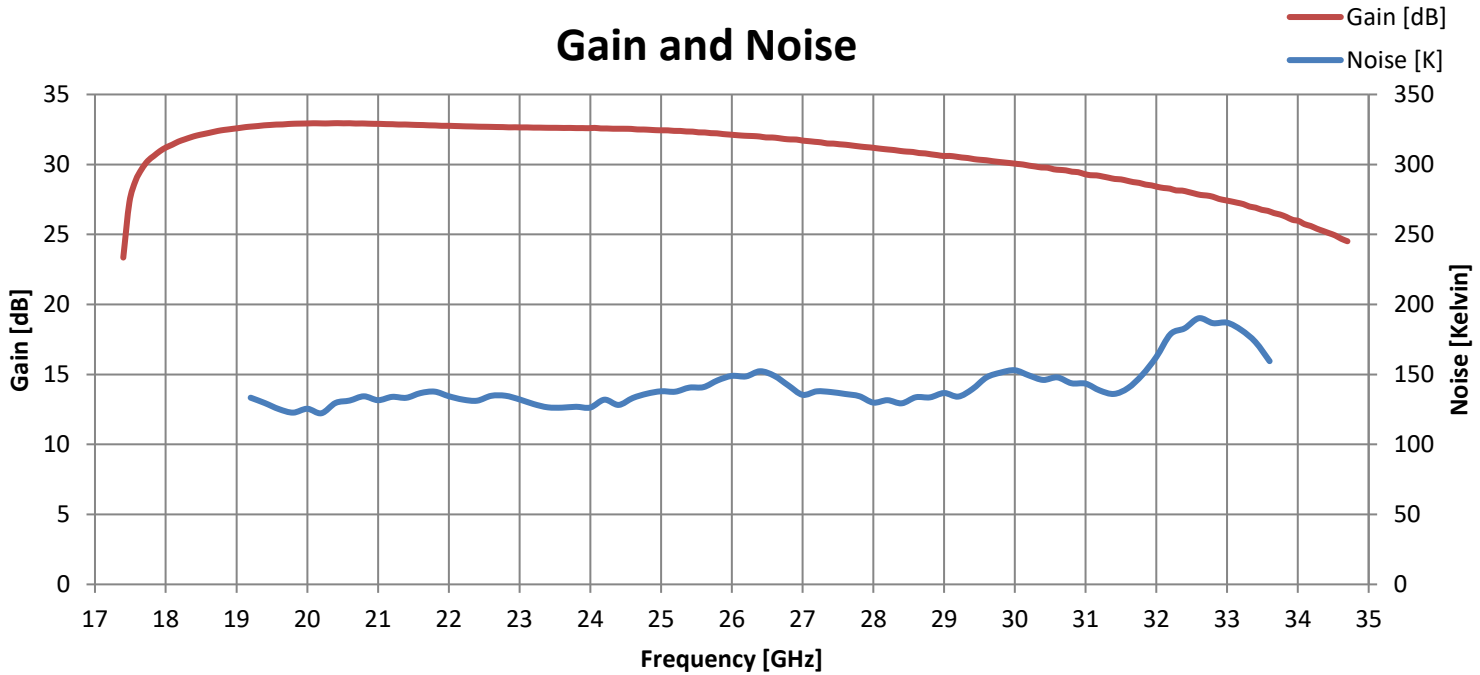
Measured typical data  $T_{amb}=5\text{ K}$

### Gain and Noise

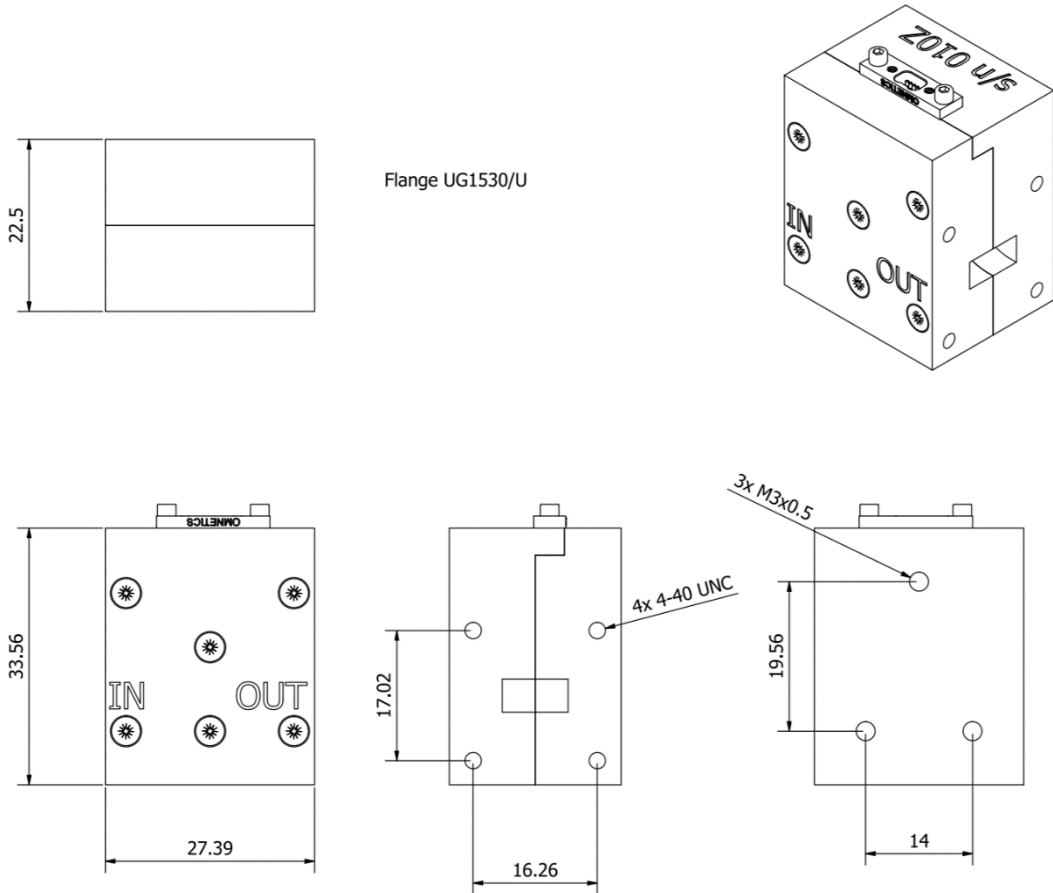


Includes the effect of coaxial-to-waveguide adaptors on input and output

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



## Drawings



Dimensions are in millimeters