

Model: TLLA4G8G-36-00-Cryo

C-band Cryogenic Low Noise Amplifier 4-8GHz, NF:2.5K@Temperature≤4K, Gain:40 dB

Feature:

- Ultra Wide Band: 4-8GHz
- Gain: 40dB
- Noise Figure: 4K Max@Temperature≤15K
- 2.5K Max@Temperature≤4K
- Technology: InP
- 50 Ohm Matched Input / Output

Electrical:

Parameter	Min.	Typ.	Max.	Units
Frequency range	4-8			GHz
Gain		40		dB
Gain Flatness		±1.0		dB
Noise Temperature		3.5	4	K @Temperature≤15K
Noise Temperature		2.0	2.5	K @Temperature≤4K
Input Return Loss			-6	dB
Output Return Loss			-13	dB
Drain voltage range	0.6	0.7	1.2	V DC
Drain current range		20		mA DC
Gate voltage range	-2		+2	V DC
Power Consumption			10	mW
Impedance	50			Ohms

Mechanical :

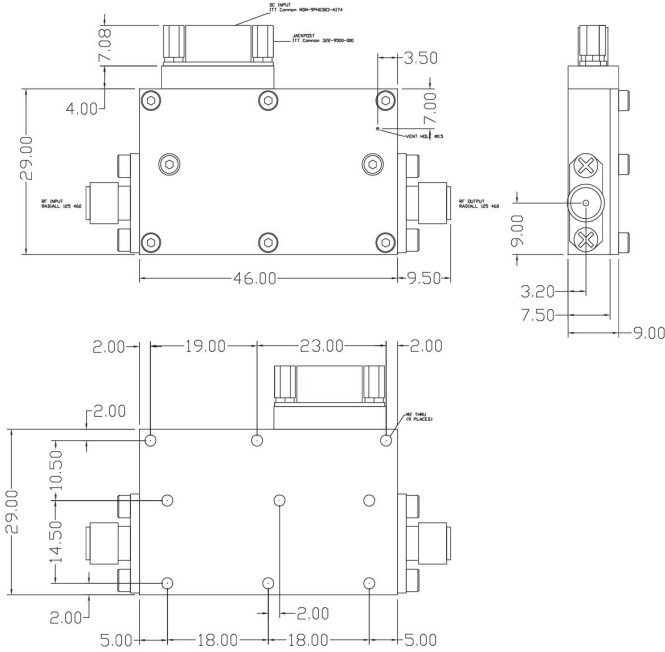
Parameter	Value	Units
Input /Output Connector	SMA Female	
Bias	Nano D connector	
Size	46*32.5*9	mm
Weight	65	g

Absolute Maximum Ratings:

Parameter	Value
Drain voltage range	+1.2V
Gate voltage range	±2V
ESD sensitivity (HBm)	Class 0, passed 150V

Outline Drawing:

Unit: mm



Nano D Female Define

Pin #	Function
1	GND
2	VD1 (0.7 to 1.2V)
3	VG1 (-2 to +2V)
4-9	NC



Note: Cryogenic low noise amplifiers made with InP FETs have been found very sensitive to ESD and leakage from the power supplies.

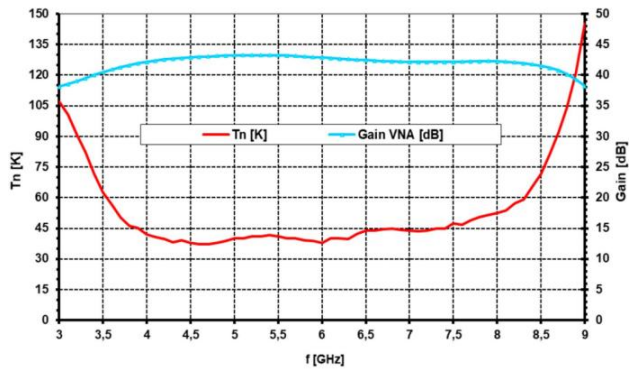
Ordering Information:

Part Number	Description	Revision
TLLA4G8G-36-00-Cryo	C-band Cryogenic Low Noise Amplifier 4-8GHz, NF:2.5K@Temperature≤4K, Gain:40 dB	Rev.1.3

Typical Performance Data:

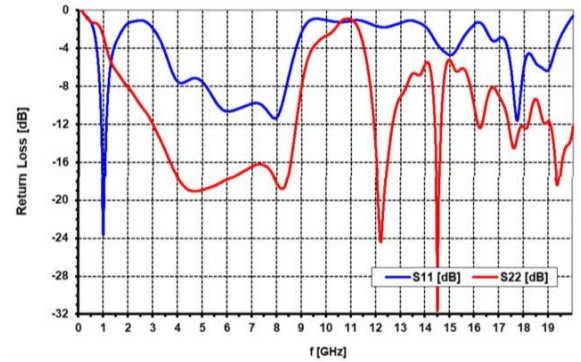
1.2V & 30mA

@ 295K



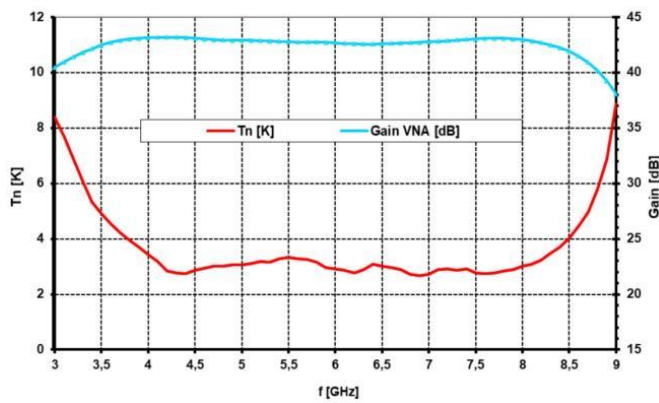
1.2V & 30mA

@ 295K



$\leq 10\text{mW}$

@ 12K



$\leq 10\text{mW}$

@ 12K

