

Low Noise Amplifier

0.9-2.5GHz/1.5dB NF/15dB Gain/15dBm P1dB

Model: TLLA0.9G2.5G-15-15

TLLA0.9G2.5G-15-15 is a low noise amplifier with a typical small signal gain of 15 dB and a maximum noise figure of 1.5 dB across the frequency range of 0.9 to 2.5 GHz. The DC power requirement for the amplifier is +12 V DC/60 mA. The input and output port configuration offers coax adapter structure with SMA female.

Features:

- Frequency range: 0.9-2.5GHz
- Gain: 15dB Typ
- Noise Figure: 1.5dB Max
- Good Power and Gain Flatness
- 50 Ohm Matched Input / Output

Applications:

- Communication systems

Electrical Characteristics:

Parameter	Min	Typ	Max	Units
Frequency range	0.9		2.5	GHz
Small Signal Gain		15		dB
Gain Flatness		±0.75		dB
Noise Figure		1.3	1.5	dB
Output P1dB	15	17		dBm
Input VSWR		1.4	1.6	:1
Output VSWR		1.4	1.6	:1
DC Voltage		+12		V DC
DC Supply Current		60		mA
Impedance		50		Ohms

Mechanical Specifications:

Parameter	Value	Units
Input /Output Connector	SMA Female/SMA Female	
DC Bias	Solder Pin	
Size	44.8*29.2*11	mm
Weight	55	g

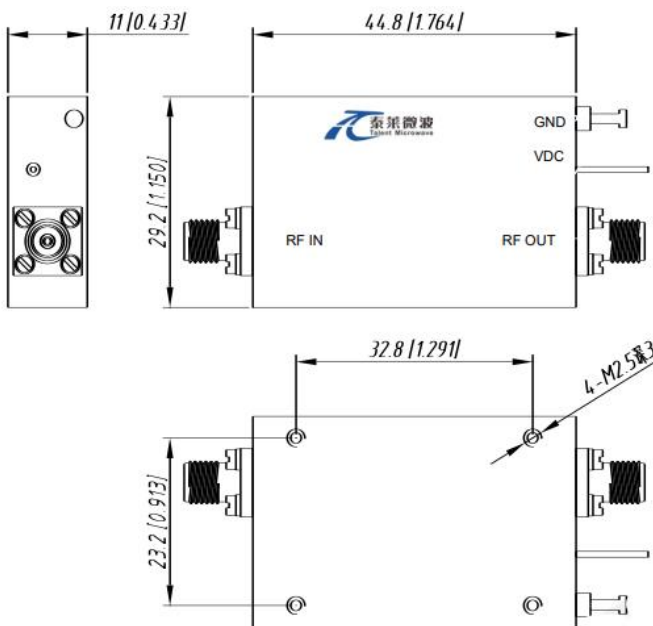
Absolute Maximum Ratings:

Parameter	Value
Supply Bias Voltage	+15V
RF Input Power	+12dBm
ESD sensitivity (HBm)	Class 0, passed 150V

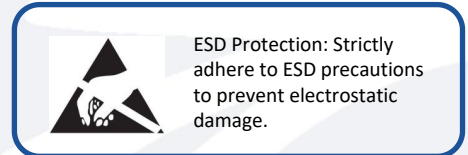


Outline Drawing:

Unit:mm



*****Heat Sink Required During Operation**



Environmental Conditions:

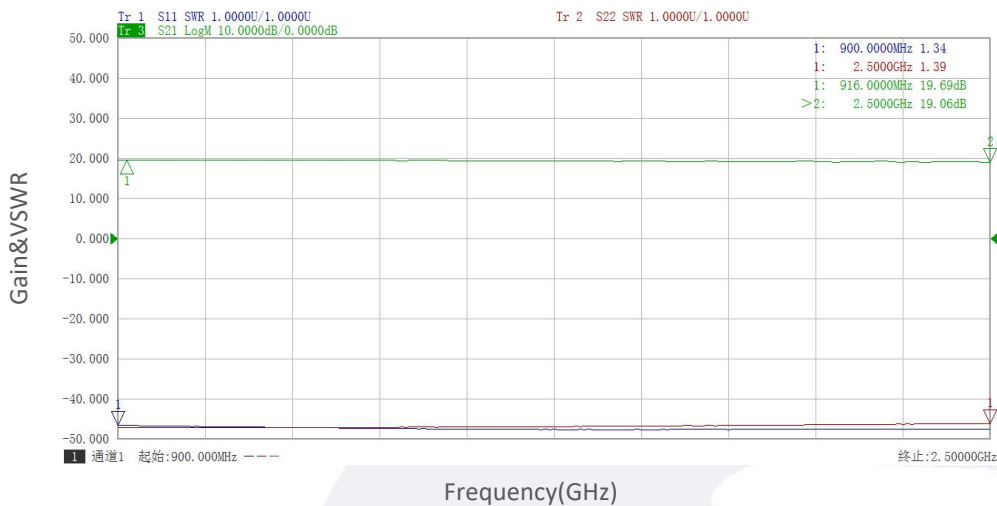
Parameter	Min	Typ	Max	Units
Operating Temperature	-45		+85	°C
Non-operating Temperature	-55		+125	°C
Relative humidity		95		%
Altitude	50,000			feet
Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
Shock(non operating)	20G for 11msc half sin wave,3 axis both directions			

Ordering Information:

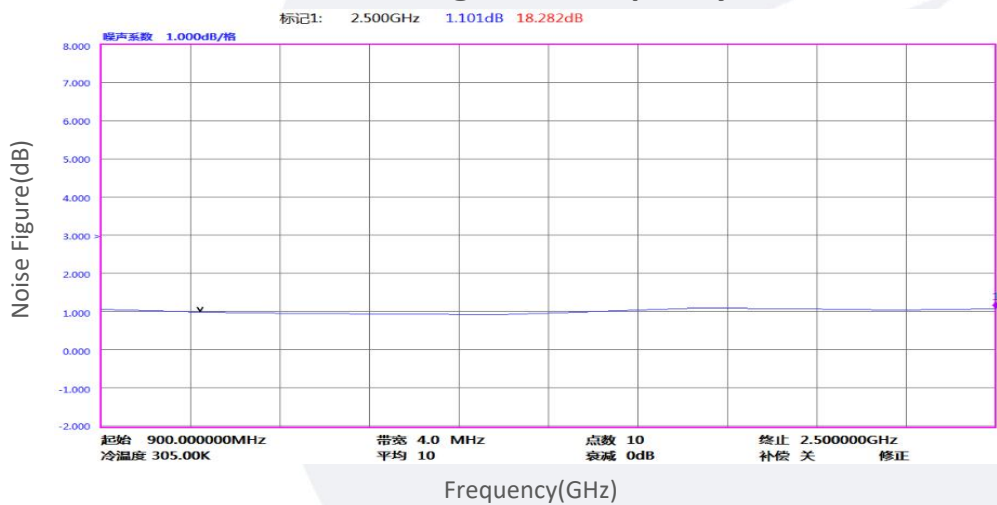
Base Number	Description	Revision
TLLA0.9G2.5G-15-15	Low Noise Amplifier, 0.9-2.5GHz, Noise Figure:1.5dB, Gain:15 dB,P1dB:15dBm,+12V DC,Without Heatsink	Rev.1.1
TLLA0.9G2.5G-15-15-HS	Low Noise Amplifier, 0.9-2.5GHz, Noise Figure:1.5dB, Gain:15 dB,P1dB:15dBm,+12V DC,With Heatsink	Rev.1.1

Typical Performance Data:

Gain&VSWR vs Frequency



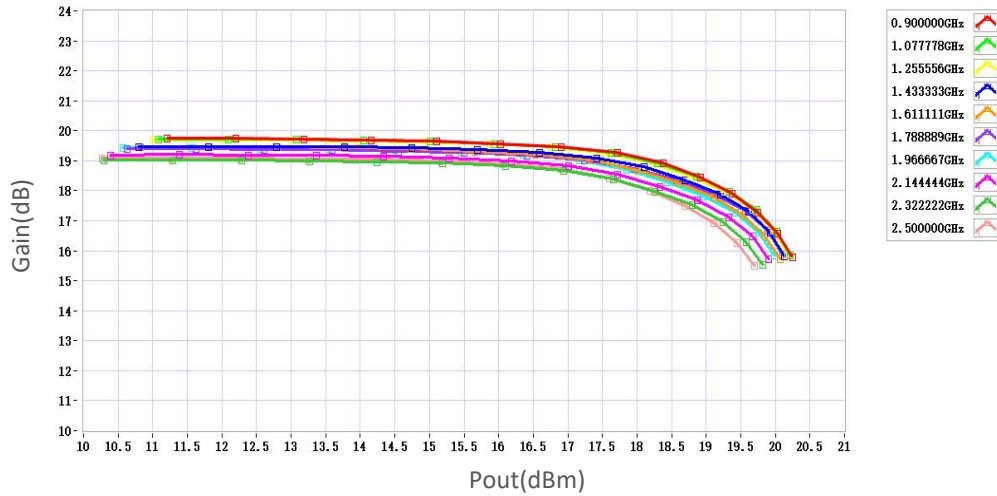
Noise Figure vs Frequency



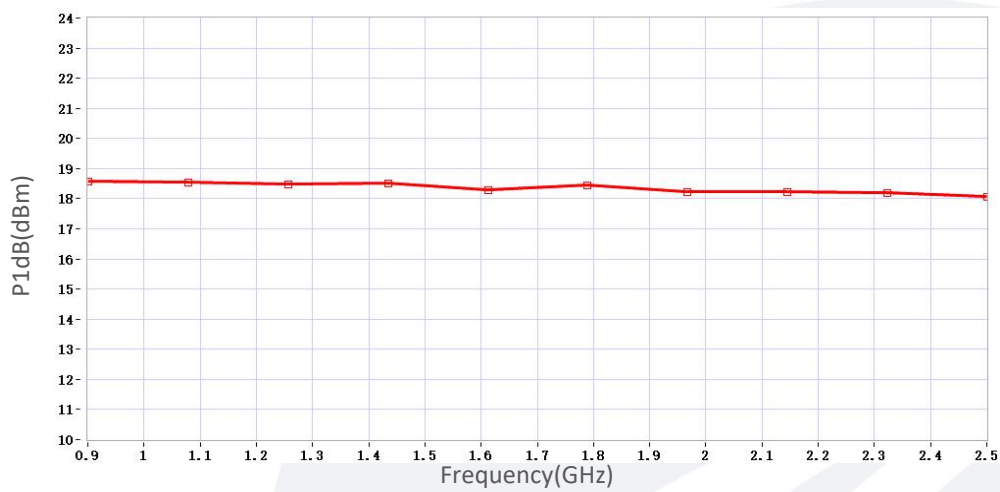
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

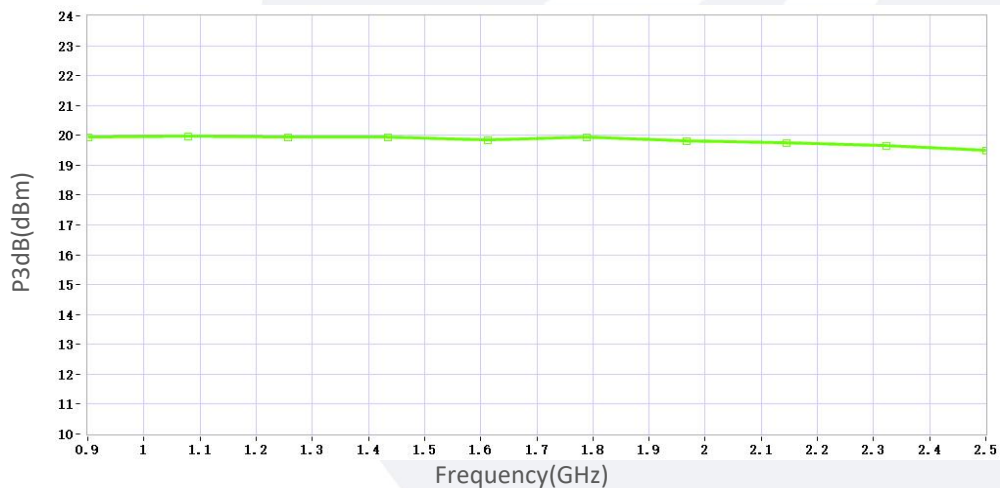
Gain vs Output Power



P1dB vs Frequency



P3dB vs Frequency



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