Suzhou Talent Microwave,Inc
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Low Noise Amplifier

4-8GHz/2.0dB NF/42dB Gain/26.5dBm P1dB

Model: TLLA4G8G-35-20

TLLA4G8G-35-20 is a low noise amplifier with a typical small signal gain of 42 dB and a maximum noise figure of 2.5 dB across the frequency range of 4 to 8 GHz. The DC power requirement for the amplifier is +15 V DC/320 mA. The input and output port configuration offers coax adapter structure with SMA female.

Features:

- Frequency range: 4-8GHz
- Gain: 42dB Typ
- Noise Figure: 2.5dB Max
- Good Power and Gain Flatness
- 50 Ohm Matched Input / Output

Applications:

- Communication systems

Electrical Characteristics:

Parameter	Min	Typ	Max	Units
Frequency range	4		8	GHz
Small Signal Gain	41	42		dB
Noise Figure			2.5	dB
Output P1dB	25.5	26.5		dBm
Output Psat	26.5	28		dBm
Input VSWR		1.8		:1
Output VSWR		2.3		:1
Monitor Power Threshold(Control NC)		20		dBm
TTL Monitor Output TTL		0/+3.3		V
DC Voltage	+12	+15	+16	V DC
DC Supply Current		320		mA
Impedance		50		Ohms

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Mechanical Specifications:

Parameter	Value	Units
Input /Output Connector	SMA Female/SMA Female	
DC Bias	Solder Pin	
Size	35*45*9.5	mm

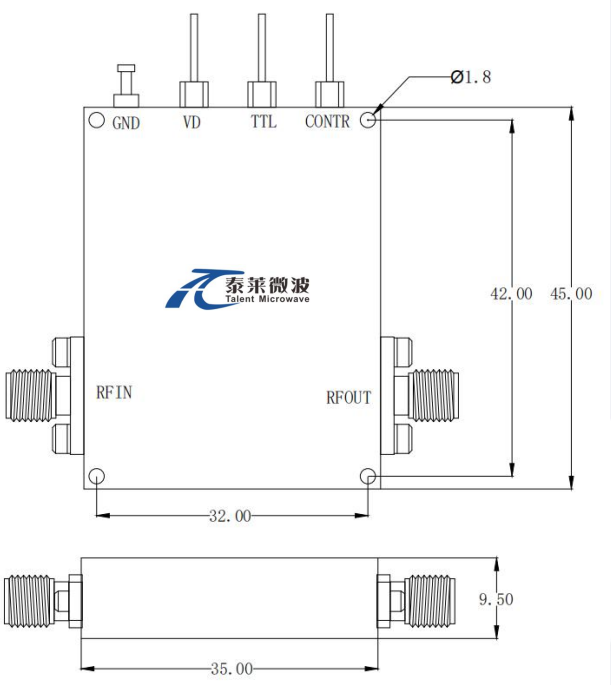
Absolute Maximum Ratings:

Parameter	Value
Supply Bias Voltage	+16 V
RF Input Power	+10 dBm
ESD sensitivity (HBm)	Class 0, passed 150V

Simple 220V System
Available SAC option

Outline Drawing:

Unit:mm



***Heat Sink Required During Operation

ESD Protection: Strictly adhere to ESD precautions to prevent electrostatic damage.

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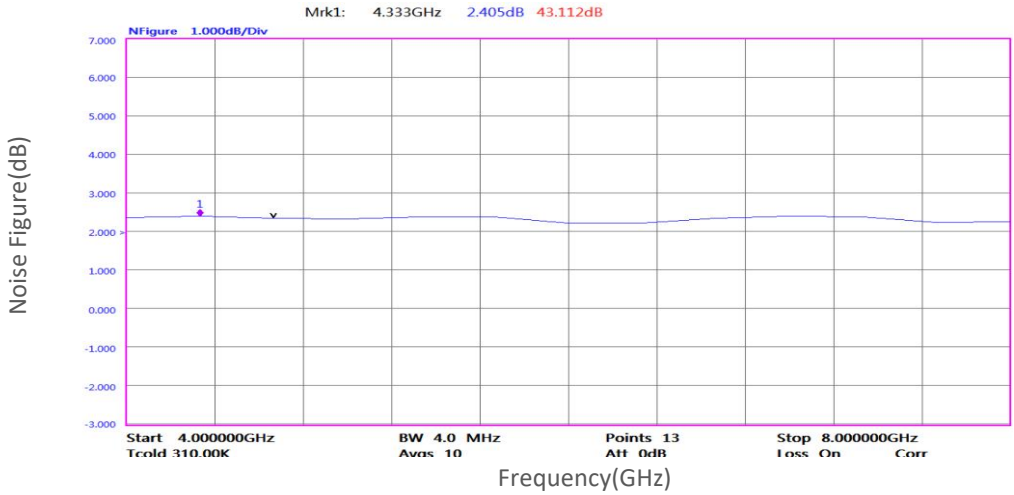
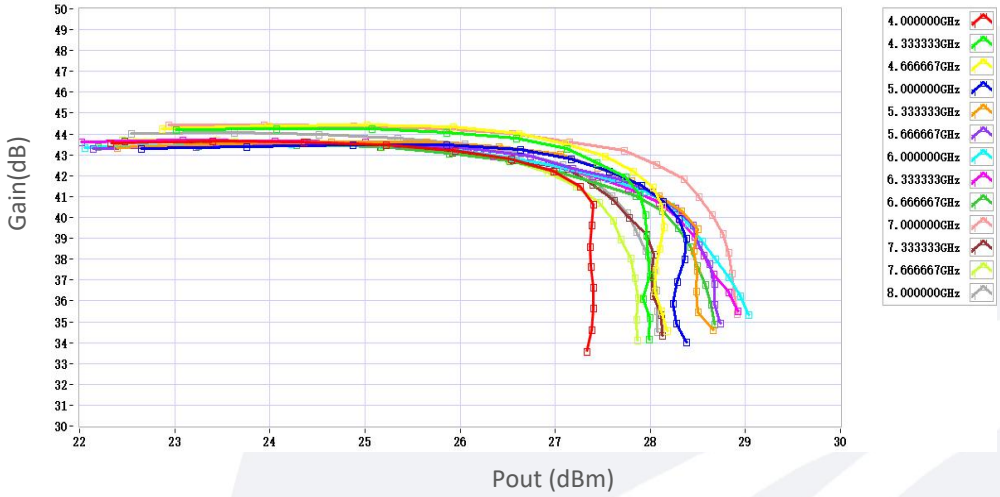
Typical Performance Data:

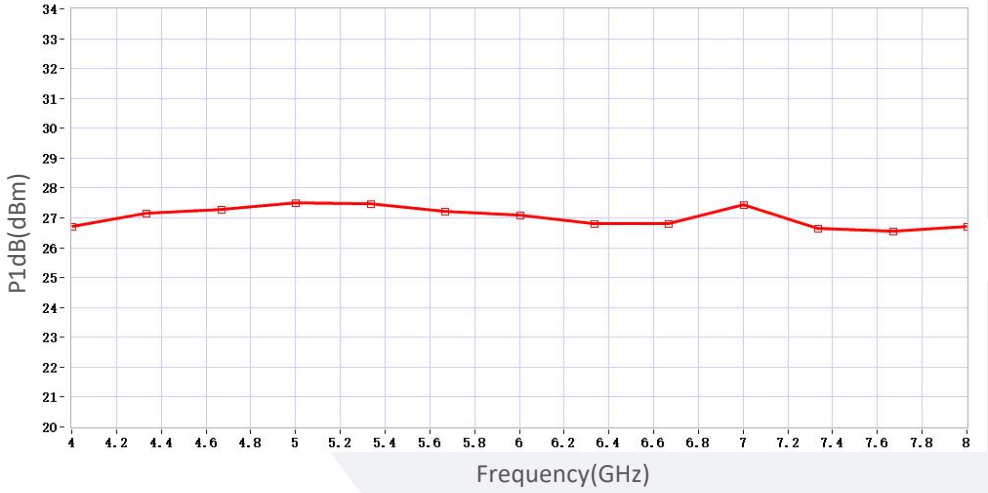
Noise Figure vs Frequency



Gain vs Output Power



P1dB 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.

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Environmental Conditions:

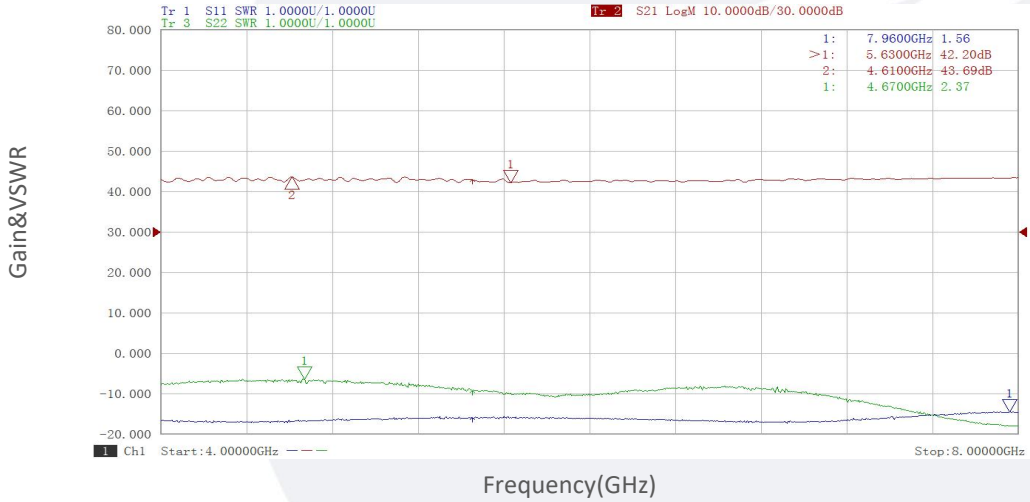
Parameter	Min	Typ	Max	Units
Operating Temperature	-45		+85	℃
Non-operating Temperature	-55		+125	℃
Relative humidity		95		%
Altitude	10,000			feet
Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
Shock(non operating)	20G for 11msc half sin wave,3 axis both directions			

Ordering Information:

Base Number	Description	Revision
TLLA4G8G-35-20	Low Noise Amplifier, 4-8GHz, Noise Figure:2.5dB, Gain:42dB,P1dB:26.5dBm,+15V DC,Without Heatsink	Rev.1.1
TLLA4G8G-35-20-HS	Low Noise Amplifier, 4-8GHz, Noise Figure:2.5dB, Gain:42dB,P1dB:26.5dBm,+15V DC,With Heatsink	Rev.1.1

Typical Performance Data:

Gain&VSWR vs Frequency



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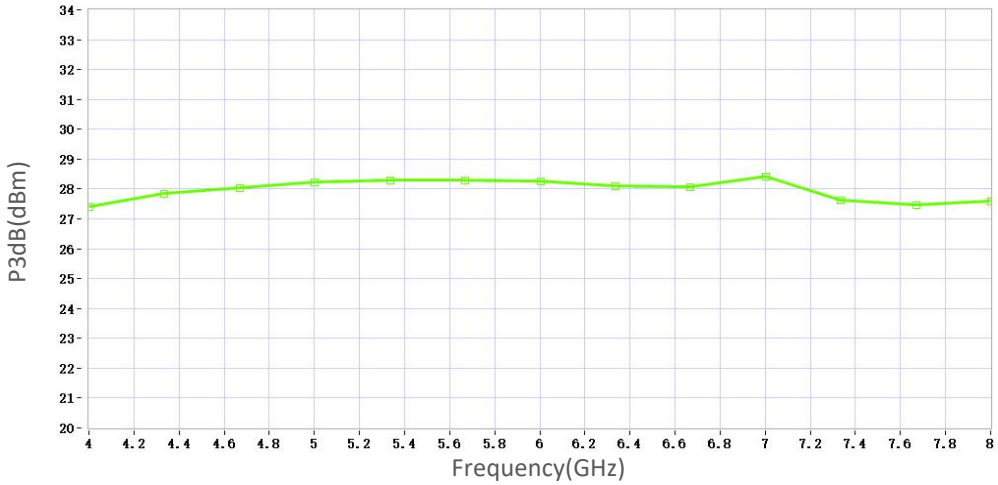
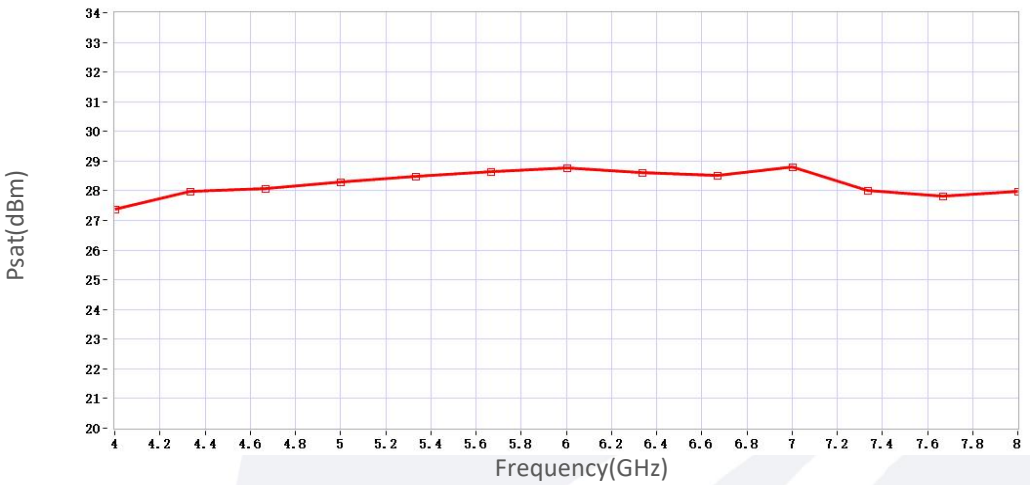
Typical Performance Data:

P3dB vs Frequency



Psat vs Frequency



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