泰莱微波
Talent Microwave

Suzhou Talent Microwave,Inc
sales@talentmw.com
www.talentmw.com

Low Noise Amplifier

0.5-40GHz/5.0dB NF/28dB Gain/17dBm P1dB Model: TLLA0.5G40G-28-50

TLLA0.5G40G-28-50 is a low noise amplifier with a typical small signal gain of 28 dB and a nominal noise figure of 5.0 dB across the frequency range of 0.5 to 40 GHz. The DC power requirement for the amplifier is +12 V DC/400 mA. The input and output port configuration offers coax adapter structure with 2.92mm female.

Features:

- Frequency range: 0.5-40GHz
- Gain: 28dB Typ
- Noise Figure: 5.0dB Typ
- Good Power and Gain Flatness
- 50 Ohm Matched Input / Output

Applications:

- Communication systems

Electrical Characteristics:

Parameter	Min	Typ	Max	Units
Frequency range	0.5		40	GHz
Small Signal Gain	25	28		dB
Gain Flatness		±2.0	±2.5	dB
Noise Figure		5.0		dB
Output P1dB		17		dBm
Output IP3		30		dBm
Input VSWR		1.8	2.5	:1
Output VSWR		1.8	2.5	:1
DC Voltage		+12		V DC
DC Supply Current		400		mA
Impedance		50		Ohms

Mechanical Specifications:

Parameter	Value	Units
Input /Output Connector	2.92mm Female/2.92mm Female	
DC Bias	Solder Pin	
Size	48*30*12(Without Heatsink) 92*30*27(With Heatsink 92*30*15)	mm

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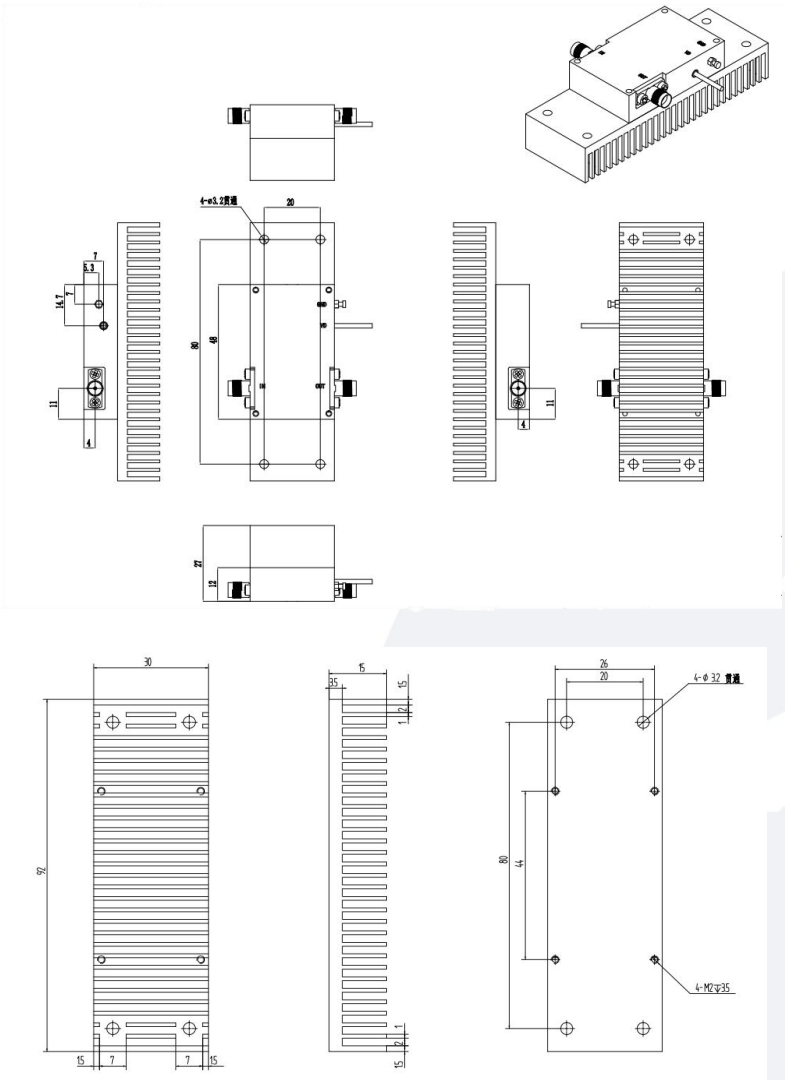
Absolute Maximum Ratings:

Parameter	Value
Supply Bias Voltage	TBD
RF Input Power	-5 dBm
ESD sensitivity (HBm)	Class 0, passed 150V

Outline Drawing:

Unit:mm



***Heat Sink Required During Operation

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

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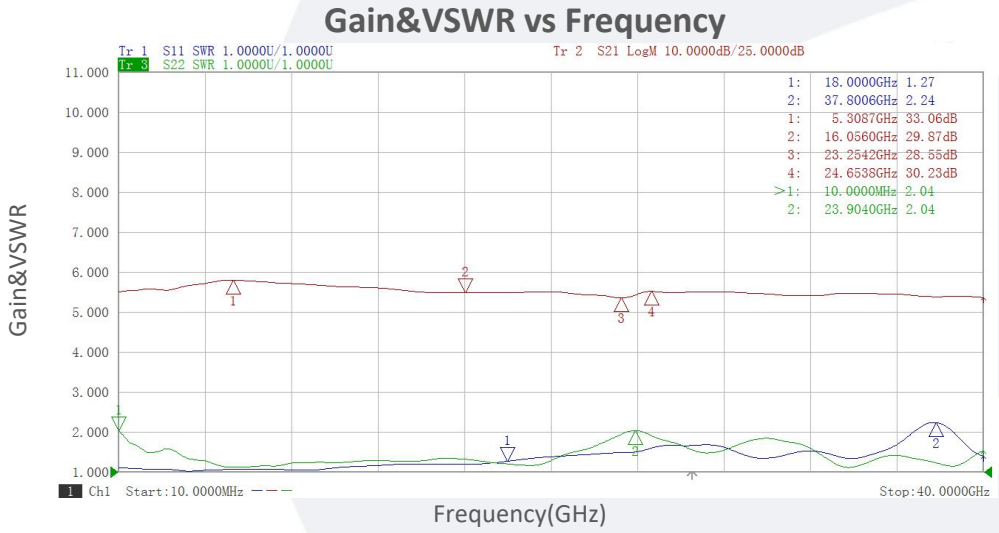
Environmental Conditions:

Parameter	Min	Typ	Max	Units
Operating Temperature	-45		+85	℃
Non-operating Temperature	-55		+125	℃
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
TLLA0.5G40G-28-50	Low Noise Amplifier, 0.5-40GHz, Noise Figure:5.0dB, Gain:28 dB,P1dB:17dBm,+12V DC,Without Heatsink	Rev.1.1
TLLA0.5G40G-28-50-HS	Low Noise Amplifier, 0.5-40GHz, Noise Figure:5.0dB, Gain:28 dB,P1dB:17dBm,+12V DC,With Heatsink	Rev.1.1

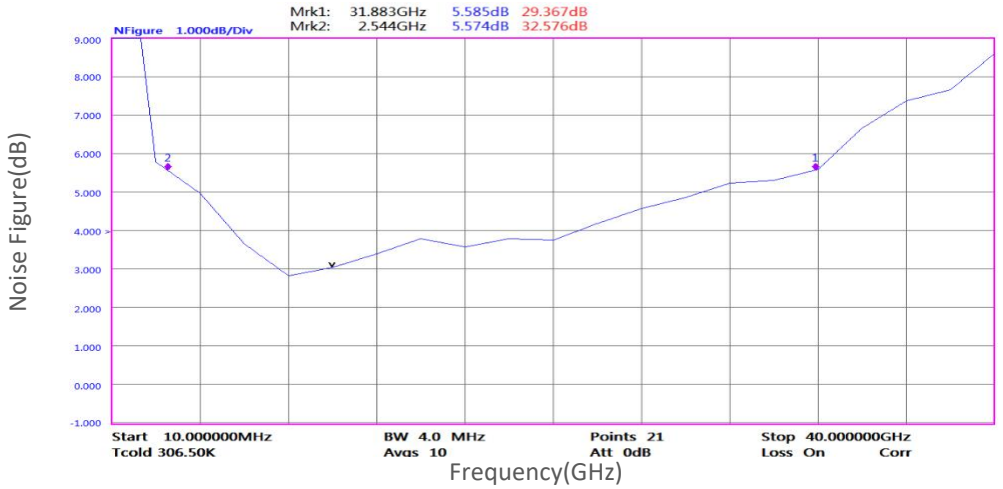
Typical Performance Data:



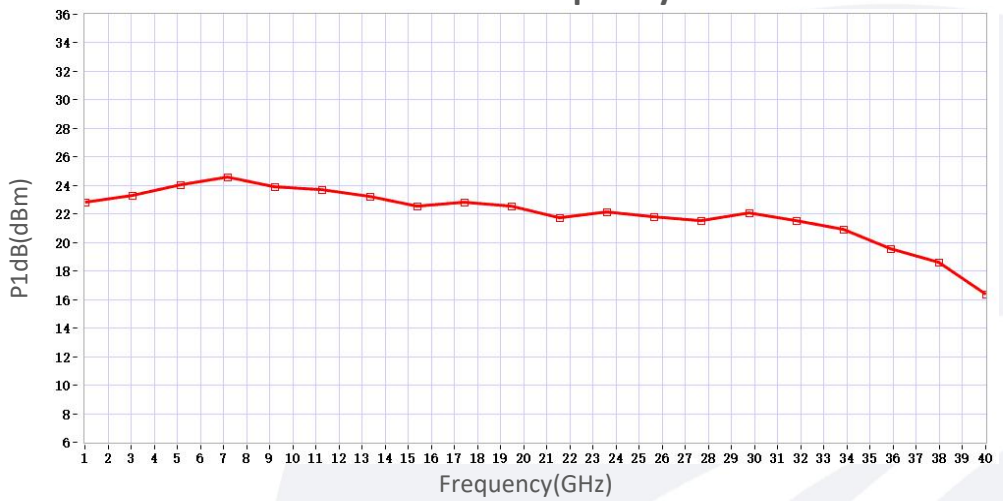
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

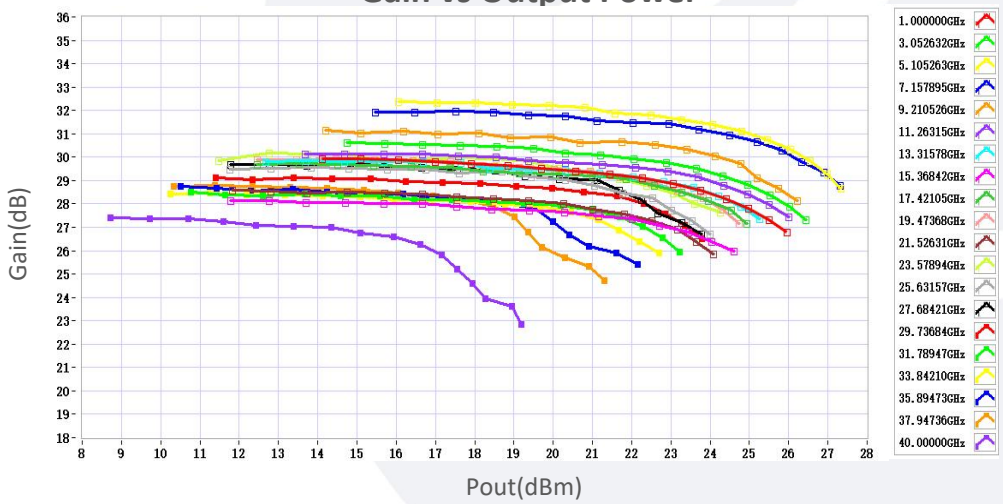
Noise Figure vs Frequency



P1dB vs Frequency



Gain vs Output Power



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