泰莱微波
Talent Microwave

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Low Noise Amplifier

40-50GHz/3.5dB NF/53dB Gain/20dBm P1dB

Model: TLLA40G50G-50-35

TLLA40G50G-50-35 is a low noise amplifier with a typical small signal gain of 53 dB and a maximum noise figure of 3.5 dB across the frequency range of 40 to 50 GHz. The DC power requirement for the amplifier is +12 V DC/270 mA. The input and output port configuration offers coax adapter structure with 2.4mm female.

Features:

- Frequency range:40-50GHz
- Gain: 53dB Typ
- Noise Figure: 3.5dB Max
- Good Power and Gain Flatness
- 50 Ohm Matched Input / Output

Applications:

- Communication systems

Electrical Characteristics:

Parameter	Min	Typ	Max	Units
Frequency range	40		50	GHz
Small Signal Gain	50	53		dB
Gain Flatness		±4		dB
Noise Figure		3	3.5	dB
Output P1dB		20		dBm
Spurious		-60		dBc
Input VSWR		2		:1
Output VSWR		2		:1
DC Voltage	8	12		V DC
DC Supply Current	180	270		mA
Impedance		50		Ohms

Mechanical Specifications:

Parameter	Value	Units
Input /Output Connector	2.4mm Female/2.4mm Female	
DC Bias	Solder Pin	
Size	44*36*12	mm

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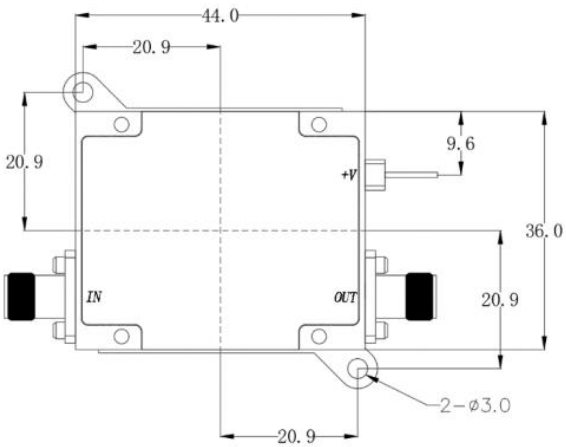
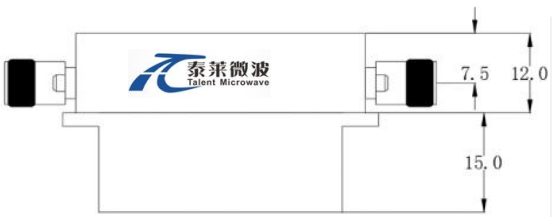
Absolute Maximum Ratings:

Parameter	Value
Supply Bias Voltage	+13 V
RF Input Power	+5 dBm
ESD sensitivity (HBm)	Class 0, passed 150V

Outline Drawing:

Unit:mm





Regulatory Compliance:

***Heat Sink Required During Operation

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

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			

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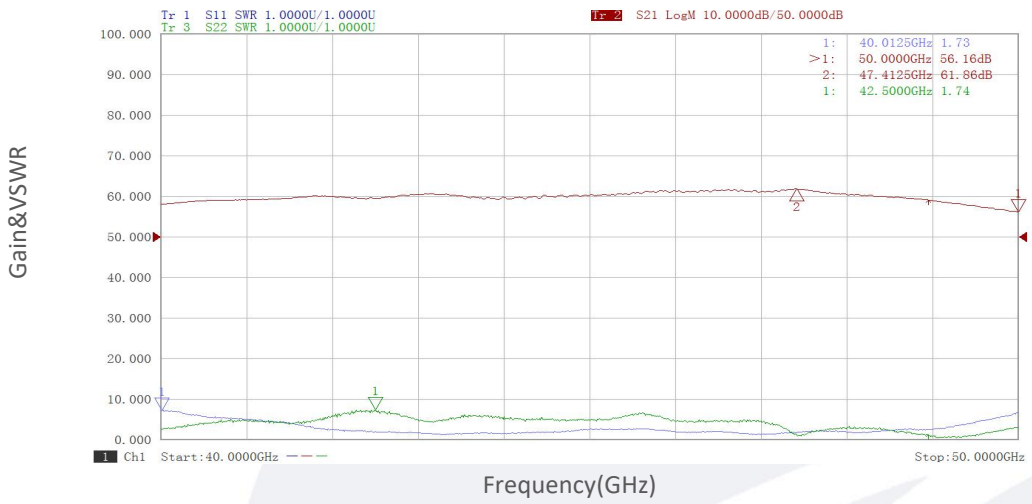
Ordering Information:

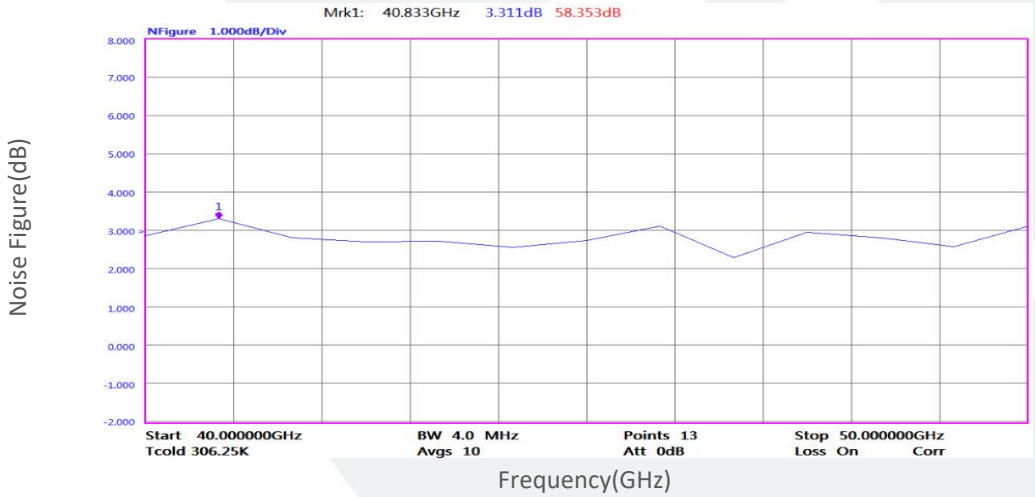
Base Number	Description	Revision
TLLA40G50G-50-35	Low Noise Amplifier, 40-50GHz, Noise Figure:3.5dB, Gain:50 dB,P1dB:20dBm,+12V DC,Without Heatsink	Rev.1.1
TLLA40G50G-50-35-HS	Low Noise Amplifier, 40-50GHz, Noise Figure:3.5dB, Gain:50 dB,P1dB:20dBm,+12V DC,With Heatsink	Rev.1.1

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.

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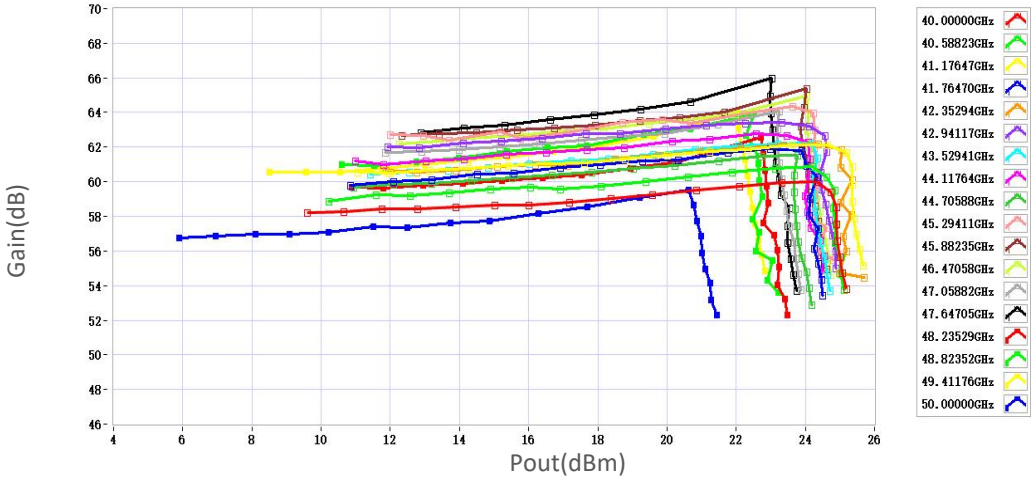
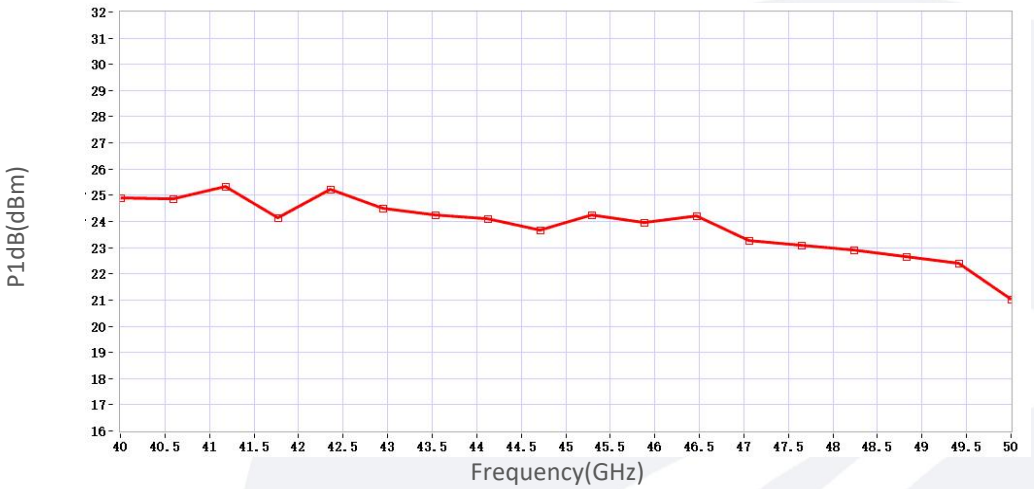
Typical Performance Data:

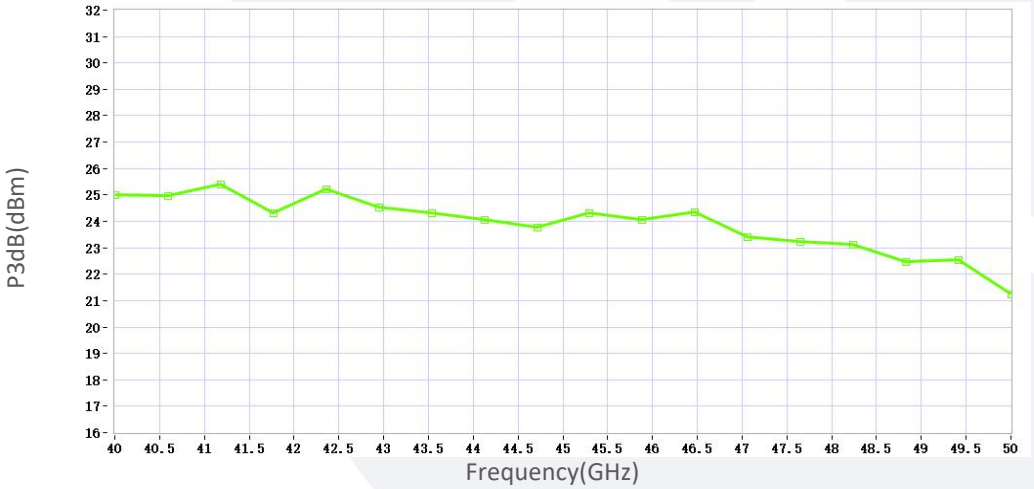
Gain vs Output Power



P1dB vs Frequency



P3dB vs Frequency



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