泰莱微波
Talent Microwave

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Low Noise Amplifier

0.03-6GHz /2.0dB NF/38dB Gain/13 dBm P1dB Model: TLLA0.03G6G-38-20

TLLA0.03G6G-38-20 is a low noise amplifier with a typical small signal gain of 38 dB and a max noise figure of 2.0 dB@0.1-6GHz across the frequency range of 0.03 to 6 GHz. The DC power requirement for the amplifier is +12 V DC/80 mA. The input and output port configuration offers coax adapter structure with SMA female.

Features:

- Ultra Wide Band:0.03-6 GHz
- Gain: 38dB Typ
- Noise Figure: 2.0dB Max@0.1-6GHz
- Good Power and Gain Flatness
- 50 Ohm Matched Input / Output

Applications:

- Communication systems

Electrical Characteristics:

Parameter		Min	Typ	Max	Units
Frequency range		0.03		6	GHz
Small Signal Gain			38		dB
Gain Flatness			±2.5		dB
Noise Figure	@0.03-0.1GHz		3		dB
	@0.1-6GHz			2	
Output P1dB		13	15		dBm
Input VSWR			2	2.2	:1
Output VSWR			2	2.2	:1
DC Voltage		8	12	15	V DC
DC Supply Current			80		mA
Impedance			50		Ohms

Mechanical Specifications:

Parameter	Value	Units
Input /Output Connector	SMA Female/SMA Female	
DC Bias	Solder Pin	
Size	32.1*29.2*11	mm

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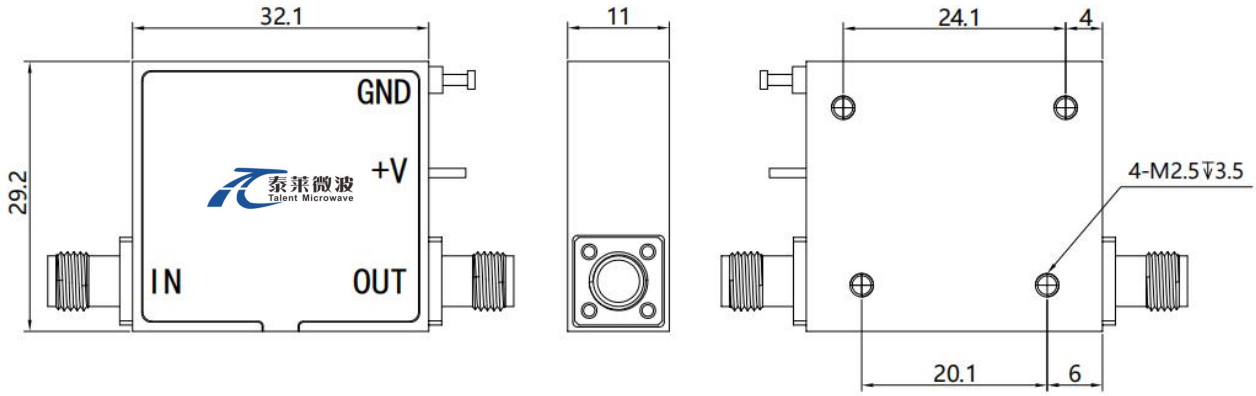
Absolute Maximum Ratings:

Parameter	Value
Supply Bias Voltage	+15 V
RF Input Power	+15 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.

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	Desciption	Revision
TLLA0.03G6G-38-20	Low Noise Amplifier, 0.03-6GHz, Noise Figure:2 dB, Gain:38 dB,P1dB:15dBm,+12V DC,Without Heatsink	Rev.1.1
TLLA0.03G6G-38-20-HS	Low Noise Amplifier, 0.03-6GHz, Noise Figure:2 dB, Gain:38 dB,P1dB:15dBm,+12V DC,With Heatsink	Rev.1.1

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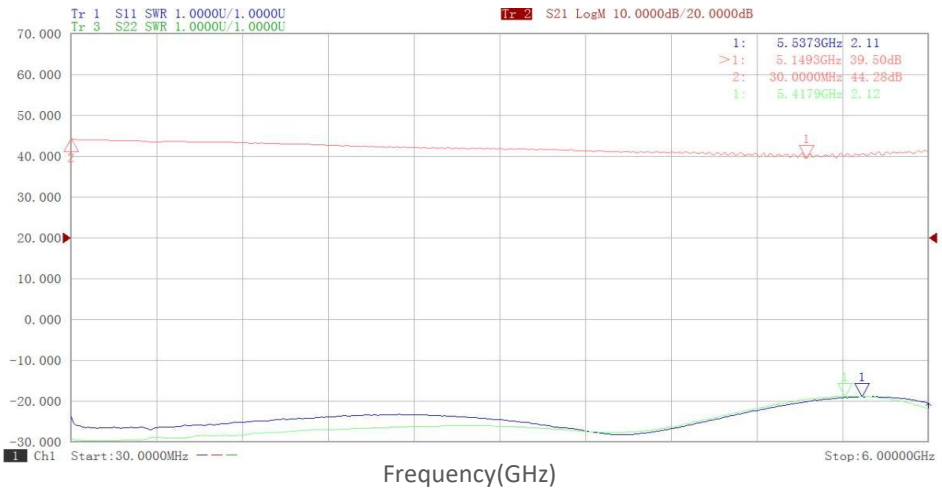
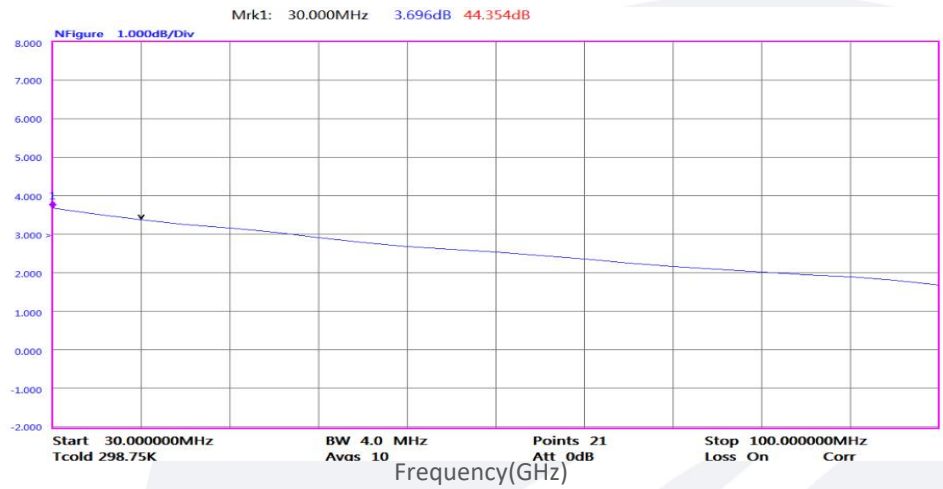
Typical Performance Data:

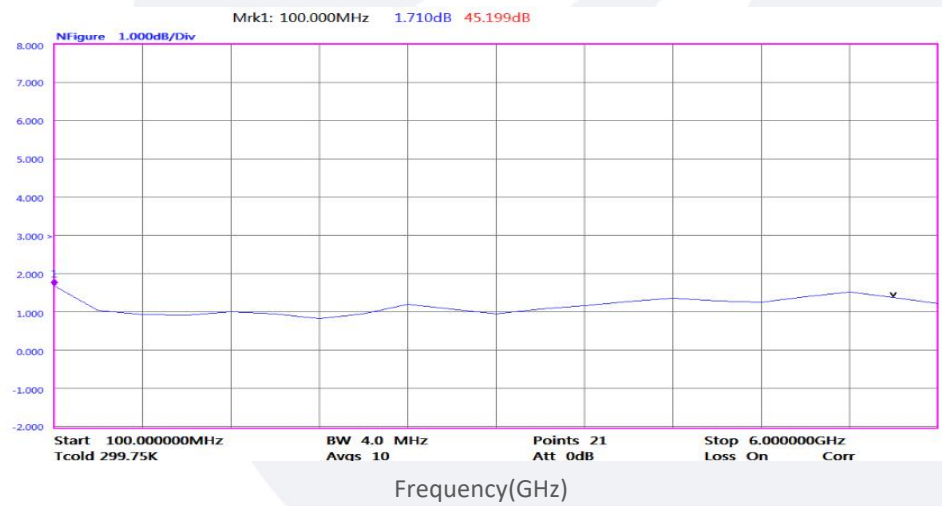
Gain&VSWR vs Frequency



Noise Figure 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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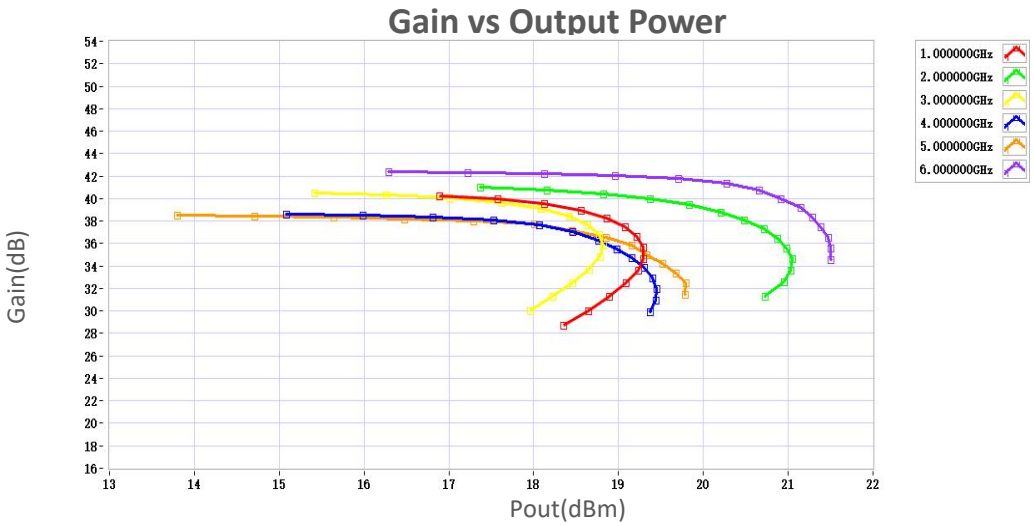

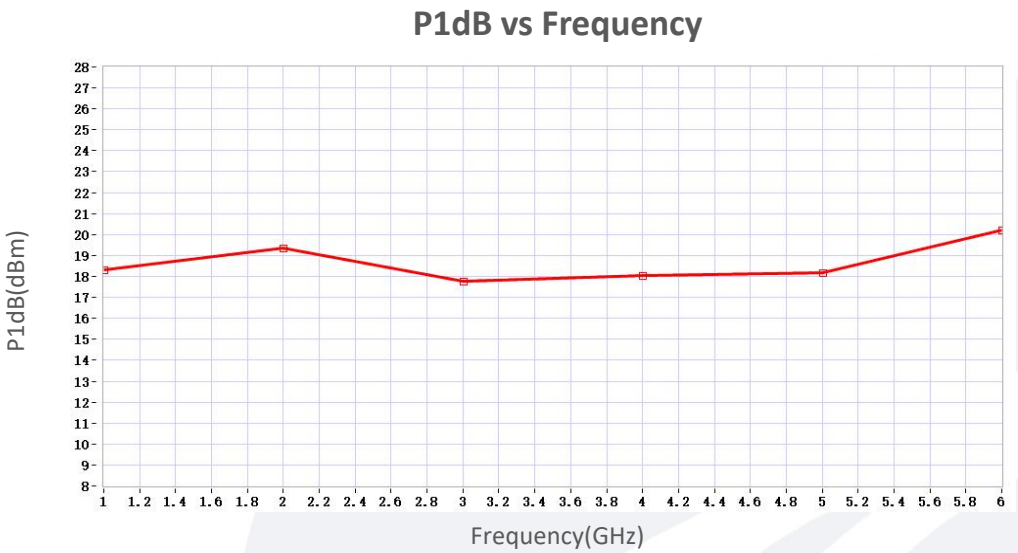

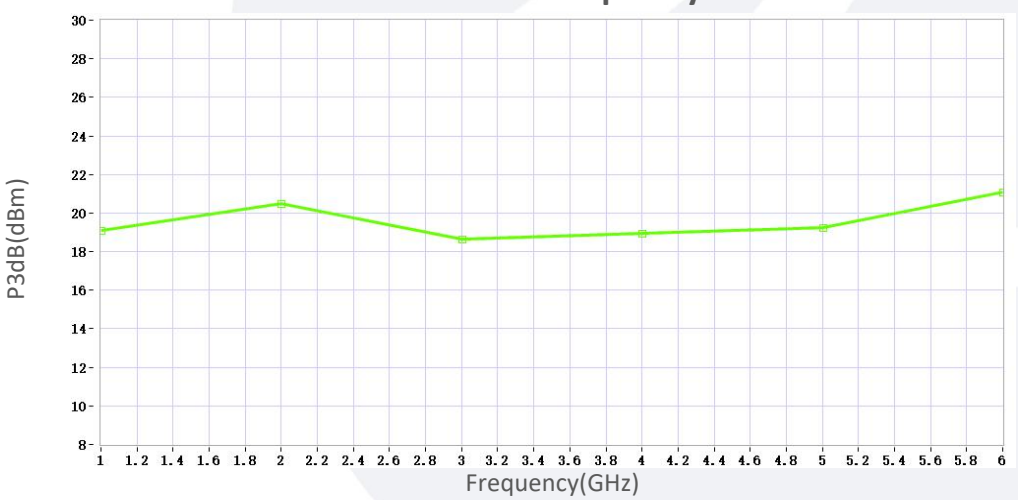

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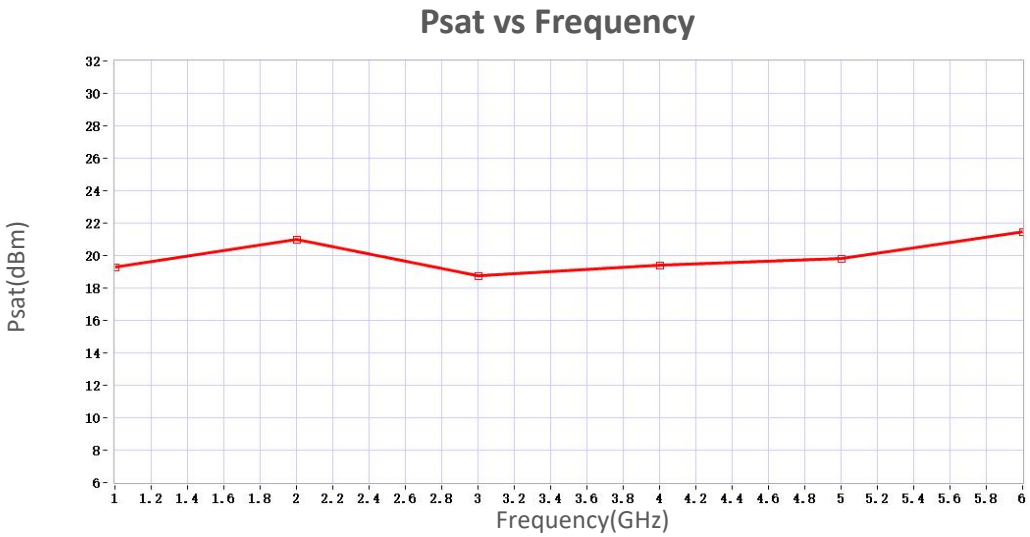

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