

**Model:TLLA0.03G6G-38-20**
**Low Noise Amplifier**  
**0.03-6GHz, NF:2dB, Gain:38dB,P1dB:13dBm**
**Feature:**

- Ultra Wide Band: 0.03-6GHz
- Gain: 38dB Typ
- Noise Figure: 2dB Max
- Good Power and Gain Flatness
- 50 Ohm Matched Input / Output

**Electrical Specifications:**

Parameter	Min	Typ	Max	Units
Frequency range	0.03-6			GHz
Gain		38		dB
Gain Flatness		±2.5		dB
Noise Figure	@30~100MHz	3.0		dB
	@0.1~6GHz		2.0	dB
Output P1dB	13	15		dBm
Input VSWR		2.0	2.2	:1
Output VSWR		2.0	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
Weight	/	g

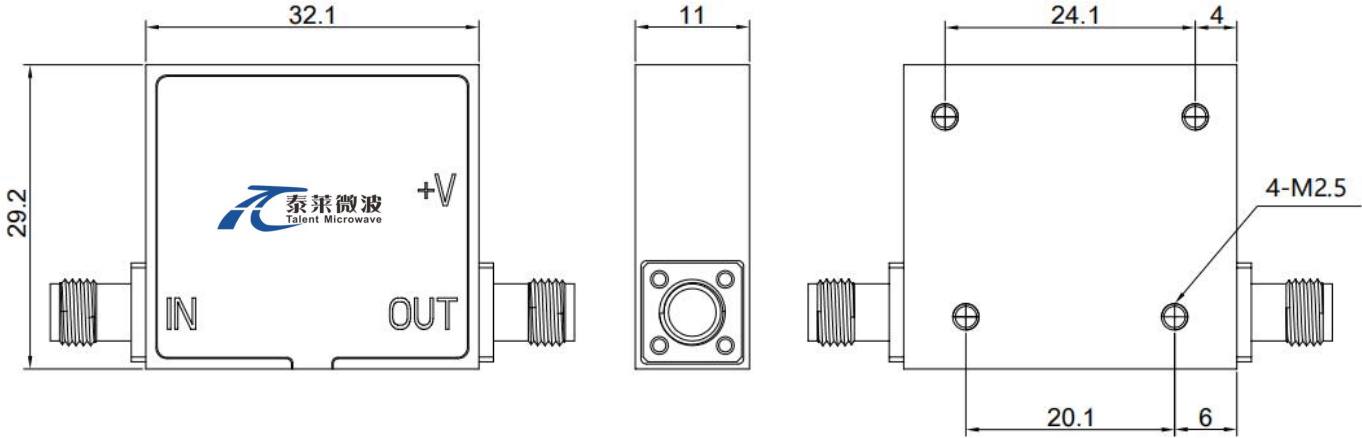
**Absolute Maximum Ratings:**

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


**Available 220V System  
 Benchtop Amplifier**

**Outline Drawing:**

Unit: mm



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



OBSERVE PRECAUTIONS  
ELECTROSTATIC SENSITIVE  
DEVICES

**Environmental Conditions:**

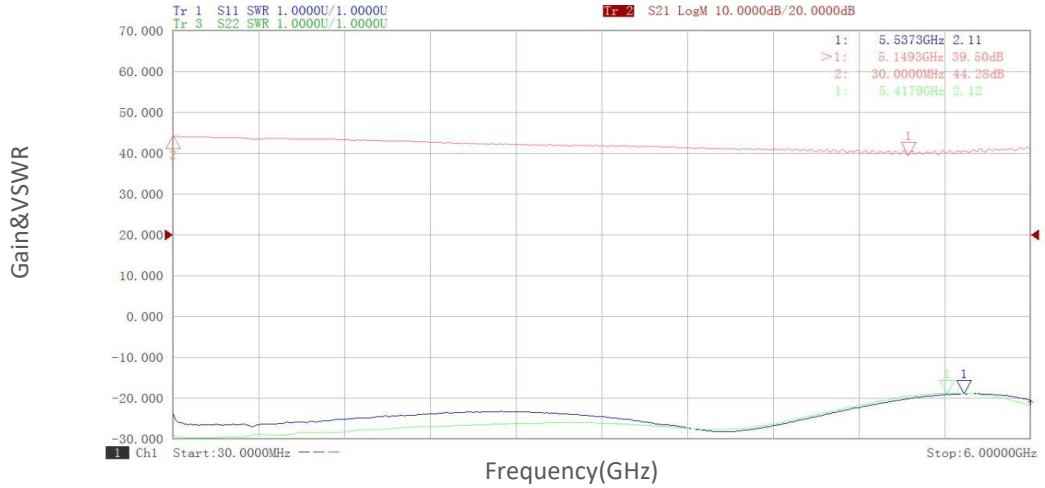
Parameter	Min	Typ	Max	Units
Operating Temperature	-45		+85	°C
Non-operating Temperature	-55		+125	°C
Relative humidity		95		%
Altitude	10,000			feet
Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
Shock(non operating)	20G for 11msc half sin wave,3 axis both directions			

**Ordering Information:**

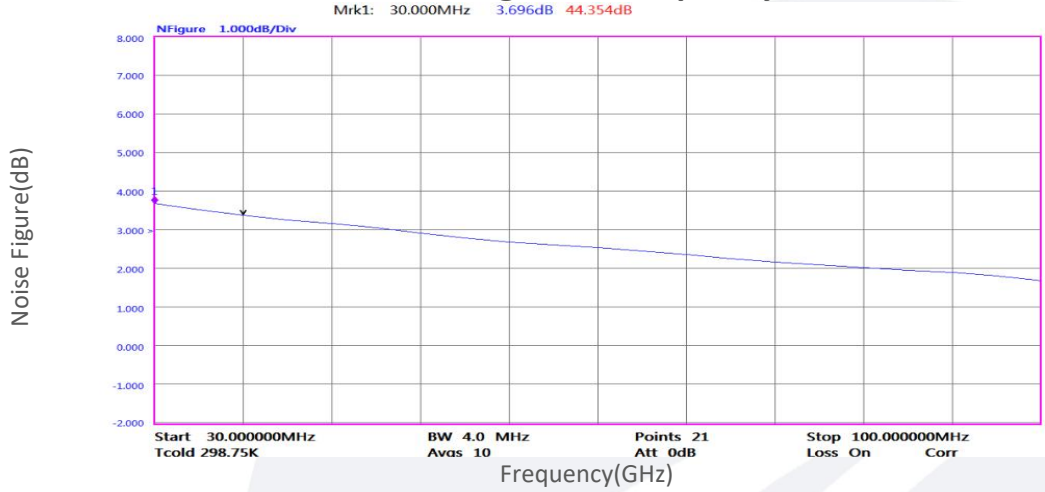
Part Number	Description	Revision
TLLA0.03G6G-38-20	Low Noise Amplifier, 0.03-6GHz, Noise Figure:2 dB, Gain:38 dB,P1dB:15dBm,+12V DC,Without Heatsink	Rev.1.1
TLLA0.03G6G-38-20-HS	Low Noise Amplifier, 0.03-6GHz, Noise Figure:2 dB, Gain:38 dB,P1dB:15dBm,+12V DC,With Heatsink	Rev.1.1

Typical Performance Data:

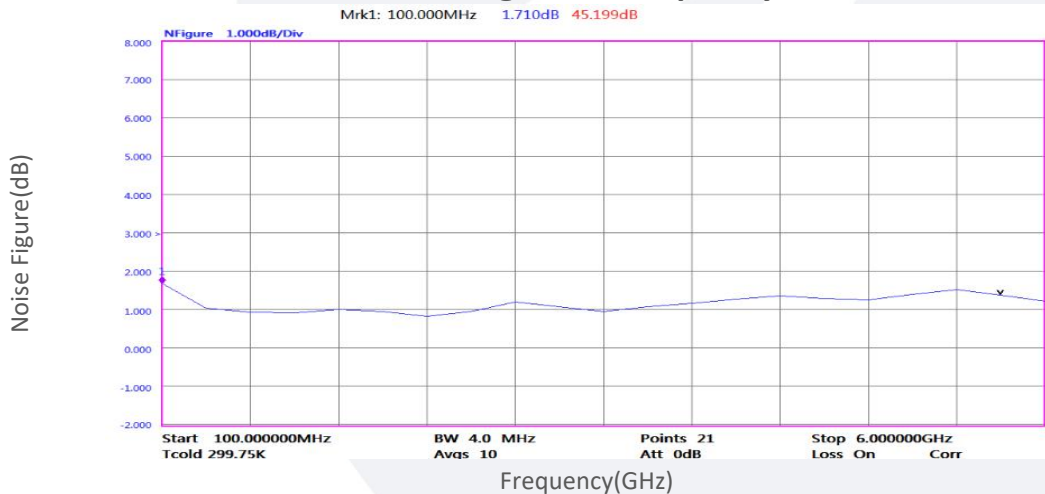
Gain&VSWR vs Frequency



Noise Figure vs Frequency



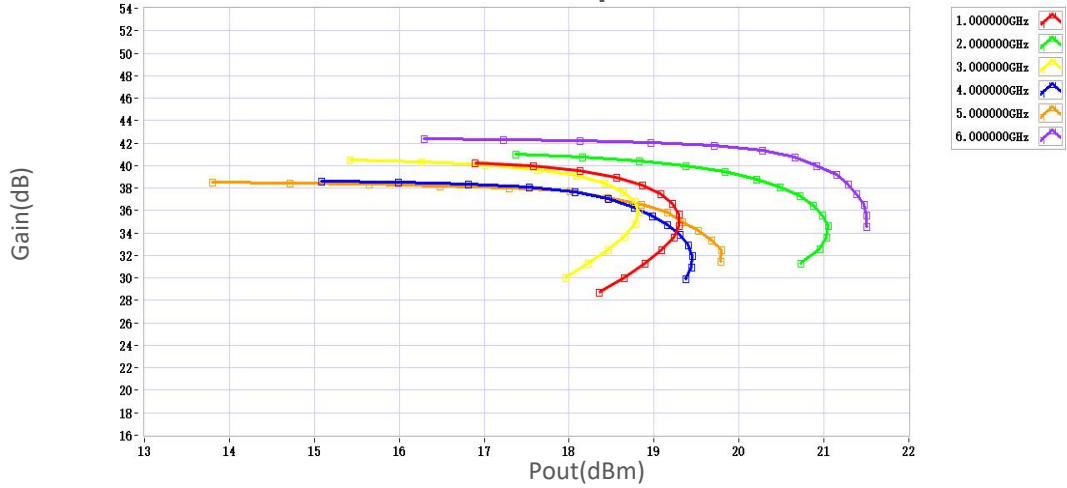
Noise Figure vs Frequency



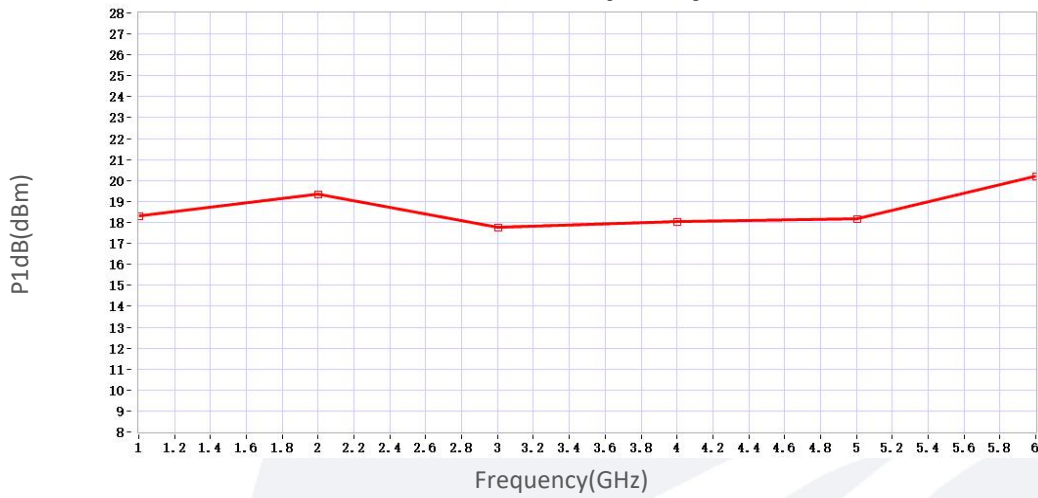
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

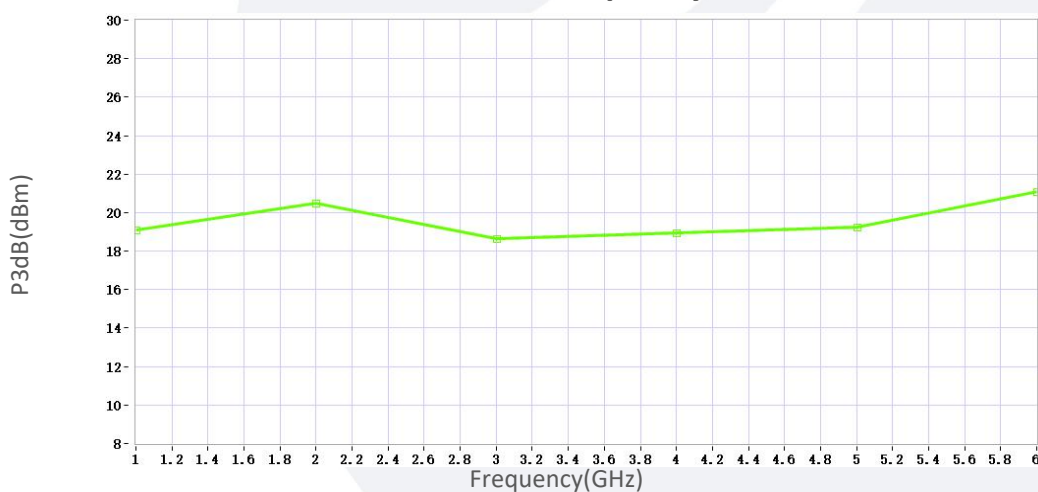
Gain vs Output Power



P1dB vs Frequency



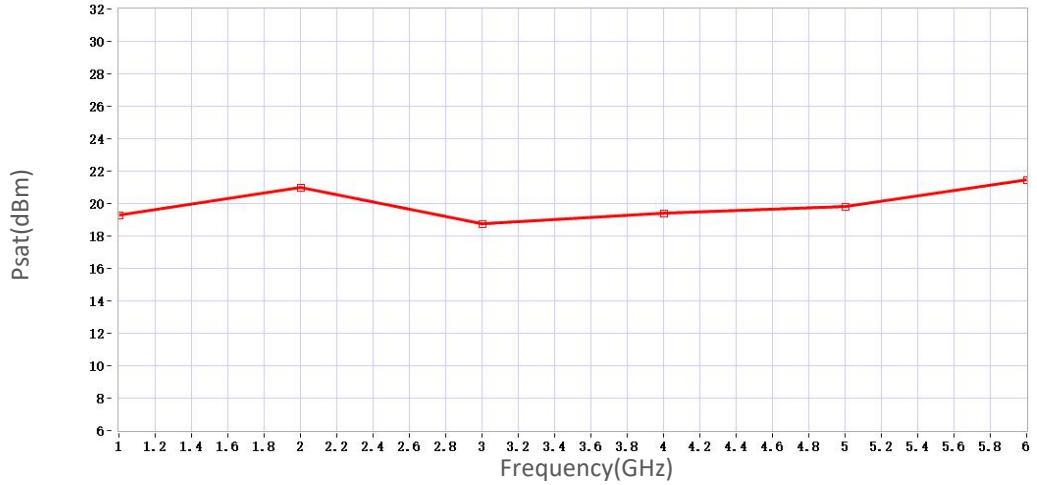
P3dB vs Frequency



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Typical Performance Data:

Psat vs Frequency



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