

Broadband Low Noise RF Amplifier (LNA)

50kHz-20GHz, 15 dB gain



DATASHEET

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This LNAM broadband Low Noise RF Amplifier provides output power up to 16 dBm with a gain of 15 dB across a frequency range of 50 kHz to 20 GHz. It features a noise figure (NF) of 3 dB within the 0.1-20GHz range. The amplifier operates on +12V DC at 80 mA and is equipped with a SMA Female connector.

Features

- Frequency: 50kHz-20GHz
- Small signal gain: 15dB
- NF=3dB
- Vout=4.48Vpp

Applications

- 5G Communication
- Test Equipment
- Optical Modulator Driver
- Radar System

Specifications

Parameter	Min	Typical	Max	Unit
Frequency Range	0.00005		20	GHz
Gain	13	15		dB
NF (0.1-20GHz)		3	5	dB
Input Power		-10	0	dBm
P1dB		+15		dBm
Psat		+16		dBm
Output Vpp		4.48		Vpp
Drain Supply	+8	+12	+15	V
Current		80		mA
Input Return Loss		-10		dB
Output Return Loss		-10		dB
Spec Temp		25		°C
Drain Supply		+16		V
RF Input Power		+20		dBm
Input Vpp		3.56		Vpp
Operating Temperature(note)	-20		70	°C
Storage Temperature	-65		+150	°C
Input Port		SMA Female		
Output Port		SMA Female		
Case Material		Copper		
Finish		Gold Plated		
Weight (Without Heatsink)		50		g
Size		30 x 30 x 9.5		mm

Note: -40 to +85°C is available according to request.

Caution

Please pay attention to the case temperature. If case temperature exceed higher than +50°C, heat sink and fan are required, or the amplifier may be damaged.

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Rev 10/24/24

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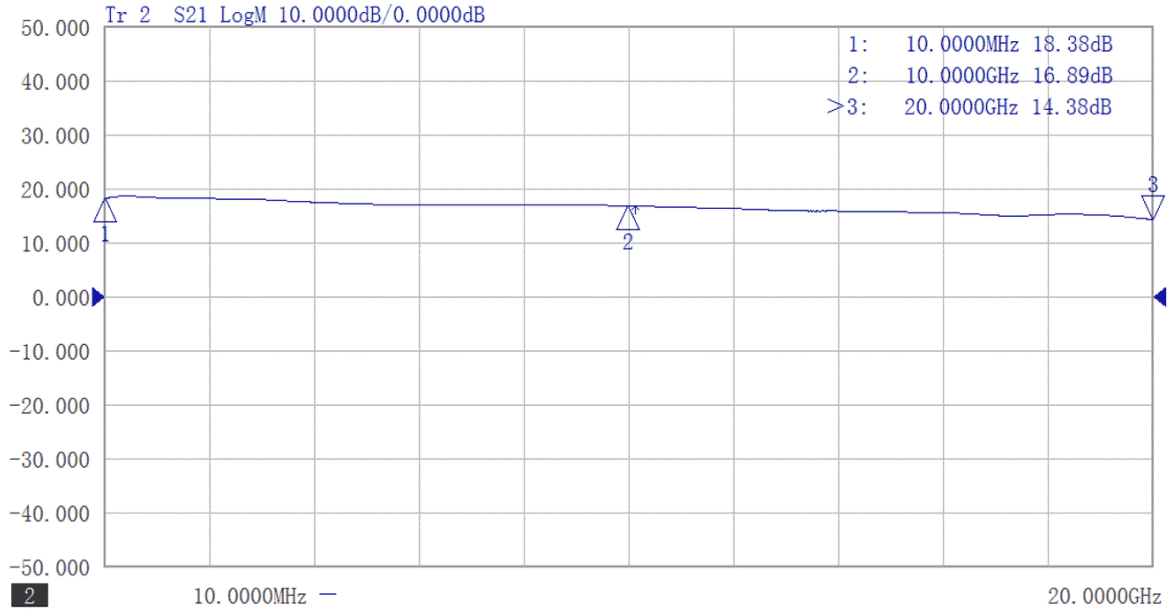


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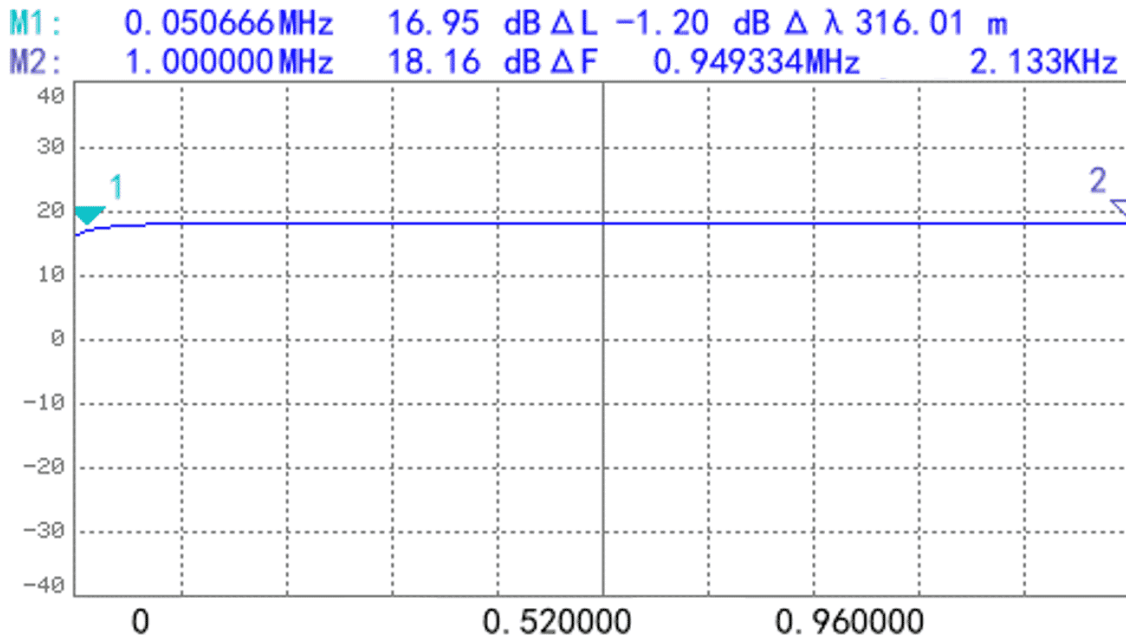
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Test Data (25°C)

Gain vs Frequency 10MHz-20GHz



Gain vs Frequency 50kHz-1MHz



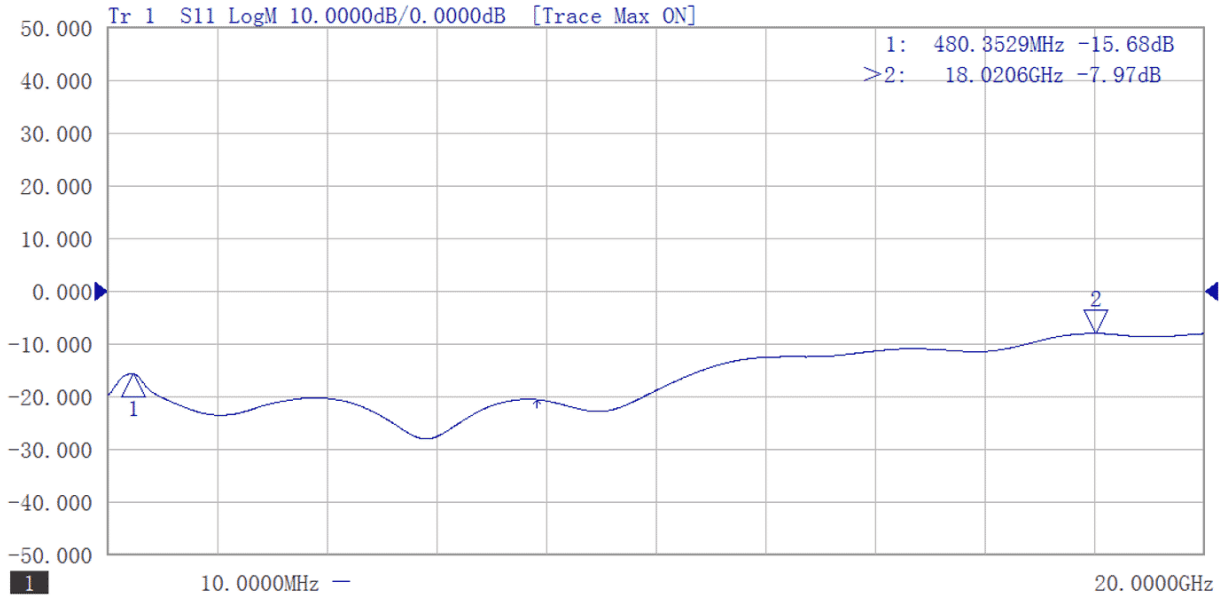
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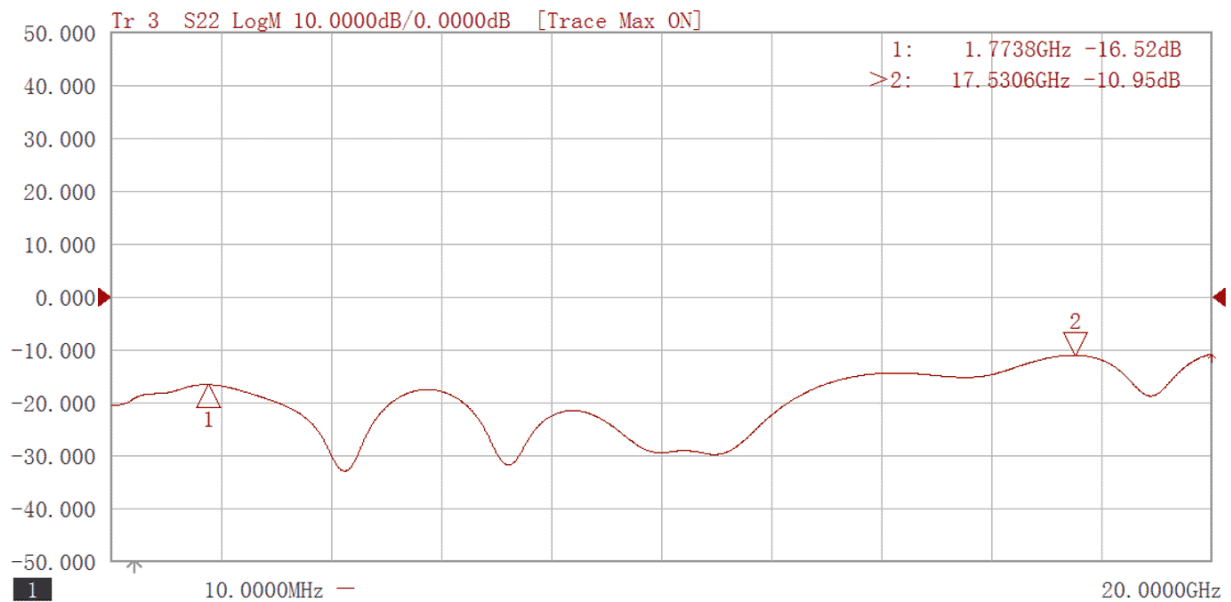


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Input Return Loss vs Frequency



Output Return Loss vs Frequency



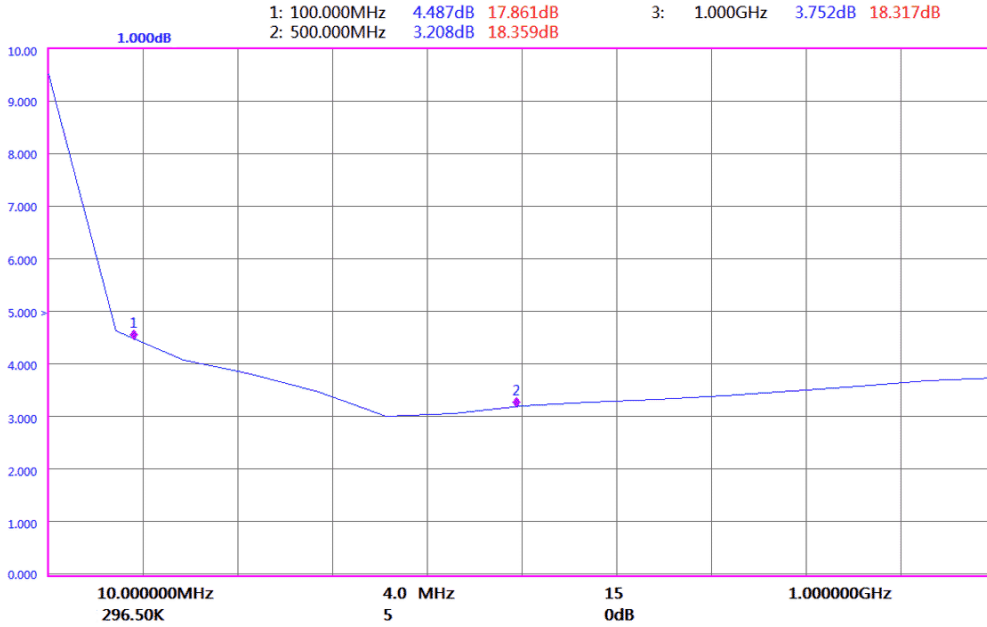
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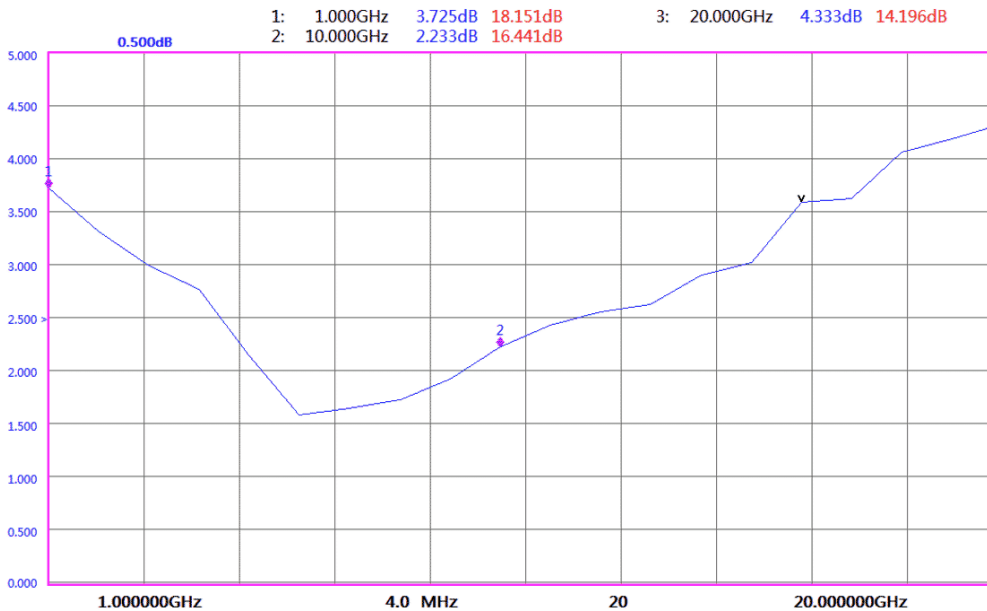


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NF vs Frequency 10MHz-1GHz



NF vs Frequency 1-20GHz



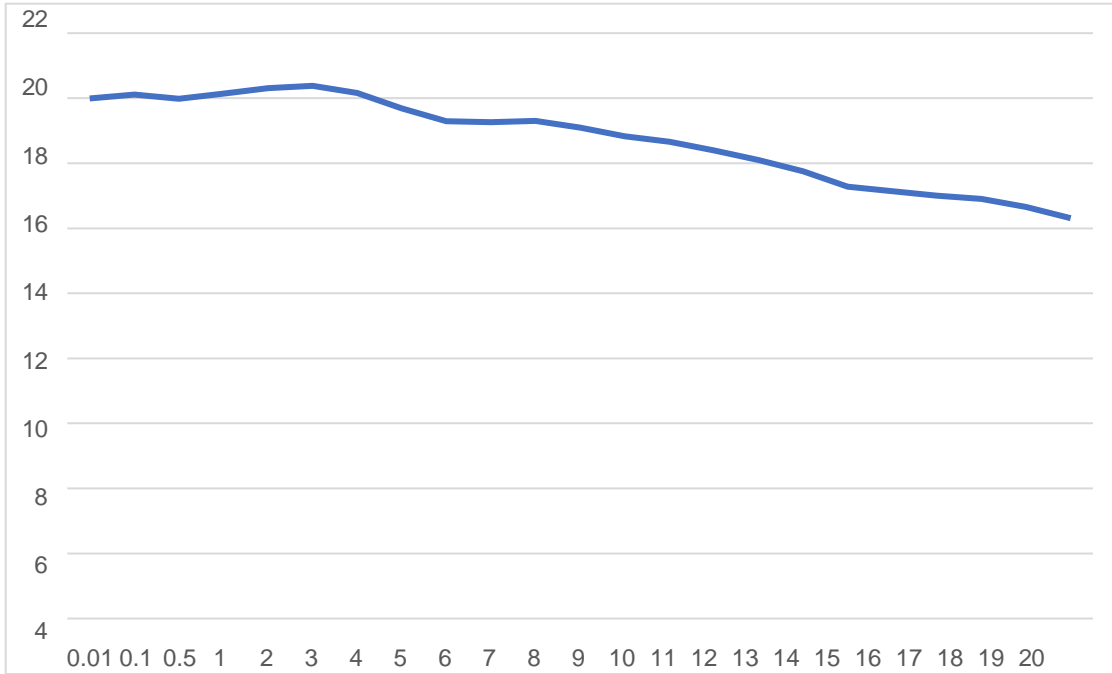
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Psat vs Frequency



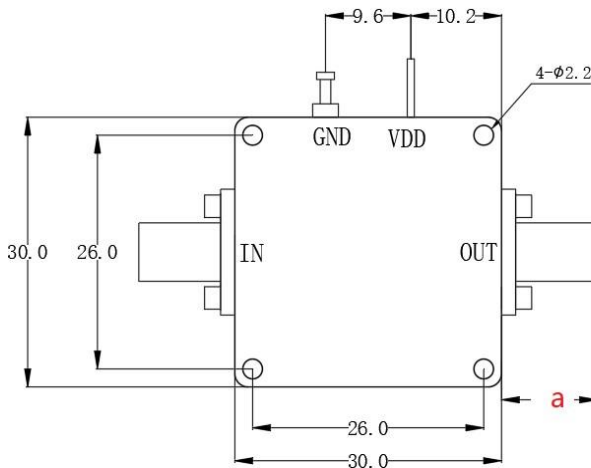
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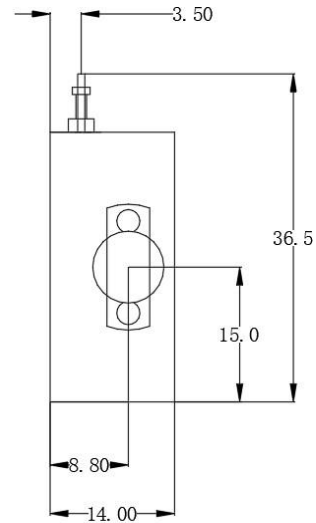
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Dimensions (mm)



In millimetres



	<26.5GHz	<40GHz	<50GHz	<67GHz
Connector	SMA	2.92mm	2.4mm	1.85mm
Lenth of a	9.4mm	9.5mm	10.8mm	11.3mm

Note: Female Default. Contact with us for other types.

Ordering Information *

	0005	20	15	3	15	<input type="checkbox"/>
Prefix	Low Frequency	High Frequency	Gain	NF	P1dB	Module*
LNAM-	0.05MHz = 0005	20GHz = 20	15dB = 15	3dB = 3	15dBm = 15	No = 0 Yes = 1