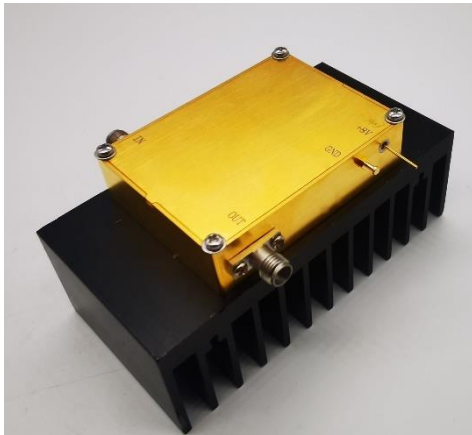


### 0.3-20GHz Broadband Amplifier

2021-11-11



#### Product Overview

AT-PA-0020-4529HX is broadband amplifier from 300MHz-20GHz, with  $P_{out}=+29dBm$ ,  $NF=2.5dB$ . It can be used both as Power amplifier and low noise amplifier. The DC power requirement is +12V/600mA. The module is with SMA Female

The broadband amplifier has high gain, high linearity, low input/output return loss and flat gain response. Bench-top test equipment type with 110-240V power supply is available according to request.

More information, please visit [www.atmicrowave.com](http://www.atmicrowave.com)

#### Advantages

- ✓ Frequency: 250MHz-20GHz
- ✓  $P_{sat}:+29dBm$
- ✓ Small signal gain: 45dB
- ✓ Single Power Supply

#### Application

- ✓ 5G Communication
- ✓ Test Equipment
- ✓ ROF (RF Over Fiber)
- ✓ Radar System

### Key Features

Parameter	Min	Typical	Max
Frequency		300MHz-20GHz	
Gain	42dB	45dB	
P1dB		+27dBm	
Psat	+27dBm	+29dBm	
Drain Supply		+12V	+13V
I <sub>dd</sub> NO RF		0.55A	
IDD at Psat		0.77A	0.85A
NF		2.2dB	2.8dB
Input Return Loss		-10dB	
Output Return Loss		-10dB	
Spec Temp		25C	





# AT-BB-0020-4529HX

300MHz-20GHz Broadband Amplifier

## Mechanical Information

Item	Description
Input Port	SMA Female
Output Port	SMA Female
Case Material	Copper
Finish	Gold Plated
Package Sealing	Epoxy Sealed
Weight (Without Heatsink)	150g
Size:	60x45x14 mm

## Absolute Maximum Ratings Table

Parameter	Value
Drain Supply	+15V
RF Input Power	+15 dBm
Operating Temperature	-20 to +70C
Storage Temperature	-65 to +150C

### Caution:

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

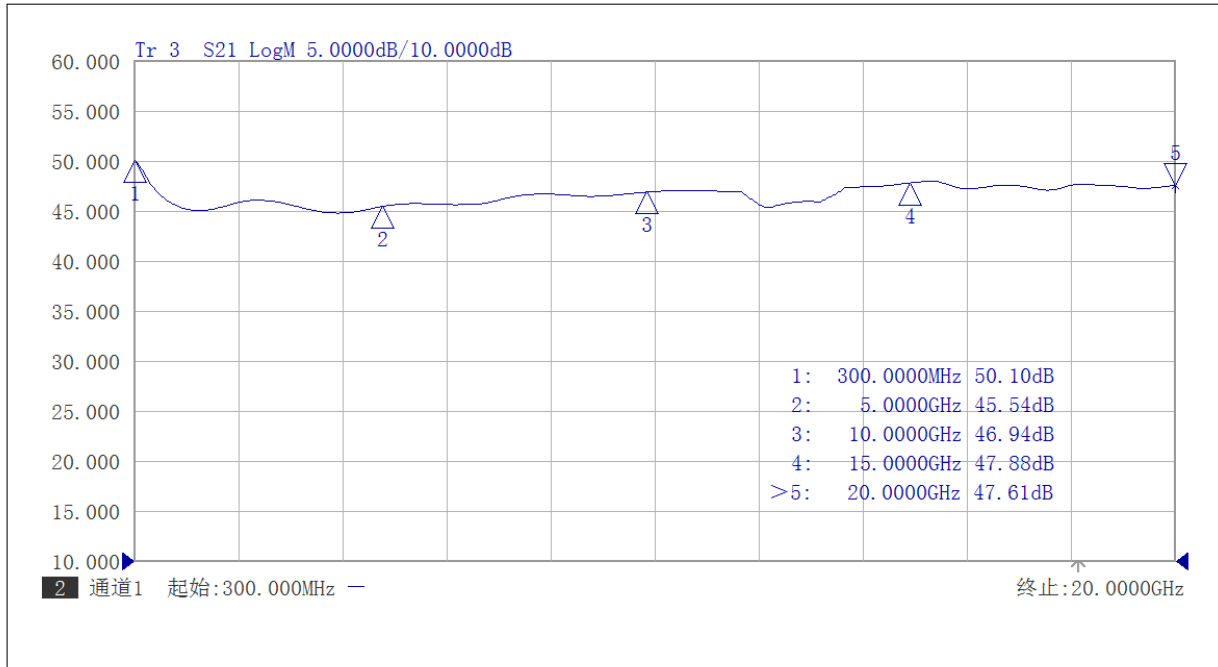
### Notes:

1. Datasheet may be changed according to update of MMIC, Raw materials , process, and so on.
2. This data is only for reference, not for guaranteed specifications.
3. Please contact AT Microwave team to make sure you have the most current data.

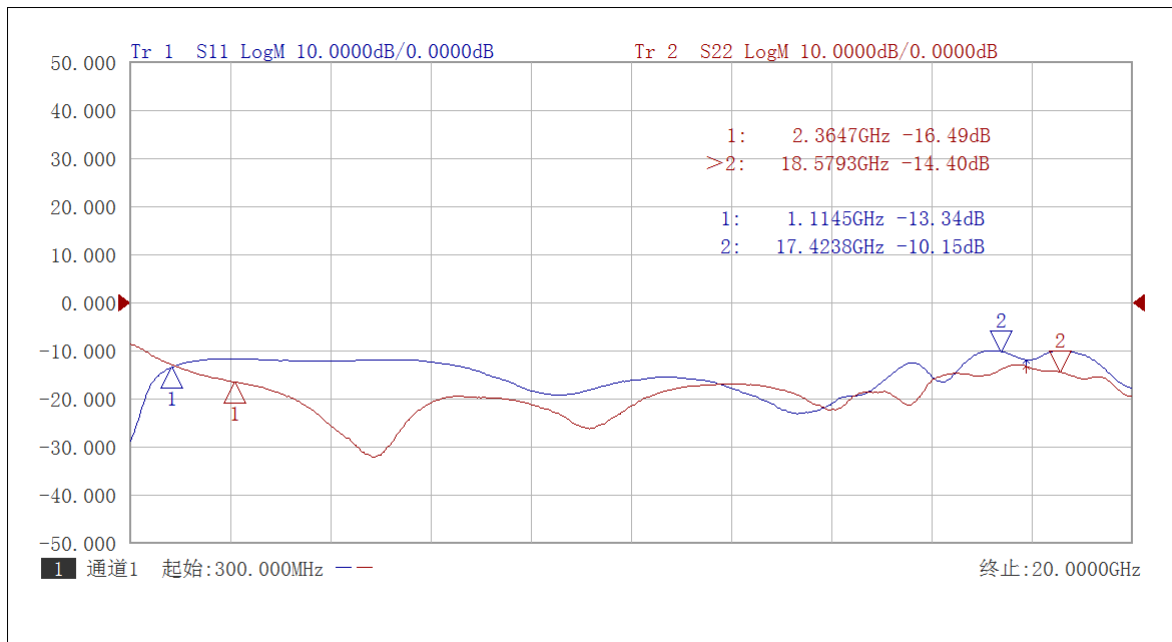


### Test Data (25C)

Please note that test curves will vary slightly from unit to unit.



Gain vs Frequency



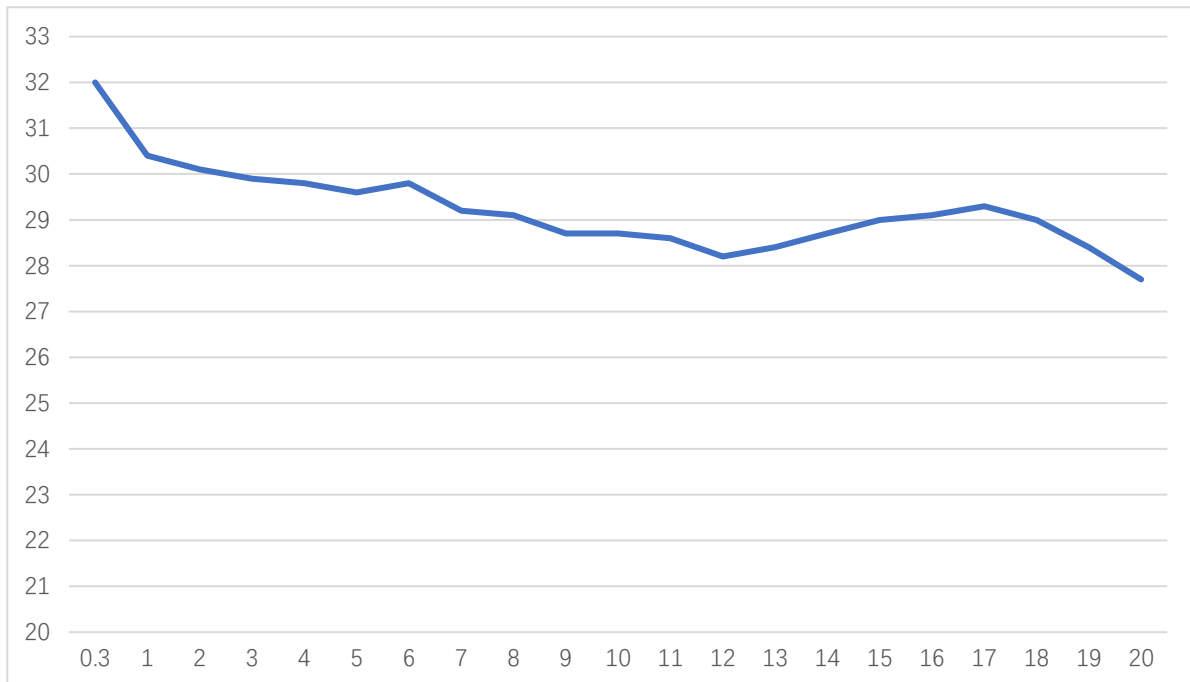
Return Loss vs Frequency



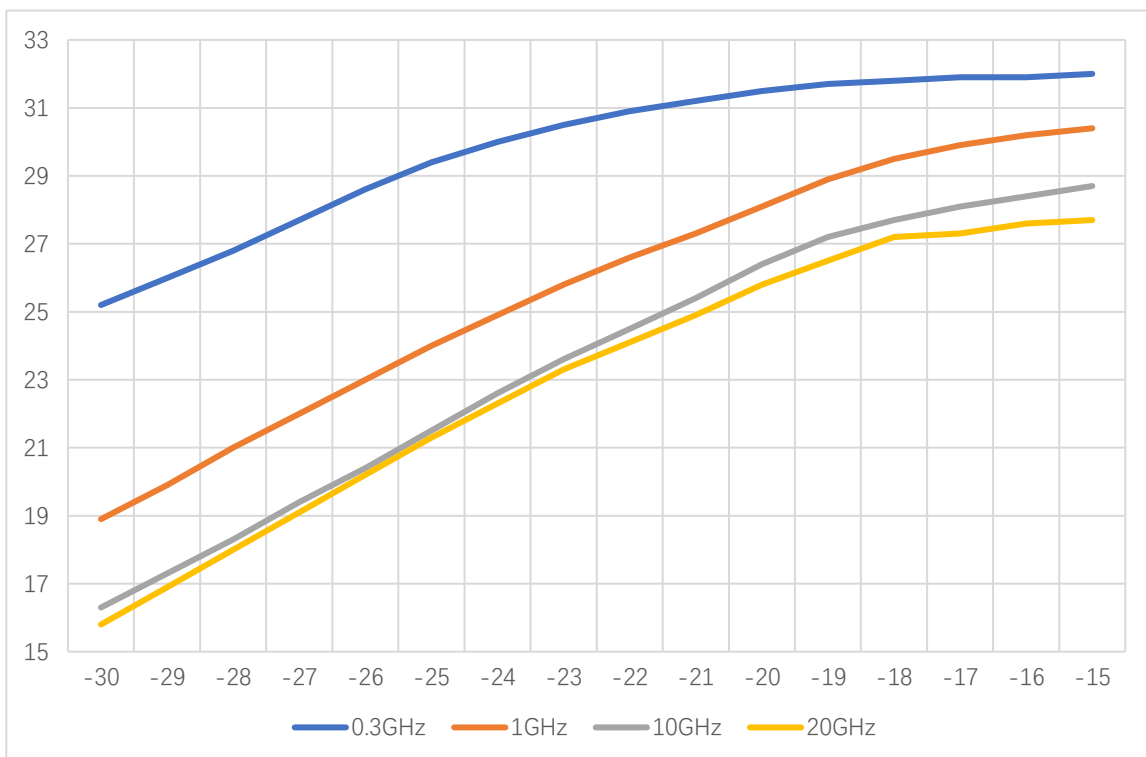


# AT-BB-0020-4529HX

300MHz-20GHz Broadband Amplifier

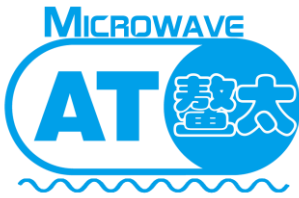


Psat vs Frequency



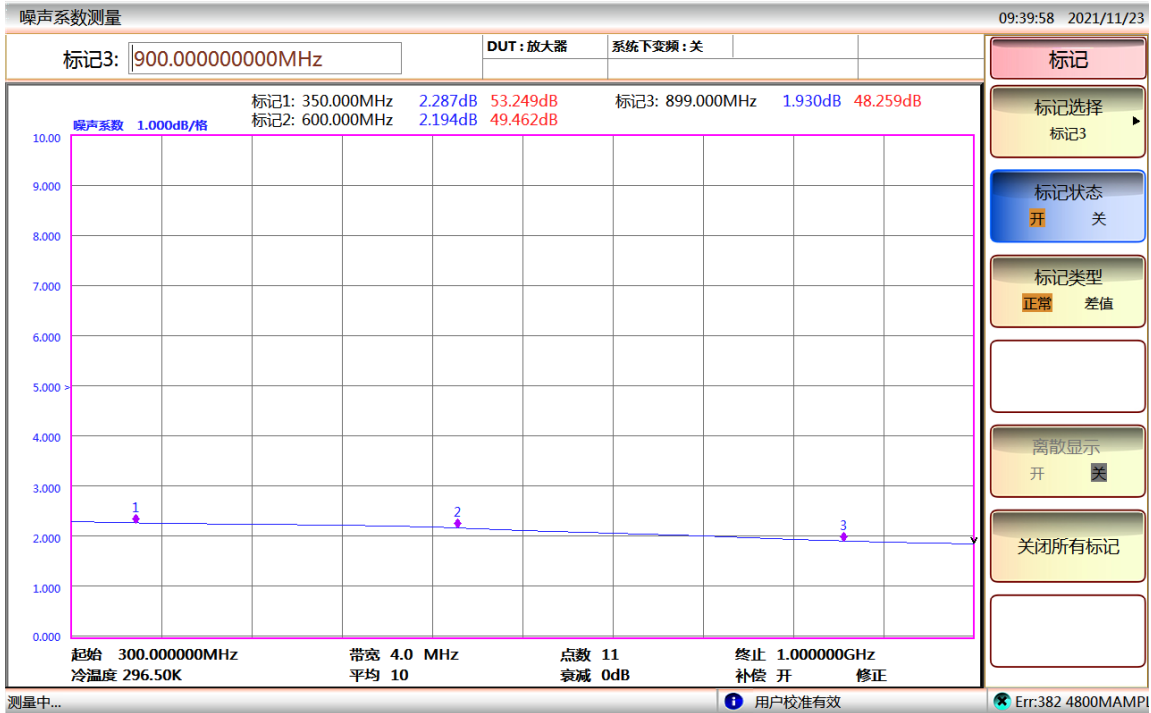
Pout vs Pin at 0.3/1/20/20GHz



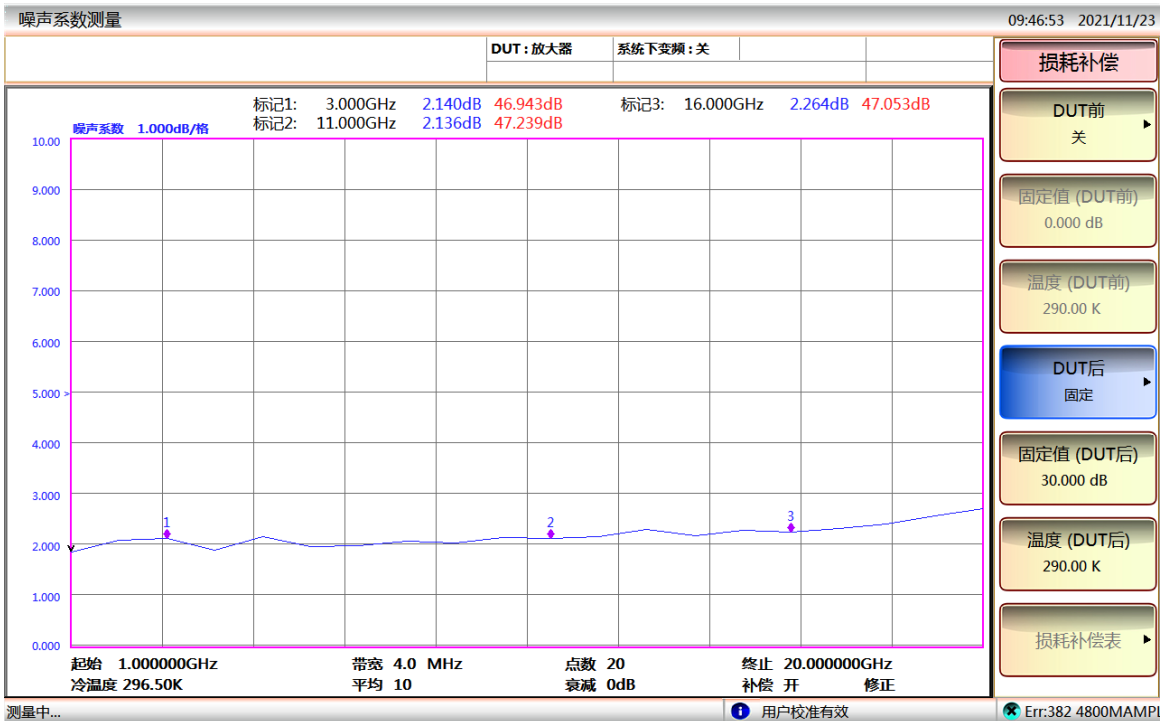


# AT-BB-0020-4529HX

300MHz-20GHz Broadband Amplifier



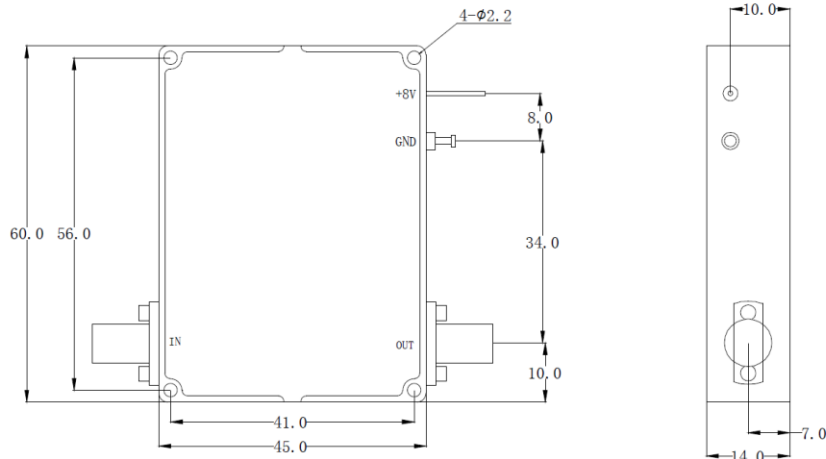
NF TEST 0.3-1GHz



NF TEST 1-20GHz

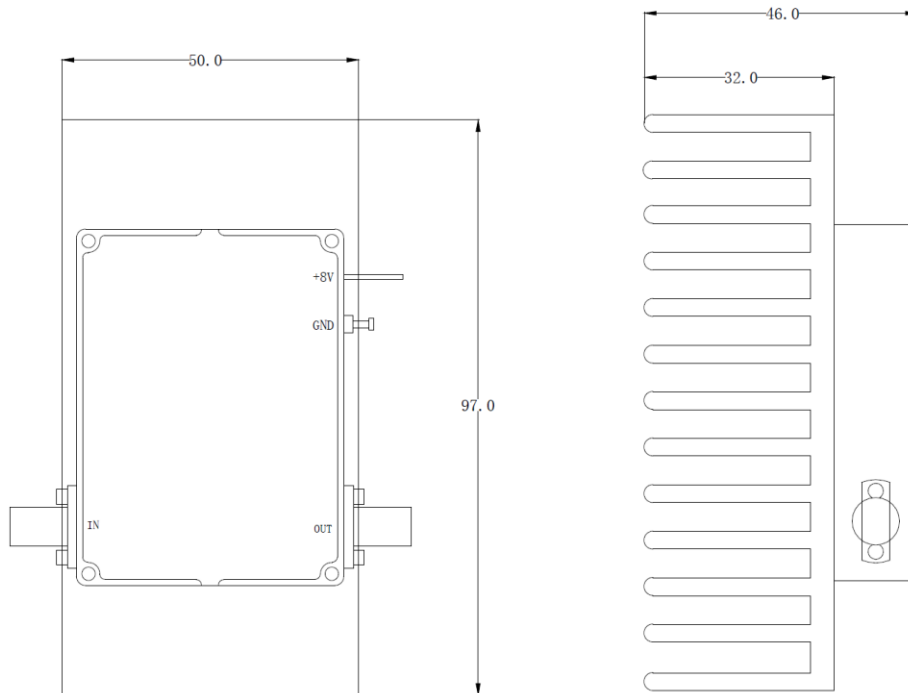


### Dimension: (unit in mm)



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

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



Including a small heatsink without Fan if output Power higher than +20dBm.

Customers can removed it or use their own heatsink according to actual situation.

**Heat Sink Required During Operation if case Temp higher than 50C**

