

## 18-40GHz Broadband Amplifier, +20dBm



### Product Overview

AT-PA-1840-3020X is high gain power amplifier with +20dBm output power in the frequency of 18-40GHz. The DC power requirement is +5V/280mA. The module is with 2.92mm connector.

The power amplifier has high gain, high linearity, low input/output return loss and flat gain response.

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

### Advantages

- ✓ Frequency: 18-40GHz
- ✓ Pout:+20dBm
- ✓ Small signal gain: 30dB
- ✓ Single Power Supply

### Application

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

### Key Features

Parameter	Min	Typical	Max
Frequency		18-40GHz	
Gain	27	30dB	
Gain Flatness		+/-2dB	
P1dB		+18dBm	
Psat		+20dBm	
NF		4dB	
Drain Supply		+5 to +8V	
Current		280 mA	310mA
Input Return Loss		-10dB	
Output Return Loss		-10dB	
Spec Temp		25C	





# AT-PA-1840-3020X

## 18-40GHz Power Amplifier

### Mechanical Information

Item	Description
Input Port	2.92mm Female
Output Port	2.92mm Female
Case Material	Copper
Finish	Gold Plated
Weight (Without Heatsink)	90g
Size:	30x30x14 mm

### Absolute Maximum Ratings Table

Parameter	Value
Drain Supply	+13V
RF Input Power	+18 dBm
Operating Temperature	-20 to +70C
Storage Temperature	-65 to +150C

#### Caution:

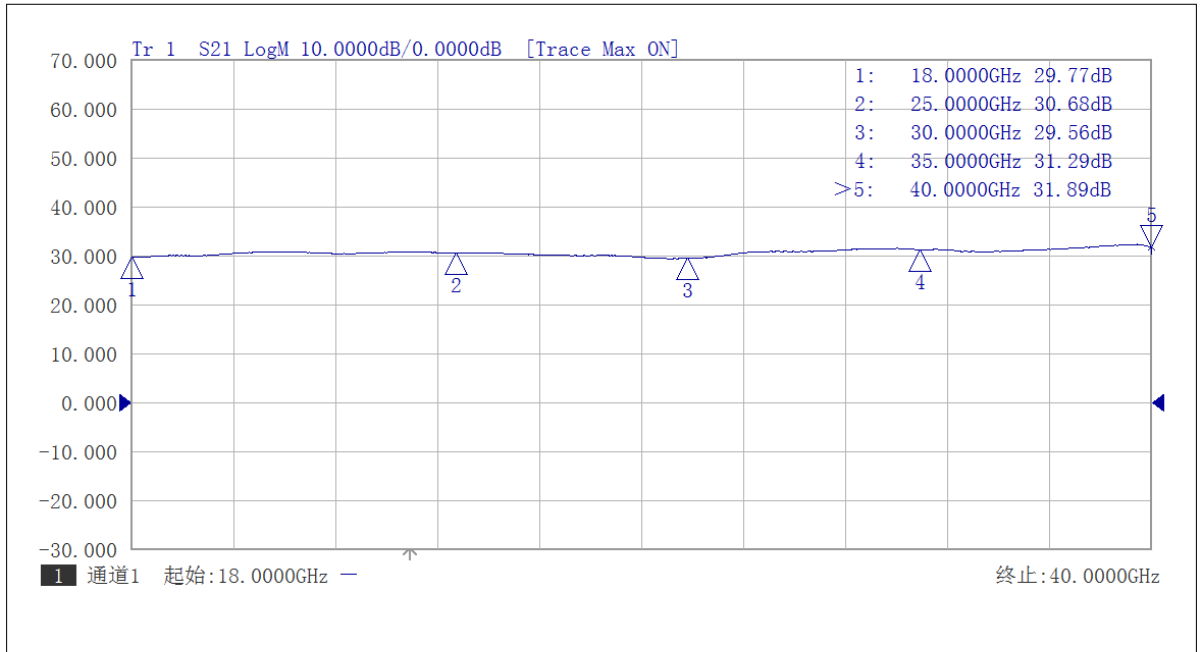
Please pay attention to the case temperature. If case temperature exceed higher than +50C, heat sink and fan are required, or the amplifier may be damaged.

#### Notes:

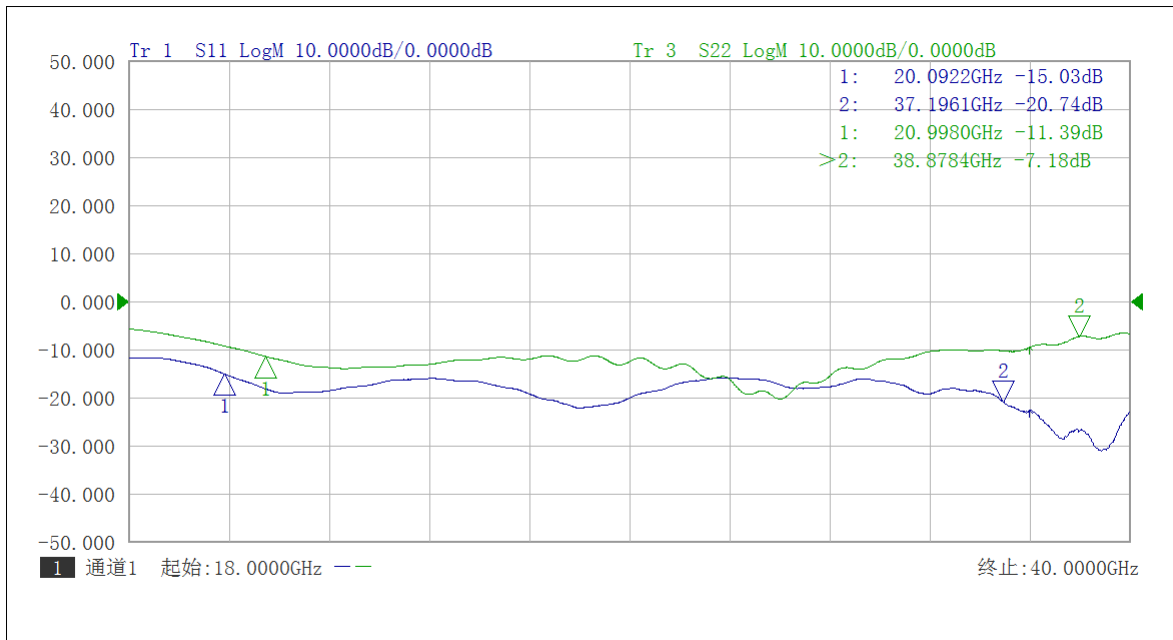
1. Datasheet may be changed according to update of MMIC, Raw materials , process, and so on.
2. This data is only for reference, not for guaranteed specifications.
3. Please contact AT Microwave team to make sure you have the most current data.



## Test Data (25C)

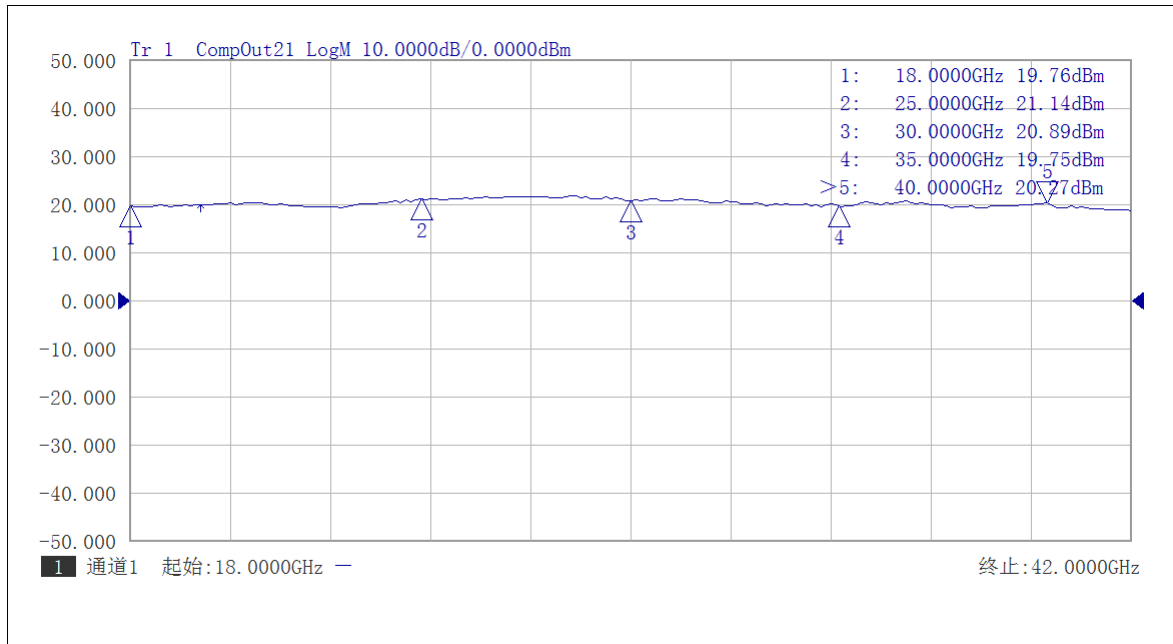


Gain vs Frequency

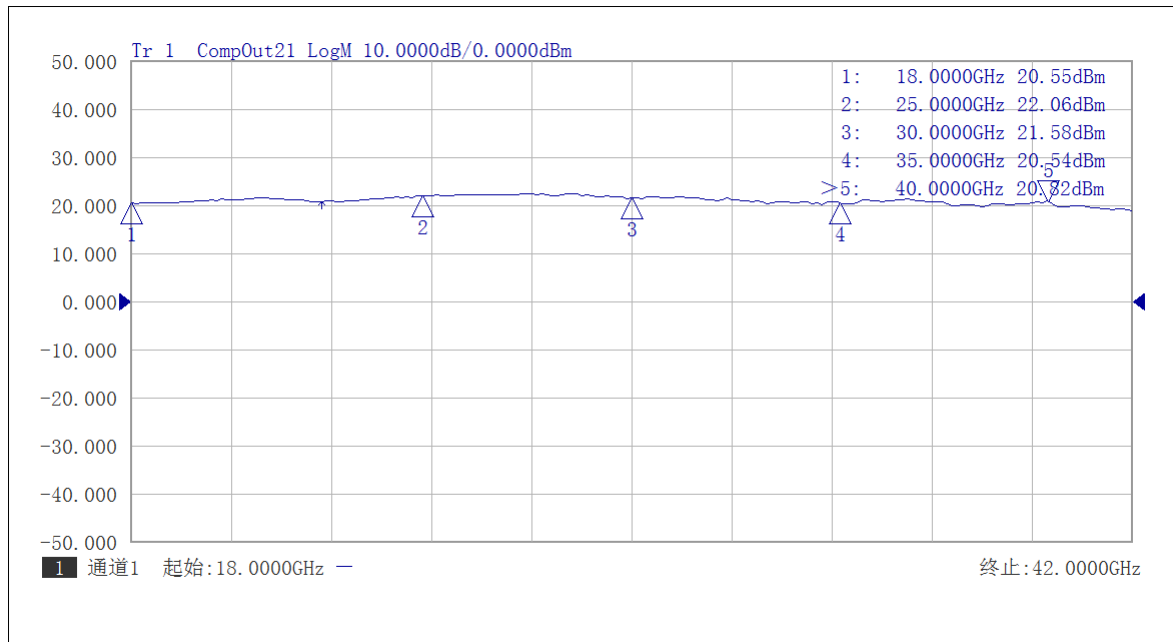


S11 /S22 Return Loss vs Frequency



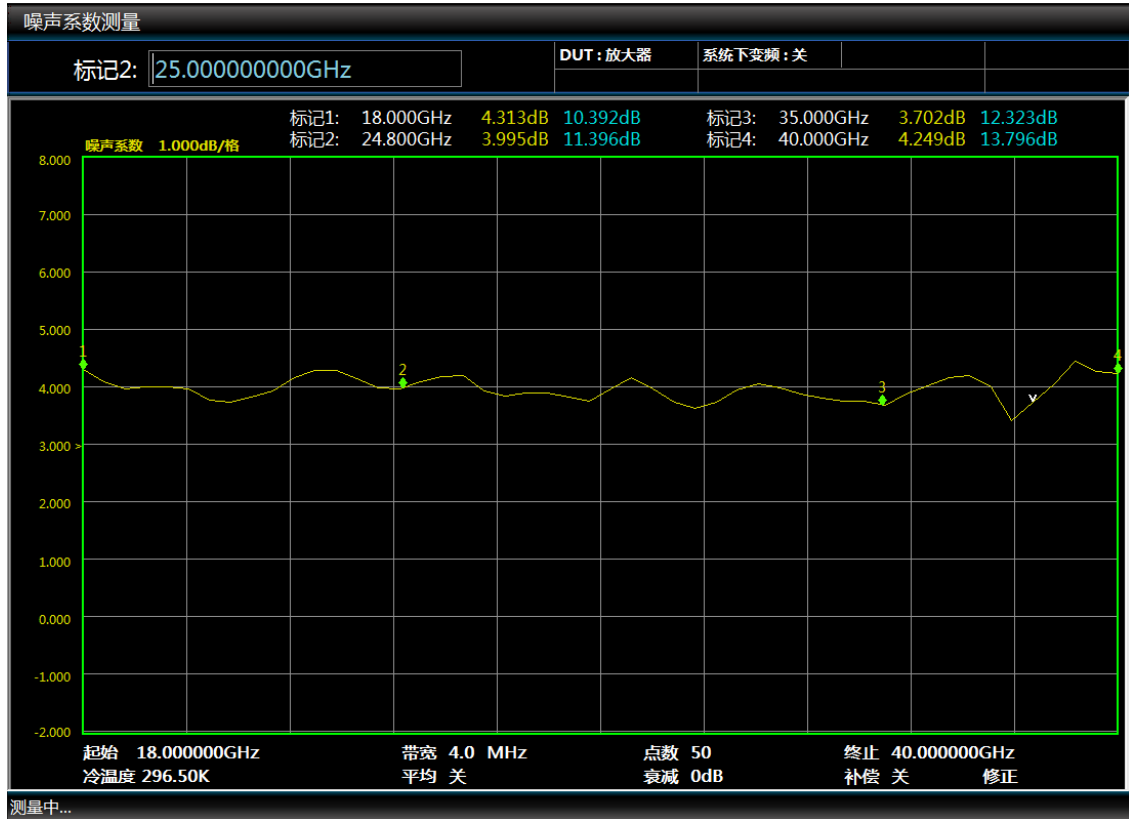


P1dB vs Frequency



P3dB vs Frequency

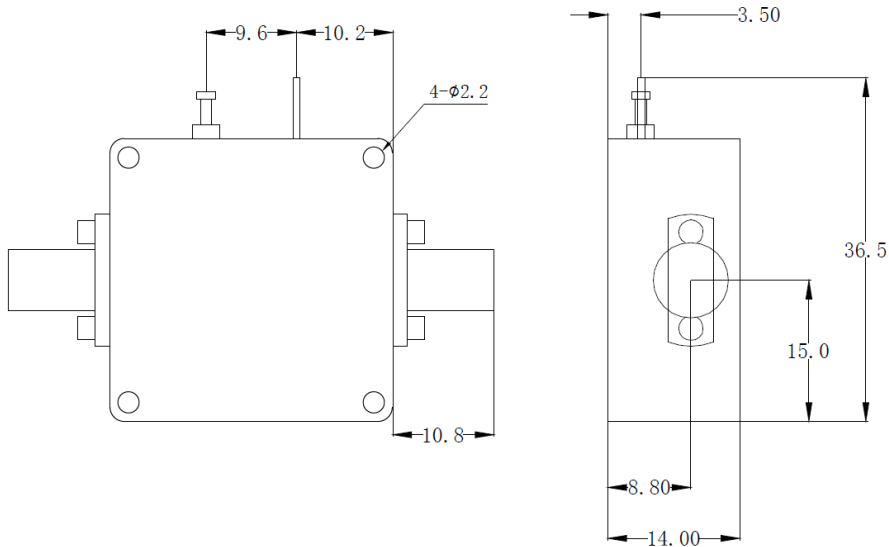




NF vs Frequency

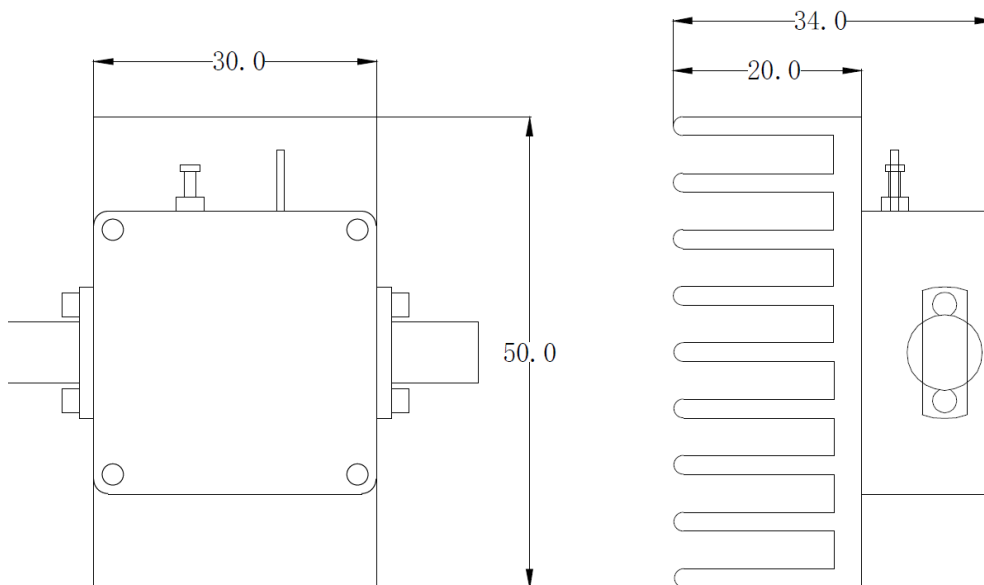


**Dimension:** (unit in mm)



	<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.



Including a small heatsink without Fan if output Power higher than +20dBm.  
Customers can remove it or use their own heatsink according to actual situation.

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

