

## 50-70GHz Broadband Power Amplifier



### Product Overview

AT-PA-5070-3020VC is high power amplifier with +20dBm output power in the frequency of 50-70GHz. The DC power requirement is +5V/500mA. The module is with 1.85mm Female. This amplifier is with very low NF=6dB, which can also be used as low noise amplifier.

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: 50-70GHz
- ✓ Psat:+20dBm
- ✓ Small signal gain: 30dB
- ✓ Single Power Supply

### Application

- ✓ V Band Communication
- ✓ Test Equipment
- ✓ ROF (RF Over Fiber)
- ✓ Radar System
- ✓ Microwave Point to Point

### Key Features

Parameter	Min	Typical	Max
Frequency		50-70GHz	
Gain	26dB	30dB	
Gain Flatness		+/-3dB	
P1dB		+18dBm	
Psat		+20dBm	
NF		6dB	
Drain Supply		+5V	+8V
Current		500 mA	
Input Return Loss		-6dB	
Output Return Loss		-10dB	
Spec Temp		25C	





# AT-PA-5070-3020VC

50-70GHz Medium Power Amplifier

## Mechanical Information

Item	Description
Input Port	1.85mm Female
Output Port	1.85mm Female
Case Material	Copper
Finish	Gold Plated
Package Sealing	Epoxy Sealed
Weight (Without Heatsink)	90g
Size:	30x30x14 mm

## Absolute Maximum Ratings Table

Parameter	Value
Drain Supply	+9V
RF Input Power	+8dBm
Operating Temperature	-20 to +70C
Storage Temperature	-65 to +150C

### Caution:

Please pay attention to the case temperature.

If case temperature exceeds +50C, heat sink and fan are required.

### Bias Procedure:

Make sure GND is connected before Vdd Power ON.

Module may be damaged when Vdd Power ON without GND.





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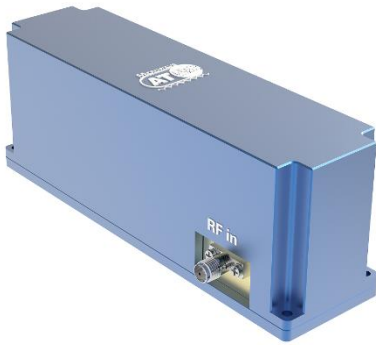
## 50-70GHz Medium Power Amplifier

### 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.

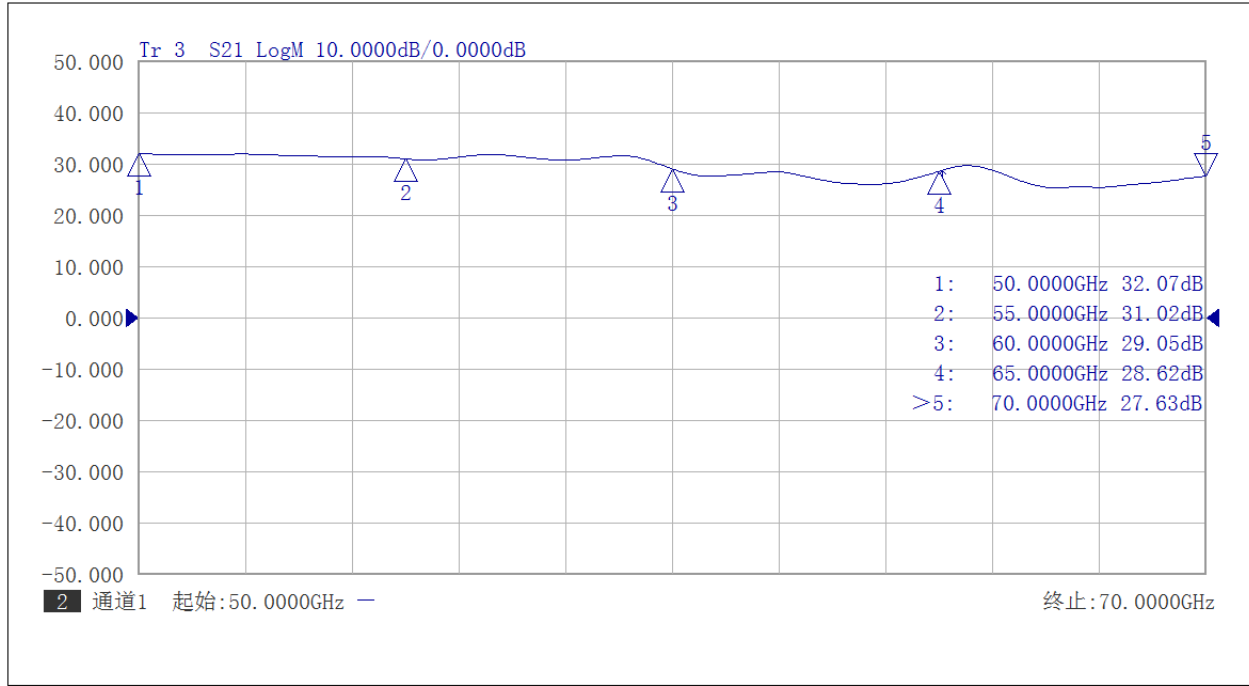
### Part Number Selection Guide

Item	Description
PN	Stand Module with DC Power Supply
<b>PN-LCBT</b>	<b>L</b> ow Cost, <b>C</b> ompact <b>B</b> ench- <b>T</b> op, +220V Supply with AC/DC Adapter

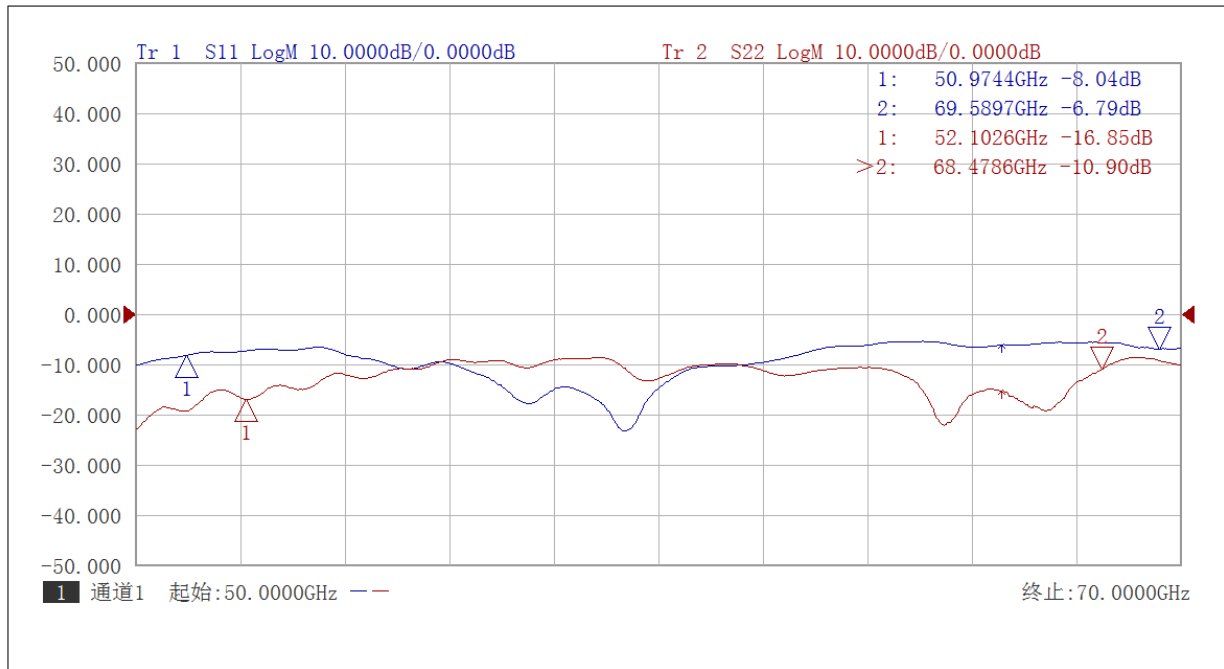


### Test Data

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

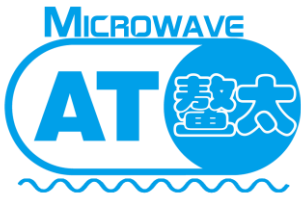


Gain vs Frequency



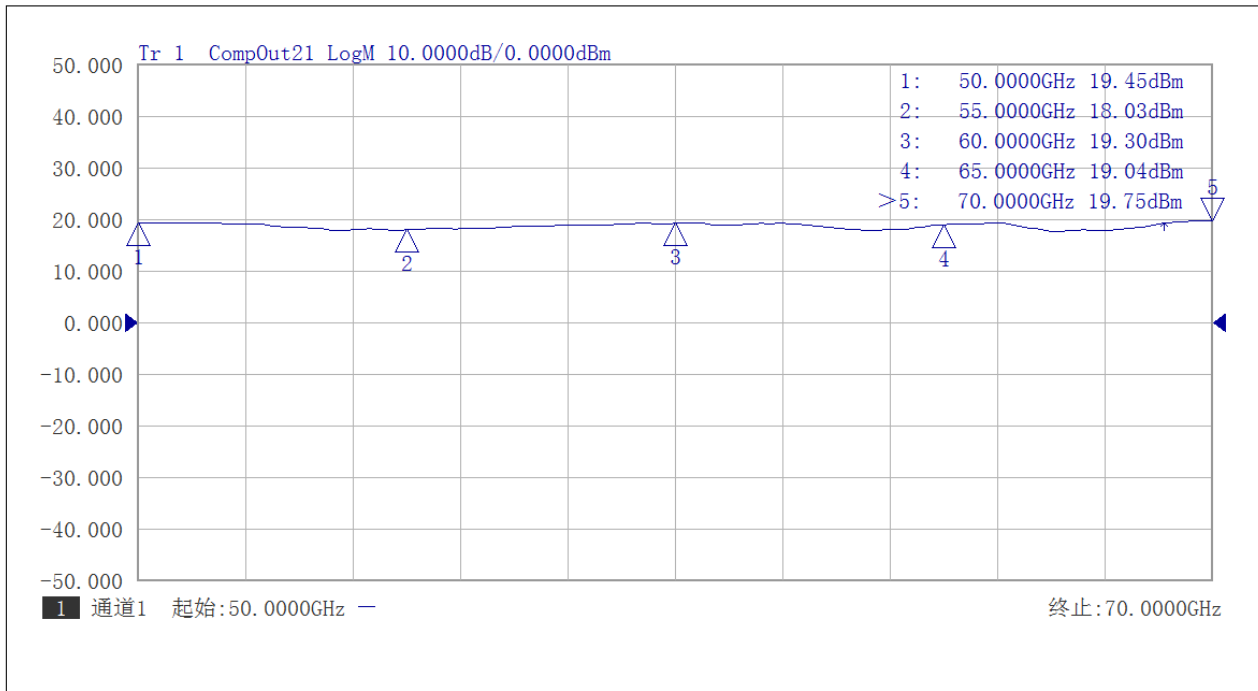
Input and Output Return Loss



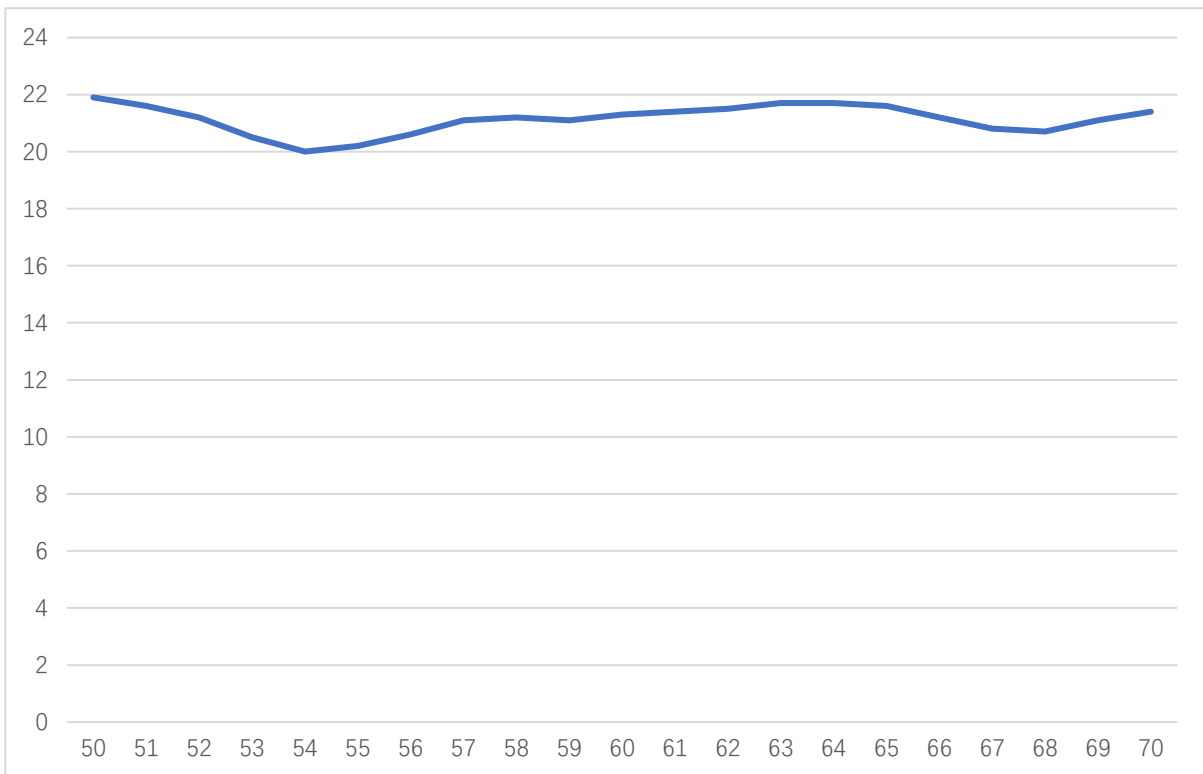


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P1dB vs Frequency



Psat vs Frequency

Shanghai AT Microwave Limited

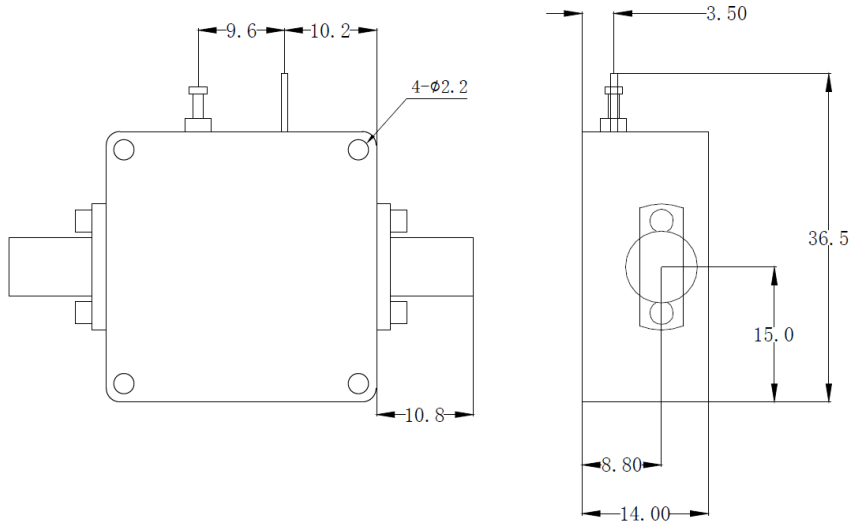
Tel:021-6229 1230

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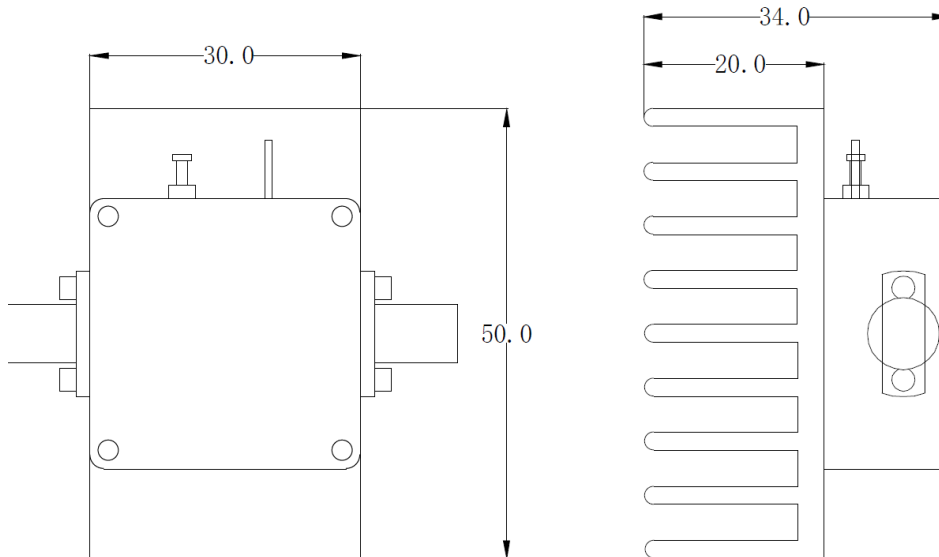


**Dimension:** (unit in mm)



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

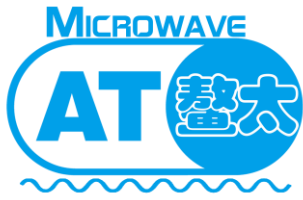
Note: Female Default. Contact with us for other types.



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**





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