

# 10MHz-50GHz Broadband Amplifier



### Product Overview

AT-PA-0050-2720C is broadband amplifier from 10MHz-50GHz, with  $P_{out}=+22dBm$ ,  $NF=6dB$ . It can be used both as Power amplifier or low noise amplifier. The DC power requirement is  $+9V/250mA$ . The module is with 2.4mm Female. 1.85mm is available according to request.

+5V Single power supply (With 3dB lower output power) is also available according to request. 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: 10MHz-50GHz
- ✓  $P_{sat}:+22dBm$
- ✓ Small signal gain: 27dB
- ✓ Single Power Supply

### Application

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

### Key Features

Parameter	Min	Typical	Max
Frequency		10MHz-50GHz	
Gain (10MHz-47GHz)	24dB	27dB	
P1dB (10MHz-40GHz)		+20dBm	
$P_{sat}(10MHz-40GHz)$		+22dBm	
Drain Supply	+8V	+9V	+12V
Current		250 mA	350mA
NF(1-43GHz)		6dB	
Input Return Loss		-10dB	
Output Return Loss		-10dB	
Spec Temp		25C	

Note1: Lower Vdd is preferred due to lower power consumption. Same RF Performance with +8V to +13V.





# AT-BB-0050-2720C

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## Mechanical Information

Item	Description
Input Port	2.4mm Female
Output Port	2.4mm Female
Case Material	Copper
Finish	Gold Plated
Weight (Without Heatsink)	80g
Size:	30x30x14 mm

## Absolute Maximum Ratings Table

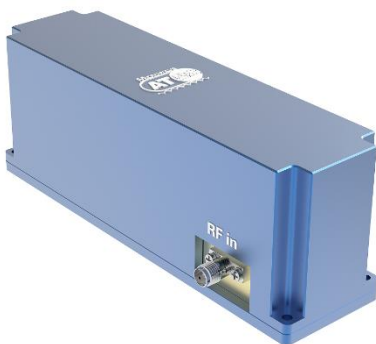
Parameter	Value
Drain Supply	+13V
RF Input Power	+15 dBm
Operating Temperature	-20 to +70C
Storage Temperature	-65 to +150C

## 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.

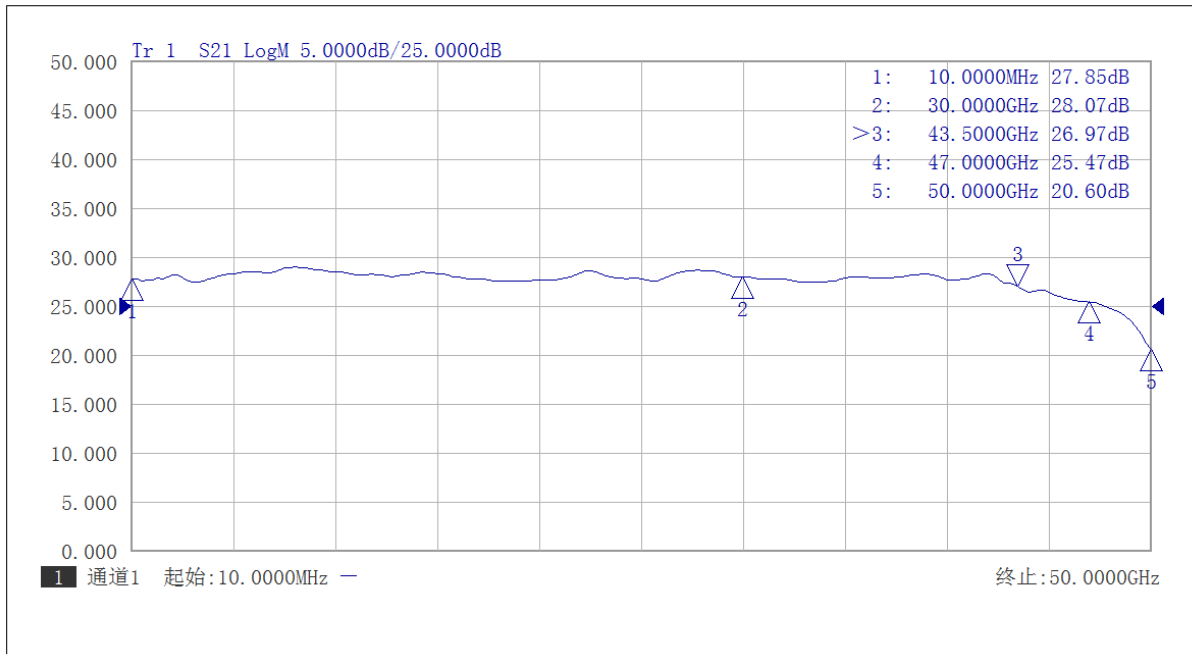
## Part Number Selection Guide

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

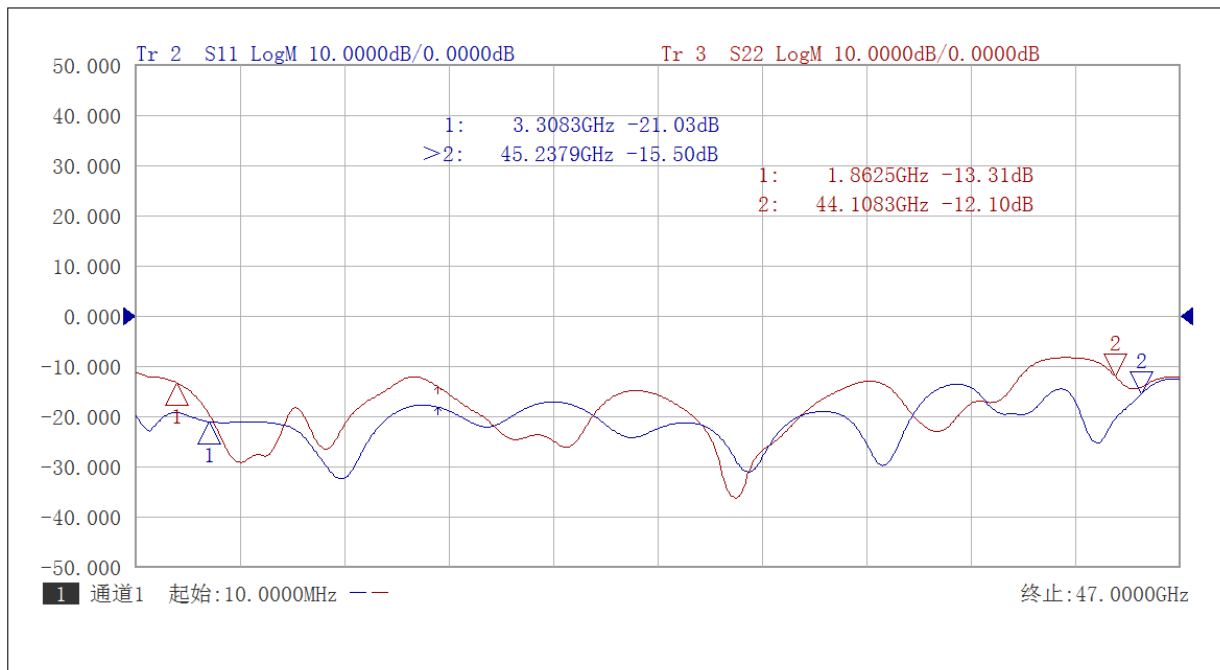


### Test Data (25C)

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

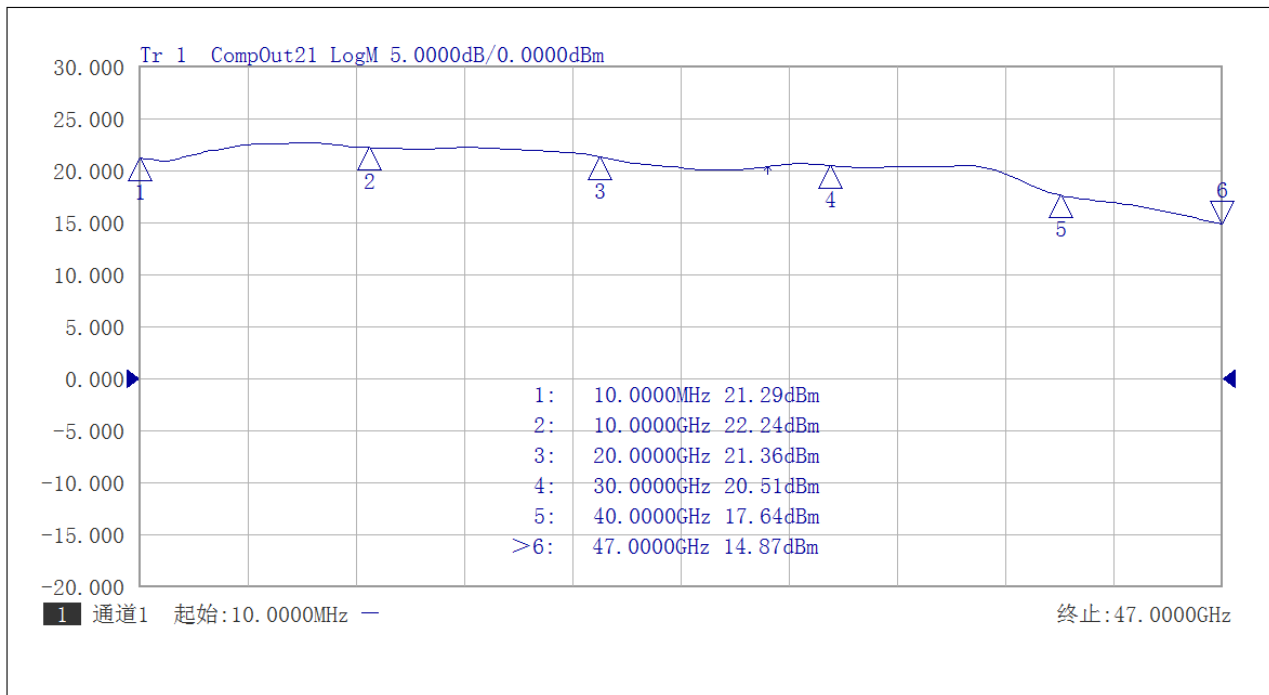


Gain vs Frequency

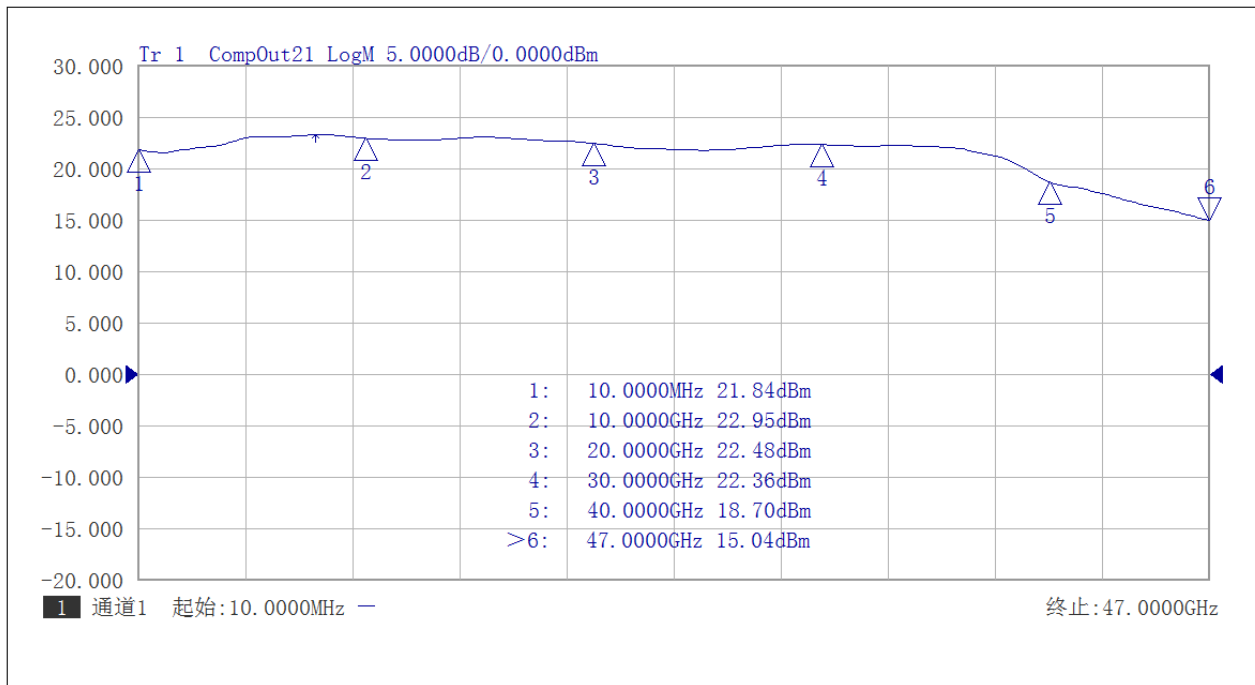


Return Loss vs Frequency





P1 vs Frequency 10MHz-50GHz



P3 vs Frequency 10MHz-50GHz





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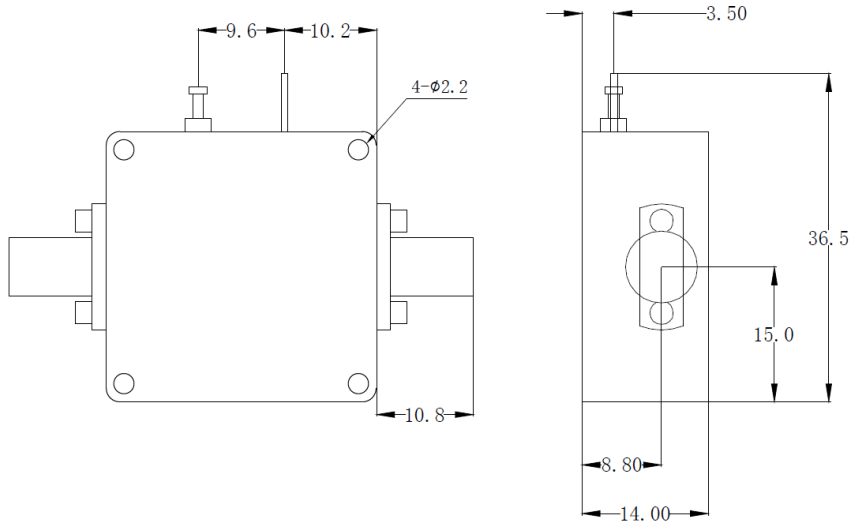
## 10MHz-50GHz Broadband Amplifier



1-50GHz NF

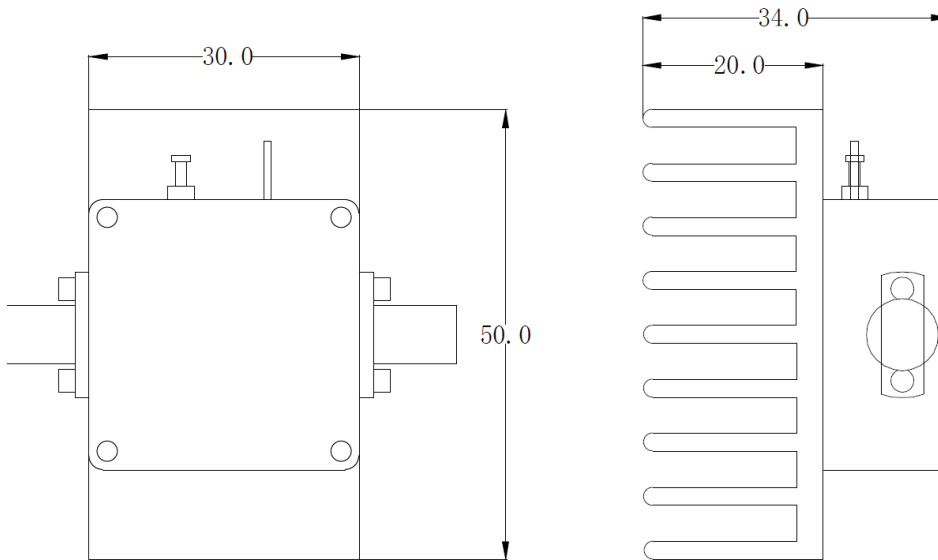


### Dimension: (unit in mm)



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

**Heat Sink Required During Operation**

