

### 10MHz-43.5GHz Broadband Amplifier

2023-11-5

Gain=27dB, Pout=+20dBm, 2.92mm



#### Product Overview

AT-BB-0043-2720 is broadband amplifier from 10MHz-43.5GHz, with Pout=+20dBm, NF=4.5dB. It can be used both as Power amplifier or low noise amplifier. The DC power requirement is +9V/250mA. The module is with 2.92mm Female

+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-43.5GHz
- ✓ Psat:+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-43.5GHz	
Gain	24dB	27dB	
P1dB (0.1-40GHz)		+20 dBm	
Psat (0.1-40GHz)		+22dBm	
Drain Supply	+8V	+9V	+12V
Current		250 mA	350mA
NF(1-40GHz)		4.5dB	6.5dB
Input Return Loss	-5	-10 dB	
Output Return Loss	-5	-10 dB	
Spec Temp		25C	

Note1: Lower Vdd is preferred due to lower power consumption. Same RF Performance with +8V to +12V.





# AT-BB-0043-2720

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### Mechanical Information

Item	Description
Input Port	2.92mm Female
Output Port	2.92mm Female
Case Material	Copper
Finish	Gold Plated
Package Sealing	Epoxy Sealed
Weight (Without Heatsink)	80g
Size:	See outline

### Absolute Maximum Ratings Table

Parameter	Value
Drain Supply	+13V
RF Input Power	+15 dBm
Operating Temperature	-40 to +85C
Storage Temperature	-55 to +125C

### 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.

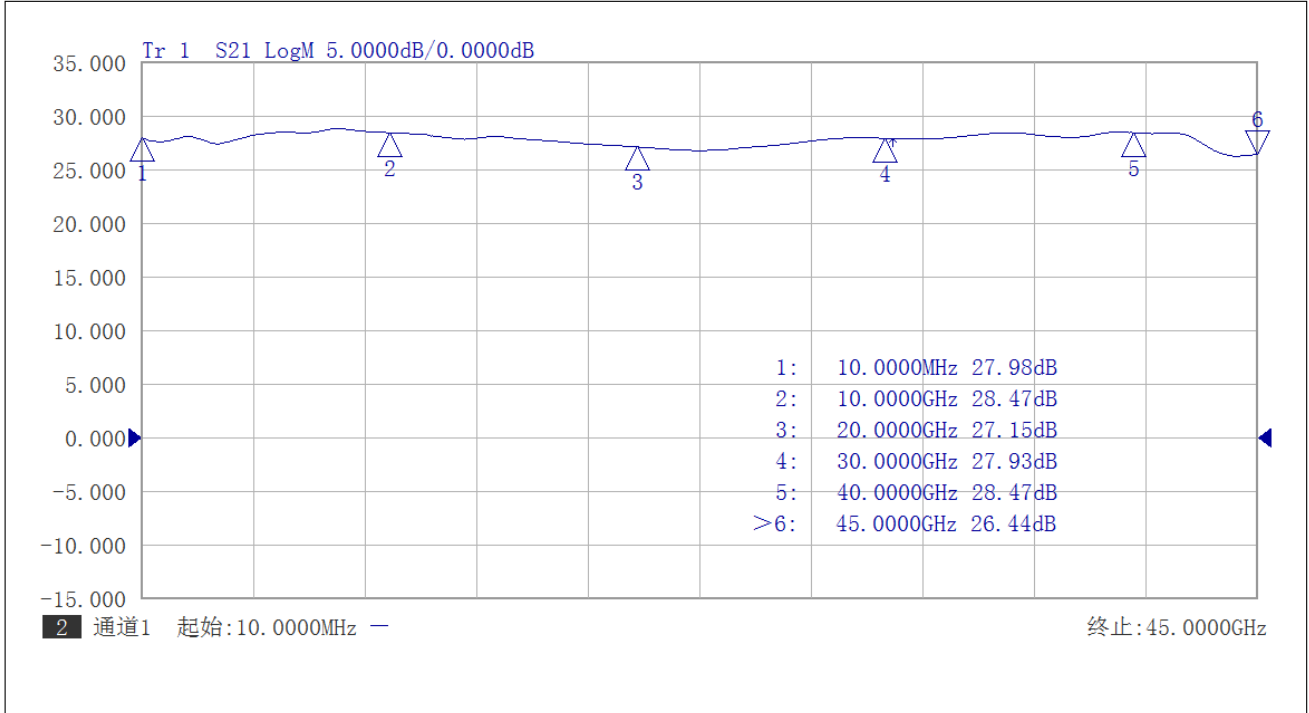
### Part Number Selection Guide

Item	Description
AT-BB-0043-2720	Stand Module with DC Power Supply
AT-BB-0043-2720 <b>-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

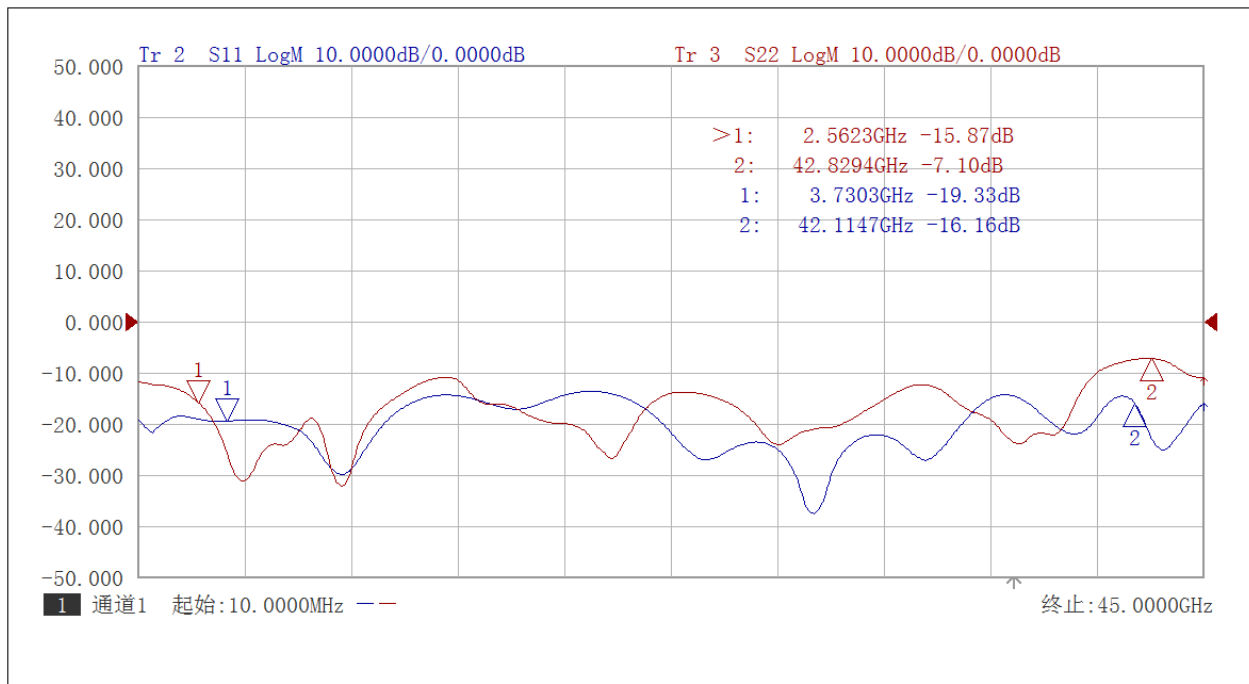


### Test Data (25C)

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

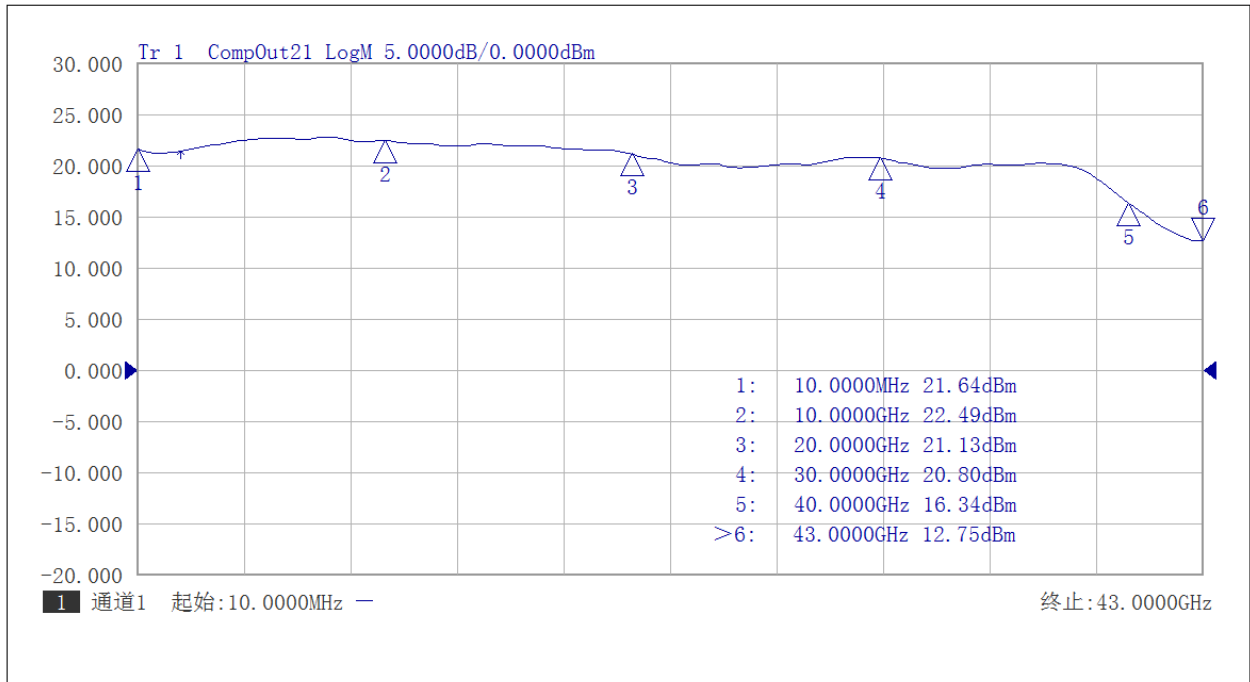


Gain vs Frequency

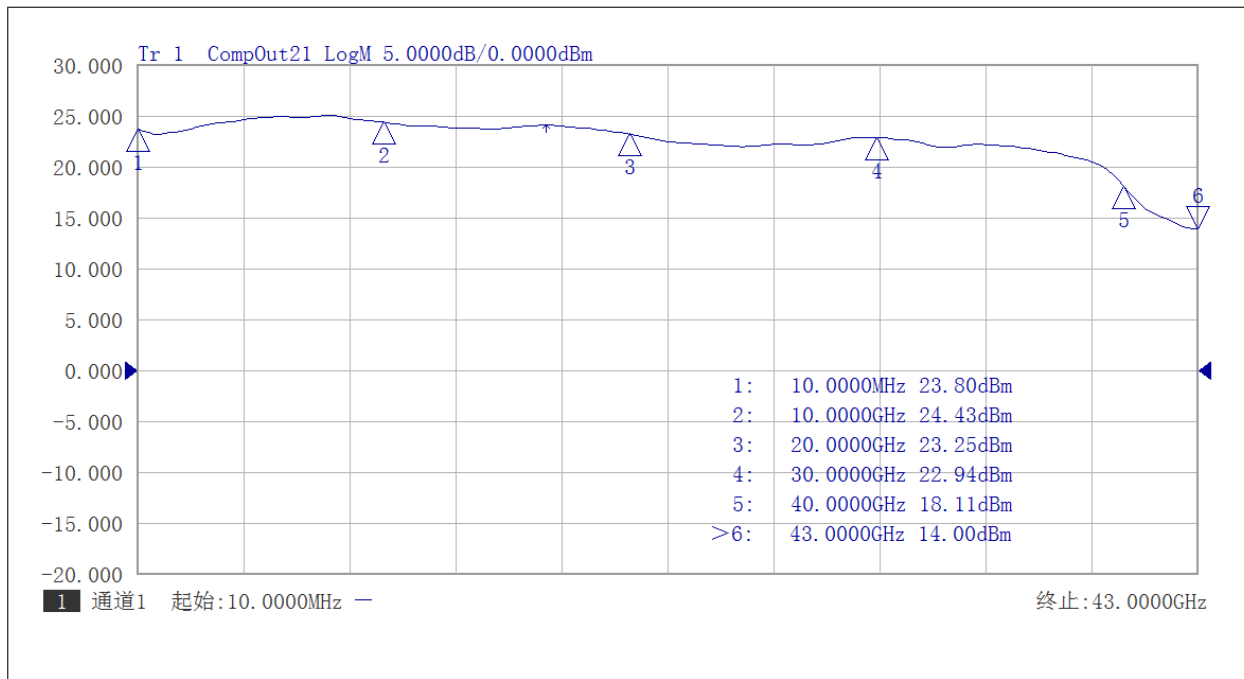


Return Loss vs Frequency



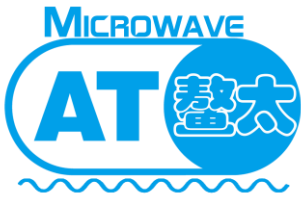


P1db vs Frequency



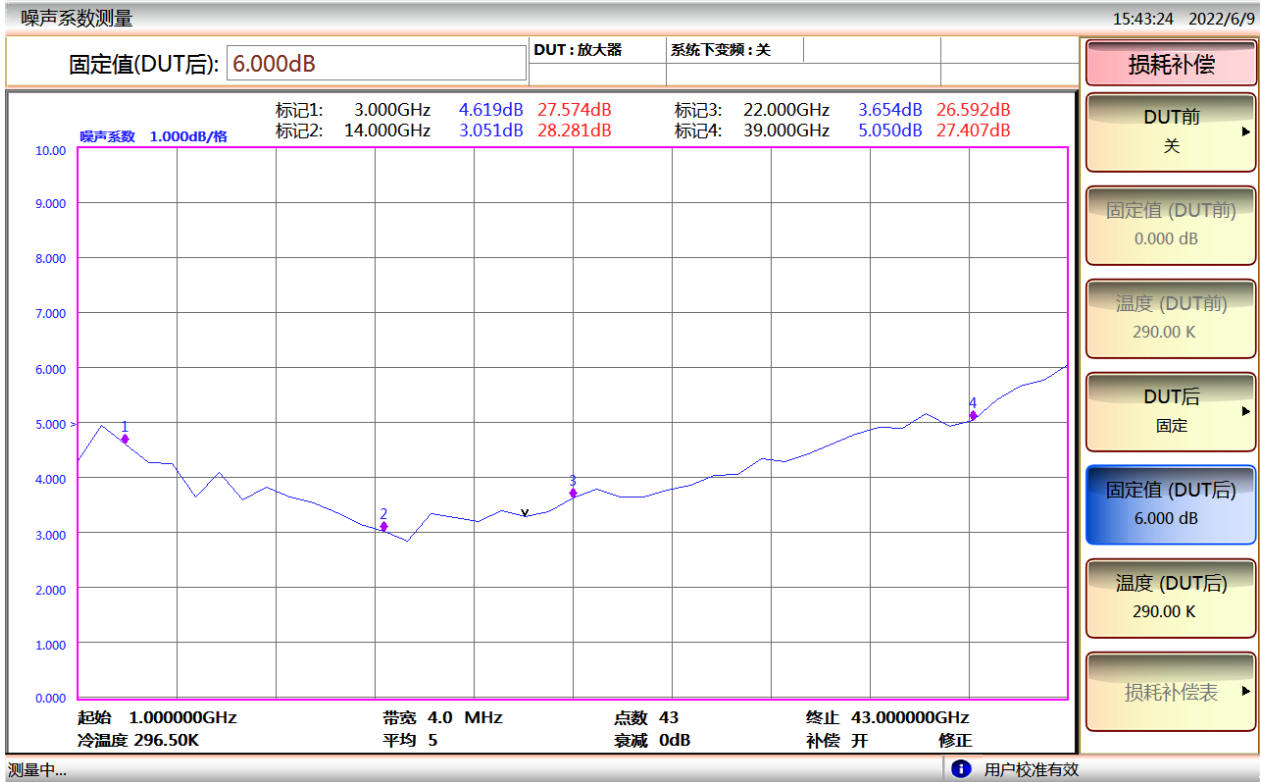
P3db vs Frequency





# AT-BB-0043-2720

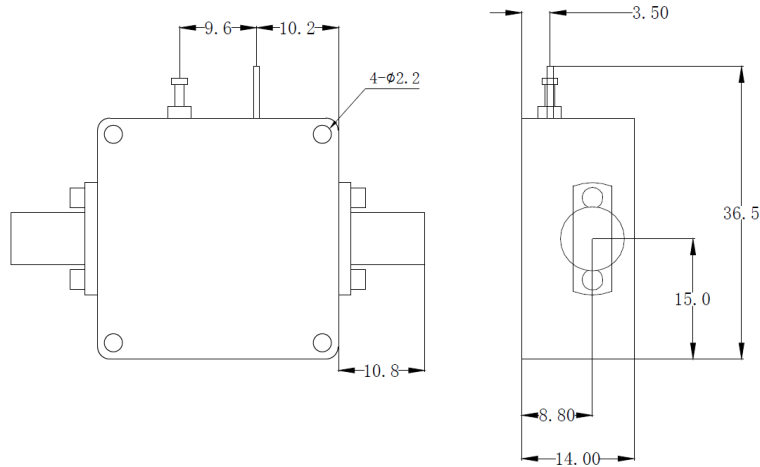
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NF vs Frequency

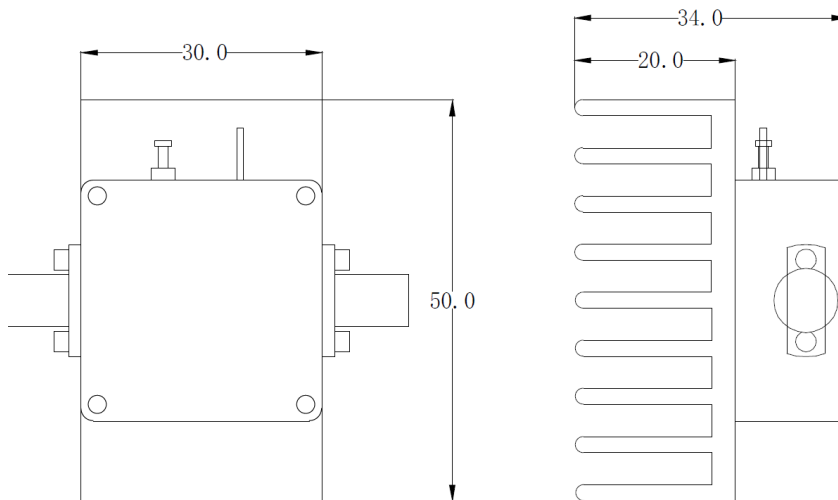


**Dimension:** (unit in mm)



	<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**



**-LCBT Option Dimension:** (unit in mm)

