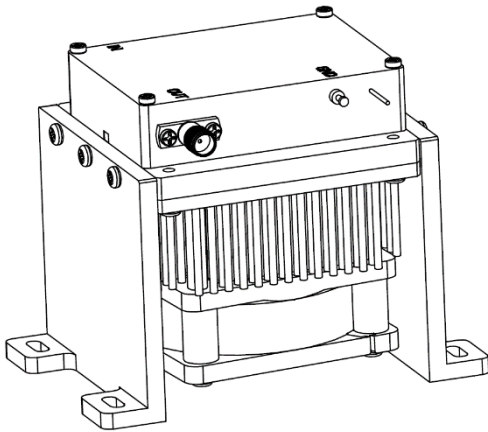


10MHz-22GHz Broadband Amplifier

High Gain=40dB, Pout=+30dBm

2023-5-5



Product Overview

AT-PA-0022-4030A is broadband amplifier from 10MHz-22GHz, with Pout=+30dBm. The DC power requirement is +16V/900mA. The module is with SMA Female.

The high power makes it suitable for many applications. 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

Advantages

- ✓ Frequency: 10MHz-22GHz
- ✓ Psat:+30dBm
- ✓ Small signal gain: 40dB
- ✓ Single Power Supply

Application

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

Key Features

Parameter	Min	Typical	Max
Frequency		10MHz-22GHz	
Gain	38	40dB	
P1dB	+27dBm +25dBm	0.1-16GHz: +29dBm 16-22GHz: +27dBm	
Psat	+29dBm +27dBm	0.1-16GHz: +30dBm 16-22GHz: +28dBm	
NF(0.1-20GHz)		4dB	4.5dB
Drain Supply		+16V	+17
Current		0.9A	1.1A
Input Return Loss		-10dB	
Output Return Loss		-5dB	
Spec Temp		25C	





AT-BB-0022-4030A

10MHz-22GHz 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:	See outline

Absolute Maximum Ratings Table

Parameter	Value
Drain Supply	+18V
RF Input Power	+13 dBm
Operating Temperature	-40 to +85C
Storage Temperature	-55 to +125C

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.





AT-BB-0022-4030A

10MHz-22GHz Broadband Amplifier

Part Number Selection

Item	Description
AT-BB-0022-4030A	In defaulted without heatsink and Fan. Heatsink and Fan required during operation.
AT-BB-0022-4030A -HF	Including Heatsink and Fan. Fan bias is connected with PA Module's Vdd supply
AT-BB-0022-4030A -LCBT	<u>L</u> ow Cost, <u>C</u> ompact <u>B</u> ench- <u>T</u> op, Heatsink included. +220V Supply with AC/DC Adapter
AT-BTBB-0022-4030A	Bench-top Option 220V AC Power Supply Directly.

ABOUT -LCBT

1. What does LCBT stand for?

Low Cost, Compact Size, Bench-Top

2. What are advantages of -LCBT?

Higher Reliability.

There is a narrow power supply range for DC Bias Amplifier modules normally
It's quit a pity if the high-cost/ fragile amplifier is damaged due to the wrong power supply.

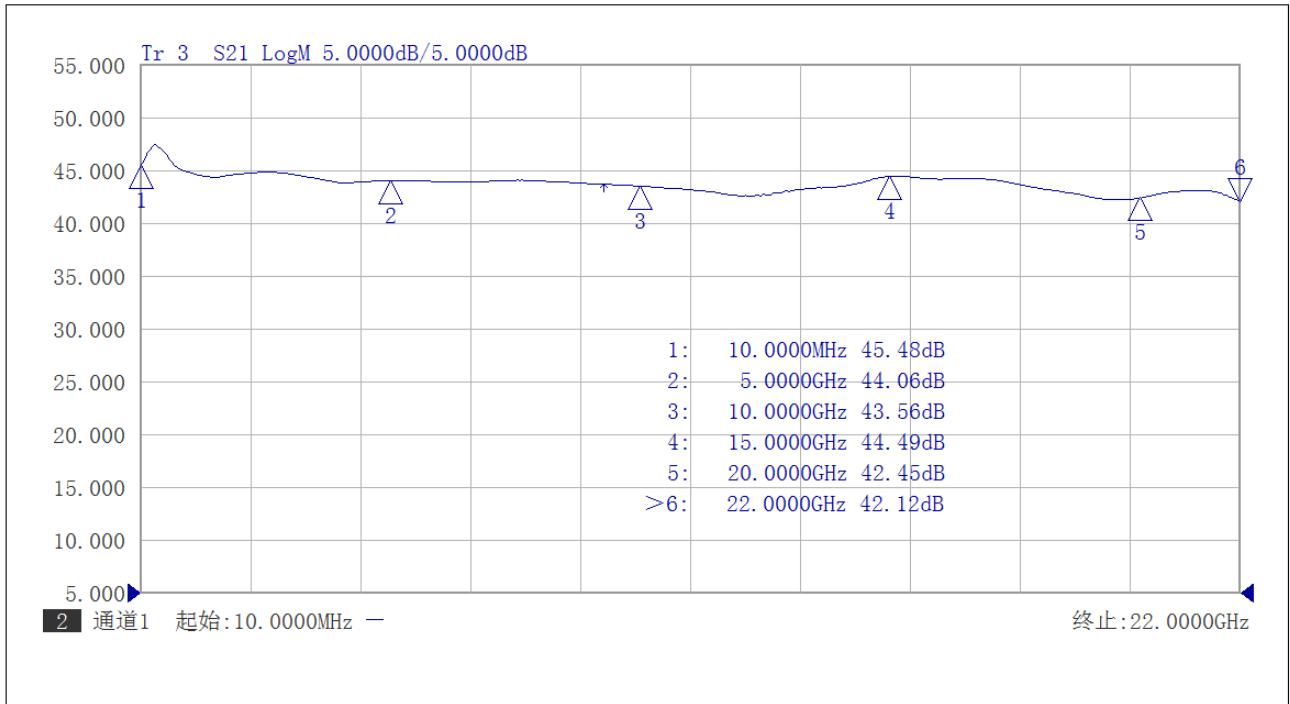
Easy to use.

-LCBT can use AC 220V(90V to 240V Range) Power supply directly, by a AC/DC apdater.

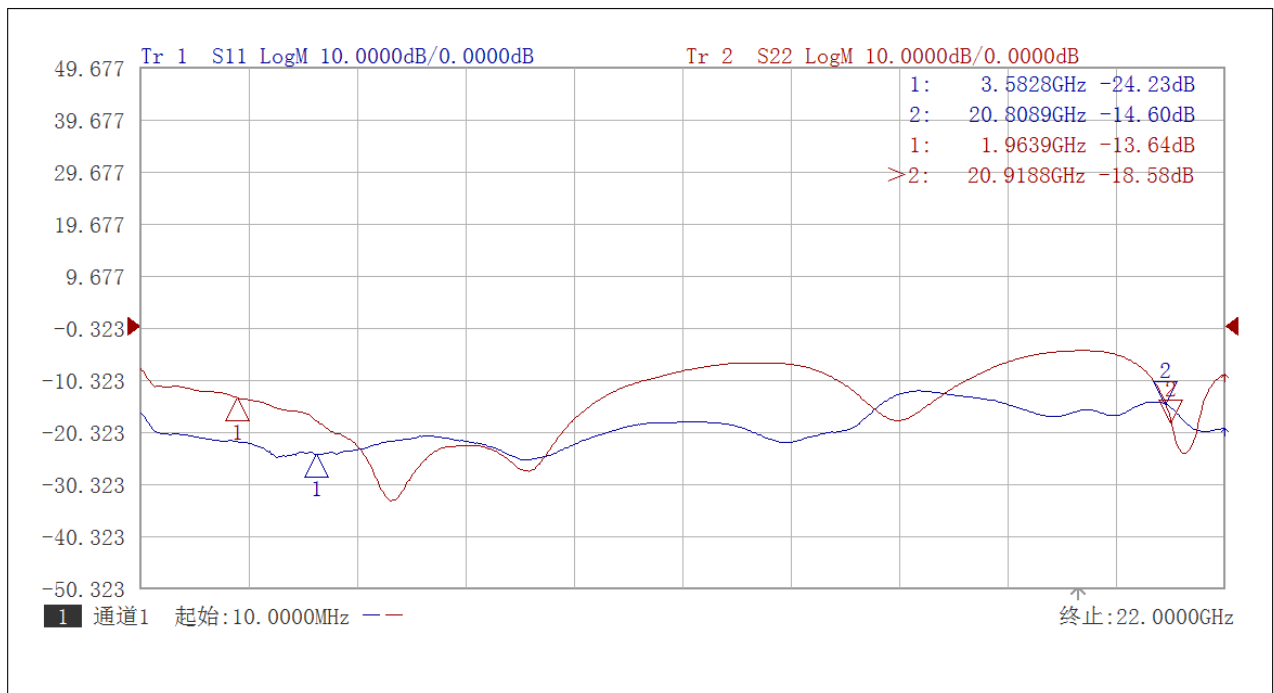


Test Data (25C)

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

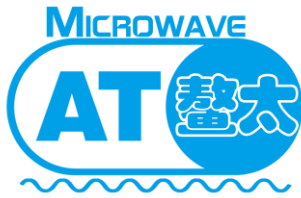


Gain vs Frequency



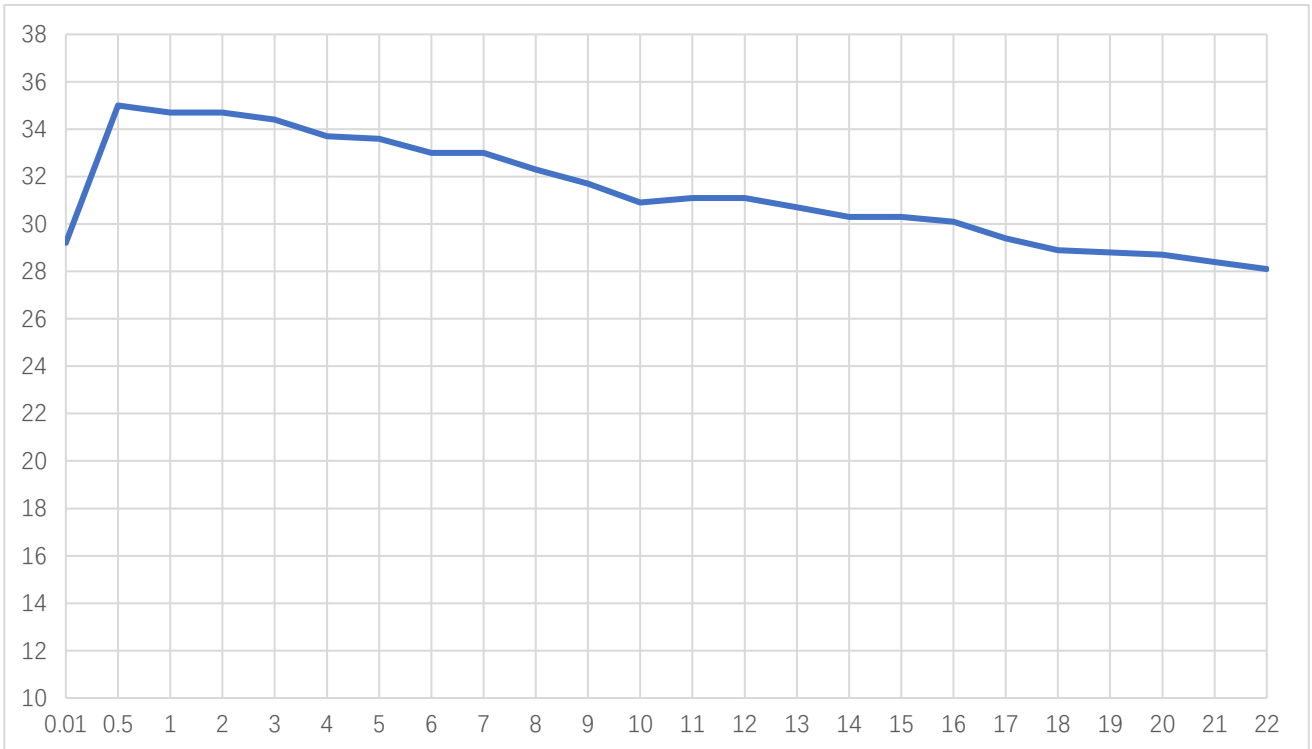
Return Loss vs Frequency



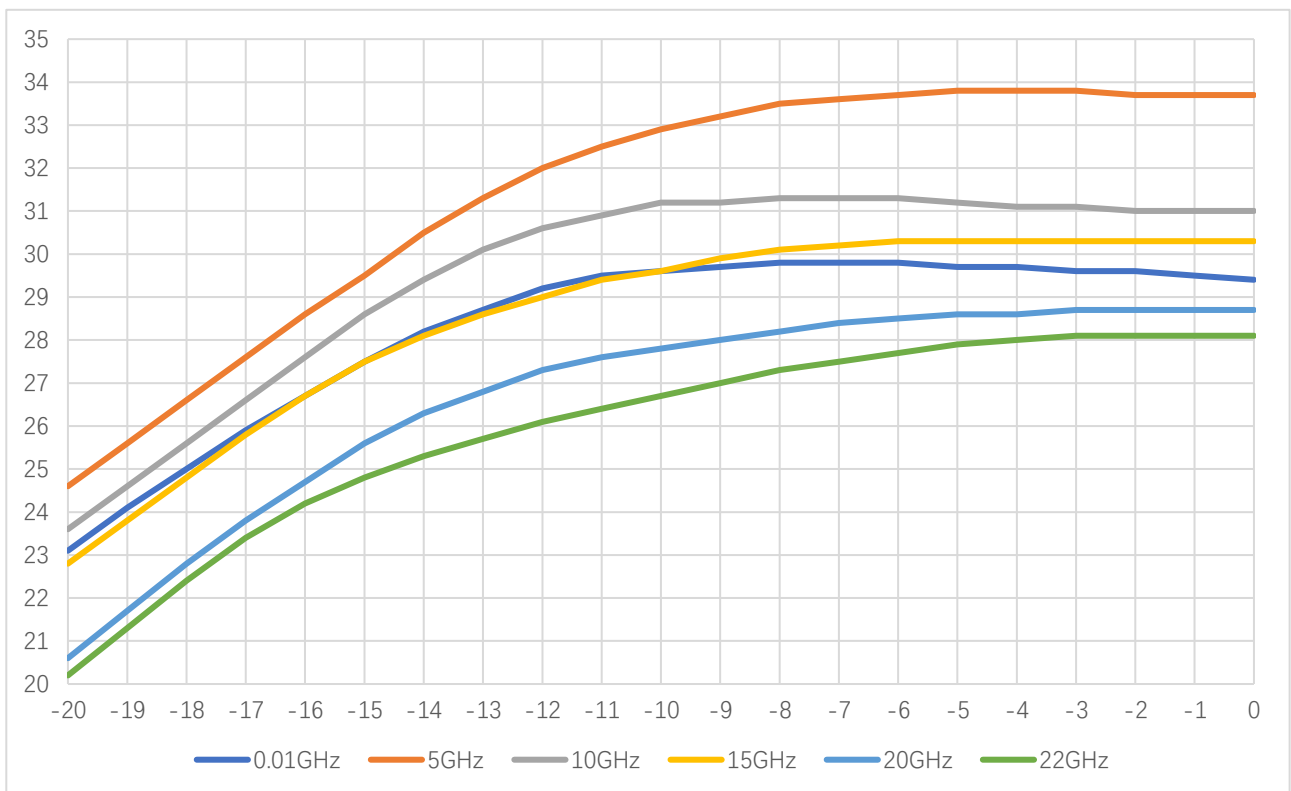


AT-BB-0022-4030A

10MHz-22GHz Broadband Amplifier



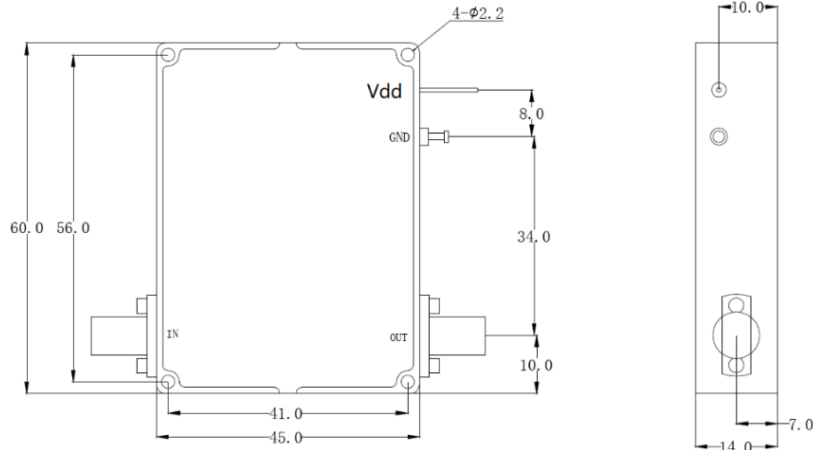
Psat vs Frequency



Pout vs Pin



Dimension without Heatsink: (unit mm)

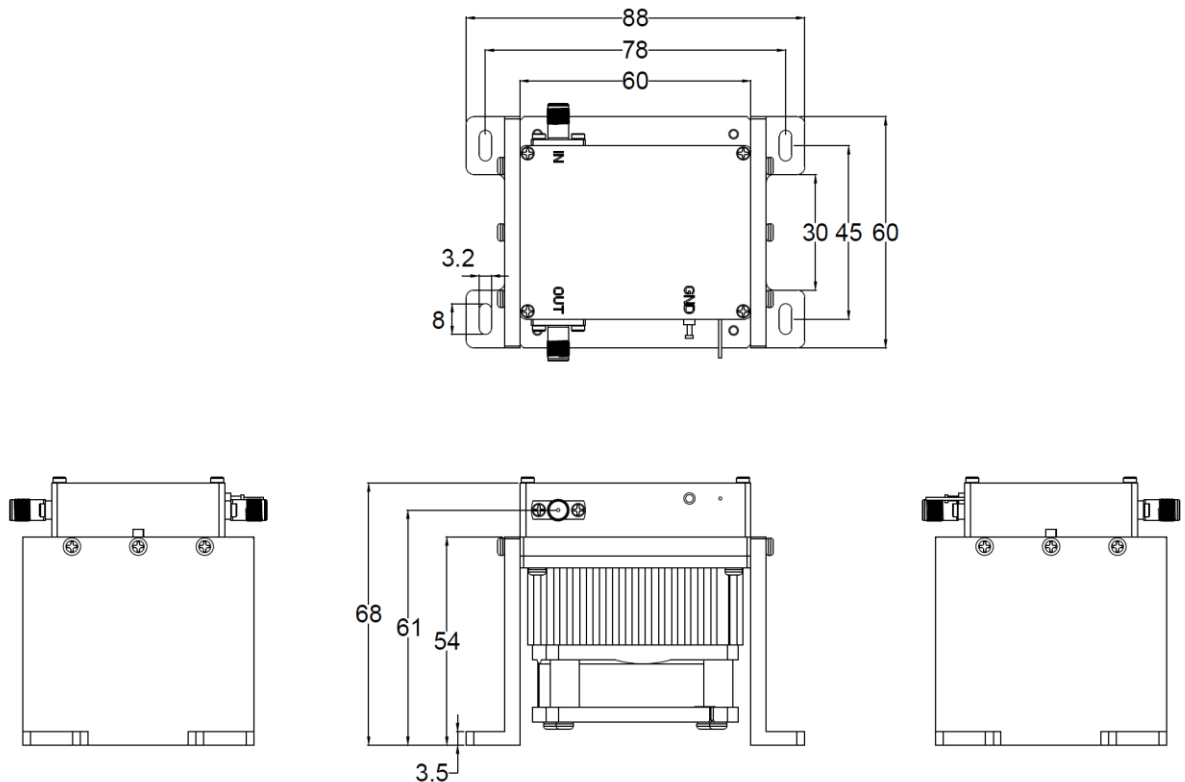


	<26.5GHz	<40GHz	<50GHz	<67GHz
Connector	SMA	2.92mm	2.4mm	1.85mm
Length of a	9.4mm	9.5mm	10.8mm	11.3mm

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

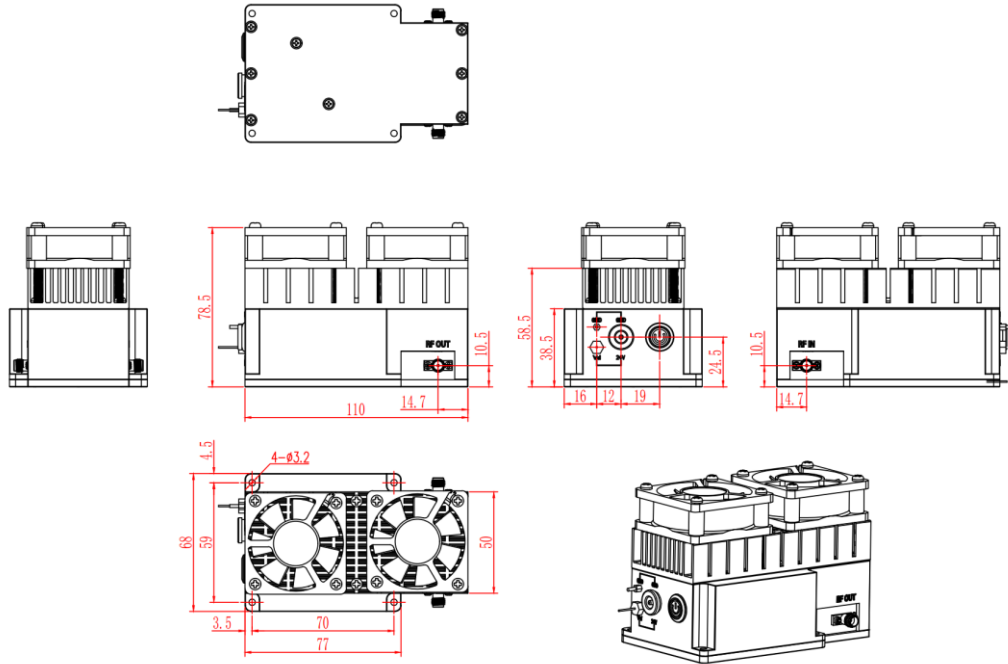
Outline without heatsink. Heat Sink Required During Operation

-HF Option Dimension with Heatsink and Fan: (unit mm)



-LCBT Option Dimension (unit mm)

Low Cost, Compact Bench-Top with 220V AC/DC Adapter



-BT Bench-top Dimension (unit mm)

