

10MHz-50GHz Broadband Amplifier

2022-8-16

Gain=50dB, Pout=+20dBm, 2.4mm Female



Product Overview

AT-BB-0050-5020C is broadband amplifier from 10MHz-50GHz, with Pout=+20dBm, NF=5dB. It can be used both as Power amplifier or low noise amplifier. The DC power requirement is +8V/500mA. The module is with 2.4mm Female

AT Microwave can provide all kinds of coaxial low noise amplifiers, with frequency from 0.01-67GHz, gain from 20 to 60dB, Pout from +5 to +27dBm, and connectors from SMA to 1.85mm.

More information, please visit www.atmicrowave.com

Advantages

- ✓ Frequency: 10MHz-50GHz
- ✓ Gain: 50dB
- ✓ Psat:+22dBm
- ✓ Single Power Supply

Application

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

Key Features

Parameter	Min	Typical	Max
Frequency		10MHz-50GHz	
Gain	47dB 44dB	10MHz-45GHz: 50dB 45-50GHz: 47dB	
Gain Flatness (10MHz-45GHz)		+/- 3dB	
P1dB (10MHz-40GHz)		+20dBm	
Psat (10MHz-40GHz)		+22dBm	
NF (1-40GHz)		4.5dB	6.5dB
Drain Supply	Note1	+8 to +12V	+13V
Current		500 mA	
Input Return Loss		-10dB	
Output Return Loss		-10dB	
Spec Temp		25C	





AT-BB-0050-5020C

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

Mechanical Information

Item	Description
Input Port	2.4mm Female
Output Port	2.4mm 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	+15V
RF Input Power	+10 dBm
Operating Temperature(note)	-20 to +70C
Storage Temperature	-65 to +150C

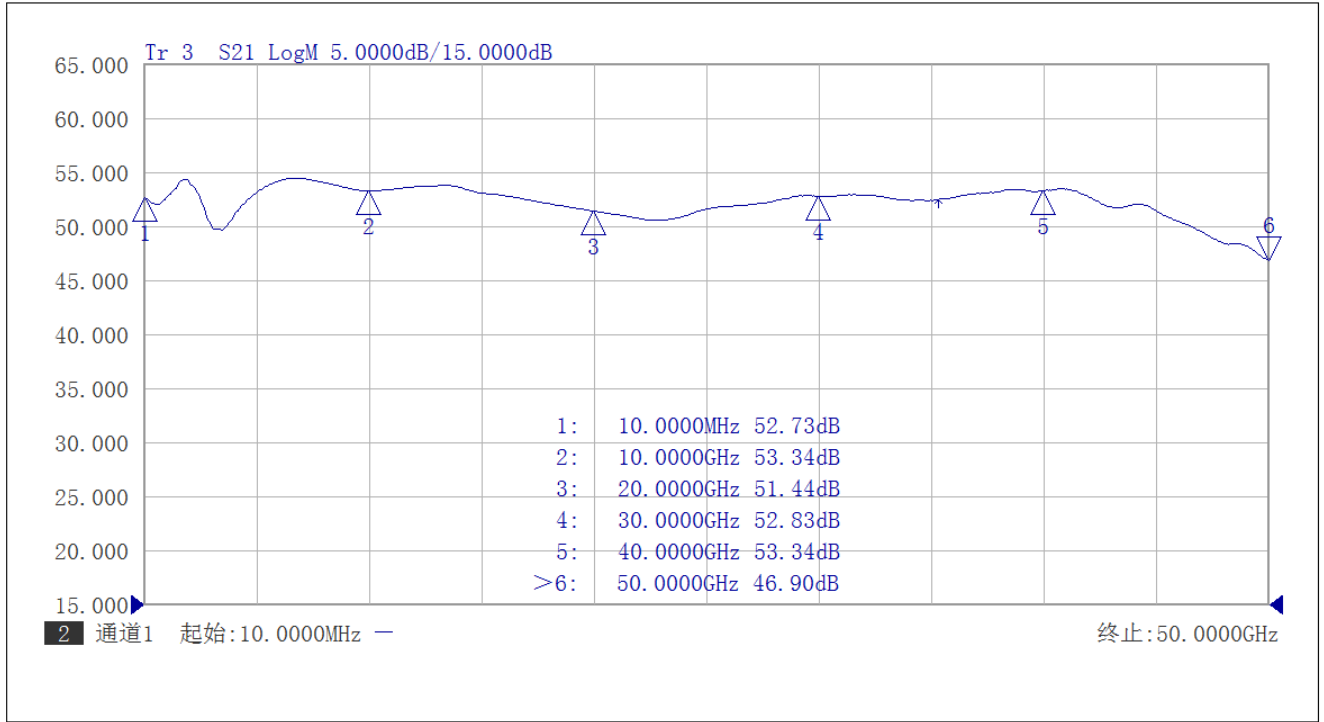
Note: -40 to +85C is available according to request.

Part Number Selection Guide

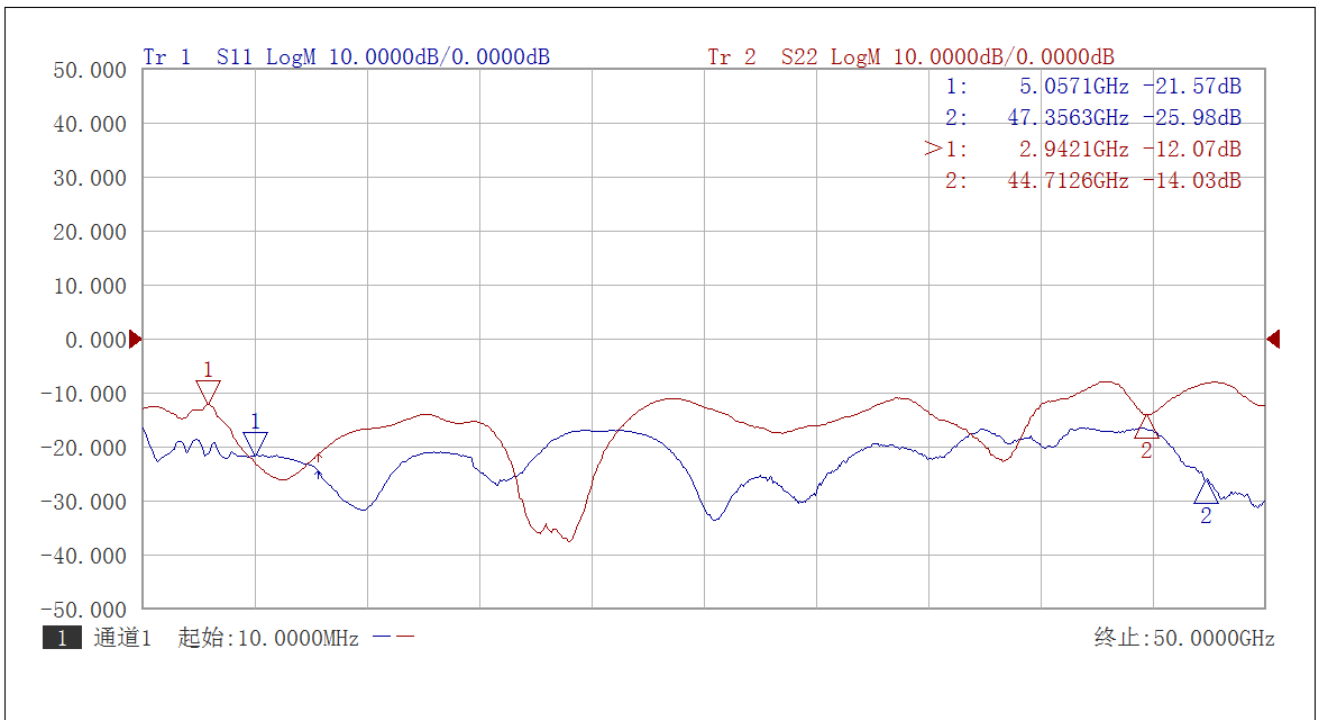
Item	Description
PN	Stand Module with DC Power Supply
PN-LCBT	L ow Cost, C ompact B ench- T op, +220V Supply with AC/DC Adapter



Test Data

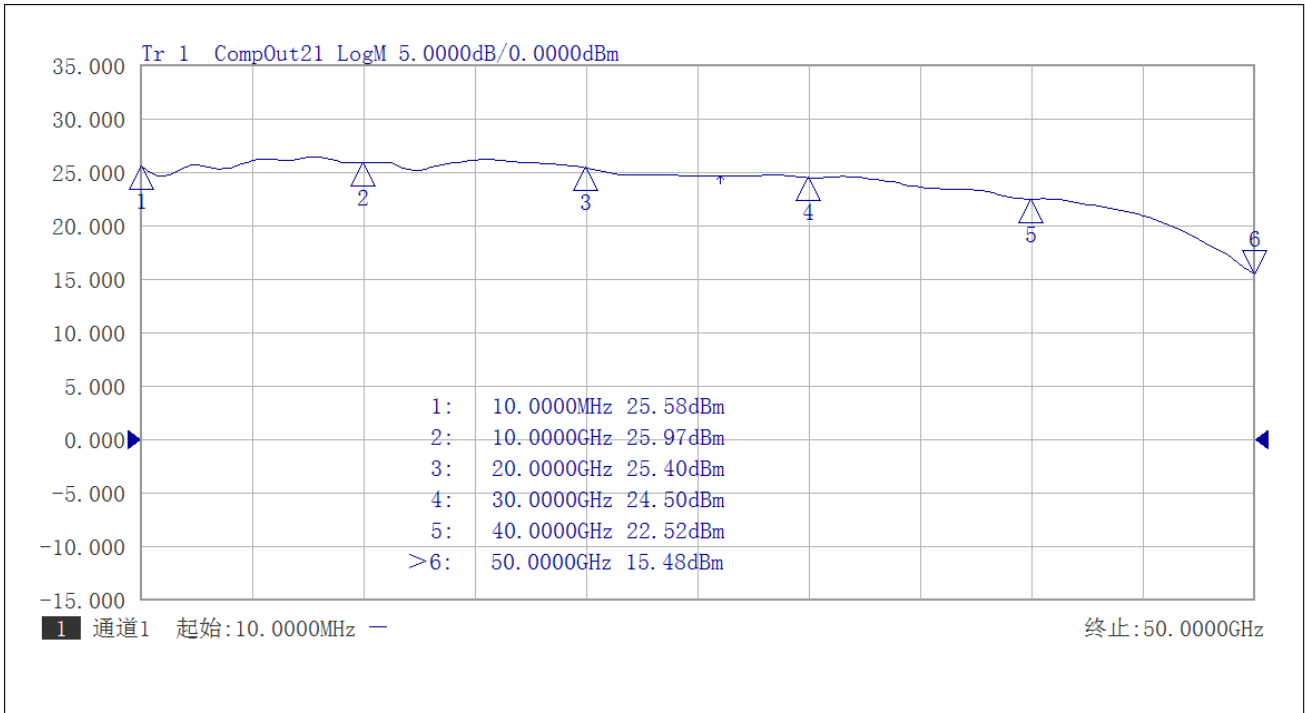


Gain vs Frequency

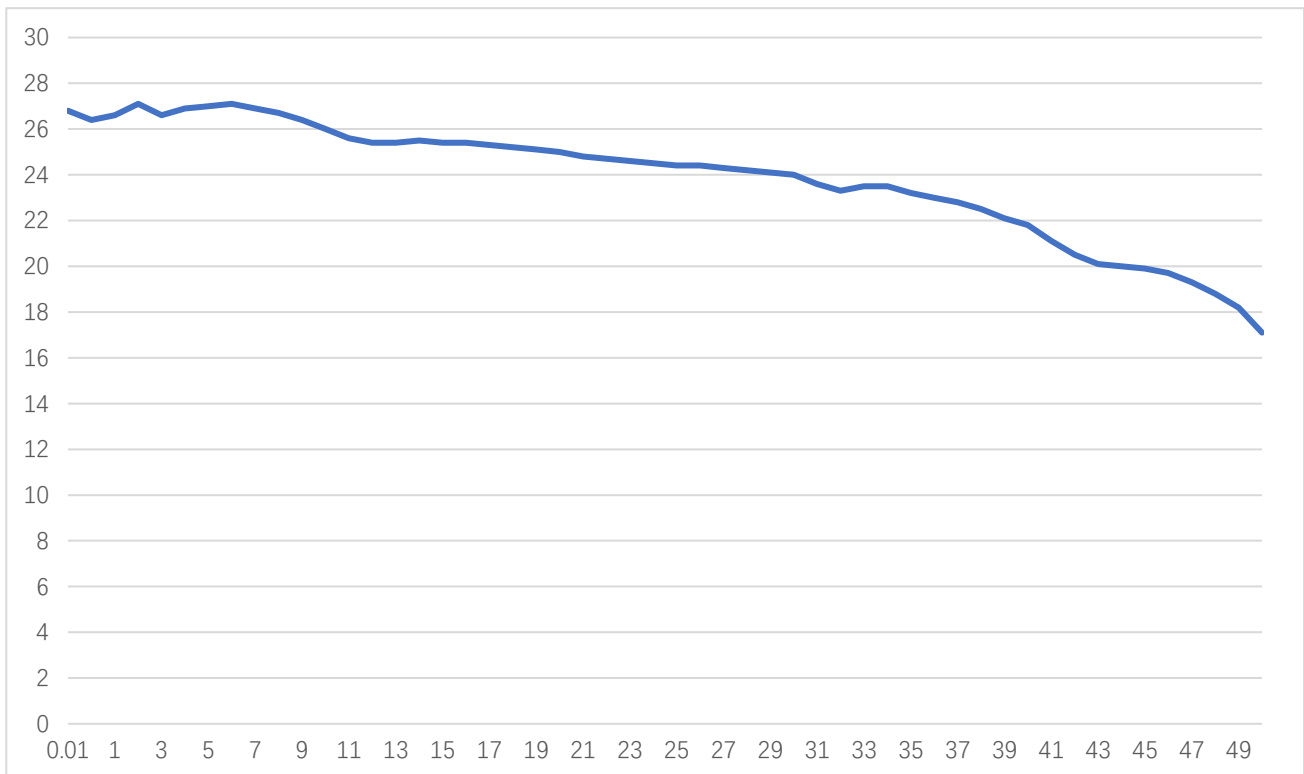


Return Loss vs Frequency



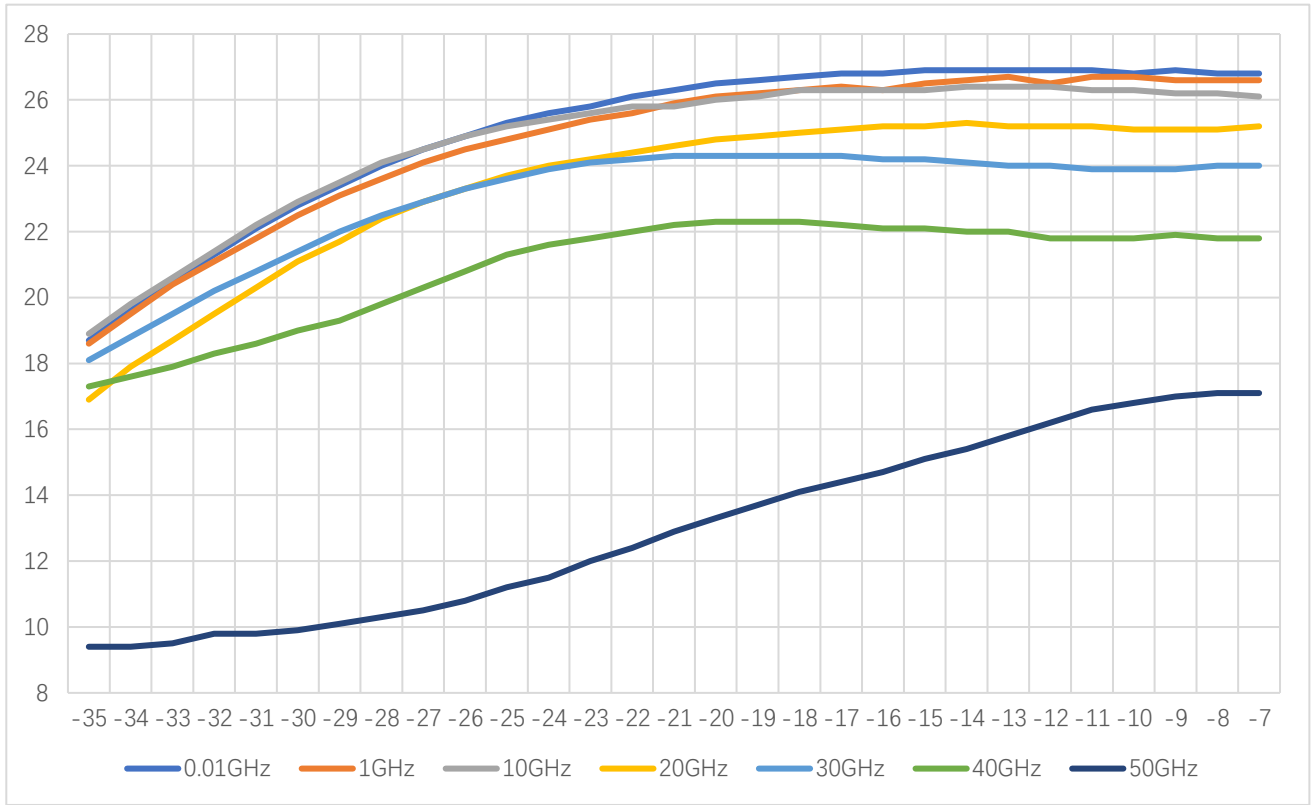


P1db vs Frequency

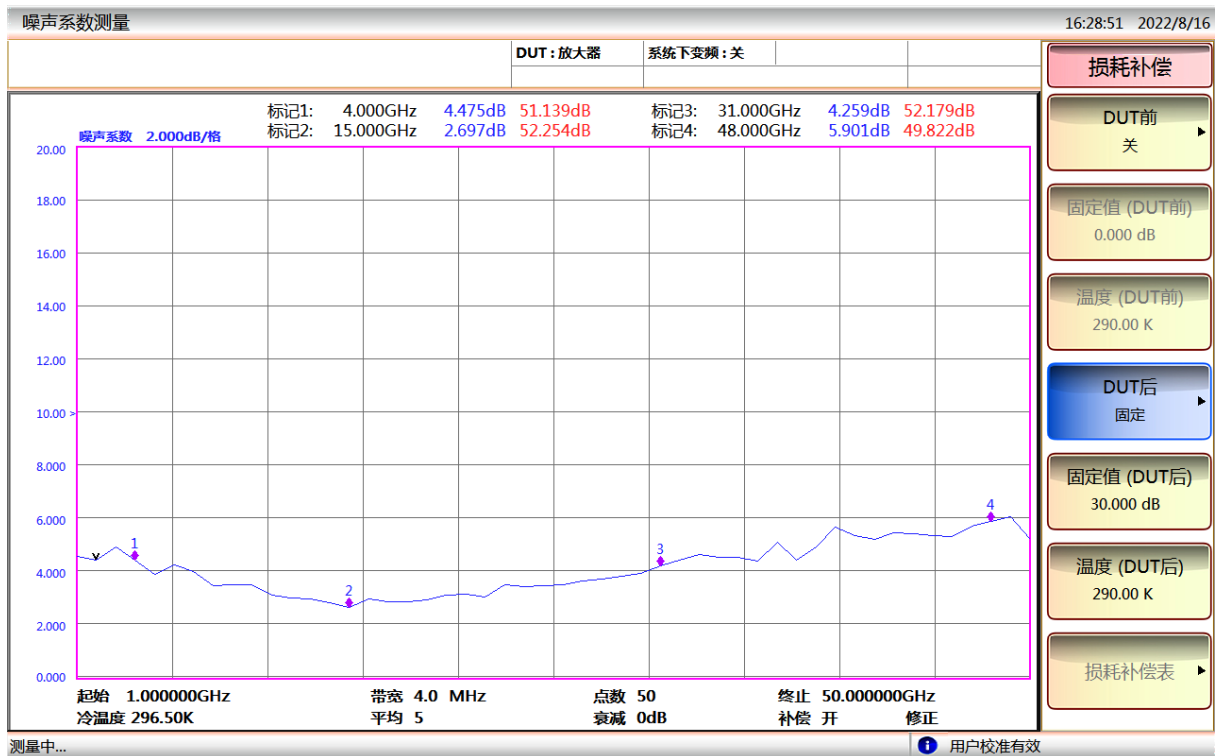


Psat vs Frequency





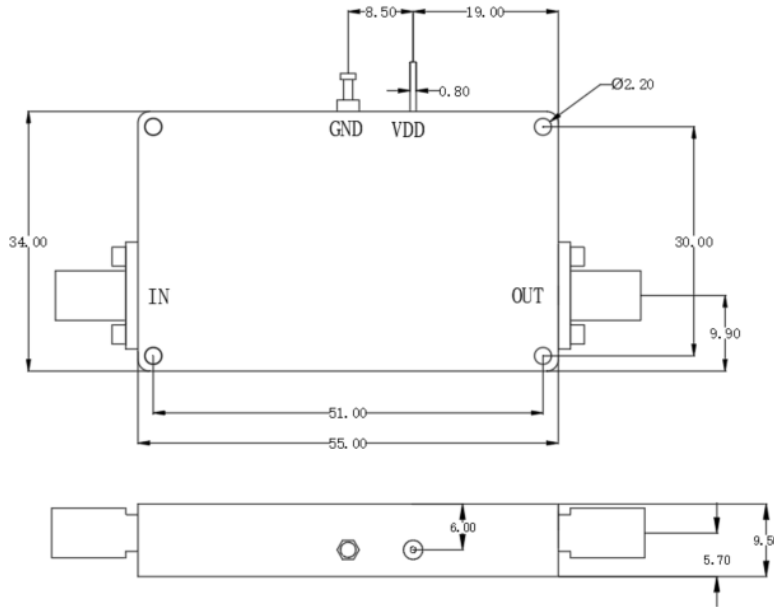
Pout vs Pin



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.

Heat Sink Required During Operation

