

18-40GHz Broadband Amplifier, Gain=30dB, +20dBm, 2.92mm Female

2022-4-24



Product Overview

AT-PA-1840-3020X is high gain power amplifier with +20dBm output power in the frequency of 18-40GHz. The DC power requirement is +8V/280mA. The module is with 2.92mm connector.

The power amplifier has high gain, high linearity, low input/output return loss and flat gain response.

More information, please visit www.atmicrowave.com

Advantages

- ✓ Frequency: 18-40GHz
- ✓ Pout:+20dBm
- ✓ Small signal gain: 30dB
- ✓ Single Power Supply

Application

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

Key Features

Parameter	Min	Typical	Max
Frequency		18-40GHz	
Gain	27	30dB	
Gain Flatness		+/-2dB	
P1dB		+18dBm	
Psat		+20dBm	
NF		4dB	
Drain Supply		+7 to 12V	
Current		280 mA	310mA
Input Return Loss		-10dB	
Output Return Loss		-10dB	
Spec Temp		25C	





AT-PA-1840-3020X

18-40GHz Power Amplifier

Mechanical Information

Item	Description
Input Port	2.92mm Female
Output Port	2.92mm Female
Case Material	Copper
Finish	Gold Plated
Weight (Without Heatsink)	90g
Size:	30x30x14 mm

Absolute Maximum Ratings Table

Parameter	Value
Drain Supply	+13V
RF Input Power	+18 dBm
Operating Temperature	-20 to +70C
Storage Temperature	-65 to +150C

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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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.

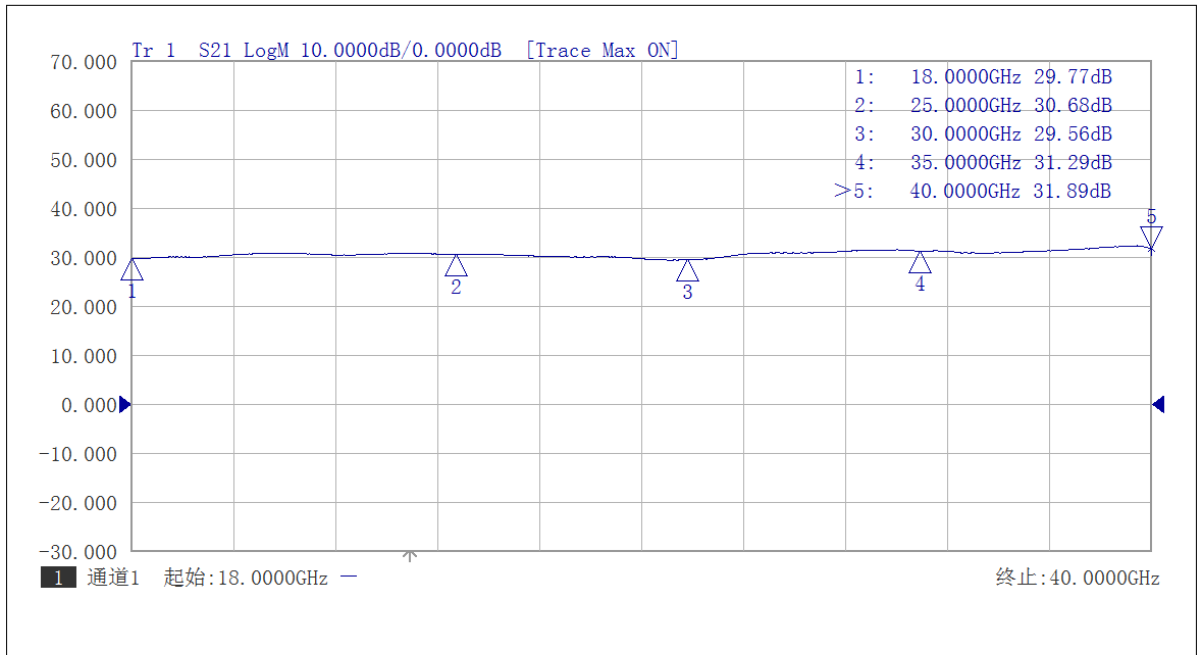
Part Number Selection Guide

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

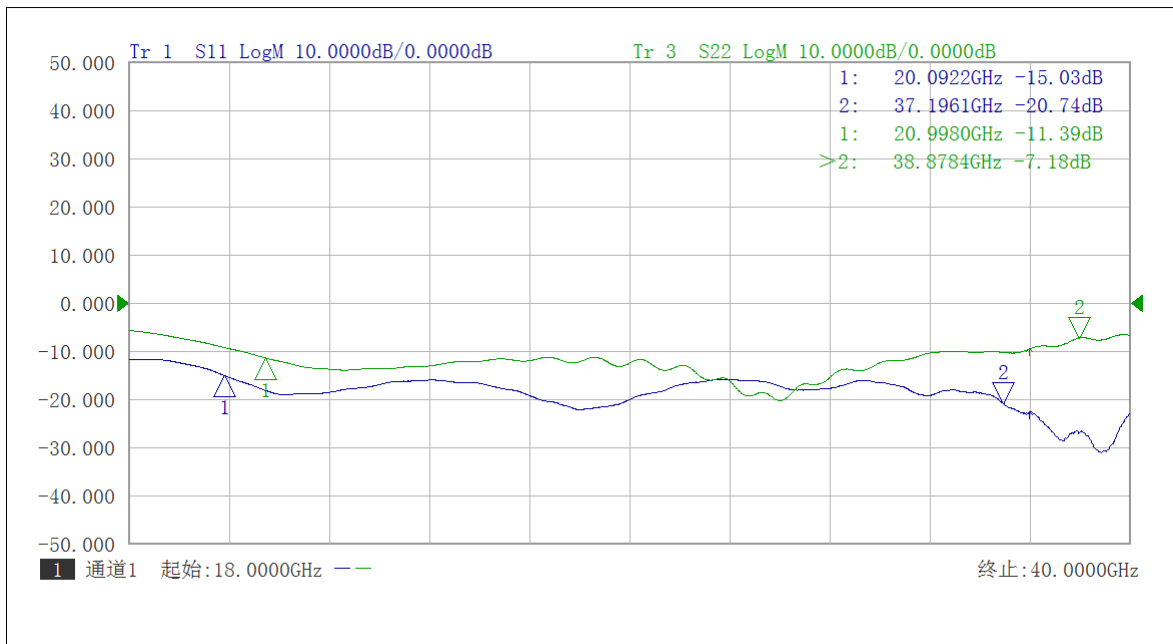


Test Data

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



Gain vs Frequency



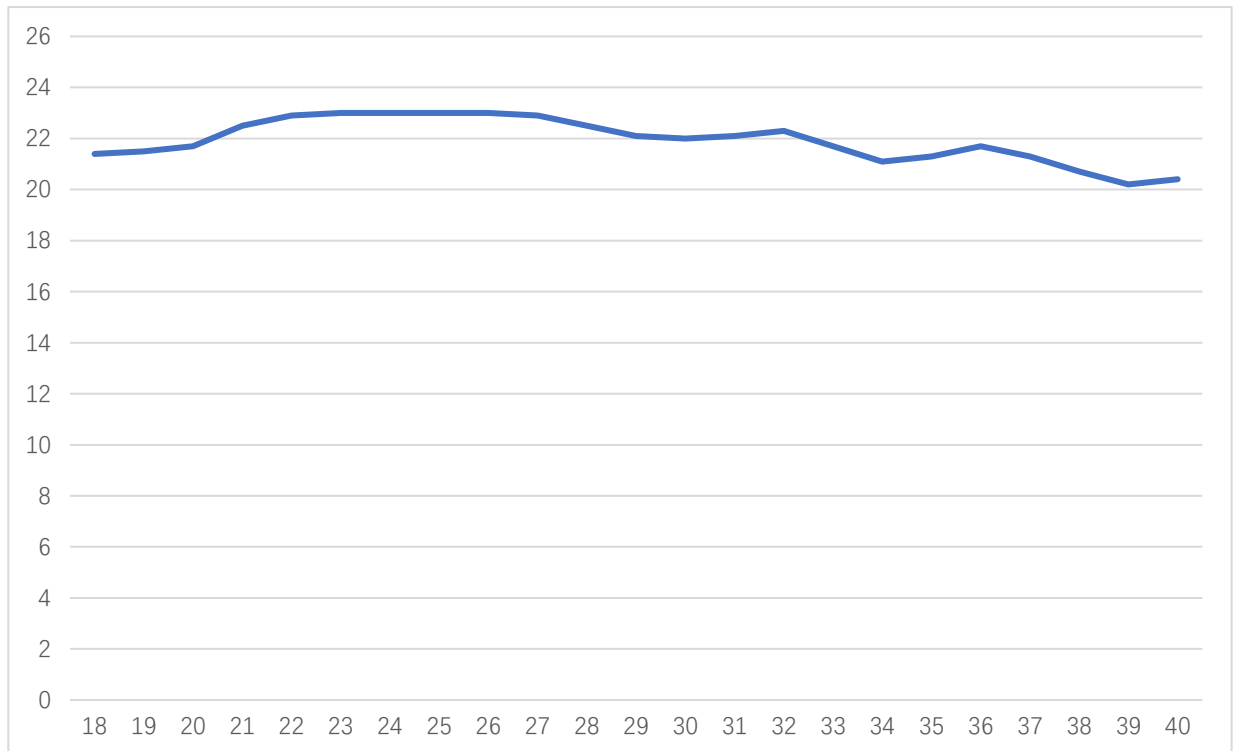
S11 /S22 Return Loss vs Frequency



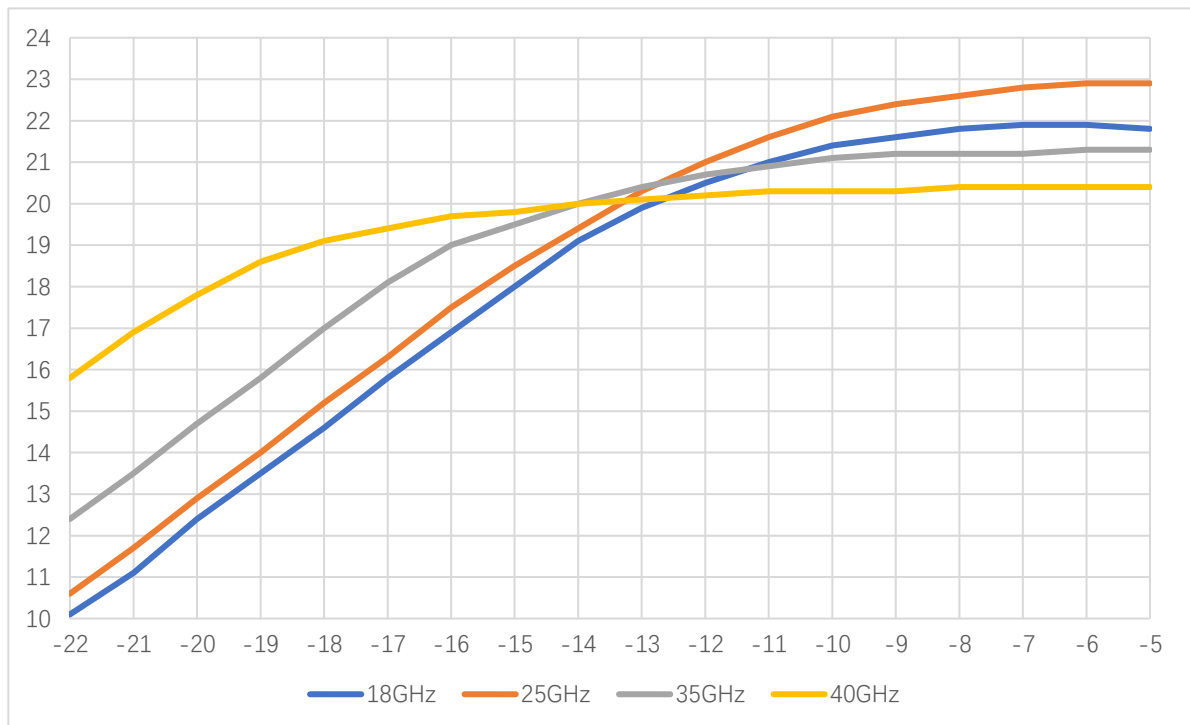


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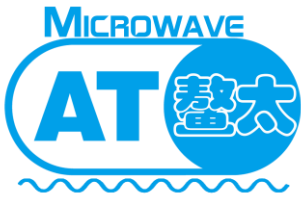


Psat vs Frequency



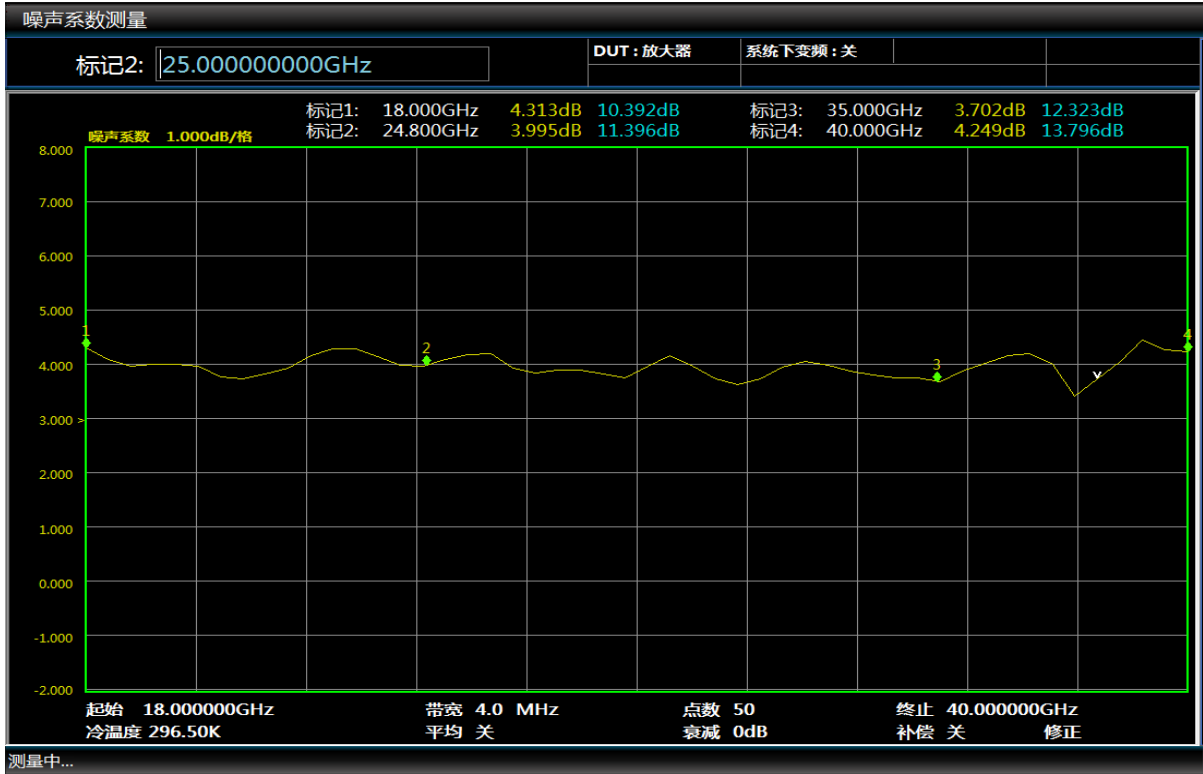
Pout vs Pin





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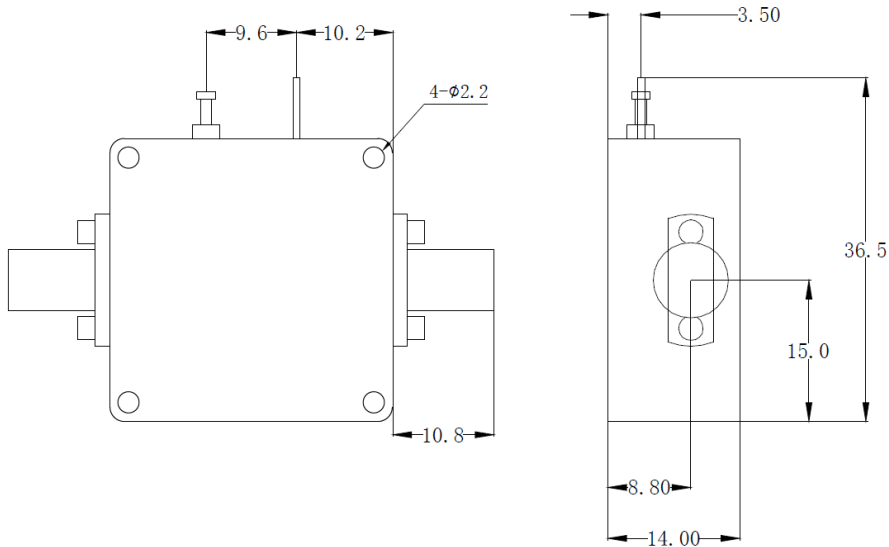
18-40GHz Power Amplifier



NF vs Frequency

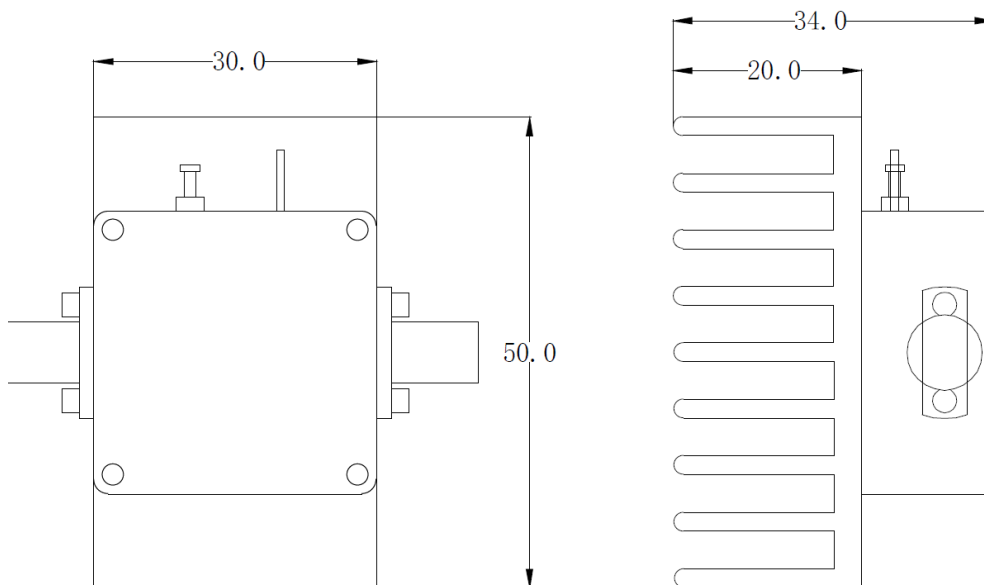


Dimension: (unit in mm)



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

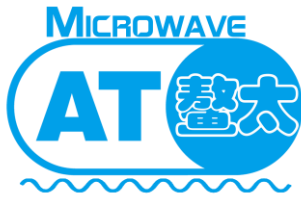
Note: Female Default. Contact with us for other types.



Including a small heatsink without Fan if output Power higher than +20dBm.
Customers can remove it or use their own heatsink according to actual situation.

Heat Sink Required During Operation if case Temp higher than 50C





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PCN History

Date	Description
2021-12-31	Package sealing change from screw to Epoxy Sealed. Outline change from 30x30x9.5mm to 30x30x14mm Same RF Performance.

