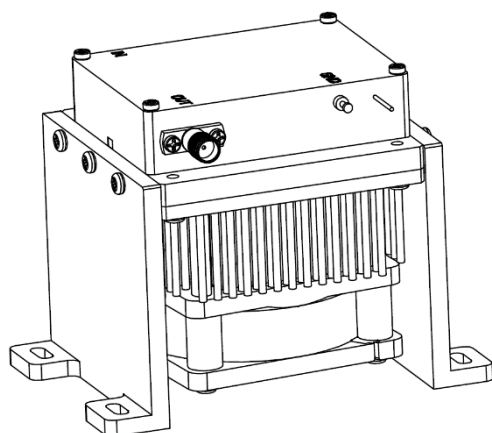


17-43GHz Broadband Amplifier, +28dBm High Gain=38dB, Low NF=3dB

2022-9-22



Product Overview

AT-PA-1743-3803P28 is high gain power amplifier with +28dBm output power in the frequency of 17-43GHz. The module is with very wide power supply from +8V to +28V. 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: 17-43GHz
- ✓ Psat:+28dBm
- ✓ Small signal gain: 38dB
- ✓ Low NF=3dB

Application

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

Key Features

Parameter	Min	Typical	Max
Frequency		17-43GHz	
Gain	36dB	38dB	
Gain Flatness		+/- 3dB	
P1dB (18-40GHz)	+25dBm	+27dBm	
Psat (18-40GHz)	+26dBm	+28dBm	
NF		3dB	4.8dB
Drain Supply	+8V	+12V	+28V
Current NO RF @12V		0.7A	
Idd Psat @12V		0.9A	1.2A
Input Return Loss		-7 dB	
Output Return Loss		-7 dB	
Spec Temp		25C	





AT-PA-1743-3803P28

17-43GHz 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)	230g
Size:	See outline

Absolute Maximum Ratings Table

Parameter	Value
Drain Supply	+36V
RF Input Power	+15 dBm
Operating Temperature	-20 to +70C
Storage Temperature	-65 to +125C

Caution:

Please pay attention to the case temperature. If case temperature exceeds +50C, heat sink and fan are required, or the amplifier may be damaged.

Bias Procedure:

Make sure GND is connected before Vdd Power ON.

Module may be damaged when Vdd Power ON without GND.





AT-PA-1743-3803P28

17-43GHz Power Amplifier

Part Number Selection

Item	Description
AT-PA-1743-3803P28	In defaulted without heatsink and Fan. Heatsink and Fan required during operation.
AT-PA-1743-3803P28-HF	Including Heatsink and Fan. Fan bias is connected with PA Module's Vdd supply

Notes:

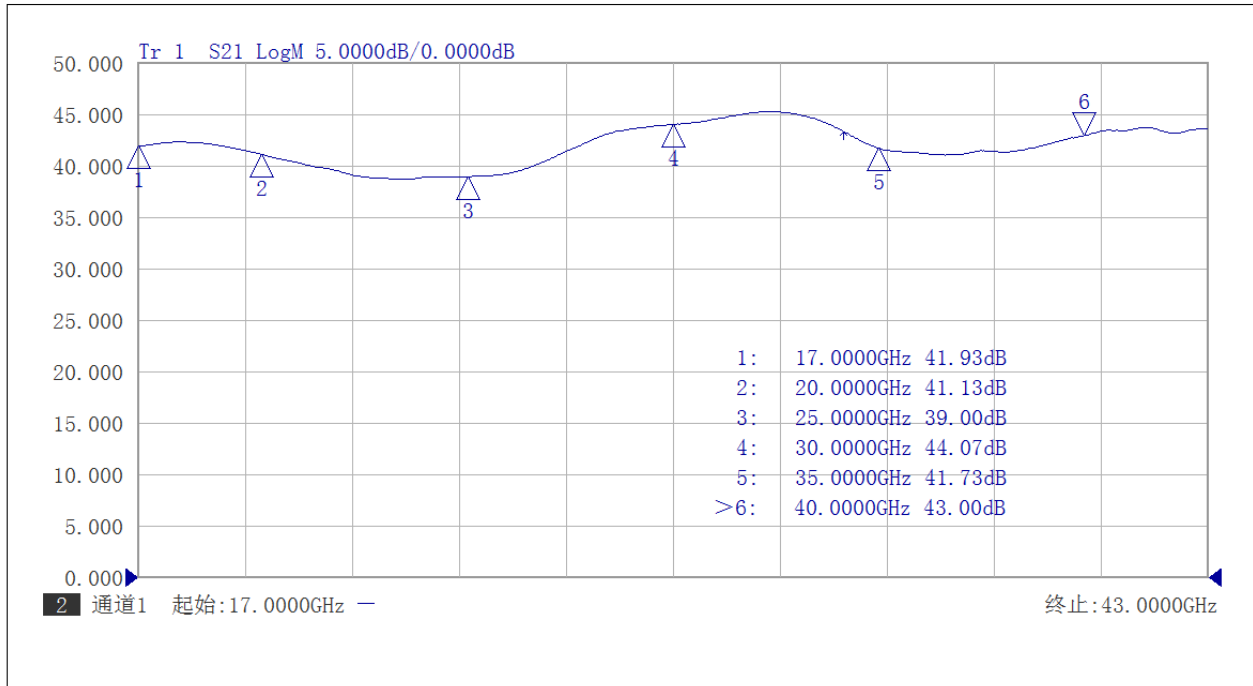
1. Datasheet may be changed according to update of MMIC, Raw materials , process, and so on.
2. This data is only for reference, not for guaranteed specifications.
3. Please contact AT Microwave team to make sure you have the most current data.



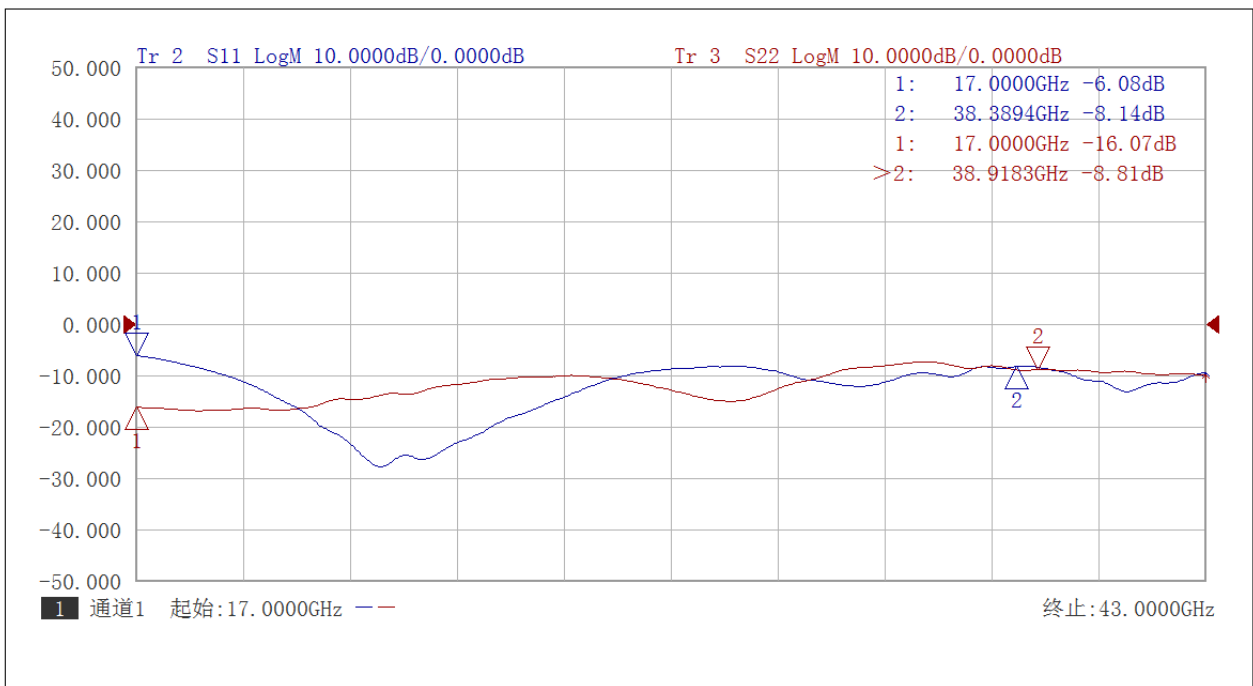
Test Data

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

Test condition, +12V/0.72A NO RF input. 25C

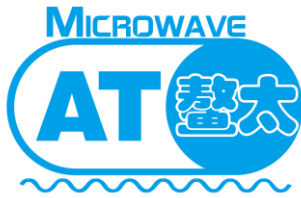


Gain vs Frequency



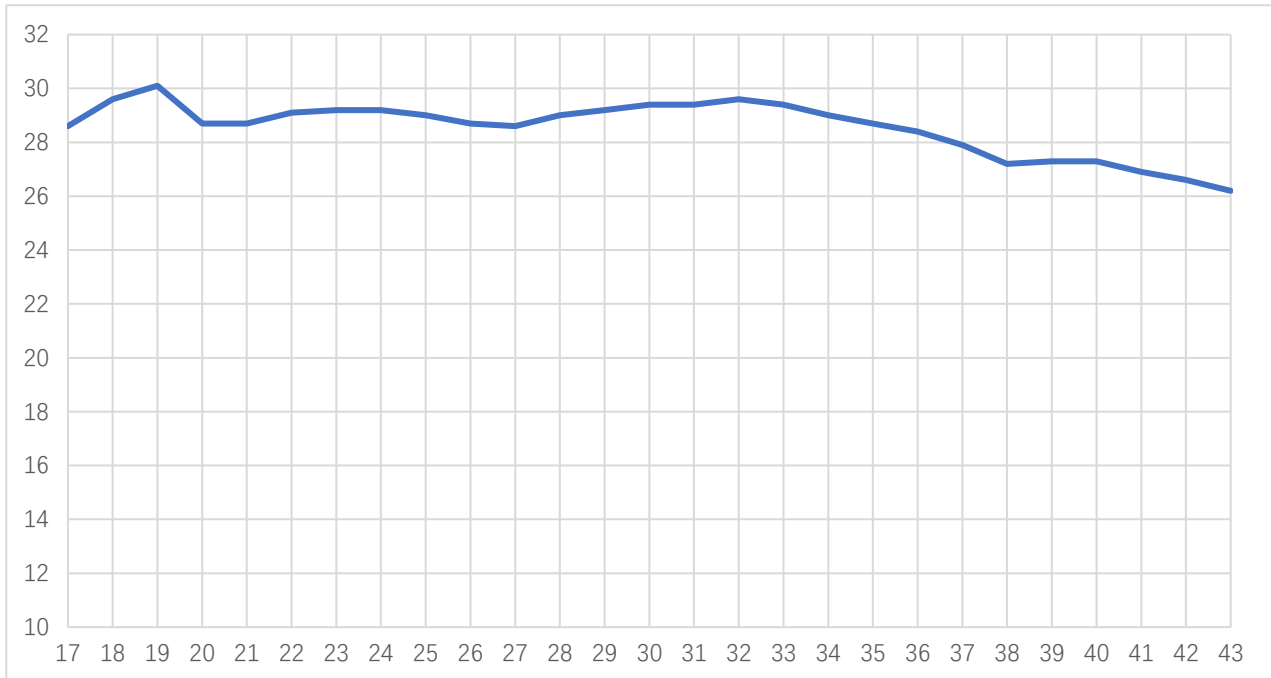
Return Loss vs Frequency



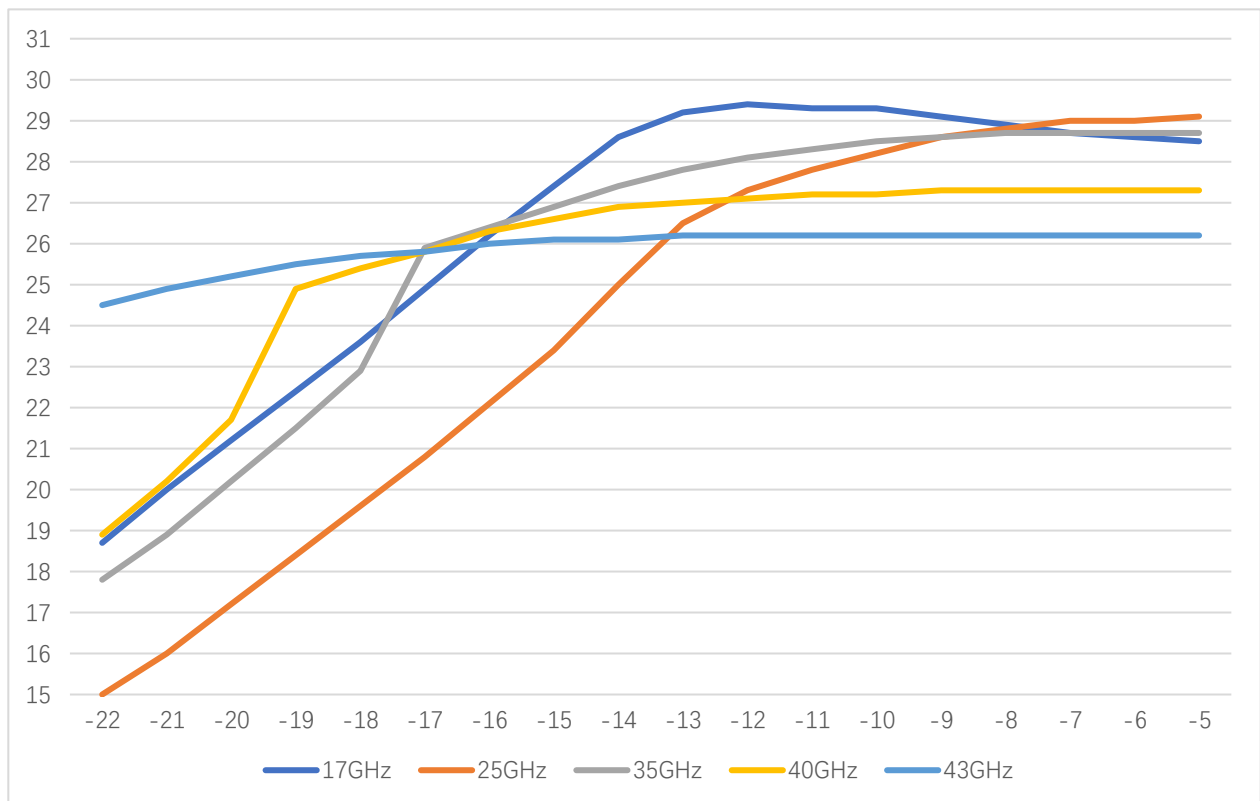


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17-43GHz Power Amplifier

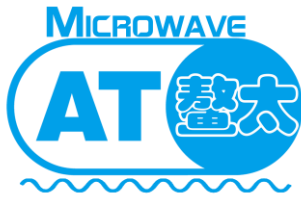


Psat vs Frequency



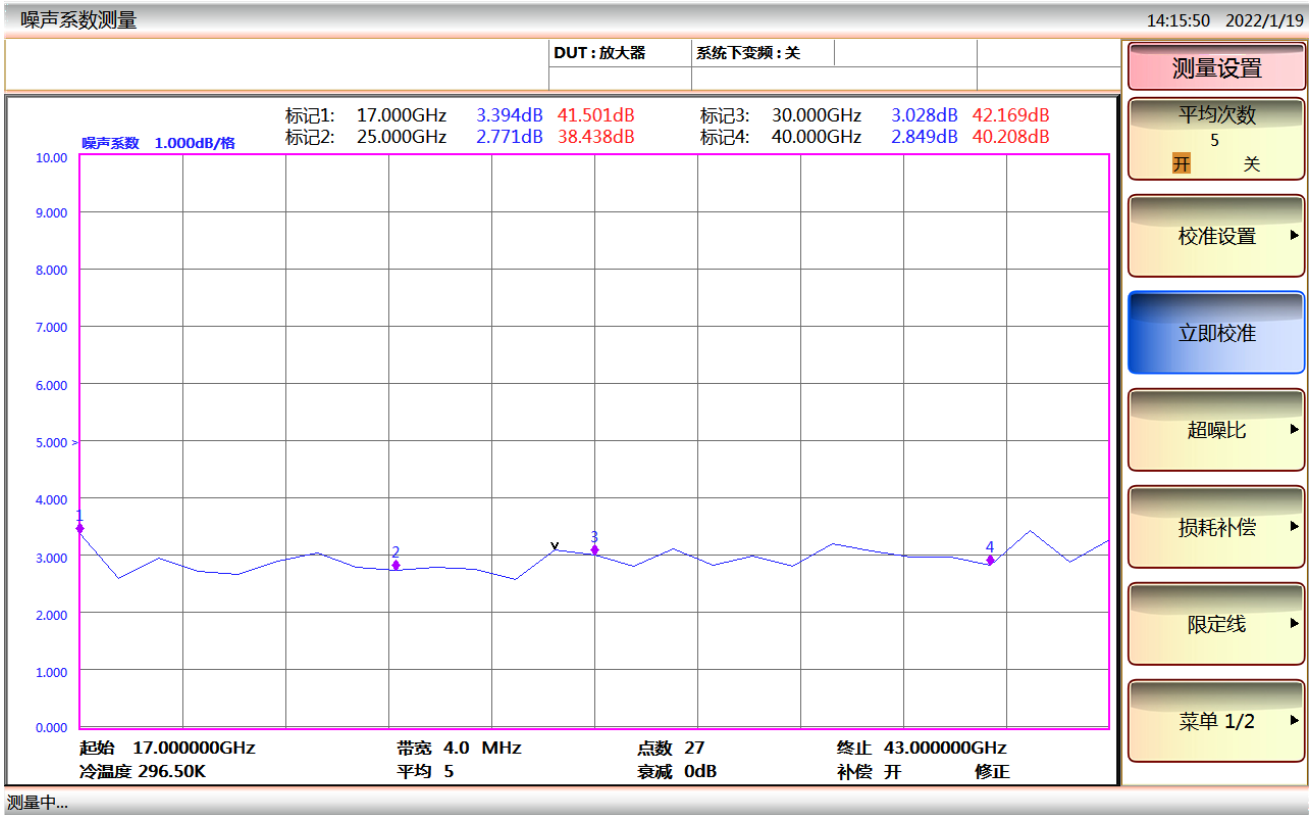
Pout vs Pin





AT-PA-1743-3803P28

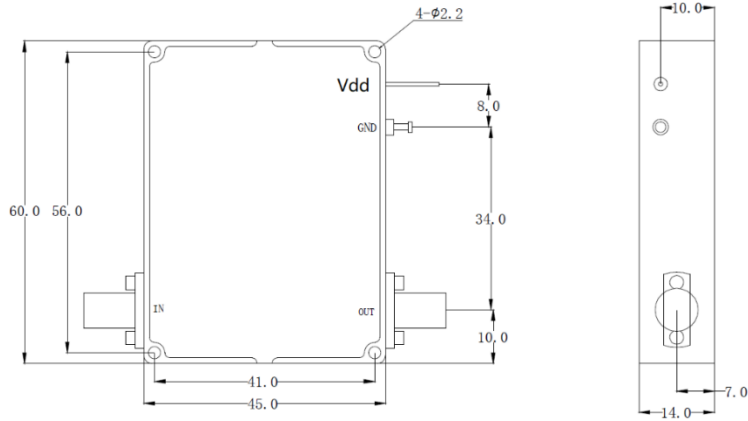
17-43GHz Power Amplifier



NF vs Frequency



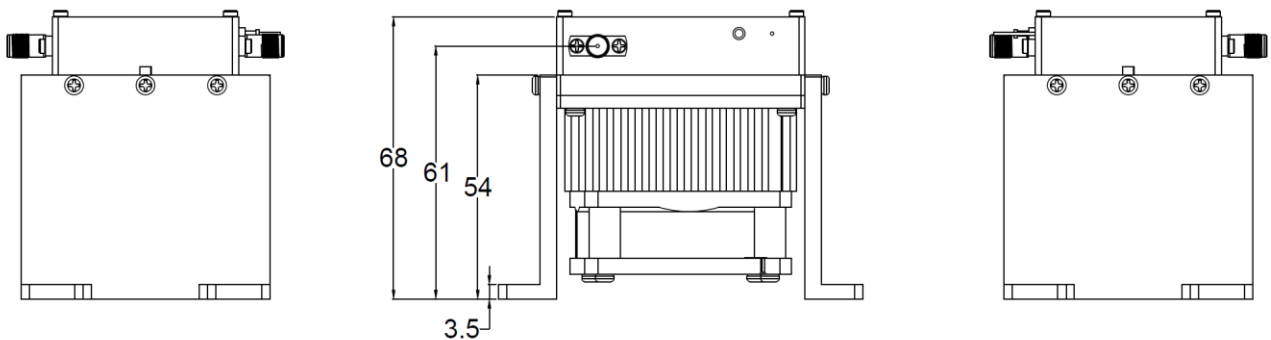
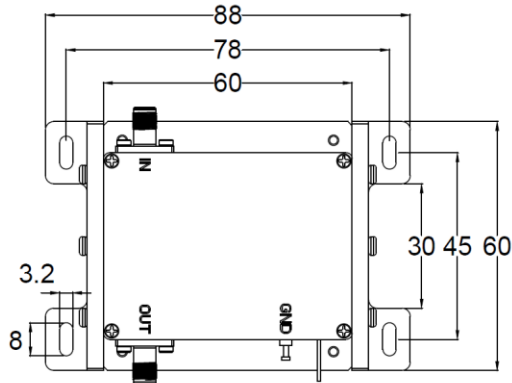
Dimension: (unit mm)



	<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



Outline-HF option with heatsink

