



AT-HPA-0842R-6048YX

0.8-4.2GHz 80W High Power Amplifier

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Gain=60dB, Pout=+48dBm

2022-10-1

Product Overview



AT-HPA-0842R-6048YX is GaN Based high gain power amplifier with +48dBm output power in the frequency of 0.8-4.2GHz. The DC power requirement is +28V/18A at Psat. The module is with SMA female input and N-Female output.

The power amplifier has high gain, high linearity, low input/output return loss and flat gain response. There is no heatsink and fan in default. Option with suffix “-HF” is part number with heatsink and Fan, -BT option is for bench-top system amplifier.

More information, please visit www.atmicrowave.com

Advantages

- ✓ Frequency: 0.8-4.2GHz
- ✓ Psat:+48dBm
- ✓ Small signal gain: 60dB
- ✓ Single Power Supply

Application

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

Key Features

Parameter	Min	Typical	Max
Frequency		0.8-4.2GHz	
Small signal Gain (Pin= -30dBm)	57dB	60dB	
Gain Flatness		+/-4dB	
Psat (Pin=0dBm)	+47dBm	+48dBm	
Drain Supply		+28V	+30V
Idd NO RF		10A	
IDD Psat		18A	22A
Harmonics		-10dBc	
Input Return Loss		-10dB	
Spec Temp		25C	





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Mechanical Information

Item	Description
Input Port	SMA Female
Output Port	N Female
Case Material	Aluminum
Finish	Nickel Plated
Weight (Without Heatsink and Fan)	TBD
Size:	See outline

Absolute Maximum Ratings Table

Parameter	Value
Drain Supply	+32V
RF Input Power	+10 dBm
Operating Temperature	-20 to +70C
Storage Temperature	-65 to +150C

Very Important:

1. MUST Apply to heatsink and Fan during operation, or the amplifier will be damaged due to the high power consumption;
2. Do NOT leave Output OPEN with Bias and input power. Connect to 50 Ohms system during operation.
3. Take care that Vdd never touch Case/GND when Power ON, or the amplifier will be damaged.

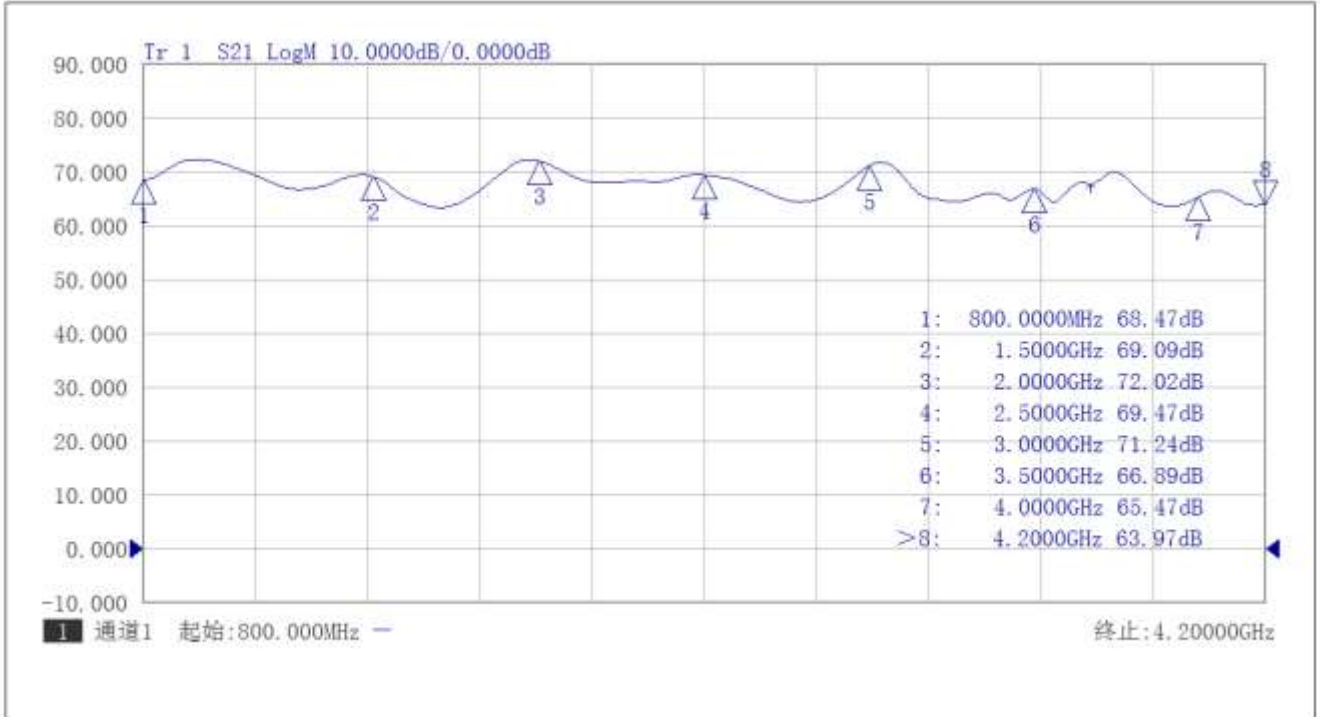




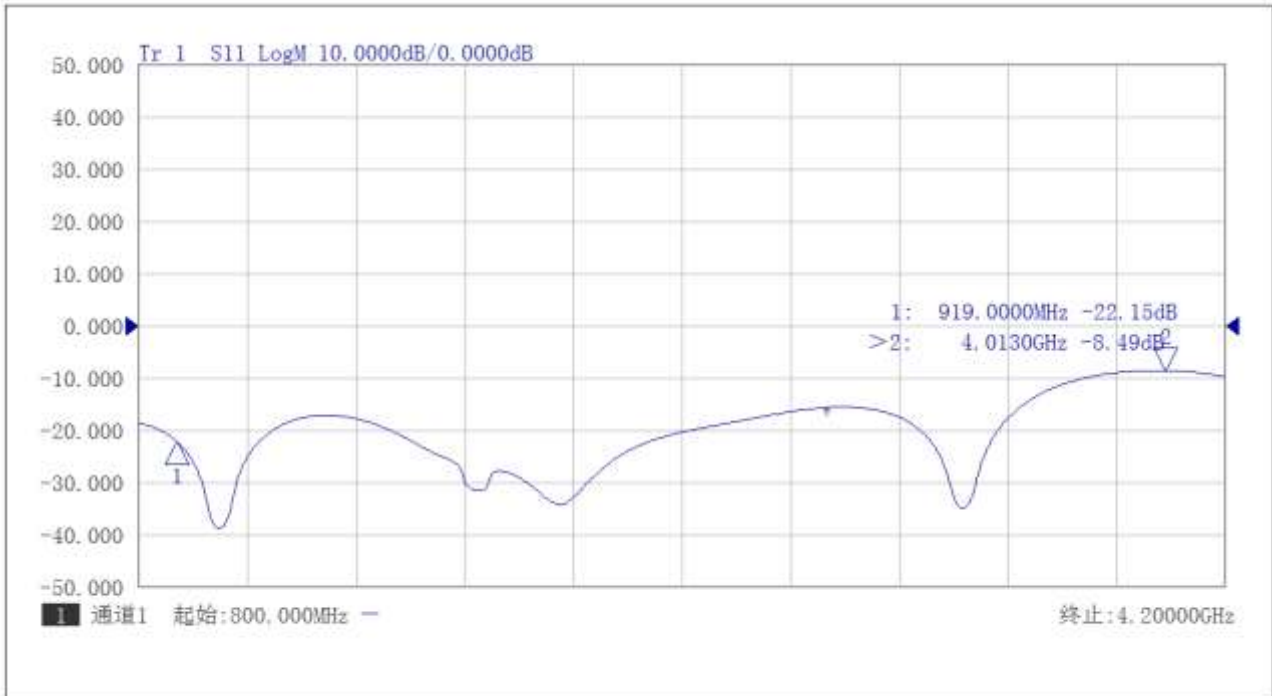
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Test Data



S21 Gain vs Frequency



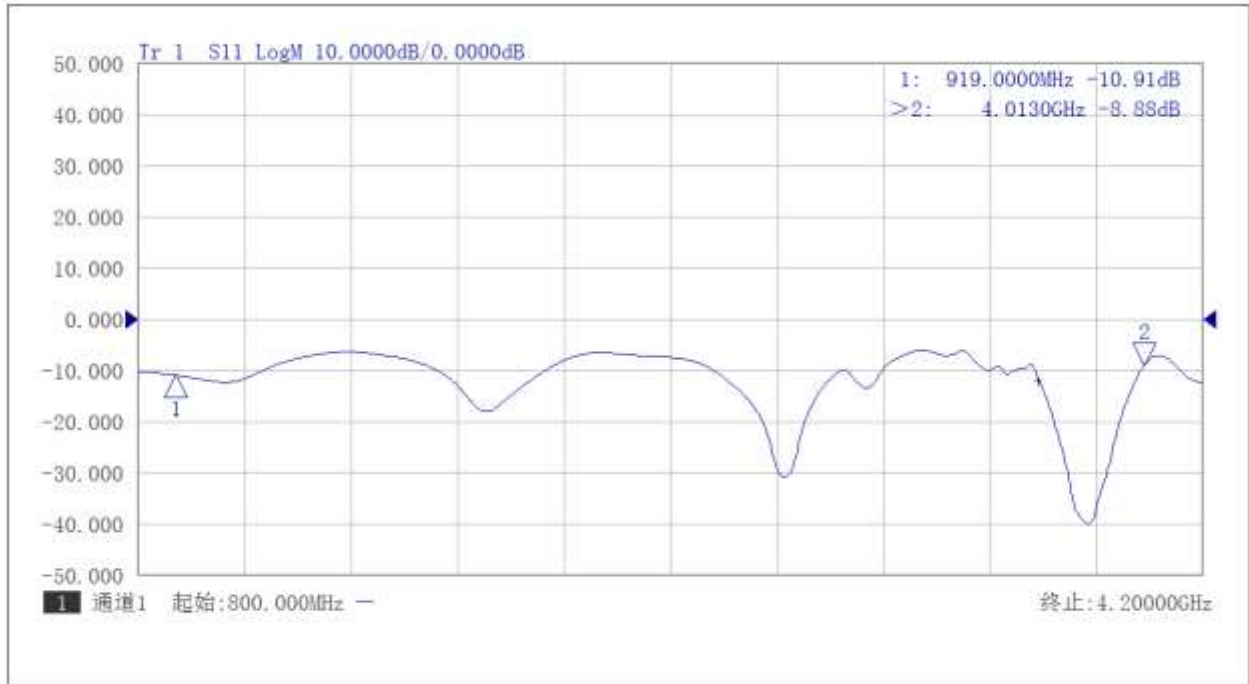
S11 Input Return Loss vs Frequency



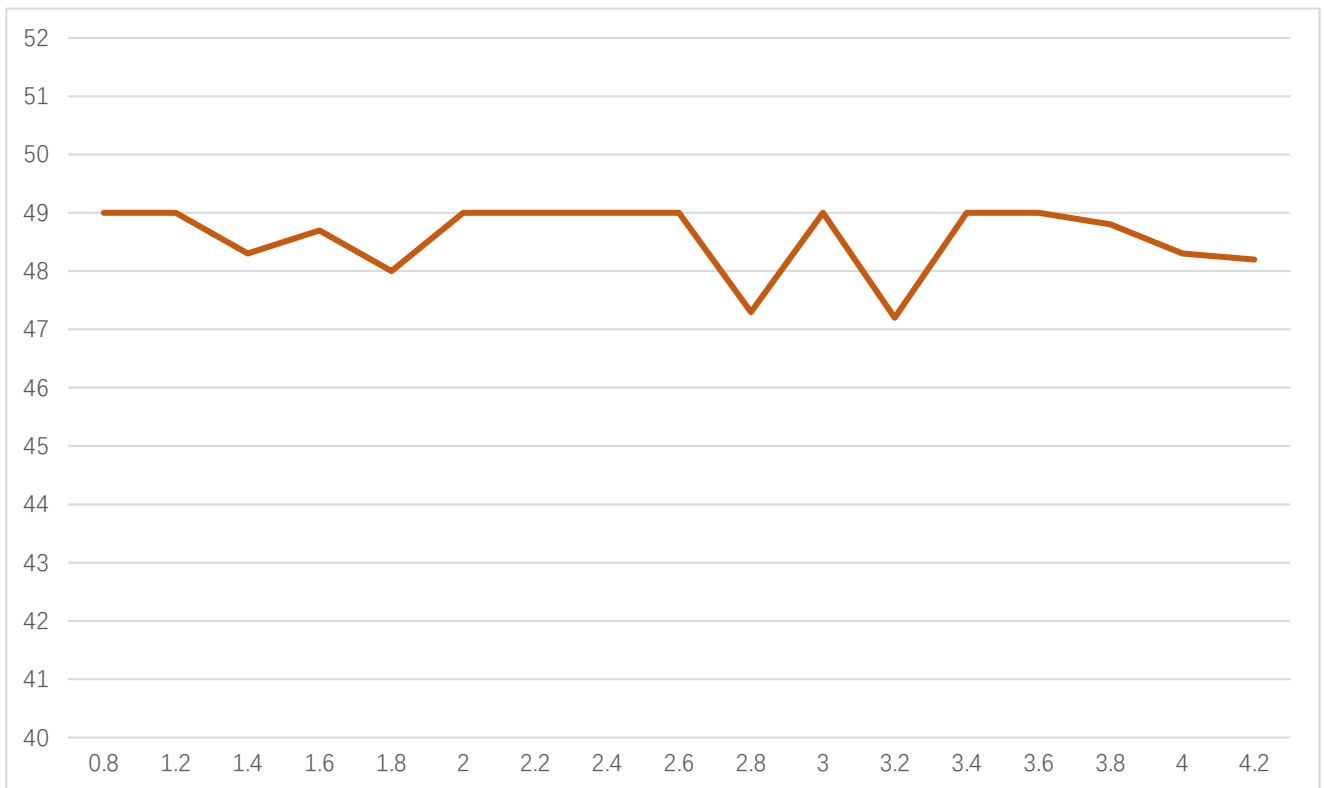


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S22 Output Return Loss vs Frequency



Psat vs Frequency



Standard Module Outline

