

E Band Broadband Power Amplifier



Description:

AT-PA-7186-1626 is power amplifier with +26dBm output power in the frequency of 71-86GHz. The DC power requirement is +5/2.0A. The module is with a standard WR-12 waveguide.

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

It can also be used from 69-86Hz with some variation of performance.

More information, please visit www.atmicrowave.com

Feature

- ✓ Frequency: 71-86GHz
- ✓ Psat:+26dBm
- ✓ Small signal gain: 16dB
- ✓ Single Power Supply

Application

- ✓ E Band Point to Point Communication
- ✓ FOD (Foreigner Objects Debris)
- ✓ Test Equipment
- ✓ ROF (RF Over Fiber)
- ✓ Radar System

Electronical Specifications:

Parameter	Min	Typical	Max
Frequency		71-86GHz	
Gain	16	18dB	
P1dB	+24	+25dBm	
Psat	+25	+26dBm	
Vdd		+5V	+6V
Idd/Quiescent		1.4A	
IDD/Psat		2.0A	
Fan Bias/Connected with PA Vdd		+5V/0.2A	
Input Return Loss		-7 dB	
Output Return Loss		-7 dB	
Spec Temp		25C	





AT-PA-7186-1626

71-86GHz Power Amplifier, $P_{sat}=+26\text{dBm}$

Mechanical Information

Item	Description
Input Port	WR-12
Output Port	WR-12
Case Material	Copper
Finish	Gold Plated
Weight (Without Heatsink)	221g
Size:	See outline

Absolute Maximum Ratings Table

Parameter	Value
Drain Supply	+7V
RF Input Power	+20dBm
Operating Temperature	0 to +50C
Storage Temperature	-45 to +85C

Caution:

Fan bias and PA Bias are connected together in default.

Heatsink and Fan are required during operation.

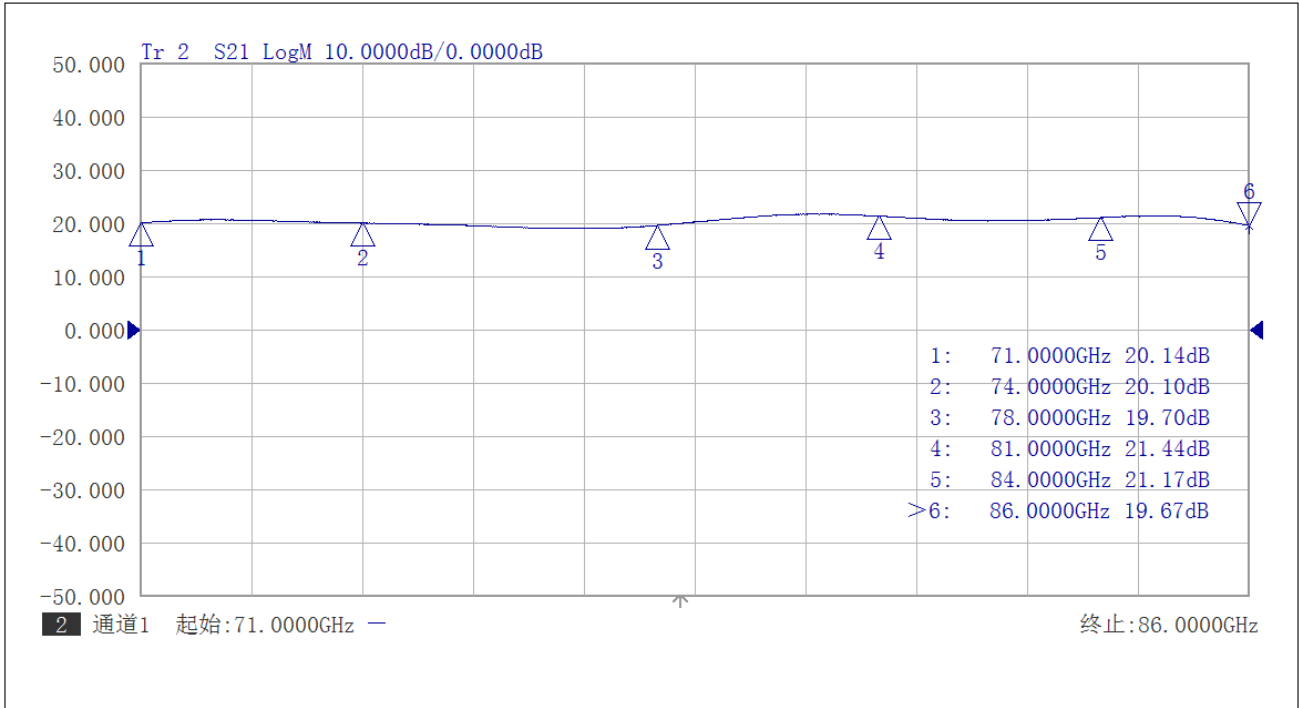
Heatsink and Fan can be removed if customer wants to use their own heatsink system.

Notes:

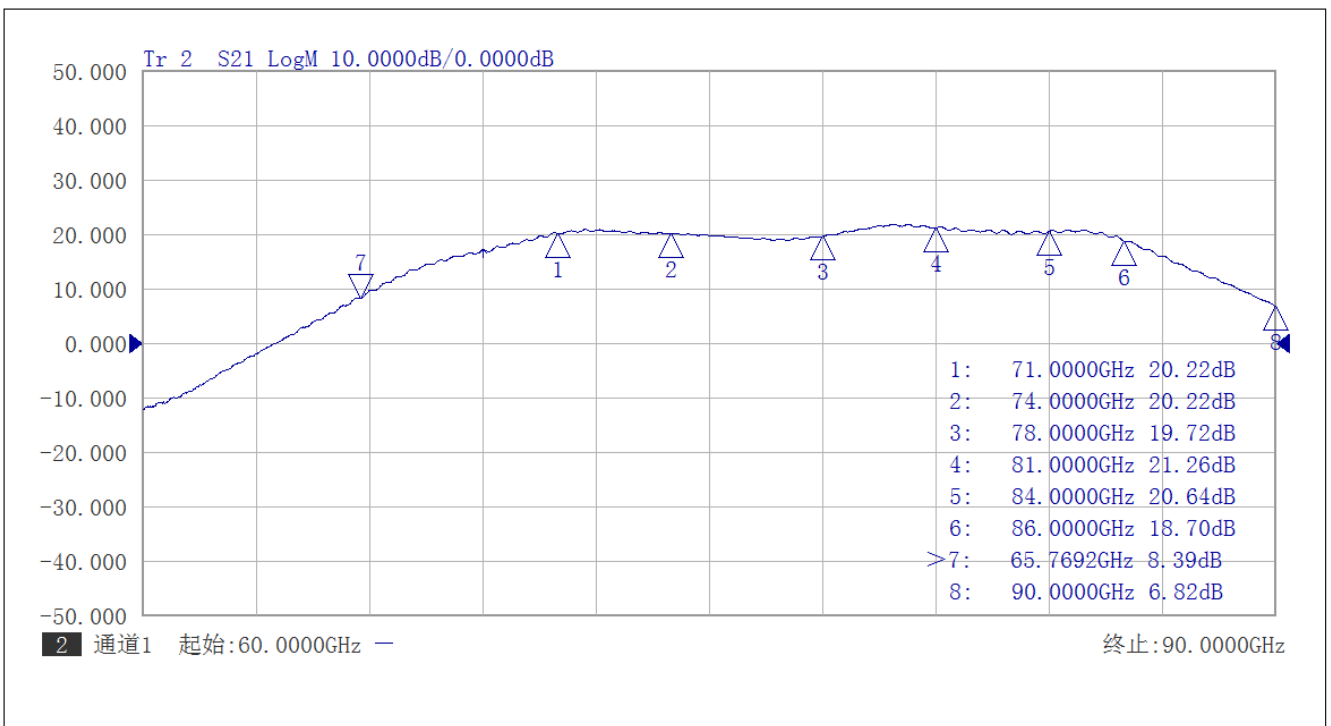
1. Datasheet may be changed according to update of MMIC, Raw materials , process, and so on.
2. This data is only for reference, not for guaranteed specifications.
3. Please contact AT Microwave team to make sure you have the most current data.



TEST DATA(25C)

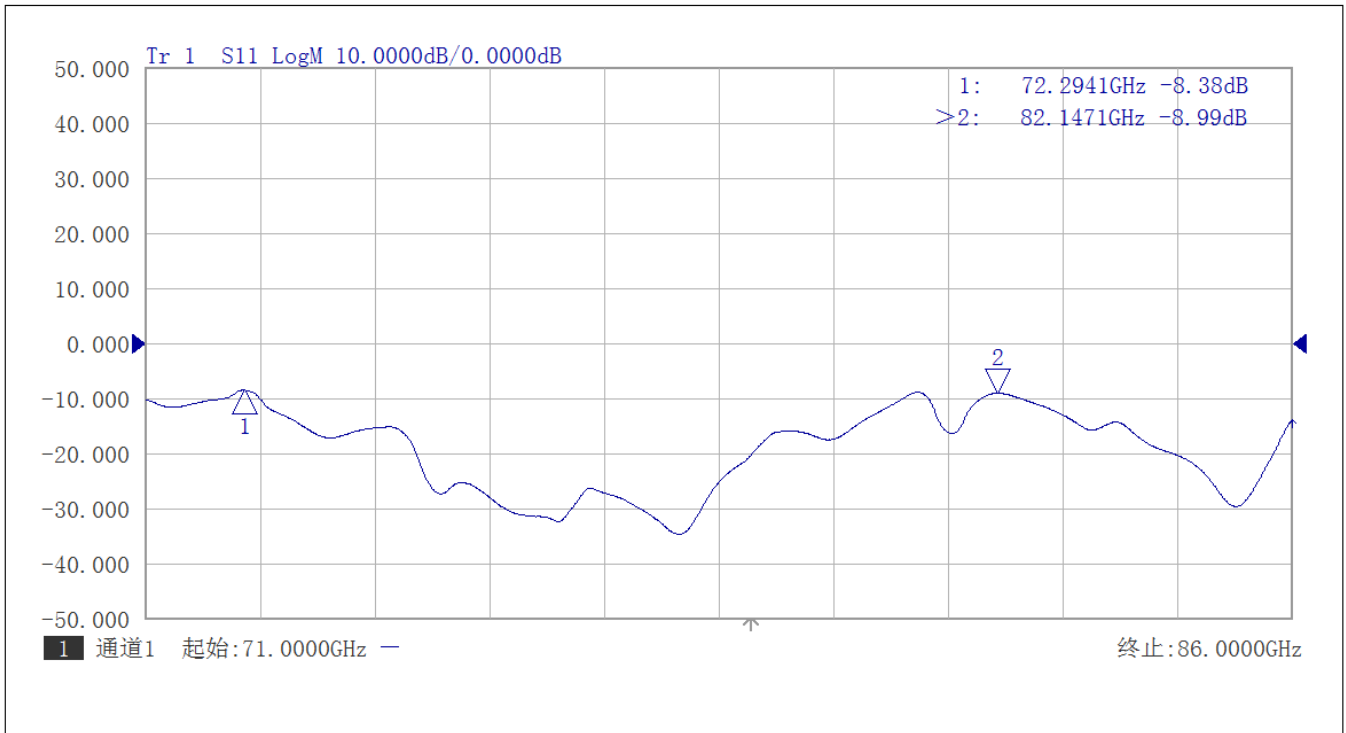


Gain Vs Frequency

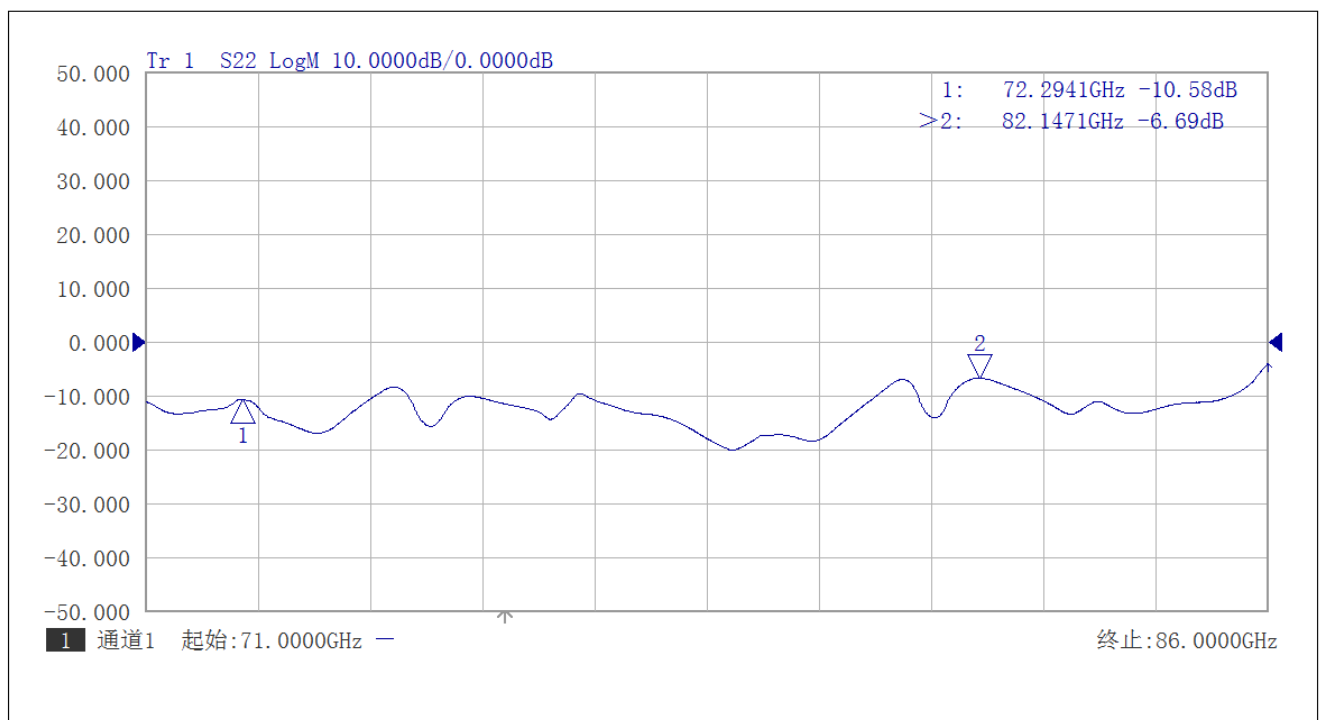


S21 from 60-90GHz



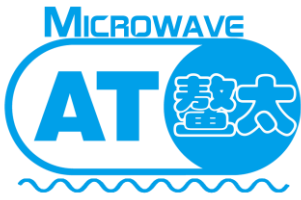


Input Return Loss



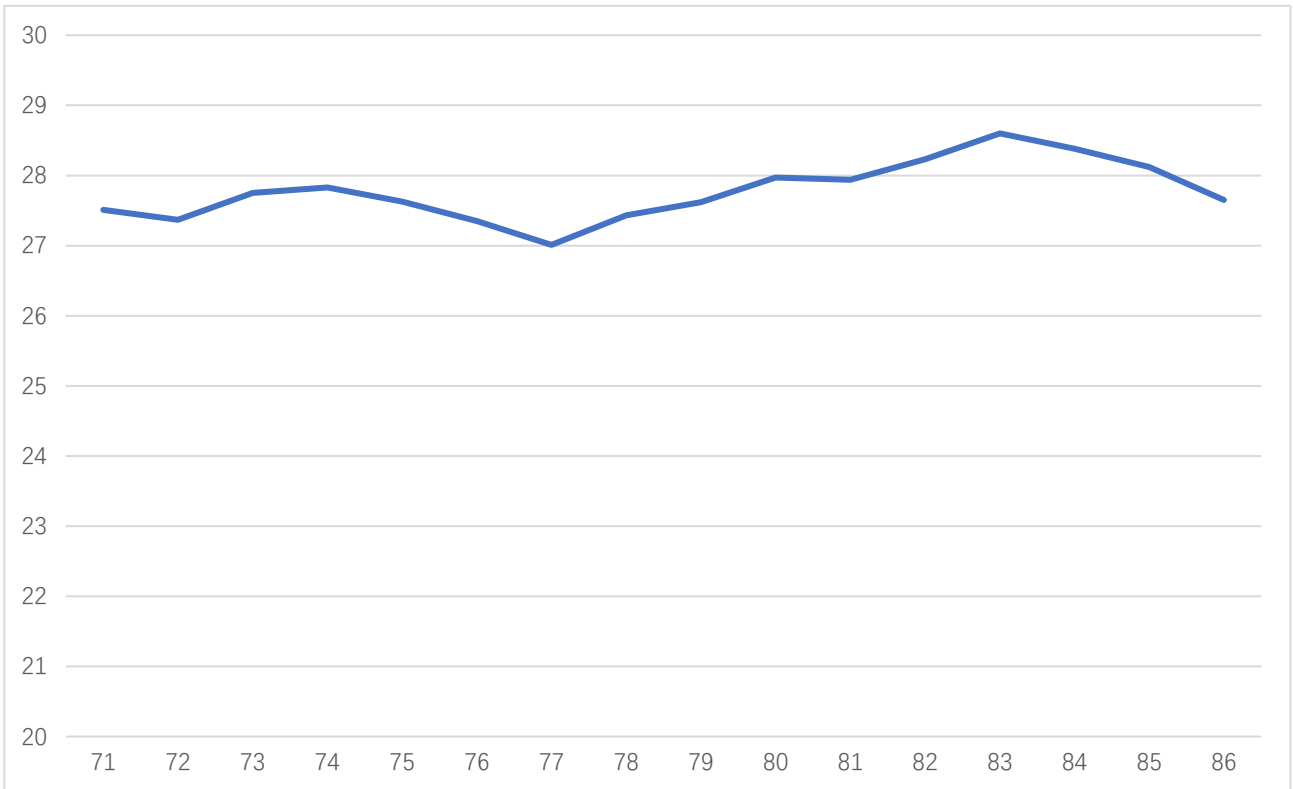
Output Return Loss



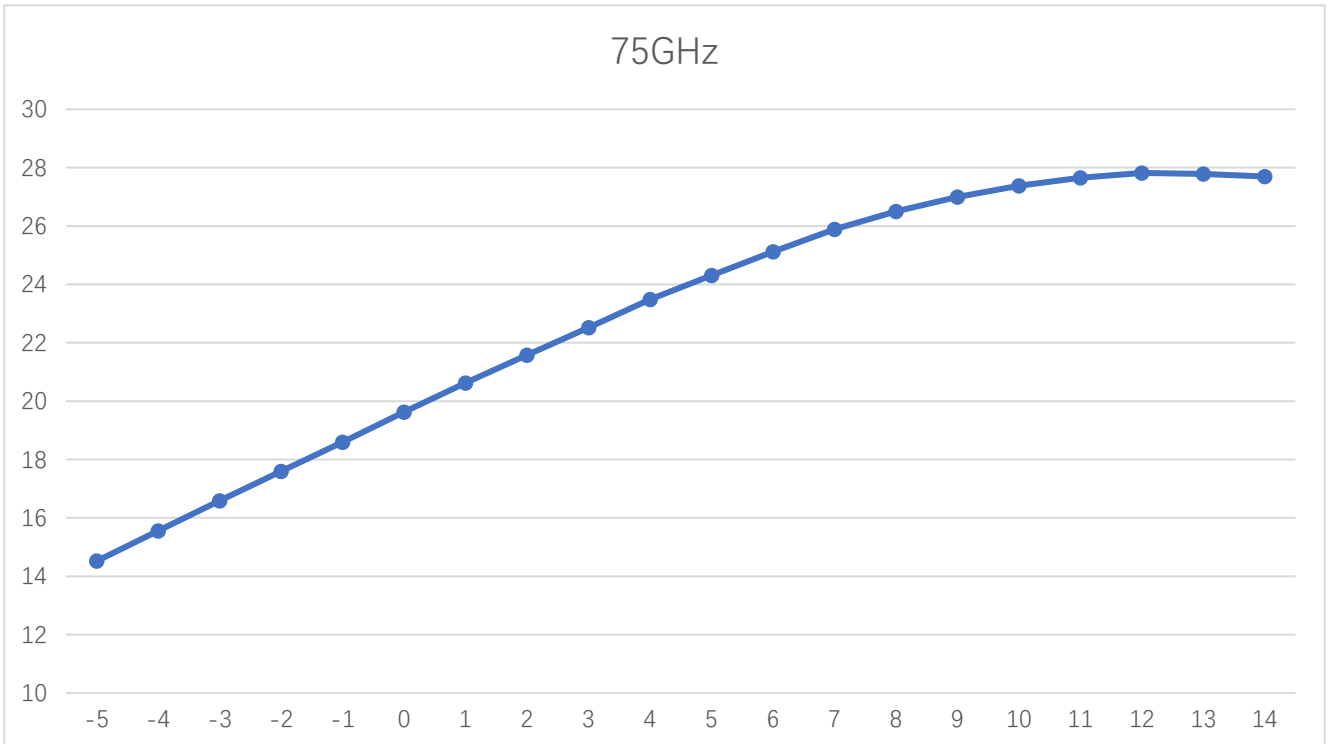


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71-86GHz Power Amplifier, $P_{sat}=+26\text{dBm}$



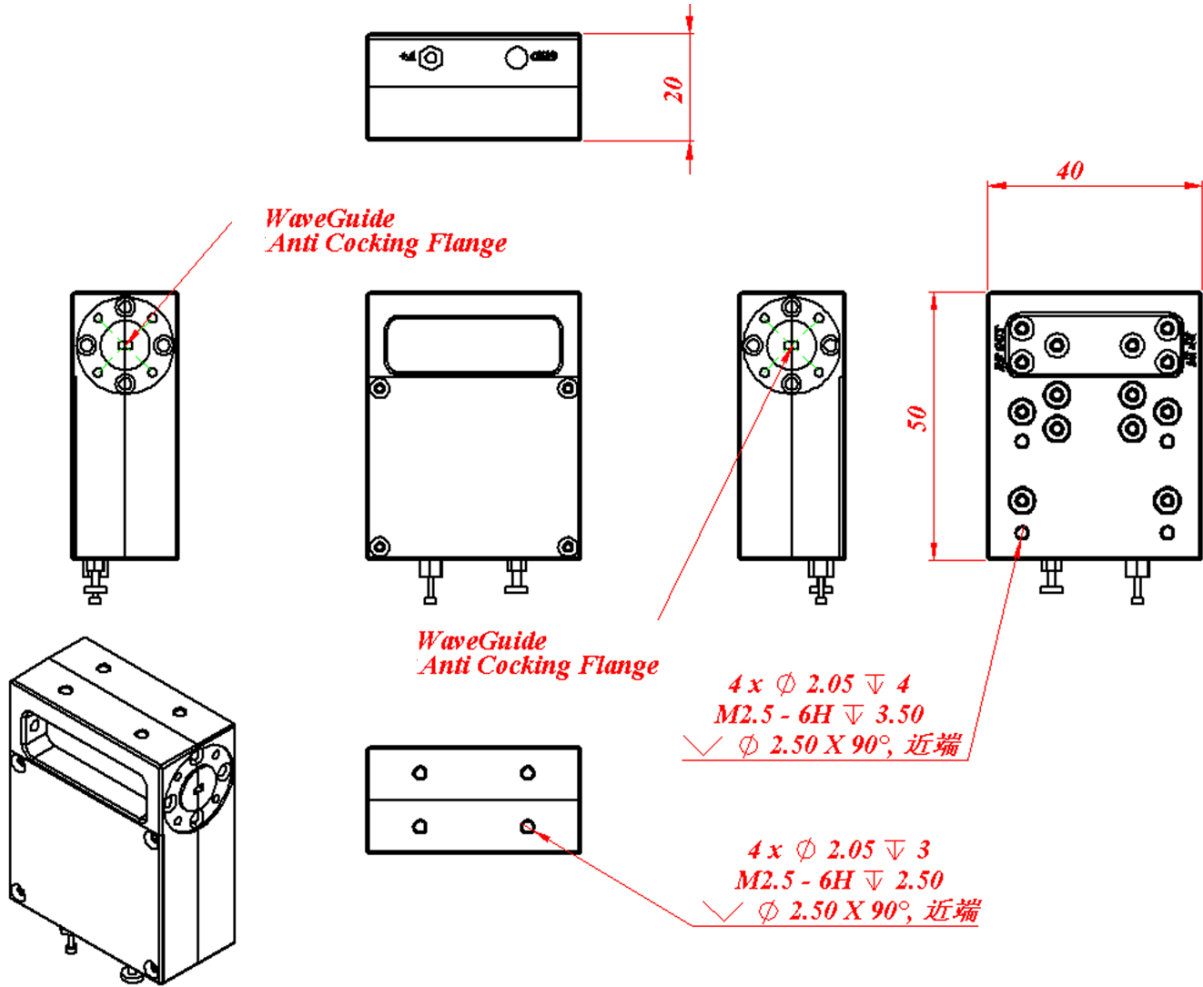
Pout vs Frequency



Pout vs Pin at 75GHz



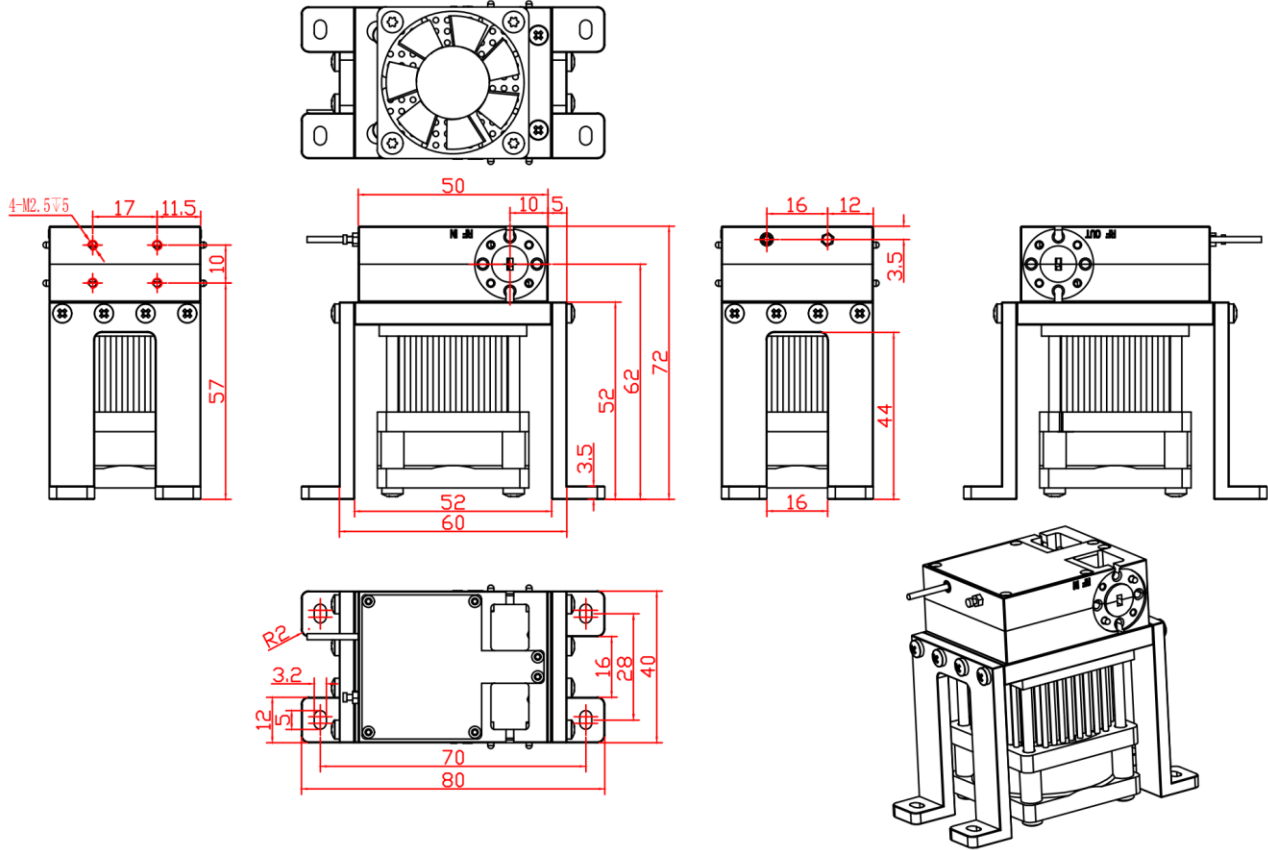
Dimension without heatsink and Fan: (unit in mm)



Heatsink and Fan required during operation



Dimension with heatsink and Fan: (unit in mm)



AT Microwave provides heatsink and Fan in default.
Customer can remove the heatsink and Fan if using own heatsink system.

