



# AT-PA-7186-3326

71-86GHz Power Amplifier, Psat=+26dBm

## E Band High Gain, High Power Amplifier



### Product Overview

AT-PA-7186-3326 is high gain high power amplifier with +26dBm output power in the frequency of 71-86GHz. The DC power requirement is +5/1700mA. 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.

More information, please visit [www.atmicrowave.com](http://www.atmicrowave.com)

### Advantages

- ✓ Frequency: 71-86GHz
- ✓ Psat:+26dBm
- ✓ Small signal gain: 33dB
- ✓ Single Positive Supply

### Application

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

### Key Features

Parameter	Min	Typical	Max
Frequency		71-86GHz	
Gain	30	33dB	
Input Power		-20dBm	0dBm
Drain Supply		+5V	+6V
Current/NO RF		1.7A	
Idd/Psat		2.4A	
P1dB		+25dBm	
Psat		+26dBm	
Input Return Loss		-10 dB	
Output Return Loss		-5 dB	
Spec Temp		25C	





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## Mechanical Information

Item	Description
Input Port	WR-12
Output Port	WR-12
Case Material	Copper
Finish	Gold Plated
Weight (Without Heatsink)	270g
Size:	See outline

## Absolute Maximum Ratings Table

Parameter	Value
Drain Supply	+7V
RF Input Power	+10dBm
Operating Temperature	0 to +50C
Storage Temperature	-65 to +150C

### Caution:

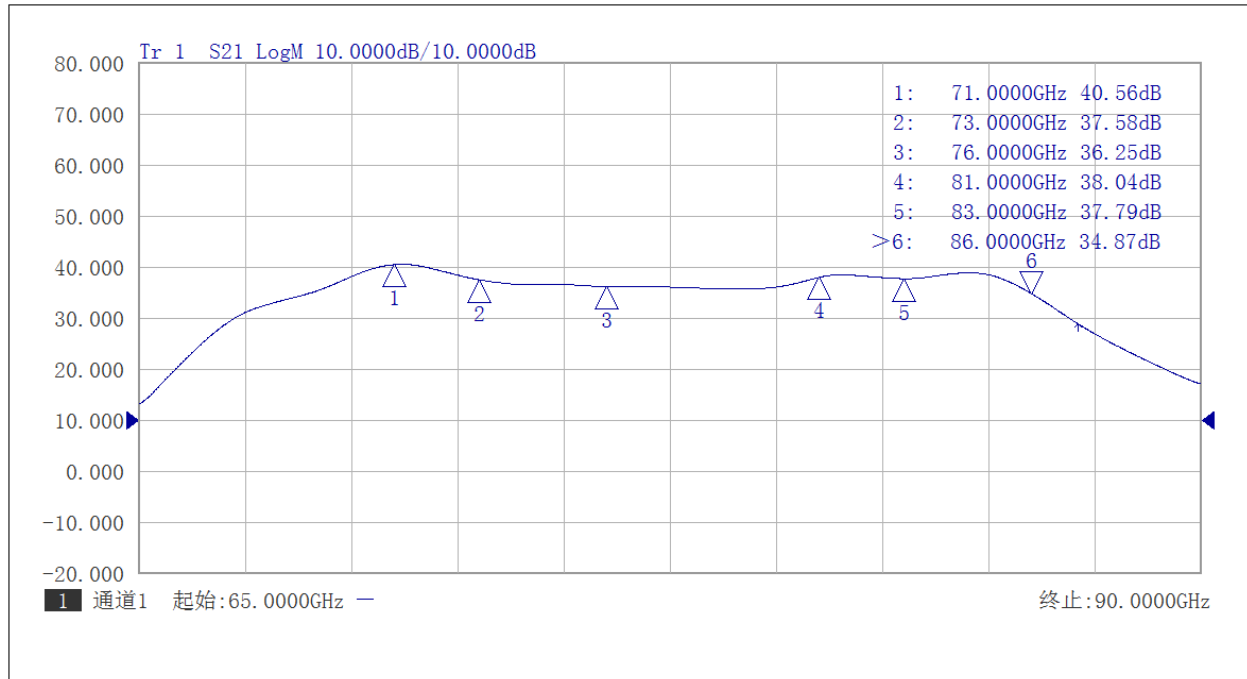
Please pay attention to the case temperature. If case temperature exceed higher than +50C, heat sink and fan are required, or the amplifier may be damaged.

### Notes:

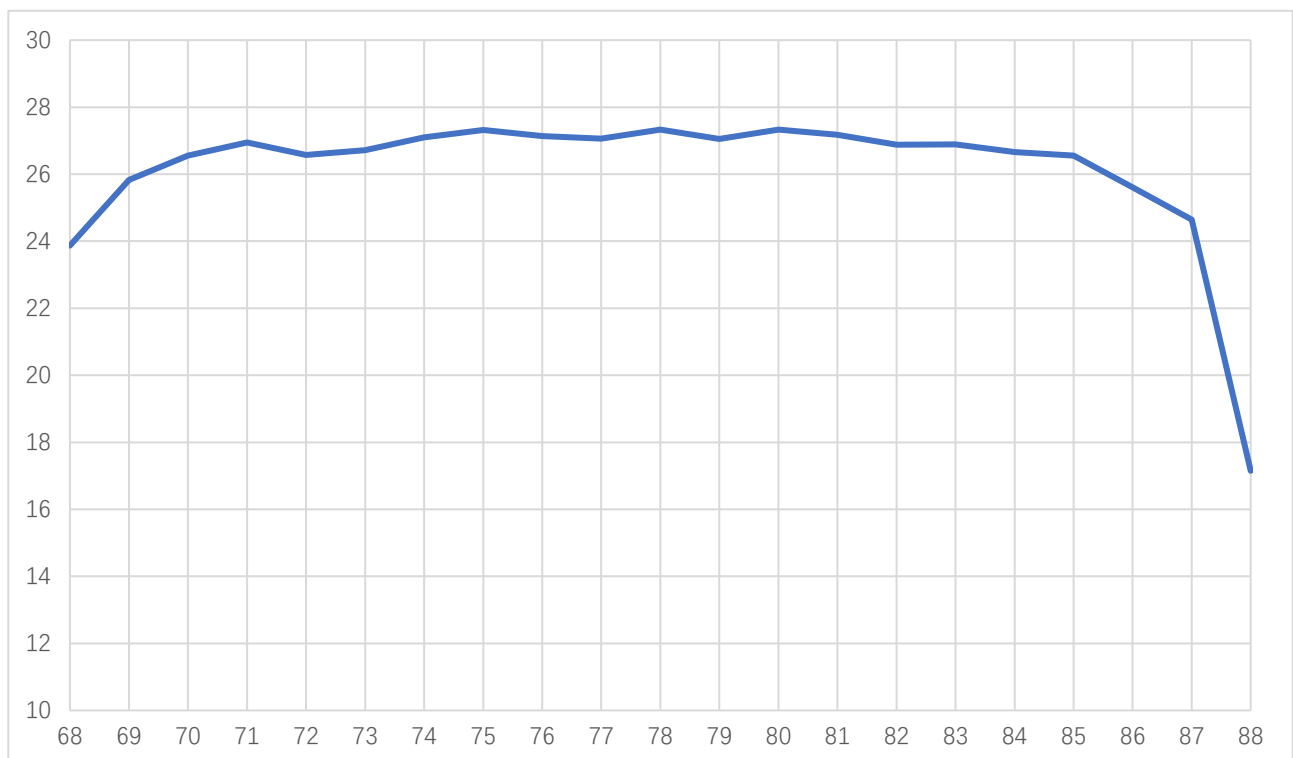
1. Datasheet may be changed according to update of MMIC, Raw materials , process, and so on.
2. This data is only for reference, not for guaranteed specifications.
3. Please contact AT Microwave team to make sure you have the most current data.



### Test Data:



Gain vs Frequency



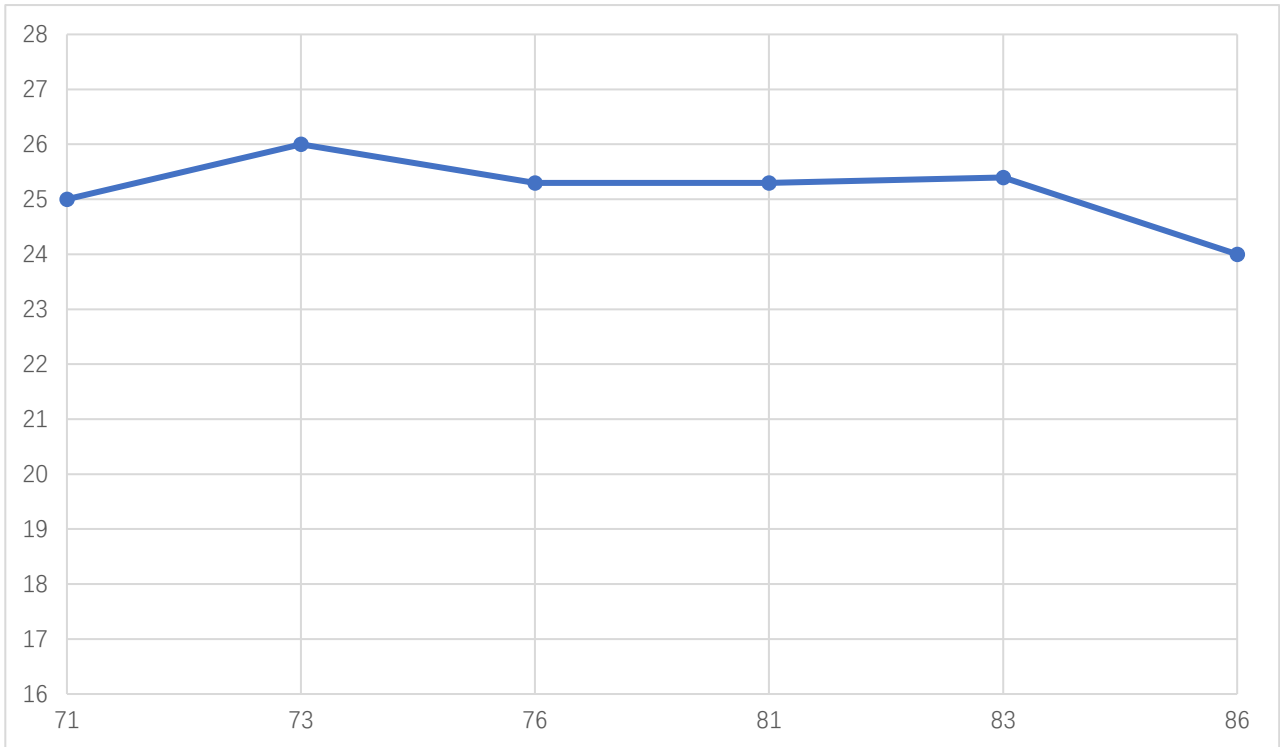
Psat vs Frequency



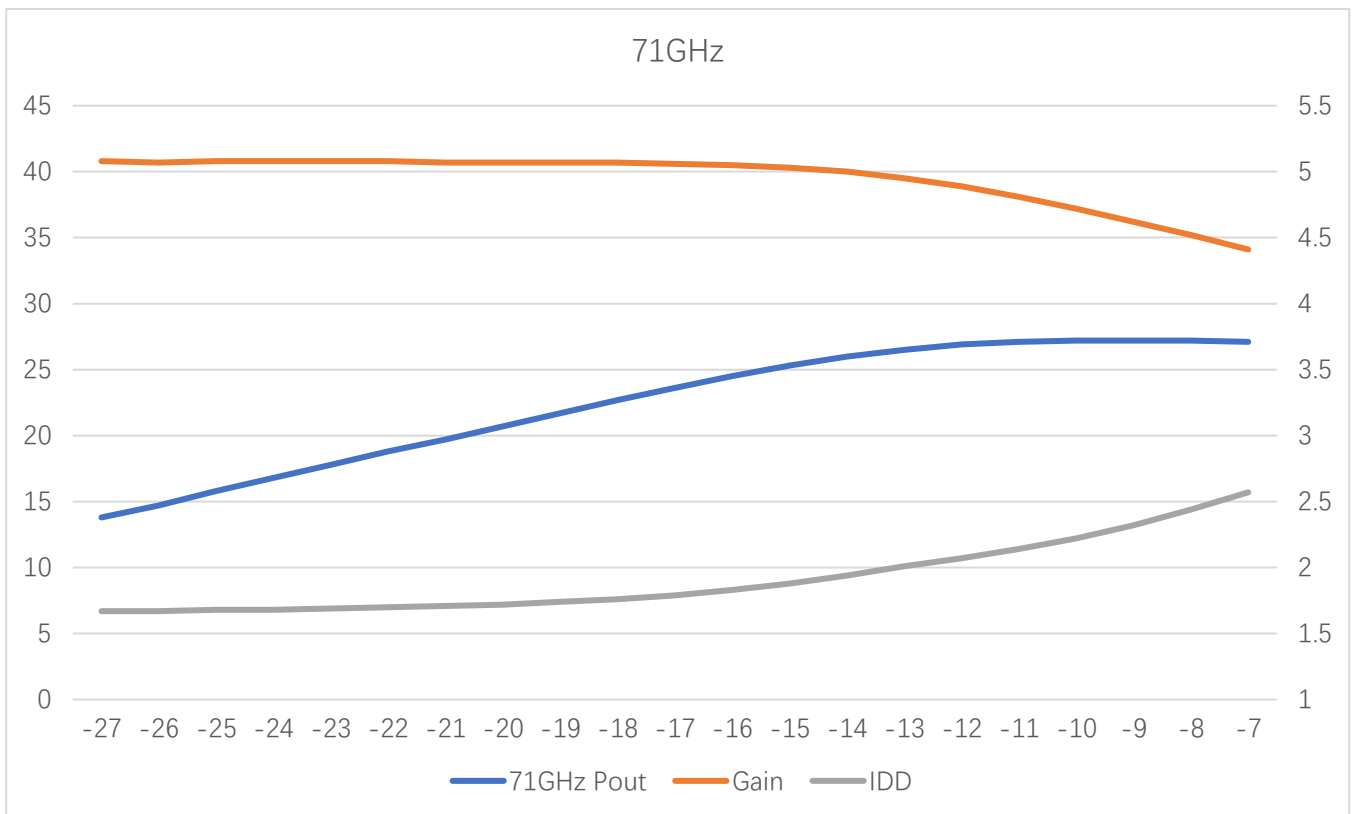


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71-86GHz Power Amplifier,  $P_{sat}=+26dBm$



P1dB vs Frequency



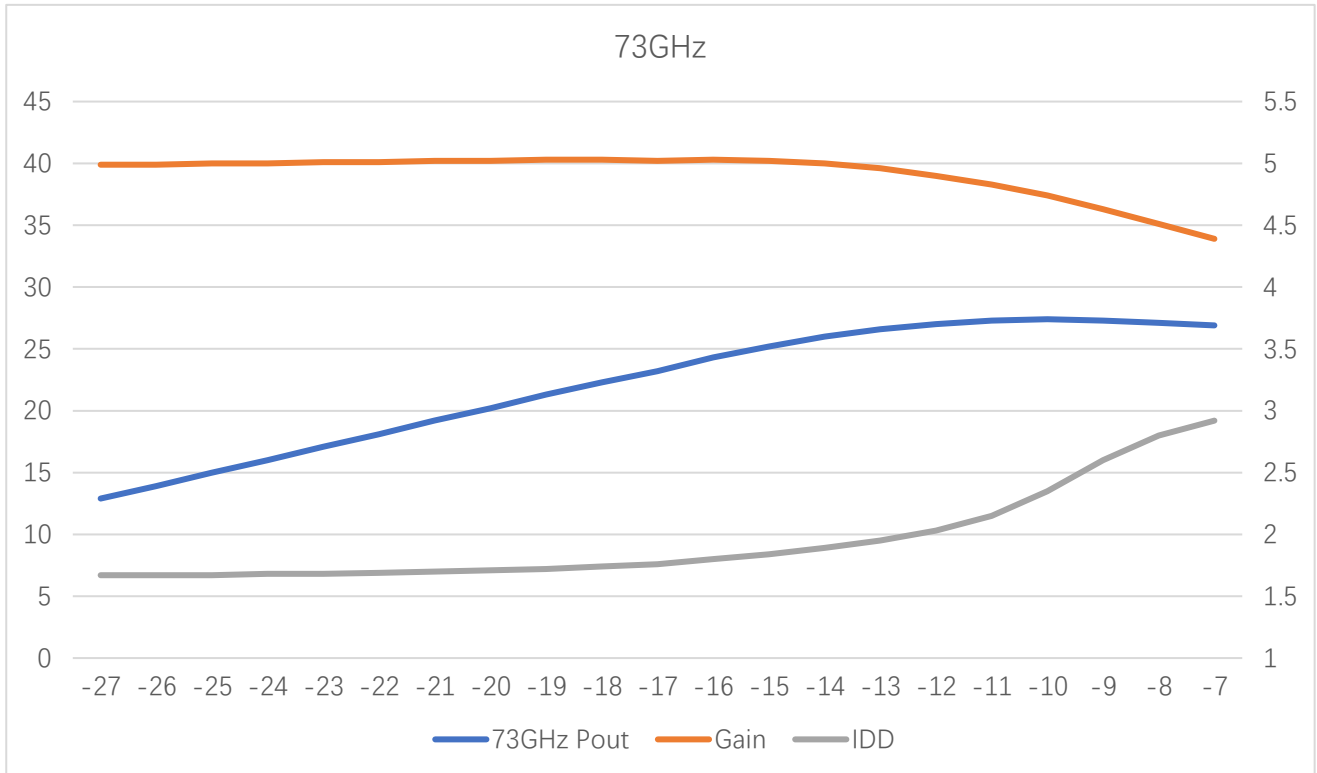
Pout, Gain and IDD vs Input Power at 71GHz



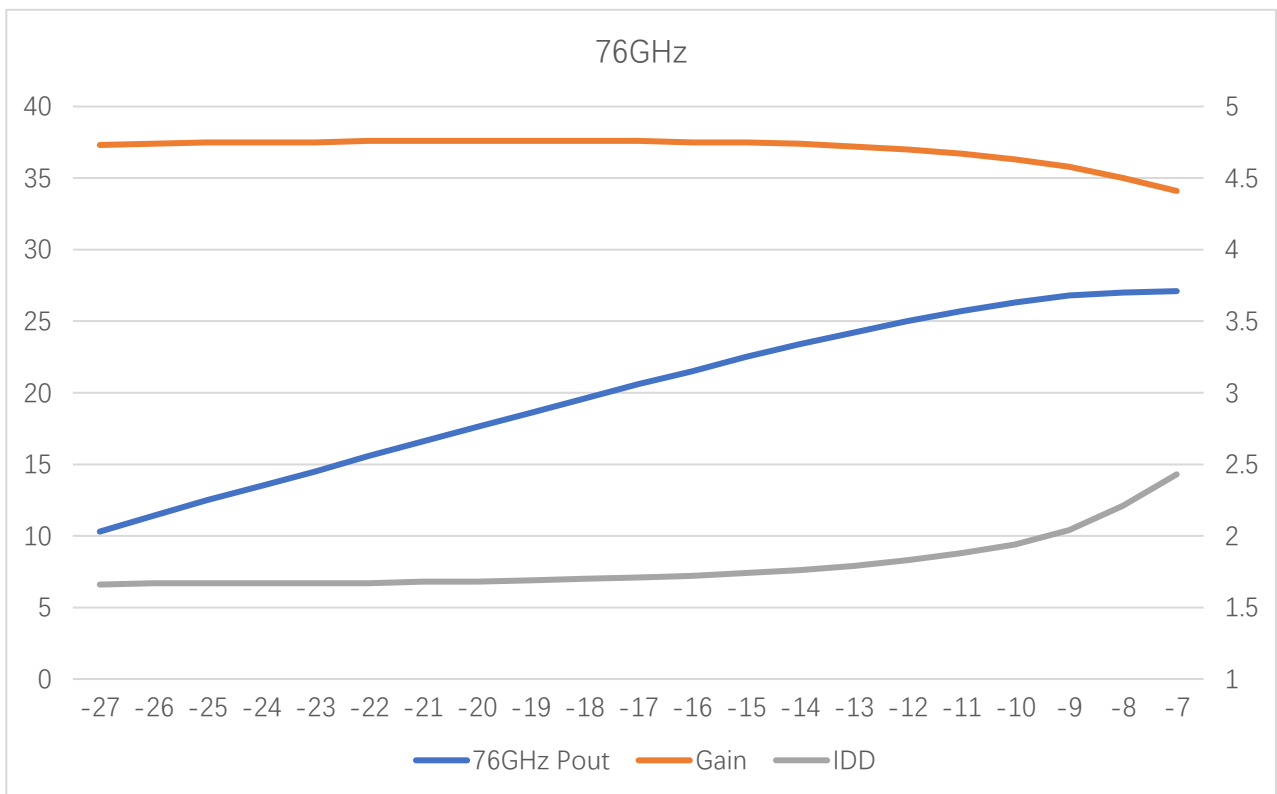


# AT-PA-7186-3326

71-86GHz Power Amplifier, Psat=+26dBm

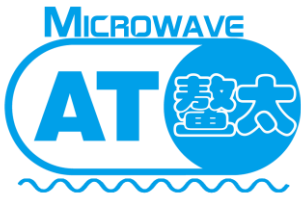


Pout , Gain and IDD vs Input Power at 73GHz



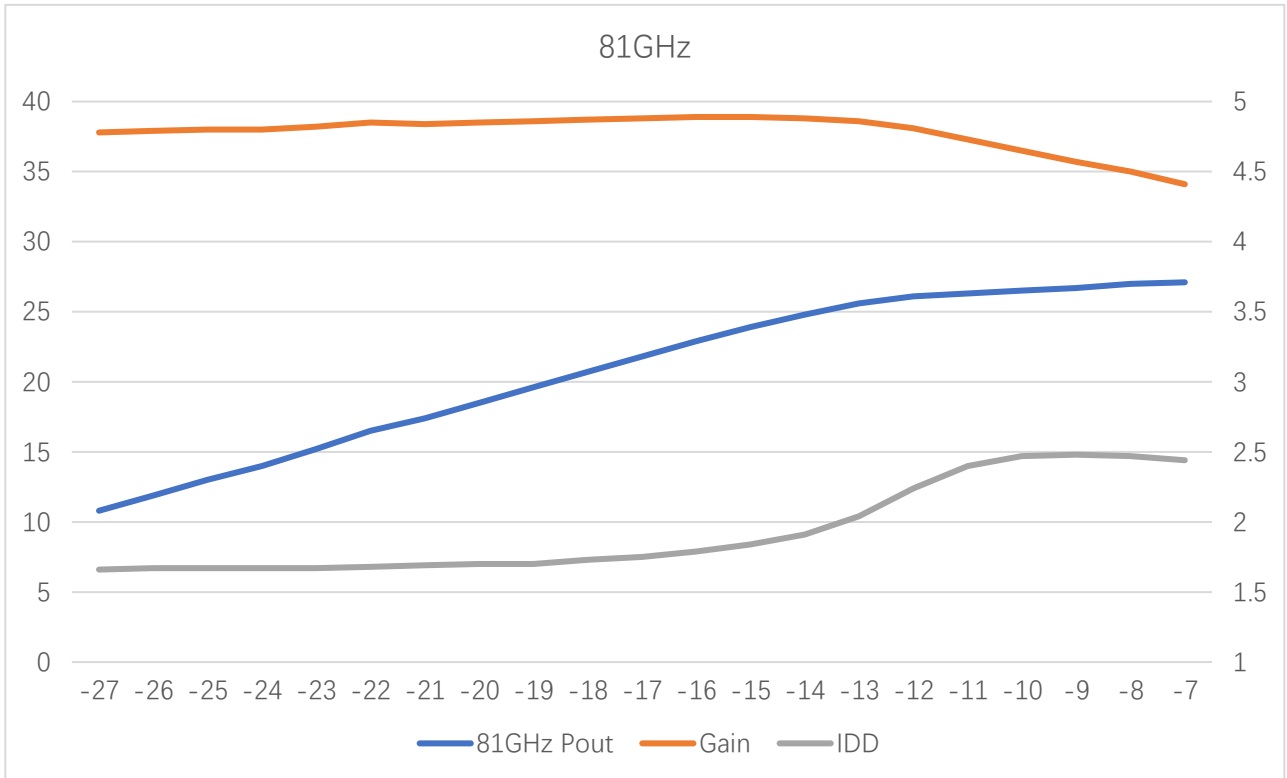
Pout , Gain and IDD vs Input Power at 76GHz



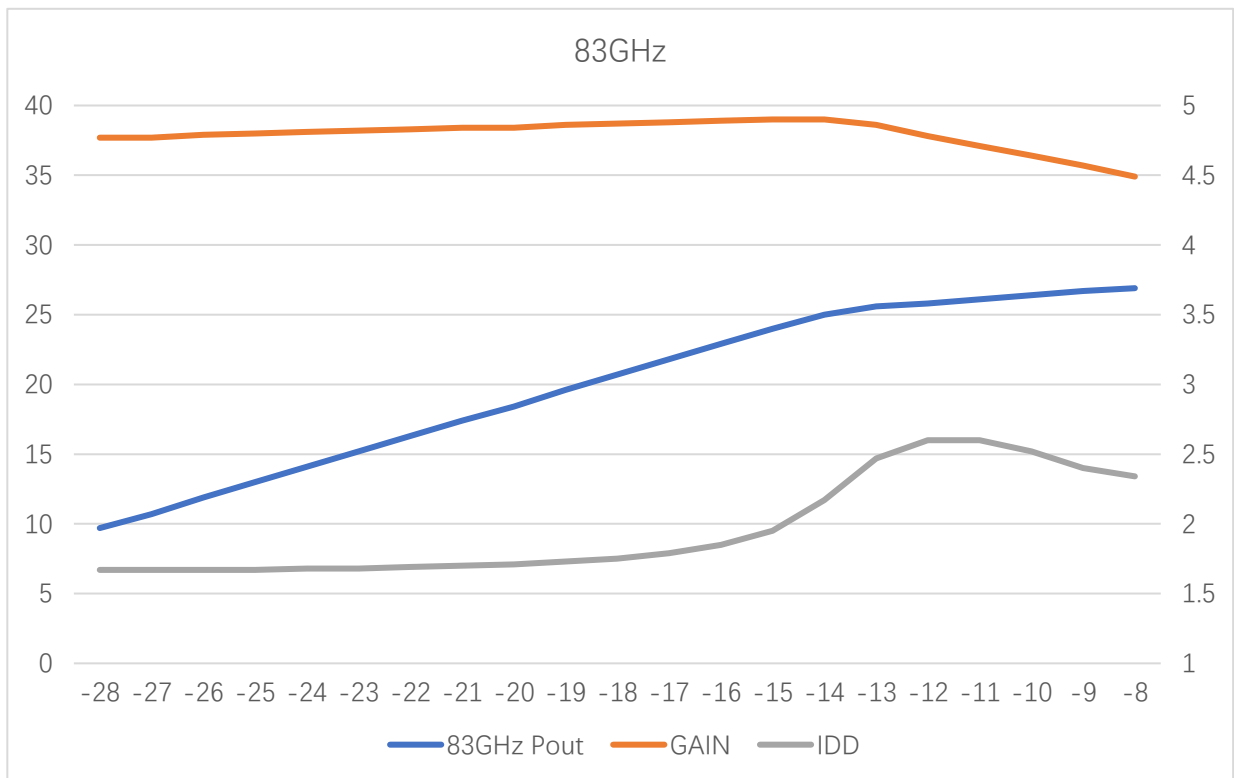


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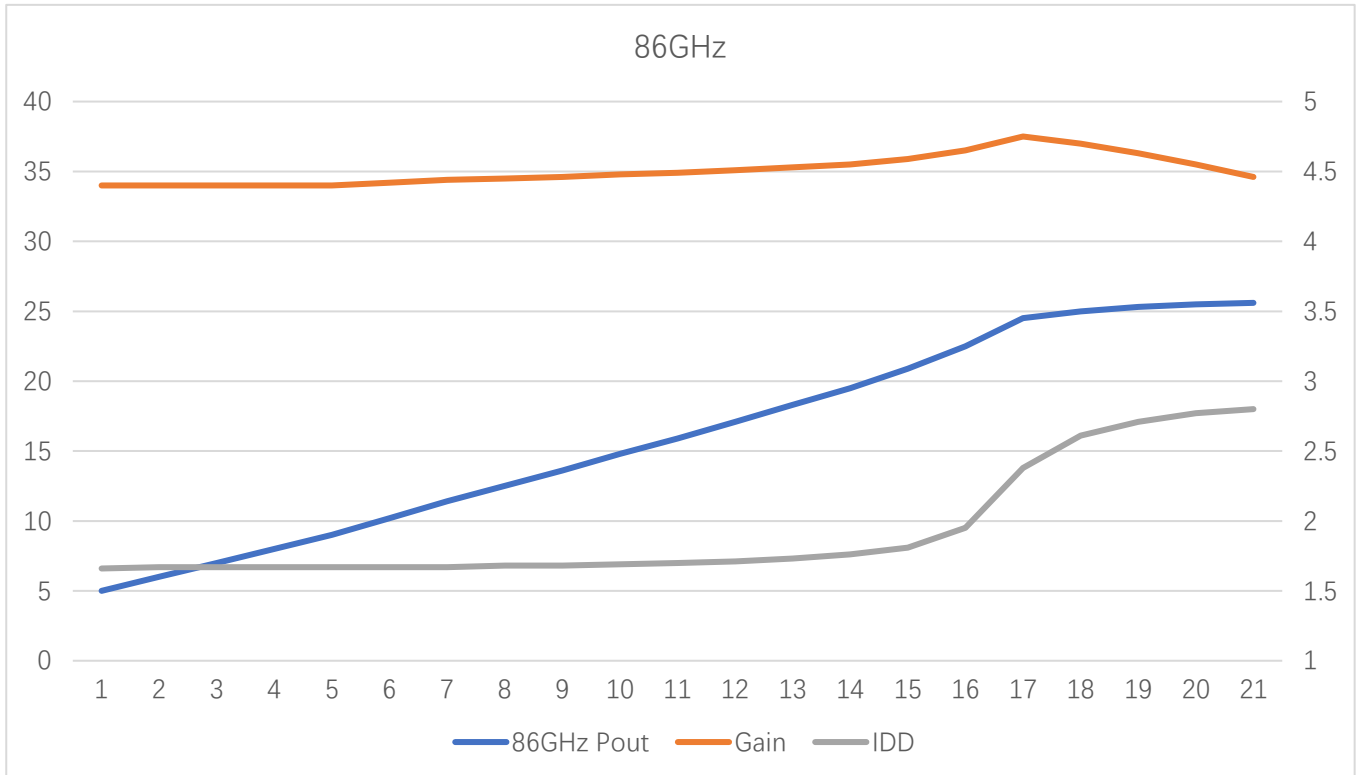


Pout , Gain and IDD vs Input Power at 81GHz



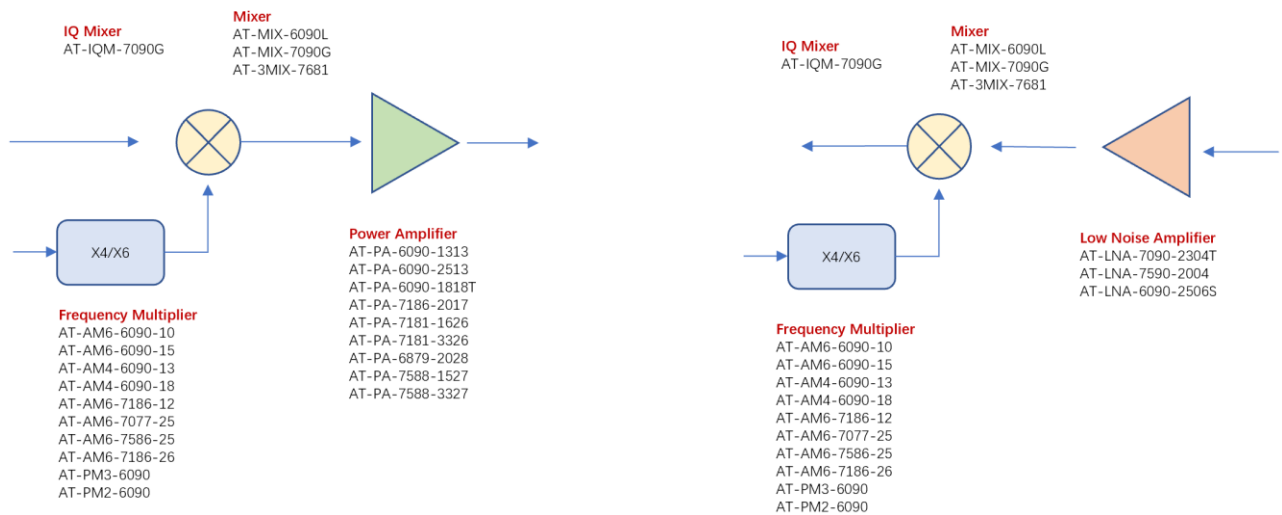
Pout , Gain and IDD vs Input Power at 83GHz



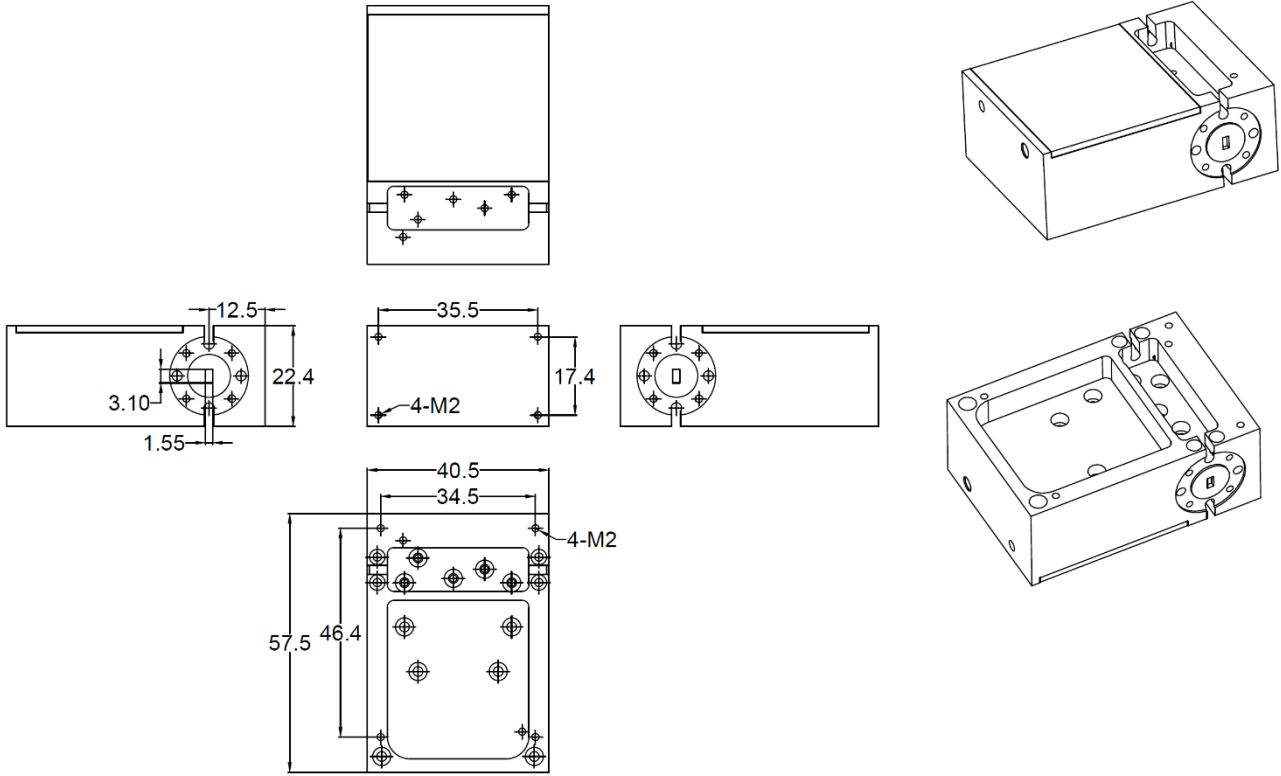


Pout , Gain and IDD vs Input Power at 86GHz

### E Band 60-90GHz



**Dimension:**(unit in mm)

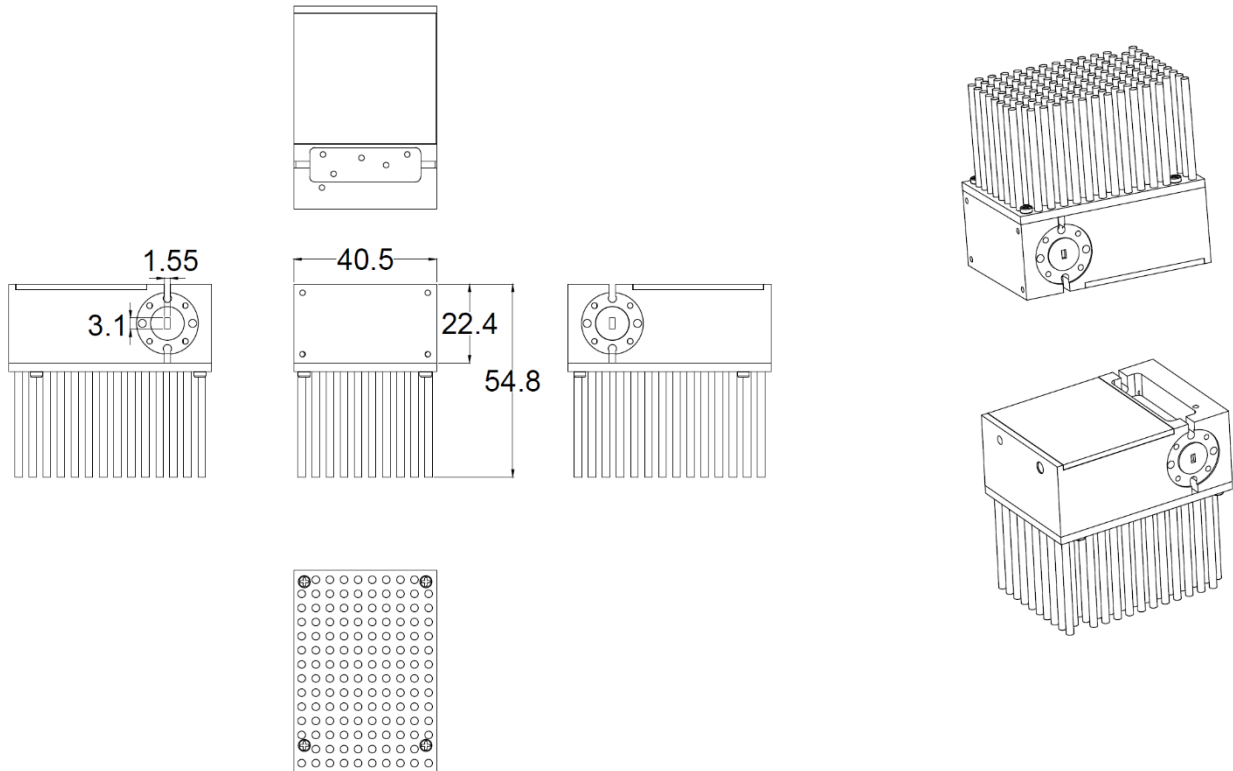


Heatsink required during operation





## Dimension with heatsink:(unit in mm)



Dimension with Heatsink

AT Microwave provides a heatsink in default if  $P_{out}$  is higher than  $+20dBm$ .  
Customer can remove the heatsink easily and use their own heatsink if need.

