

## E2 Band Power Amplifier



### Product Overview

AT-PA-7586-1825 is power amplifier with +25dBm output power in the frequency of 75-86GHz. The DC power requirement is +5/900mA. 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: 75-86GHz
- ✓ Psat:+25dBm
- ✓ Small signal gain: 18dB
- ✓ Single Power 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		75-86GHz	
Gain		18dB	
Drain Supply		+5V	+8V
Idd NO RF		0.9A	
IDD Psat		1.3A	1.5A
P1Db		+24dBm	
Psat		+25dBm	
Input Return Loss		-5 dB	
Output Return Loss		-5 dB	
Spec Temp		25C	





# AT-PA-7586-1825

75-86GHz Power Amplifier,  $P_{sat}=+25\text{dBm}$

## 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	+9V
RF Input Power	+18dBm
Operating Temperature	0 to +50C
Storage Temperature	-65 to +150C

### Caution:

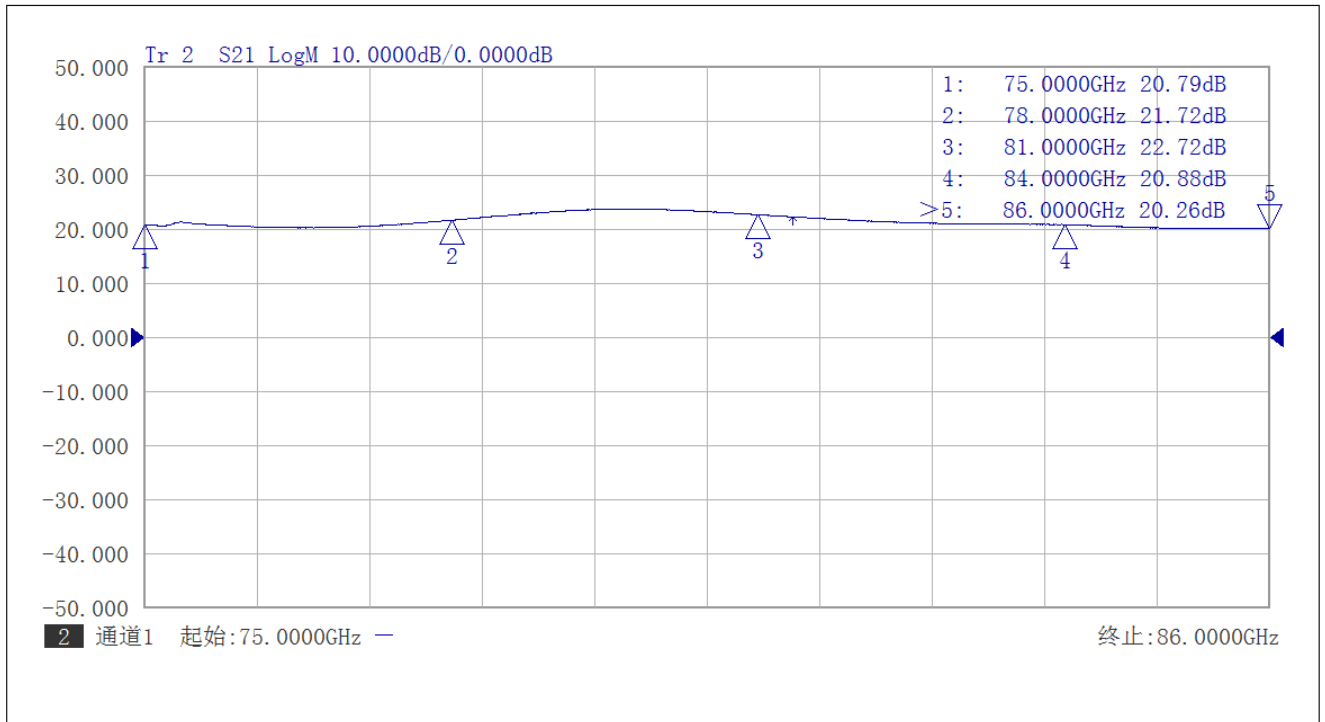
Please pay attention to the case temperature. If case temperature exceed higher than +50C, heat sink and fan are required, or the amplifier may be damaged.

### Notes:

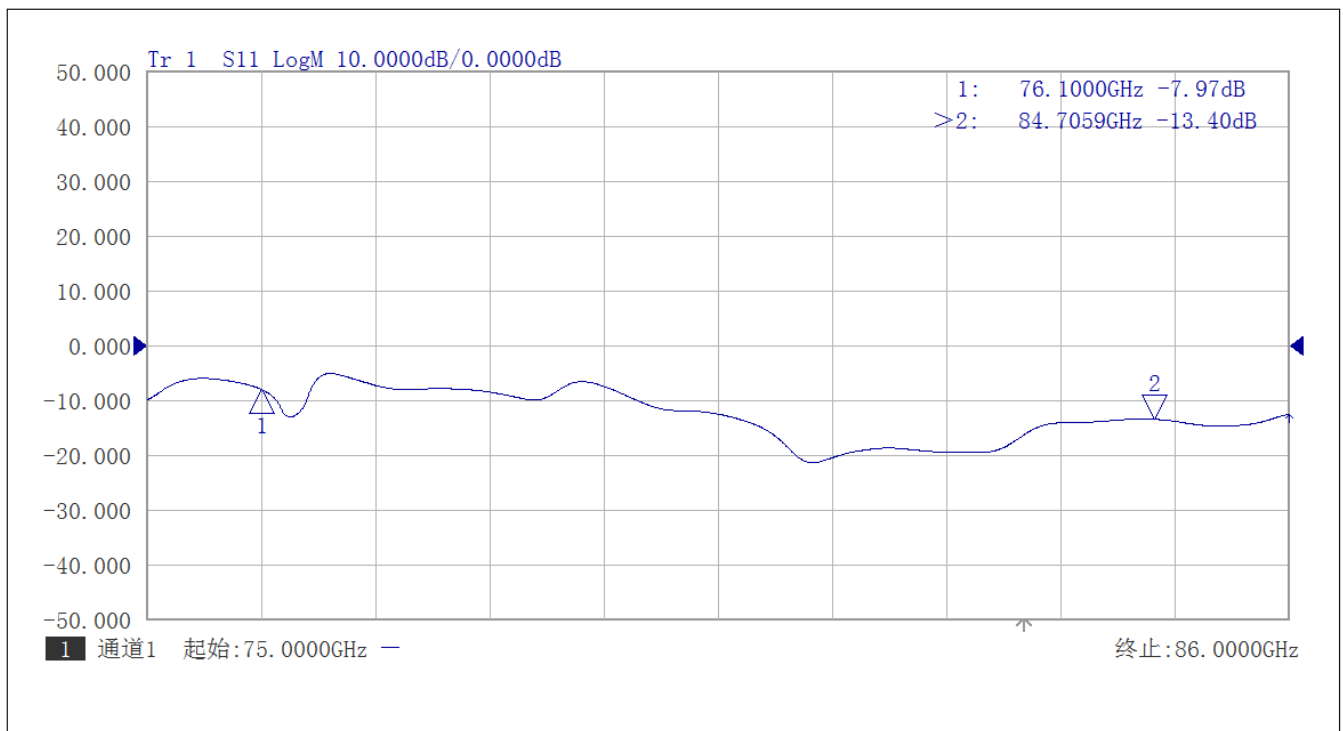
1. Datasheet may be changed according to update of MMIC, Raw materials , process, and so on.
2. This data is only for reference, not for guaranteed specifications.
3. Please contact AT Microwave team to make sure you have the most current data.



### Test Data:

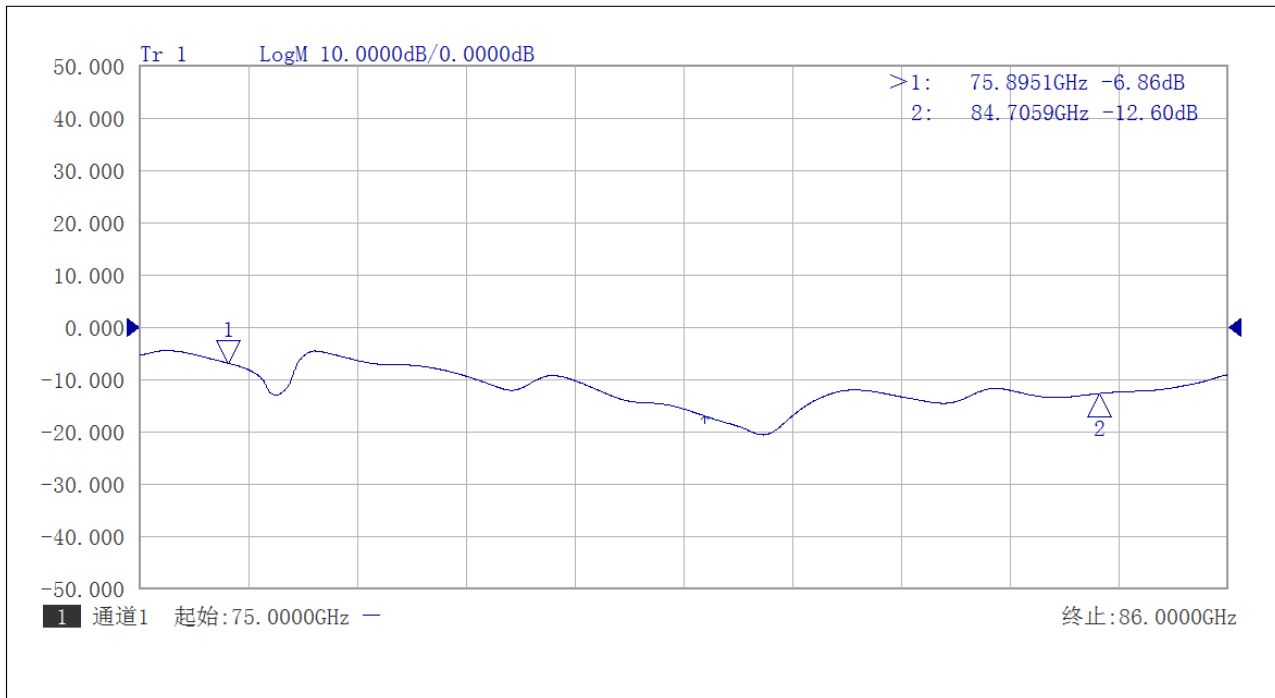


Gain vs Frequency

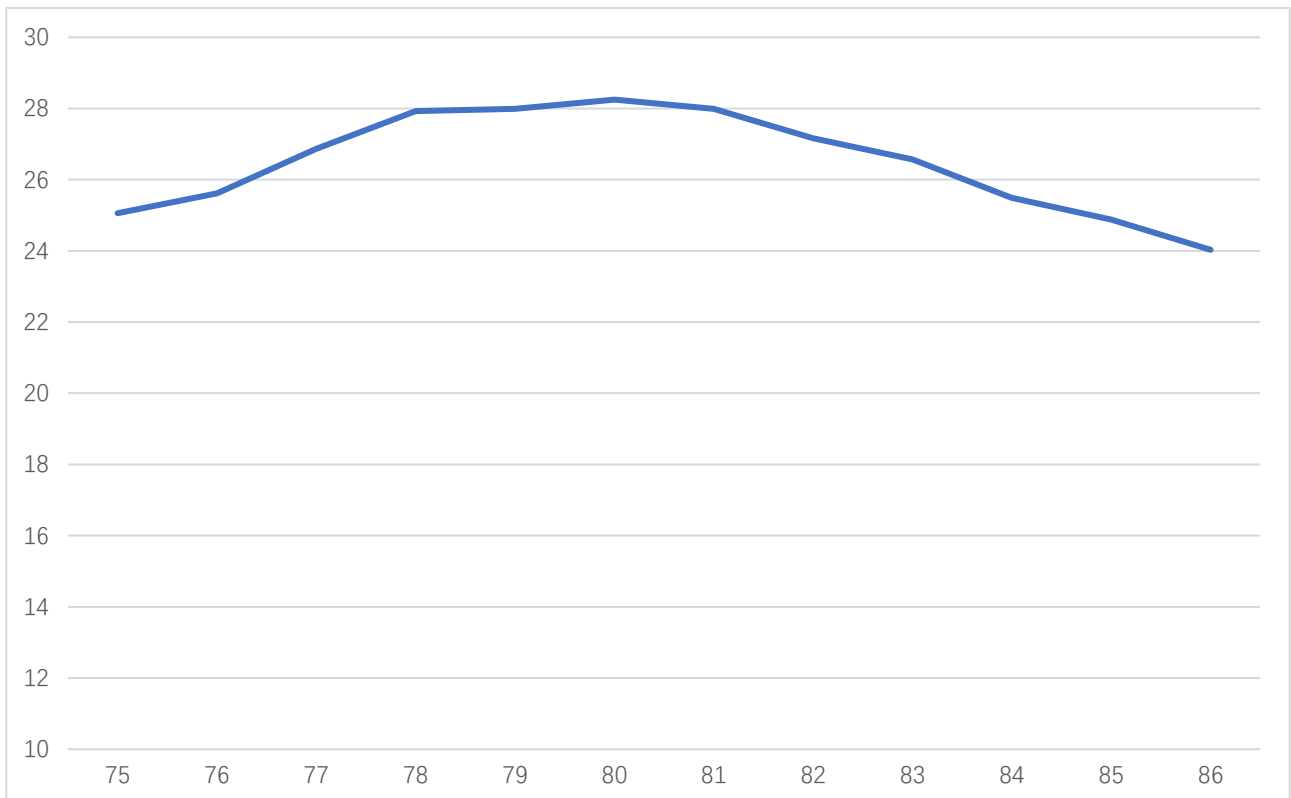


Input Return Loss



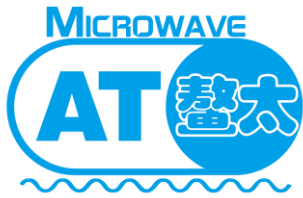


Output Return Loss vs Frequency



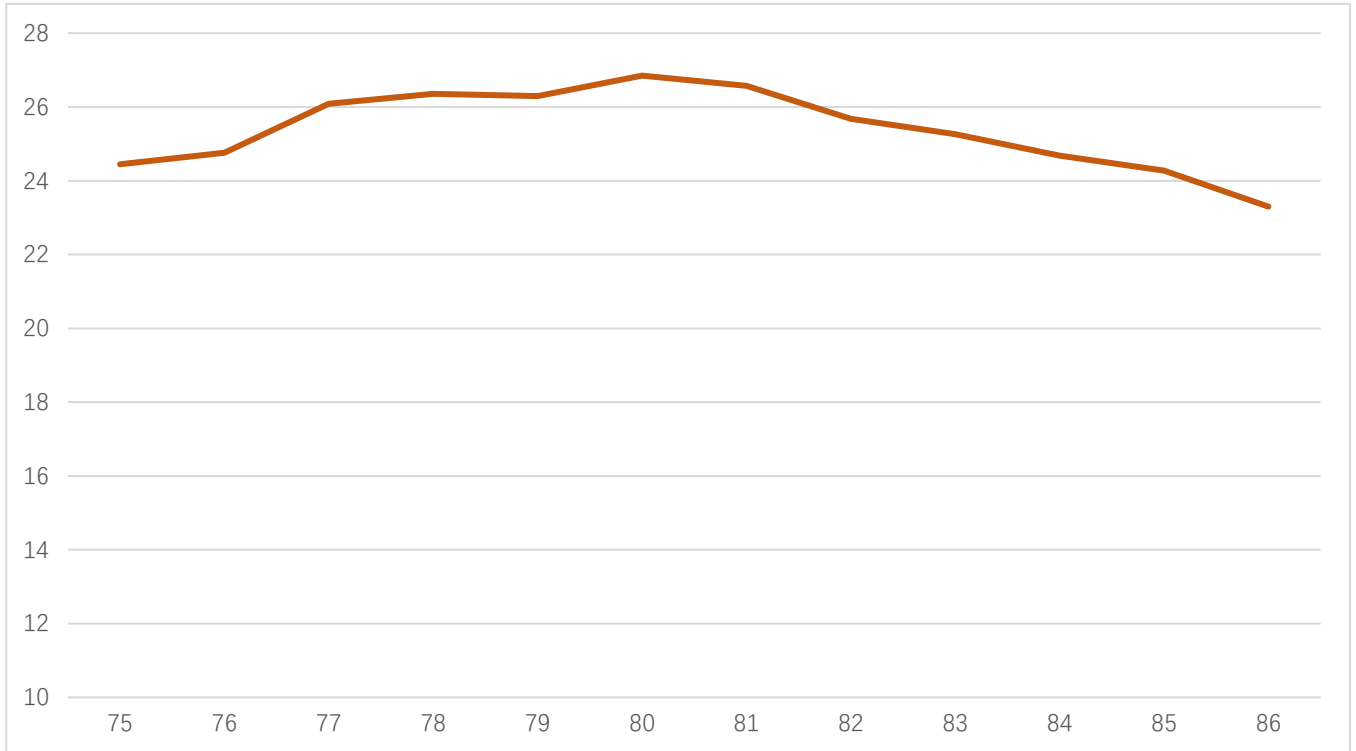
Psat vs Frequency



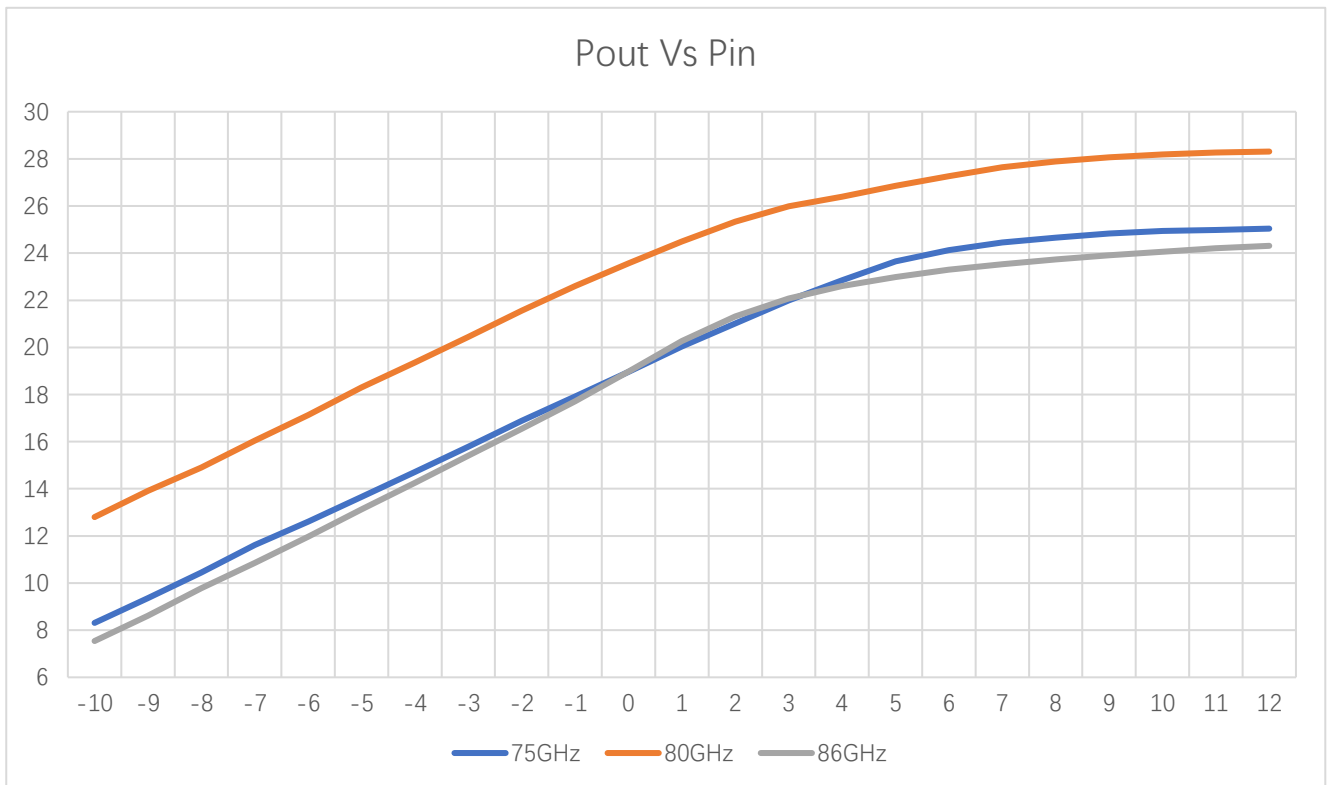


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75-86GHz Power Amplifier,  $P_{sat}=+25\text{dBm}$



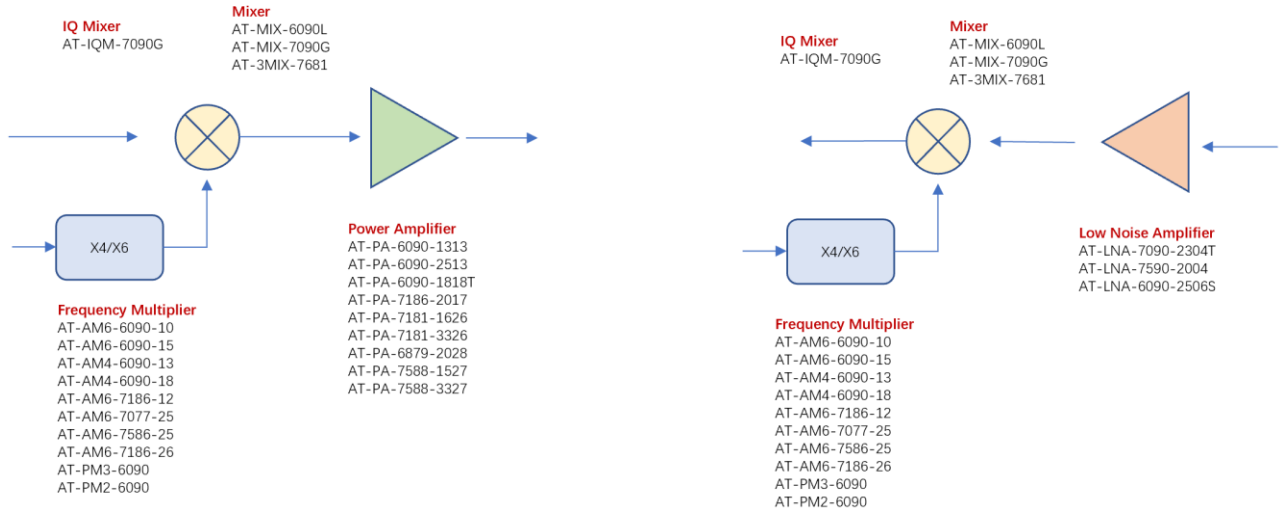
P1dB vs Frequency



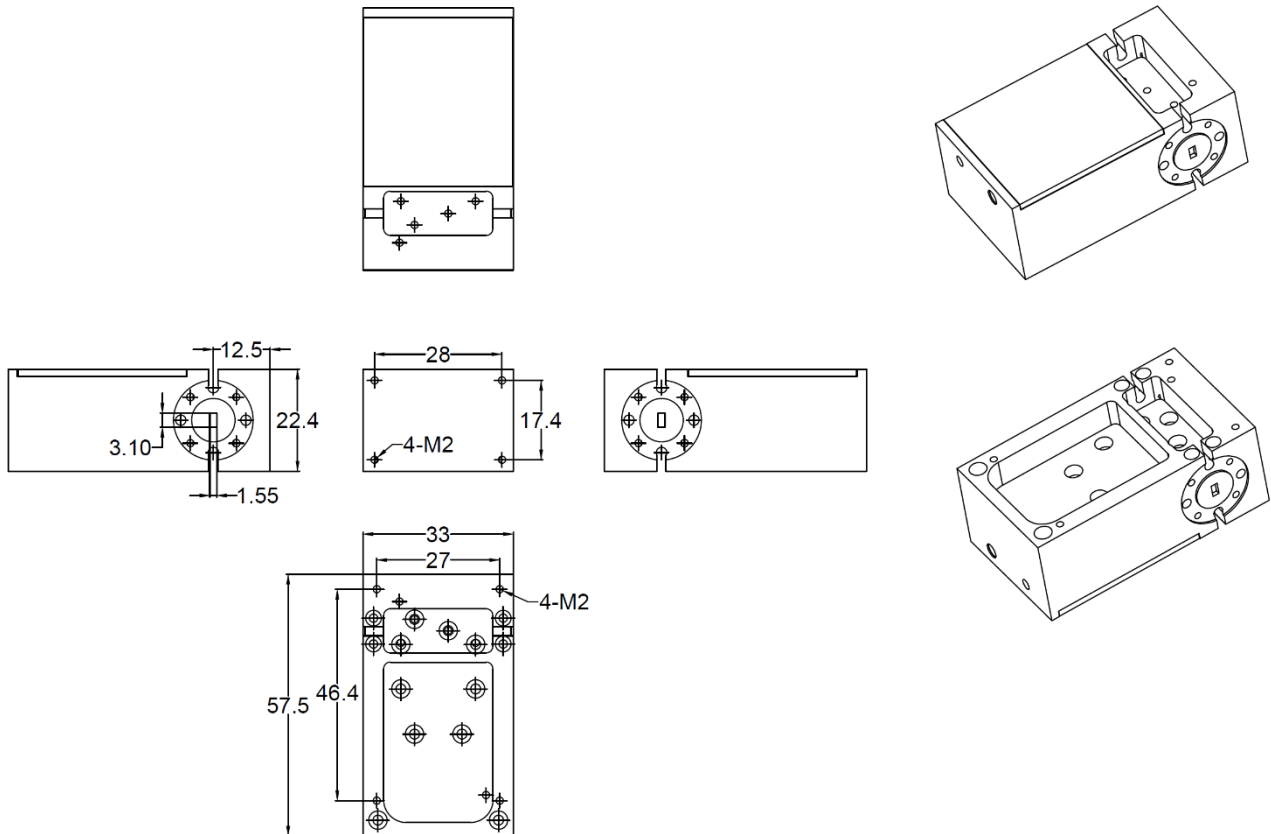
Pout vs Pin at 80GHz



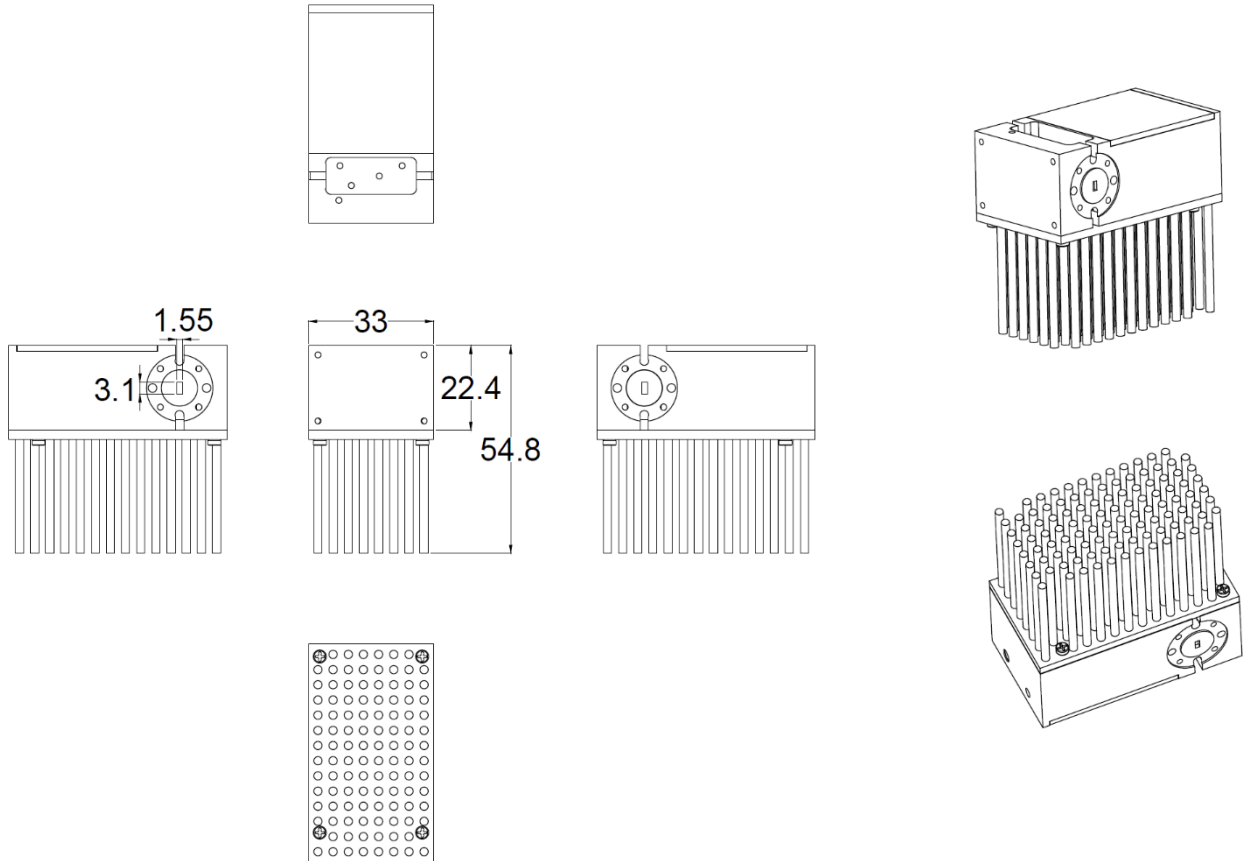
### E Band 60-90GHz



### Dimension:(unit in mm)



## 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.

