

W Band Power Amplifier, +30dBm



Product Overview

AT-PA-8898-3030GN is power amplifier with +30dBm output power in the frequency of 88-98GHz. The DC power requirement is +15V/0.6A. The module is with a standard WR-10 waveguide. GaN chips are used inside module.

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: 88-98GHz
- ✓ Psat:+30dBm
- ✓ Small signal gain: 30dB
- ✓ Single Power Supply

Application

- ✓ W band Imaging
- ✓ FOD (Foreigner Objects Debris)
- ✓ Test Equipment
- ✓ ROF (RF Over Fiber)
- ✓ Radar System

Key Features

Parameter	Min	Typical	Max
Frequency		88-98GHz	
Gain (Small Signal Gain)	28	30dB	
P1dB	+26	+28dBm	
Output Saturated Power	+28	+30 dBm	
Supply Voltage (V)		+15V	+18V
I _{dd} /NO RF		0.55A	
IDD/ Psat		0.65A	
Input Return Loss		-5dB	
Output Return Loss		-5dB	
Spec Temp		25C	





AT-PA-8898-3030GN

88-98GHz Power Amplifier, $P_{sat}=+30dBm$

Mechanical Information

Item	Description
Input Port	WR-10
Output Port	WR-10
Case Material	Copper
Finish	Gold Plated
Weight (Without Heatsink)	270g
Size:	See outline

Absolute Maximum Ratings Table

Parameter	Value
Drain Supply	+20V
RF Input Power	+15dBm
Operating Temperature	0 to +50C
Storage Temperature	-65 to +150C

Note:

Output Port Must be connected to Load during operation, or the PA may be damaged due to the poor VSWR.
操作过程中，输出端不能空载，否则可能损坏 PA 模块。

Caution:

Please pay attention to the case temperature. If case temperature exceeds 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.



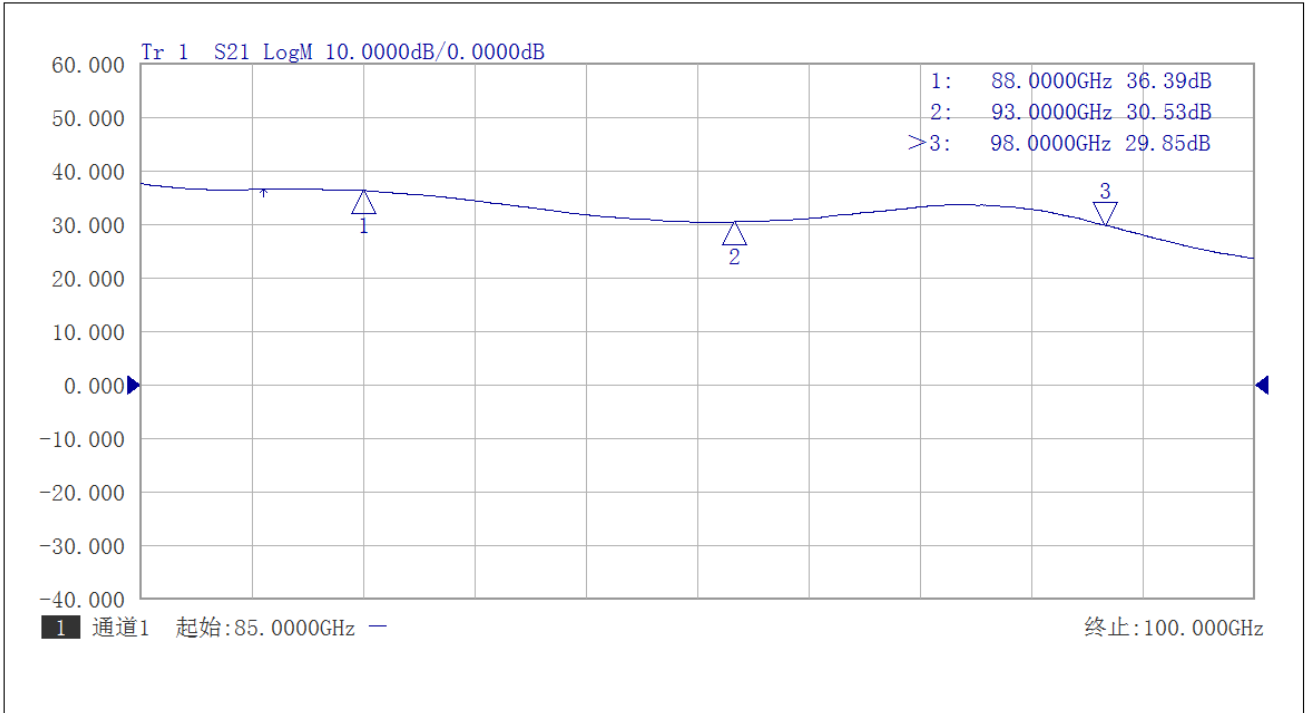


AT-PA-8898-3030GN

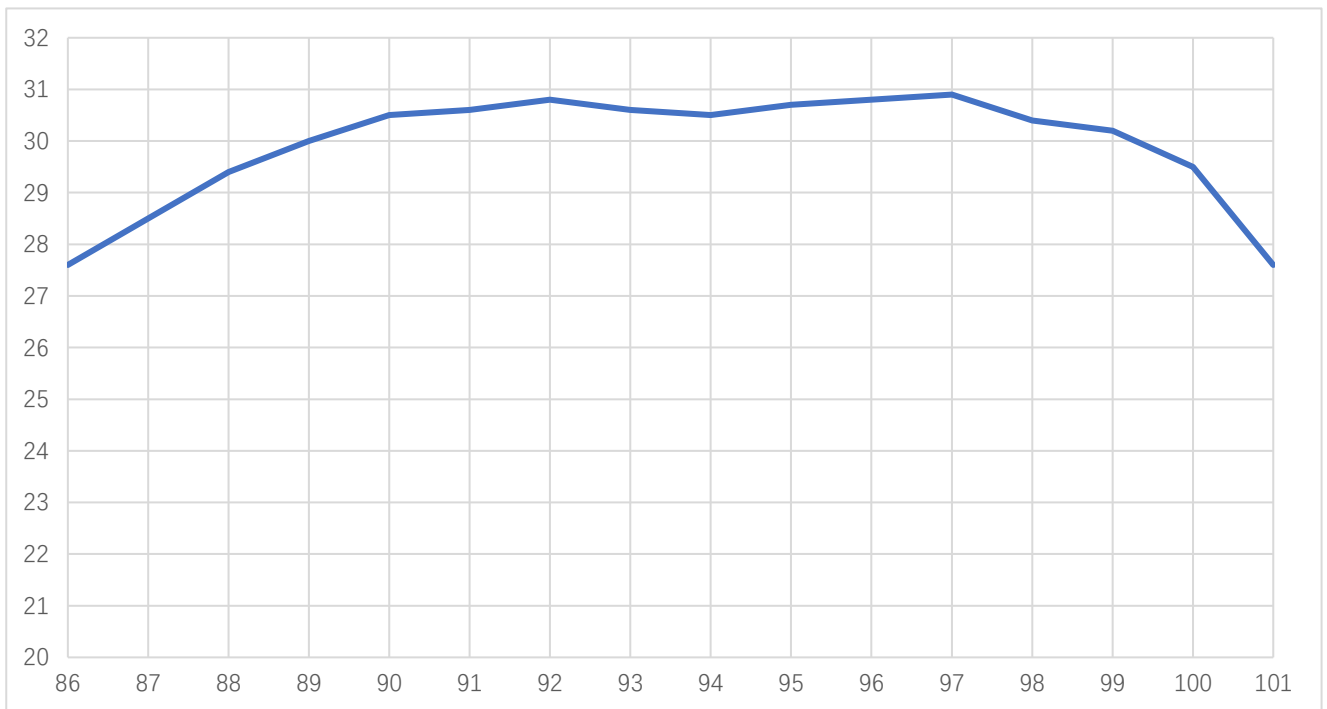
88-98GHz Power Amplifier, $P_{sat}=+30dBm$

Test Data:

Vdd=+15V, Idd=0.56A, IDD=0.65A at P_{sat} , 25C



Gain vs Frequency



Psat vs. Frequency

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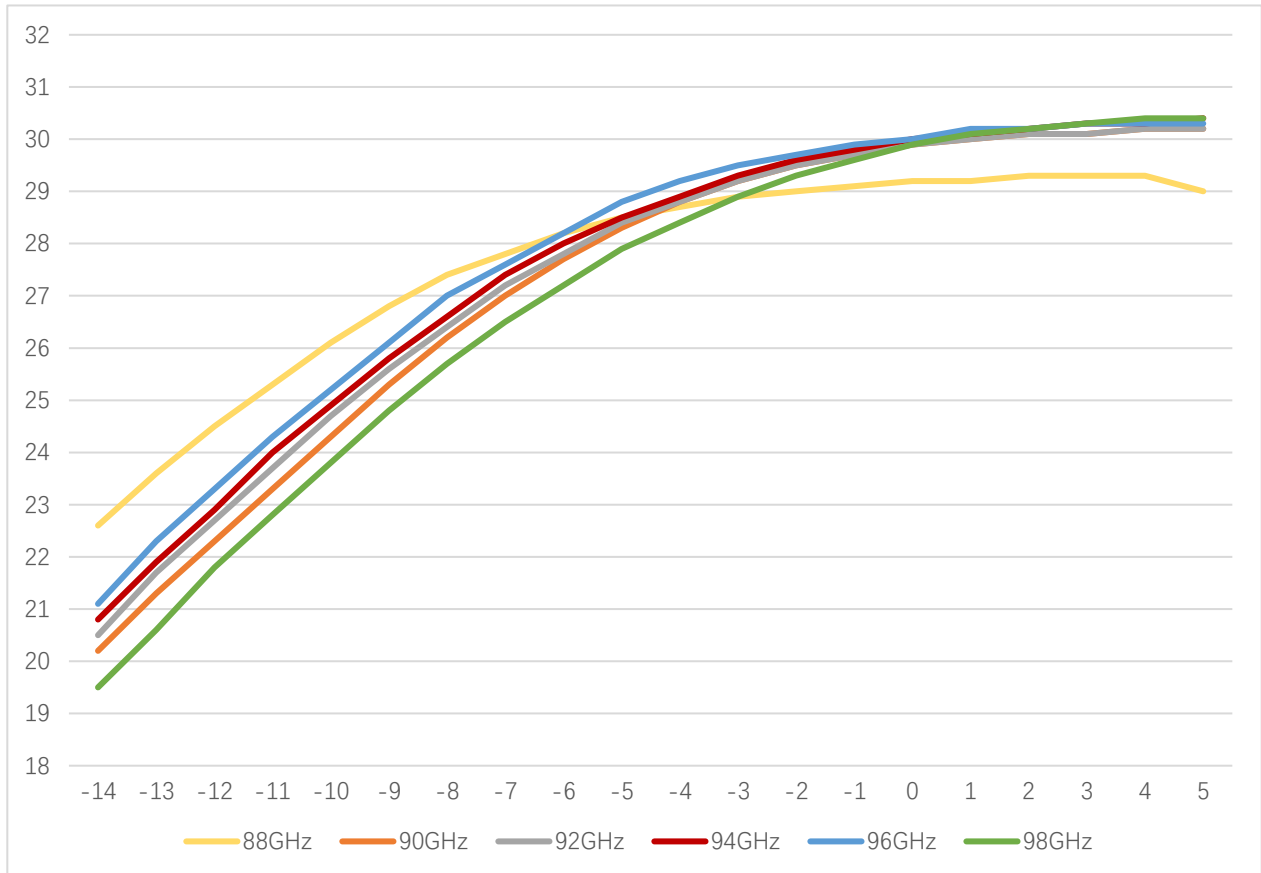
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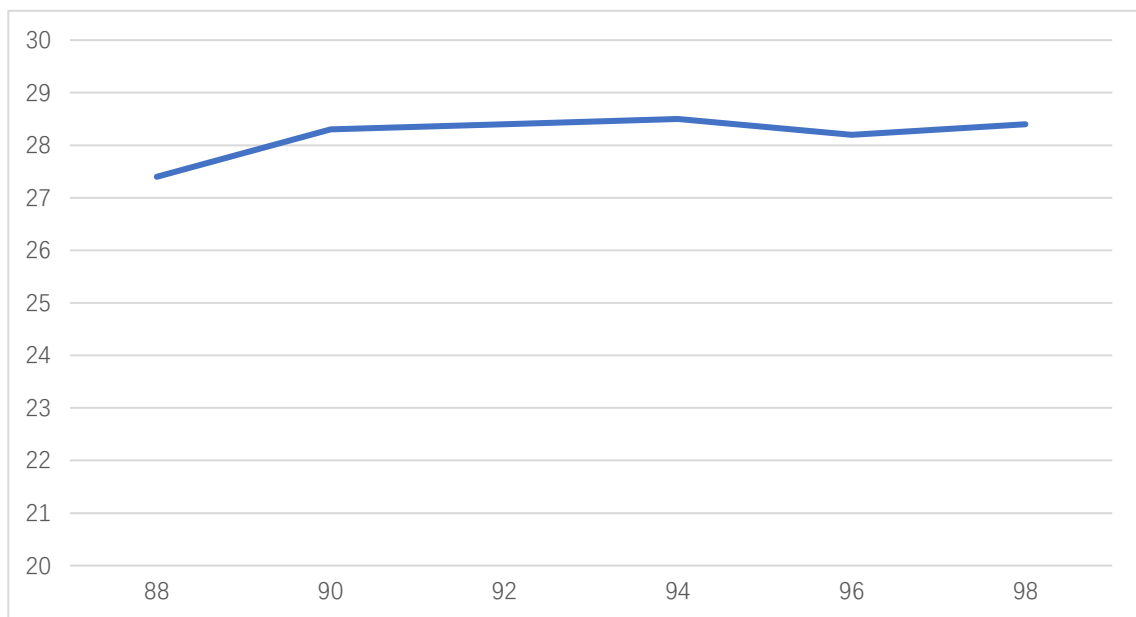


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Pout vs Pin at 88/90/92/94/96/98GHz



P1dB vs Frequency

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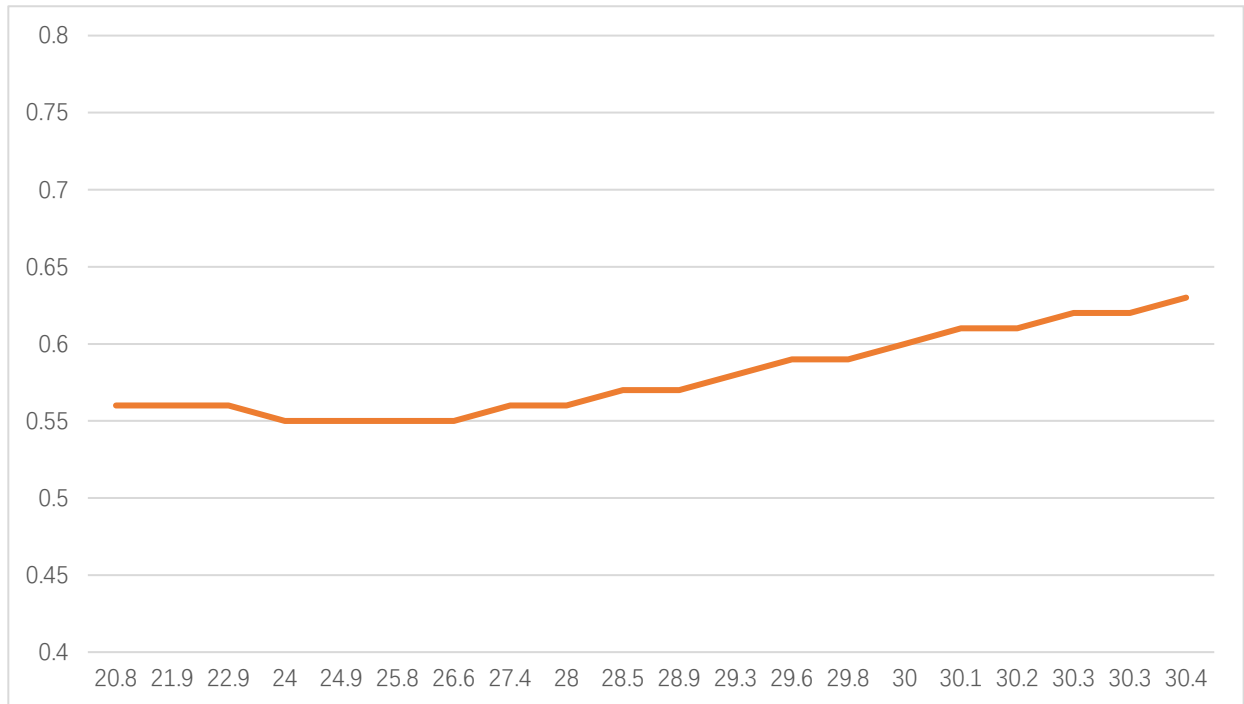
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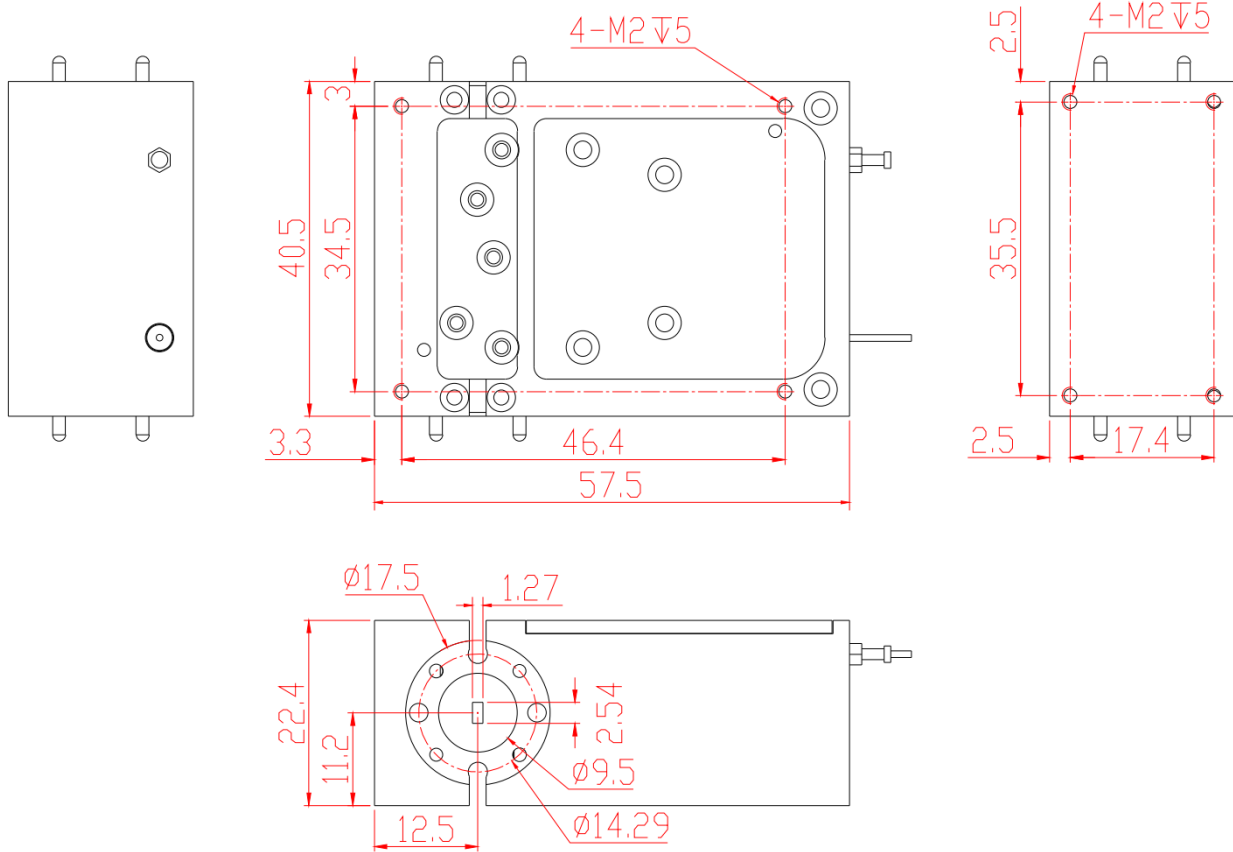
88-98GHz Power Amplifier, $P_{sat}=+30dBm$



IDD vs Pout at 94GHz

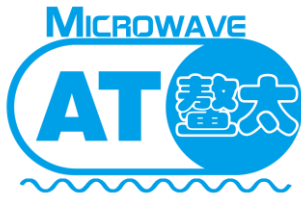


Dimension



Heat Sink Required During Operation

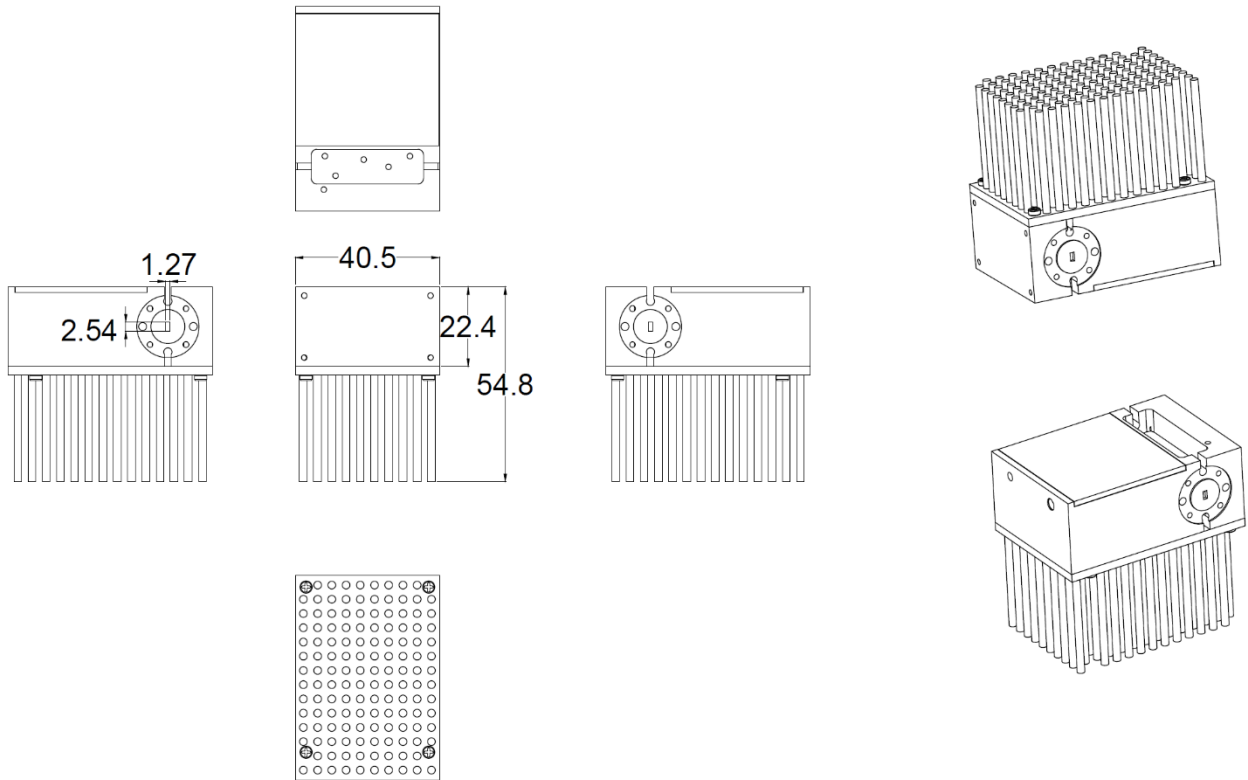




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88-98GHz Power Amplifier, $P_{sat}=+30dBm$

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.

