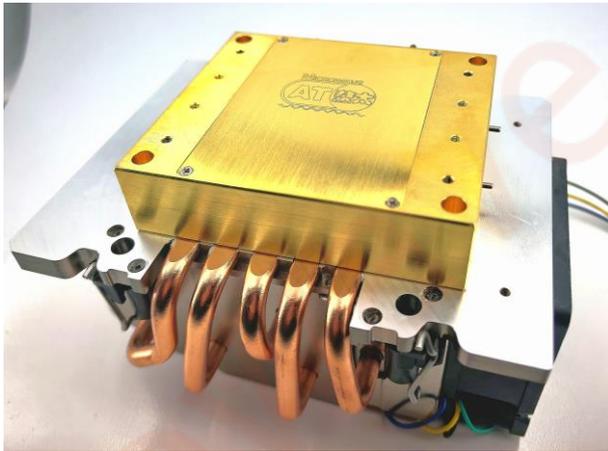


E1 Band High Power Amplifier, Gain=16dB , Psat +33dBm, WR-12

2025-12-19



Product Overview

AT-CPA-7078-1633G2 is 16dB high gain power amplifier with +33dBm output power in the frequency of 70-78GHz. The DC power requirement is +5V/8A. The module is with a standard WR-12 waveguide. GaAs amplifier chips are used inside.

The power amplifier can also be used from 66-79GHz with some degrade of performance.

More information, please visit www.atmicrowave.com

Advantages

- ✓ Frequency: 70-78GHz
- ✓ P1=+31dBm
- ✓ Psat:+33dBm
- ✓ Small signal gain: 16dB

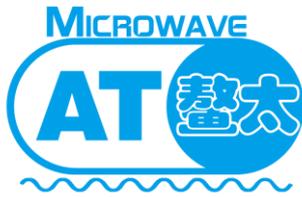
Application

- ✓ E1 Band Communication
- ✓ FOD (Foreigner Objects Debris)
- ✓ Test Equipment
- ✓ ROF (RF Over Fiber)
- ✓ Radar System

Key Features

Parameter	Min	Typical	Max
Frequency		70-78GHz	
Small Signal Gain	14dB	16dB	
Output P1(71-76GHz)	+30dBm	+31dBm	
Saturated Power(71-76GHz)	+32dBm	+33dBm	
Supply Voltage		+5V	+6V
Quiescent Current/A		6.0A	
Psat Current/A		8A	10A
Fan Supply		+5V/0.5A	
Input Return Loss		-7dB	
Output Return Loss		-7dB	
Spec Temp		25C	





AT-CPA-7078-1633G2

70-78GHz Power Amplifier, $P_{sat}=+33\text{dBm}$

Mechanical Information

Item	Description
Input Port	WR-12
Output Port	WR-12
Case Material	Copper
Finish	Gold Plated
Weight (Without Heatsink)	450g
Size:	See outline

Absolute Maximum Ratings Table

Parameter	Value
Drain Supply	+7V
RF Input Power	+25dBm
Operating Temperature	0 to +50C
Storage Temperature	-45 to +85C

Caution:

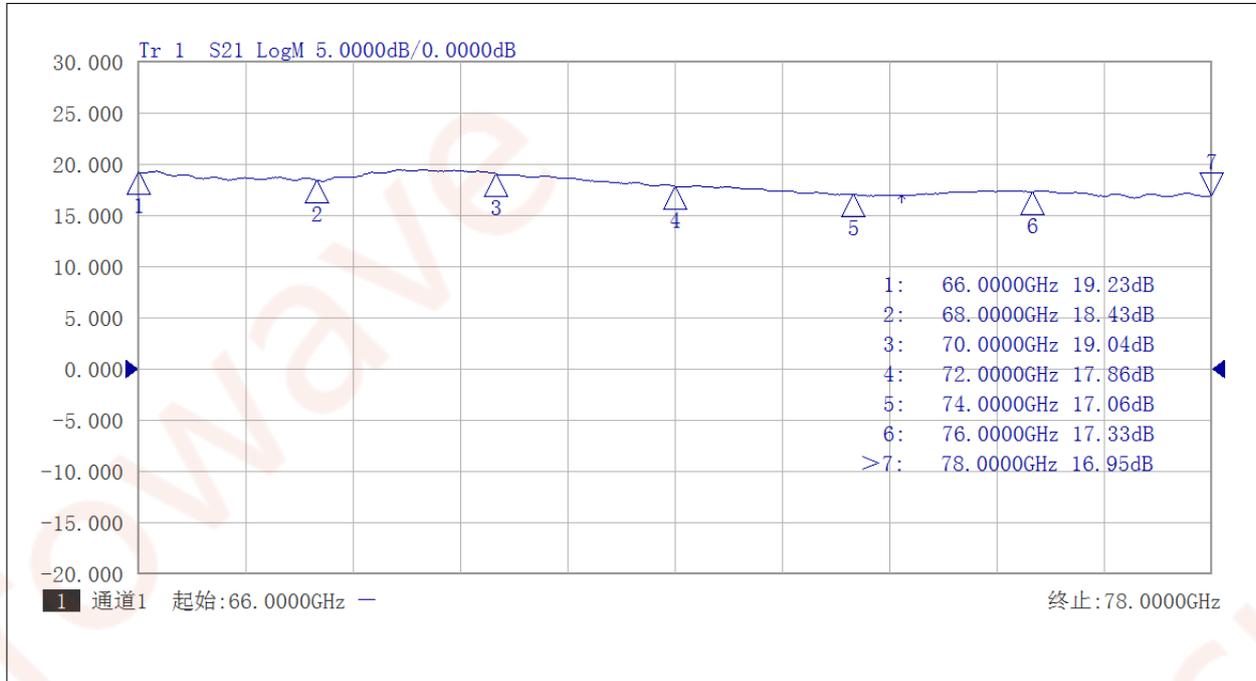
Please pay attention to the case temperature. If case temperature exceeds higher than +50C, heat sink and fan are required, or the amplifier may be damaged.

Notes:

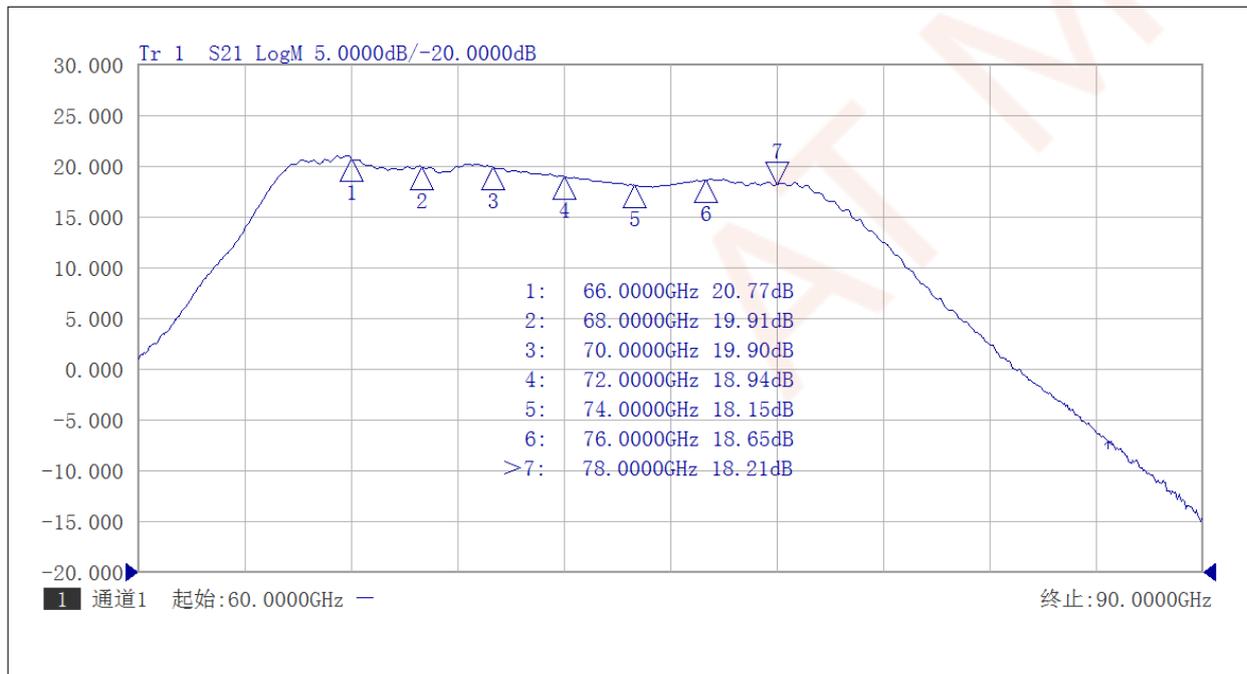
1. Datasheet may be changed according to update of MMIC, Raw materials , process, and so on.
2. This data is only for reference, not for guaranteed specifications.
3. Please contact AT Microwave team to make sure you have the most current data.



TEST DATA(25C)

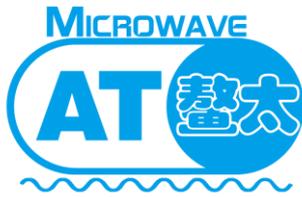


Gain vs Frequency



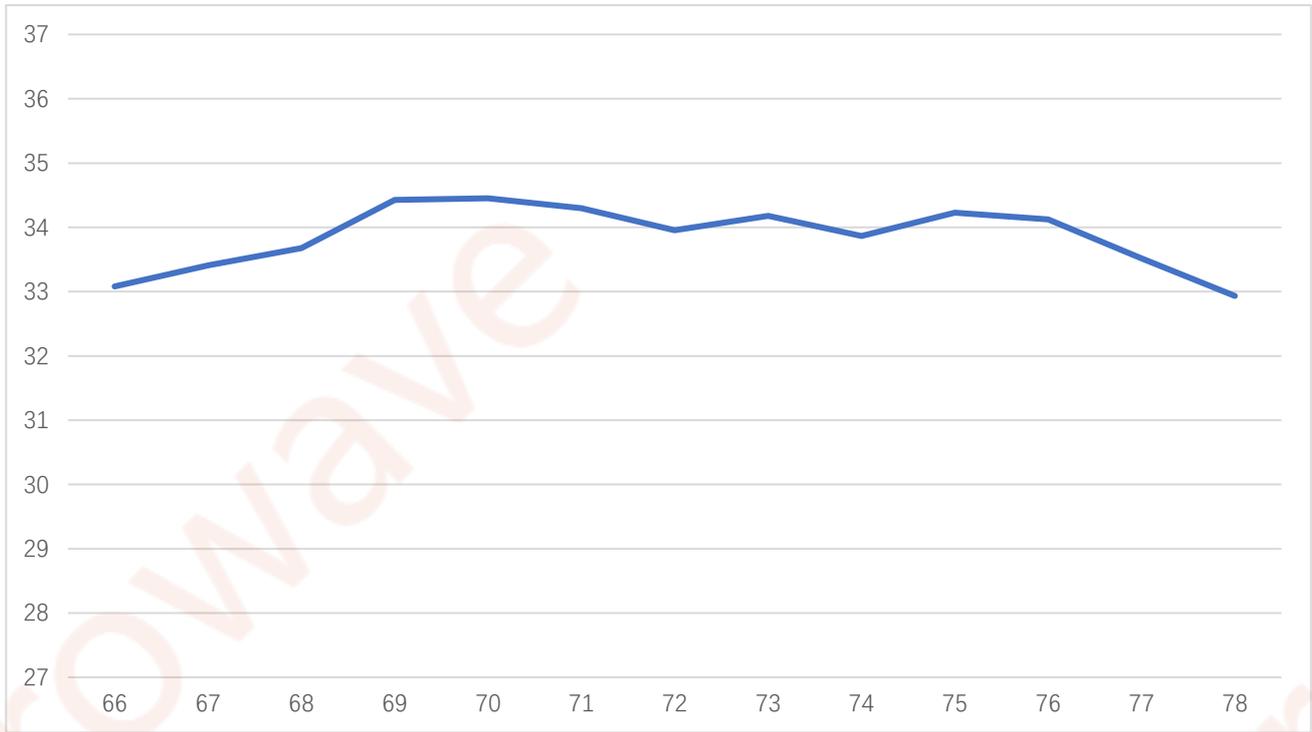
Gain vs Frequency 60-90GHz



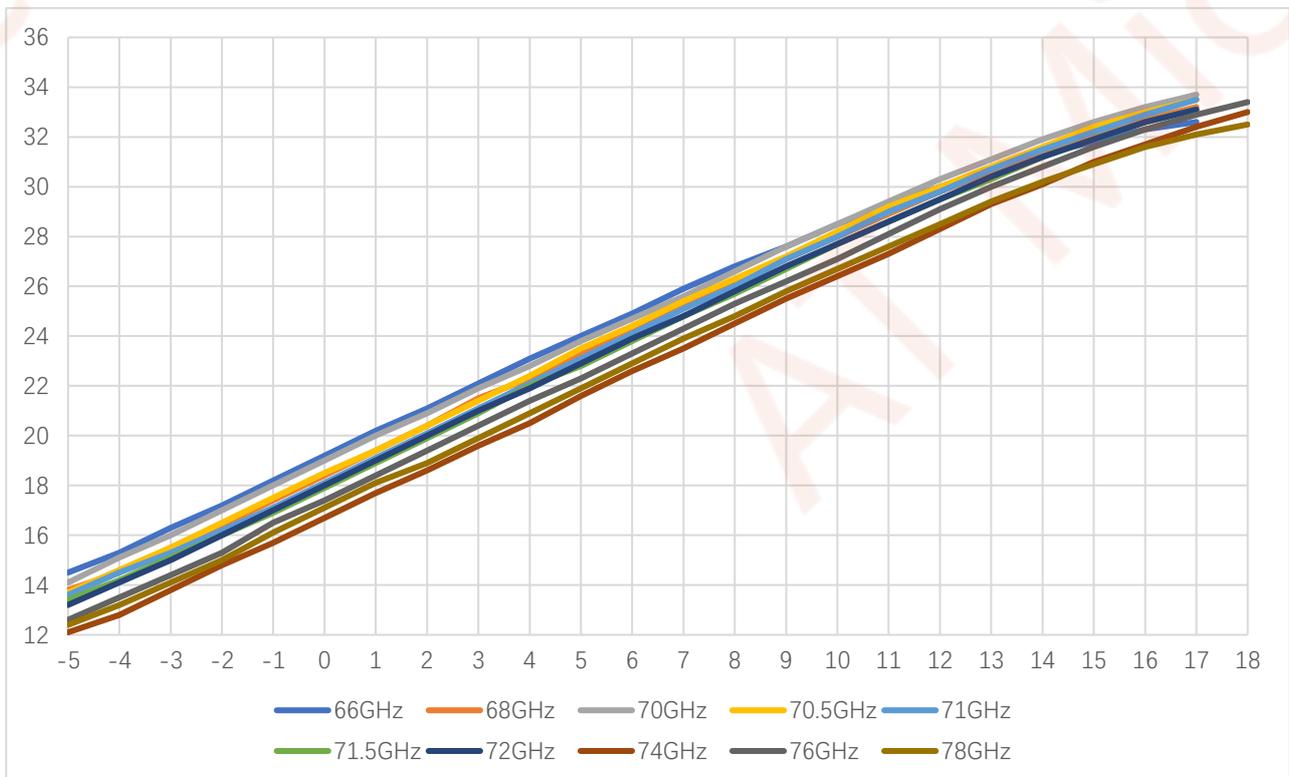


AT-CPA-7078-1633G2

70-78GHz Power Amplifier, $P_{sat}=+33dBm$



Psat vs Frequency



Pout vs Pin

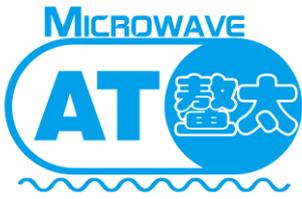
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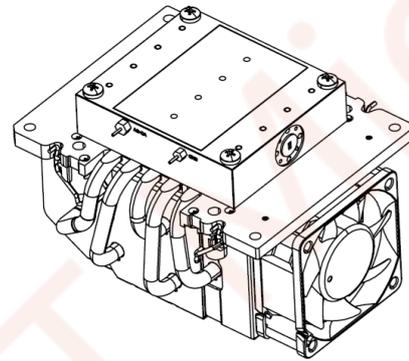
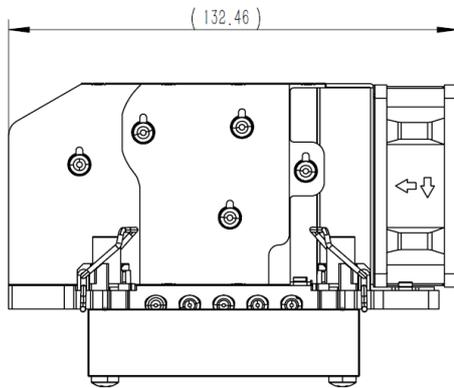
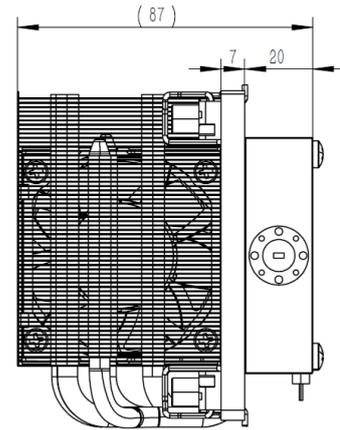
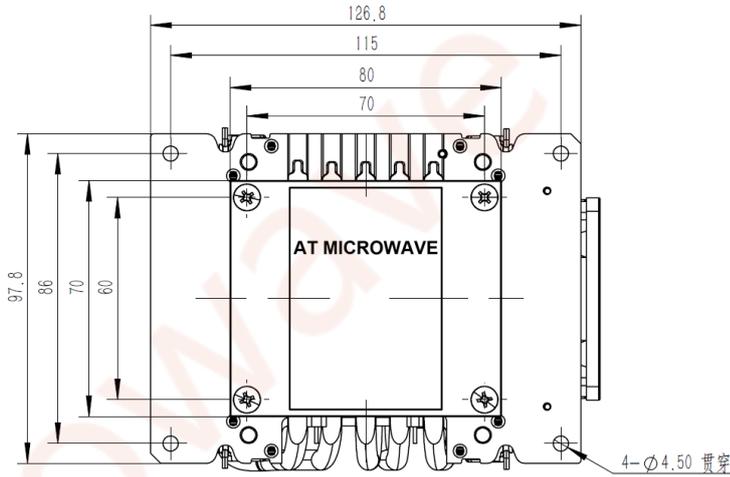


AT-CPA-7078-1633G2

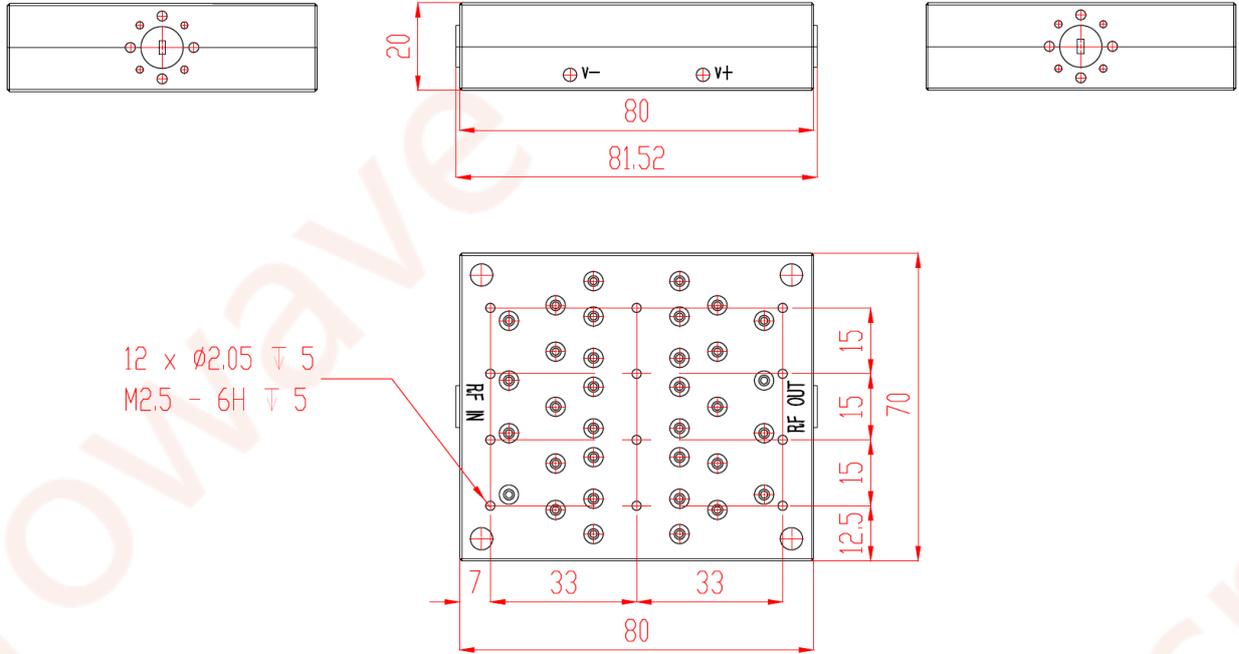
70-78GHz Power Amplifier, $P_{sat}=+33dBm$

Outline with heatsink and Fan: (unit in mm)

AT Microwave provides heatsink and fan in default for this module.
Customer can remove the heatsink if use their own heatsink system.



Outline with heatsink: (unit in mm)



Heat Sink Required During Operation

