

10MHz-43GHz Broadband Amplifier

2021-11-11



Product Overview

AT-BB-0043-2720C is broadband amplifier from 10MHz-43GHz, with $P_{out}=+20dBm$, $NF=6dB$. It can be used both as Power amplifier or low noise amplifier. The DC power requirement is $+8V/320mA$. The module is with 2.92mm Female

+5V Single power supply (With 3dB lower output power) is also available according to request. Bench-top test equipment type with 110-240V power supply is available according to request.

More information, please visit www.atmicrowave.com

Advantages

- ✓ Frequency: 10MHz-43GHz
- ✓ P_{sat} : +22dBm
- ✓ Small signal gain: 27dB
- ✓ Single Power Supply

Application

- ✓ 5G Communication
- ✓ Test Equipment
- ✓ ROF (RF Over Fiber)
- ✓ Radar System

Key Features

Parameter	Min	Typical	Max
Frequency		10MHz-43GHz	
Gain	25dB	27dB	
P1dB	+18dBm +16dBm	10MHz-33GHz: +20dBm 33-43GHz: +18dBm	
Psat	+20dBm +17dBm	10MHz-33GHz: +22dBm 33-43GHz: +20dBm	
Drain Supply		+8V	+12V
Current		320 mA	450mA
NF(1-40GHz)		6dB	
Input Return Loss	-5	-10 dB	
Output Return Loss	-5	-10 dB	
Spec Temp		25C	





AT-BB-0043-2720C

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Mechanical Information

Item	Description
Input Port	2.92mm Female
Output Port	2.92mm Female
Case Material	Copper
Finish	Gold Plated
Package Sealing	Epoxy Sealed
Weight (Without Heatsink)	80g
Size:	30X30X14 mm

Absolute Maximum Ratings Table

Parameter	Value
Drain Supply	+15V
RF Input Power	+15 dBm
Operating Temperature	-20 to +70C
Storage Temperature	-65 to +150C

Caution:

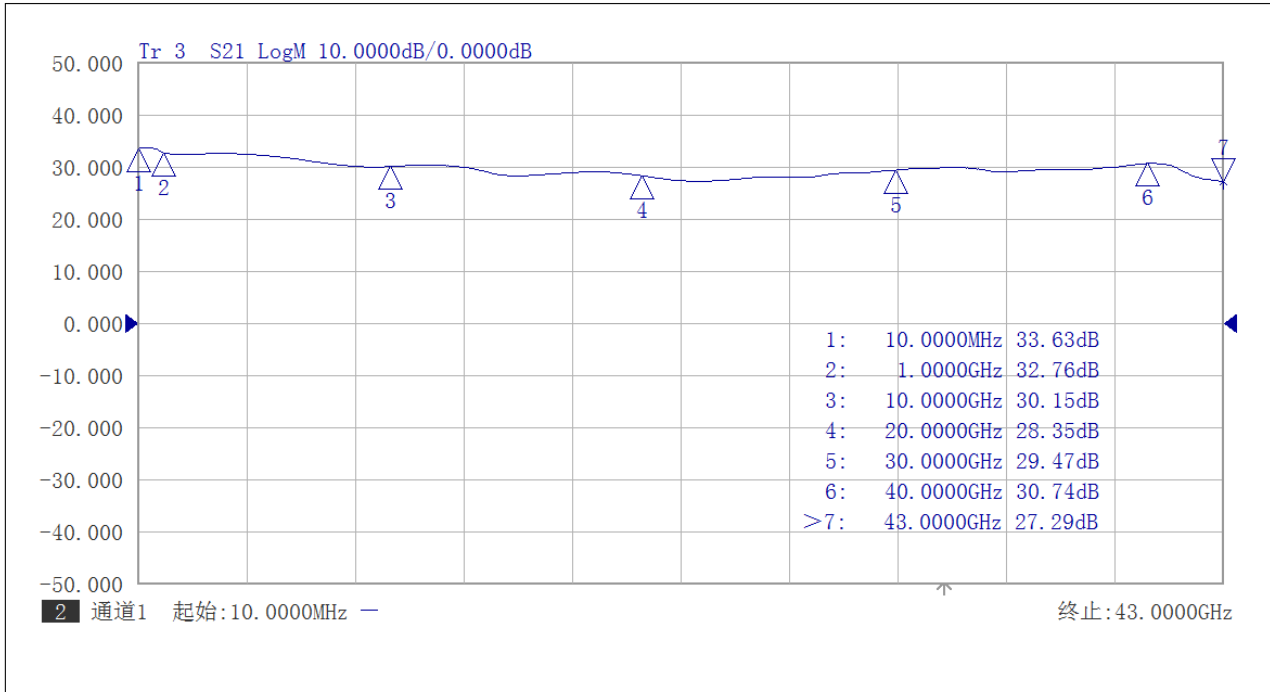
Please pay attention to the case temperature. If case temperature exceed higher than +50C, heat sink and fan are required, or the amplifier may be damaged.

Notes:

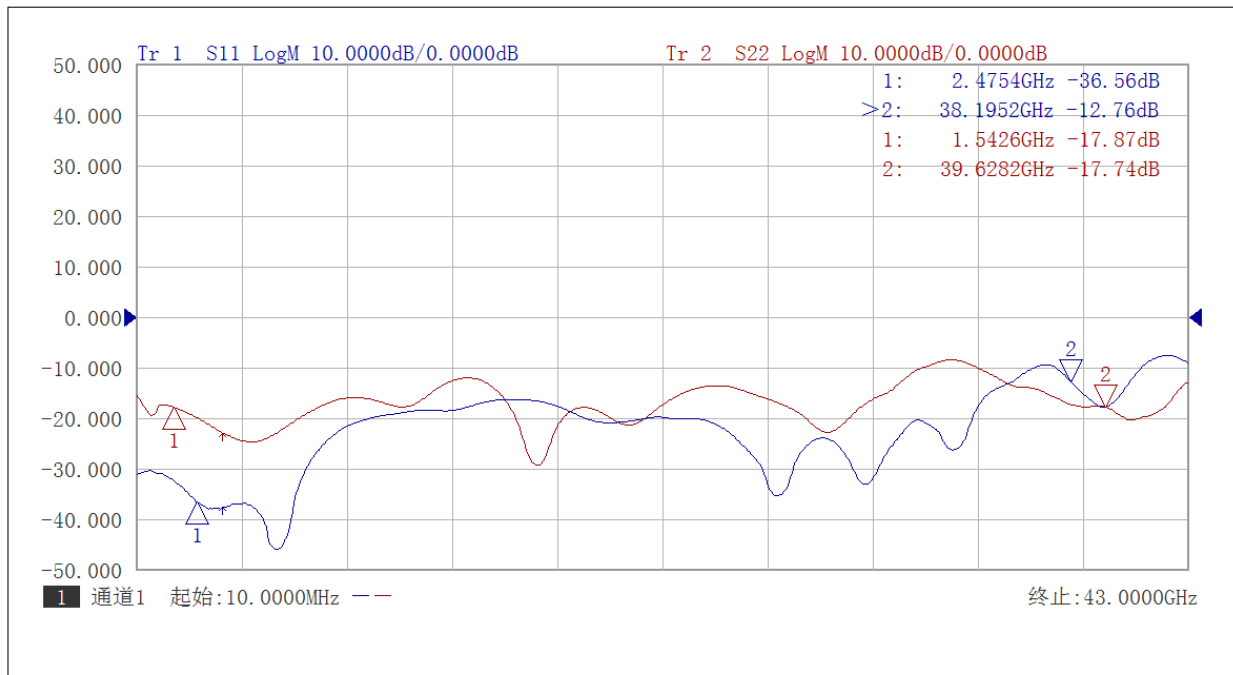
1. Datasheet may be changed according to update of MMIC, Raw materials , process, and so on.
2. This data is only for reference, not for guaranteed specifications.
3. Please contact AT Microwave team to make sure you have the most current data.



Test Data

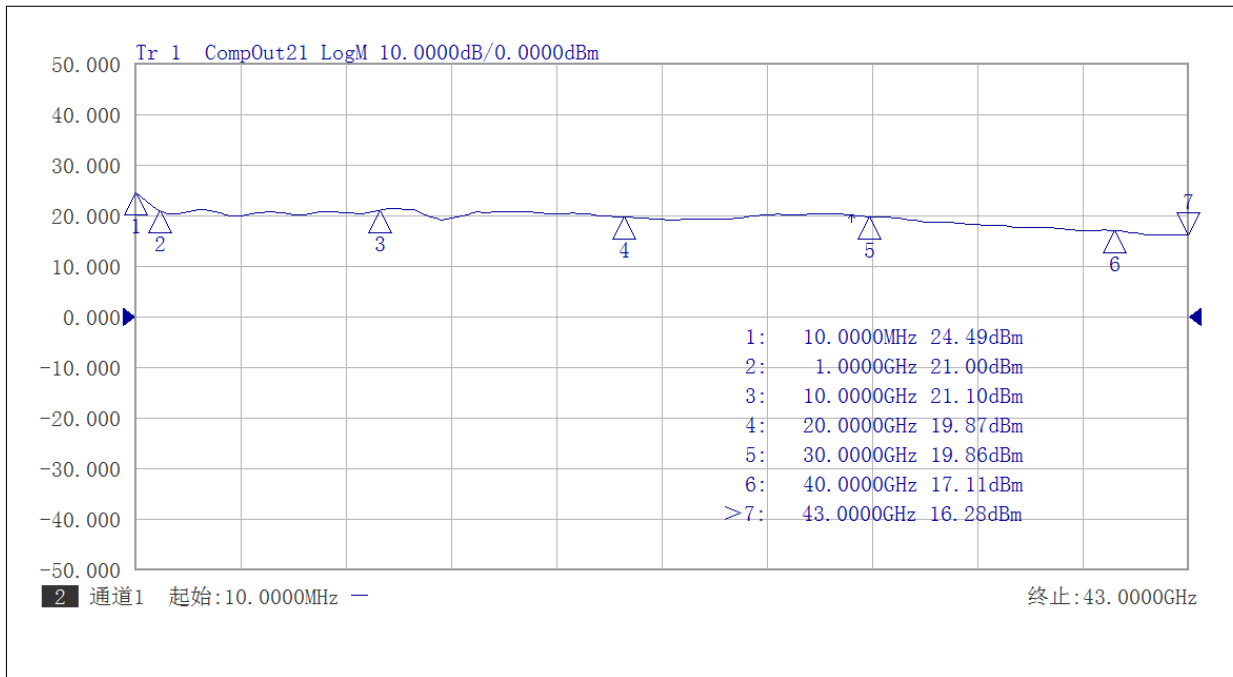


Gain vs Frequency

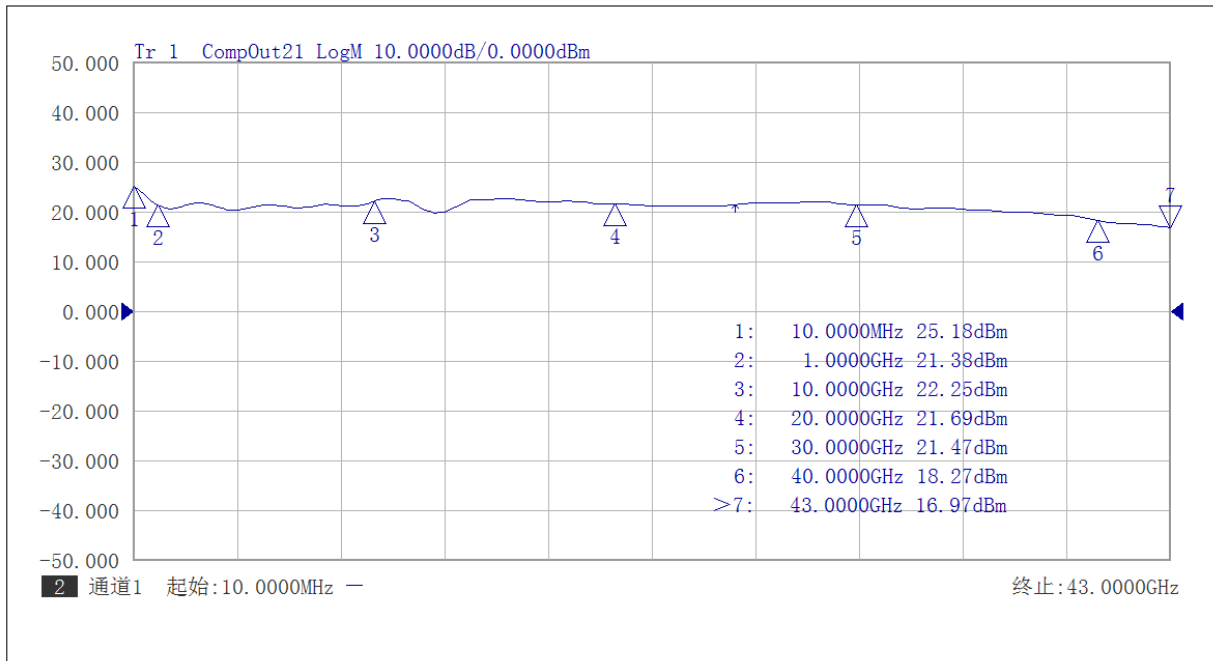


Input and Output Return Loss vs Frequency



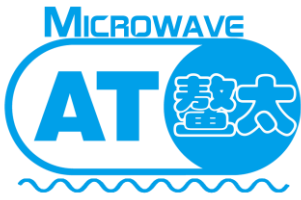


P1dB vs Frequency



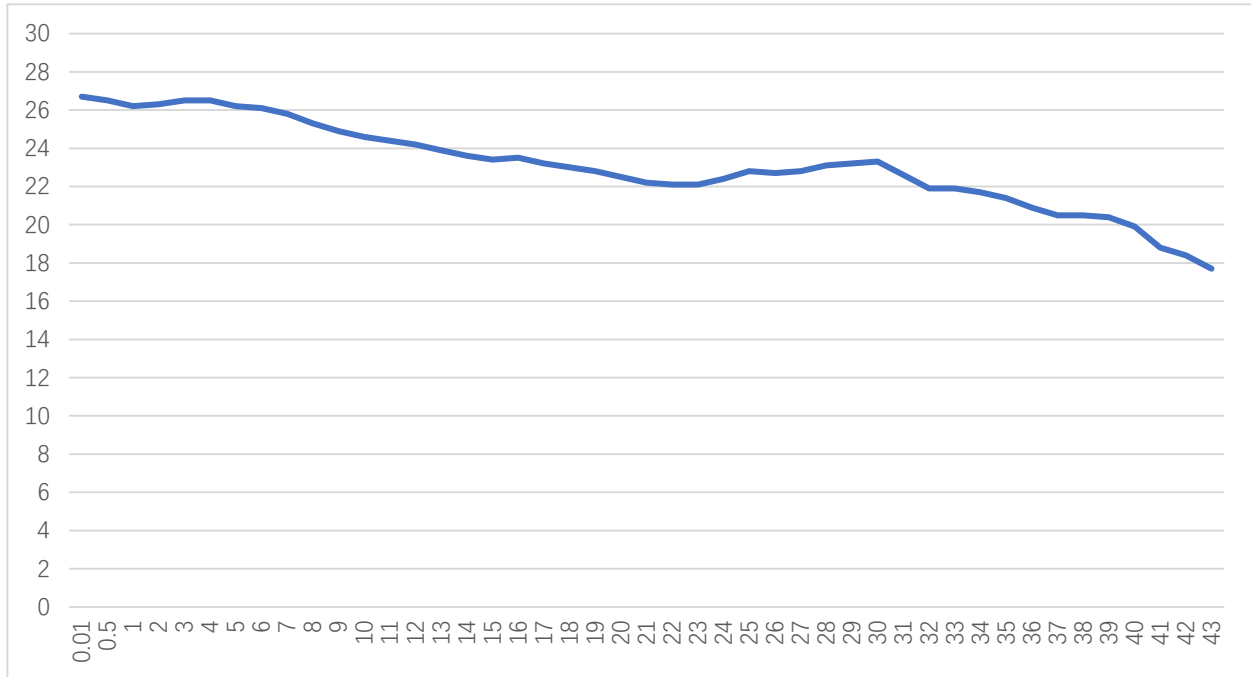
P3dB vs Frequency



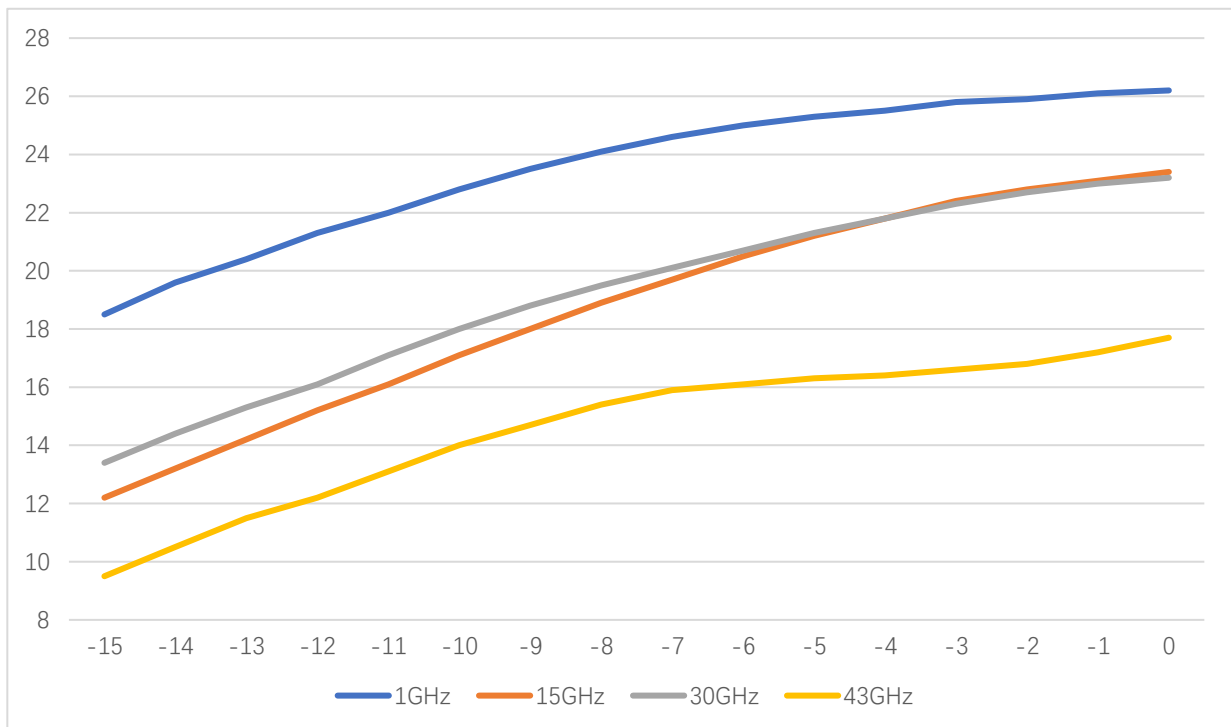


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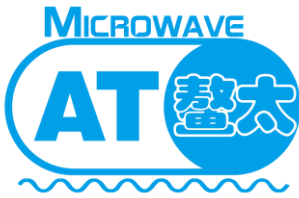


Psat vs Frequency



Pout vs Pin



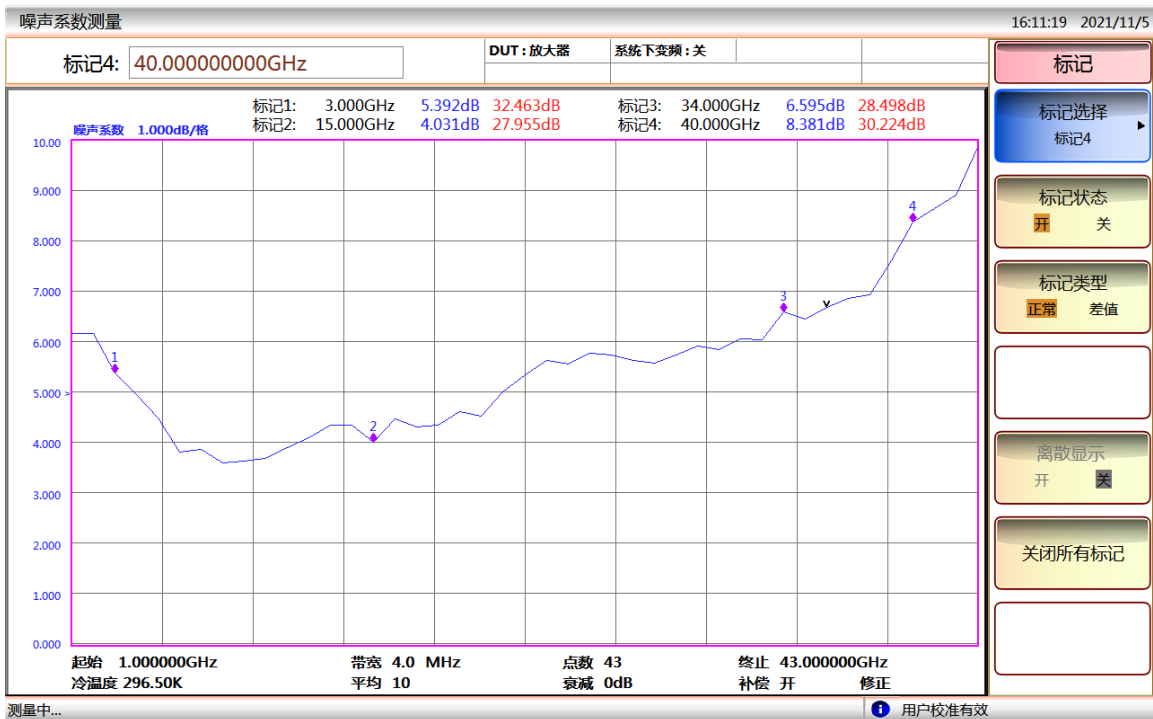


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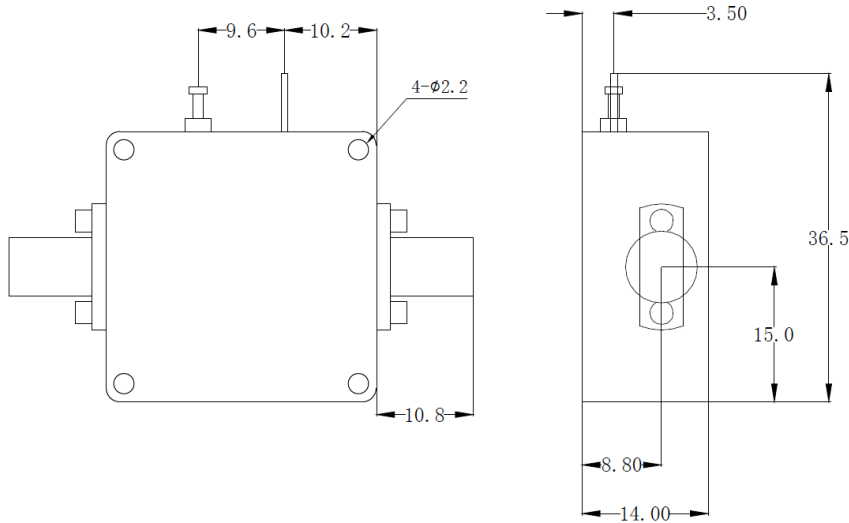
10MHz-1GHz NF



1-43GHz NF

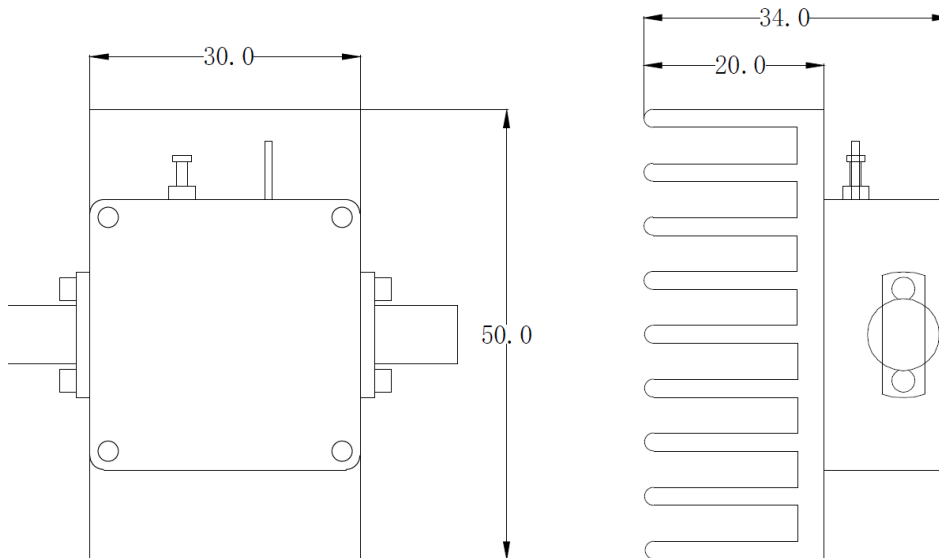


Dimension: (unit in mm)



	<26.5GHz	<40GHz	<50GHz	<67GHz
Connector	SMA	2.92mm	2.4mm	1.85mm
Lenth of a	9.4mm	9.5mm	10.8mm	11.3mm

Note: Female Default. Contact with us for other types.



Including a small heatsink without Fan if output Power higher than +20dBm.
Customers can removed it or use their own heatsink according to actual situation.

Heat Sink Required During Operation

