AT-PA-2050-3523T

20-50GHz Power Amplifier

20-50GHz Broadband Amplifier, +23dBm

Product Overview

AT-PA-2050-3523T is high gain power amplifier with +23dBm output power in the frequency of 20-50GHz. The DC power requirement is +5V/700mA. The module is with 2.4mm connector. The amplifier NF is 5dB, which can also be used as low noise amplifier.

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: 20-50GHz
- ✓ Psat:+23dBm
- ✓ Small signal gain: 35dB
- ✓ NF=5dB

Application

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

Key Features

Parameter	Min	Typical	Max
Frequency		20-50GHz	
Gain	33	35dB	
Gain Flatness		+/-2dB	+/-4dB
P1dB		20-45GHz: +20dBm 45-50GHz: +18dBm	
Psat		20-45GHz: +23dBm 45-50GHz: +20dBm	
NF(20-45GHz)		5dB	
Drain Supply		+5V	+8V
Idd NO RF		500 mA	
IDD at Psat		700mA	
Input Return Loss		-10dB	
Output Return Loss		-10dB	
Spec Temp		25C	

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Mechanical Information

Item	Description
Input Port	2.4mm Female
Output Port	2.4mm Female
Case Material	Copper
Finish	Gold Plated
Package Sealing	Epoxy Sealed
Weight (Without Heatsink)	90g
Size:	45x34x9.5 mm

Absolute Maximum Ratings Table

Parameter	Value
Drain Supply	+13V
RF Input Power	+5 dBm
Operating Temperature	-20 to +70C
Storage Temperature	-65 to +150C

Caution:

Please pay attention to the case temperature.

If case temperature exceeds +50C, heat sink and fan are required.

Bias Procedure:

Make sure GND is connected before Vdd Power ON.

Module may be damaged when Vdd Power ON without GND.

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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.

Part Number Selection Guide

Item	Description
PN	Stand Module with DC Power Supply
PN-LCBT	Low Cost, Compact Bench-Top, +220V Supply with AC/DC Adapter

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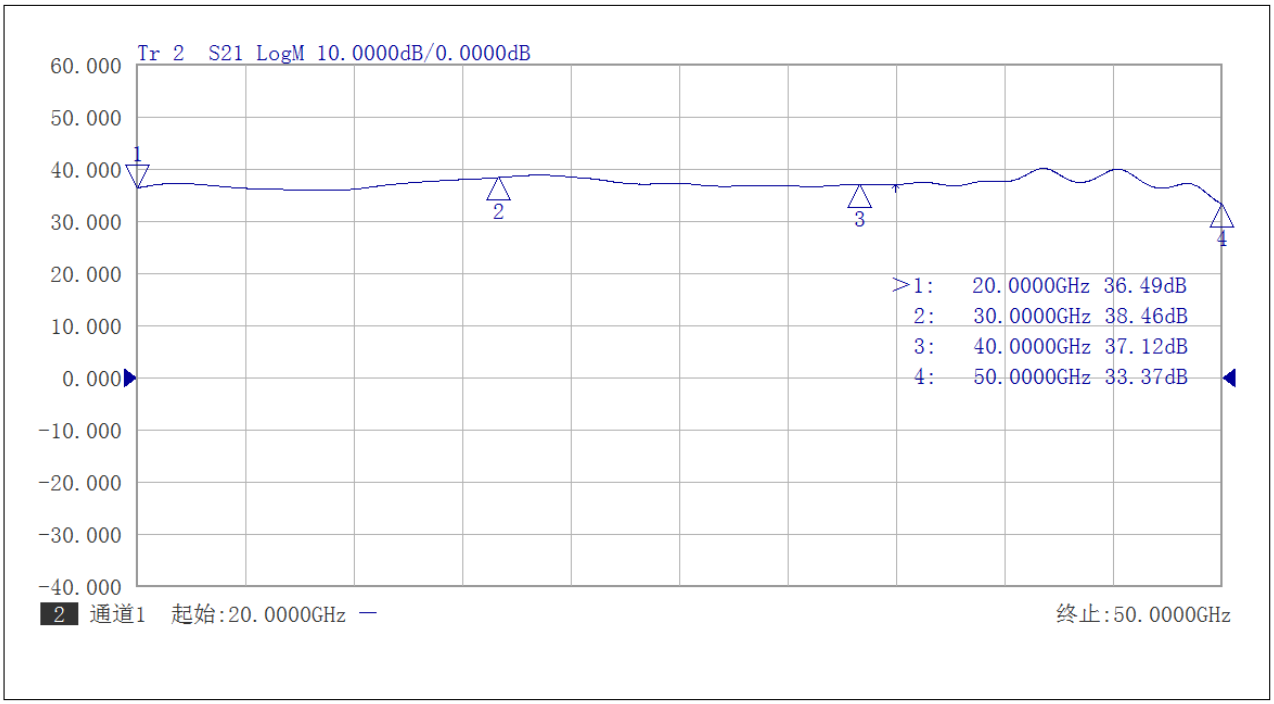
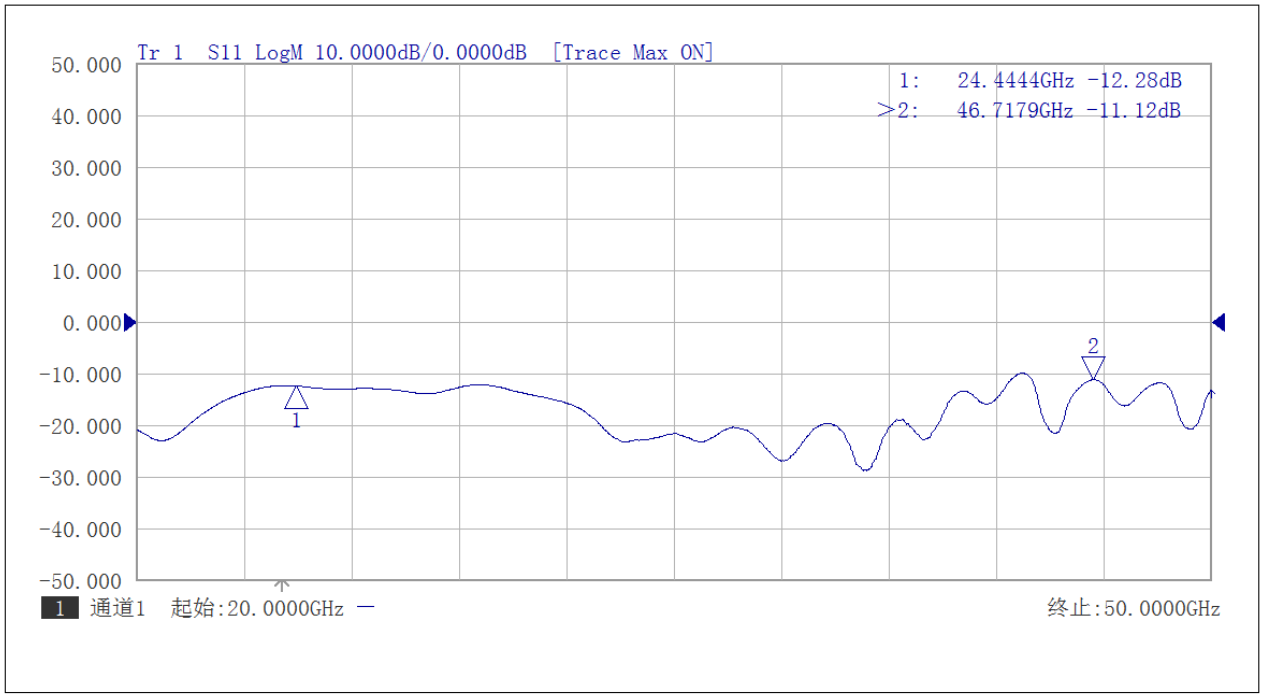
Test Data

Please note that test curves will vary slightly from unit to unit.



Gain vs Frequency



Input Return Loss vs Frequency

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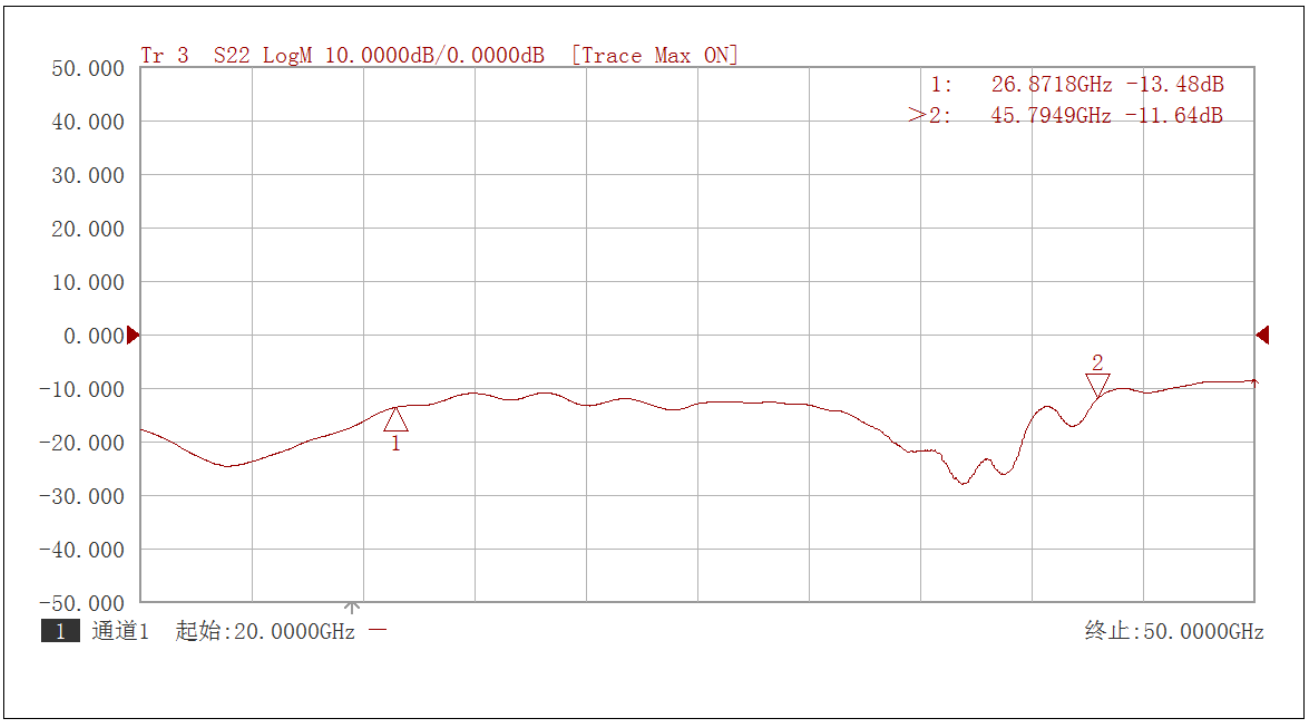
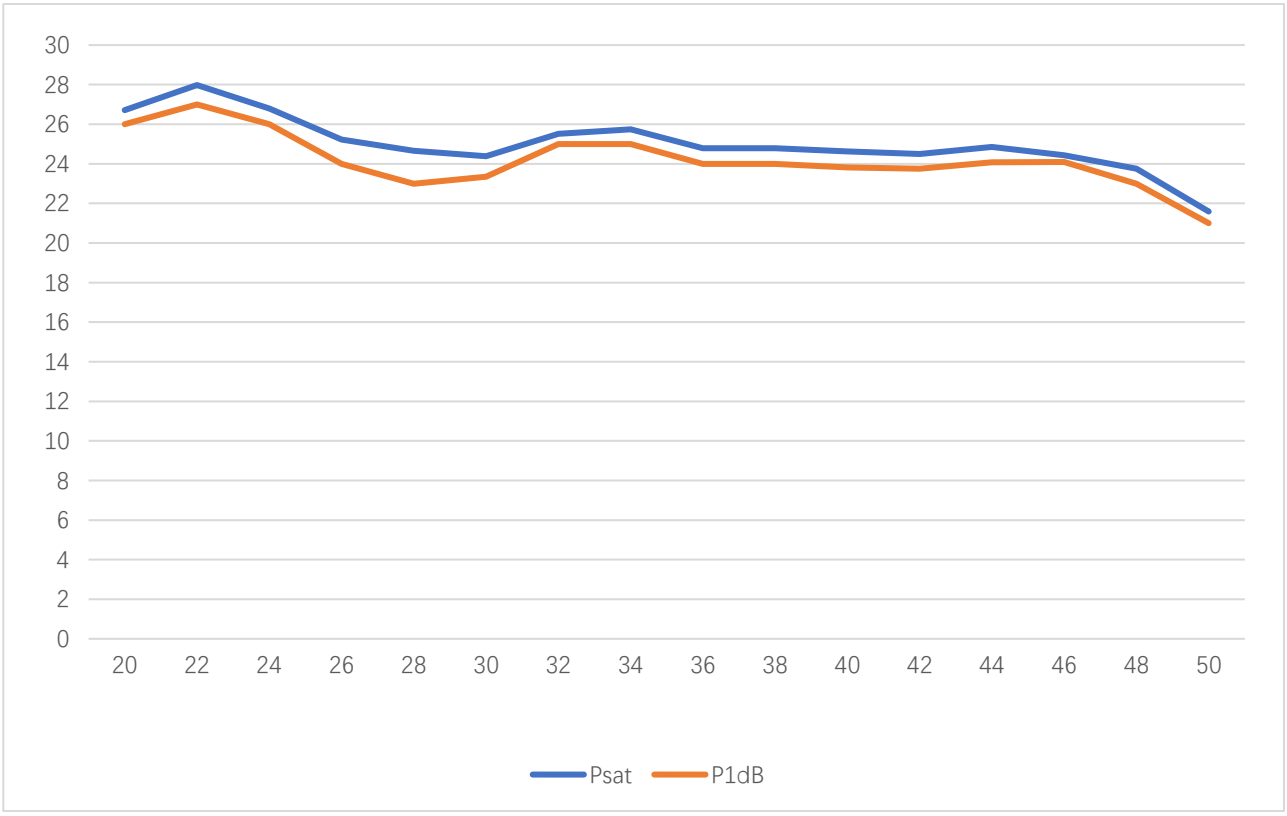


Output Return Loss vs Frequency



Psat and P1Db vs Frequency

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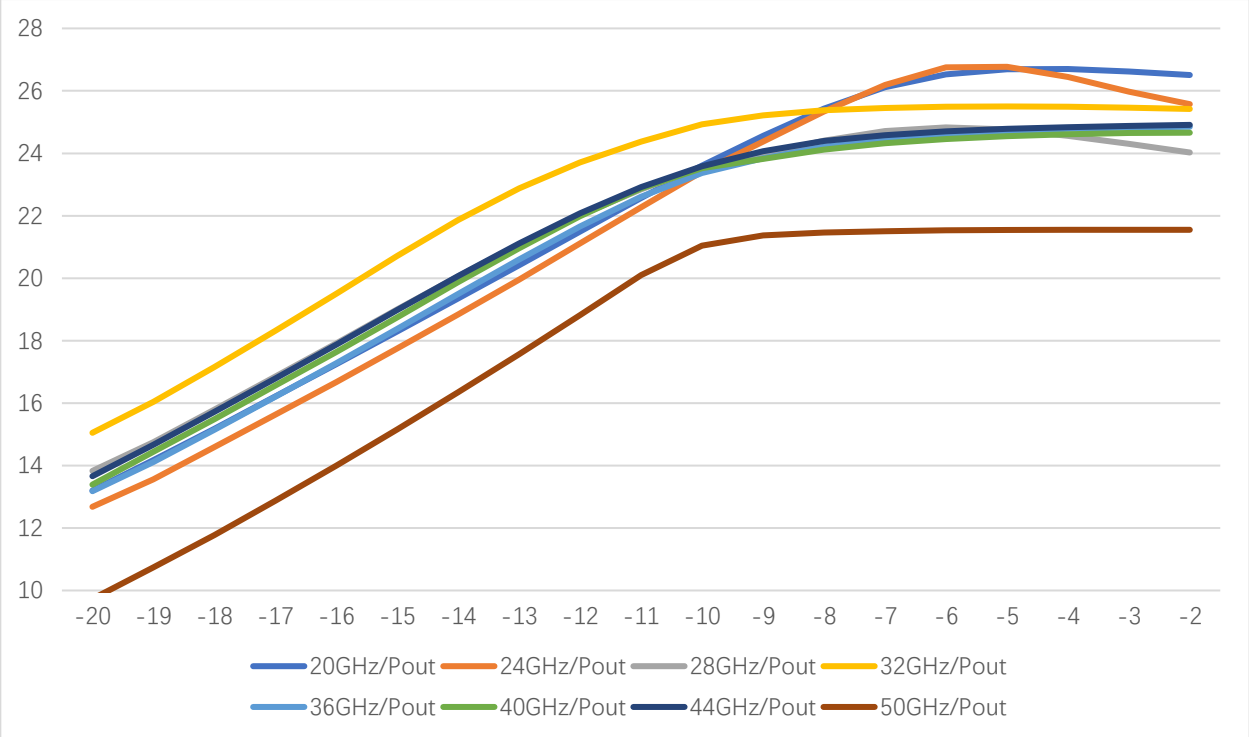
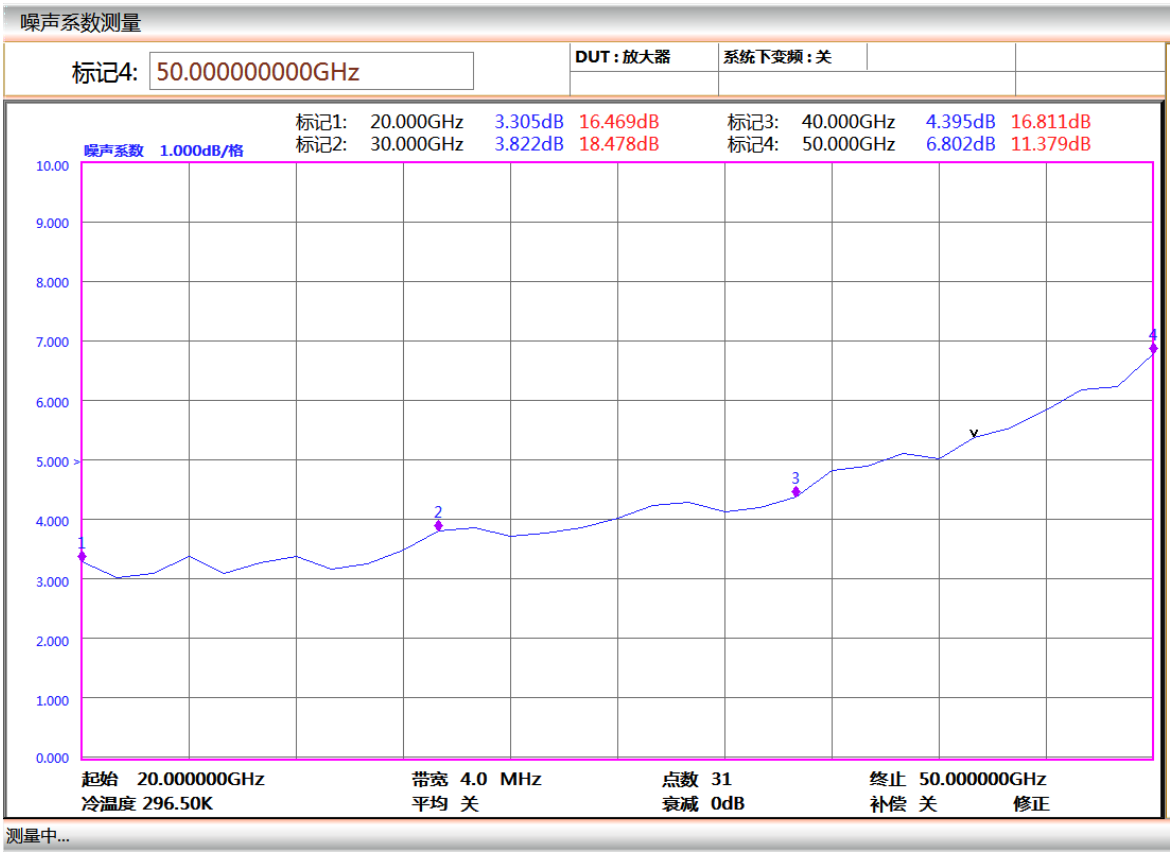


Pout vs Pin



NF vs Frequency

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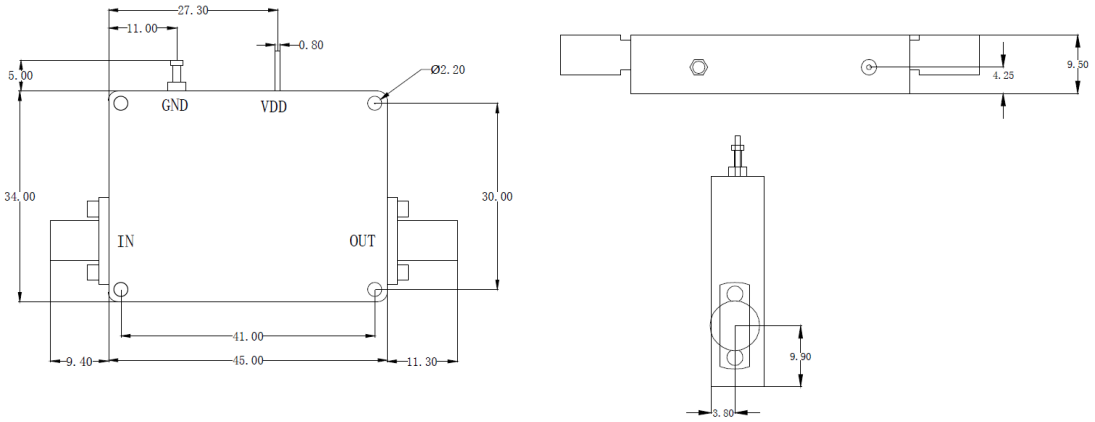
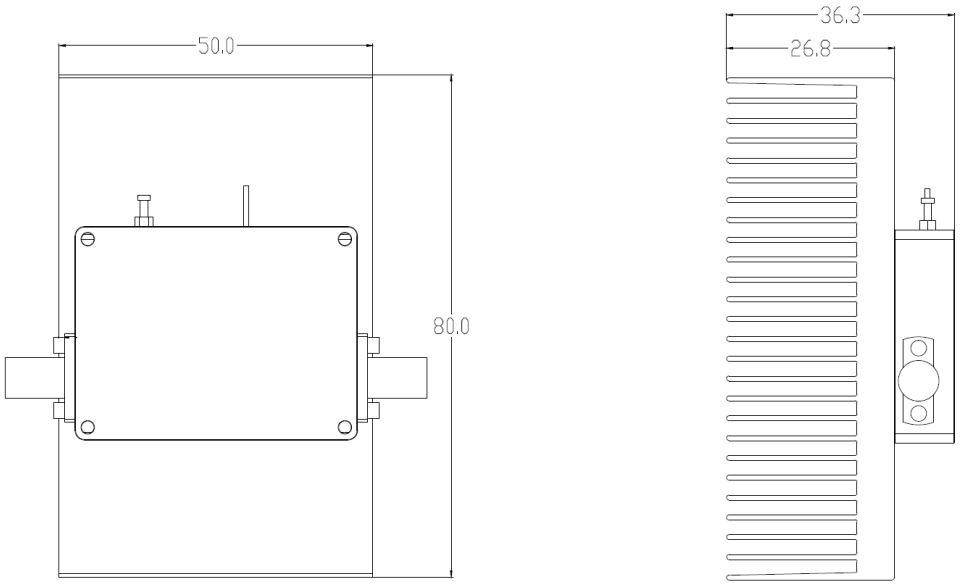
Dimension: (unit in mm)



	<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 if case Temp higher than 50C

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