

## 90-96GHz Receiver, High Gain, NF=4dB

2022-3-2

### Product Overview



AT-WRX-9096SIR is high gain W-Band image rejection receiver. The receiver is integrated with High Performance GaAs MMIC chips, with Gain=23dB, NF=4dB. RF frequency range is 90-96GHz, LO range is 10.7-13.3GHz with x8 time inside. IF frequency range is 2.5-8.5GHz with 90degree hybrid inside to combine IQ together.

The receiver is with compact size. LO/IF port is with SMA, and RF port is with standard WR-10.

More information, please visit [www.atmicrowave.com](http://www.atmicrowave.com)

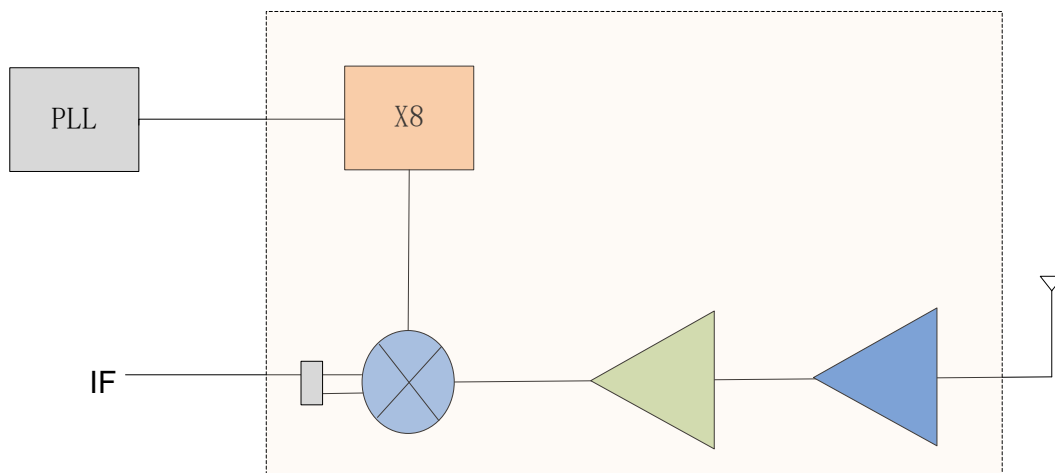
### Feature

- ✓ Frequency: 90-96GHz
- ✓ Gain: +23dB typical
- ✓ IF Range: 2.5-8.5Hz
- ✓ Single Power Supply

### Application

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

### Diagram Block





# AT-WRX-9096SIR

Image Rejection Receiver, 90-96GHz, Gain 23dB

## Key Features

Parameter	Min	Typical	Max
RF Frequency		90-96GHz	
Input Power		-40 dBm	-15
LO Frequency	10.7GHz		12GHz
LO Multiplier Factor		X8	
LO Power	0	+3dBm	+5dBm
IF Frequency		2.5-8.5GHz	
RF to IF Gain	20	23 dB	
NF		4 dB	6dB
Image Rejection (Note)	10	15dB	
Drain Power Supply		+5V	+8V
Current		300mA	
Spec Temp		+25C	

Note:

- ✓ Low LO application only, which means LO frequency must be always lower than RF Frequency as there is 90 degree at IF port to achieve imaging rejection.
- ✓ High LO module is available according to request.
- ✓ Low-band Side Rejection.





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## Mechanical Information

Parameter	Description
RF Port	WR-10
LO Port	SMA Female
IF Port	SMA Female
Case Material (Note)	Copper
Finish	Gold Plated
Weight	180g
Dimension	See outline

Note: Aluminium for lighter weight is available according to request

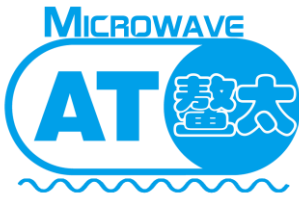
## Absolute Maximum Ratings Table

Parameter	Value
RF Power	+7dBm
LO Port	+15dBm
Power Supply	+7V
Operating Temperature	0 to +50C
Storage Temperature	-55 to +125C

## 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.

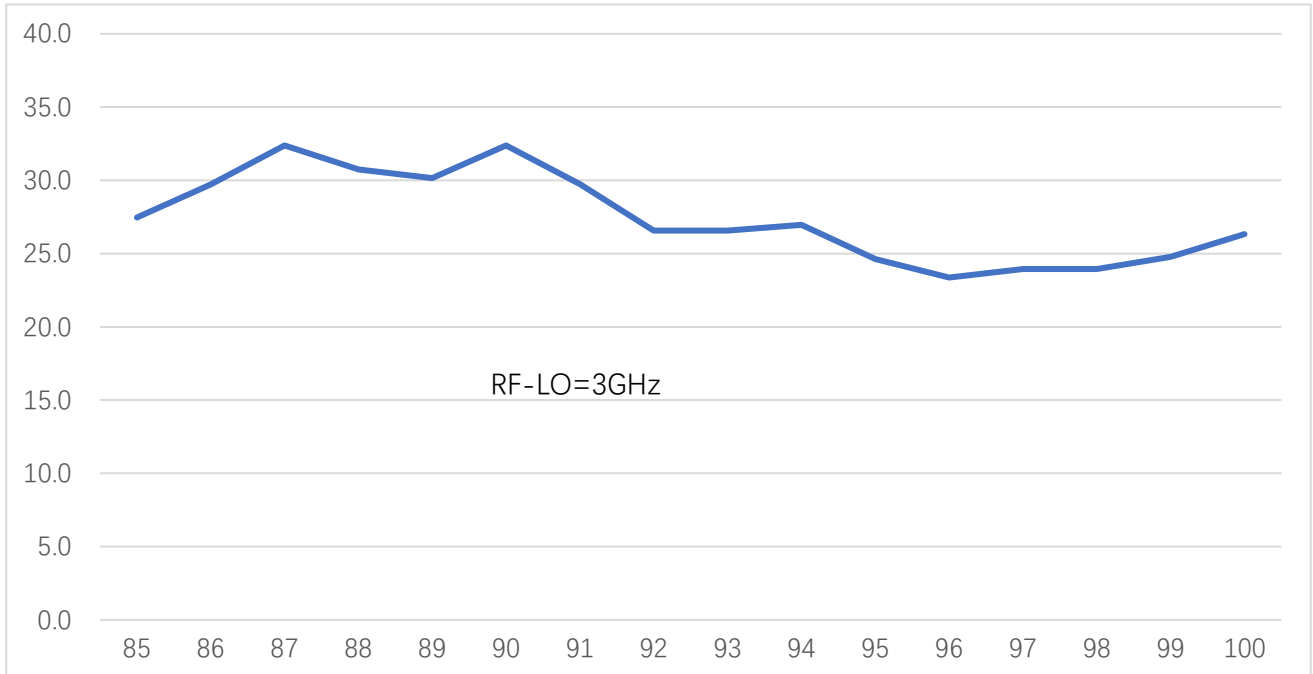




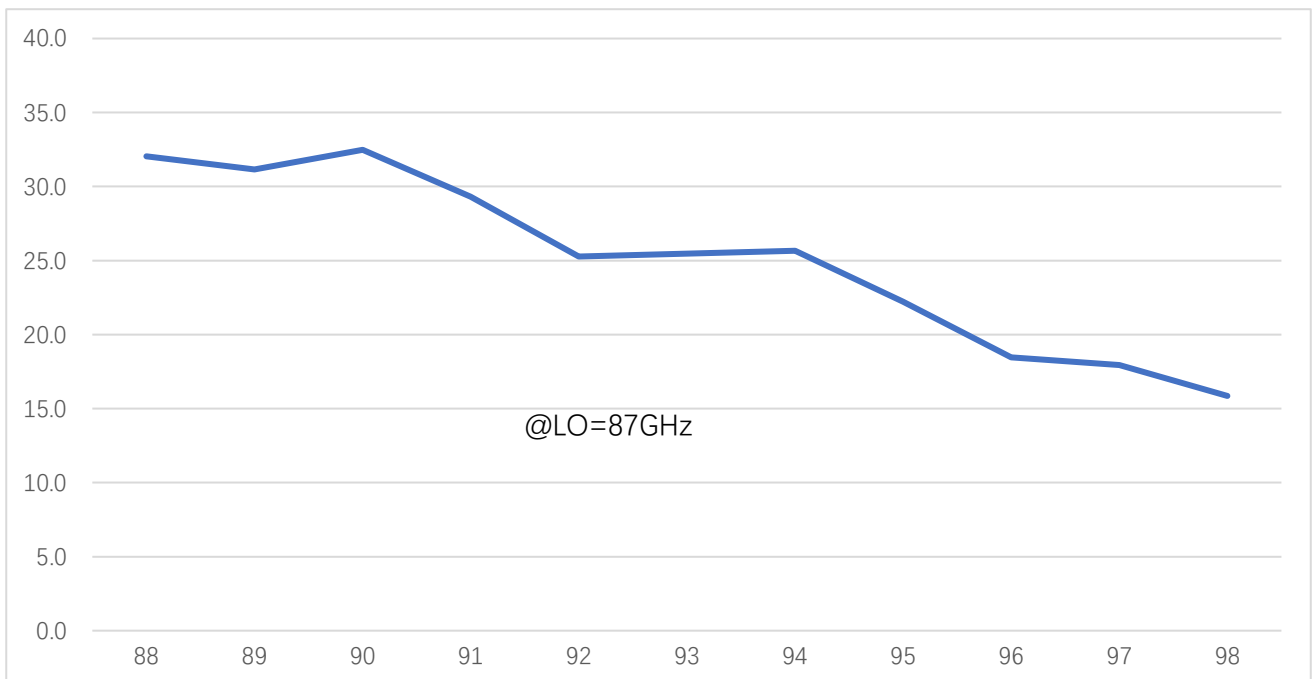
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## Test Data(25C)



Gain vs Frequency, Fixed IF=3GHz



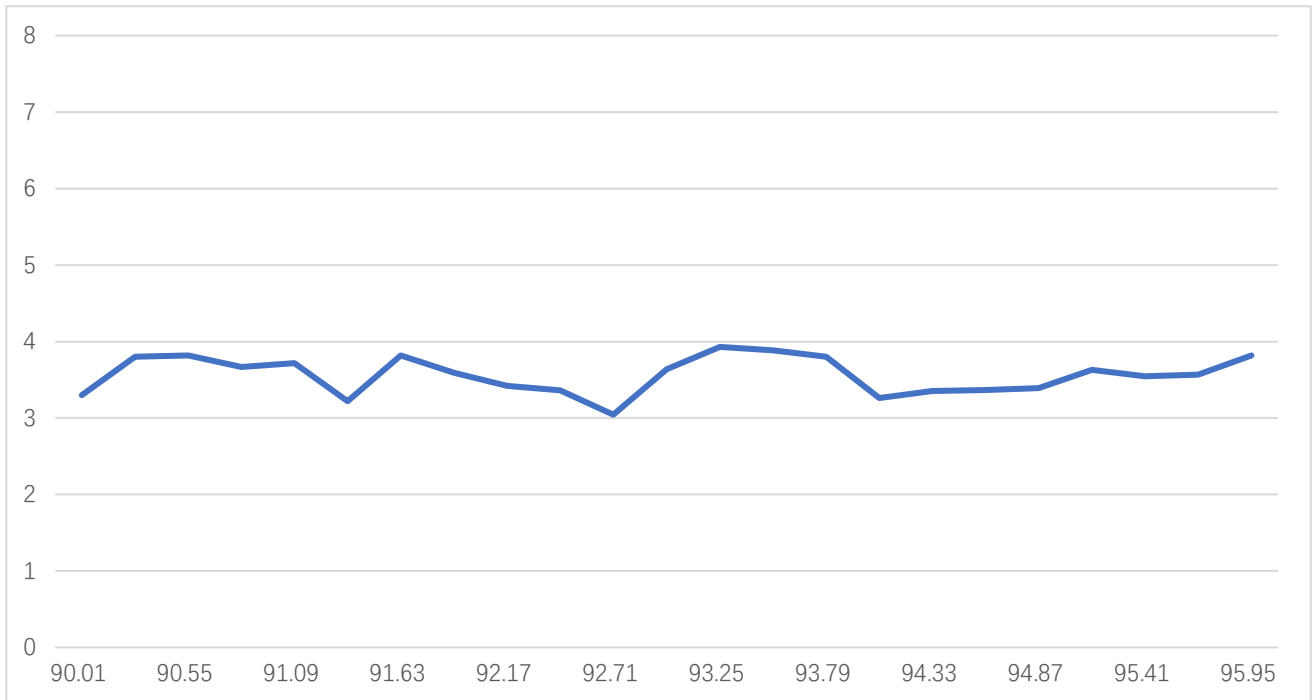
IF Response, Fixe LO=87GHz





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NF Vs Frequency



## Dimension (unit mm)

