

88-100GHz Receiver, High Gain, NF=4dB

2021-01-03



Product Overview

AT-WRX-88100SIR 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 88-100GHz, LO range is 10.7-13.3GHz with x8 time inside. IF frequency range is 2.5-8.5GHz with 90 degree 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

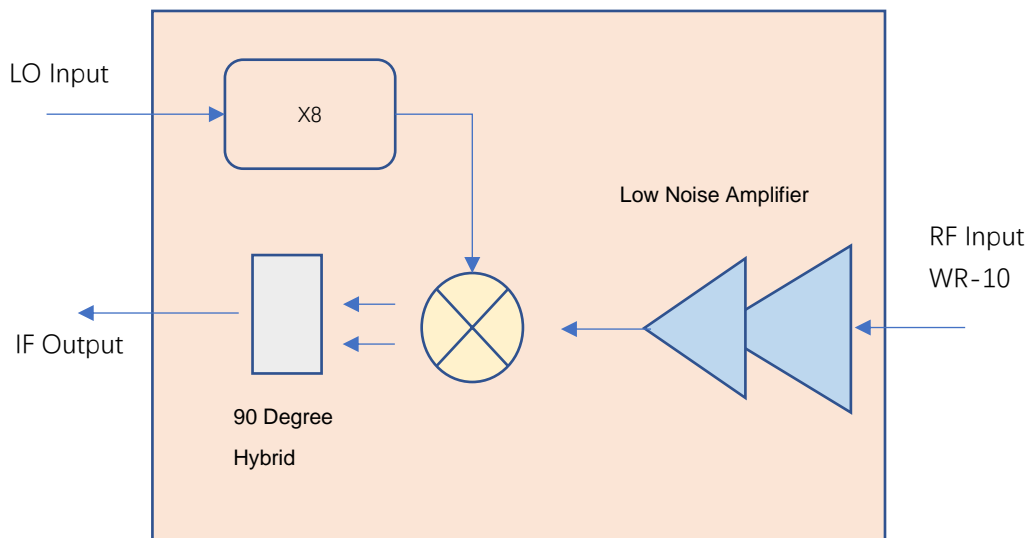
Feature

- ✓ Frequency: 88-100GHz
- ✓ Gain: +23dB typical
- ✓ NF: 4dB
- ✓ 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-88100SIR

Image Rejection Receiver, 88-100GHz, Gain 23dB

Key Features

Parameter	Min	Typical	Max
RF Frequency		88-100GHz	
Input Power		-40 dBm	-15dBm
Input P1dB		-30dBm	
LO Frequency	10.7GHz		13.3GHz
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	6.5dB
Image Rejection	10	15dB	
Drain Power Supply		+5	+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 88 degree at IF port to achieve imaging rejection.
- ✓ High LO module is available according to request.

Mechanical Information

Item	Description
RF Port	WR-10
IF Port	SMA Female
LO Port	SMA Female
Finish	Gold Plated
Weight (Without Heatsink)	225g
Size:	75x40x20mm





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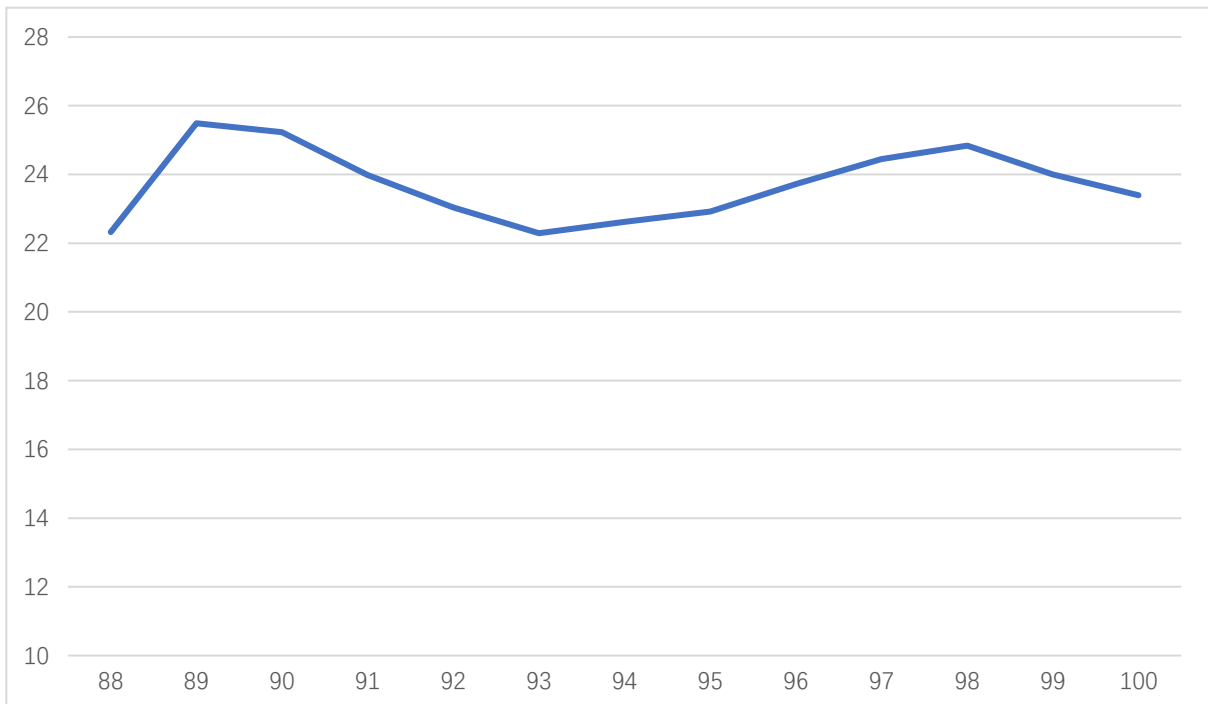
Absolute Maximum Ratings Table

Parameter	Value
Drain Supply	+9V
RF Input Power	+10 dBm
LO Input Power	+15dBm
Operating Temperature	0 to +50C
Storage Temperature	-65 to +150C

Notes:

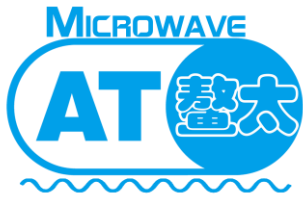
1. Datasheet may be changed according to update of MMIC, Raw materials , process, and so on.
2. This data is only for reference, not for guaranteed specifications.
3. Please contact AT Microwave team to make sure you have the most current data.

Test Data:



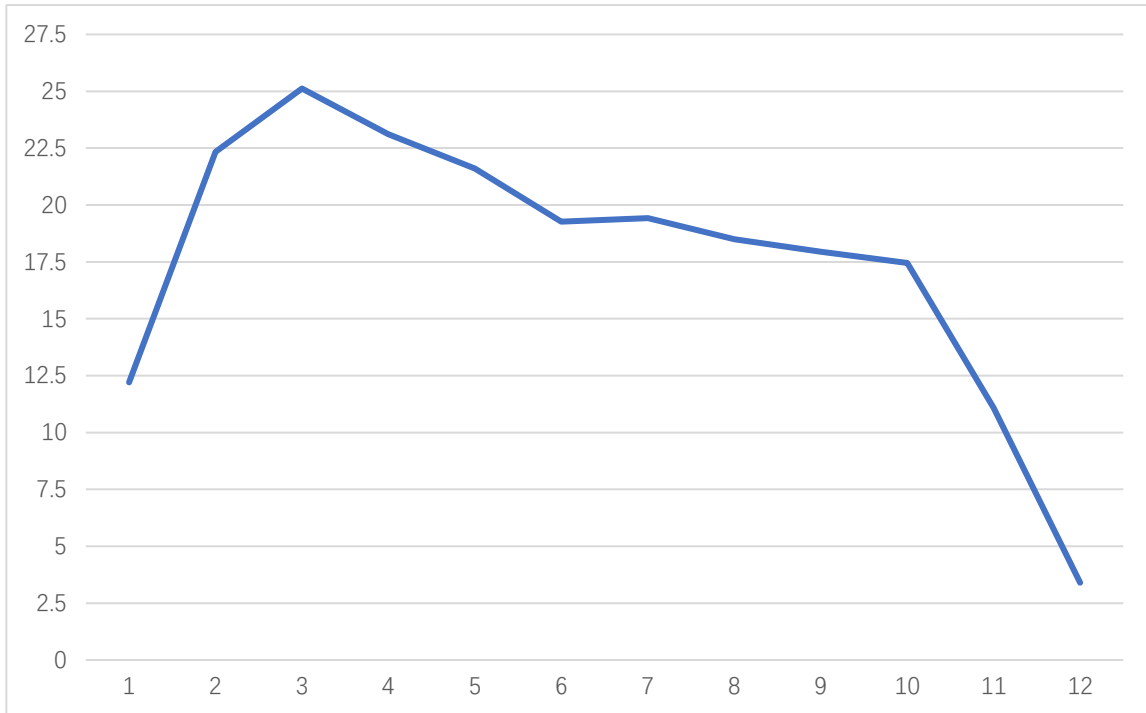
Gain vs Frequency, Fixed IF=3GHz



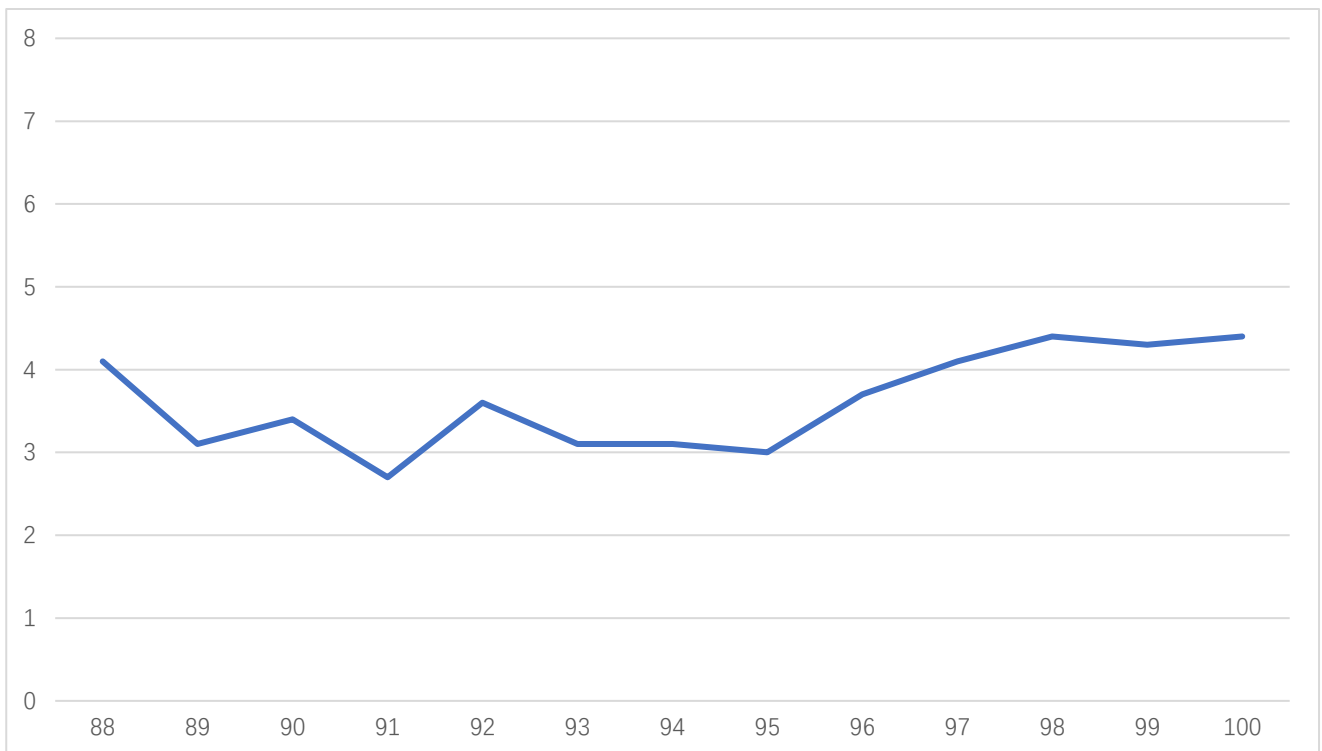


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IF Response, Fixe LO=87GHz



NF Vs Frequency



Dimension (unit mm)

