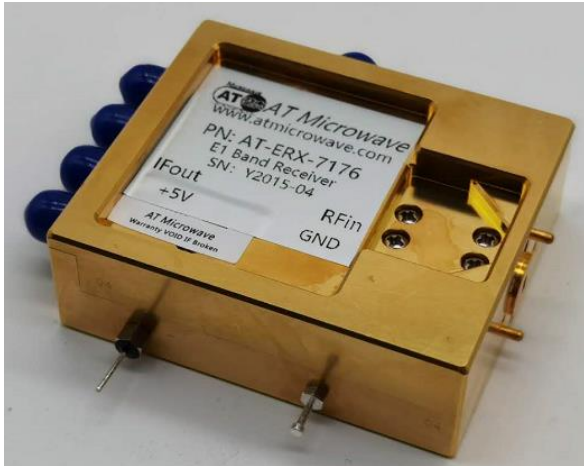


2020-09-08

E1 Band Receiver, 71-76GHz



Product Overview

AT-ERX-71-76 is a E-Band Receiver, with gain=12dB, NF=6 dB typical.

The Rx is integrated with High Performance GaAs MMIC chips. RF frequency range is 71-76GHz, LO range is 11.8-12.7GHz with x6 times multiplier inside. IF range is DC-10GHz The receiver is with compact size. LO/IF port is with SMA, and RF port is with standard WR-12.

More information, please visit www.atmicrowave.com

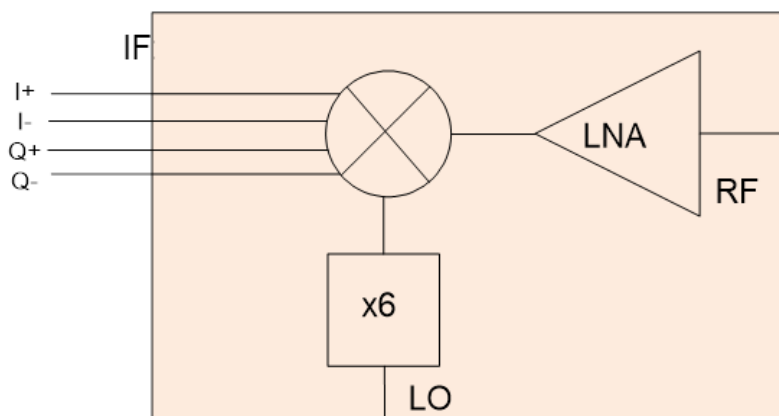
Feature

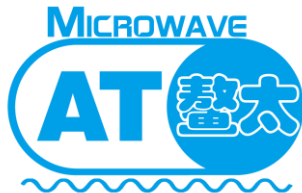
- ✓ Frequency: 71-76GHz
- ✓ Gain: 12dB typical
- ✓ IF Range: DC-10GHz
- ✓ NF=6dB Typical

Application

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

Diagram Block





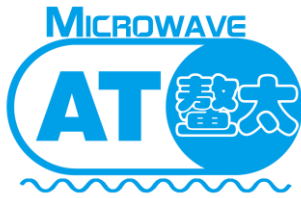
AT-ERX-7176

Compact E Band Receiver, 71-76GHz

Key Features

Parameter	Min	Typical	Max
RF Frequency		71-76GHz	
IF Frequency (Note1)		DC-10GHz	
LO Frequency	11.8GHz		14.3 GHz
Multiplier Factor		X6	
LO Power	+7	+10dBm	+12
NF		6 dB	
Conversion Gain (combine IQ)	10	12 dB	
RF Return Loss		-10dB	
LO Return Loss		-14dB	
Drain Power Supply		+5/150mA	+8V
Spec Temp		25C	





AT-ERX-7176

Compact E Band Receiver, 71-76GHz

Mechanical Information

Parameter	Description
RF Port	WR-12
LO Port	SMA Female
IF Port	SMA Female
Case Material (Note)	Copper
Finish	Gold Plated
Weight	315g
Dimension	See outline

Note: Aluminium for lighter weight is available according to request

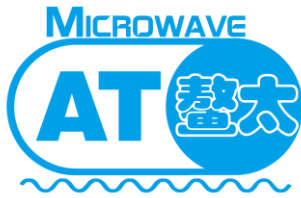
Absolute Maximum Ratings Table

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.





AT-ERX-7176

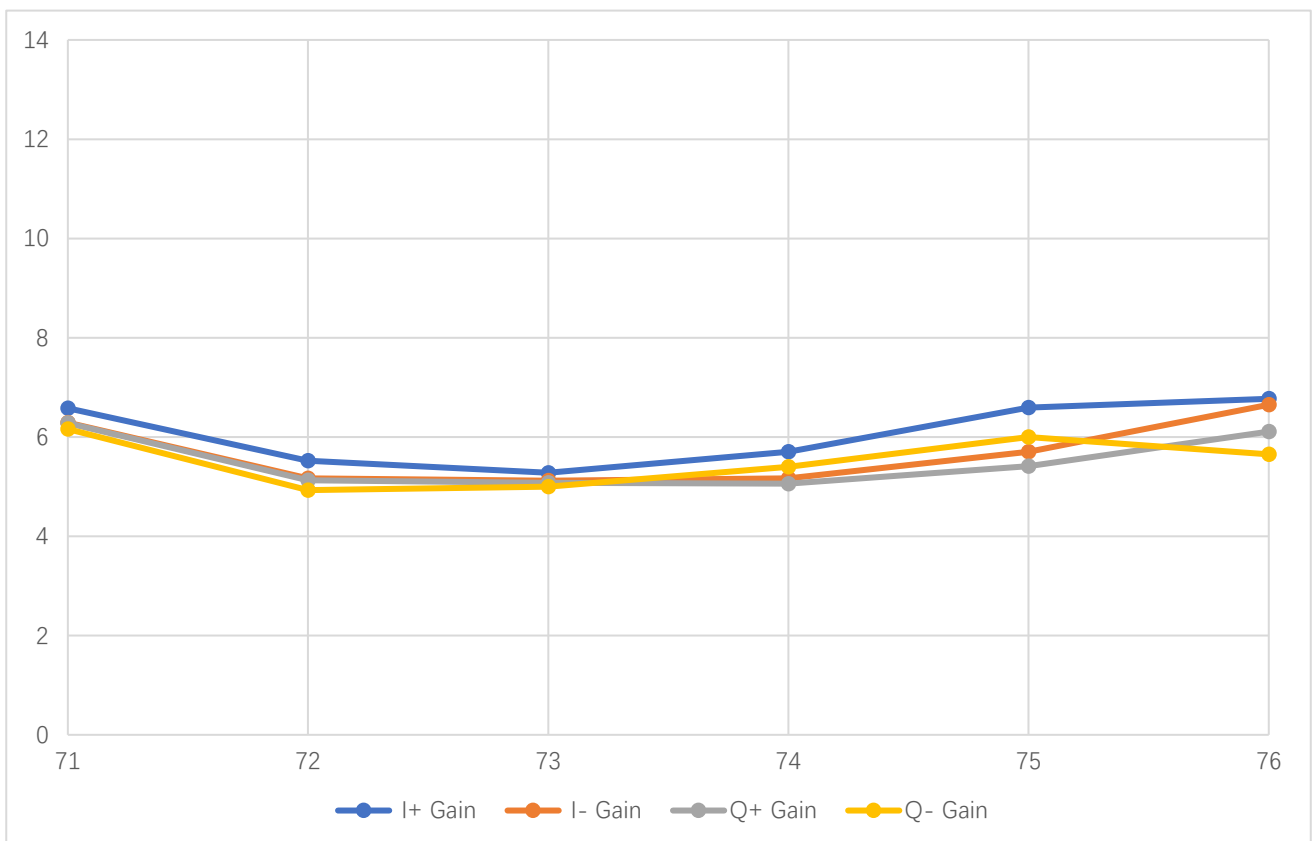
Compact E Band Receiver, 71-76GHz

Test Condition

Parameter	Setting
RF Input Power	-20dBm
LO Power	+10dBm
IF Frequency	1GHz
Temperature	25C

Test Data (25C)

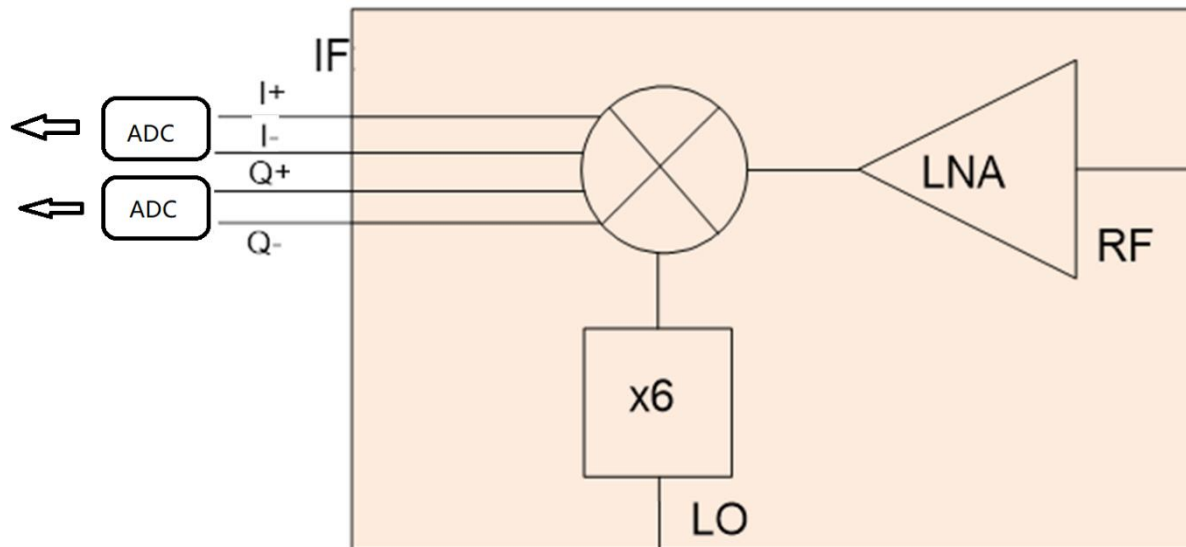
IF=1GHz, LO=+10dBm, RF Power=-20dBm



Conversion Gain vs Frequency

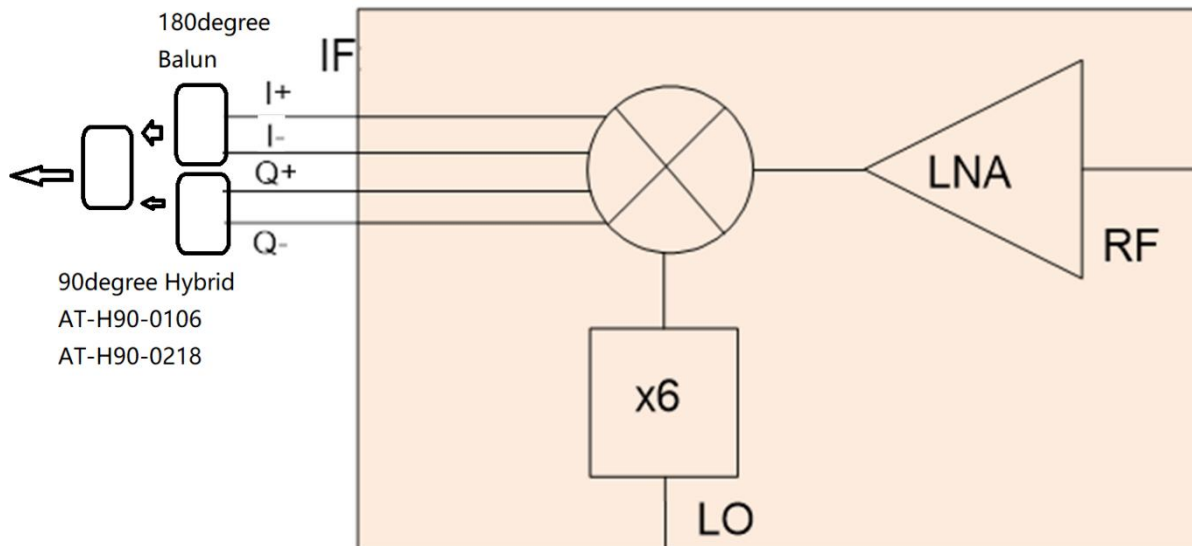


Applicaiton1:



Zero IF Direct Conversion

Applicaiton2:



Imaging Rejection Single IF Application

Contact with us for 180degree balun and 90degree hybrid.



Dimension (mm)

