



Frequency Conversion Component

Model: LNB-12G7-15G5-55-IP67

12.7-15.5GHz 55dB, Gain

Low power consumption, high accuracy, fast response and high stability

Features:

- RF Frequency range: 12.7-15.5GHz
- IF Frequency range: 950-2450MHz
- Gain: 55dB
- External/Internal Reference Adaptive

Applications:

- Test Lab
- Instrumentations
- Auto Test Set

Product Overview:

The LNB-12G7-15G5-55-IP67 is a frequency conversion component operating in the Ku-band. It features an integrated local oscillator, with input RF frequency of 12.7-15.5 GHz and output IF frequency of 950~2450 MHz. Providing a conversion gain of 55 dB, it also supports adaptive switching between internal and external references.



Electrical Specifications at 25°C:

Parameter		Min	Typ	Max	Units
RF Input Frequency		12.7		15.5	GHz
IF Output Frequency		950		2450	MHz
Gain		55			dB
Gain Control Step			0.5		dB
Gain Flatness				±2	dB
Noise Figure				3	dB
Image Rejection		50			dBc
Spurious@IF out				-60	dBc
Group Delay@100MHz BW				±2	ns
Output P1dB		10			dBm
Phase Noise	@1KHz			-75	dBc/Hz
	@10KHz			-80	
	@100KHz			-90	
	@1MHz			-105	
LO Reference Mode		External/Internal Reference Adaptive; External reference with fallback to Internal Reference			
External LO Reference Level (Sine wave, 100MHz)		5			dBm
Output Reference Clock @Output Power≥10dBm			100		MHz
VSWR				2	:1
DC Supply Voltage			12		V DC



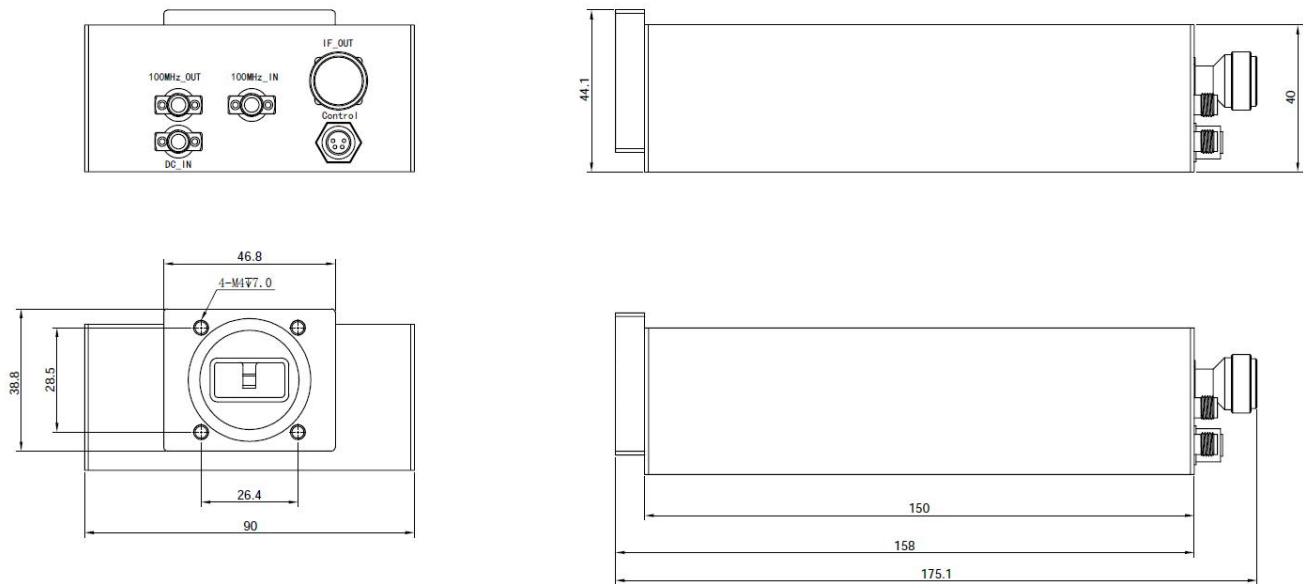
Mechanical Specifications:

Parameter	Value	Notes
Operating Temperature	-30°C to +65°C	
RF Input/Output Connector	WR75 or WR120/N Female	
Remote Control Connector	M8 Female, 4 pin (Pin1 = NC; Pin2 = A pos+ RS485; Pin3 = B neg- RS485; Pin4 = Common GND)	1、 LO Frequency Setting 2、 Digital Attenuator Setting 3、 Internal/External Reference Status Query 4、 PLL Lock Status Monitoring 5、 DC Power Supply Status Monitoring
Communication Connector	RS485	
DC supply Interface	SMA Female	+12 VDC
Reference Output Reference Interface	SMA Female	100MHz
External Reference Input Interface	SMA Female	100MHz
Ingress Protection Grade	IP-67	
Dimensions W x H x D	175.1*90*40	mm
Weight	TBD	Kg

Note: The PLL frequency and the Digital Attenuator attenuation will be done by writing a number in the relevant register as per the communication protocol.

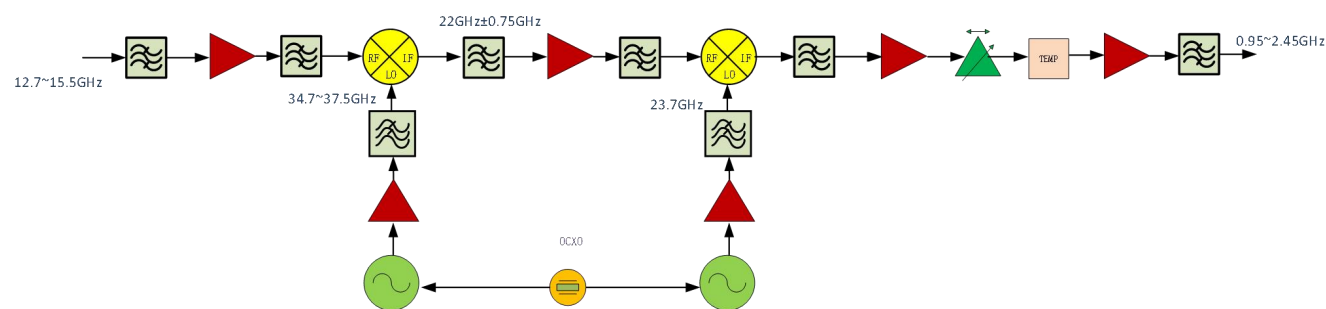
Outline Drawing:

Unit:mm





Functional Block Diagram:



Ordering Information:

Base Number	Description
LNB-12G7-15G5-55-IP67	Frequency Conversion Component, RF frequency; 12.7-15.5 GHz,Gain: 55dB

- Notes:**
- 1、 Dimensions and specifications may be changed without prior notice.
 - 2、 Standard Warranty: three years.