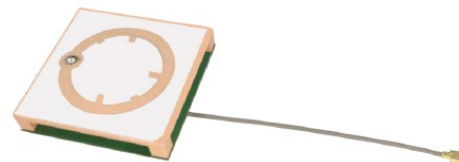


Description

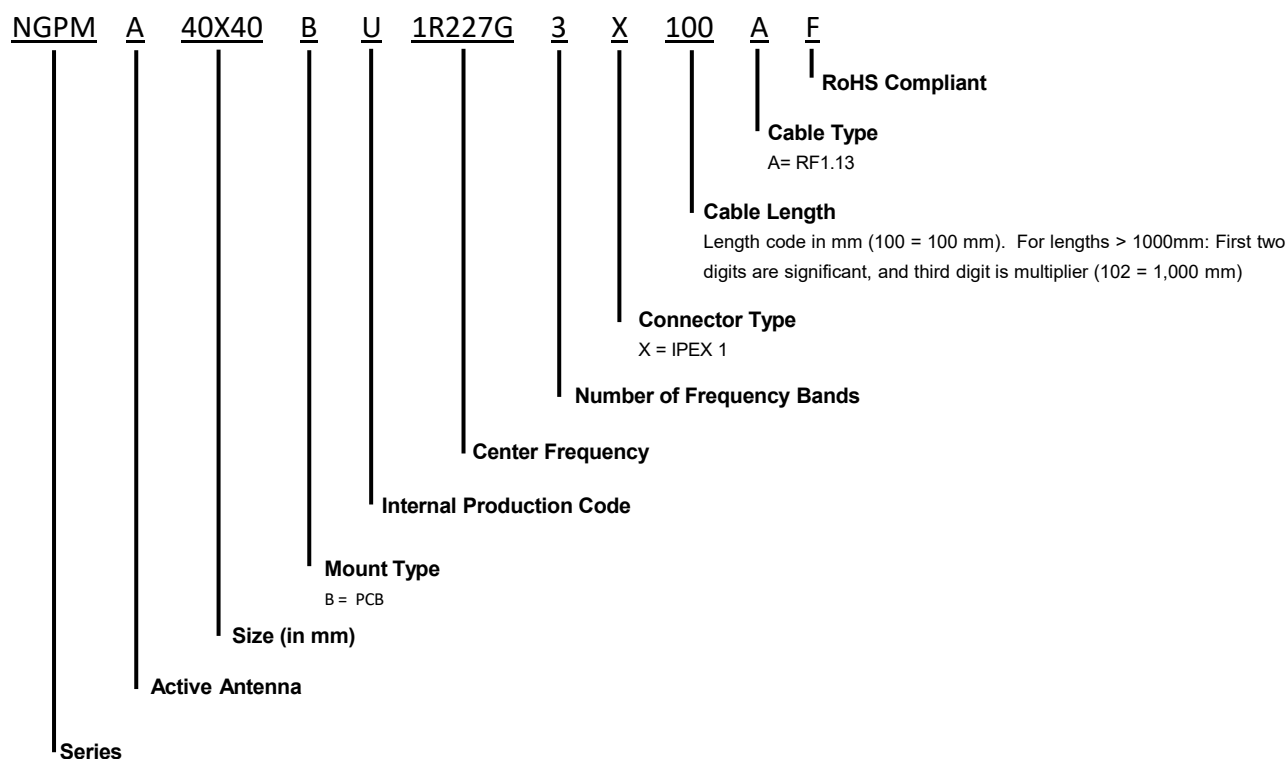
The NGPMA4040BU1R227G3X100AF is an Active High Precision Patch Antenna designed for Glonass G1 and GPS L1 & L2 applications. Its operational frequencies include 1227.6 MHz, 1575.42 & 1602 MHz making it perfect for navigation Systems / Position Tracking Systems, Car Navigation and Security Surveillance



Features

- Support Glonass G1 and GPS L1 & L2 Bands
- Low temperature Coefficient of frequency
- Customizable Cables and Connectors
- RoHS & REACH Compliant

Part Number Breakdown



Part Number Options

Part Number	Protocol	Connector	Cable Type	Cable Length
NGPMA4040BU1R227G3X100AF	GPS / Glonass L1, G1 & L2	IPEX I	RF1.13	100 mm

The table represents assembled part numbers available on www.niccomp.com. For options not listed above please contact NIC

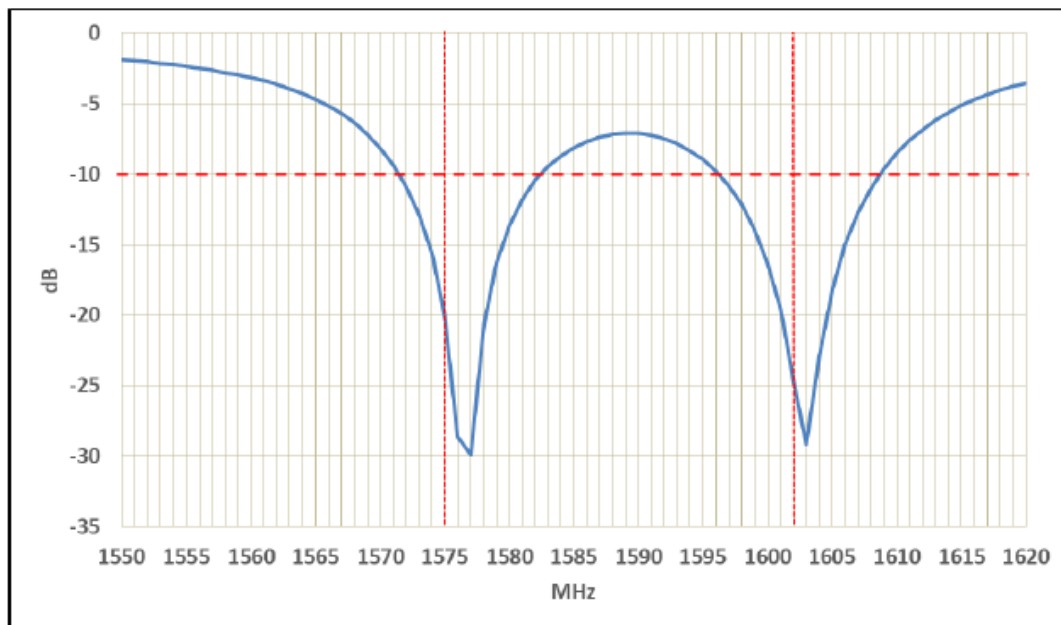
Specifications

Electrical			
Frequency Bands	L1 Band		L2 Band
Frequency (MHz)	1575.42	1602	1227.6
Peak Gain (dBi)	4.6 Typ.	3.7 Typ.	1.2 Typ.
Average Gain (dB)	-1.8 Typ.	-2.2 Typ.	-4.3 Typ.
Efficiency (%)	66.1 Typ.	60.8 Typ.	37.2 Typ.
Return Loss (dB)	<-10 Typ.	<-10 Typ.	<-10 Typ.
Polarization	RHCP		
Impedance (Ω)	50		
LNA			
Frequency Bands	L1 Band		L2 Band
Frequency Range (MHz)	1575.42	1602	1227.6
Gain (dB)	28±3 Typ.		
Noise Figure (dB)	3.0 Typ.		
Input Voltage (V)	DC = 3.0 ± 0.3		
Current (mA)	12.5 Typ. (at DC 3V)		
Impedance (Ω)	50		
Environmental			
Operating Temperature (°C)	-40 ~ +85		
Storage Temperature (°C) (Antenna with packing sealed)	-5 ~ +40		
Relative Humidity	10 ~ 70 %		
RoHS Compliant	Yes		

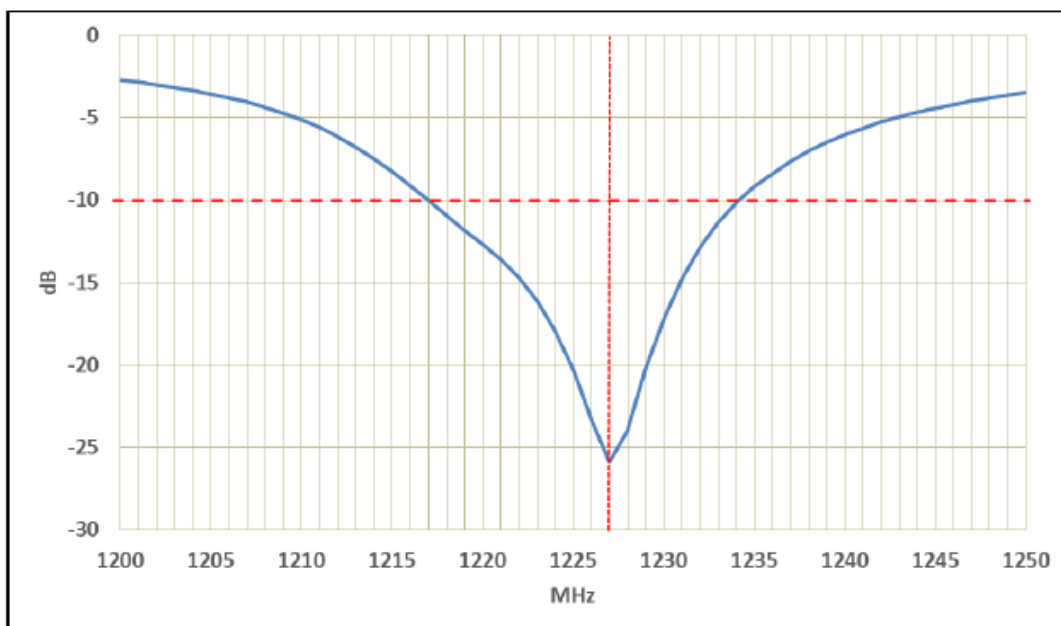
Passive Electrical Properties

Return Loss (dB)

L1 Band (1575.42 MHz & 1602 MHz)



L2 Band (1227.6 MHz)

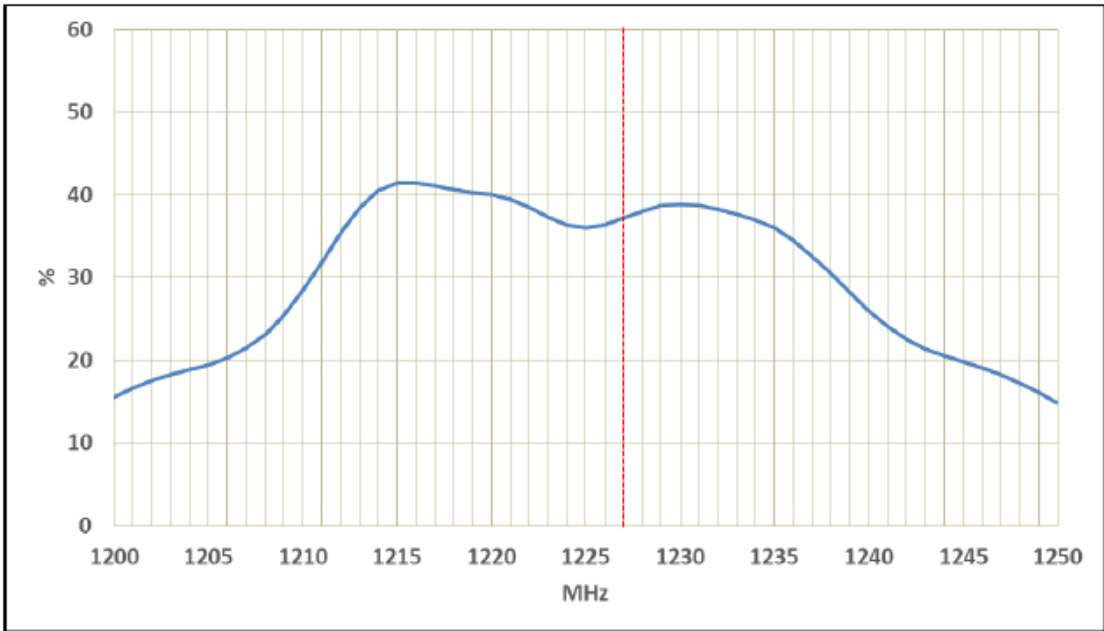




Efficiency (%)
L1 Band (1575.42 MHz & 1602 MHz)



L2 Band (1227.6 MHz)

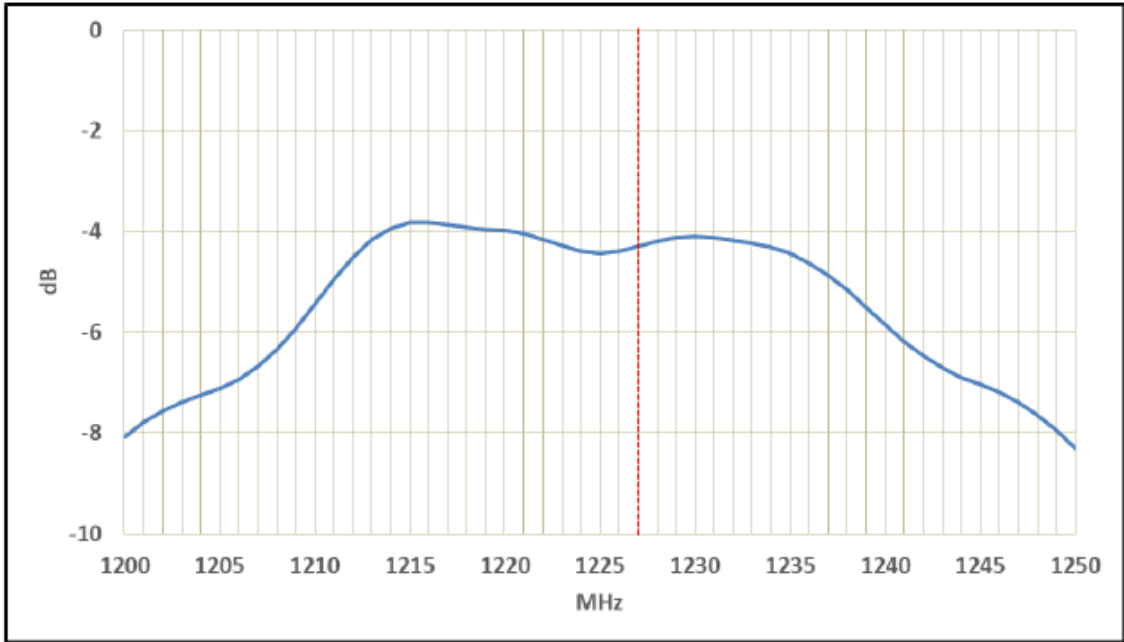




Average Gain (dB)
L1 Band (1575.42 MHz & 1602 MHz)

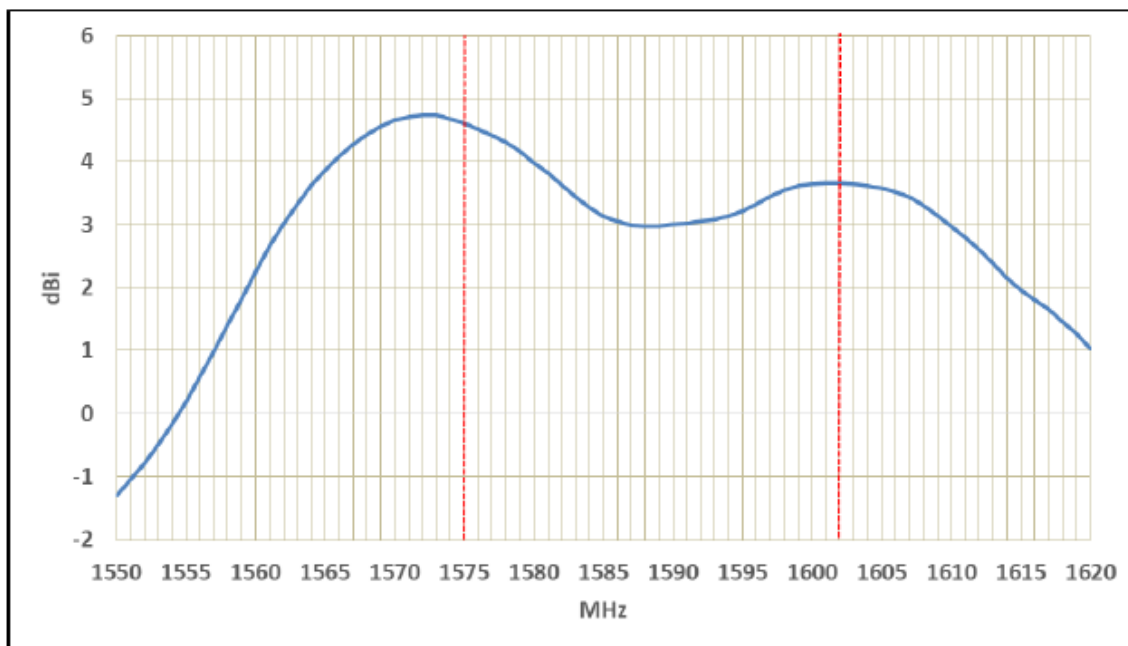


L2 Band (1227.6 MHz)

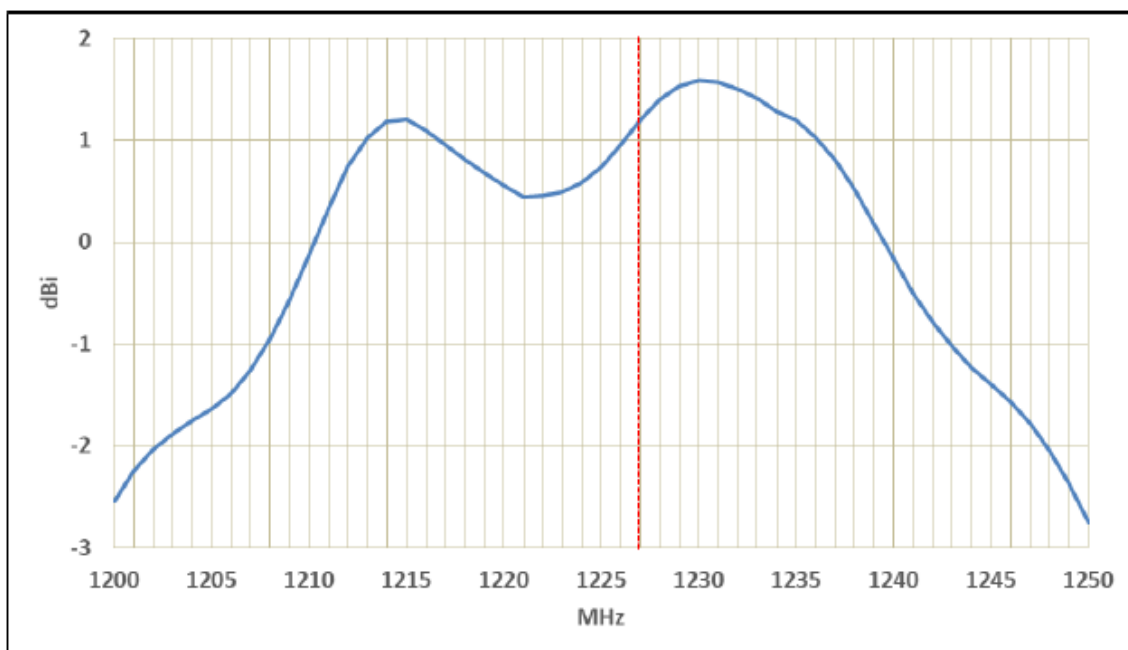


Peak Gain (dBi)

L1 Band (1575.42 MHz & 1602 MHz)

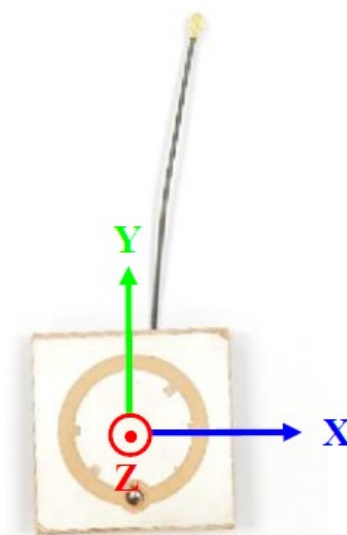


L2 Band (1227.6 MHz)



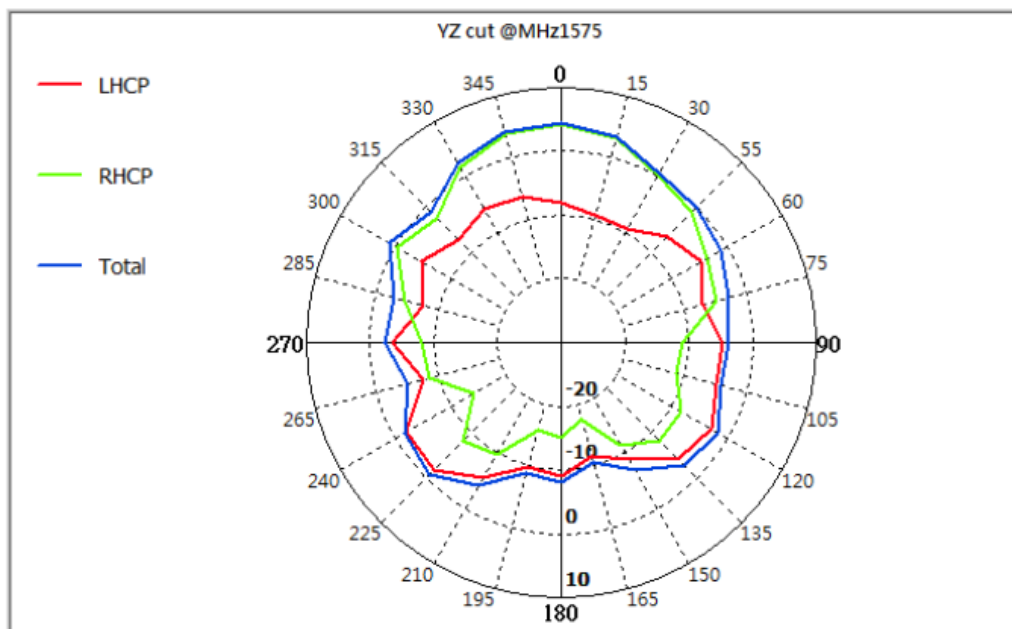
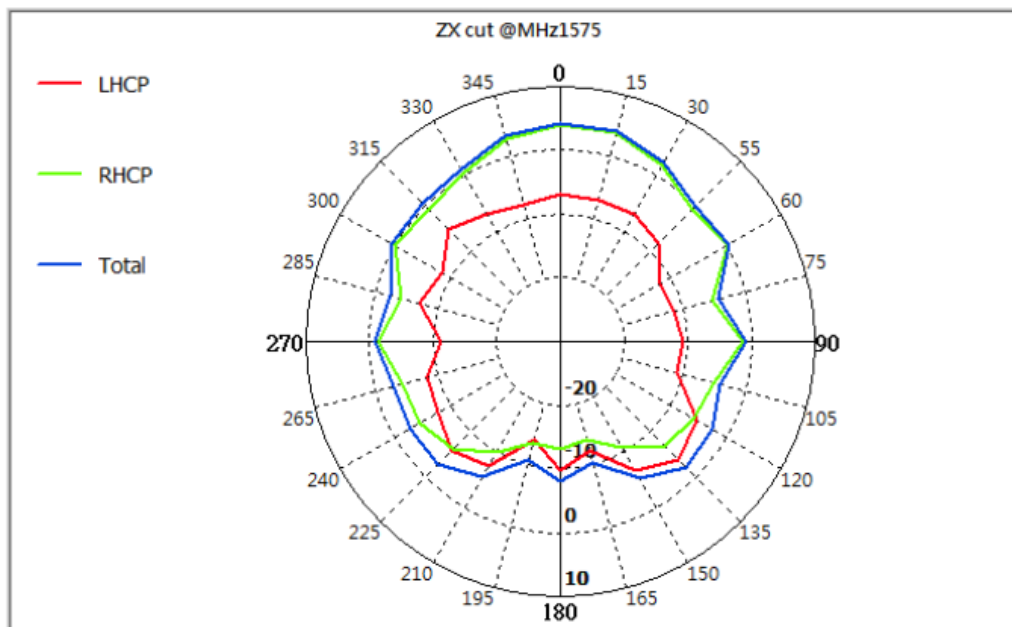
Antenna Radiation Pattern Measurement:

The antenna radiation patterns are measured in a 3D Anechoic Chamber. The measurement setup is as shown below.



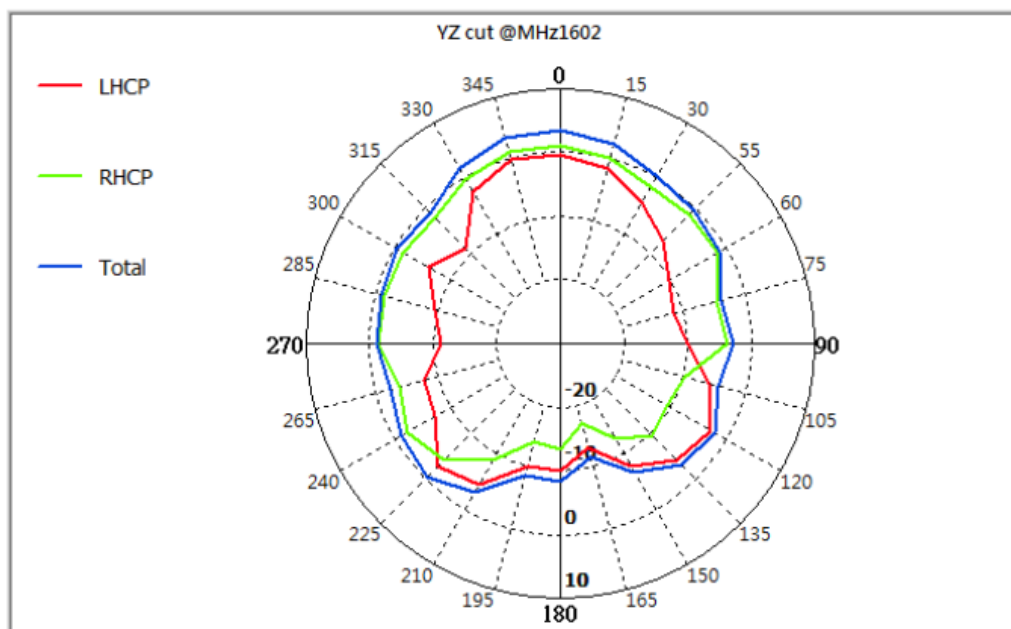
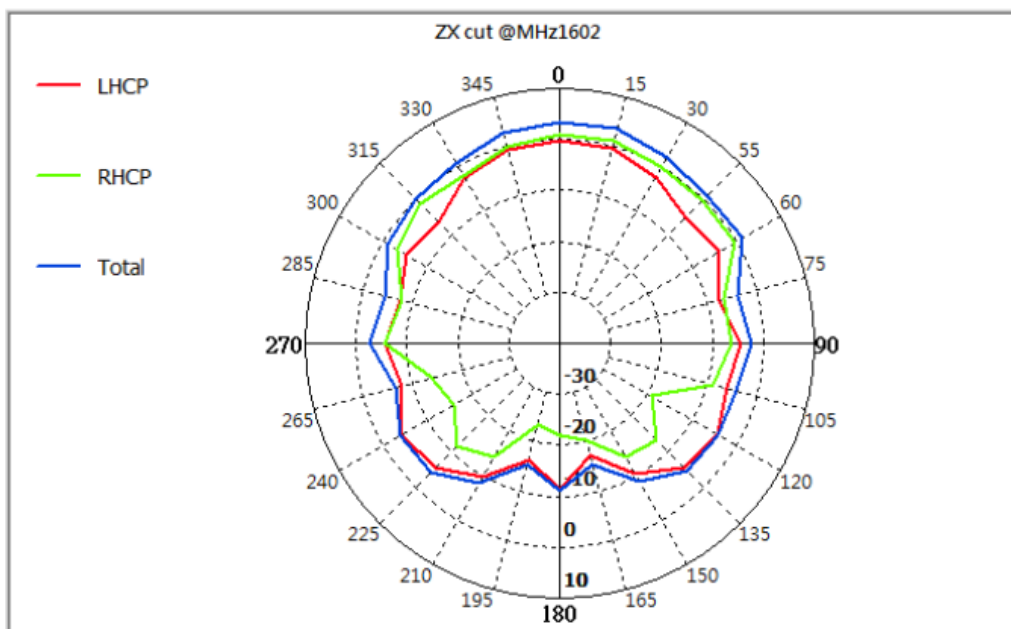
3D Radiation Gain Patterns

1575 MHz (unit: dBi)



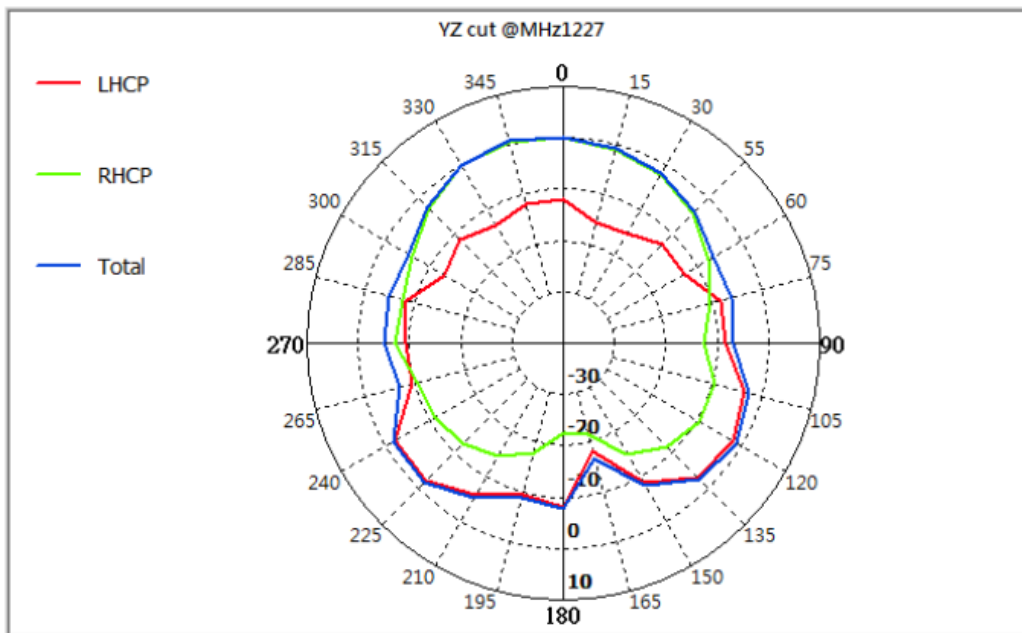
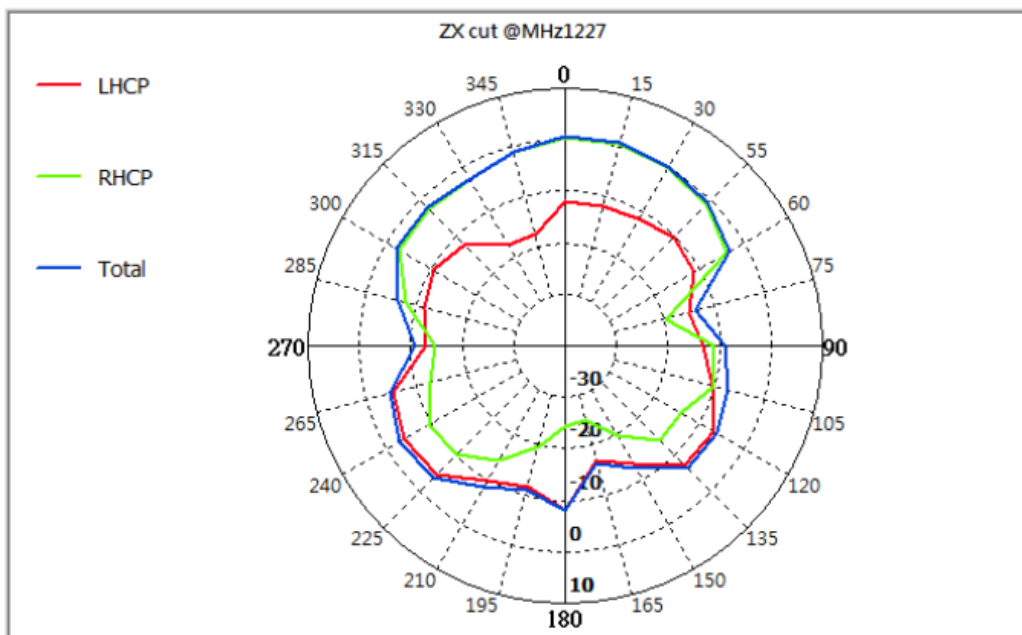
3D Radiation Gain Patterns (Continued)

1602 MHz (unit: dBi)



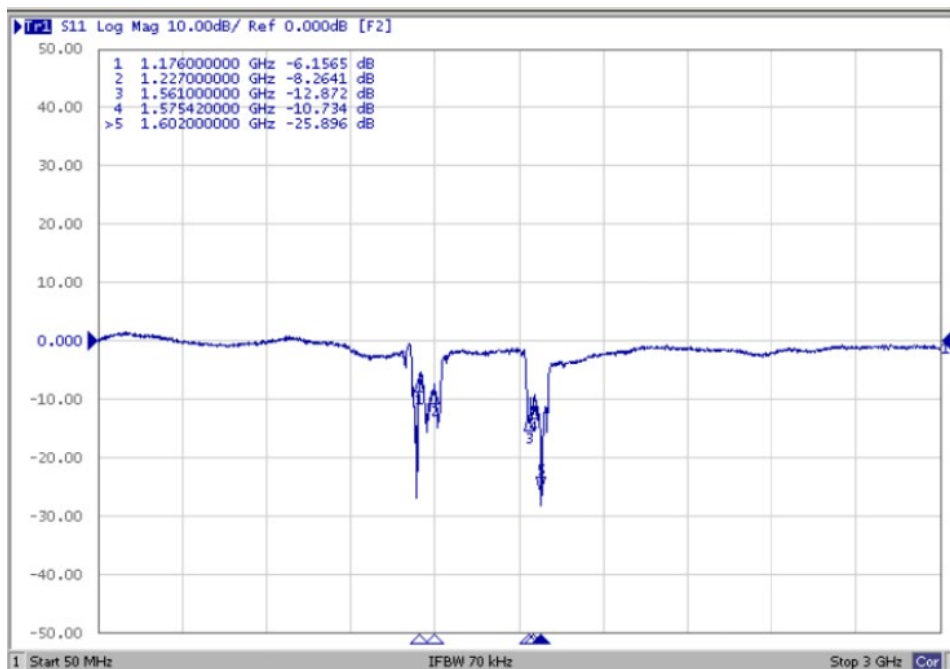
3D Radiation Gain Patterns (Continued)

1227 MHz (unit: dBi)

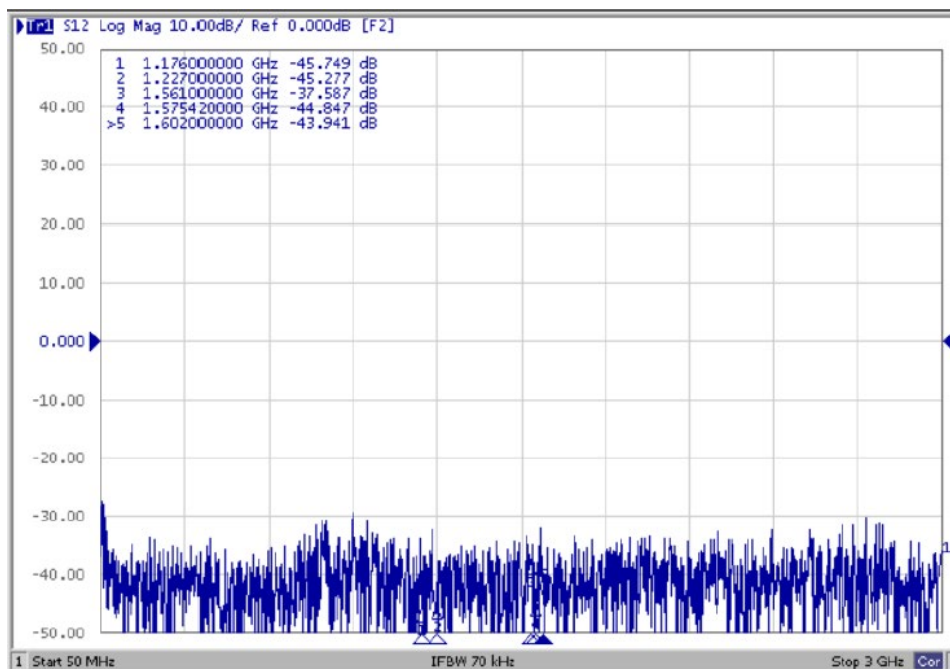


Low Noise Amplifier (LNA)

S11: (The input power of network analyzer is -40dBm)

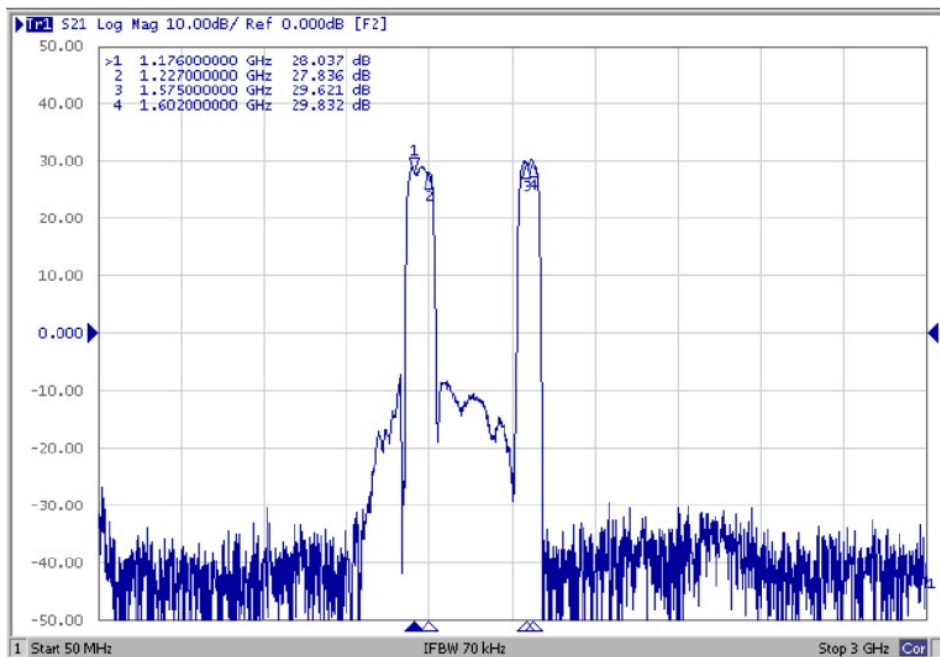


S12: (The input power of network analyzer is -40dBm)

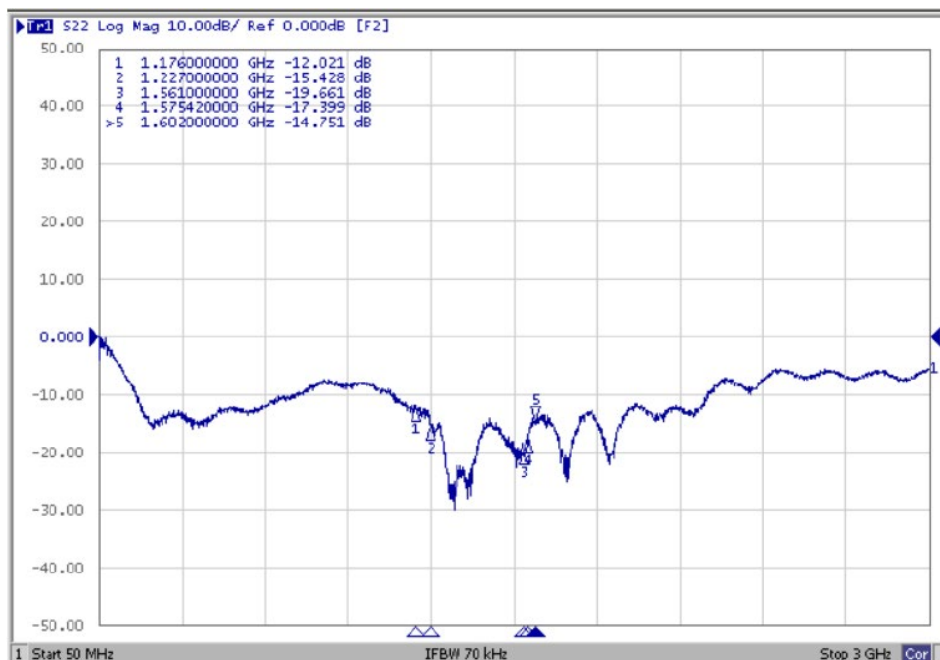


Low Noise Amplifier (LNA) (Continued)

S21: (The input power of network analyzer is -40dBm)

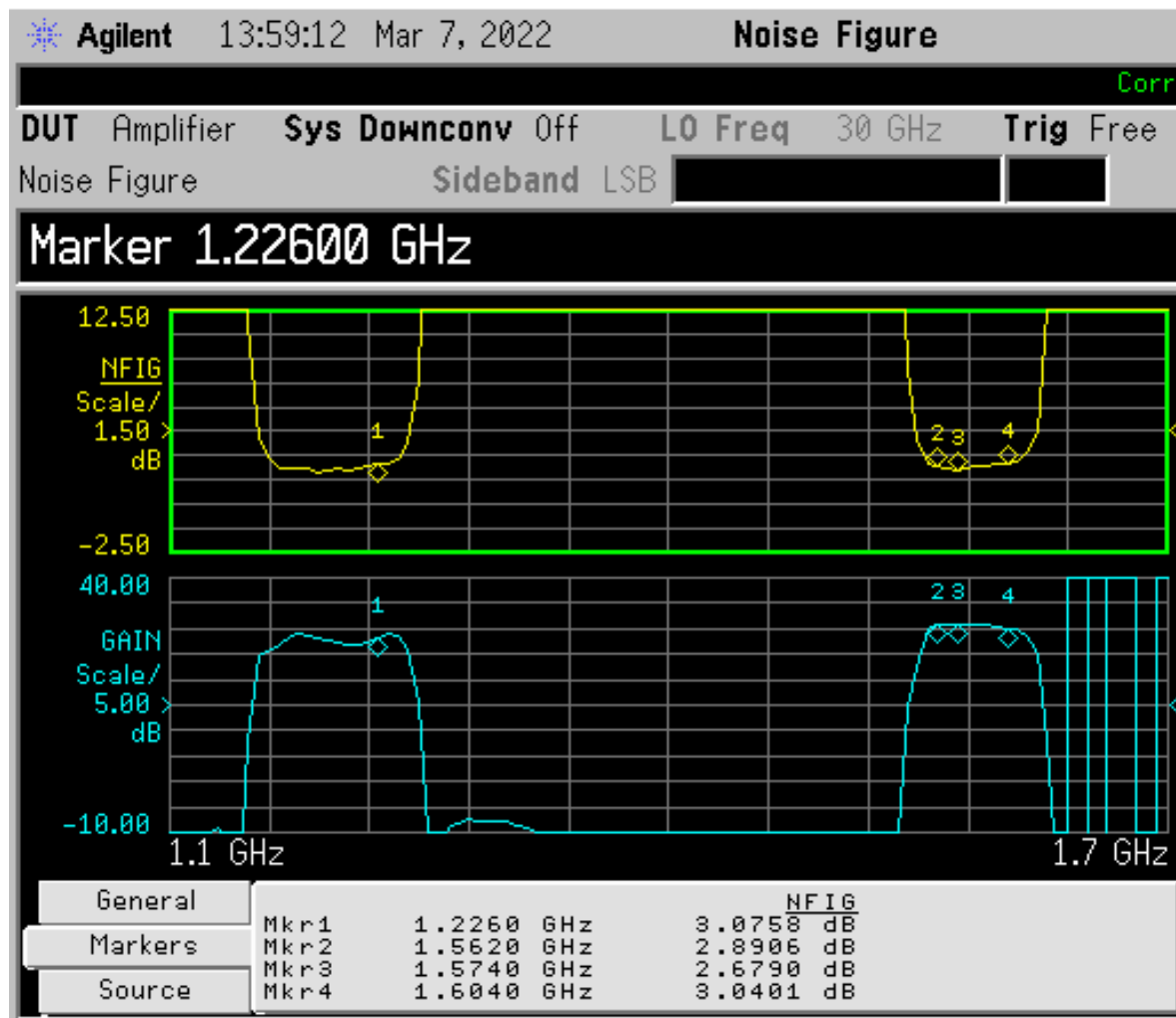


S22: (The input power of network analyzer is -40dBm)



Low Noise Amplifier (LNA) (Continued)

Noise Figure



Packing

- a) Unit Weight: 26 ± 1 g
- b) Quantity: Each bubble bag 1 pcs. Each outer carton 100 pcs



One antenna in one bubble bag (110 x 70 x 5 mm)



Max 100 pcs of antenna in one carton



Label on the top right corner of the carton