

4-axis Helix BDS/GNSS Active Antenna

MODEL: GA-90D

Compact & Sensitive BDS/GNSS Antenna Module with Excellent Signal Amplification for Mobile Applications



- Gain: 27 dB
- Ultra-high sensitivity
- Voltage: 2.5~5.5V DC
- 25mm x 55mm
- ABS PA777D Impact-resistant plastic

GA-90D is the most compact BDS/GNSS antenna module currently available on the market, thanks to our cutting-edge technology that makes the device the tiniest possible without sacrificing performance. With comprehensive coverage almost all the way to the horizon, it performs excellently in foliage or urban canyon environment. Featuring diminutive but substantial enclosure plus unparalleled performance, **GA-90D** is compatible with almost every BDS/GNSS receiver model available on the market and provides a perfect alternative for a vast range of BDS/GNSS applications in the fields of AVL, vehicle navigation, aviation and military.

Features:

- Compact Construction/ Low Profile/ Fully Waterproof
- Magnet and Screw Mount Base
- Excellent Temperature Stability
- Low Noise Figure
- High Sensitivity

Applications:

- Automobile BDS/GNSS
- pilot-less airplane
- Car Tracking Navigation System
- AVL / Fleet Management Systems
- External Antenna for Handheld BDS/GNSS
- External Antenna for PDA Navigator

Specifications:

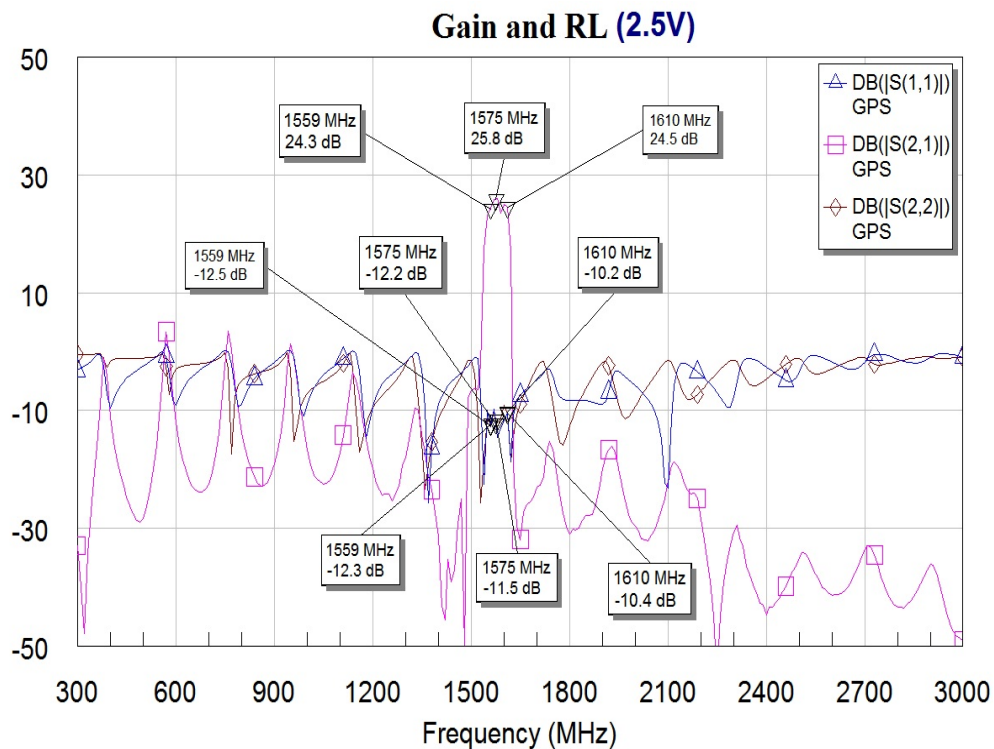
PHYSICAL CONDITION	
Dimension:	25mm x 55mm
Weight:	50 g
Standard Mounting:	screw mount
ANTENNA ELEMENT	
Frequency:	1550~1700Mhz

Polarization:	R.H.C.P. 4-axis Ceramic helix antenna
Gain:	3 dBi
Output VSWR:	2.0 Max.
Output Impedance:	50 ohm
LOW NOISE AMPLIFIER	
Center Frequency:	1550MHz~1615MHz
Gain:	27dB Typ.
Band Width:	5 MHz min. @S11-8 dB
Noise Figure:	1.5 Typ.
Supply Voltage:	2.5V~5 V DC
Current Consumption:	9.0~15 mA
Output Impedance:	50 ohm
CABLE & CONNECTOR	
RF Cable:	
Pulling Strength:	6 Kg/5 sec. with molded plastics on connector end for strain relief (w/o cable loss)
Connector Available:	N(M) or SMA(M)
Optional Adapters:	
ENVIRONMENTAL CONDITIONS	
Operating Temperature:	-40°C~+85°C
Storage Temperature:	-40°C~+90°C
Relative Humidity:	10~95% non-condensing

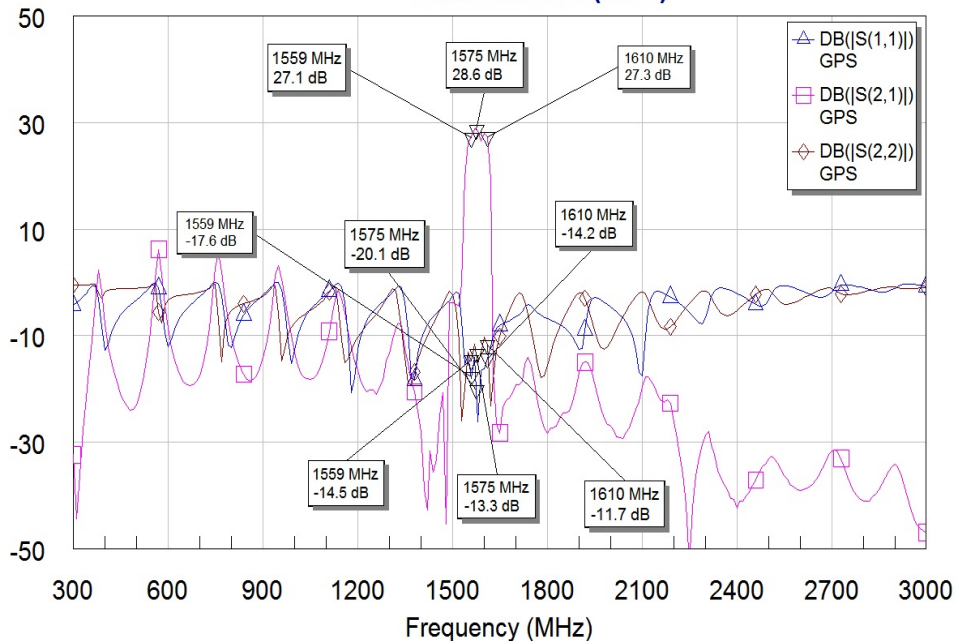
* This specification is subject to change without prior notice

Data Updated: JUN 18, 2013

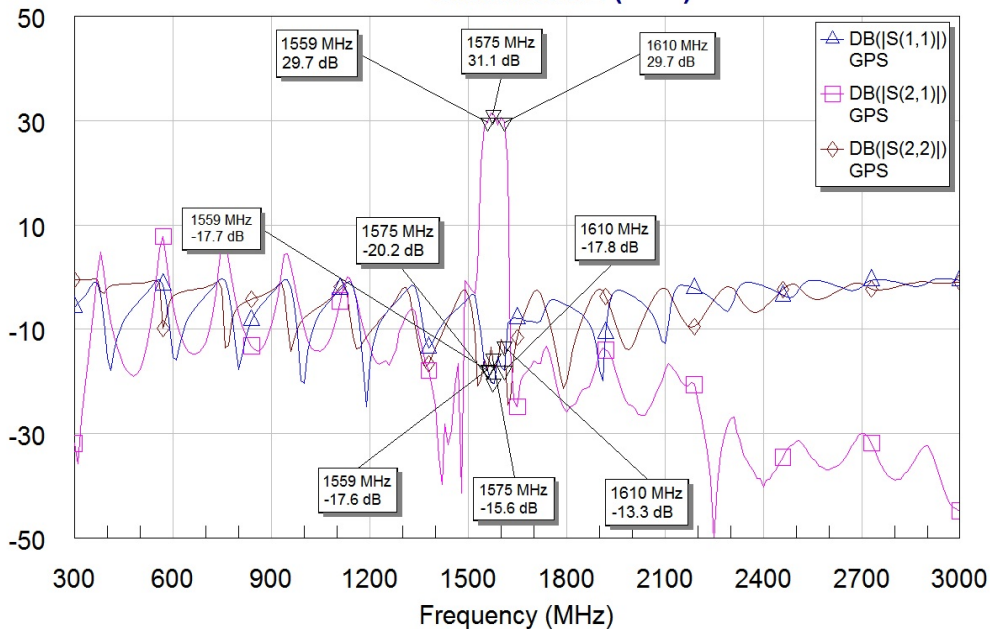
I. Insertion Gain for LNA:



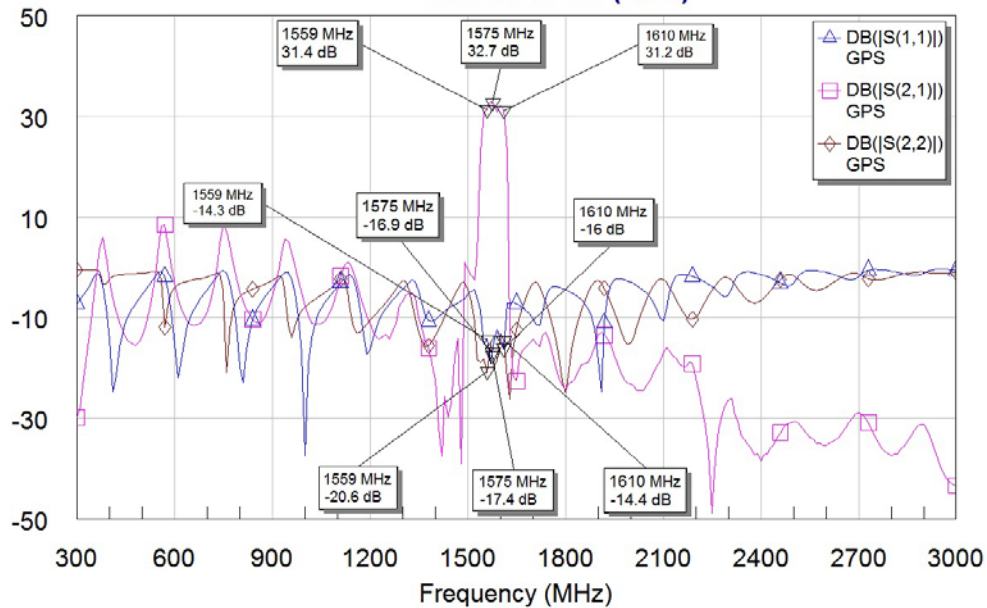
Gain and RL (3.5V)



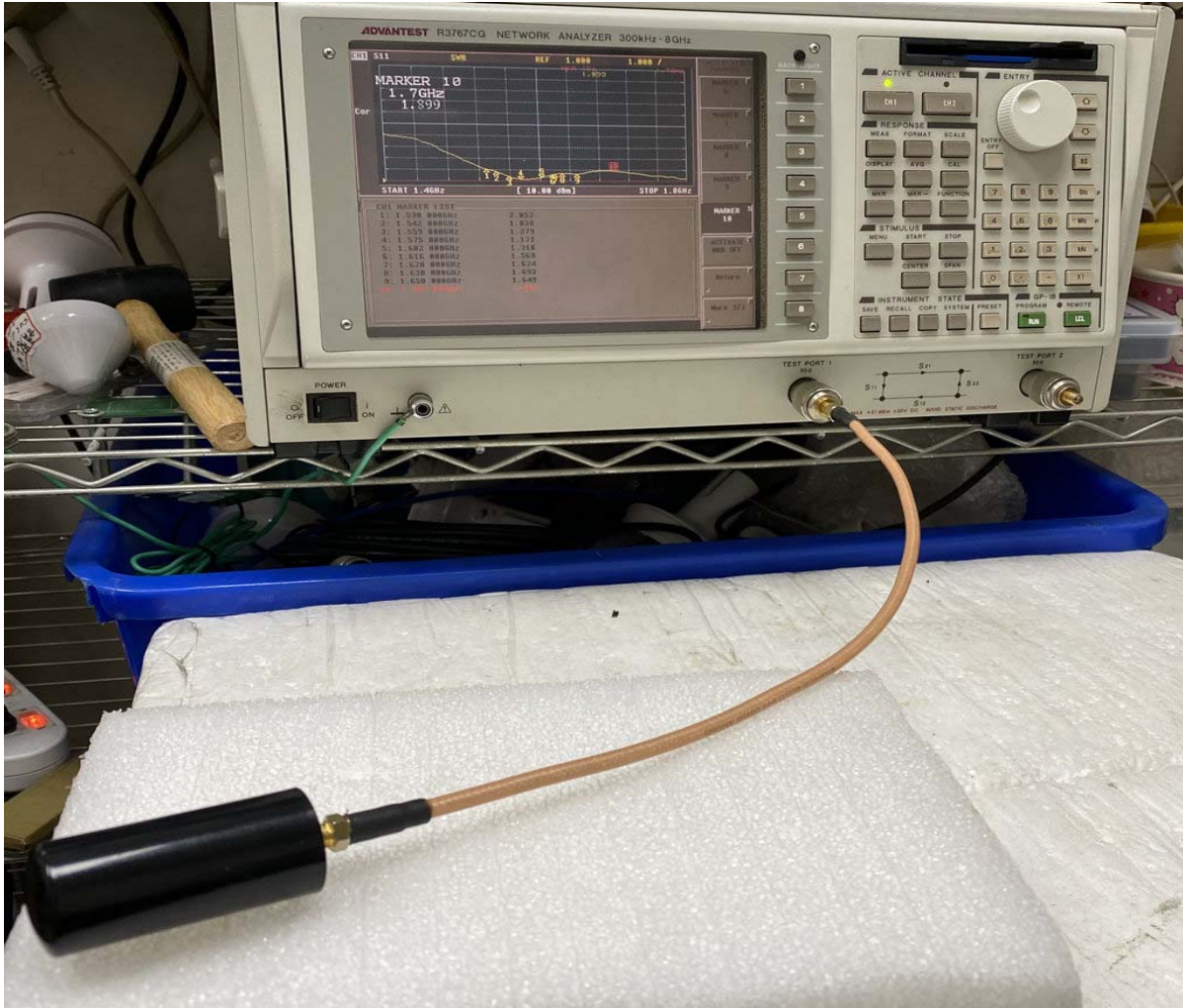
Gain and RL (4.5V)

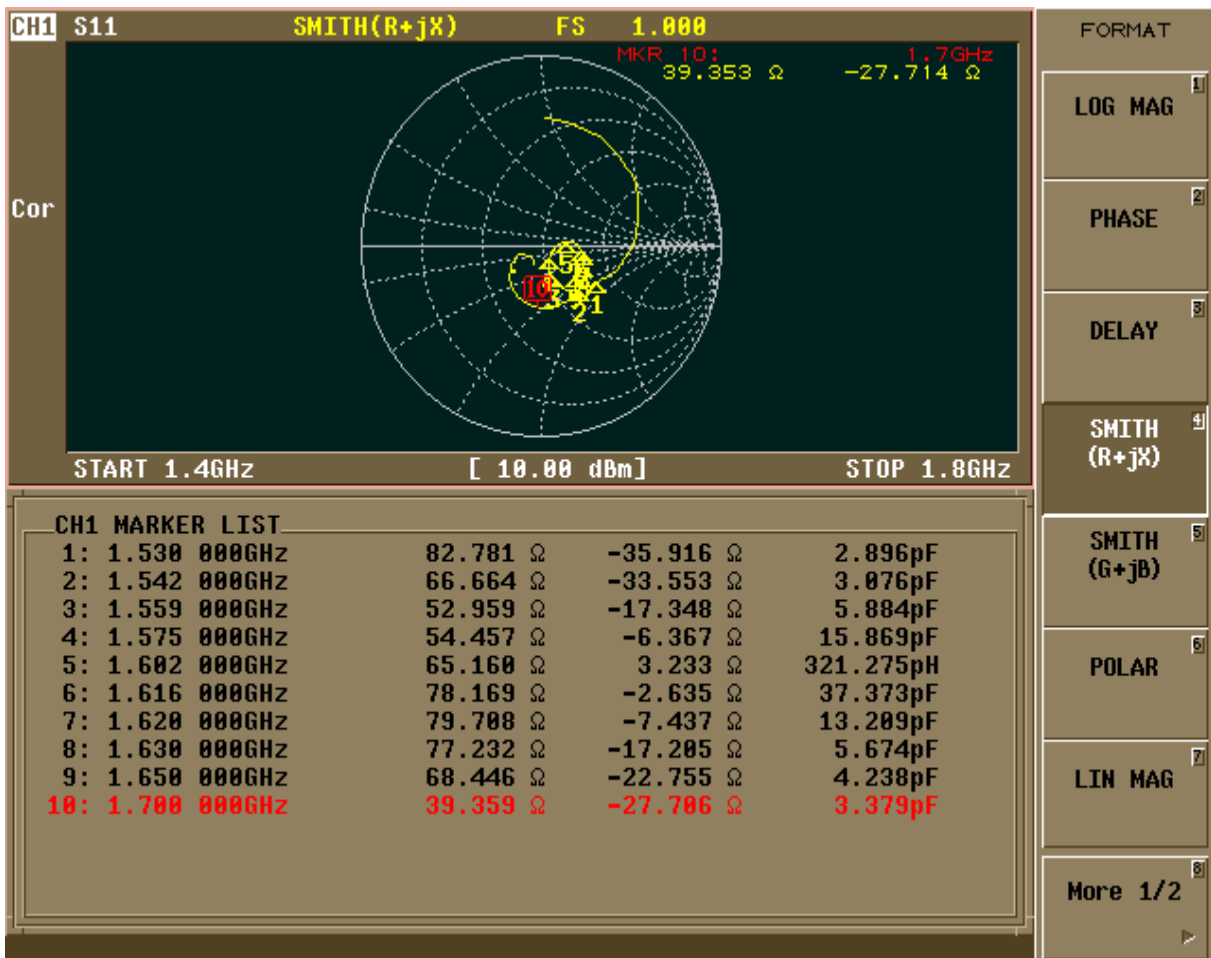


Gain and RL (5.5V)



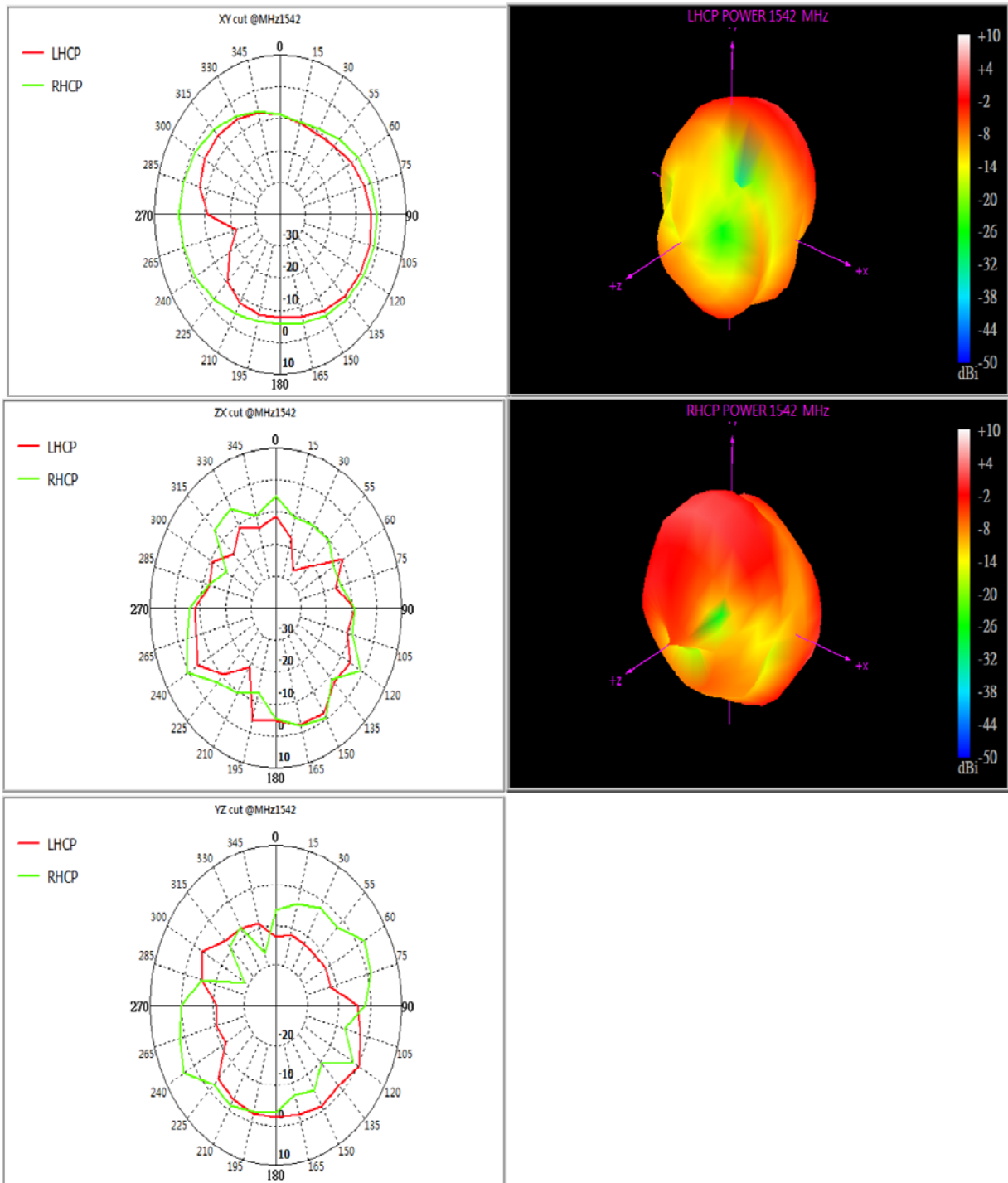
Passive test:



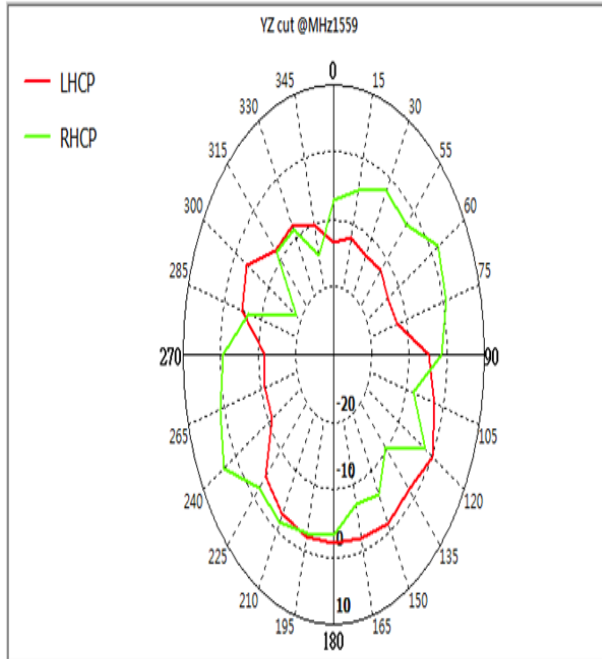
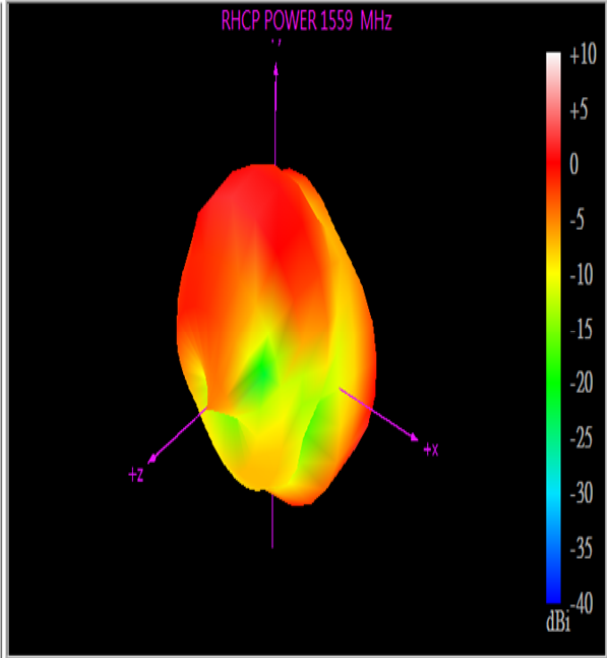
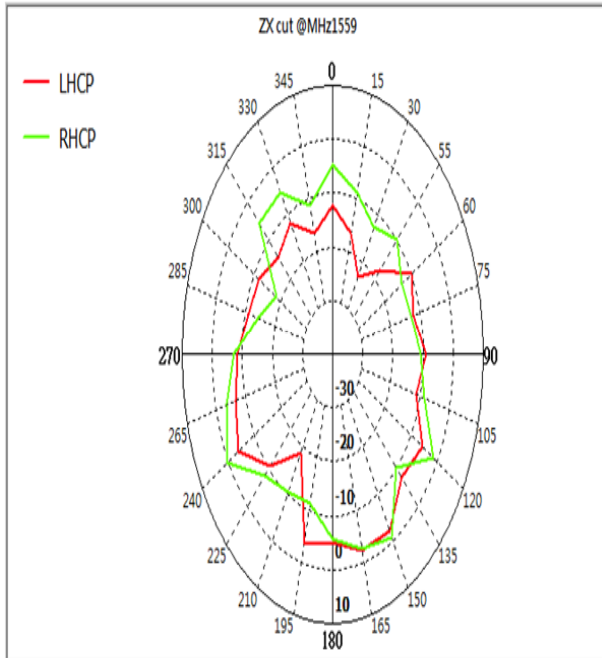
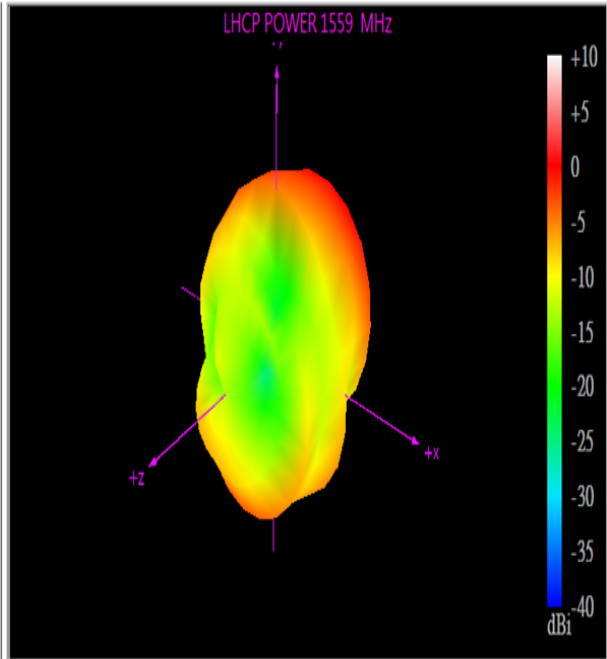
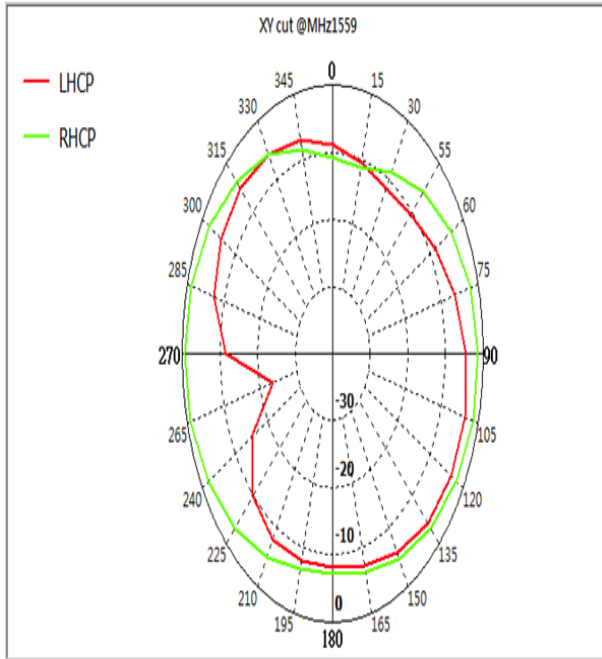


3D Total						
Frequency (MHz)	Upper Hem. PRP (dBm)	Lower Hem. PRP (dBm)	Efficiency (dB)	Efficiency (%)	Gain (dBi)	Tot. Rad.Pwr. (dBm)
1450 MHz	-8.54	-5.55	-3.78	41.88	1.57	-3.78
1500 MHz	-8.15	-5.22	-3.43	45.36	2.05	-3.43
1542 MHz	-6.37	-3.41	-1.63	68.71	4.03	-1.63
1559 MHz	-6.68	-3.63	-1.88	64.88	3.82	-1.88
1561 MHz	-6.68	-3.61	-1.87	65.01	3.85	-1.87
1575 MHz	-6.67	-3.50	-1.79	66.21	4.03	-1.79
1602 MHz	-6.89	-3.49	-1.86	65.22	4.16	-1.86
1616 MHz	-7.58	-4.07	-2.47	56.62	3.64	-2.47
1620 MHz	-7.68	-4.13	-2.54	55.69	3.58	-2.54
1626 MHz	-7.93	-4.33	-2.76	53.00	3.37	-2.76
1630 MHz	-7.92	-4.29	-2.73	53.35	3.41	-2.73
1642 MHz	-8.96	-5.25	-3.71	42.54	2.34	-3.71
1650 MHz	-9.41	-5.68	-4.15	38.49	1.82	-4.15
1700 MHz	-8.09	-4.23	-2.73	53.32	2.31	-2.73

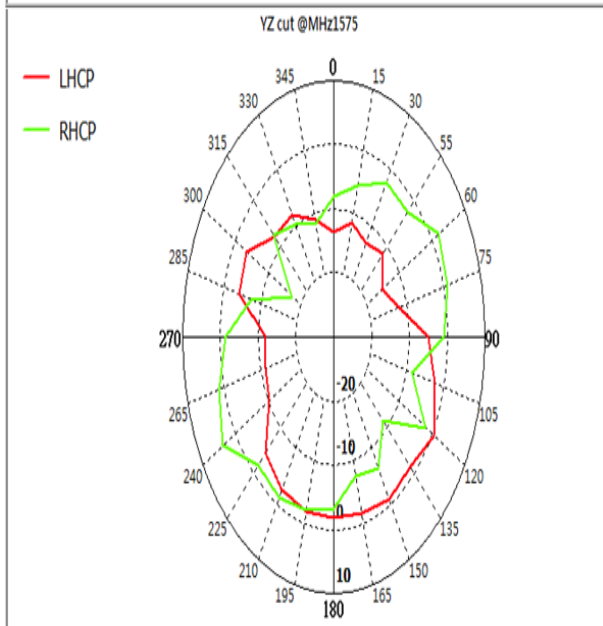
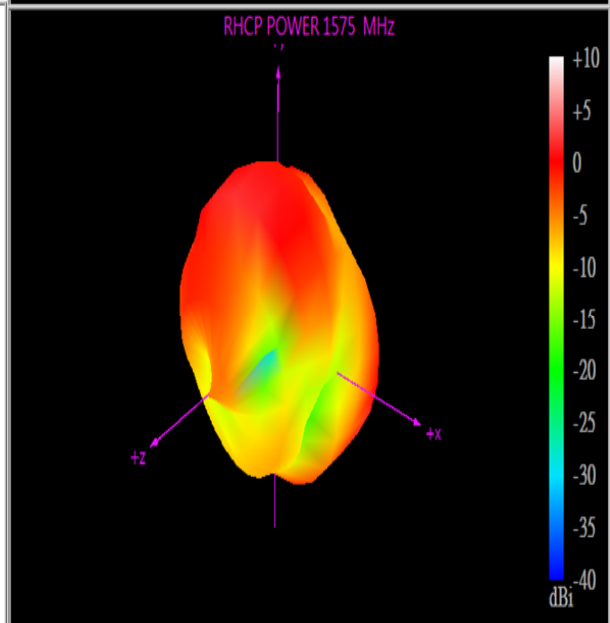
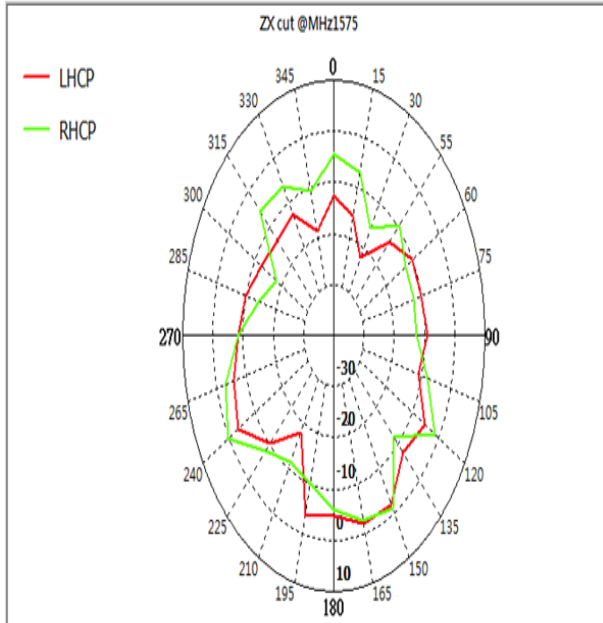
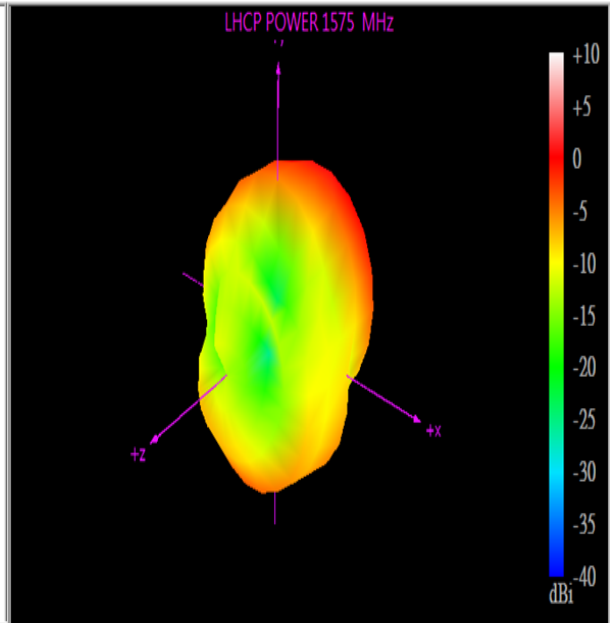
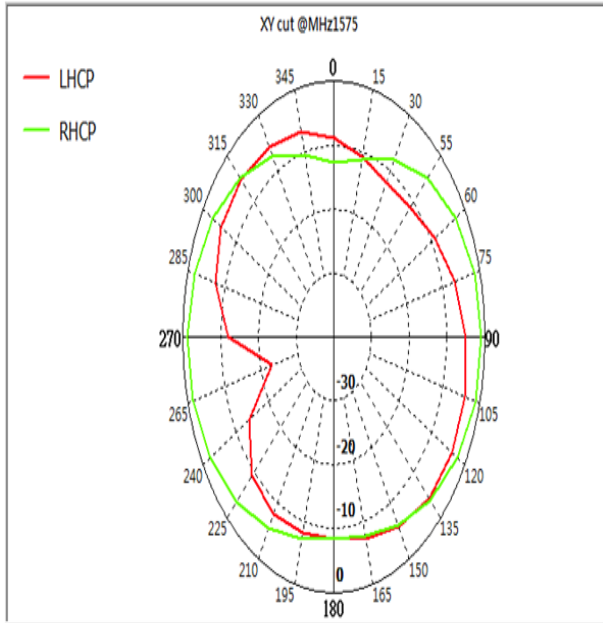
1542Mhz:



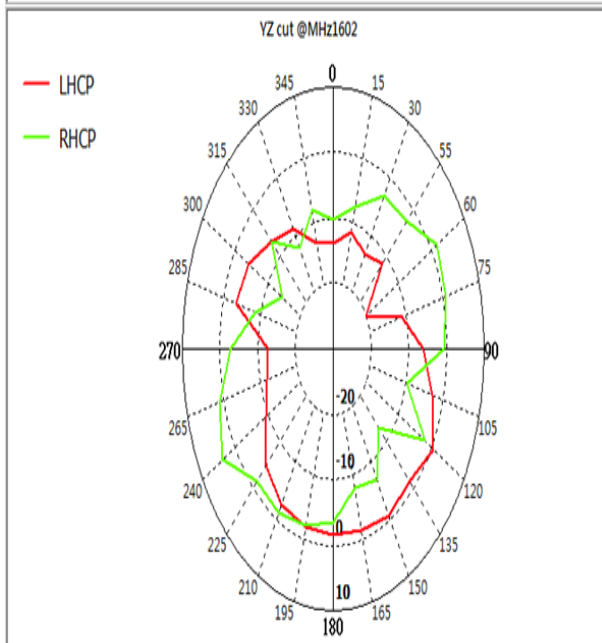
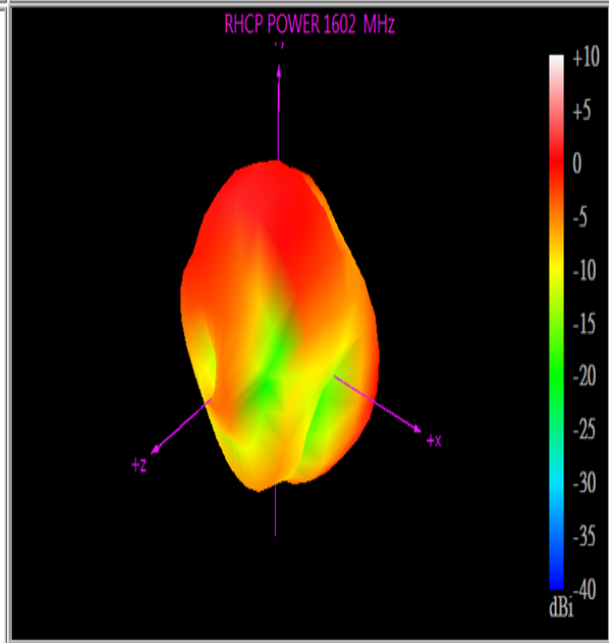
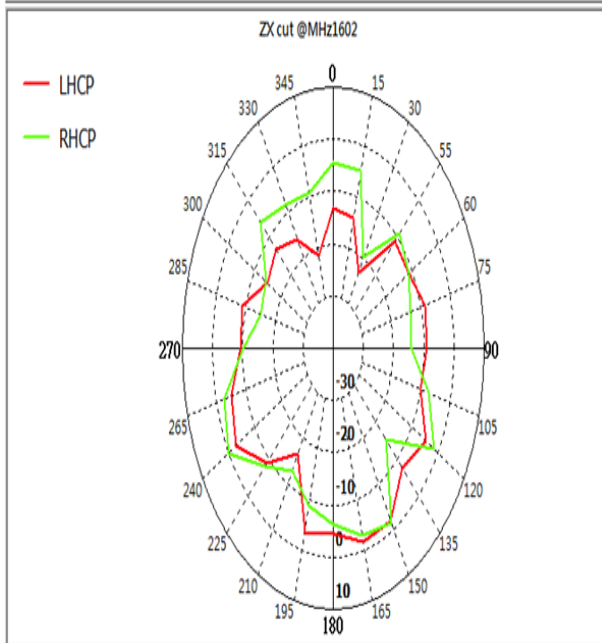
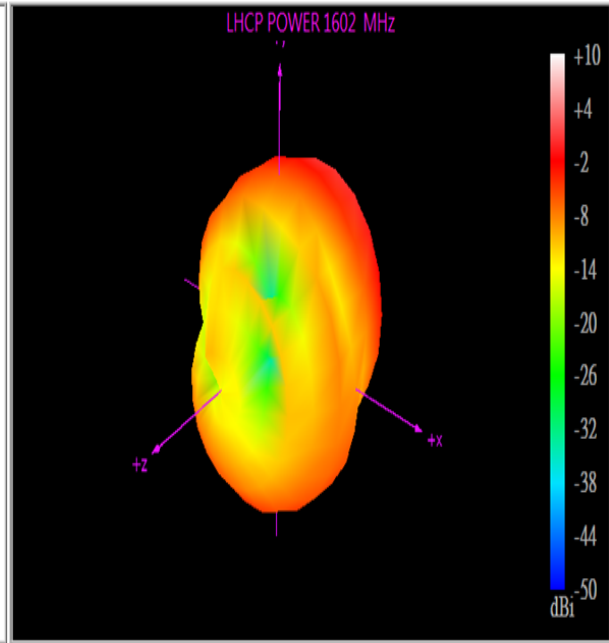
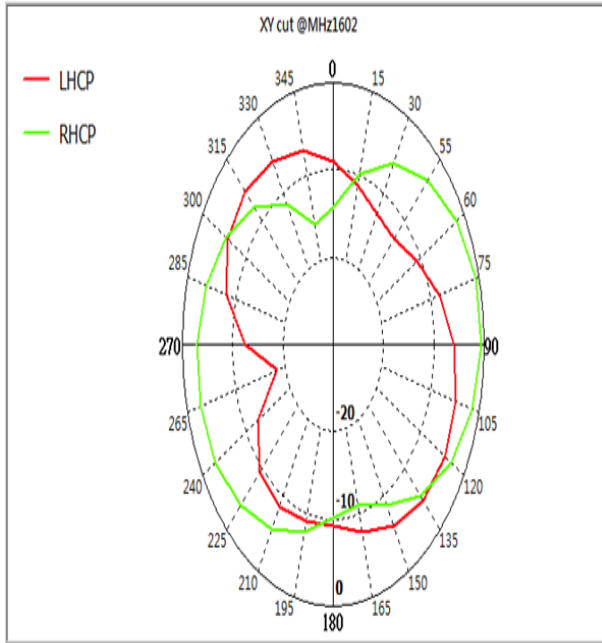
1559Mhz :



1575Mhz:



1602Mhz:



1620Mhz:

