

4-axis Helix BDS/GNSS Active Antenna

MODEL: GA-85F

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



- High performance
- Out-band filtering & rejection
- Voltage: 1.4~3.6 V DC
- Provides excellent signal amplification
- 12.4(Dia.) × 50.4(L) mm
- IPX6

GA-85F is the integration of a high performance BDS/GNSS antenna and a state-of-the-art low noise amplifier into a very low profile/ extremely compact/ fully waterproof enclosure which, when connected to a BDS/GNSS receiver with 1.4~3.6V DC antenna power, provides excellent signal amplification and out-band filtering & rejection, provide 1.4~3.6V input Voltage is available.

FEATURES:

- Compact Construction/ Low Profile/
- Omni-Directional Antenna Patterns
- Excellent Temperature Stability
- Low Noise Figure
- High Sensitivity

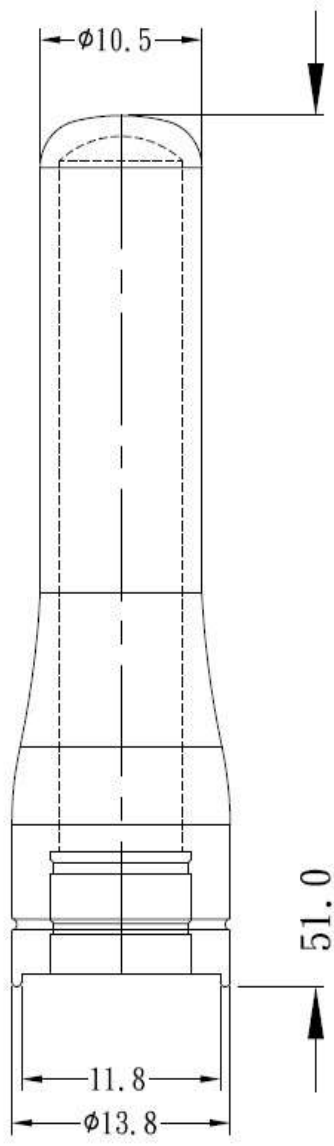
APPLICATIONS:

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

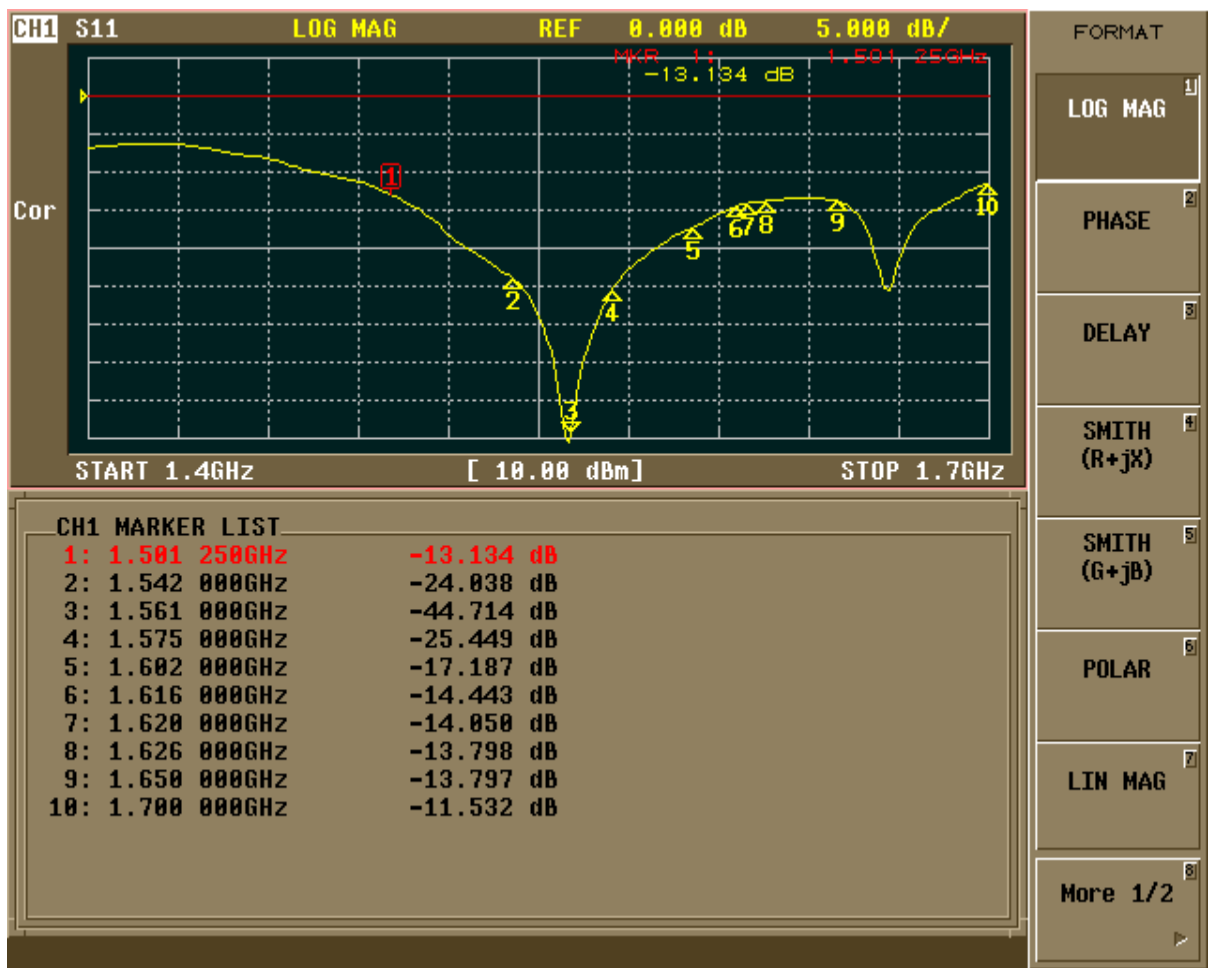
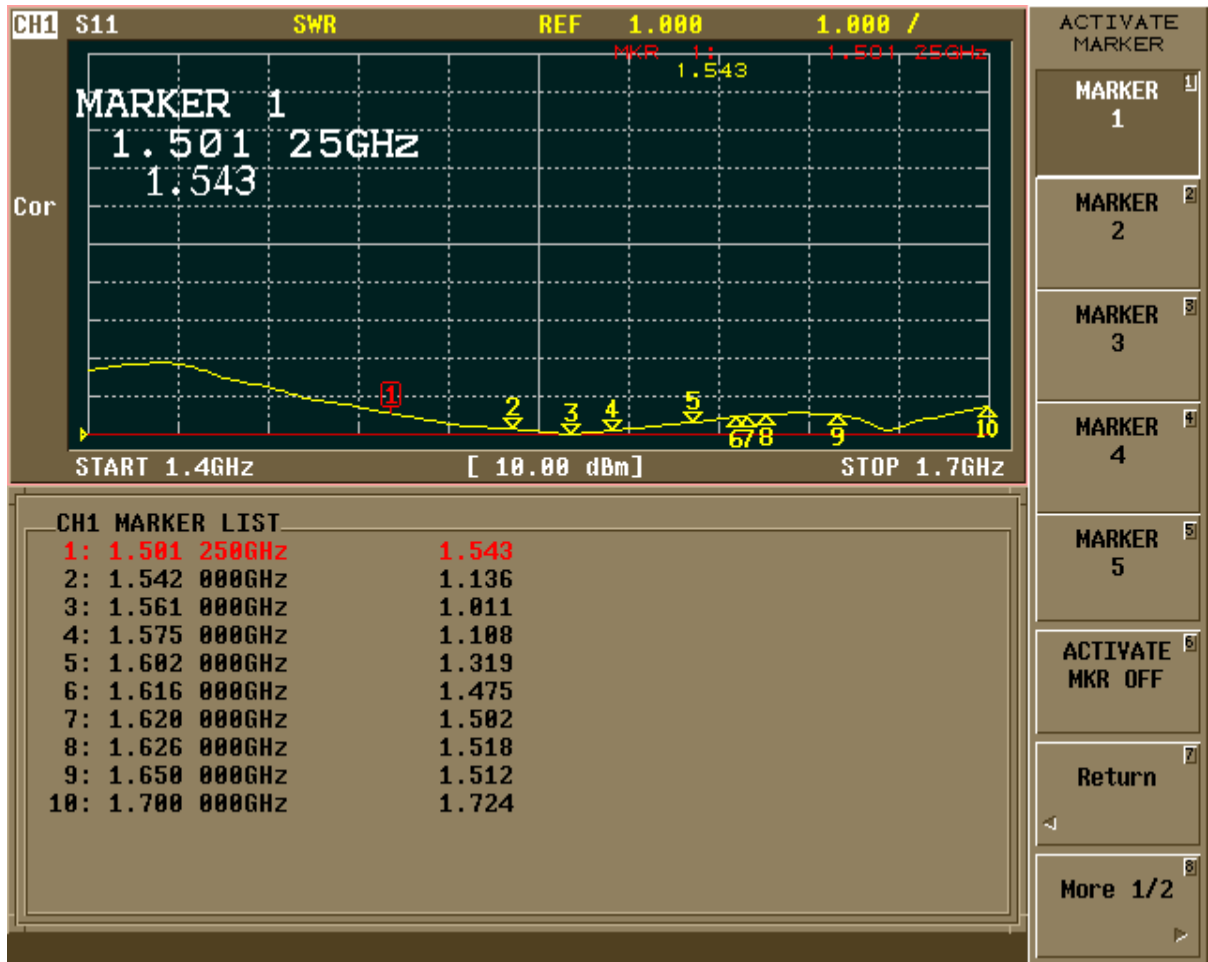
SPECIFICATIONS:

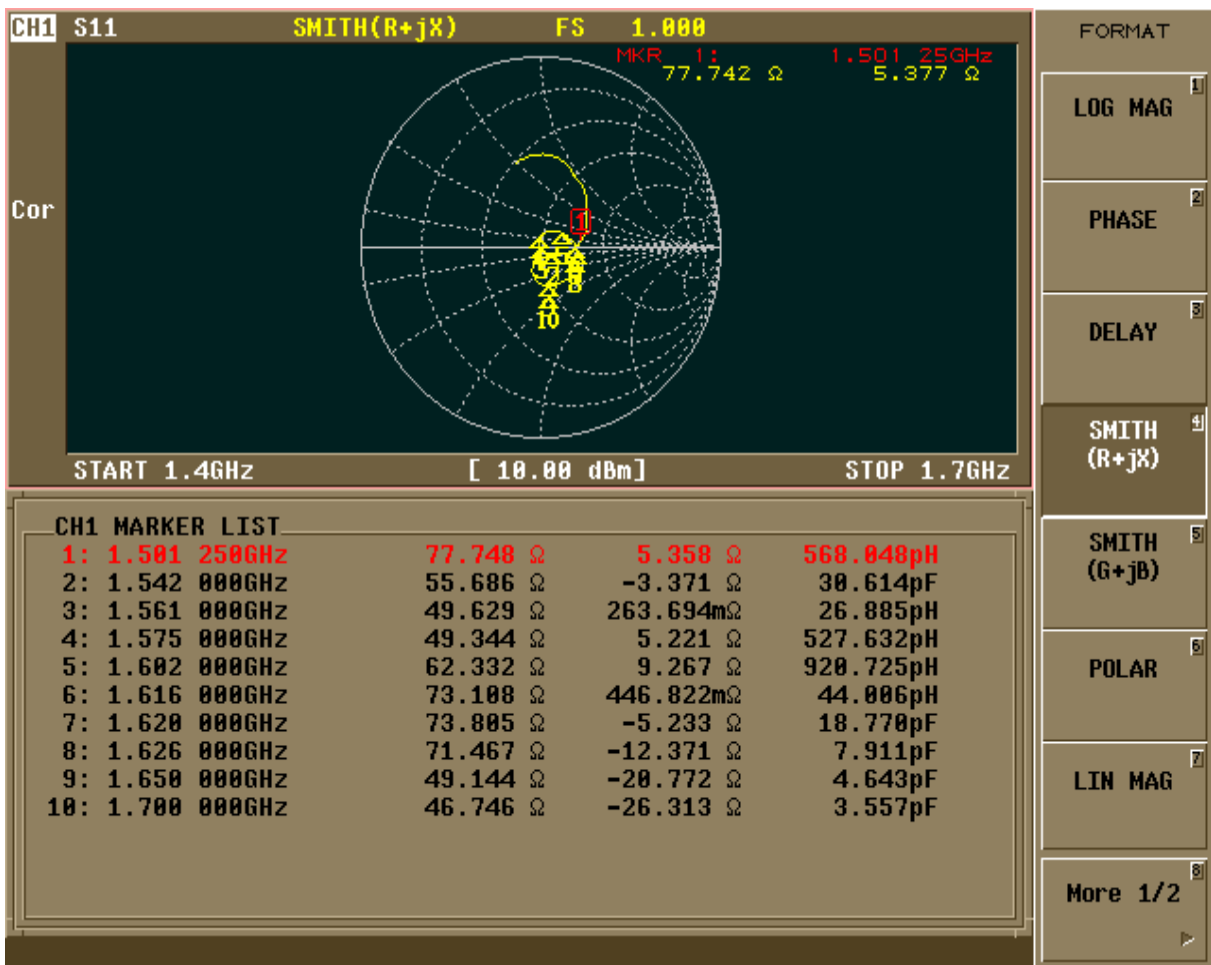
Physical Condition	
Construction	TPU rubber
Dimension	OD13.8 x 51.0mm±0.5
Weight	8 grams
Environmental Conditions	
Operation temperature	-40°C to +85°C
Storage temperature	-40°C to +85°C

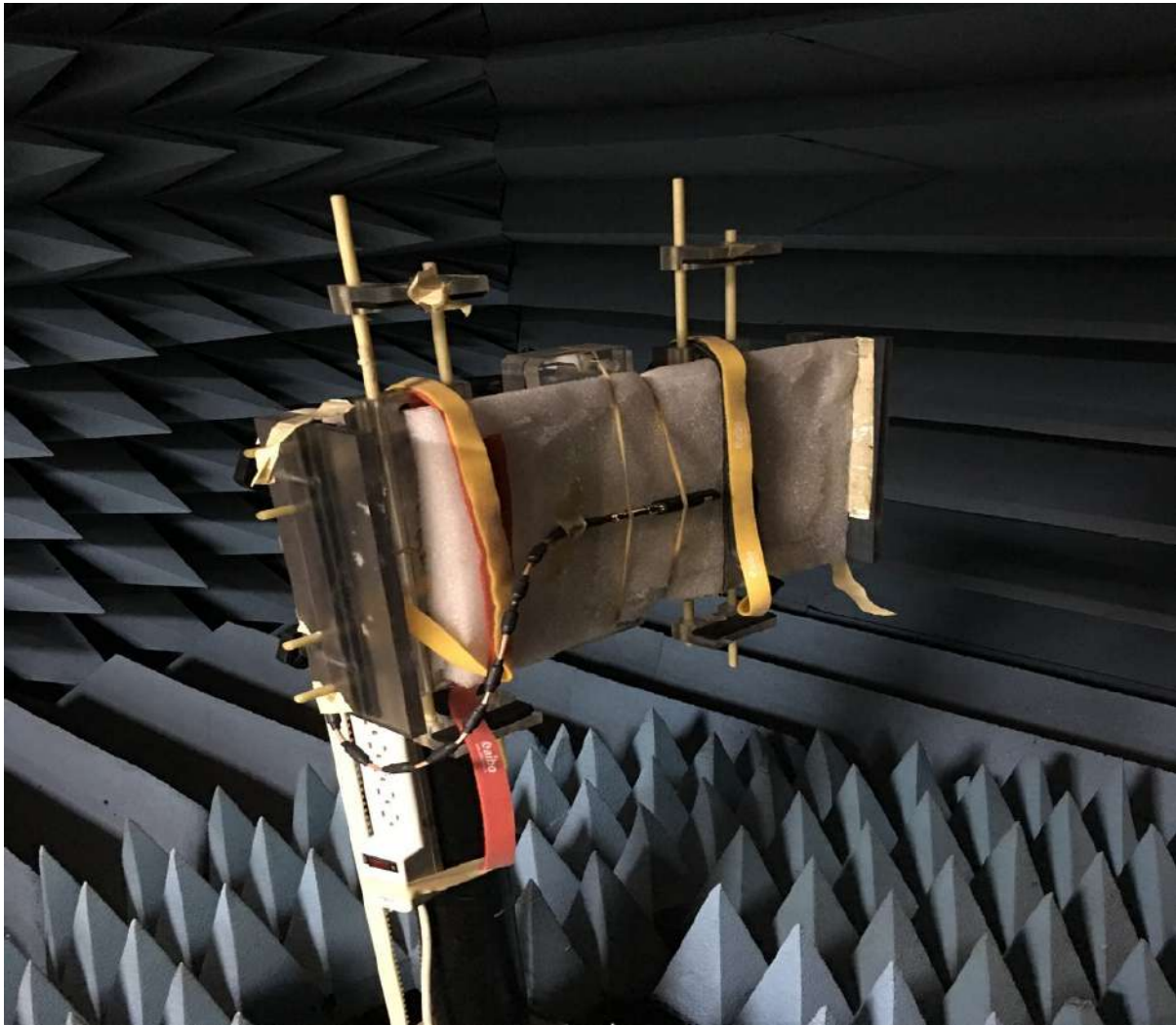
Relative Humidity	95% non-condensing
Connector	
Connector Available	SMA (M) Straight
Low Noise Amplifier	
Center Frequency	1550MHz ~ 1615MHz
Gain	18db +/-3db
Bandwidth	10 MHz min. @S11≤-10 dB
Noise Figure	1.0dB
ESD	2.5KV HBM
Supply Voltages	1.4~3.6V DC
Current Consumption	4mA
Output Impedance	50 ohm
Output VSWR	2.0 max.
Antenna Element	
Center Frequency	1500~1700Mhz
Polarization	R.H.C.P. 4-axis Ceramic helix antenna
Gain	3 dBic Typ.
VSWR	2.0



Passive antenna test :

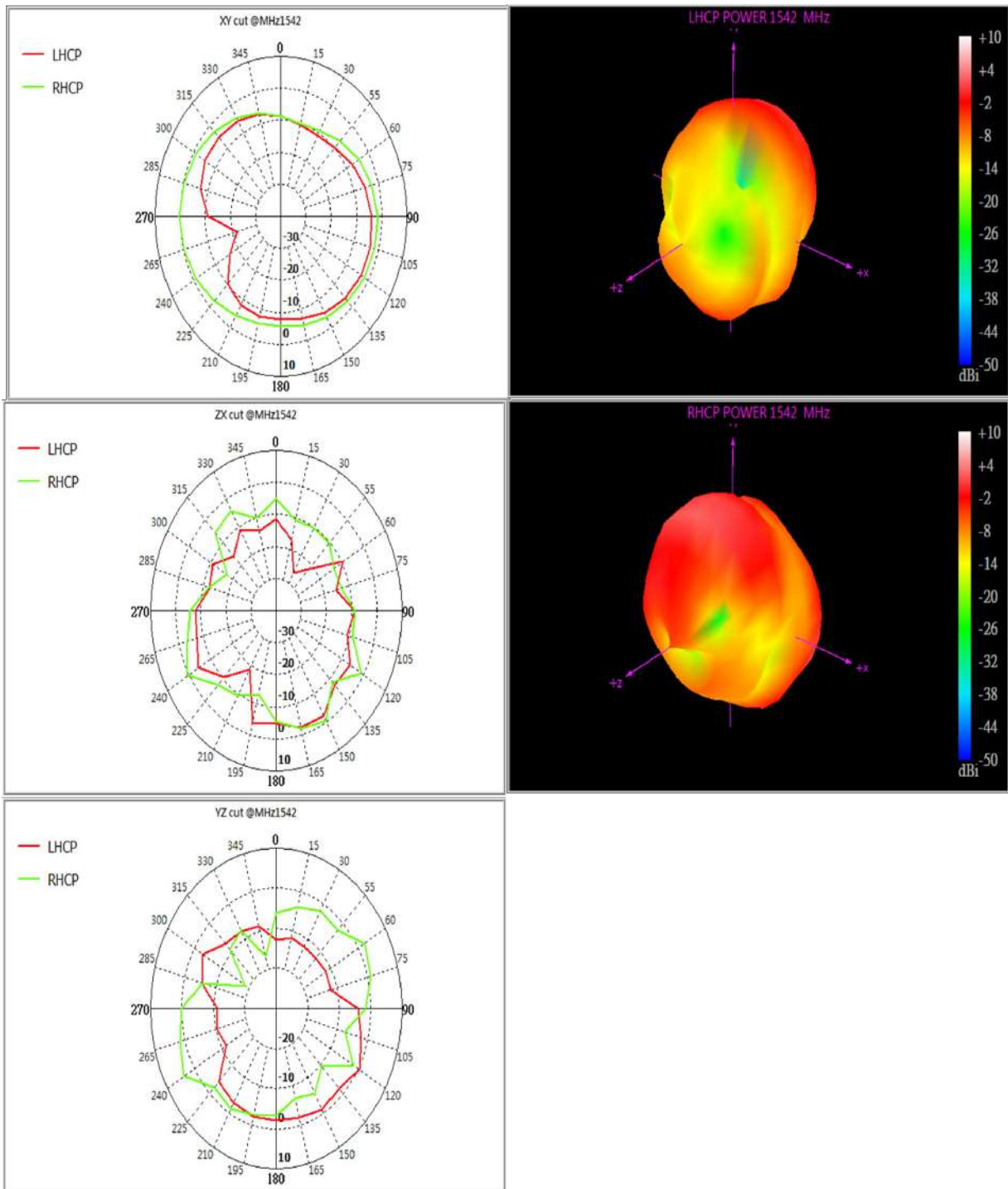




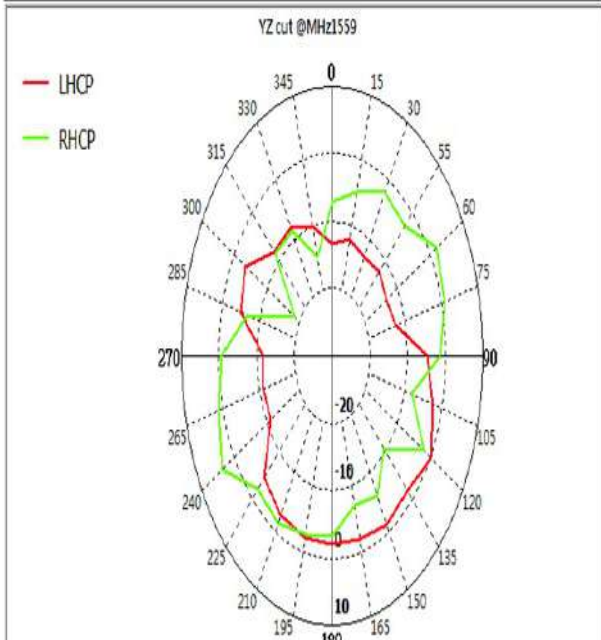
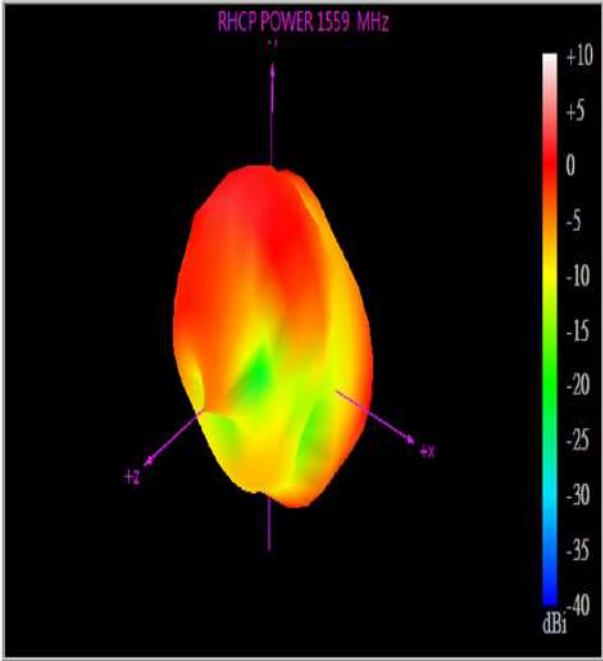
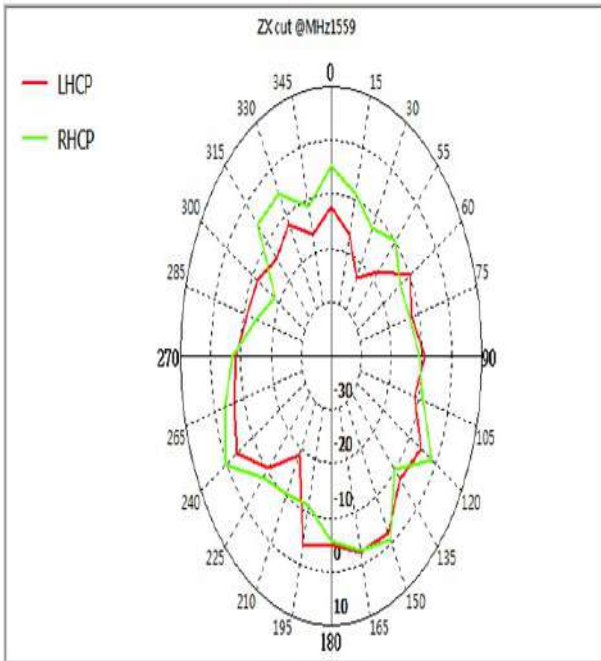
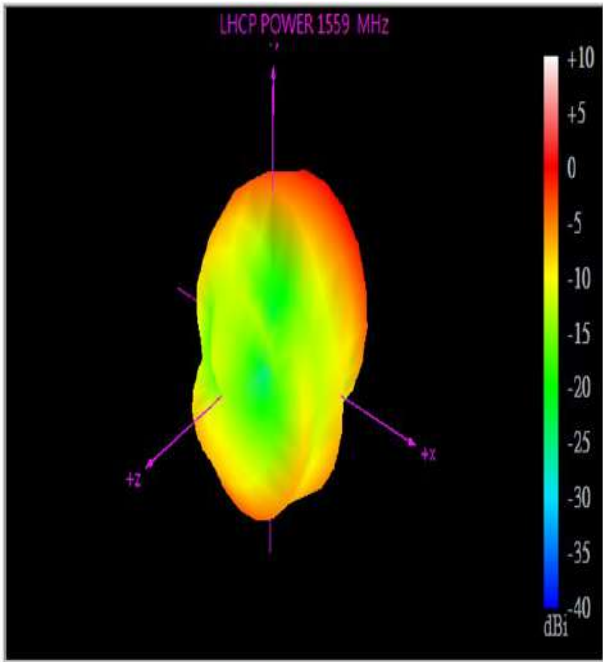
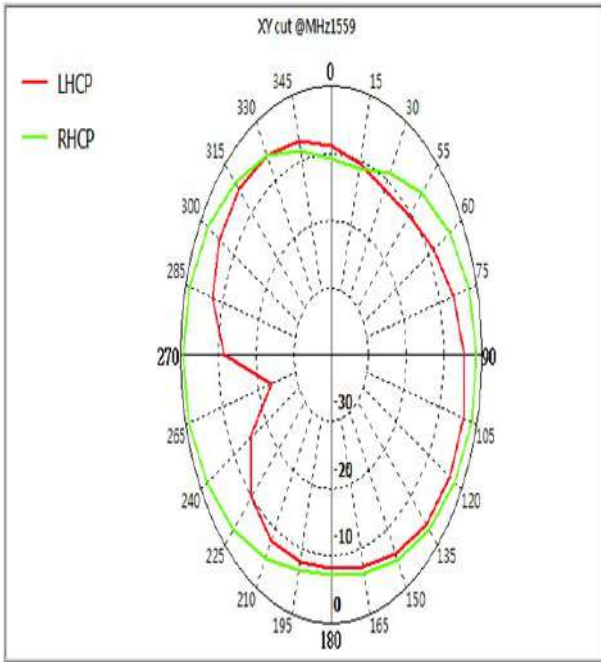


3D Total						
Frequency (MHz)	Upper Hem. PRP (dBm)	Lower Hem. PRP (dBm)	Efficiency (dB)	Efficiency (%)	Gain (dBi)	Tot. Rad.Pwr. (dBm)
1450 MHz	-8.54	-5.55	-3.78	41.88	1.57	-3.78
1500 MHz	-8.15	-5.22	-3.43	45.36	2.05	-3.43
1542 MHz	-6.37	-3.41	-1.63	68.71	4.03	-1.63
1559 MHz	-6.68	-3.63	-1.88	64.88	3.82	-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

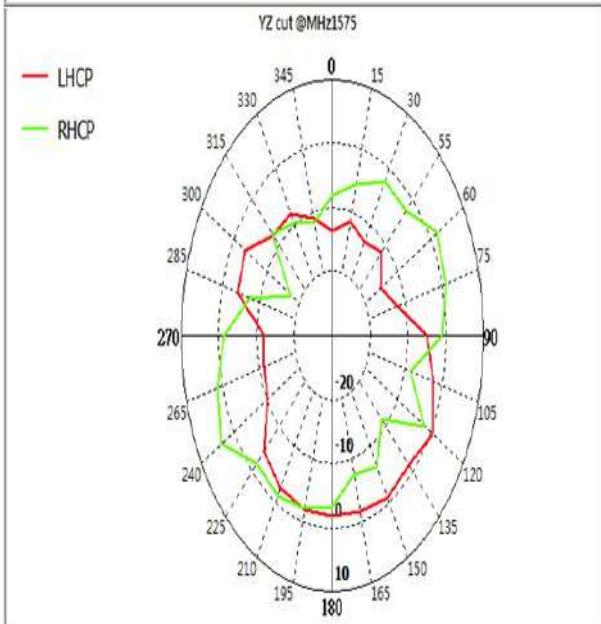
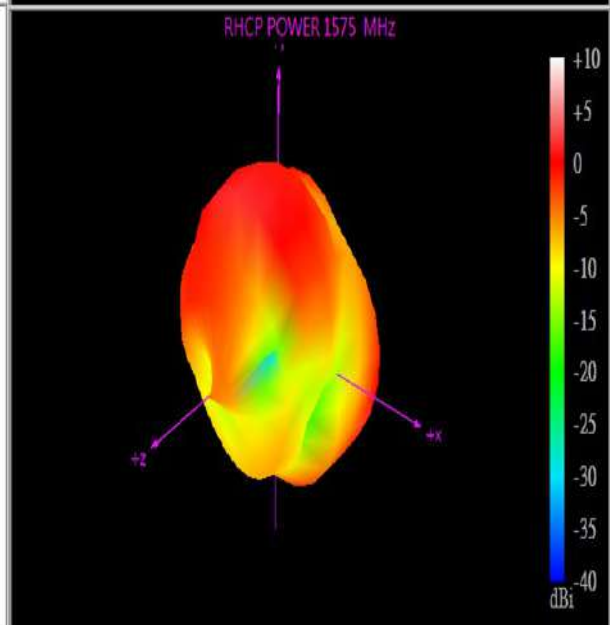
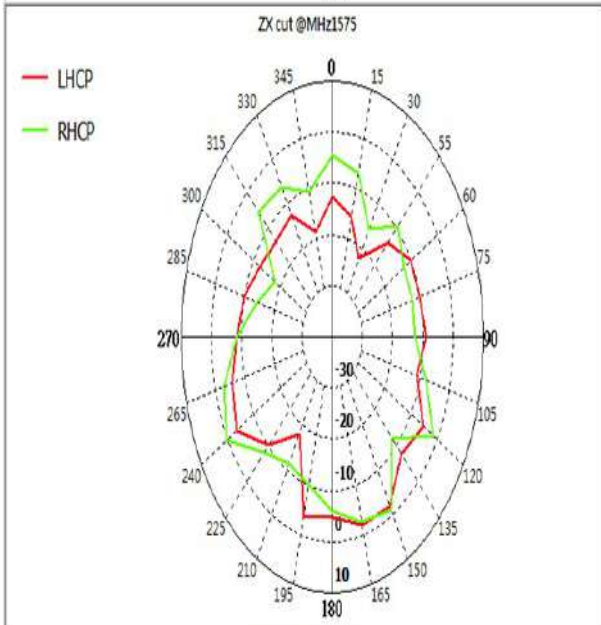
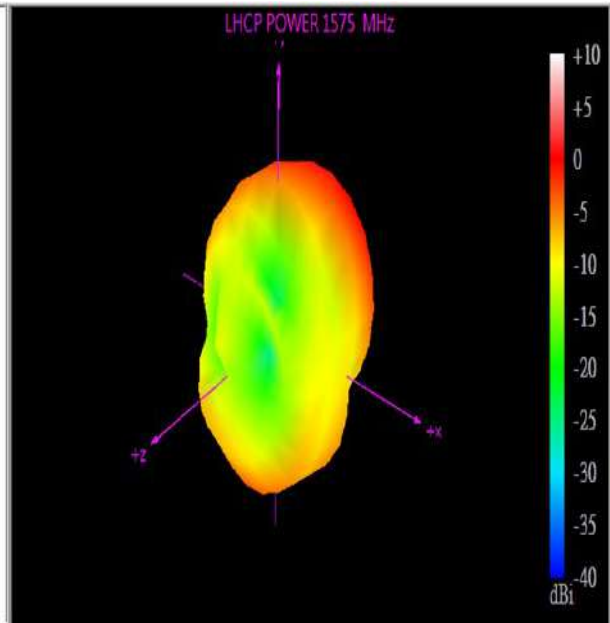
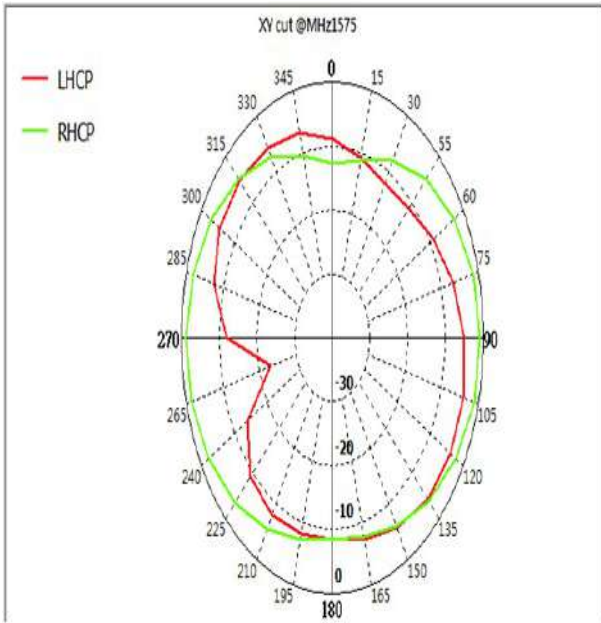
1542Mhz:



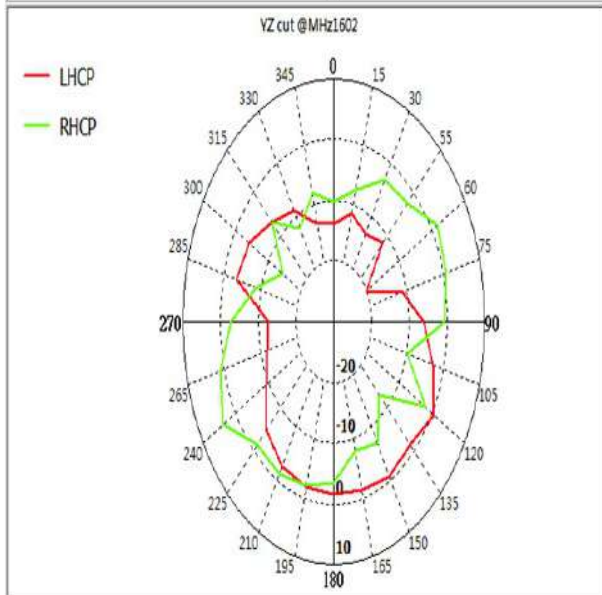
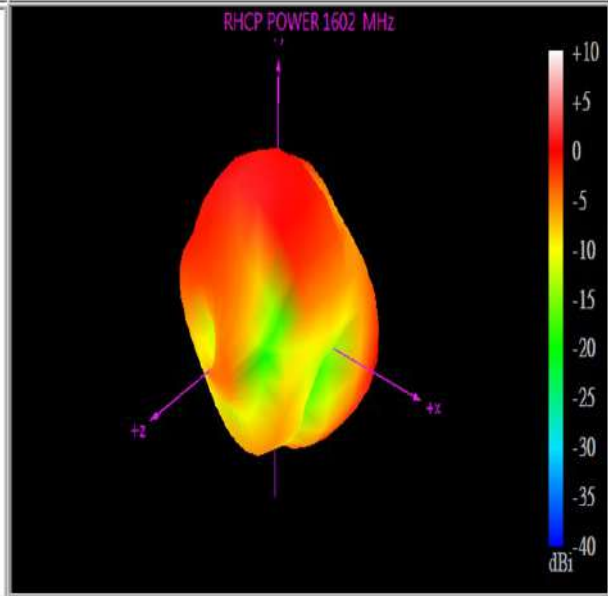
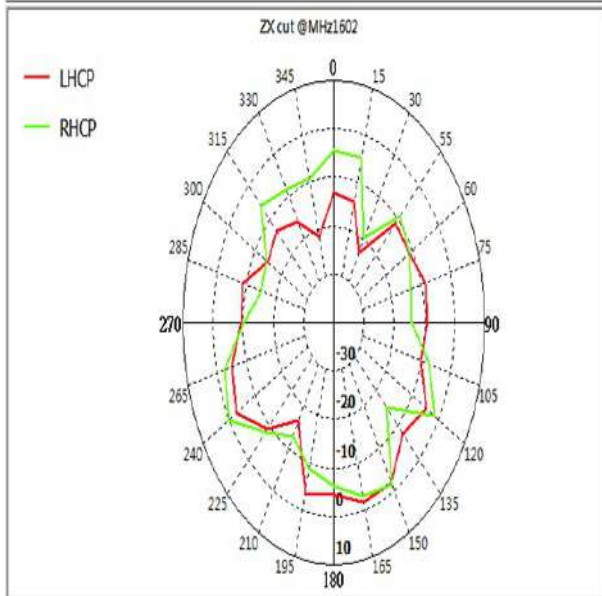
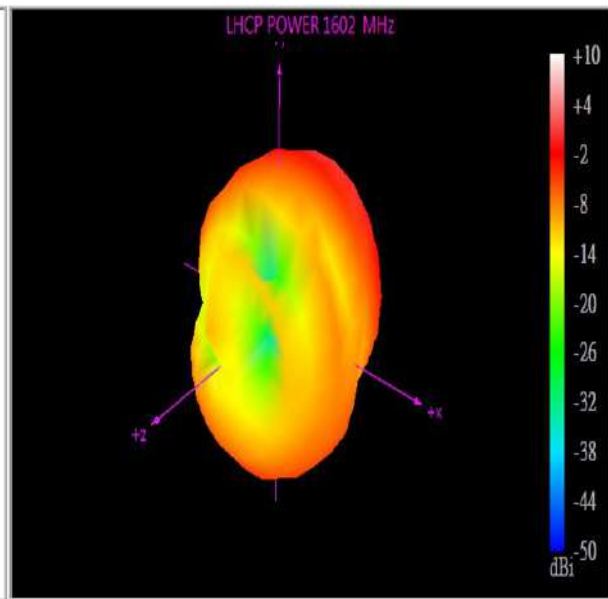
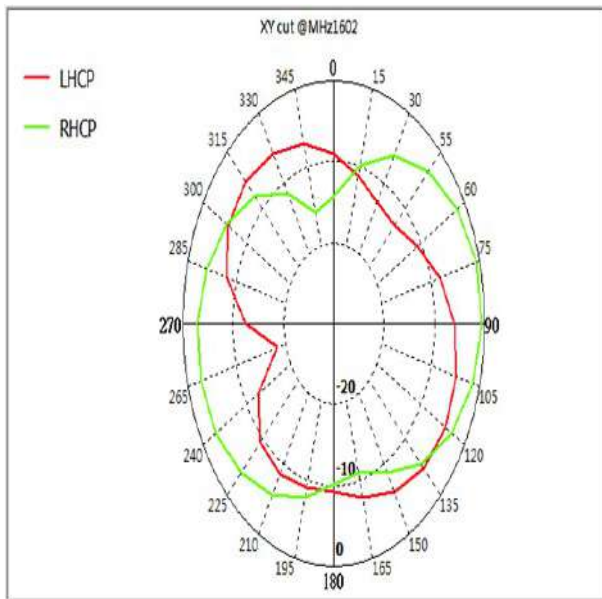
1559Mhz :



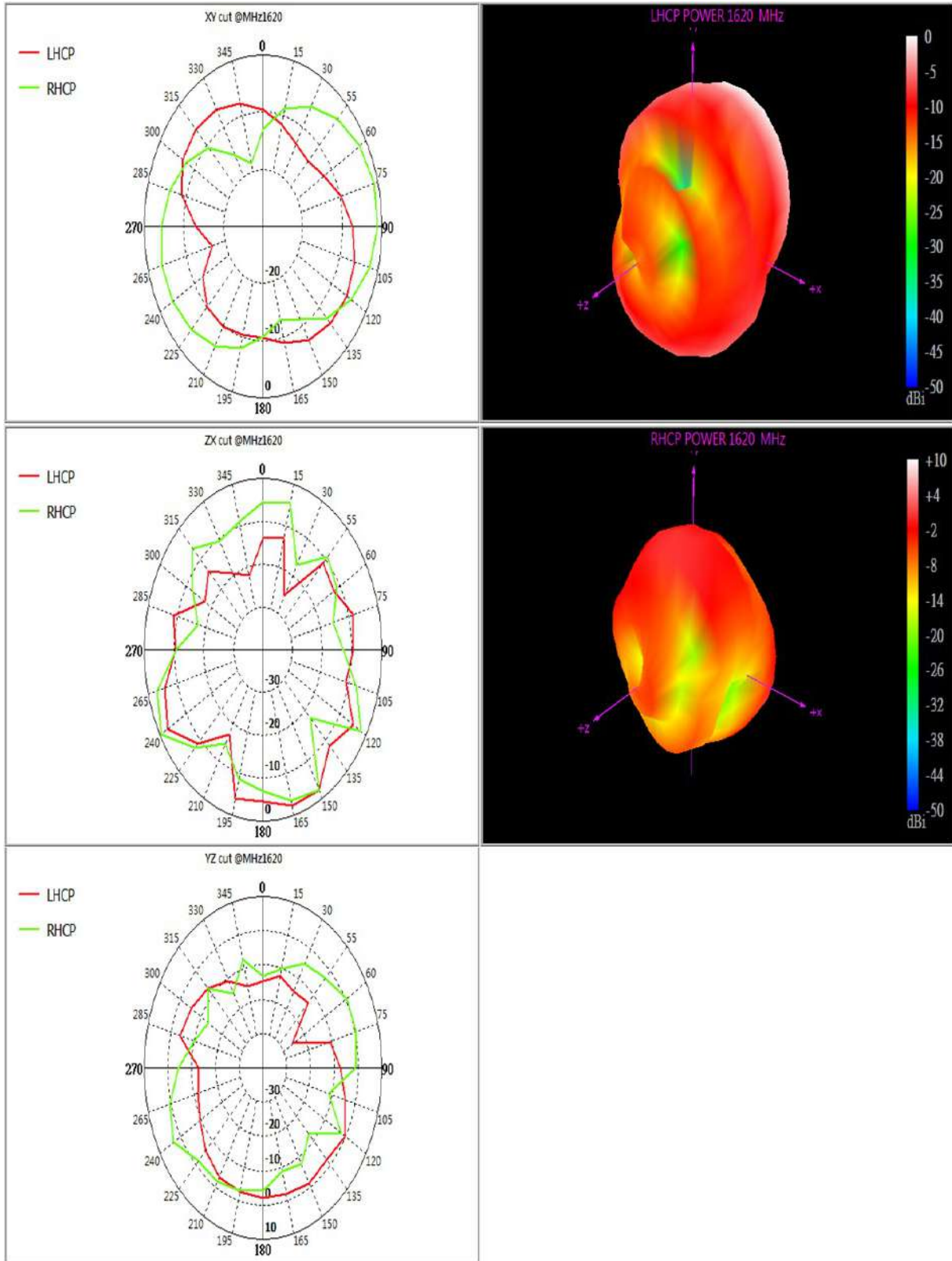
1575Mhz:



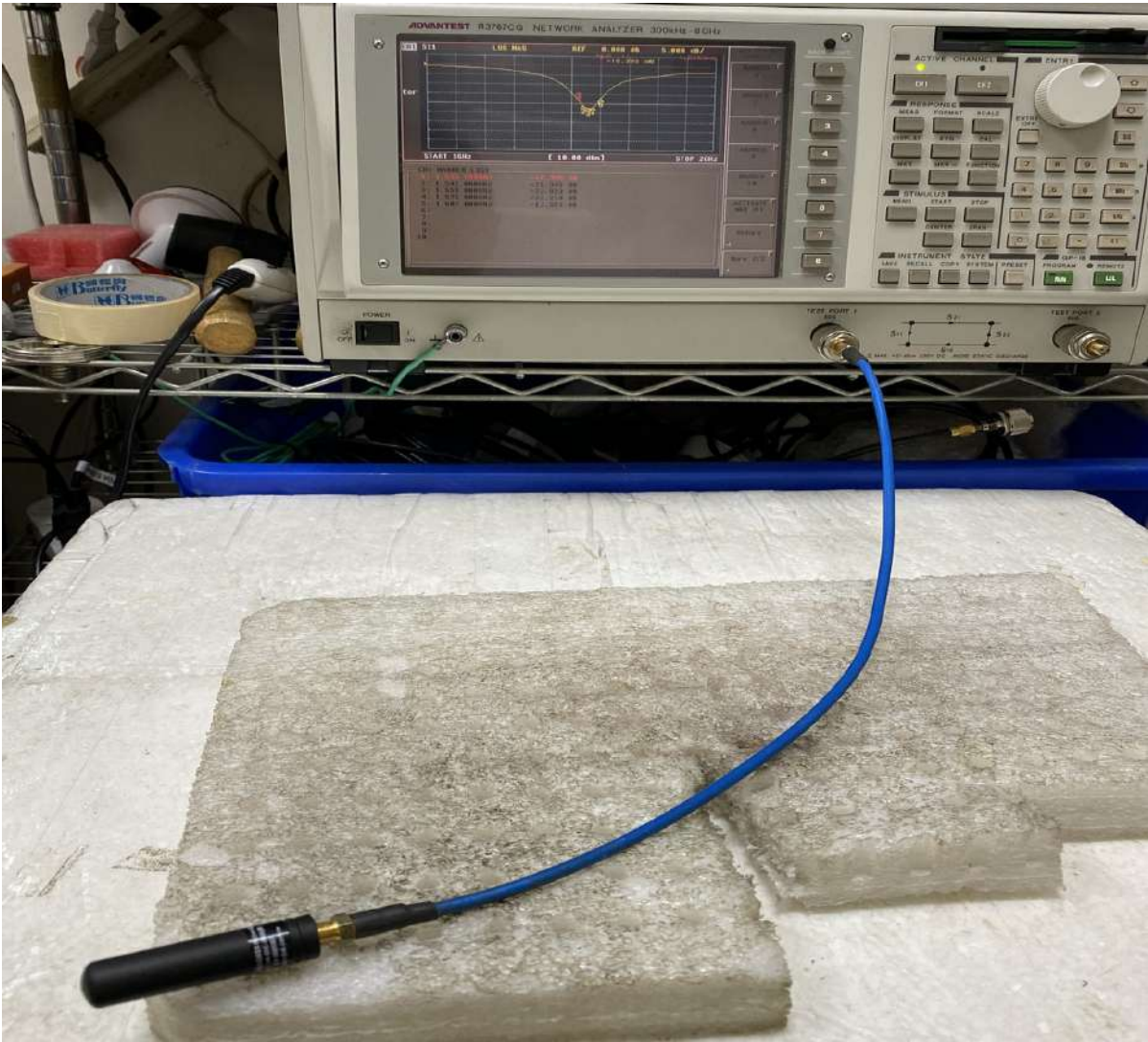
1602MHz:

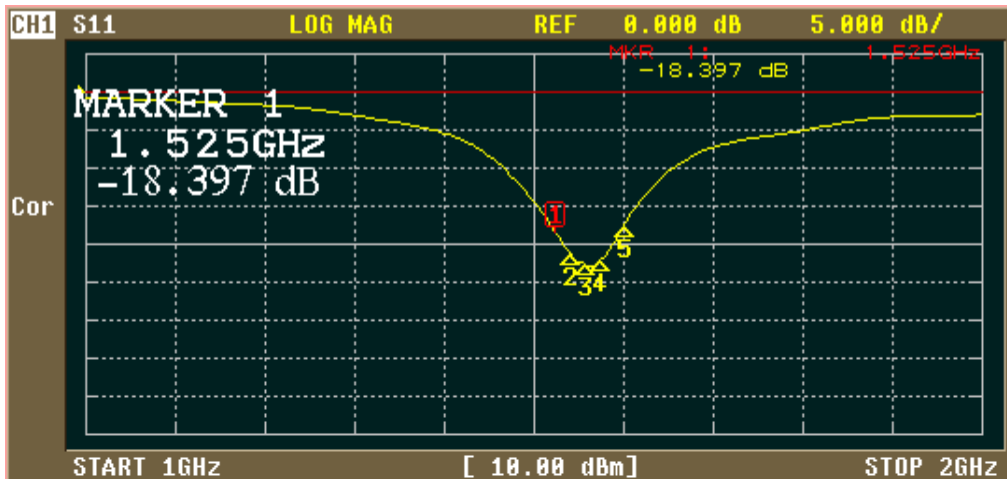


1620Mhz:



Active antenna test :





CH1 MARKER LIST

1:	1.525 000GHz	-18.406 dB
2:	1.542 000GHz	-21.377 dB
3:	1.559 000GHz	-22.854 dB
4:	1.575 000GHz	-22.244 dB
5:	1.602 000GHz	-17.364 dB
6:		
7:		
8:		
9:		
10:		

ACTIVATE MARKER

MARKER 6

MARKER 7

MARKER 8

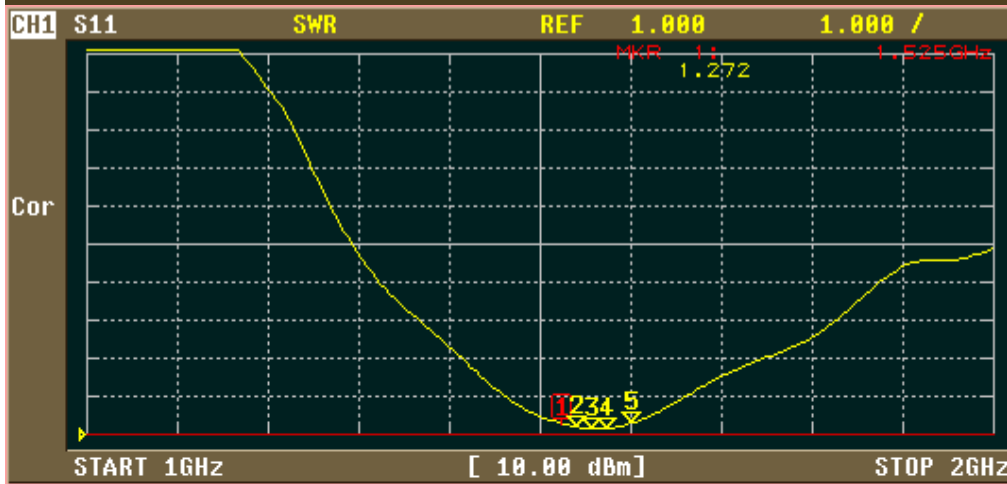
MARKER 9

MARKER 10

ACTIYATE MKR OFF

Return

More 2/2



CH1 MARKER LIST

1:	1.525 000GHz	1.272
2:	1.542 000GHz	1.186
3:	1.559 000GHz	1.155
4:	1.575 000GHz	1.167
5:	1.602 000GHz	1.314
6:		
7:		
8:		
9:		
10:		

FORMAT

SWR

REAL

IMAG

PHASE
-∞, +∞

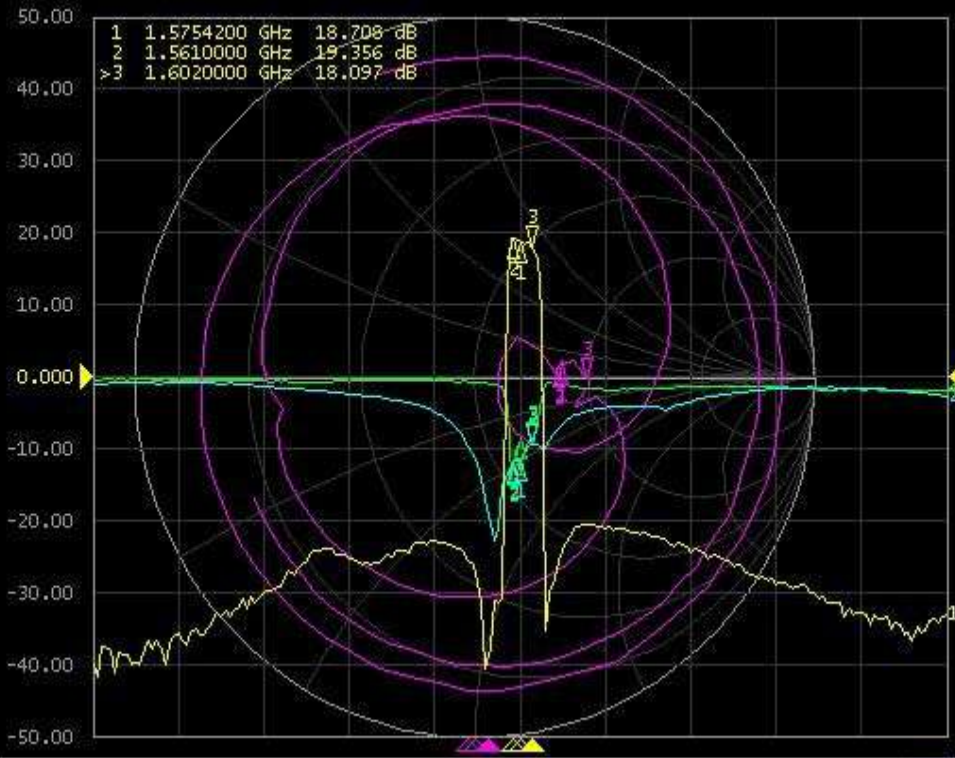
LOG MAG & PHASE

LOG MAG & DELAY

LIN MAG & PHASE

More 2/2

Tr1 S12 Log Mag 10.00dB/ Ref 0.000dB [F2]
Tr2 S11 Log Mag 10.00dB/ Ref 0.000dB [F2]
Tr3 S11 Smith (R+jX) Scale 1.0000 [F2]
Tr4 S22 Log Mag 10.00dB/ Ref 0.000dB [F2]



1 Center 1.5752 GHz IFBW 30 kHz Span 2 GHz

System

Print

Abort Printing

Printer Setup...

Invert Image
ON

Dump
Screen Image...

87050/75 Setup

Misc Setup

Backlight
ON

Firmware
Revision