

Internal BC1 & BC10 Antennas (Airvana Femetocell Train5)

TEST REPORT

Product Description:	BC1(AIVF-130313) for 1850~1990MHz BC10(AIVF-130314) for 820~869MHz	
PENSON MPN:	BC1: EM18190103 BC10: EM08080103	
Antenna Revision:	V2	
Date:	2011.10.13	
Report by:	Winston Cheng	
Performance Check:	VSWR:	PASS
	Gain &Patterns:	PASS

#1. ANTENNA LOCATION

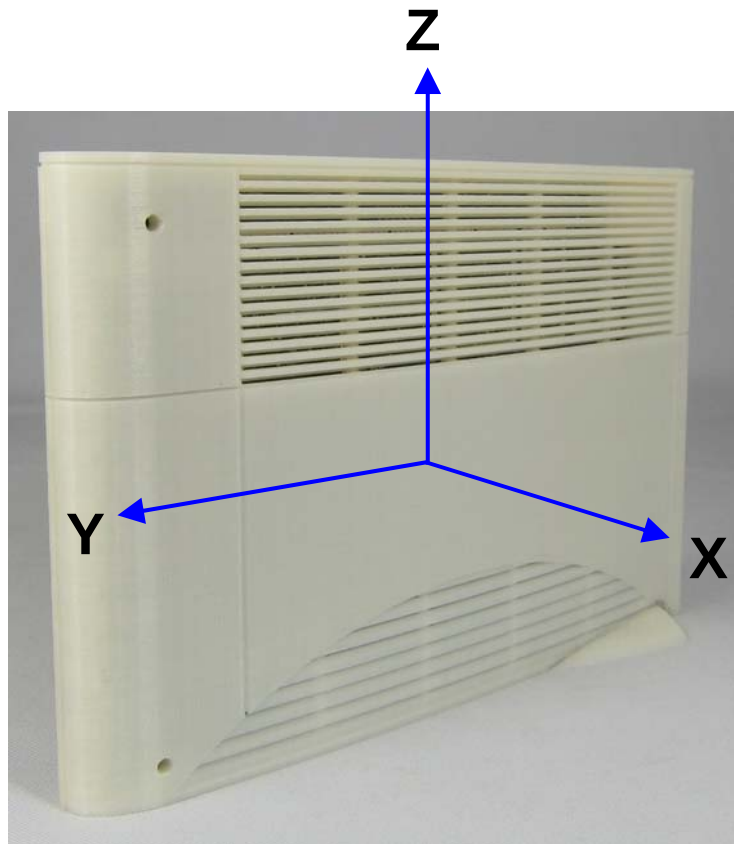


(PCBA alone)



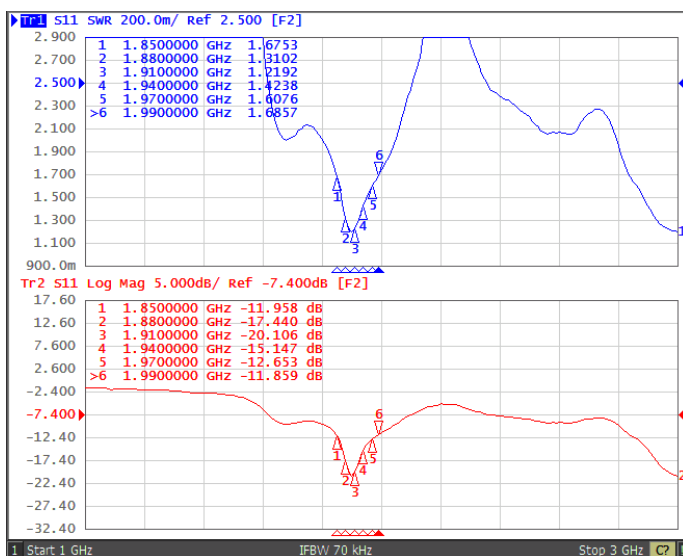
(Set in the enclosure)

#2. MEASUREMENT ORIENTATION

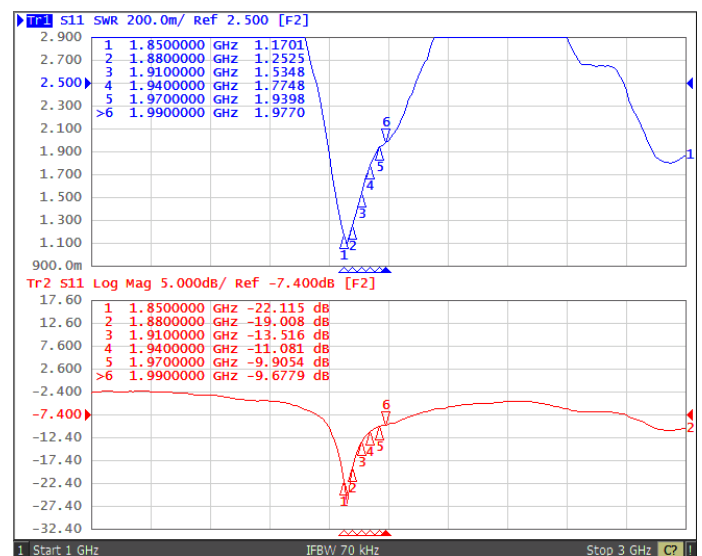


#3. VSWR/RETURN LOSS MEASUREMENT RESULT

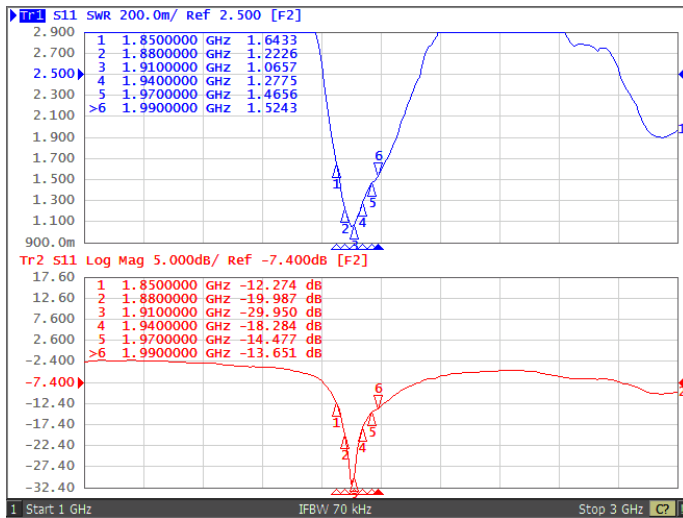
BC1-1



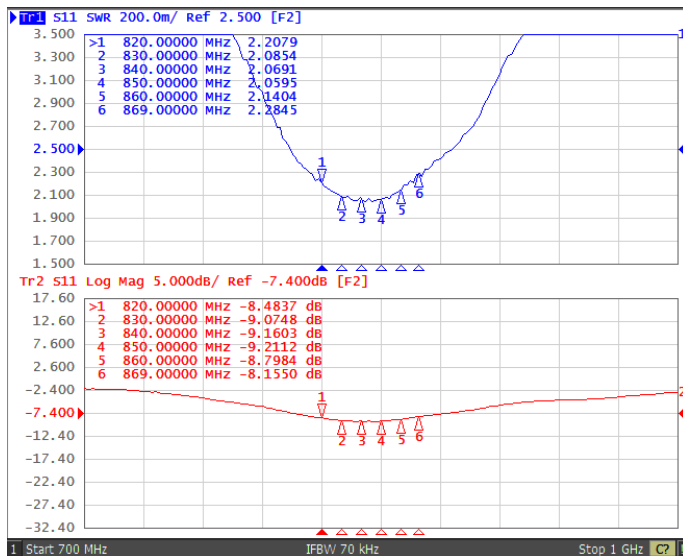
BC1-2



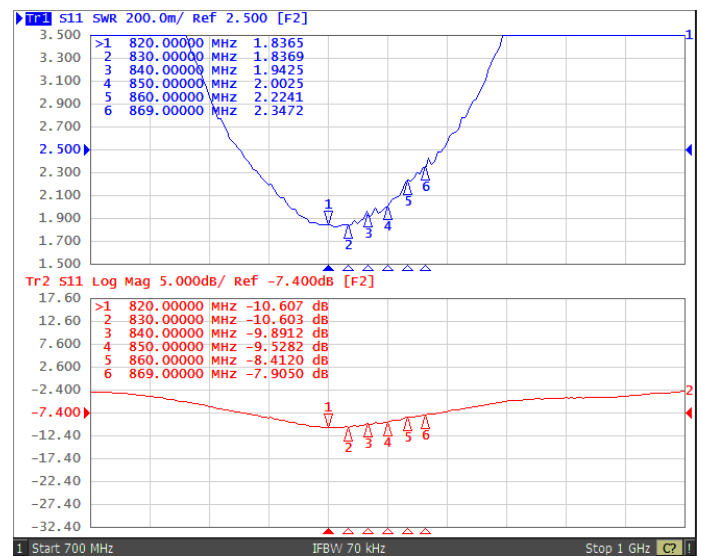
BC1-3



BC10-1



BC10-2

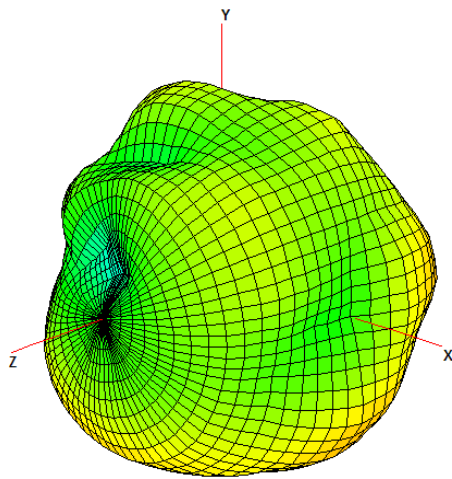
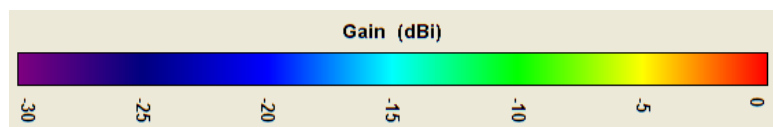
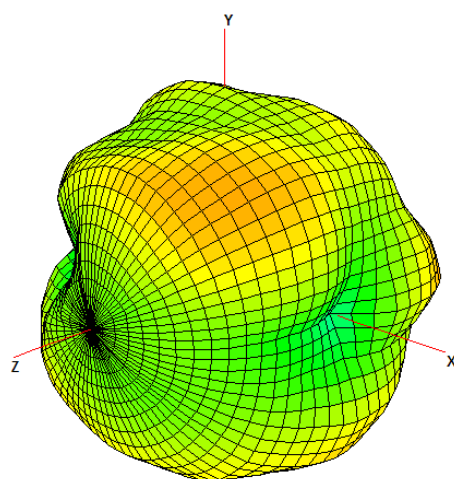
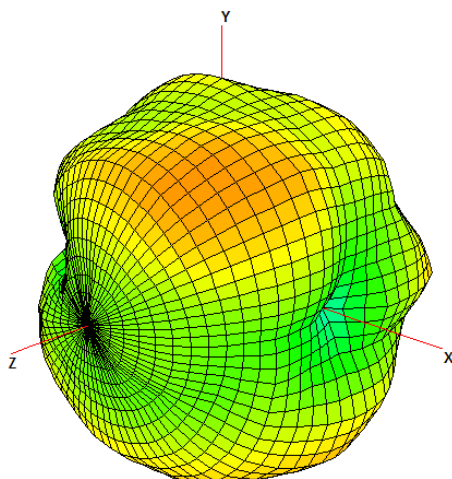
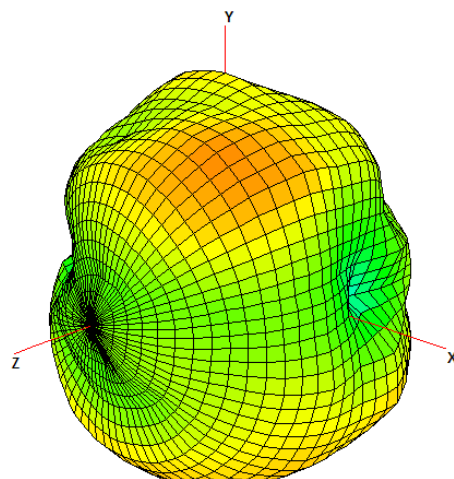


#4. GAIN & EFFICIENCY & PATTERNS MEASUREMENT RESULT

4.1. BC1-1

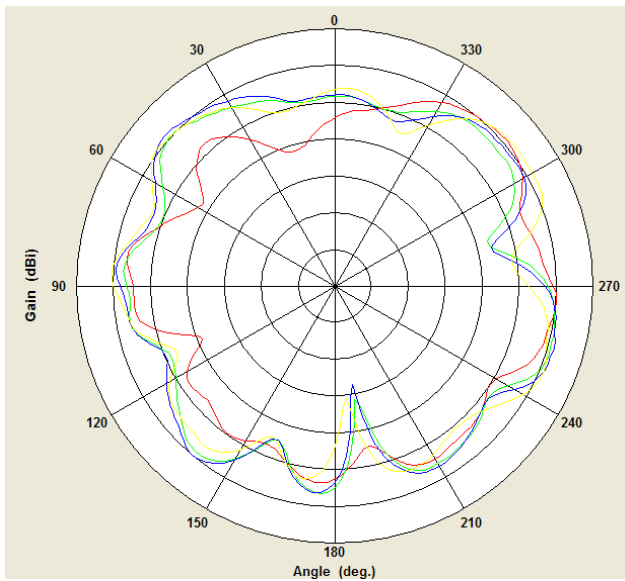
Frequency (MHz)	1850	1910	1930	1990
Peak Gain (dBi)	0.27	-0.88	-0.78	0.03
Avg. gain (dBi)	-3.52	-3.09	-3.04	-3.50
Efficiency (%)	45.98	41.78	53.04	46.17

The measurement tolerance of Gain: +/-0.5dB.

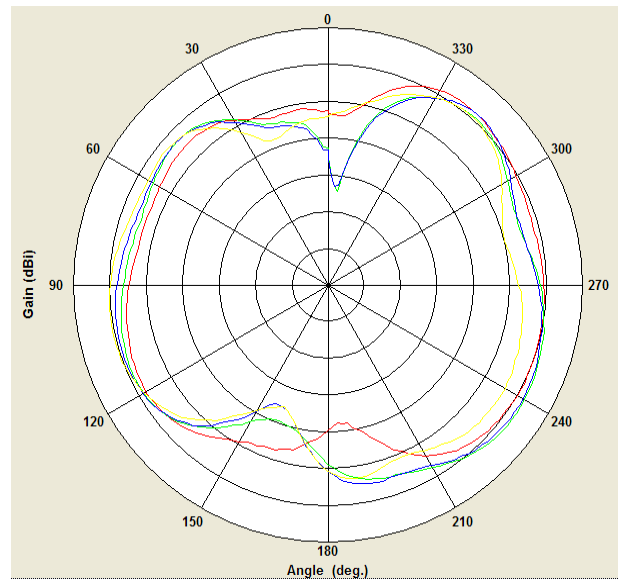
3D Patterns1850 MHz1910 MHz1930 MHz1990 MHz

2D Patterns

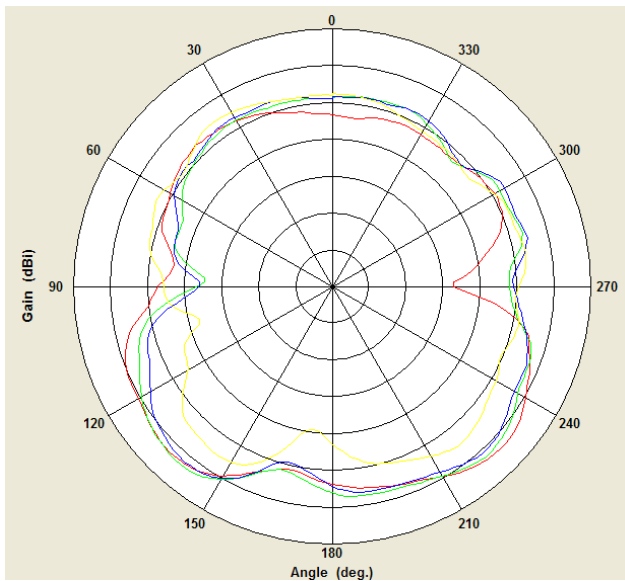
Y-Z Plane(H+V) Patterns



X-Y Plane(H+V) Patterns



Z-X Plane(H+V) Patterns

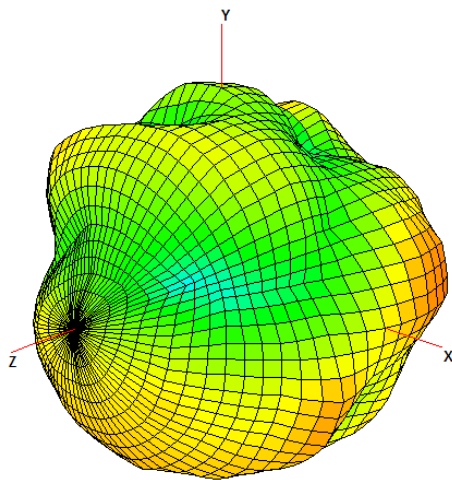
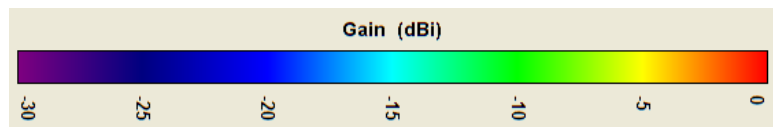
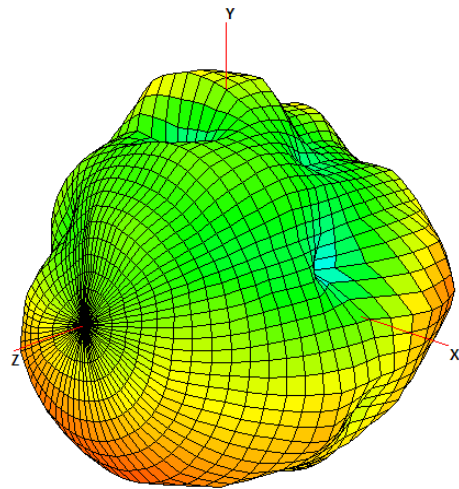
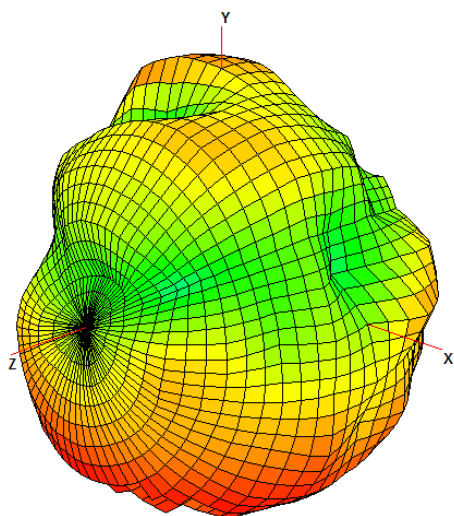
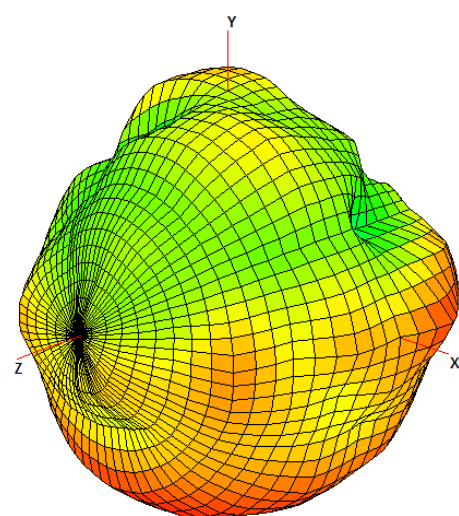


- 1850 MHz
- 1910 MHz
- 1930 MHz
- 1990 MHz

4.2. BC1-2

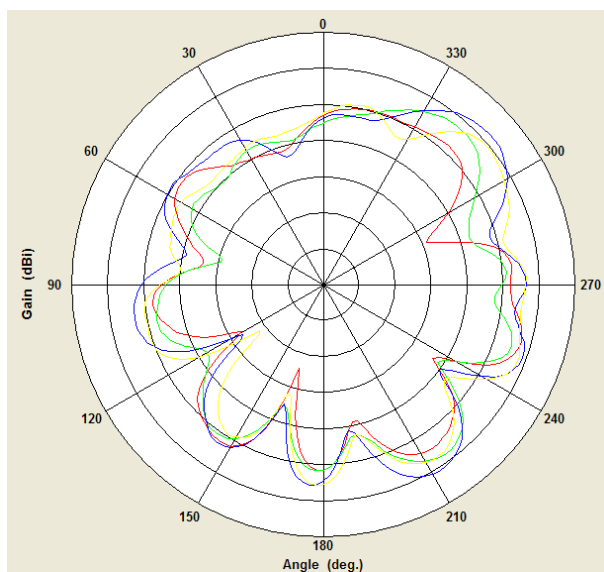
Frequency (MHz)	1850	1910	1930	1990
Peak Gain (dBi)	-0.77	-1.73	0.02	0.09
Avg. gain (dBi)	-3.45	-3.34	-4.25	-4.07
Efficiency (%)	42.66	43.23	34.26	41.15

The measurement tolerance of Gain: $\pm 0.5\text{dB}$.

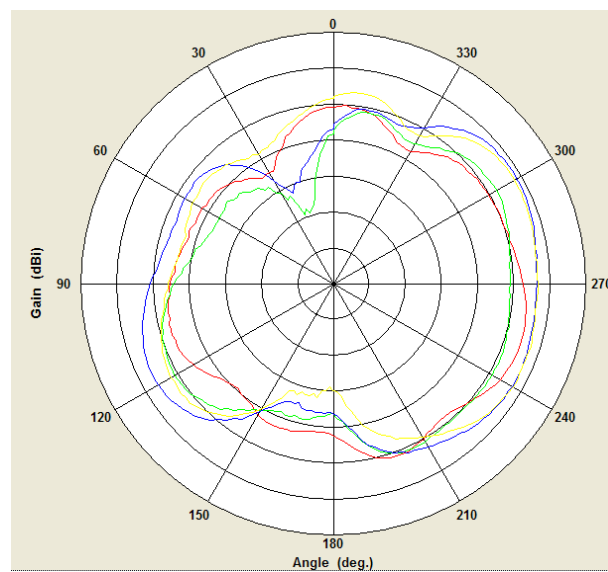
3D Patterns1850 MHz1910 MHz1930 MHz1990 MHz

2D Patterns

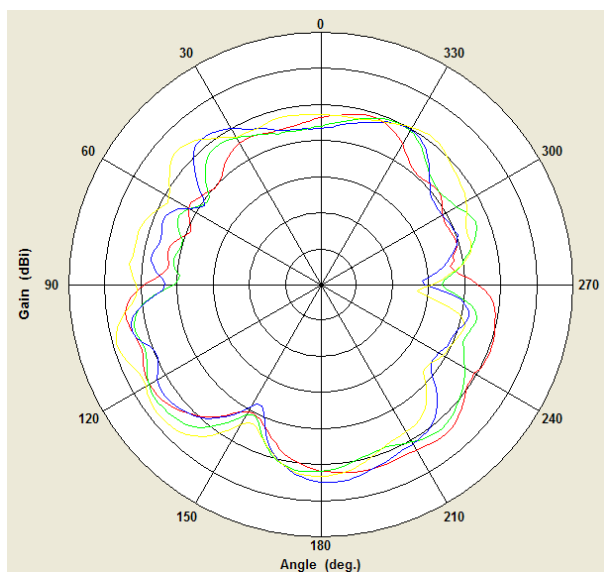
Y-Z Plane(H+V) Patterns



X-Y Plane(H+V) Patterns



Z-X Plane(H+V) Patterns

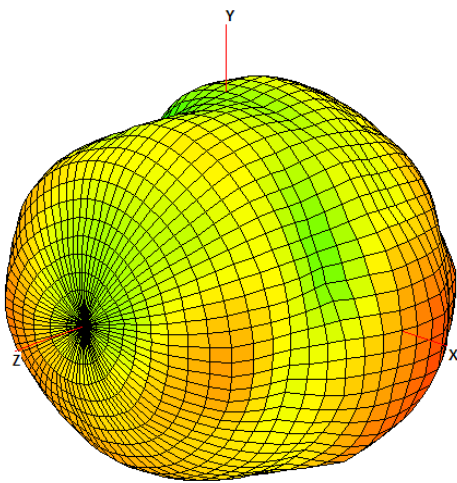
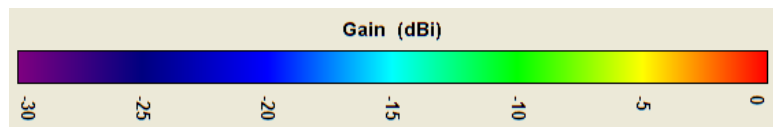
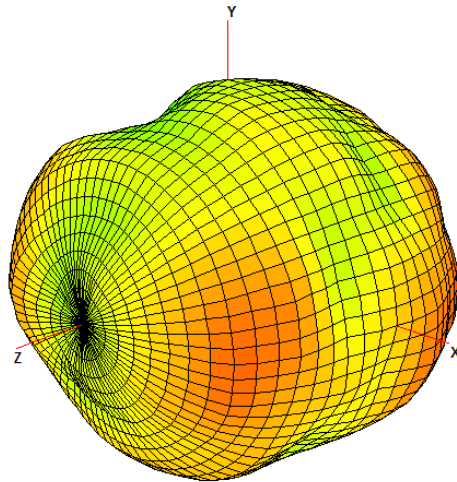
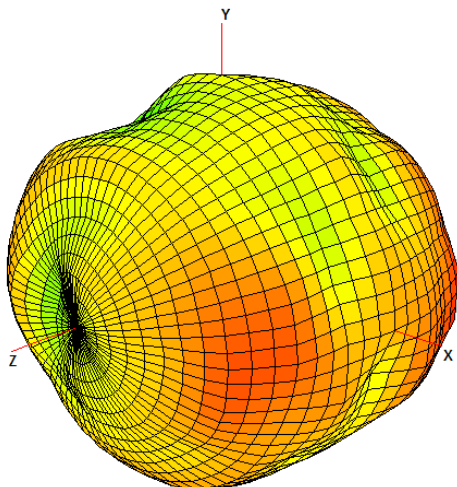
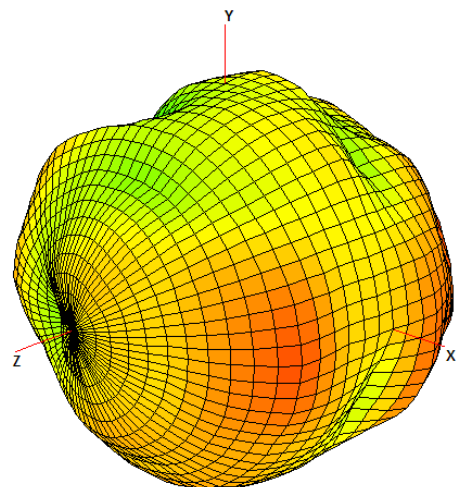


- 1850 MHz
- 1910 MHz
- 1930 MHz
- 1990 MHz

4.3. BC1-3

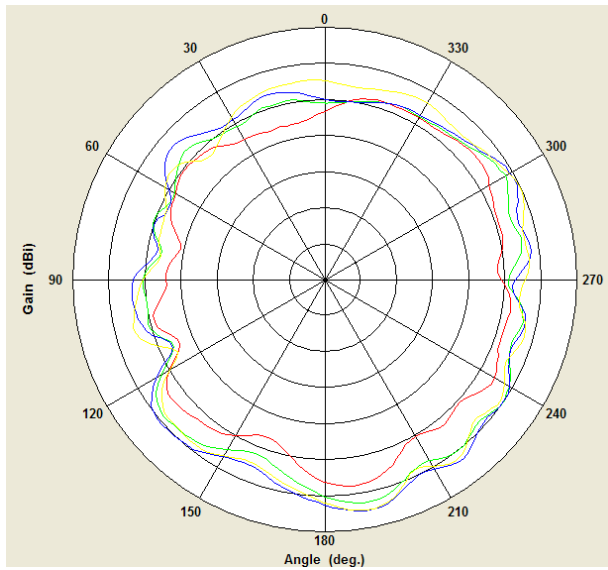
Frequency (MHz)	1850	1910	1930	1990
Peak Gain (dBi)	-1.45	-0.63	-0.95	-0.25
Avg. gain (dBi)	-4.09	-4.57	-3.86	-3.31
Efficiency (%)	41.01	45.39	55.18	48.79

The measurement tolerance of Gain: +/-0.5dB.

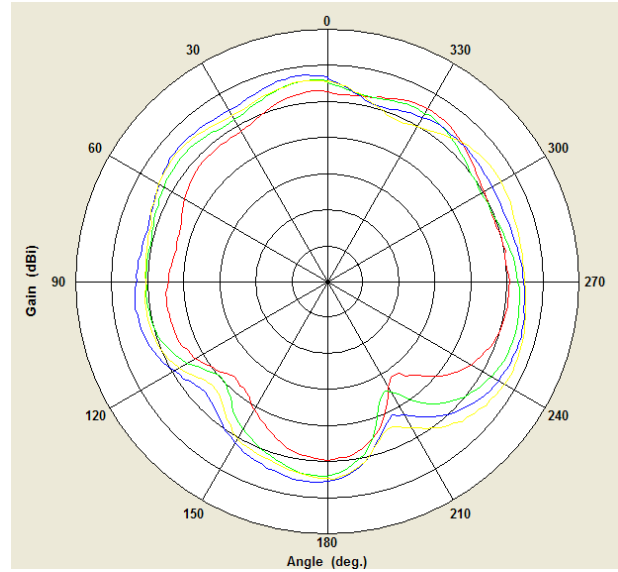
3D Patterns**1850 MHz****1910 MHz****1930 MHz****1990 MHz**

2D Patterns

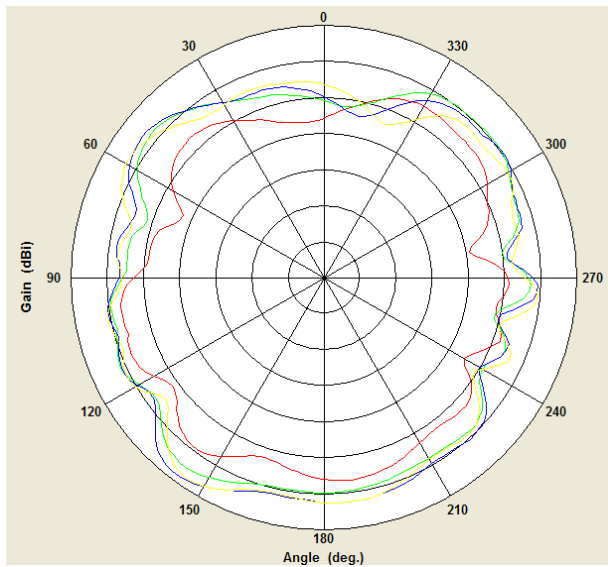
Y-Z Plane(H+V) Patterns



X-Y Plane(H+V) Patterns



Z-X Plane(H+V) Patterns

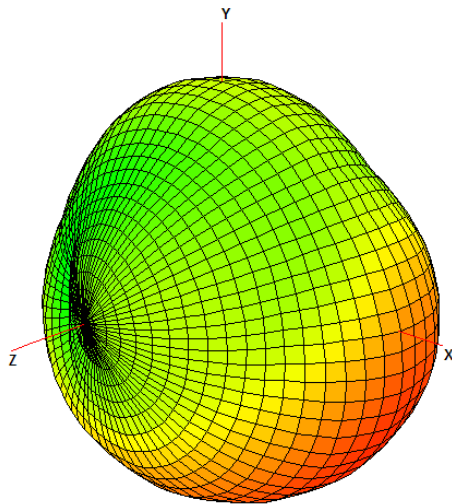
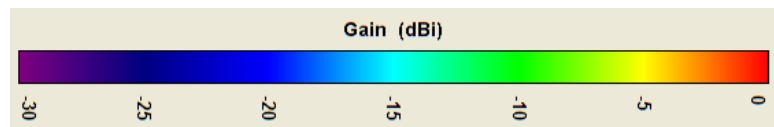
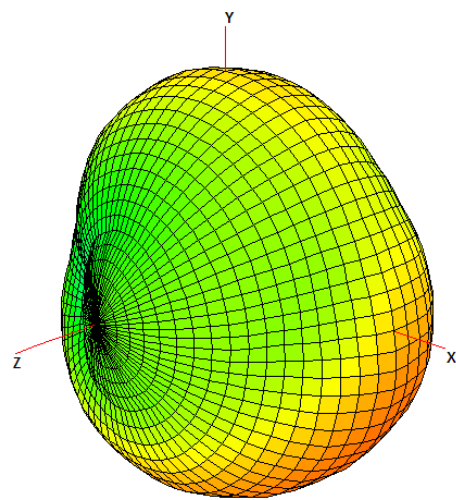
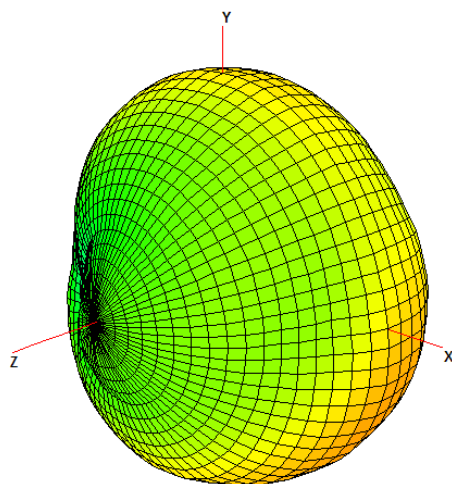
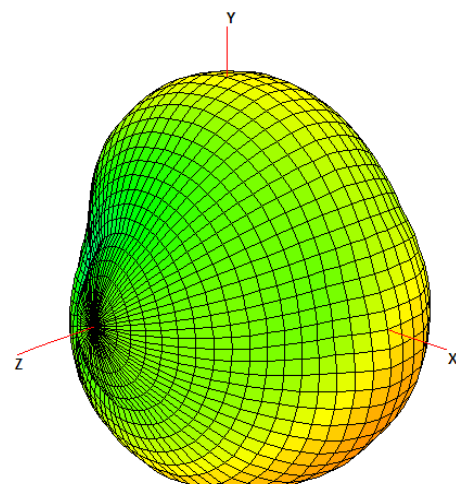


- 1850 MHz
- 1910 MHz
- 1930 MHz
- 1990 MHz

4.4. BC10-1

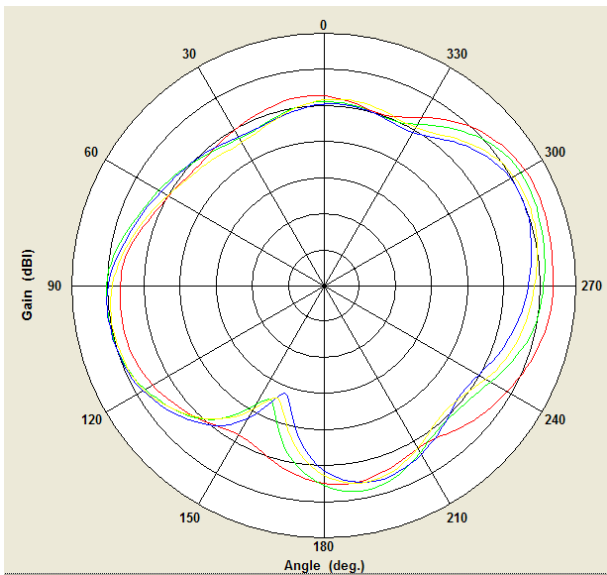
Frequency (MHz)	820	840	860	869
Peak Gain (dBi)	-1.81	-1.24	-0.45	-1.08
Avg. gain (dBi)	-5.73	-5.59	-4.41	-5.56
Efficiency (%)	26.76	31.95	38.15	37.54

The measurement tolerance of Gain: $\pm 0.5\text{dB}$.

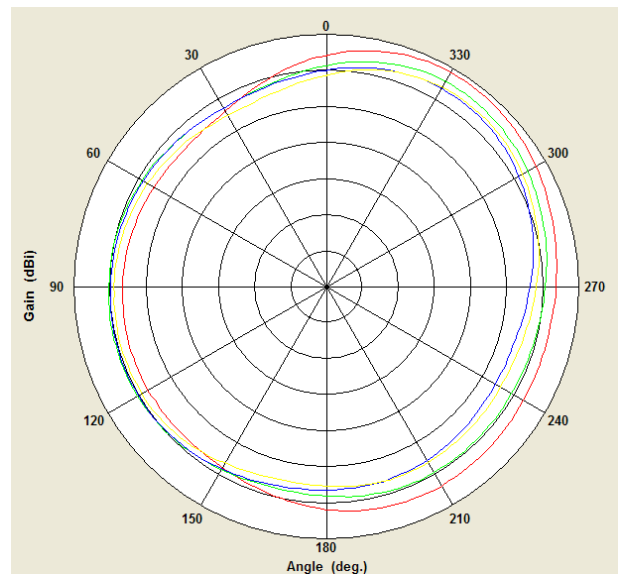
3D Patterns820 MHz840 MHz860 MHz869 MHz

2D Patterns

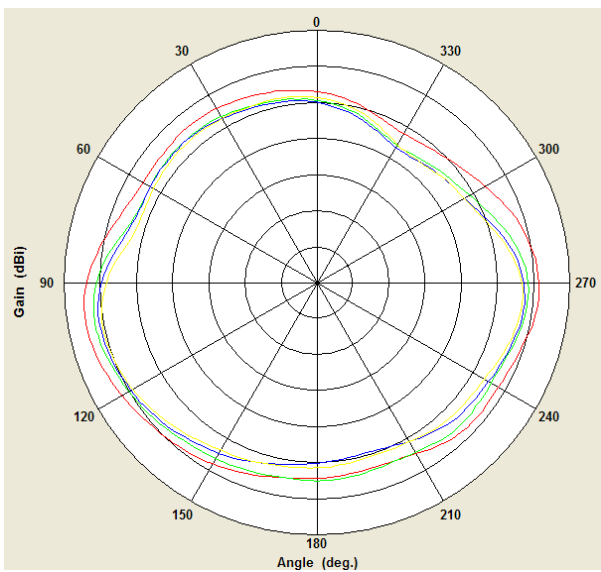
Y-Z Plane(H+V) Patterns



X-Y Plane(H+V) Patterns



Z-X Plane(H+V) Patterns

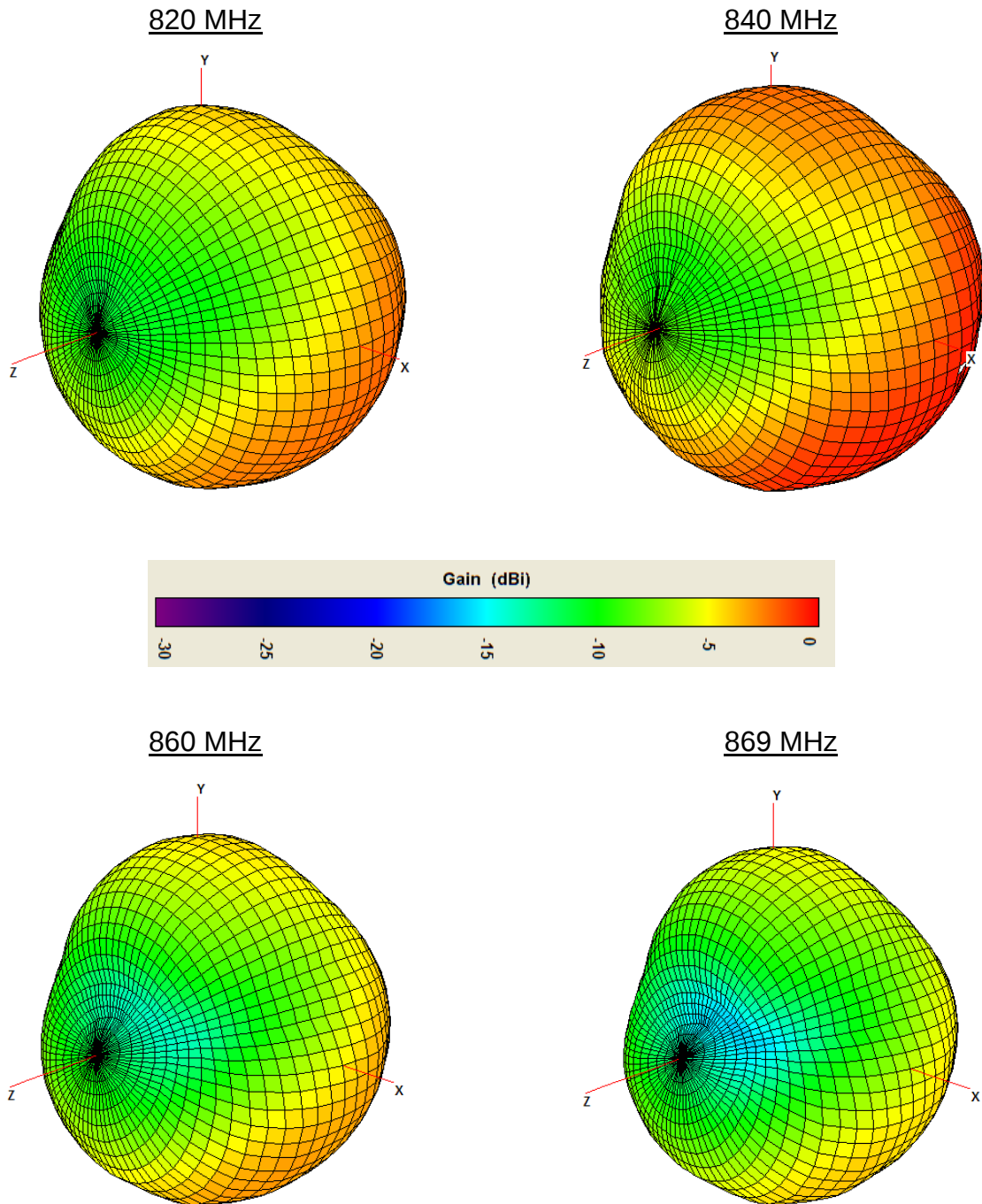


- 820 MHz
- 840 MHz
- 860 MHz
- 869 MHz

4.5. BC10-2

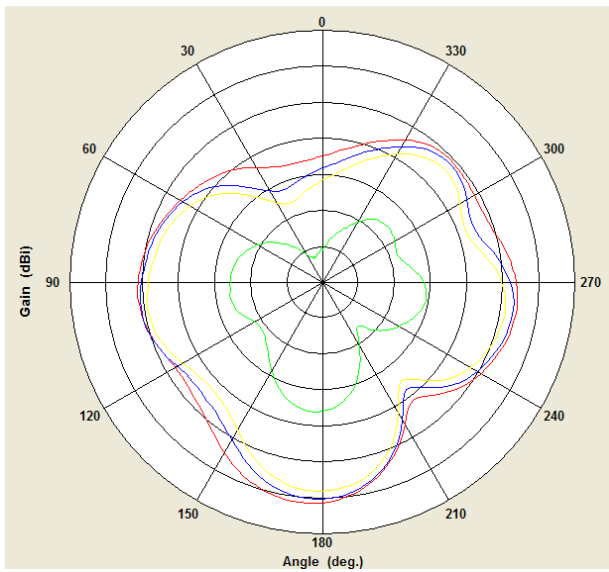
Frequency (MHz)	820	840	860	869
Peak Gain (dBi)	-1.46	-2.13	-0.29	-0.46
Avg. gain (dBi)	-4.19	-6.05	-5.27	-5.52
Efficiency (%)	38.13	31.97	39.74	32.31

The measurement tolerance of Gain: +/-0.5dB.

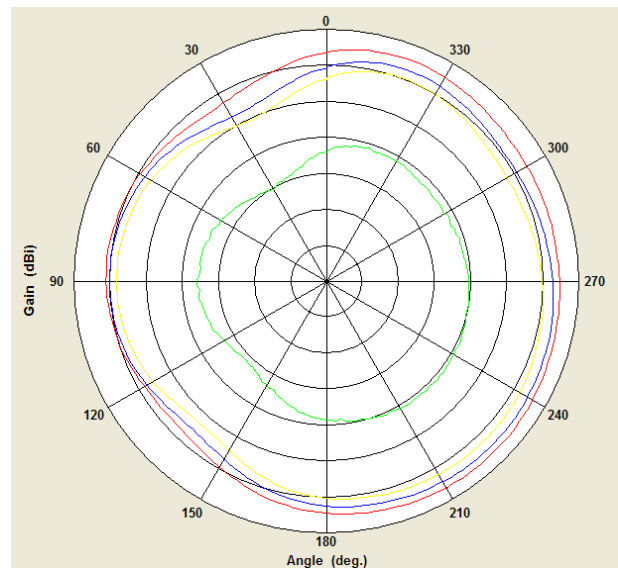
3D Patterns

2D Patterns

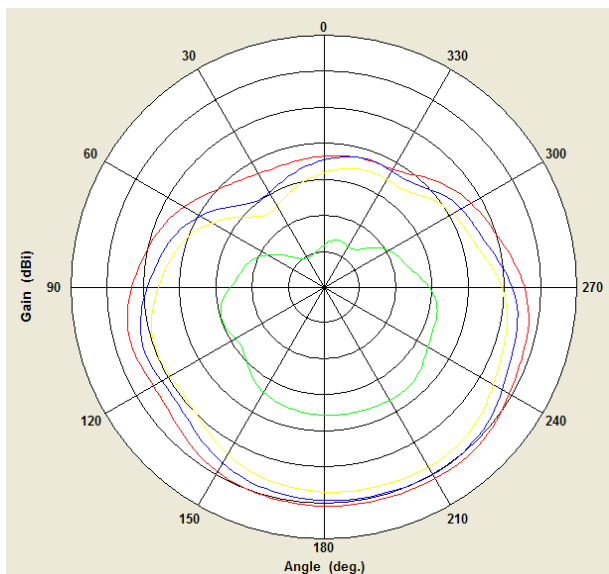
Y-Z Plane(H+V) Patterns



X-Y Plane(H+V) Patterns



Z-X Plane(H+V) Patterns



- 820 MHz
- 840 MHz
- 860 MHz
- 869 MHz

END OF REPORT