

Antenna Regulatory Information

• Product type	• WWAN antenna
• Model number	• DELL Latitude E4200
• Revision	• Rev. 1
• Manufacturer Part No. : Main / Aux	• 1556017-1
• Dell Part No. : Main / Aux	•



Template Revision 082009

1. Specifications

Antenna Specifications

Antenna Type (Material, Technology)	PIFA
Antenna Model Number	1556017-1
Operating Frequency Range(s)	824MHz ~ 960MHz and 1710MHz ~ 2170MHz
Peak Gain (Low Band) (dBi)	Main 0.48 / Aux -0.55
Peak Gain (High Band) (dBi)	Main 2.21 / Aux 1.38
Radio Connector Type	IPEX 20278-111R-13
Mid-Line Connector Type (If Applicable)	N/A

Remark: Peak Gains include all system losses (connector, cable, etc)

Cable Specifications

Cable Parameters	Main			Aux		
	LCD Side	Base Side	Total	LCD Side	Base Side	Total
Length (mm)	N/A	N/A	329	N/A	N/A	260
Loss (Including Connectors) (dB, 0.9GHz / 2GHz)			0.75 / 1.03			0.60 / 0.81
Description (Color, Diameter, Manufacturer)	Color: White with a gray stripe OD: 1.13 mm(low loss) Vendor: Sumitomo or equivalent			Color: Black with a gray stripe OD: 1.13 mm (low loss) Vendor: Sumitomo or equivalent		

2. Antenna Assembly

Main Antenna

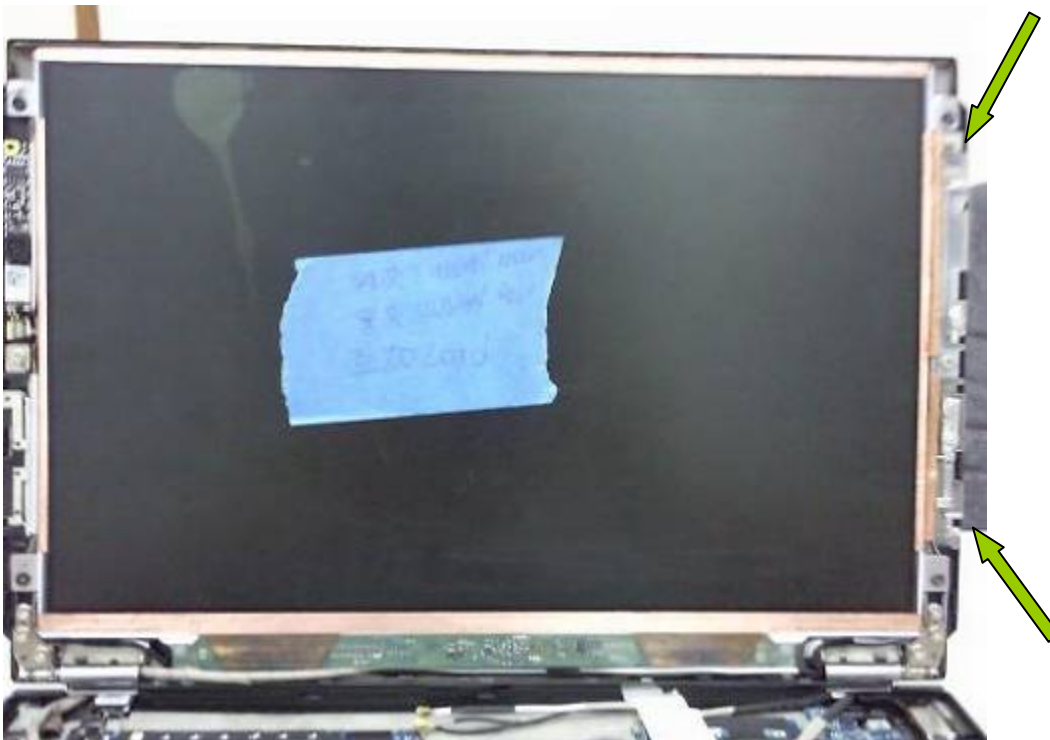


Aux Antenna



3. Antenna Assembly Installed in The Notebook

Main Antenna



Aux Antenna

4. Mechanical Drawing of Antennas

THIS DRAWING IS UNCONTROLLED
IF THIS CUSTOMER ORDER NUMBER
DOES NOT APPEAR ON THIS DRAWING

4 3 2 1

REVISIONS

REV	DATE	DESCRIPTION	BY	CHK
00		ISSUE FOR QUOTE		
01		REVISED DRAWING		
02		REVISED DRAWING		

ITEM	DESCRIPTION	QTY
05	TUBE	PE
06	COIL	HEAT-SHRINKABLE POLYMER BLACK/BLACK L155mm
07	TUBE	HEAT-SHRINKABLE POLYMER BLACK/BLACK L155mm
08	TUBE	HEAT-SHRINKABLE POLYMER BLACK/BLACK L155mm
09	TUBE	HEAT-SHRINKABLE POLYMER BLACK/BLACK L155mm
10	CABLE	HEAT-SHRINKABLE POLYMER BLACK/BLACK L155mm
11	TUBE	HEAT-SHRINKABLE POLYMER BLACK/BLACK L155mm
12	TUBE	HEAT-SHRINKABLE POLYMER BLACK/BLACK L155mm
13	TUBE	HEAT-SHRINKABLE POLYMER BLACK/BLACK L155mm
14	TUBE	HEAT-SHRINKABLE POLYMER BLACK/BLACK L155mm
15	TUBE	HEAT-SHRINKABLE POLYMER BLACK/BLACK L155mm
16	TUBE	HEAT-SHRINKABLE POLYMER BLACK/BLACK L155mm

THIS DRAWING IS A CONTROLLED DOCUMENT

DATE: 15/04/07

PROJECT: 1556017

DRAWING NO: A300779

REV: 1.4

DATE: 15/04/07

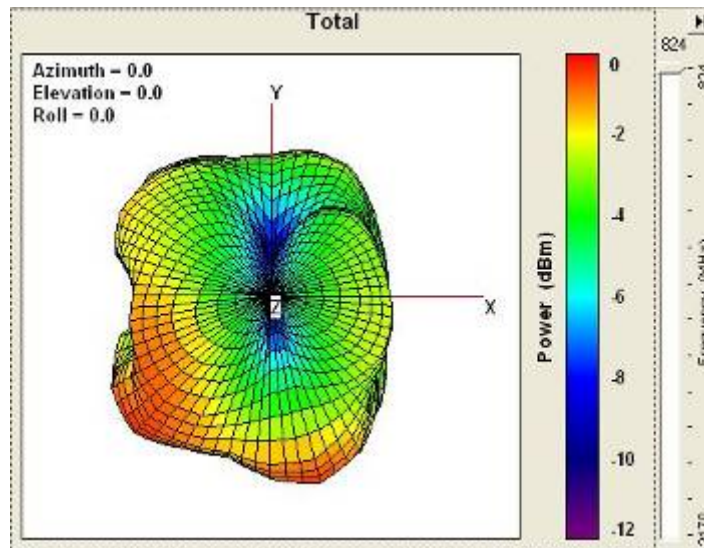
REV: 1.1

REV: 02

5. Gain Patterns

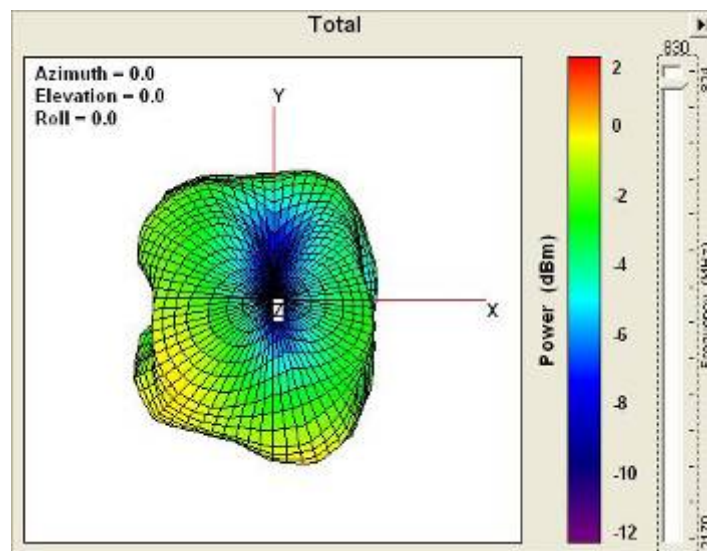
- Main Antenna

824 MHz



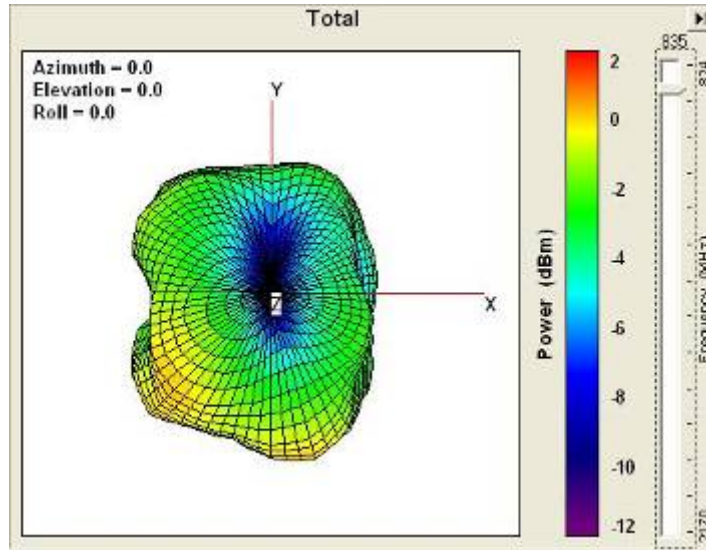
Center Frequency	824 MHz
Theta Peak EIRP(dBm)	-0.35
Phi Peak EIRP(dBm)	-1.14
Efficiency(%)	47.78

830 MHz



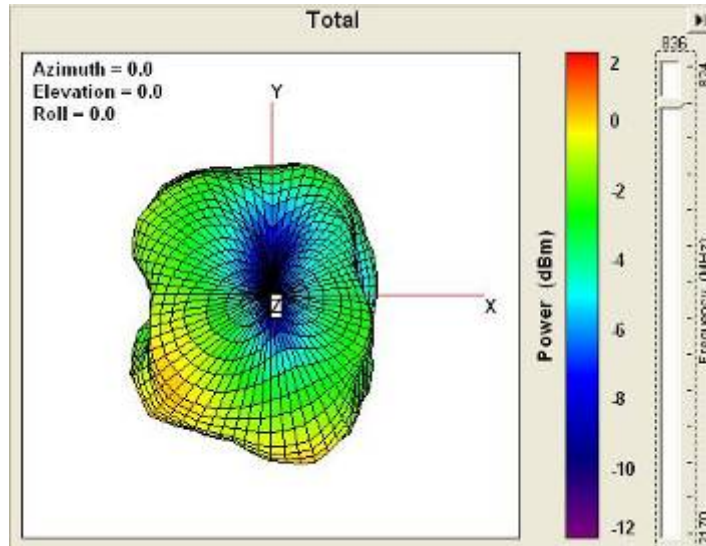
Center Frequency	830 MHz
Theta Peak EIRP(dBm)	0.02
Phi Peak EIRP(dBm)	-0.84
Efficiency(%)	50.11

835 MHz



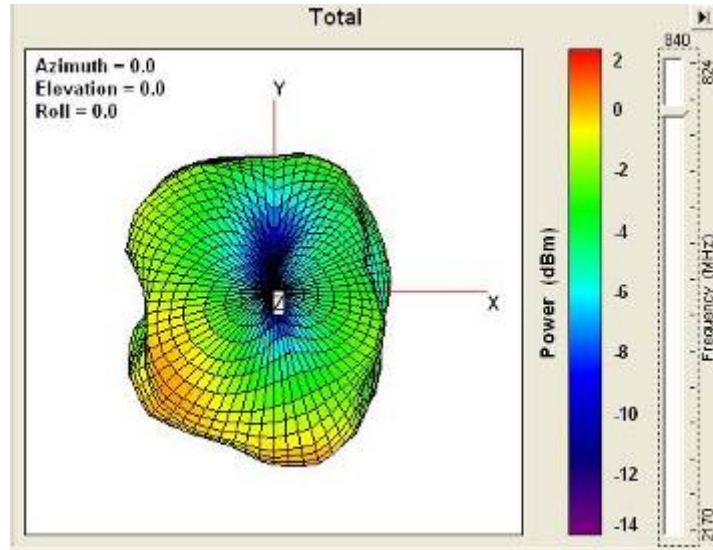
Center Frequency	835 MHz
Theta Peak EIRP(dBm)	0.22
Phi Peak EIRP(dBm)	-0.65
Efficiency(%)	51.09

836 MHz



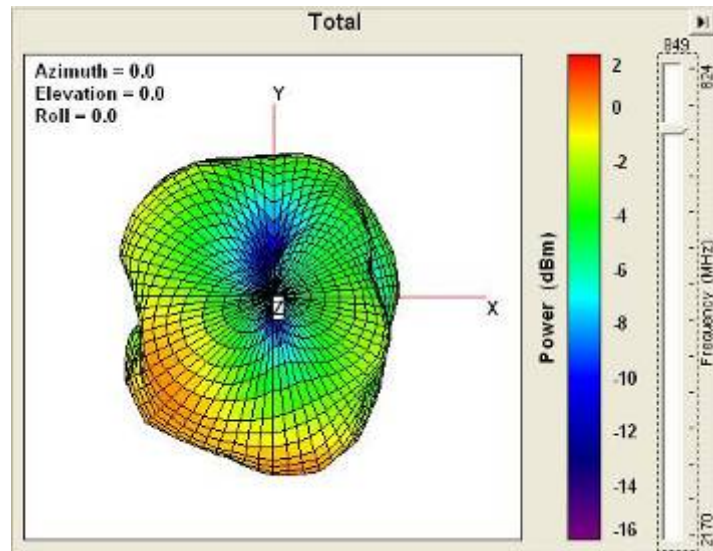
Center Frequency	836 MHz
Theta Peak EIRP(dBm)	0.26
Phi Peak EIRP(dBm)	-0.57
Efficiency(%)	51.33

840 MHz



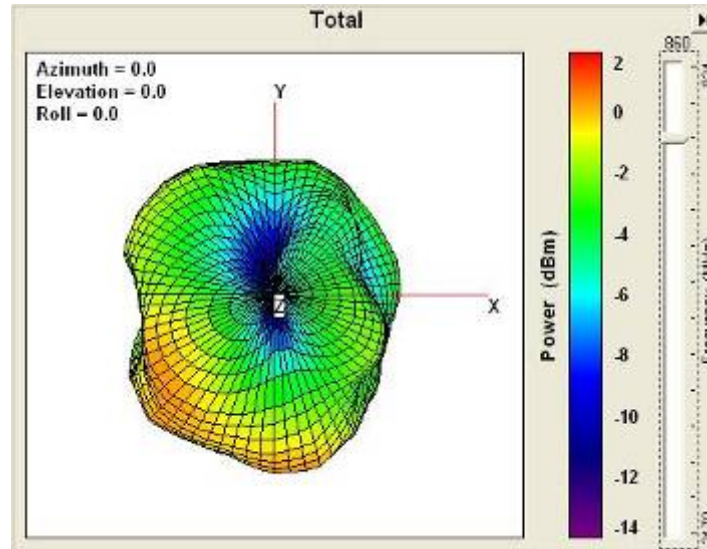
Center Frequency	840 MHz
Theta Peak EIRP(dBm)	0.43
Phi Peak EIRP(dBm)	-0.29
Efficiency(%)	52.34

849 MHz



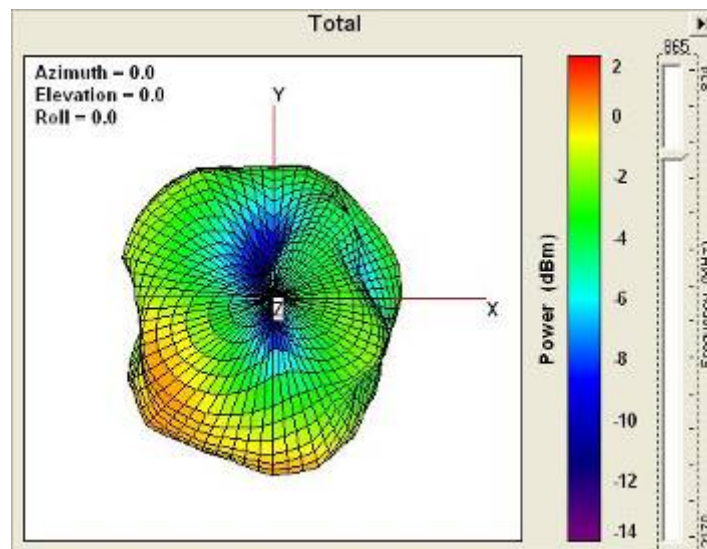
Center Frequency	849 MHz
Theta Peak EIRP(dBm)	0.48
Phi Peak EIRP(dBm)	-0.29
Efficiency(%)	52.04

860 MHz



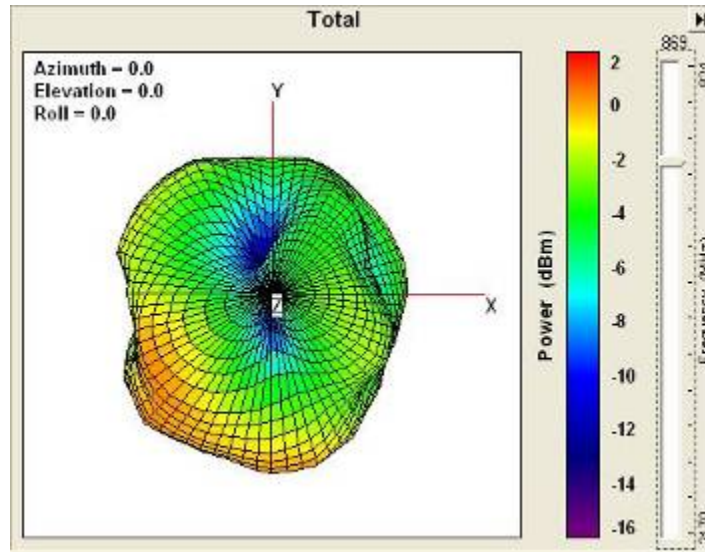
Center Frequency	860 MHz
Theta Peak EIRP(dBm)	0.40
Phi Peak EIRP(dBm)	-0.43
Efficiency(%)	52.28

865 MHz



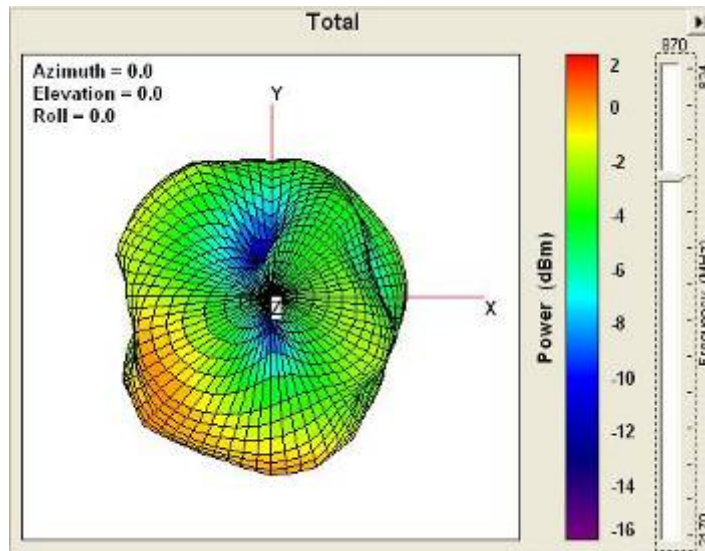
Center Frequency	865 MHz
Theta Peak EIRP(dBm)	0.30
Phi Peak EIRP(dBm)	-0.48
Efficiency(%)	51.80

869 MHz



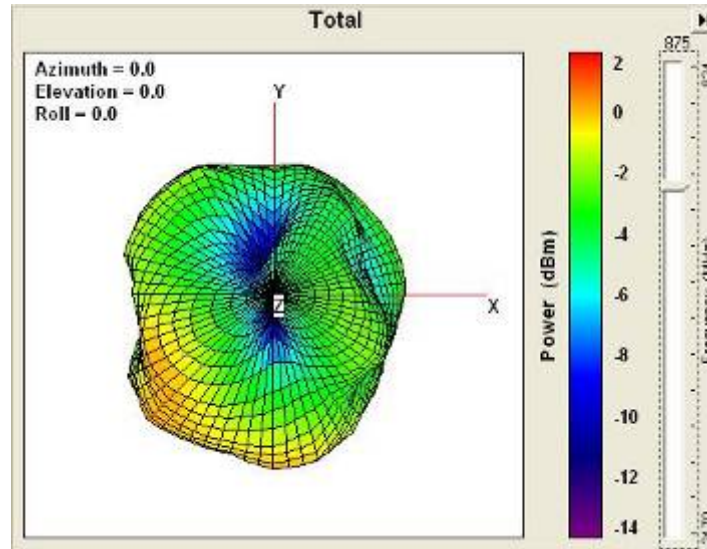
Center Frequency	869 MHz
Theta Peak EIRP(dBm)	0.23
Phi Peak EIRP(dBm)	-0.57
Efficiency(%)	51.61

870 MHz



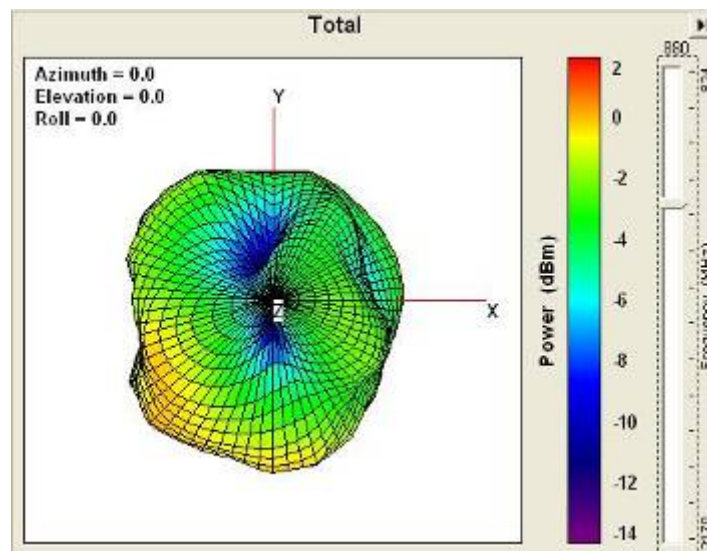
Center Frequency	870 MHz
Theta Peak EIRP(dBm)	0.21
Phi Peak EIRP(dBm)	-0.59
Efficiency(%)	51.56

875 MHz



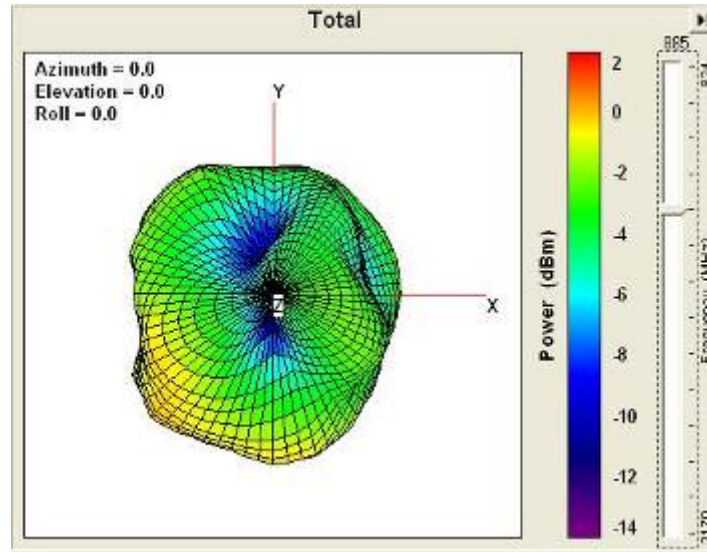
Center Frequency	875 MHz
Theta Peak EIRP(dBm)	0.05
Phi Peak EIRP(dBm)	-0.74
Efficiency(%)	50.88

880 MHz



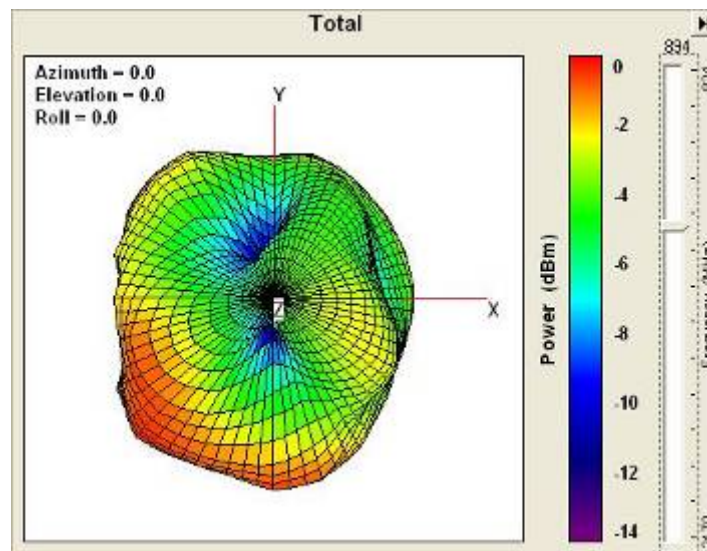
Center Frequency	880 MHz
Theta Peak EIRP(dBm)	-0.10
Phi Peak EIRP(dBm)	-0.94
Efficiency(%)	49.79

885 MHz



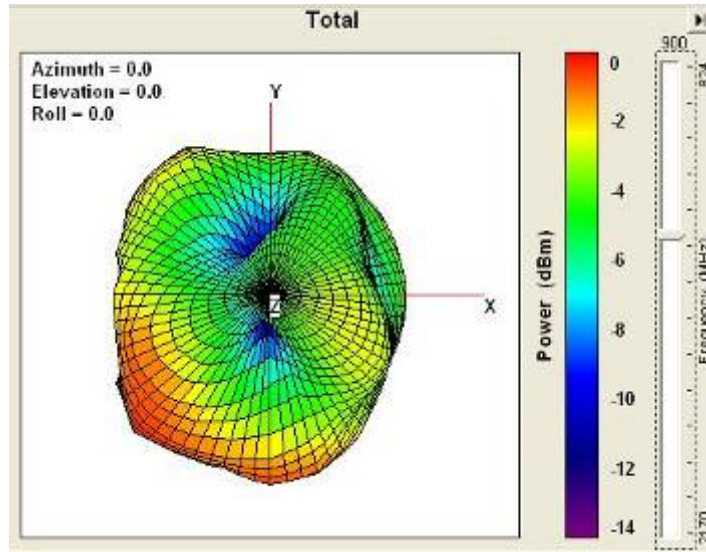
Center Frequency	885 MHz
Theta Peak EIRP(dBm)	-0.10
Phi Peak EIRP(dBm)	-0.94
Efficiency(%)	48.00

894 MHz



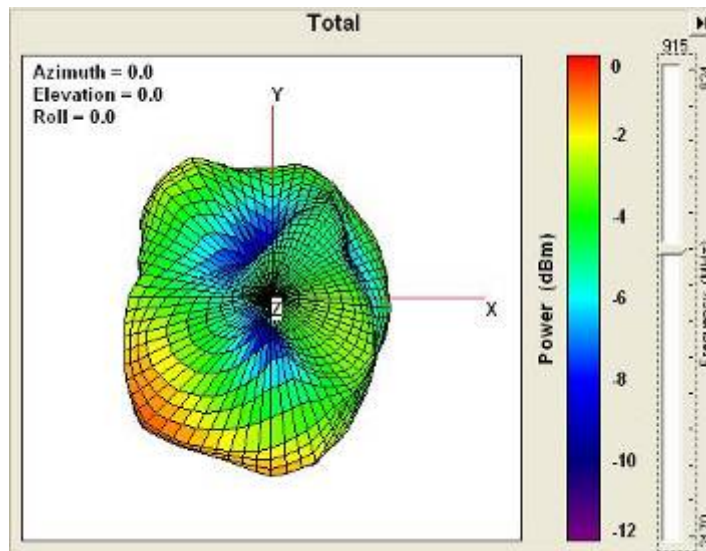
Center Frequency	894 MHz
Theta Peak EIRP(dBm)	-0.56
Phi Peak EIRP(dBm)	-1.44
Efficiency(%)	45.11

900 MHz



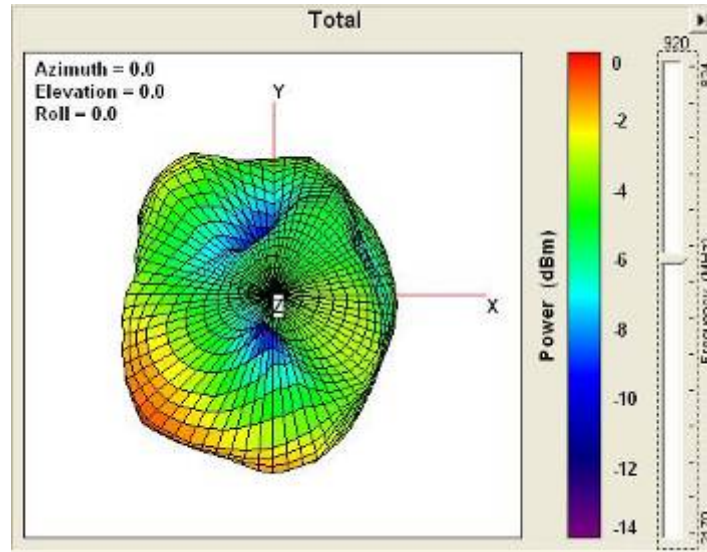
Center Frequency	900 MHz
Theta Peak EIRP(dBm)	-0.70
Phi Peak EIRP(dBm)	-1.54
Efficiency(%)	43.29

915 MHz



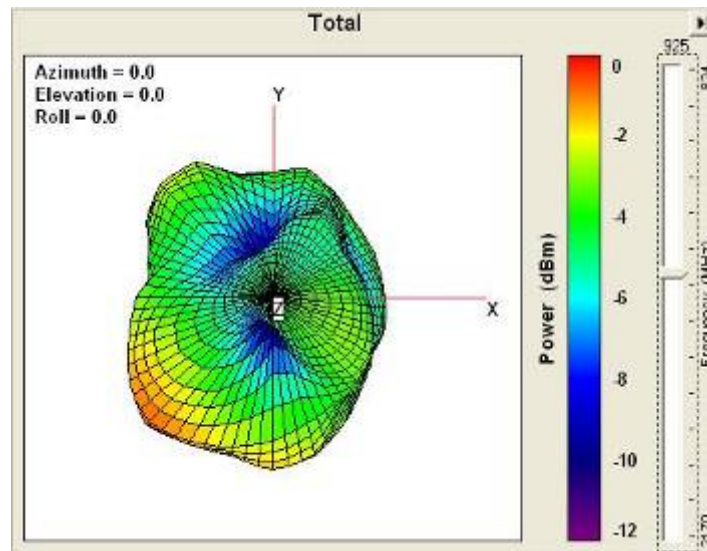
Center Frequency	915 MHz
Theta Peak EIRP(dBm)	-1.25
Phi Peak EIRP(dBm)	-1.79
Efficiency(%)	38.03

920 MHz



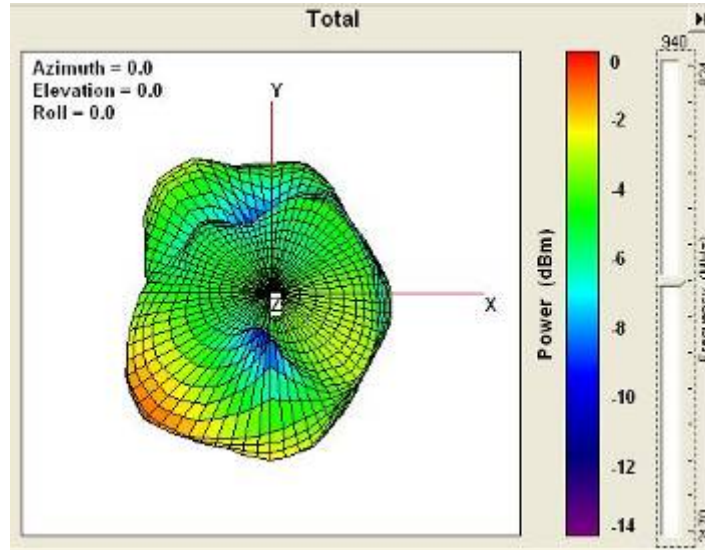
Center Frequency	920 MHz
Theta Peak EIRP(dBm)	-1.44
Phi Peak EIRP(dBm)	-1.91
Efficiency(%)	36.52

925 MHz



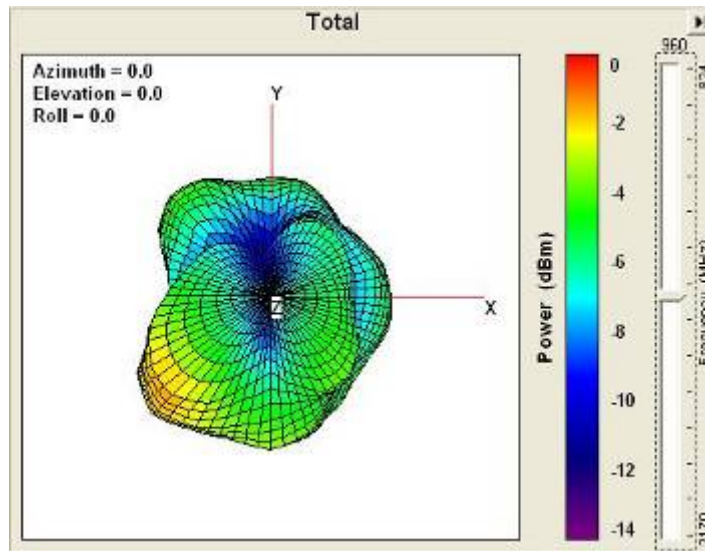
Center Frequency	925 MHz
Theta Peak EIRP(dBm)	-1.63
Phi Peak EIRP(dBm)	-1.95
Efficiency(%)	35.21

940 MHz



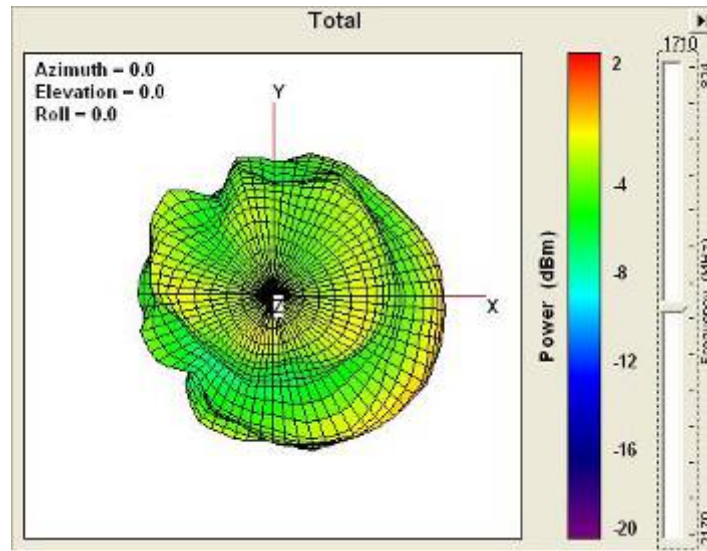
Center Frequency	940 MHz
Theta Peak EIRP(dBm)	-2.20
Phi Peak EIRP(dBm)	-2.09
Efficiency(%)	33.11

960 MHz



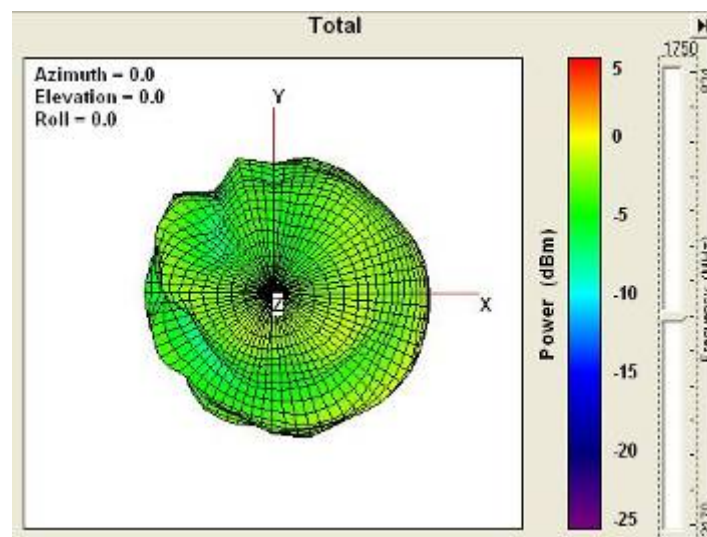
Center Frequency	960 MHz
Theta Peak EIRP(dBm)	-3.04
Phi Peak EIRP(dBm)	-2.85
Efficiency(%)	27.62

1710 MHz



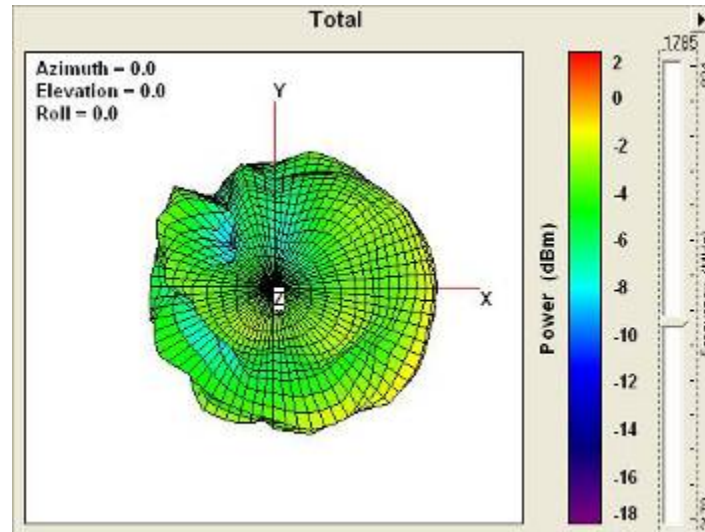
Center Frequency	1710 MHz
Theta Peak EIRP(dBm)	-0.86
Phi Peak EIRP(dBm)	-2.22
Efficiency(%)	45.68

1750 MHz



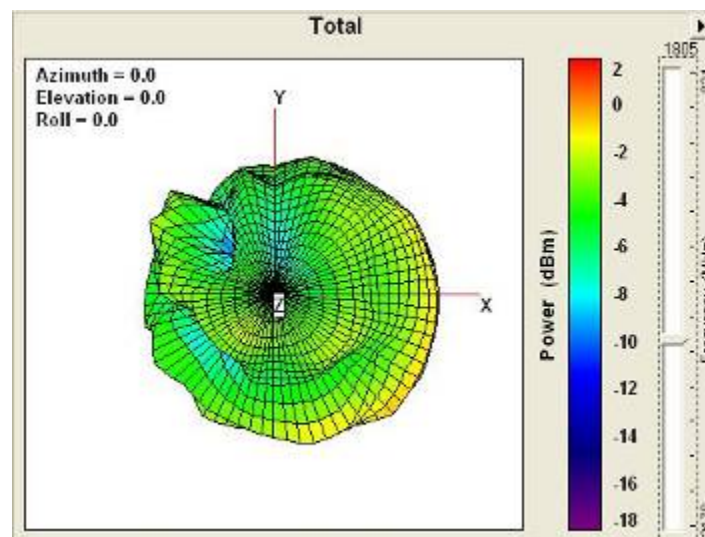
Center Frequency	1750 MHz
Theta Peak EIRP(dBm)	-0.22
Phi Peak EIRP(dBm)	-1.16
Efficiency(%)	50.39

1785 MHz



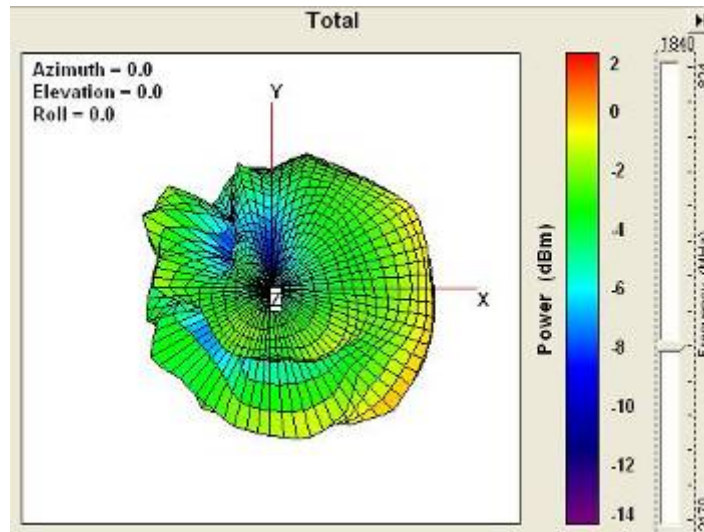
Center Frequency	1785 MHz
Theta Peak EIRP(dBm)	-0.28
Phi Peak EIRP(dBm)	-1.18
Efficiency(%)	46.27

1805 MHz



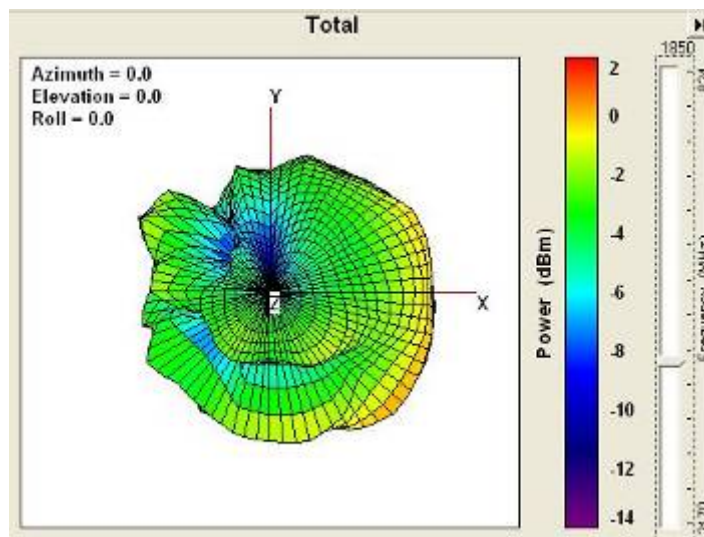
Center Frequency	1805 MHz
Theta Peak EIRP(dBm)	-0.17
Phi Peak EIRP(dBm)	-0.70
Efficiency(%)	49.26

1840 MHz



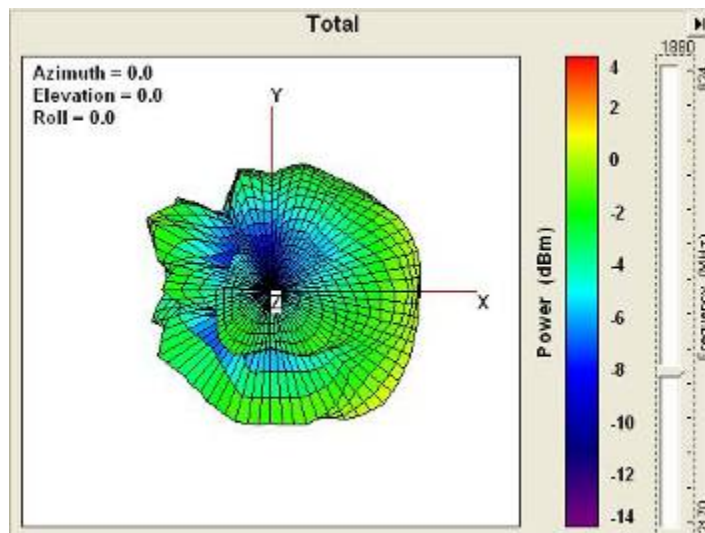
Center Frequency	1840 MHz
Theta Peak EIRP(dBm)	0.33
Phi Peak EIRP(dBm)	0.23
Efficiency(%)	56.61

1850 MHz



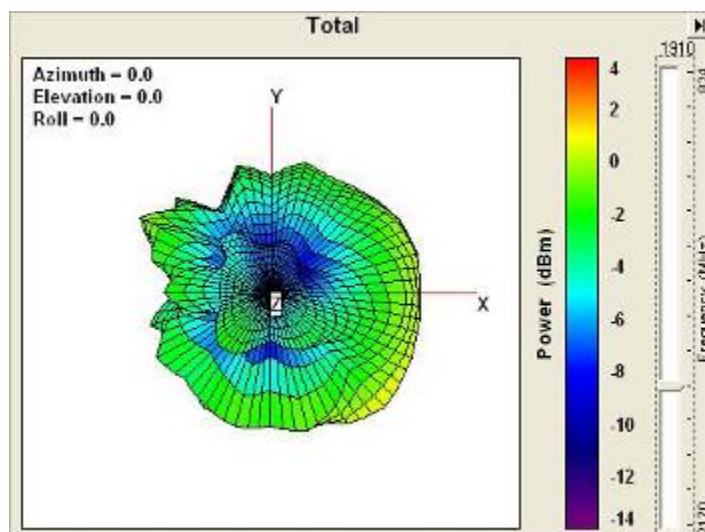
Center Frequency	1850 MHz
Theta Peak EIRP(dBm)	0.49
Phi Peak EIRP(dBm)	0.43
Efficiency(%)	57.89

1880 MHz



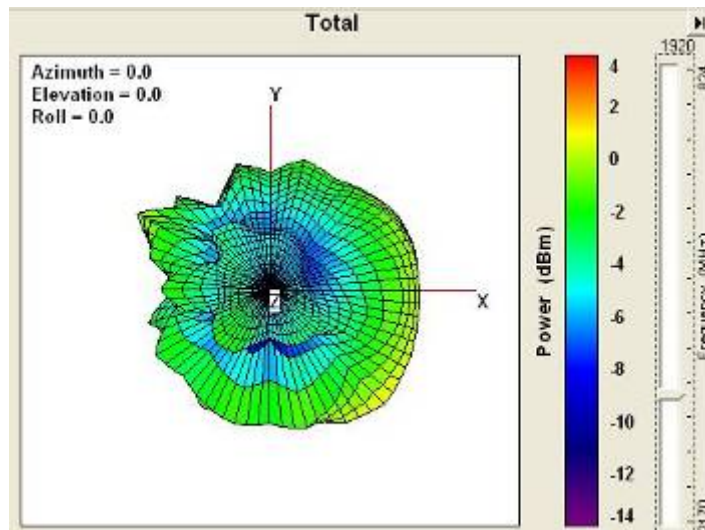
Center Frequency	1880 MHz
Theta Peak EIRP(dBm)	1.26
Phi Peak EIRP(dBm)	0.99
Efficiency(%)	62.86

1910 MHz



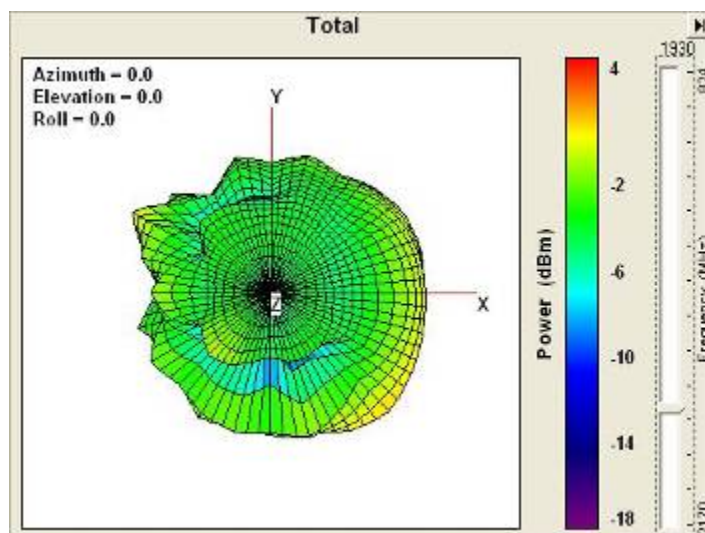
Center Frequency	1910 MHz
Theta Peak EIRP(dBm)	1.75
Phi Peak EIRP(dBm)	1.12
Efficiency(%)	64.26

1920 MHz



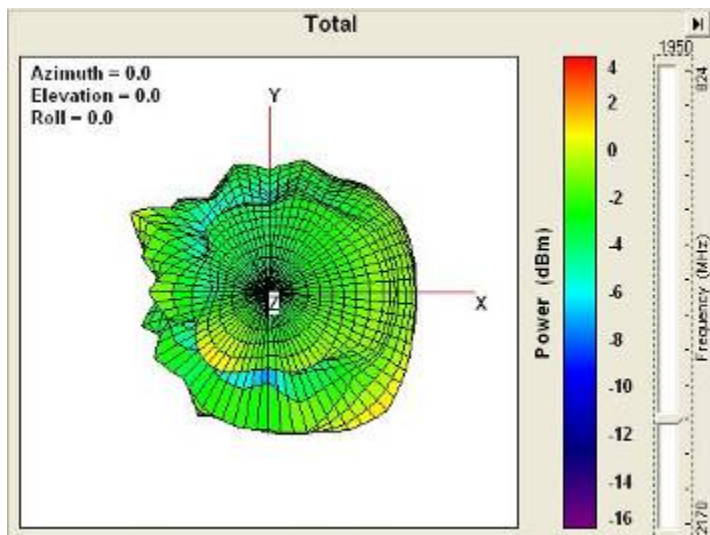
Center Frequency	1920 MHz
Theta Peak EIRP(dBm)	1.89
Phi Peak EIRP(dBm)	1.20
Efficiency(%)	64.96

1930 MHz



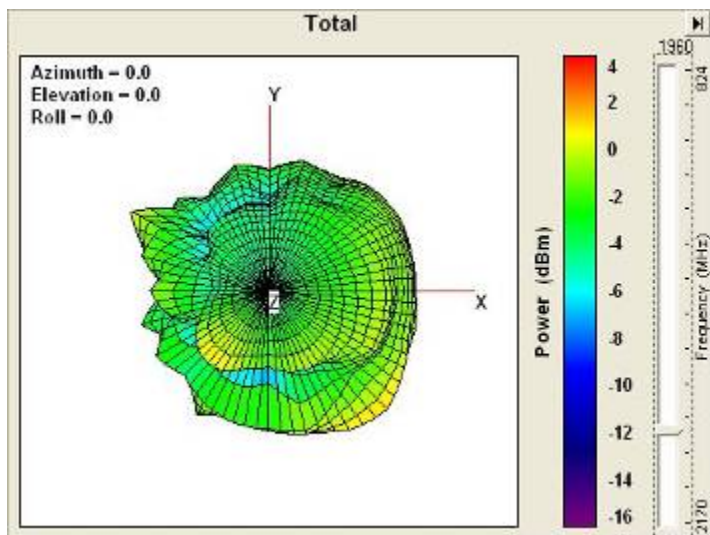
Center Frequency	1930 MHz
Theta Peak EIRP(dBm)	1.94
Phi Peak EIRP(dBm)	1.21
Efficiency(%)	65.32

1950 MHz



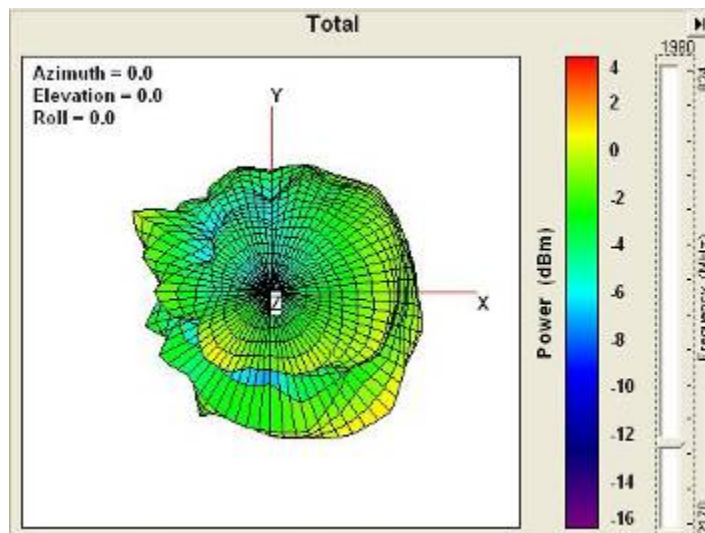
Center Frequency	1950 MHz
Theta Peak EIRP(dBm)	2.18
Phi Peak EIRP(dBm)	1.49
Efficiency(%)	68.58

1960 MHz



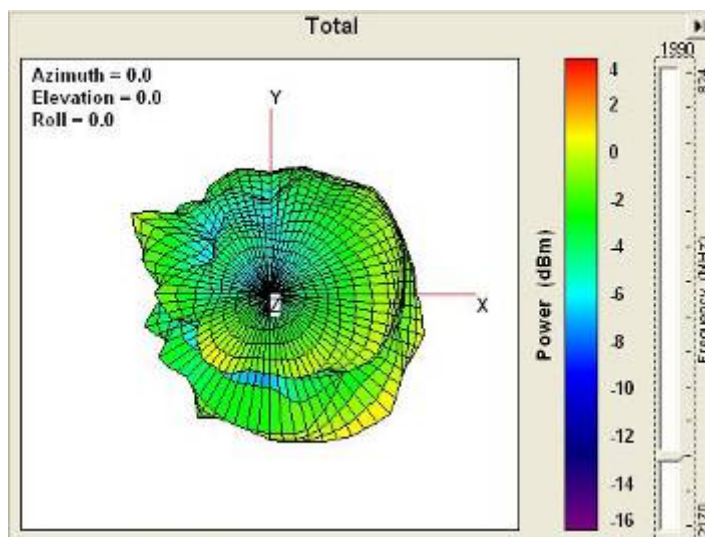
Center Frequency	1960MHz
Theta Peak EIRP(dBm)	2.21
Phi Peak EIRP(dBm)	1.60
Efficiency(%)	68.07

1980 MHz



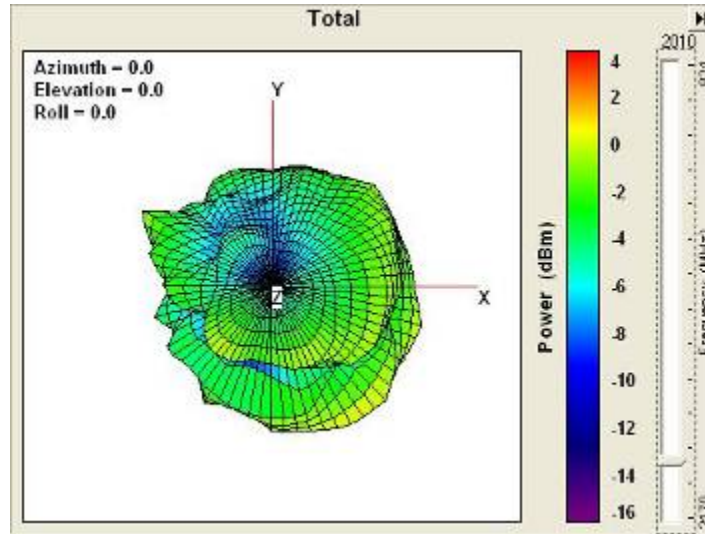
Center Frequency	1980 MHz
Theta Peak EIRP(dBm)	2.12
Phi Peak EIRP(dBm)	1.82
Efficiency(%)	67.81

1990 MHz



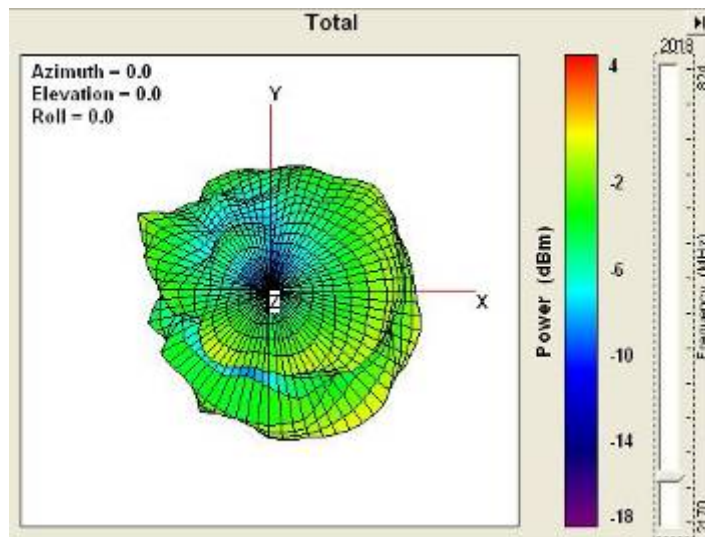
Center Frequency	1990 MHz
Theta Peak EIRP(dBm)	1.99
Phi Peak EIRP(dBm)	1.98
Efficiency(%)	68.05

2010 MHz



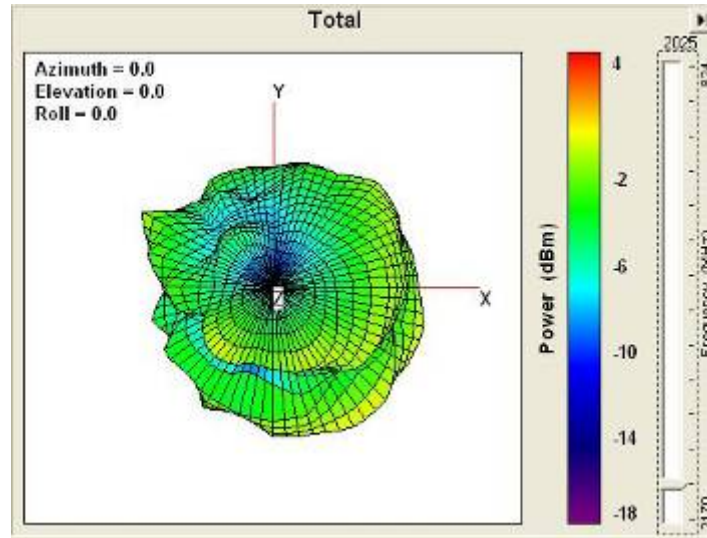
Center Frequency	2010 MHz
Theta Peak EIRP(dBm)	1.25
Phi Peak EIRP(dBm)	1.34
Efficiency(%)	59.18

2018 MHz



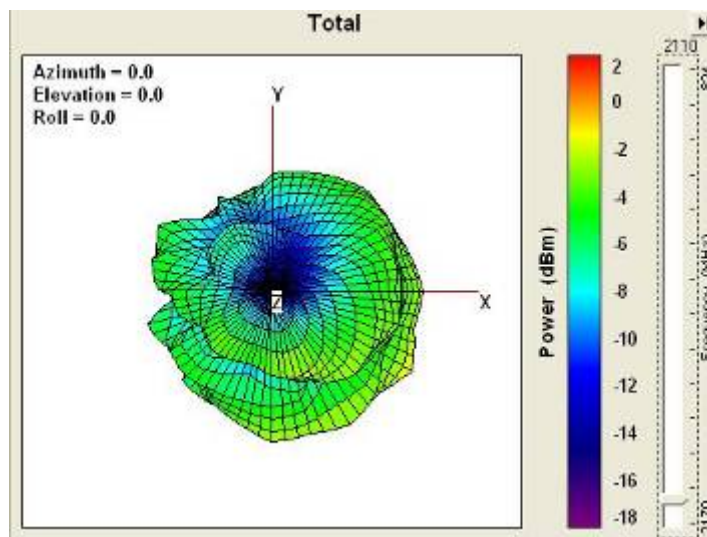
Center Frequency	2018 MHz
Theta Peak EIRP(dBm)	0.93
Phi Peak EIRP(dBm)	1.30
Efficiency(%)	57.17

2025 MHz



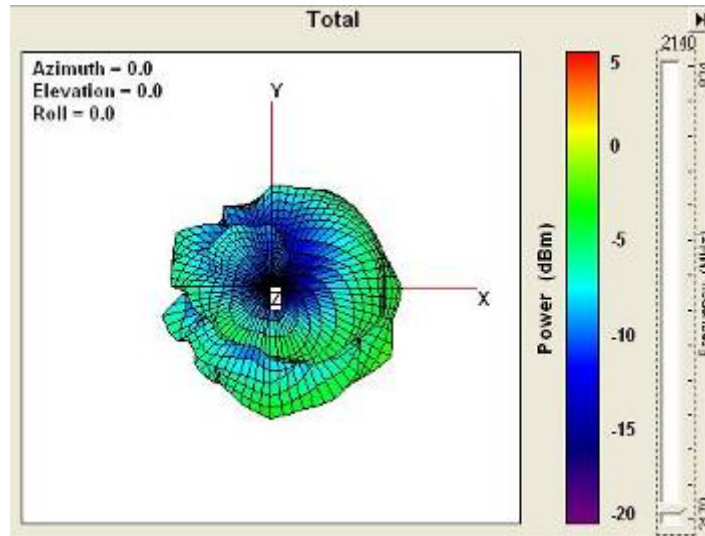
Center Frequency	2025 MHz
Theta Peak EIRP(dBm)	0.74
Phi Peak EIRP(dBm)	1.40
Efficiency(%)	56.82

2110 MHz



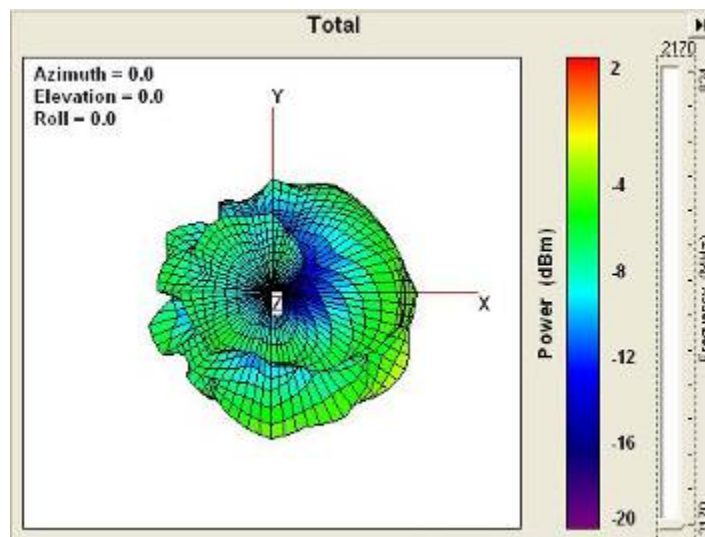
Center Frequency	2110 MHz
Theta Peak EIRP(dBm)	-0.71
Phi Peak EIRP(dBm)	0.43
Efficiency(%)	36.13

2140 MHz



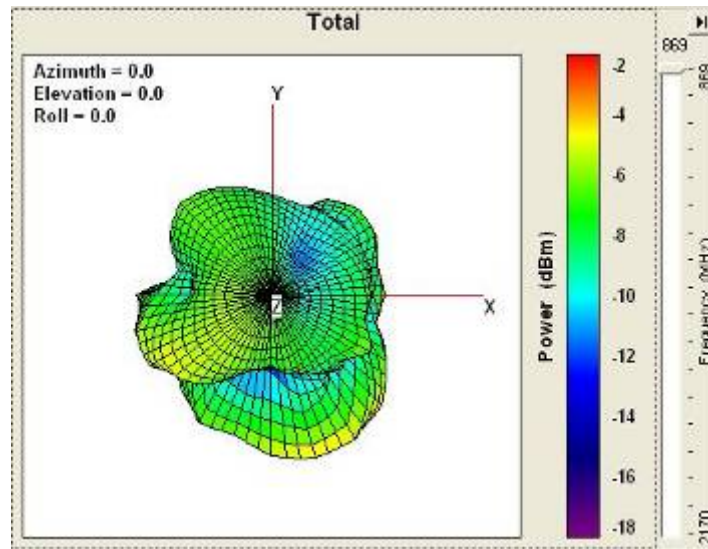
Center Frequency	2140 MHz
Theta Peak EIRP(dBm)	-1.40
Phi Peak EIRP(dBm)	-0.47
Efficiency(%)	29.28

2170 MHz



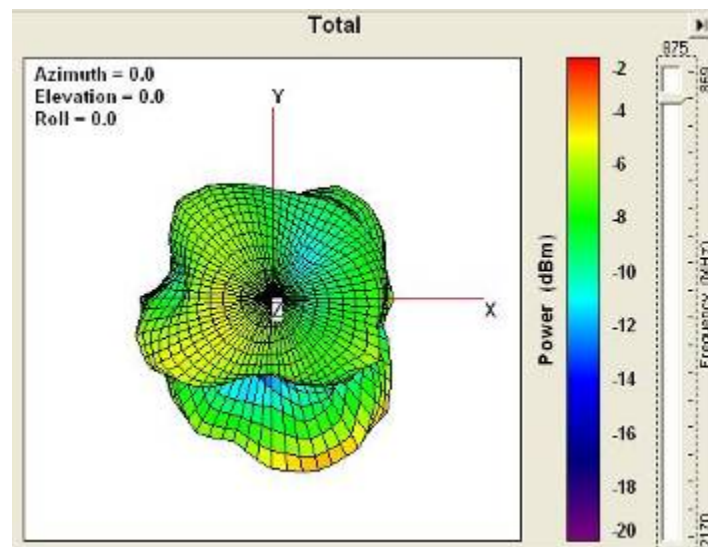
Center Frequency	2170 MHz
Theta Peak EIRP(dBm)	-1.48
Phi Peak EIRP(dBm)	-0.28
Efficiency(%)	28.06

- Aux Antenna
869 MHz



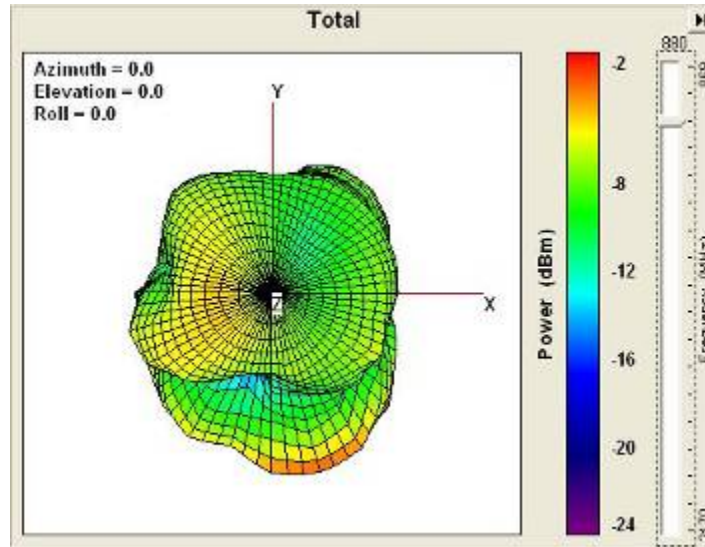
Center Frequency	869 MHz
Theta Peak EIRP(dBm)	-4.51
Phi Peak EIRP(dBm)	-4.51
Efficiency(%)	17.02

875 MHz



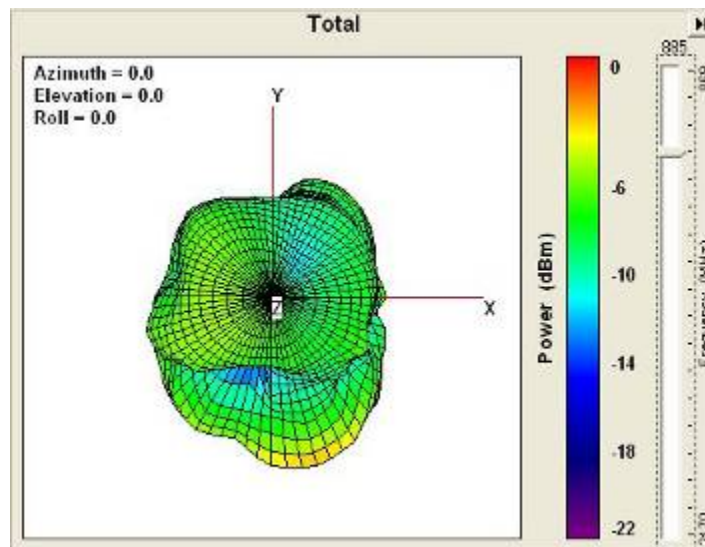
Center Frequency	875 MHz
Theta Peak EIRP(dBm)	-3.97
Phi Peak EIRP(dBm)	-3.97
Efficiency(%)	18.07

880 MHz



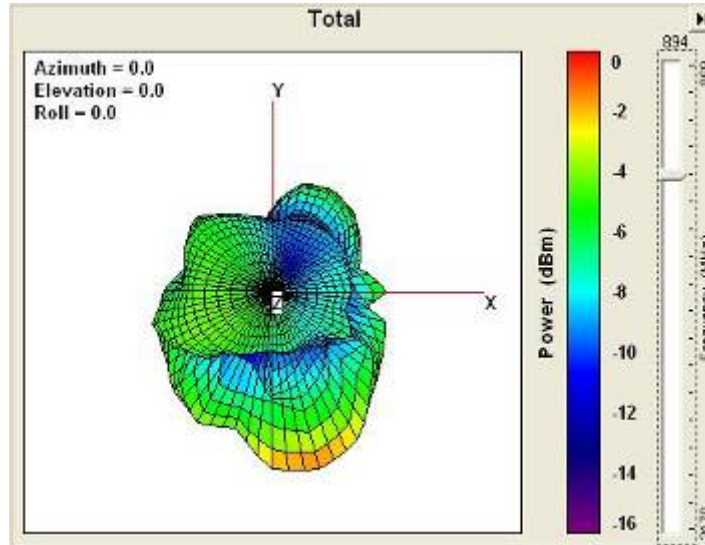
Center Frequency	880 MHz
Theta Peak EIRP(dBm)	-3.59
Phi Peak EIRP(dBm)	-3.59
Efficiency(%)	18.64

885 MHz



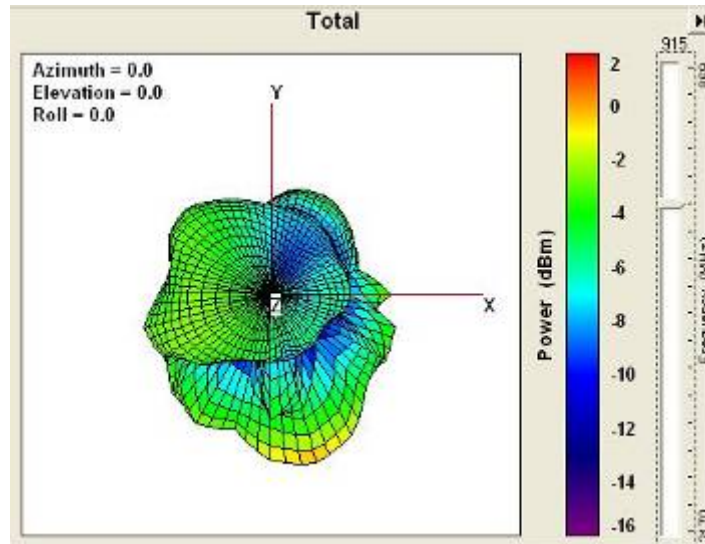
Center Frequency	885 MHz
Theta Peak EIRP(dBm)	-3.14
Phi Peak EIRP(dBm)	-3.14
Efficiency(%)	19.69

894 MHz



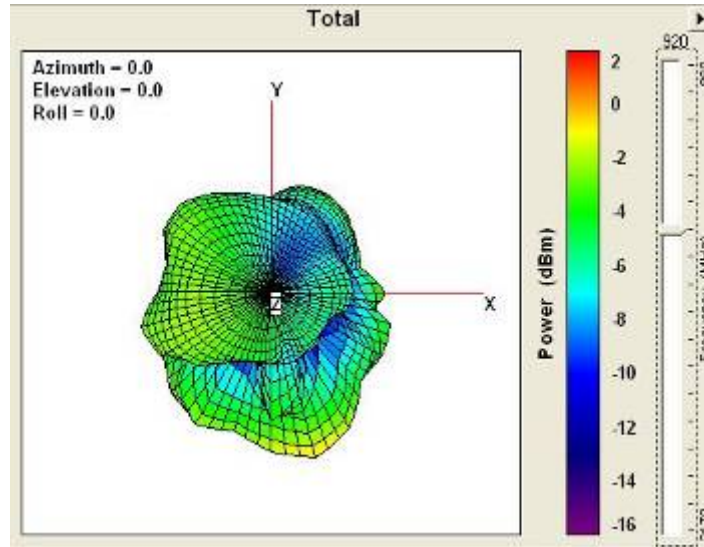
Center Frequency	894 MHz
Theta Peak EIRP(dBm)	-1.97
Phi Peak EIRP(dBm)	-1.89
Efficiency(%)	23.77

915 MHz



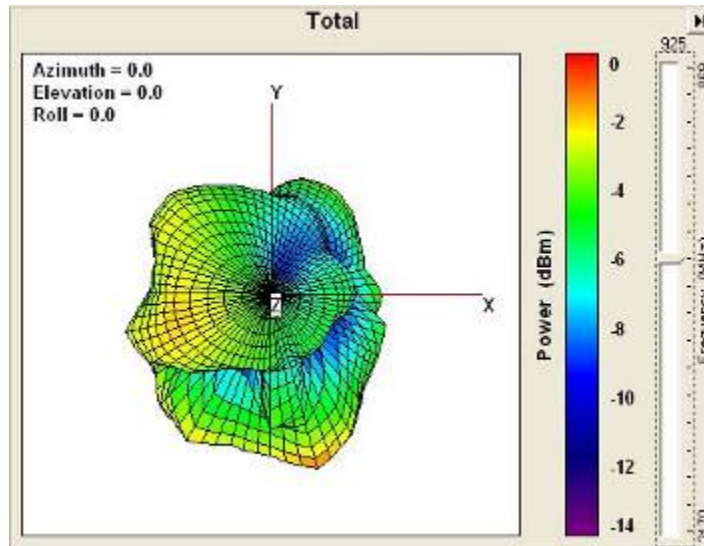
Center Frequency	915 MHz
Theta Peak EIRP(dBm)	-1.19
Phi Peak EIRP(dBm)	-0.55
Efficiency(%)	33.47

920 MHz



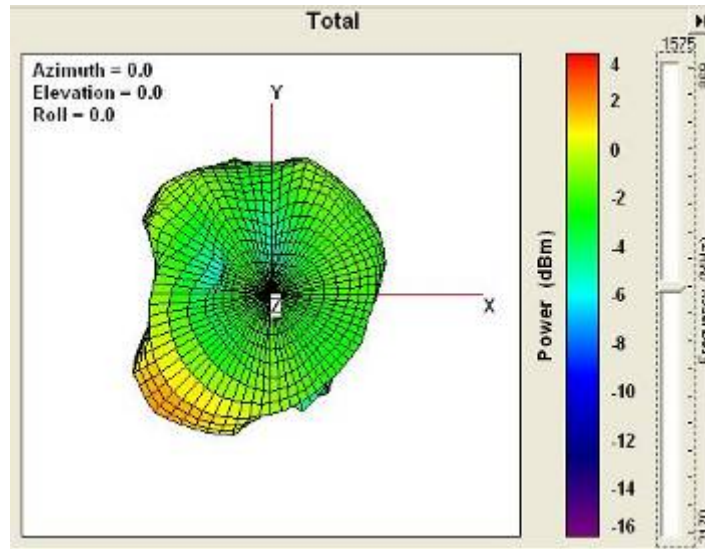
Center Frequency	920 MHz
Theta Peak EIRP(dBm)	-1.69
Phi Peak EIRP(dBm)	-0.83
Efficiency(%)	34.20

925 MHz



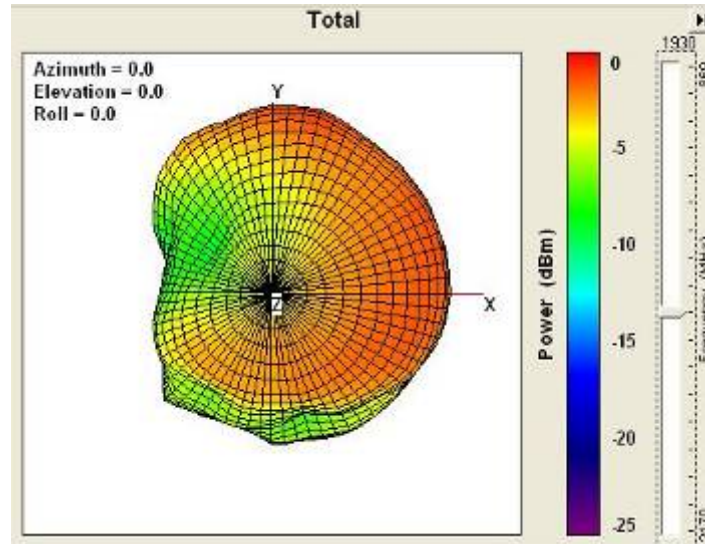
Center Frequency	925 MHz
Theta Peak EIRP(dBm)	-1.64
Phi Peak EIRP(dBm)	-1.24
Efficiency(%)	33.95

1575 MHz



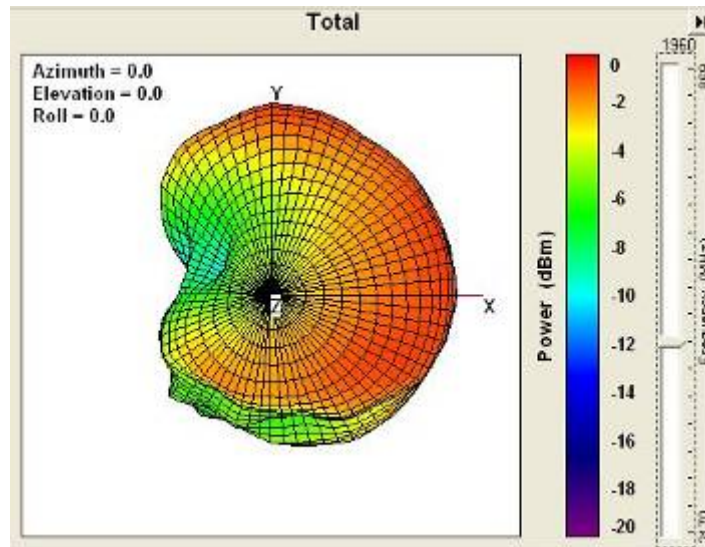
Center Frequency	1575 MHz
Theta Peak EIRP(dBm)	-0.87
Phi Peak EIRP(dBm)	0.99
Efficiency(%)	43.94

1930 MHz



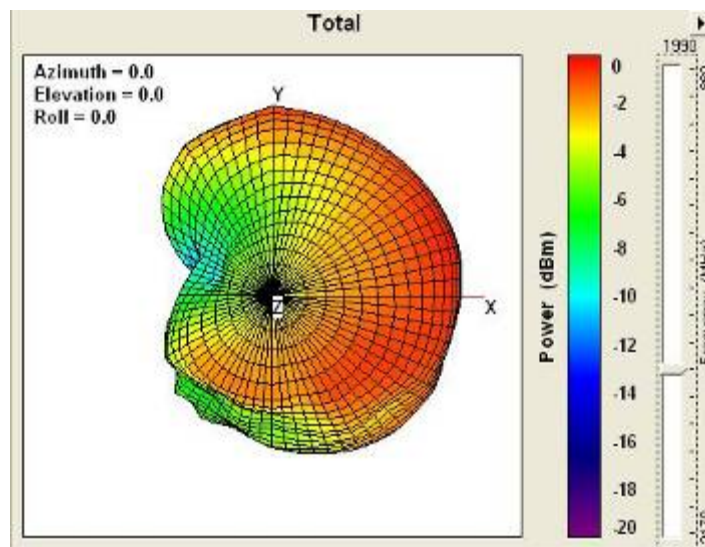
Center Frequency	1930 MHz
Theta Peak EIRP(dBm)	-1.88
Phi Peak EIRP(dBm)	-4.19
Efficiency(%)	28.20

1960 MHz



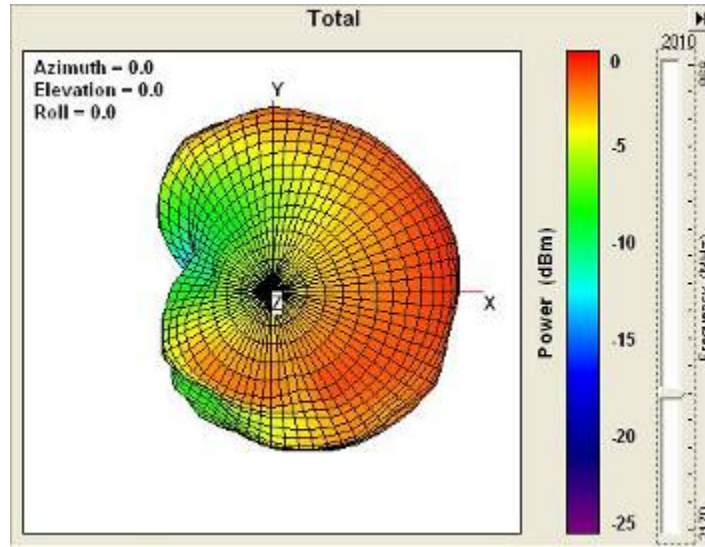
Center Frequency	1960 MHz
Theta Peak EIRP(dBm)	-1.25
Phi Peak EIRP(dBm)	-3.92
Efficiency(%)	33.85

1990 MHz



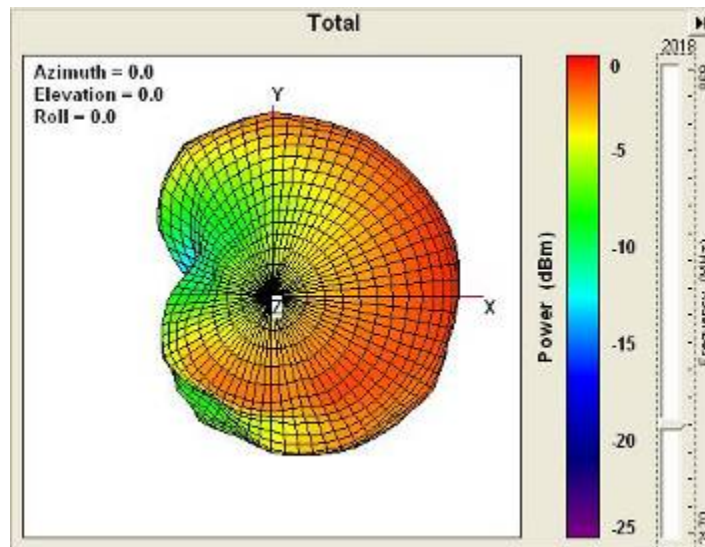
Center Frequency	1990 MHz
Theta Peak EIRP(dBm)	-0.99
Phi Peak EIRP(dBm)	-3.46
Efficiency(%)	36.20

2010 MHz



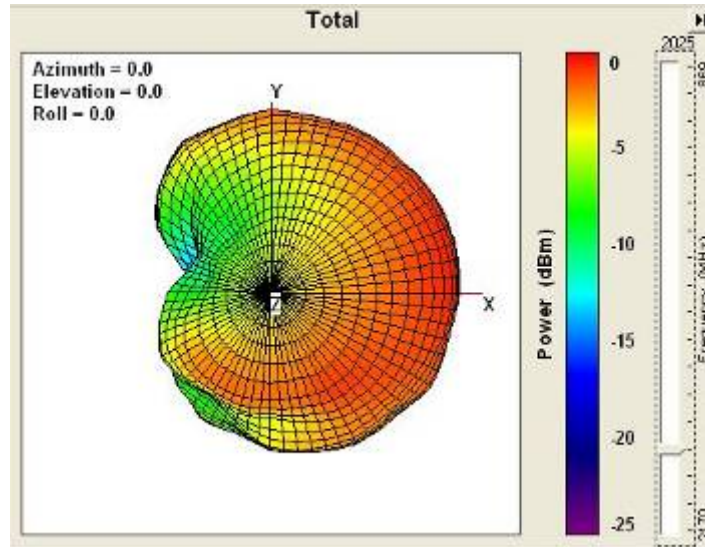
Center Frequency	2010 MHz
Theta Peak EIRP(dBm)	-1.19
Phi Peak EIRP(dBm)	-4.23
Efficiency(%)	32.38

2018 MHz



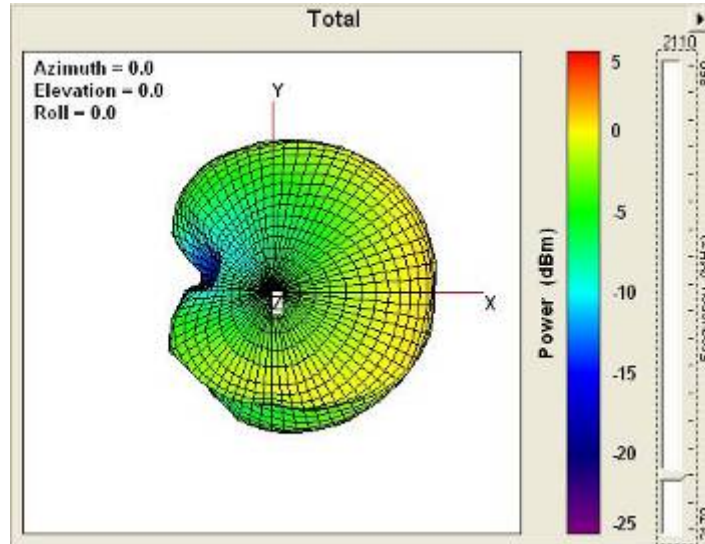
Center Frequency	2018 MHz
Theta Peak EIRP(dBm)	-1.14
Phi Peak EIRP(dBm)	-4.26
Efficiency(%)	32.34

2025 MHz



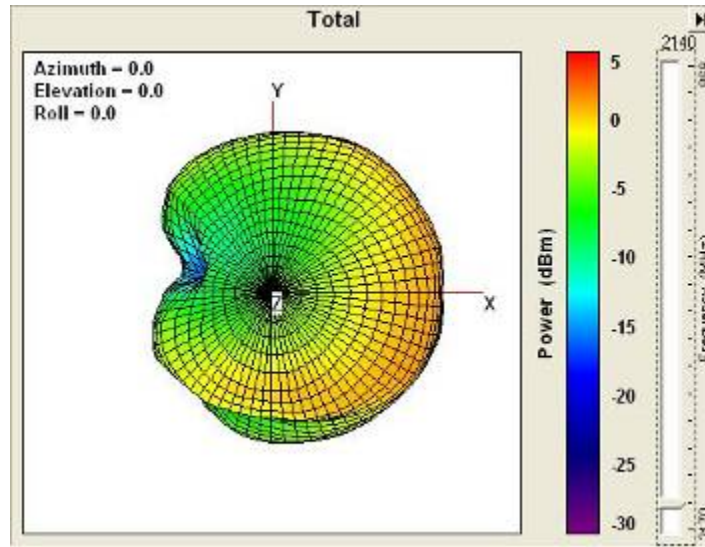
Center Frequency	2025 MHz
Theta Peak EIRP(dBm)	-0.97
Phi Peak EIRP(dBm)	-4.22
Efficiency(%)	32.94

2110 MHz



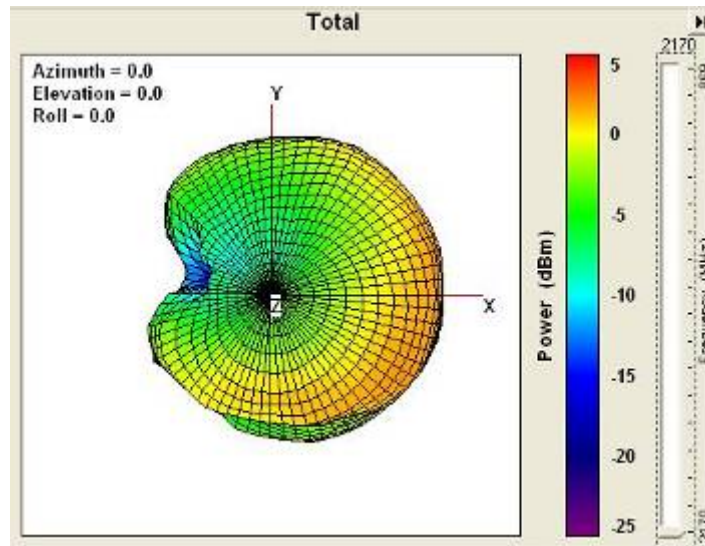
Center Frequency	2110 MHz
Theta Peak EIRP(dBm)	0.37
Phi Peak EIRP(dBm)	-4.24
Efficiency(%)	42.35

2140 MHz



Center Frequency	2140 MHz
Theta Peak EIRP(dBm)	0.82
Phi Peak EIRP(dBm)	-3.62
Efficiency(%)	50.55

2170MHz



Center Frequency	2170 MHz
Theta Peak EIRP(dBm)	1.38
Phi Peak EIRP(dBm)	-2.31
Efficiency(%)	59.11