

Regulatory WWAN Antenna Information

Antenna Information

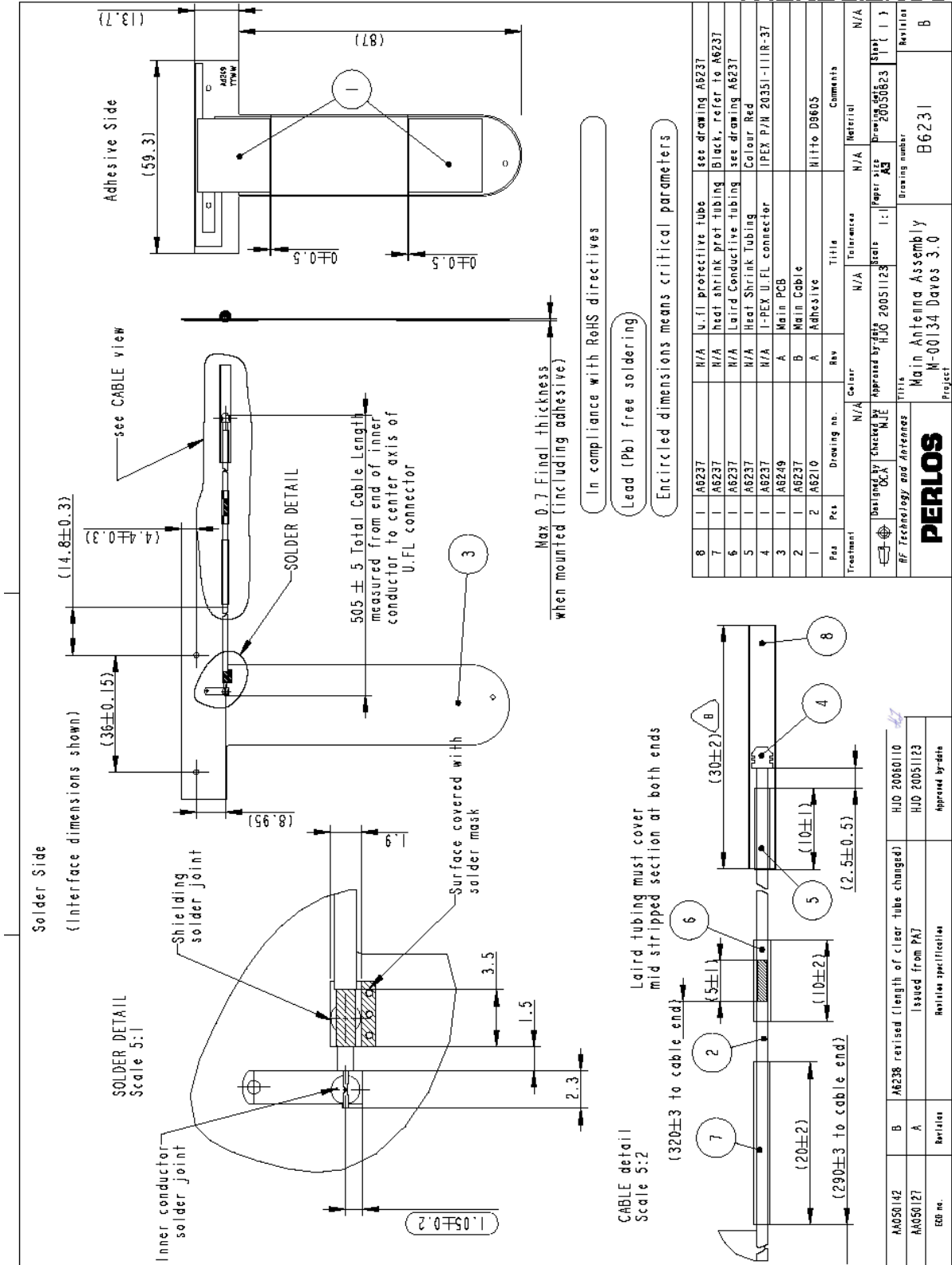
Section 1. Antenna Assembly Specifications

Antenna Assembly Summary:

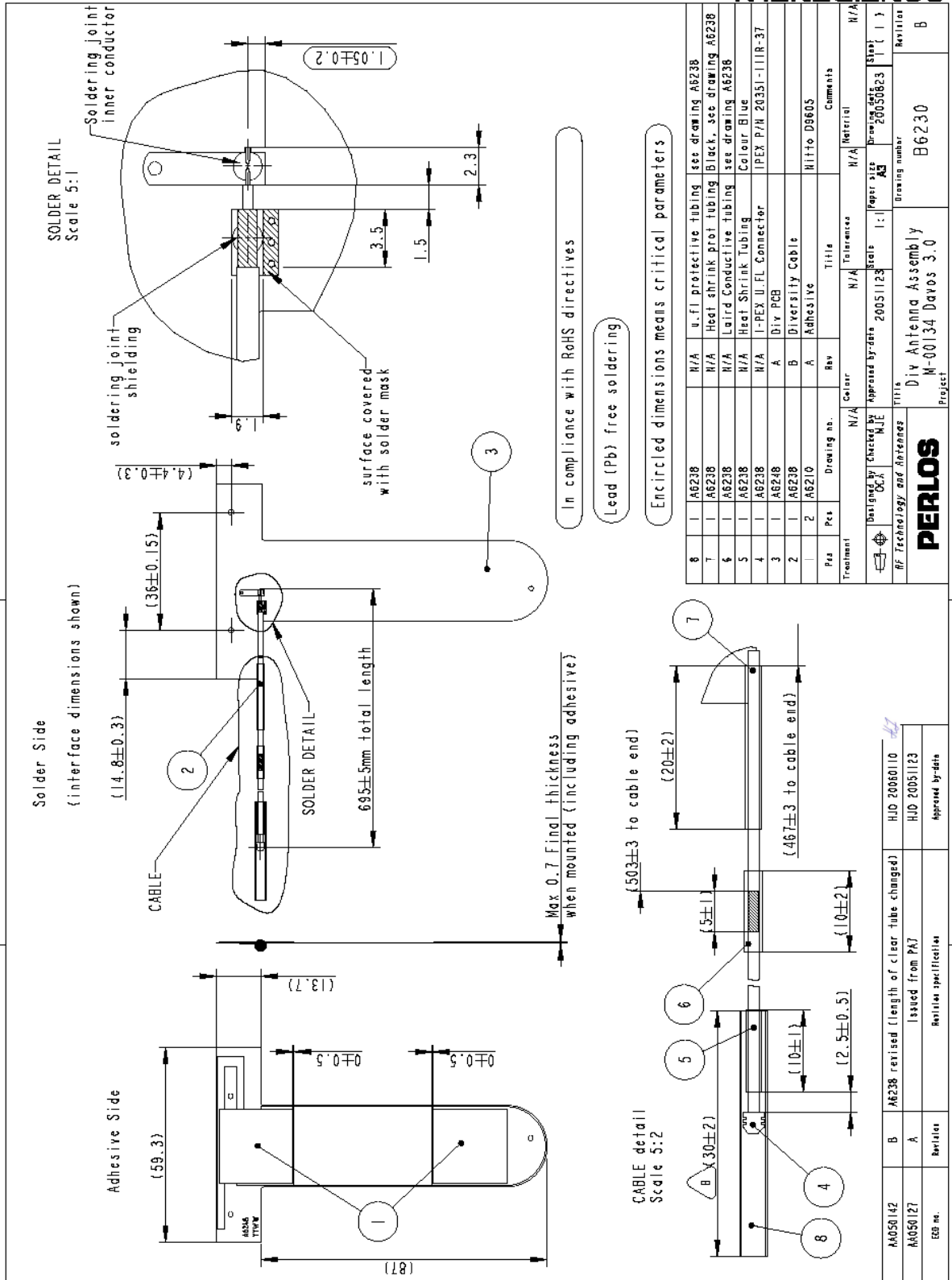
1A Antenna Part Number	1B Manufacture	1C Antenna Type	1D Cable Assembly Part Number and Information	1E Peak Gain w/ Cable loss (dBi) (3D peak)	1F Peak Gain w/o Cable Loss (dBi)	1G VSWR	1H Cable Loss (dBi)
P/N: B6231 Main Antenna (including cable)	Perlos AB	F-antenna	50 ohm Coaxial. Length: 50.5 cm diameter: 1.37mm Connector: U.FL	824-849MHz 2.34 dBi (peak)	824-849MHz 3.03 dBi (peak)	824-849MHz 1.37 max	824-849MHz 0.69 dB (peak)
				869-894MHz 1.89 dBi (peak)	869-894MHz 2.60 dBi (peak)	869-894MHz 2.47 max	869-894MHz 0.71 dB (peak)
				1850-1910MHz 2.55 dBi (peak)	1850-1910MHz 3.65 dBi (peak)	1850-1910MHz 1.29 max	1850-1910MHz 1.10 dB (peak)
				1930-1990MHz 2.71 dBi (peak)	1930-1990MHz 3.82 dBi (peak)	1930-1990MHz 1.81 max	1930-1990MHz 1.11 dB (peak)
P/N: B6230 Diversity antenna (including cable)	Perlos AB	F-antenna	50 ohm Coaxial. Length: 69.5 cm diameter: 1.37mm Connector: U.FL	824-849MHz 0.23 dBi (peak)	824-849MHz 1.19 dBi (peak)	824-849MHz 1.75 max	824-849MHz 0.96 dB (peak)
				869-894MHz 0.49 dBi (peak)	869-894MHz 1.46 dBi (peak)	869-894MHz 2.45 max	869-894MHz 0.97 dB (peak)
				1850-1910MHz 1.32 dBi (peak)	1850-1910MHz 2.81 dBi (peak)	1850-1910MHz 1.31 max	1850-1910MHz 1.49 dB (peak)
				1930-1990MHz 1.35 dBi (peak)	1930-1990MHz 2.85 dBi (peak)	1930-1990MHz 1.71 max	1930-1990MHz 1.50 dB (peak)

Section 2. Dimensioned Photos or Drawings of Antennas

Main Antenna Drawing



Diversity Antenna Drawing



CONFIDENTIAL

6	1	A6238	N/A	u.FI protective tubing	see drawing A6238
7	1	A6238	N/A	Heat shrink prot tubing	Black, see drawing A6238
6	1	A6238	N/A	Laird Conductive tubing	see drawing A6238
5	1	A6238	N/A	Heat Shrink Tubing	Colour Blue
4	1	A6238	N/A	I-PEX U.FL Connector	IPEX P/N 20351-111R-37
3	1	A6248	A	Div PCB	
2	1	A6238	B	Diversity Cable	
1	2	A6210	A	Adhesive	HITto D9605
Part	Pcs	Drawing no.	Rev	Title	Comments
Treatment	N/A	Colour	N/A	Tolerance	N/A
Designed by	Checked by	Approved by	Drawn by	Scale	Sheet
DCX	MJE	20051123	AS	1:1	20050823
RF Technology and References	Titls	Div Antenna Assembly		Drawing number	Revision
		M-00134 Dvays 3.0		B6230	B
PERLOS					

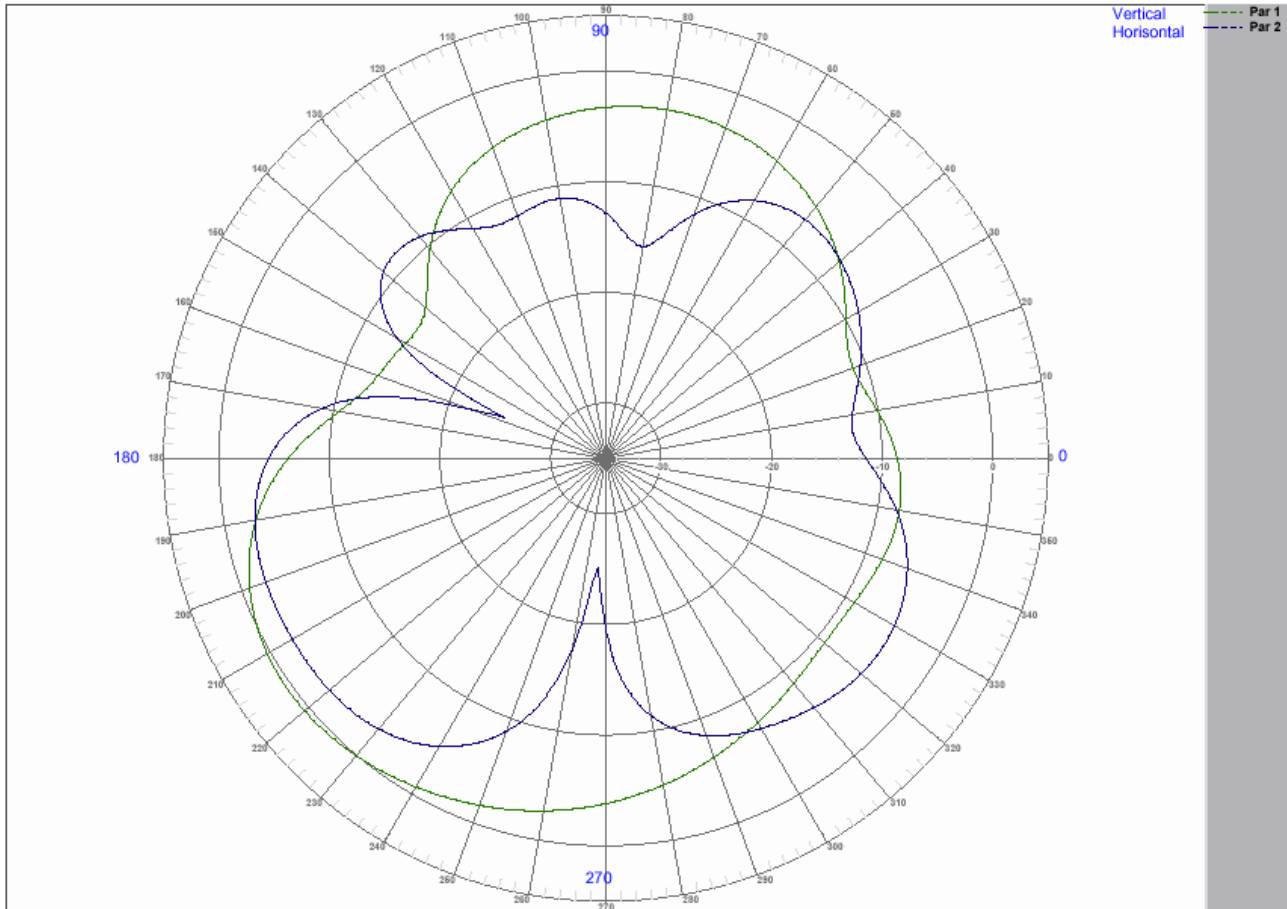
AA050142	B	A6238 revised (length of clear tube changed)	HJD 20060110	
AA050127	A	Issued from PA7	HJD 20051123	
EDD no.	Revisior	Revisior specification	Approved by	

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Section 3. Radiation Characteristics of Antennae Loaded in Host Platform

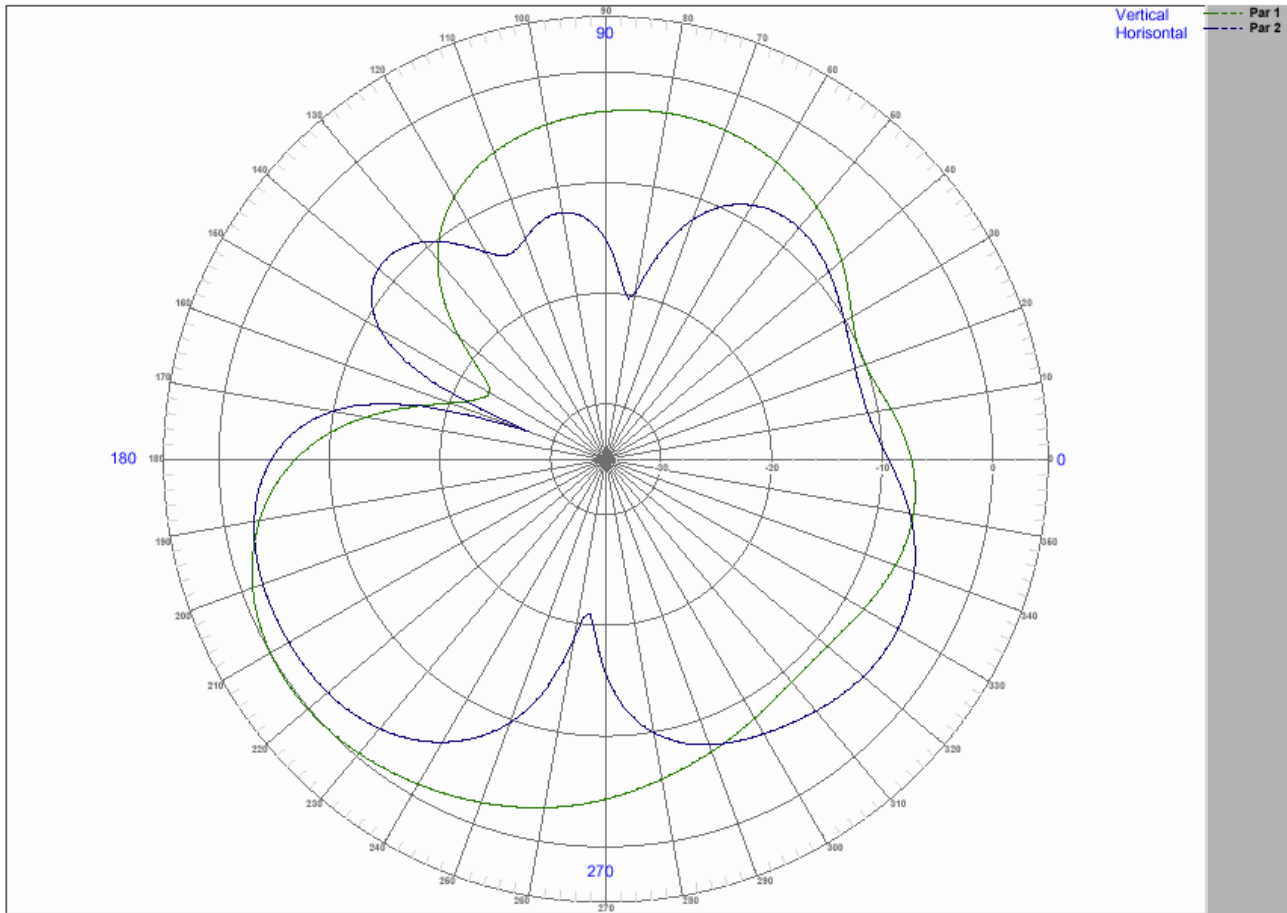
824-894MHz radiation characteristic

Main antenna: 824.2 MHz



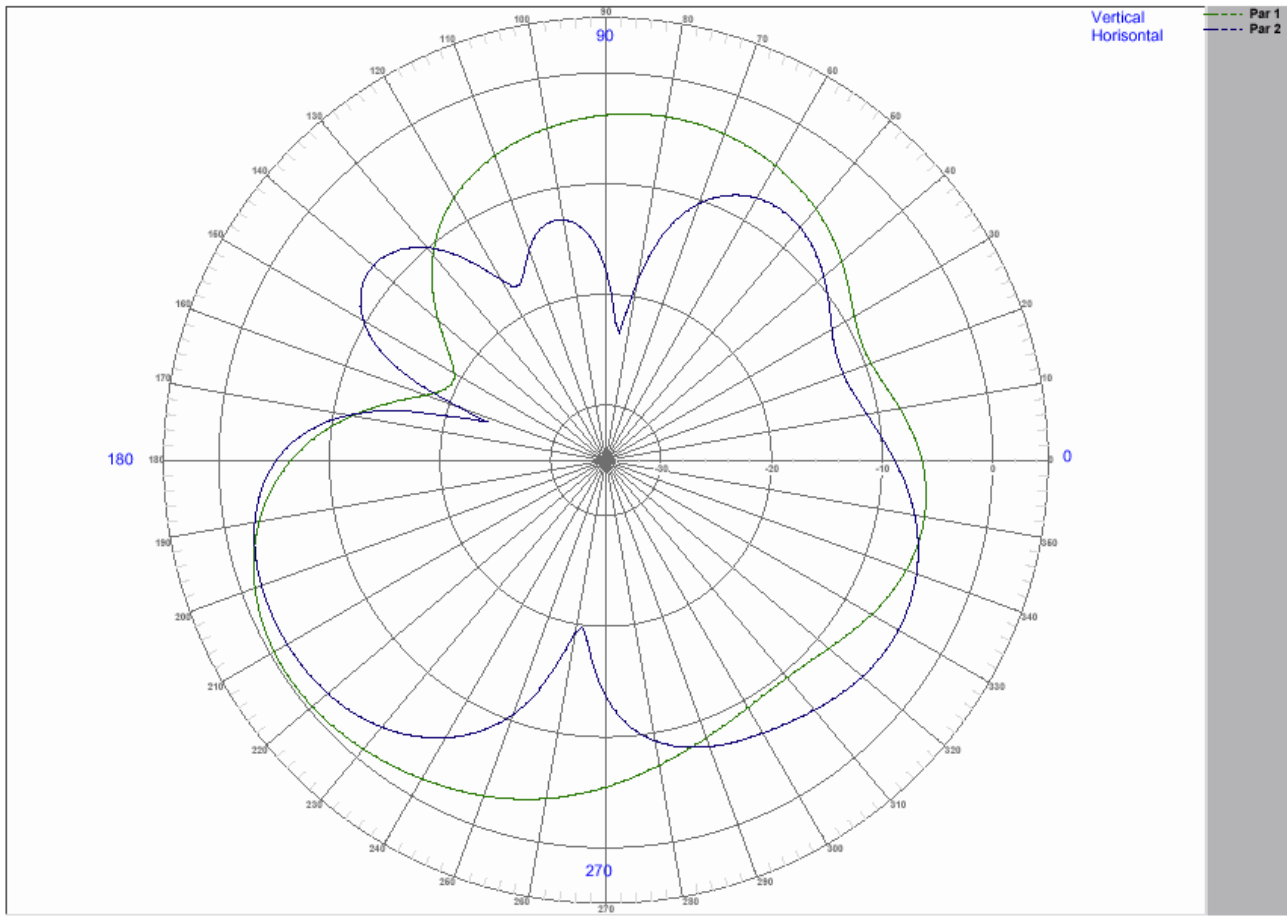
Center Frequency	824 MHz
Horizontal (dBi) peak	-2.29
Vertical (dBi) peak	0.51
Horz+Vert (dBi) peak	2.34

Main antenna: 836.6 MHz



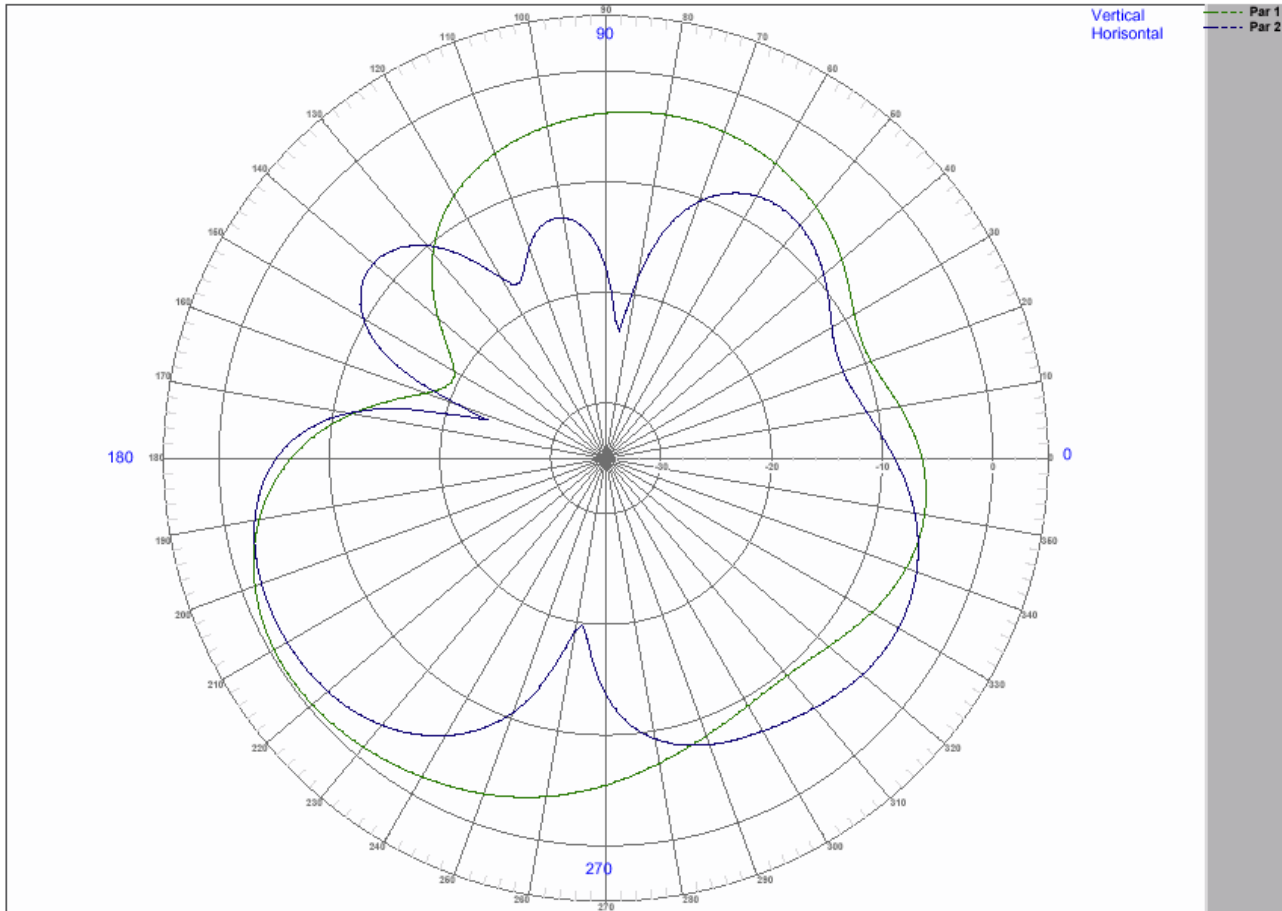
Center Frequency	836.6 MHz
Horizontal (dBi) peak	-1.93
Vertical (dBi) peak	0.15
Horz+Vert (dBi) peak	2.22

Main antenna: 848.8 MHz



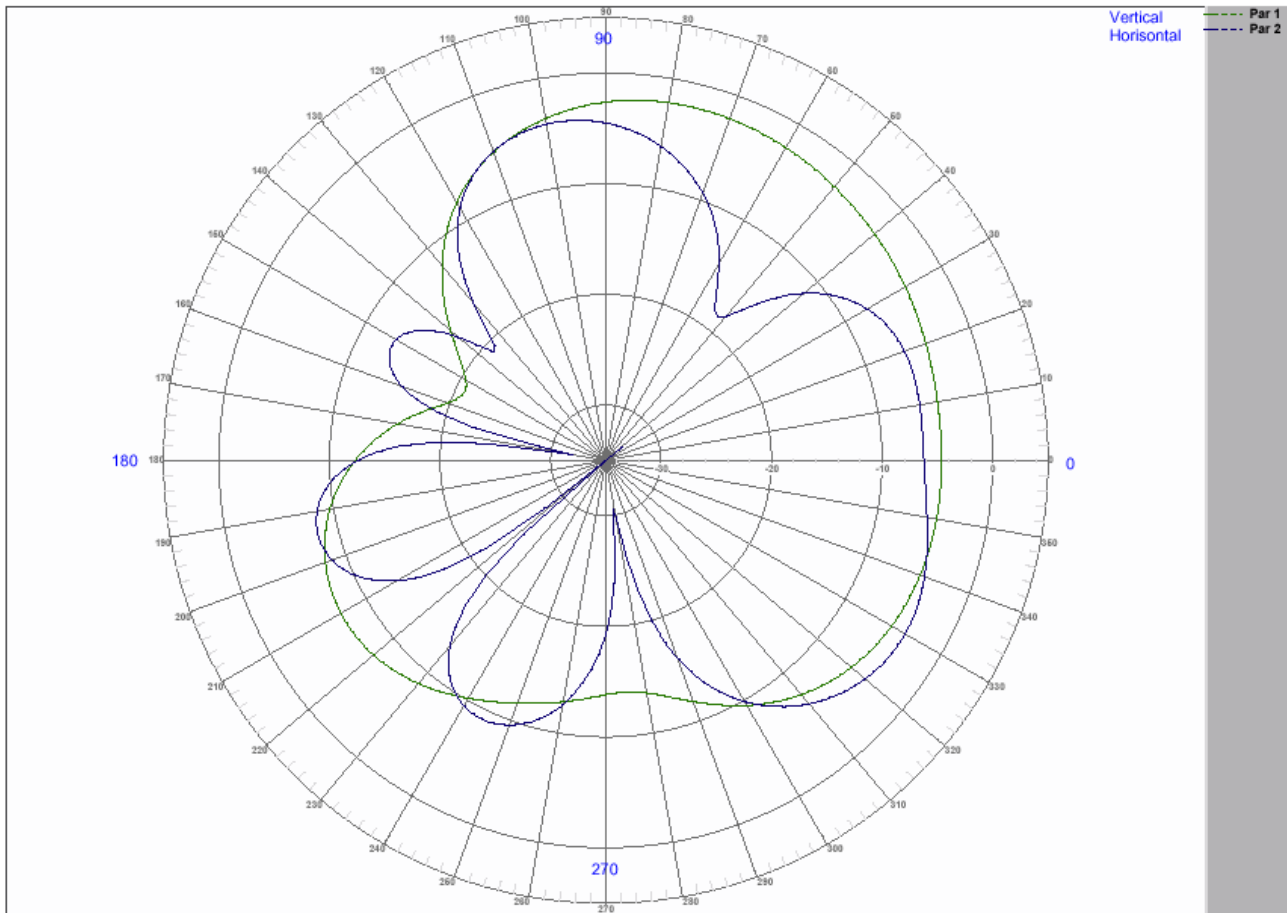
Center Frequency	848.8 MHz
Horizontal (dBi) peak	-1.75
Vertical (dBi) peak	-0.33
Horz+Vert (dBi) peak	1.99

Diversity antenna: 824.2 MHz



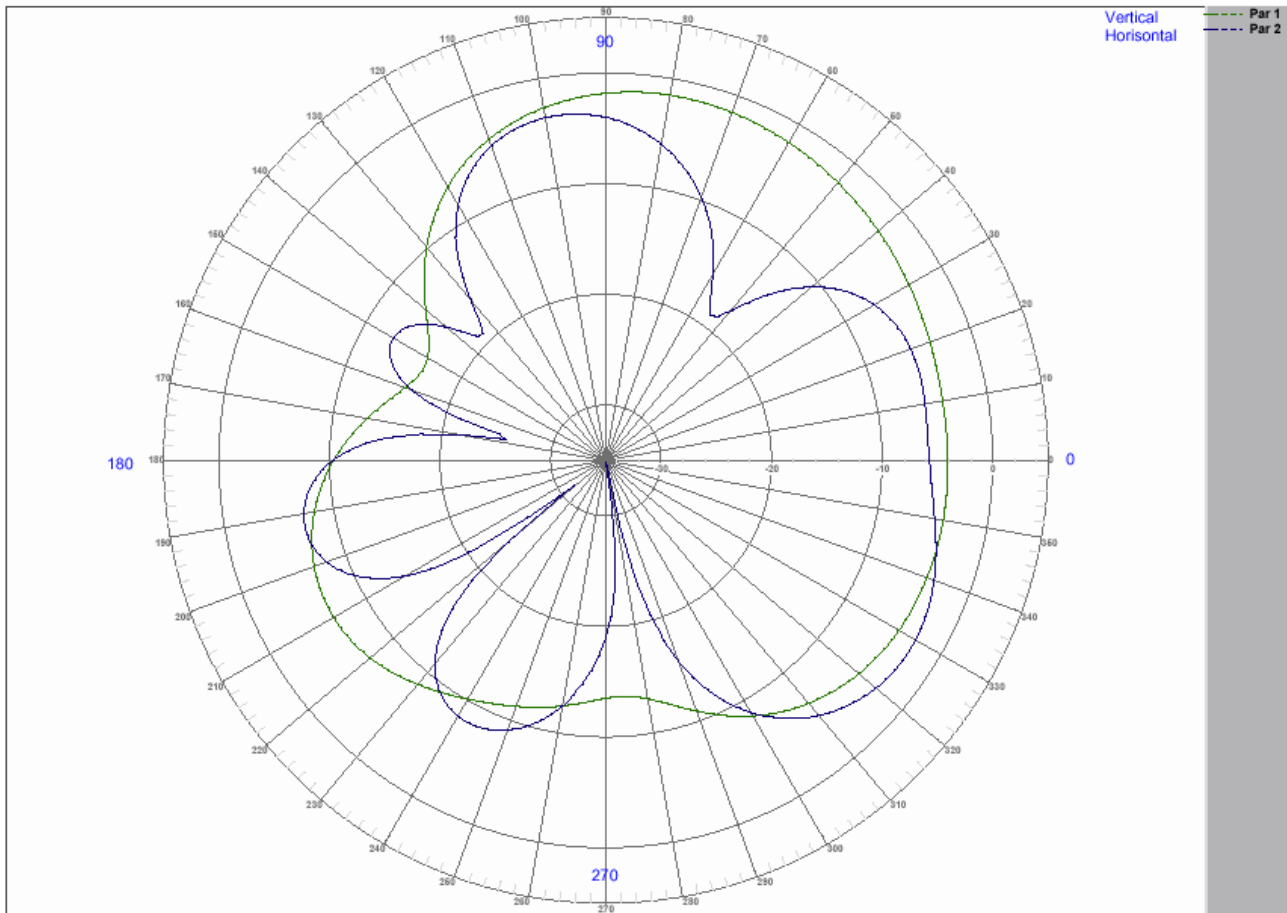
Center Frequency	824.4 MHz
Horizontal (dBi) peak	-4.29
Vertical (dBi) peak	-2.33
Horz+Vert (dBi) peak	-0.74

Diversity antenna: 836.6 MHz



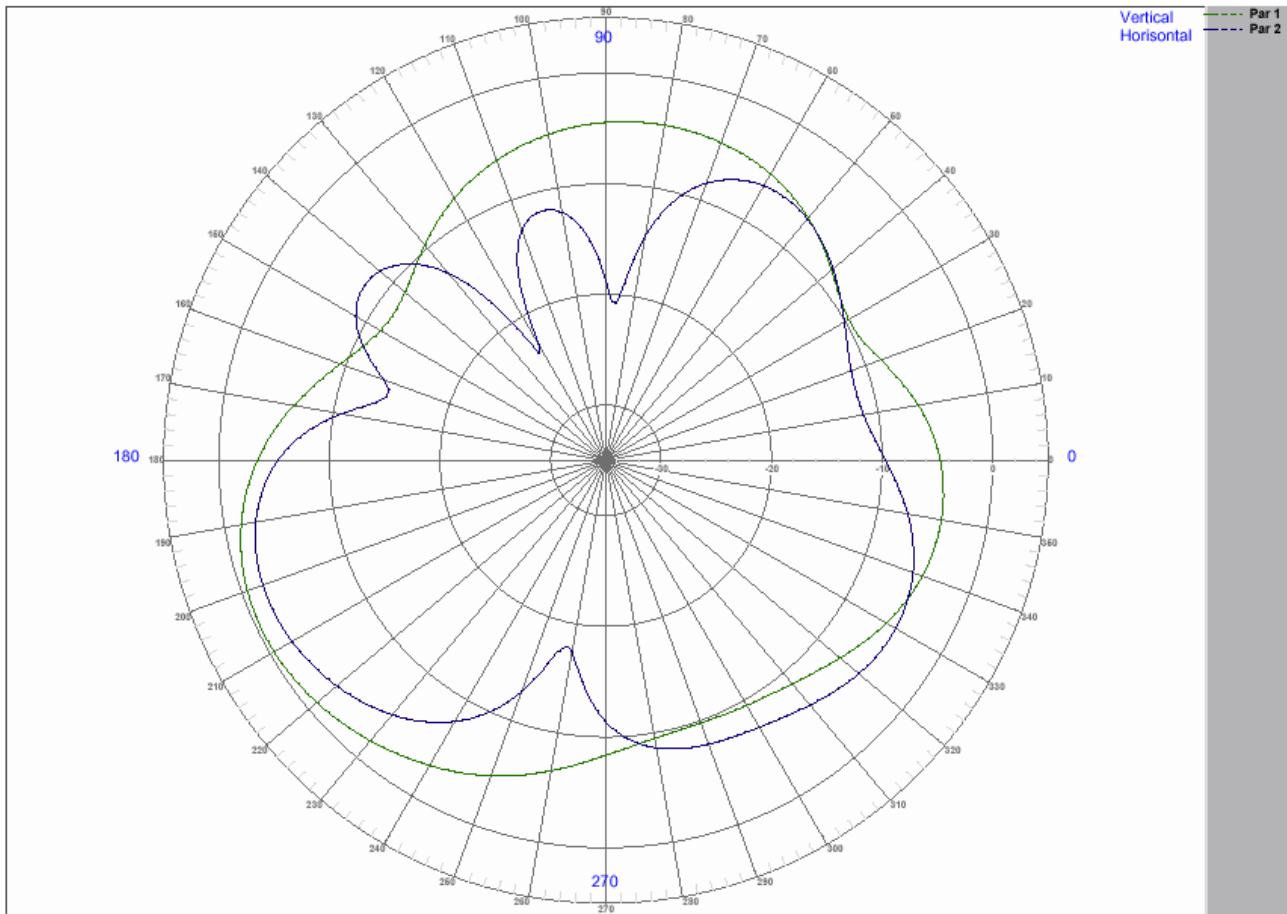
Center Frequency	836.6 MHz
Horizontal (dBi) peak	-3.75
Vertical (dBi) peak	-2.15
Horz+Vert (dBi) peak	-0.46

Diversity antenna: 848.8 MHz



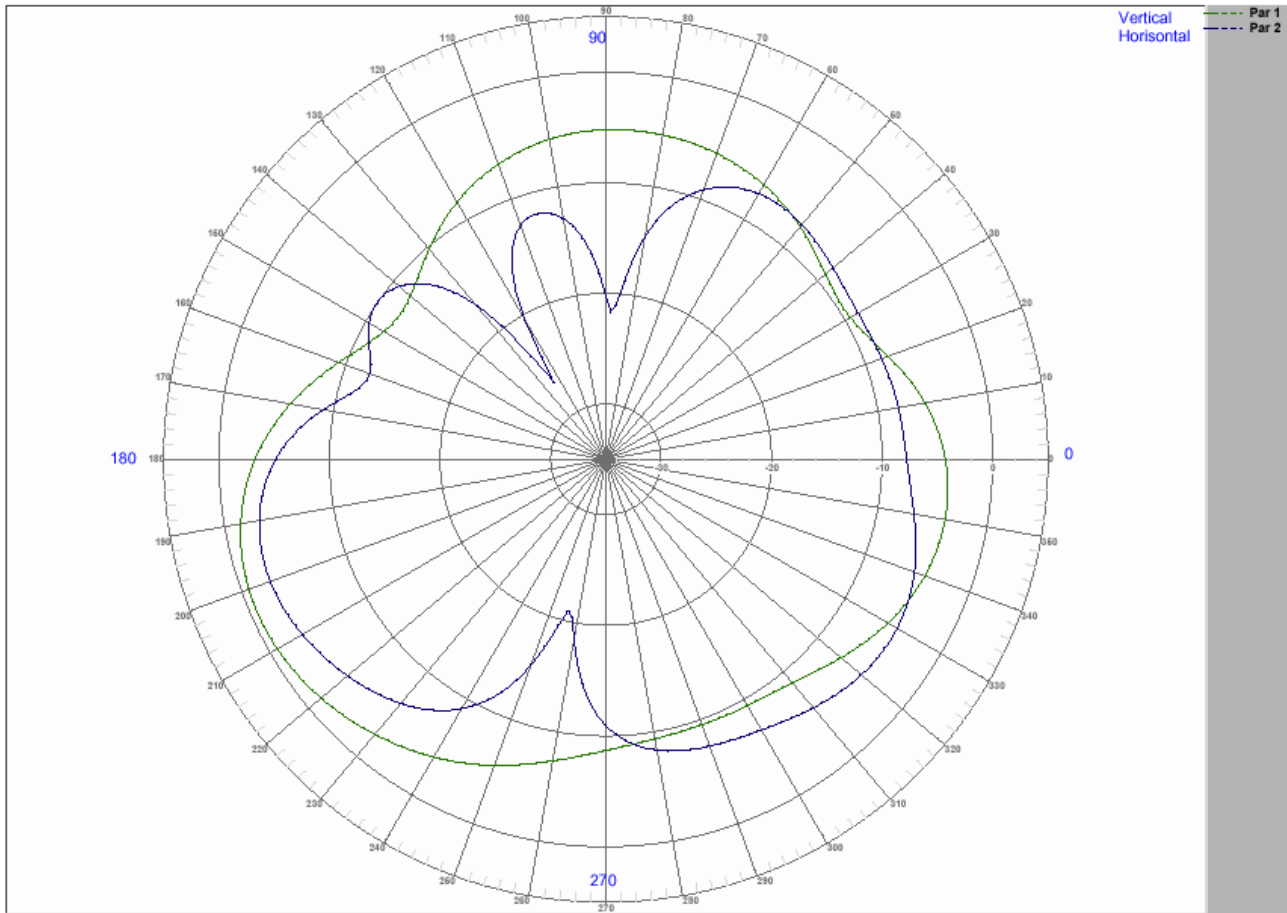
Center Frequency	848.8 MHz
Horizontal (dBi) peak	-2.64
Vertical (dBi) peak	-1.50
Horz+Vert (dBi) peak	0.23

Main antenna: 869.2 MHz



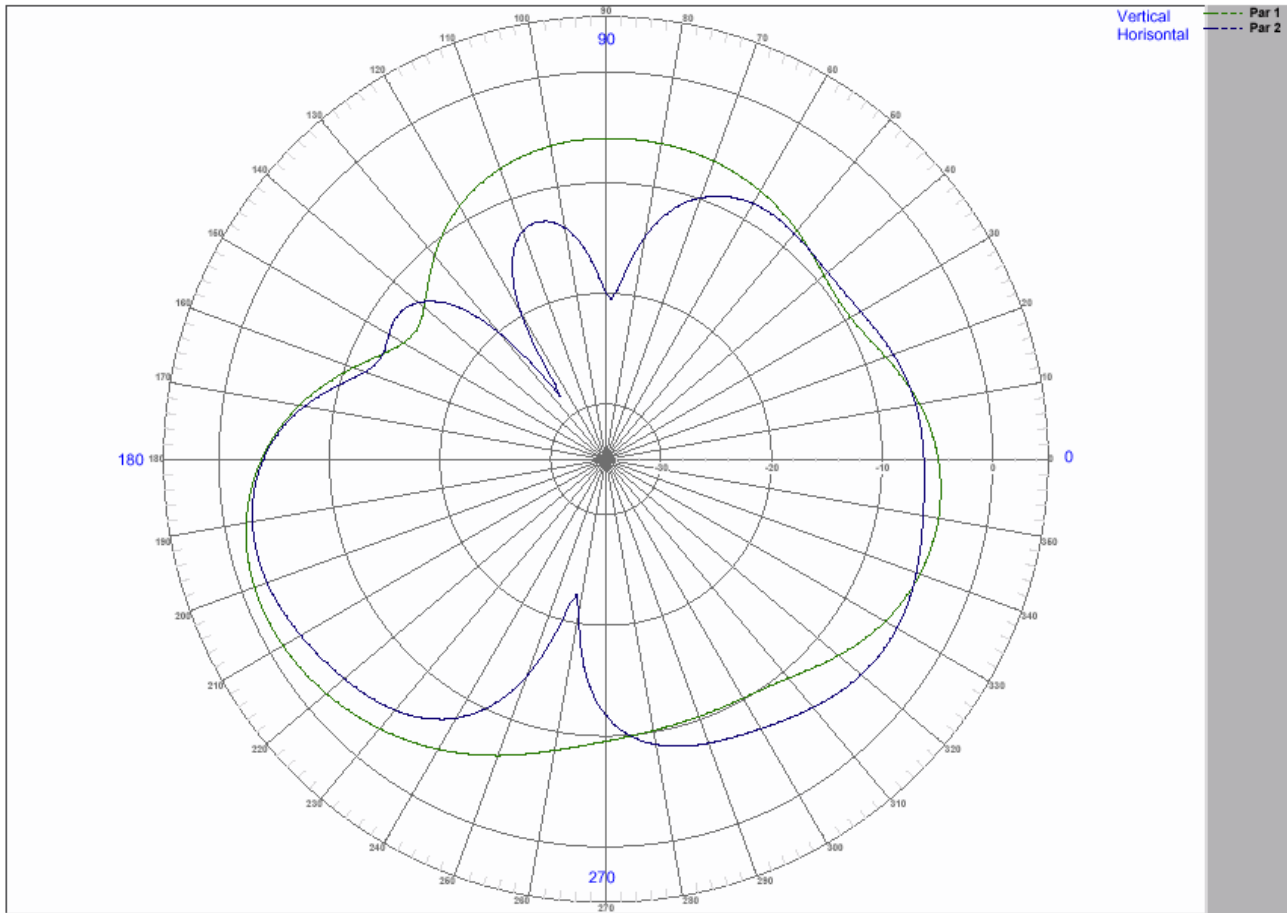
Center Frequency	869.2 MHz
Horizontal (dBi) peak	-2.00
Vertical (dBi) peak	-0.36
Horz+Vert (dBi) peak	1.89

Main antenna: 881.6 MHz



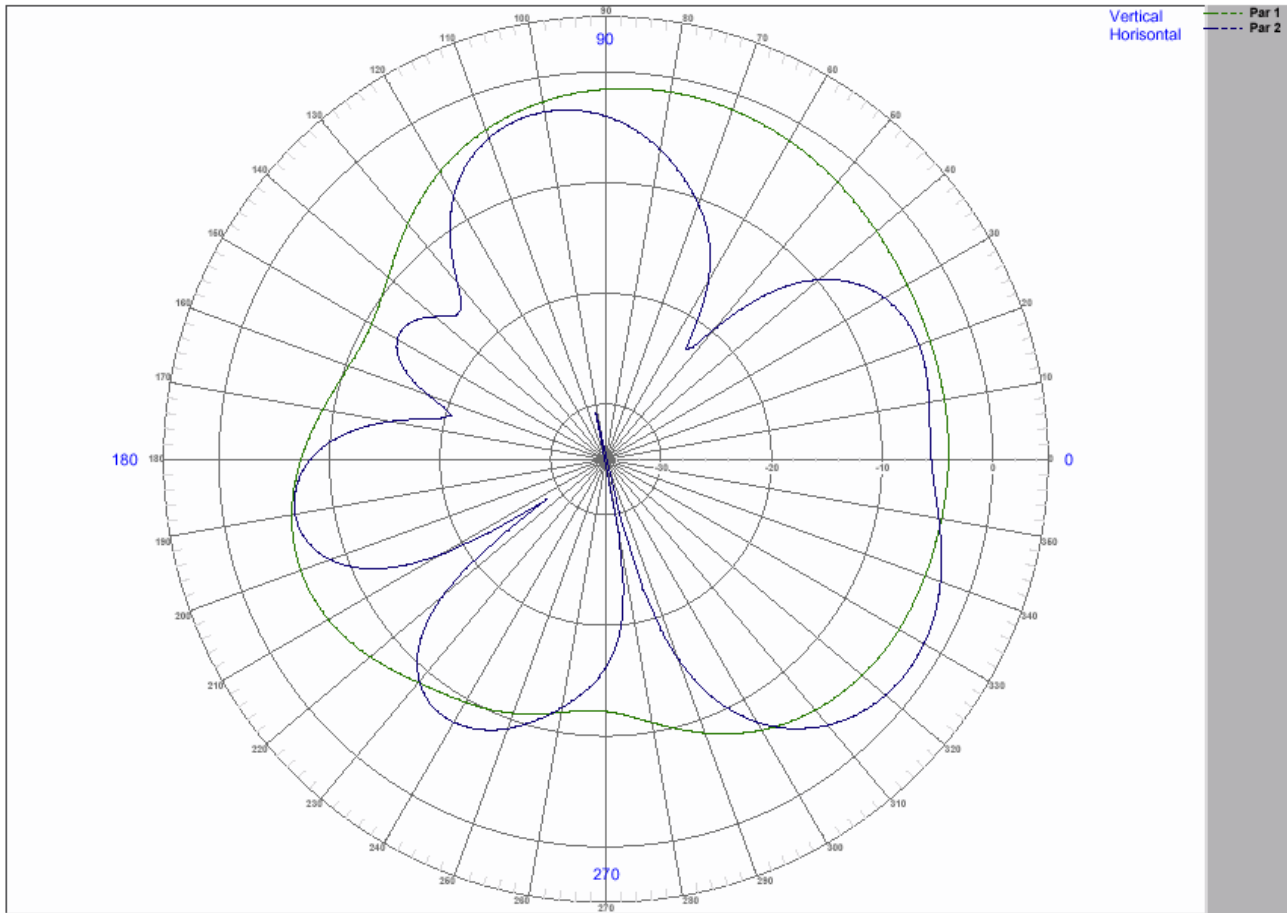
Center Frequency	881.6 MHz
Horizontal (dBi) peak	-2.73
Vertical (dBi) peak	-0.60
Horz+Vert (dBi) peak	1.45

Main antenna: 893.8 MHz



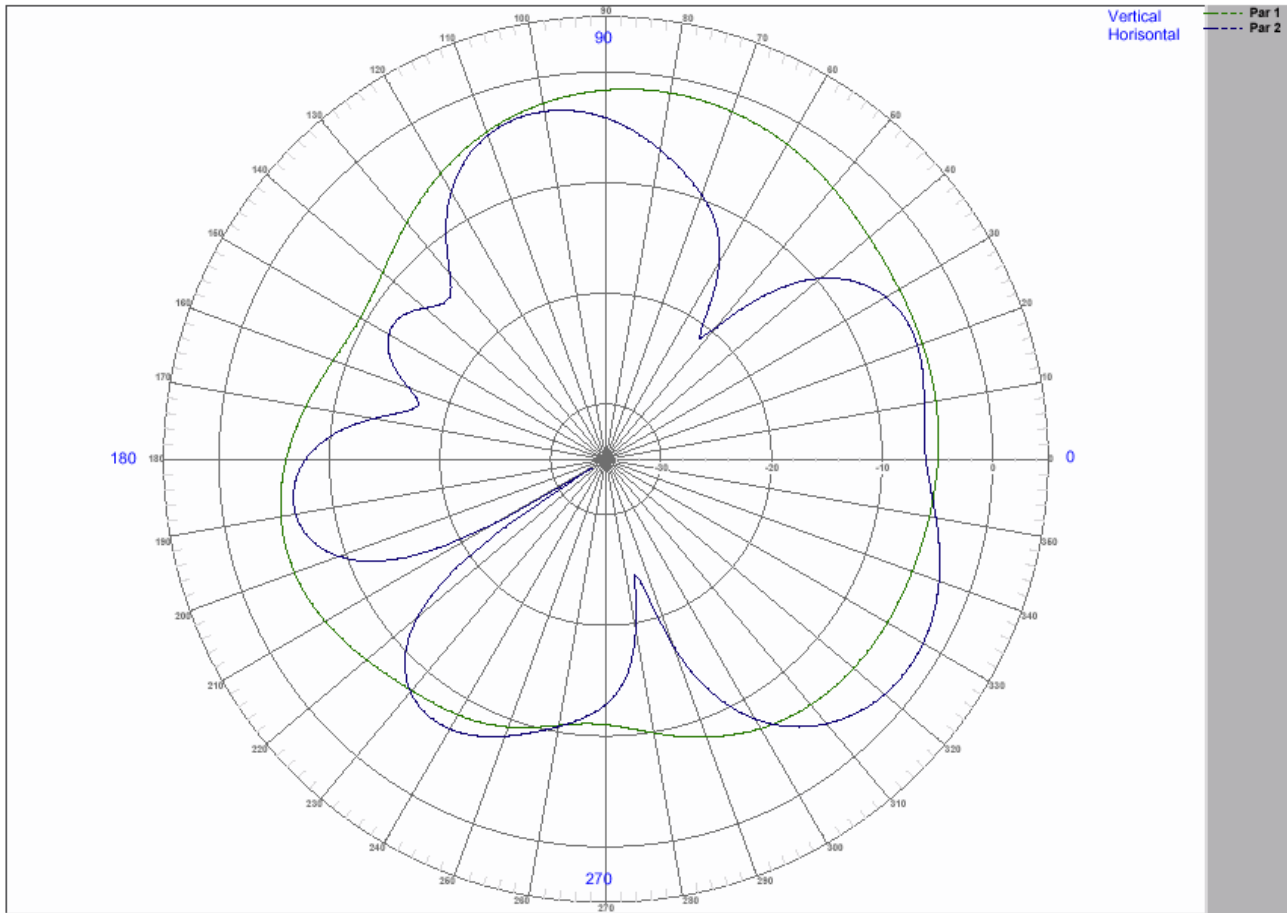
Center Frequency	893.8 MHz
Horizontal (dBi) peak	-2.34
Vertical (dBi) peak	-1.17
Horz+Vert (dBi) peak	1.23

Diversity antenna: 869.2 MHz



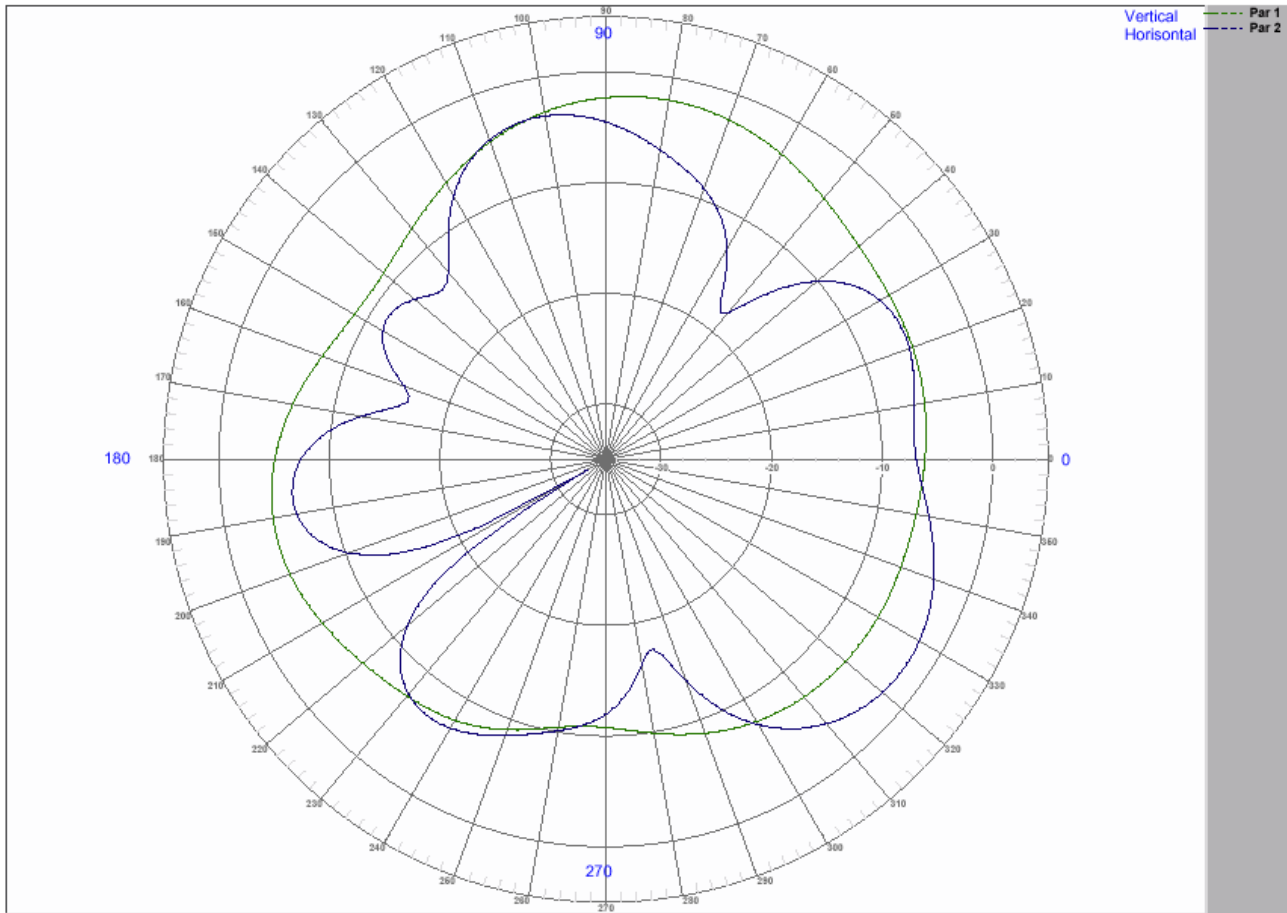
Center Frequency	869.2 MHz
Horizontal (dBi) peak	-1.68
Vertical (dBi) peak	-1.32
Horz+Vert (dBi) peak	0.49

Diversity antenna: 881.6 MHz



Center Frequency	881.6 MHz
Horizontal (dBi) peak	-1.78
Vertical (dBi) peak	-1.40
Horz+Vert (dBi) peak	0.39

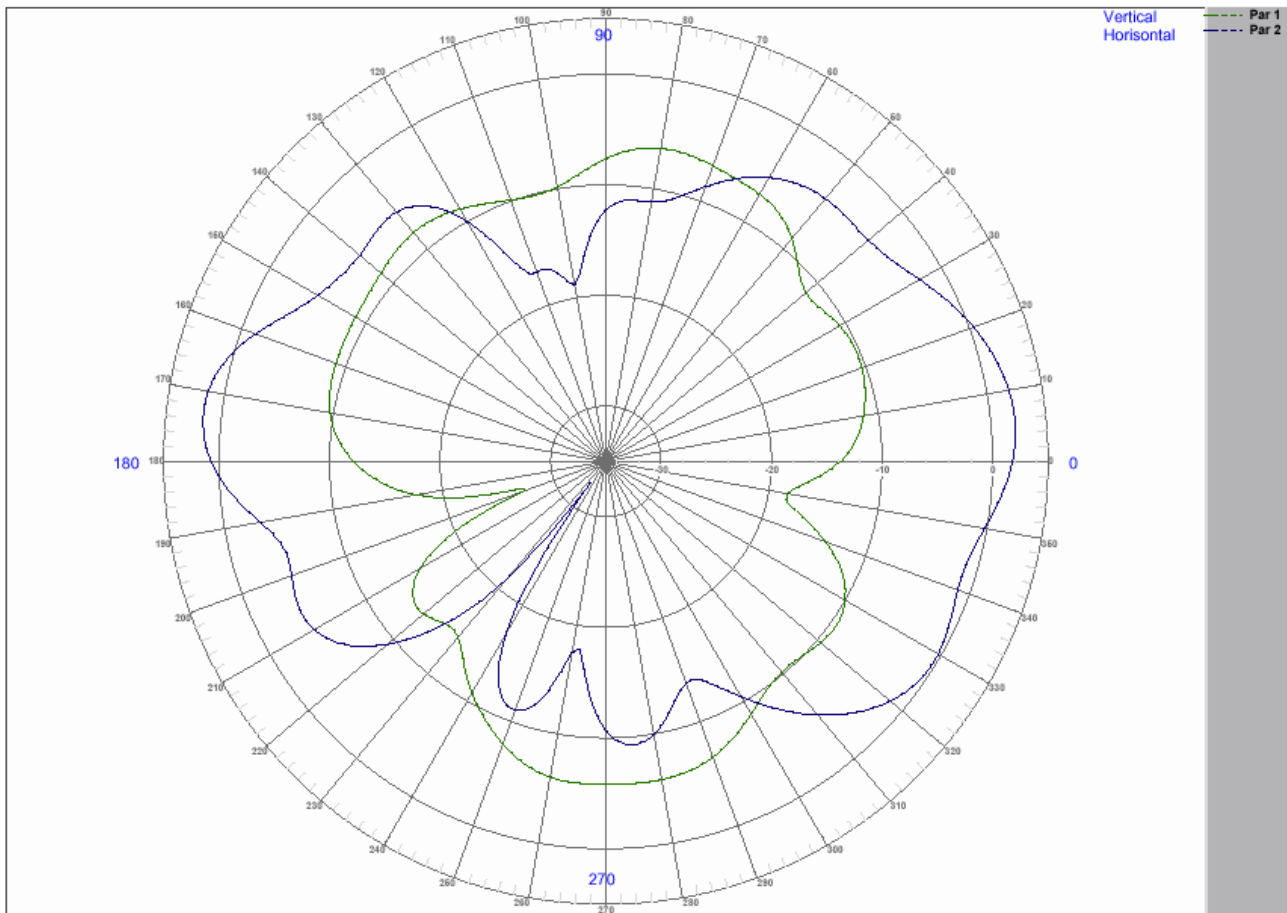
Diversity antenna: 893.8 MHz



Center Frequency	893.8 MHz
Horizontal (dBi) peak	-2.13
Vertical (dBi) peak	-2.07
Horz+Vert (dBi) peak	-0.20

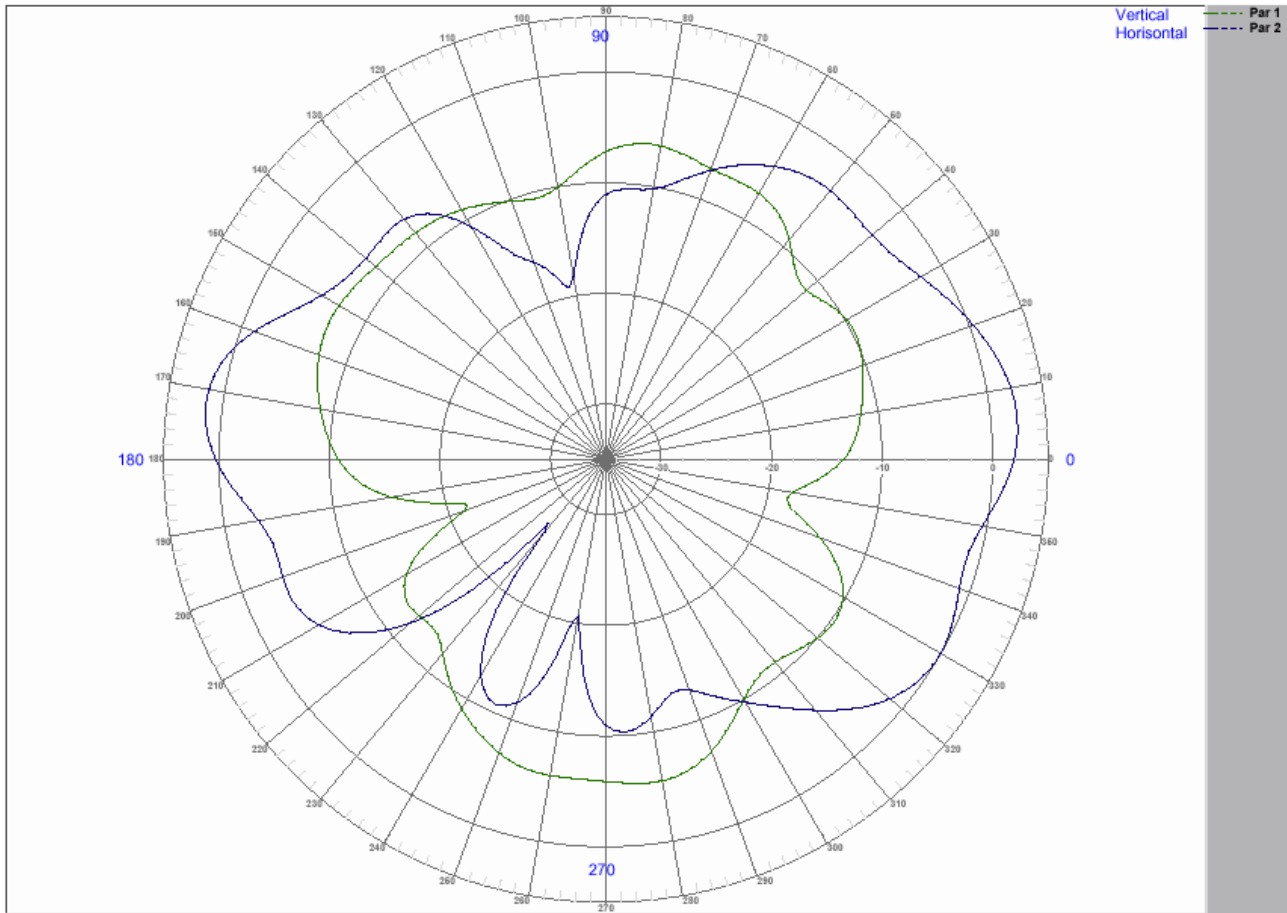
1850-1990 MHz radiation characteristic

Main antenna: 1850.2 MHz



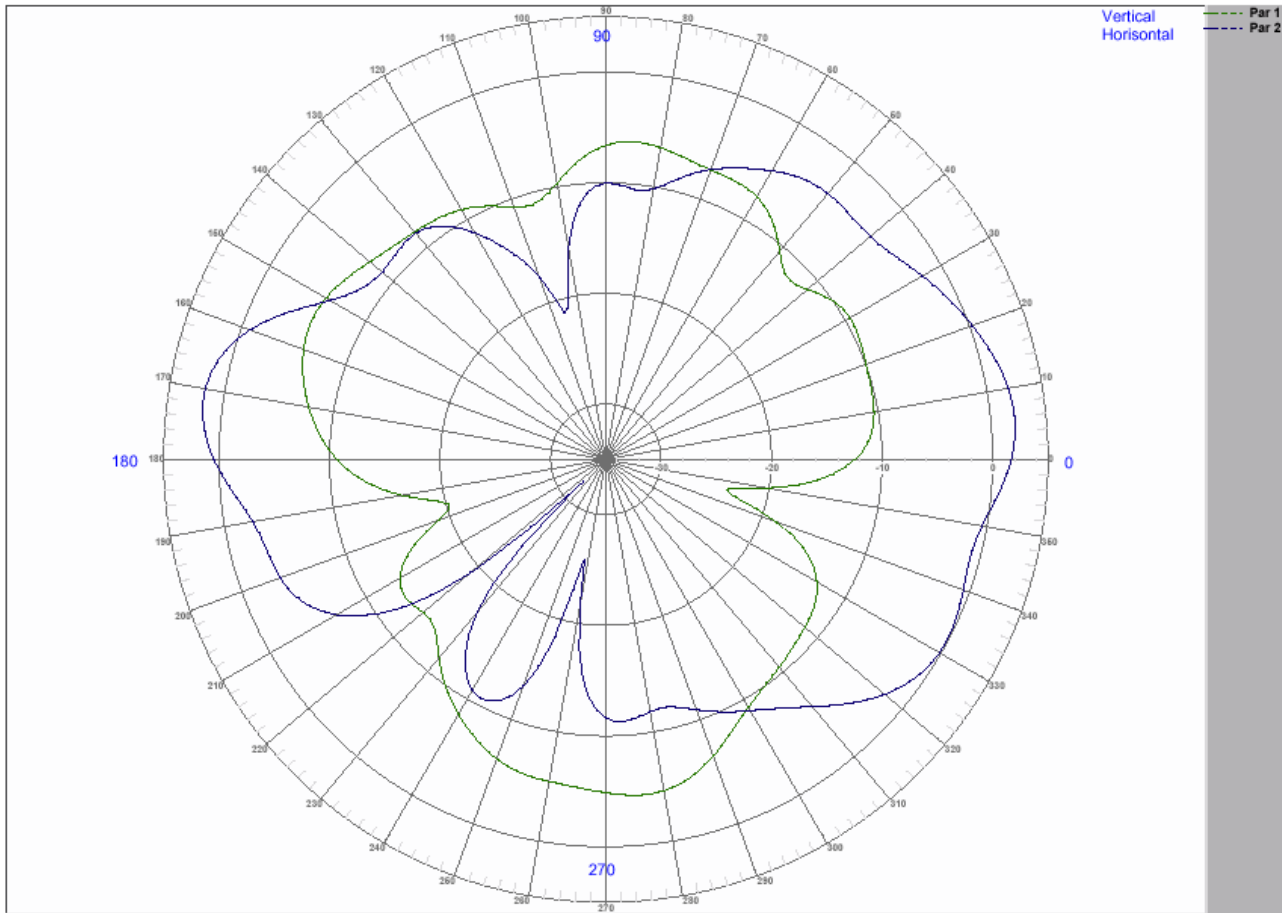
Center Frequency	1850.2 MHz
Horizontal (dBi) peak	2.18
Vertical (dBi) peak	-5.80
Horz+Vert (dBi) peak	2.35

Main antenna: 1880.0 MHz



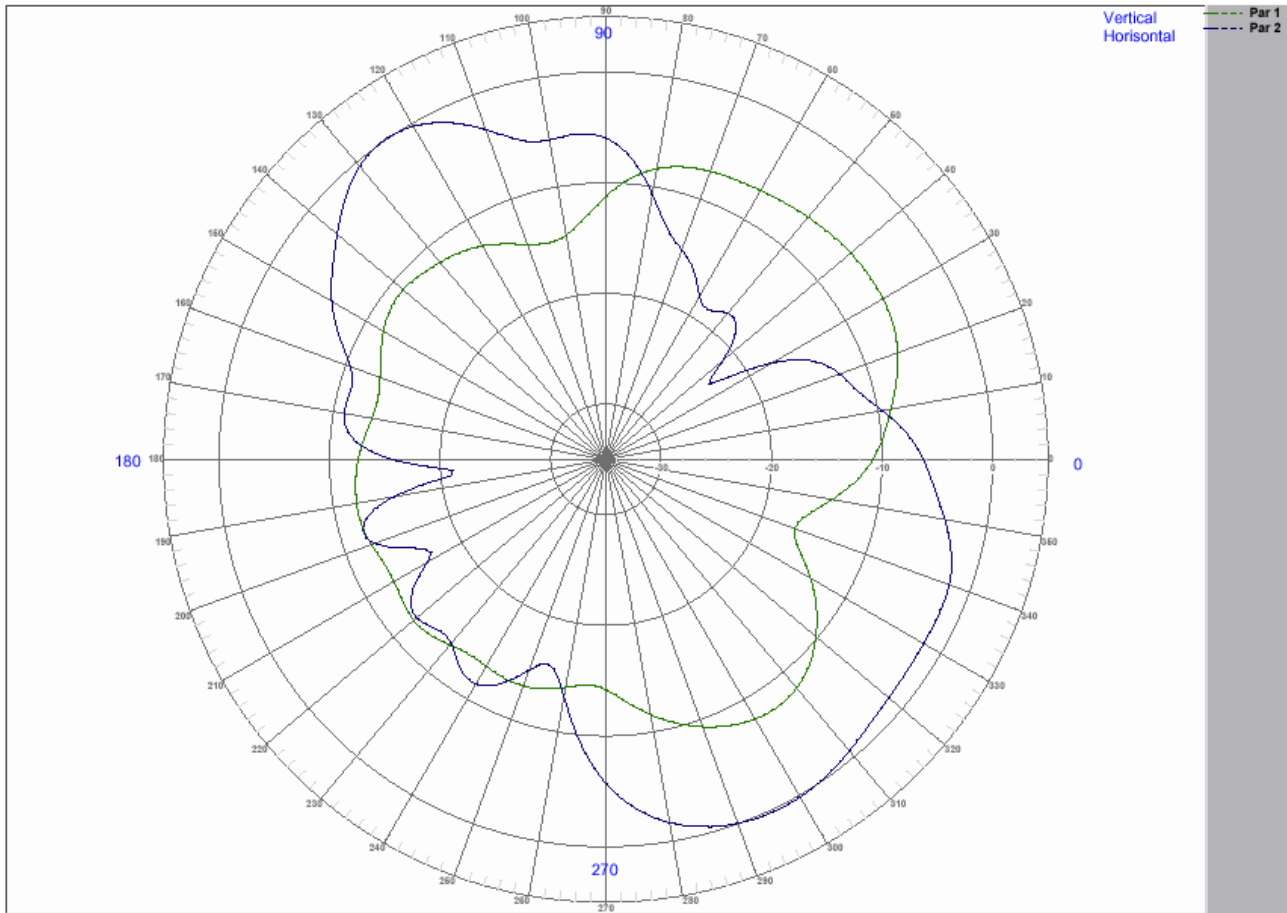
Center Frequency	1880.0 MHz
Horizontal (dBi) peak	2.40
Vertical (dBi) peak	-5.52
Horz+Vert (dBi) peak	2.55

Main antenna: 1909.8 MHz



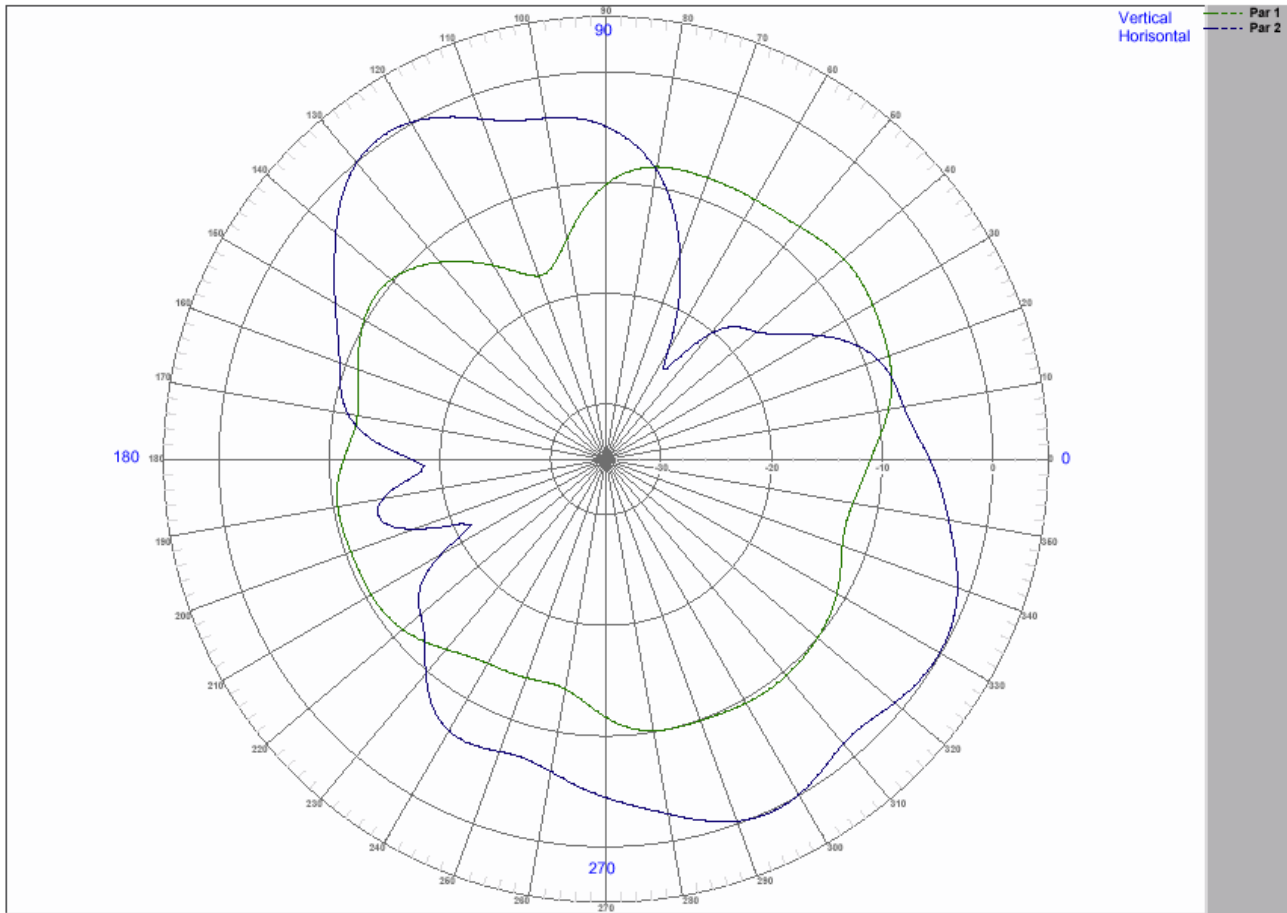
Center Frequency	1909.8 MHz
Horizontal (dBi) peak	2.16
Vertical (dBi) peak	-4.53
Horz+Vert (dBi) peak	2.37

Diversity antenna: 1850.2 MHz



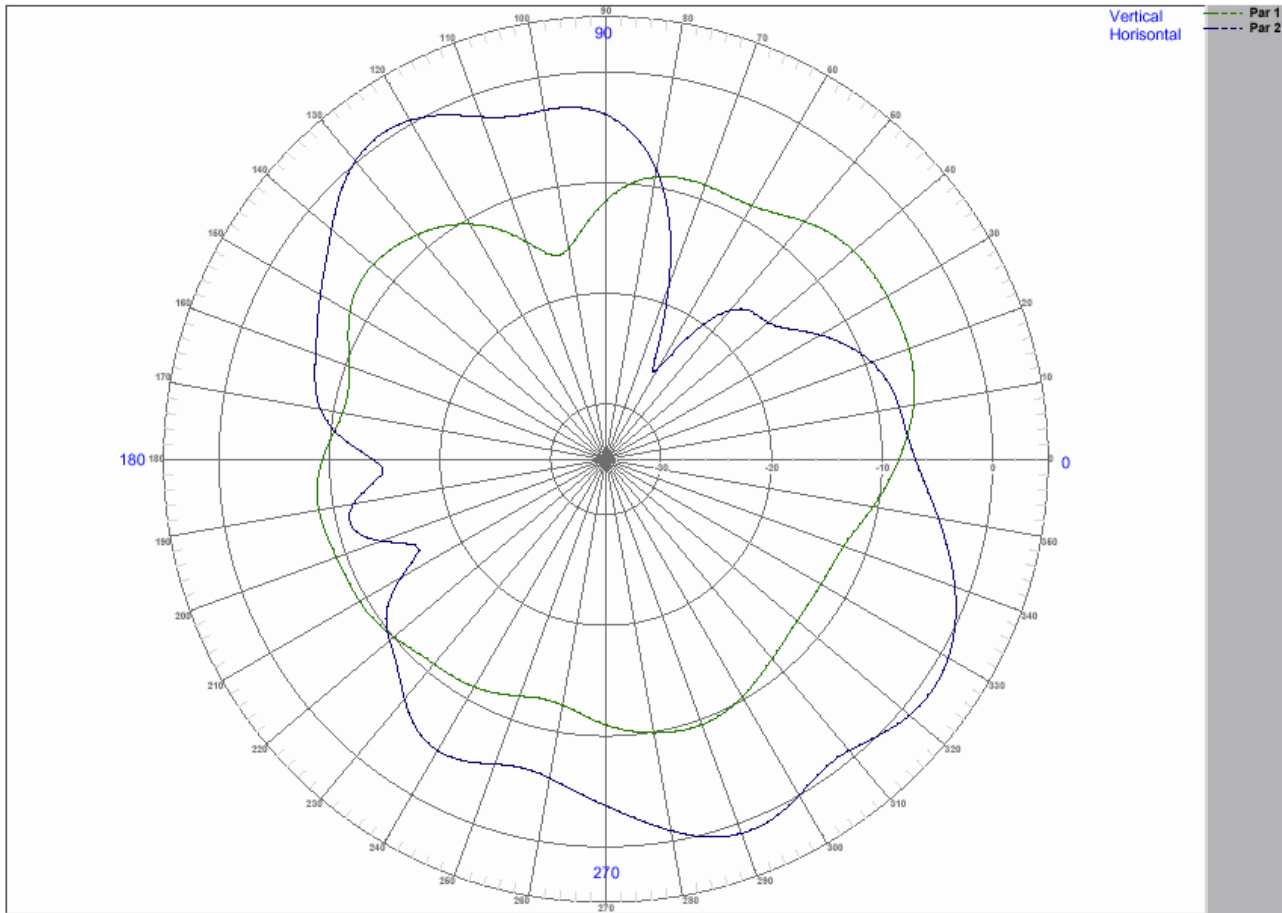
Center Frequency	1850.2 MHz
Horizontal (dBi) peak	0.23
Vertical (dBi) peak	-6.01
Horz+Vert (dBi) peak	0.81

Diversity antenna: 1880.0 MHz



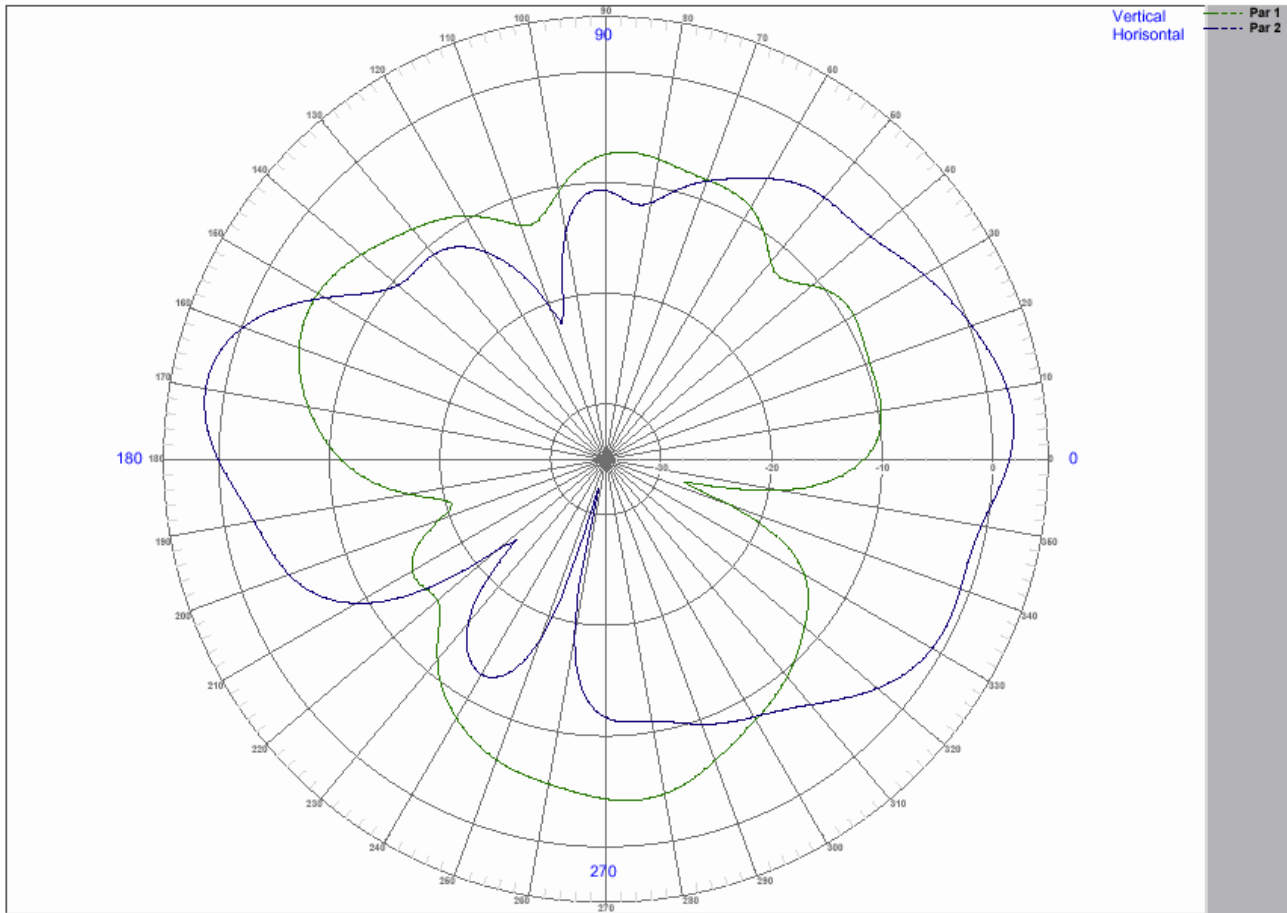
Center Frequency	1880.0 MHz
Horizontal (dBi) peak	0.49
Vertical (dBi) peak	-6.87
Horz+Vert (dBi) peak	0.67

Diversity antenna: 1909.8 MHz



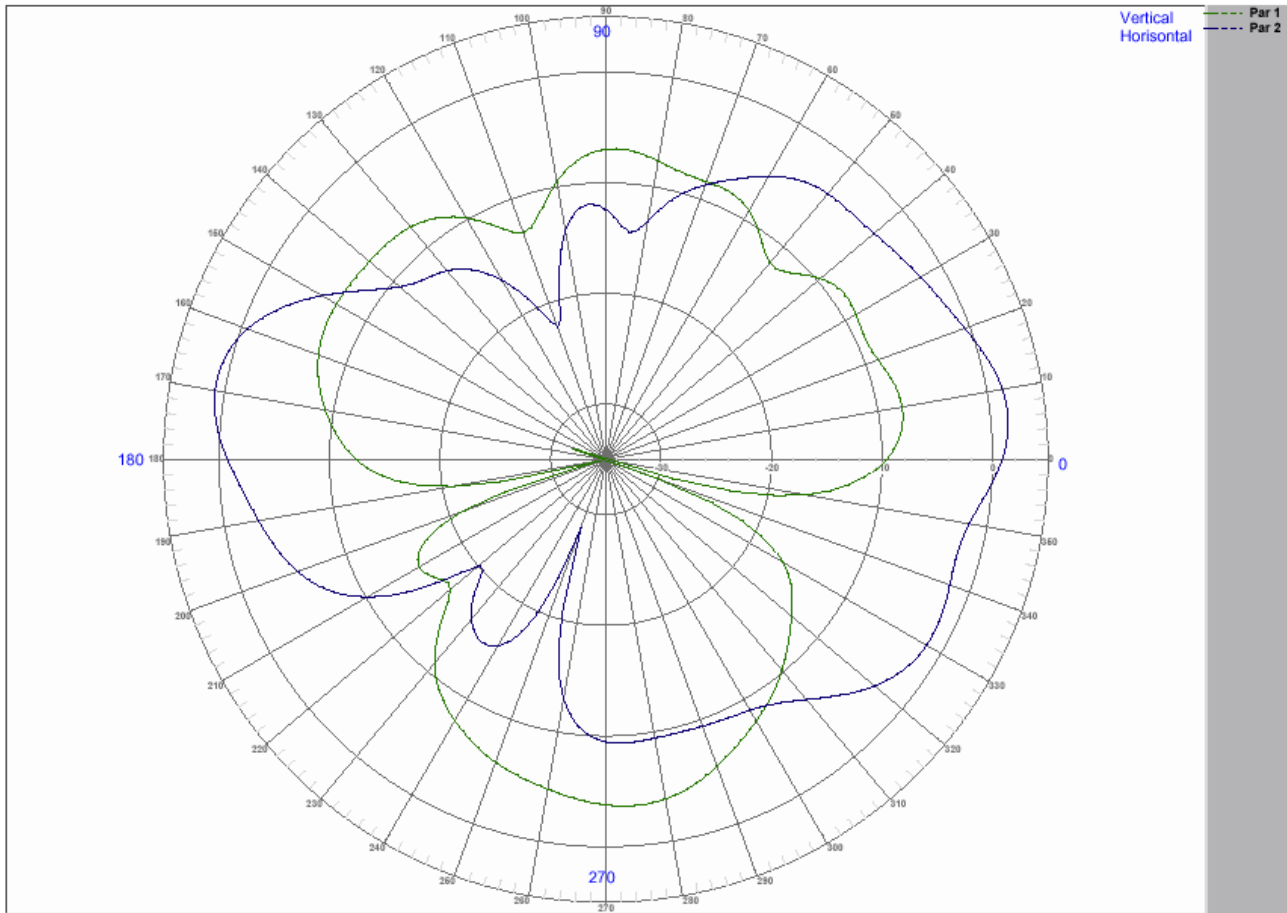
Center Frequency	1909.8 MHz
Horizontal (dBi) peak	1.11
Vertical (dBi) peak	-5.61
Horz+Vert (dBi) peak	1.32

Main antenna: 1930.2 MHz



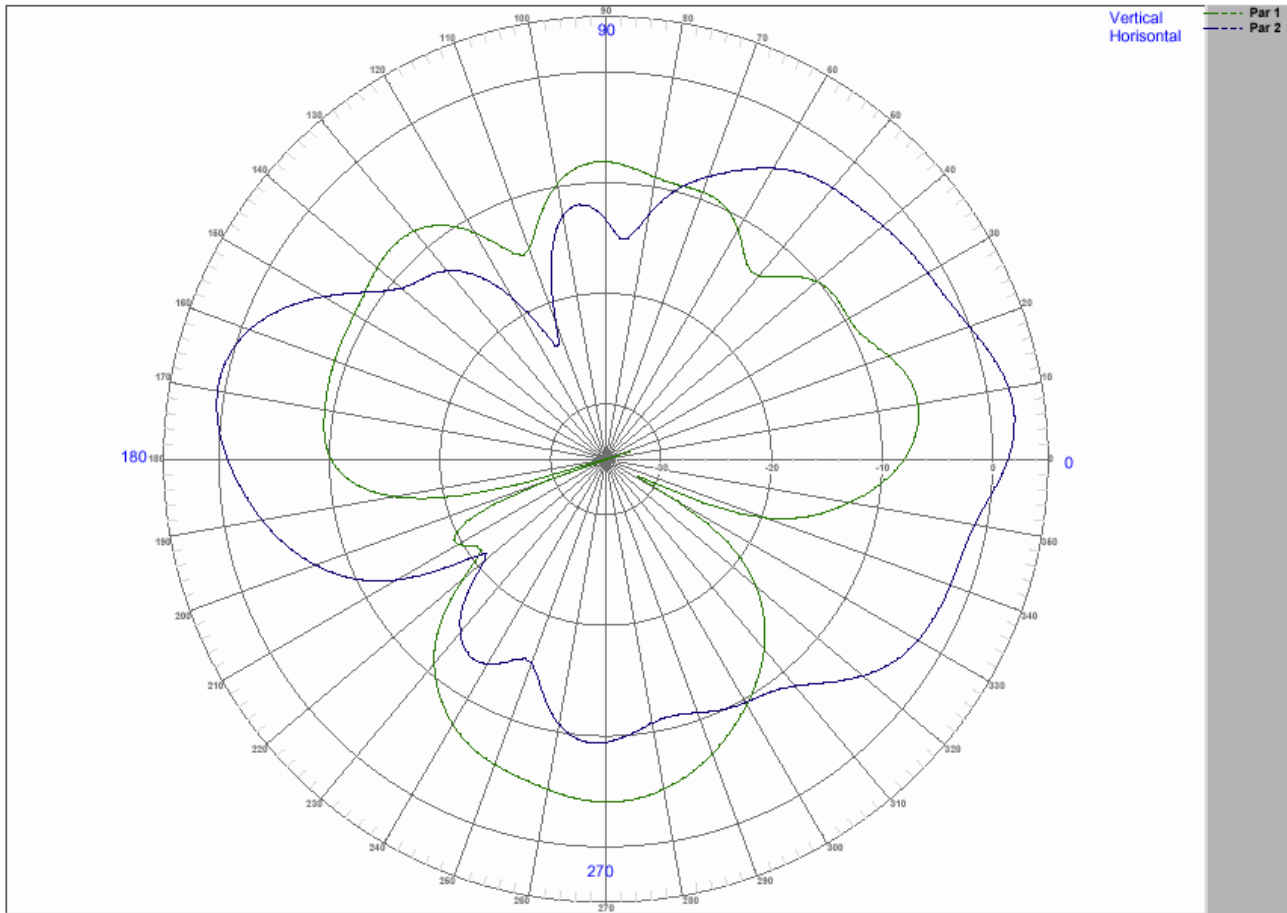
Center Frequency	1930.2 MHz
Horizontal (dBi) peak	2.04
Vertical (dBi) peak	-4.11
Horz+Vert (dBi) peak	2.30

Main antenna: 1960.0 MHz



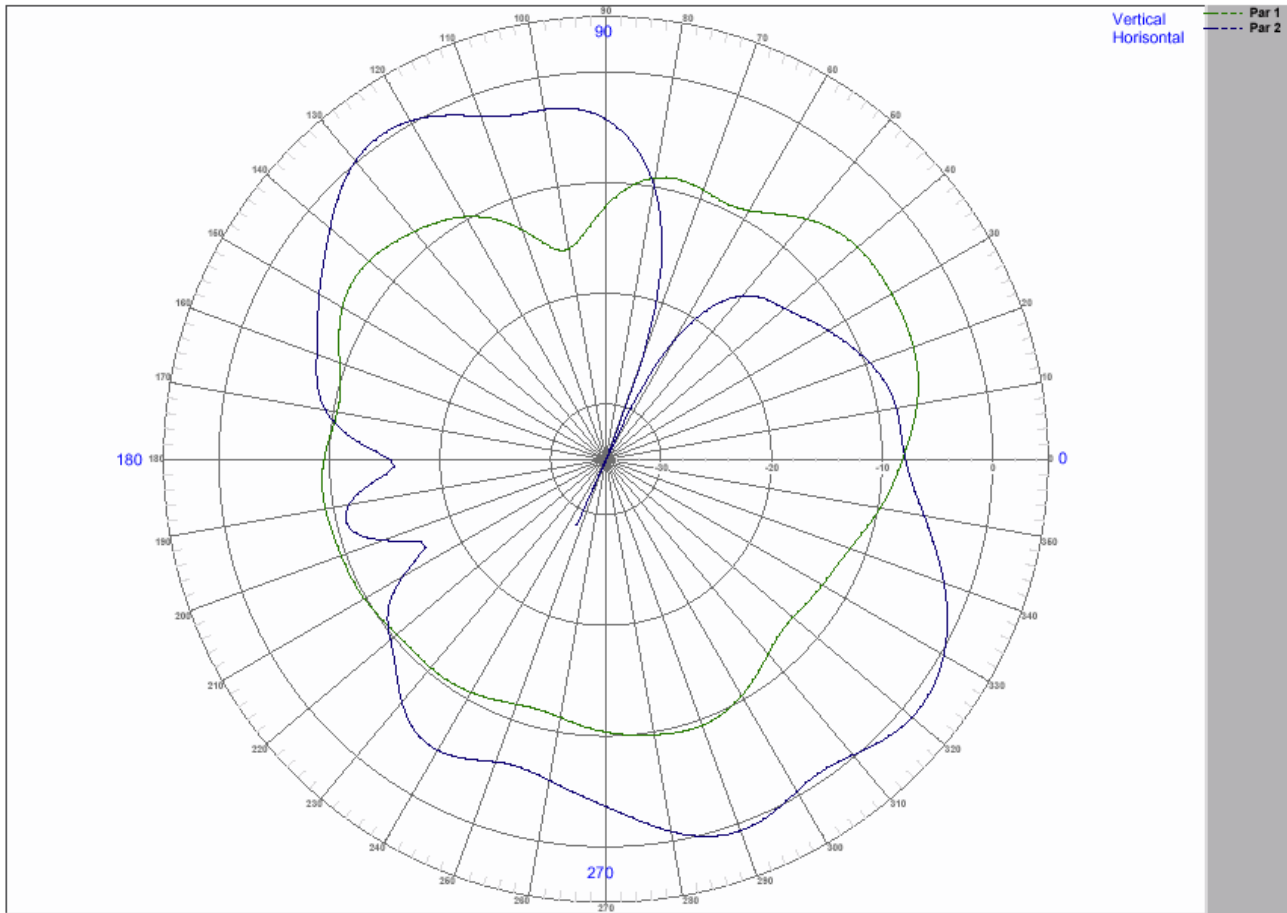
Center Frequency	1960.0 MHz
Horizontal (dBi) peak	1.58
Vertical (dBi) peak	-3.63
Horz+Vert (dBi) peak	2.04

Main antenna: 1989.8 MHz



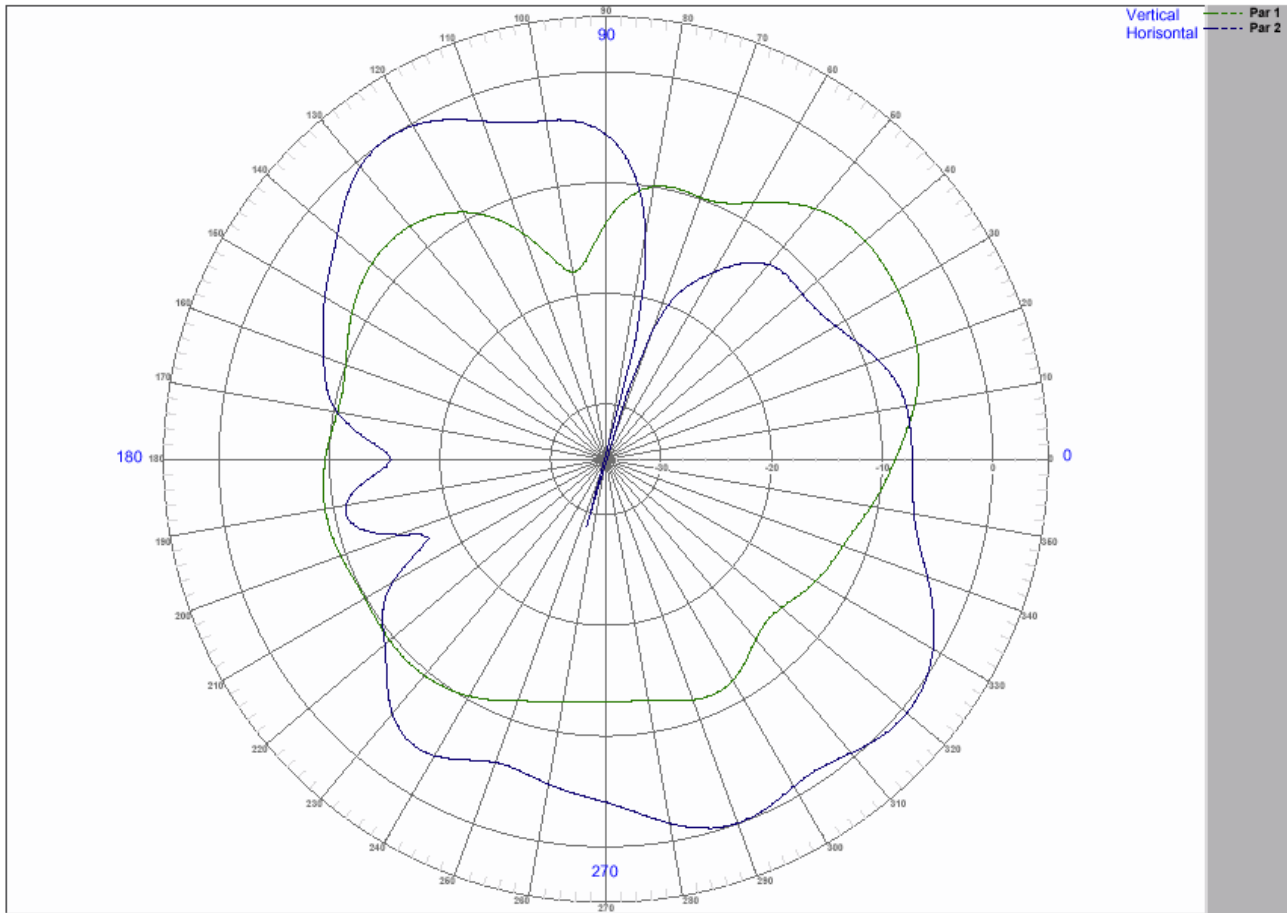
Center Frequency	1989.8 MHz
Horizontal (dBi) peak	2.16
Vertical (dBi) peak	-4.05
Horz+Vert (dBi) peak	2.71

Diversity antenna: 1930.2 MHz



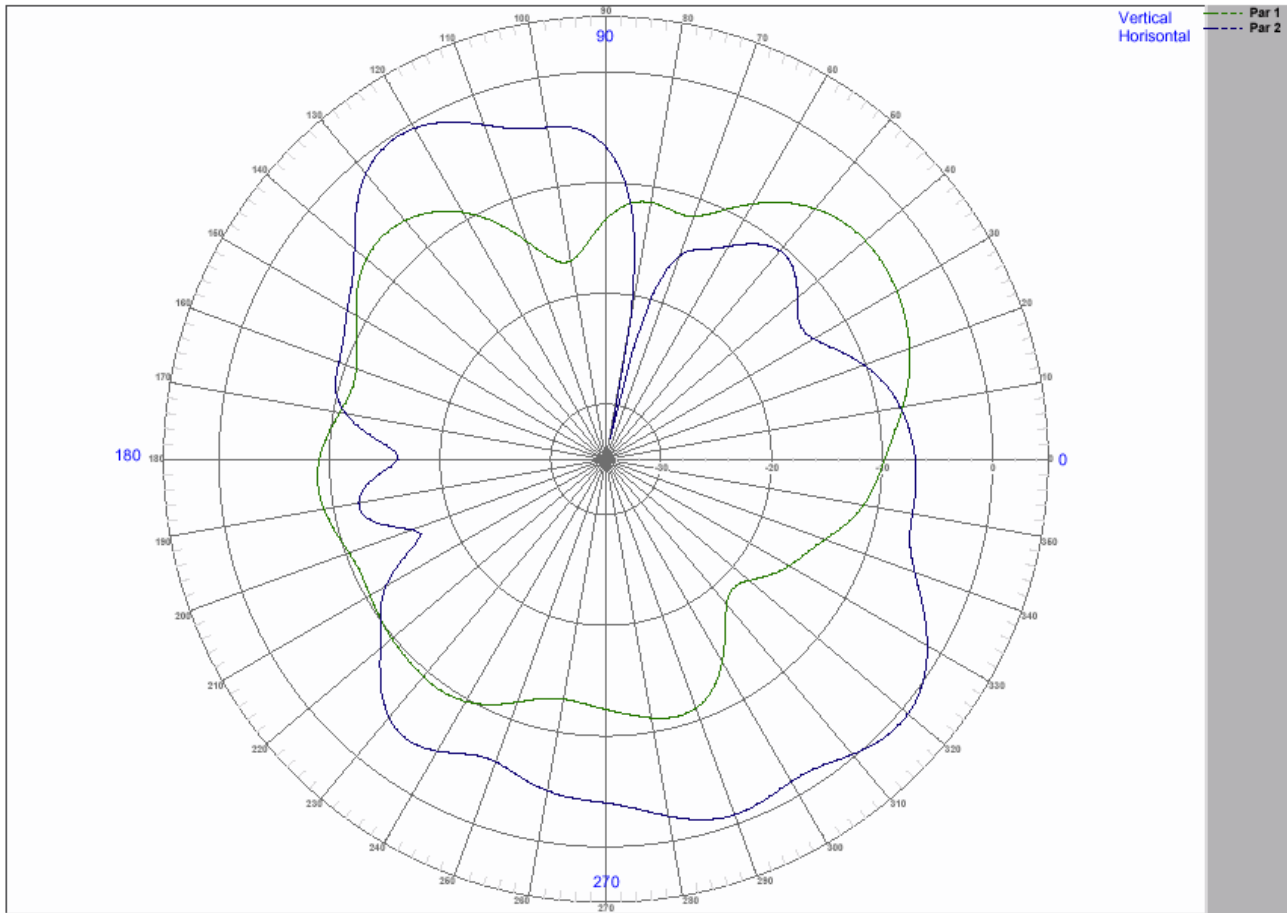
Center Frequency	1930.2 MHz
Horizontal (dBi) peak	1.18
Vertical (dBi) peak	-5.13
Horz+Vert (dBi) peak	1.35

Diversity antenna: 1960.0 MHz



Center Frequency	1960.0 MHz
Horizontal (dBi) peak	0.56
Vertical (dBi) peak	-4.34
Horz+Vert (dBi) peak	0.70

Diversity antenna: 1989.8 MHz



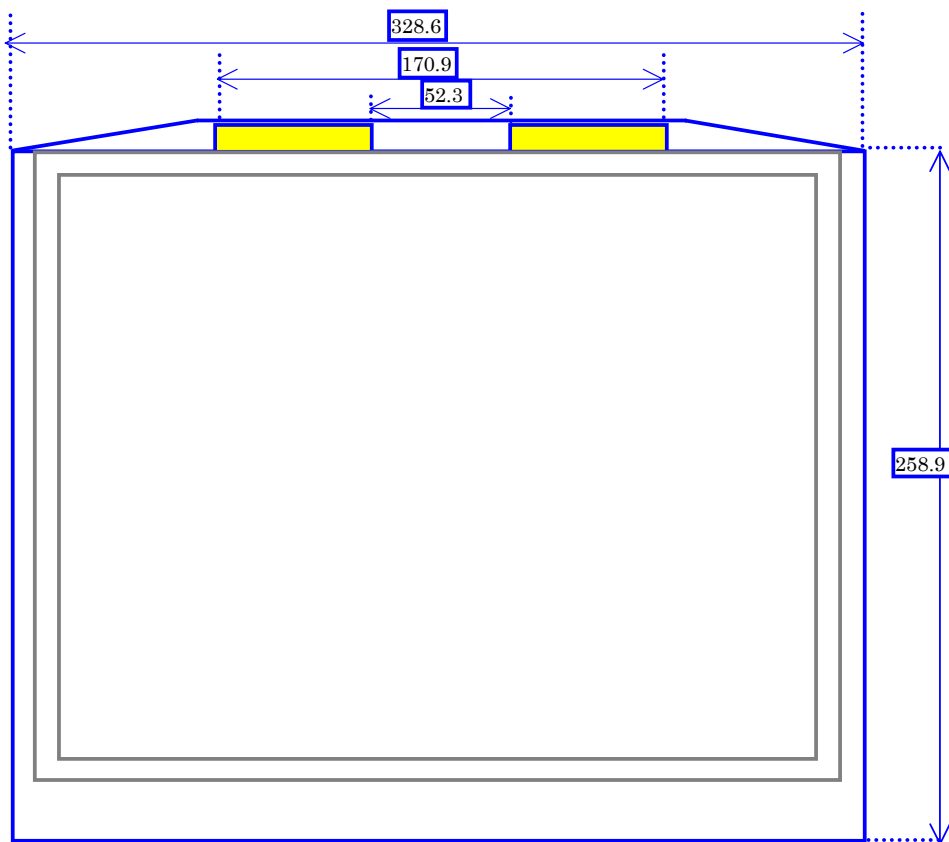
Center Frequency	1989.8 MHz
Horizontal (dBi) peak	0.73
Vertical (dBi) peak	-4.32
Horz+Vert (dBi) peak	0.78

Section 4. Host Platform Information

OEM / ODM Host platform: HP Compaq nc6320 Notebook PC, HSTNN-I05C

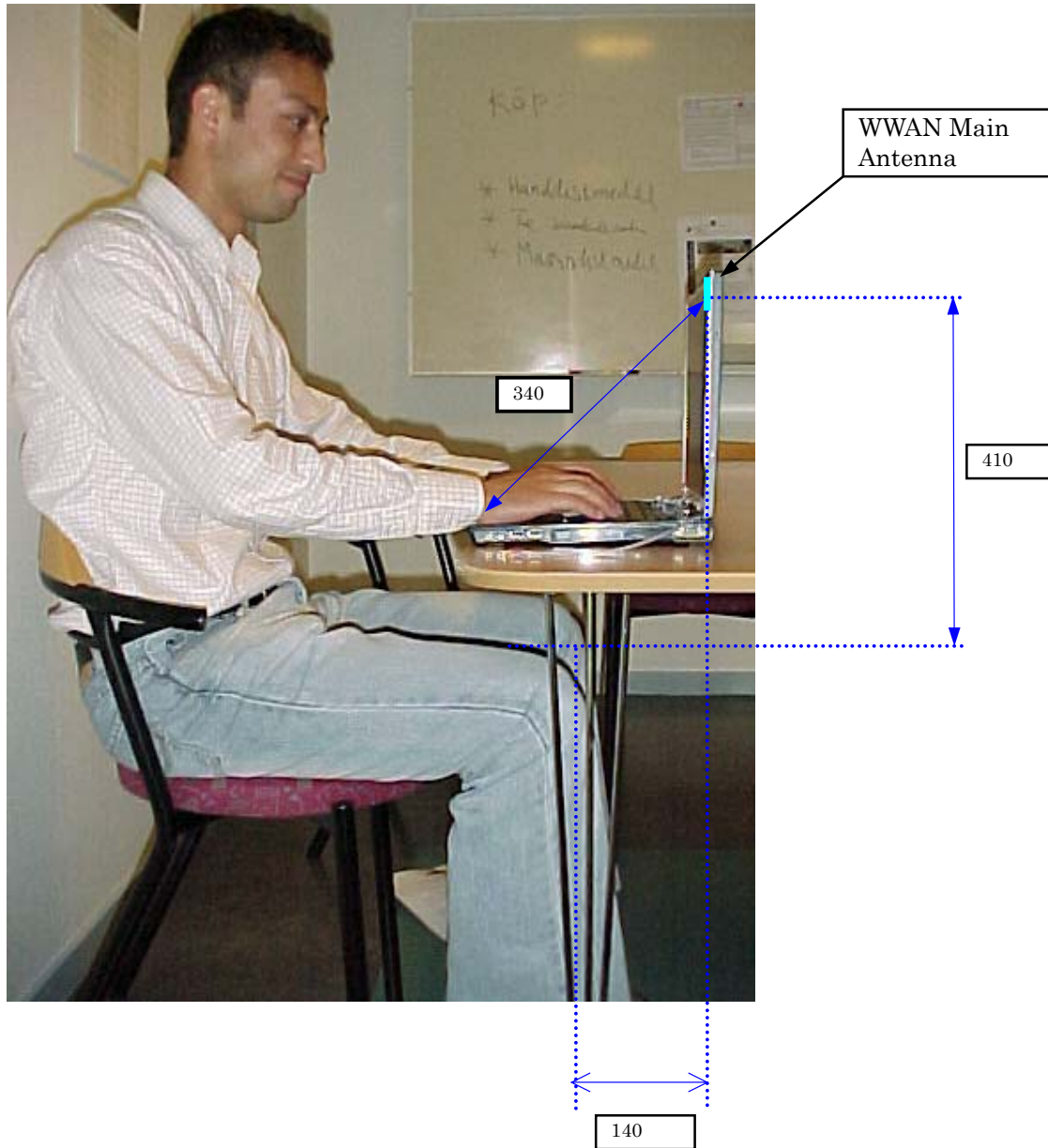
Section 5. Antenna Host Platform Location Information

WWAN Antenna Placements. Dimensions in mm.



Section 6. Antenna dimensional information for SAR evaluation

Distance between user and transmitting antenna. Dimensions in mm.



Section 7. Diagram Example of Co-Location Antenna Separation

Indicate distance between WLAN module antennas and Bluetooth/other radio antenna element.

(Note: Due to the evolving rules regarding co-location, each platform will need to be reviewed on a case by case basis)

