

Regulatory

Product Type	WLAN antenna
Model Number	Dell / Quanta / Shelby (DM5)
Revision	A00
Part No. / Yageo / LCD	CAN4313511012501B
Part No. / Yageo / Base	CAN4313511022501B
Part No. / Quanta / LCD	DQ601250147
Part No. / Quanta / Base	DQ602250108

Yageo (Taiwan) Ltd.

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Yageo Electronics (China) Co, Ltd

No. 10, Zhu Yuan Road, Suzhou New District, Suzhou, PRC

1. Specifications

Antenna Specifications

Antenna Type (Material, Technology)	Material: Phosphor Bronze Stamping Inverted-F Metal Antenna Technology Lead Free Technology
Antenna Model Number	Yageo Shelby (DM5) LCD / Base Antenna Dell/ Quanta P/N: DQ601250147 DQ602250108
Operating Frequency Range(s)	2.4GHz ~ 2.5GHz and 4.9GHz ~ 5.9GHz
Peak Gain (802.11b/g / 2.4GHz Band) (dBi)	Main/ Aux/ MIMO 2.07/ 2.82 / 1.94
Peak Gain (802.11a / 5GHz Band) (dBi)	Main/ Aux/ MIMO 0.75/ 1.09/ 1.00
Radio Connector Type	Hirose U.FL-LP-88 or IPEX 20308-111R-32/ 20351-111R-37 or Compatible Mini-PCI Connector
Mid-Line Connector Type (If Applicable)	Molex or Aliner or compatible SSMCX (Plug+ Jack) connectors

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

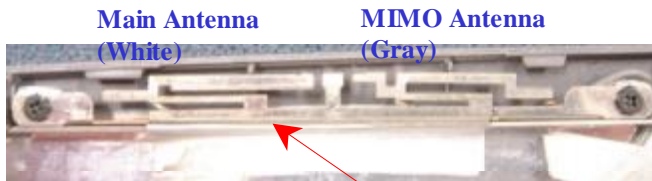
Cable Specifications

Cable Parameters	Main			MIMO			Aux		
	LCD Side	Base Side	Total	LCD Side	Base Side	Total	LCD Side	Base Side	Total
Length (mm)	360	276	636	357	276	633	448	286	734
Loss (Including Connectors) (dB)	0.78/ 1.10	0.91/ 1.37	1.69/ 2.47	0.78/ 1.09	0.91/ 1.37	1.69/ 2.46	0.97/ 1.37	0.95/ 0.85	1.92/ 2.22
Description (Color, Diameter, Manufacturer)	Color: White OD: 1.32~1.37 mm Vendor: Nissei or Equivalent Performance Cables			Color: Gray OD: 1.32~1.37 mm Vendor: Nissei or Equivalent Performance Cables			Color: Black OD: 1.32~1.37 mm Vendor: Nissei or Equivalent Performance Cables		

2. Antenna Assembly



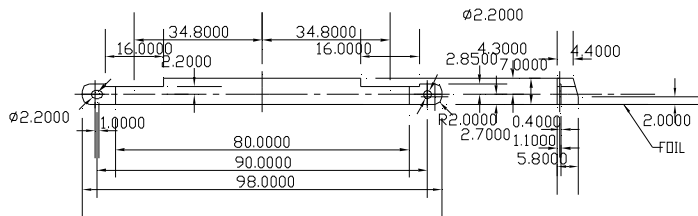
3. Antenna Assembly Installed in The Notebook



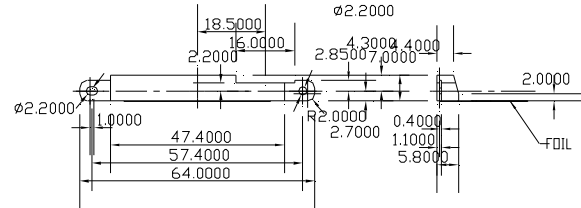
4. Mechanical Drawing of Antennas

Shelby Antenna Patch

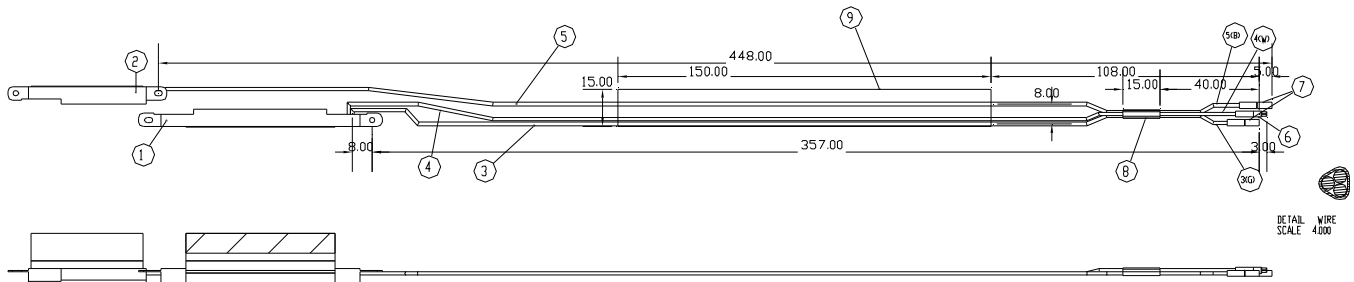
Main Antenna MIMO Antenna



Aux Antenna

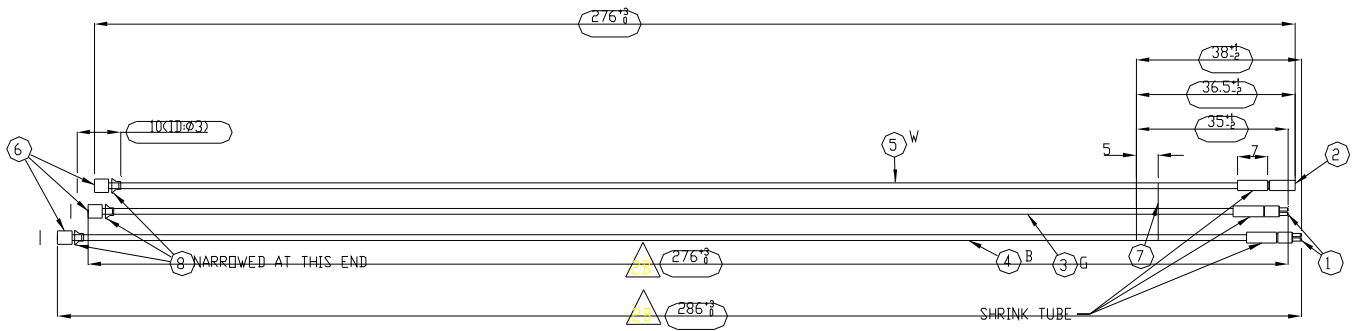


Shelby LCD Antenna



ITEM	DESCRIPTION	Q'TY
1	MAIN RADIATOR (L)	1
2	AUX RADIATOR (R)	1
3	MIMO CABLE, ϕ 1.37mm, GRAY COLOR	1
4	MAIN CABLE, ϕ 1.37mm, WHITE COLOR	1
5	AUX CABLE, ϕ 1.37mm, BLACK COLOR	1
6	SSMCX-PC PLUG(MALE)(MOLEX 73415-468 OR ALINER 32-101A)	1
7	SSMCX-JC JACK(FEMALE)(MOLEX 73415-476 OR ALINER 32-130A)	2
8	HEAT SHRINK TUBE	1
9	3M No. 5 Polyester Tape width=15mm	1
10	HEAT SHRINK TUBE	3

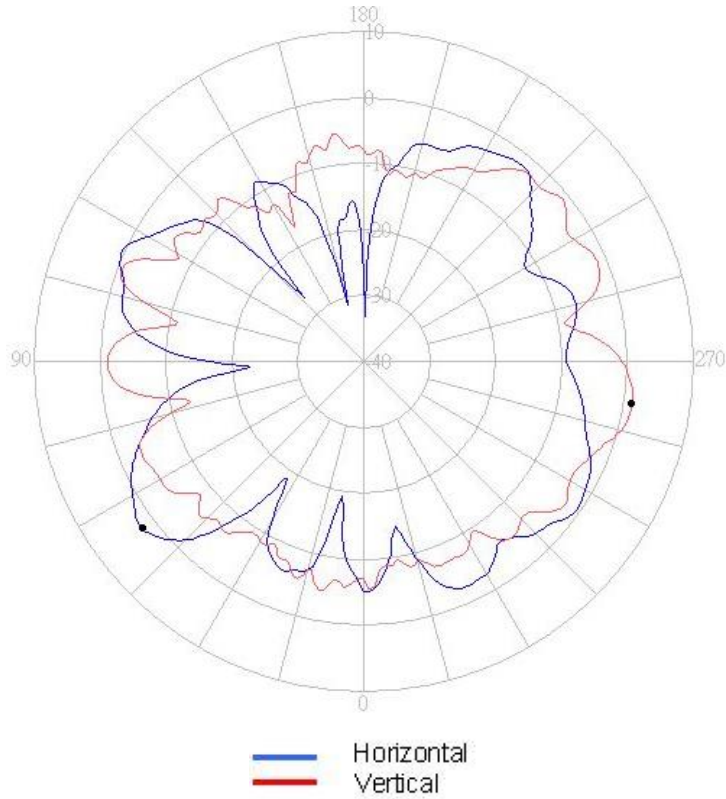
Shelby Base Antenna



ITEM	DESCRIPTION	QTY
1	SSMCX-PC PLUG(MALE)(MOLEX 73415-4680 OR ALINER 32-101A)	2
2	SSMCX-JC PLUG(FEMALE)(MOLEX 73415-4760 OR ALINER 32-130A)	1
3	CABLE Ø1.37 GREY COLOR	1
4	CABLE Ø1.37 BLACK COLOR	1
5	CABLE Ø1.37 WHITE COLOR	1
6	UFL CONNECTOR(CHRS,I-PEX)	3
7	Acetate Tape	1
8	TRANSPARENT TUBE(NARROWED THE NECK TYPE) Ø3X10	3

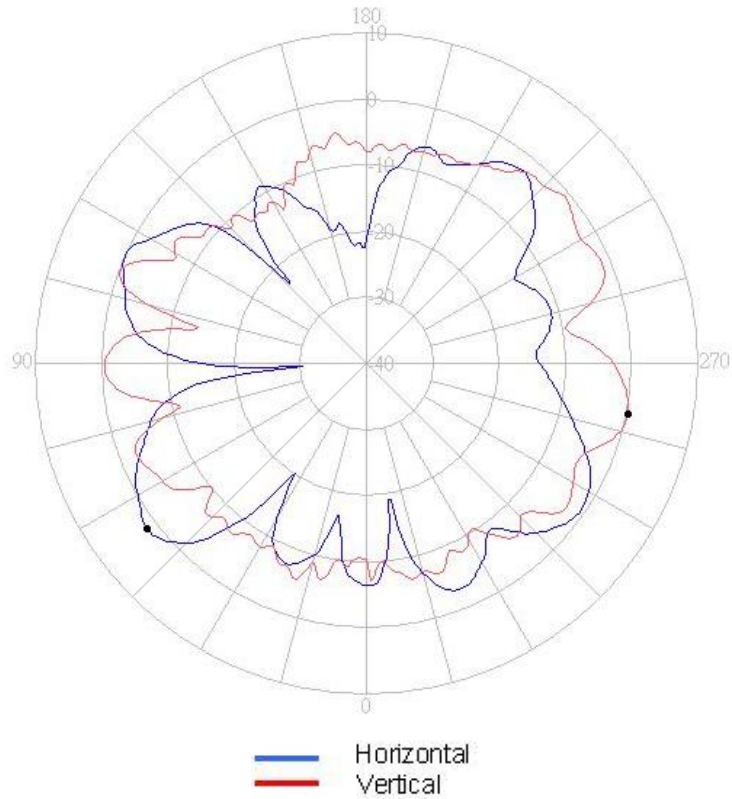
5. Gain Patterns

Main Antenna



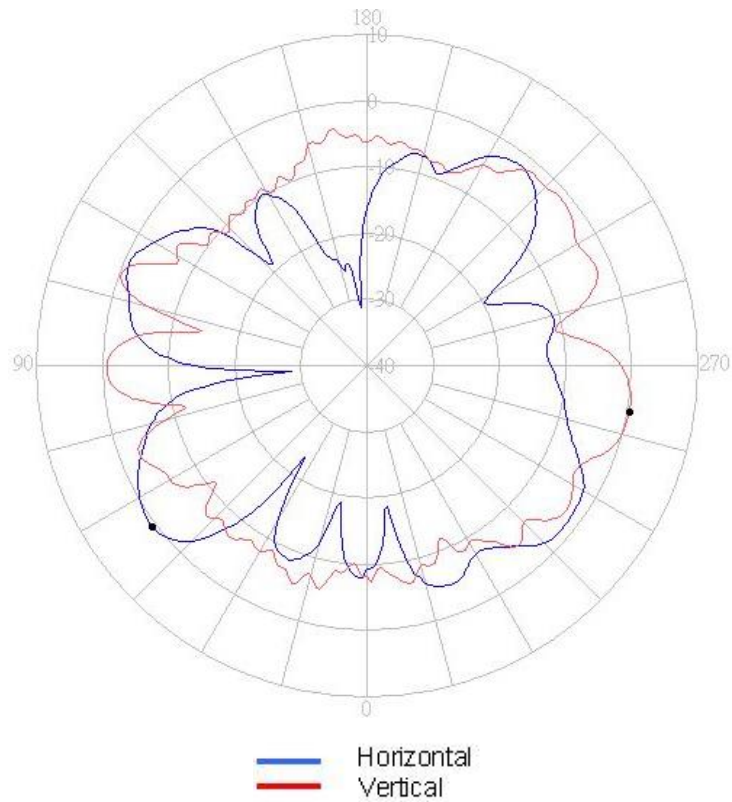
Frequency	2412 MHz
Horizontal Peak Gain (dBi)	2.07
Vertical Peak Gain (dBi)	1.16
Hori + Vert Avg. Gain (dBi)	-2.82

Main Antenna



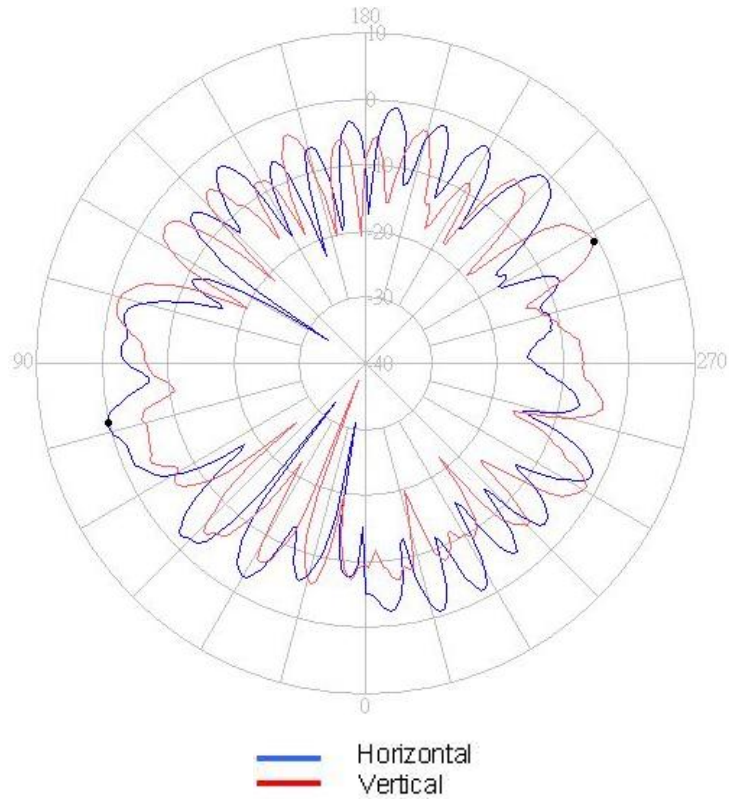
Frequency	2437 MHz
Horizontal Peak Gain (dBi)	1.49
Vertical Peak Gain (dBi)	0.11
Hori + Vert Avg. Gain (dBi)	-3.16

Main Antenna



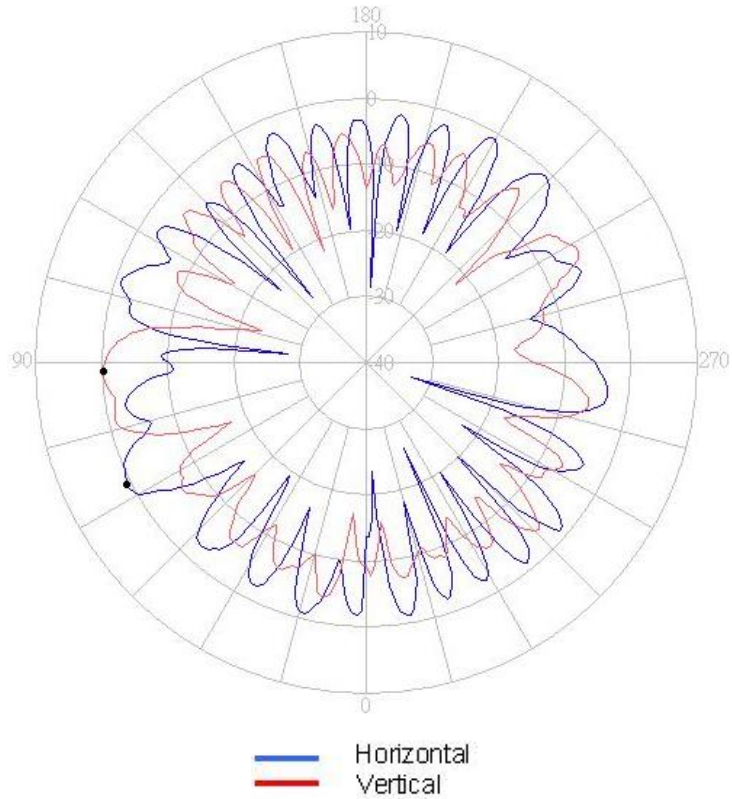
Frequency	2462 MHz
Horizontal Peak Gain (dBi)	0.58
Vertical Peak Gain (dBi)	0.27
Hori + Vert Avg. Gain (dBi)	-3.29

Main Antenna



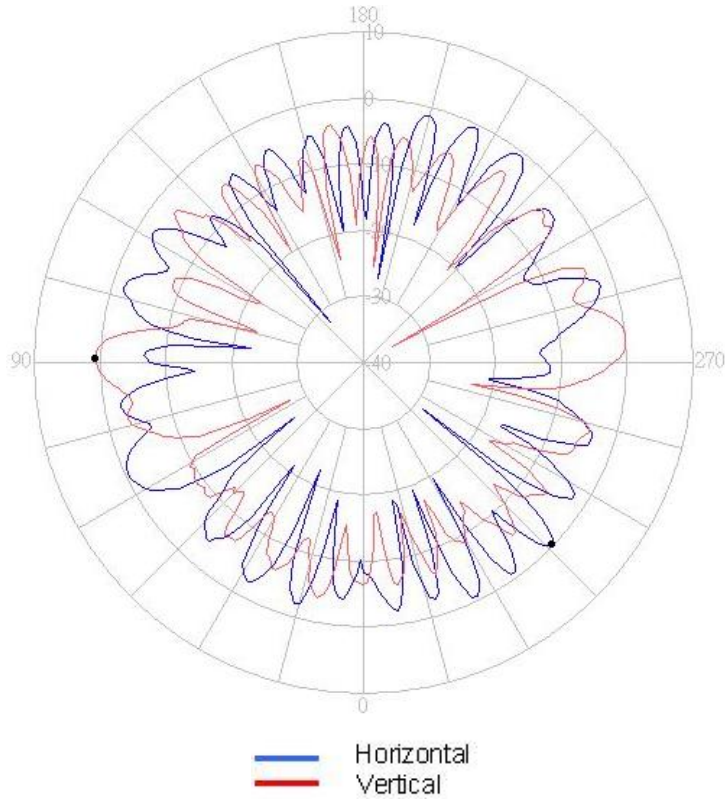
Frequency	4900 MHz
Horizontal Peak Gain (dBi)	0.17
Vertical Peak Gain (dBi)	-0.82
Hori + Vert Avg. Gain (dBi)	-4.15

Main Antenna



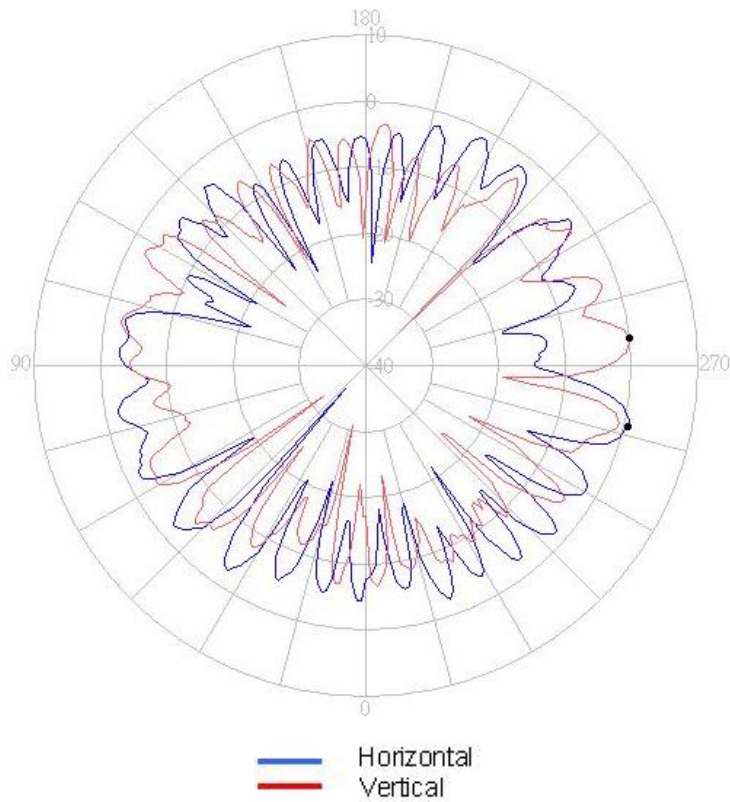
Frequency	5150 MHz
Horizontal Peak Gain (dBi)	0.62
Vertical Peak Gain (dBi)	-0.33
Hori + Vert Avg. Gain (dBi)	-3.90

Main Antenna



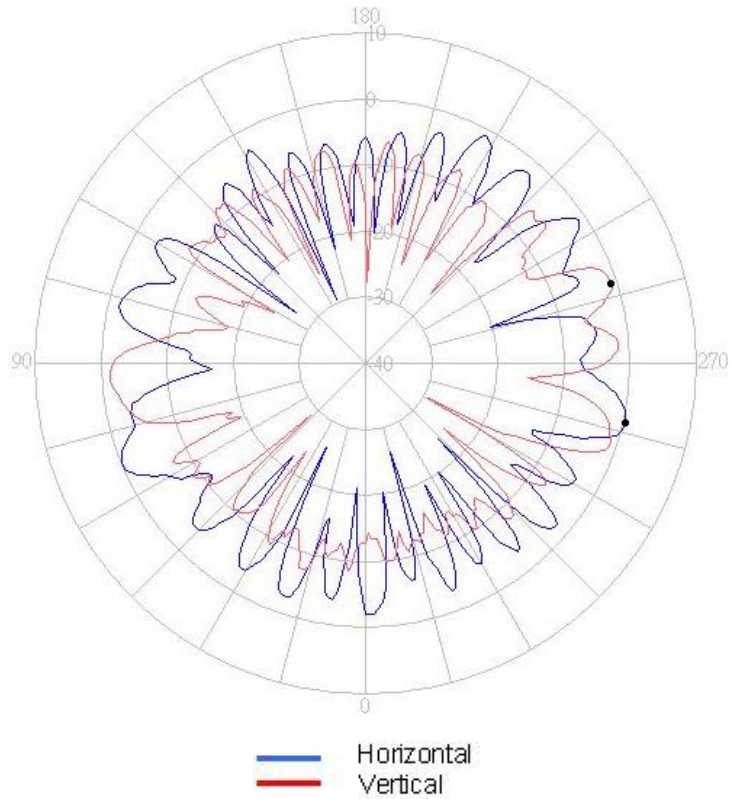
Frequency	5350 MHz
Horizontal Peak Gain (dBi)	-0.40
Vertical Peak Gain (dBi)	0.75
Hori + Vert Avg. Gain (dBi)	-3.87

Main Antenna



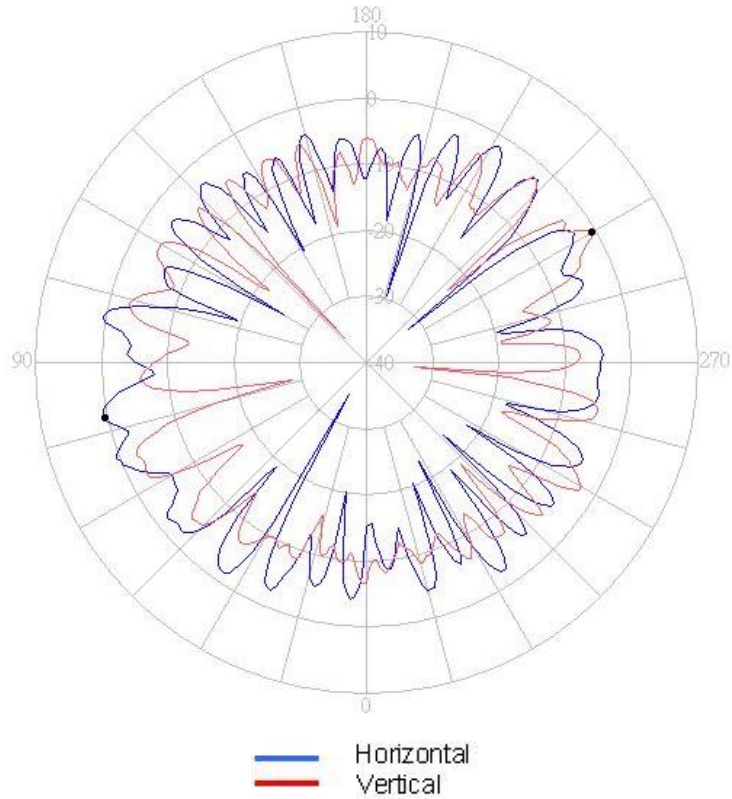
Frequency	5470 MHz
Horizontal Peak Gain (dBi)	0.50
Vertical Peak Gain (dBi)	-0.17
Hori + Vert Avg. Gain (dBi)	-4.36

Main Antenna



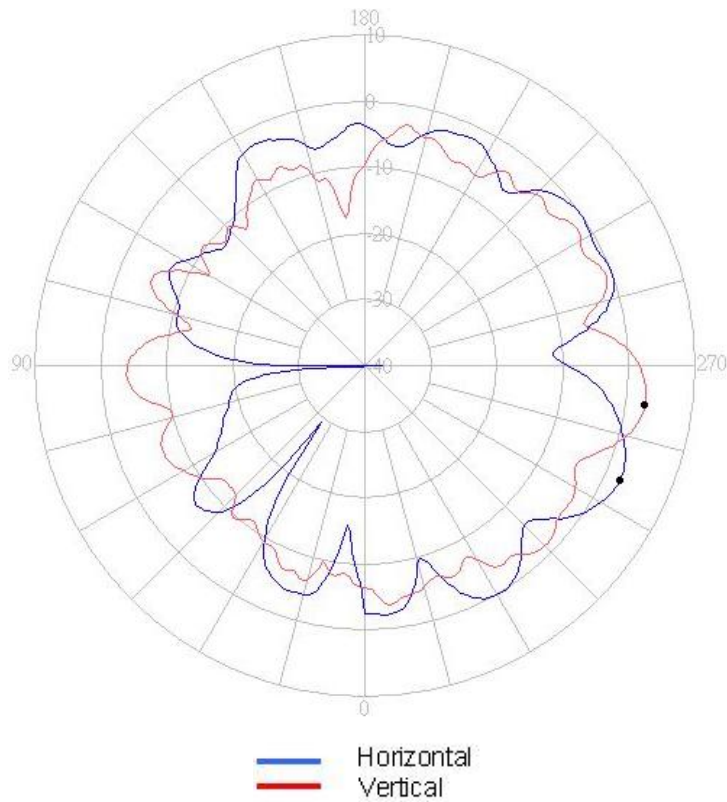
Frequency	5725 MHz
Horizontal Peak Gain (dBi)	0.19
Vertical Peak Gain (dBi)	-0.94
Hori + Vert Avg. Gain (dBi)	-4.41

Main Antenna



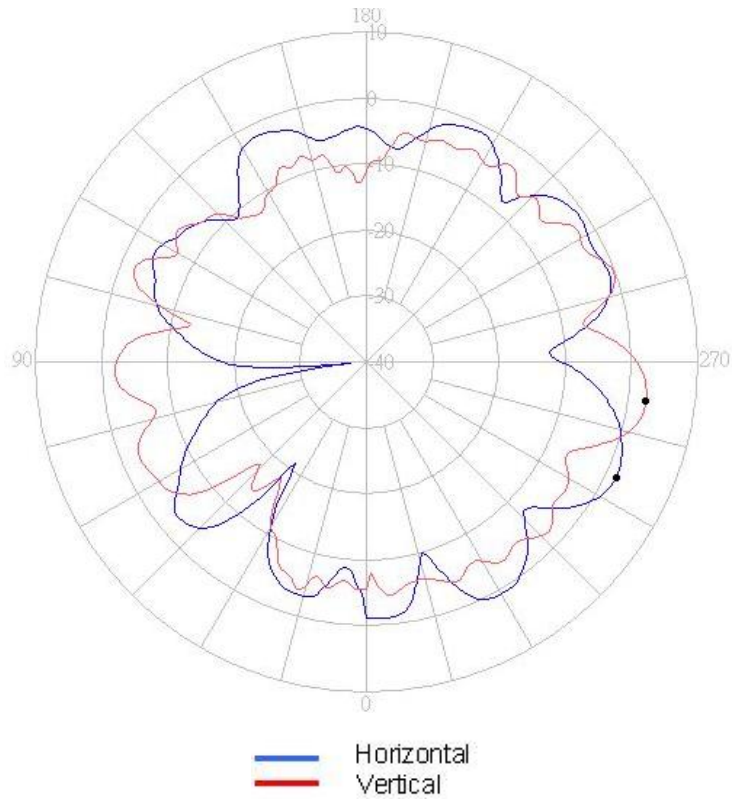
Frequency	5875 MHz
Horizontal Peak Gain (dBi)	0.44
Vertical Peak Gain (dBi)	-0.74
Hori + Vert Avg. Gain (dBi)	-4.53

Aux Antenna



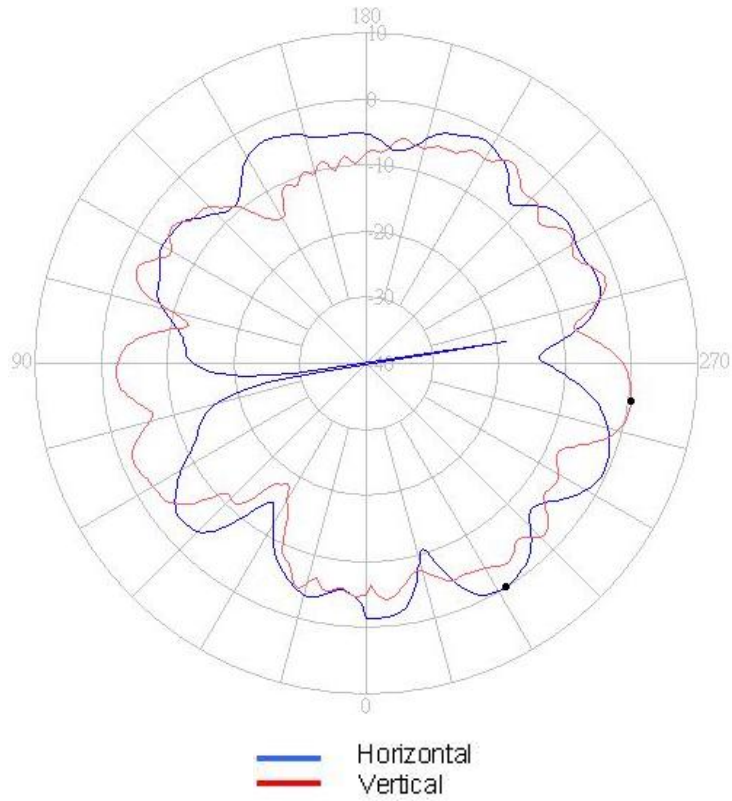
Frequency	2412 MHz
Horizontal Peak Gain (dBi)	2.36
Vertical Peak Gain (dBi)	2.82
Hori + Vert Avg. Gain (dBi)	-2.37

Aux Antenna



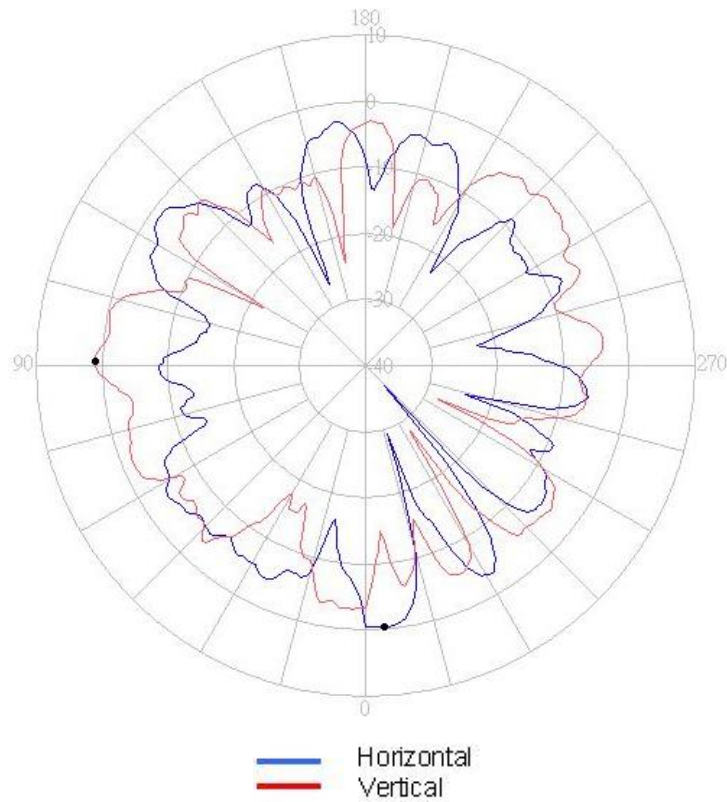
Frequency	2437 MHz
Horizontal Peak Gain (dBi)	1.51
Vertical Peak Gain (dBi)	2.62
Hori + Vert Avg. Gain (dBi)	-2.17

Aux Antenna



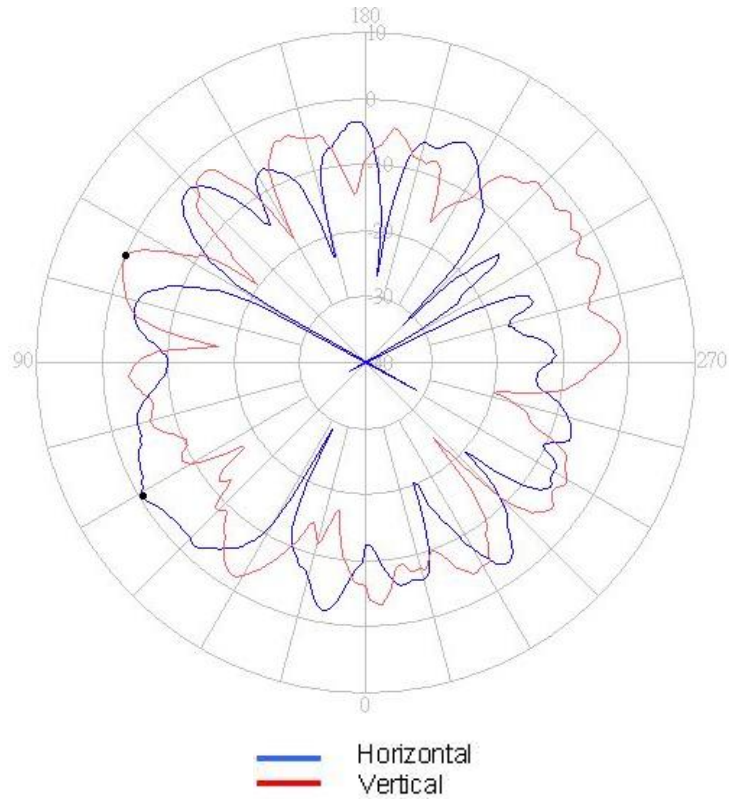
Frequency	2462 MHz
Horizontal Peak Gain (dBi)	-0.09
Vertical Peak Gain (dBi)	0.39
Hori + Vert Avg. Gain (dBi)	-2.95

Aux Antenna



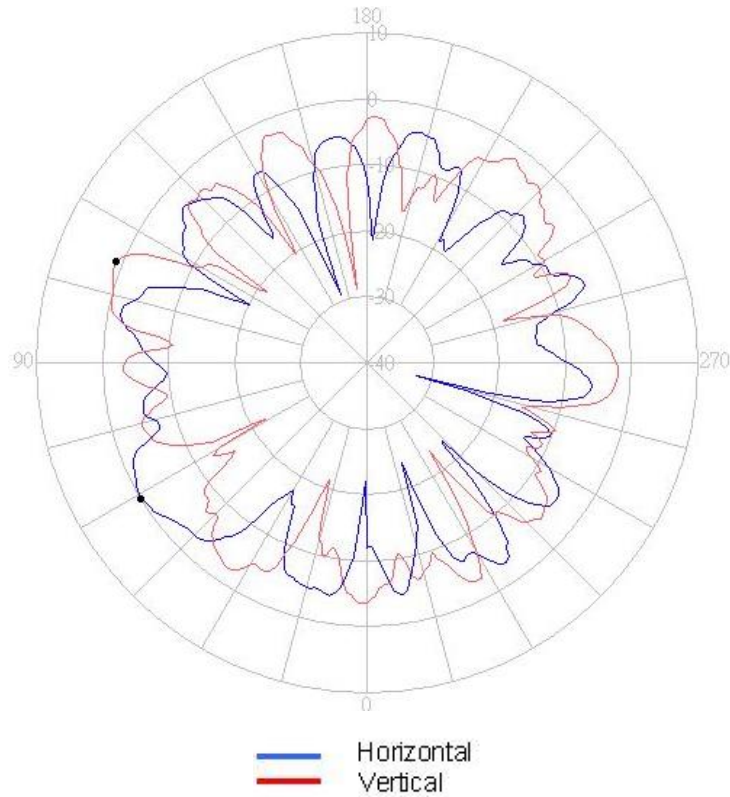
Frequency	4900 MHz
Horizontal Peak Gain (dBi)	-0.34
Vertical Peak Gain (dBi)	0.99
Hori + Vert Avg. Gain (dBi)	-4.07

Aux Antenna



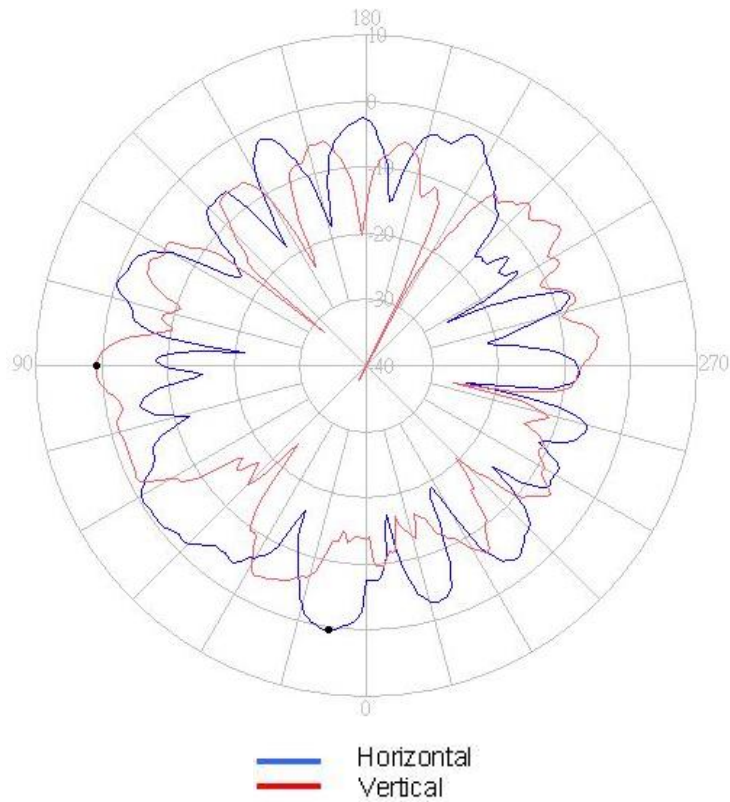
Frequency	5150 MHz
Horizontal Peak Gain (dBi)	-0.68
Vertical Peak Gain (dBi)	-0.19
Hori + Vert Avg. Gain (dBi)	-3.96

Aux Antenna



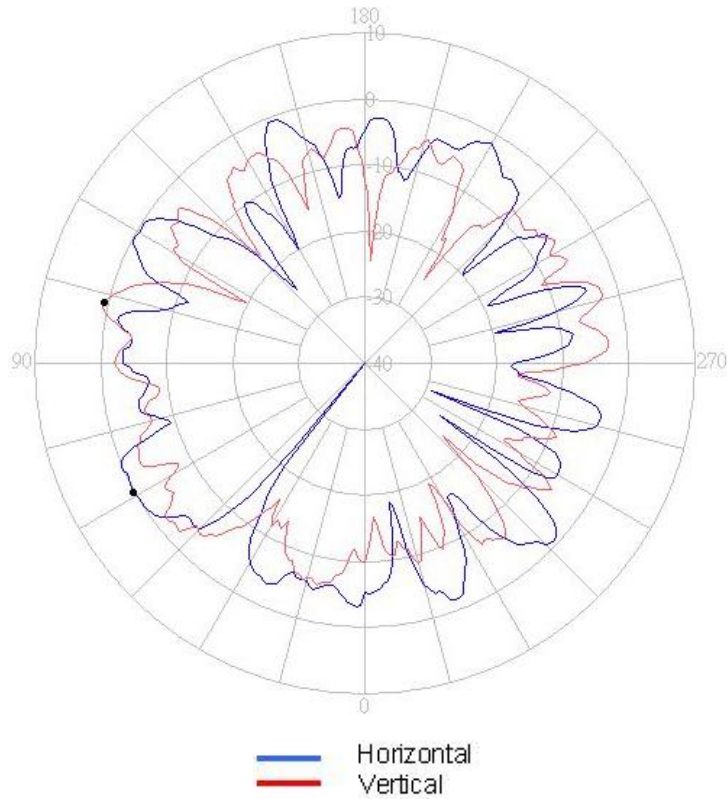
Frequency	5350 MHz
Horizontal Peak Gain (dBi)	-0.18
Vertical Peak Gain (dBi)	0.88
Hori + Vert Avg. Gain (dBi)	-4.04

Aux Antenna



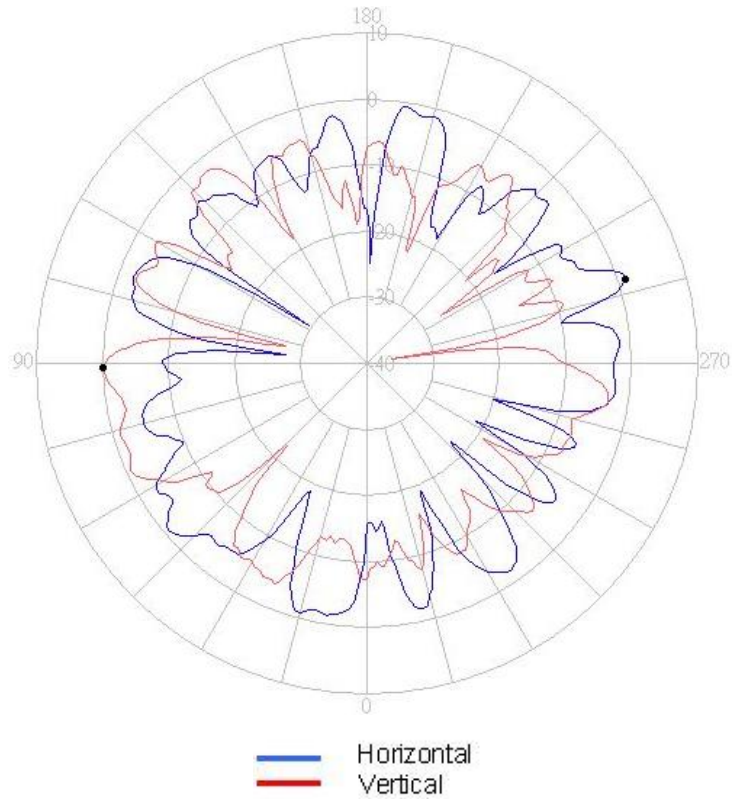
Frequency	5470 MHz
Horizontal Peak Gain (dBi)	0.33
Vertical Peak Gain (dBi)	0.88
Hori + Vert Avg. Gain (dBi)	-3.88

Aux Antenna



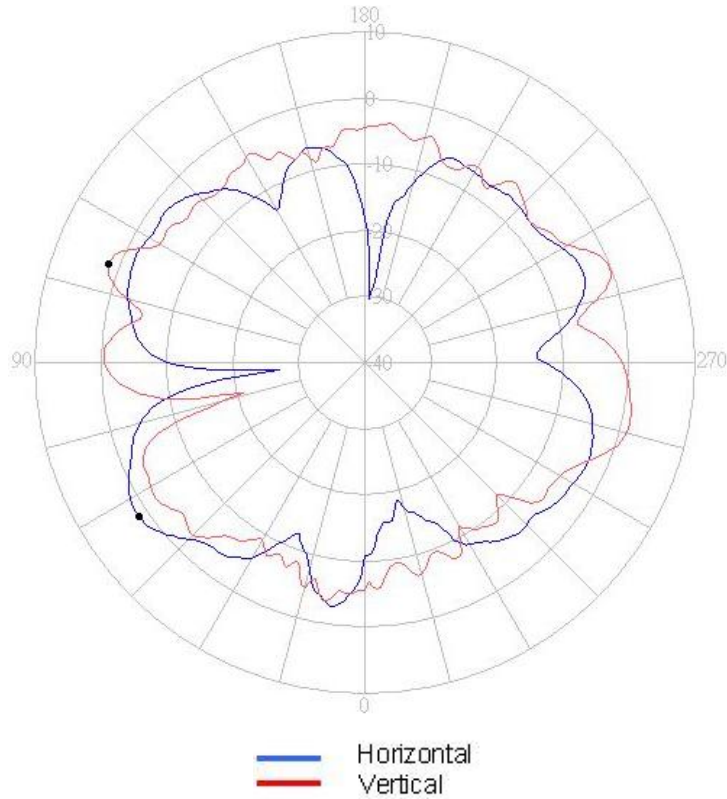
Frequency	5725 MHz
Horizontal Peak Gain (dBi)	0.13
Vertical Peak Gain (dBi)	0.59
Hori + Vert Avg. Gain (dBi)	-3.81

Aux Antenna



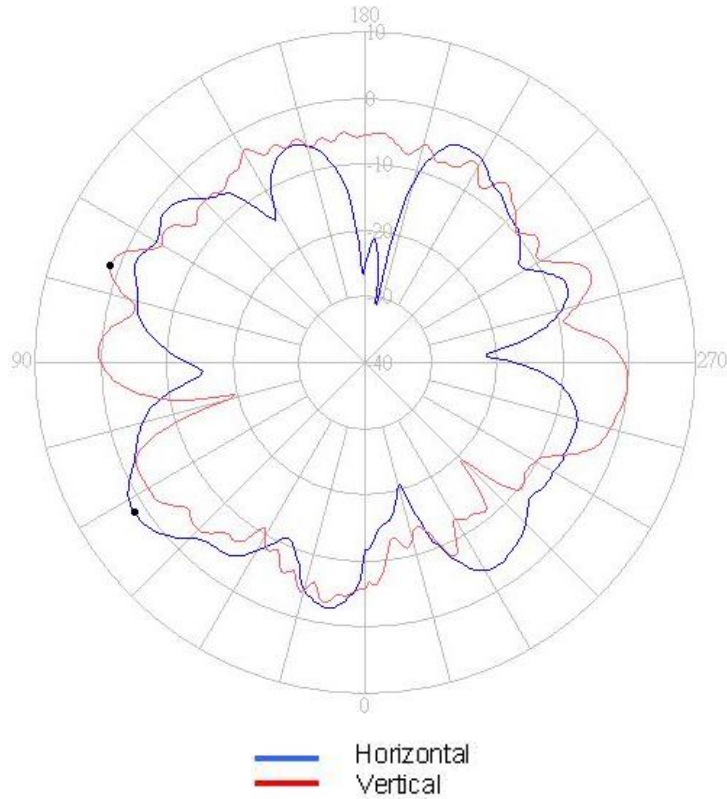
Frequency	5875 MHz
Horizontal Peak Gain (dBi)	1.00
Vertical Peak Gain (dBi)	-0.18
Hori + Vert Avg. Gain (dBi)	-3.75

MIMO Antenna



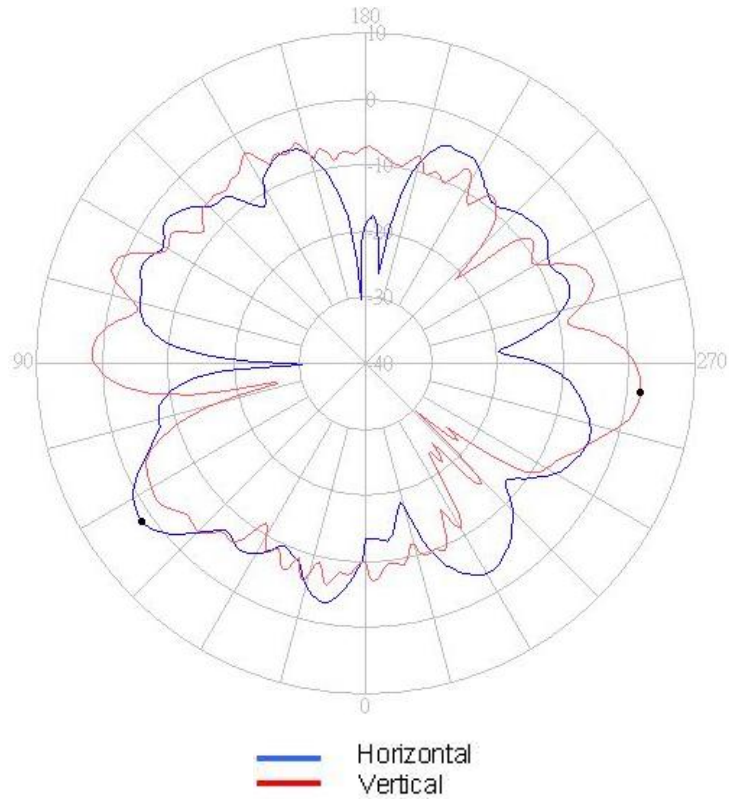
Frequency	2412 MHz
Horizontal Peak Gain (dBi)	1.39
Vertical Peak Gain (dBi)	1.56
Hori + Vert Avg. Gain (dBi)	-2.78

MIMO Antenna



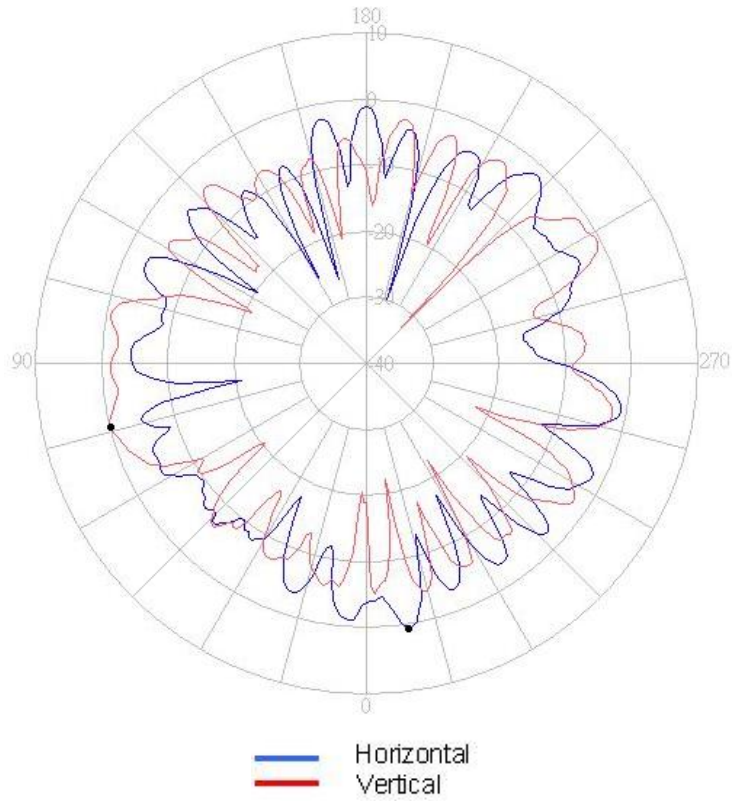
Frequency	2437 MHz
Horizontal Peak Gain (dBi)	1.66
Vertical Peak Gain (dBi)	1.30
Hori + Vert Avg. Gain (dBi)	-3.26

MIMO Antenna



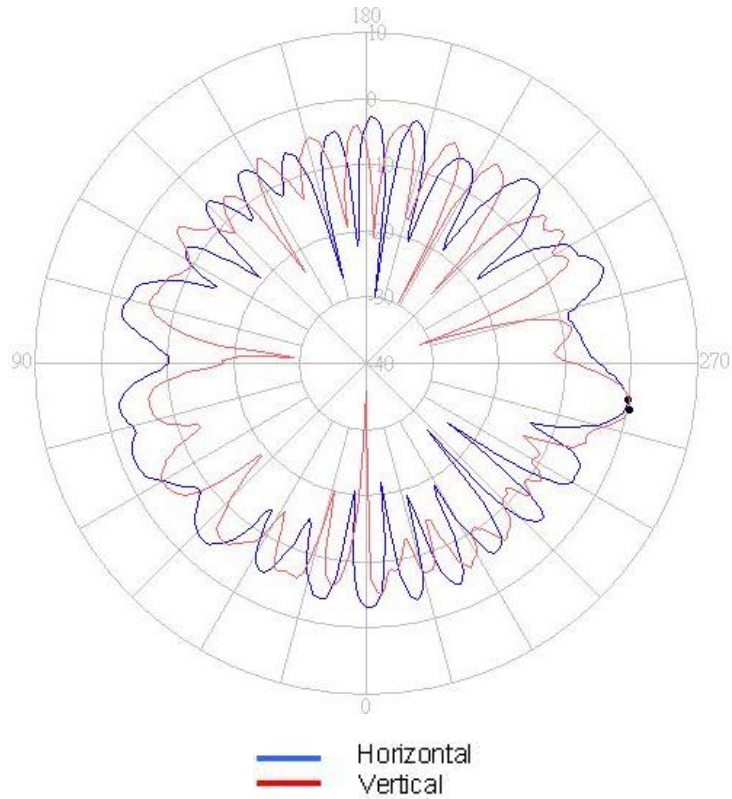
Frequency	2462 MHz
Horizontal Peak Gain (dBi)	1.56
Vertical Peak Gain (dBi)	1.94
Hori + Vert Avg. Gain (dBi)	-3.43

MIMO Antenna



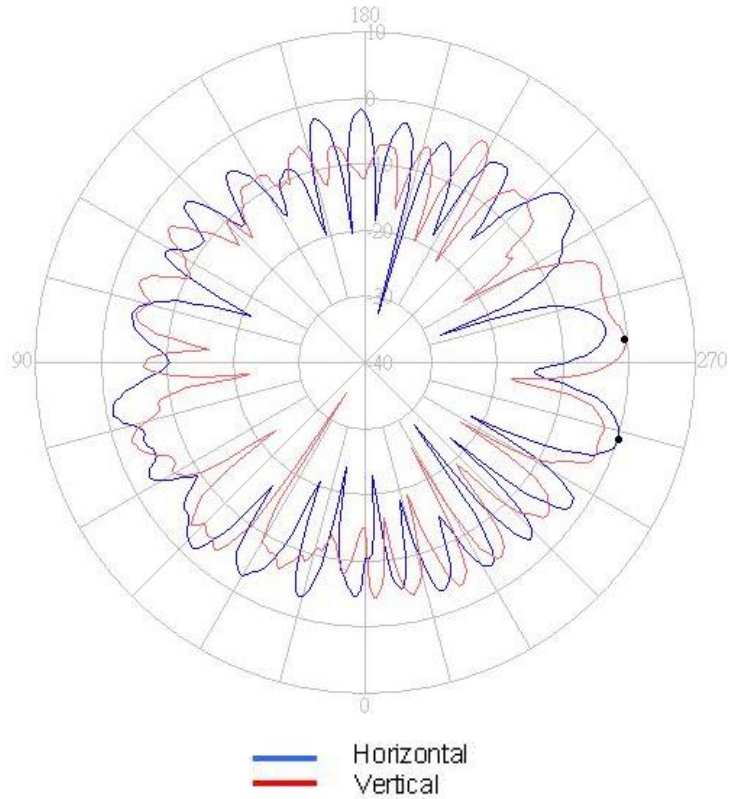
Frequency	4900 MHz
Horizontal Peak Gain (dBi)	0.57
Vertical Peak Gain (dBi)	-0.14
Hori + Vert Avg. Gain (dBi)	-3.82

MIMO Antenna



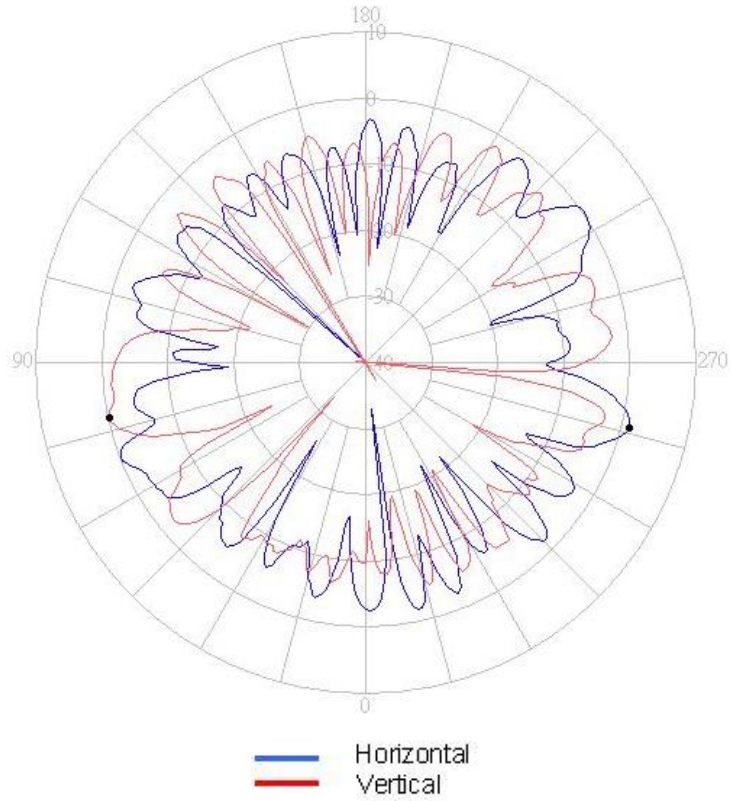
Frequency	5150 MHz
Horizontal Peak Gain (dBi)	-0.10
Vertical Peak Gain (dBi)	0.35
Hori + Vert Avg. Gain (dBi)	-4.50

MIMO Antenna



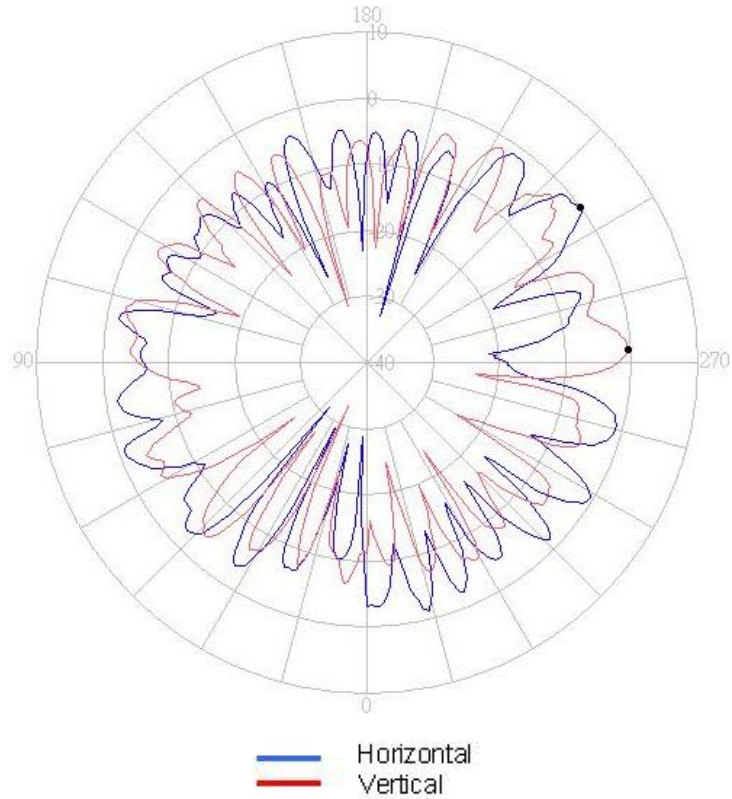
Frequency	5350 MHz
Horizontal Peak Gain (dBi)	0.05
Vertical Peak Gain (dBi)	-0.49
Hori + Vert Avg. Gain (dBi)	-4.00

MIMO Antenna



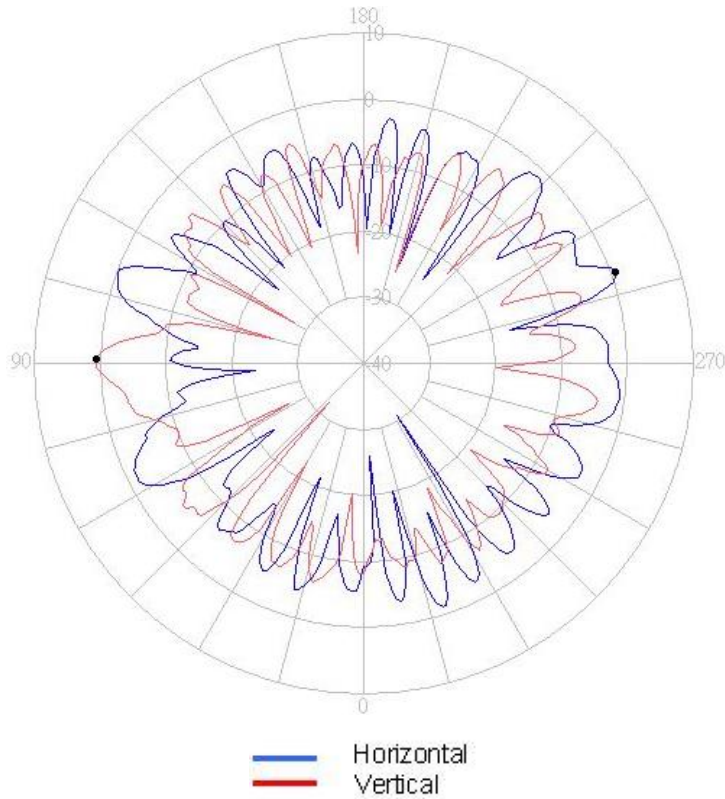
Frequency	5470 MHz
Horizontal Peak Gain (dBi)	1.09
Vertical Peak Gain (dBi)	-0.31
Hori + Vert Avg. Gain (dBi)	-3.90

MIMO Antenna



Frequency	5725 MHz
Horizontal Peak Gain (dBi)	-0.13
Vertical Peak Gain (dBi)	-0.50
Hori + Vert Avg. Gain (dBi)	-4.42

MIMO Antenna



Frequency	5875 MHz
Horizontal Peak Gain (dBi)	0.63
Vertical Peak Gain (dBi)	0.62
Hori + Vert Avg. Gain (dBi)	-4.52