

Regulatory WLAN Antenna Information HFT40

Intel Corporation

Antenna Sample / Antenna Data Requirements for worldwide regulatory approval

Section	Description of Required OEM / ODM Antenna Information	US / IC	EU	Japan	Taiwan	Korea
1A	Part Number for Antenna only	Required	Required	Required	Required	Required
1B	Antenna Manufacturer Name	Required	Required	Required	Required	Required
1C	Description of Antenna Type	Required	N/A	N/A	N/A	N/A
1D	Part number of Antenna Assembly / cable impedance, length & diameter.	Required	Desired	Desired	Desired	Desired
1E	Main & Aux antenna (Peak Gain W/ cable loss)	Required	Required	Required	Required	Required
	1E OR 1F, 1G, 1H					
1F	Main & Aux antenna (Peak Gain only)	Required	Required	Required	Required	Required
1G	VSWR of cable including connector	Required	Required	Required	Required	Required
1H	Main & Aux antenna (Cable loss W/ connector)	Required	Required	Required	Required	Required
2	Dimensioned Photographs or Drawings of main & auxiliary antennas	Required	Required	Required	Required	Required
3	Radiation patterns of antennas loaded in the host platform.	Required	Desired	Required	N/A	Required
4	Platform model name / number - correlated to antenna manufacturer and antenna part number	Required	Required	Desired	Required	Desired
5	Photograph(s) or Drawings showing location of antennas in platform.	Required	Required	Desired	Required	Desired
6	Mech. drawings / photos with dimensions of antenna locations and distance from end-user (For evaluation of SAR testing requirement).	Required	N/A	N/A	N/A	N/A
7	Photograph(s) or Drawings showing the location of all antennas (WLAN, BT, other) and distance between those transmitting antennas. Information will be used to evaluate whether co-location testing is required.	Required	N/A	N/A	N/A	N/A

Antenna Information

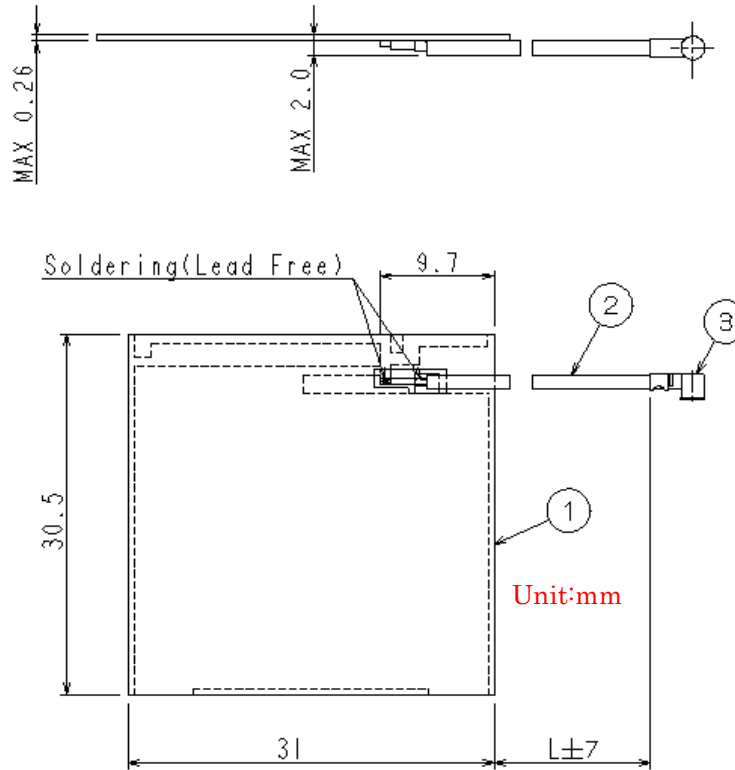
Section 1. Antenna Assembly Specifications

Antenna Assembly Summary:

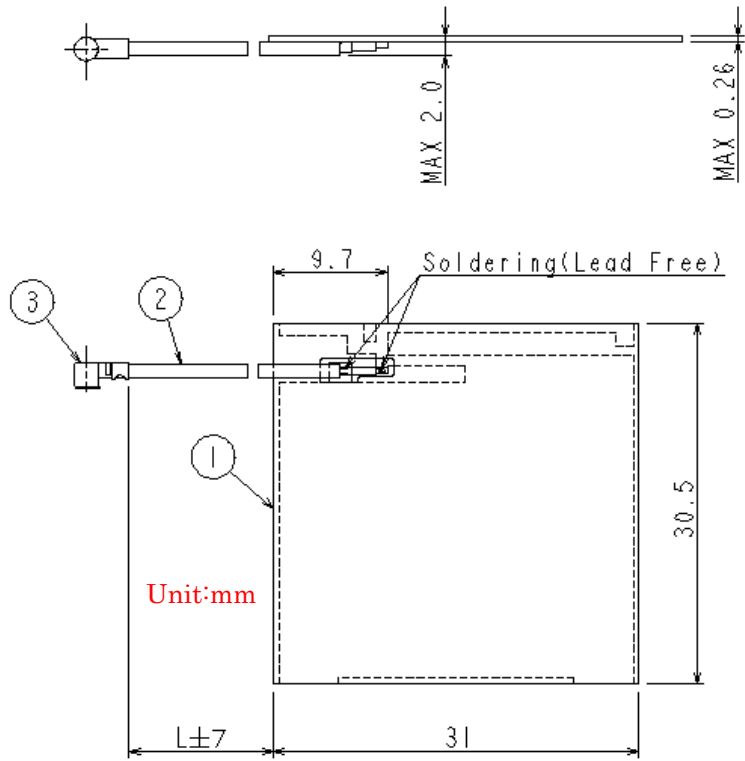
1A Antenna Part Number	1B Manufacture	1C Antenna Type	1D Cable Assembly Part Number and Information	1E Peak Gain W/ Cable loss (dBi)	1F Peak Gain w/o Cable Loss (dBi)	1G VSWR	1H Cable Loss (dBi)
HFT40	Hitachi Cable, Ltd.	2.4GHz:PIFA 5GHz:PIFA	P/N: HFT40 50 ohm Coaxial. length: 306mm diameter: 1.0mm Connector: IPEX	2400-2500MHz -0.54 dBi (peak)	2400-2500MHz 0.32 dBi (peak)	2400-2500MHz 1.30 max	2400-2500MHz 0.86 dBi (peak)
				5150-5350MHz 0.89 dBi (peak)	5150-5350MHz 2.15 dBi (peak)	5150-5350MHz 1.30 max	5150-5350MHz 1.26 dBi (peak)
				5470-5725MHz 2.27 dBi (peak)	5470-5725MHz 3.53 dBi (peak)	5470-5725MHz 1.30 max	5470-5725MHz 1.26 dBi (peak)
				5725-5850MHz 1.80 dBi (peak)	5725-5850MHz 3.06 dBi (peak)	5725-5850MHz 1.30 max	5725-5850MHz 1.26 dBi (peak)
HFT40	Hitachi Cable, Ltd.	2.4GHz:PIFA 5GHz:PIFA	P/N: HFT40 50 ohm Coaxial. length: 306mm diameter: 1.0mm Connector: IPEX	2400-2500MHz -0.23 dBi (peak)	2400-2500MHz 0.63 dBi (peak)	2400-2500MHz 1.30 max	2400-2500MHz 0.86 dBi (peak)
				5150-5350MHz -1.17 dBi (peak)	5150-5350MHz 0.09 dBi (peak)	5150-5350MHz 1.30 max	5150-5350MHz 1.26 dBi (peak)
				5470-5725MHz 0.18 dBi (peak)	5470-5725MHz 1.44 dBi (peak)	5470-5725MHz 1.30 max	5470-5725MHz 1.26 dBi (peak)
				5725-5850MHz 0.18 dBi (peak)	5725-5850MHz 1.44 dBi (peak)	5725-5850MHz 1.30 max	5725-5850MHz 1.26 dBi (peak)

Section 2. Dimensioned Photos or Drawings of Antennas

Include a dimensioned photo or dimensioned drawing of main antenna here.



Include a dimensioned photo or dimensioned drawing of aux antenna here.



Section 3. Radiation characteristics of antennae Loaded in Host Platform

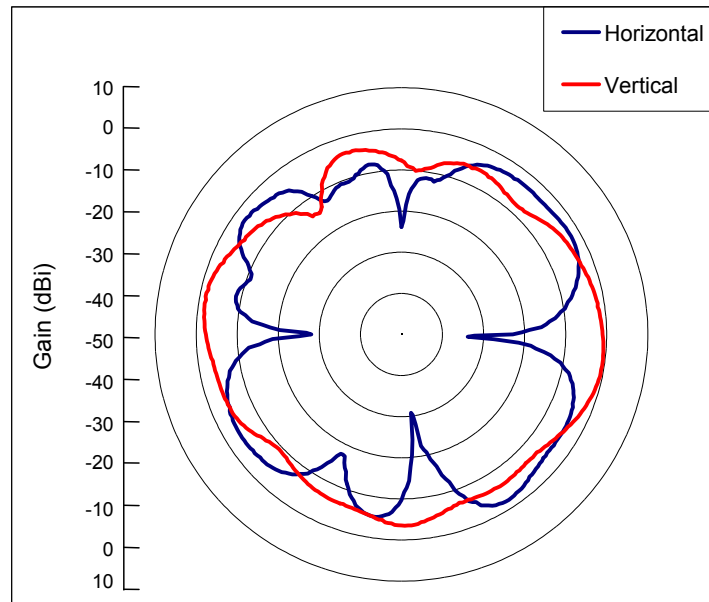
2400-2500MHz radiation characteristic

Main antenna: 2400 MHz

<Average Gain>

	Horizontal	Vertical
AVG	-8.38	-5.33
MAX	-2.03	-0.54

(dBi)

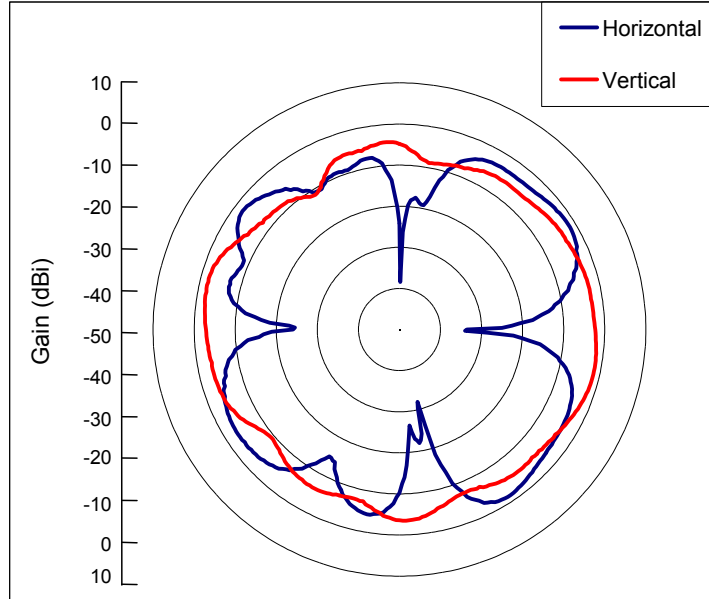


Center Frequency	2400 MHz
Horizontal (dBi) peak	-2.03
Vertical (dBi) peak	-0.54
Horz+Vert (dBi) peak	-0.54

Main antenna: 2450 MHz

<Average Gain>		
	Horizontal	Vertical
AVG	-8.36	-5.29
MAX	-1.49	-1.53

(dBi)



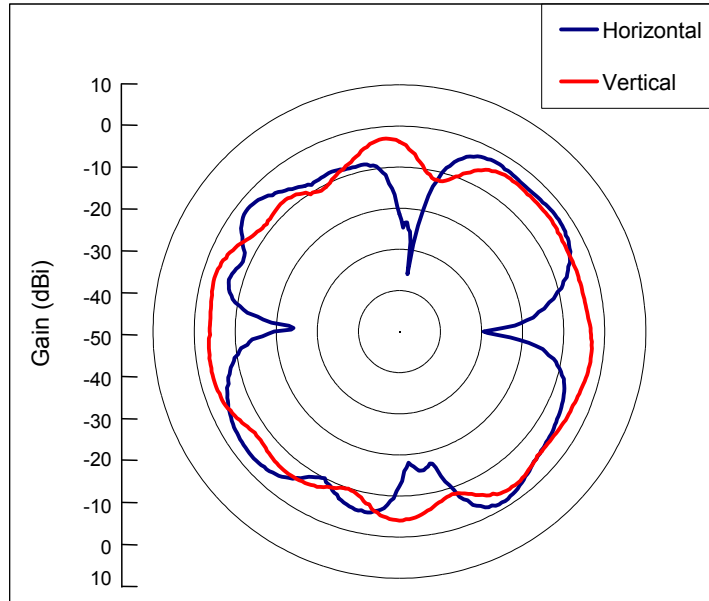
Center Frequency	2450 MHz
Horizontal (dBi) peak	-1.49
Vertical (dBi) peak	-1.53
Horz+Vert (dBi) peak	-1.49

Main antenna: 2500 MHz

<Average Gain>

	Horizontal	Vertical
AVG	-8.33	-5.60
MAX	-1.36	-2.92

(dBi)



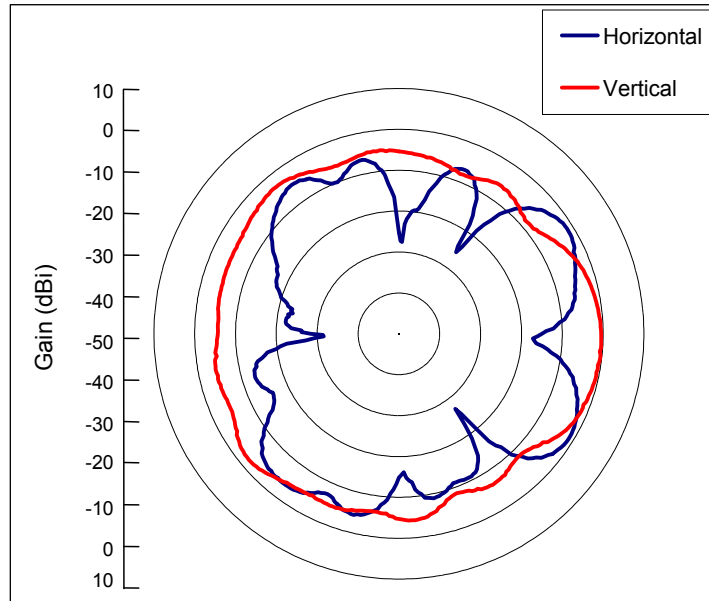
Center Frequency	2500 MHz
Horizontal (dBi) peak	-1.36
Vertical (dBi) peak	-2.92
Horz+Vert (dBi) peak	-1.36

Auxiliary antenna: 2400 MHz

<Average Gain>

	Horizontal	Vertical
AVG	-10.55	-4.84
MAX	-1.17	-0.39

(dBi)



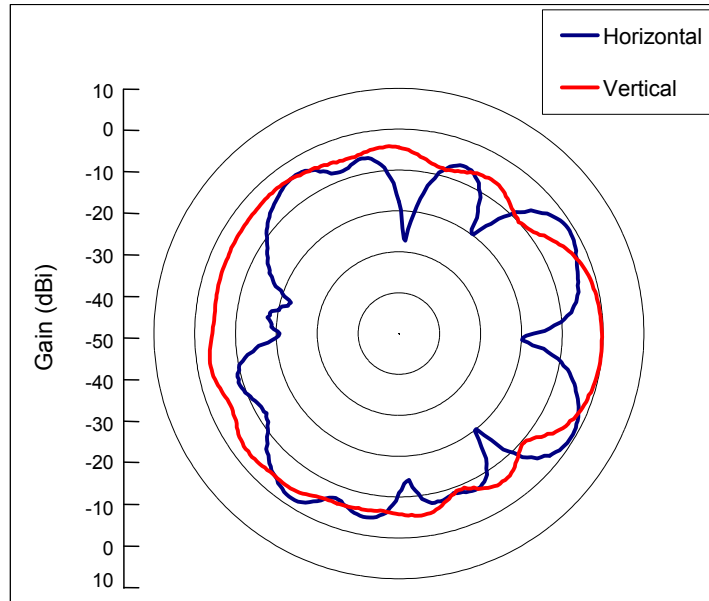
Center Frequency	2400 MHz
Horizontal (dBi) peak	-1.17
Vertical (dBi) peak	-0.39
Horz+Vert (dBi) peak	-0.39

Auxiliary antenna: 2450 MHz

<Average Gain>

	Horizontal	Vertical
AVG	-9.13	-4.86
MAX	-0.81	-0.23

(dBi)



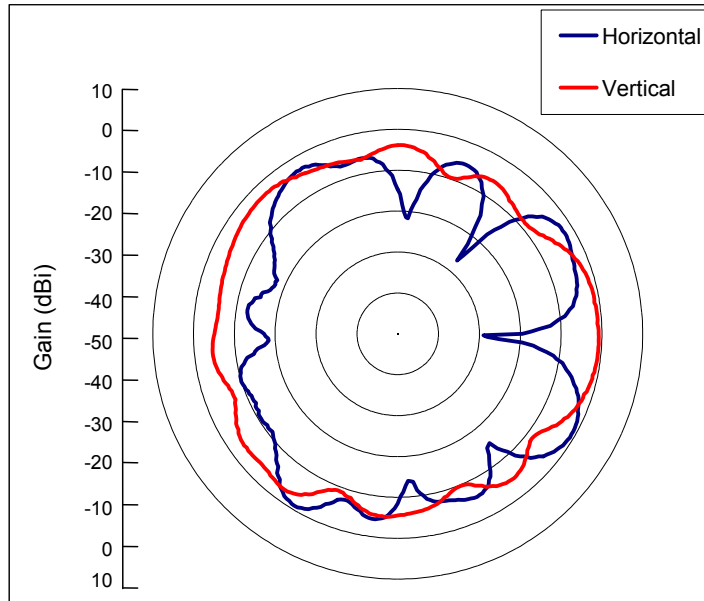
Center Frequency	2450 MHz
Horizontal (dBi) peak	-0.81
Vertical (dBi) peak	-0.23
Horz+Vert (dBi) peak	-0.23

Auxiliary antenna: 2500 MHz

<Average Gain>

	Horizontal	Vertical
AVG	-8.86	-5.17
MAX	-0.87	-0.73

(dBi)



Center Frequency	2500 MHz
Horizontal (dBi) peak	-0.87
Vertical (dBi) peak	-0.73
Horz+Vert (dBi) peak	-0.73

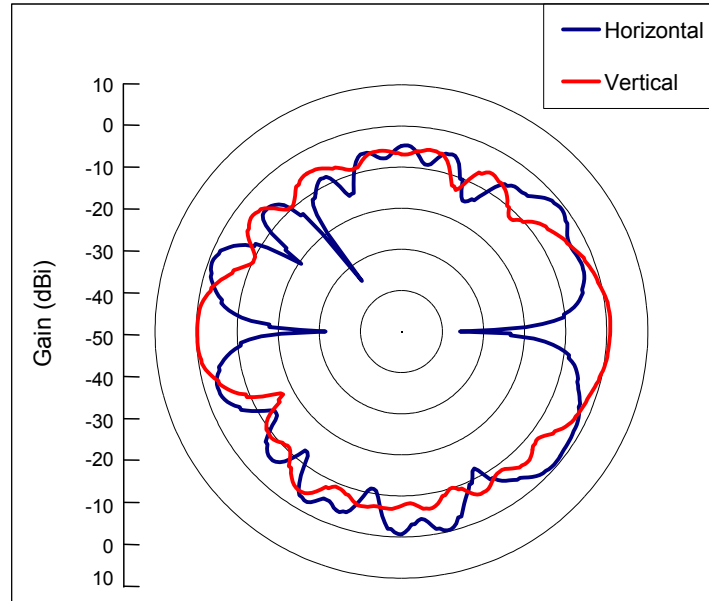
5150-5350 MHz radiation characteristic

Main antenna: 5150 MHz

<Average Gain>

	Horizontal	Vertical
AVG	-6.93	-5.93
MAX	-0.30	0.89

(dBi)



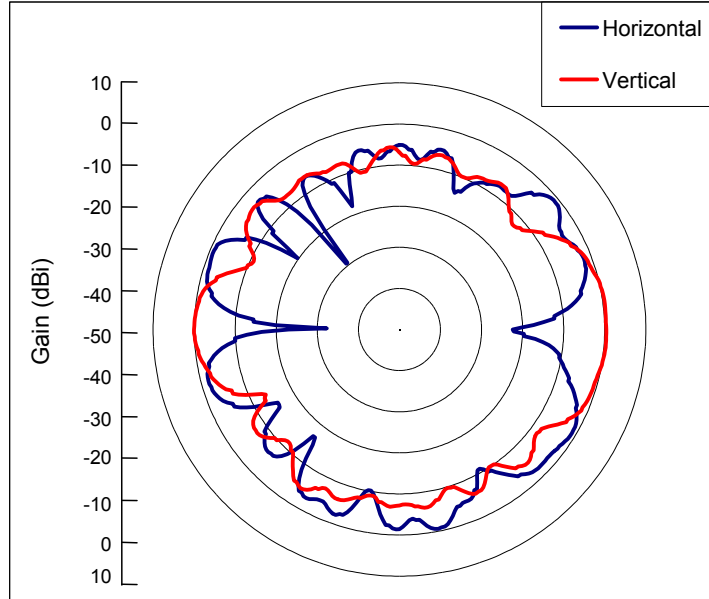
Center Frequency	5150 MHz
Horizontal (dBi) peak	-0.30
Vertical (dBi) peak	0.89
Horz+Vert (dBi) peak	0.89

Main antenna: 5250 MHz

<Average Gain>

	Horizontal	Vertical
AVG	-6.76	-6.02
MAX	-0.60	0.41

(dBi)

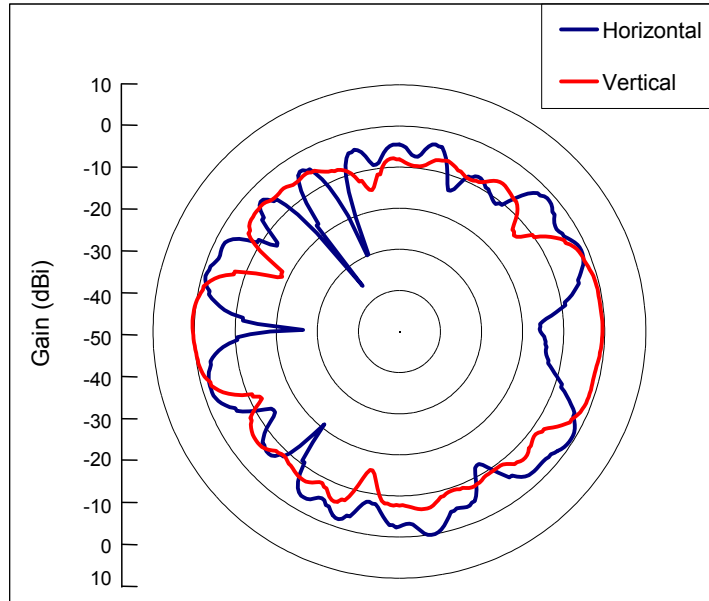


Center Frequency	5250 MHz
Horizontal (dBi) peak	-0.60
Vertical (dBi) peak	0.41
Horz+Vert (dBi) peak	0.41

Main antenna: 5350 MHz

<Average Gain>		
	Horizontal	Vertical
AVG	-6.83	-6.47
MAX	0.01	0.44

(dBi)

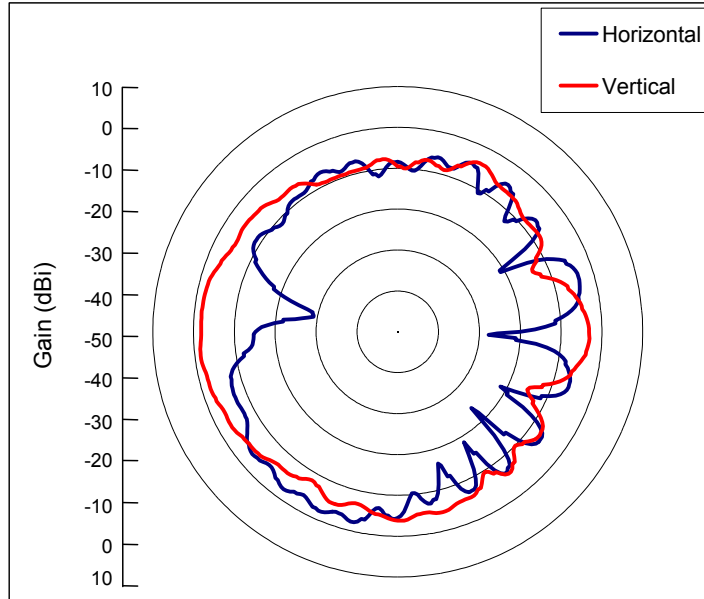


Center Frequency	5350 MHz
Horizontal (dBi) peak	0.01
Vertical (dBi) peak	0.44
Horz+Vert (dBi) peak	0.44

Auxiliary antenna: 5150 MHz

<Average Gain>		
	Horizontal	Vertical
AVG	-9.40	-6.27
MAX	-2.13	-1.42

(dBi)

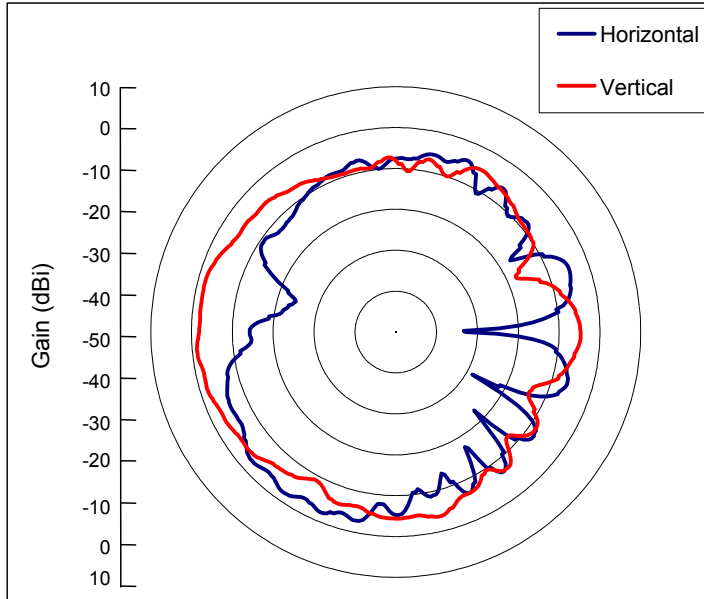


Center Frequency	5150 MHz
Horizontal (dBi) peak	-2.13
Vertical (dBi) peak	-1.42
Horz+Vert (dBi) peak	-1.42

Auxiliary antenna: 5250 MHz

<Average Gain>		
	Horizontal	Vertical
AVG	-9.58	-6.71
MAX	-2.10	-1.17

(dBi)



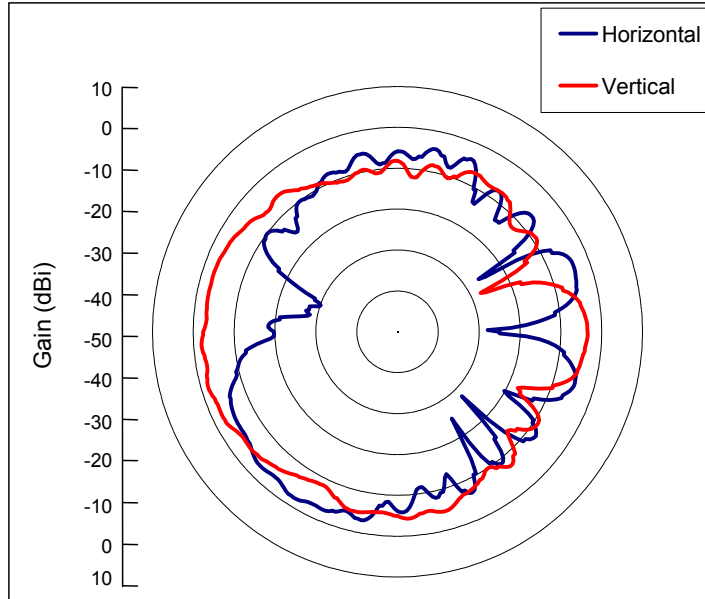
Center Frequency	5250 MHz
Horizontal (dBi) peak	-2.10
Vertical (dBi) peak	-1.17
Horz+Vert (dBi) peak	-1.17

Auxiliary antenna: 5350 MHz

<Average Gain>

	Horizontal	Vertical
AVG	-10.00	-7.17
MAX	-2.12	-1.71

(dBi)



Center Frequency	5350 MHz
Horizontal (dBi) peak	-2.12
Vertical (dBi) peak	-1.71
Horz+Vert (dBi) peak	-1.71

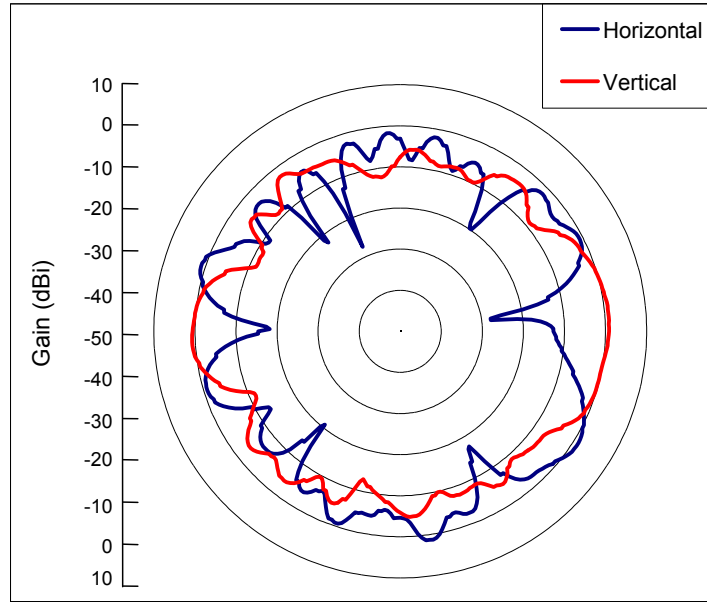
5470-5725MHz radiation characteristic

Main antenna: 5470 MHz

<Average Gain>

	Horizontal	Vertical
AVG	-6.22	-5.50
MAX	1.34	0.89

(dBi)

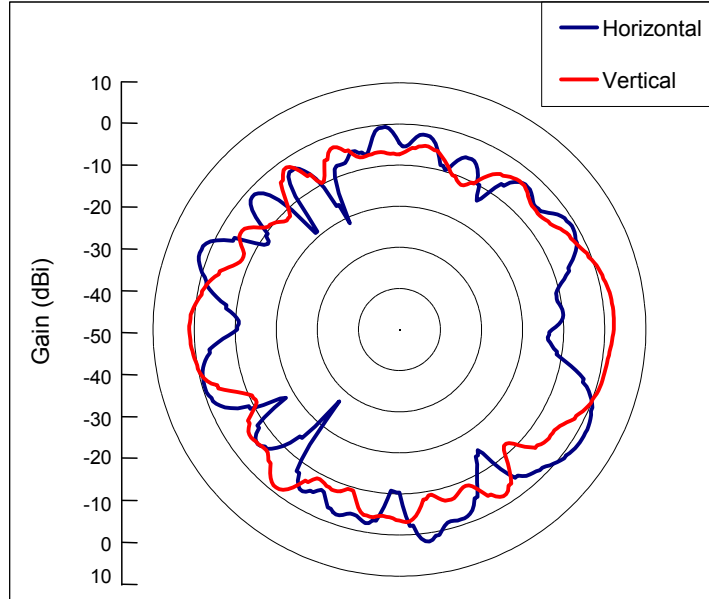


Center Frequency	5470 MHz
Horizontal (dBi) peak	1.34
Vertical (dBi) peak	0.89
Horz+Vert (dBi) peak	1.34

Main antenna: 5597.5 MHz

<Average Gain>		
	Horizontal	Vertical
AVG	-5.53	-4.68
MAX	2.09	2.27

(dBi)



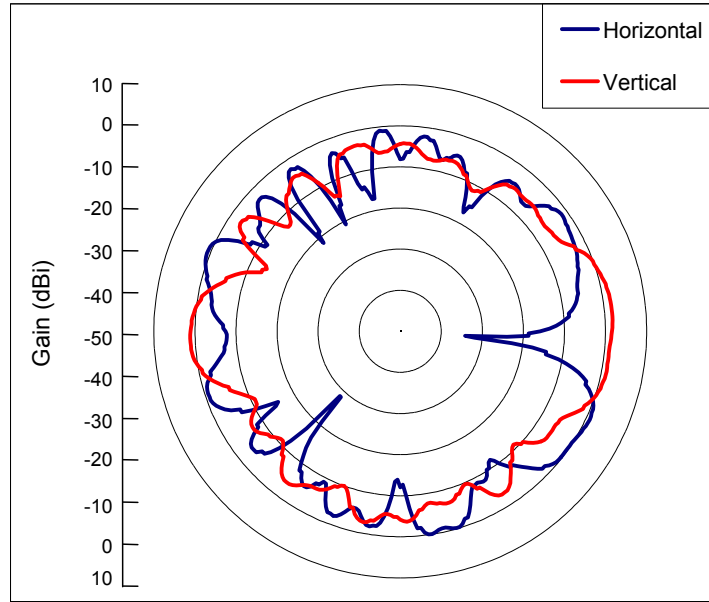
Center Frequency	5597.5 MHz
Horizontal (dBi) peak	2.09
Vertical (dBi) peak	2.27
Horz+Vert (dBi) peak	2.27

Main antenna: 5725 MHz

<Average Gain>

	Horizontal	Vertical
AVG	-6.14	-5.34
MAX	0.91	1.80

(dBi)

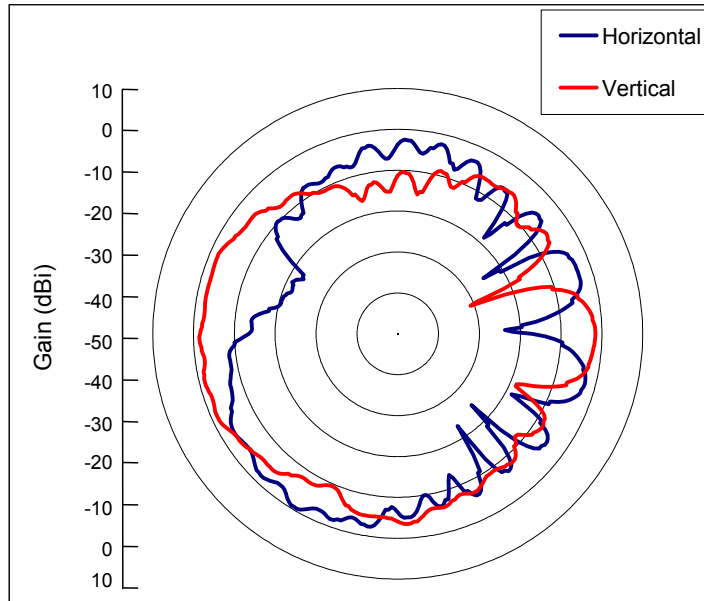


Center Frequency	5725 MHz
Horizontal (dBi) peak	0.91
Vertical (dBi) peak	1.80
Horz+Vert (dBi) peak	1.80

Auxiliary antenna: 5470 MHz

<Average Gain>		
	Horizontal	Vertical
AVG	-8.44	-7.13
MAX	-0.61	-1.33

(dBi)



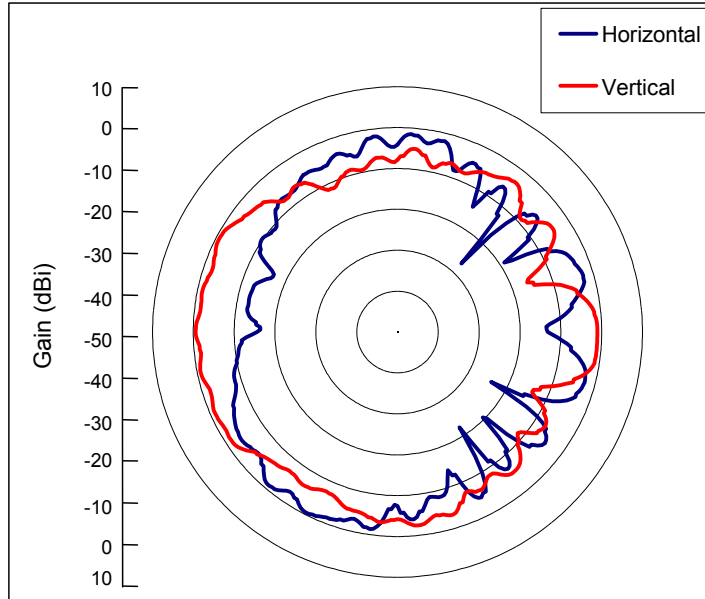
Center Frequency	5470 MHz
Horizontal (dBi) peak	-0.61
Vertical (dBi) peak	-1.33
Horz+Vert (dBi) peak	-0.61

Auxiliary antenna: 5597.5 MHz

<Average Gain>

	Horizontal	Vertical
AVG	-7.38	-5.41
MAX	-0.49	-0.59

(dBi)

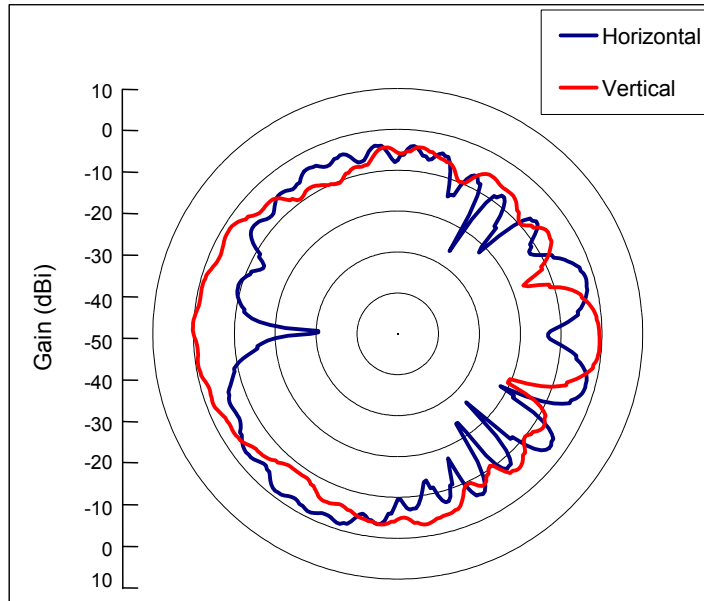


Center Frequency	5597.5 MHz
Horizontal (dBi) peak	-0.49
Vertical (dBi) peak	-0.59
Horz+Vert (dBi) peak	-0.49

Auxiliary antenna: 5725 MHz

<Average Gain>		
	Horizontal	Vertical
AVG	-7.84	-5.67
MAX	-1.32	0.18

(dBi)



Center Frequency	5725 MHz
Horizontal (dBi) peak	-1.32
Vertical (dBi) peak	0.18
Horz+Vert (dBi) peak	0.18

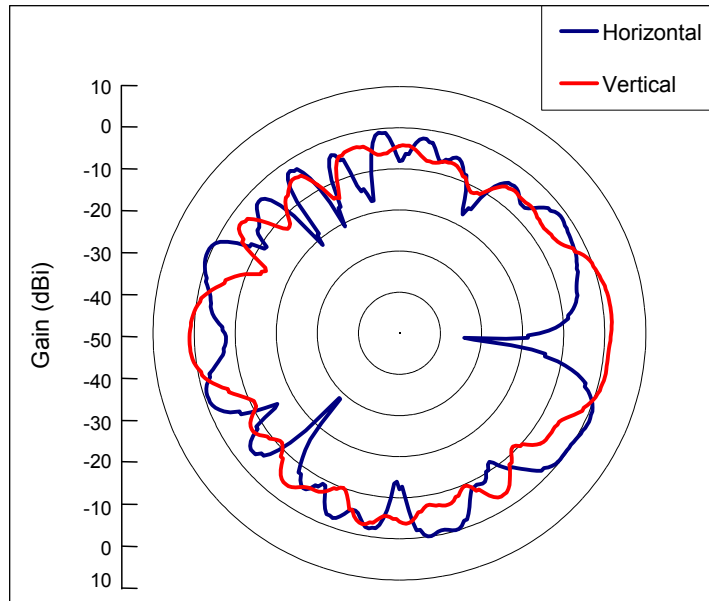
5725-5850 MHz radiation characteristic

Main antenna: 5725 MHz

<Average Gain>

	Horizontal	Vertical
AVG	-6.14	-5.34
MAX	0.91	1.80

(dBi)

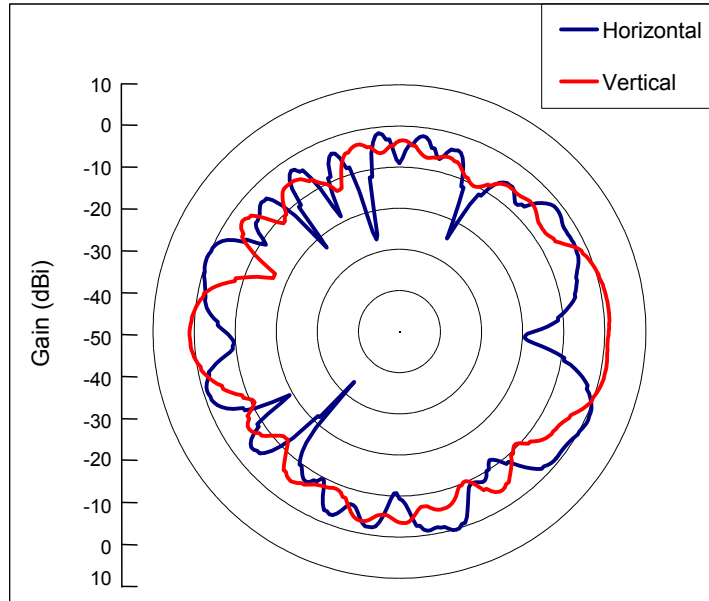


Center Frequency	5725 MHz
Horizontal (dBi) peak	0.91
Vertical (dBi) peak	1.80
Horz+Vert (dBi) peak	1.80

Main antenna: 5785 MHz

<Average Gain>		
	Horizontal	Vertical
AVG	-6.29	-5.40
MAX	0.74	1.22

(dBi)



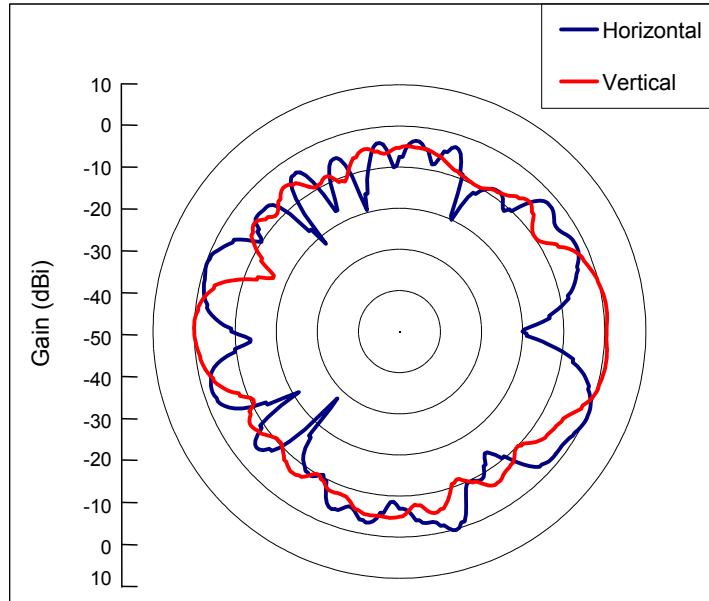
Center Frequency	5785 MHz
Horizontal (dBi) peak	0.74
Vertical (dBi) peak	1.22
Horz+Vert (dBi) peak	1.22

Main antenna: 5850 MHz

<Average Gain>

	Horizontal	Vertical
AVG	-6.86	-6.06
MAX	0.26	0.88

(dBi)

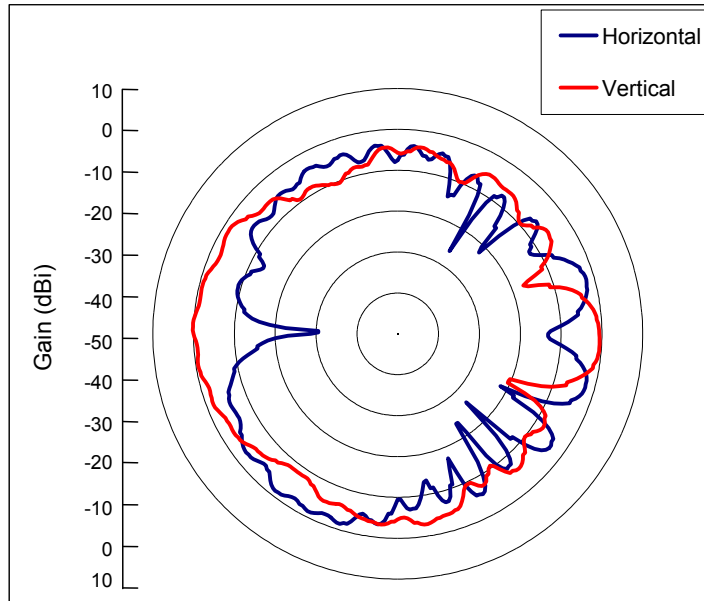


Center Frequency	5850 MHz
Horizontal (dBi) peak	0.26
Vertical (dBi) peak	0.88
Horz+Vert (dBi) peak	0.88

Auxiliary antenna: 5725 MHz

<Average Gain>		
	Horizontal	Vertical
AVG	-7.84	-5.67
MAX	-1.32	0.18

(dBi)



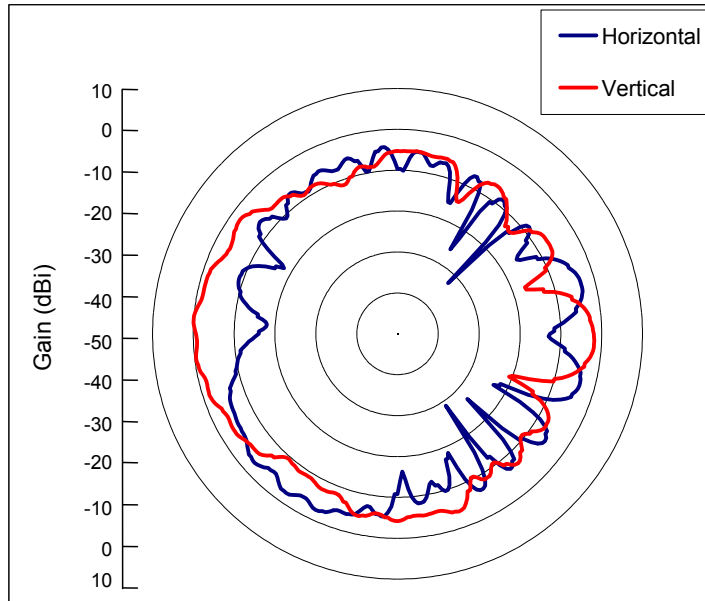
Center Frequency	5725 MHz
Horizontal (dBi) peak	-1.32
Vertical (dBi) peak	0.18
Horz+Vert (dBi) peak	0.18

Auxiliary antenna: 5785 MHz

<Average Gain>

	Horizontal	Vertical
AVG	-8.86	-6.51
MAX	-2.47	-0.04

(dBi)

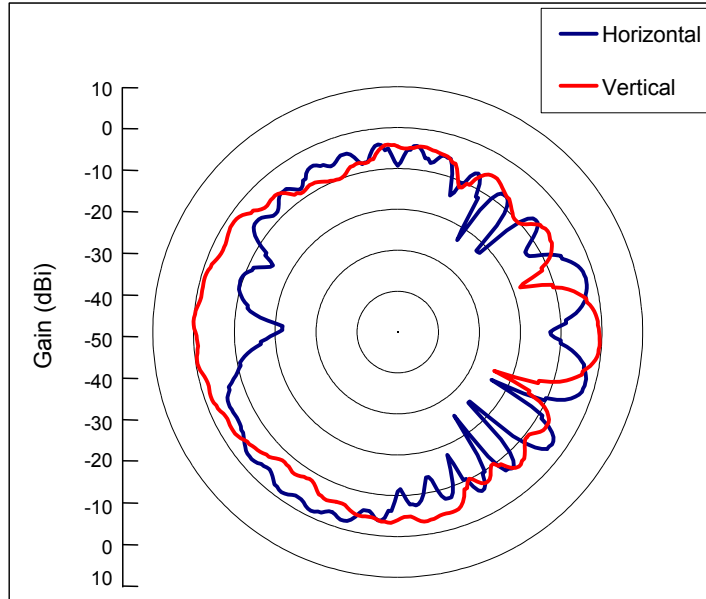


Center Frequency	5785 MHz
Horizontal (dBi) peak	-2.47
Vertical (dBi) peak	-0.04
Horz+Vert (dBi) peak	-0.04

Auxiliary antenna: 5850 MHz

<Average Gain>		
	Horizontal	Vertical
AVG	-8.03	-5.68
MAX	-1.42	0.04

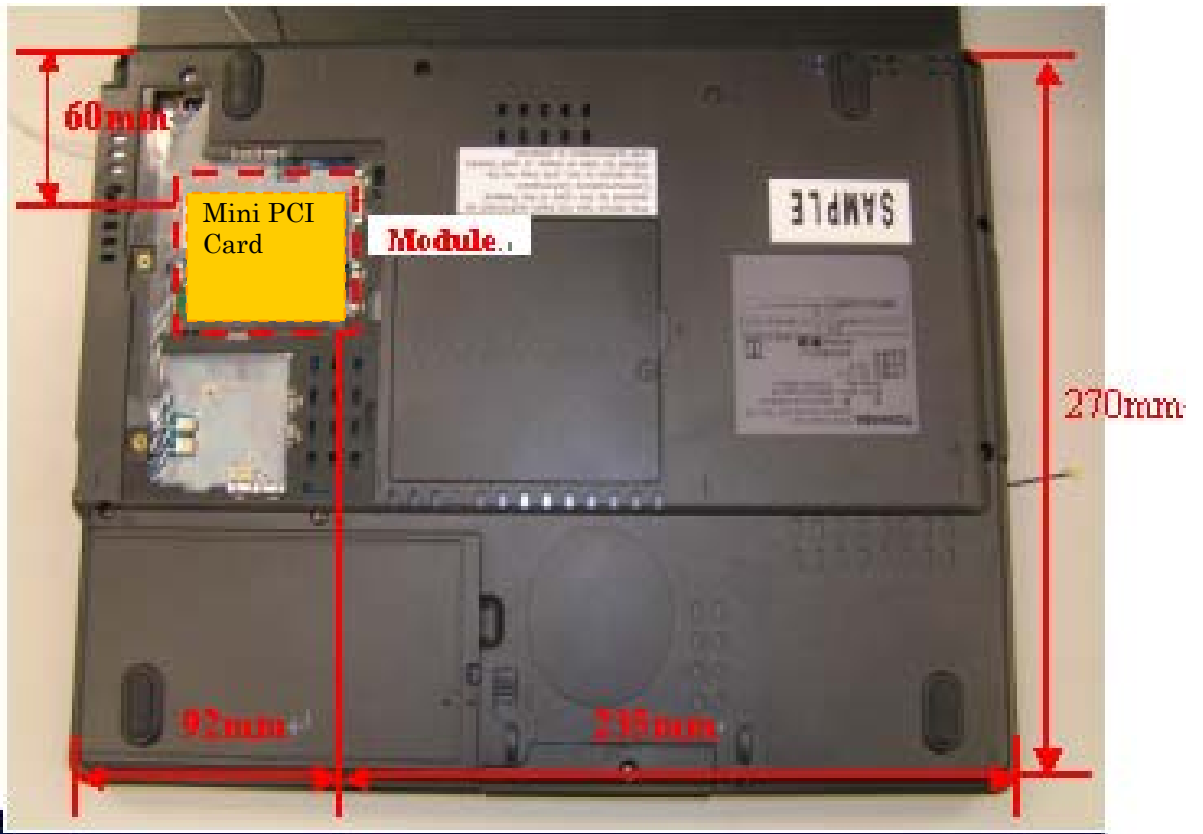
(dBi)



Center Frequency	5850 MHz
Horizontal (dBi) peak	-1.42
Vertical (dBi) peak	0.04
Horz+Vert (dBi) peak	0.04

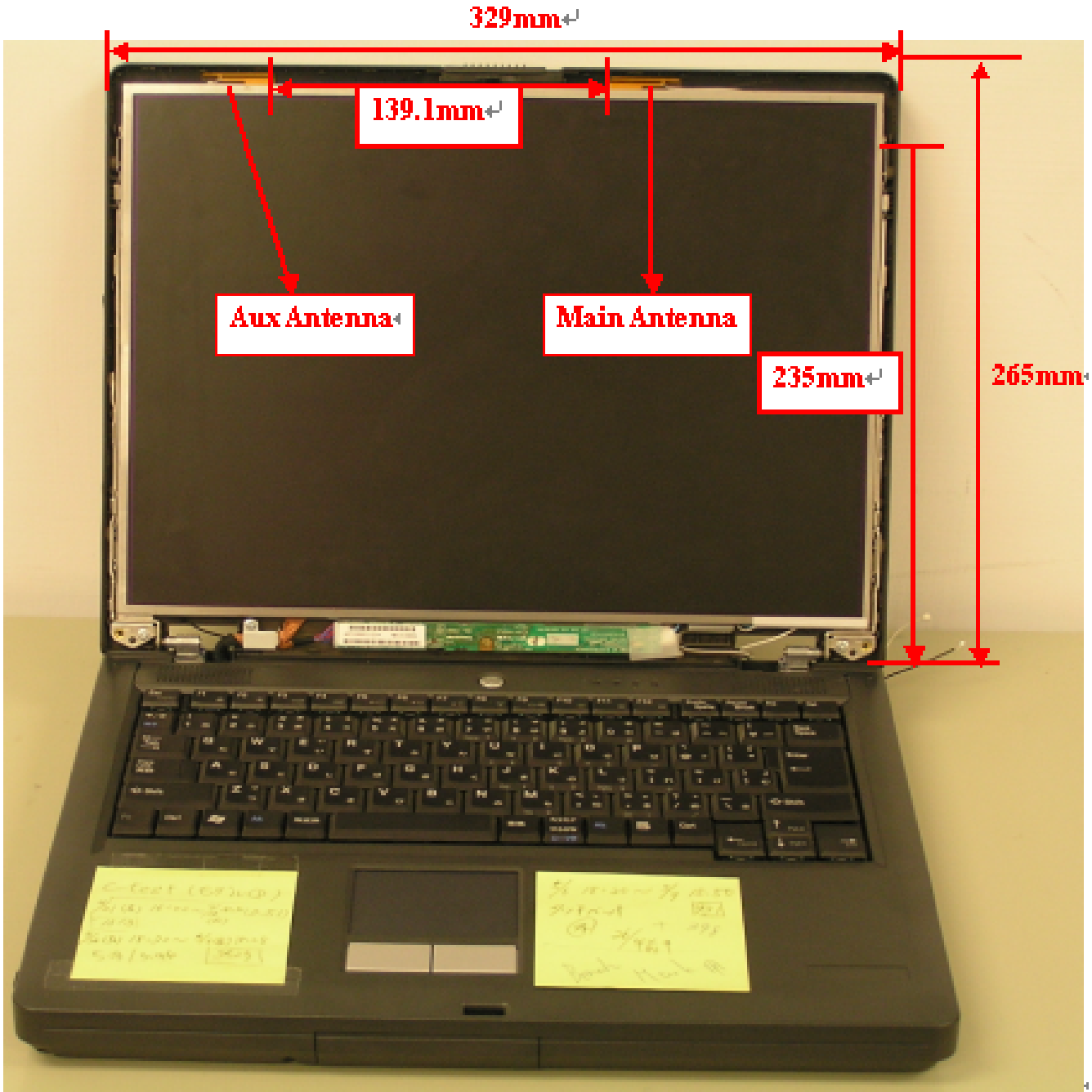
Section 4. Host Platform Information

Module Location Photo:



Section 5. Antenna Host Platform Location Information

Include a **dimensioned photo** or **dimensioned drawing** of main and auxiliary antenna placements.



Section 6. Antenna dimensional information for SAR evaluation

Include a **dimensioned photo or dimensioned drawing** showing the distance (mm) between the transmit (main) antenna and the user (excluding hands, wrist, feet, and ankle)

