

Regulatory WLAN Antenna Information HTL017

(English Language Required for Intel Regulatory Review / Approval)

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 Example

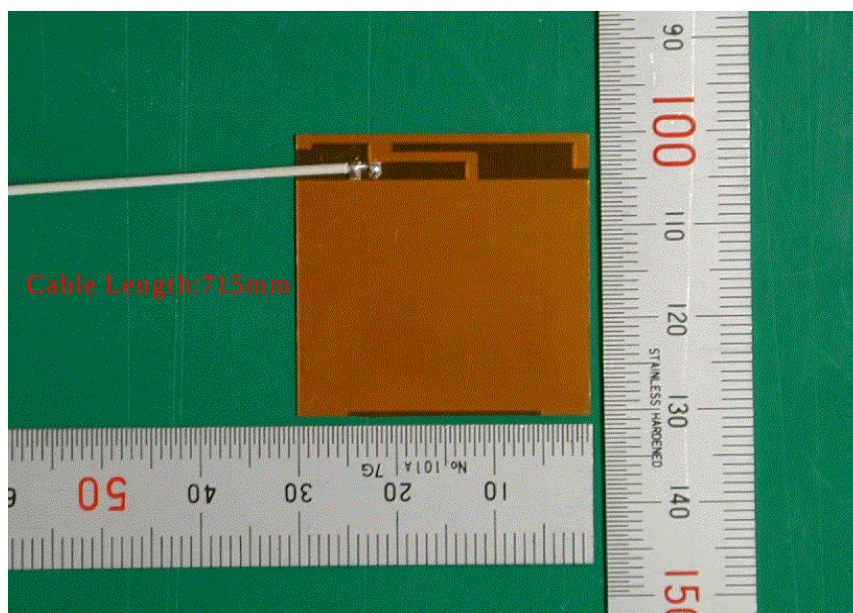
Section 1. Antenna Assembly Specifications

Antenna Assembly Summary:

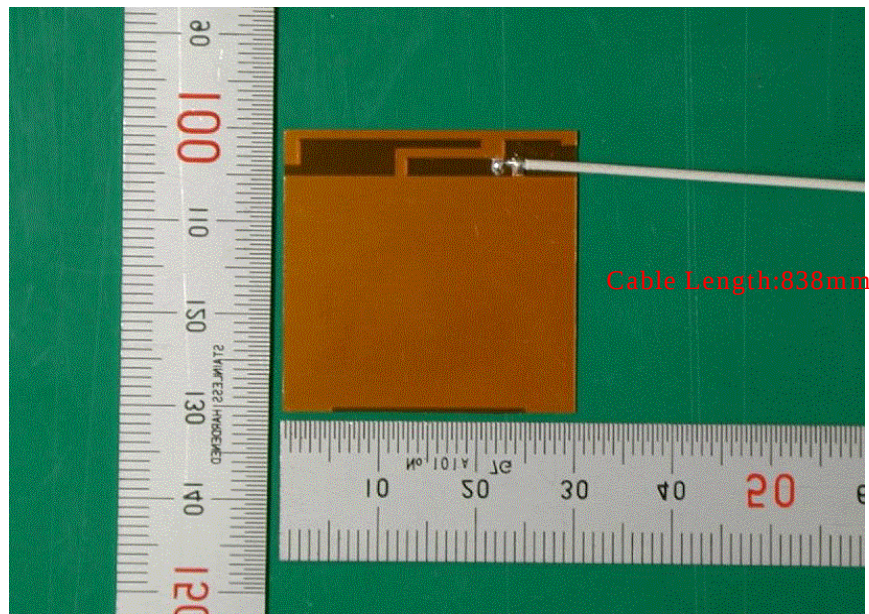
1A Antenna Part Number	1B Manufacture	1C Antenna Type	1D Cable Assembly Part Number and Information	1E Peak Gain W/ Cable loss (dBi)	1F Peak Gain w/o Cable Loss (dBi)	1G VSWR	1H Cable Loss (dBi)
HTL017	Hitachi Cable, Ltd.	2.4GHz: Monopole 5GHz: Monopole	P/N: HTL017-C334 50 ohm Coaxial. length: 715mm diameter: 1.0mm Connector: U.FL	2400-2500MHz 2.2 dBi (peak)	2400-2500MHz 4.24 dBi (peak)	2400-2500MHz 1.51 max	2400-2500MHz 2.04 dBi (peak)
				5150-5350MHz 1.2 dBi (peak)	5150-5350MHz 4.17 dBi (peak)	5150-5350MHz 1.41 max	5150-5350MHz 2.97 dBi (peak)
				5470-5725MHz 1.8 dBi (peak)	5470-5725MHz 4.86 dBi (peak)	5470-5725MHz 1.45 max	5470-5725MHz 3.06 dBi (peak)
				5725-5850MHz 1.0 dBi (peak)	5725-5850MHz 4.12 dBi (peak)	5725-5850MHz 1.48 max	5725-5850MHz 3.12 dBi (peak)
HTL017	Hitachi Cable, Ltd.	2.4GHz: Monopole 5GHz: Monopole	P/N: HTL017-C334 50 ohm Coaxial. length: 838mm diameter: 1.0mm Connector: U.FL	2400-2500MHz -1.5 dBi (peak)	2400-2500MHz 0.89 dBi (peak)	2400-2500MHz 1.72 max	2400-2500MHz 2.39 dBi (peak)
				5150-5350MHz -0.5 dBi (peak)	5150-5350MHz 3.98 dBi (peak)	5150-5350MHz 1.41 max	5150-5350MHz 3.48 dBi (peak)
				5470-5725MHz 0.0 dBi (peak)	5470-5725MHz 3.59 dBi (peak)	5470-5725MHz 1.33 max	5470-5725MHz 3.59 dBi (peak)
				5725-5850MHz -1.2 dBi (peak)	5725-5850MHz 2.45 dBi (peak)	5725-5850MHz 1.40 max	5725-5850MHz 3.65 dBi (peak)

Section 2. Dimensioned Photos or Drawings of Antennas

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



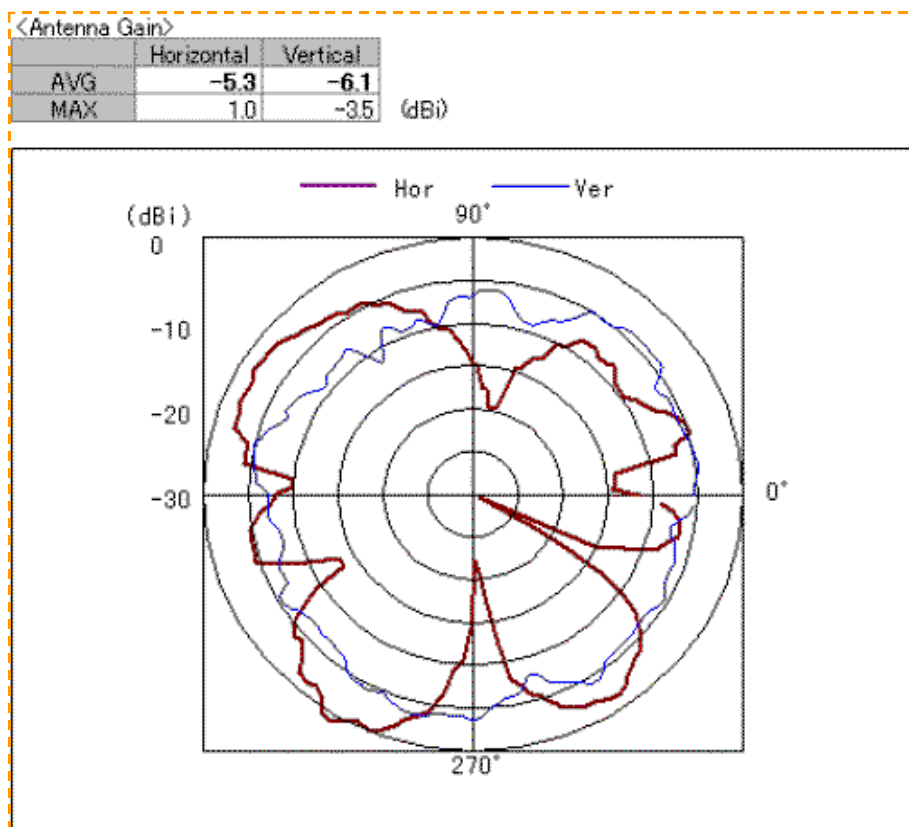
include a dimensioned photo or dimensioned drawing of aux antenna here.



Section 3. Radiation characteristics of antennae Loaded in Host Platform

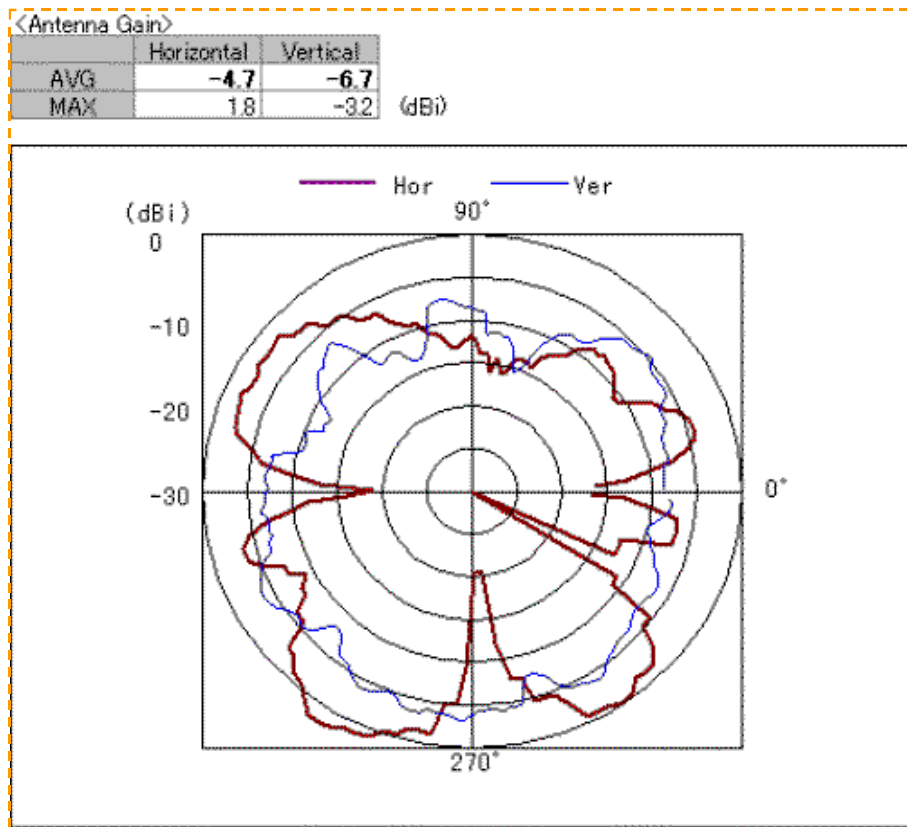
2400-2500MHz radiation characteristic

Main antenna: 2400 MHz



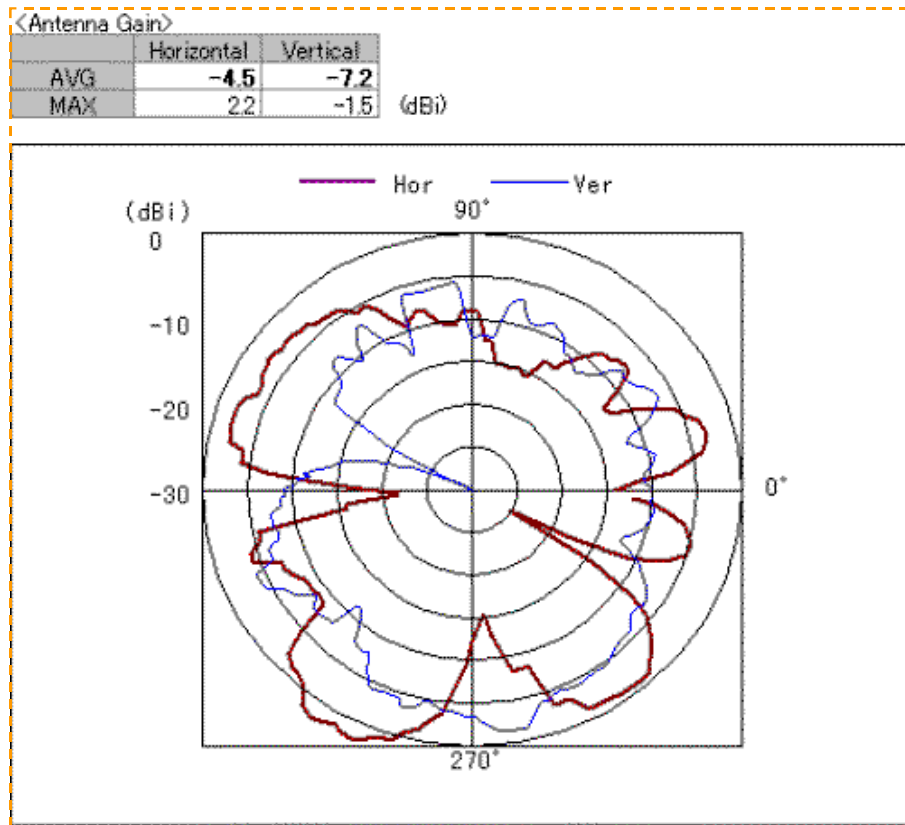
Center Frequency	2400 MHz
Horizontal (dBi) peak	1.0
Vertical (dBi) peak	-3.5
Horz+Vert (dBi) peak	1.0

Main antenna: 2450 MHz



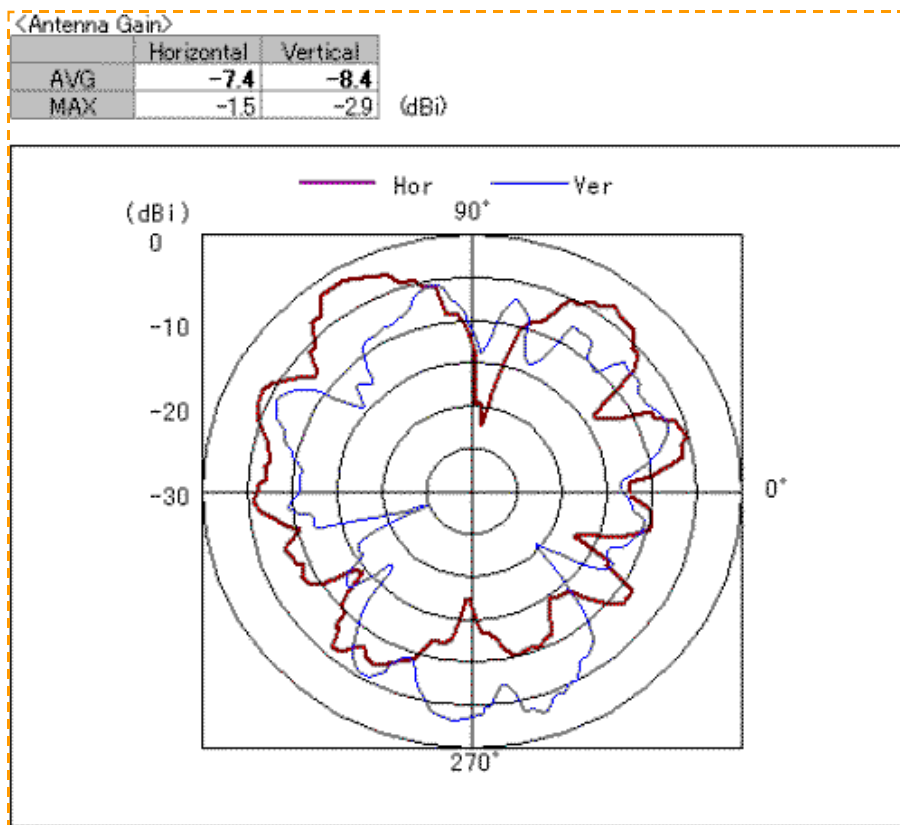
Center Frequency	2450 MHz
Horizontal (dBi) peak	1.8
Vertical (dBi) peak	-3.2
Horz+Vert (dBi) peak	1.8

Main antenna: 2500 MHz



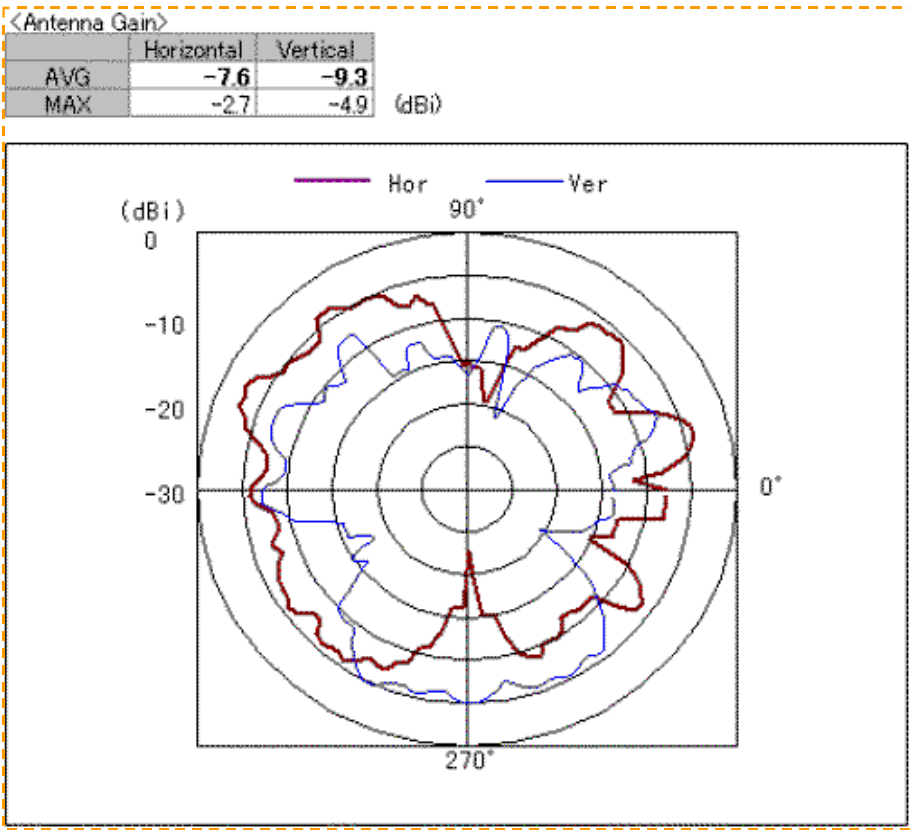
Center Frequency	2500 MHz
Horizontal (dBi) peak	2.2
Vertical (dBi) peak	-1.5
Horz+Vert (dBi) peak	2.2

Auxiliary antenna: 2400 MHz



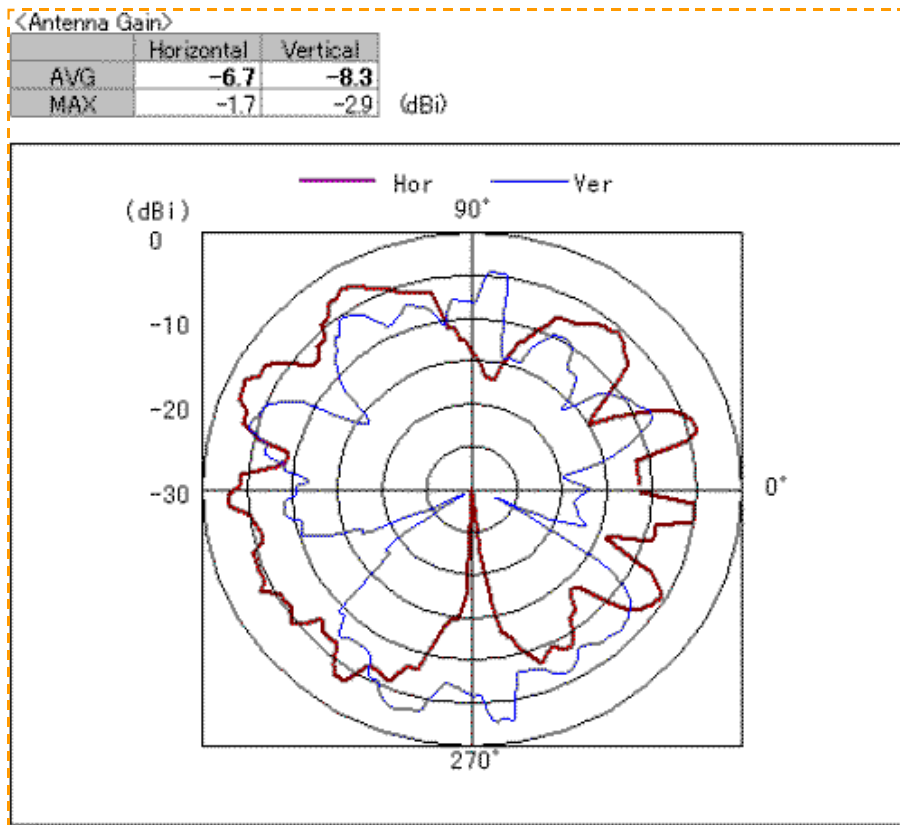
Center Frequency	2400 MHz
Horizontal (dBi) peak	-1.5
Vertical (dBi) peak	-2.9
Horz+Vert (dBi) peak	-1.5

Auxiliary antenna: 2450 MHz

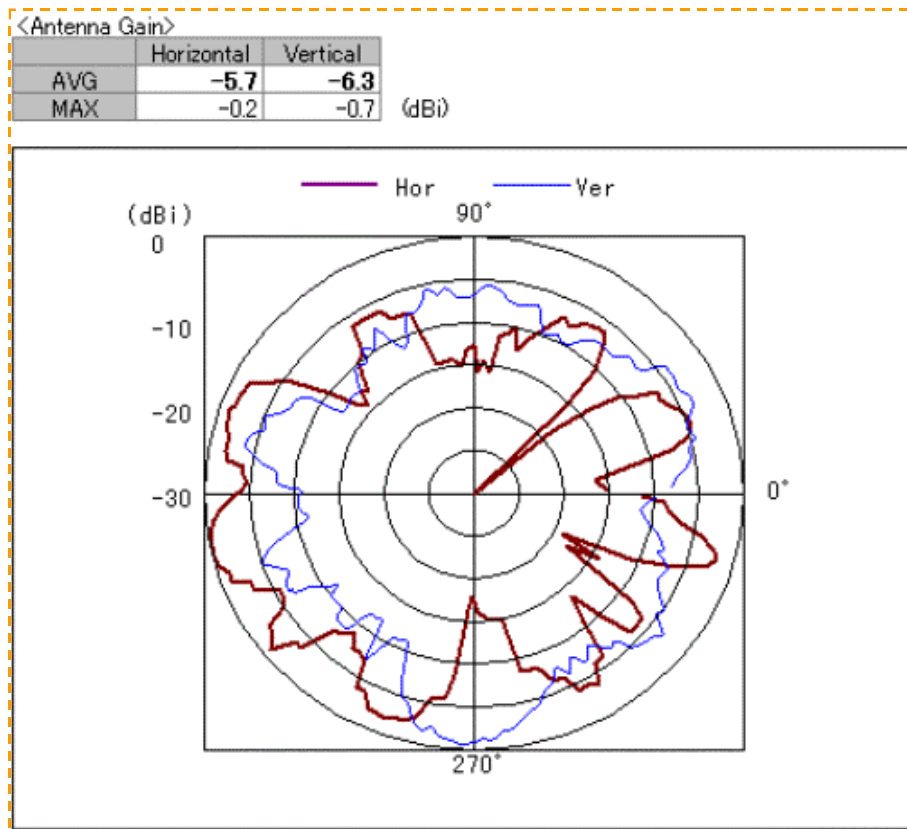


Center Frequency	2450 MHz
Horizontal (dBi) peak	-2.7
Vertical (dBi) peak	-4.9
Horz+Vert (dBi) peak	-2.7

Auxiliary antenna: 2500 MHz

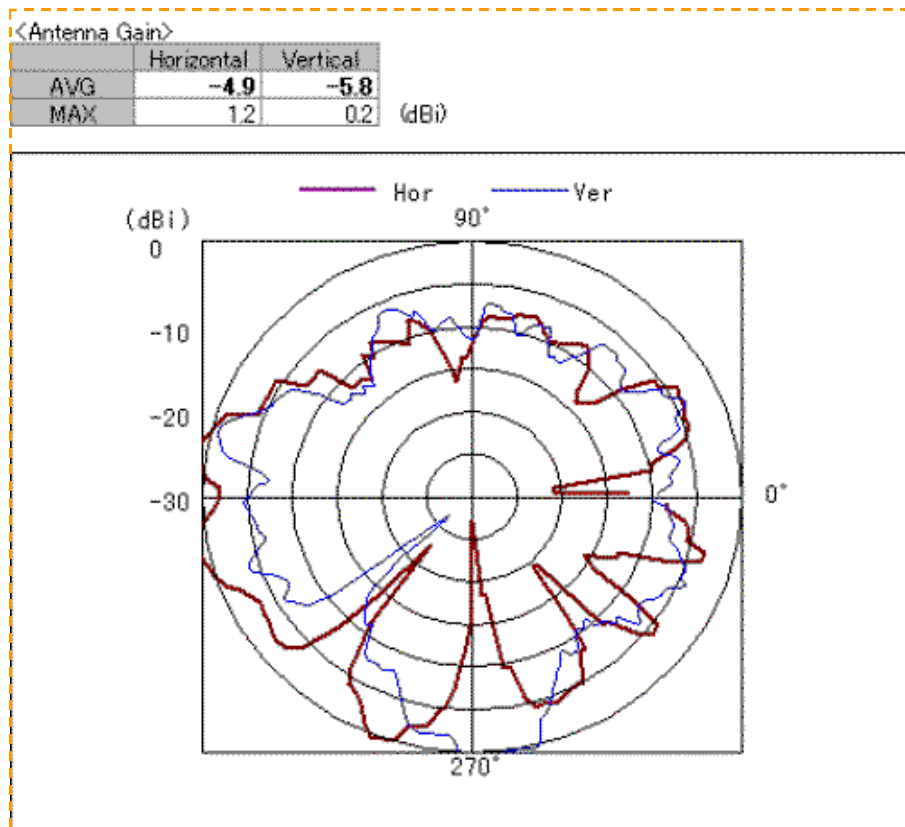


Center Frequency	2500 MHz
Horizontal (dBi) peak	-1.7
Vertical (dBi) peak	-2.9
Horz+Vert (dBi) peak	-1.7

5150-5350 MHz radiation characteristicMain antenna: 5150 MHz

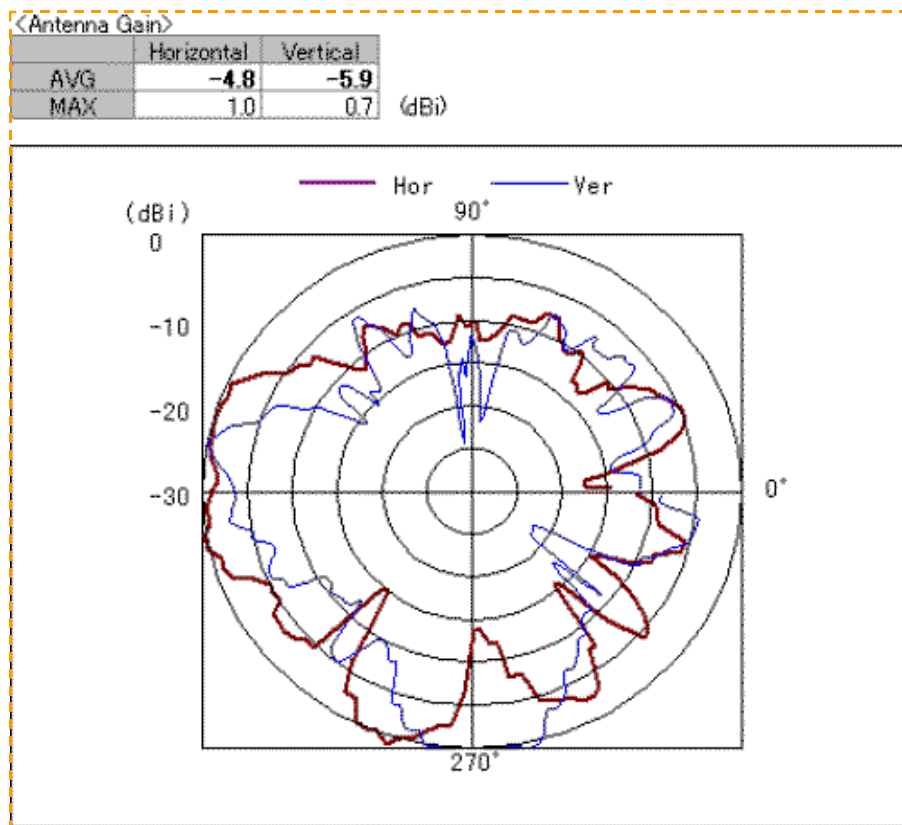
Center Frequency	5150 MHz
Horizontal (dBi) peak	-0.2
Vertical (dBi) peak	-0.7
Horz+Vert (dBi) peak	-0.2

Main antenna: 5250 MHz



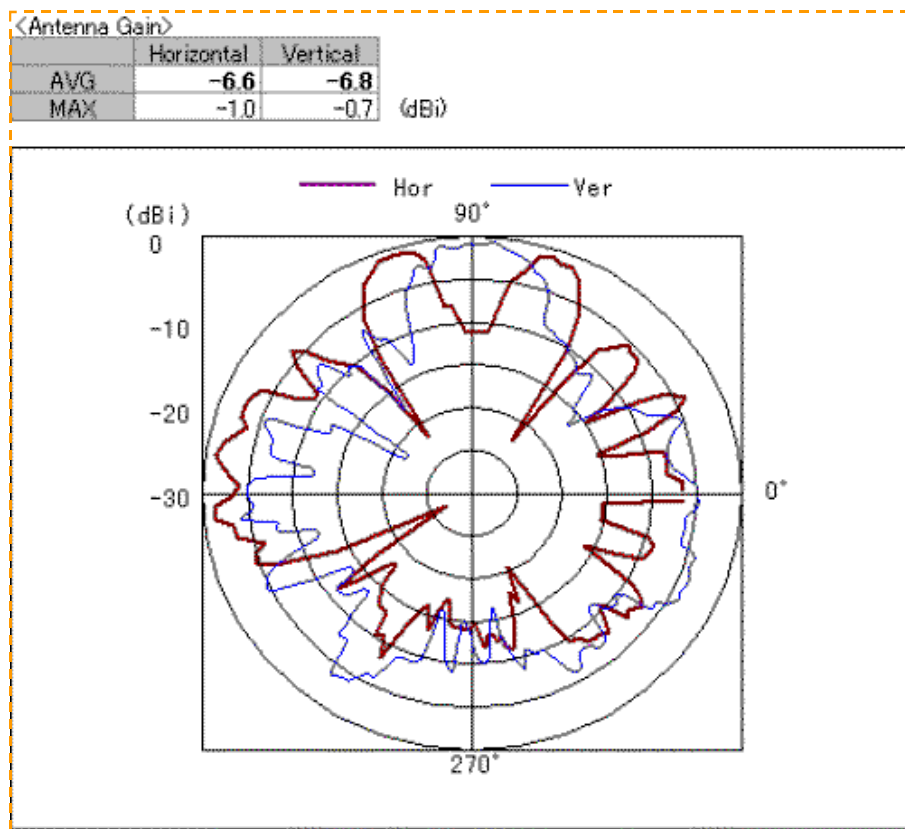
Center Frequency	5250 MHz
Horizontal (dBi) peak	1.2
Vertical (dBi) peak	0.2
Horz+Vert (dBi) peak	1.2

Main antenna: 5350 MHz



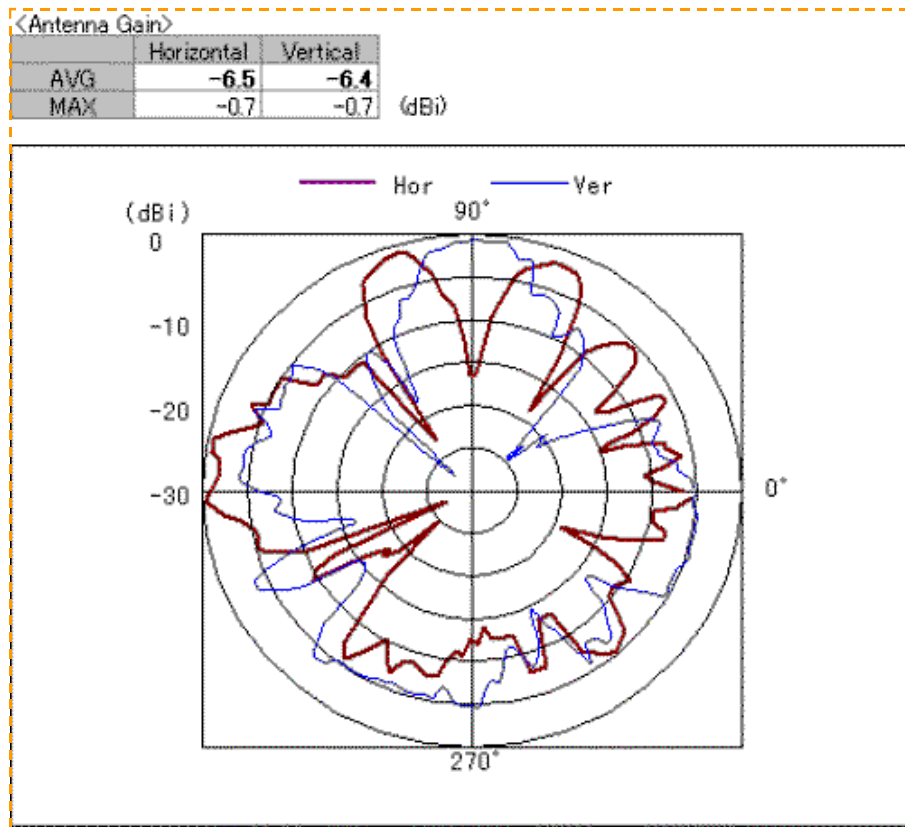
Center Frequency	5350 MHz
Horizontal (dBi) peak	1.0
Vertical (dBi) peak	0.7
Horz+Vert (dBi) peak	1.0

Auxiliary antenna: 5150 MHz



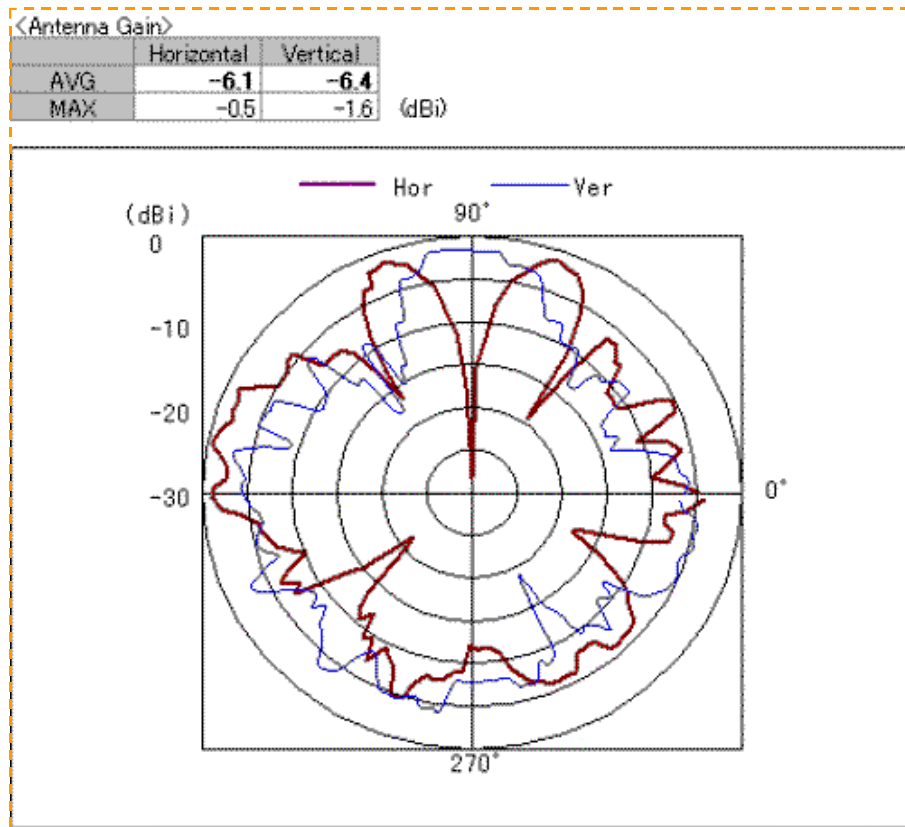
Center Frequency	5150 MHz
Horizontal (dBi) peak	-1.0
Vertical (dBi) peak	-0.7
Horz+Vert (dBi) peak	-0.7

Auxiliary antenna: 5250 MHz



Center Frequency	5250 MHz
Horizontal (dBi) peak	-0.7
Vertical (dBi) peak	-0.7
Horz+Vert (dBi) peak	-0.7

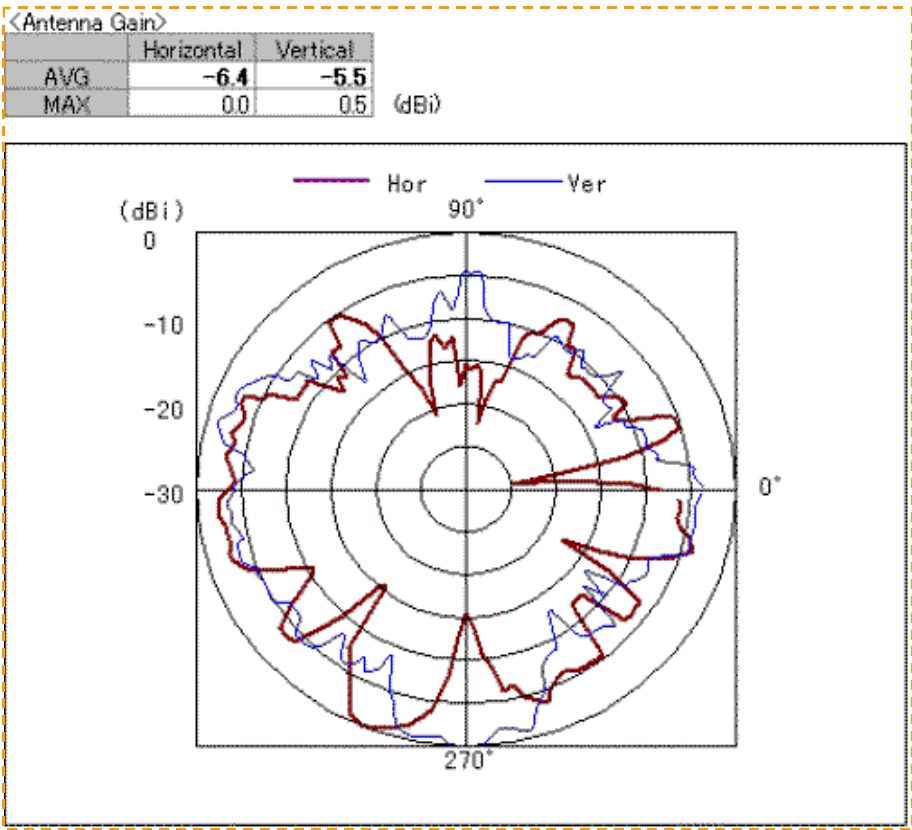
Auxiliary antenna: 5350 MHz



Center Frequency	5350 MHz
Horizontal (dBi) peak	-0.5
Vertical (dBi) peak	-1.6
Horz+Vert (dBi) peak	-0.5

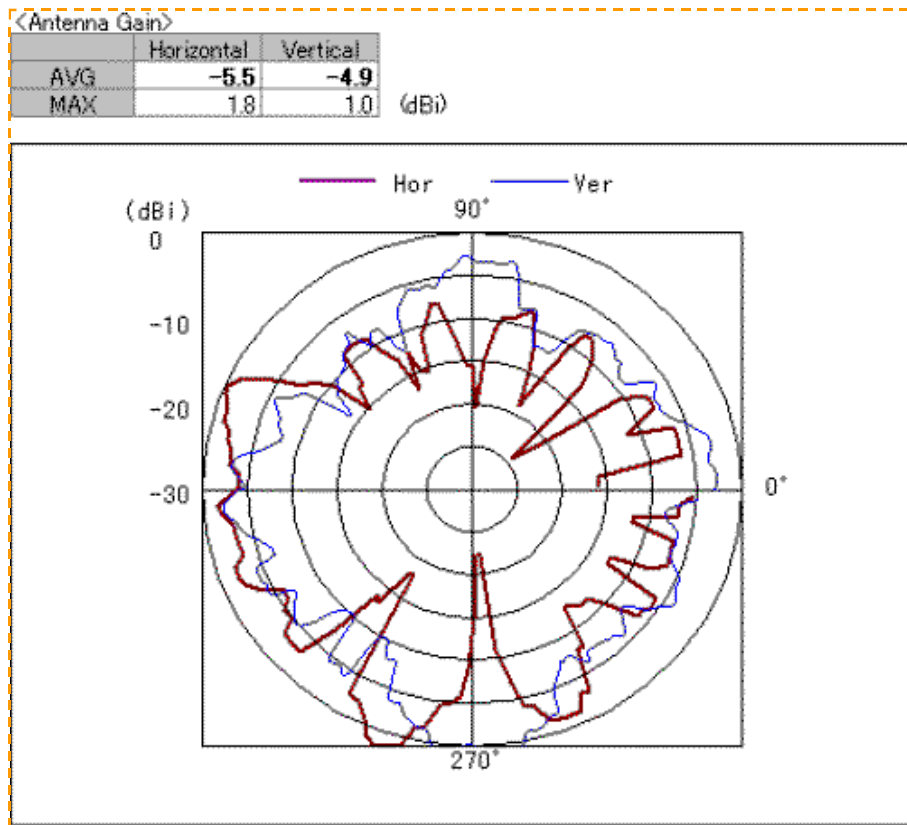
5470-5725MHz radiation characteristic

Main antenna: 5470 MHz



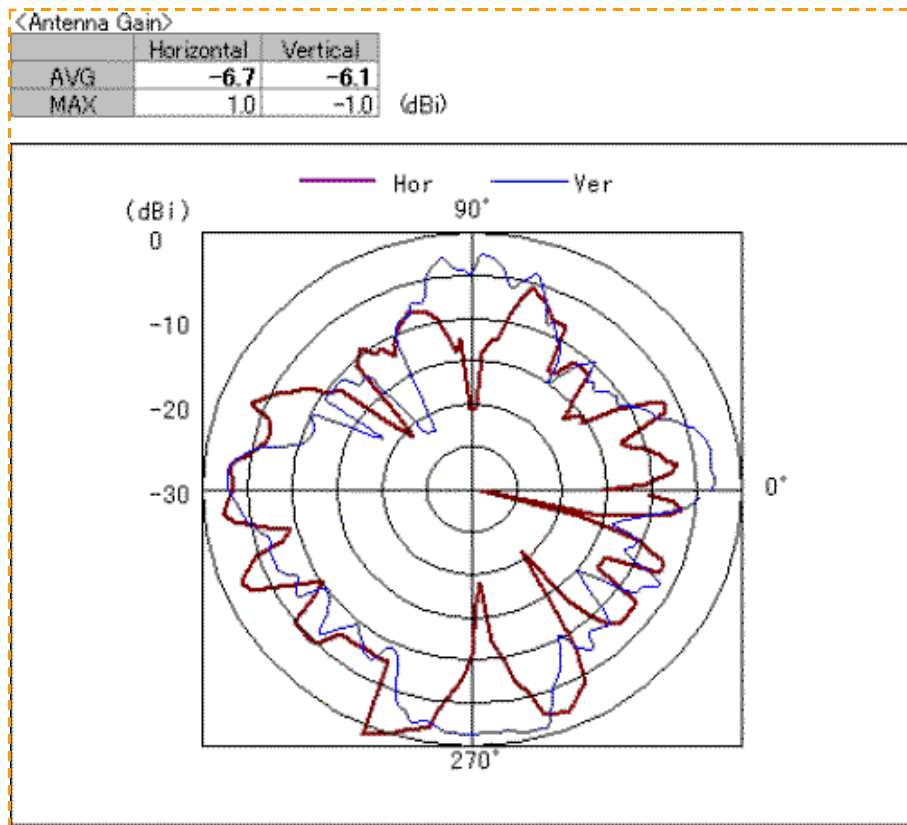
Center Frequency	5470 MHz
Horizontal (dBi) peak	0.0
Vertical (dBi) peak	0.5
Horz+Vert (dBi) peak	0.5

Main antenna: 5597.5 MHz



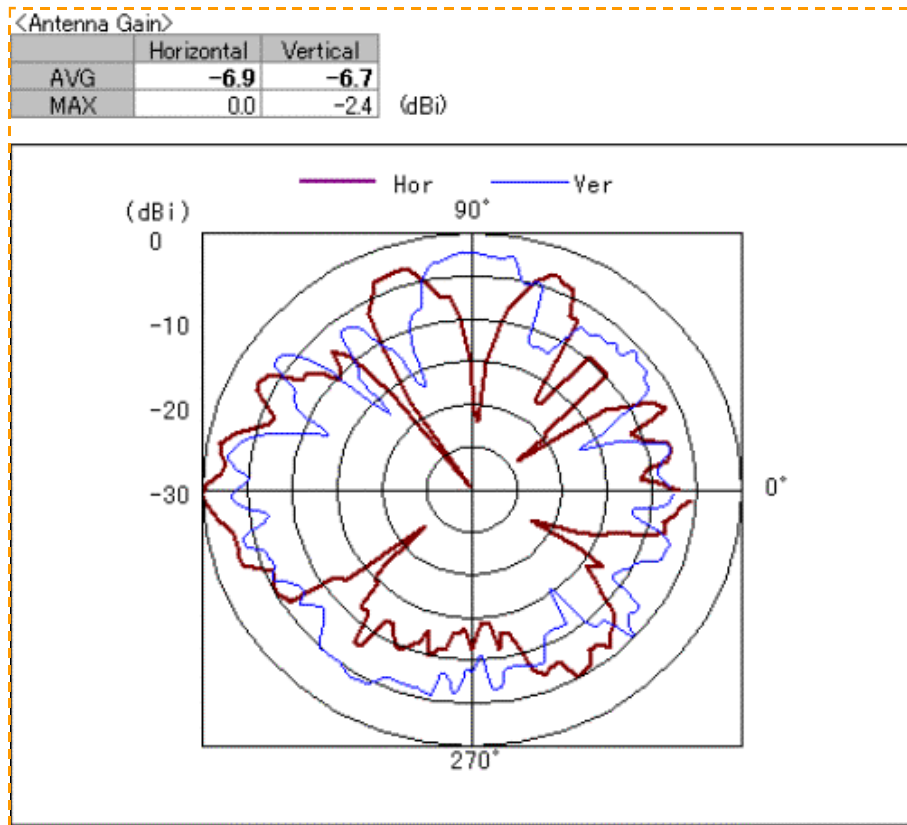
Center Frequency	5597.5 MHz
Horizontal (dBi) peak	1.8
Vertical (dBi) peak	1.0
Horz+Vert (dBi) peak	1.8

Main antenna: 5725 MHz



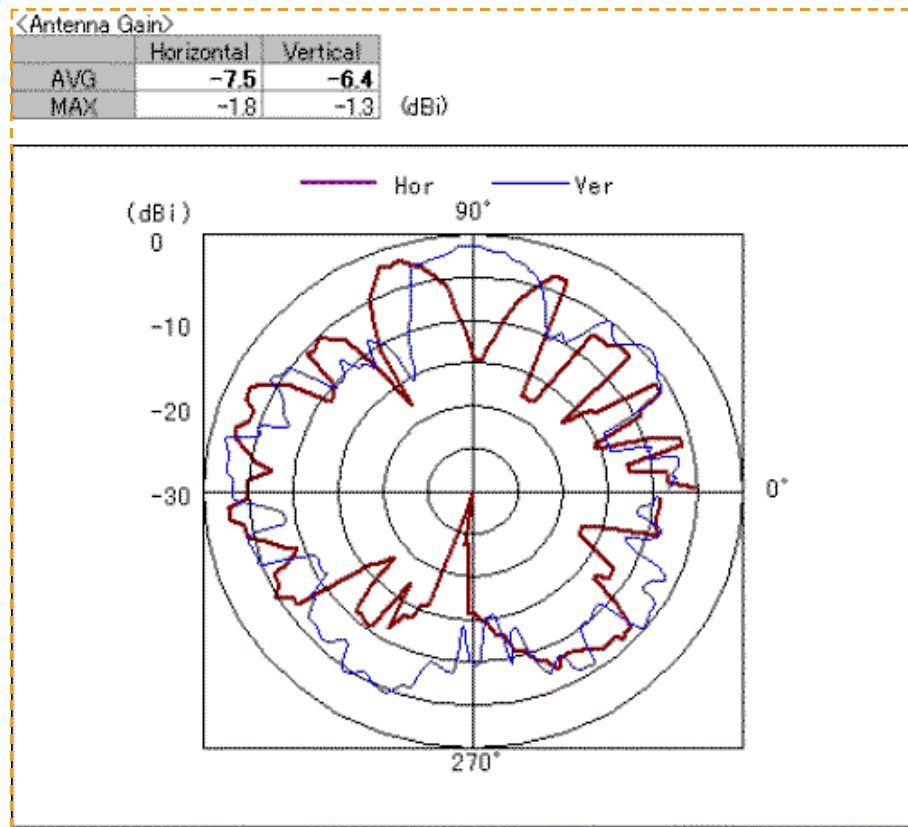
Center Frequency	5725 MHz
Horizontal (dBi) peak	1.0
Vertical (dBi) peak	-1.0
Horz+Vert (dBi) peak	1.0

Auxiliary antenna: 5470 MHz



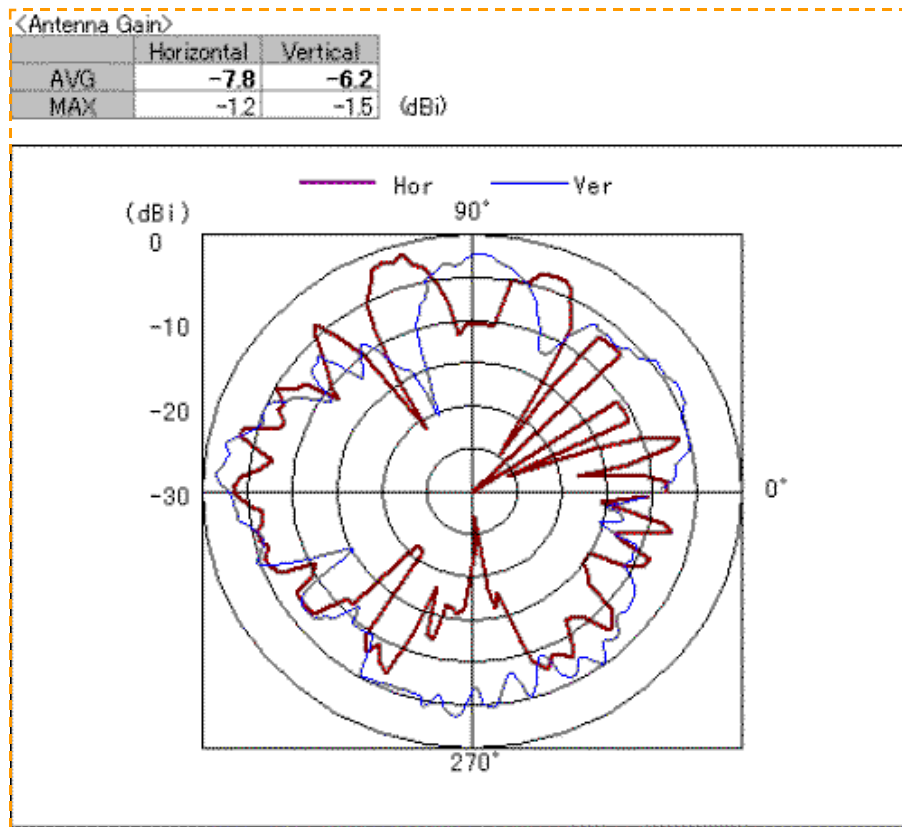
Center Frequency	5470 MHz
Horizontal (dBi) peak	0.0
Vertical (dBi) peak	-2.4
Horz+Vert (dBi) peak	0.0

Auxiliary antenna: 5597.5 MHz



Center Frequency	5597.5 MHz
Horizontal (dBi) peak	-1.8
Vertical (dBi) peak	-1.3
Horz+Vert (dBi) peak	-1.3

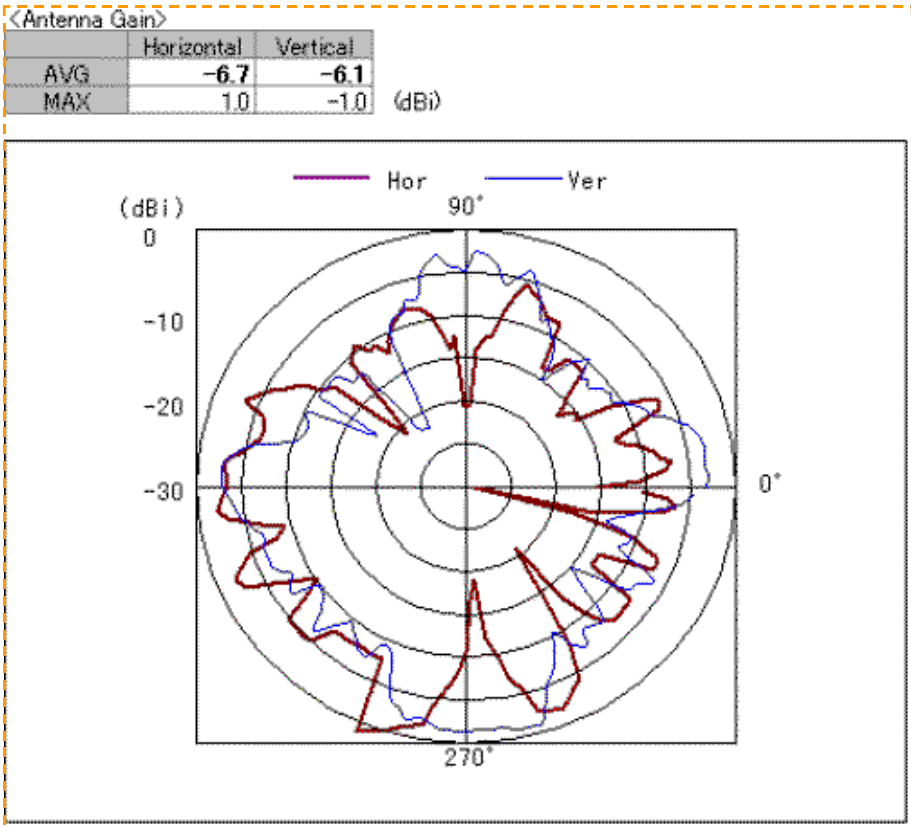
Auxiliary antenna: 5725 MHz



Center Frequency	5725 MHz
Horizontal (dBi) peak	-1.2
Vertical (dBi) peak	-1.5
Horz+Vert (dBi) peak	-1.2

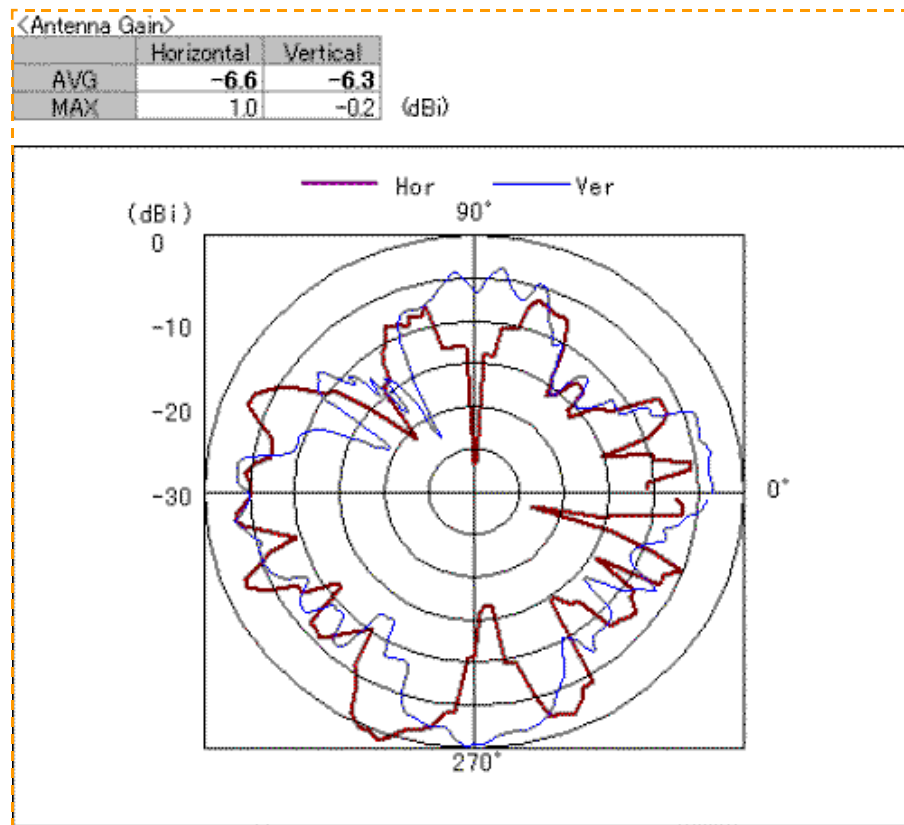
5725-5850 MHz radiation characteristic

Main antenna: 5725 MHz



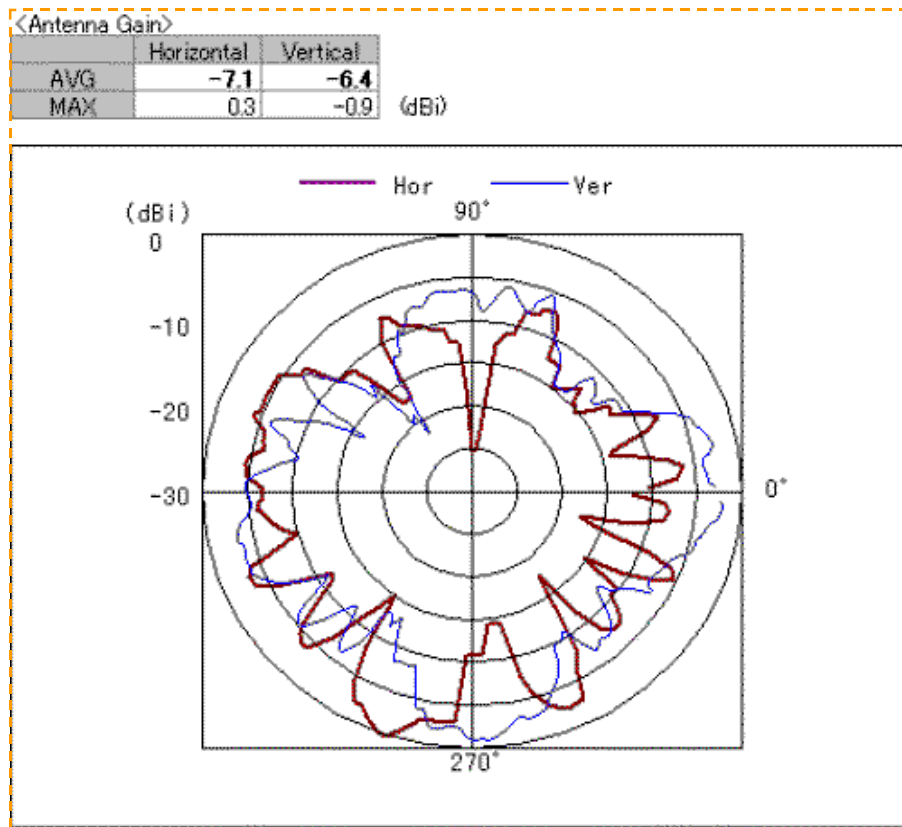
Center Frequency	5725 MHz
Horizontal (dBi) peak	1.0
Vertical (dBi) peak	-1.0
Horz+Vert (dBi) peak	1.0

Main antenna: 5785 MHz



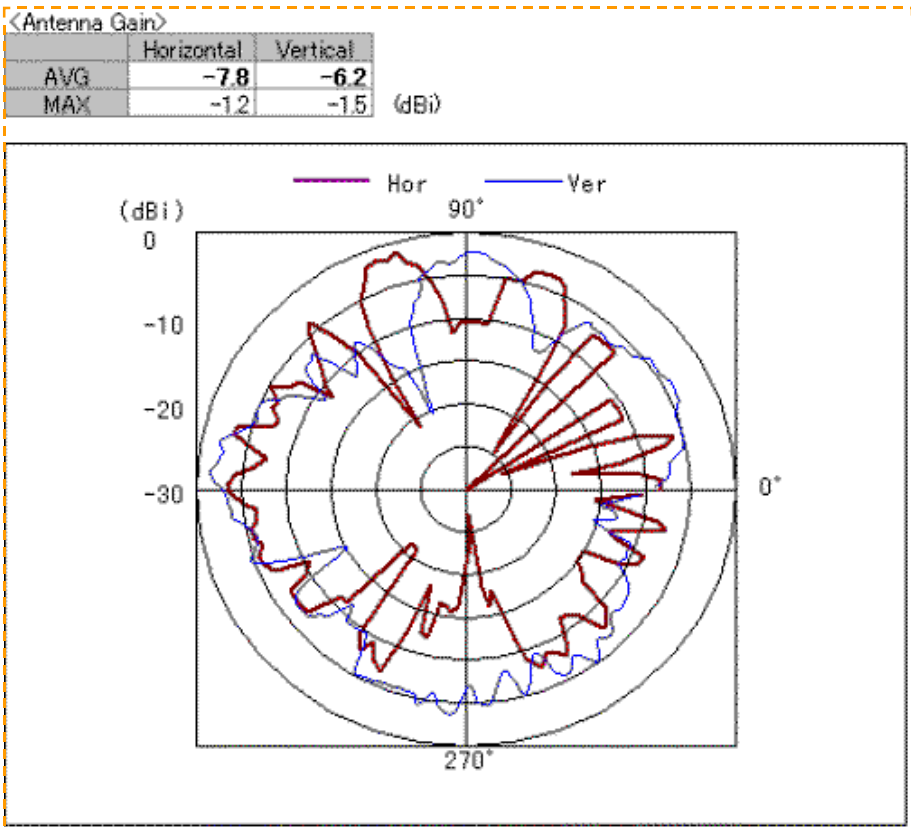
Center Frequency	5785 MHz
Horizontal (dBi) peak	1.0
Vertical (dBi) peak	-0.2
Horz+Vert (dBi) peak	1.0

Main antenna: 5850 MHz



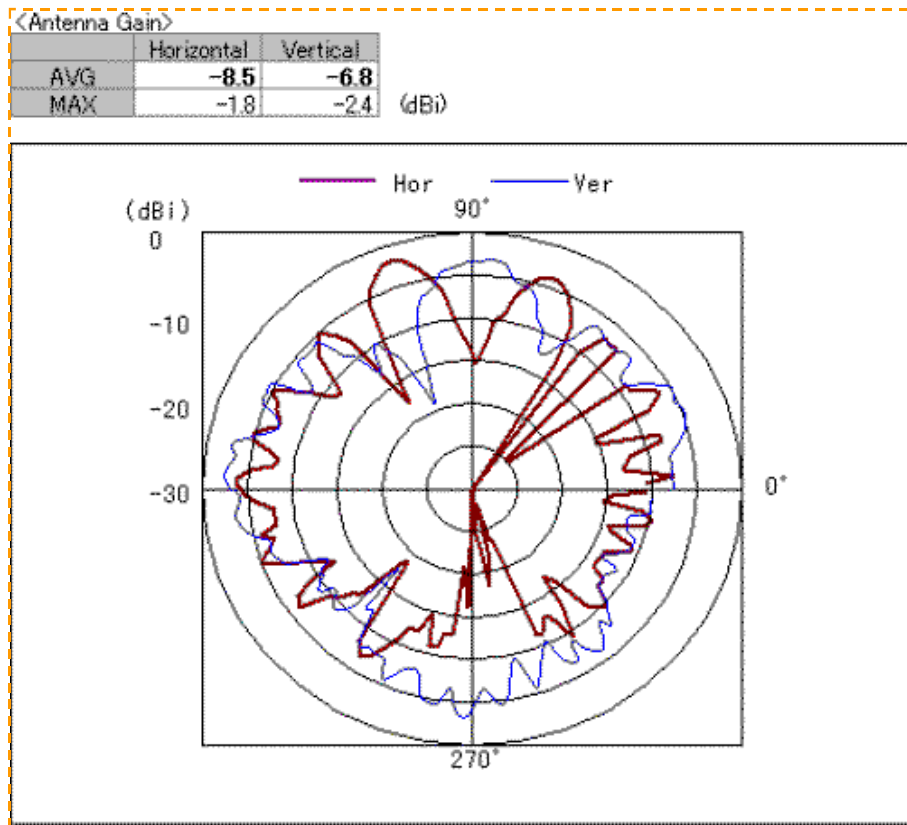
Center Frequency	5850 MHz
Horizontal (dBi) peak	0.3
Vertical (dBi) peak	-0.9
Horz+Vert (dBi) peak	-0.3

Auxiliary antenna: 5725 MHz



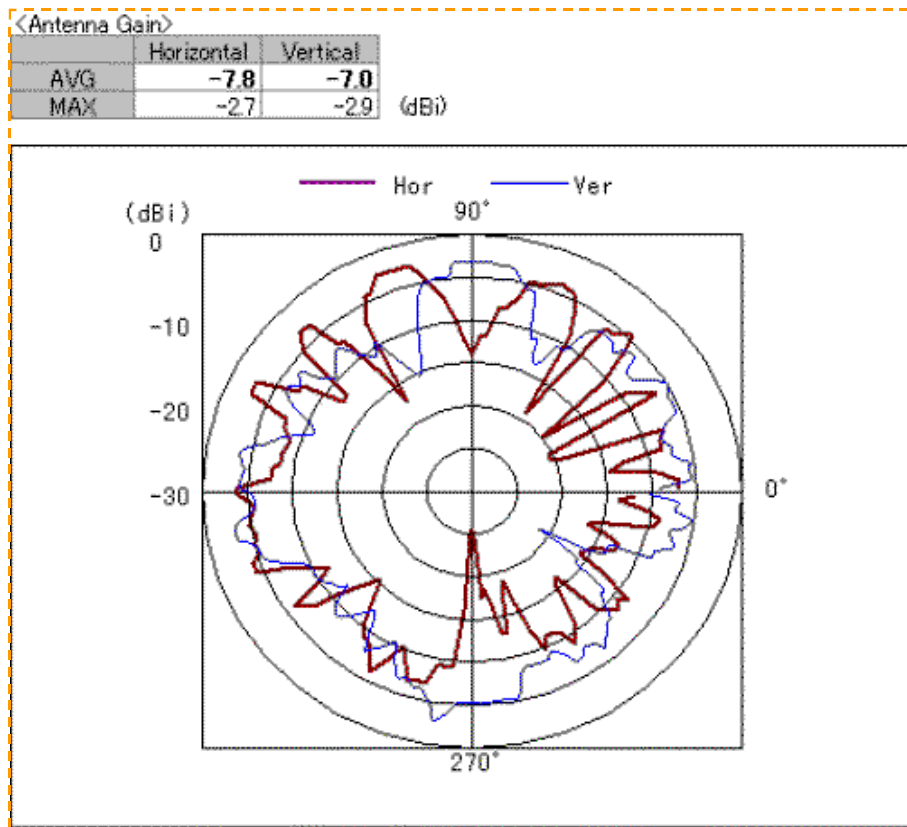
Center Frequency	5725 MHz
Horizontal (dBi) peak	-1.2
Vertical (dBi) peak	-1.5
Horz+Vert (dBi) peak	-1.2

Auxiliary antenna: 5785 MHz



Center Frequency	5785 MHz
Horizontal (dBi) peak	-1.8
Vertical (dBi) peak	-2.4
Horz+Vert (dBi) peak	-1.8

Auxiliary antenna: 5850 MHz



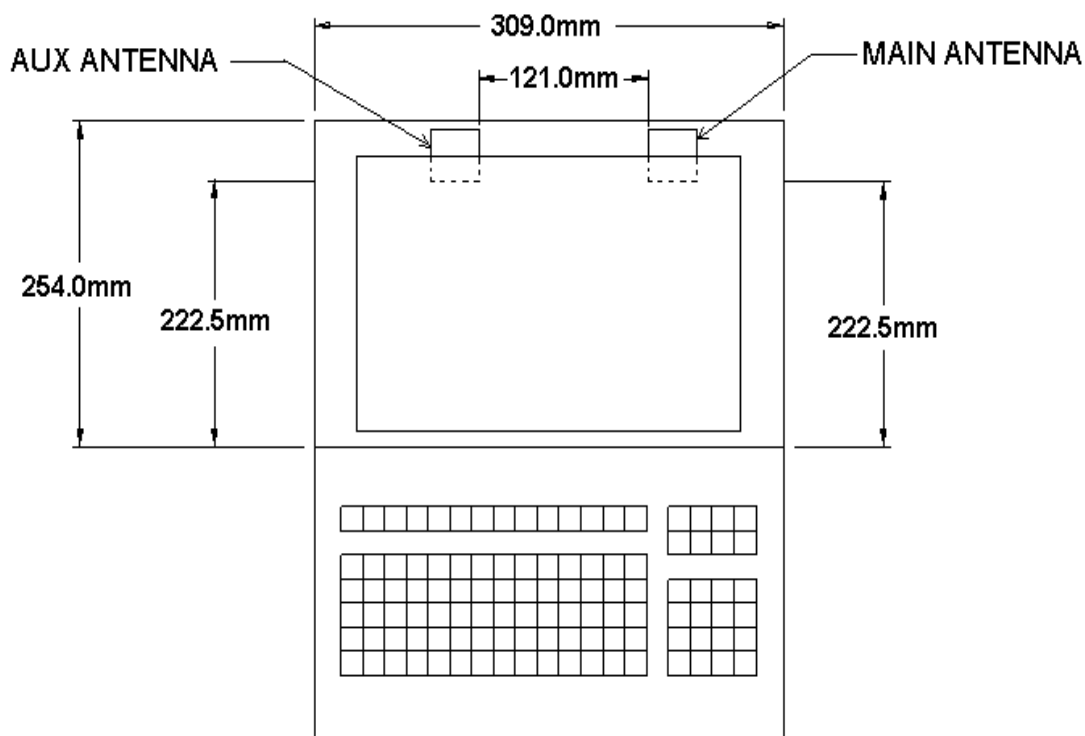
Center Frequency	5850 MHz
Horizontal (dBi) peak	-2.7
Vertical (dBi) peak	-2.9
Horz+Vert (dBi) peak	-2.7

Section 4. Host Platform Information

DEM / ODM Host platform: (XXXXXXX) platform correlated to antenna data

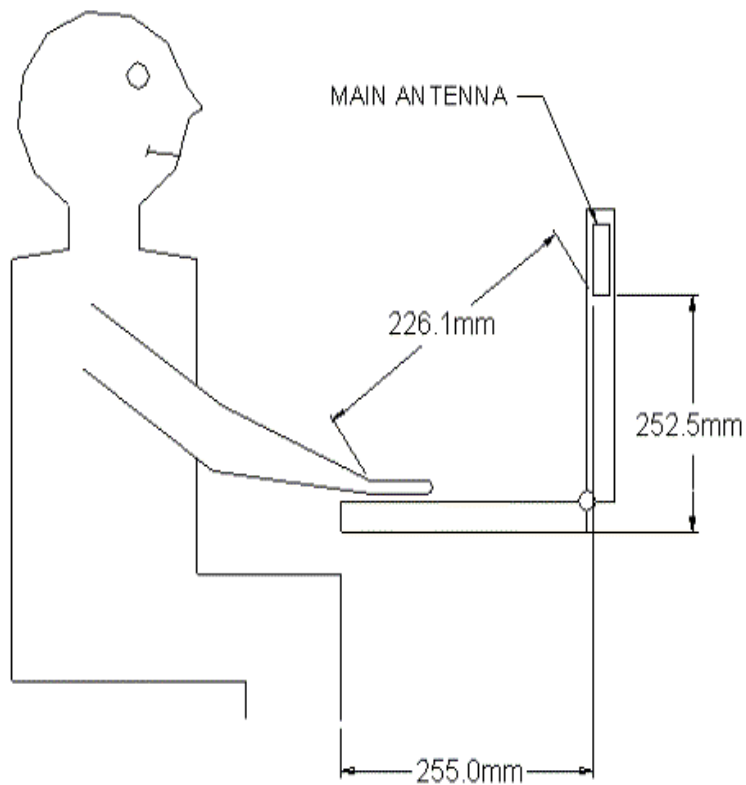
Section 5. Antenna Host Platform Location Information

Include a dimensioned photos or dimensioned drawings of main and auxiliary antenna placements.



Section 6. Antenna dimensional information for SAR evaluation

include a dimensioned photos or dimensioned drawings showing the distance (mm) between the transmit (main) antenna and the user (excluding hands, wrist, feet, and ankle)



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)

