

# **Regulatory WLAN Antenna Information TIAN01**

**Toshiba Corporation**

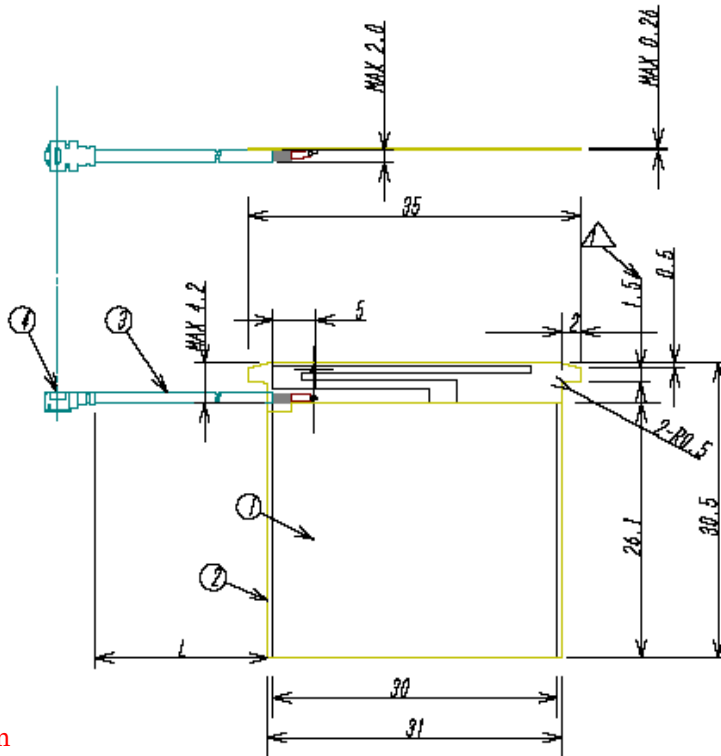
## Section 1. Antenna Assembly Specifications

### 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)
TIAN01	Tyco Electronics AMP K.K.	2.4GHz:PIFA 5GHz:PIFA	P/N: TIAN01-001 50 ohm Coaxial. length: 715mm diameter: 0.9mm Connector: U.FL	2400-2500MHz 2.0 dBi (peak)	2400-2500MHz 4.02 dBi (peak)	2400-2500MHz 1.59 max	2400-2500MHz 2.02 dBi (peak)
				5150-5350MHz 1.6 dBi (peak)	5150-5350MHz 4.66 dBi (peak)	5150-5350MHz 1.72 max	5150-5350MHz 3.06 dBi (peak)
				5470-5725MHz 1.0 dBi (peak)	5470-5725MHz 4.07 dBi (peak)	5470-5725MHz 1.99 max	5470-5725MHz 3.07 dBi (peak)
				5725-5850MHz -2.2 dBi (peak)	5725-5850MHz 0.91 dBi (peak)	5725-5850MHz 2.09 max	5725-5850MHz 3.11 dBi (peak)
TIAN01	Tyco Electronics AMP K.K.	2.4GHz:PIFA 5GHz:PIFA	P/N: TIAN01-001 50 ohm Coaxial. length: 838mm diameter: 0.9mm Connector: U.FL	2400-2500MHz -1.4 dBi (peak)	2400-2500MHz 0.97 dBi (peak)	2400-2500MHz 1.54 max	2400-2500MHz 2.37 dBi (peak)
				5150-5350MHz -0.5 dBi (peak)	5150-5350MHz 3.09 dBi (peak)	5150-5350MHz 1.48 max	5150-5350MHz 3.59 dBi (peak)
				5470-5725MHz -1.3 dBi (peak)	5470-5725MHz 2.30 dBi (peak)	5470-5725MHz 1.63 max	5470-5725MHz 3.60 dBi (peak)
				5725-5850MHz -1.9 dBi (peak)	5725-5850MHz 1.74 dBi (peak)	5725-5850MHz 1.83 max	5725-5850MHz 3.64 dBi (peak)

## Section 2. Dimensioned Photos or Drawings of Antennas

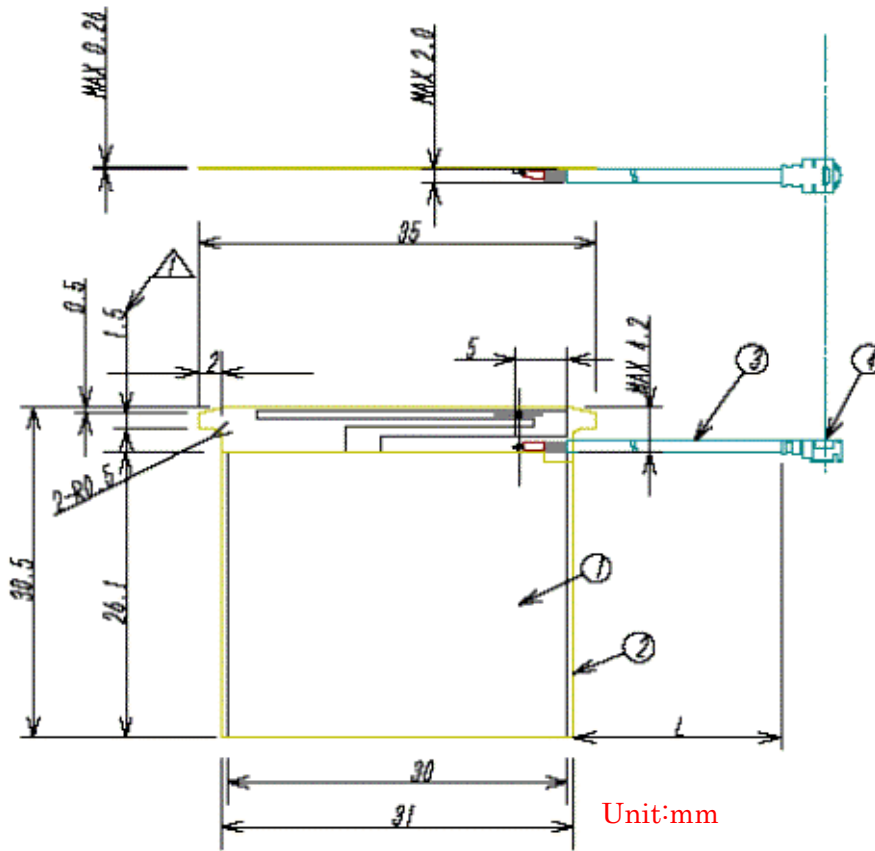
Include a dimensioned photo or dimensioned drawing of main antenna here.



Unit:mm

No.	DESCRIPTION
①	An original antenna manufactured by NISSEI(TOKUGAN2002-28YU76)
②	Insulation film
③	High frequency coaxial cable RF-NF5021
④	Connector

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

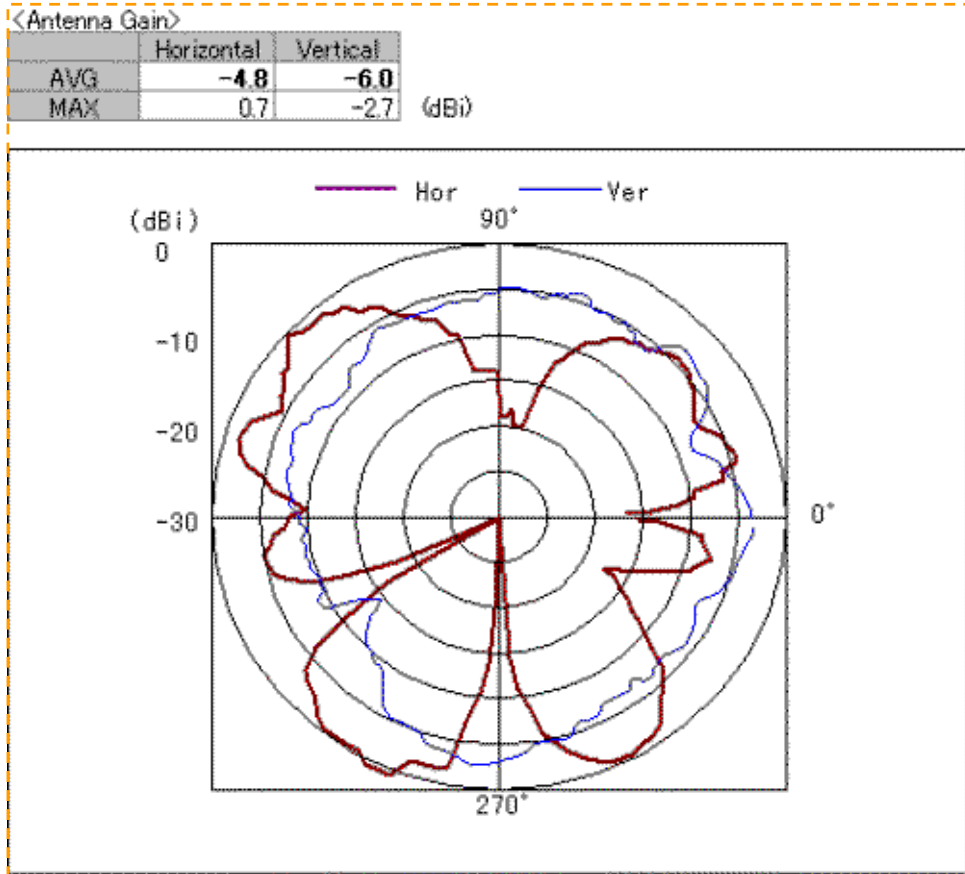


No.	DESCRIPTION
①	An original antenna manufactured by MISSEI(TOKUGANZU02-28YB76)
②	Insulation film
③	High frequency coaxial cable RF-NF5D21
④	Connector

## Section 3. Radiation characteristics of antennae Loaded in Host Platform

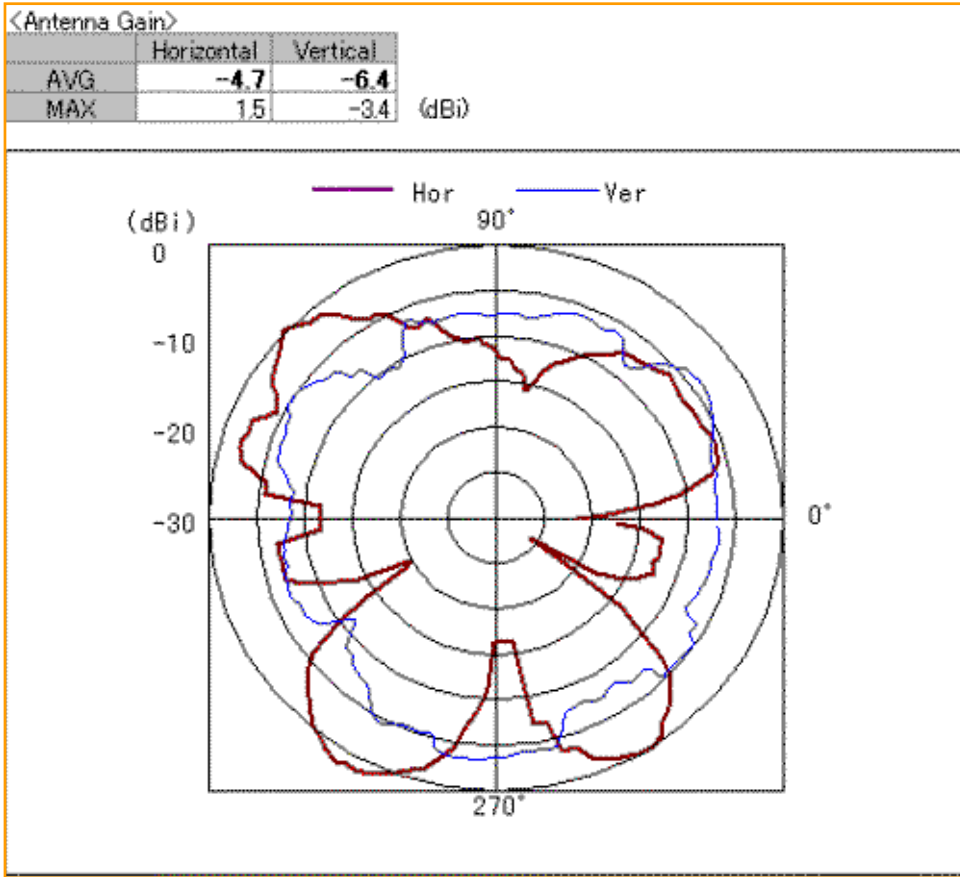
### 2400-2500MHz radiation characteristic

Main antenna: 2400 MHz



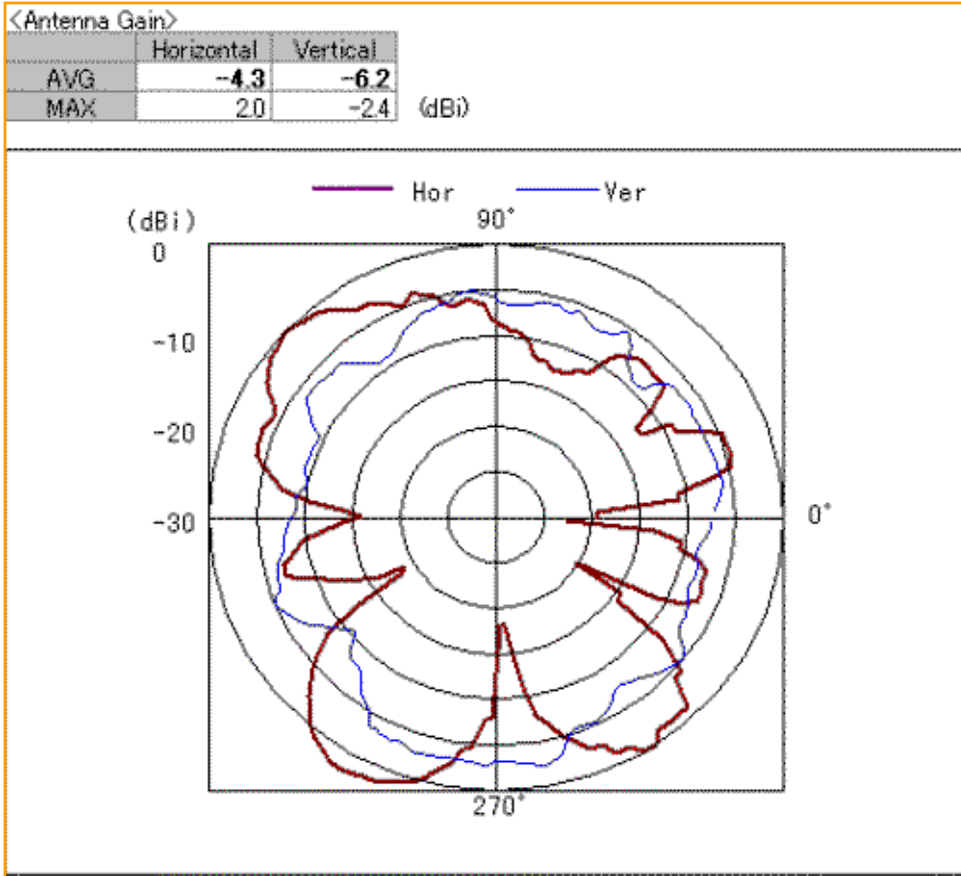
Center Frequency	<b>2400 MHz</b>
Horizontal (dBi) peak	<b>0.7</b>
Vertical (dBi) peak	<b>-2.7</b>
Horz+Vert (dBi) peak	<b>0.7</b>

**Main antenna: 2450 MHz**



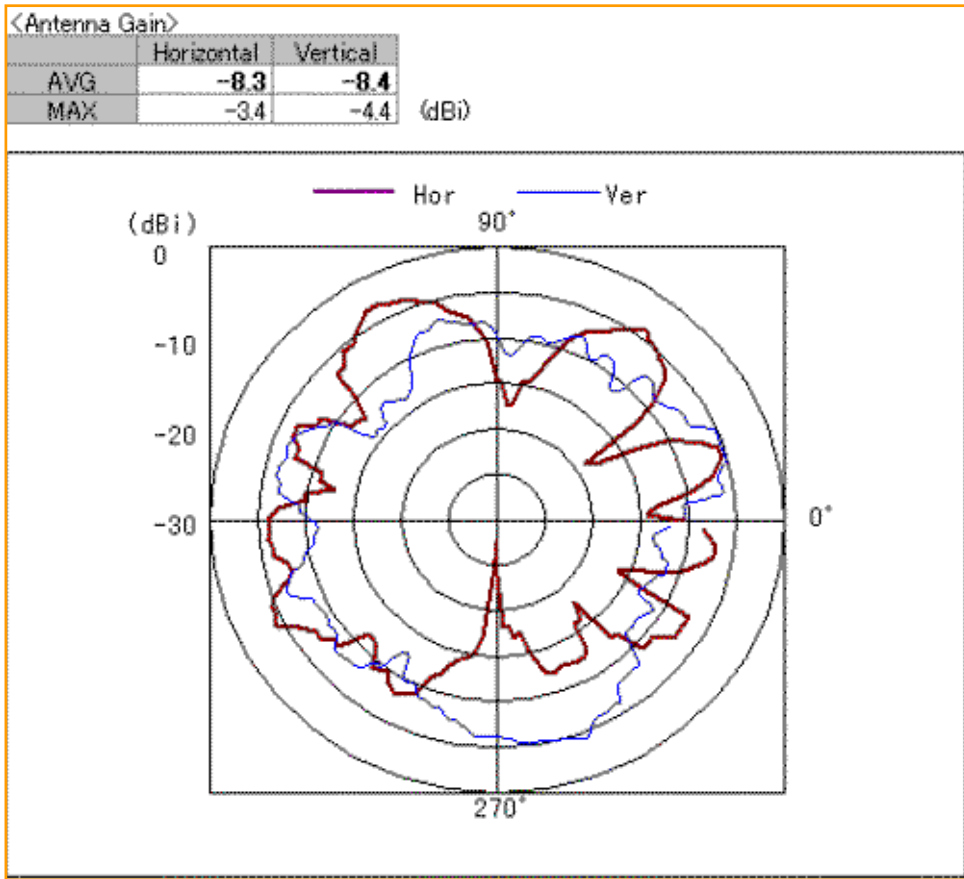
Center Frequency	<b>2450 MHz</b>
Horizontal (dBi) peak	<b>1.5</b>
Vertical (dBi) peak	<b>-3.4</b>
Horz+Vert (dBi) peak	<b>1.5</b>

**Main antenna: 2500 MHz**



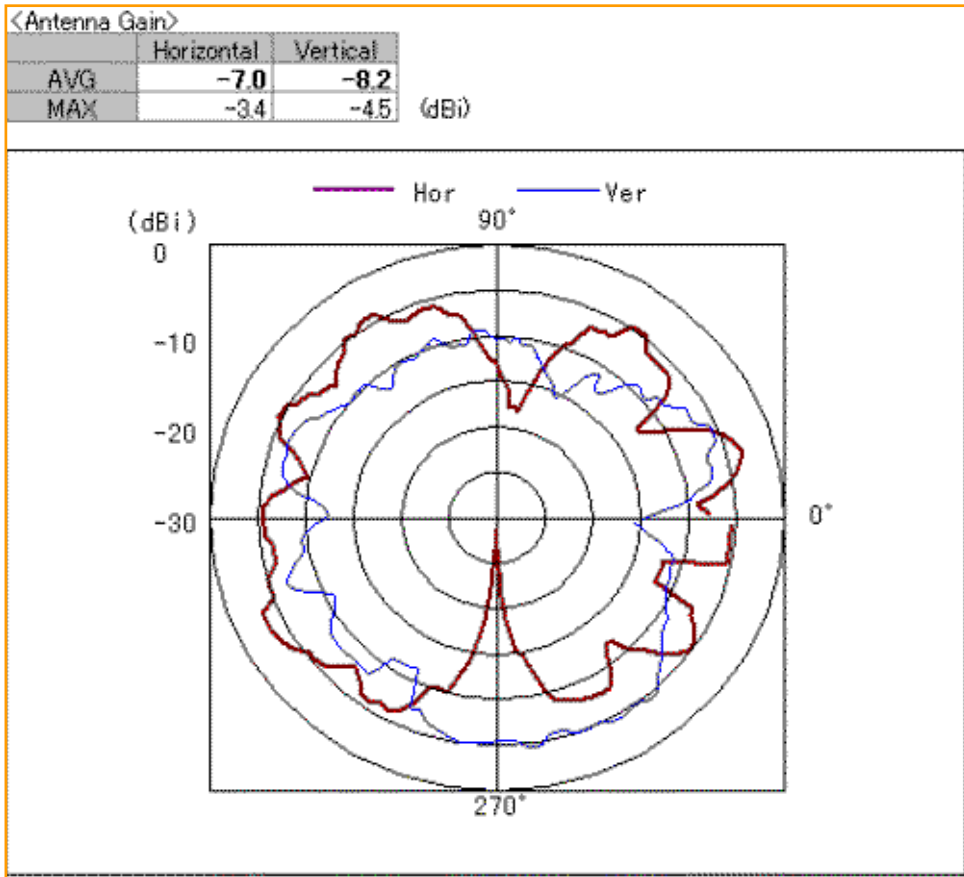
Center Frequency	<b>2500 MHz</b>
Horizontal (dBi) peak	<b>2.0</b>
Vertical (dBi) peak	<b>-2.4</b>
Horz+Vert (dBi) peak	<b>2.0</b>

**Auxiliary antenna: 2400 MHz**



Center Frequency	<b>2400 MHz</b>
Horizontal (dBi) peak	<b>-3.4</b>
Vertical (dBi) peak	<b>-4.4</b>
Horz+Vert (dBi) peak	<b>-3.4</b>

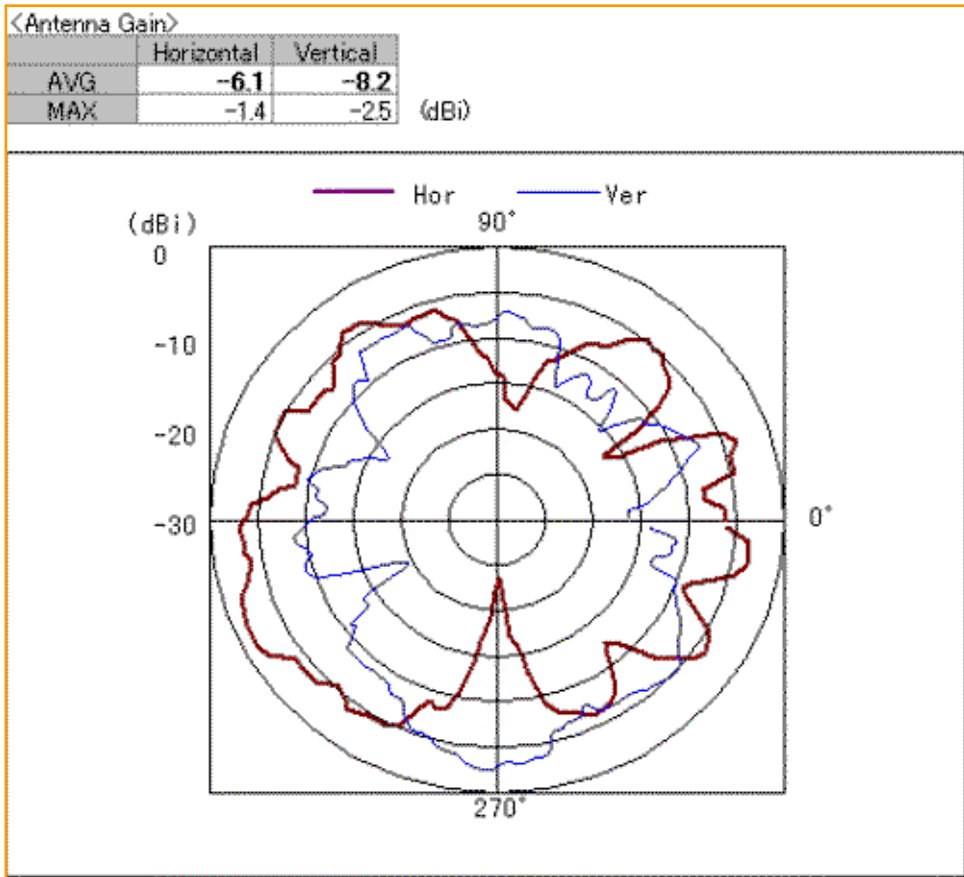
**Auxiliary antenna: 2450 MHz**



Center Frequency	<b>2450 MHz</b>
Horizontal (dBi) peak	<b>-3.4</b>
Vertical (dBi) peak	<b>-4.5</b>
Horz+Vert (dBi) peak	<b>-3.4</b>



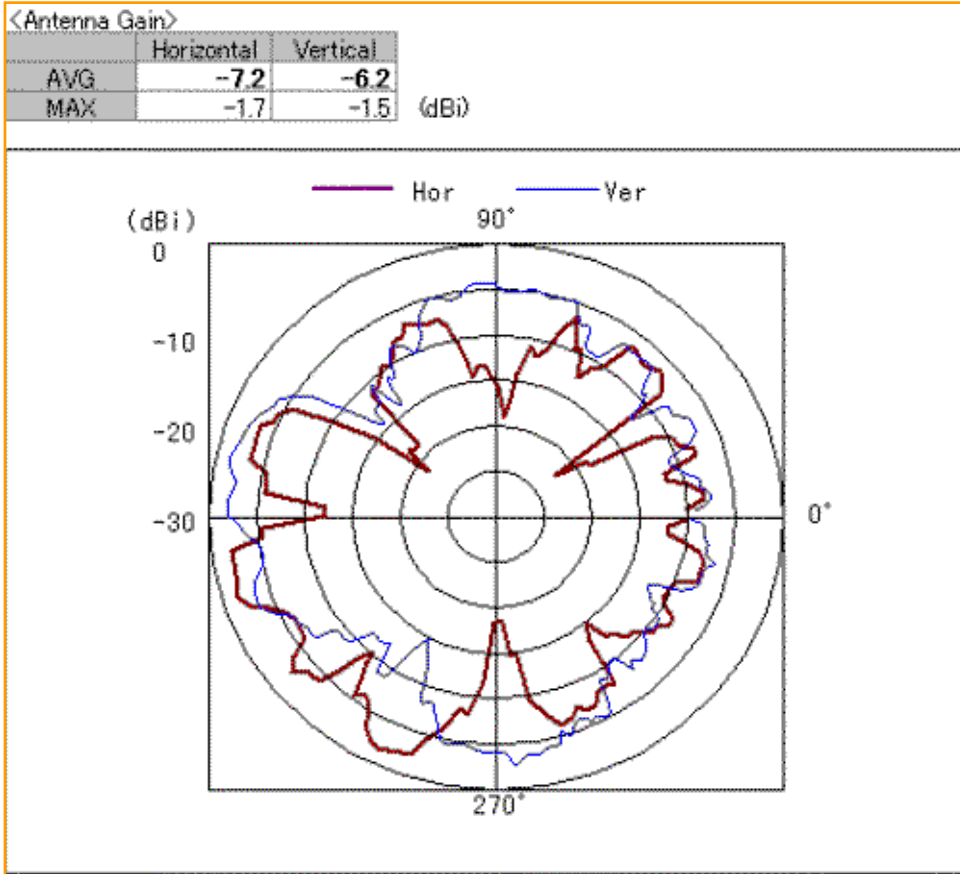
**Auxiliary antenna: 2500 MHz**



Center Frequency	<b>2500 MHz</b>
Horizontal (dBi) peak	<b>-1.4</b>
Vertical (dBi) peak	<b>-2.5</b>
Horz+Vert (dBi) peak	<b>-1.4</b>

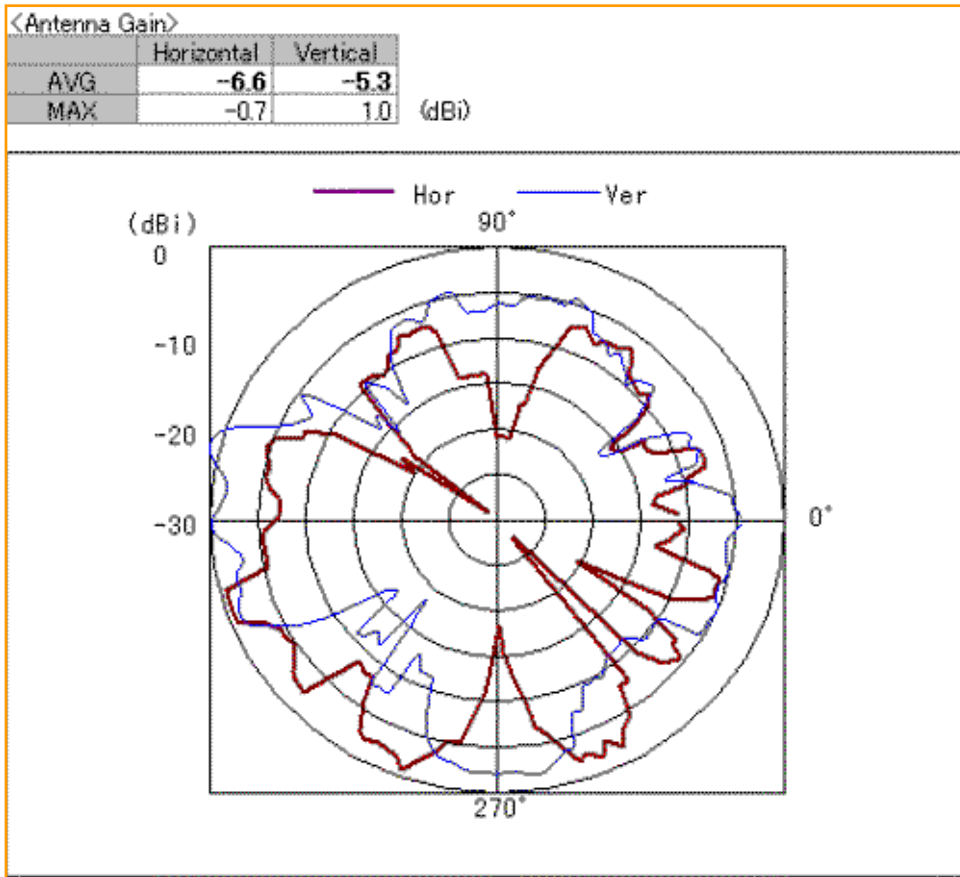
**5150-5350 MHz radiation characteristic**

**Main antenna: 5150 MHz**



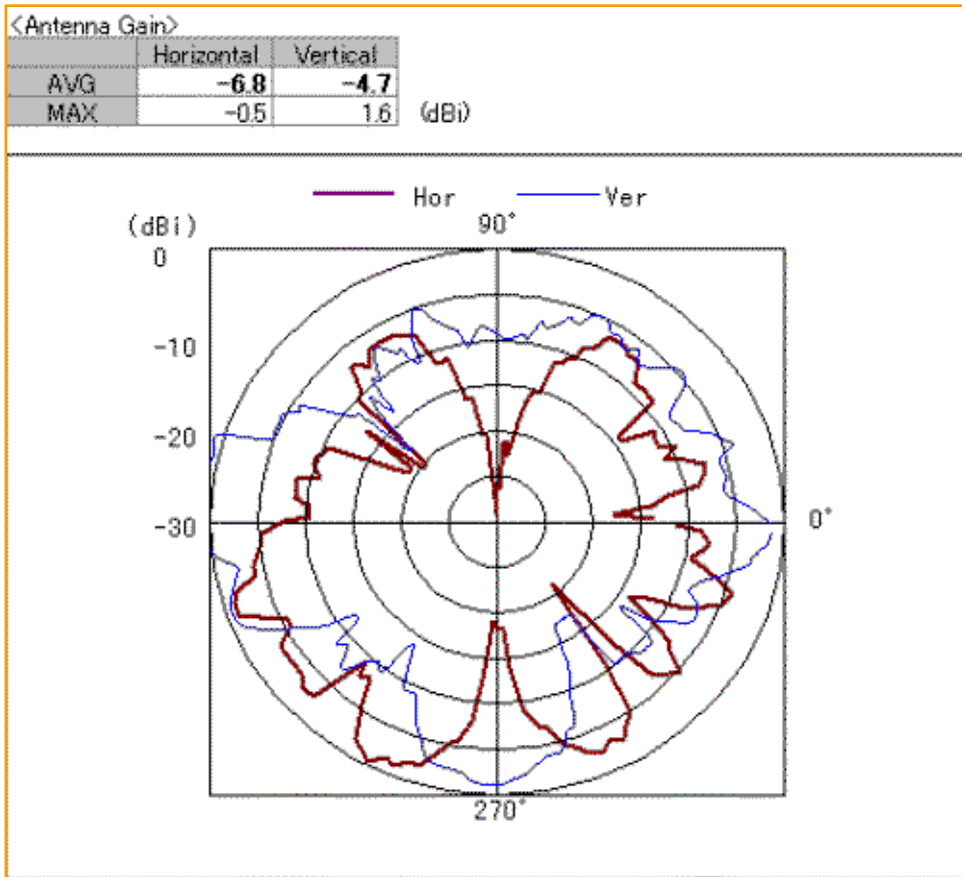
Center Frequency	<b>5150 MHz</b>
Horizontal (dBi) peak	<b>-1.7</b>
Vertical (dBi) peak	<b>-1.5</b>
Horz+Vert (dBi) peak	<b>-1.5</b>

**Main antenna: 5250 MHz**



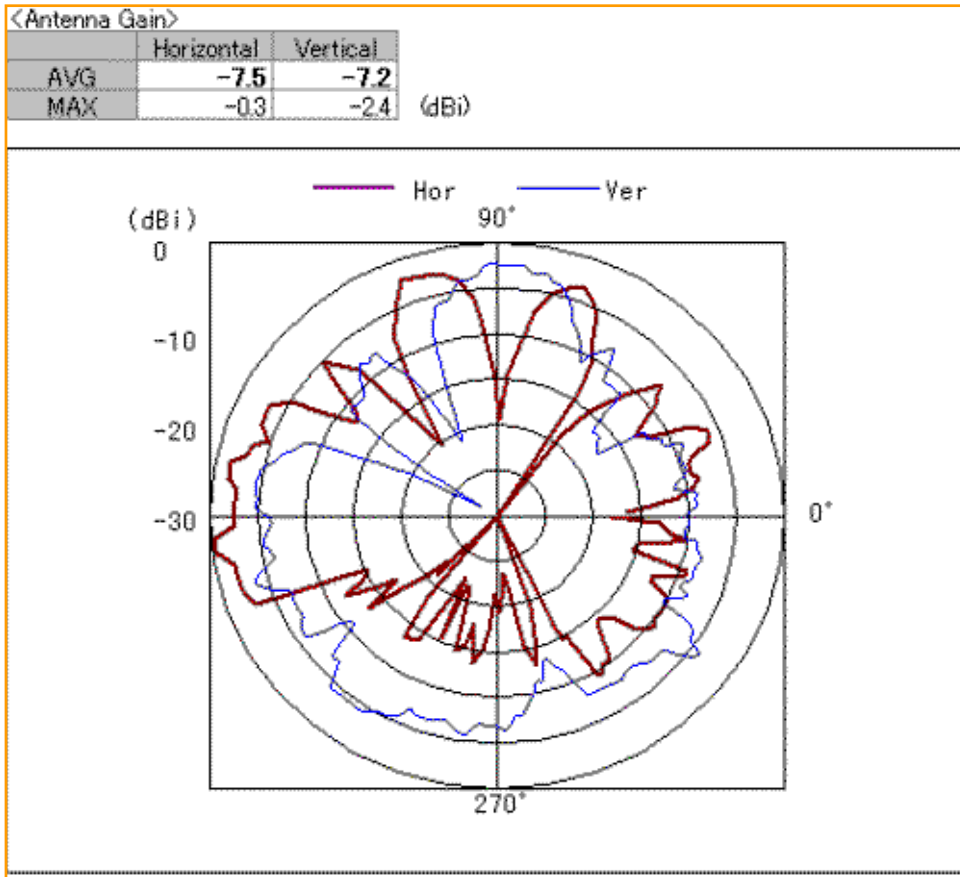
Center Frequency	<b>5250 MHz</b>
Horizontal (dBi) peak	<b>-0.7</b>
Vertical (dBi) peak	<b>1.0</b>
Horz+Vert (dBi) peak	<b>1.0</b>

**Main antenna: 5350 MHz**



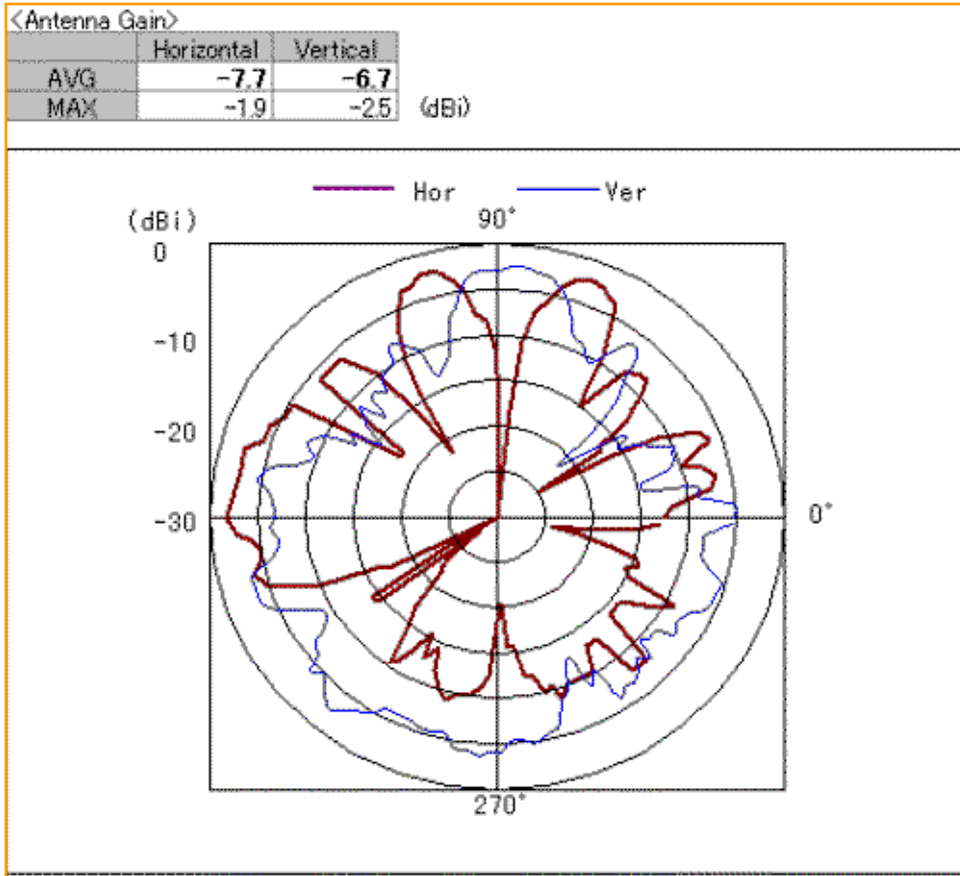
Center Frequency	<b>5350 MHz</b>
Horizontal (dBi) peak	<b>-0.5</b>
Vertical (dBi) peak	<b>1.6</b>
Horz+Vert (dBi) peak	<b>1.6</b>

**Auxiliary antenna: 5150 MHz**



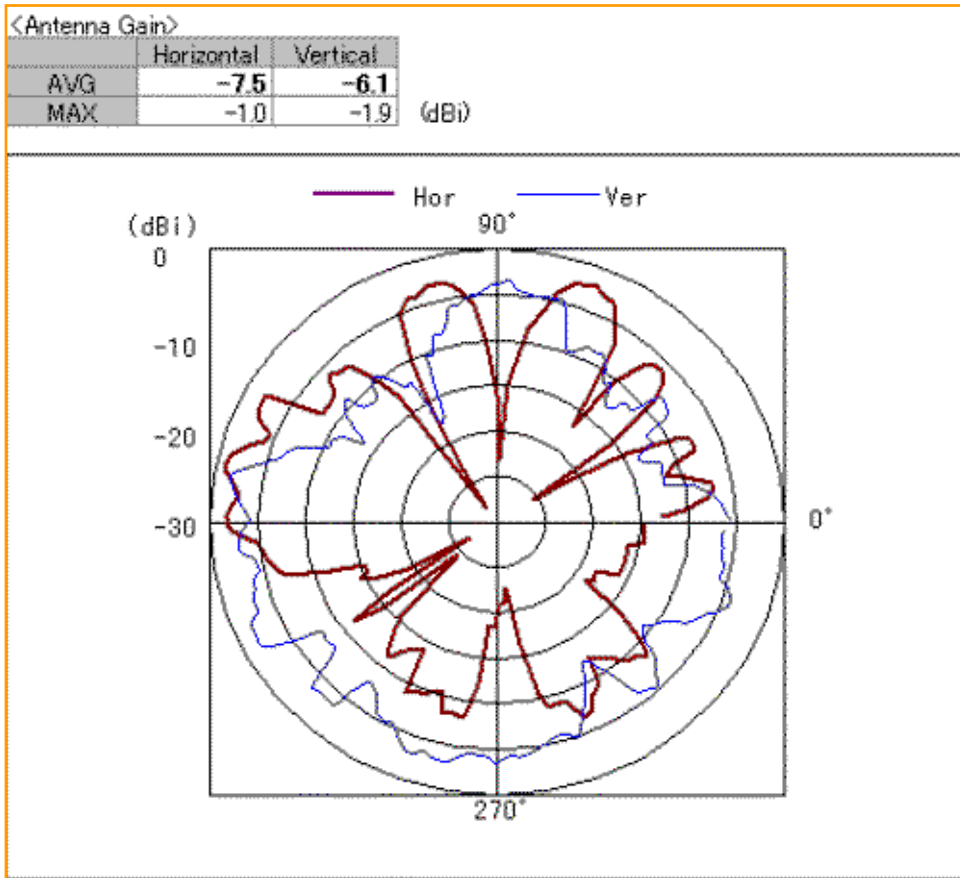
Center Frequency	<b>5150 MHz</b>
Horizontal (dBi) peak	<b>-0.3</b>
Vertical (dBi) peak	<b>-2.4</b>
Horz+Vert (dBi) peak	<b>-0.3</b>

**Auxiliary antenna: 5250 MHz**



Center Frequency	<b>5250 MHz</b>
Horizontal (dBi) peak	<b>-1.9</b>
Vertical (dBi) peak	<b>-2.5</b>
Horz+Vert (dBi) peak	<b>-1.9</b>

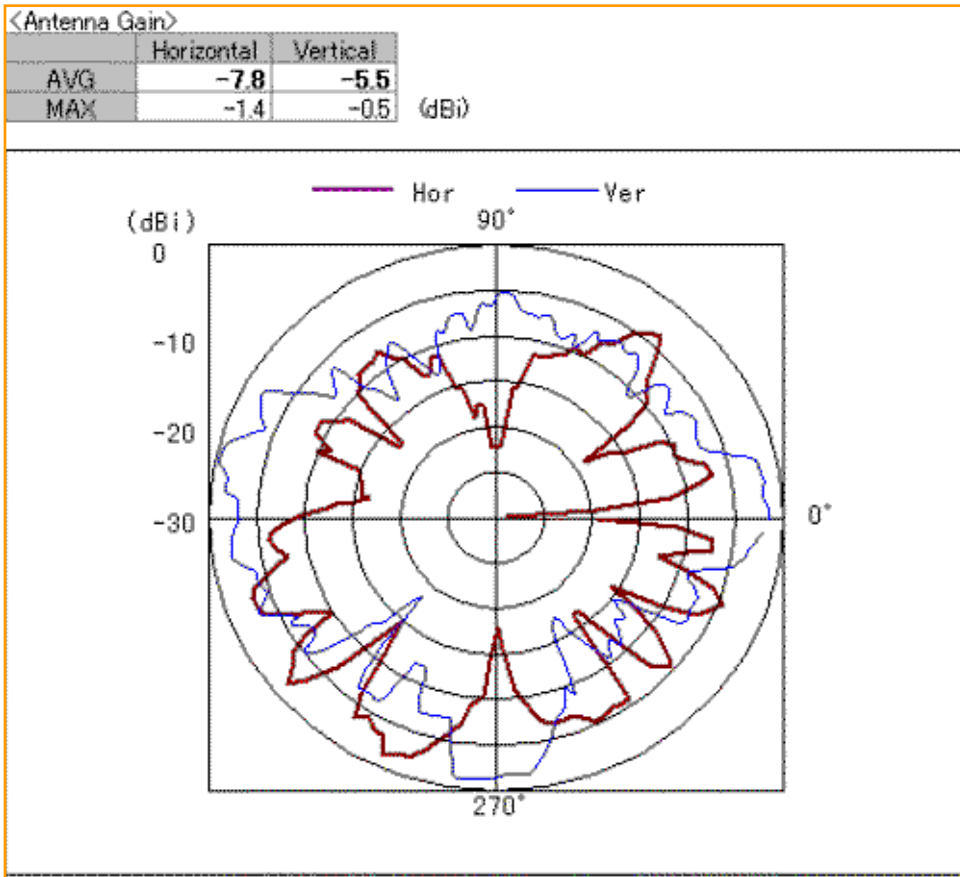
**Auxiliary antenna: 5350 MHz**



Center Frequency	<b>5350 MHz</b>
Horizontal (dBi) peak	<b>-1.0</b>
Vertical (dBi) peak	<b>-1.9</b>
Horz+Vert (dBi) peak	<b>-1.0</b>

**5470-5725MHz radiation characteristic**

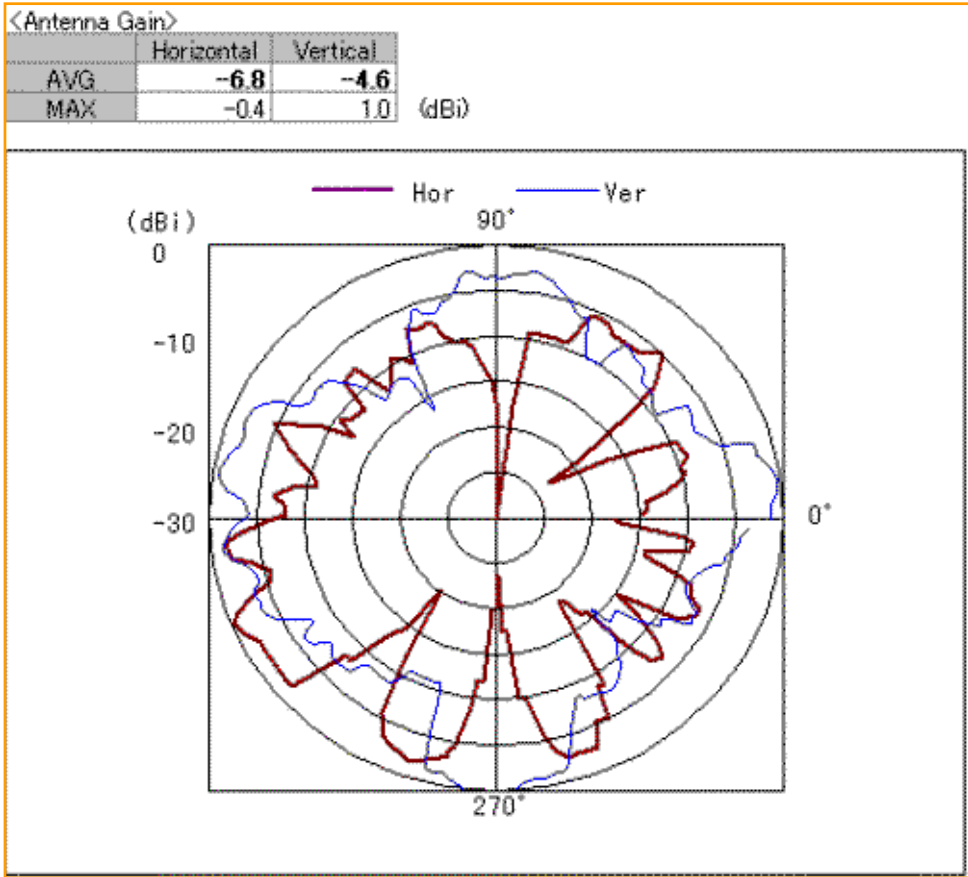
**Main antenna: 5470 MHz**



Center Frequency	<b>5470 MHz</b>
Horizontal (dBi) peak	<b>-1.4</b>
Vertical (dBi) peak	<b>-0.5</b>
Horz+Vert (dBi) peak	<b>-0.5</b>

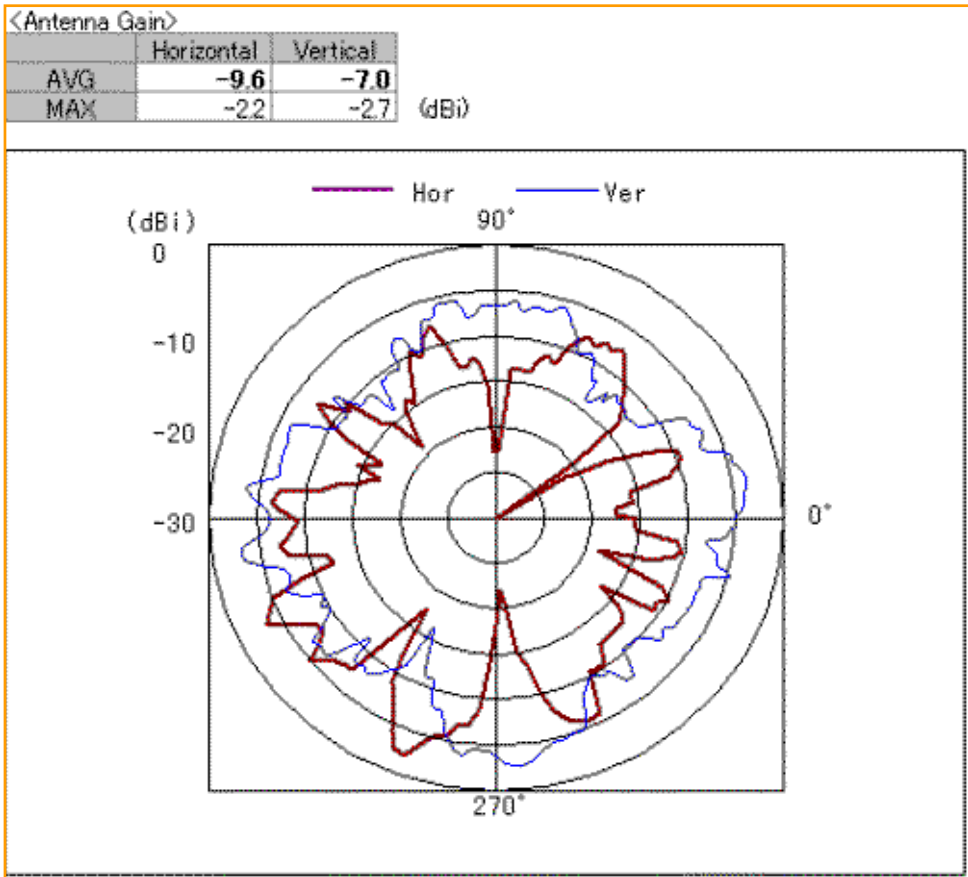


**Main antenna: 5597.5 MHz**



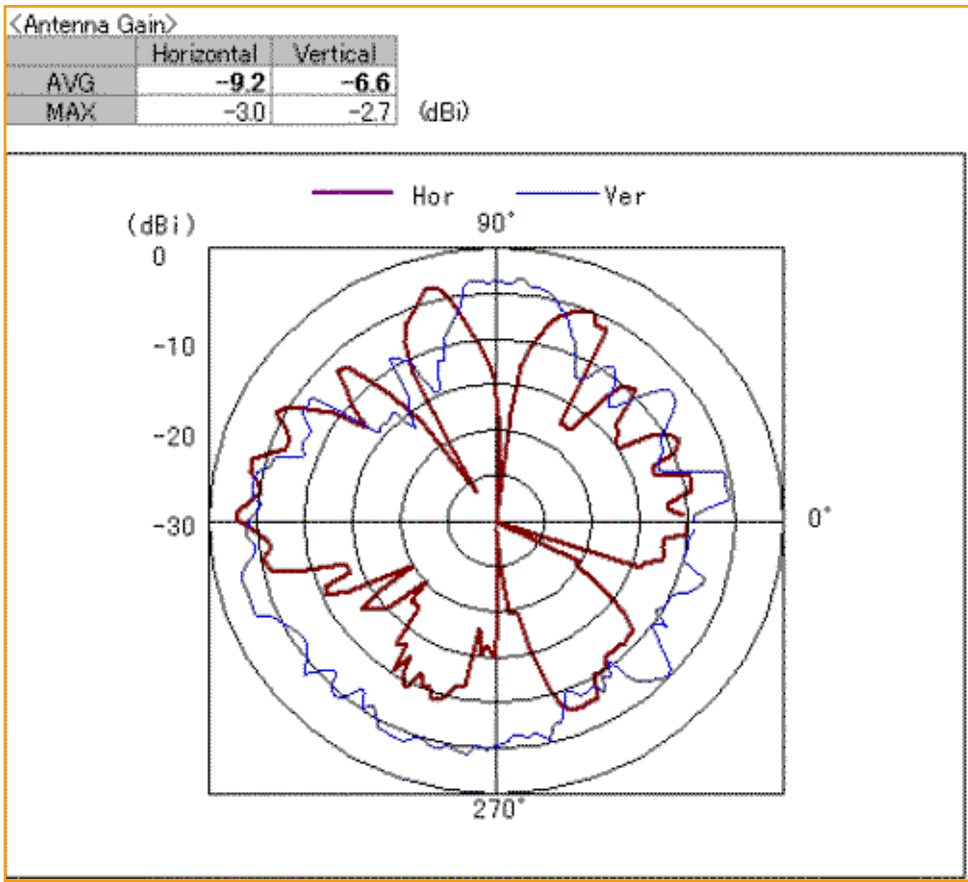
Center Frequency	<b>5597.5 MHz</b>
Horizontal (dBi) peak	<b>1.0</b>
Vertical (dBi) peak	<b>-0.4</b>
Horz+Vert (dBi) peak	<b>1.0</b>

**Main antenna: 5725 MHz**



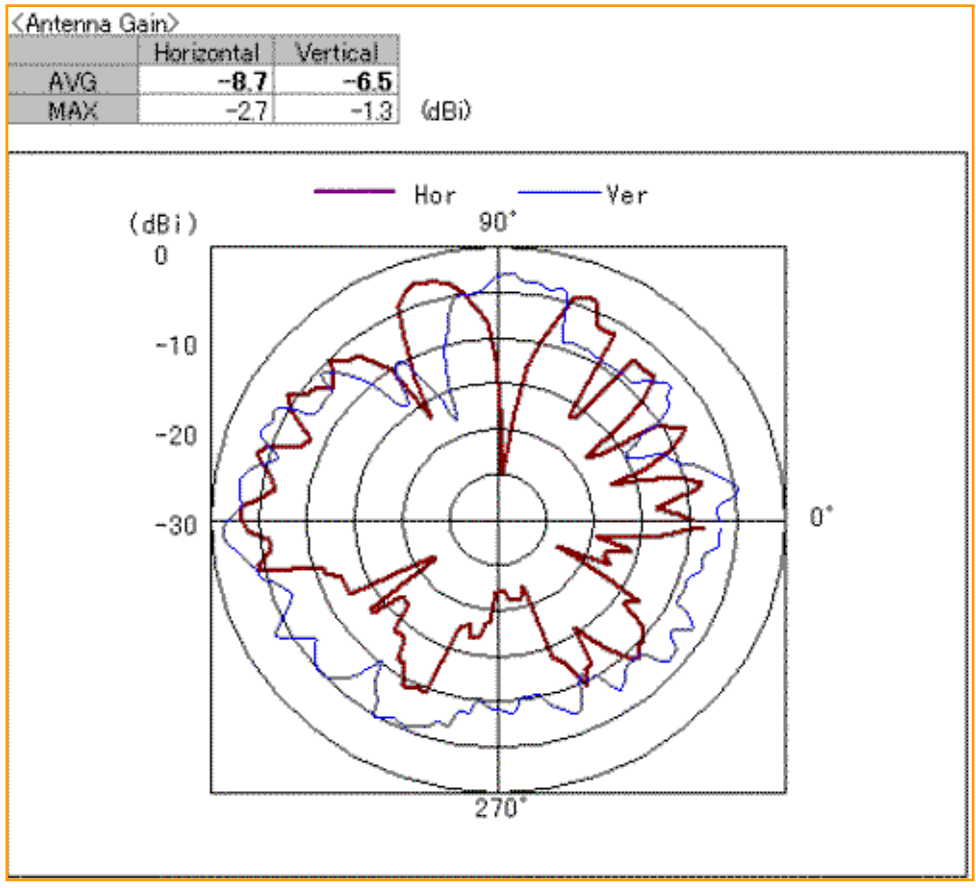
Center Frequency	<b>5725 MHz</b>
Horizontal (dBi) peak	<b>-2.2</b>
Vertical (dBi) peak	<b>-2.7</b>
Horz+Vert (dBi) peak	<b>-2.2</b>

**Auxiliary antenna: 5470 MHz**



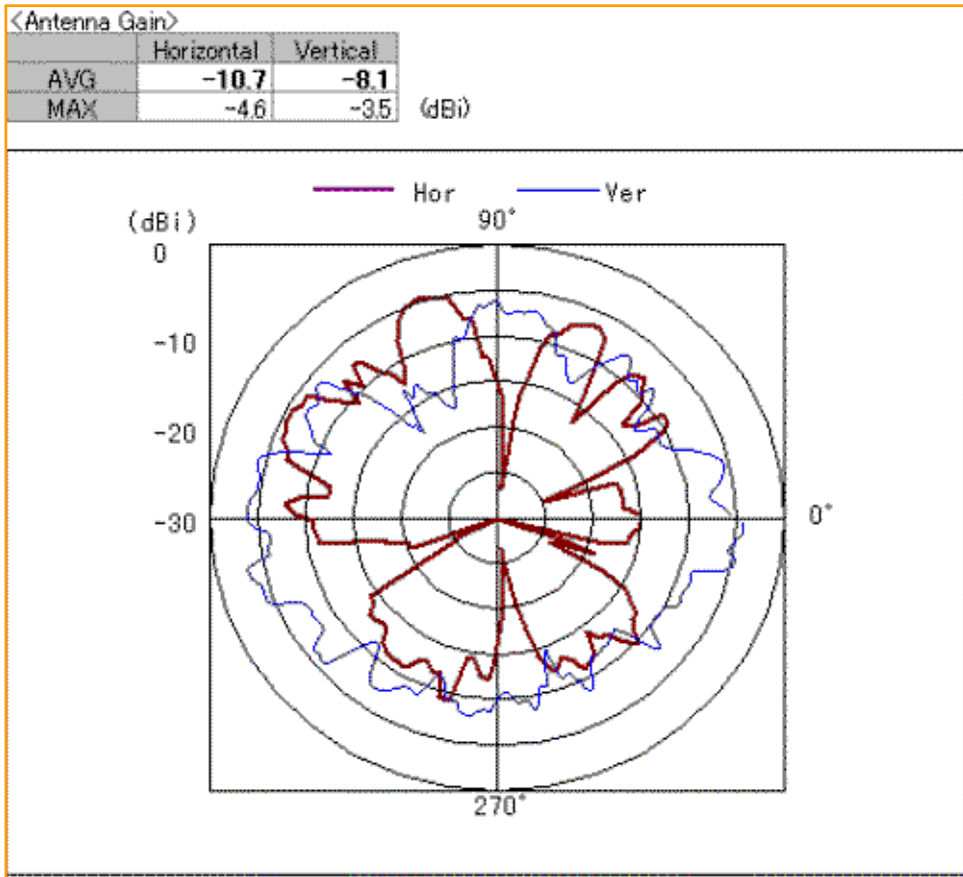
Center Frequency	<b>5470 MHz</b>
Horizontal (dBi) peak	<b>-3.0</b>
Vertical (dBi) peak	<b>-2.7</b>
Horz+Vert (dBi) peak	<b>-2.7</b>

**Auxiliary antenna: 5597.5 MHz**



Center Frequency	<b>5597.5 MHz</b>
Horizontal (dBi) peak	<b>-2.7</b>
Vertical (dBi) peak	<b>-1.3</b>
Horz+Vert (dBi) peak	<b>-1.3</b>

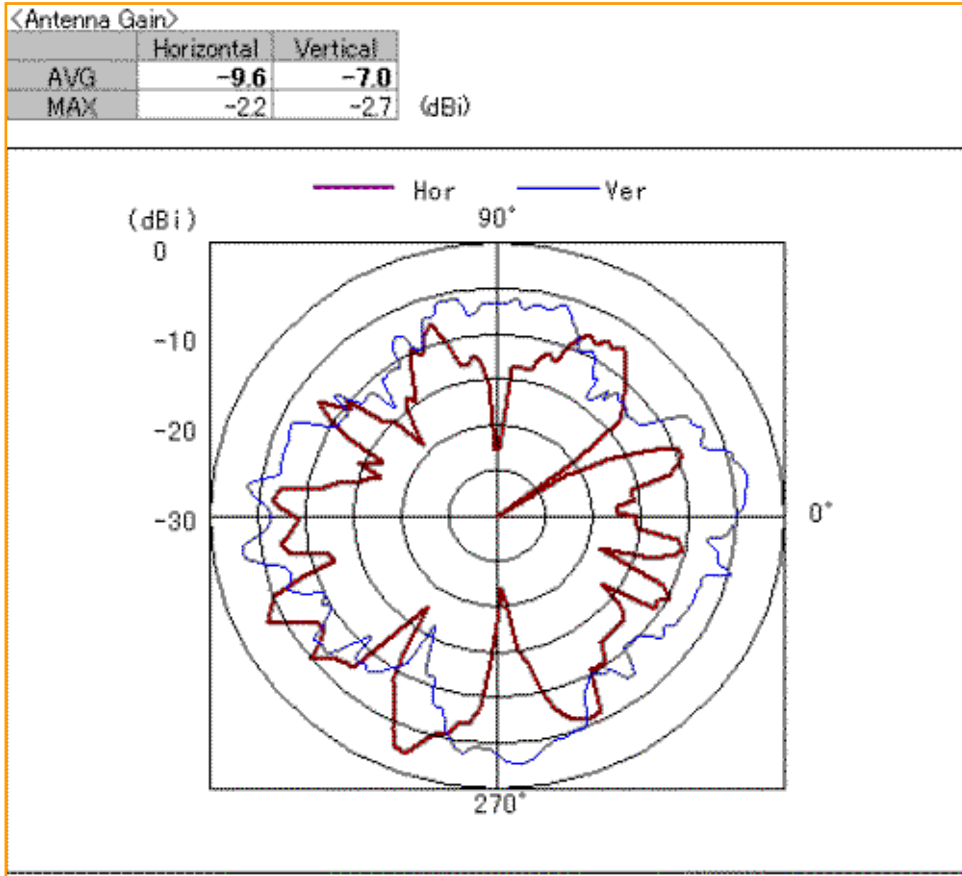
**Auxiliary antenna: 5725 MHz**



Center Frequency	<b>5725 MHz</b>
Horizontal (dBi) peak	<b>-4.6</b>
Vertical (dBi) peak	<b>-3.5</b>
Horz+Vert (dBi) peak	<b>-3.5</b>

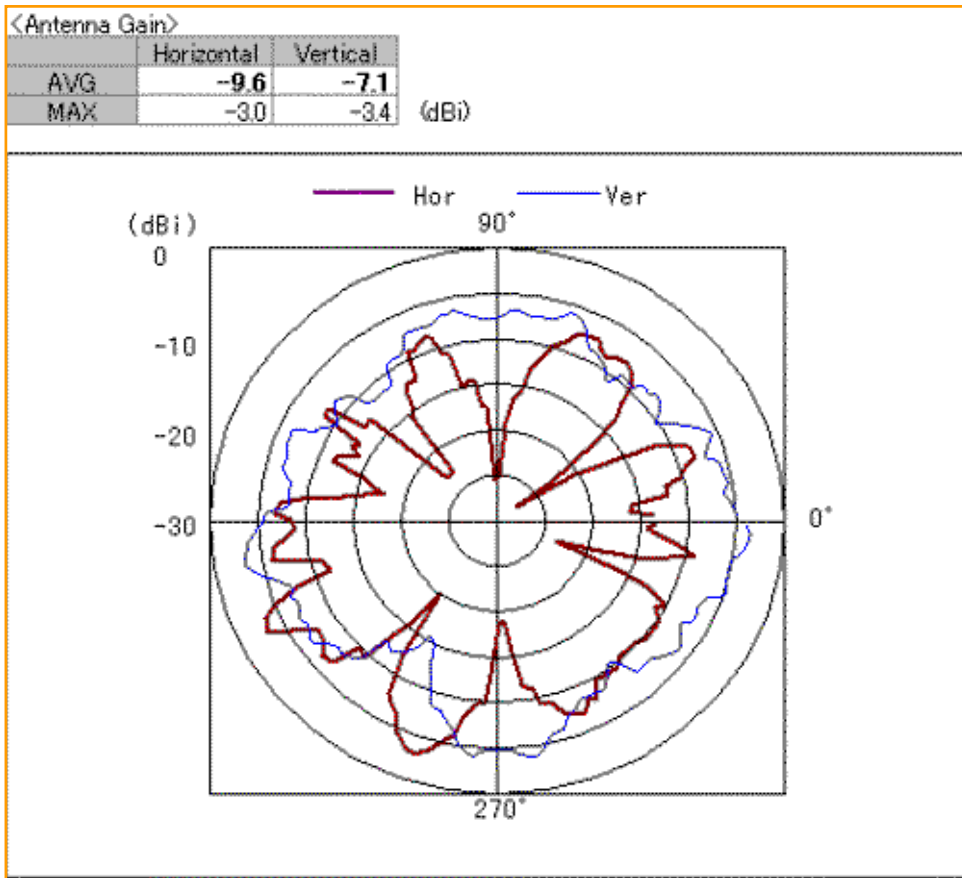
**5725-5850 MHz radiation characteristic**

**Main antenna: 5725 MHz**



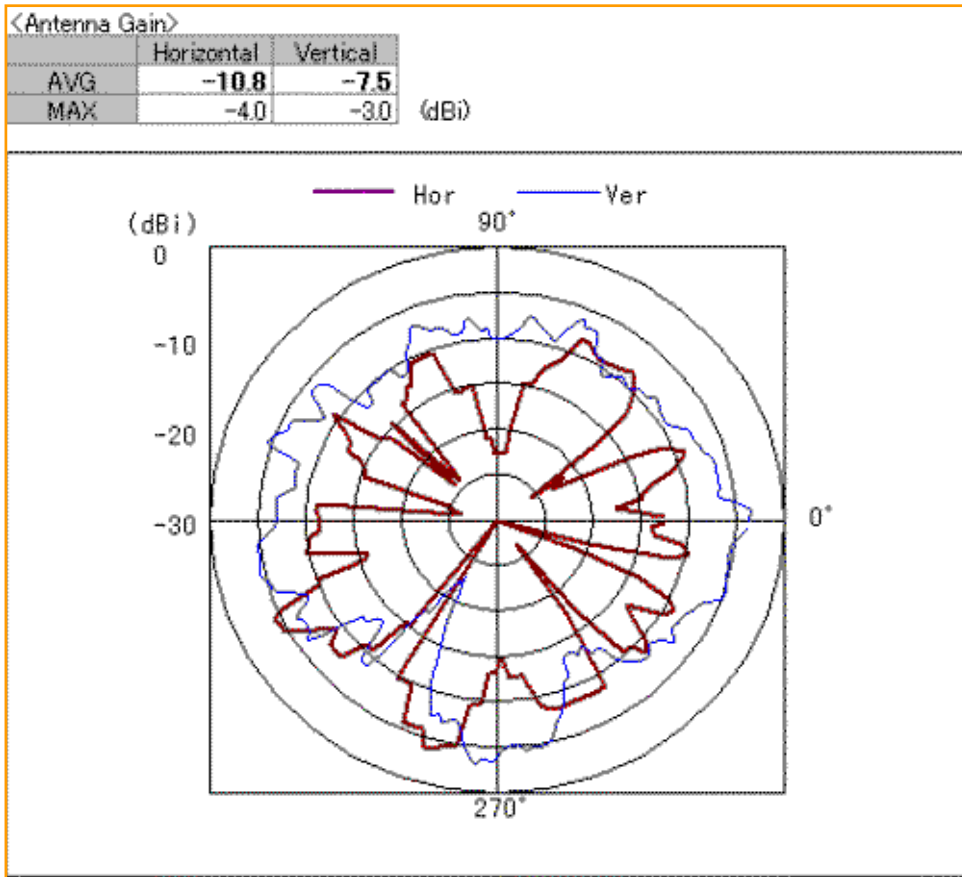
Center Frequency	<b>5725 MHz</b>
Horizontal (dBi) peak	<b>-2.2</b>
Vertical (dBi) peak	<b>-2.7</b>
Horz+Vert (dBi) peak	<b>-2.2</b>

**Main antenna: 5785 MHz**



Center Frequency	<b>5785 MHz</b>
Horizontal (dBi) peak	<b>-3.0</b>
Vertical (dBi) peak	<b>-3.4</b>
Horz+Vert (dBi) peak	<b>-3.0</b>

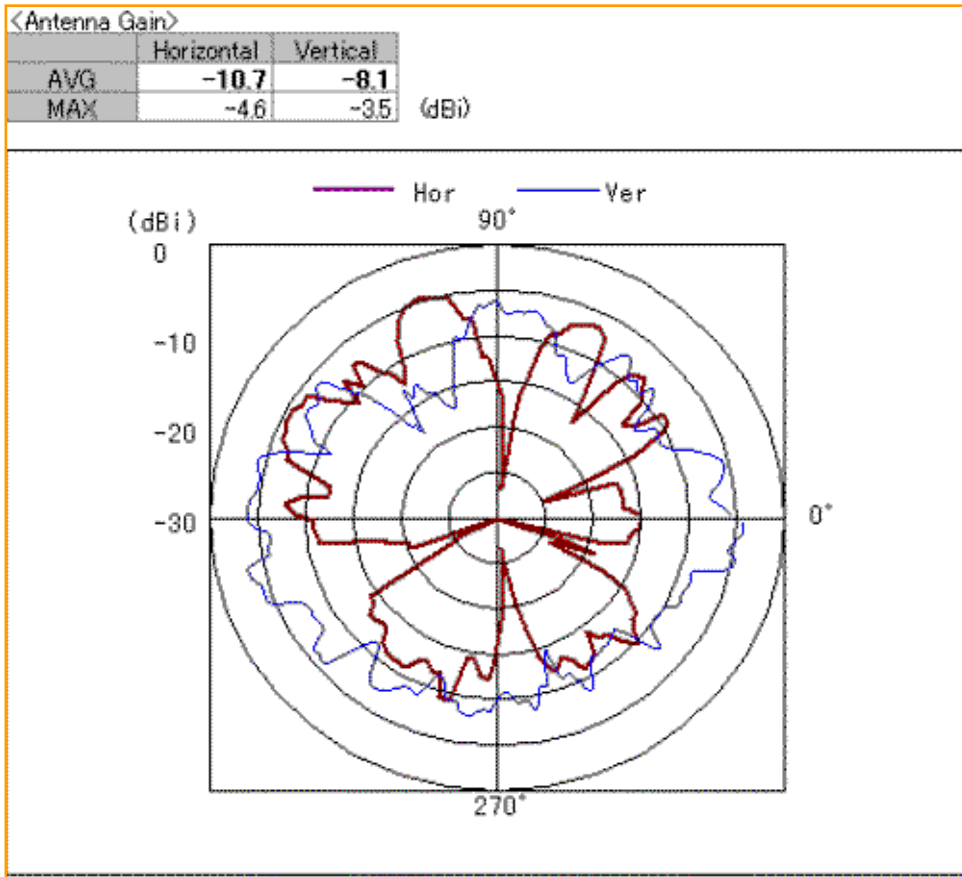
**Main antenna: 5850 MHz**



Center Frequency	<b>5850 MHz</b>
Horizontal (dBi) peak	<b>-4.0</b>
Vertical (dBi) peak	<b>-3.0</b>
Horz+Vert (dBi) peak	<b>-3.0</b>

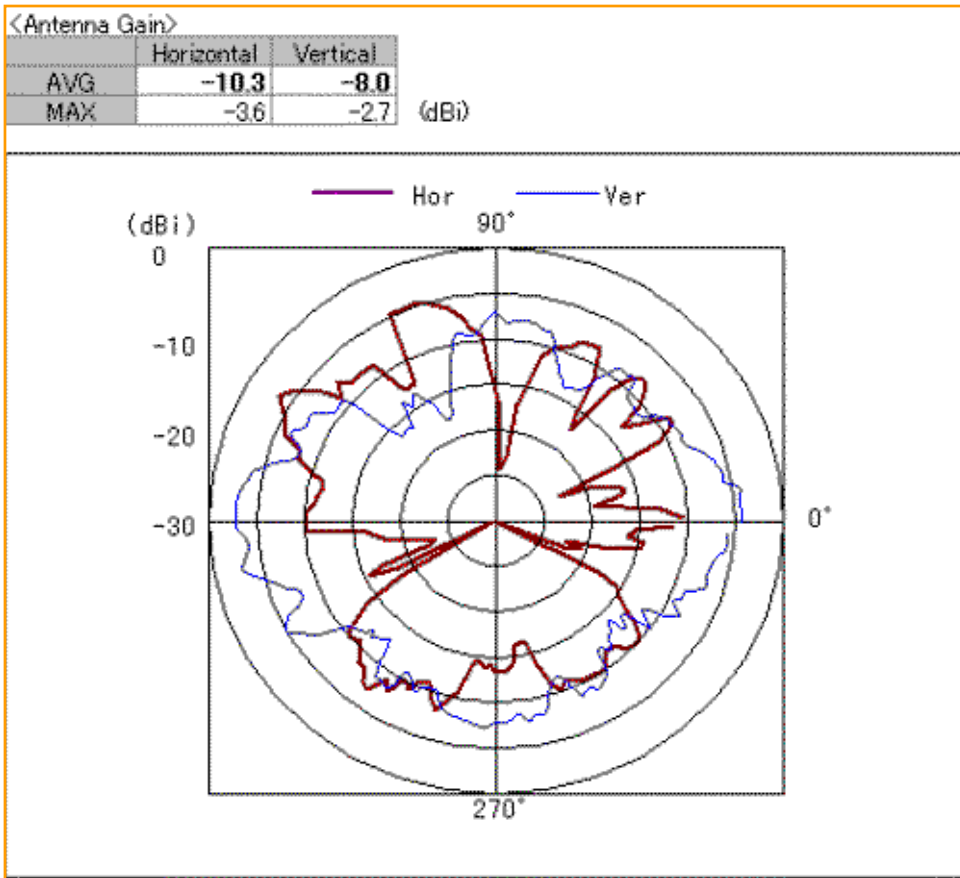


**Auxiliary antenna: 5725 MHz**



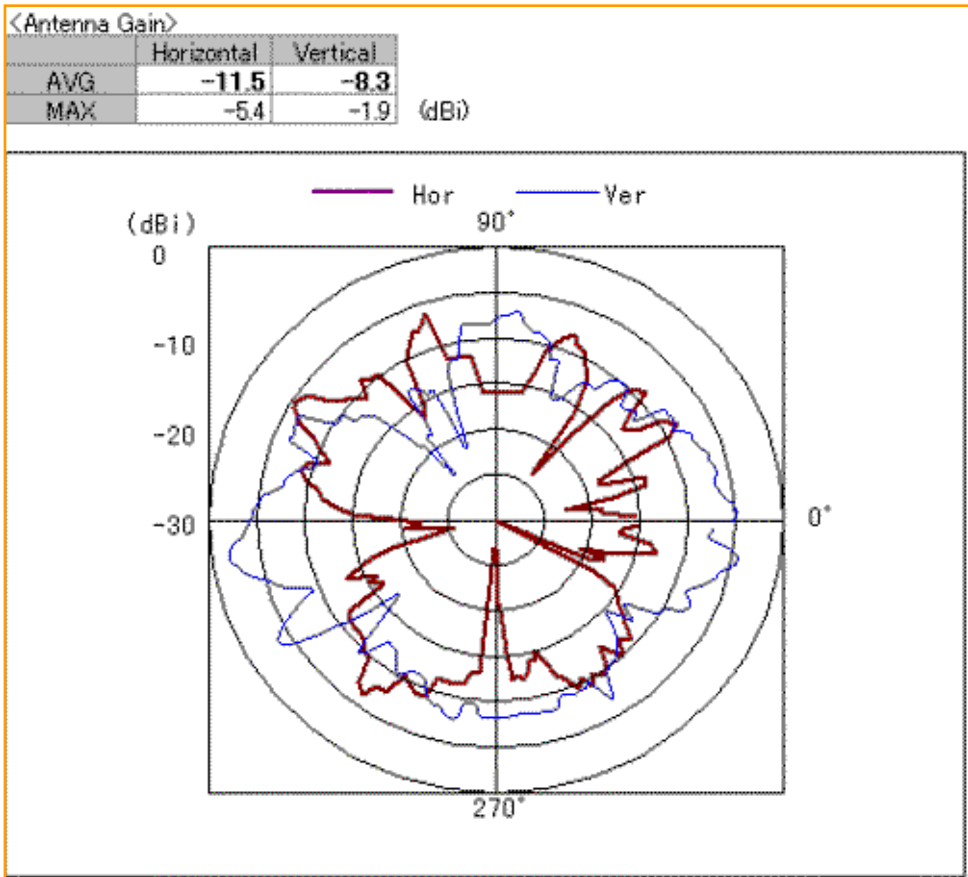
Center Frequency	<b>5725 MHz</b>
Horizontal (dBi) peak	<b>-4.6</b>
Vertical (dBi) peak	<b>-3.5</b>
Horz+Vert (dBi) peak	<b>-3.5</b>

**Auxiliary antenna: 5785 MHz**



Center Frequency	<b>5785 MHz</b>
Horizontal (dBi) peak	<b>-3.6</b>
Vertical (dBi) peak	<b>-2.7</b>
Horz+Vert (dBi) peak	<b>-2.7</b>

**Auxiliary antenna: 5850 MHz**



Center Frequency	<b>5850 MHz</b>
Horizontal (dBi) peak	<b>-5.4</b>
Vertical (dBi) peak	<b>-1.9</b>
Horz+Vert (dBi) peak	<b>-1.9</b>