

# Winchester Regulatory WLAN Antenna Information

(English Language Required)

Brand Name	Samsung
Model Name	Winchester
Antenna Vendor	Foxconn
Antenna Part Number	<input type="checkbox"/> Main Antenna: WDAN-M1WC1002-DF
	<input type="checkbox"/> Aux Antenna: WDAN-M1WC1001-DF
Samsung Part Number	<input type="checkbox"/> Main Antenna: BA42-00217A
	<input type="checkbox"/> Aux Antenna: BA42-00216A
With WLAN Module	<input type="checkbox"/> WM3B2100
(Check Box)	<input type="checkbox"/> WM3B2200BG
	<input type="checkbox"/> WM3B2915ABG
	<input type="checkbox"/> WM3945ABG

## 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:

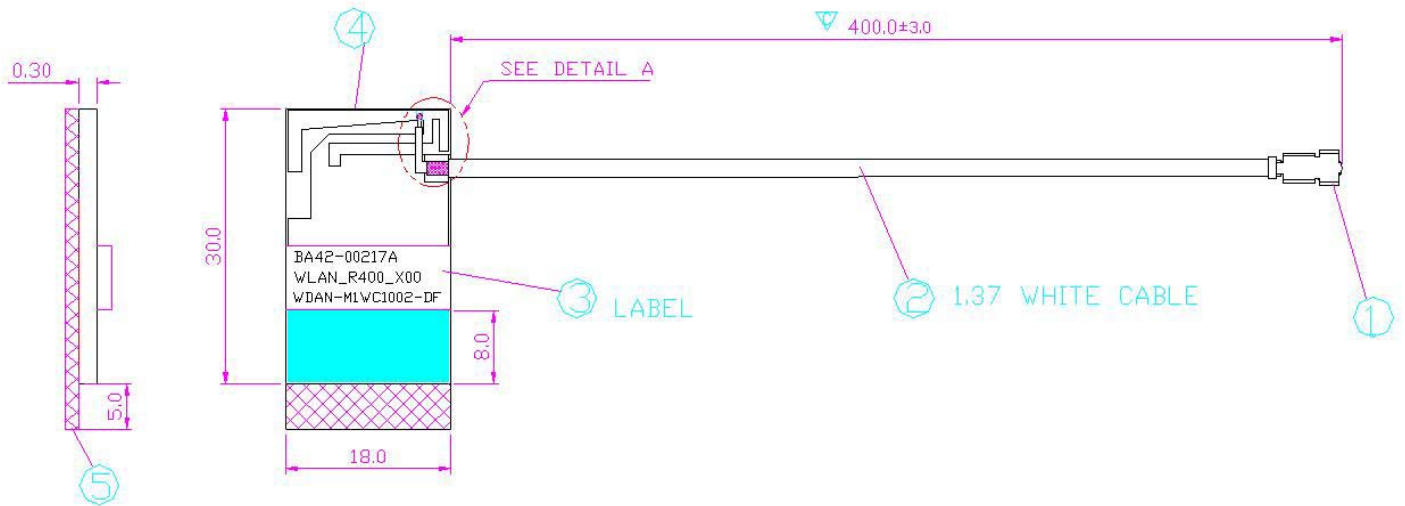
1A Antenna Part Number	1B Manufacture	1C Antenna Type	1D Cable Assembly Part Number and Information	1E Peak Gain W/ Cable loss (dBi)	1F Peak Gain w/o Cable Loss (dBi)	1G VSWR	1H Cable Loss (dBi)
(P/N: <b>WDAN-M1WC1 002-DF</b> ) Main antenna	HON HAI PRECISION IND. CO.,LTD.	PCB	1. Cable P/N: FOXCONN:703-3009-513 2. Cable type: 30 AWG O.D. 1.37 mm 50 ohm coaxial cable 3. Cable length: 400 mm 4. Connector P/N: SGX0003-02	2400-2500MHz 0.18 dBi (peak)	2400-2500MHz 1.046 dBi (peak)	2400-2500MHz 2.0 max	2400-2500MHz -0.866 dB (peak)
				5150-5350MHz -0.07 dBi (peak)	5150-5350MHz 1.435 dBi (peak)	5150-5350MHz 2.0 max	5150-5350MHz -1.505 dB (peak)
				5470-5850MHz 1.46 dBi (peak)	5470-5850MHz 3.181 dBi (peak)	5470-5850MHz 2.0 max	5470-5850MHz -1.721 dB (peak)
(P/N: <b>WDAN-M1WC1 001-DF</b> ) Aux antenna	HON HAI PRECISION IND. CO.,LTD.	PCB	1. Cable P/N: FOXCONN:703-3000-513 2. Cable type: 30 AWG O.D. 1.37 mm 50 ohm coaxial cable 3. Cable length:650 mm 4. Connector P/N: SGX0003-02	2400-2500MHz -0.28 dBi (peak)	2400-2500MHz 1.127 dBi (peak)	2400-2500MHz 2.0 max	2400-2500MHz -1.407 dB (peak)
				5150-5350MHz 0.68 dBi (peak)	5150-5350MHz 3.126 dBi (peak)	5150-5350MHz 2.0 max	5150-5350MHz -2.446 dB (peak)
				5470-5850MHz 0.45 dBi (peak)	5470-5850MHz 3.246 dBi (peak)	5470-5850MHz 2.0 max	5470-5850MHz -2.796 dB (peak)

### Antenna Peak Gain Table:

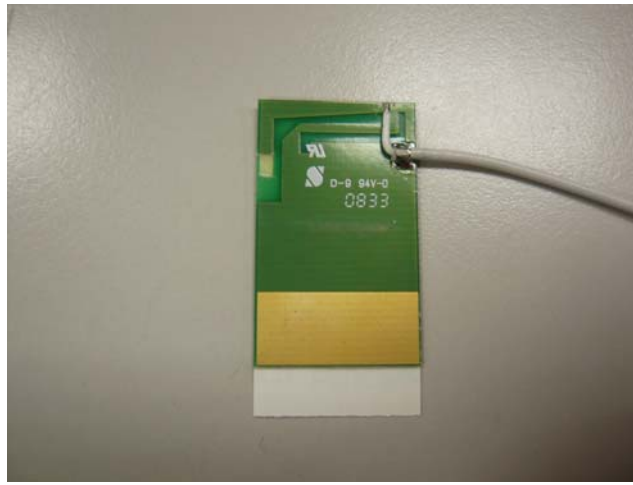
Frequency (MHz)	Main antenna			Aux Antenna		
	Horizontal (dBi)	Vertical (dBi)	Hori+Ver (dBi)	Horizontal (dBi)	Vertical (dBi)	Hori+Ver (dBi)
2400	-0.33	-0.40	0.31	-0.93	-1.38	-0.03
2450	-0.65	-2.13	-0.48	-0.38	-2.03	0.14
2500	0.18	-2.13	0.38	-0.28	-1.53	0.61
5150	-0.07	-0.83	1.49	0.51	-4.26	1.14
5250	-0.49	-1.85	1.23	0.68	-3.13	1.16
5350	-0.70	-0.95	0.92	0.03	-1.08	0.72
5470	1.19	-0.46	1.81	0.45	-1.02	1.14
5725	0.34	-0.02	1.81	-0.21	-0.70	0.67
5850	1.46	-1.33	2.46	-0.02	-1.05	0.73

## Section 2. Dimensioned Photos or Drawings of Antennas

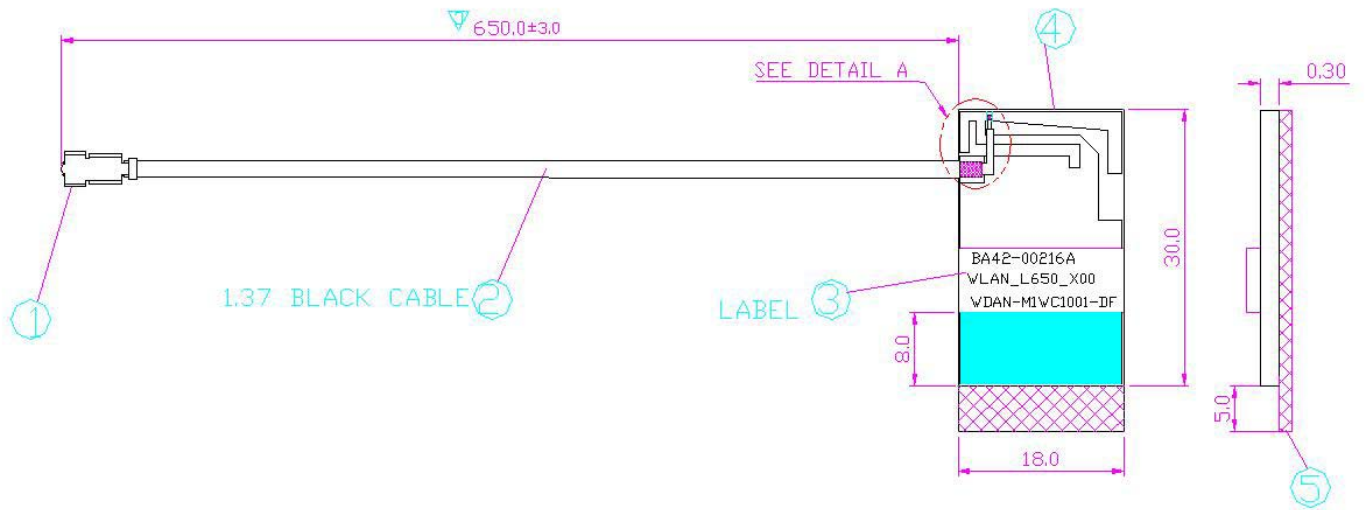
Include a dimensioned photo or dimensioned drawing of main antenna here.



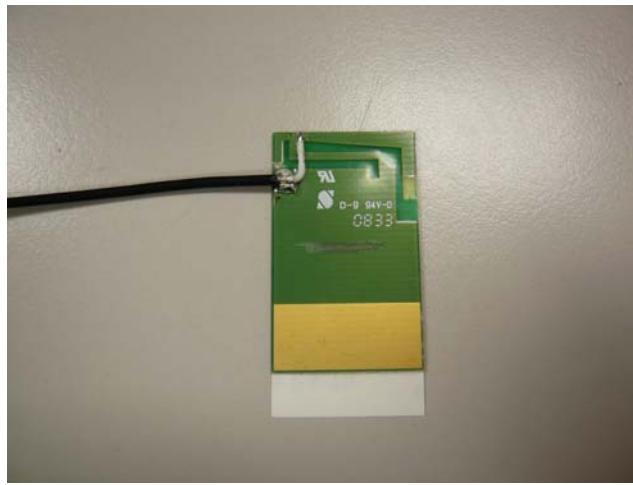
Antenna photo :



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



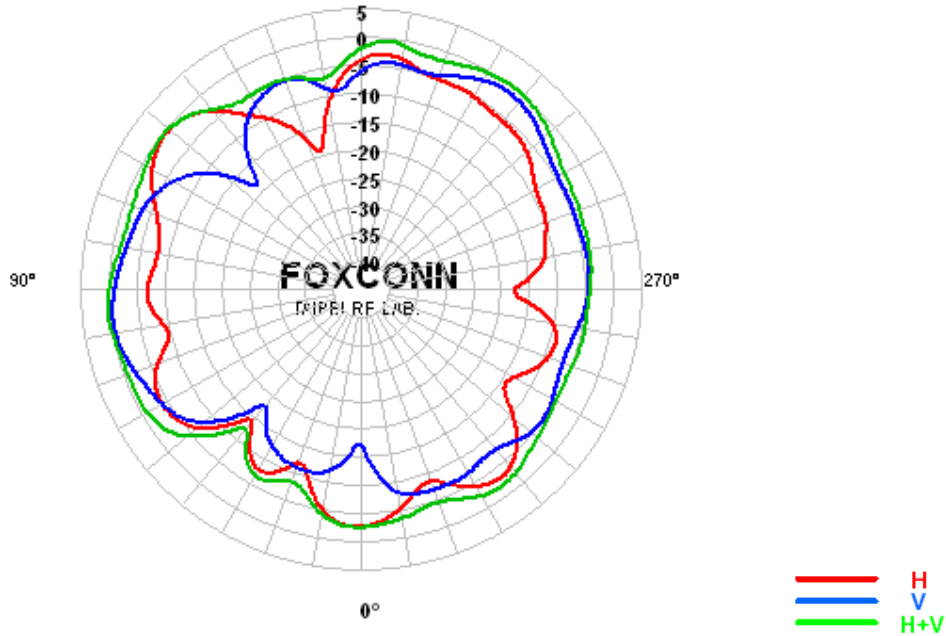
Antenna photo :



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

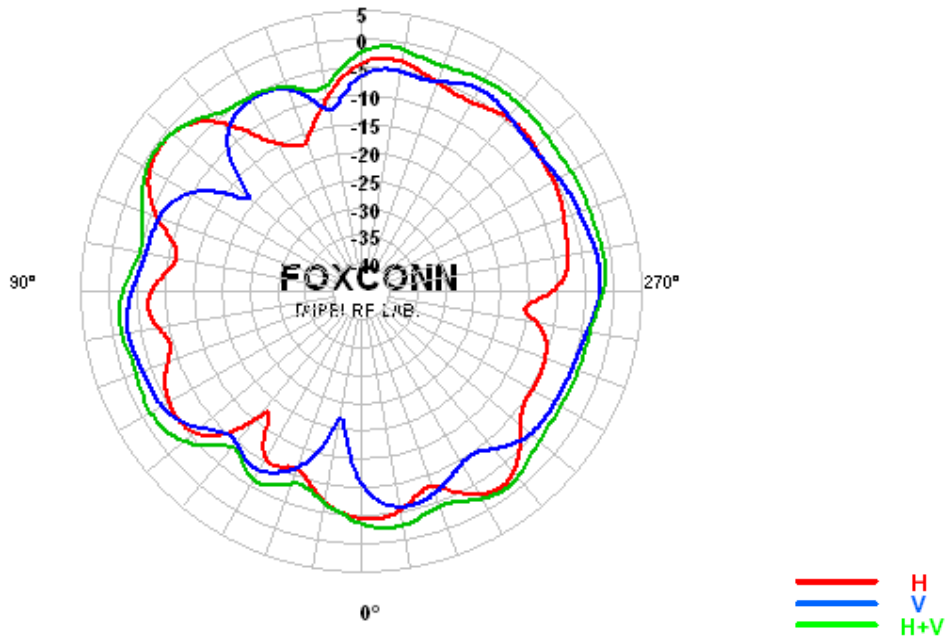
### 2400-2500MHz radiation characteristic

Main antenna: 2400 MHz



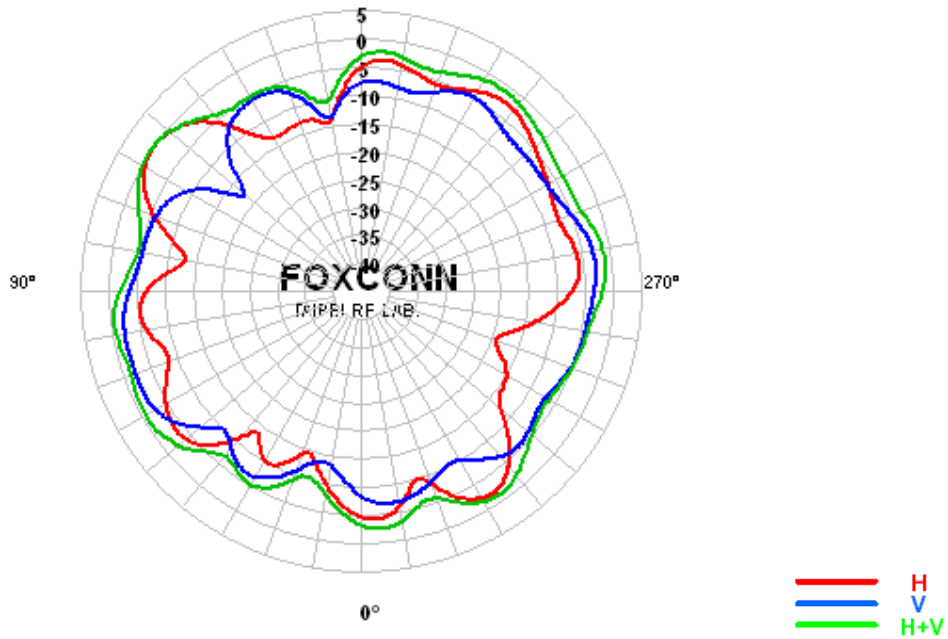
Center Frequency	<b>2400 MHz</b>
Horizontal (dBi) peak	<b>-0.33</b>
Vertical (dBi) peak	<b>-0.40</b>
Horz+Vert (dBi) peak	<b>0.31</b>

Main antenna: 2450 MHz



Center Frequency	<b>2450 MHz</b>
Horizontal (dBi) peak	<b>-0.65</b>
Vertical (dBi) peak	<b>-2.13</b>
Horz+Vert (dBi) peak	<b>-048</b>

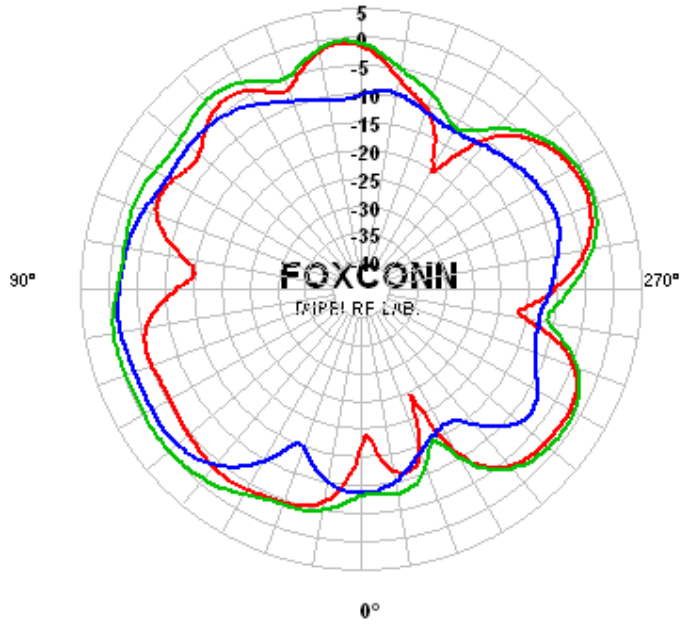
Main antenna: 2500 MHz



Center Frequency	<b>2500 MHz</b>
Horizontal (dBi) peak	<b>0.18</b>
Vertical (dBi) peak	<b>-2.13</b>
Horz+Vert (dBi) peak	<b>0.38</b>



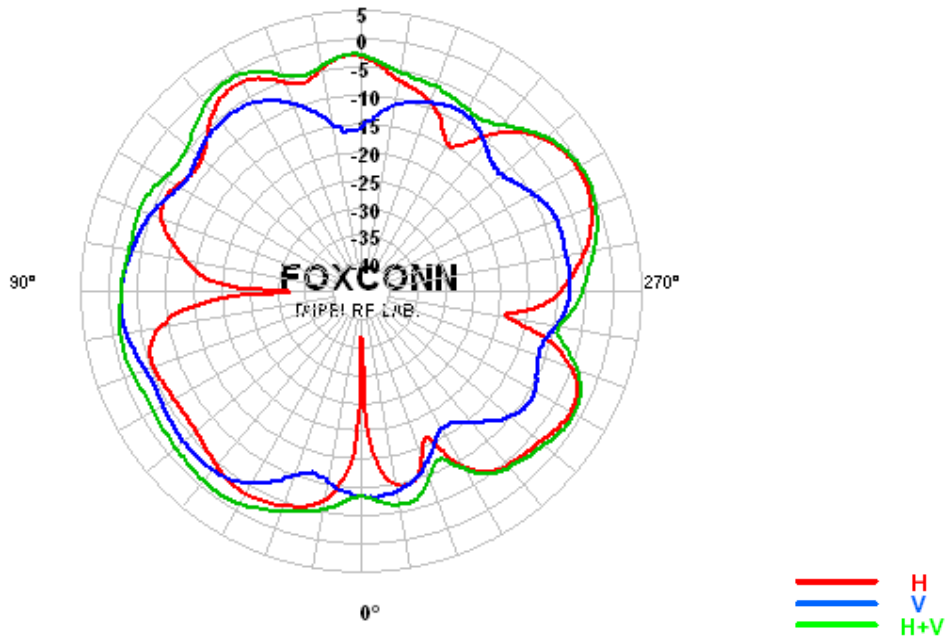
Aux antenna: 2400 MHz



— H  
— V  
— H+V

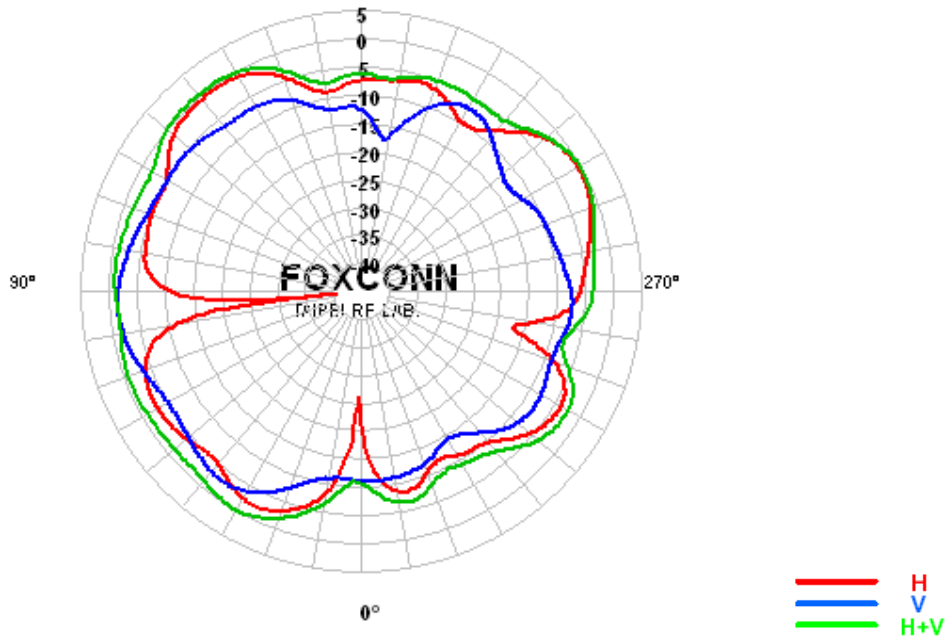
Center Frequency	<b>2400 MHz</b>
Horizontal (dBi) peak	<b>-0.93</b>
Vertical (dBi) peak	<b>-1.38</b>
Horz+Vert (dBi) peak	<b>-0.03</b>

Aux antenna: 2450 MHz



Center Frequency	<b>2450 MHz</b>
Horizontal (dBi) peak	<b>-0.38</b>
Vertical (dBi) peak	<b>-2.03</b>
Horz+Vert (dBi) peak	<b>0.14</b>

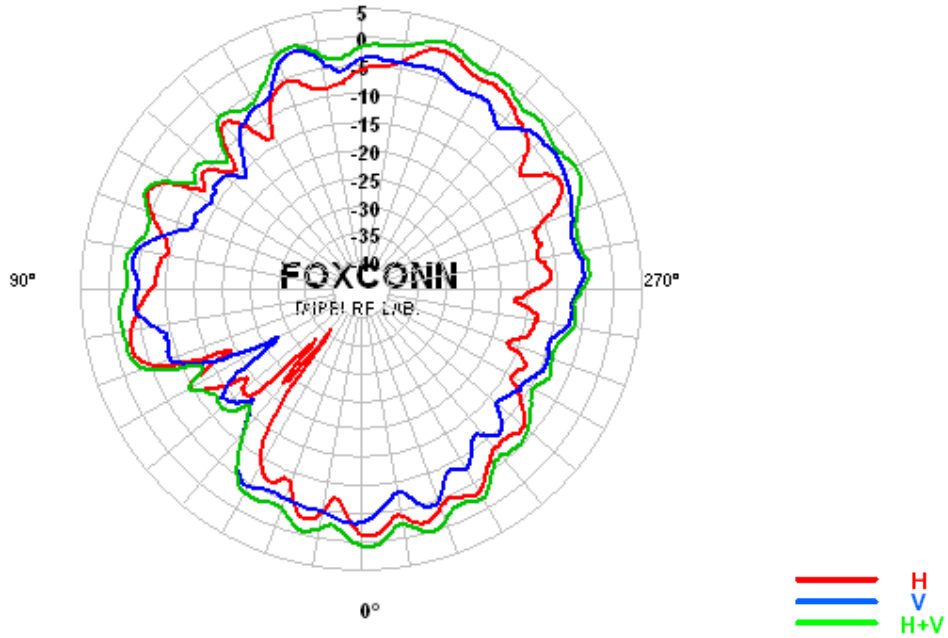
Aux antenna: 2500 MHz



Center Frequency	2500 MHz
Horizontal (dBi) peak	-0.28
Vertical (dBi) peak	-1.53
Horz+Vert (dBi) peak	0.61

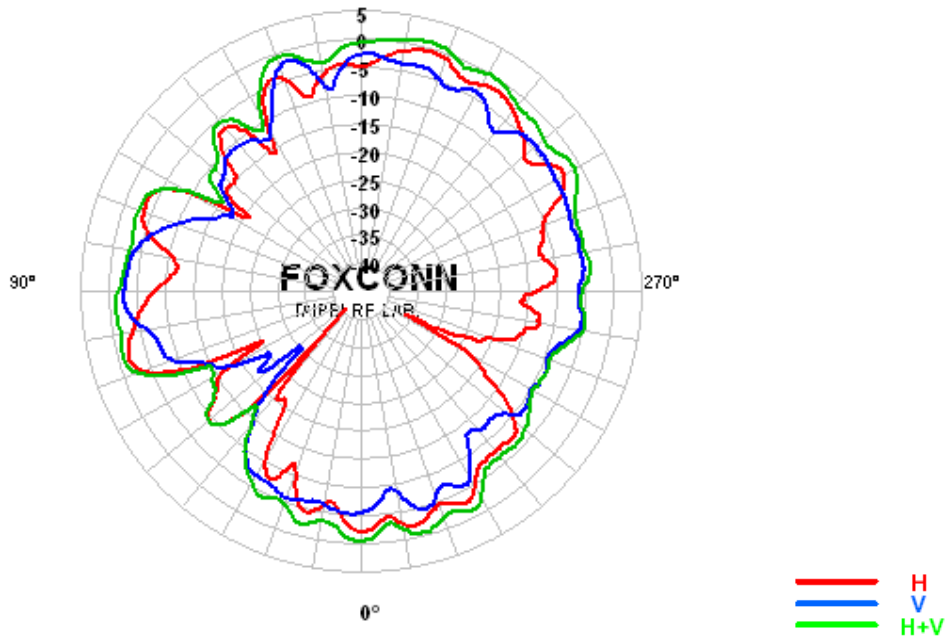
## 5150-5350 MHz radiation characteristic

Main antenna: 5150 MHz



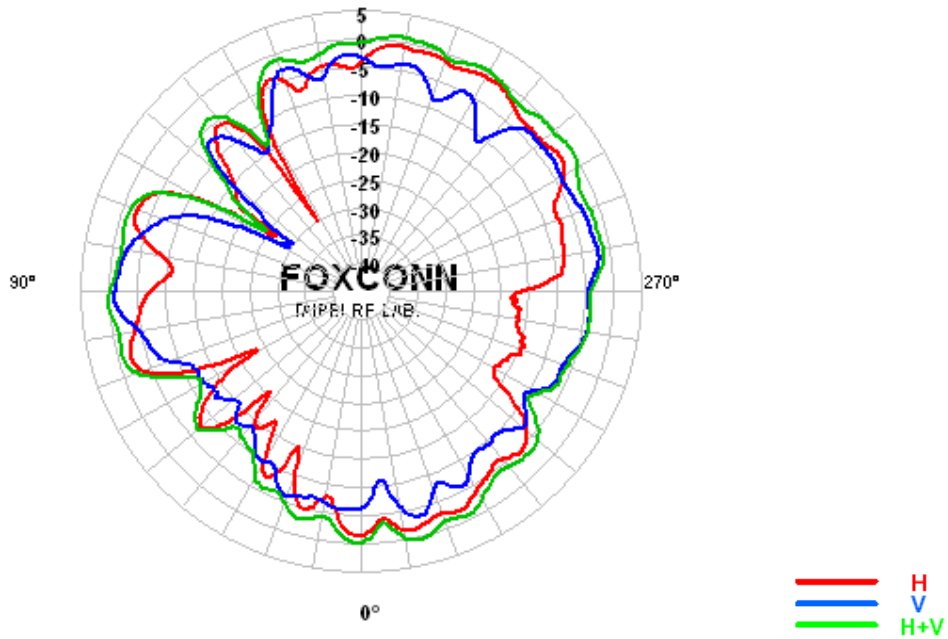
Center Frequency	<b>5150 MHz</b>
Horizontal (dBi) peak	<b>-0.07</b>
Vertical (dBi) peak	<b>-0.83</b>
Horz+Vert (dBi) peak	<b>1.49</b>

Main antenna: 5250 MHz



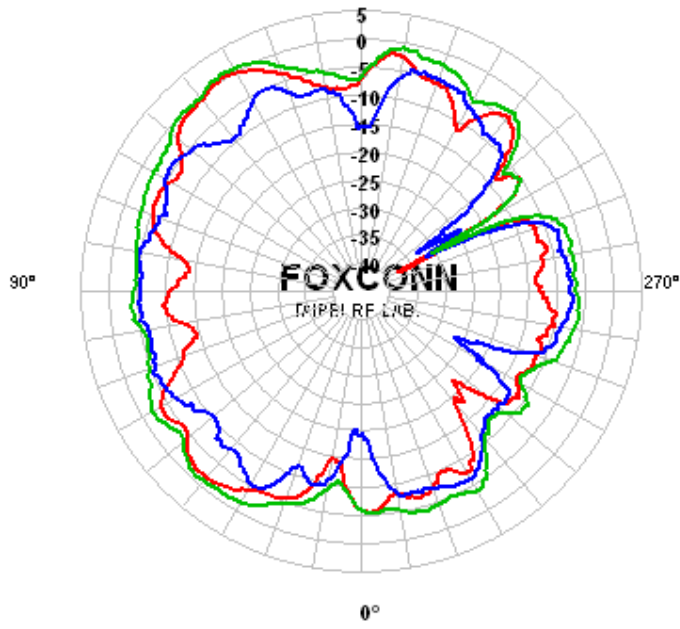
Center Frequency	<b>5250 MHz</b>
Horizontal (dBi) peak	<b>-0.49</b>
Vertical (dBi) peak	<b>-1.85</b>
Horz+Vert (dBi) peak	<b>1.23</b>

Main antenna: 5350 MHz



Center Frequency	<b>5350 MHz</b>
Horizontal (dBi) peak	<b>-0.70</b>
Vertical (dBi) peak	<b>-0.95</b>
Horz+Vert (dBi) peak	<b>0.92</b>

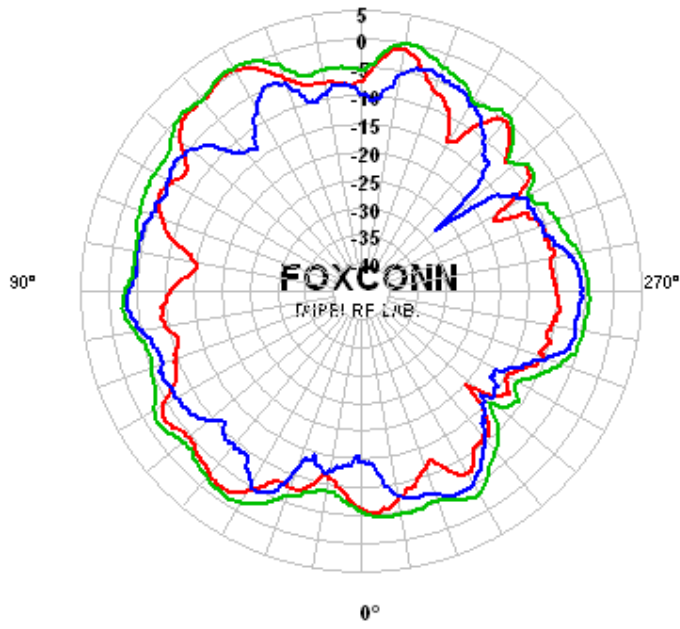
Aux antenna: 5150 MHz



— H  
— V  
— H+V

Center Frequency	<b>5150 MHz</b>
Horizontal (dBi) peak	<b>0.51</b>
Vertical (dBi) peak	<b>-4.26</b>
Horz+Vert (dBi) peak	<b>1.14</b>

Aux antenna: 5250 MHz

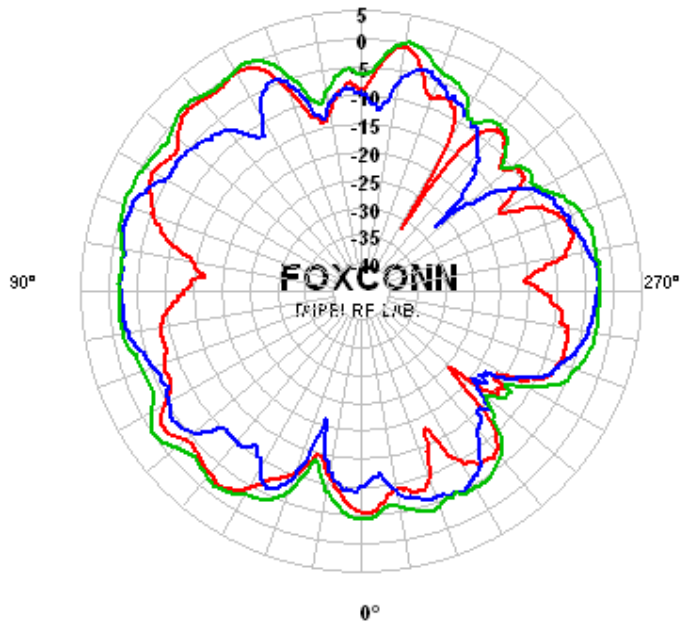


— H  
— V  
— H+V

Center Frequency	<b>5250 MHz</b>
Horizontal (dBi) peak	<b>0.68</b>
Vertical (dBi) peak	<b>-3.13</b>
Horz+Vert (dBi) peak	<b>1.16</b>



Aux antenna: 5350 MHz

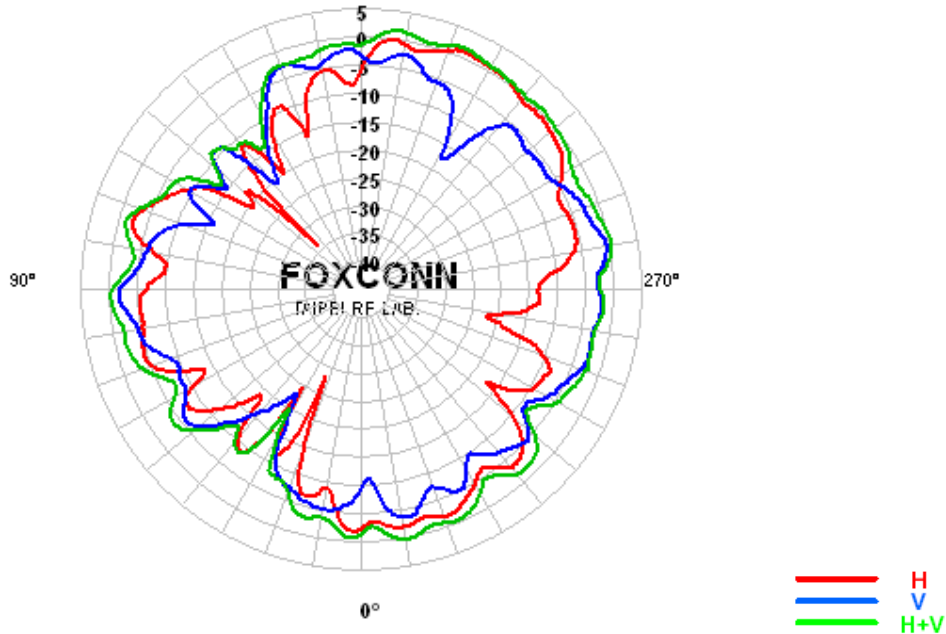


— H  
— V  
— H+V

Center Frequency	<b>5350 MHz</b>
Horizontal (dBi) peak	<b>0.03</b>
Vertical (dBi) peak	<b>-1.08</b>
Horz+Vert (dBi) peak	<b>0.72</b>

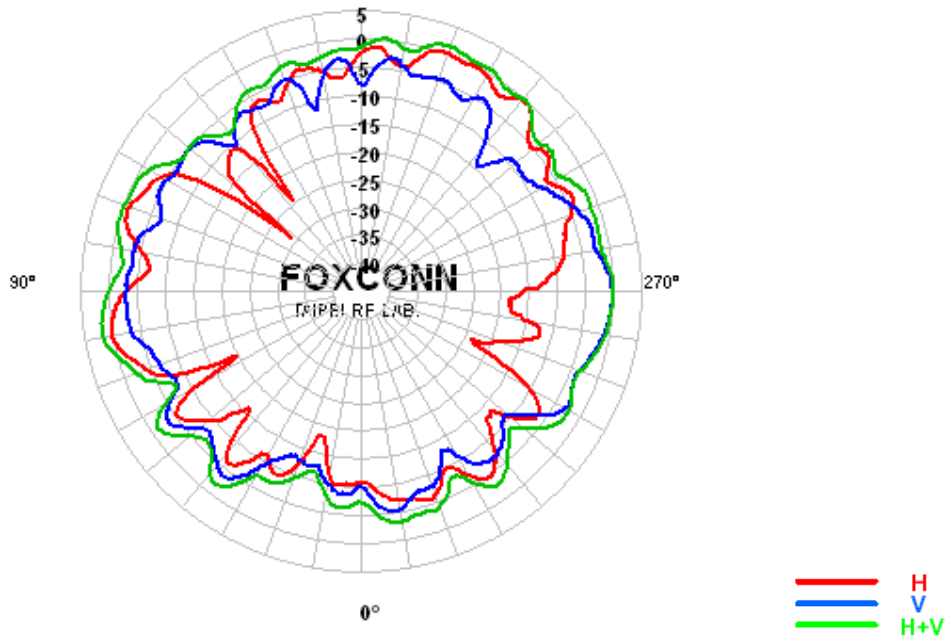
5470-5850MHz radiation characteristic

Main antenna: 5470 MHz



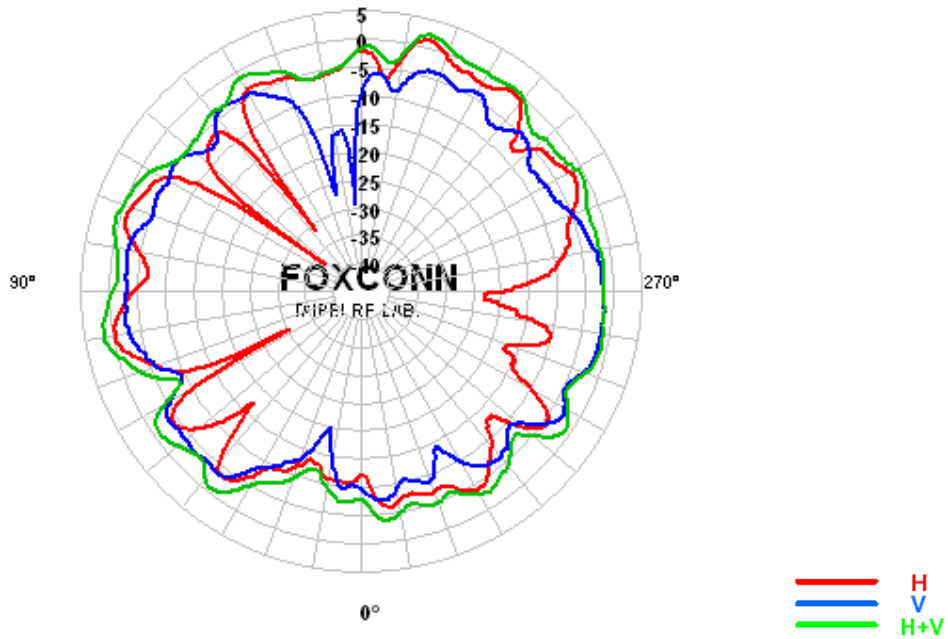
Center Frequency	<b>5470 MHz</b>
Horizontal (dBi) peak	<b>-1.19</b>
Vertical (dBi) peak	<b>-0.46</b>
Horz+Vert (dBi) peak	<b>1.81</b>

Main antenna: 5725MHz



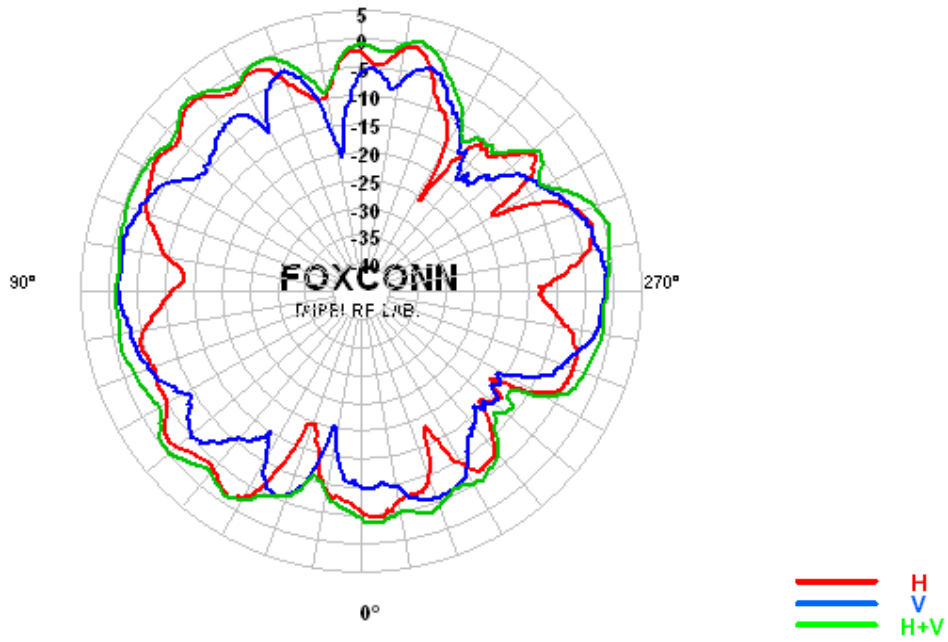
Center Frequency	<b>5725 MHz</b>
Horizontal (dBi) peak	<b>0.34</b>
Vertical (dBi) peak	<b>-0.02</b>
Horz+Vert (dBi) peak	<b>1.81</b>

Main antenna: 5850 MHz



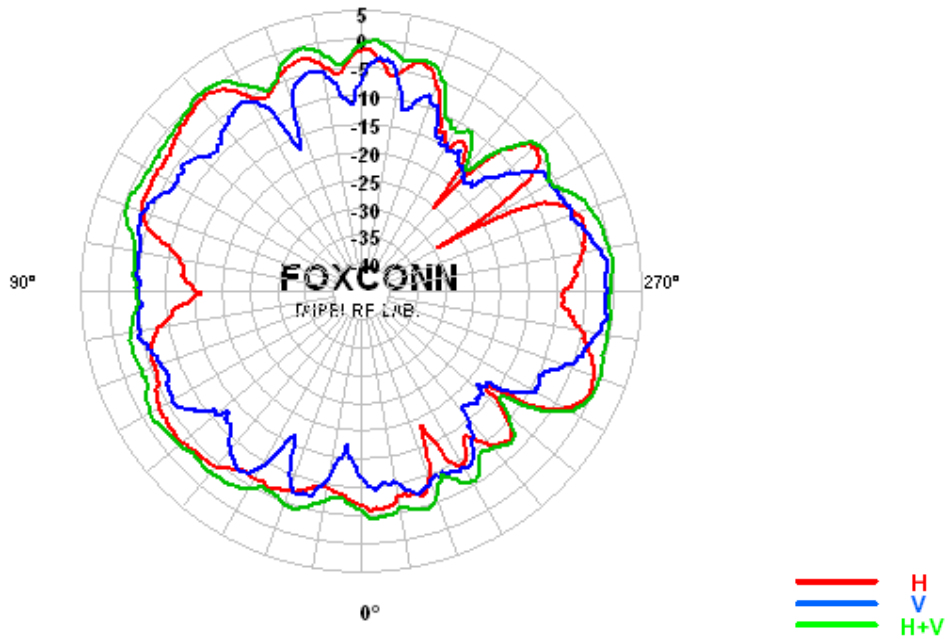
Center Frequency	<b>5850 MHz</b>
Horizontal (dBi) peak	<b>1.46</b>
Vertical (dBi) peak	<b>-1.33</b>
Horz+Vert (dBi) peak	<b>2.46</b>

Aux antenna: 5470 MHz



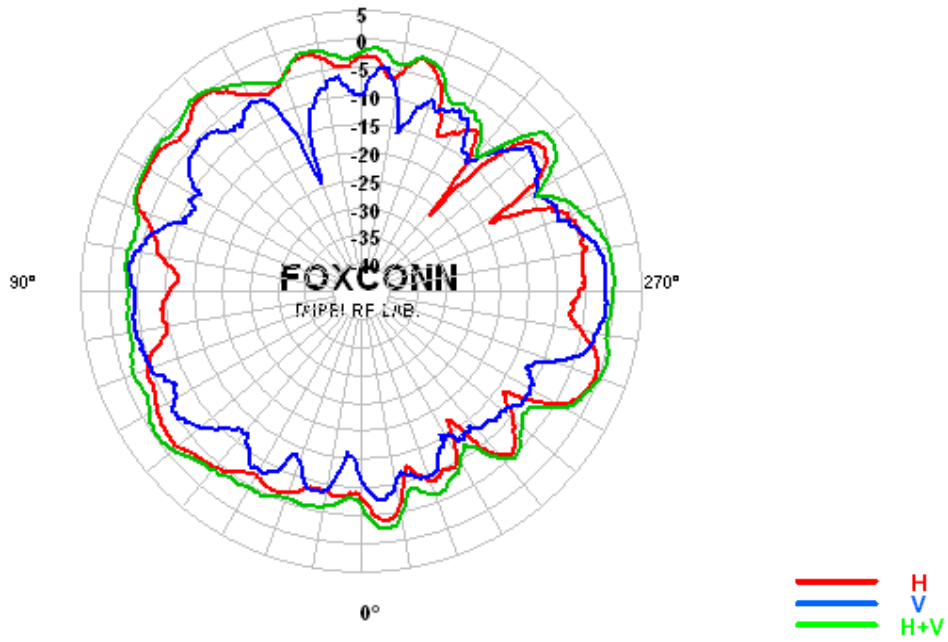
Center Frequency	<b>5470 MHz</b>
Horizontal (dBi) peak	<b>0.45</b>
Vertical (dBi) peak	<b>-1.02</b>
Horz+Vert (dBi) peak	<b>1.14</b>

Aux antenna: 5725MHz



Center Frequency	<b>5725 MHz</b>
Horizontal (dBi) peak	<b>-0.21</b>
Vertical (dBi) peak	<b>-0.70</b>
Horz+Vert (dBi) peak	<b>0.67</b>

Aux antenna: 5850 MHz



Center Frequency	<b>5850 MHz</b>
Horizontal (dBi) peak	<b>-0.02</b>
Vertical (dBi) peak	<b>-1.05</b>
Horz+Vert (dBi) peak	<b>0.73</b>

## Section 4. Host Platform Information

OEM / ODM Host platform: (XXXXXXX) platform correlated to antenna data  
Rating label photo

Module location photo

## 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)