

Regulatory WLAN Antenna Information

Brand Name	Samsung
Model Name	Macao
Antenna Vendor	Wistron NeWeb Corporation
Antenna Part Number	<input type="checkbox"/> Main Antenna: BA42-00185A
	<input type="checkbox"/> Aux Antenna: BA42-00186A
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	S.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 and 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. (S. Korea requires photographs of antennas for approval submission). Taiwan requires pictures of each antenna type shown in the system.	Required	Required	Desired	Required (Photos)	Required (Photos)
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, 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
8	Local representative contact information for LMA/ PARS process.	Required	N/A	N/A	N/A	N/A

Antenna Information

Section 1. Antenna Assembly Specifications

Antenna Assembly Summary:

1A Antenna Part Number	1B Manufactur e	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)
(WNC P/N: 81.EER15.001 Customer P/N: BA42-00185A) Main antenna	Wistron NeWeb Corporation	<i>Meander IFA Antenna</i>	(P/N: 60.EER01.001) 50 ohm Coaxial. length : 65mm diameter: 1.13mm Connector: I-PEX or performance equivalent	2400-2500MHz -1.08 dBi (peak)	2400-2500MHz -0.74 dBi (peak)	2400-2500MHz 2 max	2400-2500MHz 0.34dBi (peak)
				5150-5350MHz -0.77dBi (peak)	5150-5350MHz -0.30 dBi (peak)	5150-5350MHz 2.5 max	5150-5350MHz 0.47 dBi (peak)
				5470-5725MHz -1.43 dBi (peak)	5470-5725MHz -0.94 dBi (peak)	5470-5725MHz 2.5 max	5470-5725MHz 0.49 dBi (peak)
				5725-5850MHz -1.51dBi (peak)	5725-5850MHz -1.02 dBi (peak)	5725-5850MHz 2.5 max	5725-5850MHz 0.49 dBi (peak)
(WNC P/N: 81.EER15.002 Customer P/N:BA42-00186A) Auxiliary antenna	Wistron NeWeb Corporation	<i>Meander IFA Antenna</i>	(P/N: 50.EER01.002) 50 ohm Coaxial. length: 215mm diameter: 1.13mm Connector: I-PEX or performance equivalent	2400-2500MHz -6.74dBi (peak)	2400-2500MHz -6.08 dBi (peak)	2400-2500MHz 2 max	2400-2500MHz 0.66dBi (peak)
				5150-5350MHz -1.24dBi (peak)	5150-5350MHz -0.25 dBi (peak)	5150-5350MHz 2.5 max	5150-5350MHz 0.99 dBi (peak)
				5470-5725MHz 0.63 dBi (peak)	5470-5725MHz 1.68 dBi (peak)	5470-5725MHz 2.5 max	5470-5725MHz 1.05 dBi (peak)
				5725-5850MHz 0.08dBi (peak)	5725-5850MHz 1.14 dBi (peak)	5725-5850MHz 2.5 max	5725-5850MHz 1.06dBi (peak)

Antenna Peak Gain Table:

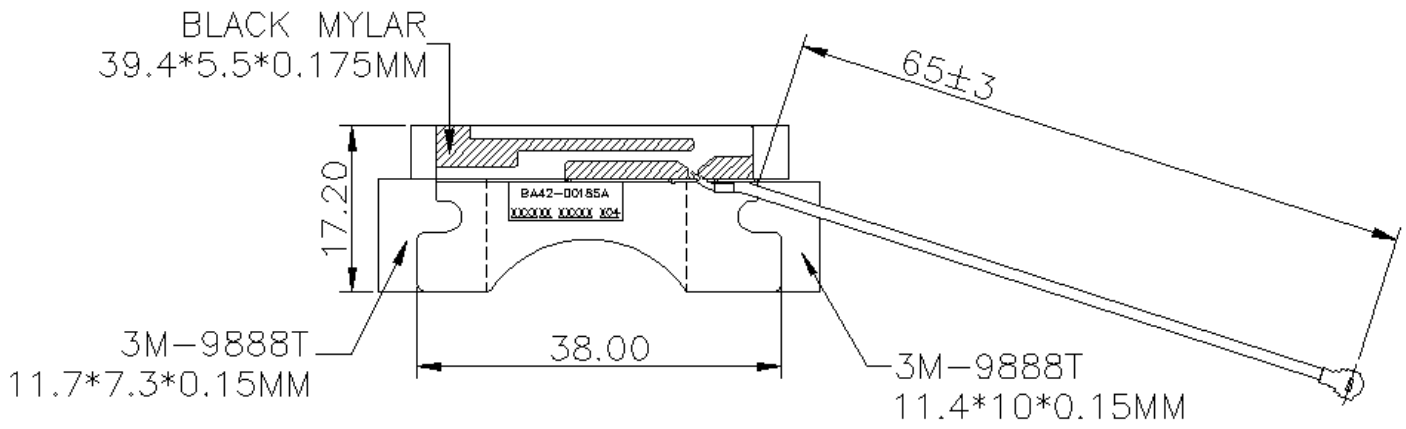
Frequency (MHz)	Main antenna			Aux Antenna		
	Horizontal (dBi)	Vertical (dBi)	Hori+Ver (dBi)	Horizontal (dBi)	Vertical (dBi)	Hori+Ver (dBi)
2400	-2.63	-3.18	-0.56	-6.74	-7.20	-4.90
2450	-1.61	-2.42	0.38	-8.97	-8.00	-5.93
2500	-1.08	-2.20	0.70	-10.78	-9.24	-8.61
5150	-3.27	-0.77	0.97	-2.49	-1.54	0.53
5250	-2.57	-2.49	-0.30	-2.36	-1.42	0.07
5350	-3.87	-3.80	-1.33	-2.53	-1.24	-0.31
5470	-3.91	-1.95	0.19	-4.21	-1.89	-1.60
5600	-3.52	-1.61	0.55	-1.60	-2.59	-0.27
5725	-2.41	-1.43	-0.22	0.63	-1.62	1.22
5785	-2.91	-1.51	-0.81	0.08	-2.17	0.46
5850	-2.65	-2.49	-1.16	-1.88	-3.72	-0.06

- Antenna Peak Gain required being test in system basis.
- 1E frame contend absolutely peak antenna gain include H/ V/ H+V.

Section 2. Dimensioned Photos or Drawings of Antennas

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

Main Antenna Dimensioned Drawing:

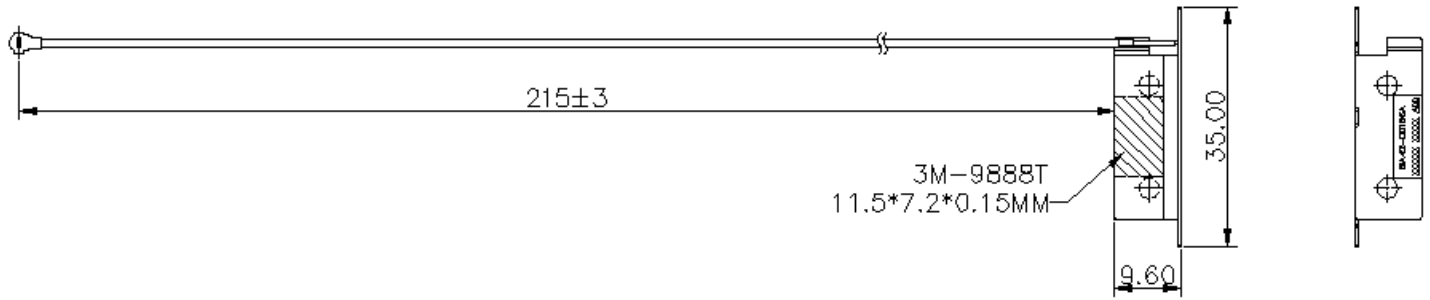


Main Antenna Photo:



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

Aux Antenna Dimensioned Drawing:



Aux Antenna Photo:

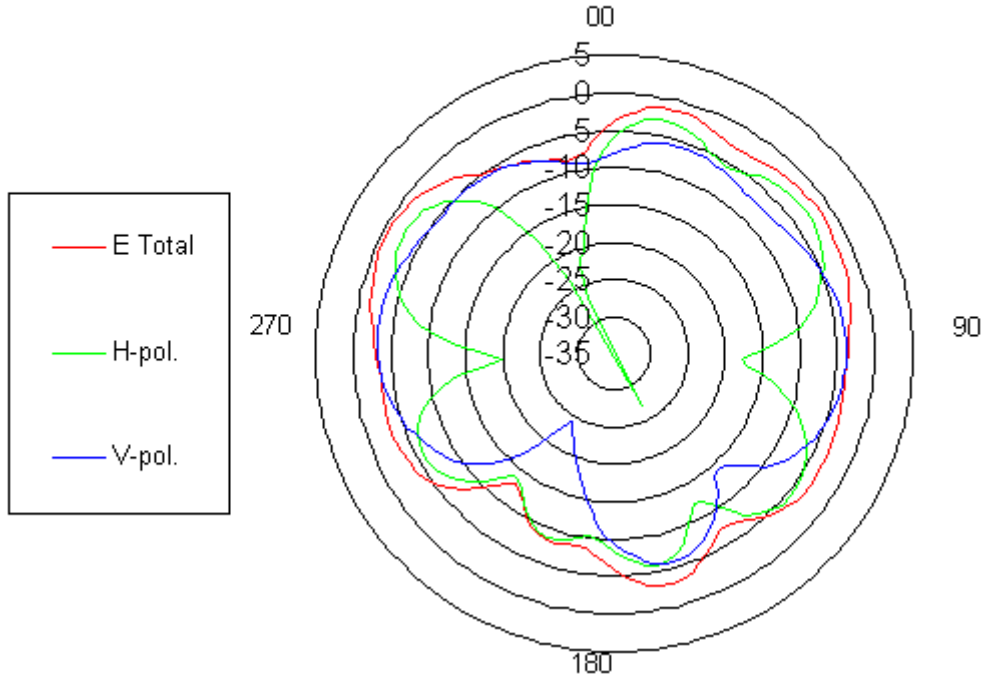


Section 3. Radiation characteristics of antennae Loaded in Host Platform

2400-2500MHz radiation characteristic

Main antenna: 2400 MHz

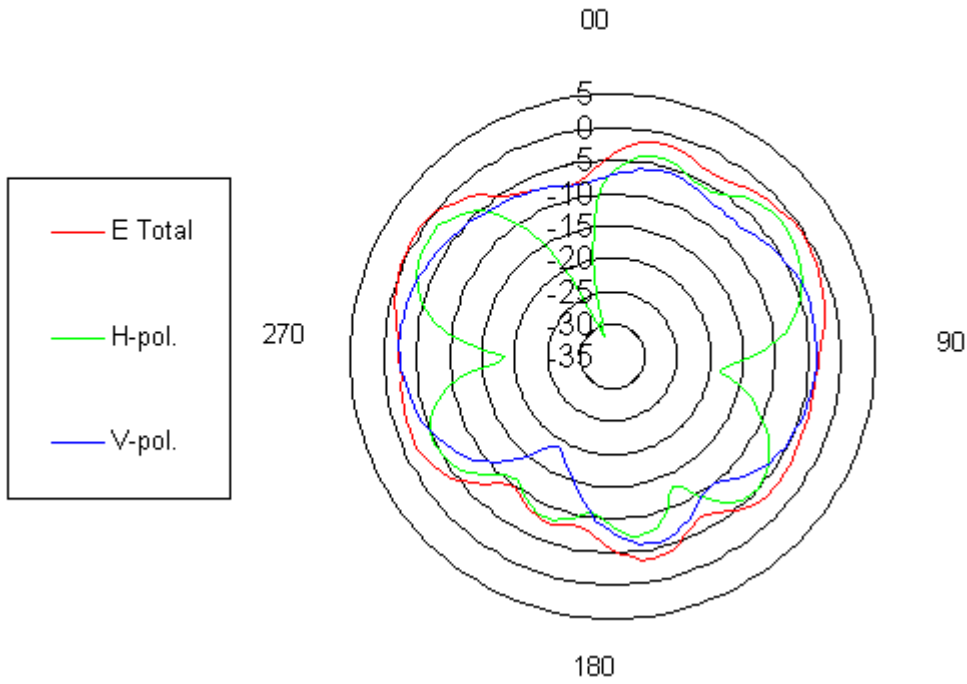
Main antenna @2.40 GHz



Center Frequency	2400 MHz
Horizontal (dBi) peak	-2.63
Vertical (dBi) peak	-3.18
Horz+Vert (dBi) peak	-0.56

Main antenna: 2450 MHz

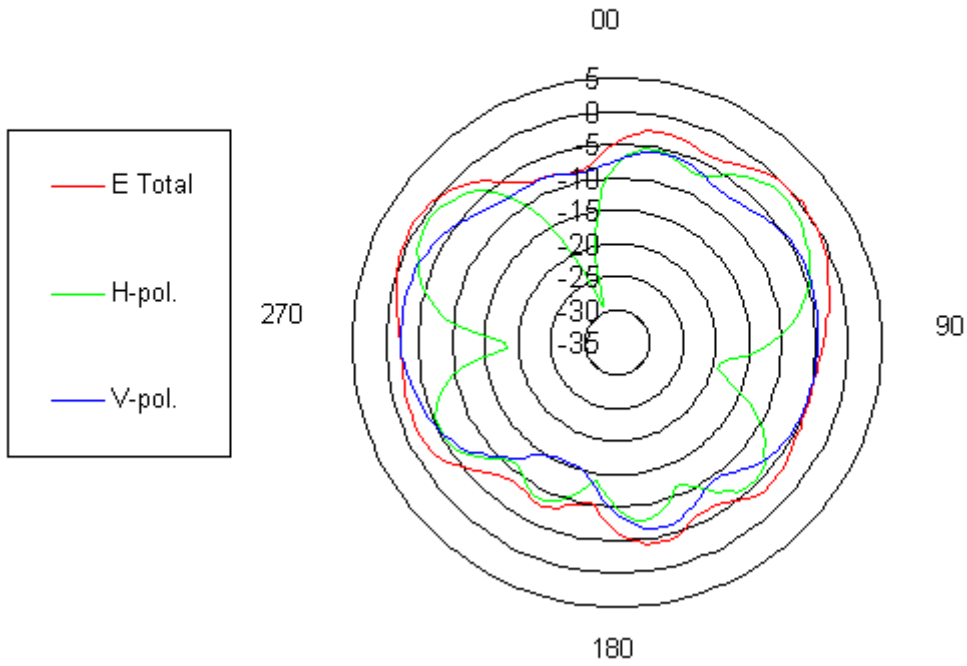
Main antenna @2.45 GHz



Center Frequency	2450 MHz
Horizontal (dBi) peak	-1.61
Vertical (dBi) peak	-2.42
Horz+Vert (dBi) peak	0.38

Main antenna: 2500 MHz

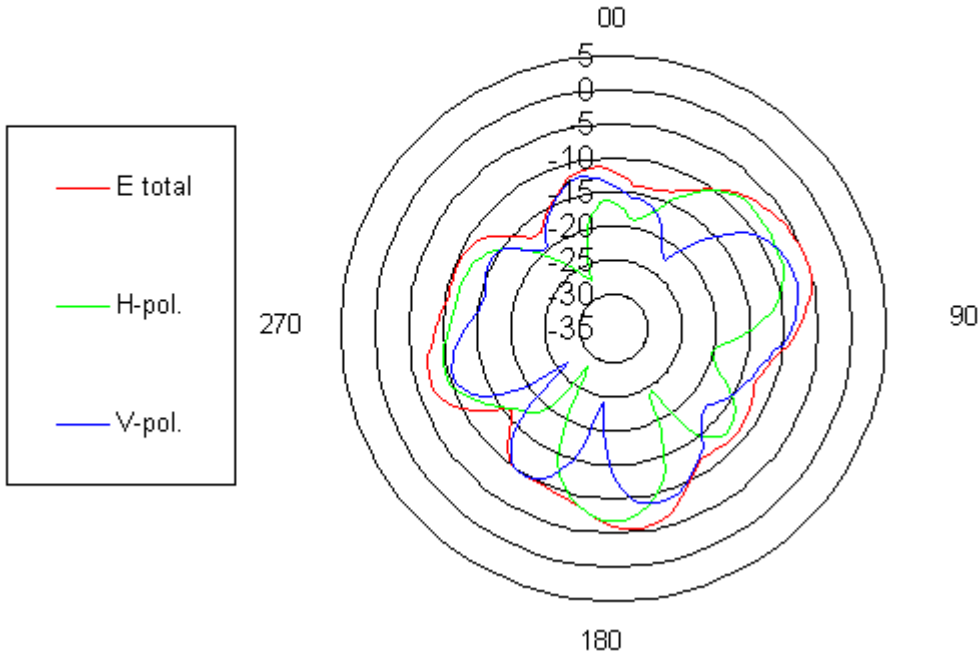
Main antenna @2.50 GHz



Center Frequency	2500 MHz
Horizontal (dBi) peak	-1.08
Vertical (dBi) peak	-2.20
Horz+Vert (dBi) peak	0.70

Auxiliary antenna: 2400 MHz

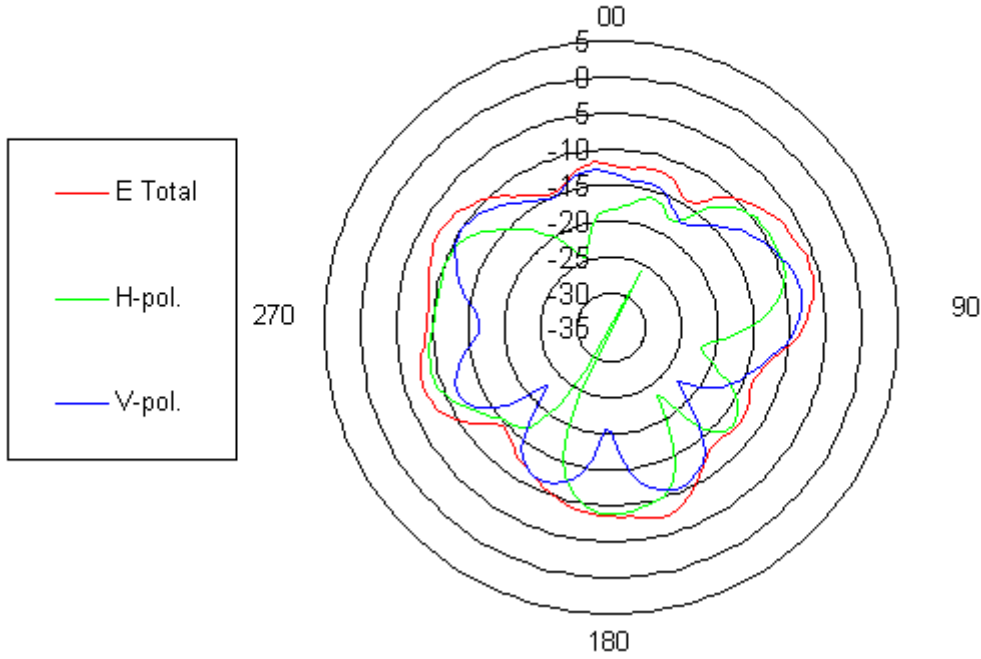
Aux antenna @2.40 GHz



Center Frequency	2400 MHz
Horizontal (dBi) peak	-6.74
Vertical (dBi) peak	-7.20
Horz+Vert (dBi) peak	-4.90

Auxiliary antenna: 2450 MHz

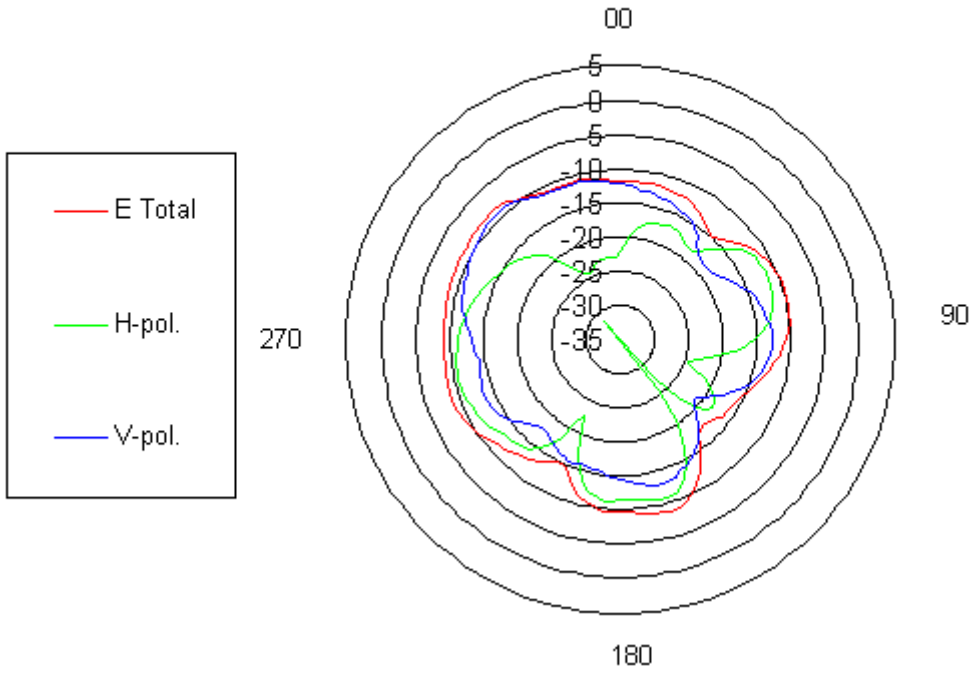
Aux antenna @2.45 GHz



Center Frequency	2450 MHz
Horizontal (dBi) peak	-8.97
Vertical (dBi) peak	-8.00
Horz+Vert (dBi) peak	-5.93

Auxiliary antenna: 2500 MHz

Aux antenna @2.50 GHz

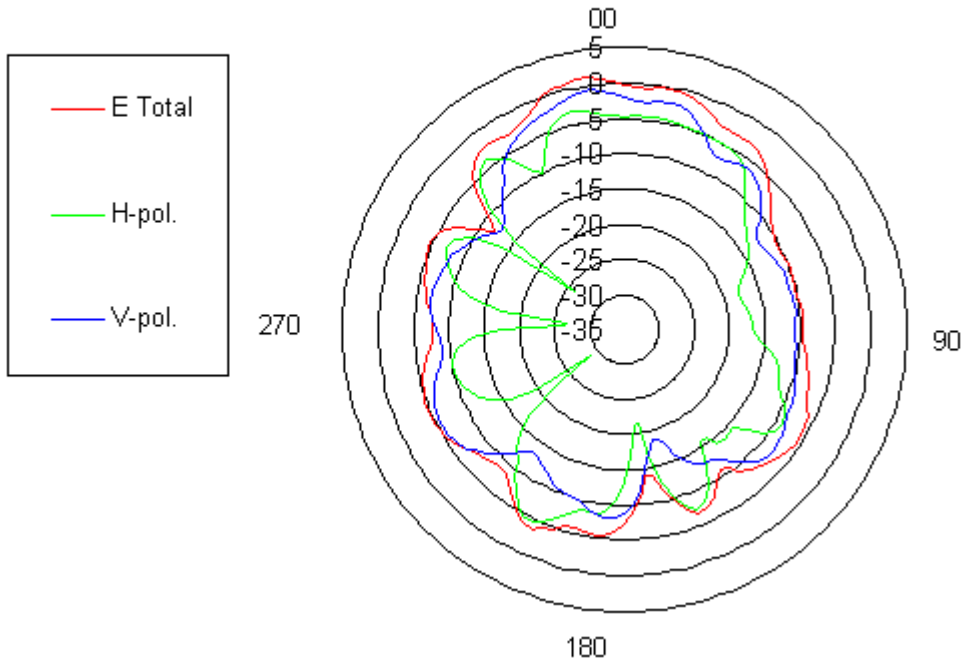


Center Frequency	2500 MHz
Horizontal (dBi) peak	-10.78
Vertical (dBi) peak	-9.24
Horz+Vert (dBi) peak	-8.61

5150-5350 MHz radiation characteristic

Main antenna: 5150 MHz

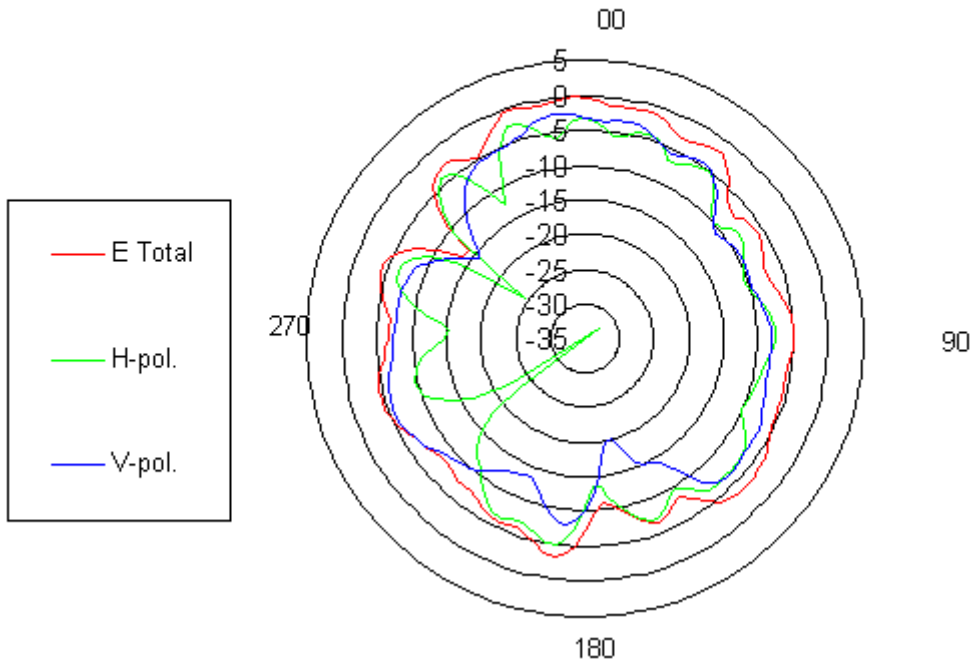
Main antenna @5.15 GHz



Center Frequency	5150 MHz
Horizontal (dBi) peak	-3.27
Vertical (dBi) peak	-0.77
Horz+Vert (dBi) peak	0.97

Main antenna: 5250 MHz

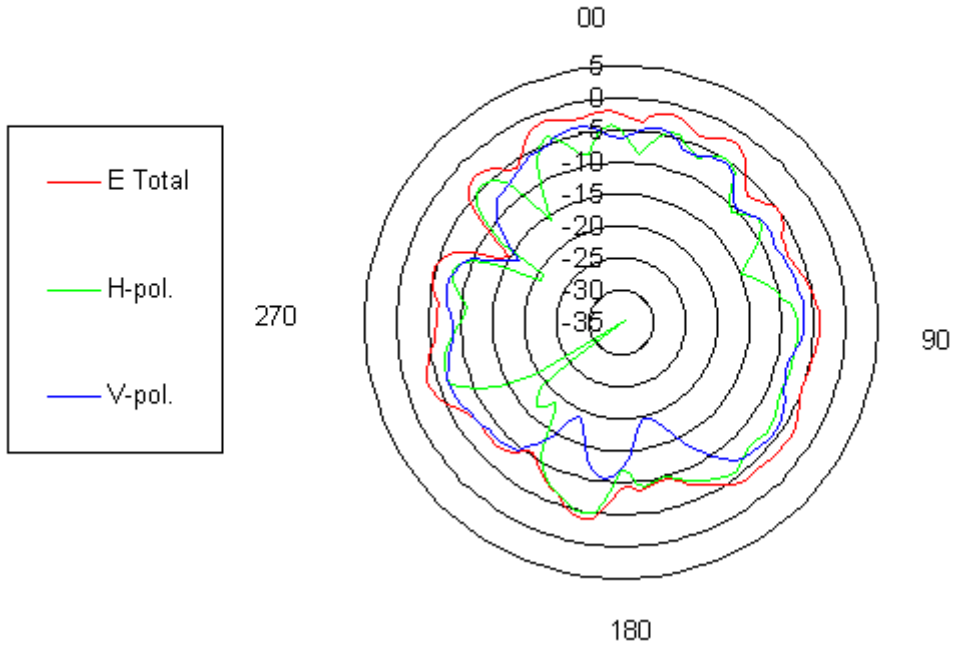
Main antenna @5.25 GHz



Center Frequency	5250 MHz
Horizontal (dBi) peak	-2.57
Vertical (dBi) peak	-2.49
Horz+Vert (dBi) peak	-0.30

Main antenna: 5350 MHz

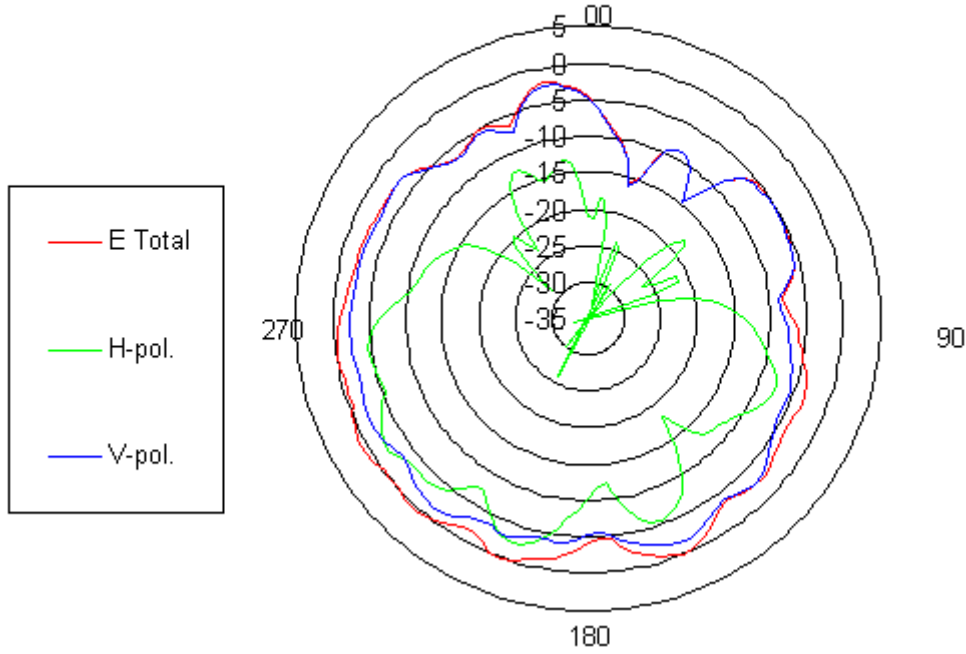
Main antenna @5.35 GHz



Center Frequency	5350 MHz
Horizontal (dBi) peak	-3.87
Vertical (dBi) peak	-3.80
Horz+Vert (dBi) peak	-1.33

Auxiliary antenna: 5150 MHz

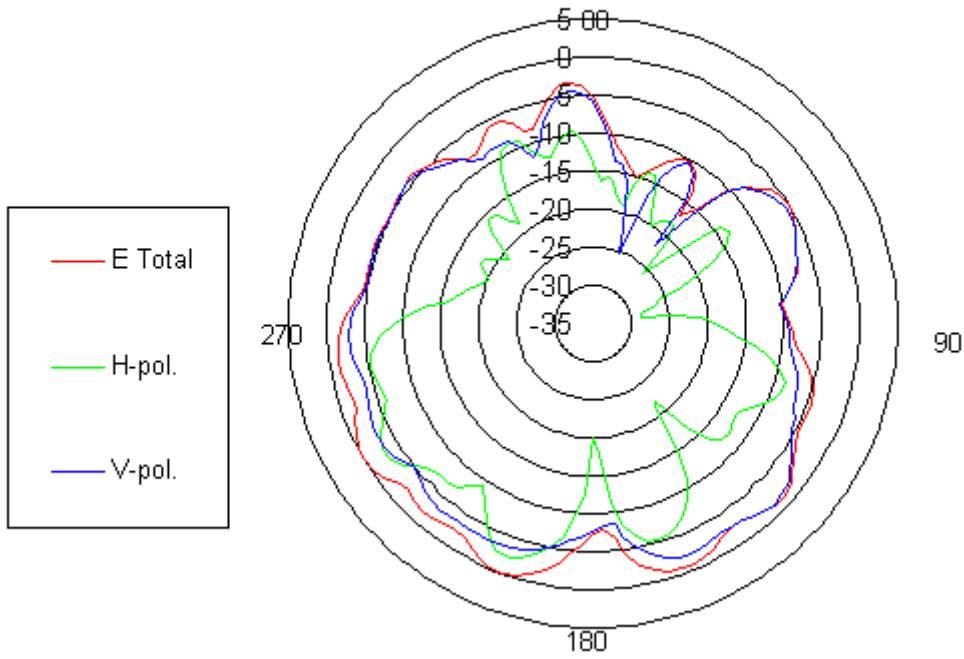
Aux antenna @5.15 GHz



Center Frequency	5150MHz
Horizontal (dBi) peak	-2.49
Vertical (dBi) peak	-1.54
Horz+Vert (dBi) peak	0.53

Auxiliary antenna: 5250 MHz

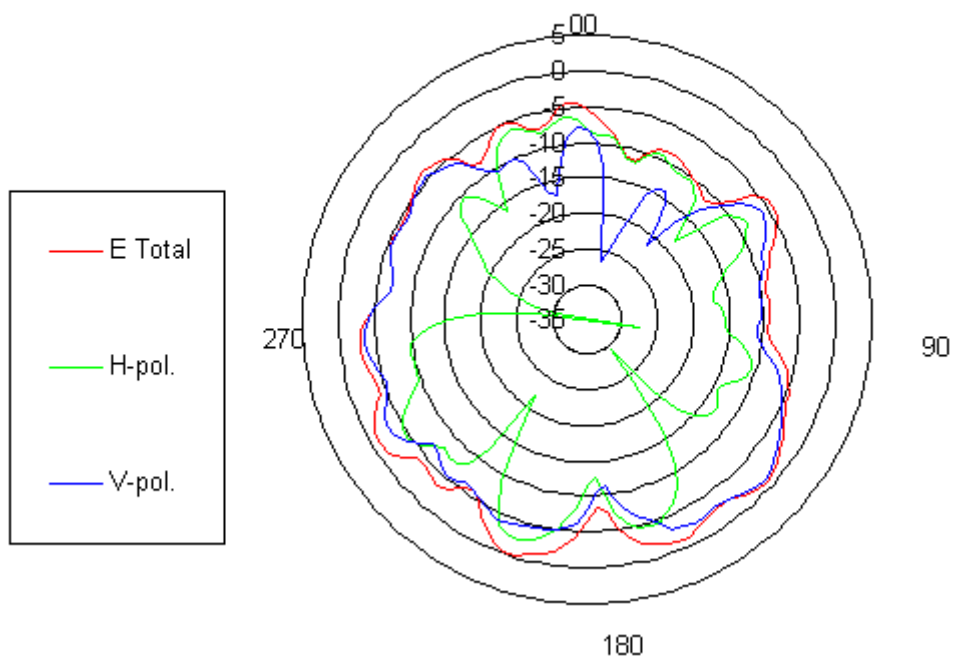
Aux antenna @5.25 GHz



Center Frequency	5250MHz
Horizontal (dBi) peak	-2.63
Vertical (dBi) peak	-1.42
Horz+Vert (dBi) peak	-0.07

Auxiliary antenna: 5350 MHz

Aux antenna @5.35 GHz

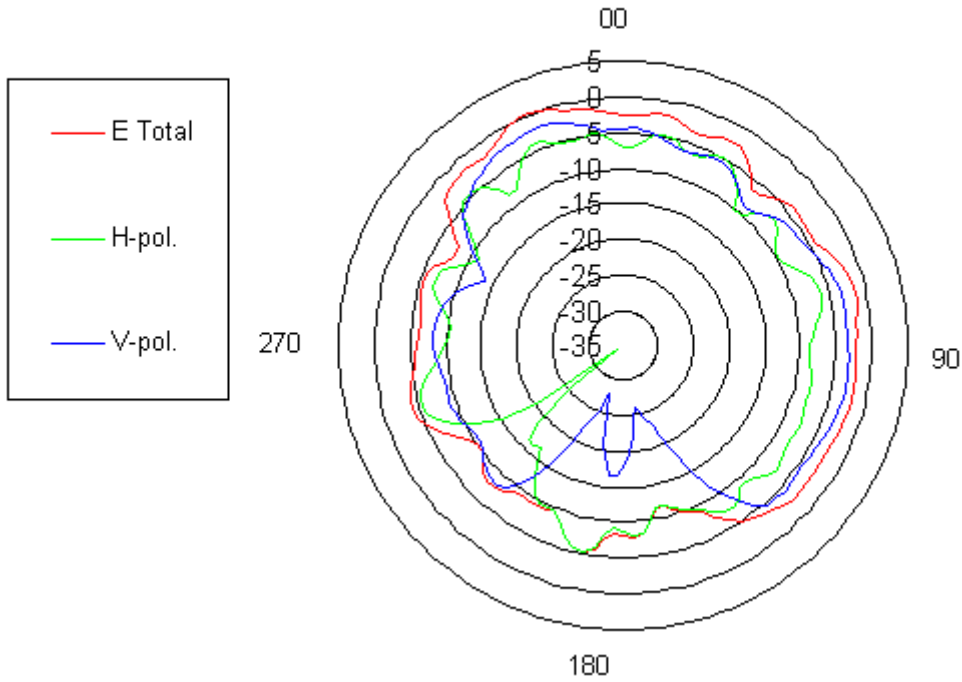


Center Frequency	5350MHz
Horizontal (dBi) peak	-2.53
Vertical (dBi) peak	-1.24
Horz+Vert (dBi) peak	-0.31

5470-5725MHz radiation characteristic

Main antenna: 5470 MHz

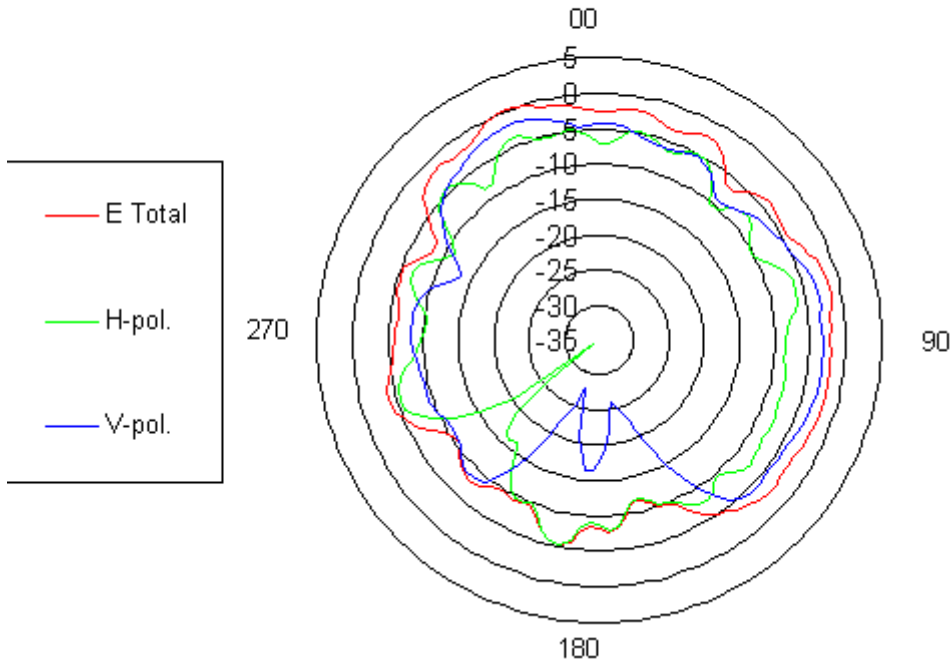
Main antenna @5.47 GHz



Center Frequency	5470 MHz
Horizontal (dBi) peak	-3.91
Vertical (dBi) peak	-1.05
Horz+Vert (dBi) peak	0.19

Main antenna: 5597.5 MHz

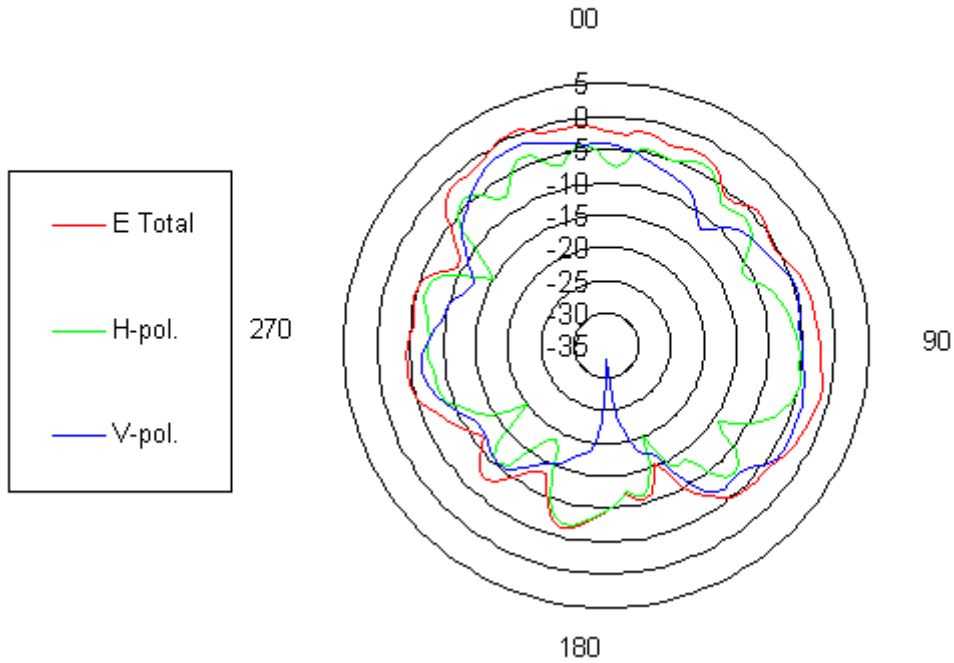
Main antenna @5.5975GHz



Center Frequency	5597.5 MHz
Horizontal (dBi) peak	-3.52
Vertical (dBi) peak	-1.61
Horz+Vert (dBi) peak	0.55

Main antenna: 5725 MHz

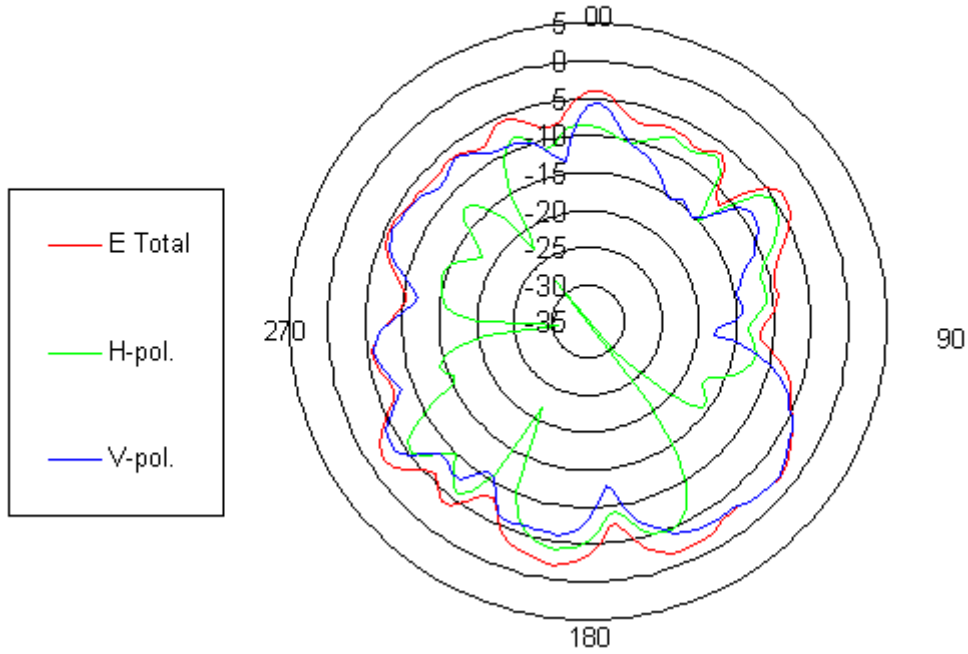
Main antenna @5.725 GHz



Center Frequency	5725 MHz
Horizontal (dBi) peak	-2.41
Vertical (dBi) peak	-1.43
Horz+Vert (dBi) peak	-0.22

Auxiliary antenna: 5470 MHz

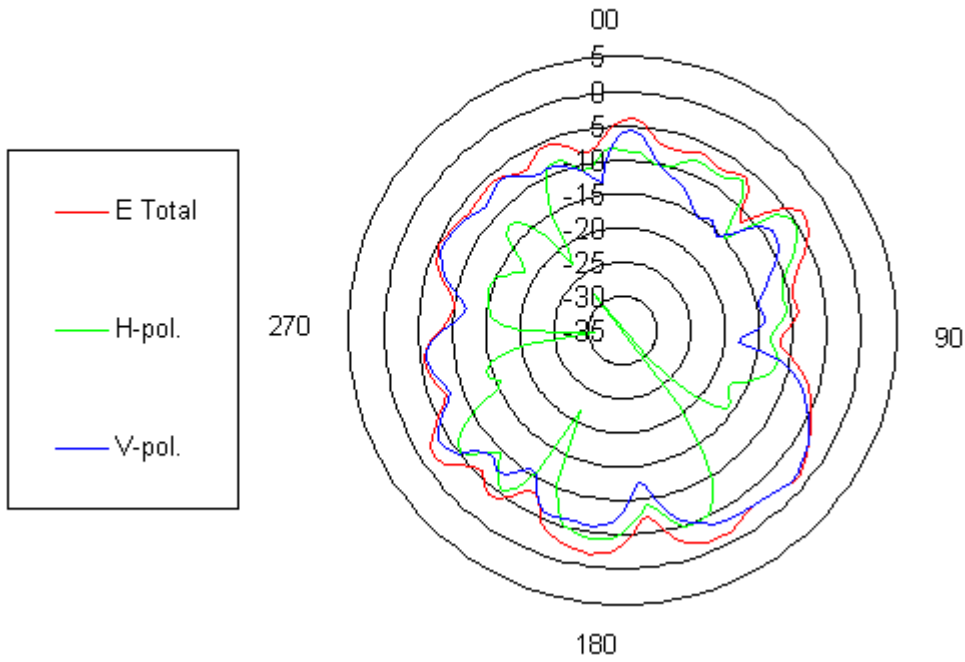
Aux antenna @5.47 GHz



Center Frequency	5470MHz
Horizontal (dBi) peak	-4.21
Vertical (dBi) peak	-1.89
Horz+Vert (dBi) peak	-1.60

Auxiliary antenna: 5597.5 MHz

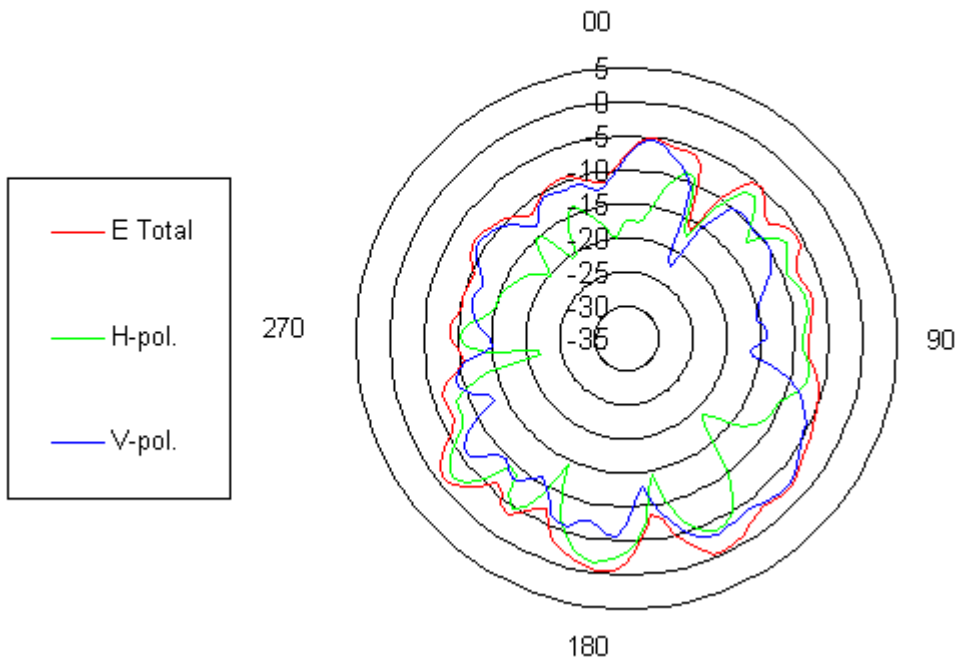
Aux antenna @5.597.5GHz



Center Frequency	5597.5MHz
Horizontal (dBi) peak	-1.60
Vertical (dBi) peak	-2.59
Horz+Vert (dBi) peak	-0.27

Auxiliary antenna: 5725 MHz

Aux antenna @5.725 GHz

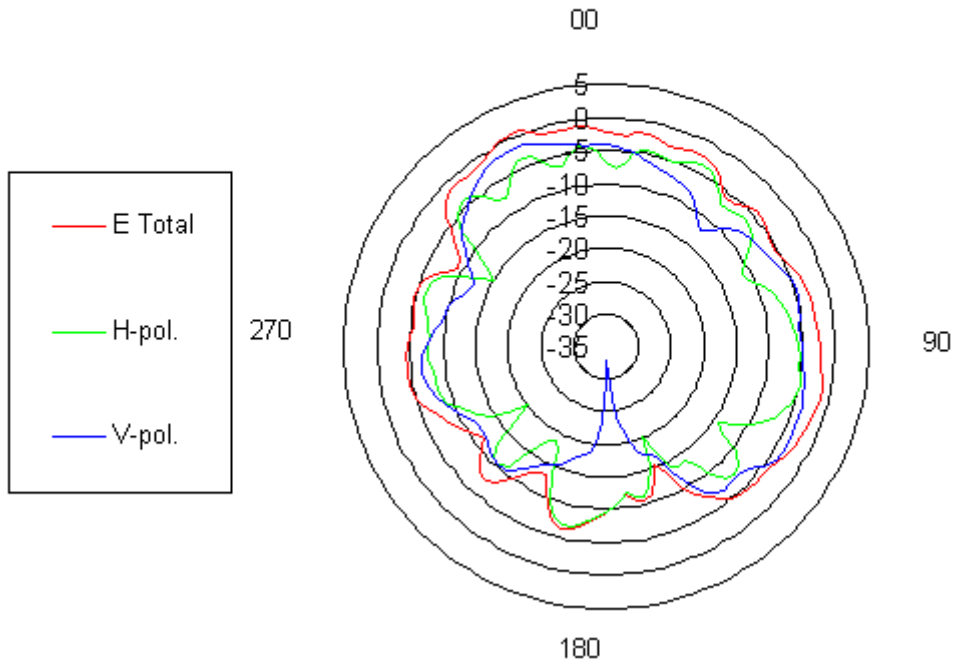


Center Frequency	5725MHz
Horizontal (dBi) peak	0.63
Vertical (dBi) peak	-1.62
Horz+Vert (dBi) peak	1.22

5725-5850 MHz radiation characteristic

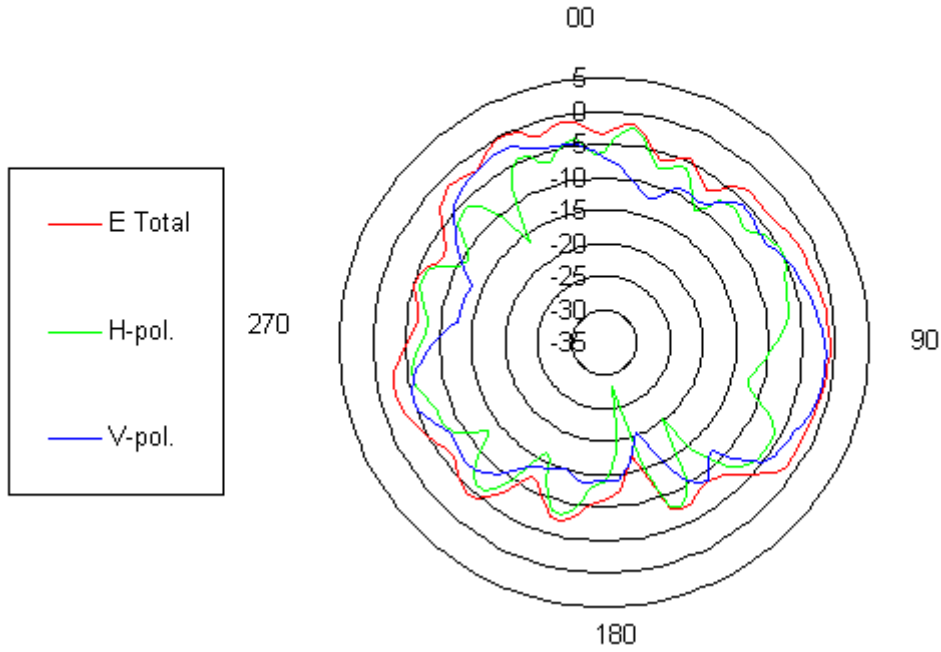
Main antenna: 5725 MHz

Main antenna @5.725 GHz



Center Frequency	5725 MHz
Horizontal (dBi) peak	-2.41
Vertical (dBi) peak	-1.43
Horz+Vert (dBi) peak	-0.22

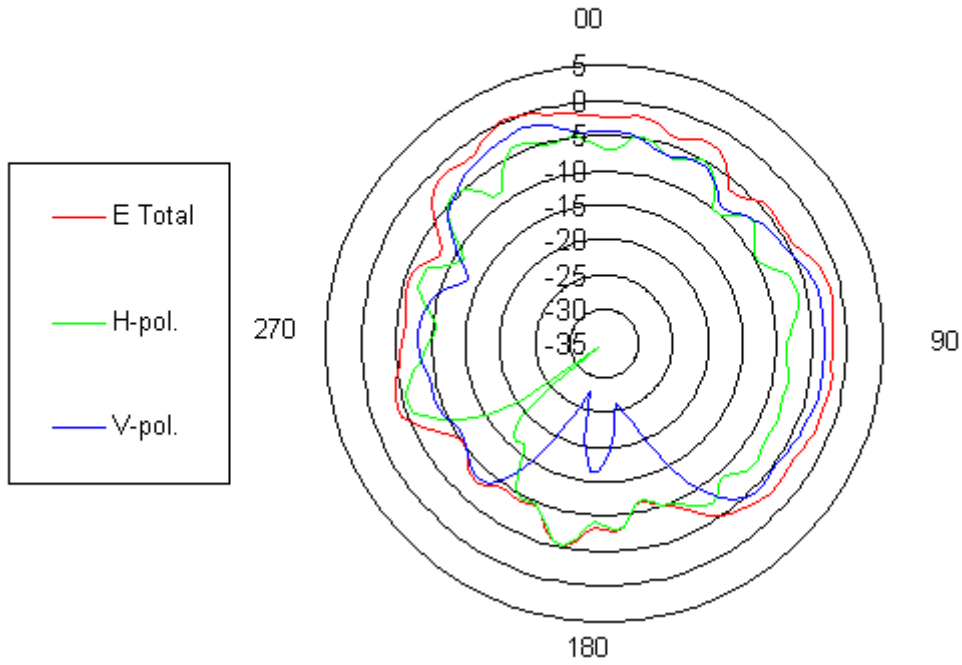
Main antenna @5.785 GHz



Center Frequency	5785MHz
Horizontal (dBi) peak	-2.91
Vertical (dBi) peak	-1.51
Horz+Vert (dBi) peak	-0.81

Main antenna: 5850 MHz

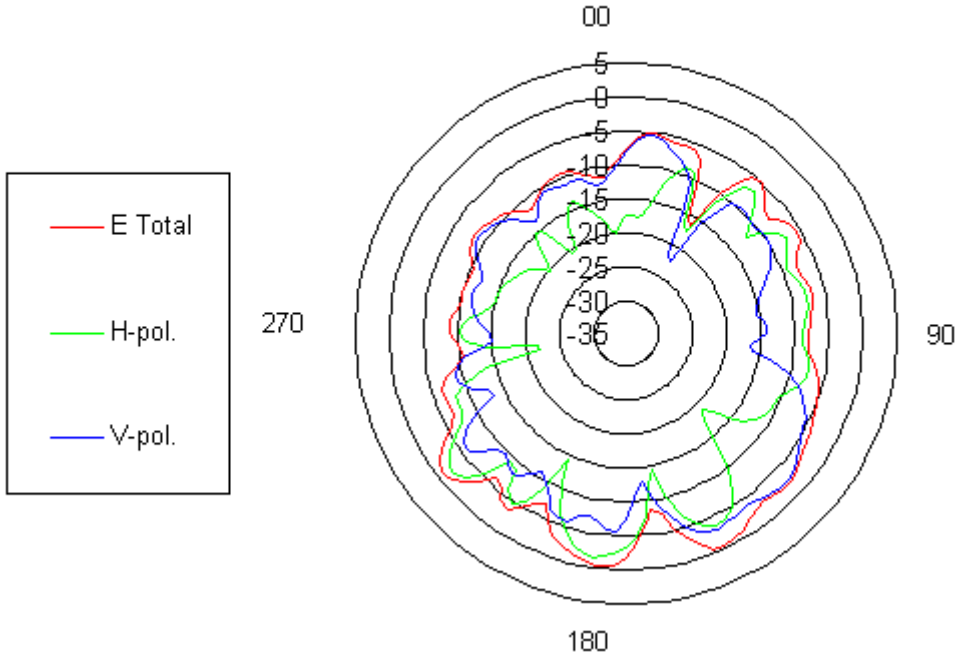
Main antenna @5.850 GHz



Center Frequency	5850 MHz
Horizontal (dBi) peak	-2.65
Vertical (dBi) peak	-2.49
Horz+Vert (dBi) peak	-1.16

Auxiliary antenna: 5725 MHz

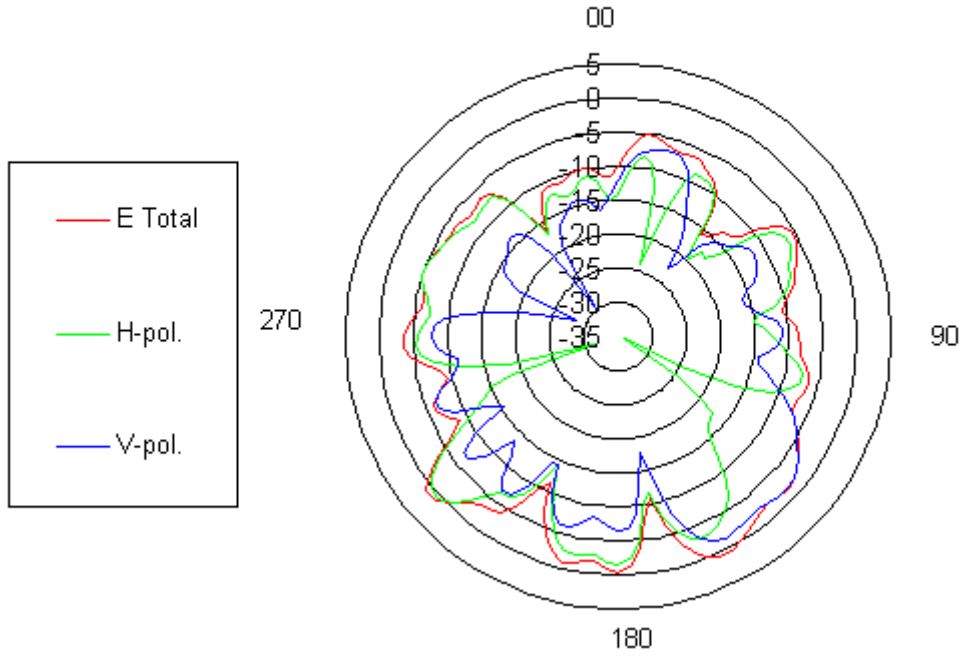
Aux antenna @5.725 GHz



Center Frequency	5725MHz
Horizontal (dBi) peak	0.63
Vertical (dBi) peak	-1.62
Horz+Vert (dBi) peak	1.22

Auxiliary antenna: 5785 MHz

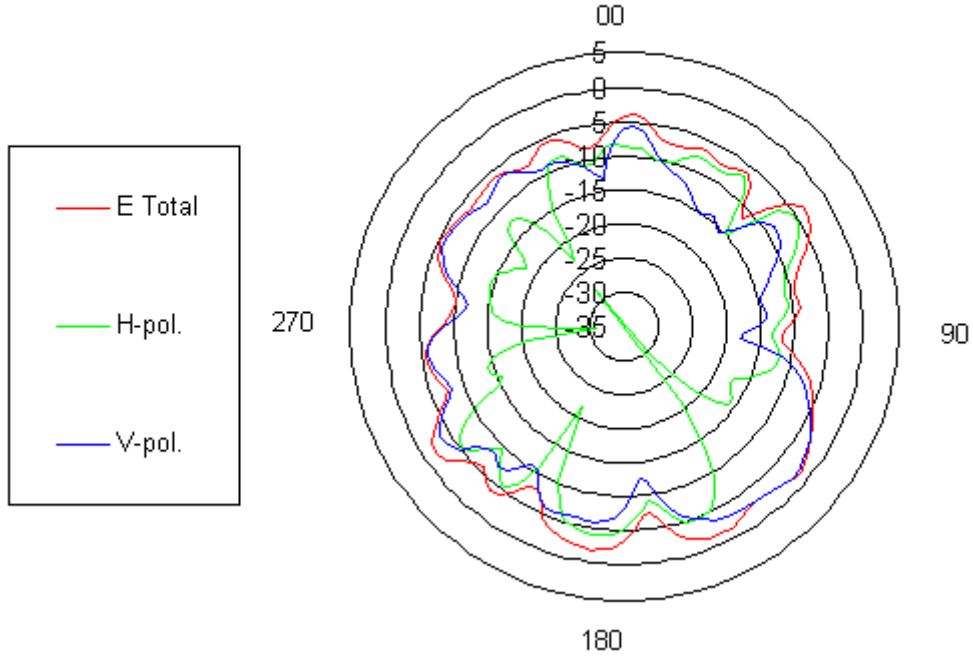
Aux antenna @5.785 GHz



Center Frequency	5785MHz
Horizontal (dBi) peak	0.08
Vertical (dBi) peak	-2.17
Horz+Vert (dBi) peak	0.46

Auxiliary antenna: 5850 MHz

Aux antenna @5.85 GHz



Center Frequency	5850MHz
Horizontal (dBi) peak	-1.88
Vertical (dBi) peak	-3.72
Horz+Vert (dBi) peak	-0.06

Section 4. Host Platform Information

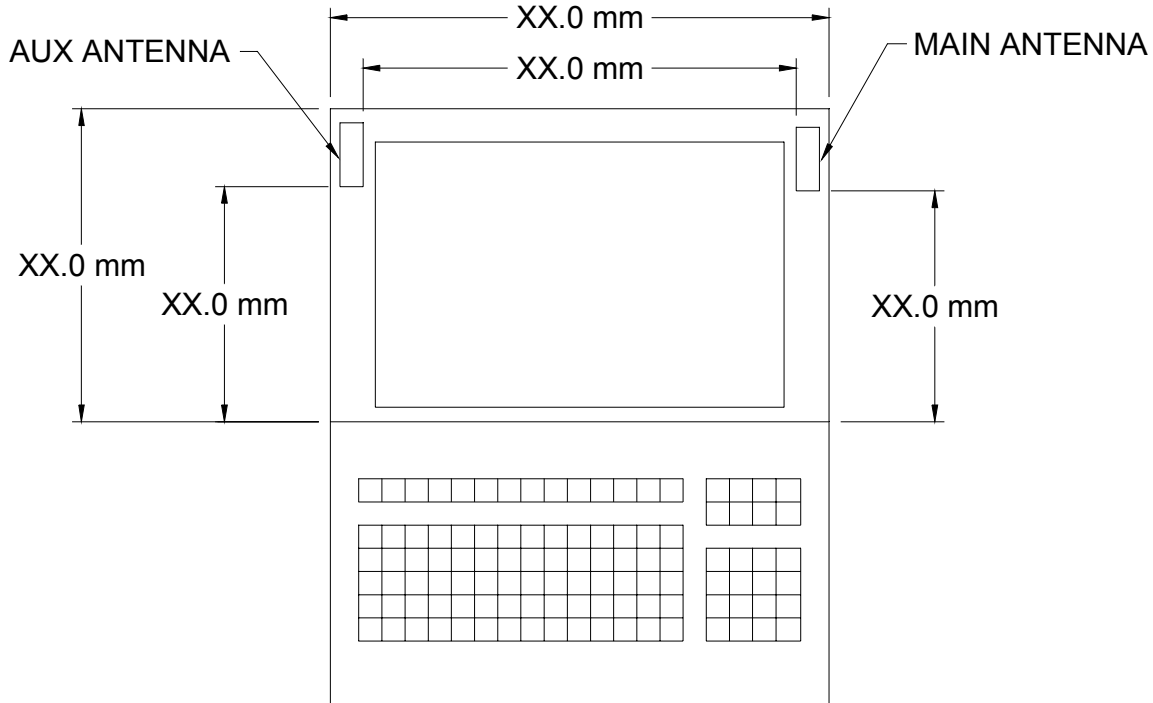
OEM / ODM Host platform: (Macao) platform correlated to antenna data

Rating Label Photo:

Module Location Photo: (if Singapore required)

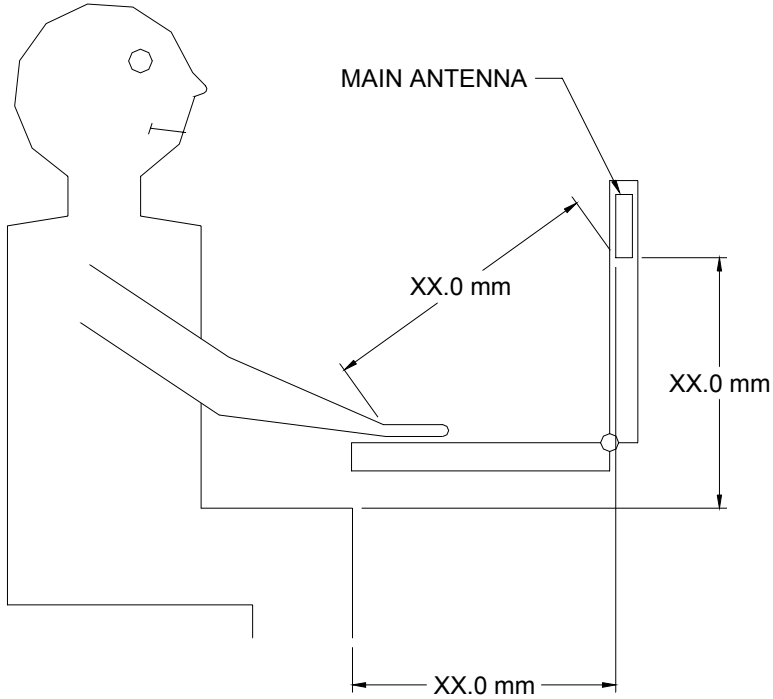
Section 5. Antenna Host Platform Location Information

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



Section 6. Antenna dimensional information for SAR evaluation

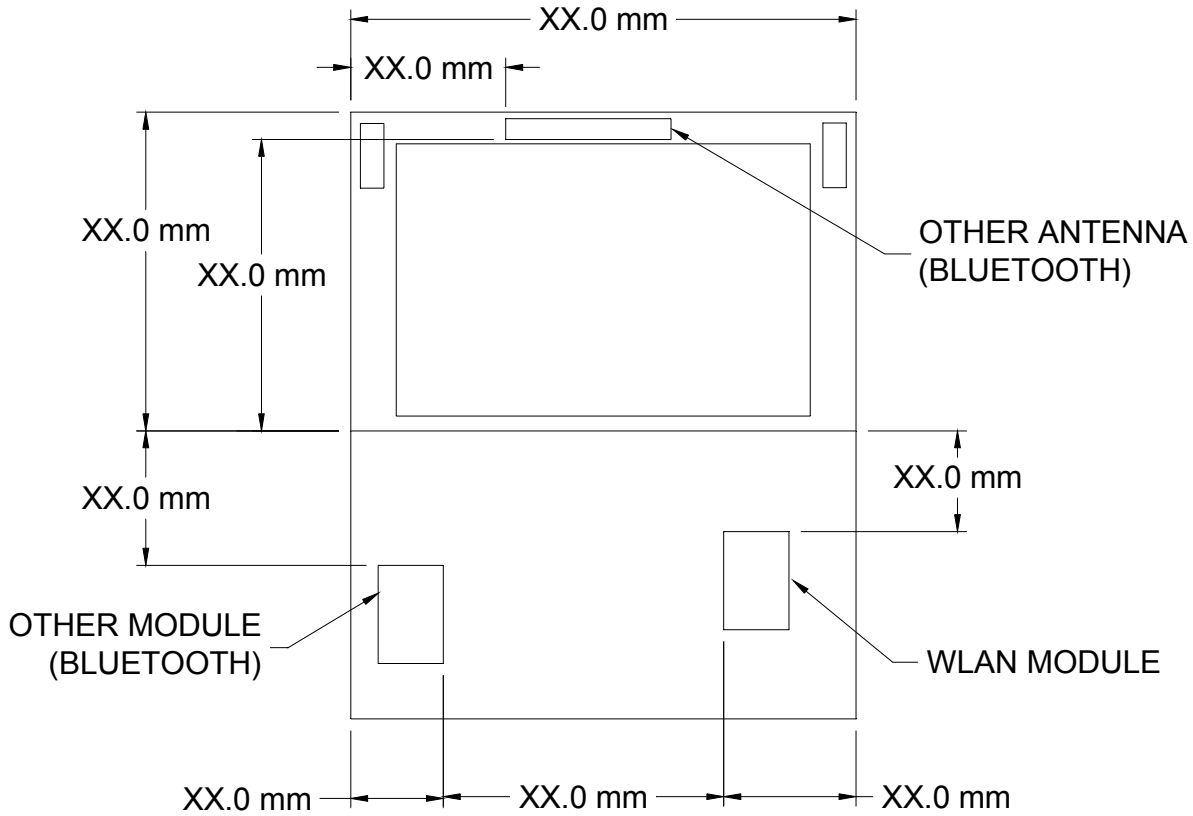
Include a **dimensioned photo or dimensioned drawing** showing the distance (mm) between the transmit (main) antenna and the user (excluding hands, wrist, feet, and ankle)



Section 7. Diagram Example of Co-Location Antenna Separation

Include a **dimensioned photo or dimensioned drawing** showing the distance (mm) between WLAN antenna and 2nd radiator transmit antenna.

(Note: Due to the evolving rules regarding co-location, each platform will need to be reviewed on a case by case basis)



Section 8. Local representative contact information

Local representative contact information is required for regulatory support for target countries below.

	Local company name	Contact name	Phone number	FAX Number	e-Mail Address	Notes
Argentina						
Brazil						
Indonesia						
Israel						
Malaysia						
Mexico						
Singapore						Telecommunication Equipment Dealer License Required
USA, Canada						