

## Regulatory WLAN Antenna Information

<b>Platform</b>	
Platform Owner	GATEWAY
Brand Name	OASIS
Model Name	MA-8
ODM	QUANTA
Target Launch Date	01-AUG-07
<b>Antenna</b>	
Brand Name	GALTRONICS
Antenna Set Name	MA-8 WLAN
Antenna Set P/N	021020168NC3709
Individual Antenna P/N's	Tx1 Antenna: 06-941-06 (Main)
	Tx2 Antenna: 06-941-03 (Aux)
<b>Module</b>	
With WLAN Module	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	Tx1, Tx2 & Tx3 antenna (Peak Gain W / cable loss) *	Required	Required	Required	Required	Required
	1E OR 1F, 1G, 1H					
1F	Tx1, Tx2 & Tx3 antenna (Peak Gain only) *	Required	Required	Required	Required	Required
1G	VSWR of cable including connector	Required	Required	Required	Required	Required
1H	Tx1, Tx2 & Tx3 antenna (Cable loss W / connector) *	Required	Required	Required	Required	Required
2	Dimensioned Photographs and Drawings of Tx1, Tx2, and Tx3 (or Rx3) 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

NOTE:

(\*) if 3<sup>rd</sup> antenna is Rx only (e.g. receive only for 4965AGN) then peak gain and cable loss not required

# 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 VSW R	1H Cable Loss (dBi)
P/N: 50-87-03  Tx1 antenna	Galtronics	PIFA	P/N: 03-264-529  50 ohm Coaxial. length: 52.9cm diameter: 1.13mm Connector: U.FL	2400-2500MHz 0.91 dBi (peak)	2400-2500MHz 2.40 dBi (peak)	2400-2500MHz -12dB max	2400-2500MHz -1.49 dBi (peak)
				5150-5350MHz 0.57 dBi (peak)	5150-5350MHz 2.89 dBi (peak)	5150-5350MHz -12dB max	5150-5350MHz -2.32 dBi (peak)
				5470-5725MHz 0.98 dBi (peak)	5470-5725MHz 3.30 dBi (peak)	5470-5725MHz -13dB max	5470-5725MHz -2.32 dBi (peak)
				5725-5850MHz 0.99 dBi (peak)	5725-5850MHz 3.31 dBi (peak)	5725-5850MHz -16dB max	5725-5850MHz -2.32 dBi (peak)
P/N: 50-88-03  Tx2 antenna	Galtronics	PIFA	P/N: 03-262-738  50 ohm Coaxial. length: 73.8cm diameter: 1.13mm Connector: U.FL	2400-2500MHz 2.04 dBi (peak)	2400-2500MHz 4.12 dBi (peak)	2400-2500MHz -20dB max	2400-2500MHz -2.08 dBi (peak)
				5150-5350MHz -0.33 dBi (peak)	5150-5350MHz 2.90 dBi (peak)	5150-5350MHz -12dB max	5150-5350MHz -3.23 dBi (peak)
				5470-5725MHz -0.83dBi (peak)	5470-5725MHz 2.40 dBi (peak)	5470-5725MHz -22dB max	5470-5725MHz -3.23 dBi (peak)
				5725-5850MHz -0.47dBi (peak)	5725-5850MHz 2.76 dBi (peak)	5725-5850MHz -19dB max	5725-5850MHz -3.23 dBi (peak)

### Antenna Peak Gain Table :

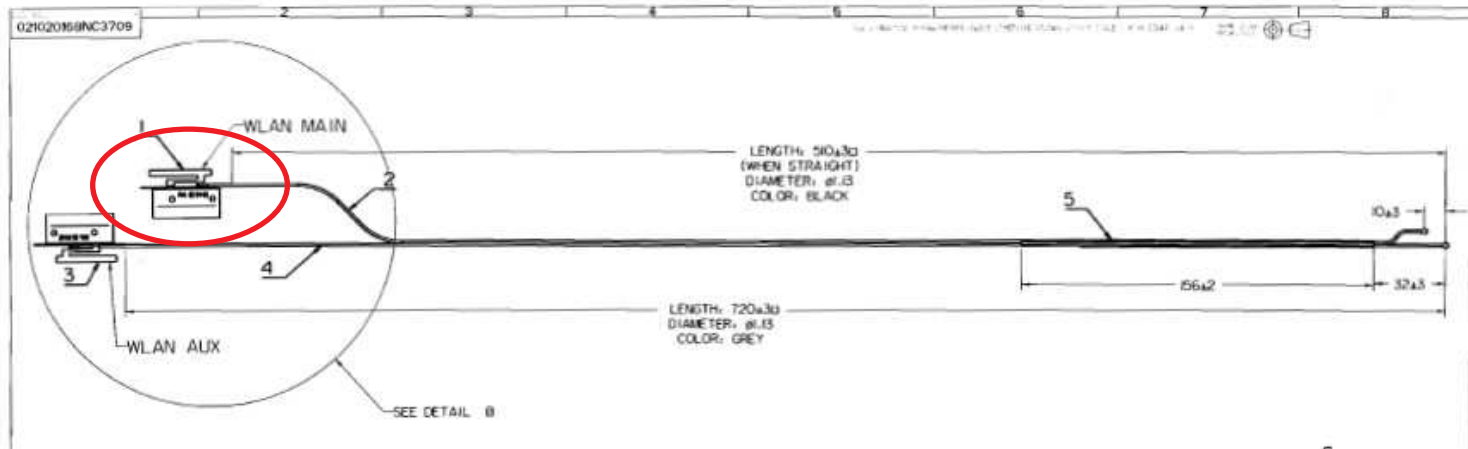
Frequency (MHz)	Tx1 antenna		Tx2 Antenna	
	Horizontal (dBi)	Vertical (dBi)	Horizontal (dBi)	Vertical (dBi)
2400	-1.67 dB	-0.67 dB	1.02 dB	0.91 dB
2450	0.57 dB	0.13 dB	1.88 dB	2.04 dB
2500	-0.12 dB	0.91 dB	1.84 dB	2.03 dB
5150	0.57 dB	-4.47 dB	-1.63 dB	-3.05 dB
5250	0.55 dB	-4.47 dB	-1.21 dB	-3.03 dB
5350	0.18 dB	-4.74 dB	-0.33 dB	-2.86 dB
5470	0.40 dB	-2.96 dB	-0.83 dB	-2.80 dB
5600	0.98 dB	-3.22 dB	-1.51 dB	-2.83 dB
5725	0.77 dB	-1.32 dB	-1.61 dB	-1.89 dB
5785	0.99 dB	-0.52 dB	-2.64 dB	-3.23 dB
5850	0.84 dB	-0.63 dB	-0.47 dB	-1.54 dB

- Antenna Peak Gain required being test in system basis.
- 1E frame contend absolutely peak antenna gain include H/V
- If Rx3 only (3<sup>rd</sup> antenna receives only, e.g. for 4965AGN) then the information is not required for Rx3.

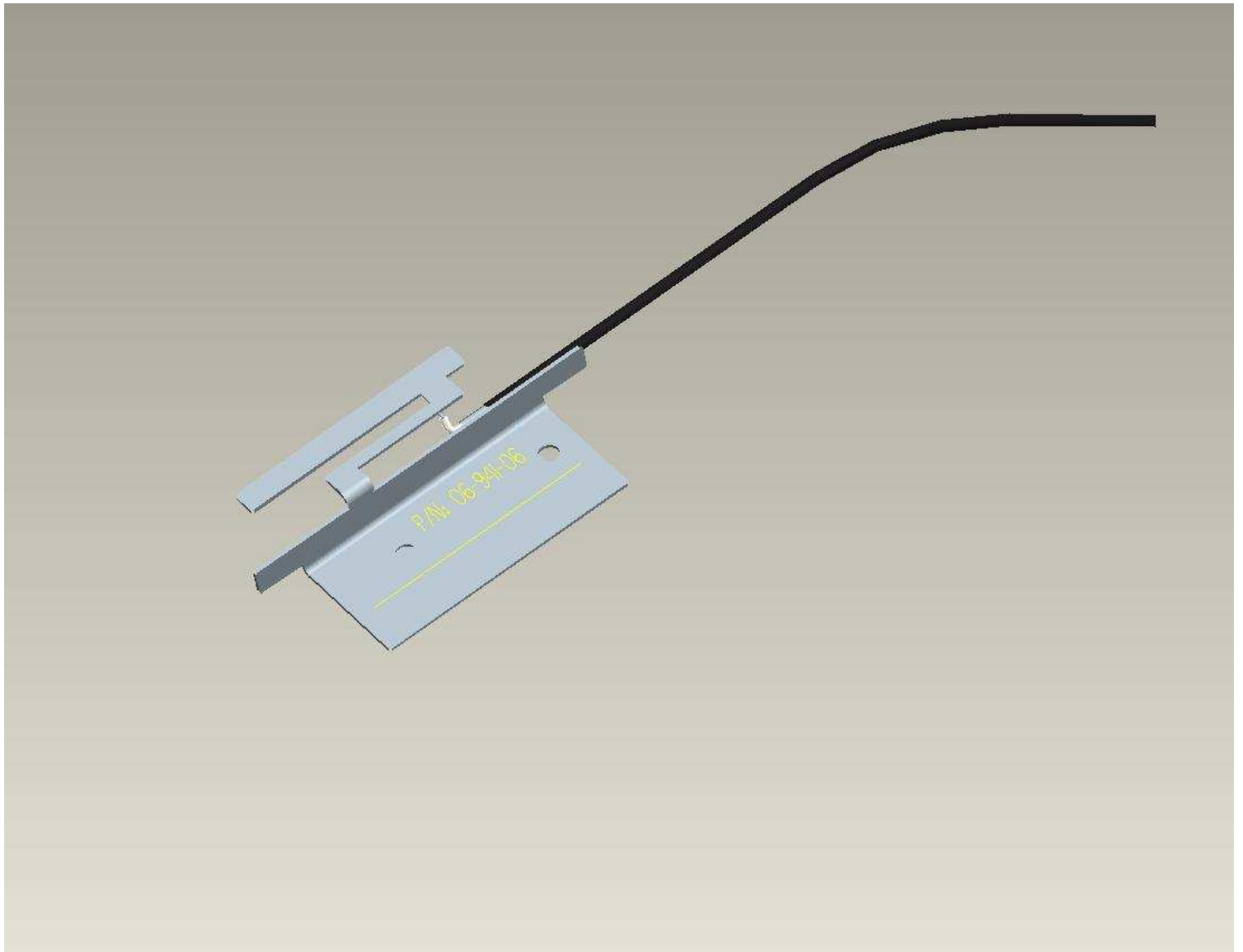
## Section 2. Dimensioned Photos or Drawings of Antennas

Include a dimensioned photo and dimensioned drawing of Tx1 antenna here.

### Tx1 Antenna Dimensioned Drawing:

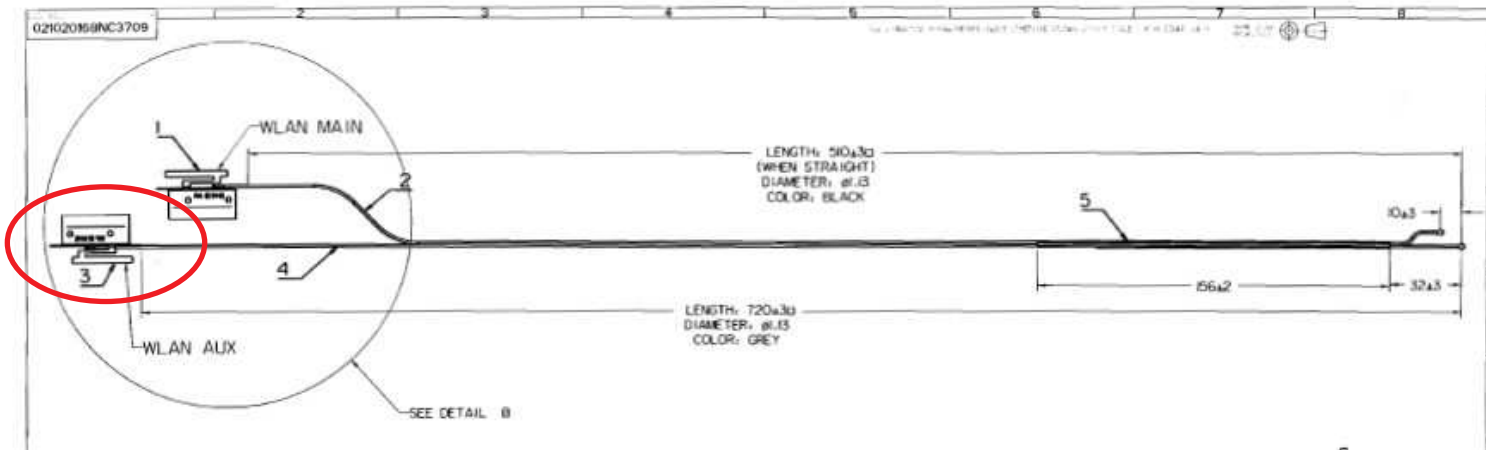


### Tx1 Antenna Photo:

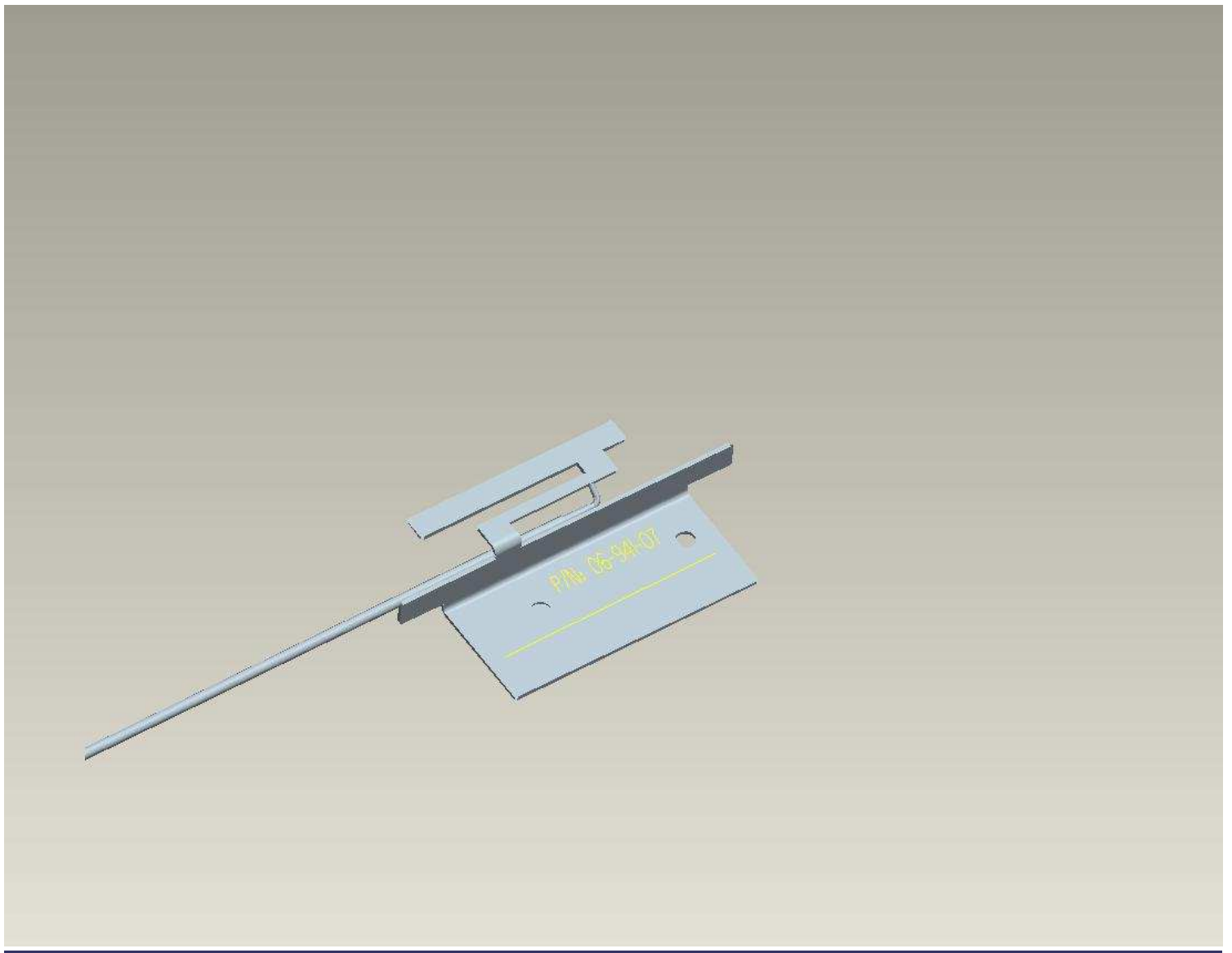


Include a dimensioned photo and dimensioned drawing of Tx2 antenna here.

Tx2 Antenna Dimensioned Drawing:



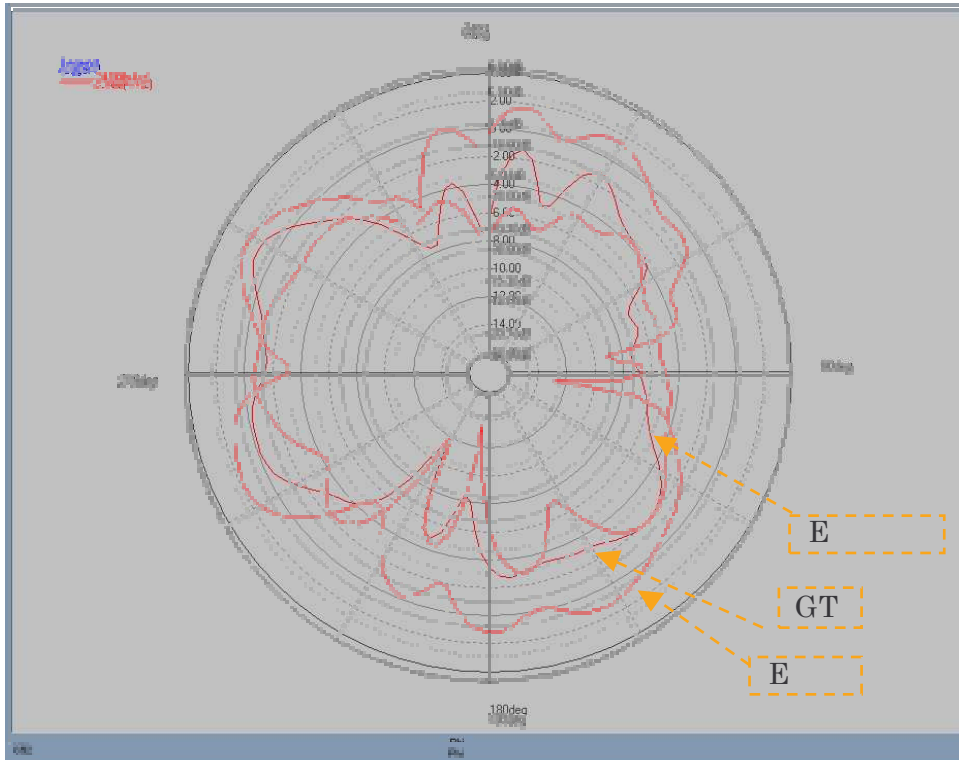
Tx2 Antenna Photo:



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

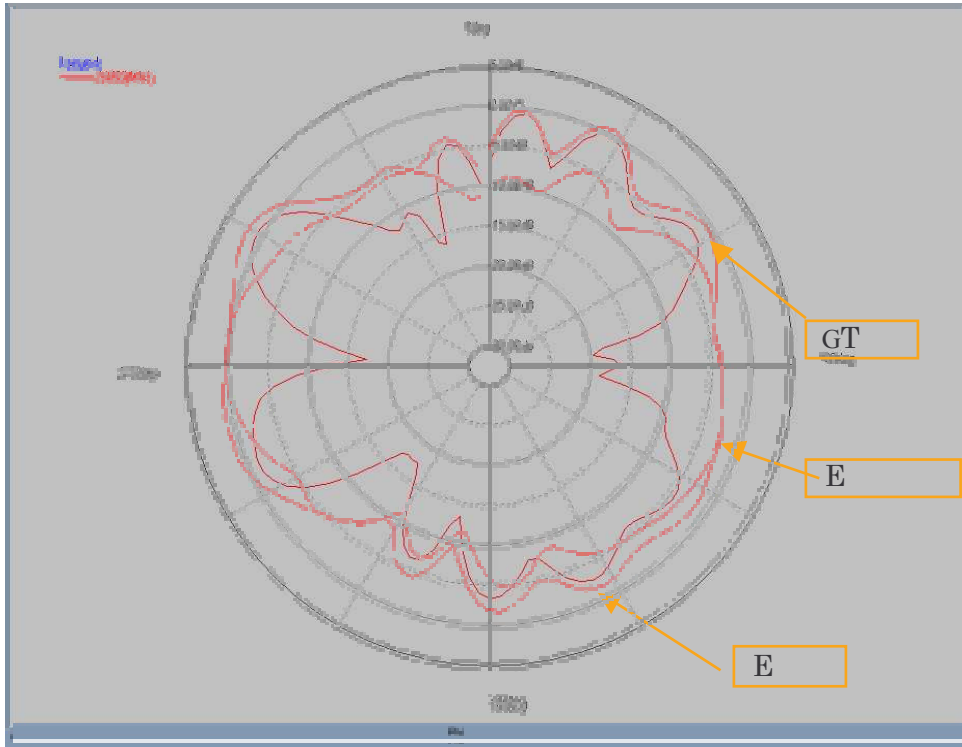
### 2400-2500MHz radiation characteristic

#### Tx1 antenna: 2400 MHz



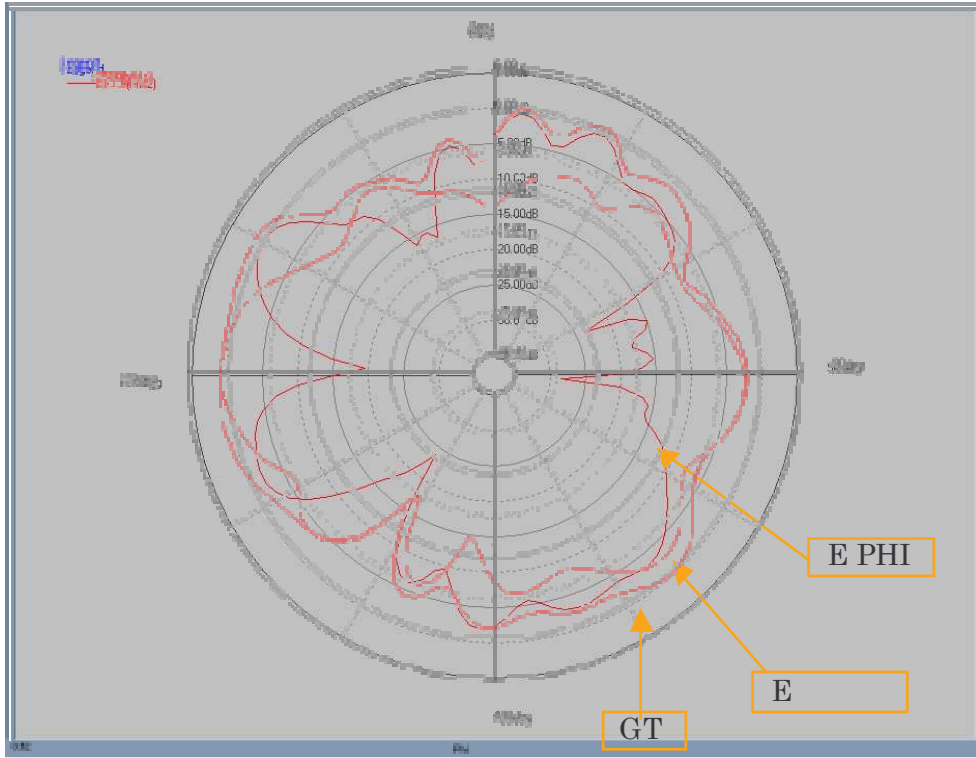
Center Frequency	<b>2400 MHz</b>
Horizontal (dBi) peak	-1.67 dB
Vertical (dBi) peak	-0.67 dB

## Tx1 antenna: 2450 MHz



Center Frequency	<b>2450 MHz</b>
Horizontal (dBi) peak	0.57 dB
Vertical (dBi) peak	0.13 dB

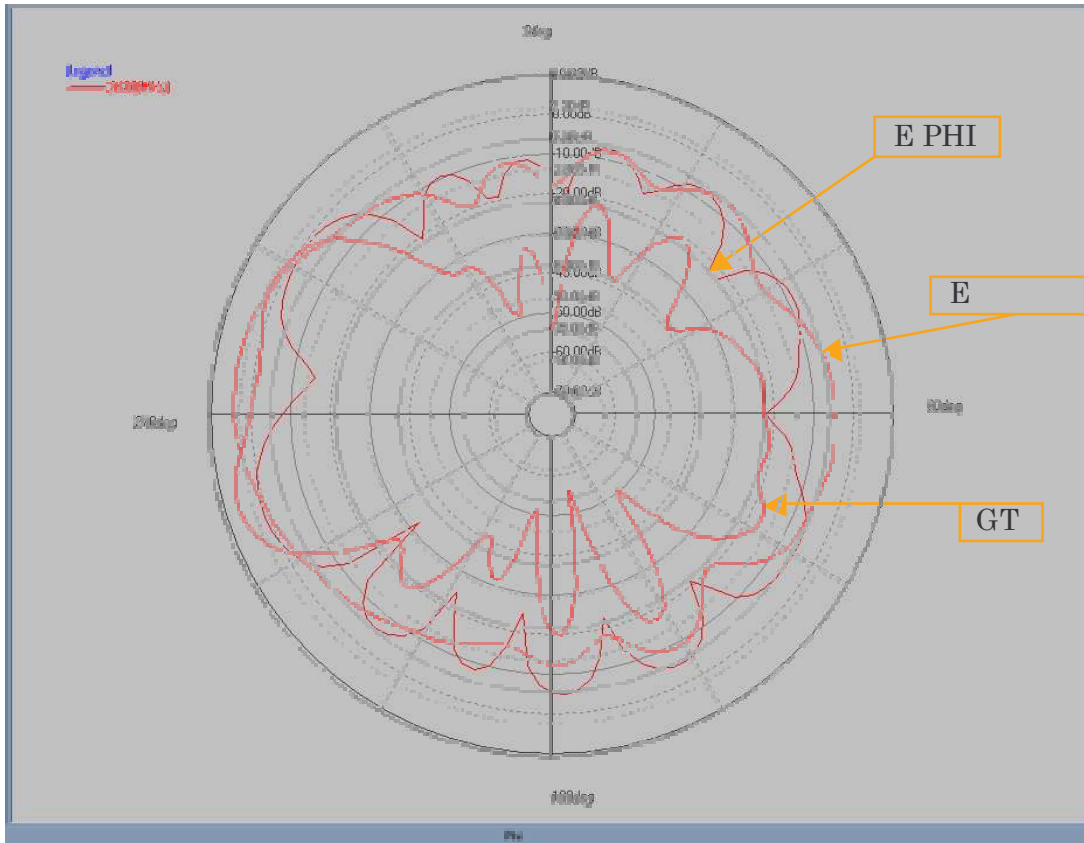
**Tx1 antenna: 2500 MHz**



Center Frequency	<b>2500 MHz</b>
Horizontal (dBi) peak	-0.12 dB
Vertical (dBi) peak	0.91 dB

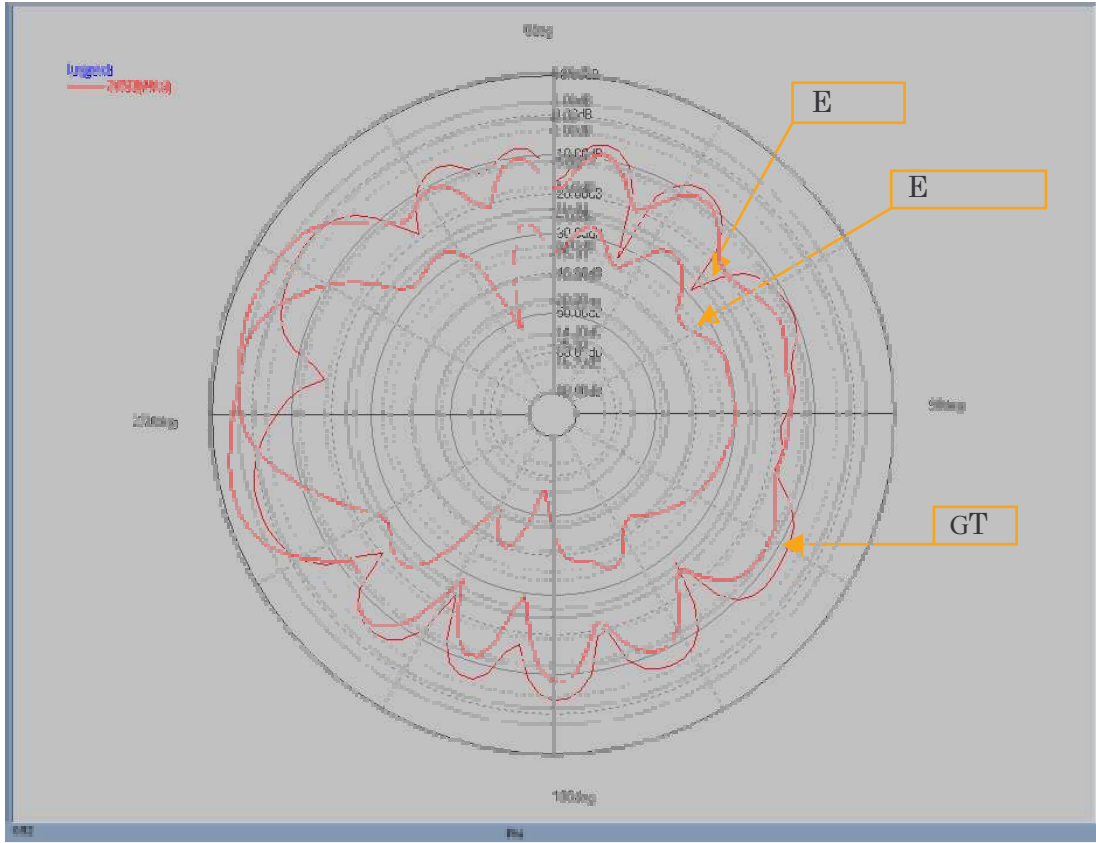


## Tx2 antenna: 2400 MHz



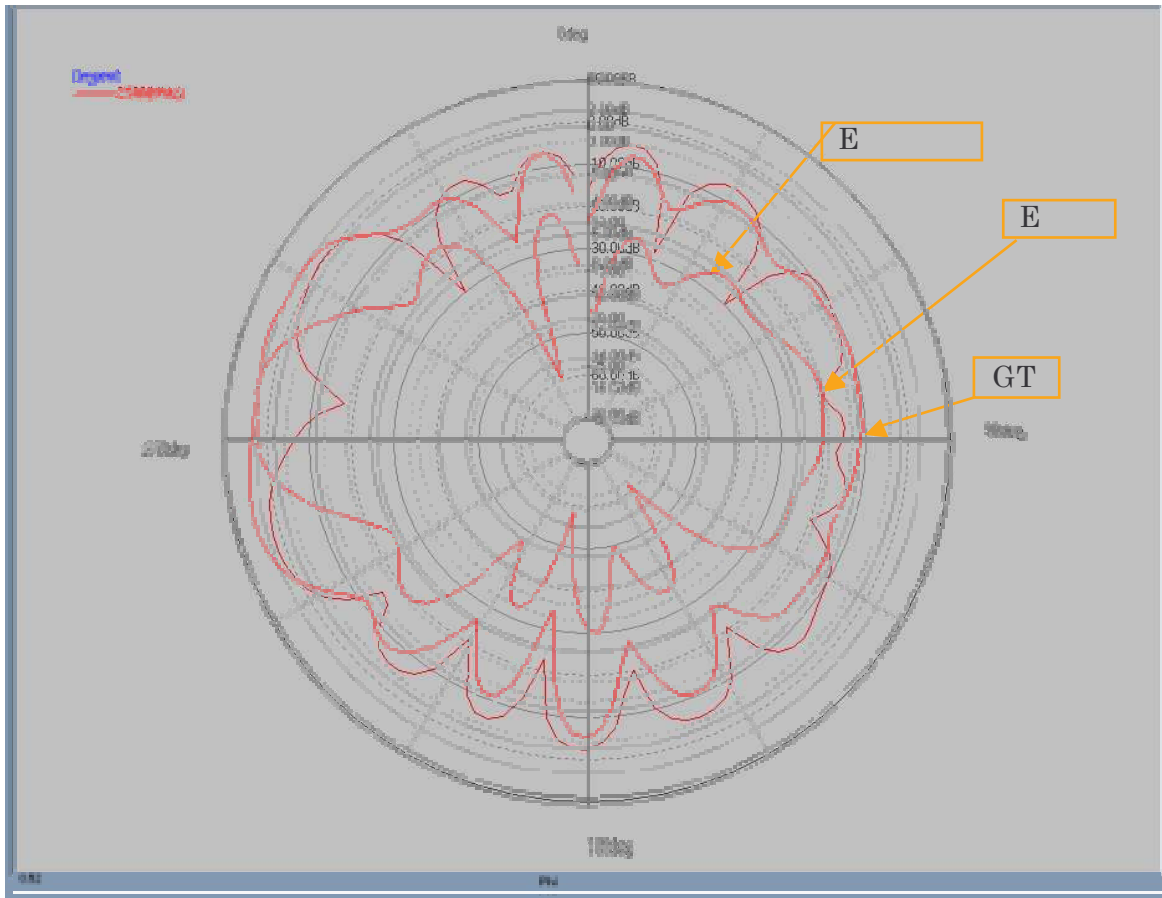
Center Frequency	<b>2400 MHz</b>
Horizontal (dBi) peak	1.02 dB
Vertical (dBi) peak	0.91 dB

**Tx2 antenna: 2450 MHz**



Center Frequency	<b>2450 MHz</b>
Horizontal (dBi) peak	1.88 dB
Vertical (dBi) peak	2.04 dB

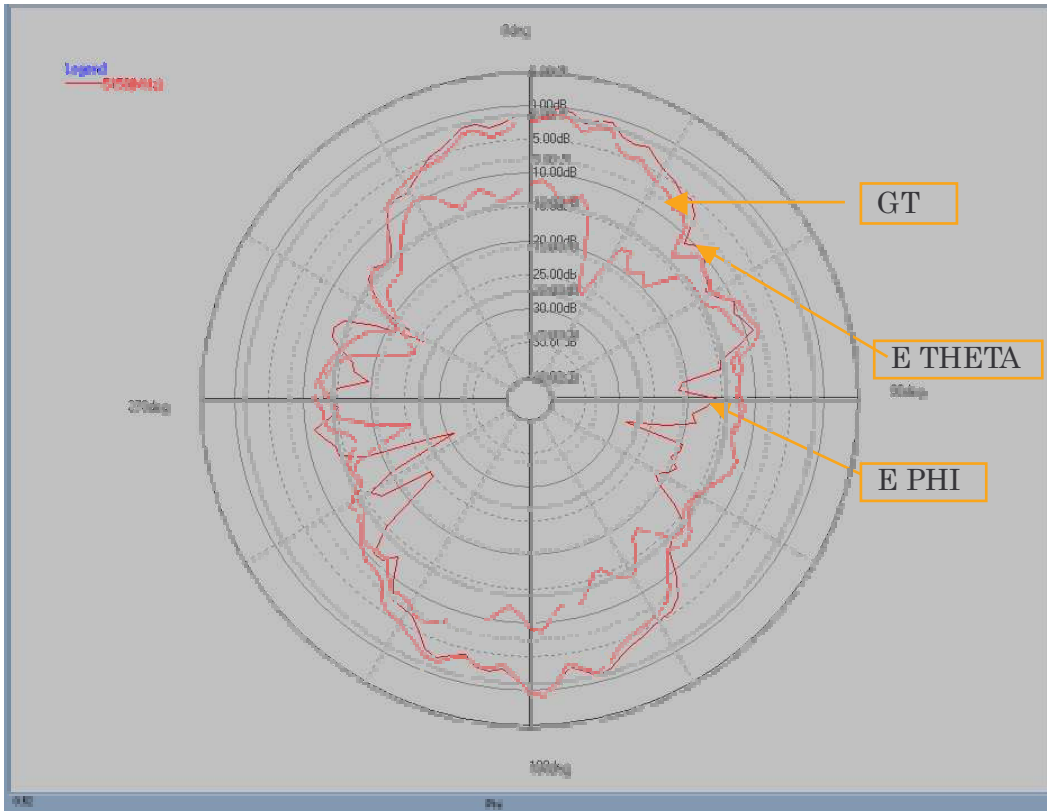
**Tx2 antenna: 2500 MHz**



Center Frequency	<b>2500 MHz</b>
Horizontal (dBi) peak	1.84 dB
Vertical (dBi) peak	2.03 dB

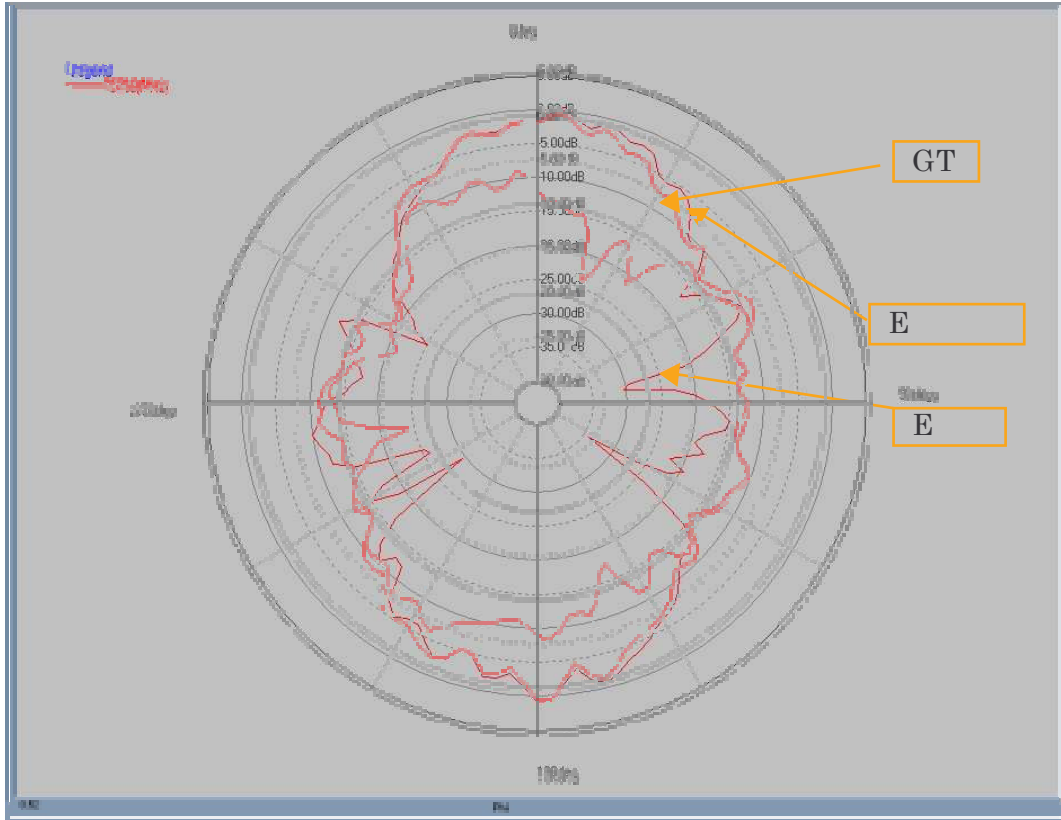
**5150-5350 MHz radiation characteristic**

**Tx1 antenna: 5150 MHz**



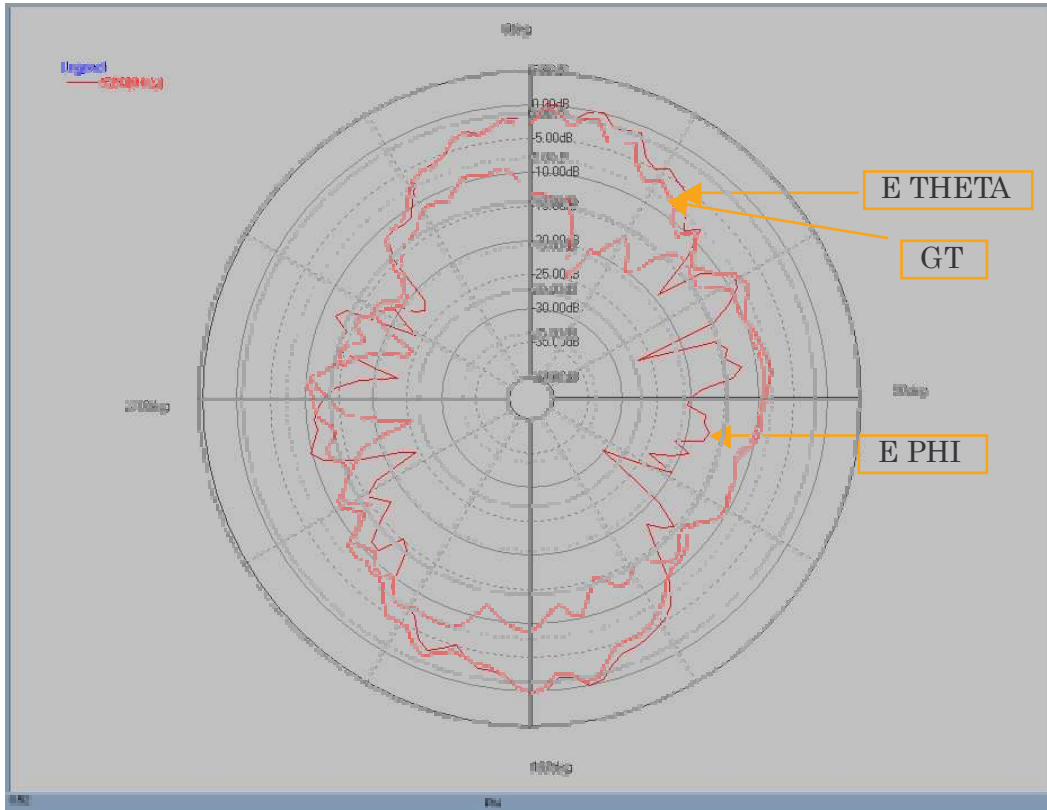
Center Frequency	<b>5150 MHz</b>
Horizontal (dBi) peak	0.57 dB
Vertical (dBi) peak	-4.47 dB

**Tx1 antenna: 5250 MHz**

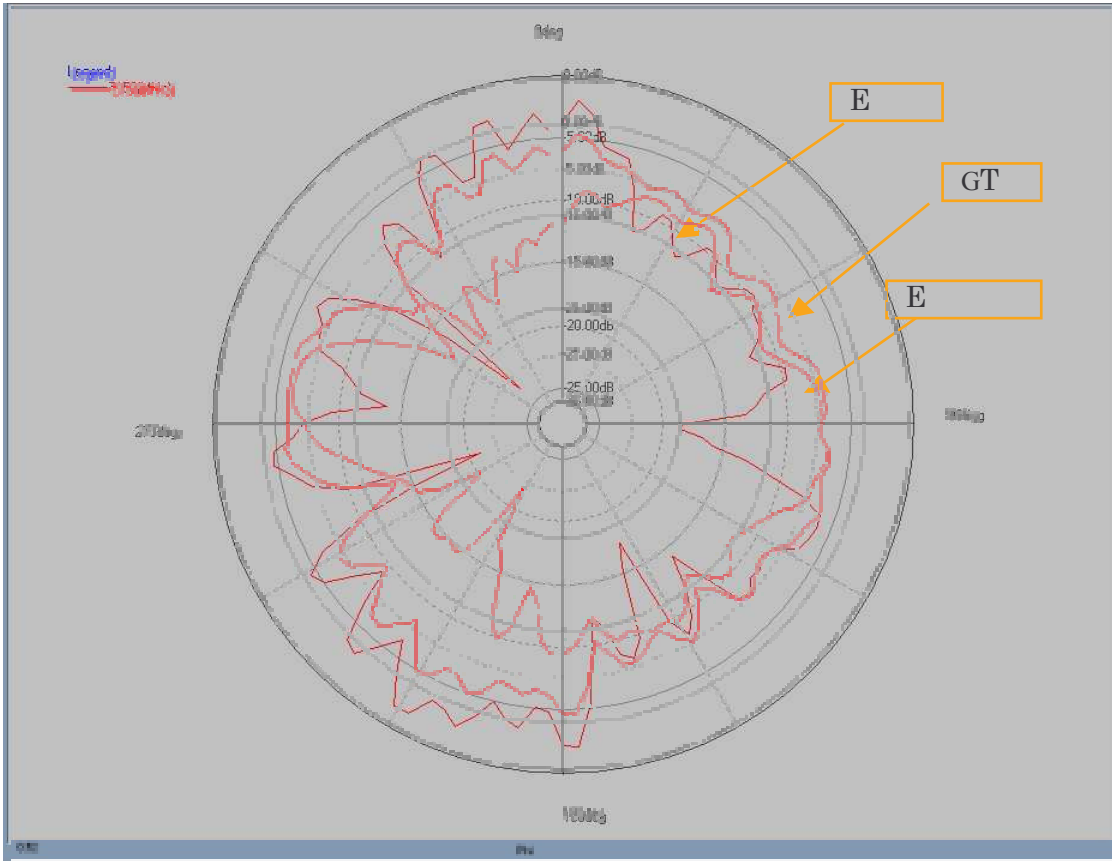


Center Frequency	<b>5250 MHz</b>
Horizontal (dBi) peak	0.55 dB
Vertical (dBi) peak	-4.47 dB

**Tx1 antenna: 5350 MHz**

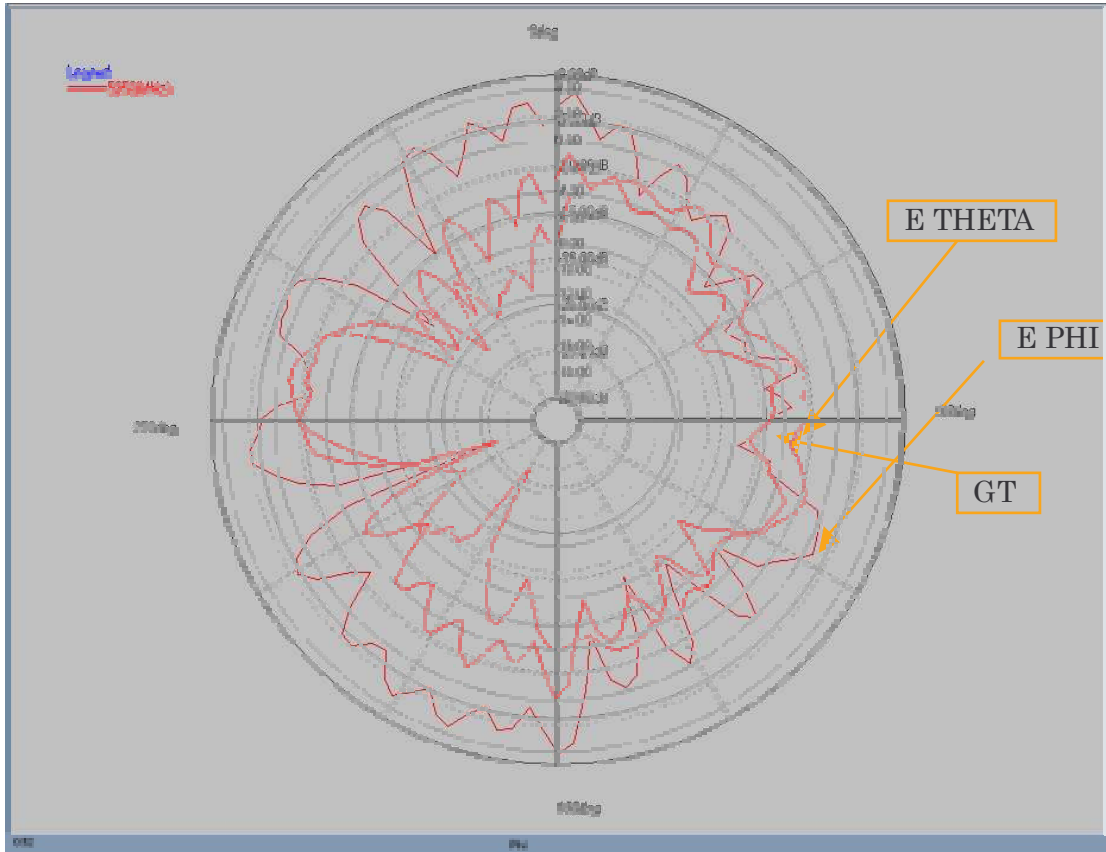


Center Frequency	<b>5350 MHz</b>
Horizontal (dBi) peak	0.18 dB
Vertical (dBi) peak	-4.74 dB



Center Frequency	<b>5150 MHz</b>
Horizontal (dBi) peak	-1.63 dB
Vertical (dBi) peak	-3.05 dB

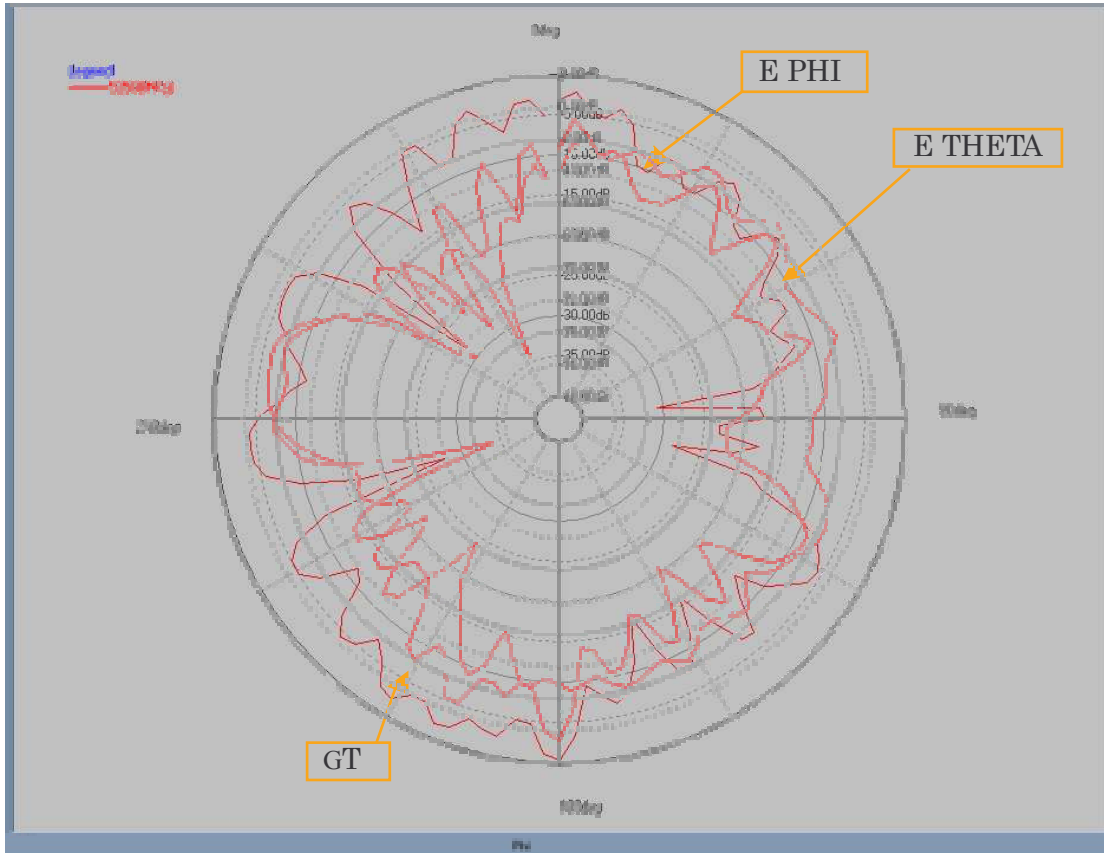
**Tx2 antenna: 5250 MHz**



Center Frequency	<b>5250 MHz</b>
Horizontal (dBi) peak	-1.21 dB
Vertical (dBi) peak	-3.03 dB



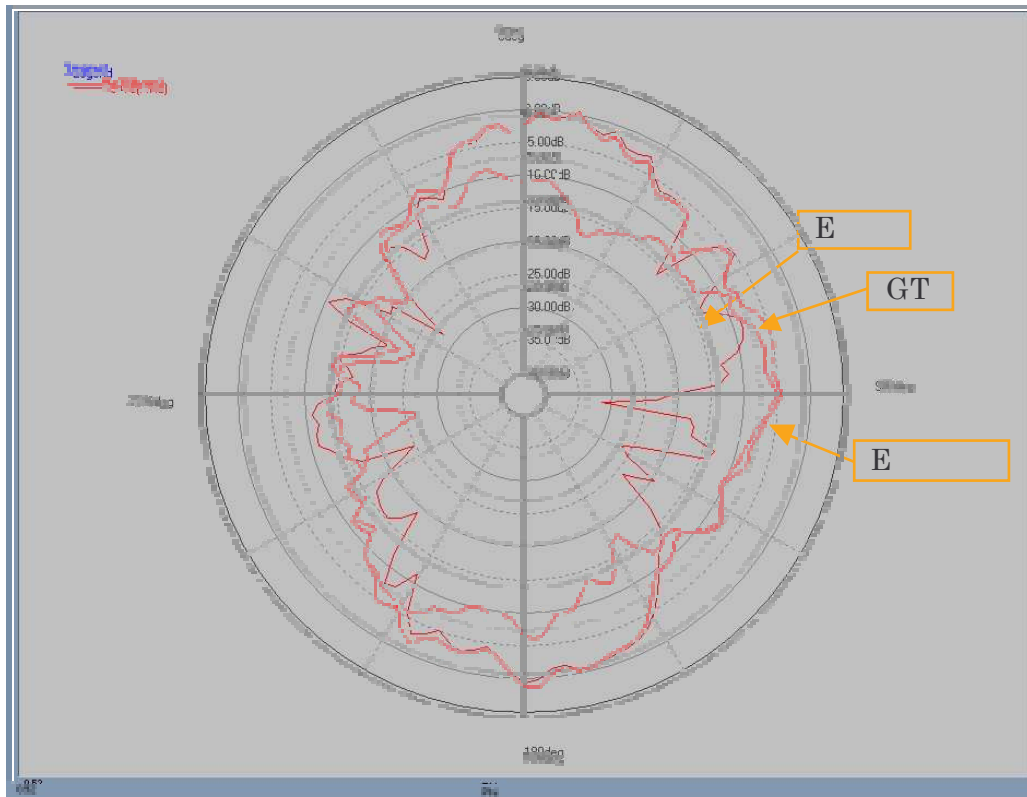
**Tx2 antenna: 5350 MHz**



Center Frequency	<b>5350 MHz</b>
Horizontal (dBi) peak	-0.33 dB
Vertical (dBi) peak	-2.86 dB

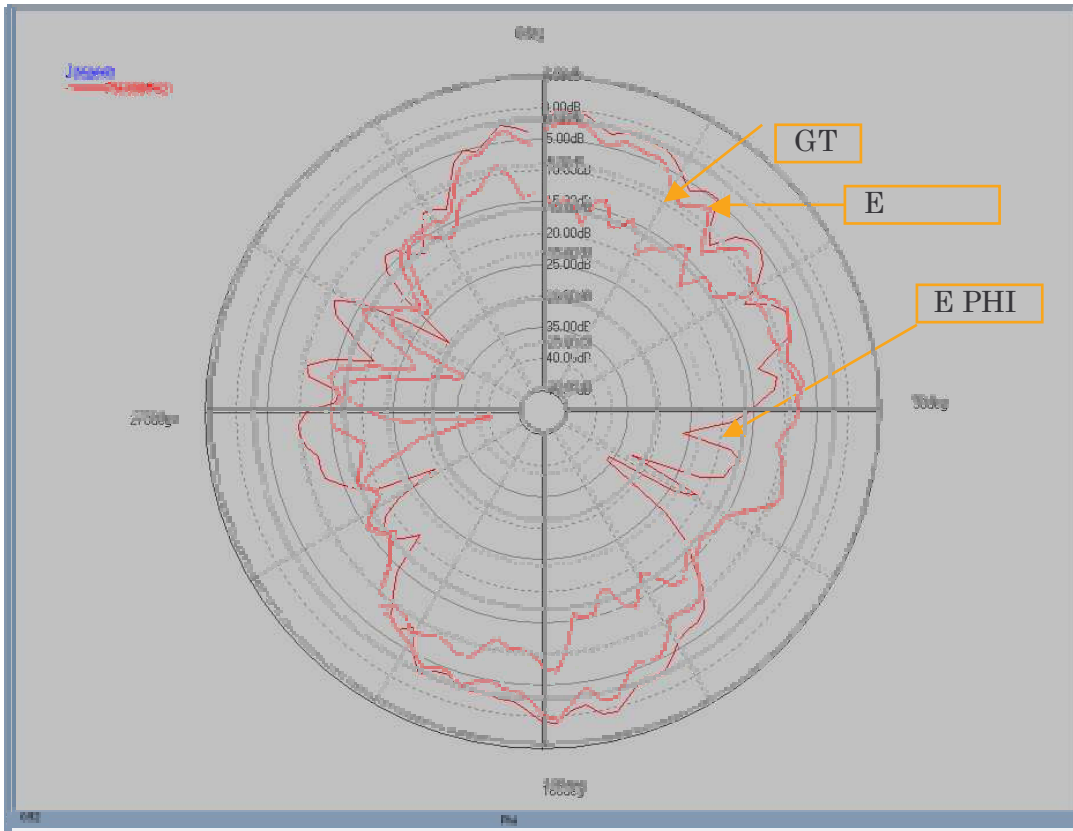
## 5470-5725MHz radiation characteristic

### Tx1 antenna: 5470 MHz



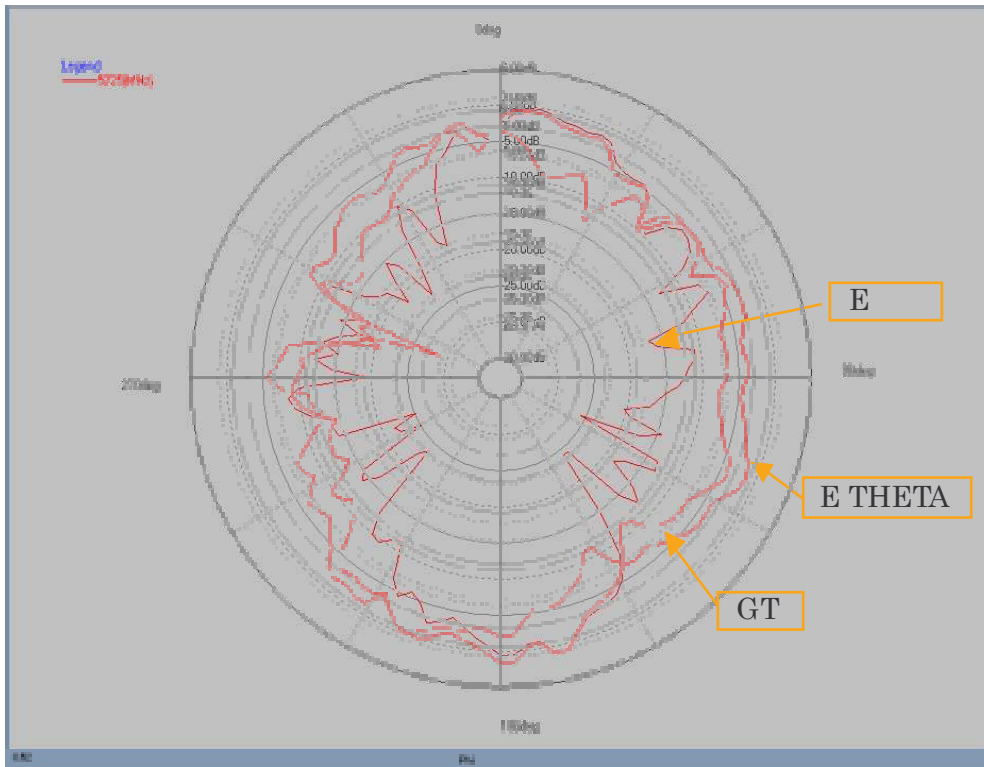
Center Frequency	<b>5470 MHz</b>
Horizontal (dBi) peak	0.40 dB
Vertical (dBi) peak	-2.96 dB

**Tx1 antenna: 5600 MHz**



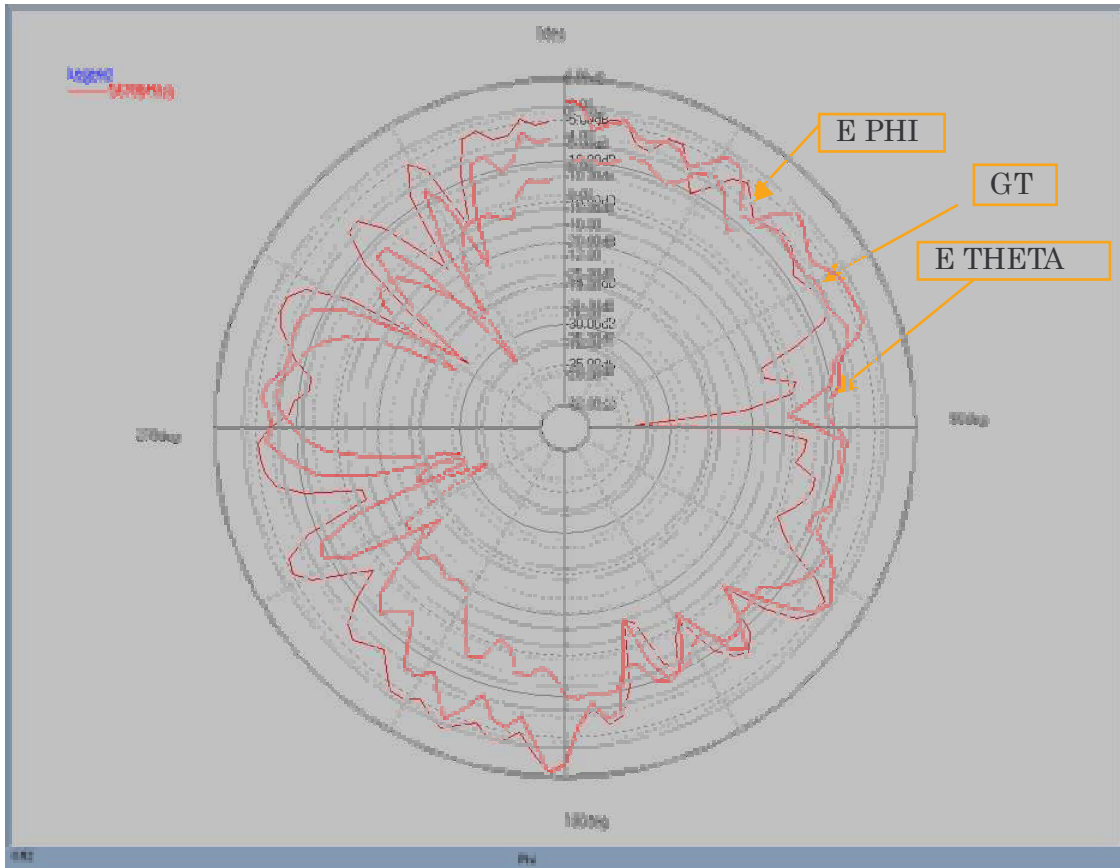
Center Frequency	<b>5600 MHz</b>
Horizontal (dBi) peak	0.98 dB
Vertical (dBi) peak	-3.22 dB

**Tx1 antenna: 5725 MHz**



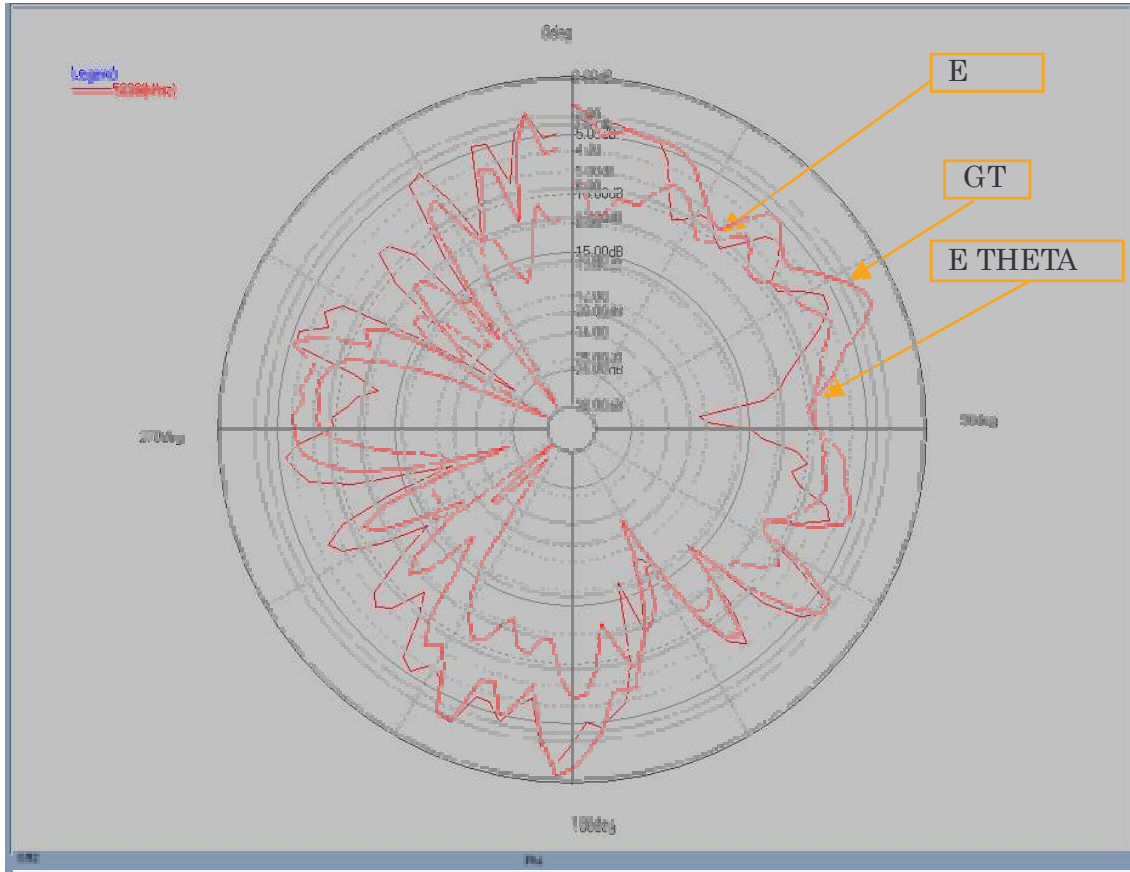
Center Frequency	<b>5725 MHz</b>
Horizontal (dBi) peak	0.77 dB
Vertical (dBi) peak	-1.32 dB

**Tx2 antenna: 5470 MHz**



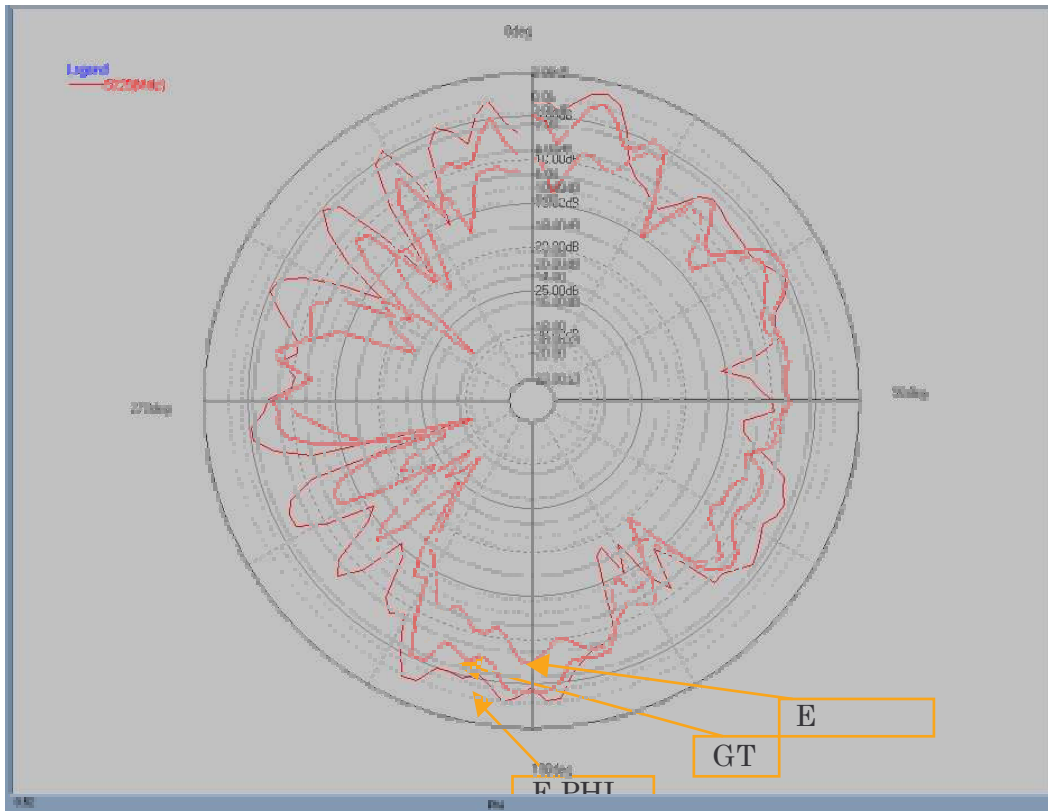
Center Frequency	<b>5470 MHz</b>
Horizontal (dBi) peak	-0.83 dB
Vertical (dBi) peak	-2.80 dB

**Tx2 antenna: 5600 MHz**



Center Frequency	<b>5600 MHz</b>
Horizontal (dBi) peak	-1.51 dB
Vertical (dBi) peak	-2.83 dB

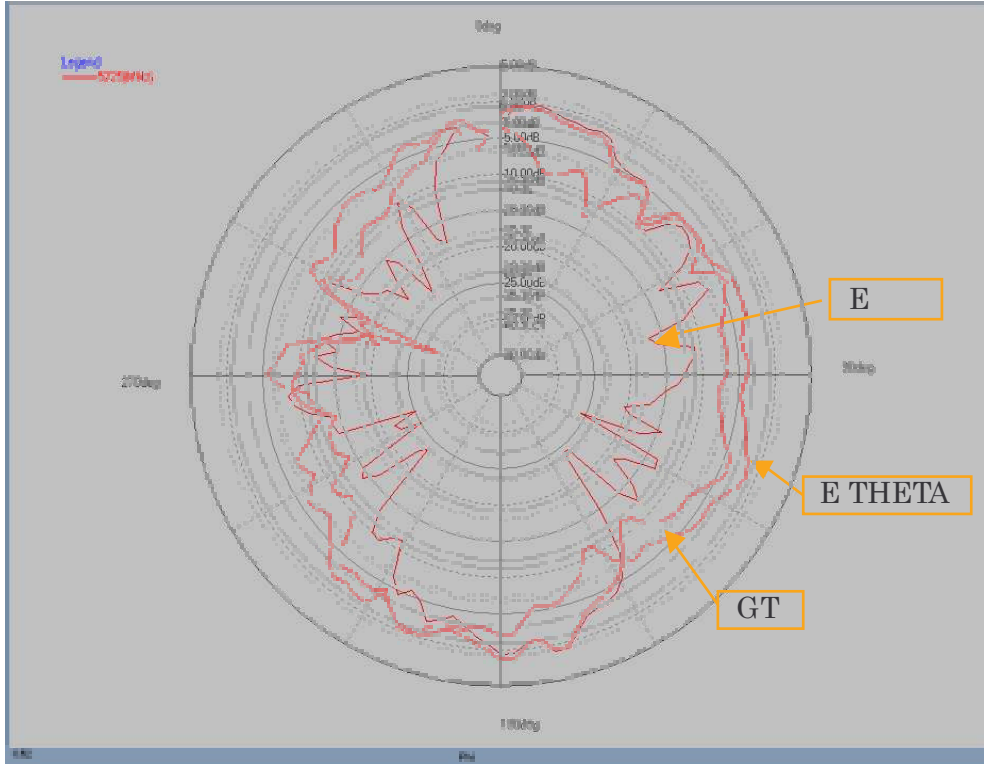
**Tx2 antenna: 5725 MHz**



Center Frequency	<b>5725 MHz</b>
Horizontal (dBi) peak	-1.61 dB
Vertical (dBi) peak	-1.89 dB

**5725-5850 MHz radiation characteristic**

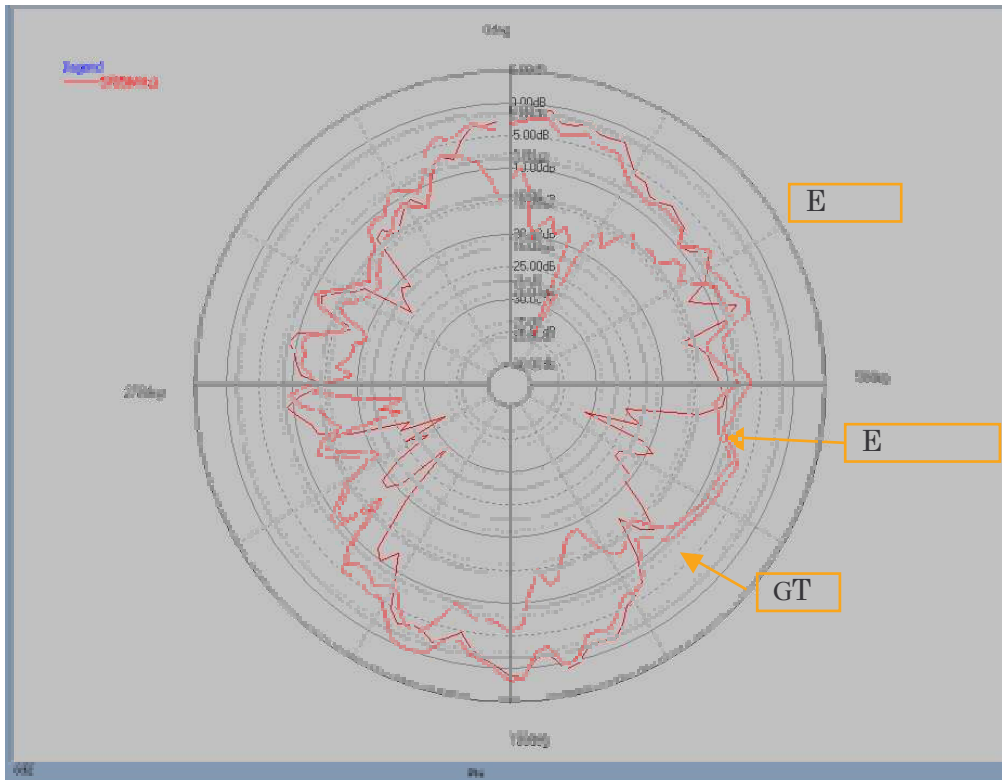
**Tx1 antenna: 5725 MHz**



Center Frequency	<b>5725 MHz</b>
Horizontal (dBi) peak	0.77 dB
Vertical (dBi) peak	-1.32 dB

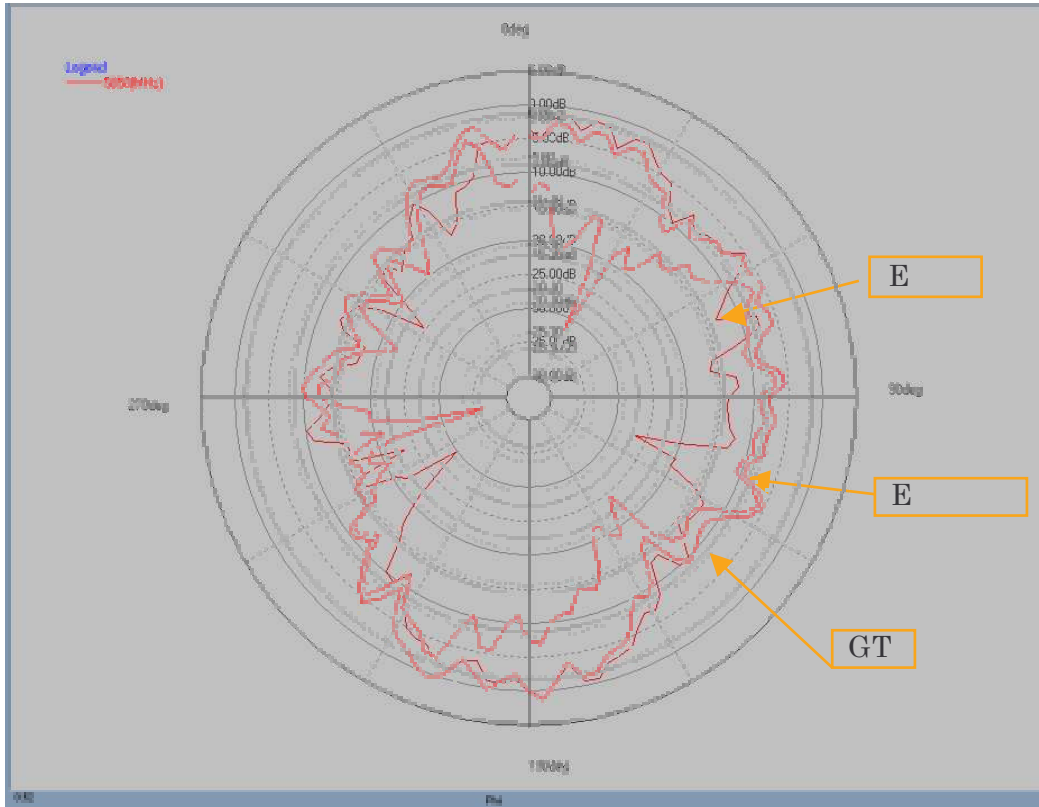


**Tx1 antenna: 5785 MHz**



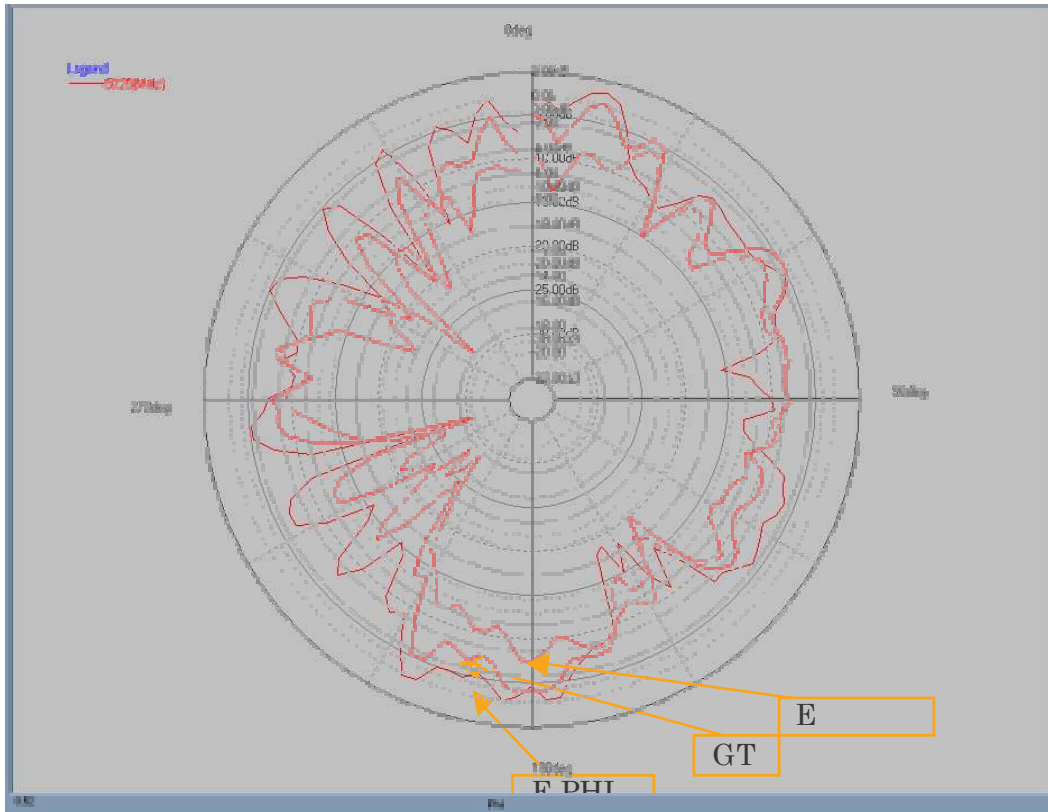
Center Frequency	<b>5785 MHz</b>
Horizontal (dBi) peak	0.99 dB
Vertical (dBi) peak	-0.52 dB

**Tx1 antenna: 5850 MHz**



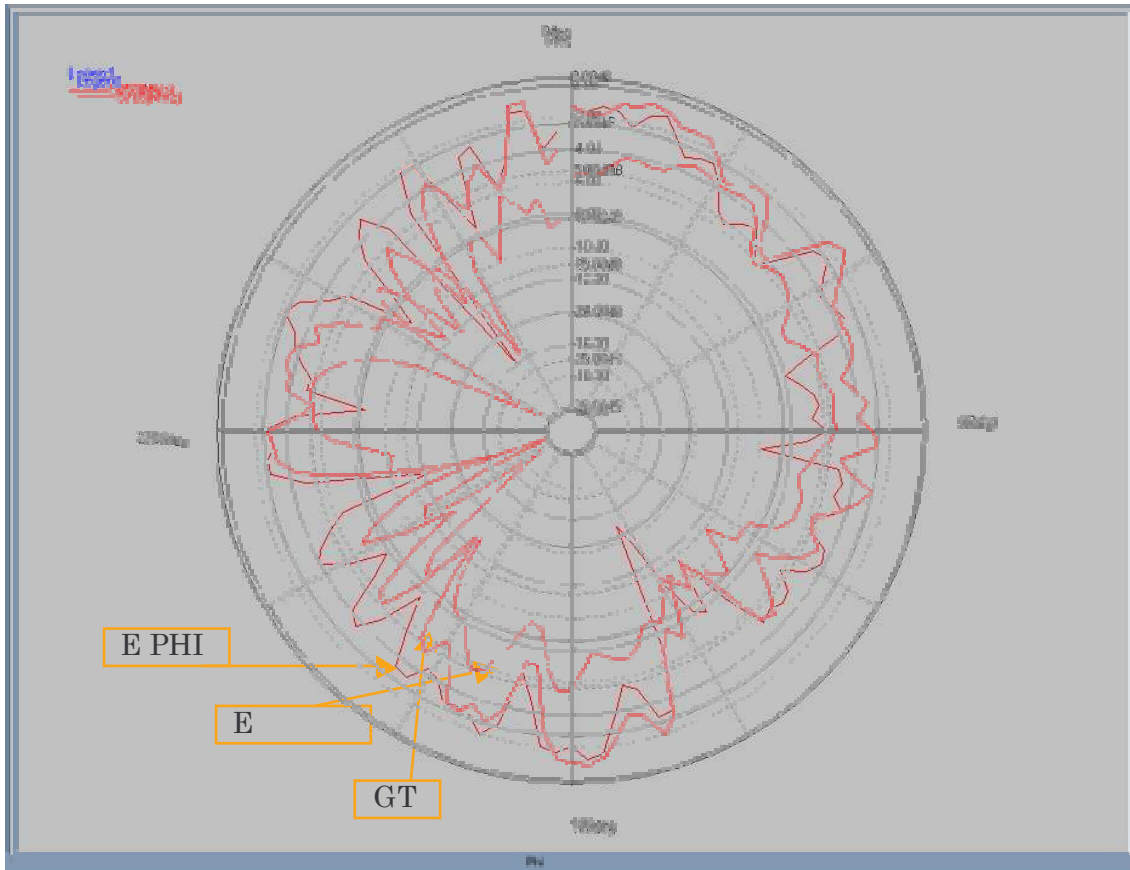
Center Frequency	<b>5850 MHz</b>
Horizontal (dBi) peak	0.84 dB
Vertical (dBi) peak	-0.63 dB

**Tx2 antenna: 5725 MHz**



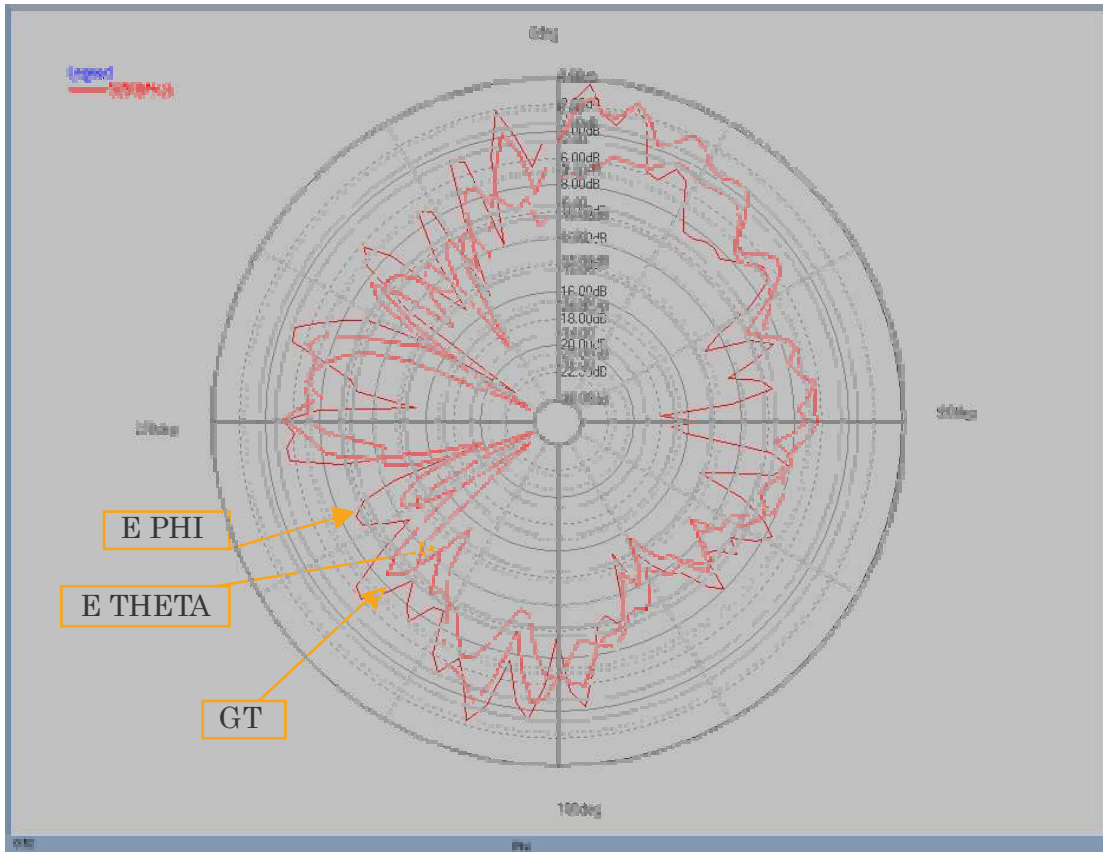
Center Frequency	<b>5725 MHz</b>
Horizontal (dBi) peak	-1.61 dB
Vertical (dBi) peak	-1.89 dB

**Tx2 antenna: 5785 MHz**



Center Frequency	<b>5785 MHz</b>
Horizontal (dBi) peak	-2.64 dB
Vertical (dBi) peak	-3.23 dB

**Tx2 antenna: 5850 MHz**



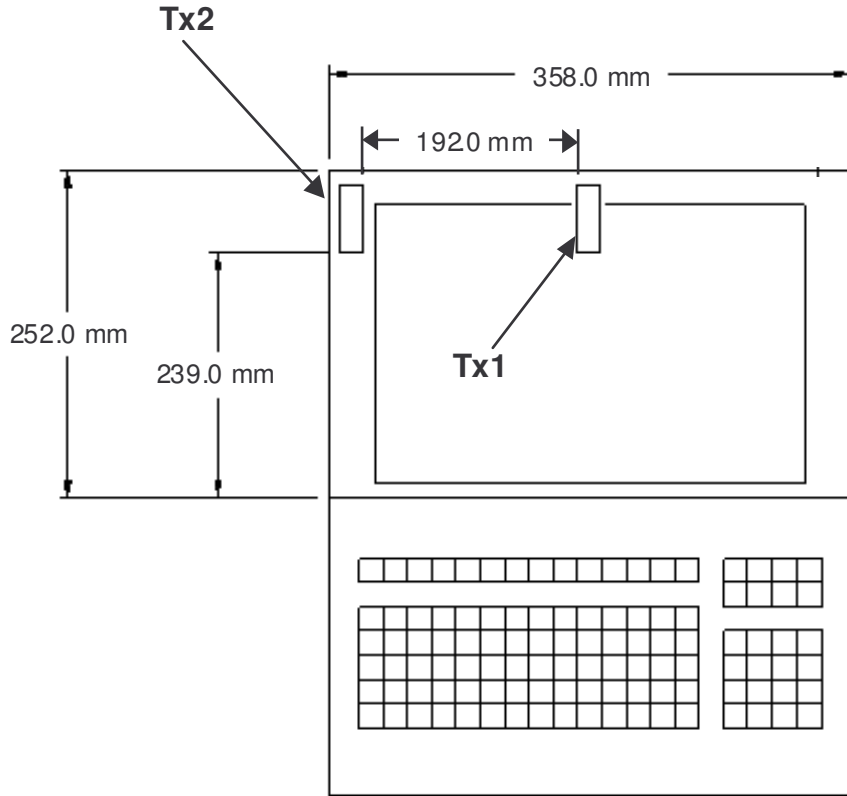
Center Frequency	<b>5850 MHz</b>
Horizontal (dBi) peak	-0.47 dB
Vertical (dBi) peak	-1.54 dB

## Section 4. Host Platform Information

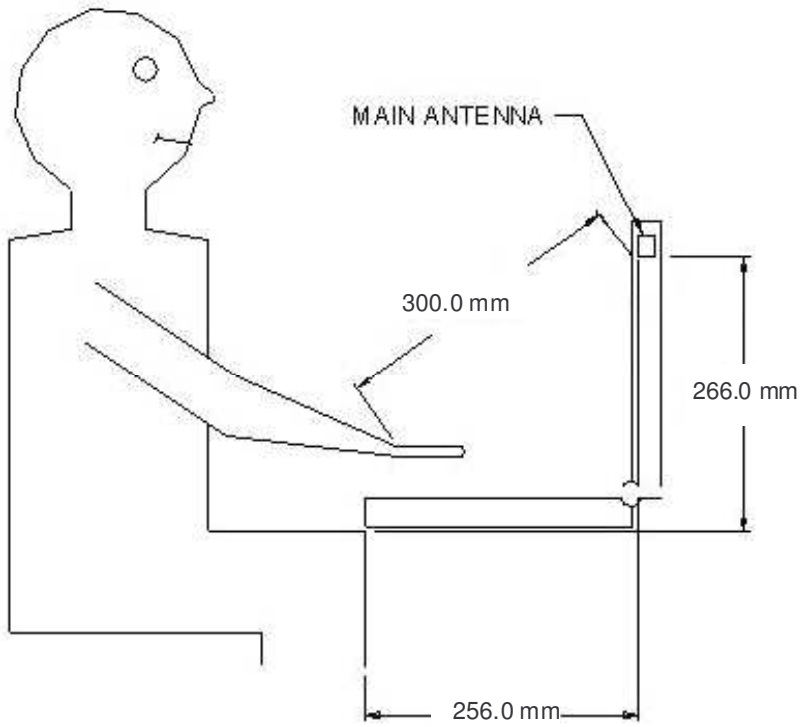
**OEM / ODM Host platform:** Gateway Oasis Model MA-8 platform correlated to Galtronics antenna MA-8 WLAN set P/N 021020168NC3709.

WLAN		
Antenna supplier	Galtronics	
Model Name	Gateway	Oasis
	Quanta	MA8
Part Number	Quanta	DQ6NC370900
	Galtronics	021020168NC3709

## Section 5. Antenna Host Platform Location Information

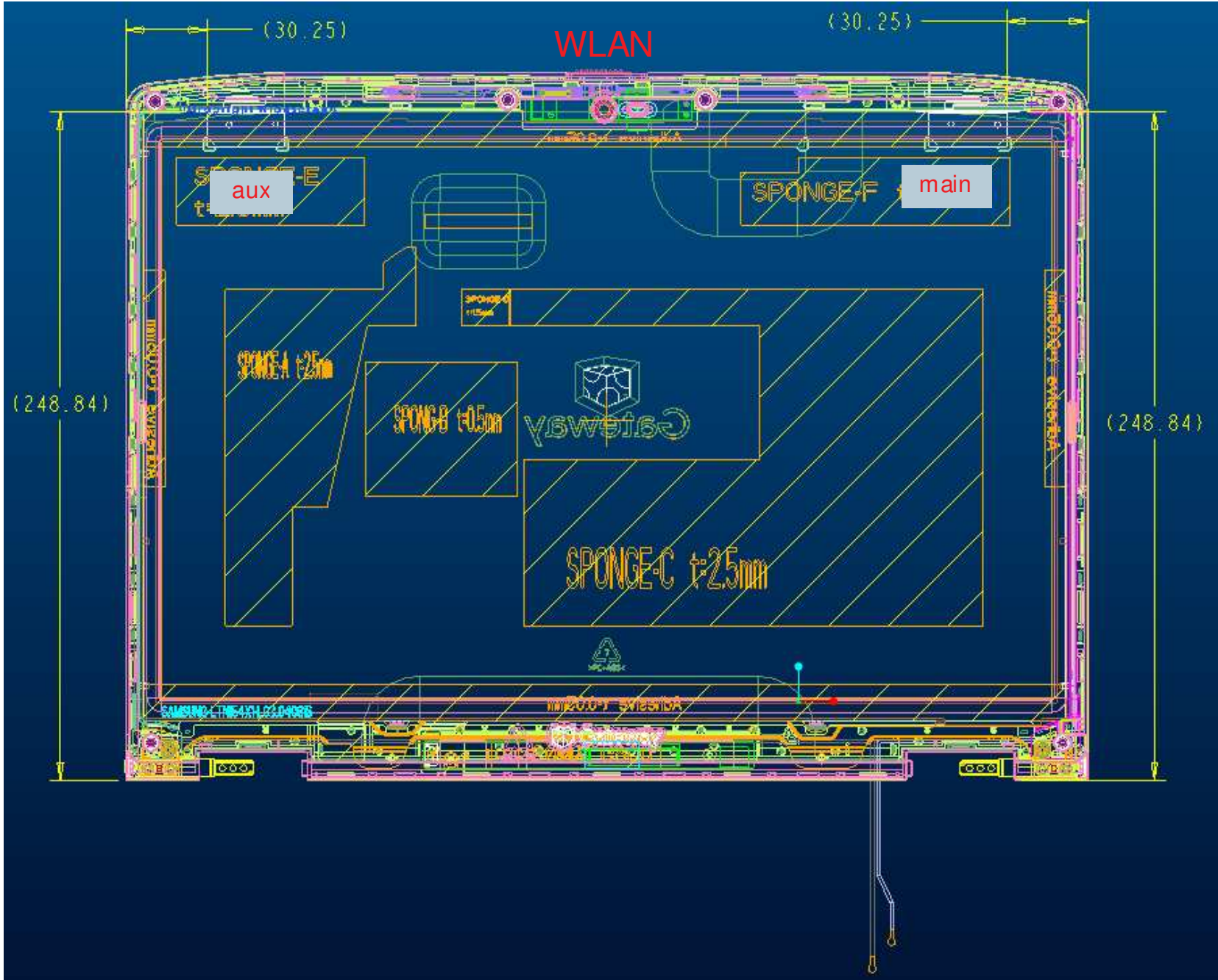


## Section 6. Antenna dimensional information for SAR evaluation





# Section 7. Diagram Example of Co-Location Antenna Separation



## 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	Galtronics, Ltd.	Darrell Simms	+972-4-673-9777	+972-4-673-4138	darrell.simms@galtronics.co.il	
Malaysia						
Mexico						
Singapore						
South Africa						
USA, Canada						