

# Regulatory WLAN Antenna Information

## 2.4/5GHz Mini Cooper Series Multiple Band Antennas with Cable & Connector For IEEE802.11 a/g/n

(English Language Required for Intel Regulatory Review / Approval)

<b>Platform</b>	
Platform Owner	Compal Inc.
Brand Name	Dell
Model Name	Mini Cooper
ODM	
Target Launch Date	(YYYY/ MM/ DD)
<b>Antenna</b>	
Brand Name	Tyco Electronics
Part Number	■ Tx1 Antenna: 2023989-1
	■ Tx2 (or Rx2) Antenna (Rx2 for 512 family ONLY) 2023988-1
	■ Tx3 (or Rx3) Antenna (Rx3 for 4965AGN ONLY) 2023989-1
<b>Module</b>	
With WLAN Module	4322 HMC
(Check Box)	4312 HMC

## 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 <u>and</u> 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. <u>(S. Korea requires photographs of antennas for approval submission). Taiwan requires pictures of each antenna type shown in the system.</u>	Required	Required	Desired	<u>Required (Photos)</u>	<u>Required (Photos)</u>
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 VSWR	1H Cable Loss (dBi)
(P/N:2023989-1) Tx1 antenna	Example: TYCO Corporation	Example: PIFA	Example: (P/N: U.FL-2LP-XXX) 50 ohm Coaxial. length: 45.5cm diameter: 1.1mm Connector: U.FL	2400-2500MHz -1.17 dBi (peak) *	2400-2500MHz -0.26 dBi (peak) *	2400-2500MHz 1.93 max *	2400-2500MHz 0.91 dBi (peak) *
				2496-2690MHz -1.12dBi (peak) *	2496-2690MHz -0.21dBi (peak) *	2496-2690MHz 1.79 max*	2496-2690MHz 0.91 dBi (peak) *
				5150-5350MHz -0.6 dBi (peak) *	5150-5350MHz 0.76 dBi (peak) *	5150-5350MHz 1.52 max *	5150-5350MHz 1.36 dBi (peak) *
				5470-5725MHz -2.06 dBi (peak) *	5470-5725MHz -0.24 dBi (peak) *	5470-5725MHz 1.92 max *	5470-5725MHz 1.82 dBi (peak) *
				5725-5850MHz -2.06 dBi (peak) *	5725-5850MHz -0.2 dBi (peak) *	5725-5850MHz 2.03 max *	5725-5850MHz 1.86dBi (peak) *
(P/N: 2023988-1) Tx2 (or Rx2 for 512 family) antenna	Example: TYCO Corporation	Example: PIFA	Example: (P/N: U.FL-2LP-XXX) 50 ohm Coaxial. length: 25.5cm diameter: 1.1mm Connector: U.FL	2400-2500MHz -2.01dBi (peak) *	2400-2500MHz 2.52 dBi (peak) *	2400-2500MHz 1.91 max *	2400-2500MHz 0.51dBi (peak) *
				2496-2690MHz -1.99 dBi (peak) *	2496-2690MHz -1.48dBi (peak) *	2496-2690MHz 1.68 max*	2496-2690MHz 0.51 dBi (peak) *
				5150-5350MHz 0.95dBi (peak) *	5150-5350MHz 1.71dBi (peak) *	5150-5350MHz 1.47 max *	5150-5350MHz 0.76dBi (peak) *
				5470-5725MHz 1.24 dBi (peak) *	5470-5725MHz 2.26 dBi (peak) *	5470-5725MHz 2.08 max *	5470-5725MHz 1.02 dBi (peak) *
				5725-5850MHz 0.5 dBi (peak) *	5725-5850MHz 1.54dBi (peak) *	5725-5850MHz 2.28 max *	5725-5850MHz 1.04dBi (peak) *
(P/N: 2023989-1) Tx3 (or Rx3) antenna	Example: TYCO Corporation	Example: PIFA	Example: (P/N: U.FL-2LP-XXX) 50 ohm Coaxial. length: 48.5cm diameter: 1.1mm Connector: U.FL	2400-2500MHz -0.79 dBi (peak)	2400-2500MHz 0.47 dBi (peak)	2400-2500MHz 2.18 max	2400-2500MHz 1.26 dBi (peak)
				2496-2690MHz -0.54 dBi (peak)	2496-2690MHz 0.77 dBi (peak)	2496-2690MHz 1.71 max	2496-2690MHz 1.31 dBi (peak)
				5150-5350MHz 1.46 dBi (peak)	5150-5350MHz 3.3 dBi (peak)	5150-5350MHz 1.93 max	5150-5350MHz 1.84 dBi (peak)
				5470-5725MHz 1.94 dBi (peak)	5470-5725MHz 3.83 dBi (peak)	5470-5725MHz 2.31 max	5470-5725MHz 1.89 dBi (peak)
				5725-5850MHz 1.31 dBi (peak)	5725-5850MHz 3.29 dBi (peak)	5725-5850MHz 2.57 max	5725-5850MHz 1.98 dBi (peak)

#### NOTE:

(\* ) If Rx2/Rx3 only (2<sup>nd</sup> or 3<sup>rd</sup> antenna receives only, e.g. for 512 family & 4965AGN) then the information marked with \* is not required

**Antenna Peak Gain Table:**

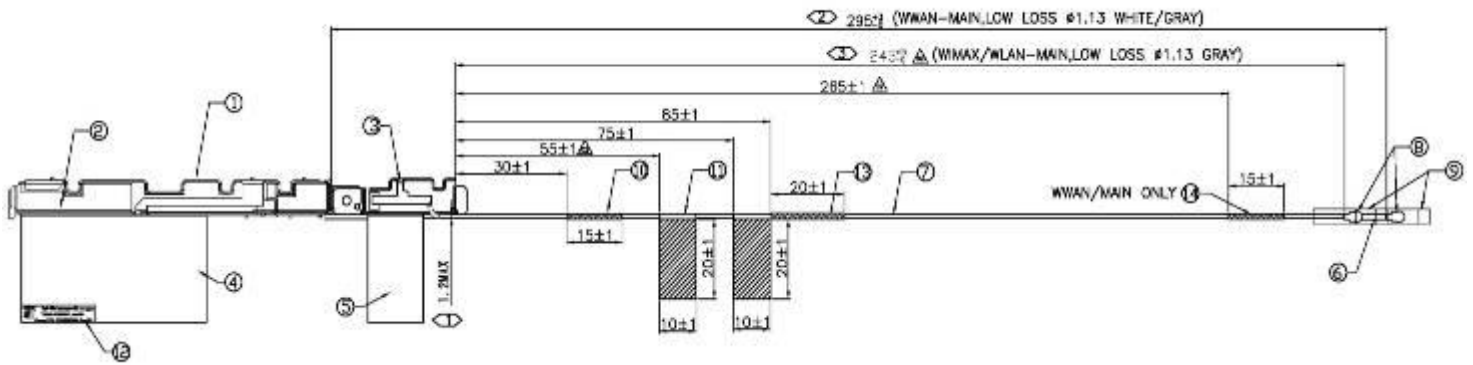
Frequency (MHz)	Tx1 antenna		Tx2 (or Rx2) Antenna		Tx3 antenna	
	Horizontal (dBi)	Vertical (dBi)	Horizontal (dBi)	Vertical (dBi)	Horizontal (dBi)	Vertical (dBi)
2400	-2.6	-6.12	-6.84	-3.68	-1.36	-4.2
2450	-1.97	-6.36	-3.21	-2.3	-0.85	-3.5
2500	-1.17	-5.1	-3.02	-2.01	-0.79	-2.44
2501	-1.12	-5.04	-3	-1.99	-0.79	-2.44
2593	-2.84	-6.49	-4.64	-4.38	-0.86	-2.79
2685	-3.43	-7.16	-2.87	-5.23	-0.8	-0.54
5150	-0.6	-5.45	-0.1	-5.72	0.41	-2.53
5250	-2.29	-6.51	0.95	-5.51	1.46	-0.51
5350	-1.82	-8.55	0.84	-4.92	0.32	-0.56
5470	-2.32	-7.98	1.24	-5.18	-1.74	-1.4
5600	-3.16	-7.99	-1.35	-6.98	1.94	-1.06
5725	-2.06	-6.6	0.5	-6.98	-1.67	-2.36
5785	-2.63	-7.39	0.28	-5.91	1.31	-0.37
5850	-3.66	-7.81	-1.11	-6.76	-0.73	-3.95

- Antenna Peak Gain required being test in system basis.
- 1E frame contend absolutely peak antenna gain include H/V
- If Rx2 only (2<sup>nd</sup> antenna receives only, e.g. for 512 family) then the information is not required for Rx2.
- If Rx3 only (3<sup>rd</sup> antenna receives only, e.g. for 4965AGN) then the information is not required for Rx3.

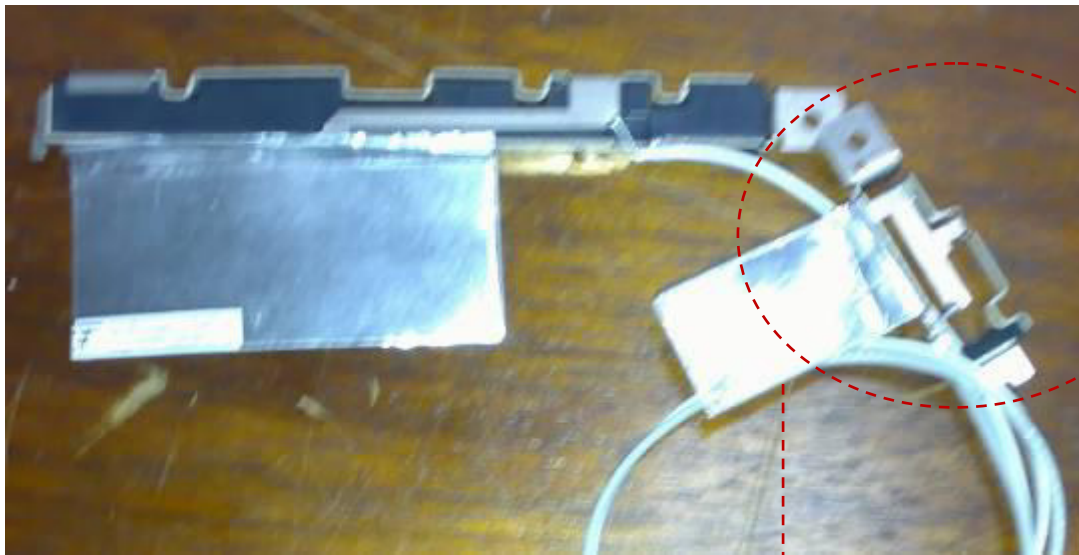


Include a dimensioned photo and dimensioned drawing of Tx2 (or Rx2) antenna here.

Tx2 (or Rx2) Antenna Dimensioned Drawing:



Tx2 (or Rx2) Antenna Photo:

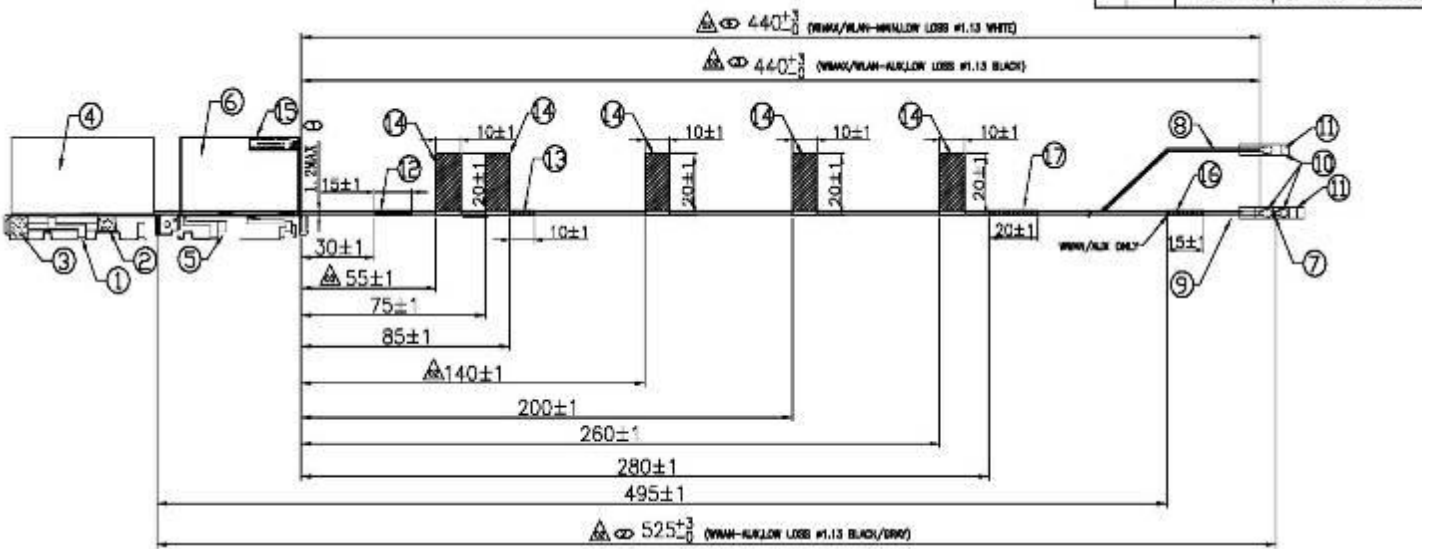


TX2  
antenna

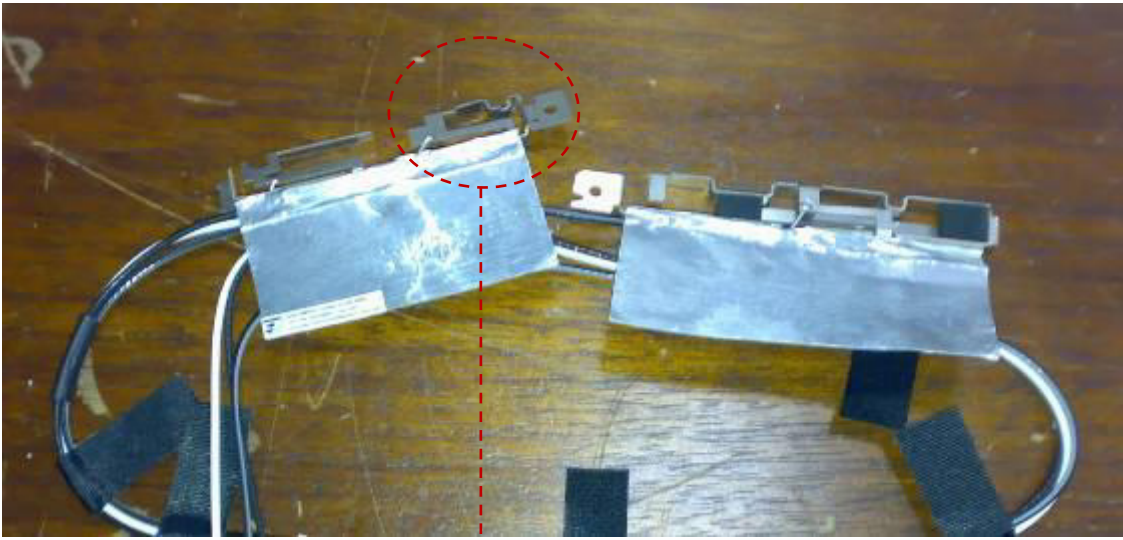


Include a dimensioned photo and dimensioned drawing of Tx3 (or Rx3) antenna here.

**Tx3 (or Rx3) Antenna Dimensioned Drawing:**



**Tx3 (or Rx3) Antenna Photo:**



TX3  
antenna

Include front view photo of all 3 antennas here.

Antenna Manufacturer: TYCO

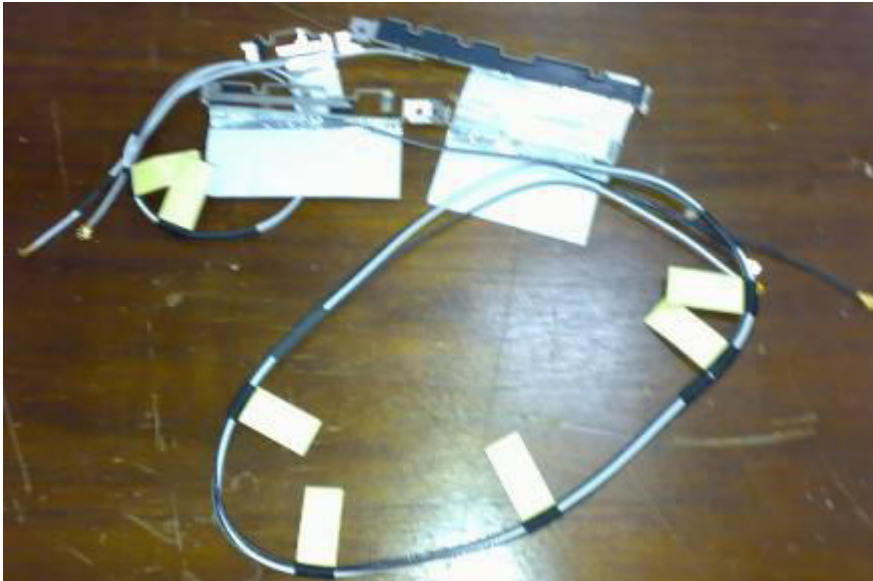
Antenna Part Number: 2023989 (Tx1), 2023988 (Tx2 or Rx2), 2023989 (Tx3)



Include back view photo of all 3 antennas here.

Antenna Manufacturer: TYCO

Antenna Part Number: 2023989 (TX1), 2023987 (TX2), 2023989 (Tx3)

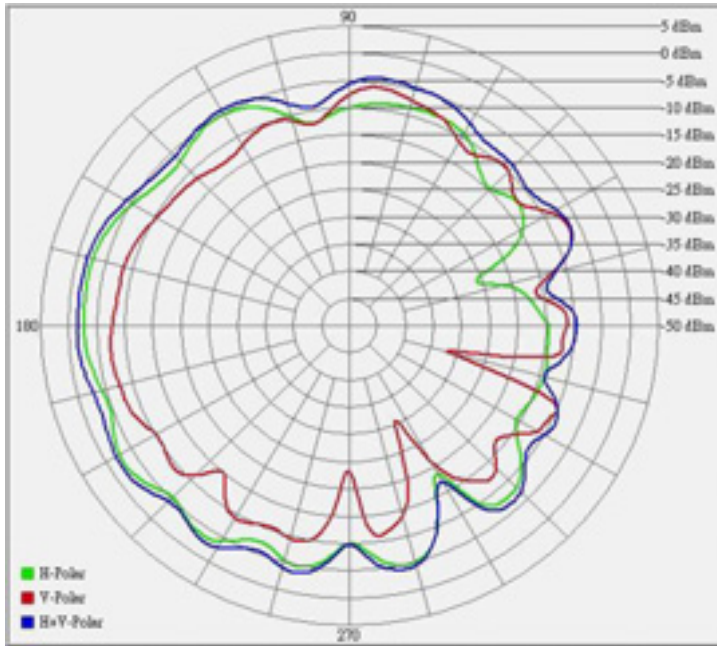




## Section 3. Radiation characteristics of antennae Loaded in Host Platform

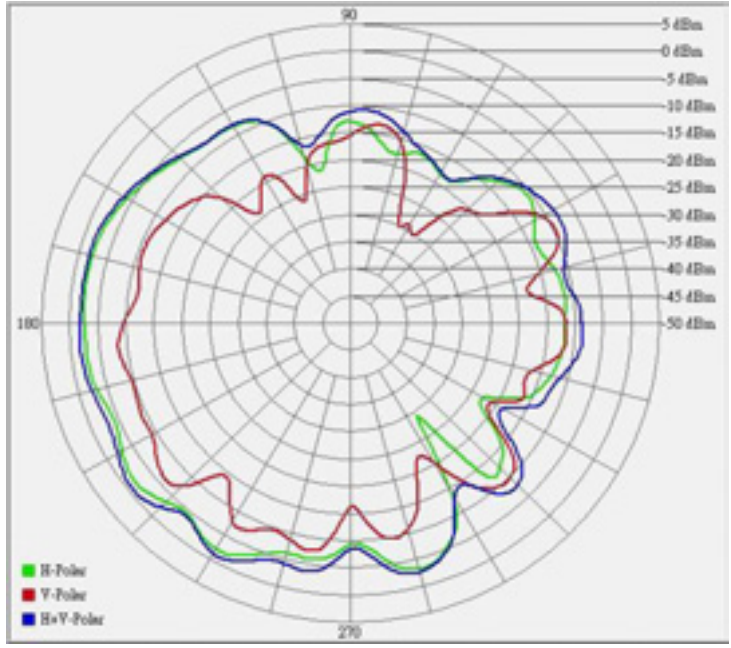
### 2400-2500MHz radiation characteristic

TX1 antenna: 2400 MHz



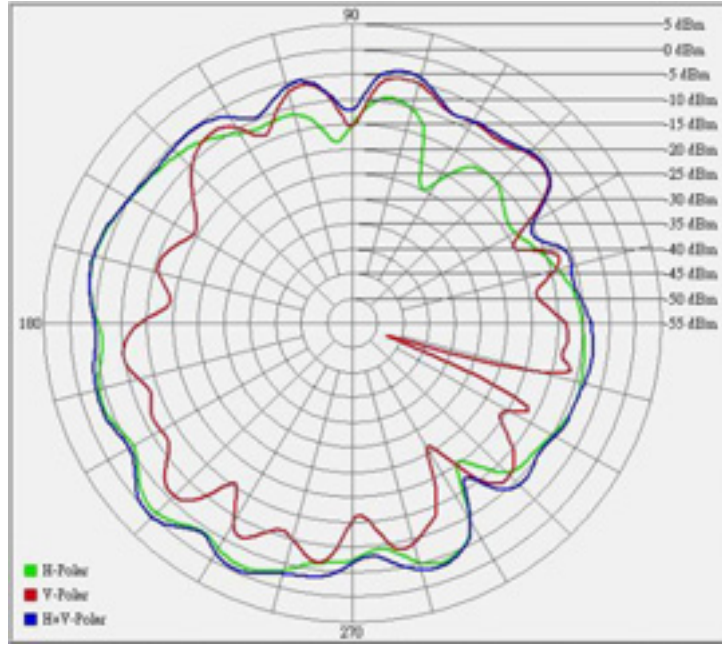
Center Frequency	<b>2400 MHz</b>
Horizontal (dBi) peak	-2.6
Vertical (dBi) peak	-6.12

**TX1 antenna: 2450 MHz**



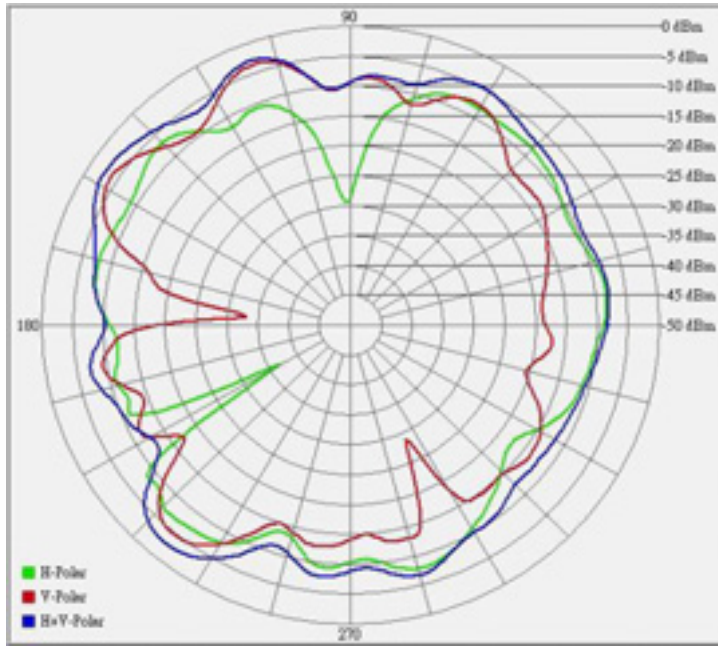
Center Frequency	<b>2450 MHz</b>
Horizontal (dBi) peak	-1.97
Vertical (dBi) peak	-6.36

**TX1 antenna: 2500 MHz**



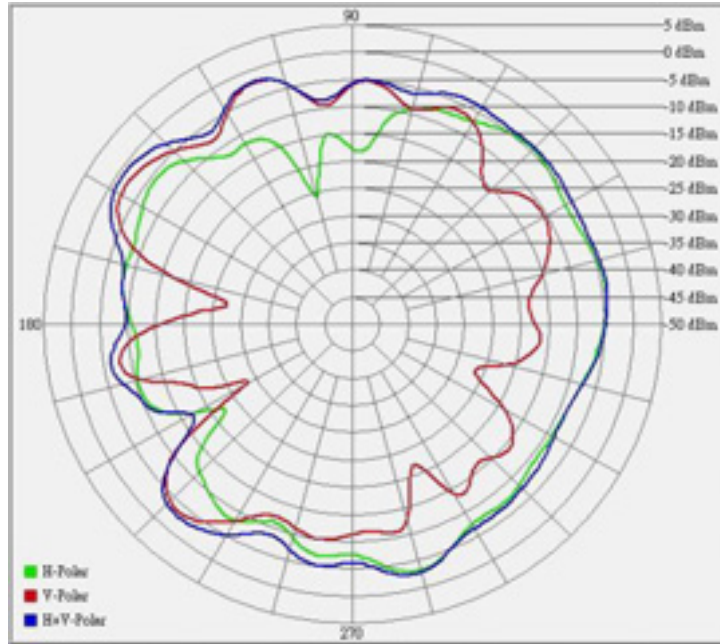
Center Frequency	<b>2500 MHz</b>
Horizontal (dBi) peak	-1.17
Vertical (dBi) peak	-5.1

**Tx2 (or Rx2) antenna: 2400 MHz (Plot is not required if 2<sup>nd</sup> Antenna is receive only e.g. Rx2 for 512 family)**



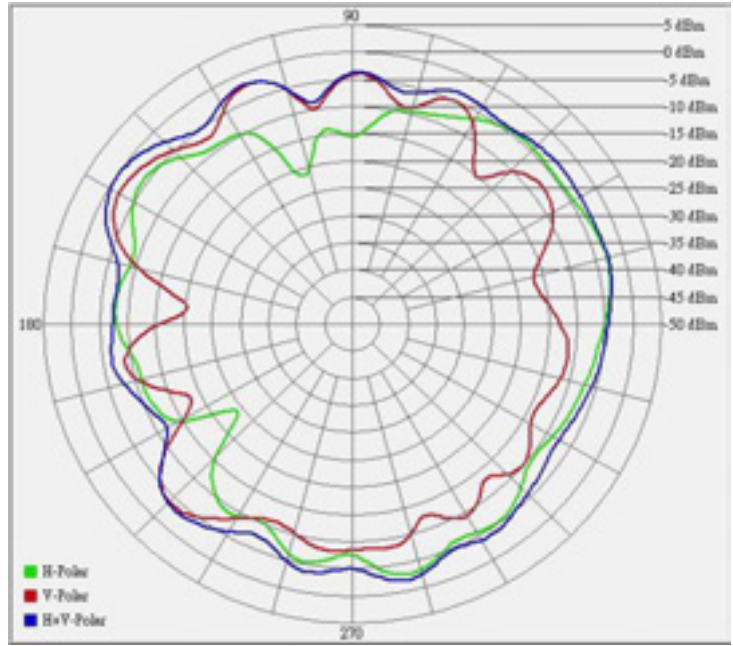
Center Frequency	<b>2400 MHz</b>
Horizontal (dBi) peak	-6.84
Vertical (dBi) peak	-3.68

**Tx2 (or Rx2) antenna: 2450 MHz (Plot is not required if 2<sup>nd</sup> Antenna is receive only e.g. Rx2 for 512 family)**



Center Frequency	<b>2450 MHz</b>
Horizontal (dBi) peak	-3.21
Vertical (dBi) peak	-2.3

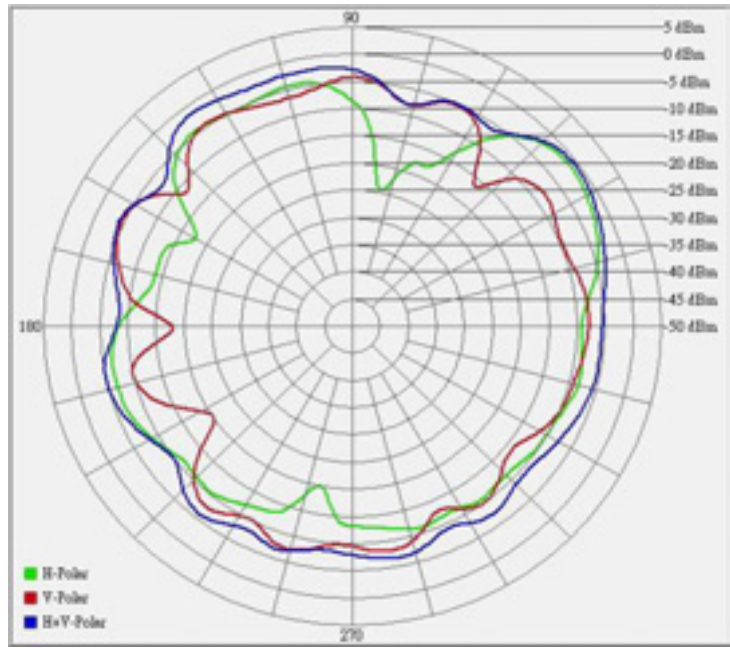
**Tx2 (or Rx2) antenna: 2500 MHz (Plot is not required if 2<sup>nd</sup> Antenna is receive only e.g. Rx2 for 512 family)**



Center Frequency	<b>2500 MHz</b>
Horizontal (dBi) peak	-3.02
Vertical (dBi) peak	-2.01

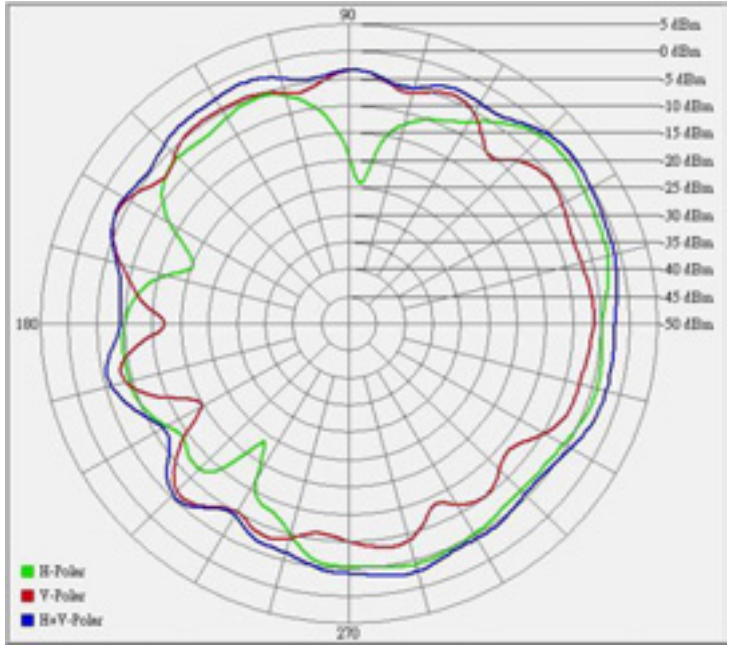


**Tx3 (or Rx3) antenna: 2400 MHz (Plot is not required if 3<sup>rd</sup> Antenna is receive only e.g. Rx3 for 4965AGN)**



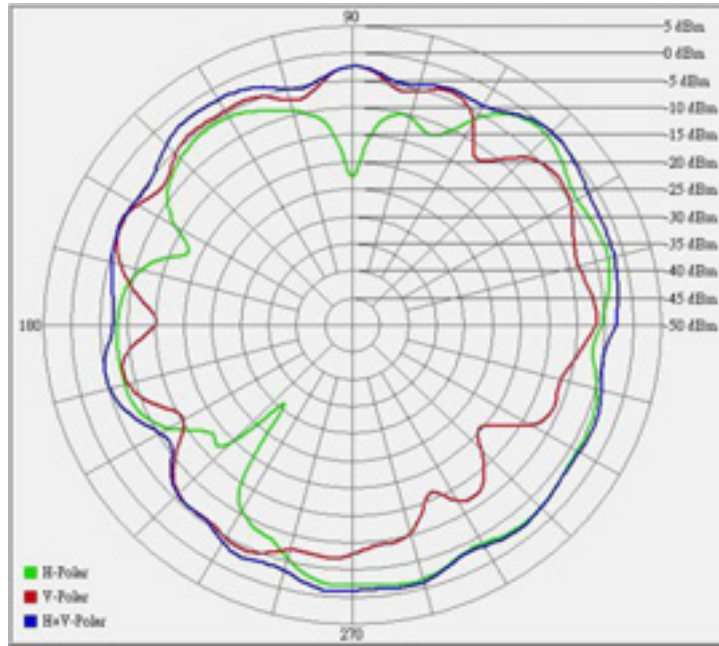
Center Frequency	<b>2400 MHz</b>
Horizontal (dBi) peak	<b>-1.36</b>
Vertical (dBi) peak	<b>-4.2</b>

**Tx3 (or Rx3) antenna: 2450 MHz (Plot is not required if 3<sup>rd</sup> Antenna is receive only e.g. Rx3 for 4965AGN)**



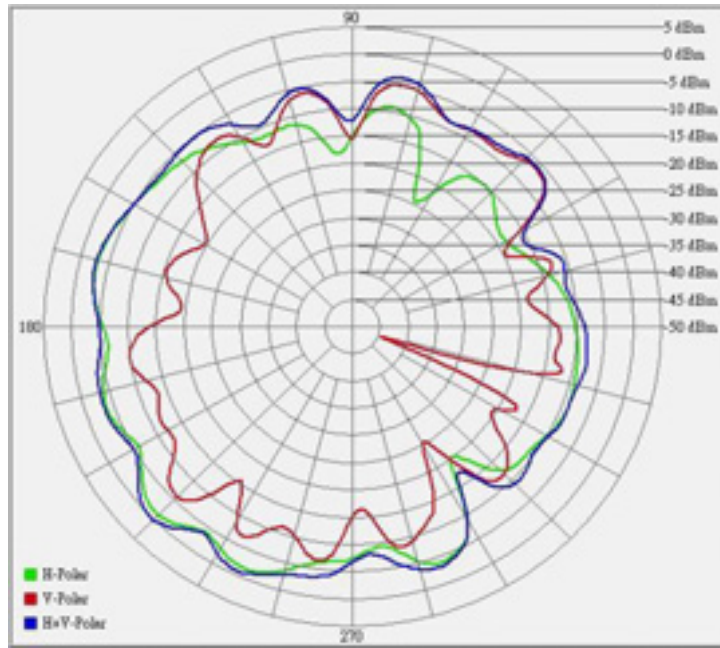
Center Frequency	<b>2450 MHz</b>
Horizontal (dBi) peak	<b>-0.85</b>
Vertical (dBi) peak	<b>-3.5</b>

**Tx3 (or Rx3) antenna: 2500 MHz** (Plot is not required if 3<sup>rd</sup> Antenna is receive only e.g. Rx3 for 4965AGN)



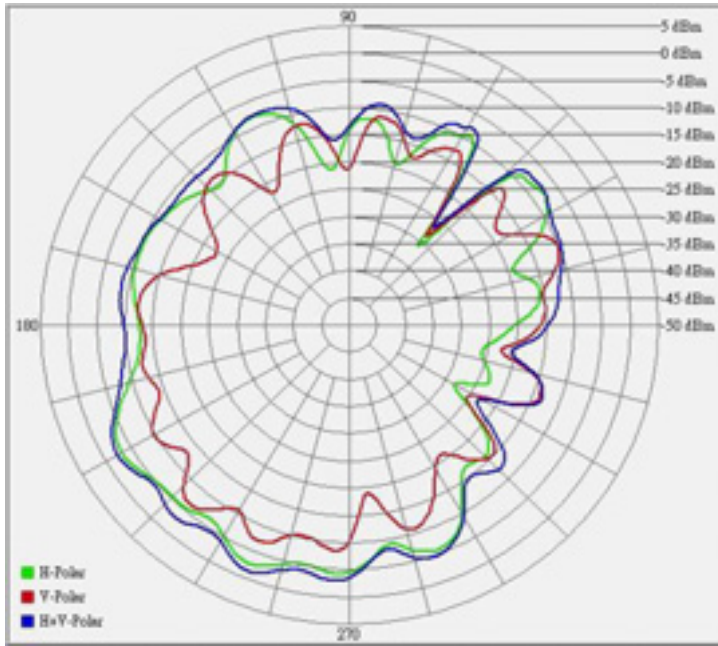
Center Frequency	<b>2500 MHz</b>
Horizontal (dBi) peak	<b>-0.79</b>
Vertical (dBi) peak	<b>-2.44</b>

2490-2700MHz radiation characteristic  
TX1 antenna: 2501MHz



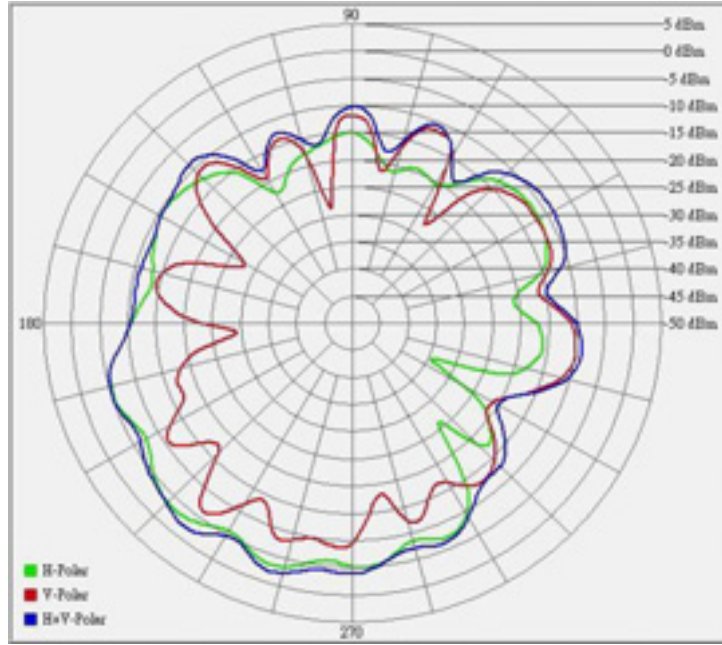
Center Frequency	<b>2501 MHz</b>
Horizontal (dBi) peak	-1.12
Vertical (dBi) peak	-5.04

**TX1** antenna: 2593MHz



Center Frequency	<b>2593 MHz</b>
Horizontal (dBi) peak	-2.84
Vertical (dBi) peak	-6.49

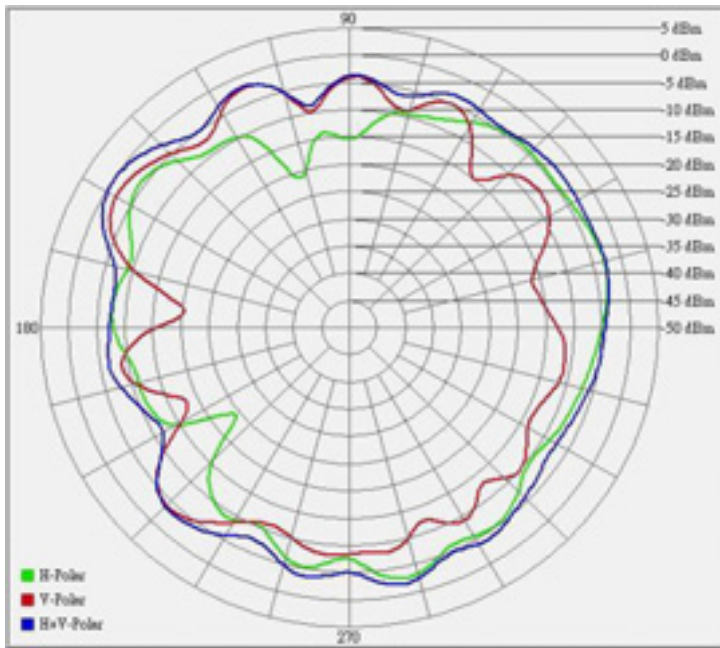
**TX1 antenna: 2683 MHz**



Center Frequency	<b>2683 MHz</b>
Horizontal (dBi) peak	-3.43
Vertical (dBi) peak	-7.16

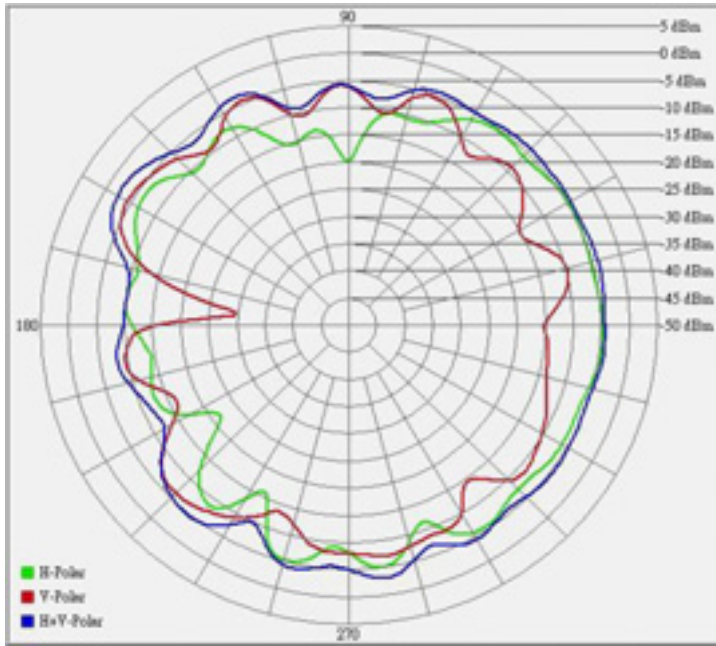


**Tx2 (or Rx2) antenna: 2501MHz (Plot is not required if 2<sup>nd</sup> Antenna is receive only e.g. Rx2 for 512 family)**



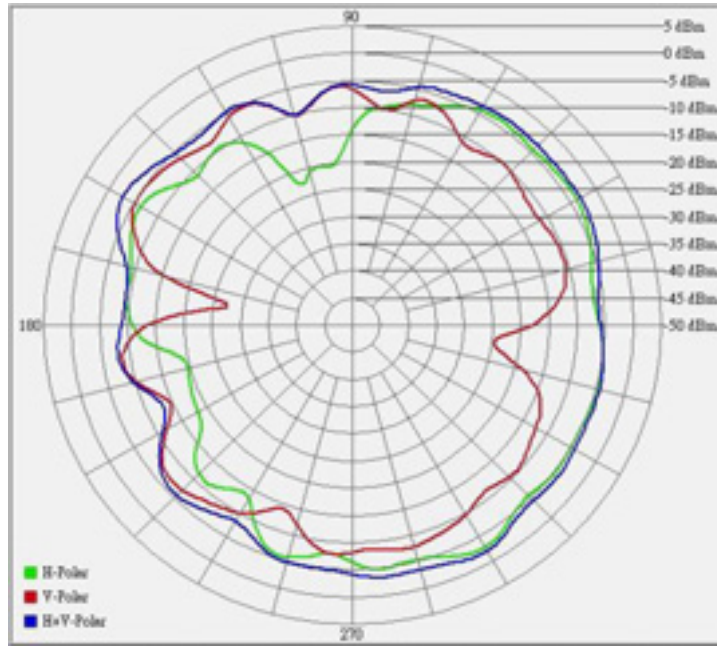
Center Frequency	<b>2501 MHz</b>
Horizontal (dBi) peak	-3
Vertical (dBi) peak	-1.99

**Tx2 (or Rx2) antenna: 2593MHz (Plot is not required if 2<sup>nd</sup> Antenna is receive only e.g. Rx2 for 512 family)**



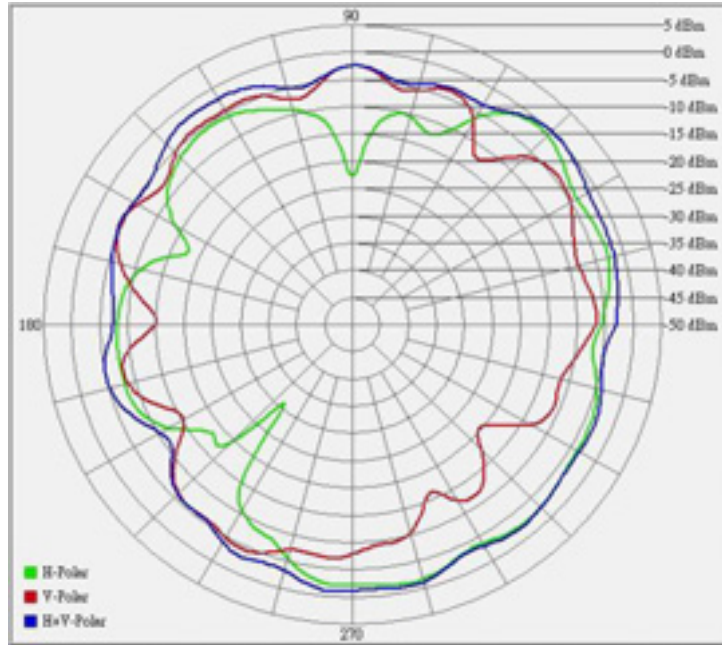
Center Frequency	<b>2593 MHz</b>
Horizontal (dBi) peak	-4.64
Vertical (dBi) peak	-4.38

**Tx2 (or Rx2) antenna: 2685 MHz (Plot is not required if 2<sup>nd</sup> Antenna is receive only e.g. Rx2 for 512 family)**



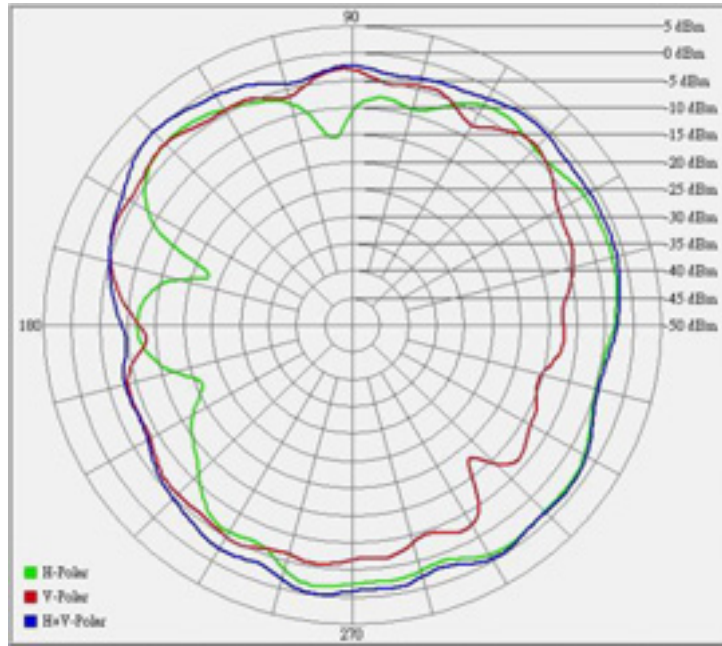
Center Frequency	<b>2685 MHz</b>
Horizontal (dBi) peak	-2.87
Vertical (dBi) peak	-5.23

**Tx3 (or Rx3) antenna: 2501 MHz (Plot is not required if 3<sup>rd</sup> Antenna is receive only e.g. Rx3 for 4965AGN)**



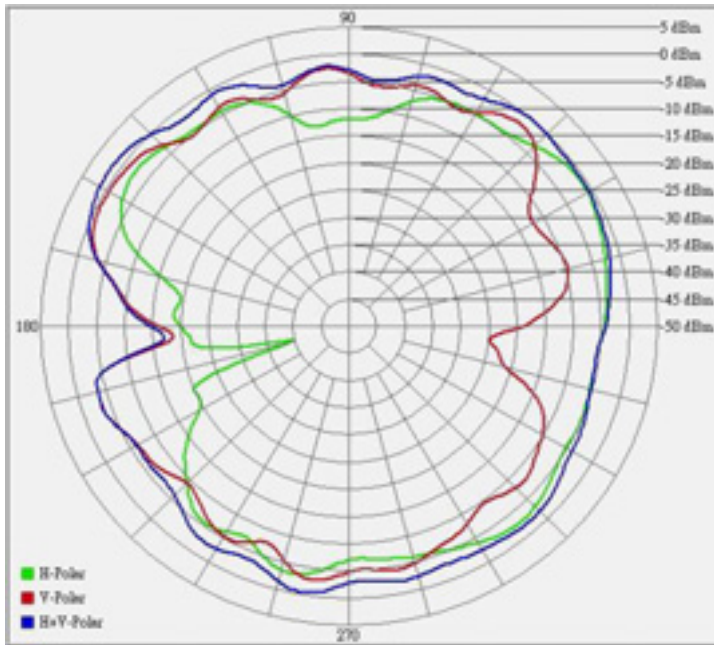
Center Frequency	<b>2501MHz</b>
Horizontal (dBi) peak	<b>-0.79</b>
Vertical (dBi) peak	<b>-2.44</b>

**Tx3 (or Rx3) antenna: 2593MHz** (Plot is not required if 3<sup>rd</sup> Antenna is receive only e.g. Rx3 for 4965AGN)



Center Frequency	<b>2593 MHz</b>
Horizontal (dBi) peak	<b>-0.86</b>
Vertical (dBi) peak	<b>-2.79</b>

**Tx3 (or Rx3)** antenna: 2685 MHz (Plot is not required if 3<sup>rd</sup> Antenna is receive only e.g. Rx3 for 4965AGN)

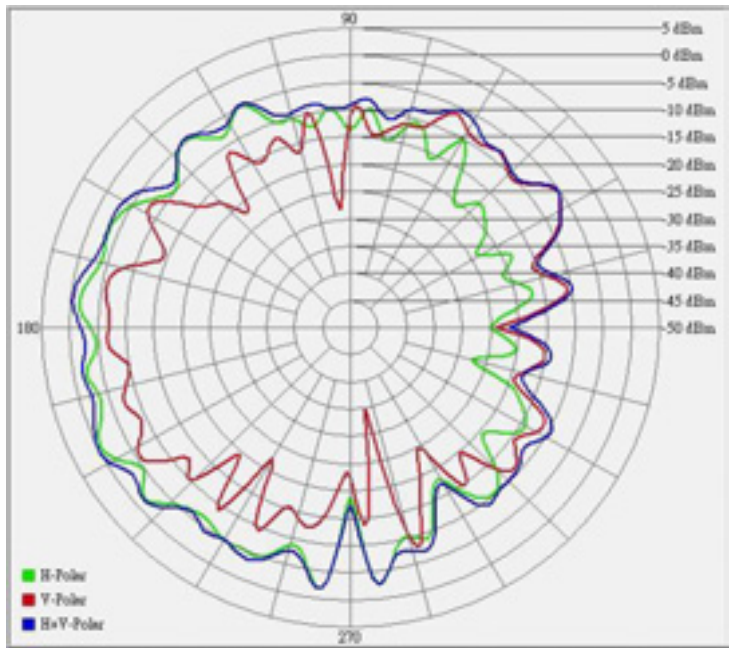


Center Frequency	<b>2685MHz</b>
Horizontal (dBi) peak	<b>-0.8</b>
Vertical (dBi) peak	<b>-0.54</b>



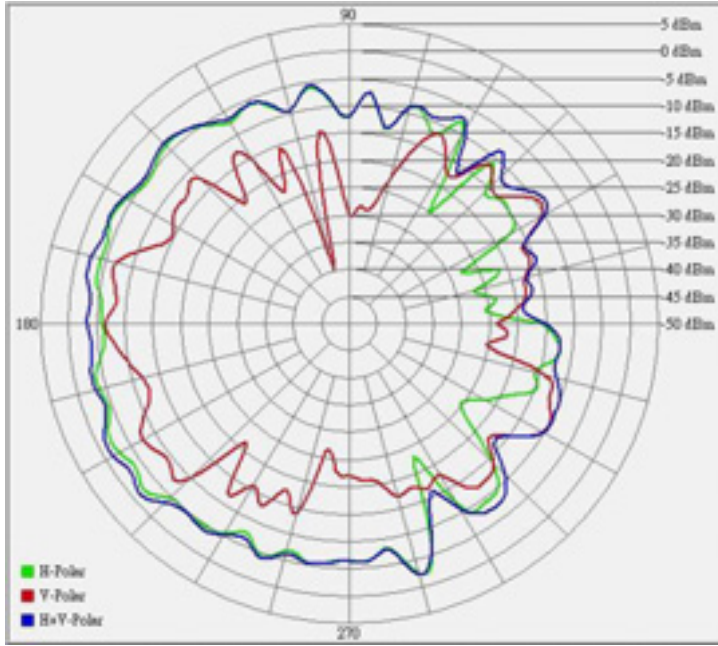
**5150-5350 MHz radiation characteristic**

**TX1 antenna: 5150 MHz**



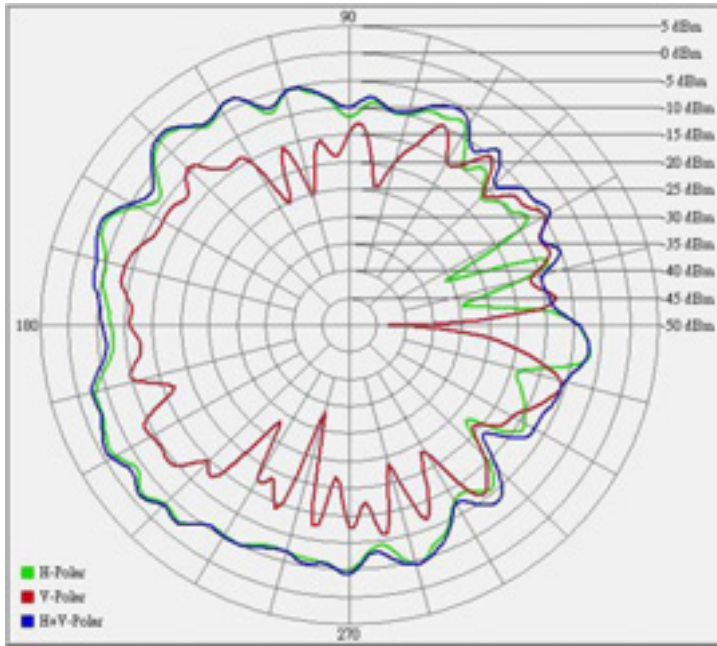
Center Frequency	<b>5150 MHz</b>
Horizontal (dBi) peak	-0.6
Vertical (dBi) peak	-5.45

**TX1 antenna: 5250 MHz**



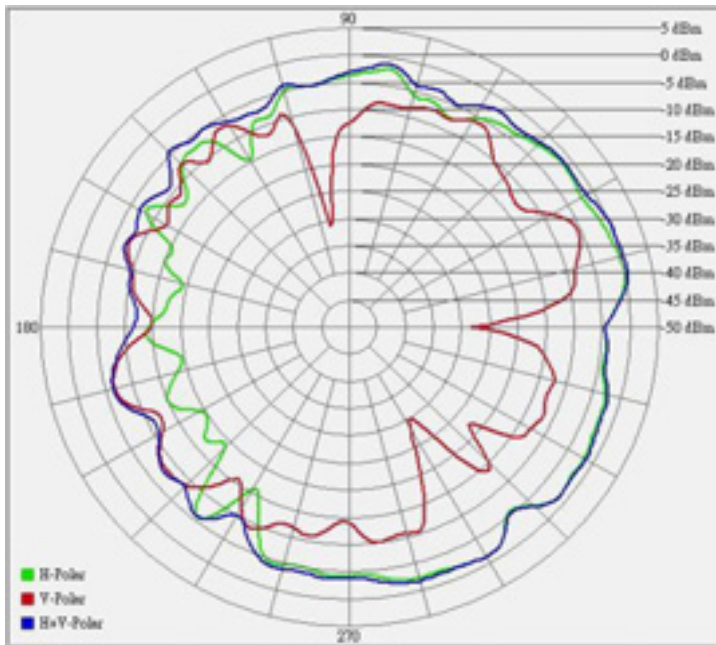
Center Frequency	<b>5250 MHz</b>
Horizontal (dBi) peak	-2.29
Vertical (dBi) peak	-6.51

**TX1** antenna: 5350 MHz



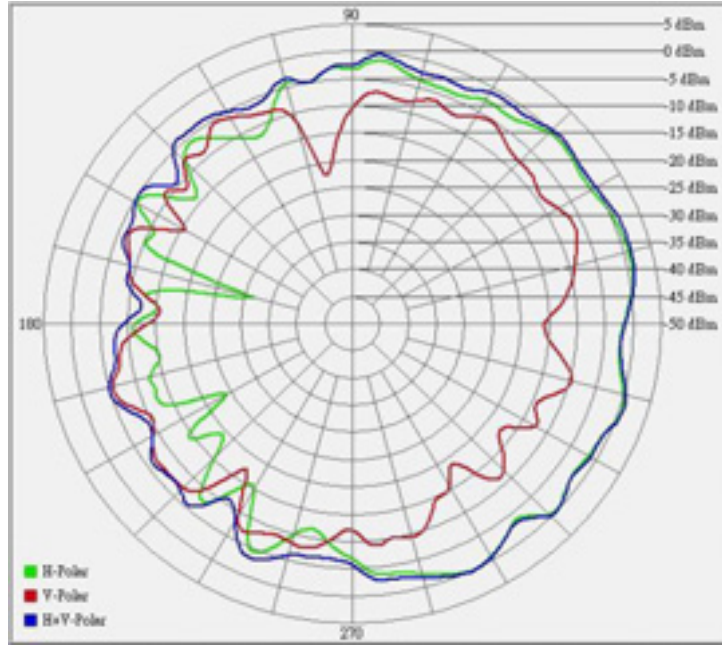
Center Frequency	<b>5350 MHz</b>
Horizontal (dBi) peak	-1.82
Vertical (dBi) peak	-8.55

**Tx2 (or Rx2) antenna: 5150 MHz (Plot is not required if 2<sup>nd</sup> Antenna is receive only e.g. Rx2 for 512 family)**



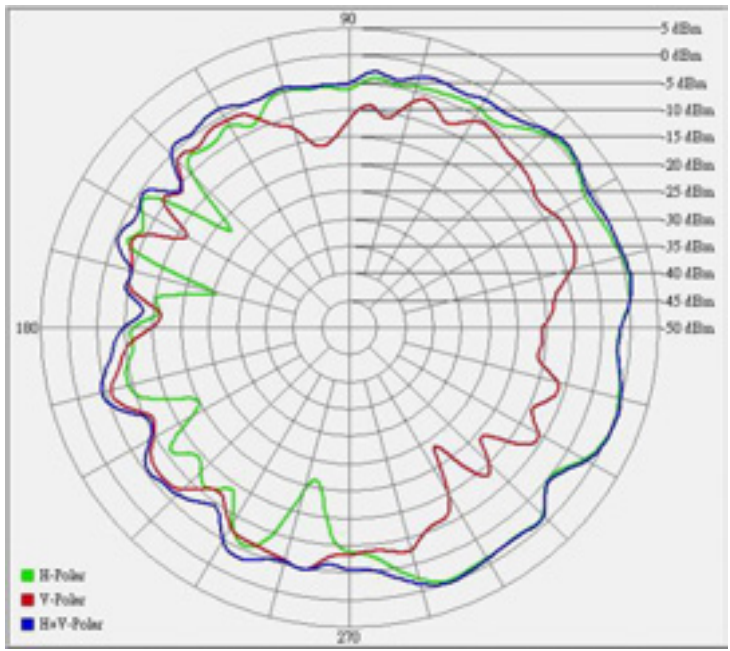
Center Frequency	<b>5150 MHz</b>
Horizontal (dBi) peak	-0.1
Vertical (dBi) peak	-5.72

Tx2 (or Rx2) antenna: 5250 MHz



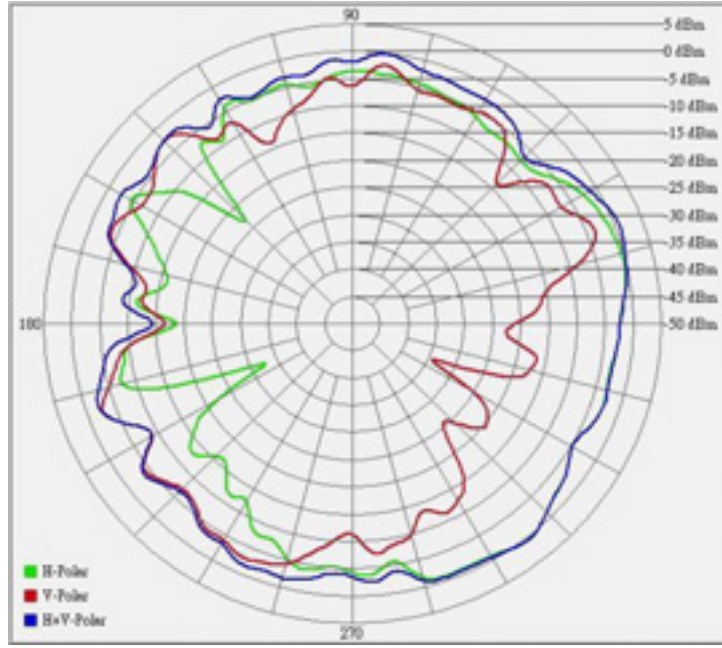
Center Frequency	<b>5250 MHz</b>
Horizontal (dBi) peak	0.95
Vertical (dBi) peak	-5.51

**Tx2 (or Rx2) antenna: 5350 MHz (Plot is not required if 2<sup>nd</sup> Antenna is receive only e.g. Rx2 for 512 family)**



Center Frequency	<b>5350 MHz</b>
Horizontal (dBi) peak	0.84
Vertical (dBi) peak	-4.92

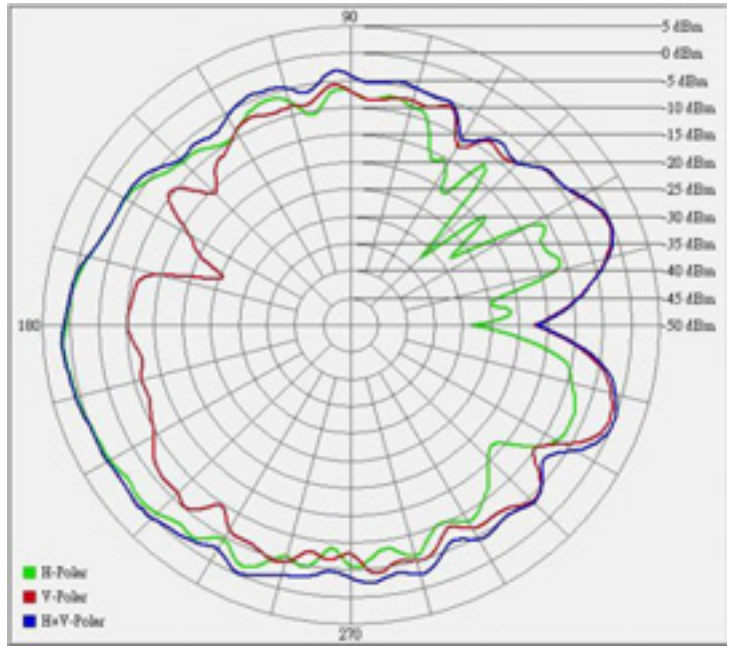
**Tx3 (or Rx3) antenna: 5150 MHz (Plot is not required if 3<sup>rd</sup> Antenna is receive only e.g. Rx3 for 4965AGN)**



Center Frequency	<b>5150 MHz</b>
Horizontal (dBi) peak	<b>0.41</b>
Vertical (dBi) peak	<b>-2.53</b>

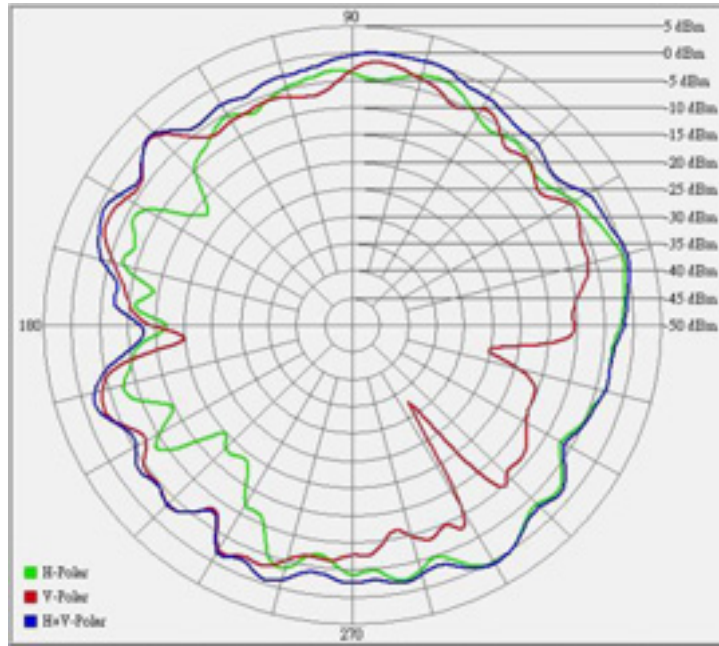


**Tx3 (or Rx3) antenna: 5250 MHz**



Center Frequency	<b>5250 MHz</b>
Horizontal (dBi) peak	<b>1.46</b>
Vertical (dBi) peak	<b>-0.51</b>

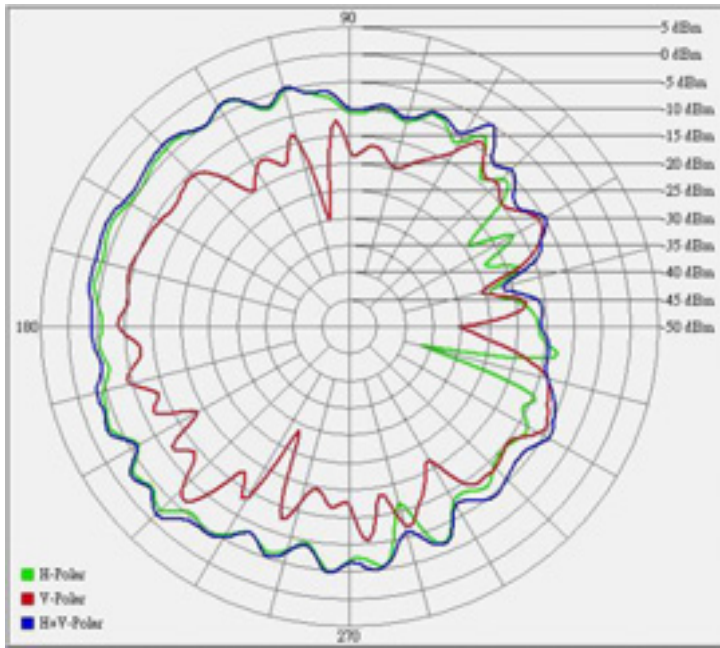
**Tx3 (or Rx3)** antenna: 5350 MHz (Plot is not required if 3<sup>rd</sup> Antenna is receive only e.g. Rx3 for 4965AGN)



Center Frequency	<b>5350 MHz</b>
Horizontal (dBi) peak	<b>0.32</b>
Vertical (dBi) peak	<b>-0.56</b>

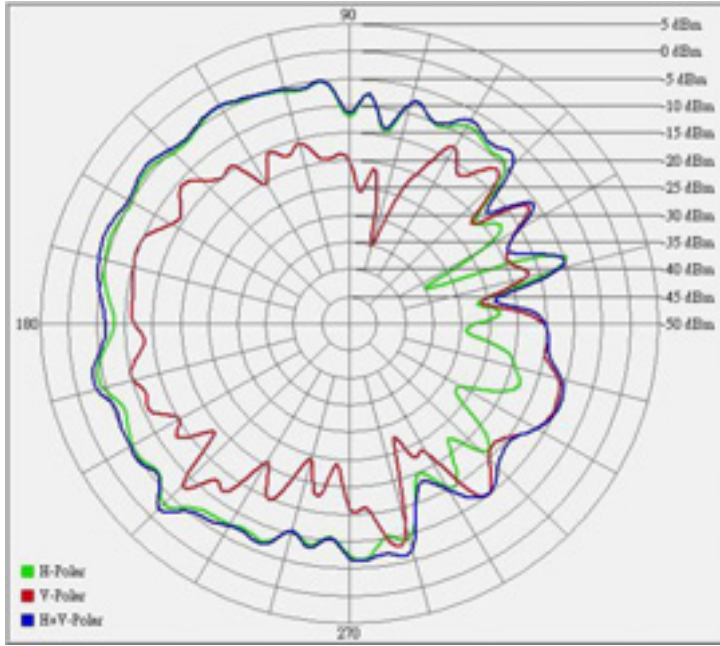
## 5470-5725MHz radiation characteristic

### TX1 antenna: 5470 MHz



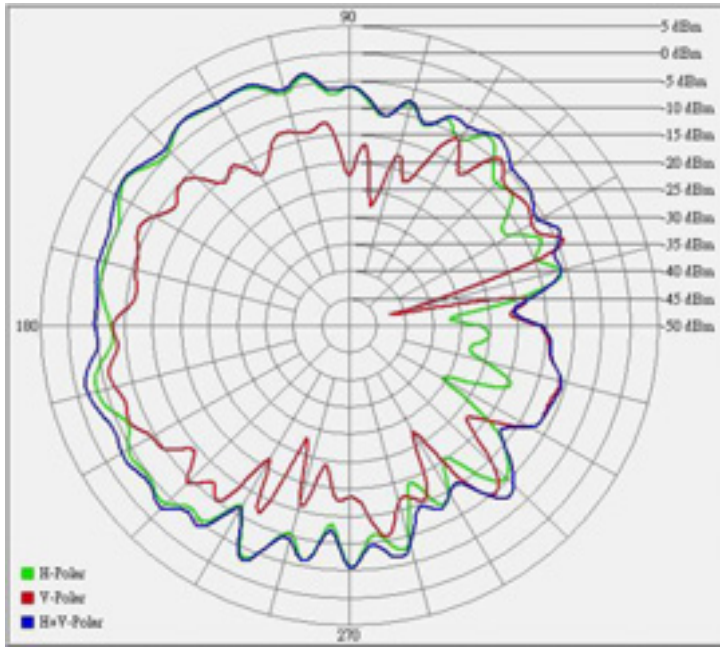
Center Frequency	<b>5470 MHz</b>
Horizontal (dBi) peak	-2.32
Vertical (dBi) peak	-7.98

**TX1** antenna: 5597.5 MHz



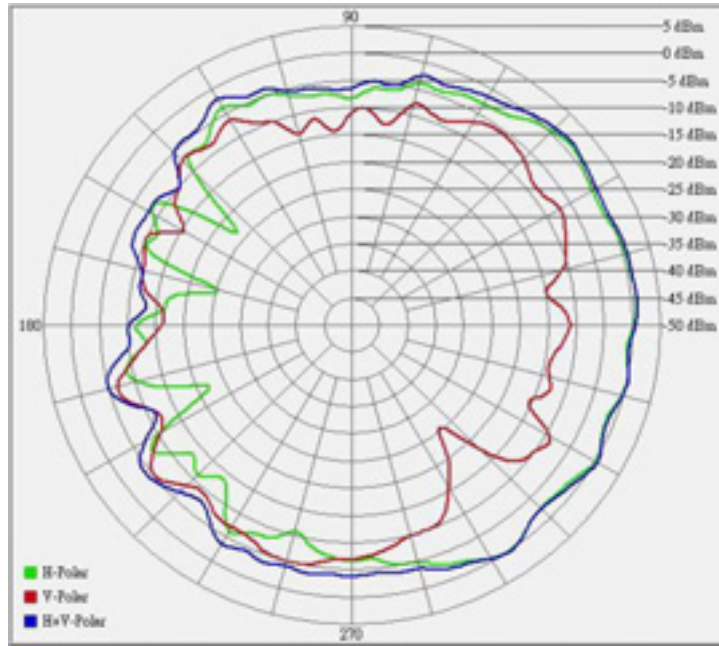
Center Frequency	<b>5597.5 MHz</b>
Horizontal (dBi) peak	-3.16
Vertical (dBi) peak	-7.99

**TX1 antenna: 5725 MHz**



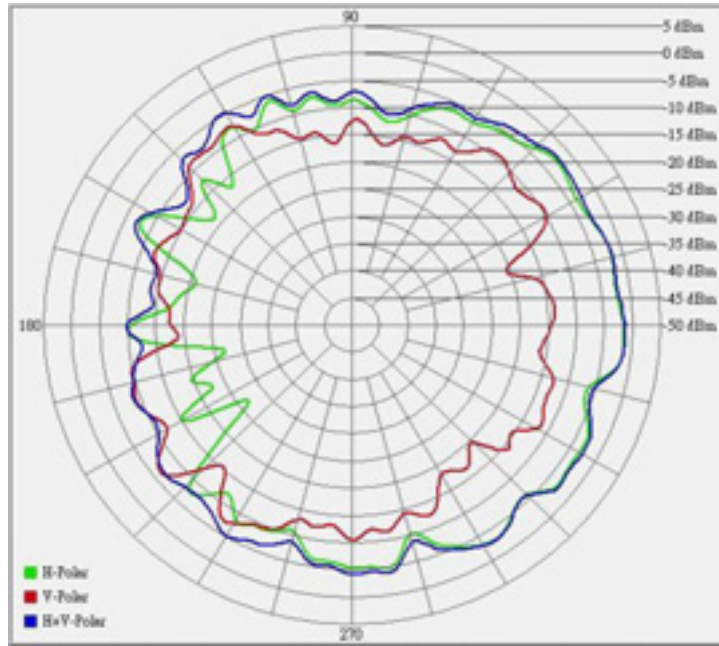
Center Frequency	<b>5725 MHz</b>
Horizontal (dBi) peak	-2.06
Vertical (dBi) peak	-6.6

**Tx2 (or Rx2) antenna: 5470 MHz (Plot is not required if 2<sup>nd</sup> Antenna is receive only e.g. Rx2 for 512 family)**



Center Frequency	<b>5470 MHz</b>
Horizontal (dBi) peak	1.24
Vertical (dBi) peak	-5.18

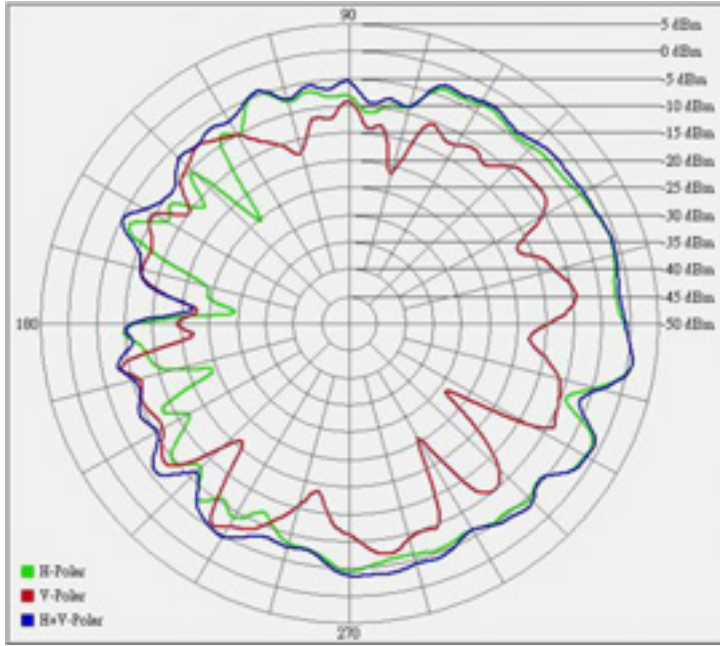
**Tx2 (or Rx2) antenna: 5597.5 MHz (Plot is not required if 2<sup>nd</sup> Antenna is receive only e.g. Rx2 for 512 family)**



Center Frequency	<b>5597.5 MHz</b>
Horizontal (dBi) peak	-1.35
Vertical (dBi) peak	-6.98

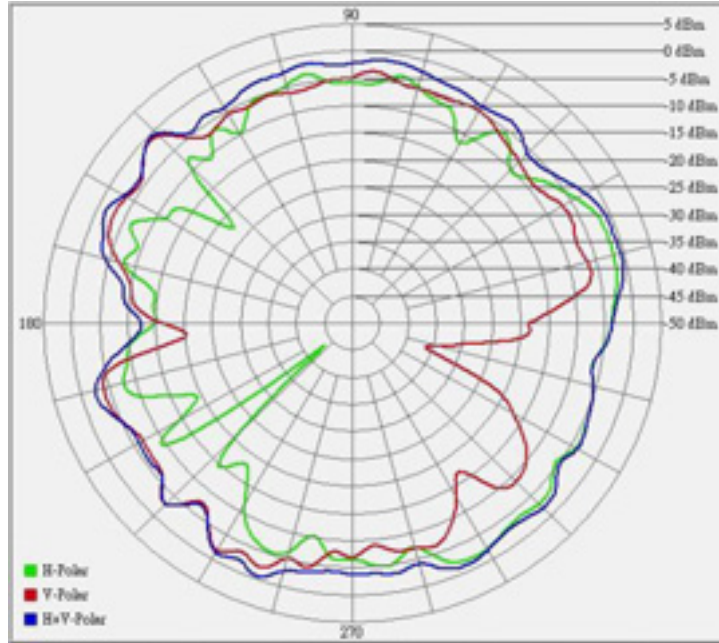


**Tx2 (or Rx2) antenna: 5725 MHz (Plot is not required if 2<sup>nd</sup> Antenna is receive only e.g. Rx2 for 512 family)**



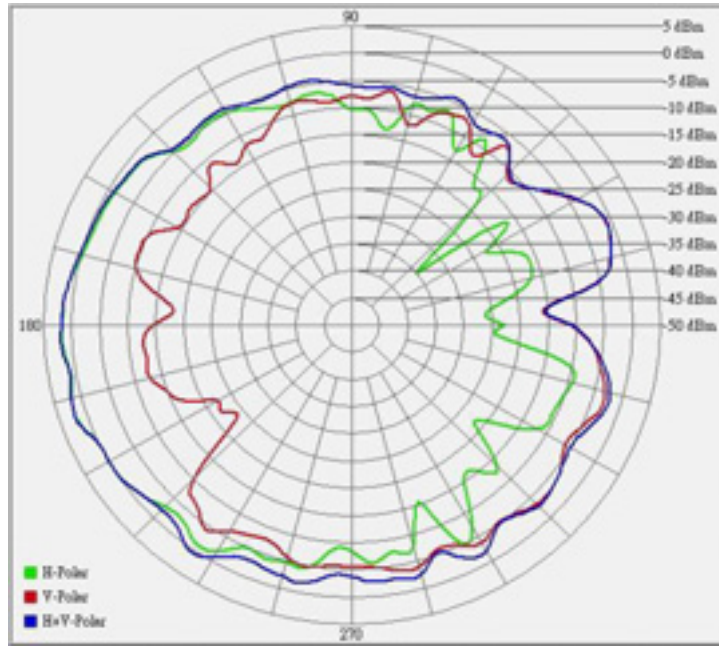
Center Frequency	<b>5725 MHz</b>
Horizontal (dBi) peak	0.5
Vertical (dBi) peak	-6.98

Tx3 (or Rx3) antenna: 5470 MHz (Plot is not required if 3<sup>rd</sup> Antenna is receive only e.g. Rx3 for



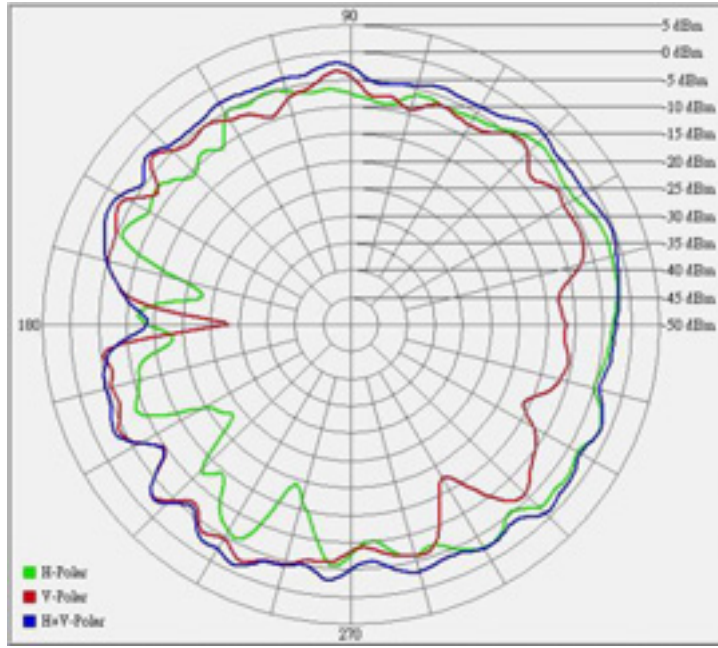
Center Frequency	<b>5470 MHz</b>
Horizontal (dBi) peak	<b>-1.74</b>
Vertical (dBi) peak	<b>-1.4</b>

**Tx3 (or Rx3)** antenna: 5597.5 MHz (Plot is not required if 3<sup>rd</sup> Antenna is receive only e.g. Rx3 for 4965AGN)



Center Frequency	<b>5597.5 MHz</b>
Horizontal (dBi) peak	<b>1.94</b>
Vertical (dBi) peak	<b>-1.06</b>

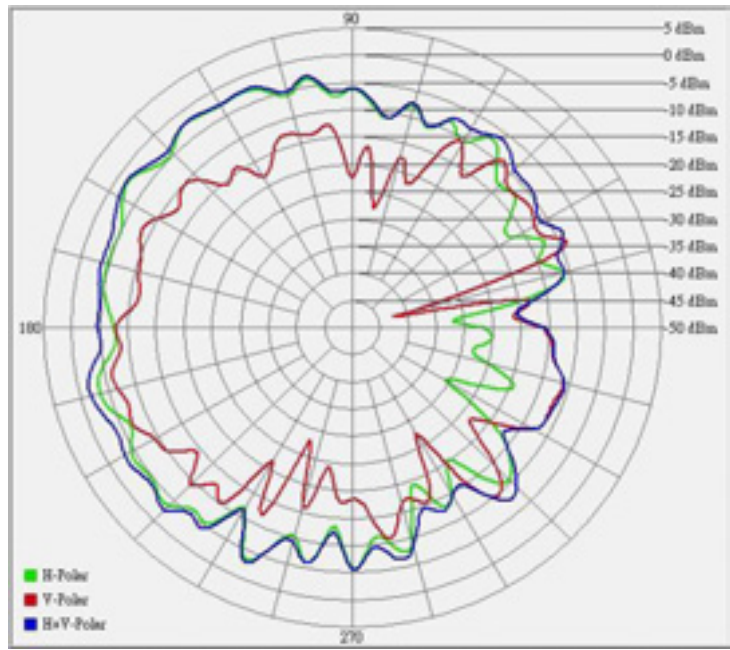
**Tx3 (or Rx3) antenna: 5725 MHz (Plot is not required if 3<sup>rd</sup> Antenna is receive only e.g. Rx3 for 4965AGN)**



Center Frequency	<b>5725 MHz</b>
Horizontal (dBi) peak	<b>-1.67</b>
Vertical (dBi) peak	<b>-2.36</b>

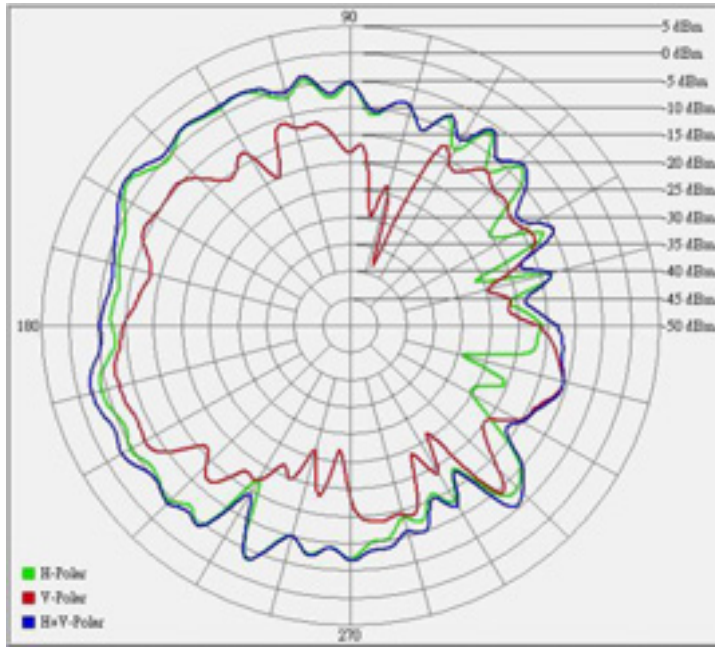
**5725-5850 MHz radiation characteristic**

**TX1 antenna: 5725 MHz**



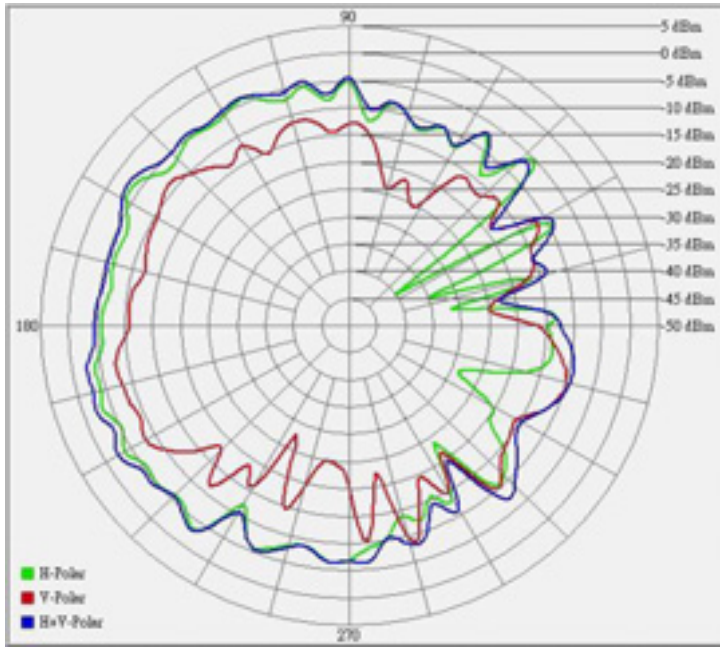
Center Frequency	<b>5725 MHz</b>
Horizontal (dBi) peak	-2.06
Vertical (dBi) peak	-6.6

**TX1 antenna: 5785 MHz**



Center Frequency	<b>5785 MHz</b>
Horizontal (dBi) peak	-2.63
Vertical (dBi) peak	-7.39

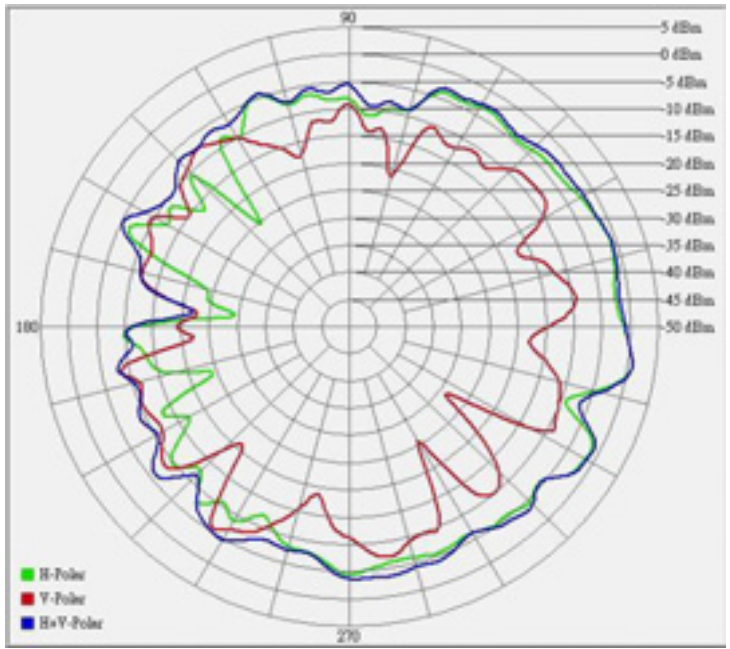
**TX1 antenna: 5850 MHz**



Center Frequency	<b>5850 MHz</b>
Horizontal (dBi) peak	-3.66
Vertical (dBi) peak	-7.81

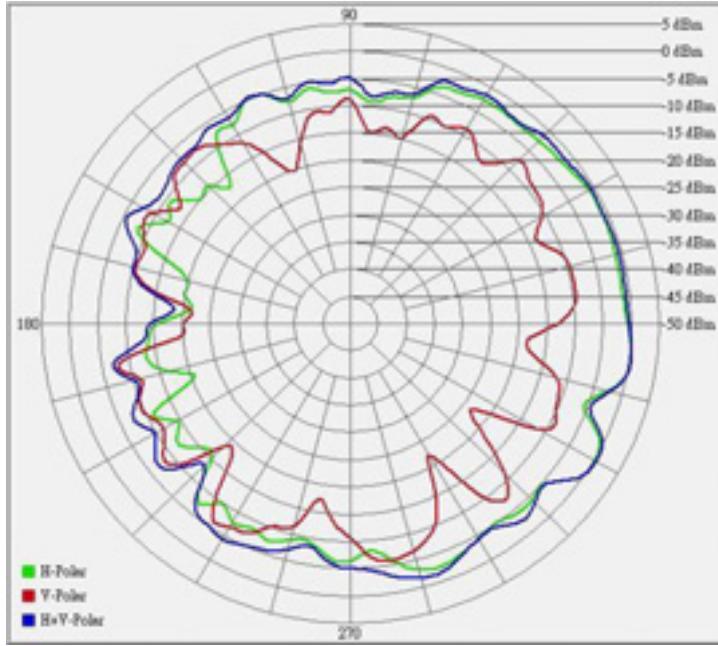


**Tx2 (or Rx2) antenna: 5725 MHz (Plot is not required if 2<sup>nd</sup> Antenna is receive only e.g. Rx2 for 512 family)**



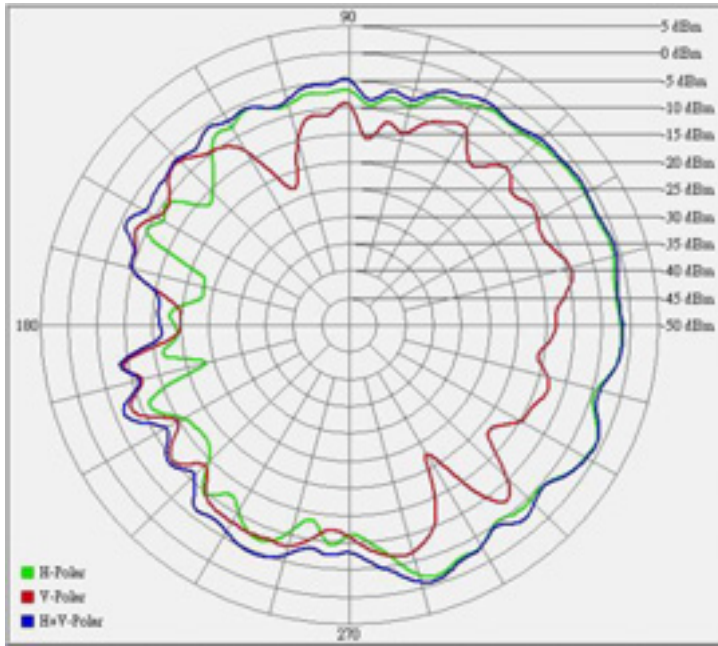
Center Frequency	<b>5725 MHz</b>
Horizontal (dBi) peak	0.5
Vertical (dBi) peak	-6.98

**Tx2 (or Rx2) antenna: 5785 MHz (Plot is not required if 2<sup>nd</sup> Antenna is receive only e.g. Rx2 for 512 family)**



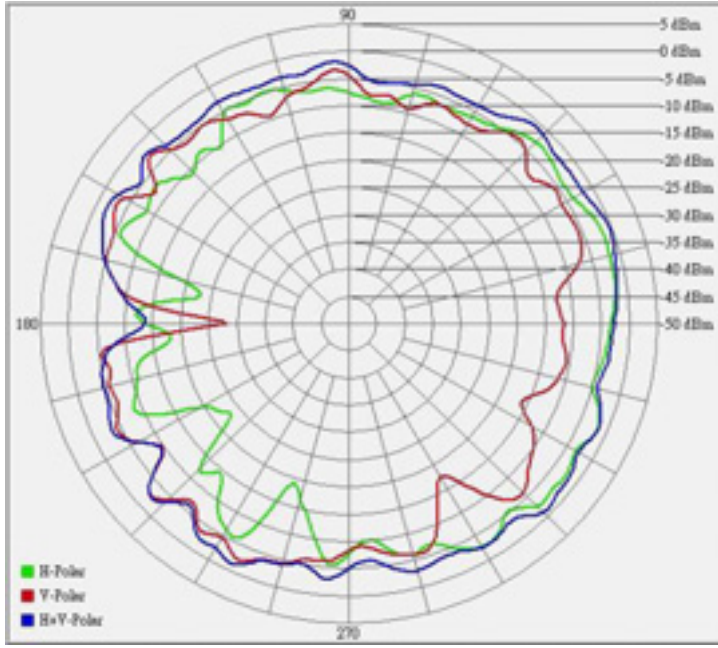
Center Frequency	<b>5785 MHz</b>
Horizontal (dBi) peak	0.28
Vertical (dBi) peak	-5.91

**Tx2 (or Rx2) antenna: 5850 MHz (Plot is not required if 2<sup>nd</sup> Antenna is receive only e.g. Rx2 for 512 family)**



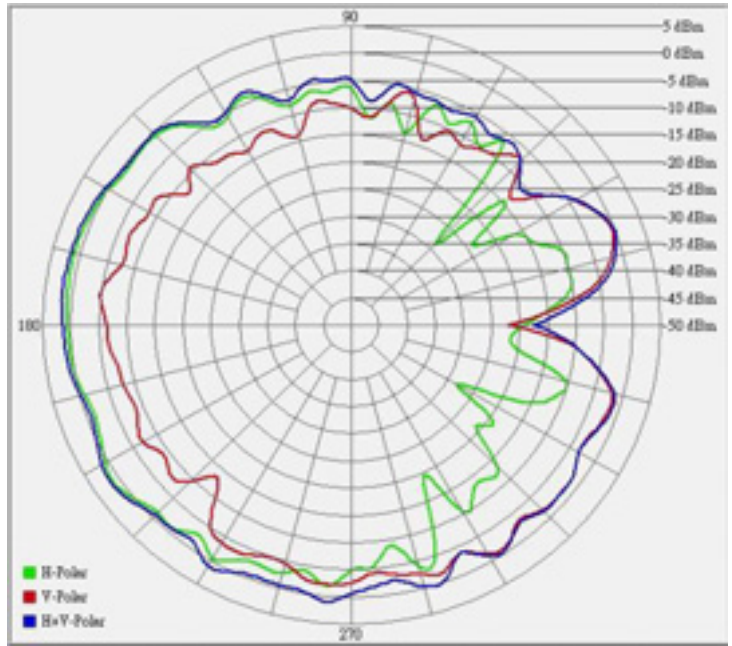
Center Frequency	<b>5850 MHz</b>
Horizontal (dBi) peak	-1.11
Vertical (dBi) peak	-6.76

**Tx3 (or Rx3) antenna: 5725 MHz (Plot is not required if 3<sup>rd</sup> Antenna is receive only e.g. Rx3 for 4965AGN)**



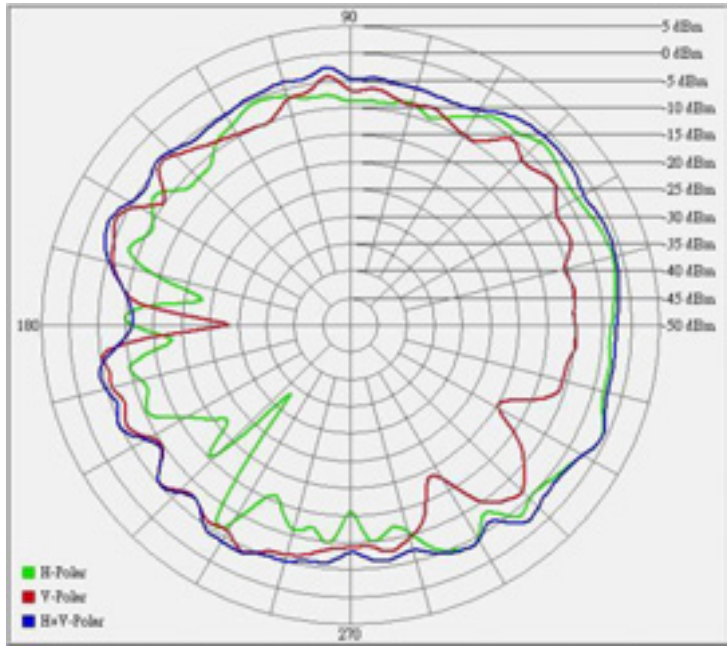
Center Frequency	<b>5725MHz</b>
Horizontal (dBi) peak	<b>-1.67</b>
Vertical (dBi) peak	<b>-2.36</b>

**Tx3 (or Rx3)** antenna: 5785 MHz (Plot is not required if 3<sup>rd</sup> Antenna is receive only e.g. Rx3 for 4965AGN)



Center Frequency	<b>5785MHz</b>
Horizontal (dBi) peak	<b>1.31</b>
Vertical (dBi) peak	<b>-0.37</b>

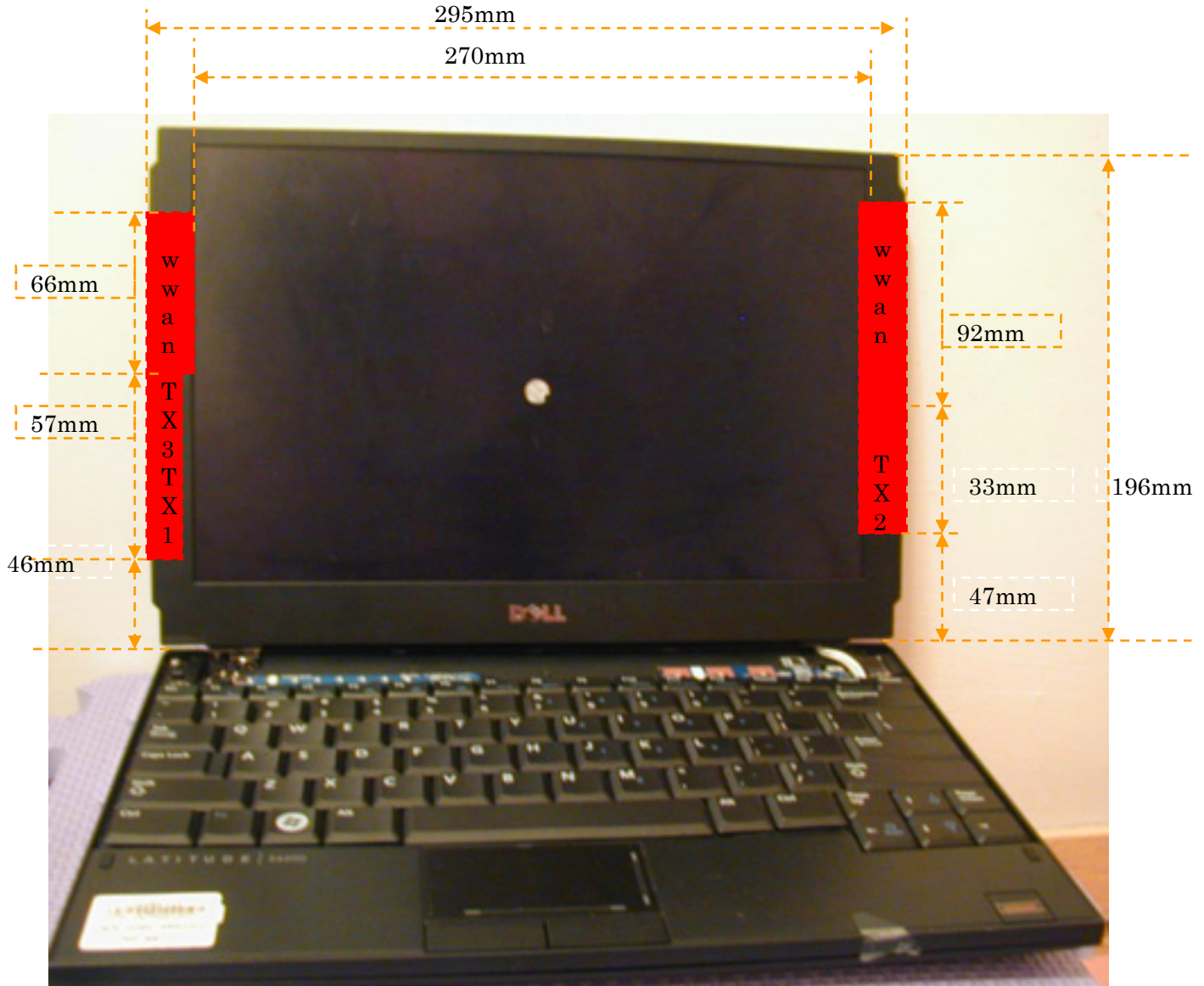
**Tx3 (or Rx3)** antenna: 5850 MHz (Plot is not required if 3<sup>rd</sup> Antenna is receive only e.g. Rx 3 for 4965AGN)



Center Frequency	<b>5850MHz</b>
Horizontal (dBi) peak	<b>-0.73</b>
Vertical (dBi) peak	<b>-3.95</b>

## Section 5. Antenna Host Platform Location Information

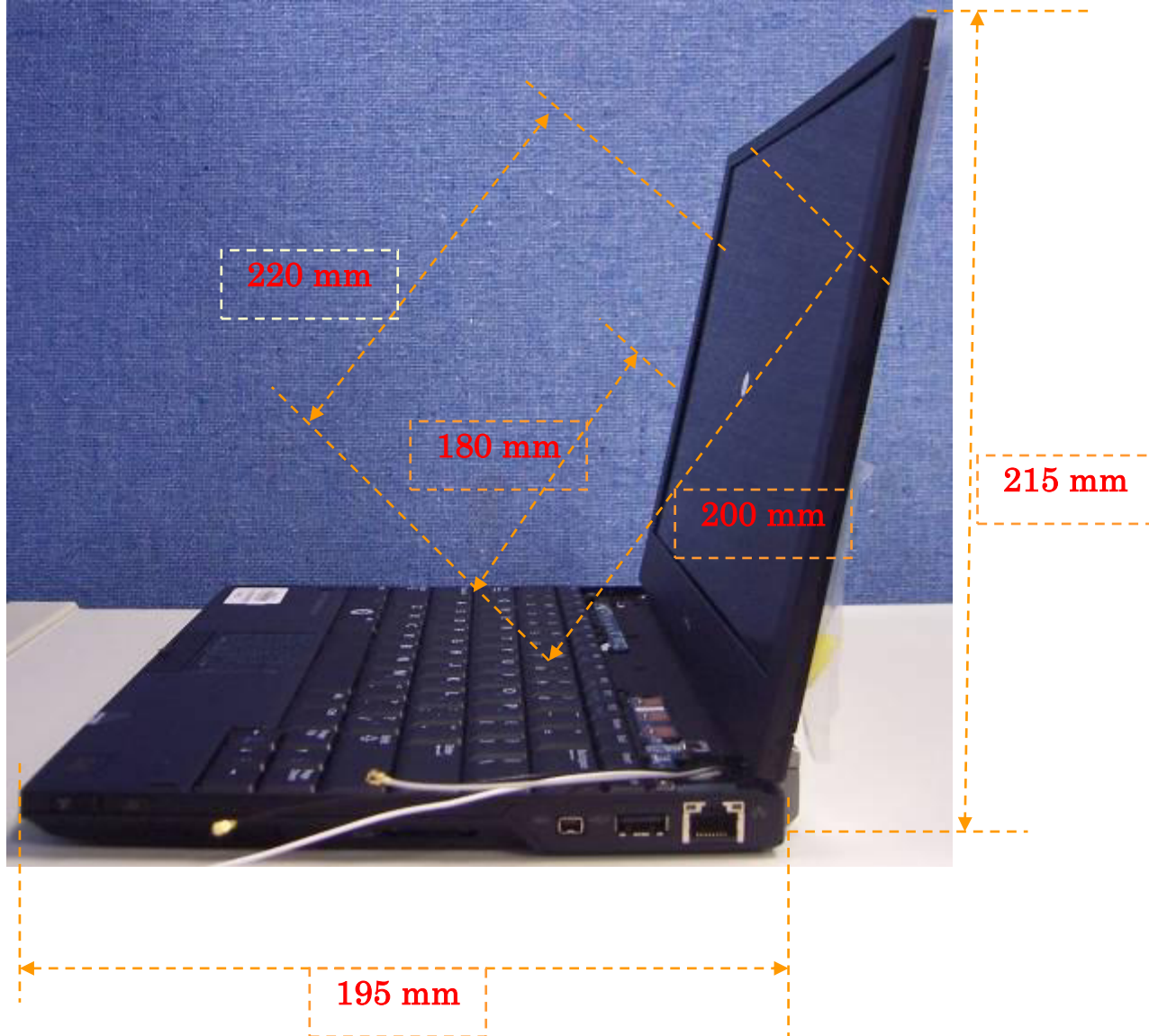
Include a **dimensioned photo or dimensioned drawing** of Tx1, Tx2 and Tx3 antenna placements (measurements are not required for receive-only antenna). Any antenna that transmits must show dimensions to bottom of laptop.





## Section 6. Antenna dimensional information for SAR evaluation

Include a **dimensioned photo or dimensioned drawing** showing the distance (mm) between the transmit antennas and the user (excluding hands, wrist, feet, lap/ thigh, and ankle)



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

Include a **dimensioned photo or dimensioned drawing** showing the distance (mm) between all WLAN transmit antennas and other co-located radiator transmit antenna such as Bluetooth, WWAN,..

(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
<b>Argentina</b>						
<b>Brazil</b>						
<b>Indonesia</b>						
<b>Israel</b>						
<b>Malaysia</b>						
<b>Mexico</b>						
<b>Singapore</b>						Telecommunication Equipment Dealer License Required
<b>South Africa</b>						
<b>USA, Canada</b>						