

## Regulatory WLAN Antenna Information

<b>Platform</b>	Lola
Platform Owner	DELL
Brand Name	DELL
Model Name	Lola no bump WLAN
<b>ODM</b>	Compal
Target Launch Date	(YYYY/ MM/ DD)
<b>Antenna</b>	
Brand Name	Amphenol
Part Number	<input type="checkbox"/> Tx2 (or Rx2) Antenna (Rx2 for 512 family ONLY) <b>RB0715-11-004-R</b>
<b>Module</b>	
With WLAN Module	<input checked="" type="checkbox"/> Intel® WiFi Link 5100
(Check Box)	<input checked="" type="checkbox"/> Intel® WiFi Link 5100
	<input checked="" type="checkbox"/> BCM 4312bg
	<input checked="" type="checkbox"/> BCM 4322agn
	<input checked="" type="checkbox"/> Intel® WiFi Link 5100

## 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:RB0715-11-004) Tx2 (or Rx2 for 512 family) antenna	Amphenol Taiwan Corporation	IFA	(P/N: GBE RF113XL5) 50 ohm Coaxial. length: 42.0cm diameter: 1.13mm Connector: Ipex	2400-2500MHz 2.52 dBi (peak) *	2400-2500MHz 3.57 dBi (peak) *	2400-2500MHz 1.9 max *	2400-2500MHz 1.05 dBi (peak) *
				2496-2690MHz 2.52 dBi (peak)*	2496-2690MHz 3.57 dBi (peak) *	2496-2690MHz 2.1 max*	2496-2690MHz 1.05 dBi (peak)*
				5150-5350MHz 0.69 dBi (peak) *	5150-5350MHz 2.45 dBi (peak) *	5150-5350MHz 2.0 max *	5150-5350MHz 1.76 dBi (peak) *
				5470-5725MHz 3.72 dBi (peak) *	5470-5725MHz 5.48 dBi (peak) *	5470-5725MHz 1.6 max *	5470-5725MHz 1.76 dBi (peak) *
				5725-5850MHz 3.72 dBi (peak) *	5725-5850MHz 5.48 dBi (peak) *	5725-5850MHz 1.7 max *	5725-5850MHz 1.76 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:

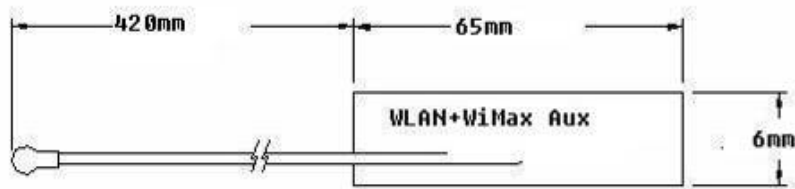
Frequency (MHz)	Tx2 (or Rx2) Antenna	
	Horizontal (dBi)	Vertical (dBi)
2400	-2.12	-3.93
2450	-0.82	-1.90
2500	2.52	-0.04
2501	1.95	-0.77
2593	1.55	-1.63
2685	-1.08	-2.59
5150	0.69	-1.36
5250	-0.52	-4.5
5350	0.02	-2.42
5470	1.16	-0.50
5600	-0.70	0.77
5725	3.72	2.78
5785	-1.57	-0.38
5850	2.19	2.19

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

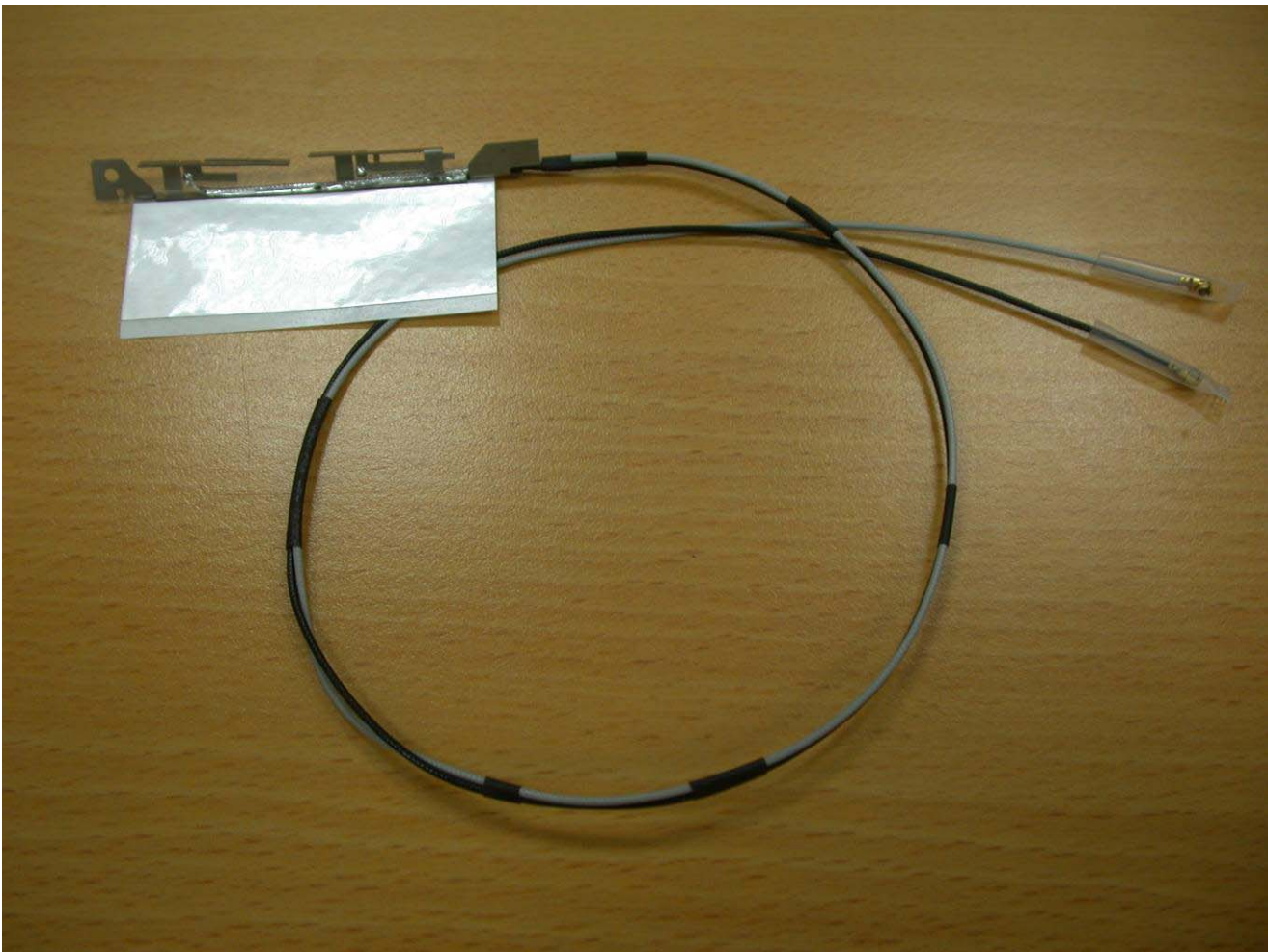
## Section 2. Dimensioned Photos or Drawings of Antennas

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

### Tx2 (or Rx2) Antenna Dimensioned Drawing:



### Tx2 (or Rx2) Antenna Photo:

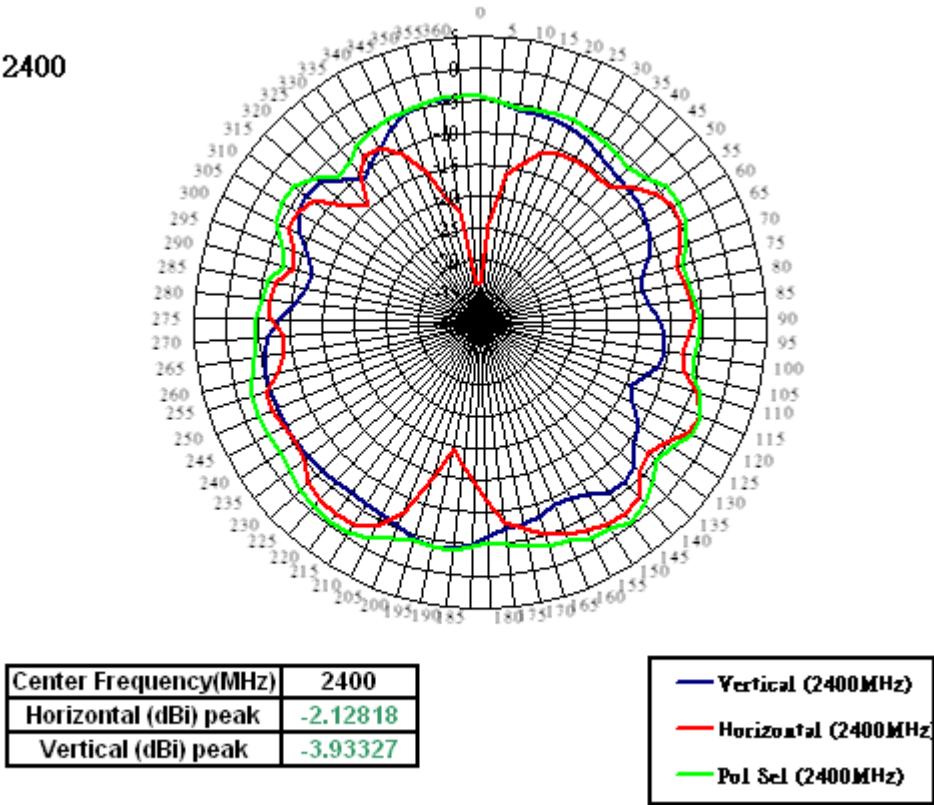


Antenna Manufacturer: Amphenol Taiwan Cooperation  
Antenna Part Number: RB0715-11-004 (Tx2 or Rx2),

Section 3. Radiation characteristics of antennae Loaded in Host Platform

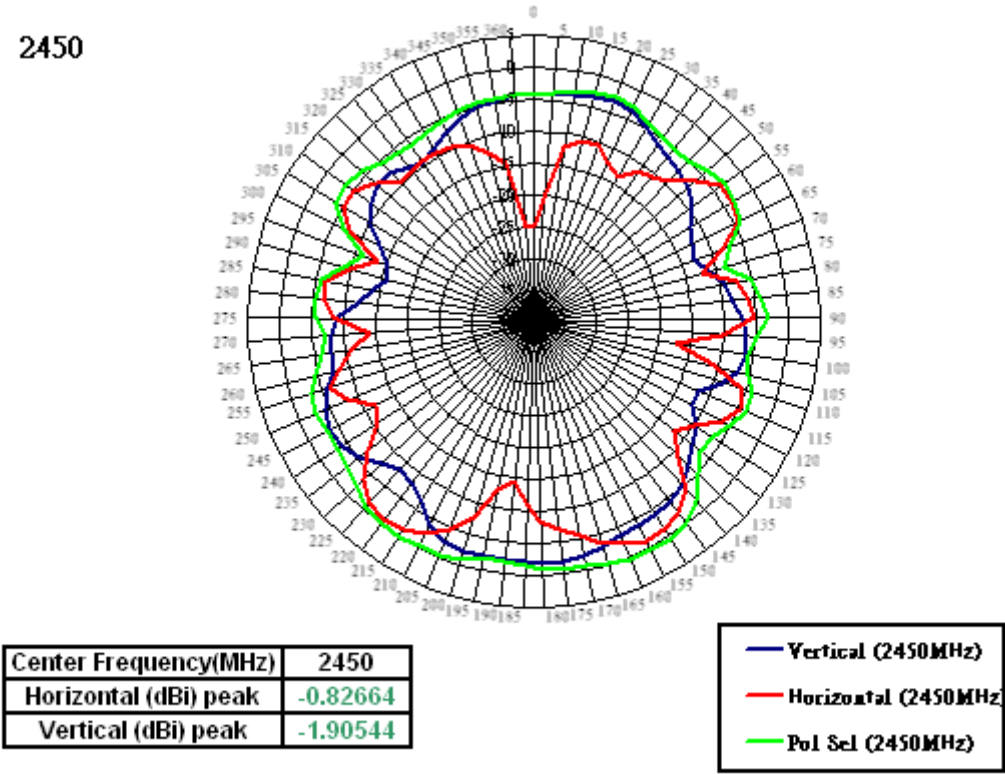
2400-2500MHz radiation characteristic

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)



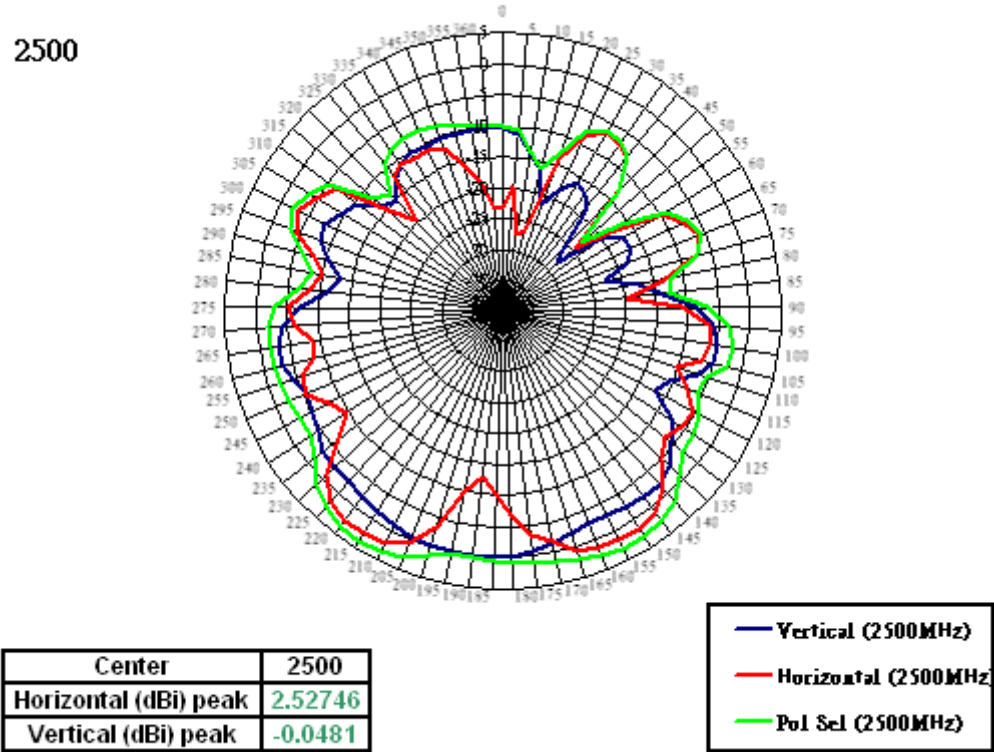
**Tx2 (or Rx2) antenna: 2450 MHz (Plot is not required if 2<sup>nd</sup> Antenna is receive only e.g. Rx2 for 512 family)**

2450



**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)**

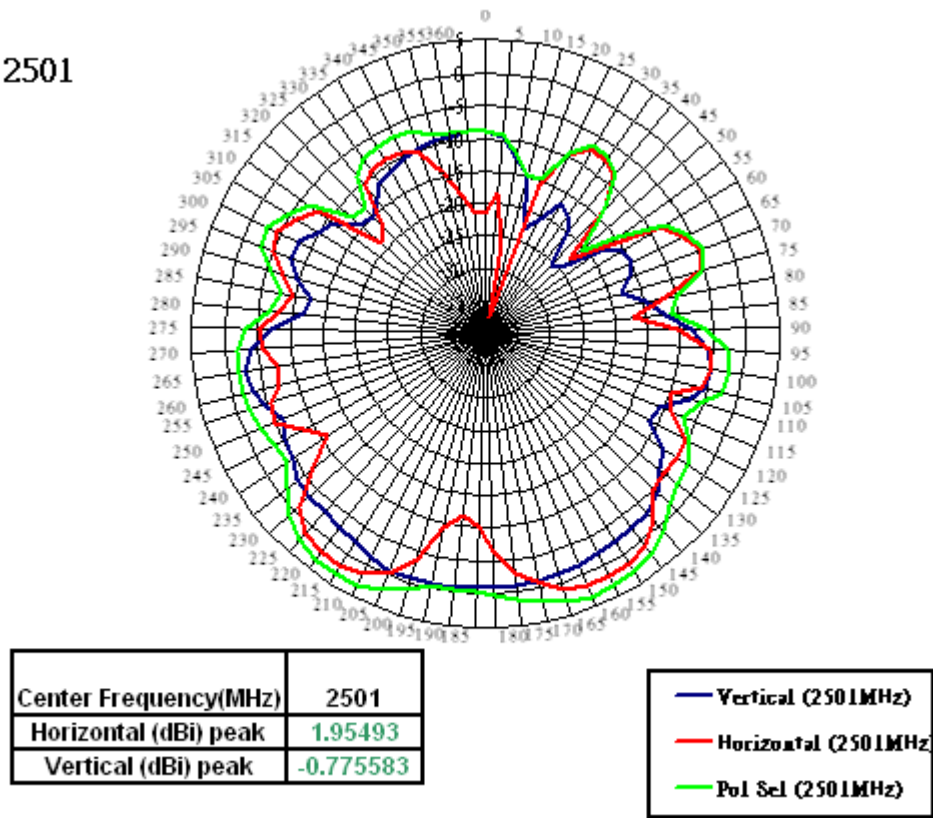
2500



2490-2700MHz radiation characteristic

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

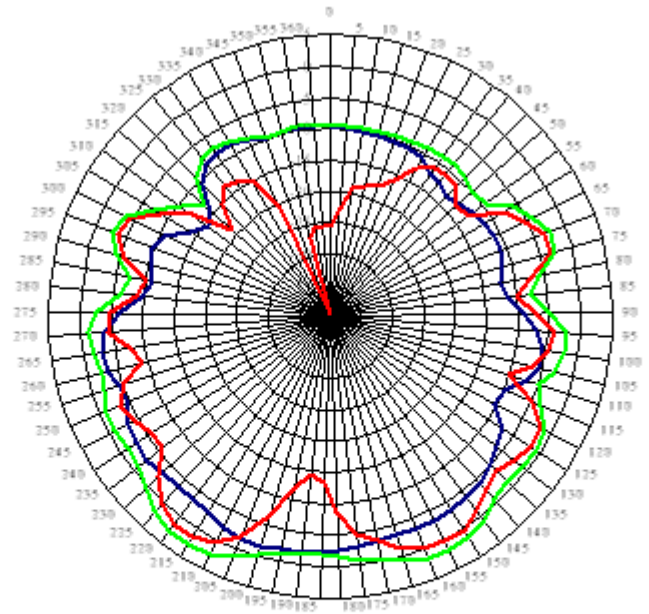
2501





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

2593

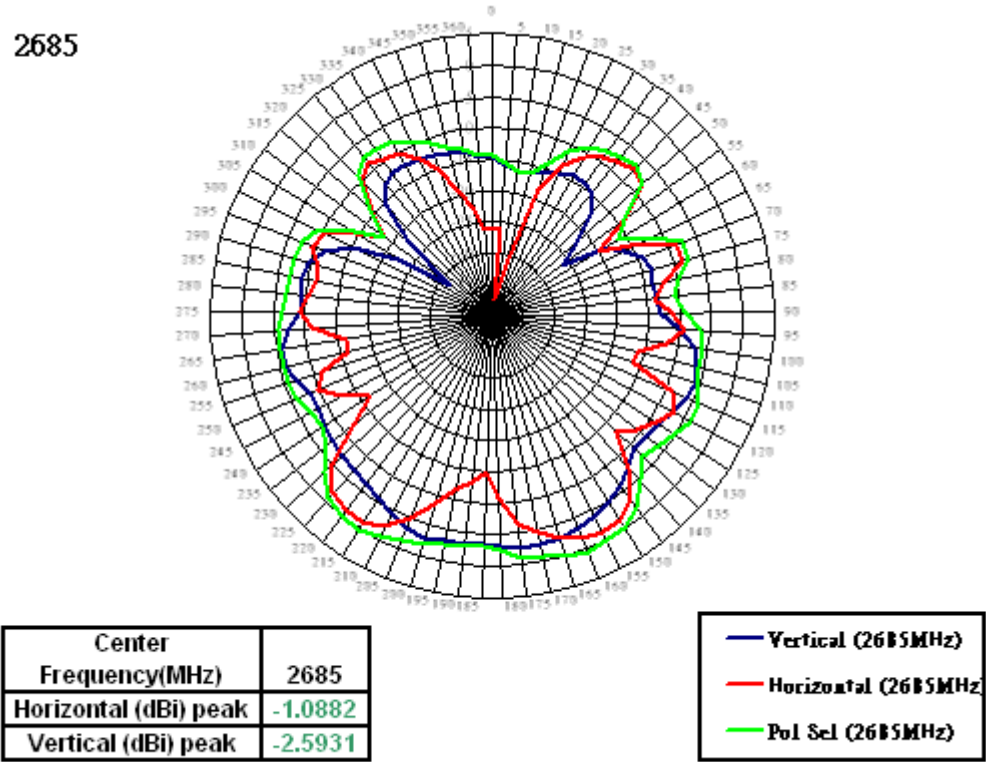


Center Frequency(MHz)	2593
Horizontal (dBi) peak	1.55925
Vertical (dBi) peak	-1.63675

Vertical (2593MHz)
Horizontal (2593MHz)
Pol Sel (2593MHz)

**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)**

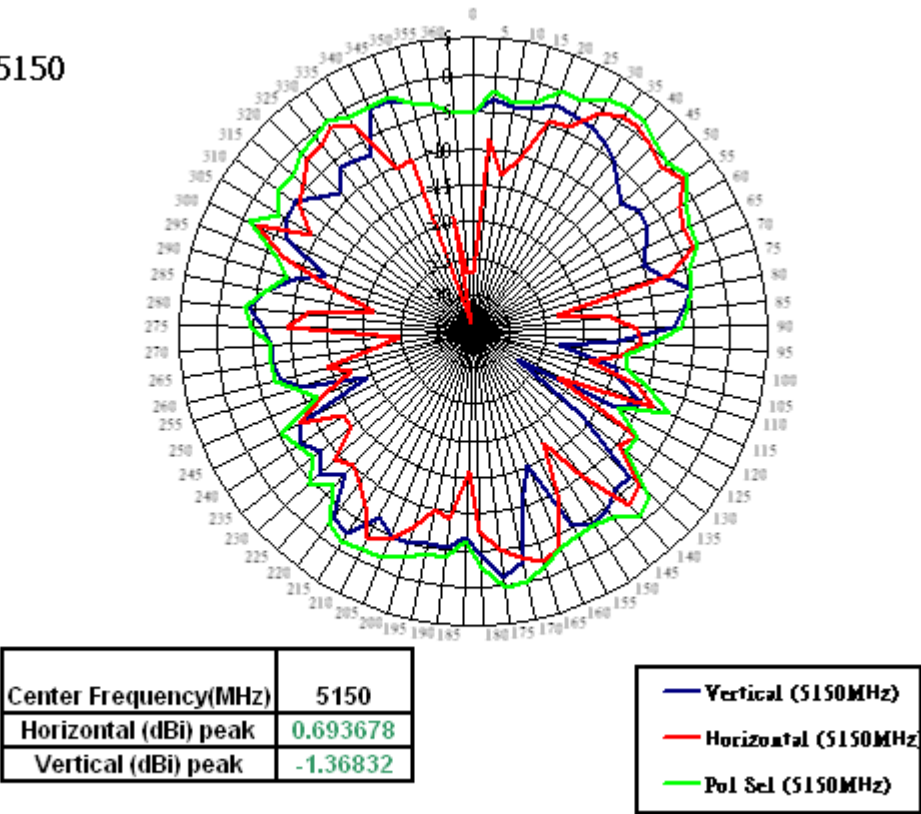
2685



5150-5350 MHz radiation characteristic

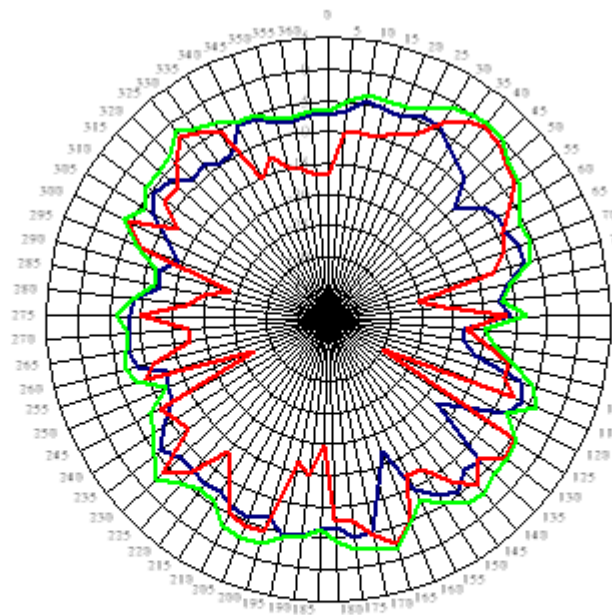
**Tx2 (or Rx2) antenna: 5150 MHz (Plot is not required if 2<sup>nd</sup> Antenna is receive only e.g. Rx2 for 512 family)**

5150



**Tx2 (or Rx2) antenna: 5250 MHz (Plot is not required if 2<sup>nd</sup> Antenna is receive only e.g. Rx2 for 512 family)**

5250

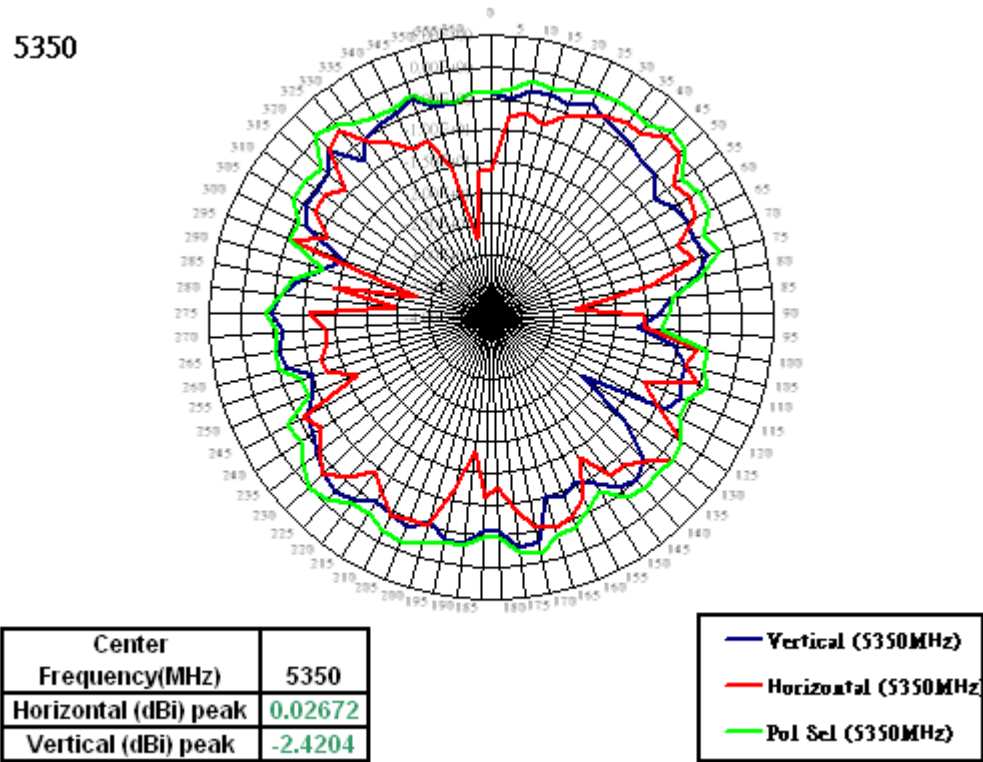


Center Frequency(MHz)	5250
Horizontal (dBi) peak	-0.52462
Vertical (dBi) peak	-4.53396

Vertical (5250MHz)
Horizontal (5250MHz)
Pol Sel (5250MHz)

**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)**

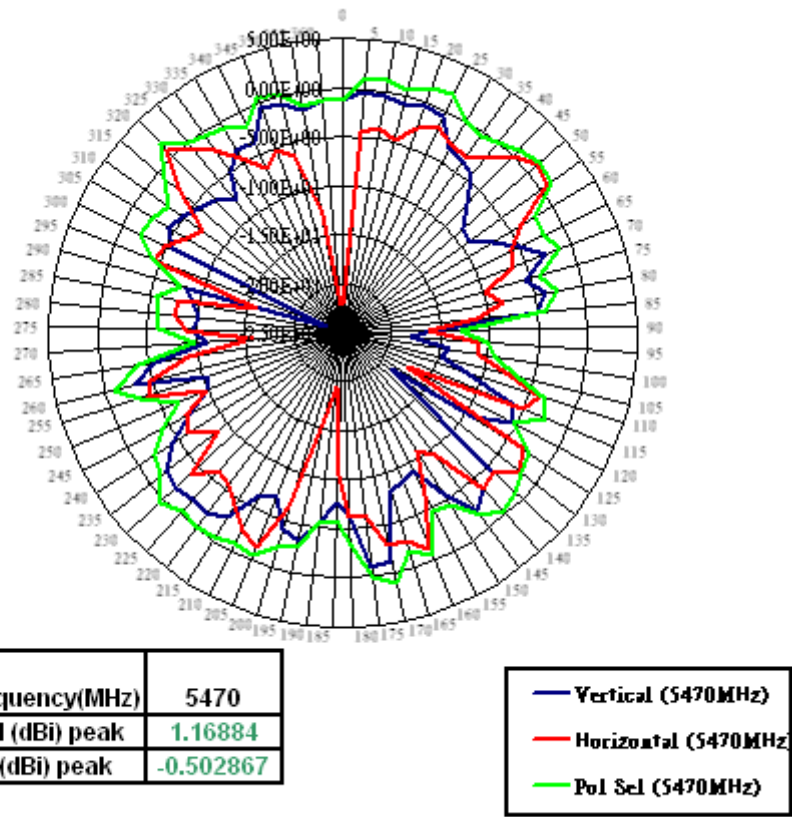
5350



5470-5725MHz radiation characteristic

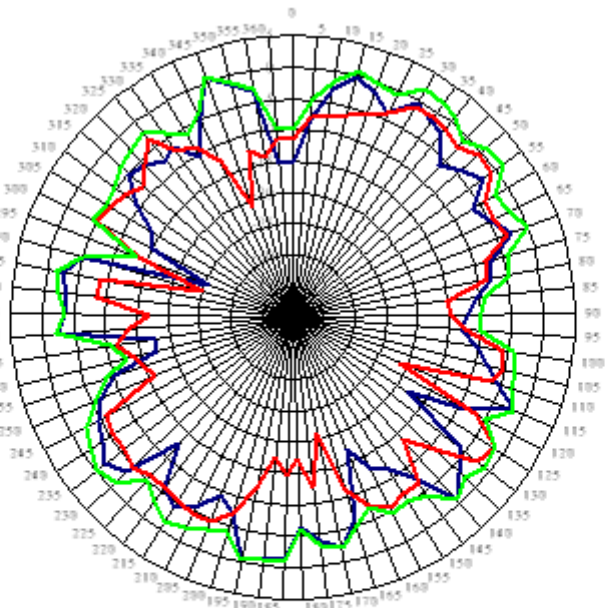
Tx2 (or Rx2) antenna: 5470 MHz (Plot is not required if 2<sup>nd</sup> Antenna is receive only e.g. Rx2 for 512 family)

5470



**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)**

5597.5

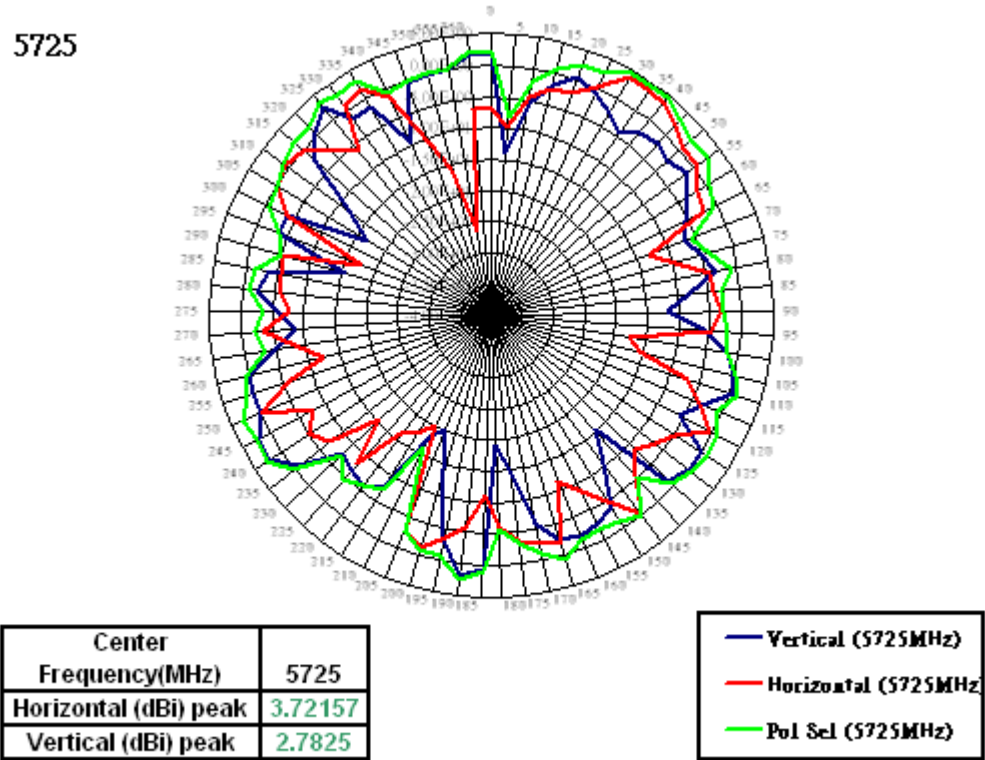


Center Frequency(MHz)	5597.5
Horizontal (dBi) peak	-0.7082
Vertical (dBi) peak	0.770562

Vertical (5597.5MHz)
Horizontal (5597.5MHz)
Pol Sel (5597.5MHz)

**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)**

5725

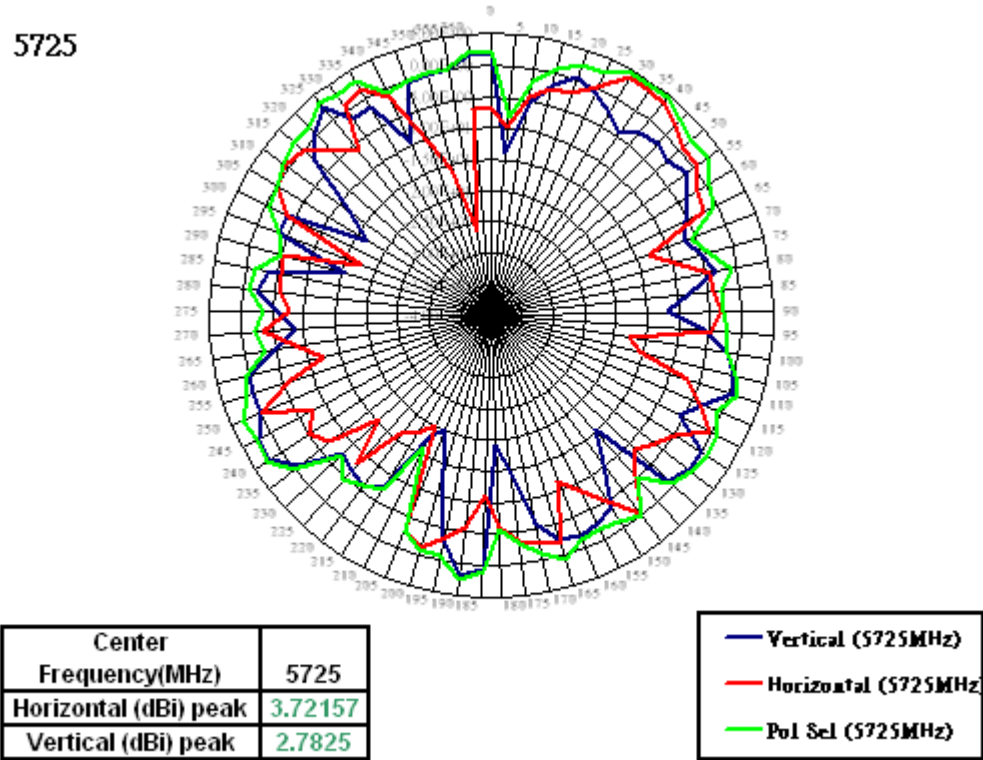




5725-5850 MHz radiation characteristic

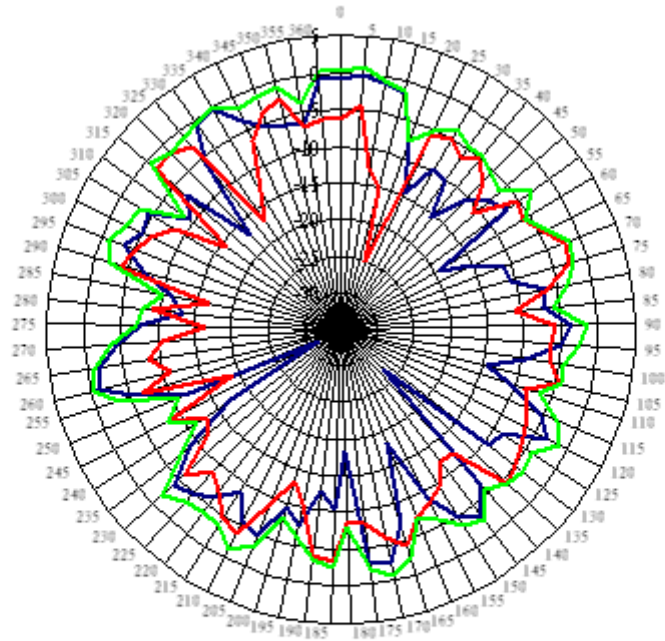
**Tx2 (or Rx2) antenna: 5725 MHz (Plot is not required if 2<sup>nd</sup> Antenna is receive only e.g. Rx2 for 512 family)**

5725



**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)**

5785

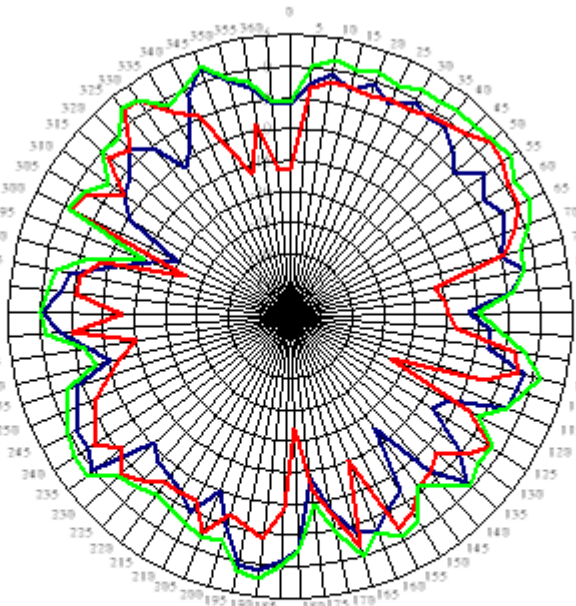


Center Frequency(MHz)	5785
Horizontal (dBi) peak	-1.57358
Vertical (dBi) peak	-0.387984

Vertical (5785MHz)
Horizontal (5785MHz)
Pol Sel (5785MHz)

**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)**

5850



Center Frequency(MHz)	5850
Horizontal (dBi) peak	2.19987
Vertical (dBi) peak	2.19361

Vertical (5850MHz)
Horizontal (5850MHz)
Pol Sel (5850MHz)