

Regulatory WLAN Antenna Information

Platform	Lola
Platform Owner	DELL
Brand Name	DELL
Model Name	Lola no bump WLAN
ODM	Compal
Target Launch Date	(YYYY/ MM/ DD)
Antenna	
Brand Name	Amphenol
Part Number	<input checked="" type="checkbox"/> Tx2 (or Rx2) Antenna (Rx2 for 512 family ONLY) RB0715-11-004-R
Module	
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).</u> <u>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 3rd 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 (2nd or 3rd antenna receives only, e.g. for 512 family & 4965AGN) then the information marked with * is not required

Antenna Peak Gain Table:

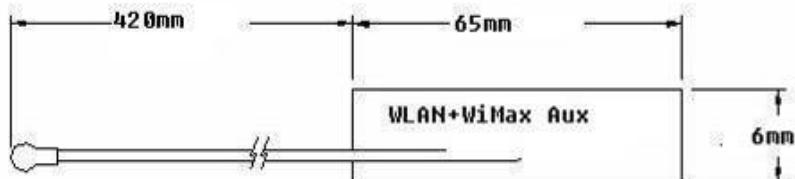
	Tx2 (or Rx2) Antenna	
Frequency (MHz)	Horizontal (dBi)	Vertical (dBi)
2400	-2.12	-3.93
2450	-0.82	-1.90
2500	2.52	-0.04
2501	1.95	-0.77
2593	1.55	-1.63
2685	-1.08	-2.59
5150	0.69	-1.36
5250	-0.52	-4.5
5350	0.02	-2.42
5470	1.16	-0.50
5600	-0.70	0.77
5725	3.72	2.78
5785	-1.57	-0.38
5850	2.19	2.19

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

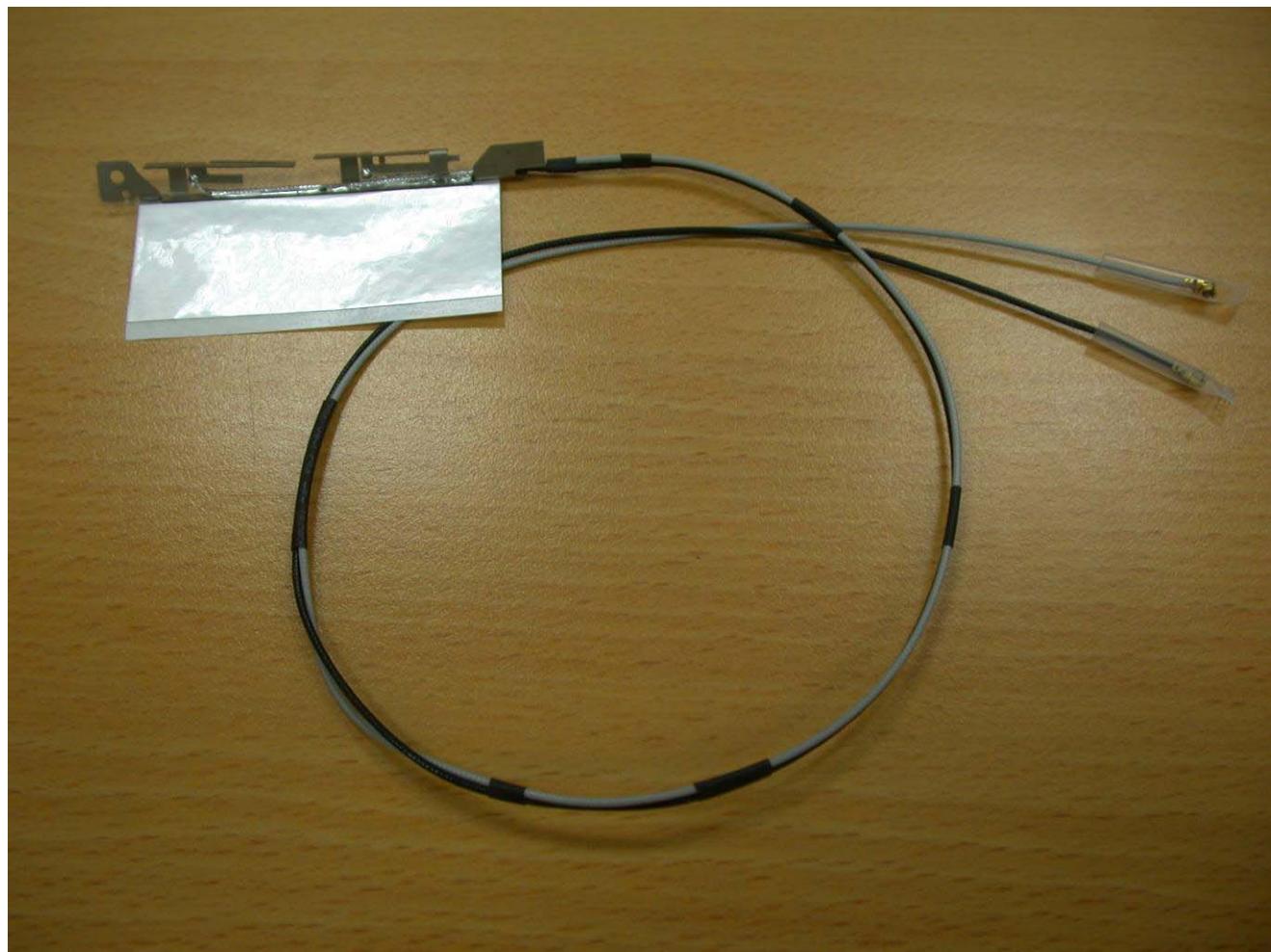
Section 2. Dimensioned Photos or Drawings of Antennas

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

Tx2 (or Rx2) Antenna Dimensioned Drawing:



Tx2 (or Rx2) Antenna Photo:

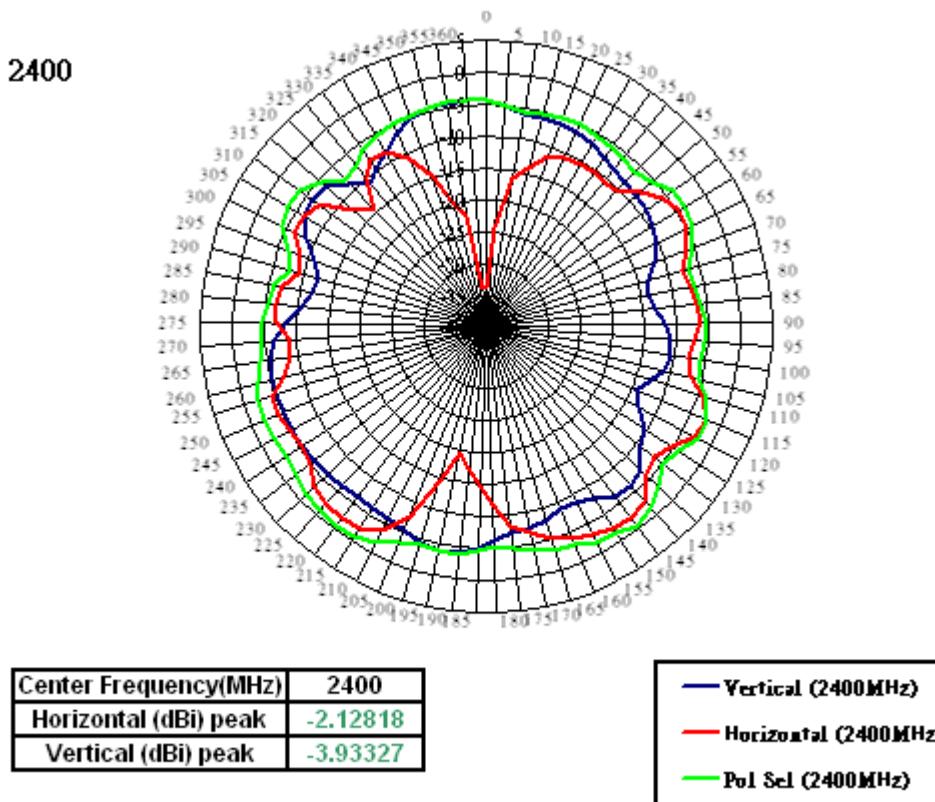


Antenna Manufacturer: Amphenol Taiwan Cooperation
Antenna Part Number: RB0715-11-004 (Tx2 or Rx2),

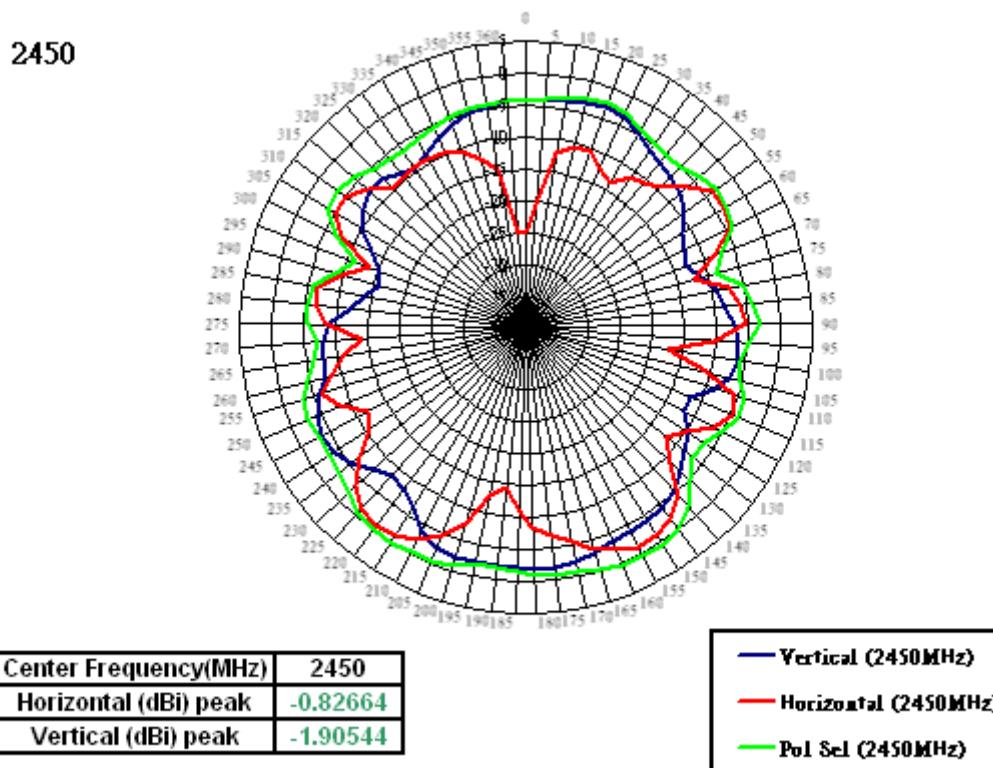
Section 3. Radiation characteristics of antennae Loaded in Host Platform

2400-2500MHz radiation characteristic

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

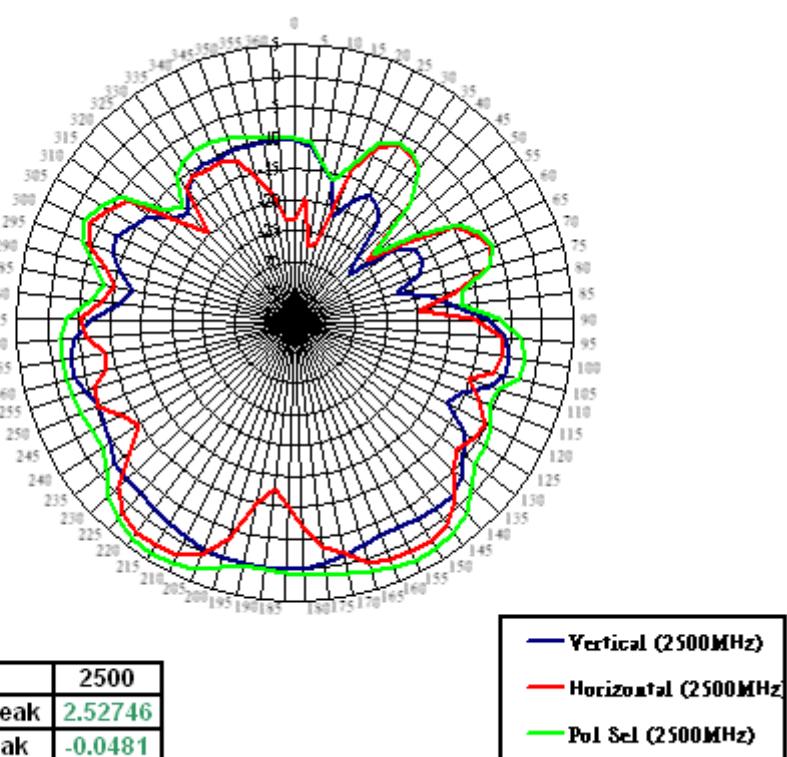


Tx2 (or Rx2) antenna: 2450 MHz (Plot is not required if 2nd Antenna is receive only e.g. Rx2 for 512 family)



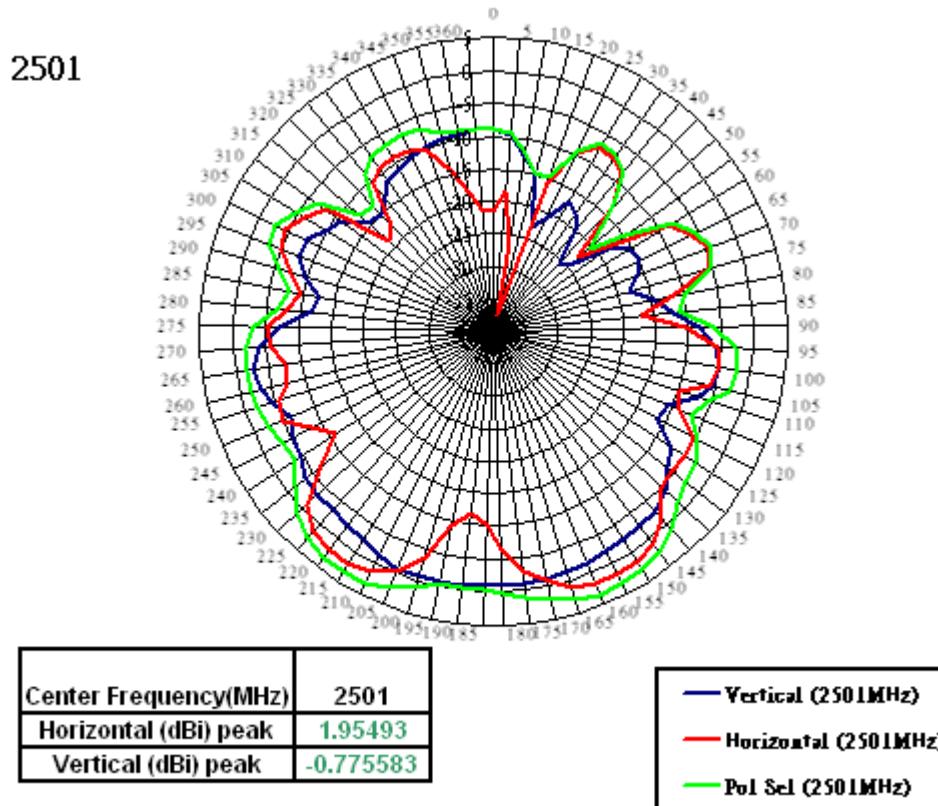
Tx2 (or Rx2) antenna: 2500 MHz (Plot is not required if 2nd Antenna is receive only e.g. Rx2 for 512 family)

2500



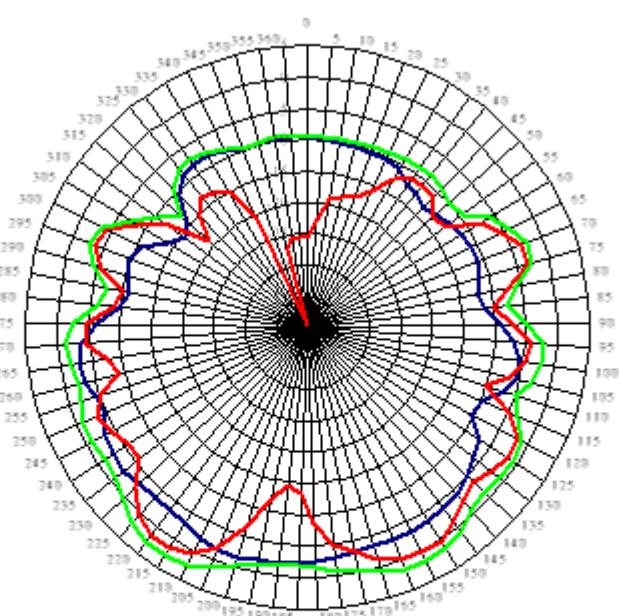
2490-2700MHz radiation characteristic

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



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

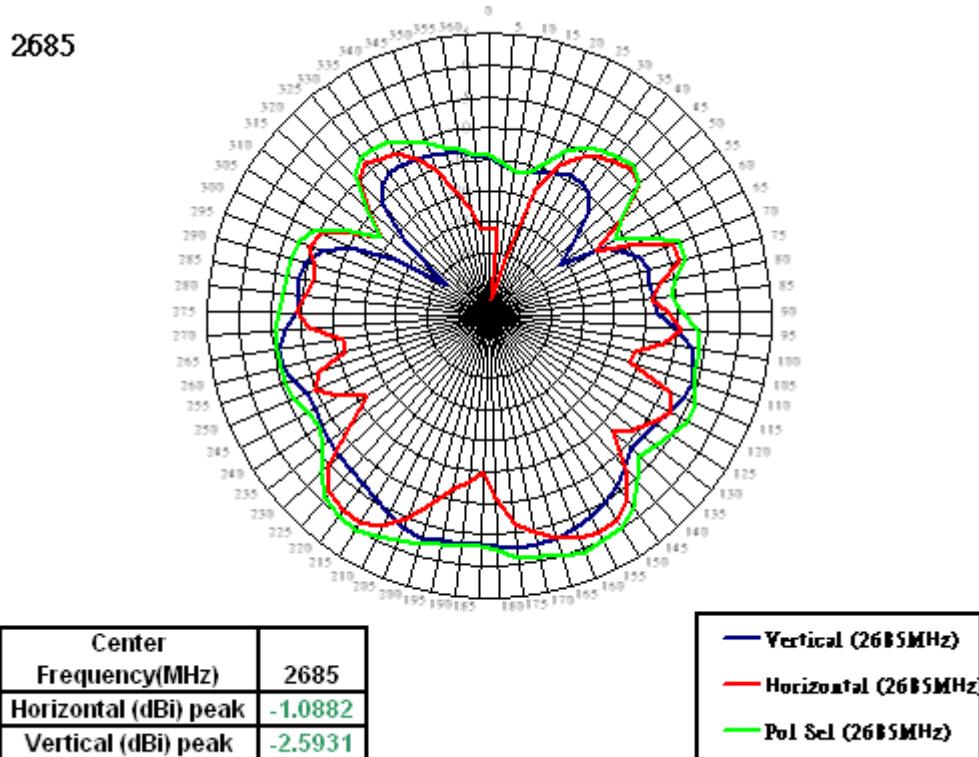
2593



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

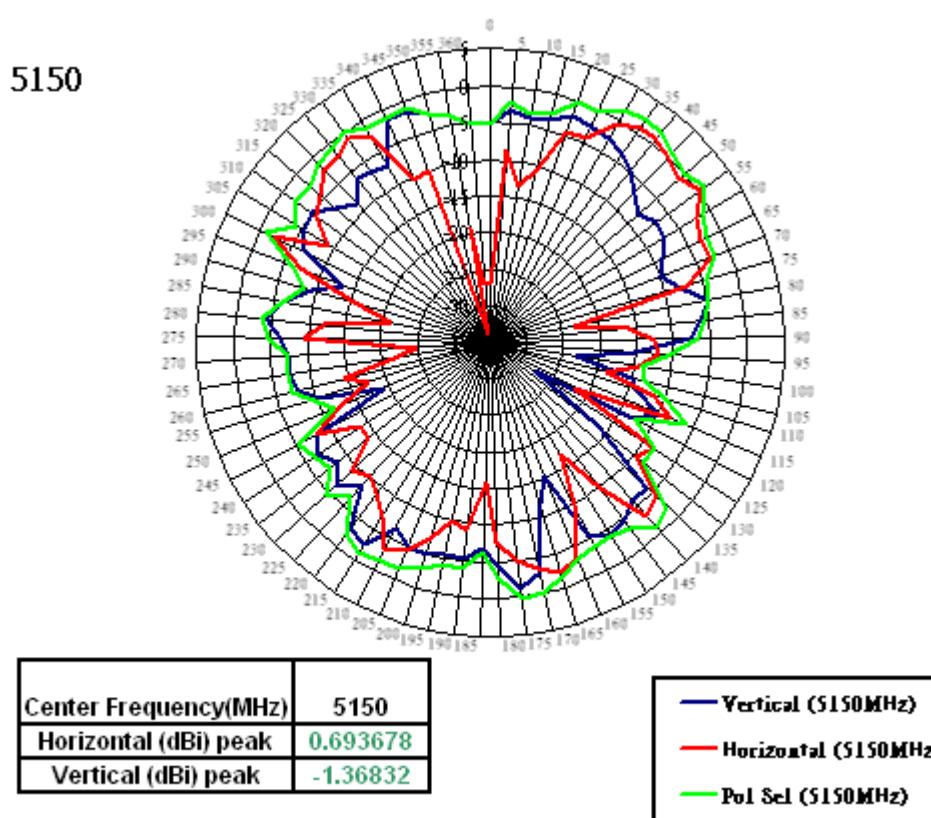
— Vertical (2593MHz)
— Horizontal (2593MHz)
— Pol Sel (2593MHz)

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



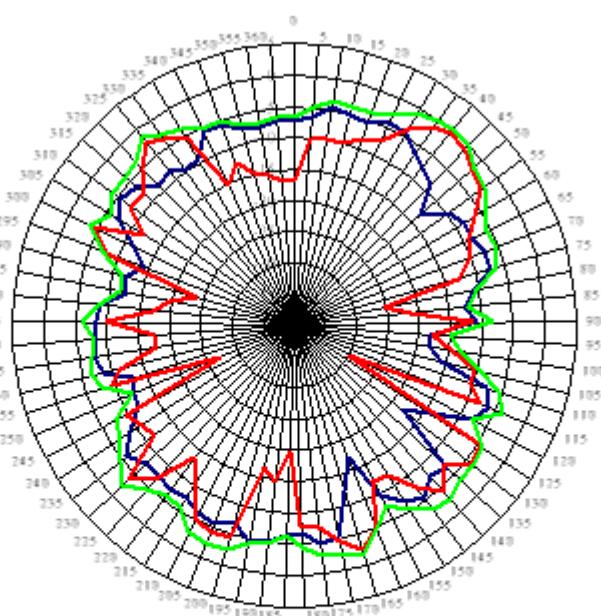
5150-5350 MHz radiation characteristic

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



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

5250

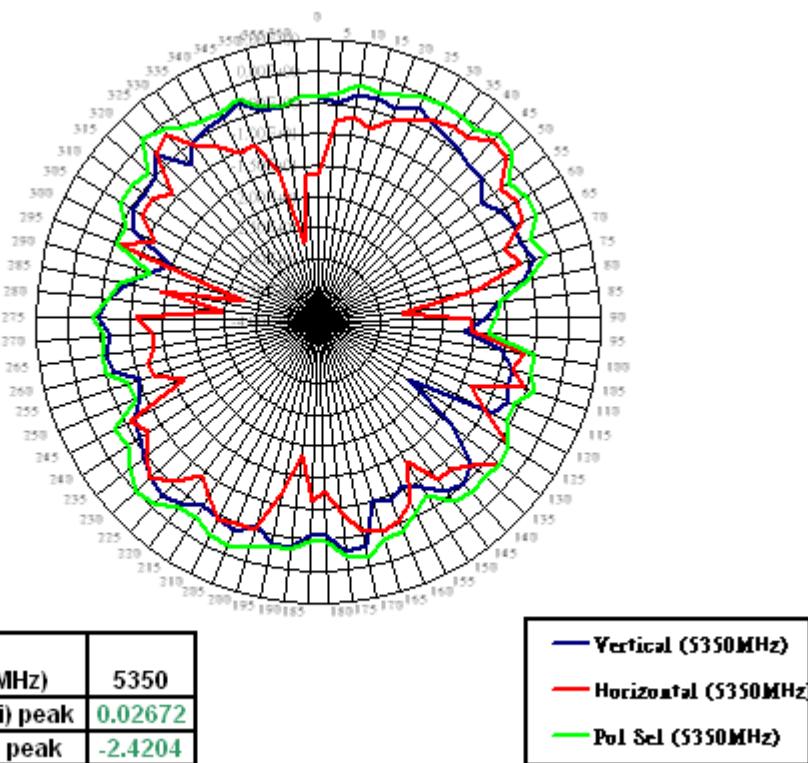


Center Frequency(MHz)	5250
Horizontal (dBi) peak	-0.52462
Vertical (dBi) peak	-4.53396

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

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

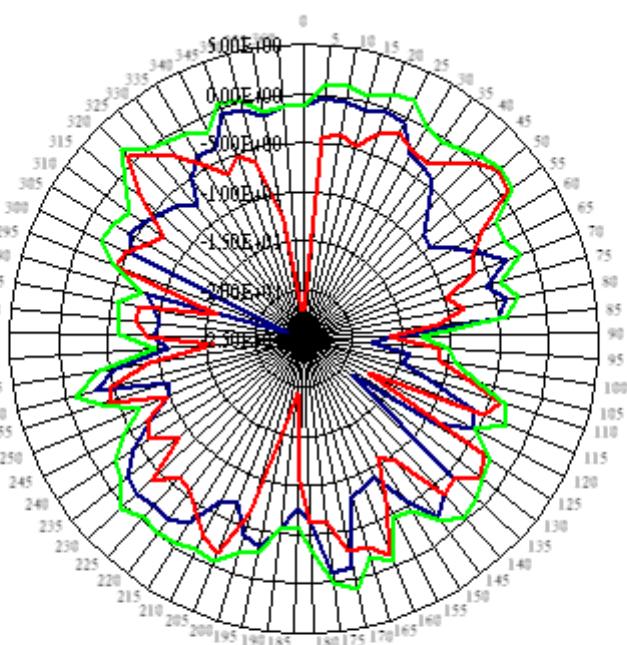
5350



5470-5725MHz radiation characteristic

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

5470

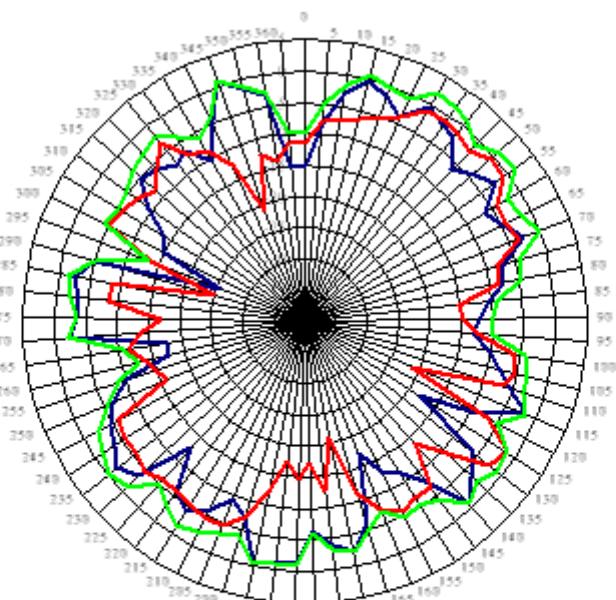


Center Frequency(MHz)	5470
Horizontal (dBi) peak	1.16884
Vertical (dBi) peak	-0.502867

Vertical (5470MHz)
Horizontal (5470MHz)
Pol Sel (5470MHz)

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

5597.5

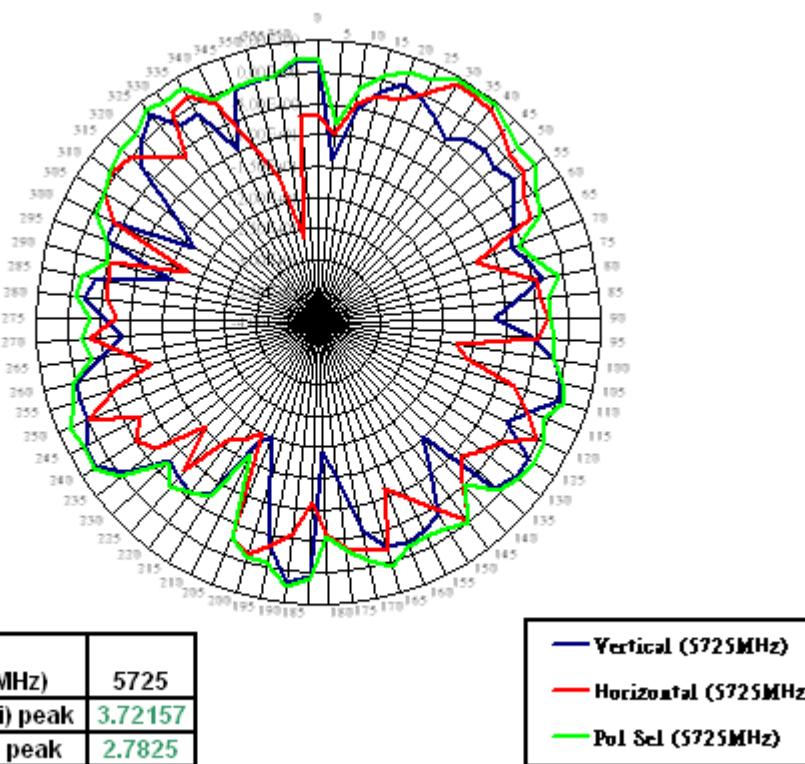


Center Frequency(MHz)	5597.5
Horizontal (dBi) peak	-0.7082
Vertical (dBi) peak	0.770562

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

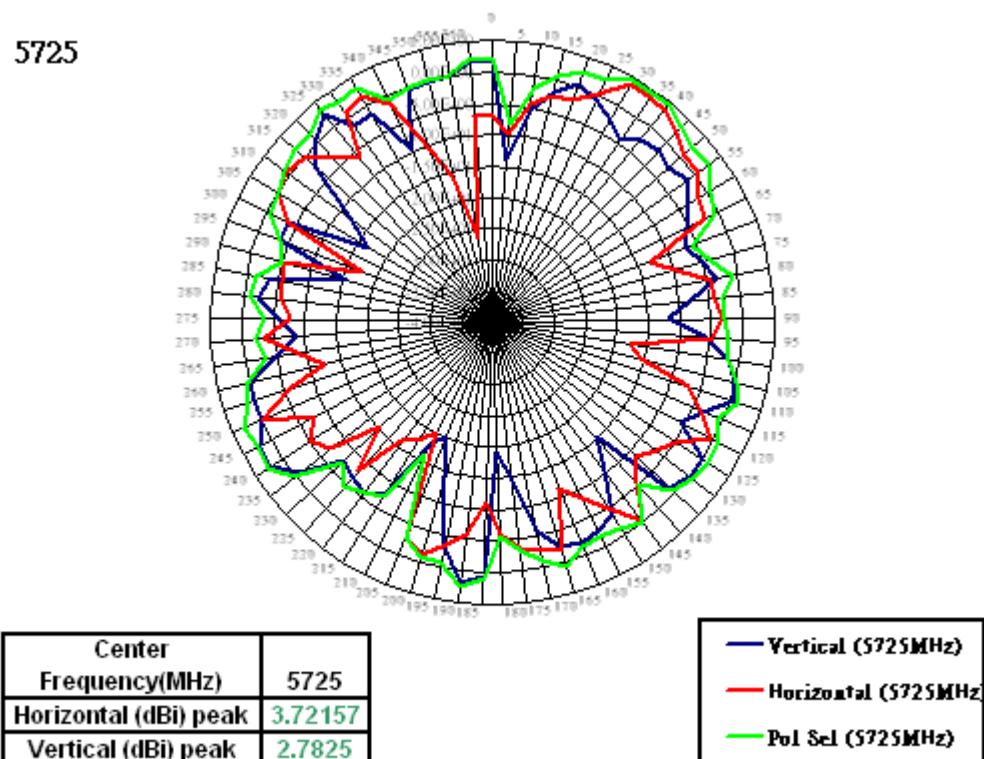
Tx2 (or Rx2) antenna: 5725 MHz (Plot is not required if 2nd Antenna is receive only e.g. Rx2 for 512 family)

5725



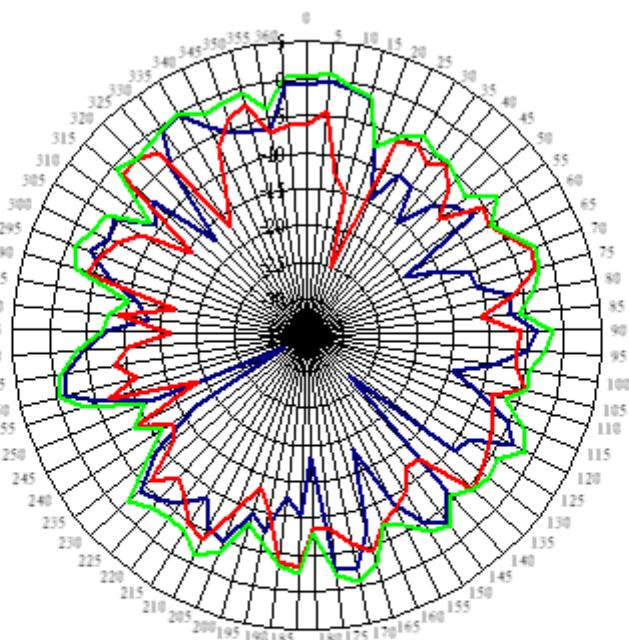
5725-5850 MHz radiation characteristic

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



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

5785

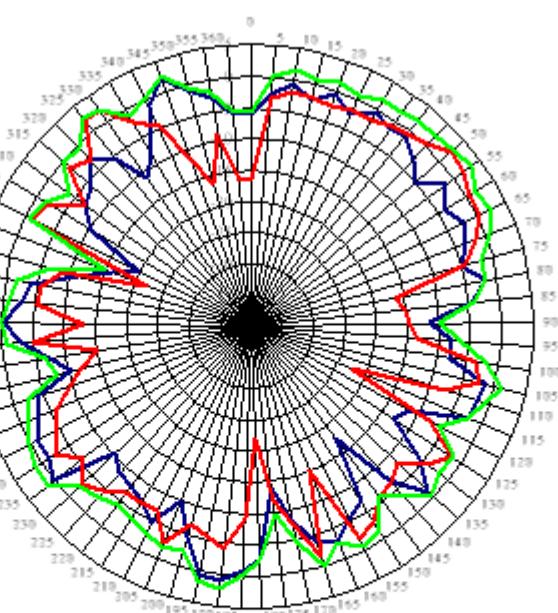


Center Frequency(MHz)	5785
Horizontal (dBi) peak	-1.57358
Vertical (dBi) peak	-0.387984

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

Tx2 (or Rx2) antenna: 5850 MHz (Plot is not required if 2nd 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)
PoI Sel (5850MHz)