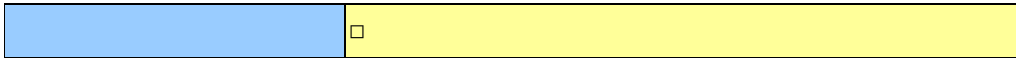


Regulatory WLAN Antenna Information 2.4/5GHz Dell Paltrow Series Multiple Band Antennas with Cable & Connector

(English Language Required for Intel Regulatory Review / Approval)

Platform	
Platform Owner	DELL
Brand Name	DELL
Model Name	Paltrow
ODM	Quanta
Target Launch Date	
Antenna	
Brand Name	
Part Number	■ Tx1 Antenna: Main –AMP8P-700056
	■ Tx2 Antenna:Aux –AMP8P-700056
	■ Tx3 (or Rx3) Antenna : MIMO –AMP8P-700055
Module	
With WLAN Module	<input type="checkbox"/>
(Check Box)	<input type="checkbox"/>
	<input type="checkbox"/>
	<input type="checkbox"/>
	<input type="checkbox"/>
	<input type="checkbox"/>
	<input type="checkbox"/>
	<input type="checkbox"/>



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 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)
AMP8P-700056 Tx1 Antenna Main White	ACON Corporation	PIFA	1) KURABE /Sumitomo /KBE 2) O.D. 1.13mm 50 ohm coaxial cable 3)length: 700 mm 4)Connector P/N:I-PEX MHF	2412-2462MHz -1.55dBi (peak)	2412-2462MHz 0.4dBi (peak)	2412-2462MHz 2.5 max	2412-2462MHz 1.95 dBi (peak)
				2500-2700MHz -0.02dBi (peak)	2500-2700MHz 2.24dBi (peak)	2500-2700MHz 2.5 max	2500-2700MHz 2.26dBi (peak)
				5150-5470MHz -0.76dBi (peak)	5150-5470MHz 2.39dBi (peak)	5150-5470MHz 2.5 max	5150-5470MHz 3.15dBi (peak)
				5725-5850MHz -1.61dBi (peak)	5725-5850MHz 1.81dBi (peak)	5725-5850MHz 2.5 max	5725-5850MHz 3.42dBi (peak)
AMP8P-700056 Tx2 antenna Aux Black	ACON Corporation	PIFA	1) KURABE /Sumitomo /KBE 2) O.D. 1.13mm 50 ohm coaxial cable 3)length: 639 mm 4)Connector P/N:I-PEX MHF	2412-2462MHz -0.26dBi (peak)	2412-2462MHz 1.56dBi (peak)	2412-2462MHz 2.5 max	2412-2462MHz 1.82dBi (peak)
				2500-2700MHz 0.02dBi (peak)	2500-2700MHz 1.95dBi (peak)	2500-2700MHz 2.5 max	2500-2700MHz 1.93dBi (peak)
				5150-5470MHz -0.68dBi (peak)	5150-5470MHz 2.27dBi (peak)	5150-5470MHz 2.5 max	5150-5470MHz 2.95dBi (peak)
				5725-5850MHz -2.62 dBi (peak)	5725-5850MHz 0.43dBi (peak)	5725-5850MHz 2.5 max	5725-5850MHz 3.05dBi (peak)
AMP8P-700055 Tx3 (or Rx3) antenna Gray MIMO	ACON Corporation	PIFA	1) KURABE /Sumitomo /KBE 2) O.D. 1.13mm 50 ohm coaxial cable 3)length: 417 mm 4)Connector P/N:I-PEX MHF	2412-2462MHz -1.57dBi (peak)	2412-2462MHz -0.14dBi (peak)	2412-2462MHz 2.5 max	2412-2462MHz 1.43dBi (peak)
				2500-2700MHz XdBi (peak)	2500-2700MHz X dBi (peak)	2500-2700MHz X max	2500-2700MHz X dBi (peak)
				5150-5470MHz 0.66dBi (peak)	5150-5470MHz 2.61dBi (peak)	5150-5470MHz 2.5 max	5150-5470MHz 1.95dBi (peak)
				5725-5850MHz -0.56dBi (peak) *	5725-5850MHz 1.49dBi (peak) *	5725-5850MHz 2.5 max *	5725-5850MHz 2.05dBi (peak) *

NOTE:

(*) If Rx3 only (3rd antenna receives only, e.g. for 4965AGN) then the information marked with * is not required

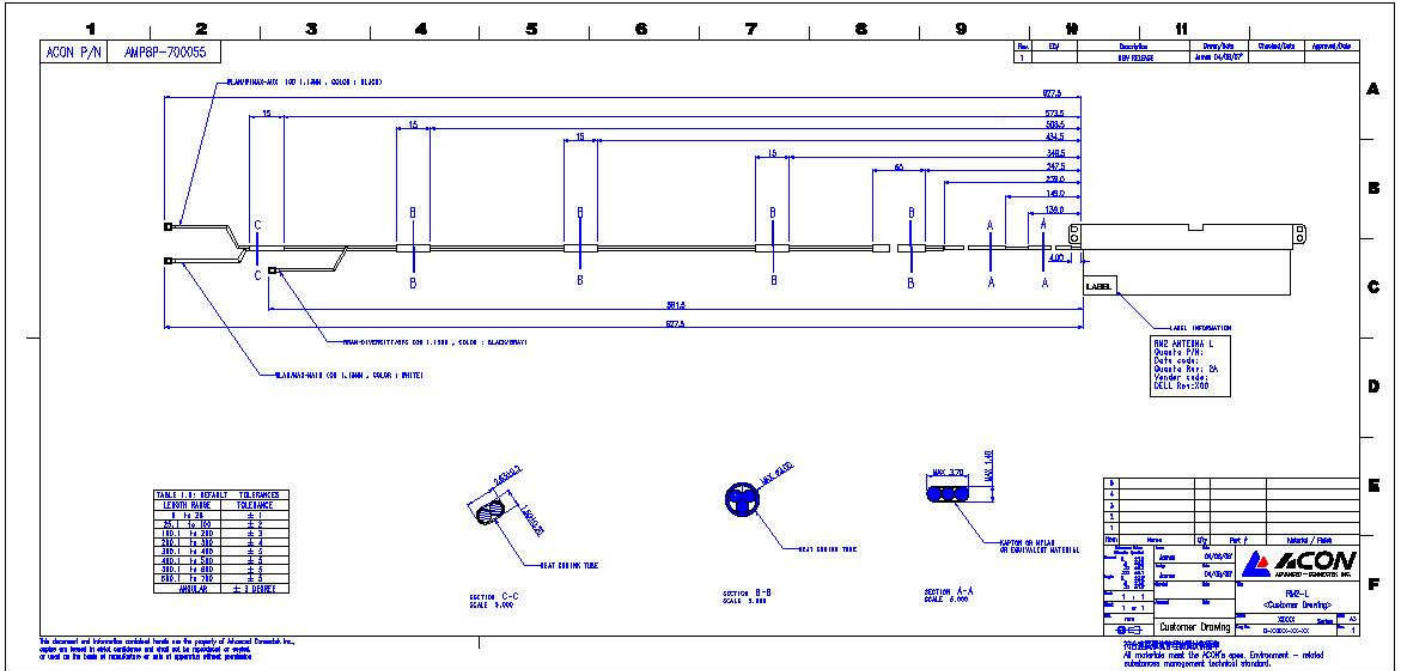
Antenna Peak Gain Table:

Freq. (MHz)	WLAN Antenna-White(MAIN)			WLAN Antenna-Black(AUX)			MIMO Antenna-Gray		
	H	V	H + V	H	V	H + V	H	V	H + V
	dBi	dBi	dBi	dBi	dBi	dBi	dBi	dBi	dBi
2412	-2.65	-1.88	-1.24	-4.57	-3.22	-1.86	-2.23	-4.17	-1.53
2437	-3.13	-1.55	-1.03	-3.33	-1.96	-0.41	-1.57	-3.39	-1.05
2462	-3.48	-1.82	-1.29	-3.54	-0.26	1.04	-1.82	-3.13	-1.11
2500	-1.60	-0.02	0.77	-2.17	0.02	1.12	X	X	X
2600	-3.81	-1.60	-0.77	-1.81	-1.46	0.43	X	X	X
2700	-3.40	-1.84	-1.12	-2.86	-4.34	-0.99	X	X	X
5150	-3.26	-0.76	-0.24	-4.30	-0.68	-0.64	-3.50	0.66	1.11
5350	-2.70	-1.08	-0.48	-3.15	-1.25	-0.59	-0.51	0.33	0.92
5470	-3.12	-1.36	-0.50	-2.85	-2.31	-1.35	-1.92	0.31	0.88
5725	-4.29	-1.61	-1.09	-3.27	-2.77	-2.24	-1.91	-0.56	0.84
5875	-3.28	-2.32	-1.03	-3.49	-2.62	-1.66	-2.05	-1.14	0.68

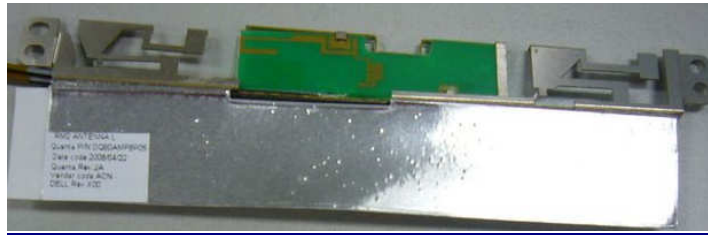
Antenna Peak Gain required being test in system basis.

- 1E frame contend absolutely peak antenna gain include H/V
- If Rx3 only (3rd antenna receives only, e.g. for 4965AGN) then the information is not required for Rx3.

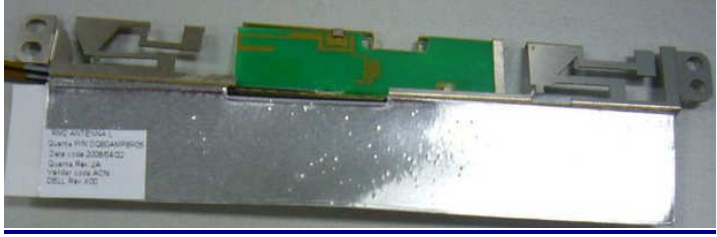
Include a dimensioned photo and dimensioned drawing of Tx2 antenna here.
Tx2 Antenna Dimensioned Drawing:



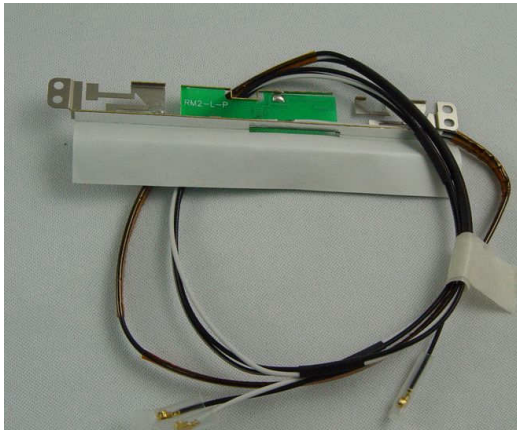
Tx2 Antenna Photo: AUX



Include front view photo of all 3 antennas here.



Include back view photo of all 3 antennas here.



Section 3. Radiation characteristics of antennae Loaded in Host Platform

2412-2562MHz radiation characteristic

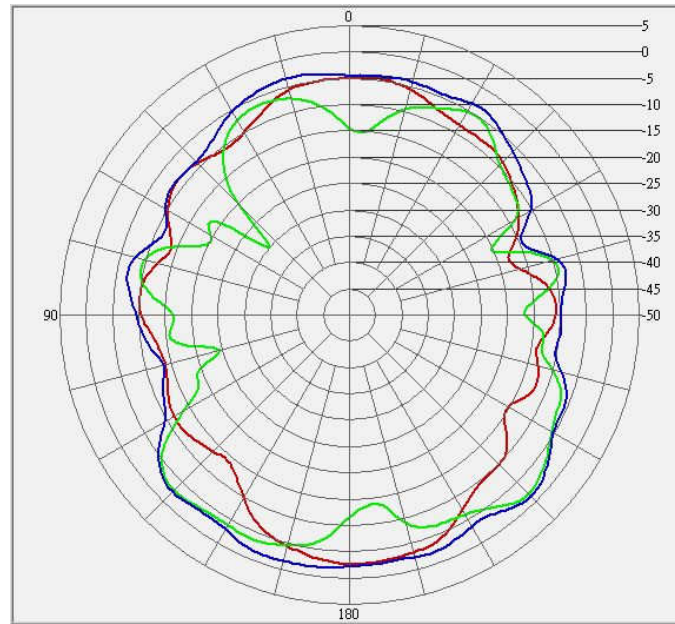
MAIN antenna: 2412 MHz

The Most Appropriate Antenna for Your Best Design!

— H-Pol

— V-Pol

— H+V



Center Frequency	2412 MHz
Horizontal (dBi) peak	-2.65
Vertical (dBi) peak	-1.88
H+V (dBi) peak	-1.24

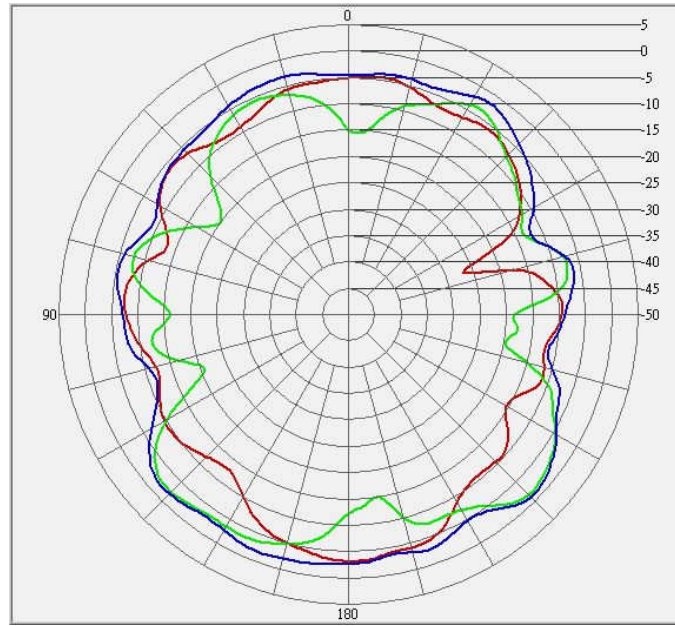
MAIN antenna: 2437 MHz

The Most Appropriate Antenna for Your Best Design!

— H-Pol

— V-Pol

— H+V



Center Frequency	2437 MHz
Horizontal (dBi) peak	-3.13
Vertical (dBi) peak	-1.55
H+V (dBi) peak	-1.03

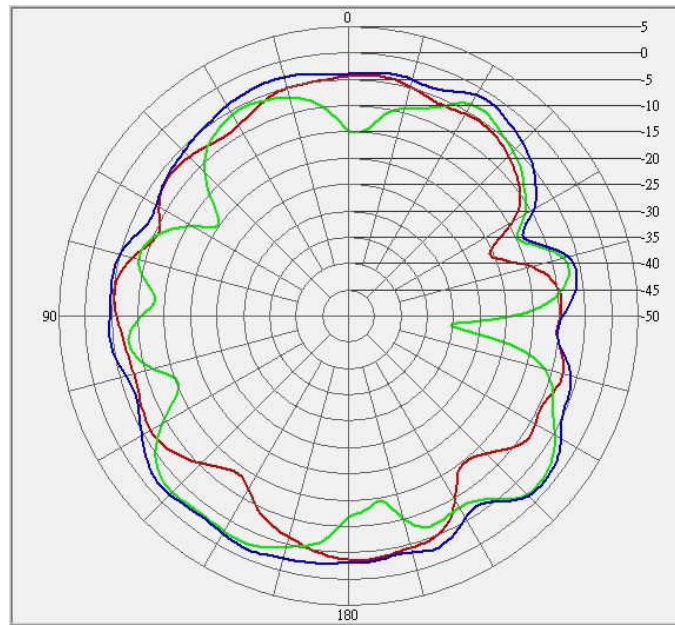
MAIN antenna: 2462 MHz

The Most Appropriate Antenna for Your Best Design!

— H-Pol

— V-Pol

— H+V

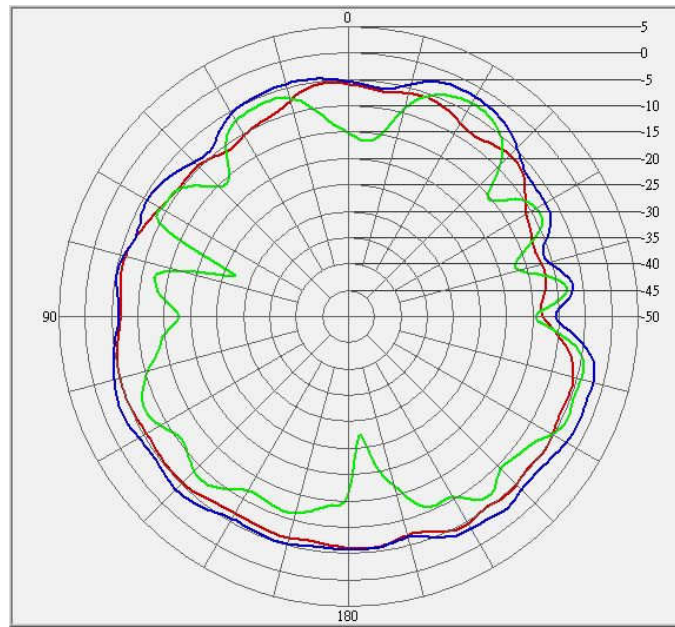


Center Frequency	2462 MHz
Horizontal (dBi) peak	-3.48
Vertical (dBi) peak	-1.82
H+V (dBi) peak	-1.29

AUX antenna: 2412 MHz

The Most Appropriate Antenna for Your Best Design!

— H-Pol — V-Pol — H+V



Center Frequency	2412 MHz
Horizontal (dBi) peak	-4.57
Vertical (dBi) peak	-3.22
H+V (dBi) peak	-1.86

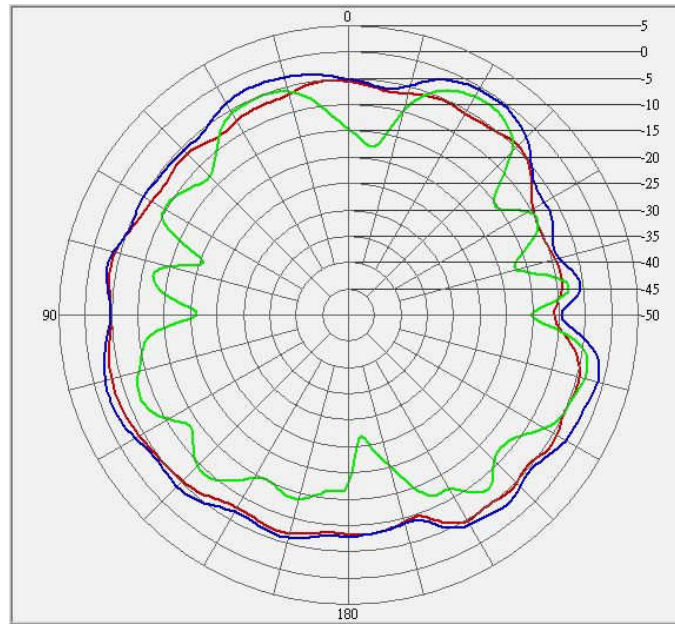
AUX antenna: 2437MHz

The Most Appropriate Antenna for Your Best Design!

— H-Pol

— V-Pol

— H+V



Center Frequency	2437 MHz
Horizontal (dBi) peak	-3.33
Vertical (dBi) peak	-1.96
H+V (dBi) peak	-0.41

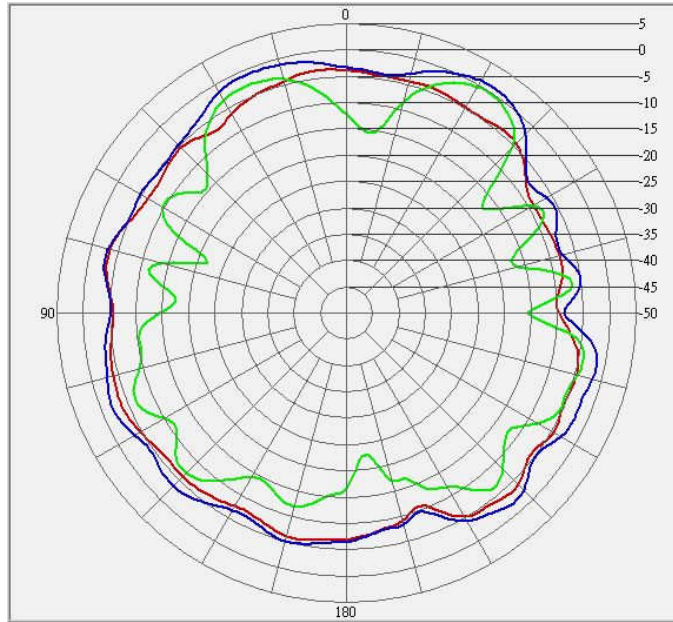
AUX antenna: 2462 MHz

The Most Appropriate Antenna for Your Best Design!

— H-Pol

— V-Pol

— H+V

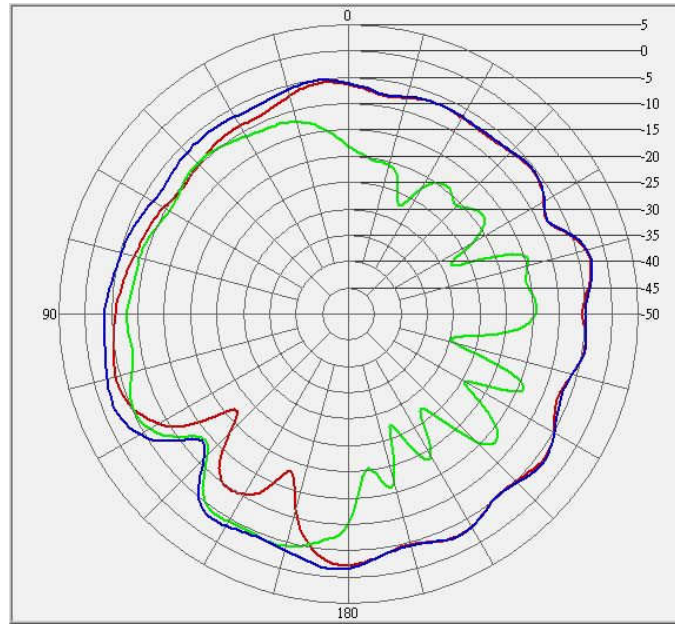


Center Frequency	2462 MHz
Horizontal (dBi) peak	-3.54
Vertical (dBi) peak	-0.26
H+V (dBi) peak	1.04

— H-Pol

— V-Pol

— H+V

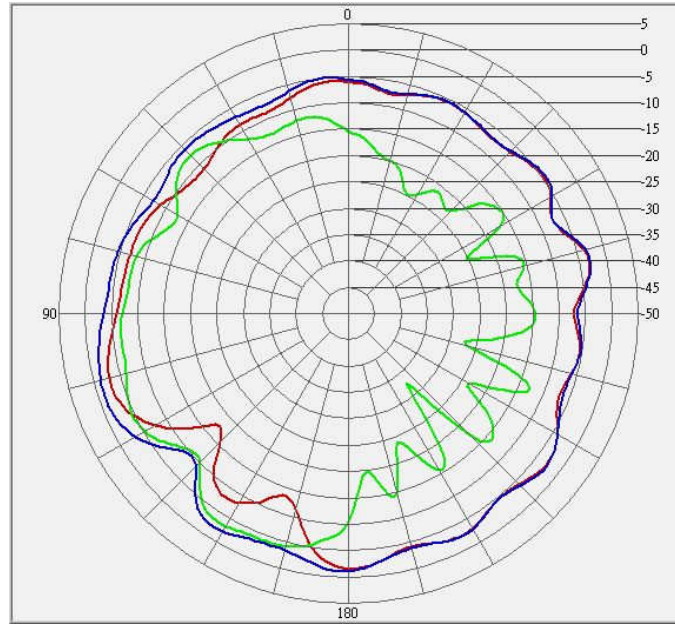


Center Frequency	2412 MHz
Horizontal (dBi) peak	-2.23
Vertical (dBi) peak	-4.17
H+V (dBi) peak	-1.53

MIMO antenna: 2437 MHz

The Most Appropriate Antenna for Your Best Design!

— H-Pol — V-Pol — H+V

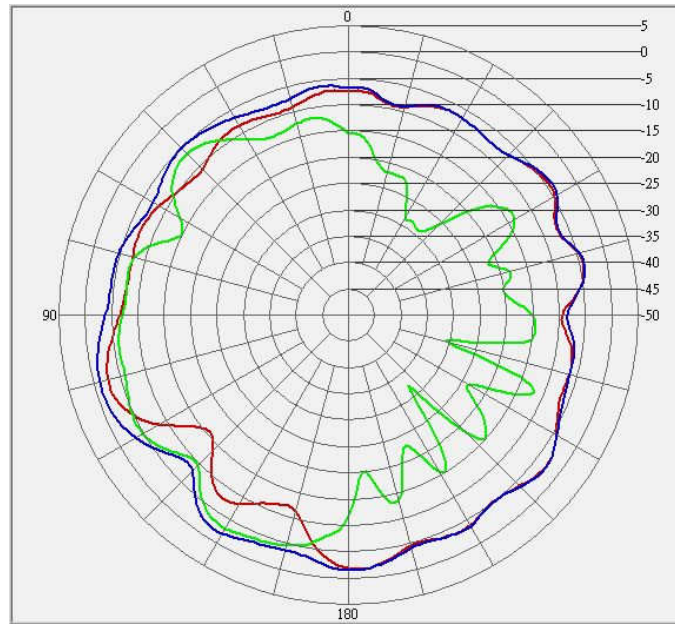


Center Frequency	2437 MHz
Horizontal (dBi) peak	-1.57
Vertical (dBi) peak	-3.39
H+V (dBi) peak	-1.05

MIMO antenna: 2462 MHz

The Most Appropriate Antenna for Your Best Design!

— H-Pol — V-Pol — H+V



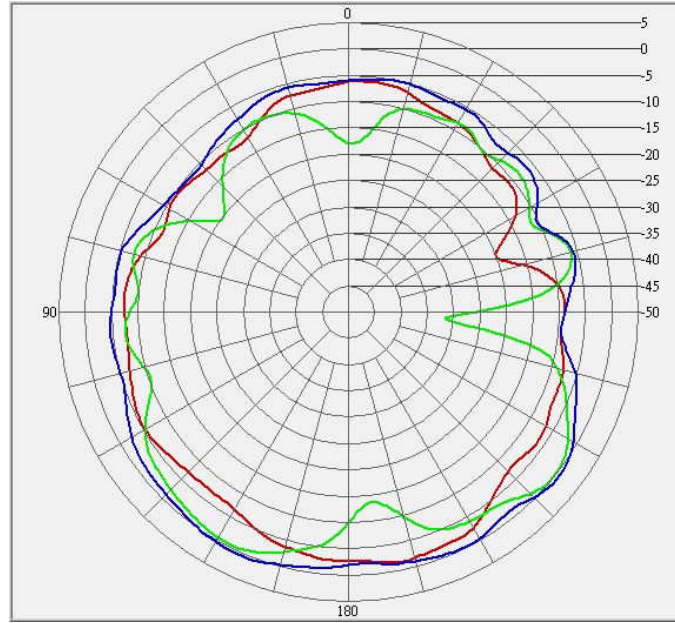
Center Frequency	2462 MHz
Horizontal (dBi) peak	-1.82
Vertical (dBi) peak	-3.13
H+V (dBi) peak	-1.11

2500-2700MHz radiation characteristic

MAIN antenna: 2500MHz

The Most Appropriate Antenna for Your Best Design!

— H-Pol — V-Pol — H+V

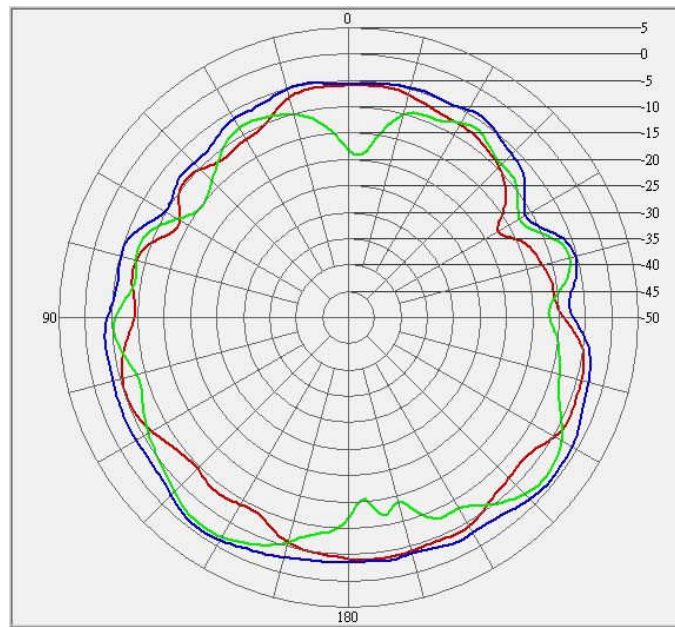


Center Frequency	2500 MHz
Horizontal (dBi) peak	-1.60
Vertical (dBi) peak	-0.02
H+V (dBi) peak	0.77

MAIN antenna: 2600 MHz

The Most Appropriate Antenna for Your Best Design!

— H-Pol — V-Pol — H+V



Center Frequency	2600 MHz
Horizontal (dBi) peak	-3.81
Vertical (dBi) peak	-1.60
H+V (dBi) peak	-0.77

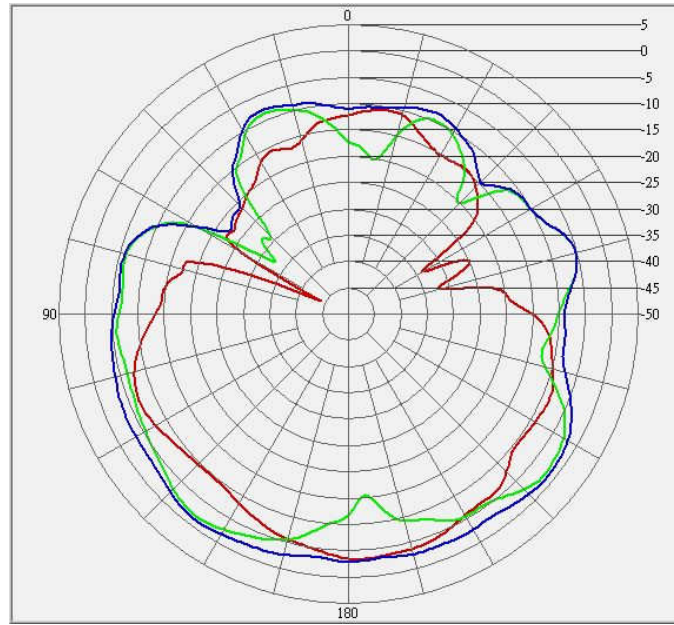
MAIN antenna:2700 MHz

The Most Appropriate Antenna for Your Best Design!

— H-Pol

— V-Pol

— H+V

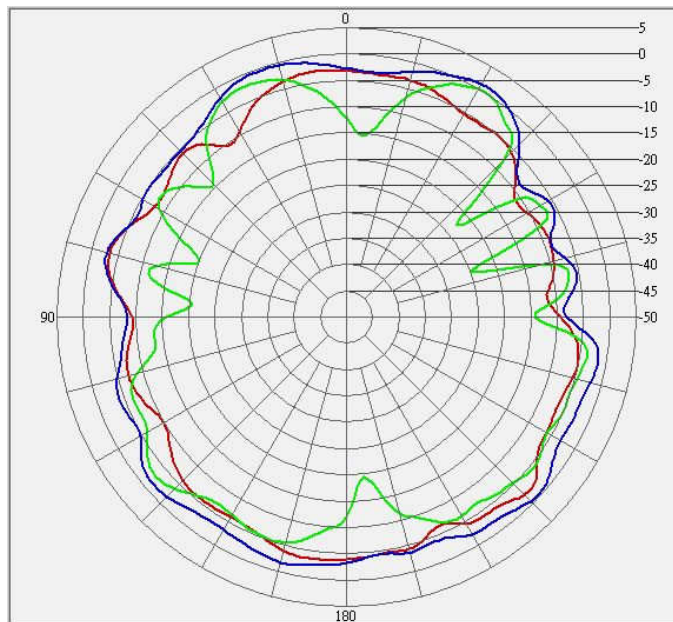


Center Frequency	2700 MHz
Horizontal (dBi) peak	-3.40
Vertical (dBi) peak	-1.84
H+V (dBi) peak	-1.12

— H-Pol

— V-Pol

— H+V

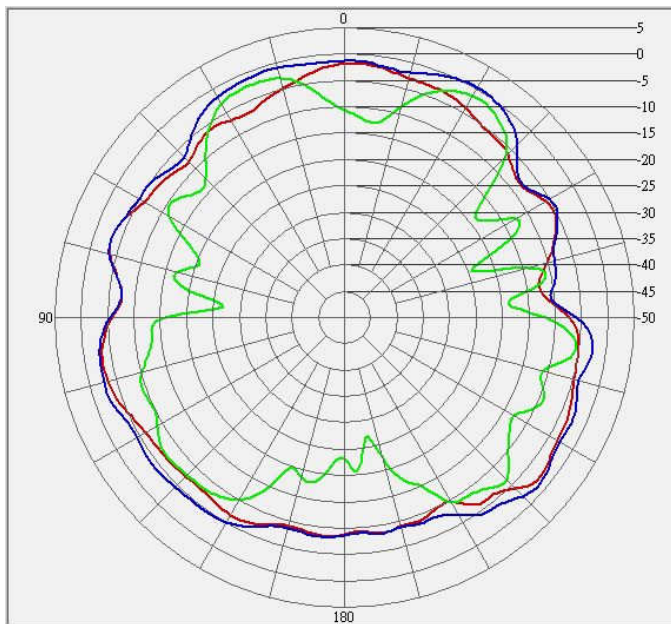


Center Frequency	2500 MHz
Horizontal (dBi) peak	-2.17
Vertical (dBi) peak	0.02
H+V (dBi) peak	1.12

— H-Pol

— V-Pol

— H+V



Center Frequency	2600 MHz
Horizontal (dBi) peak	-1.81
Vertical (dBi) peak	-1.46
H+V (dBi) peak	0.43