Regulatory WLAN Antenna Information

Platform	
Platform Owner	Hewlett-Packard Company
Brand Name	Hewlett-Packard Company
Model Name	Osprey
ODM	Inventec Corporation
Target Launch Date	2014 / /
Antenna	
Manufacturer	Yageo Corporation
Part Number	■ Tx1(orRx1)Antenna: 6036B0145201 /ANTA0HV09381WLAN1
	Tx2(orRx2)Antenna: 6036B0145101/ANTA0HV09381WLAN2
Module	
	■
	■
	■
	■

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	Required	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

Antenna Information

Section 1. Antenna Assembly Specifications

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)
ODM P/N: 6036B0145201 Yageo P/N ANTA0HV09381WLAN1 (TX1) Main Antenna	Yageo Corporation	PIFA	Connector: TN (7.026A1-000-1R0) or compatible. SY(SY113/50-001) or compatible. 50 ohm Coaxial Length:25mm diameter:1.13 mm	2400-2500MHz -2.51dBi (peak)	2400-2500MHz -2.43dBi (peak)	2400-2500MHz 3.00 max	2400-2500MHz 0.08dBi (peak)
				5150-5350MHz -4.65dBi (peak)	5150-5350MHz -4.53dBi (peak)	5150-5350MHz 3.00 max	5150-5350MHz 0.12dBi (peak)
				5470-5725MHz -2.88dBi (peak)	5470-5725MHz -2.75dBi (peak)	5470-5725MHz 3.00 max	5470-5725MHz 0.13dBi (peak)
				5725-5850MHz -2.67dBi (peak)	5725-5850MHz -2.54dBi (peak)	5725-5850MHz 3.00 max	5725-5850MHz 0.13dBi (peak)
ODM P/N: 6036B0145101 Yageo P/N ANTA0HV09381WLAN2 (TX2) Aux Antenna	Yageo Corporation	PIFA	Connector: TN (7.026A1-000-1R0) or compatible. SY(SY113/50-001) or compatible. 50 ohm Coaxial Length:125mm diameter:1.13 mm	2400-2500MHz -4.89dBi (peak)	2400-2500MHz -4.50dBi (peak)	2400-2500MHz 3.00 max	2400-2500MHz 0.39dBi (peak)
				5150-5350MHz -1.25dBi (peak)	5150-5350MHz -0.63dBi (peak)	5150-5350MHz 3.00 max	5150-5350MHz 0.62dBi (peak)
				5470-5725MHz -1.98dBi (peak)	5470-5725MHz -1.33dBi (peak)	5470-5725MHz 3.00 max	5470-5725MHz 0.65dBi (peak)
				5725-5850MHz -2.23dBi (peak)	5725-5850MHz -1.57dBi (peak)	5725-5850MHz 3.00 max	5725-5850MHz 0.66dBi (peak)

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

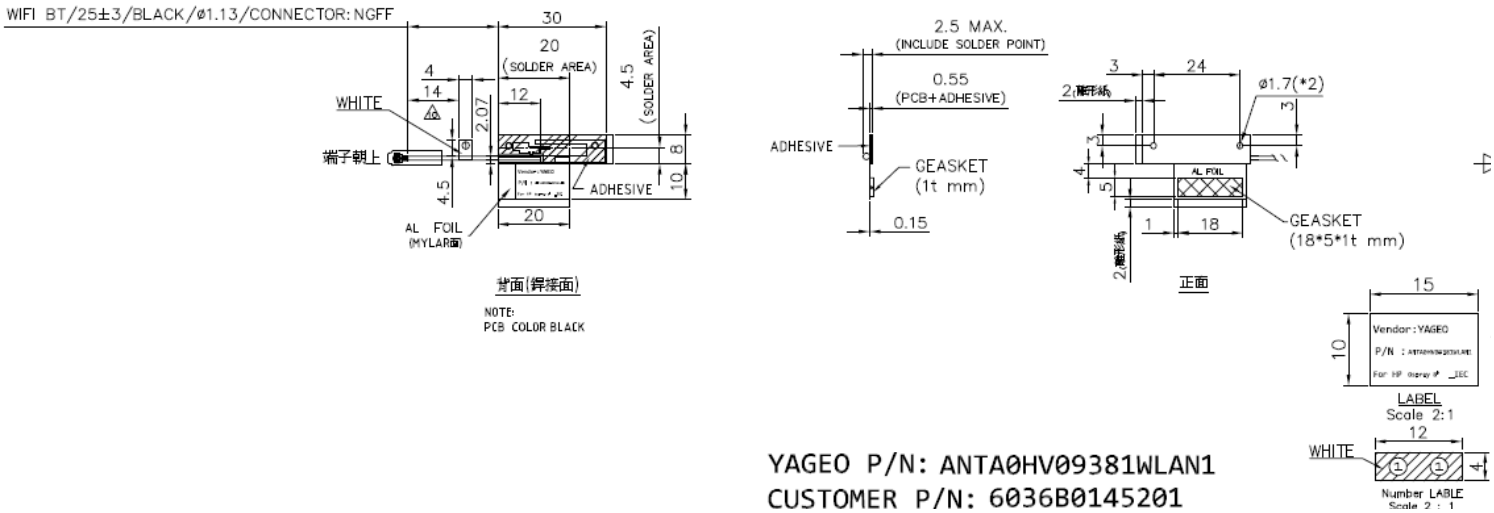
Antenna Peak Gain Table:

	Tx1 antenna		Tx2 (or Rx2) Antenna	
Frequency (MHz)	Horizontal (dBi)	Vertical (dBi)	Horizontal (dBi)	Vertical (dBi)
2400	-4.26	-2.51	-4.89	-9.18
2450	-4.44	-3.11	-5.09	-7.78
2500	-5.74	-5.14	-6.81	-9.60
5150	-4.65	-8.43	-2.40	-2.11
5250	-4.78	-5.68	-3.20	-1.25
5350	-6.01	-6.28	-2.13	-1.62
5470	-5.79	-8.06	-2.48	-2.69
5600	-3.06	-6.08	-1.98	-2.11
5725	-2.88	-7.90	-4.11	-2.23
5785	-2.67	-8.25	-4.37	-2.74
5850	-3.64	-8.60	-6.55	-3.27

Section 2. Dimensioned Photos or Drawings of Antennas

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

Tx1 Antenna Dimensioned Drawing:

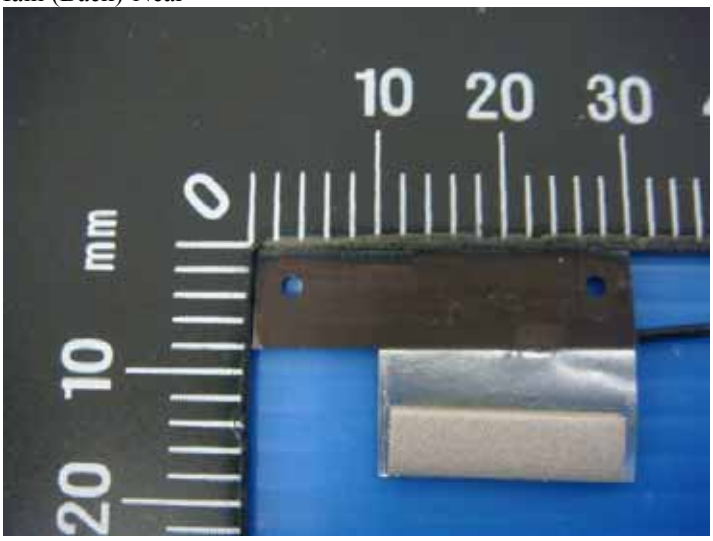


Tx1 Antenna Photo:

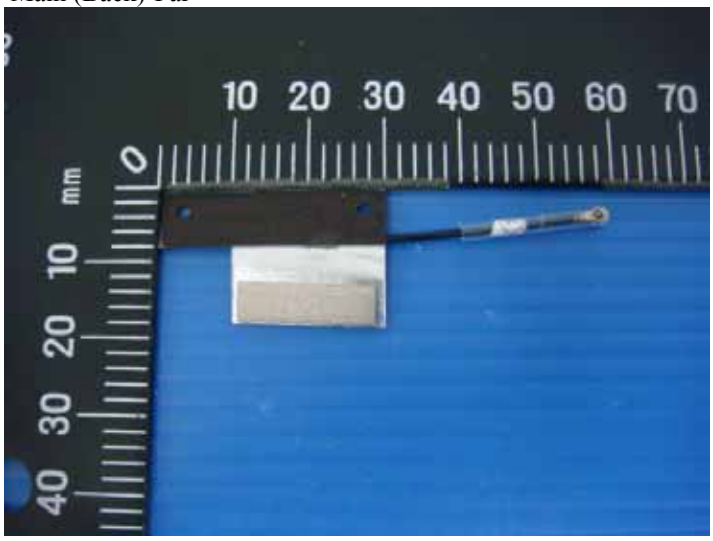
Main (Front)-Near

Main (Front)-Far

Main (Back)-Near

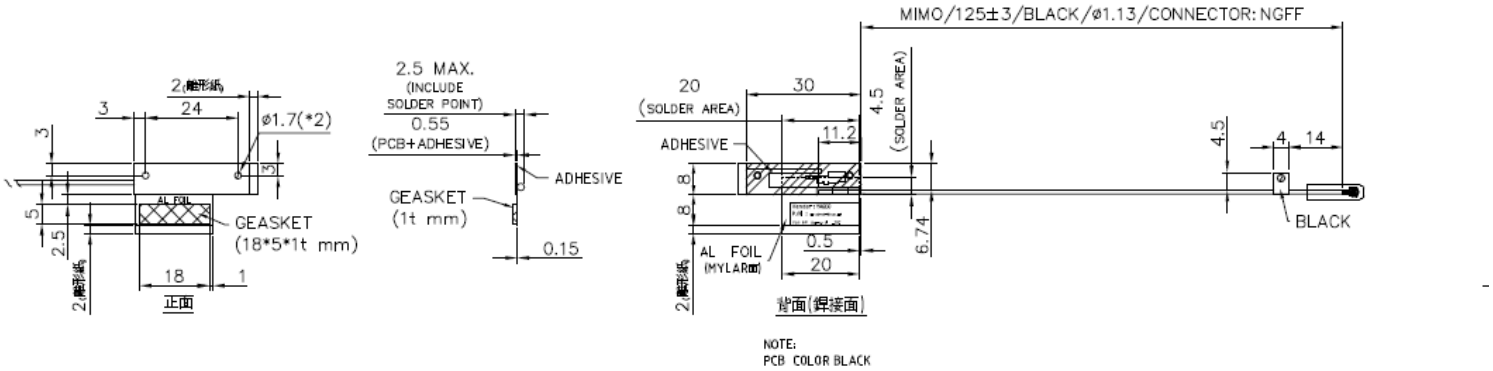


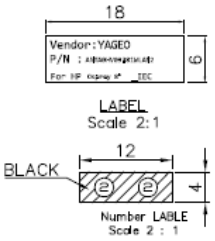
Main (Back)-Far



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

Tx2 (or Rx2) Dimensioned Drawing:

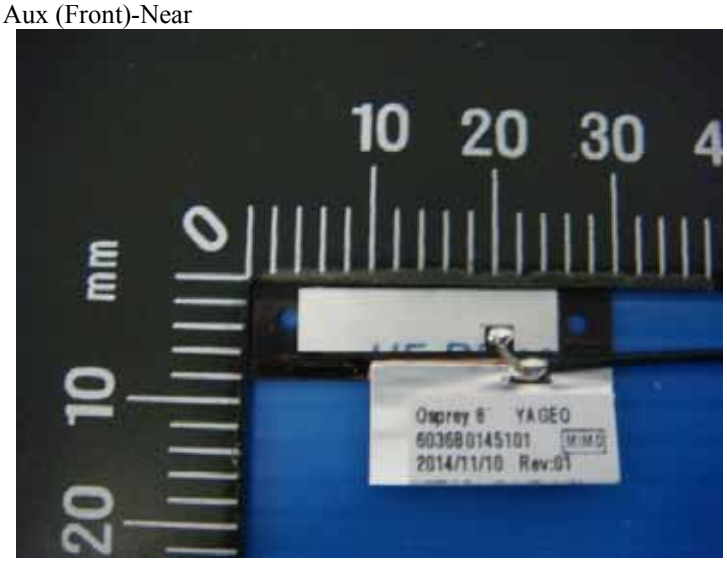




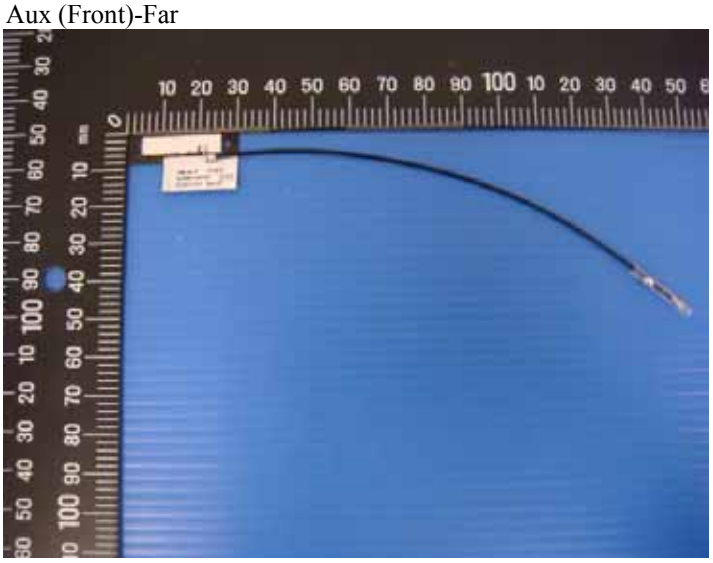
YAGEO P/N: ANTA0HV09381WLAN2
CUSTOMER P/N: 6036B0145101

Tx2 (or Rx2) Antenna Photo:

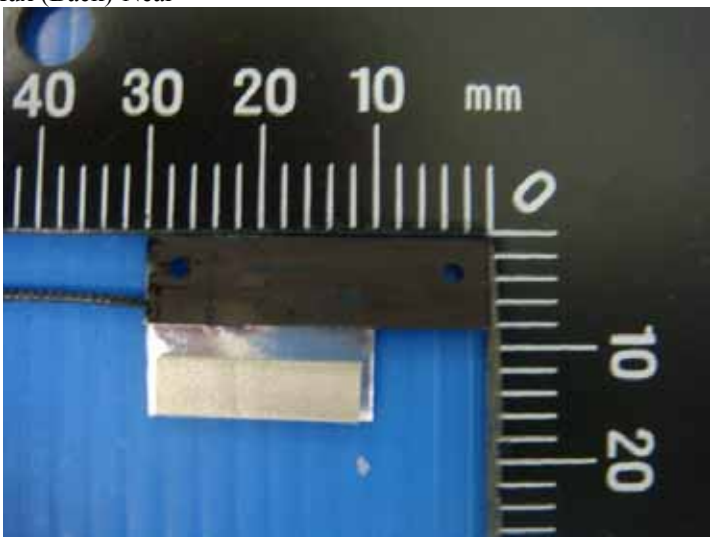
Aux (Front)-Near



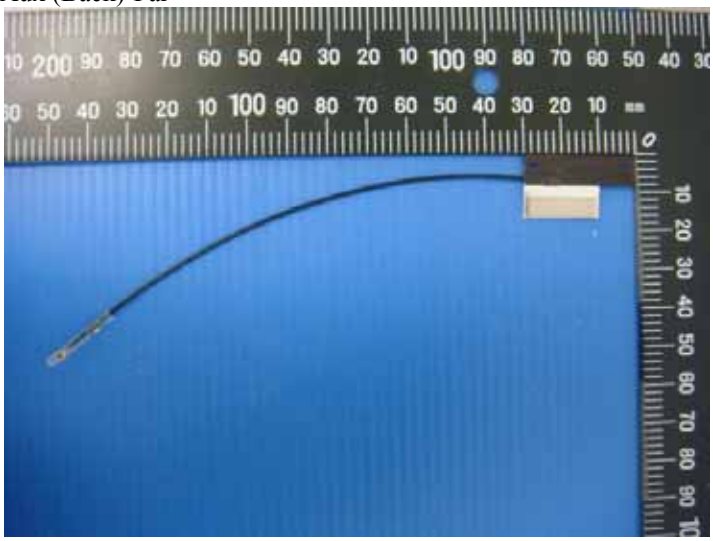
Aux (Front)-Far



Aux (Back)-Near



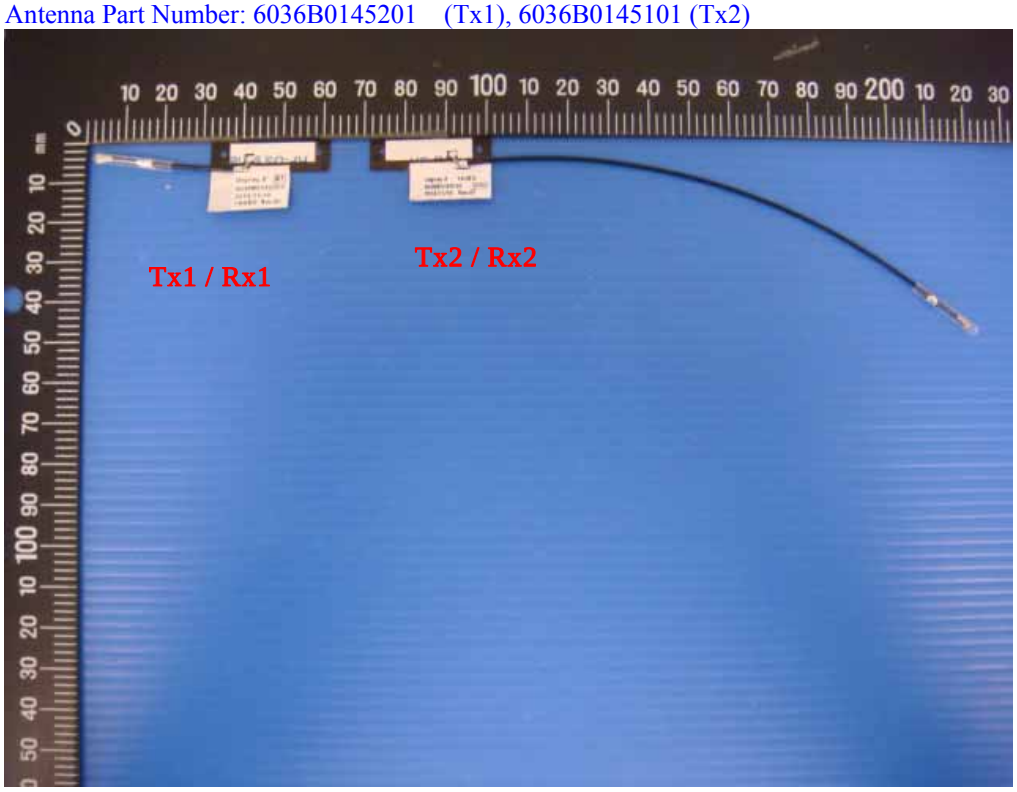
Aux (Back)-Far



Include front view photo of all antennas here

Antenna Manufacturer: Yageo Corporation

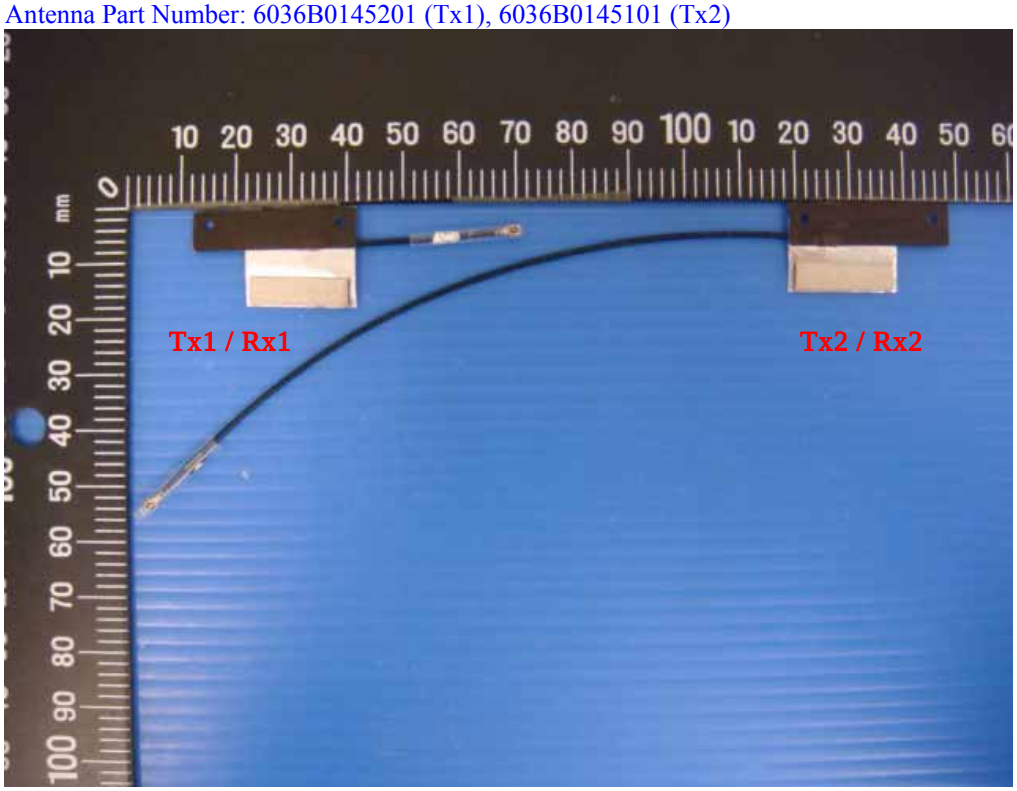
Antenna Part Number: 6036B0145201 (Tx1), 6036B0145101 (Tx2)



Include back view photo of all antennas here

Antenna Manufacturer: Yageo Corporation

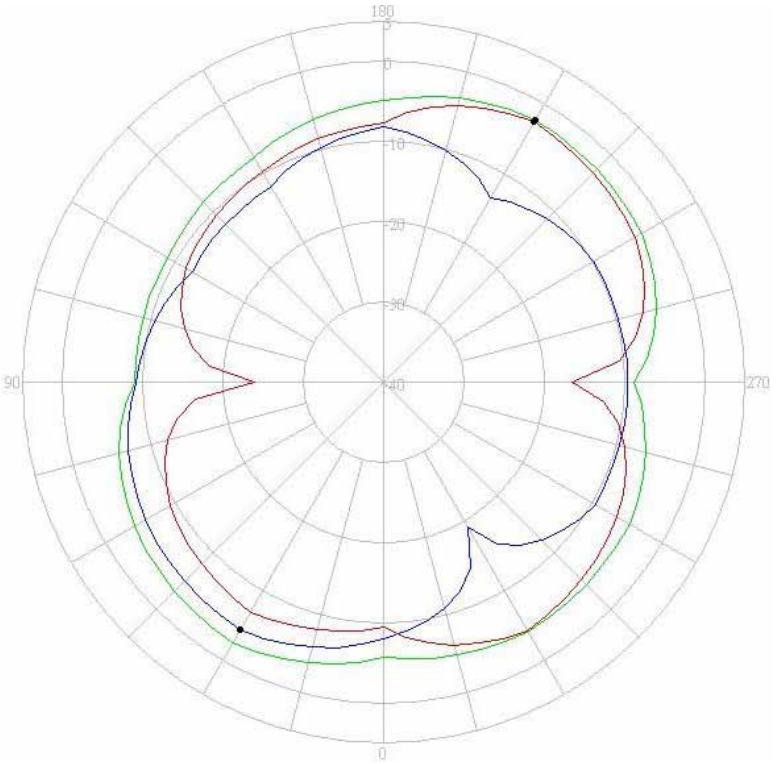
Antenna Part Number: 6036B0145201 (Tx1), 6036B0145101 (Tx2)



Section 3. Radiation characteristics of antennae Loaded in Host Platform

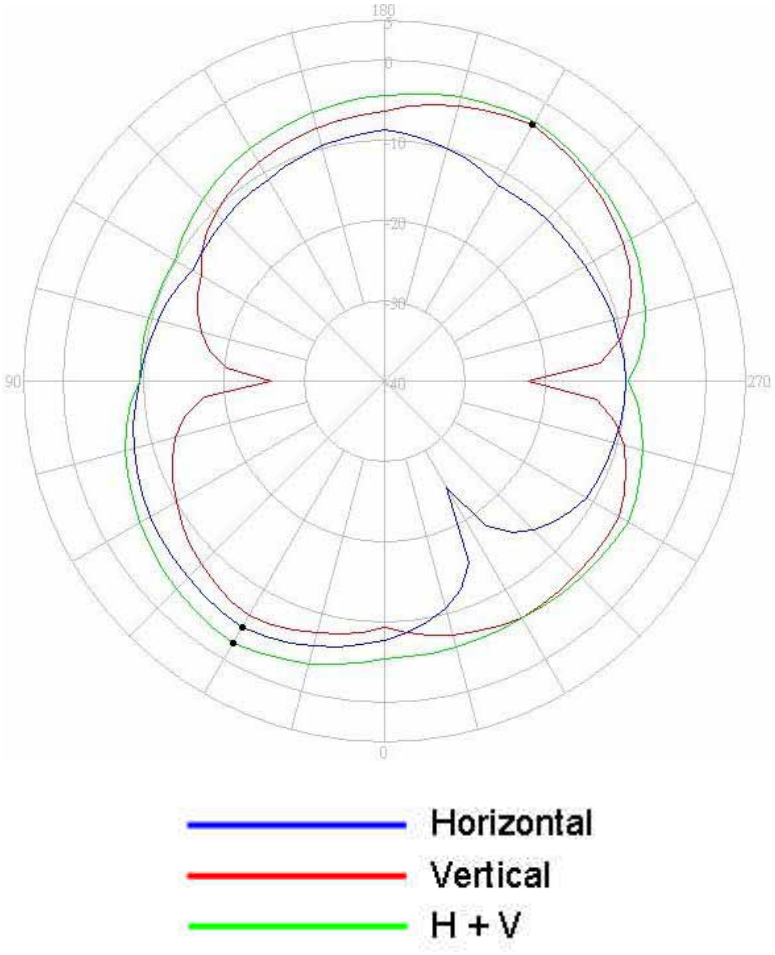
2400-2500MHz radiation characteristic

Tx1 antenna: 2400 MHz



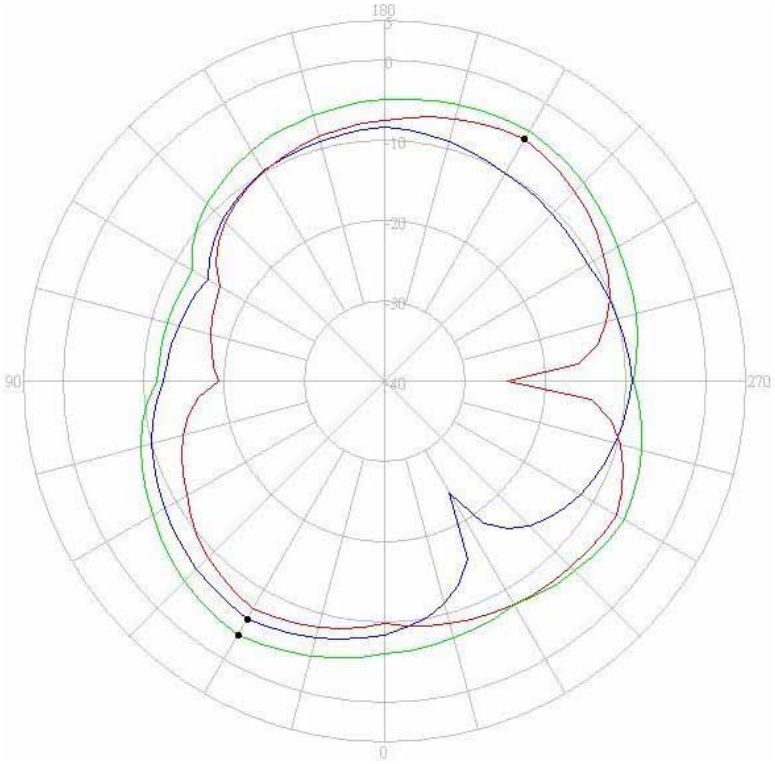
Center Frequency	**2400 MHz**
Horizontal (dBi) Peak	**-4.26**
Vertical (dBi) Peak	**-2.51**

Tx1 antenna: 2450 MHz



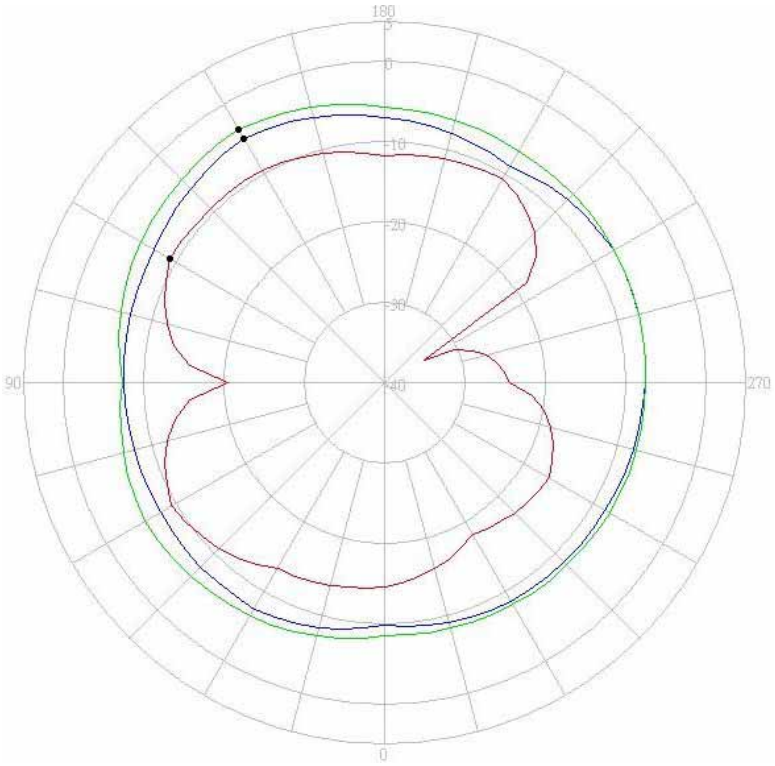
Center Frequency	**2450 MHz**
Horizontal (dBi) Peak	**-4.44**
Vertical (dBi) Peak	**-3.11**

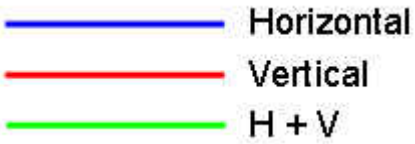
Tx1 antenna: 2500 MHz



Center Frequency	**2500 MHz**
Horizontal (dBi) Peak	**-5.74**
Vertical (dBi) Peak	**-5.14**

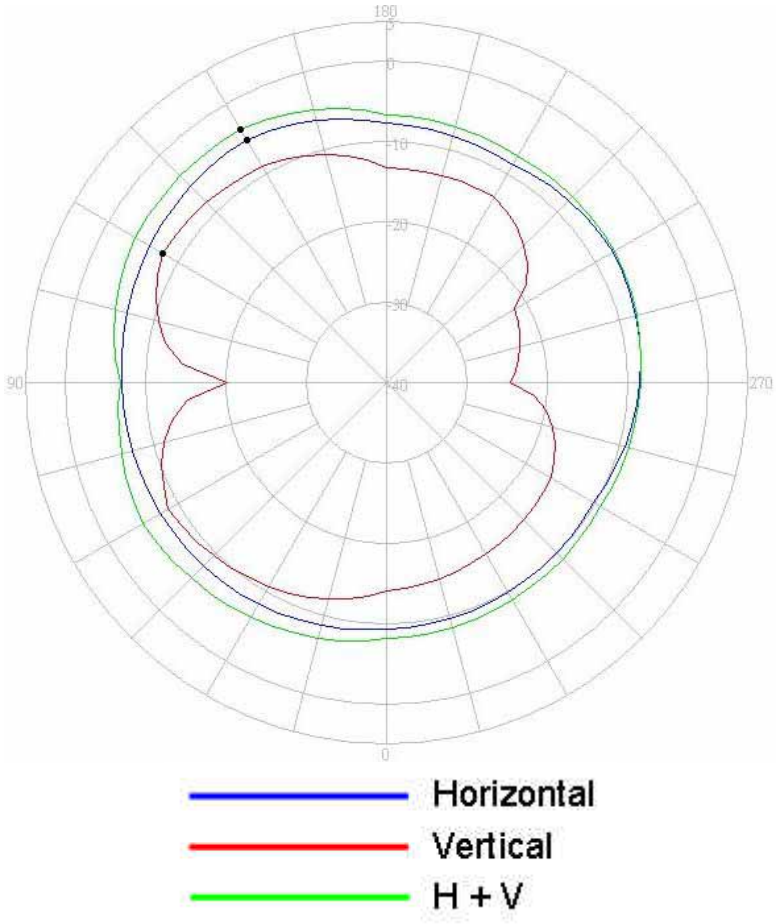
Tx2 antenna: 2400 MHz





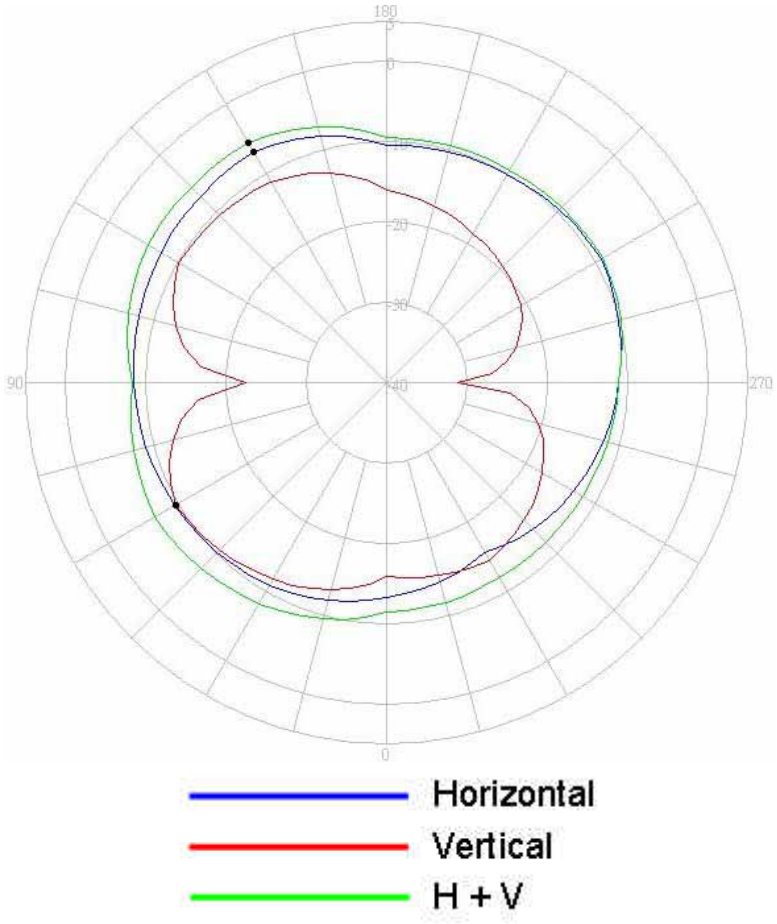
Center Frequency	**2400 MHz**
Horizontal (dBi) Peak	**-4.89**
Vertical (dBi) Peak	**-9.18**

Tx2 antenna: 2450 MHz



Center Frequency	**2450 MHz**
Horizontal (dBi) Peak	**-5.09**
Vertical (dBi) Peak	**-7.78**

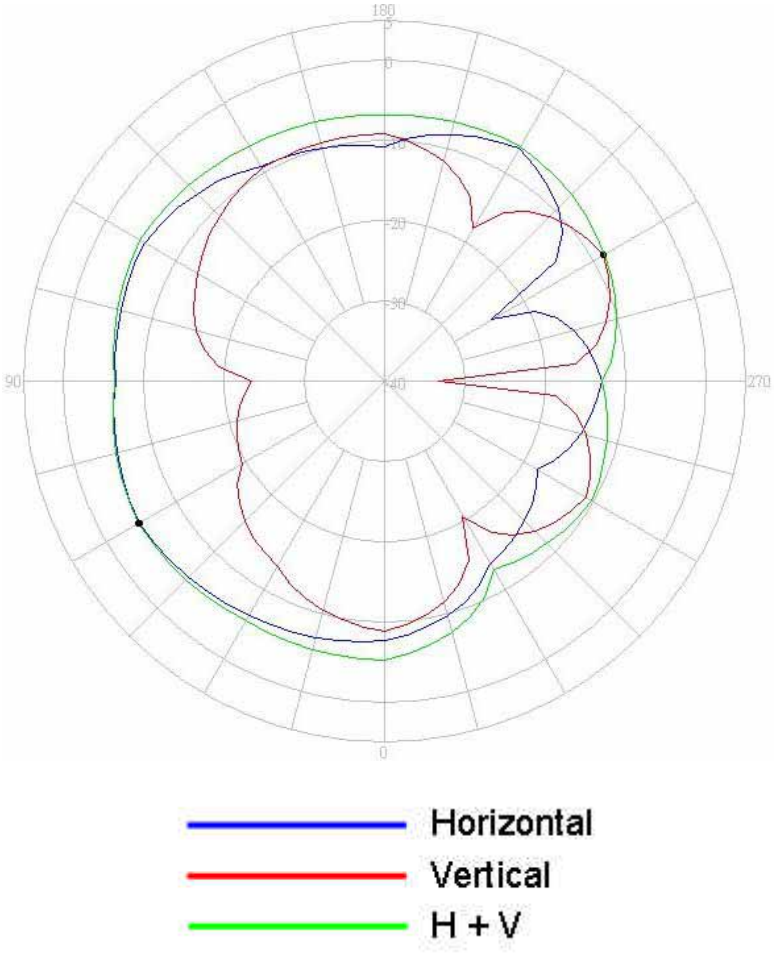
Tx2 antenna: 2500 MHz



Center Frequency	**2500 MHz**
Horizontal (dBi) Peak	**-6.81**
Vertical (dBi) Peak	**-9.60**

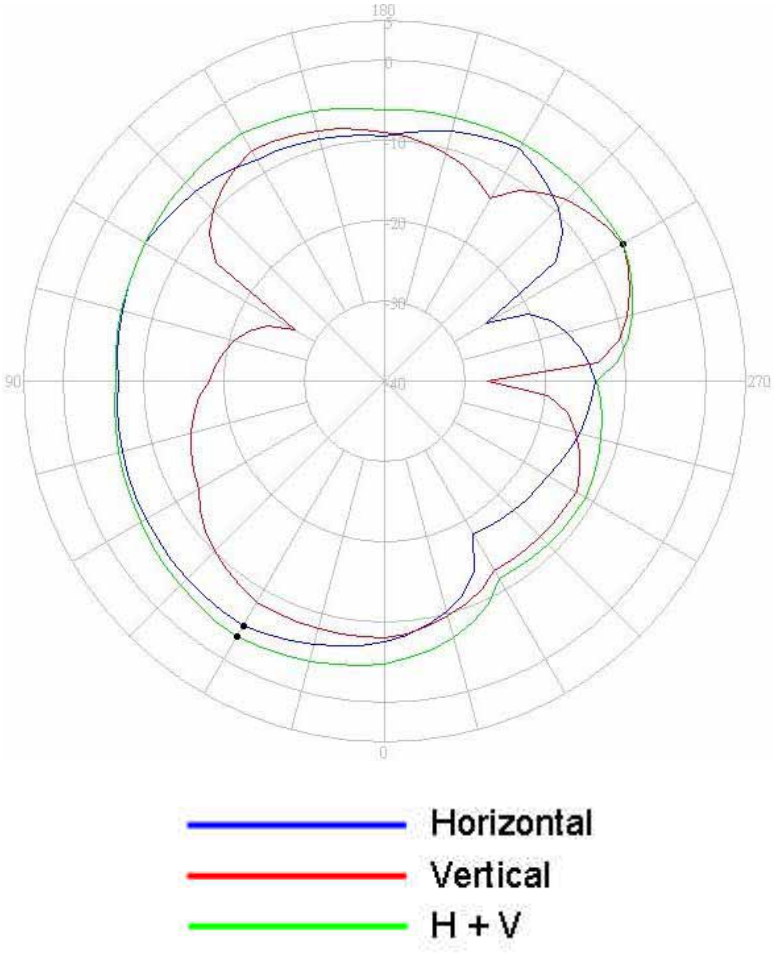
5150-5350 MHz radiation characteristic

Tx1 antenna: 5150 MHz



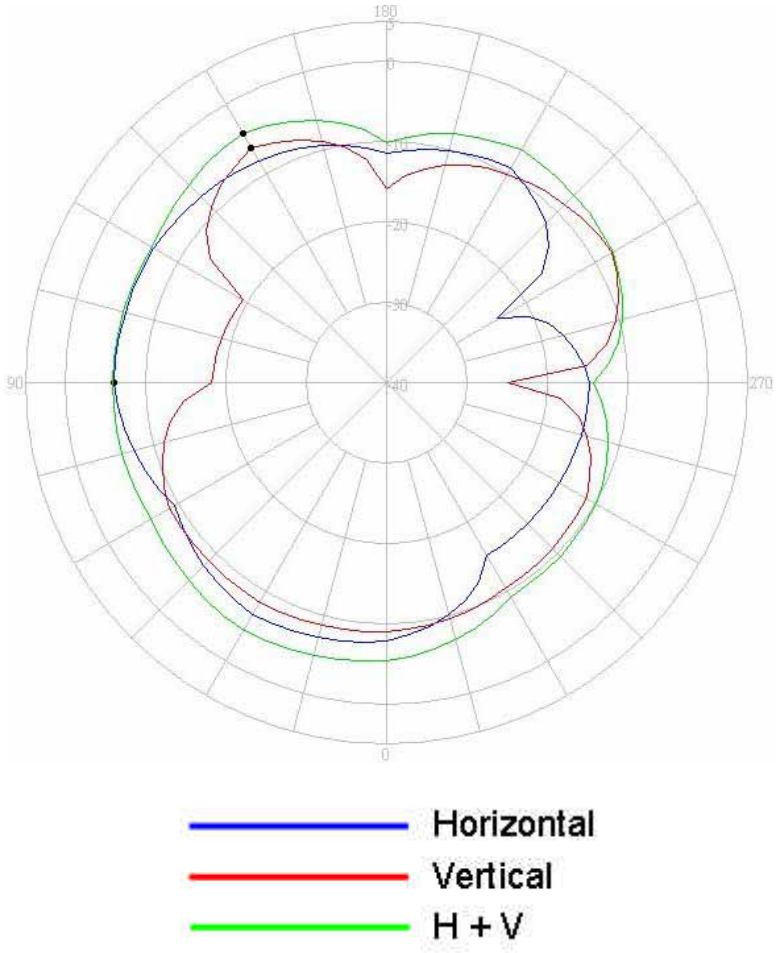
Center Frequency	**5150 MHz**
Horizontal (dBi) Peak	**-4.65**
Vertical (dBi) Peak	**-8.43**

Tx1 antenna: 5250 MHz



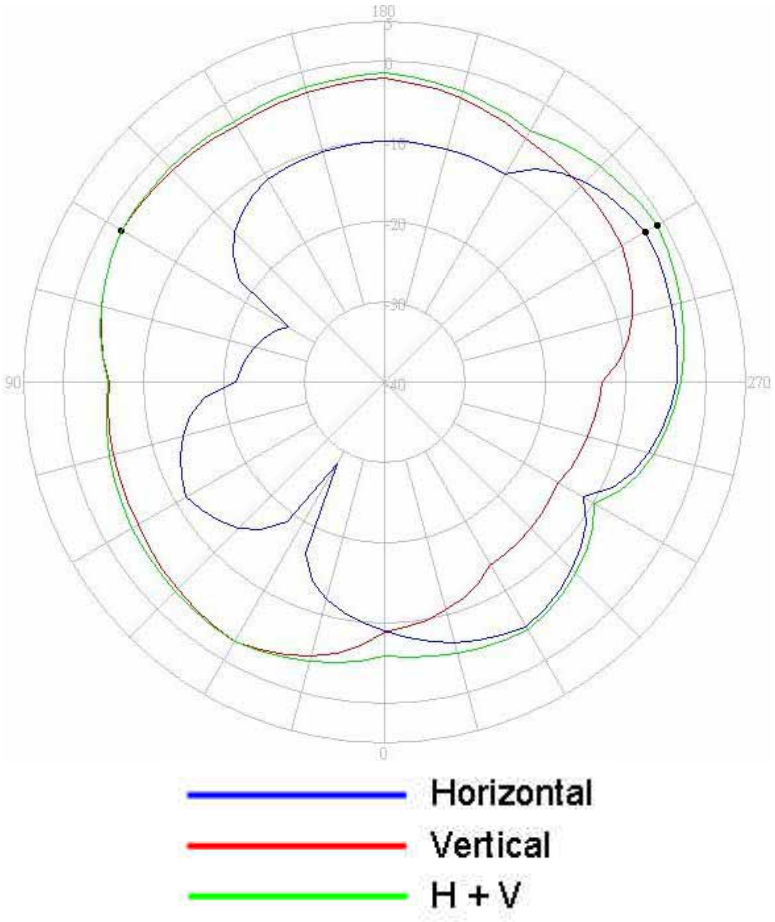
Center Frequency	**5250 MHz**
Horizontal (dBi) Peak	**-4.78**
Vertical (dBi) Peak	**-5.68**

Tx1 antenna: 5350 MHz



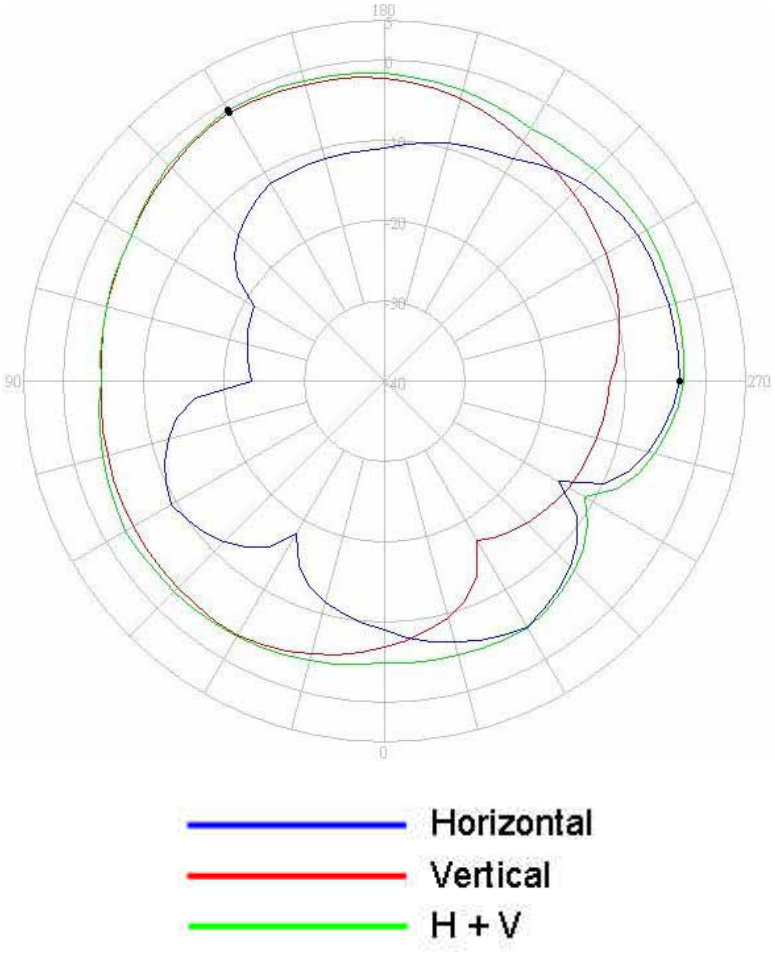
Center Frequency	**5350 MHz**
Horizontal (dBi) Peak	**-6.01**
Vertical (dBi) Peak	**-6.28**

Tx2 antenna: 5150 MHz



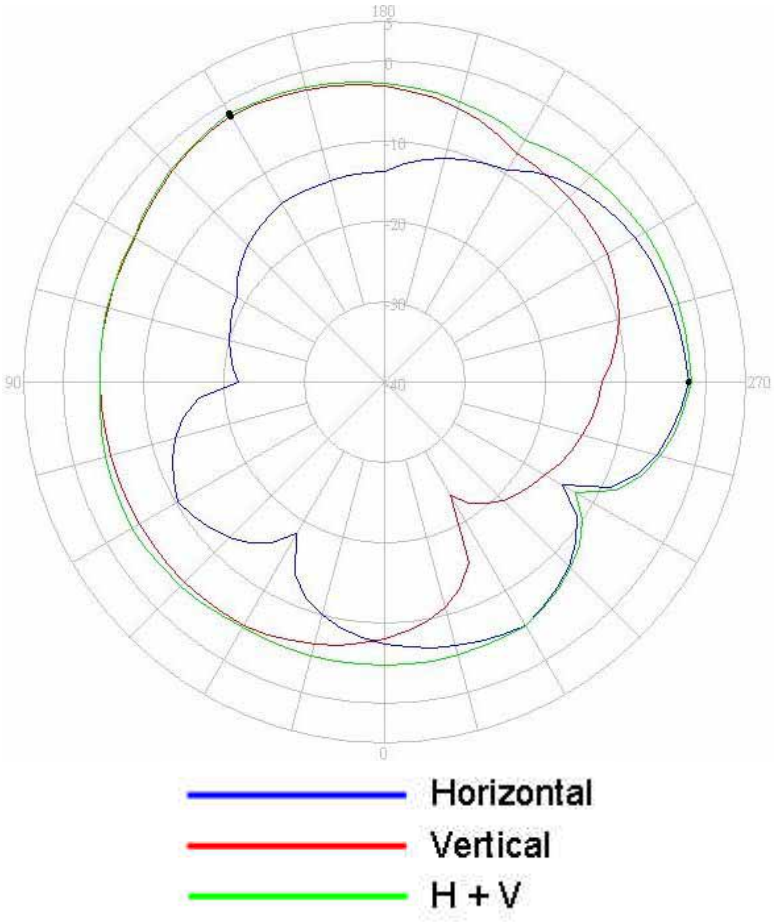
Center Frequency	**5150 MHz**
Horizontal (dBi) Peak	**-2.40**
Vertical (dBi) Peak	**-2.11**

Tx2 antenna: 5250 MHz



Center Frequency	**5250 MHz**
Horizontal (dBi) Peak	**-3.20**
Vertical (dBi) Peak	**-1.25**

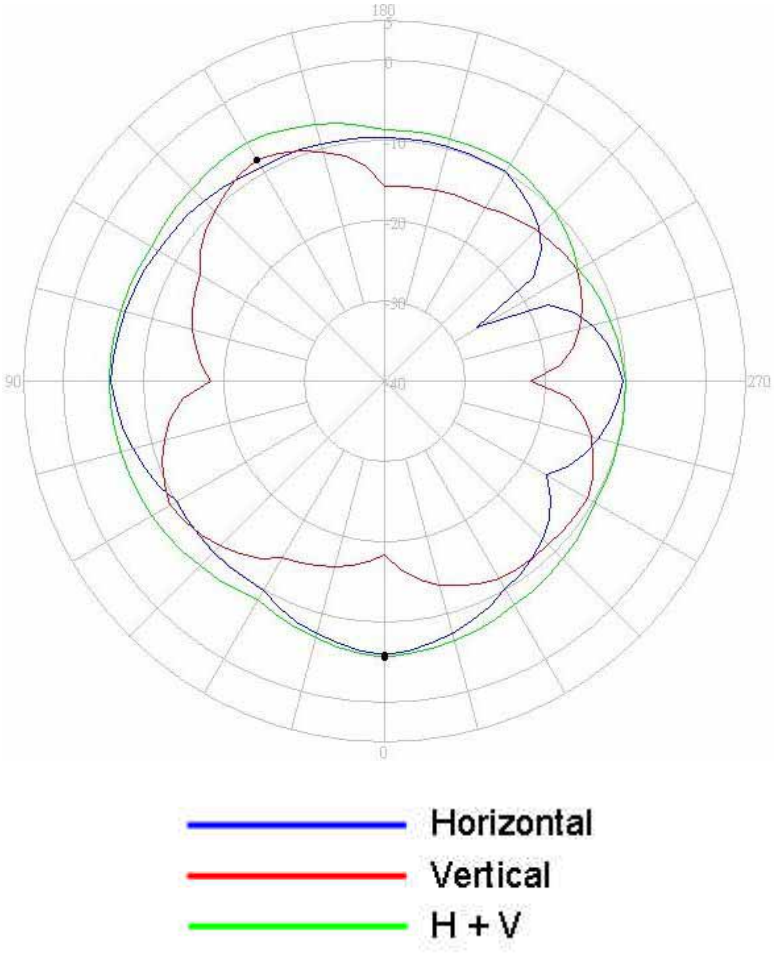
Tx2 antenna: 5350 MHz



Center Frequency	**5350 MHz**
Horizontal (dBi) Peak	**-2.13**
Vertical (dBi) Peak	**-1.62**

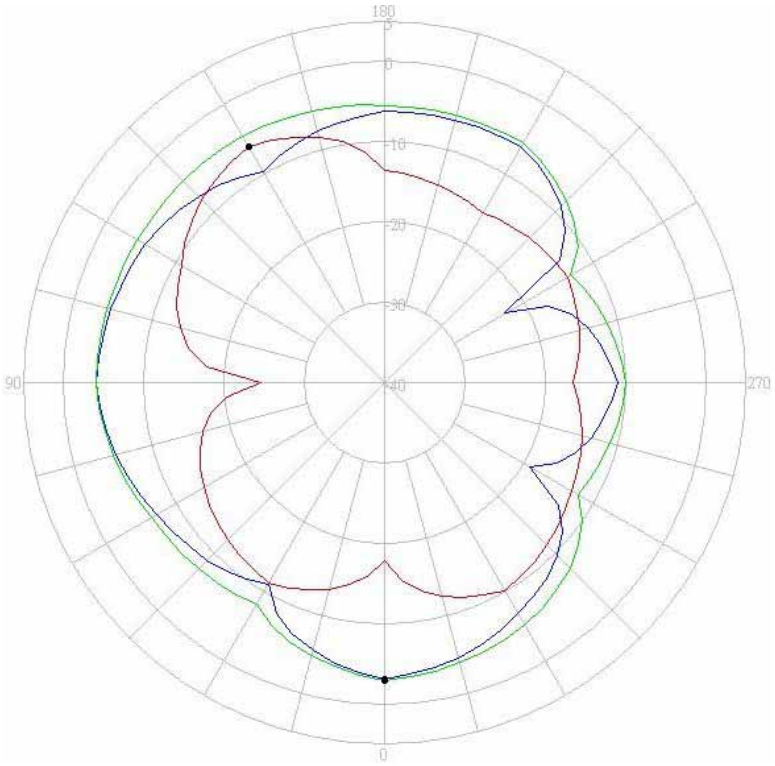
5470-5725MHz radiation characteristic

Tx1 antenna: 5470 MHz



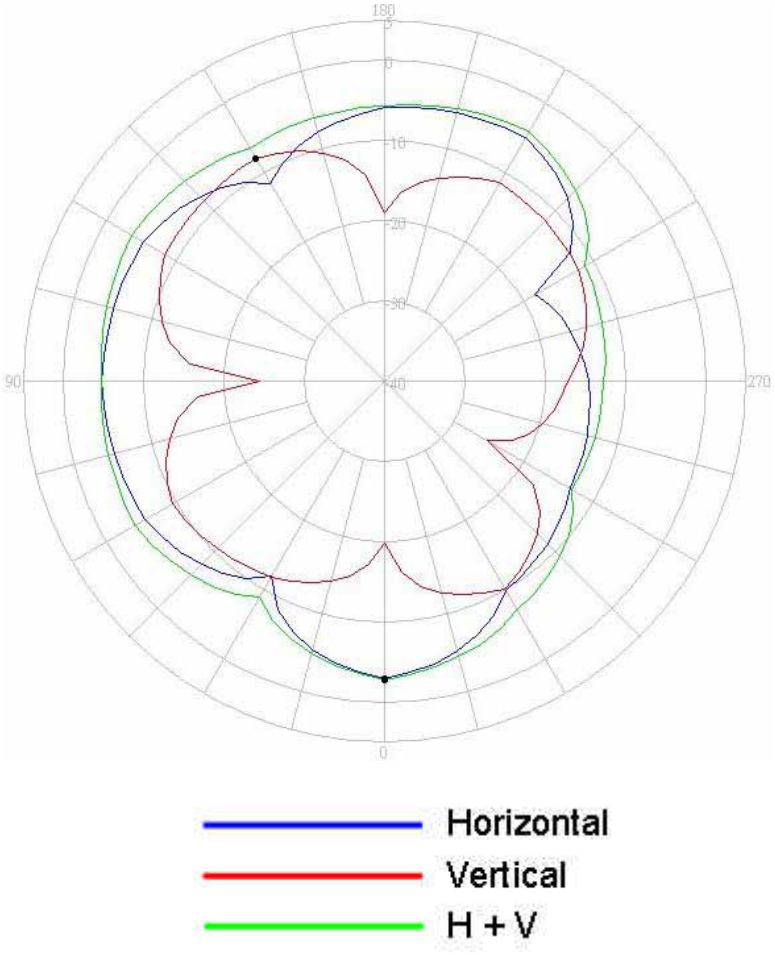
Center Frequency	**5470 MHz**
Horizontal (dBi) Peak	**-2.48**
Vertical (dBi) Peak	**-2.69**

Tx1 antenna: 5600 MHz



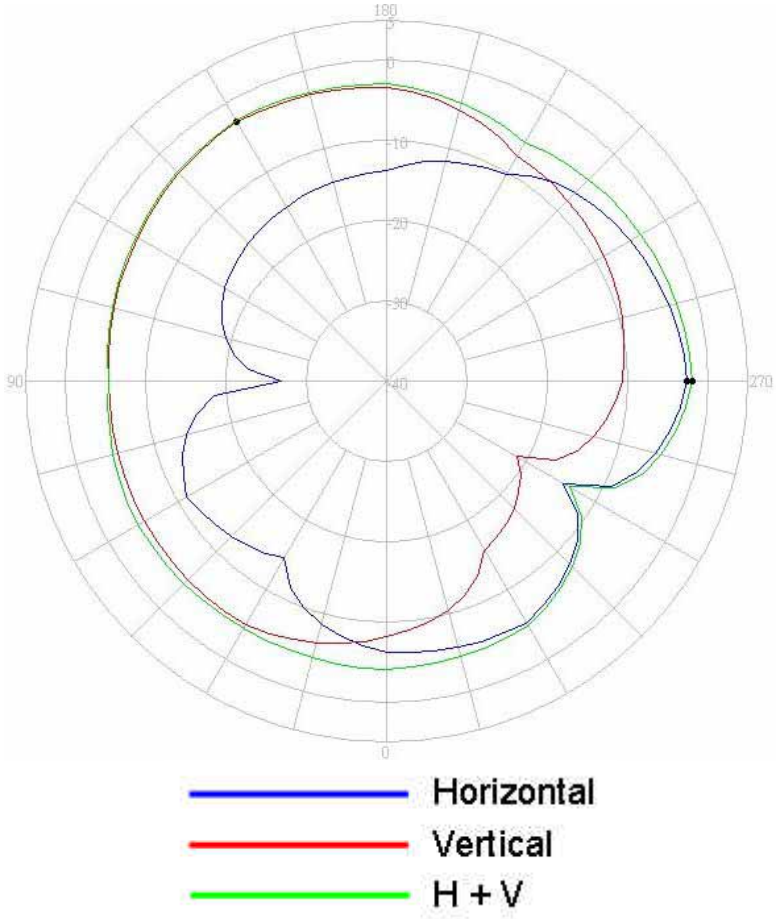
Center Frequency	**5600 MHz**
Horizontal (dBi) Peak	**-3.06**
Vertical (dBi) Peak	**-6.08**

Tx1 antenna: 5725 MHz



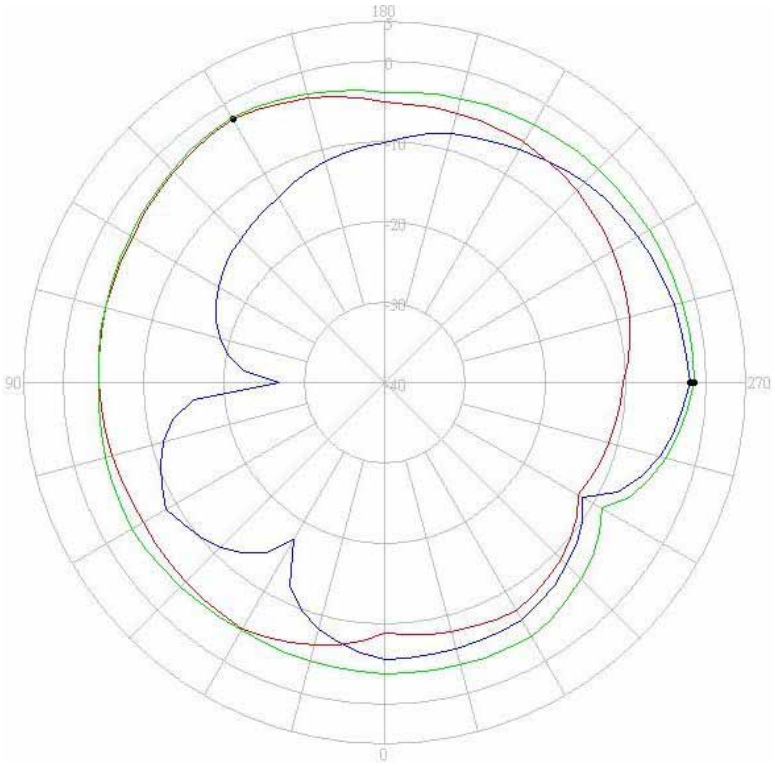
Center Frequency	**5725 MHz**
Horizontal (dBi) Peak	**-2.88**
Vertical (dBi) Peak	**-7.90**

Tx2 antenna: 5470 MHz



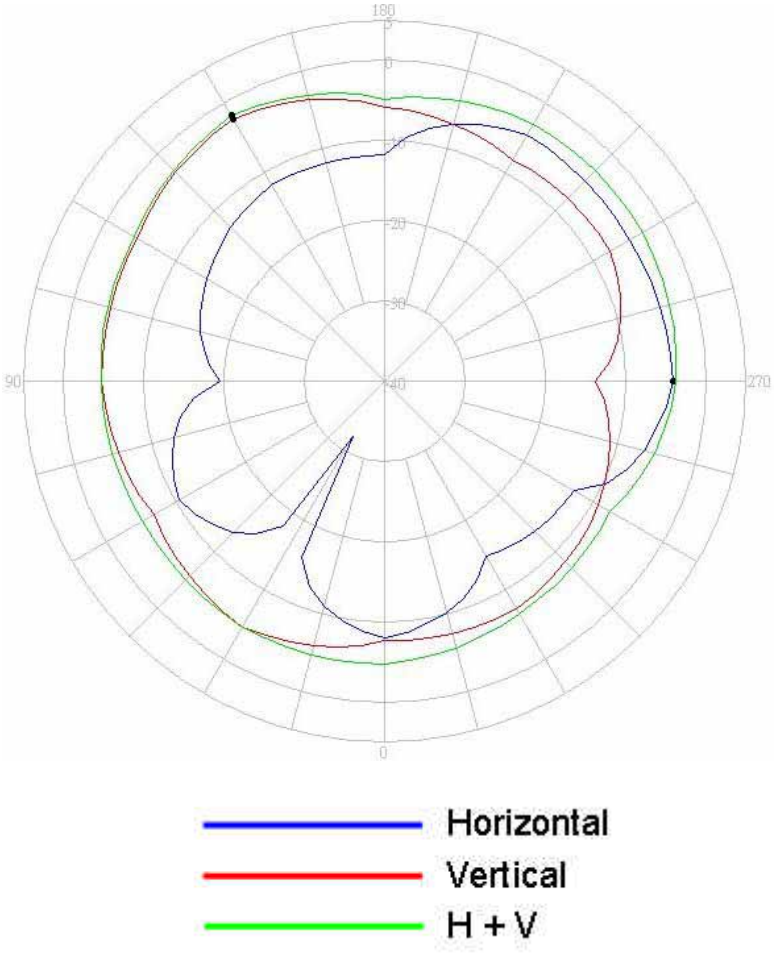
Center Frequency	**5470 MHz**
Horizontal (dBi) Peak	**-2.48**
Vertical (dBi) Peak	**-2.69**

Tx2 antenna: 5600 MHz



Center Frequency	**5600 MHz**
Horizontal (dBi) Peak	**-1.98**
Vertical (dBi) Peak	**-2.11**

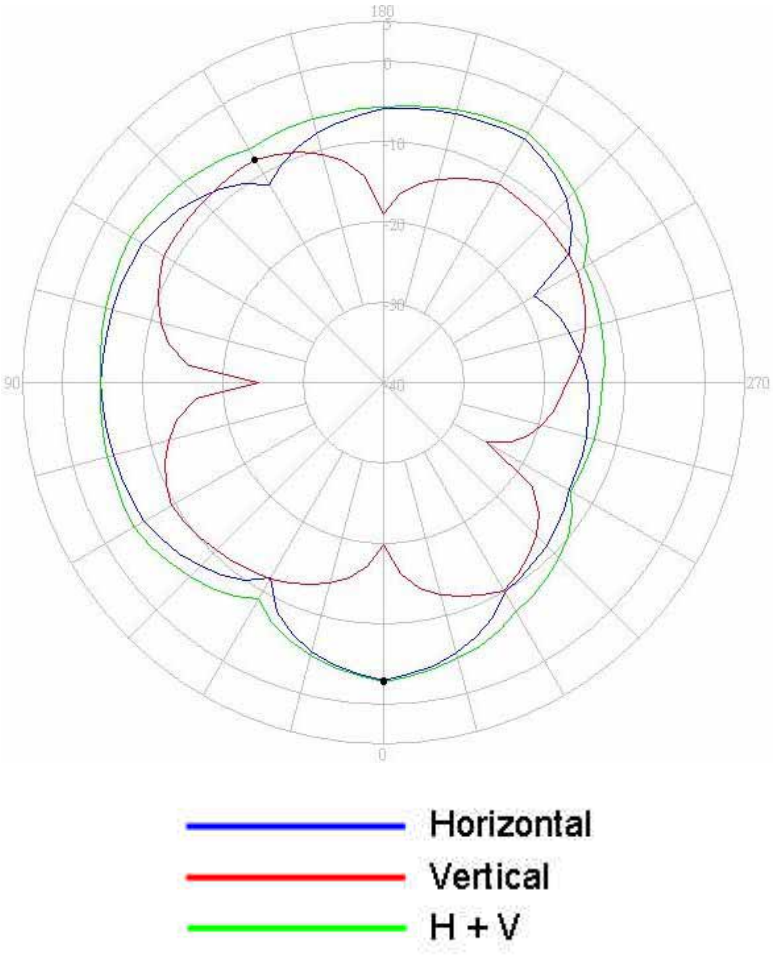
Tx2 antenna: 5725 MHz



Center Frequency	**5725 MHz**
Horizontal (dBi) Peak	**-4.11**
Vertical (dBi) Peak	**-2.23**

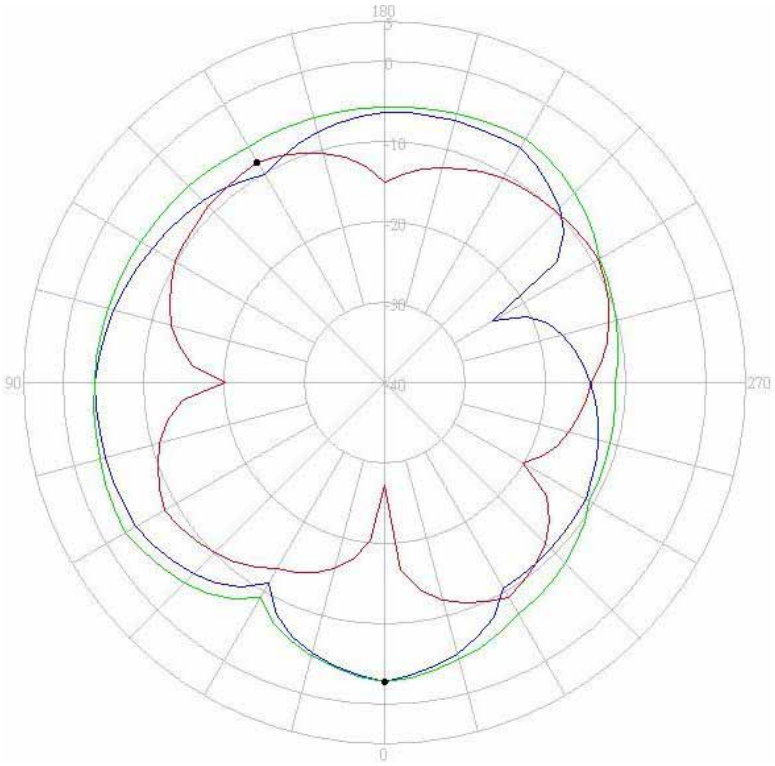
5725-5850 MHz radiation characteristic

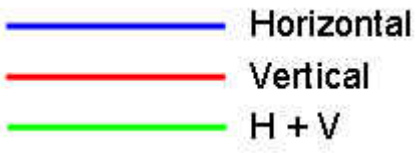
Tx1 antenna: 5725 MHz



Center Frequency	**5725 MHz**
Horizontal (dBi) Peak	**-2.88**
Vertical (dBi) Peak	**-7.90**

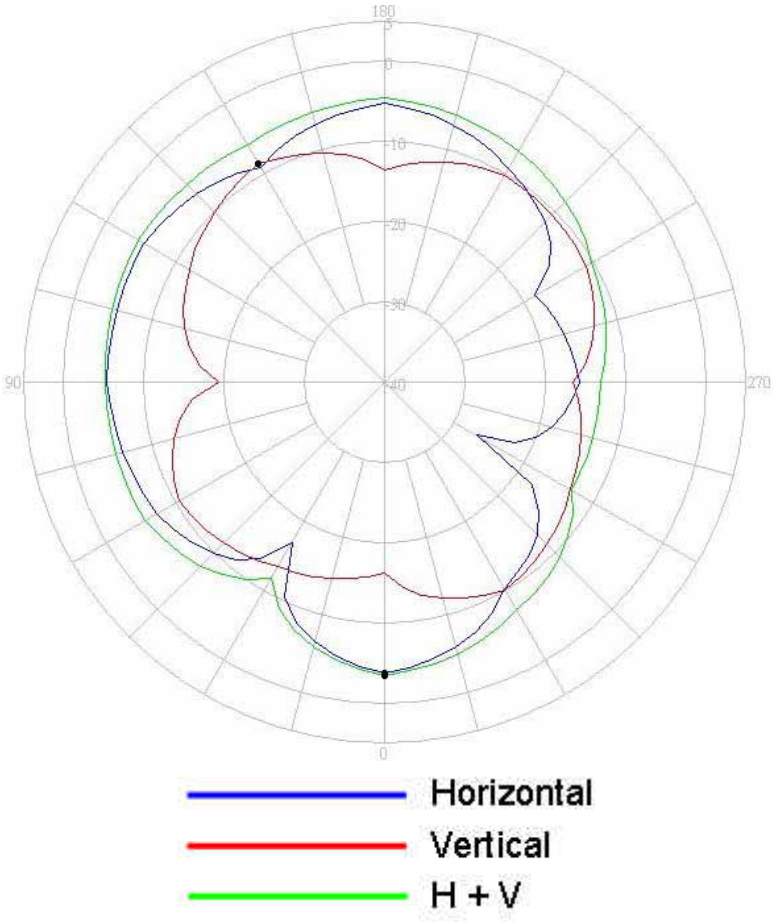
Tx1 antenna: 5785 MHz





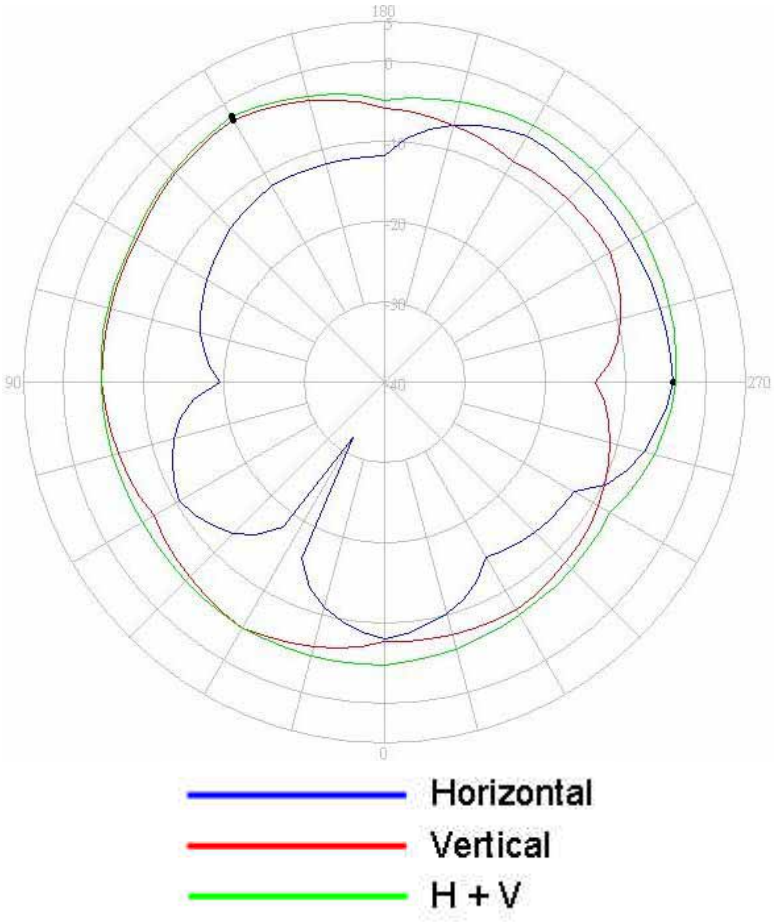
Center Frequency	**5785 MHz**
Horizontal (dBi) Peak	**-2.67**
Vertical (dBi) Peak	**-8.25**

Tx1 antenna: 5850 MHz



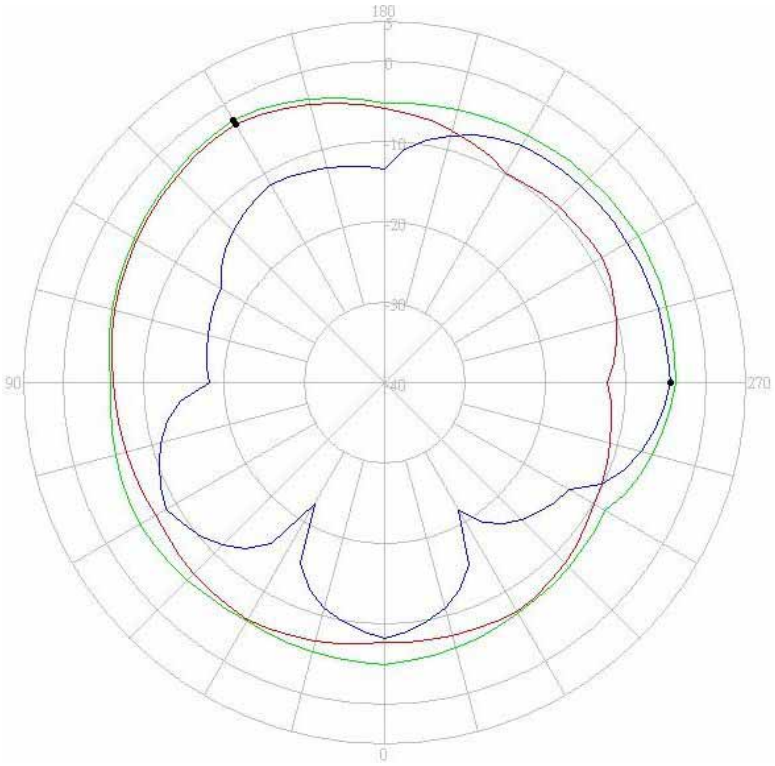
Center Frequency	**5850 MHz**
Horizontal (dBi) Peak	**-3.64**
Vertical (dBi) Peak	**-8.60**

Tx2 antenna: 5725 MHz



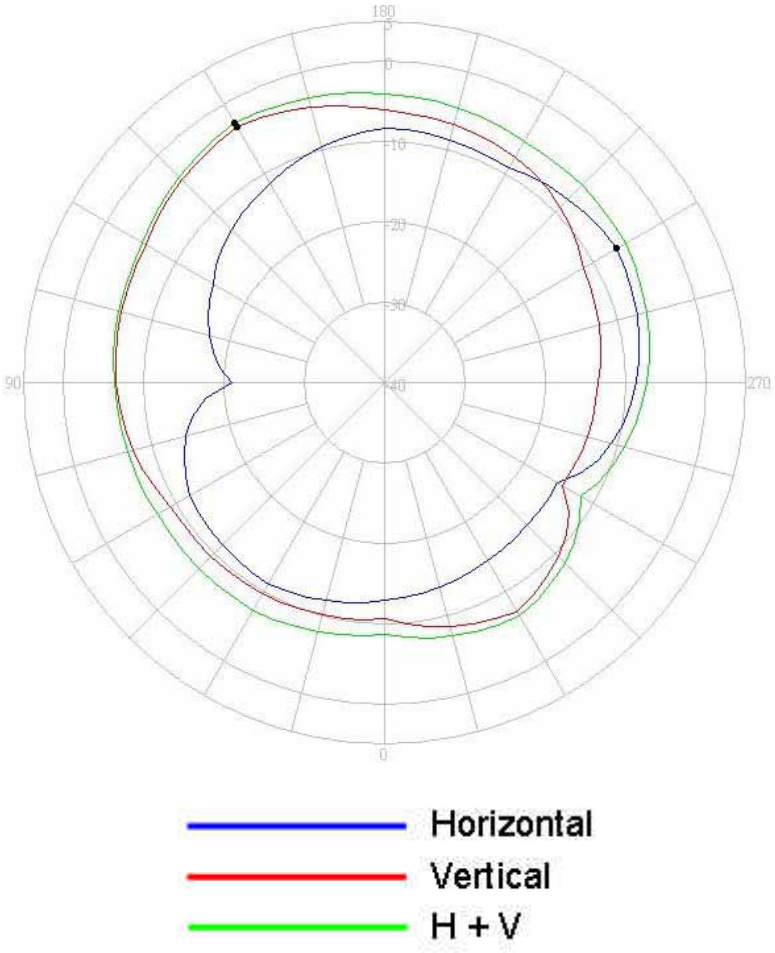
Center Frequency	**5725 MHz**
Horizontal (dBi) Peak	**-4.11**
Vertical (dBi) Peak	**-2.23**

Tx2 antenna: 5785 MHz



Center Frequency	**5785 MHz**
Horizontal (dBi) Peak	**-4.37**
Vertical (dBi) Peak	**-2.74**

Tx2 antenna: 5850 MHz

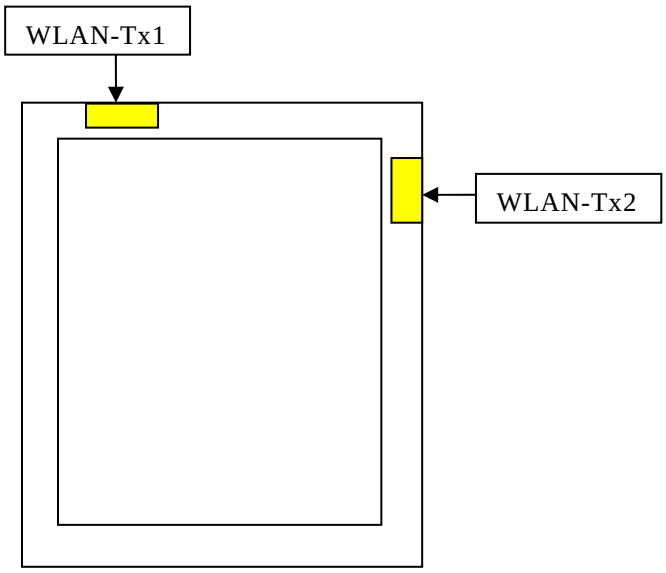


Center Frequency	**5850 MHz**
Horizontal (dBi) Peak	**-6.55**
Vertical (dBi) Peak	**-3.27**

Section 4. Host Platform Information

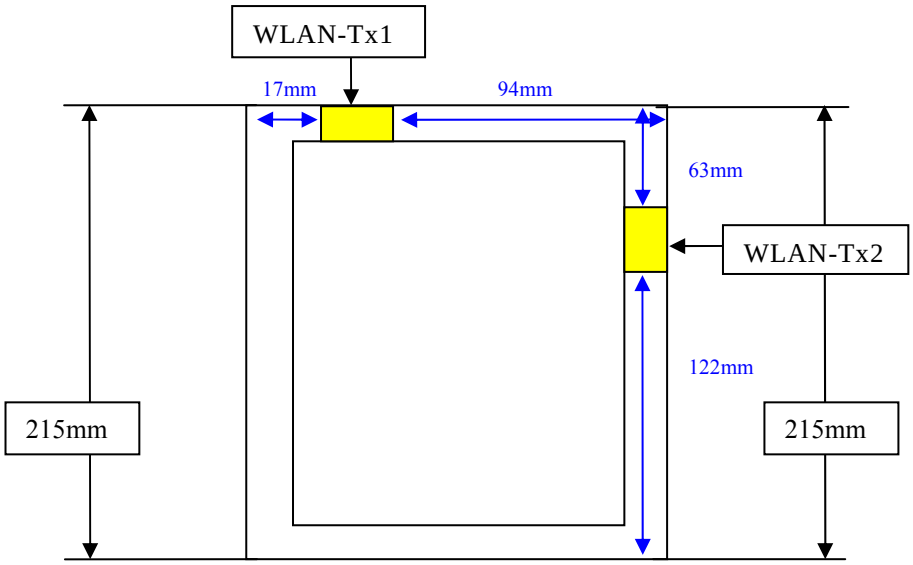
OEM / ODM Host platform: (Inventec –Osprey) platform correlated to antenna data

Rating Label Photo:



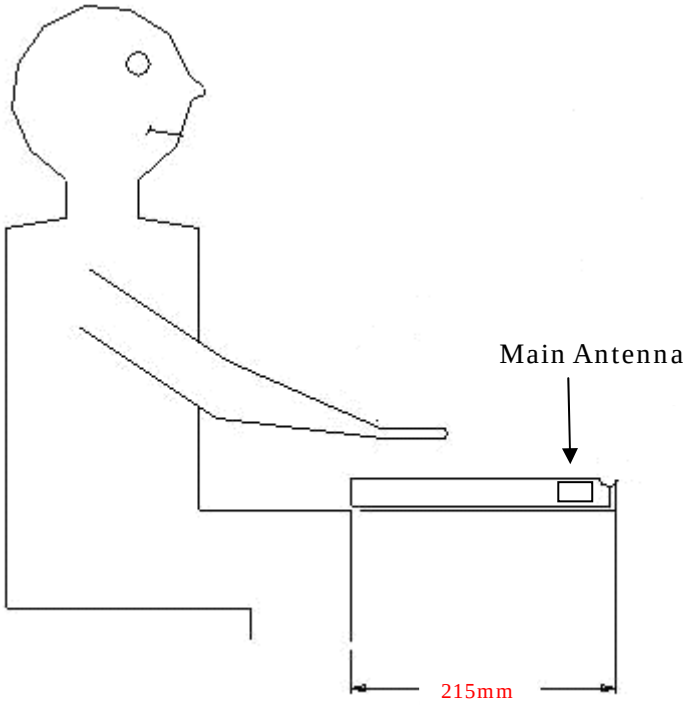
Section 5. Antenna Host Platform Location Information

Include a **dimensioned photo or dimensioned drawing** of Tx1, Tx2 and Tx3 antenna placements. (Not applicable for receive-only antenna e.g. Rx3 for 4965AGN)



Section 6. Antenna dimensional information for SAR evaluation

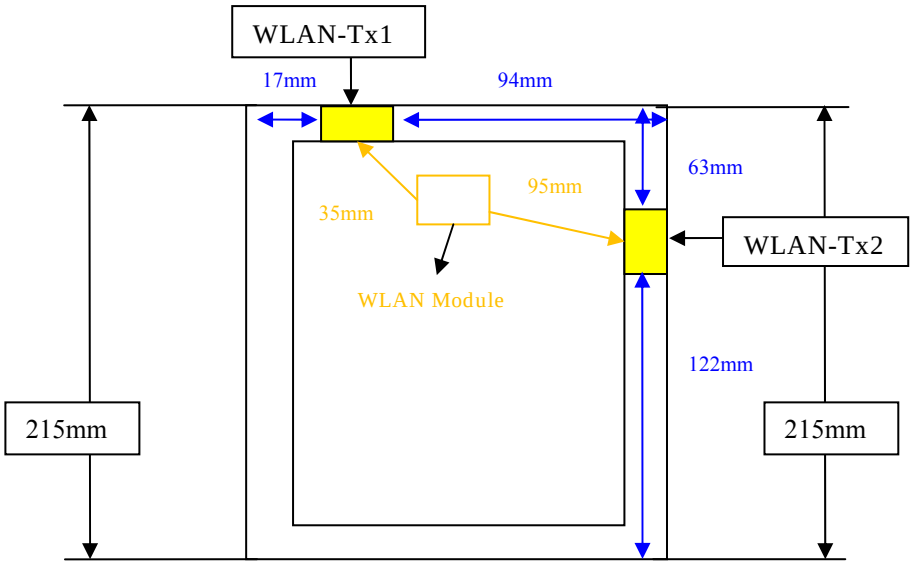
Include a **dimensioned photo or dimensioned drawing** showing the distance (mm) between the transmit antennas and the user (excluding hands, wrist, feet, lap/ thigh, and ankle)



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
Argentina						
Azerbaijan						
Cambodia						
Indonesia						
Israel						
Malaysia						
Philippines						
Singapore						Telecommunication Equipment Dealer License Required
South Africa						
USA, Canada						
Vietnam						