

## Regulatory WLAN Antenna Information

Platform information										
Brand	ODM	RMN	Intel platform (ex: Yes, No or NA)	Platform type (ex: regular NB, convertible PC, AIO...etc)	*SAR minimum separation (mm)					
HP Inc.	Inventec	HSN-I52C	Yes	Notebook PC	12.8 mm					
*****Please fill in exact product model name and make sure the model name is visible on product cover or any parts for end users recognize for authority inspection.										
Antenna information										
Vendor	Type	Antenna Part number (Main/Tx2)				Antenna Part number (Aux/Tx1)				
HONG-BO	PIFA	6036B0321001 (00-2602752450)				6036B0321101 (00-2602752350)				
Peak gain w/ cable loss (dBi)*										
	2.4GHz 2400-2483.5 MHz	5.2GHz 5150-5250MHz	5.3GHz 5250-5350MHz	5.6GHz 5470-5725MHz	5.8GHz 5725-5850MHz	5.9GHz 5850-5895MHz	6.2GHz 5925-6425MHz	6.5GHz 6425-6525MHz	6.7GHz 6525-6875MHz	7.0 GHz 6875-7125MHz
Main	1.39	-0.6	-0.09	1.57	1.66	0.75	0.75	-1.05	0.01	0.22
Aux	1.06	0.45	0.45	0.87	0.79	1.27	1.27	0.5	0.46	-0.18
Module Information										
Model	Form factor and suffixes									
AX211.D2WG	Intel Garfield Peak 2 AX211 Wi-Fi 6e +BT 5.2 M.2 1216 160MHz CNVi WW WLAN									
BE200.D2W	Intel Gale Peak 2 BE200 Wi-Fi 7 +BT 5.4 M.2 1216 320MHz PCIe WW WLAN									
Antenna vendor connect person										
Antenna Vendor	HONGBO Wireless Communication Technology Co., LTD									
contact person	Mirabelle Chou									
E-mail	<a href="mailto:mirabellechou@hong-bo.com.tw">mirabellechou@hong-bo.com.tw</a>									
Tel/Mobile	02-2792-6009 EXT: 683									
Web address	<a href="https://www.hong-lin.com.cn/index.php">https://www.hong-lin.com.cn/index.php</a>									
Address	4F., No.143, Sinhu 1st Rd., Neihu Dist., Taipei City, 11494 Taiwan									

# Table of contents

1. Applicable test method
2. Test & System Description
  - a. Test setup
  - b. Equipment list
  - c. Test lab
3. Setup photo

[Section 1. Antenna Assembly Specifications](#)

[Section 2. Dimensioned Photos or Drawings of Antennas](#)

[Section 3. Radiation characteristics of antenna loaded in Host Platform](#)

[Section 4. Antenna Host Platform Location Information](#)

[Section 5. Antenna dimensional information for SAR evaluation](#)

[Section 6. Diagram Example of Co-Location Antenna Separation](#)

1. **Applicable test methods**

ETS-Lindgren AMS-8500 system is 3D fully anechoic chamber, it is applied to the “Conical Cut test method”, the detail description is described as below.

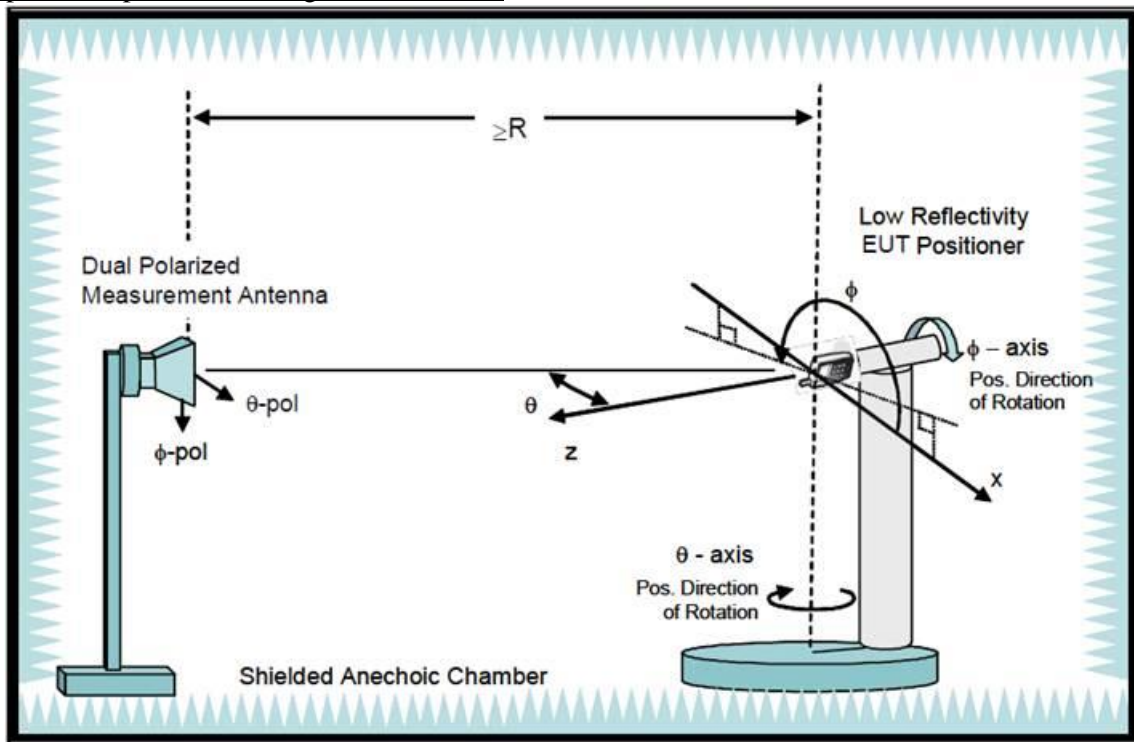
The Conical Cut method requires the ability of the Measurement Antenna to be physically rotated in the theta plane (overhead) of the EUT for implementations using a single Measurement Antenna, Eleven conical cuts are required to capture data at every 15 degrees from the EUT, with the top (0 degrees) and bottom (180 degrees) cuts not being measured. Typically, the EUT will remain affixed to a turntable during the entire measurement process. The Measurement Antenna will be positioned at a starting theta angle. The EUT will then be rotated around the full 360 degrees of phi rotation. The Measurement Antenna will then be positioned at the next theta angle, and the process repeated.

		$\theta$ -Axis	$\Phi$ -Axis
Passive	Step size	15°~165° step: 15°	0°~345° step: 15°
	N / M (Points)	12	24

2. **Test & System Description**

a. Test setup

Typical Setup for ETS-Lindgren AMS-8500:



## b. Equipment list

Equipment Description	Manufacturer	Identification no.	Current calibration date	Next calibration date
Network analyzer	Agilent	E5071C	2023/01/07	2024/01/06
Measurement software	ETS-Lindgren	EMQuest	N/A	N/A
Multi axis positioning system(MAPSTM)	ETS-Lindgren	EMCO 2115	N/A	N/A
Multi axis positioning system(MAPSTM)	ETS-Lindgren	EMCO 2110	N/A	N/A
MAPSTM controller	ETS-Lindgren	EMCO 2090	N/A	N/A
Horn antenna	ETS-Lindgren	3164-10	2023/03/03	2024/03/02
ETS OTA Chamber	ETS-Lindgren	AMS-8500	2023/03/03	2024/03/02
Cable	ETS-Lindgren	RFC SMS-100-NMR Series	N/A	N/A

Note: Chamber calibration included full set of implement

Test lab

Address: 1F., No. 8, Aly. 15, Ln. 120, Sec. 1, Neihu Rd., Neihu Dist., Taipei City

Test date: 2024/01/05

# Antenna Information

## Section 1. Antenna Assembly Specifications

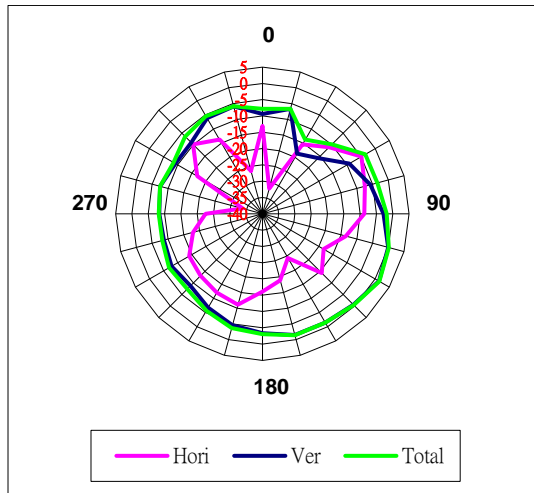
1A Antenna Part Number	1B Manufacturer	1C Antenna Type	1D Cable Assembly Part Number and Information	1E Freq Range MHz	1F * Peak Gain W/ Cable loss (dBi)	1G Peak Gain w/o Cable Loss (dBi)	1H Max VSWR	1I Cable Loss (dB)
P/N: <b>6036B0321001</b> (00-2602752450)  Main Antenna <b>(TX2)</b>	HONG-BO	PIFA	Connector : I-PEX (P/N: 20565-001R-13)  50 ohm Coaxial length: 152mm diameter: 1.13mm	2400-2495	1.39	1.78	3	0.39
				5150-5250	-0.60	-0.02	3	0.58
				5250-5350	-0.09	0.49	3	0.58
				5470-5725	1.57	2.17	3	0.60
				5725-5850	1.66	2.27	3	0.61
				5850-5895	0.75	1.36	3	0.61
				5925-6425	0.75	1.39	3	0.64
				6425-6525	-1.05	-0.41	3	0.64
				6525-6875	0.01	0.67	3	0.66
				6875-7125	0.22	0.89	3	0.67
P/N: <b>6036B0321101</b> (00-2602752350)  Aux Antenna <b>(TX1)</b>	HONG-BO	PIFA	Connector : I-PEX (P/N: 20565-001R-13)  50 ohm Coaxial length: 440mm diameter: 1.13mm	2400-2495	1.06	2.18	3	1.12
				5150-5250	0.45	2.12	3	1.67
				5250-5350	0.45	2.13	3	1.68
				5470-5725	0.87	2.62	3	1.75
				5725-5850	0.79	2.56	3	1.77
				5850-5895	1.27	3.05	3	1.78
				5925-6425	1.27	3.12	3	1.85
				6425-6525	0.5	2.36	3	1.86
				6525-6875	0.46	2.38	3	1.92
				6875-7125	-0.18	1.77	3	1.95

## Section 3. Radiation characteristics of antenna loaded in Host Platform

### Main Antenna

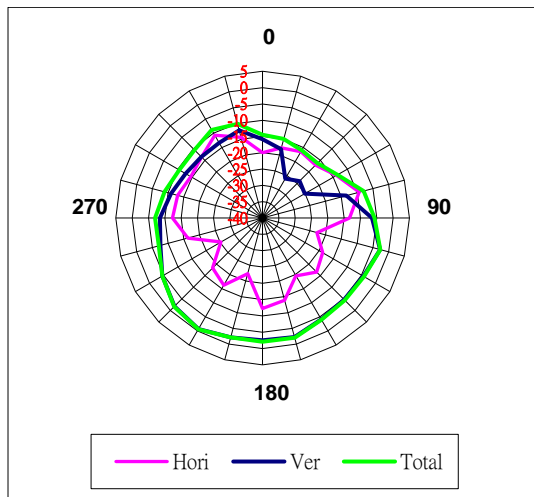
#### Max Antenna 2D Radiation Pattern 2400 – 2495 MHz

Frequency (MHz)	Horizontal+ Vertical (dBi) peak (dBi)
2400-2495	1.39



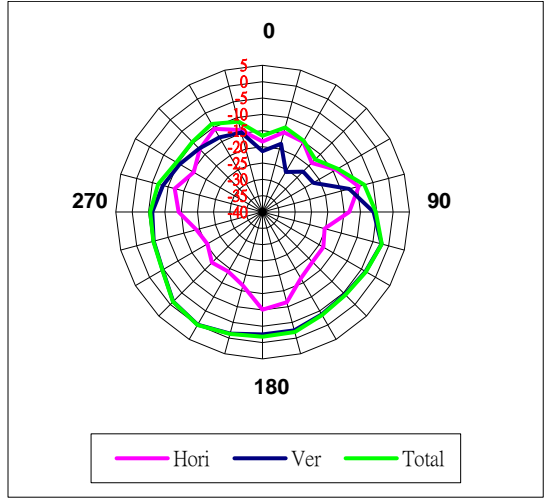
#### Max Antenna 2D Radiation Pattern 5150-5250 MHz

Frequency (MHz)	Horizontal+ Vertical (dBi) peak (dBi)
5150-5250	-0.60



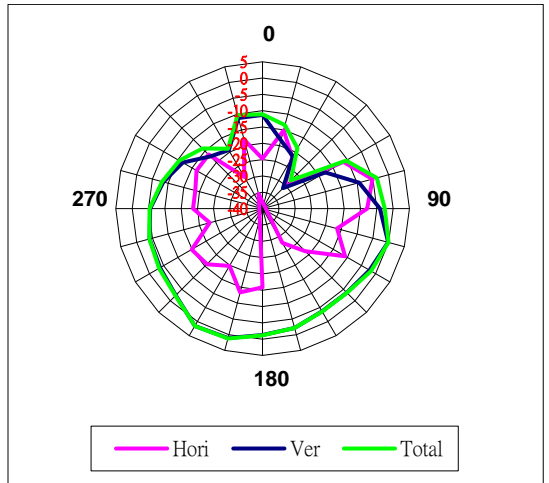
### Max Antenna 2D Radiation Pattern 5250-5350 MHz

Frequency (MHz)	Horizontal+ Vertical (dBi) peak (dBi)
5250-5350	-0.09



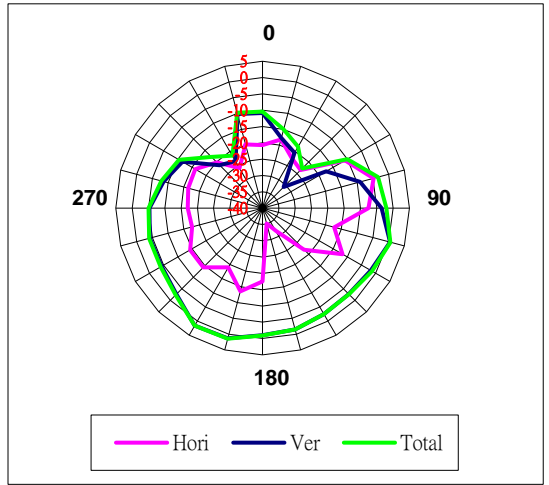
### Max Antenna 2D Radiation Pattern 5470-5725 MHz

Frequency (MHz)	Horizontal+ Vertical (dBi) peak (dBi)
5470-5725	1.57



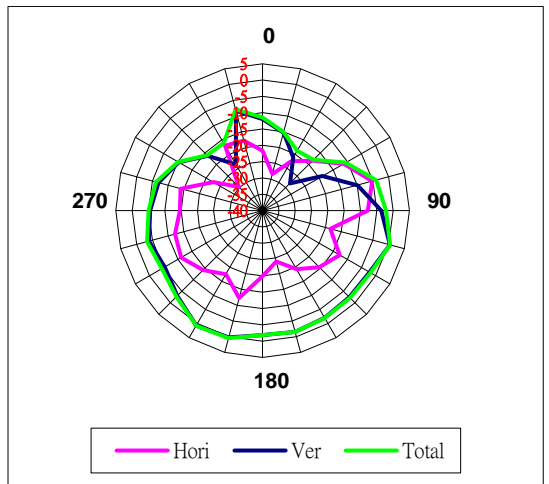
### Max Antenna 2D Radiation Pattern 5725-5850 MHz

Frequency (MHz)	Horizontal+ Vertical (dBi) peak (dBi)
5725-5850	1.66



### Max Antenna 2D Radiation Pattern 5850-5895 MHz

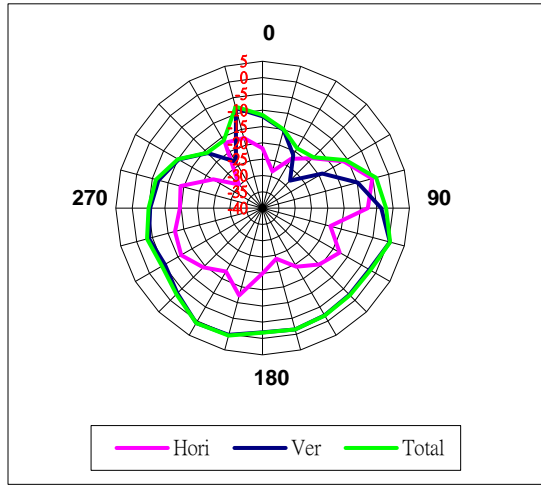
Frequency (MHz)	Horizontal+ Vertical (dBi) peak (dBi)
5850-5895	0.75





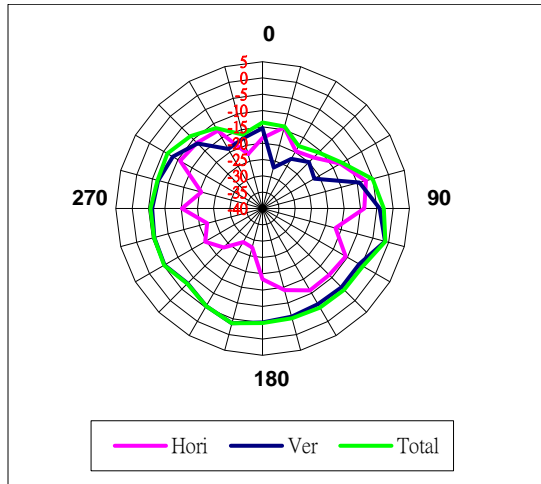
### Max Antenna 2D Radiation Pattern 5925-6425 MHz

Frequency (MHz)	Horizontal+ Vertical (dBi) peak (dBi)
5925-6425	0.75



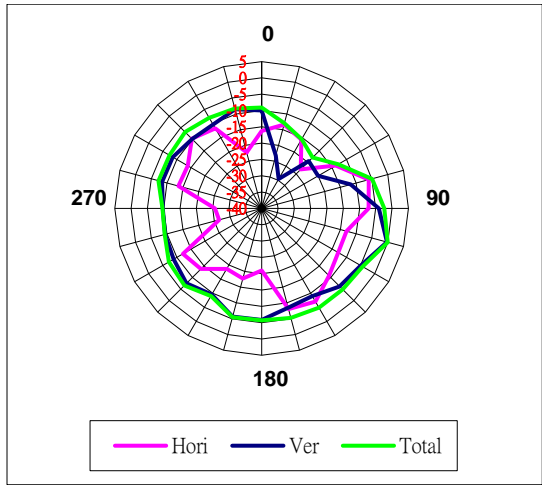
### Max Antenna 2D Radiation Pattern 6425-6525 MHz

Frequency (MHz)	Horizontal+ Vertical (dBi) peak (dBi)
6425-6525	-1.05



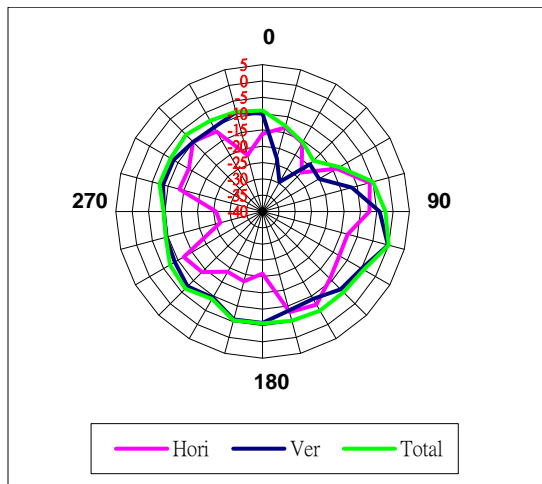
### Max Antenna 2D Radiation Pattern 6525-6875 MHz

Frequency (MHz)	Horizontal+ Vertical (dBi) peak (dBi)
6525-6875	0.01



### Max Antenna 2D Radiation Pattern 6875-7125 MHz

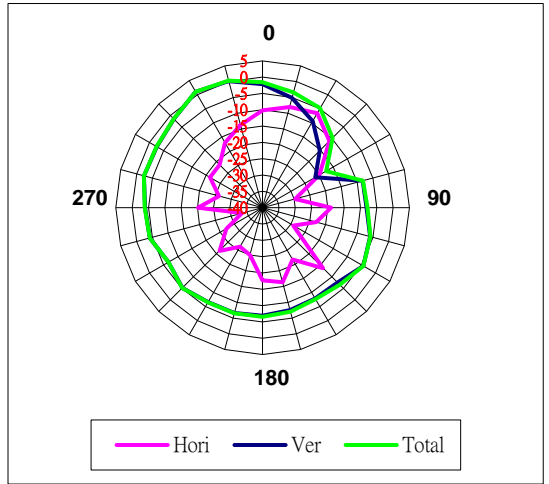
Frequency (MHz)	Horizontal+ Vertical (dBi) peak (dBi)
6875-7125	0.22



## Auxiliary Antenna

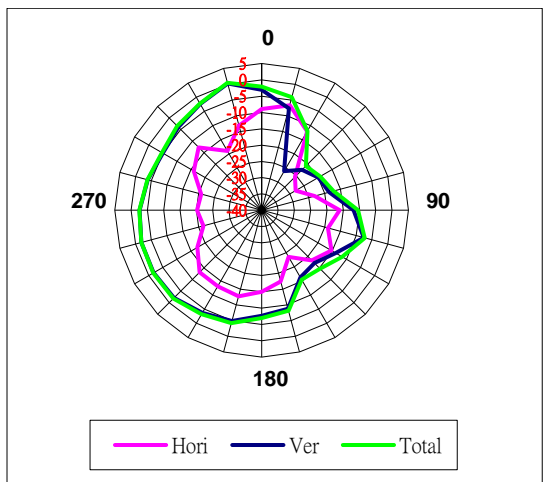
### Max Antenna 2D Radiation Pattern 2400 – 2495 MHz

Frequency (MHz)	Horizontal+ Vertical (dBi) peak (dBi)
2400-2495	1.06



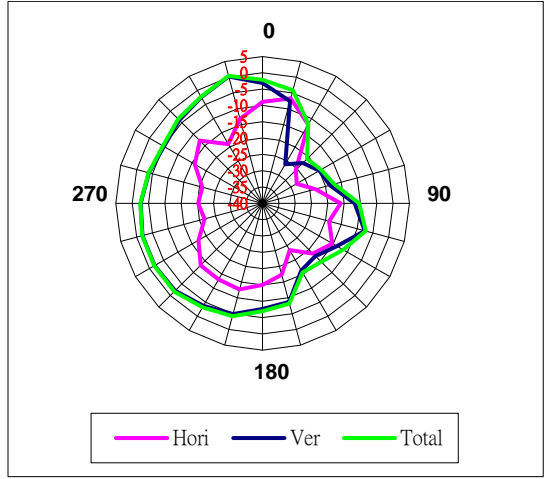
### Max Antenna 2D Radiation Pattern 5150-5250 MHz

Frequency (MHz)	Horizontal+ Vertical (dBi) peak (dBi)
5150-5250	0.45



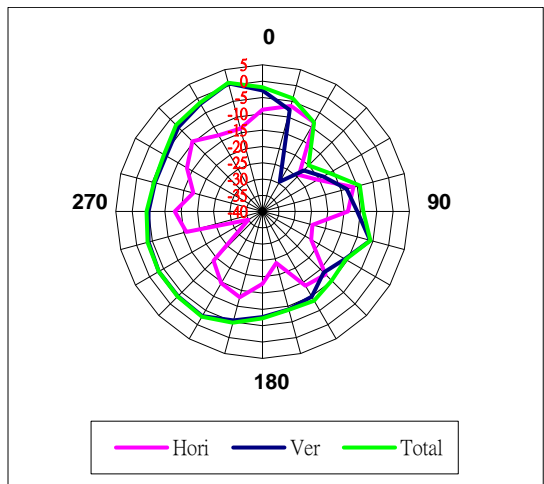
### Max Antenna 2D Radiation Pattern 5250-5350 MHz

Frequency (MHz)	Horizontal+ Vertical (dBi) peak (dBi)
5250-5350	0.45



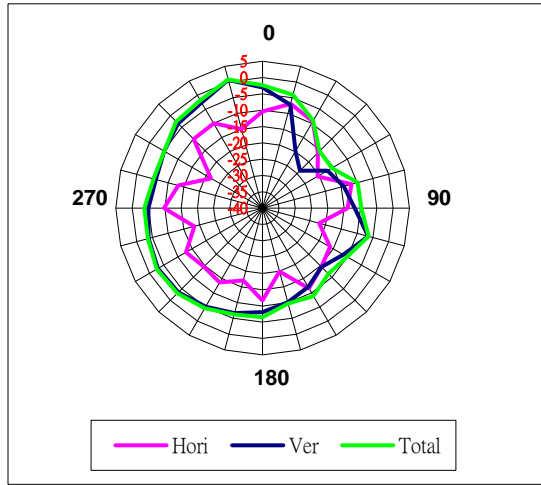
### Max Antenna 2D Radiation Pattern 5470-5725 MHz

Frequency (MHz)	Horizontal+ Vertical (dBi) peak (dBi)
5470-5725	0.87



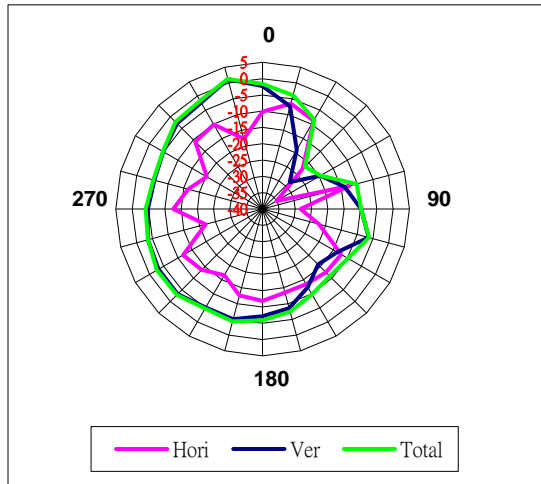
### Max Antenna 2D Radiation Pattern 5725-5850 MHz

Frequency (MHz)	Horizontal+ Vertical (dBi) peak (dBi)
5725-5850	0.79



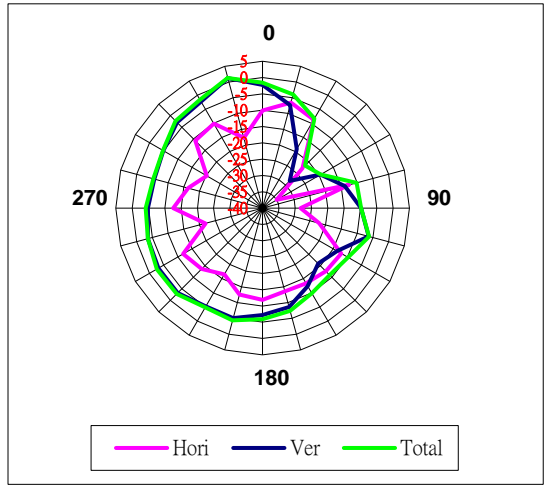
### Max Antenna 2D Radiation Pattern 5850-5895 MHz

Frequency (MHz)	Horizontal+ Vertical (dBi) peak (dBi)
5850-5895	1.27



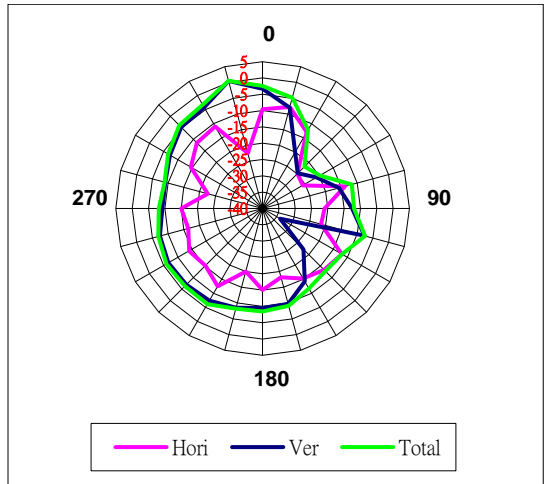
### Max Antenna 2D Radiation Pattern 5925-6425 MHz

Frequency (MHz)	Horizontal+ Vertical (dBi) peak (dBi)
5925-6425	1.27



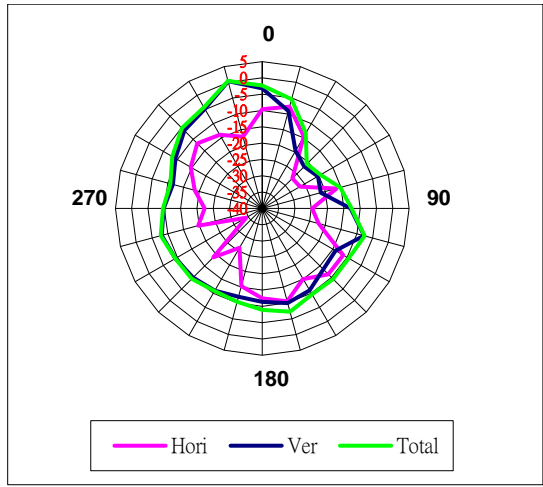
### Max Antenna 2D Radiation Pattern 6425-6525 MHz

Frequency (MHz)	Horizontal+ Vertical (dBi) peak (dBi)
6425-6525	0.5



### Max Antenna 2D Radiation Pattern 6525-6875 MHz

Frequency (MHz)	Horizontal+ Vertical (dBi) peak (dBi)
6525-6875	0.46



### Max Antenna 2D Radiation Pattern 6875-7125 MHz

Frequency (MHz)	Horizontal+ Vertical (dBi) peak (dBi)
6875-7125	-0.18

