



WBE700

Antenna Datasheet

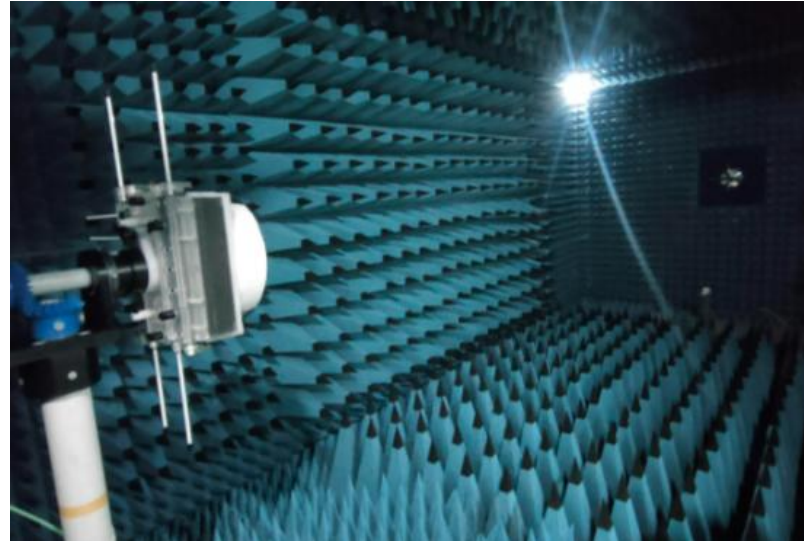
Senao Networks Inc.

Customer	Netgear
Project	WBE700
Project Description	2.4G antenna*2 5G antenna*2
Date	2026/04/24
Prepared by	Daniel
Report Version	V01

This report provides Wi-Fi antenna passive measurement results which include:

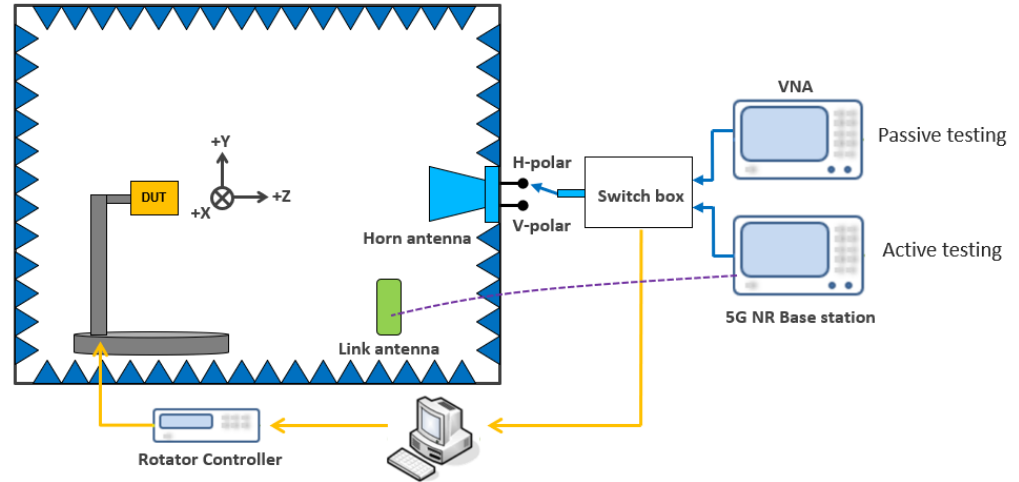
- General Information
- Antenna Measurement System Information
- Test Procedure
- DUT Information
- Set-up Photo
- Placement and Specification
- S11 & Isolation
- Radiation Pattern
- Combine Pattern
- Efficiency and Gain

- Antenna Vendor : WHAYU
- Test Date : 2026/01/26
- Test Engineer : Tony.Duan
- Measurement System : BWANT
- Software Name : BWANT 3D Passive
- Software Version : 2025061601



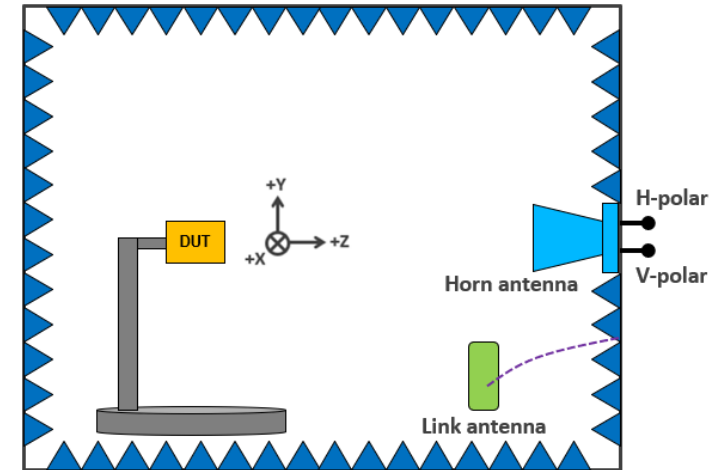
Antenna Measurement System Information

- Measurement System: BWANT Chamber
- Measurement setup:
 - Pattern & Gain measurement
 1. BWANT chamber
 2. BWANT program (BWANT 3D Passive)
 3. System overview
 - Test item
 1. Antenna passive test 600MHz~8.5GHz
- Calibration Information

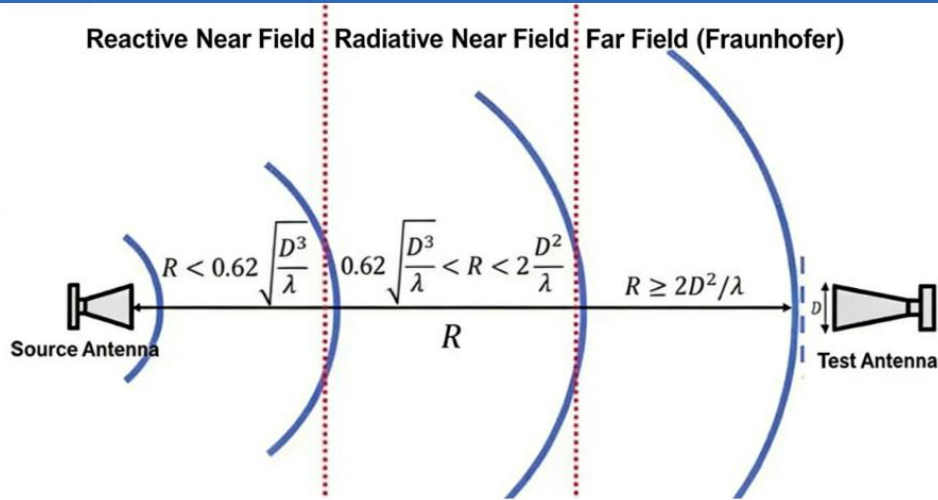


Description	Model No.	Serial #	Calibration Date	Calibration Until
Chamber	NA	NA	2025/06/04	2026/06/03
Network Analyzer	E5063A	MY54101300	2025/10/09	2026/10/08

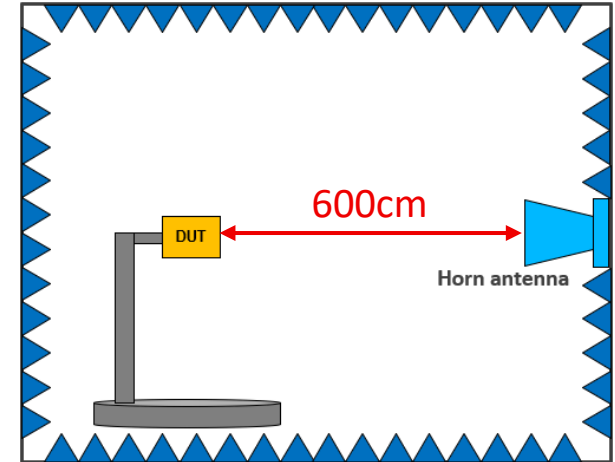
1. Place the device to be tested on the fixture and align it with the center of the chamber.
2. Connect the antenna cable to the RF connector of the chamber.
3. Use the SW to configure parameters (antenna name, frequency points, measurement angles, antenna dimension), and then run the test SW (BWANT 3D Passive).
4. By phi from 0° to 360° and theta from 0° to 180° with a step size of 2 degrees, get the 3D data, including efficiency, peak gain, 2D and 3D radiation patterns.
5. This is far field test for antenna verification.
6. This is passive measurement, which means the device is off and not in any operating mode.



Test Measurement System Far Field Information



R: Far-field starting distance
 λ : operating wavelength ($\lambda=c/f$)
 D: Antenna Size



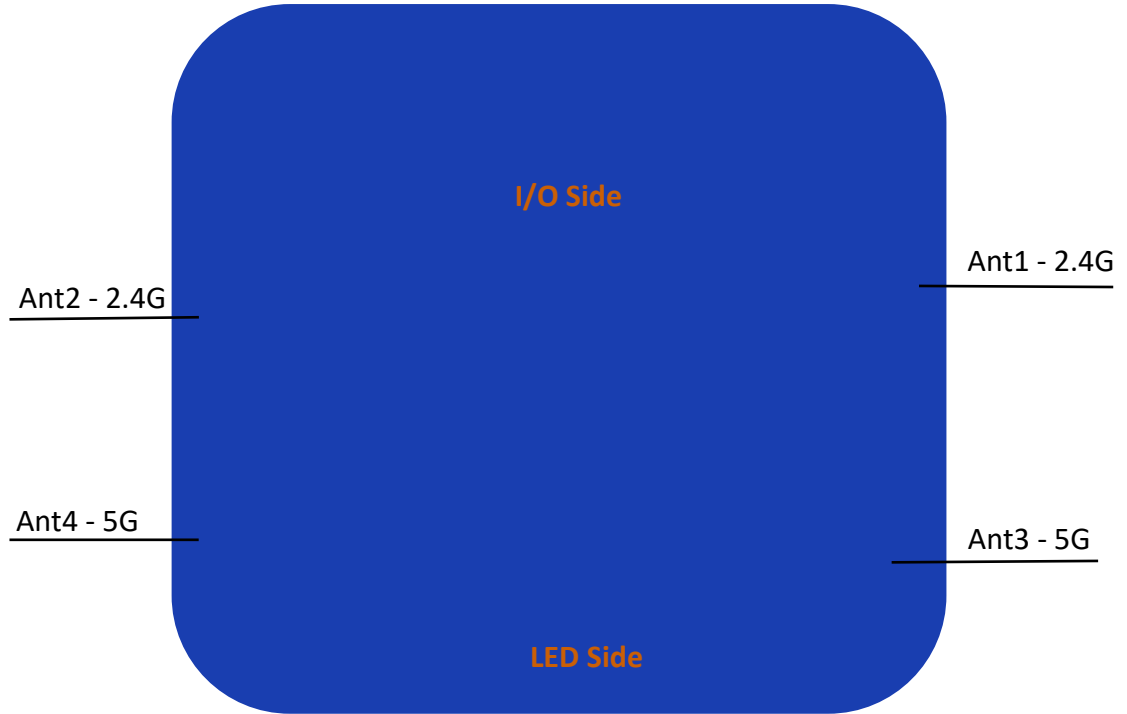
Frequency (MHz)	Near Field	Far Field	EUT to Measurement antenna distance
2500MHz	$R < 11\text{cm}$	$R \geq 41\text{cm}$	$R = 600\text{cm}$
5895MHz	$R < 17\text{cm}$	$R \geq 97\text{cm}$	$R = 600\text{cm}$

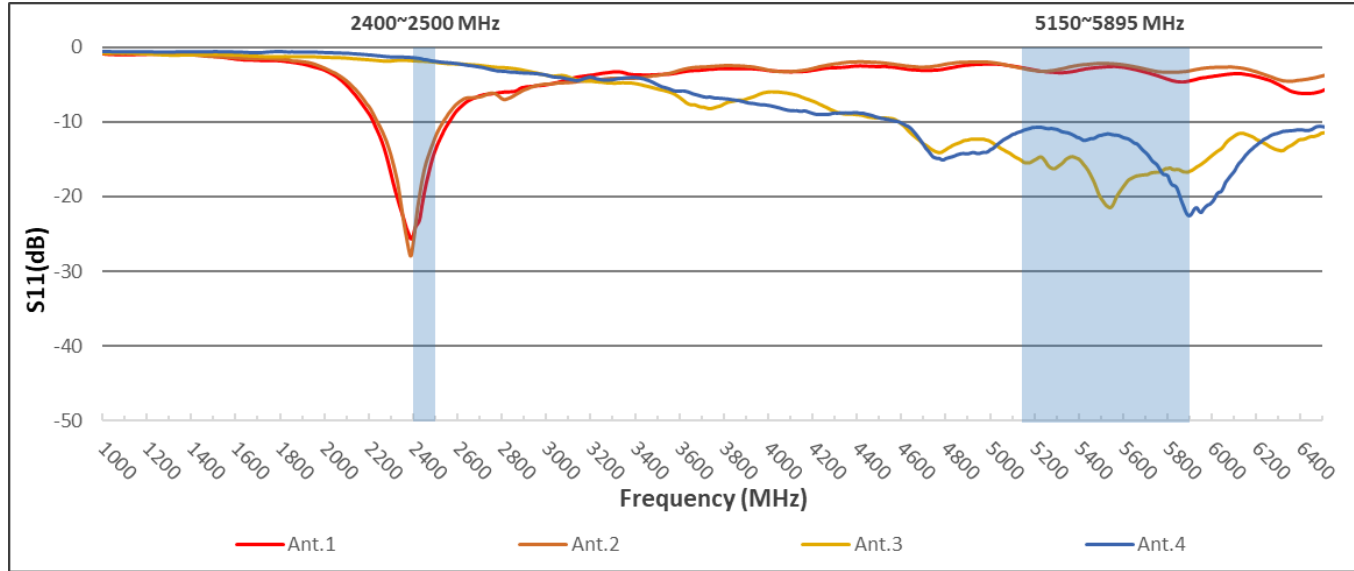
Support band	TX/RX	Operation mode
2.4G	2TX-2RX	11b/11g/11n/11ax/11be
5G UNII-1	2TX-2RX	11a/11n/11ac/11ax/11be
5G UNII-2a	2TX-2RX	11a/11n/11ac/11ax/11be
5G UNII-2c	2TX-2RX	11a/11n/11ac/11ax/11be
5G UNII-3	2TX-2RX	11a/11n/11ac/11ax/11be
5G UNII-4	2TX-2RX	11a/11n/11ac/11ax/11be

DUT Information - DUT Operations Mode

Band	Modulation Mode	CDD mode	Beamforming mode
2.4GHz	802.11b	Nss1	Not Support
	802.11g	Nss1	Not Support
	802.11n (HT20)	Nss1 / Nss2	Nss1 / Nss2
	802.11n (HT40)	Nss1 / Nss2	Nss1 / Nss2
	802.11n (VHT20)	Nss1 / Nss2	Nss1 / Nss2
	802.11n (VHT40)	Nss1 / Nss2	Nss1 / Nss2
	802.11ax (HE20)	Nss1 / Nss2	Nss1 / Nss2
	802.11ax (HE40)	Nss1 / Nss2	Nss1 / Nss2
	802.11be (EHT20)	Nss1 / Nss2	Nss1 / Nss2
	802.11be (EHT40)	Nss1 / Nss2	Nss1 / Nss2
5GHz	802.11a	Nss1	Not Support
	802.11n (HT20)	Nss1 / Nss2	Nss1 / Nss2
	802.11n (HT40)	Nss1 / Nss2	Nss1 / Nss2
	802.11ac (VHT20)	Nss1 / Nss2	Nss1 / Nss2
	802.11ac (VHT40)	Nss1 / Nss2	Nss1 / Nss2
	802.11ac (VHT80)	Nss1 / Nss2	Nss1 / Nss2
	802.11ac (VHT160)	Nss1 / Nss2	Nss1 / Nss2
	802.11ax (HE20)	Nss1 / Nss2	Nss1 / Nss2
	802.11ax (HE40)	Nss1 / Nss2	Nss1 / Nss2
	802.11ax (HE80)	Nss1 / Nss2	Nss1 / Nss2
	802.11ax (HE160)	Nss1 / Nss2	Nss1 / Nss2
	802.11be (EHT20)	Nss1 / Nss2	Nss1 / Nss2
	802.11be (EHT40)	Nss1 / Nss2	Nss1 / Nss2
	802.11be (EHT80)	Nss1 / Nss2	Nss1 / Nss2
	802.11be (EHT160)	Nss1 / Nss2	Nss1 / Nss2
	802.11be (EHT240)	Nss1 / Nss2	Nss1 / Nss2

Radio_1	Ant.1~2
Wi-Fi Frequency	2400~2500MHz
Return Loss	10dB
Antenna Type	Pifa
Material	Metal
Feeding	Cable
Radio_2	Ant.3~4
Wi-Fi Frequency	5150~5895MHz
Return Loss	10dB
Antenna Type	Pifa
Material	Metal
Feeding	Cable
Ant.1	
Brand Name :	Enrack
P/N	7102A1417000
Ant.2	
Brand Name :	Enrack
P/N	7102A1418000
Ant.3	
Brand Name :	Enrack
P/N	7102A1419000
Ant.4	
Brand Name :	Enrack
P/N	7102A1420000

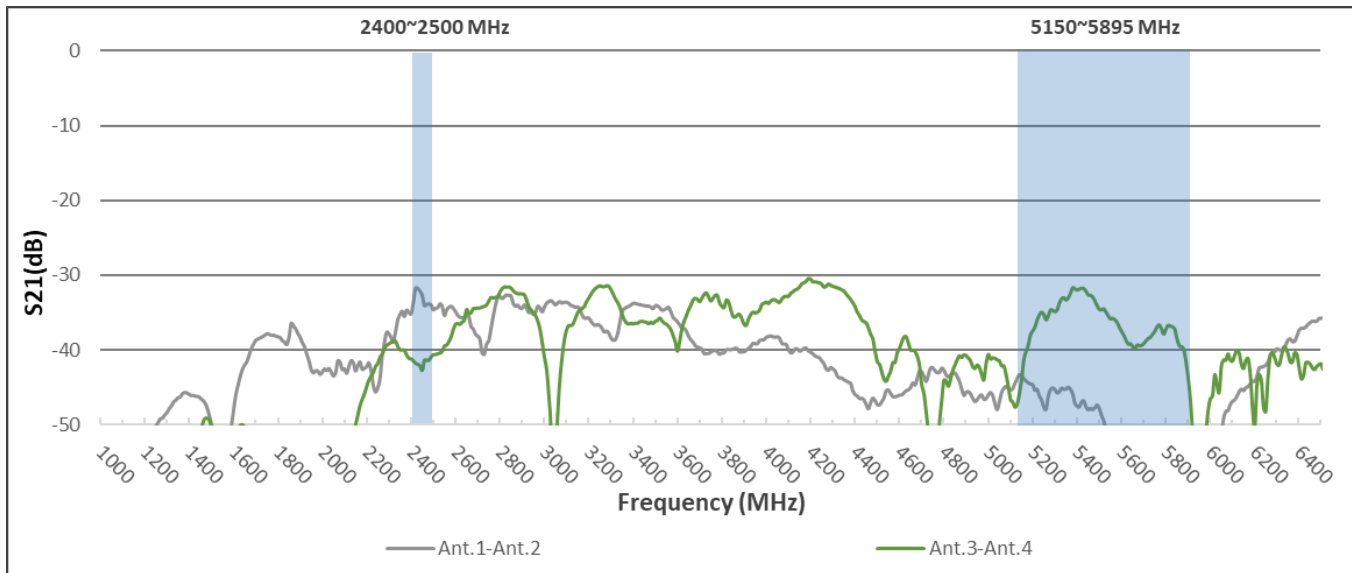




Antenna S11				
Freq. (MHz)	Ant1 2G	Ant2 2G	Ant3 5G	Ant4 5G
2400	-25.30	-26.35	-1.79	-1.37
2450	-19.58	-16.48	-1.86	-1.64
2500	-13.79	-12.09	-1.98	-1.85
5150	-2.72	-2.91	-15.34	-11.07
5550	-2.62	-2.25	-20.24	-11.74
5895	-4.46	-3.21	-16.53	-22.47

- The gray text indicates that the antenna does not support the corresponding frequency band and can be disregarded.

Antenna Isolation (S21)

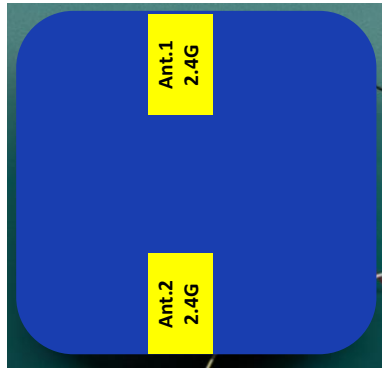


S21 (Isolation)		
Freq. (MHz)	Ant1-Ant2	Ant3-Ant4
2400	-35.21	-41.13
2450	-32.71	-42.71
2500	-34.67	-40.59
5150	-43.52	-43.94
5550	-47.87	-34.50
5895	-53.96	-43.67

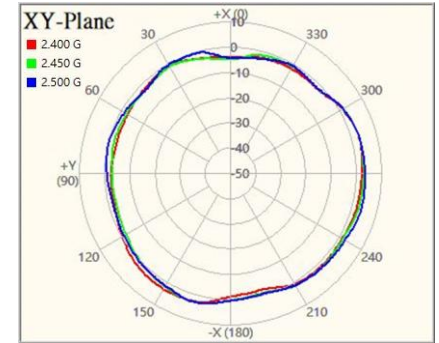
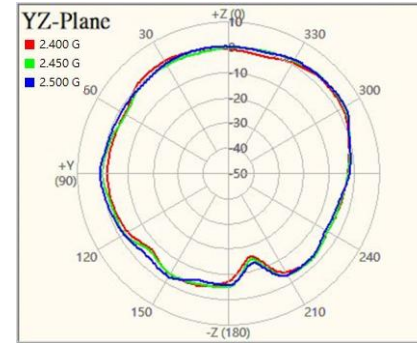
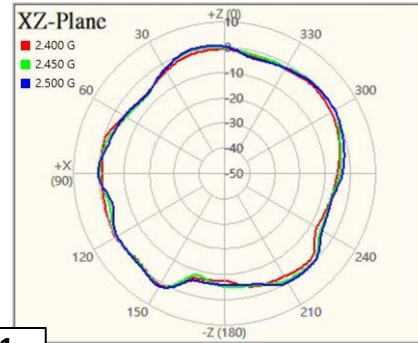
- The gray text indicates that the antenna does not support the corresponding frequency band and can be disregarded.

2D Radiation Pattern – Radio 1

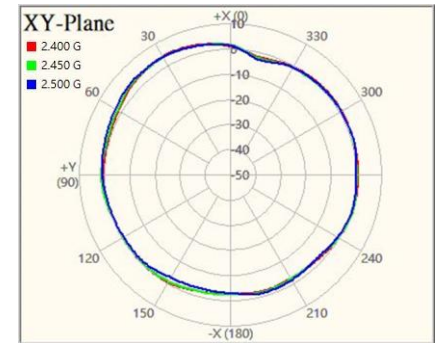
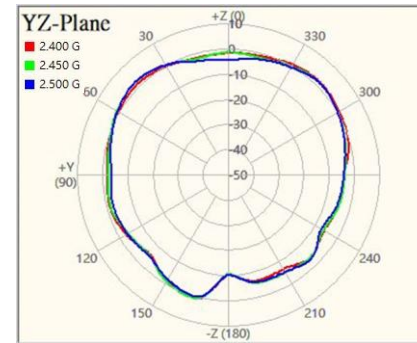
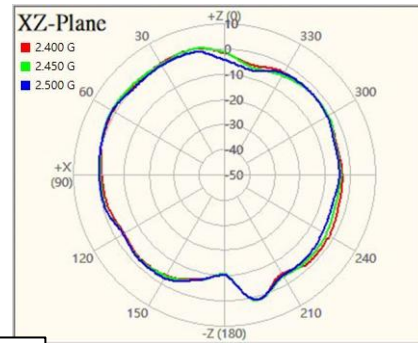
Represent the all X-Y plane using down tiles 30-degree angle.



Ant1



Ant2

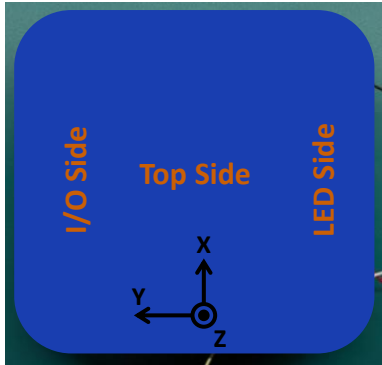
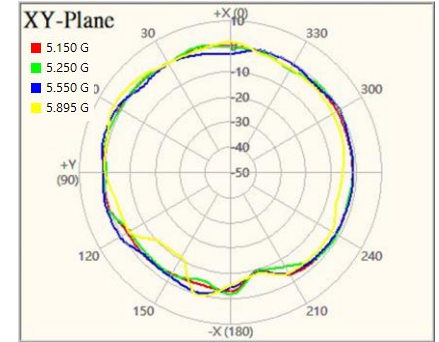
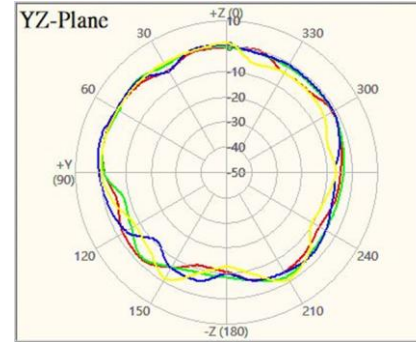
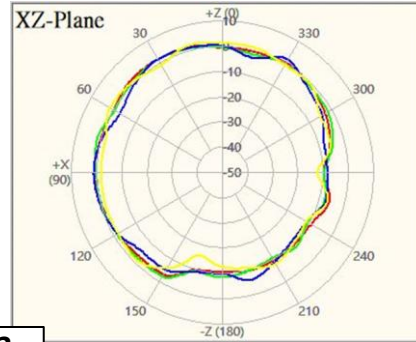


2D Radiation Pattern – Radio 2

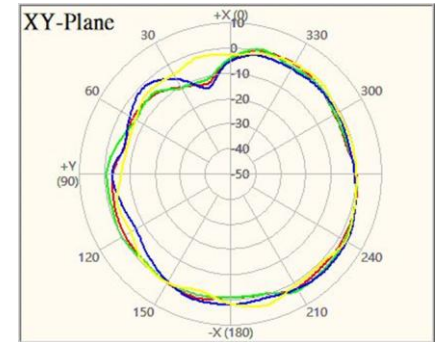
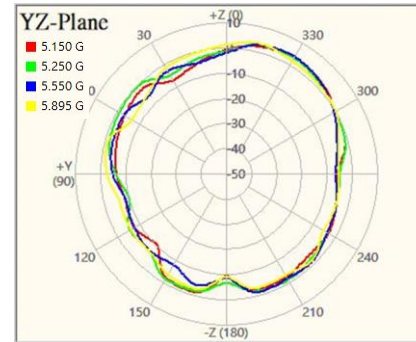
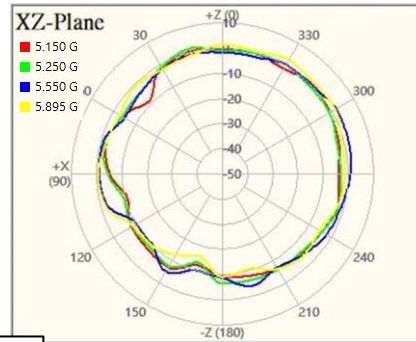
Represent the all X-Y plane using down tiles 30-degree angle.



Ant3

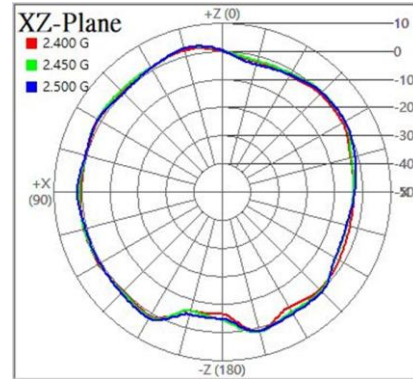
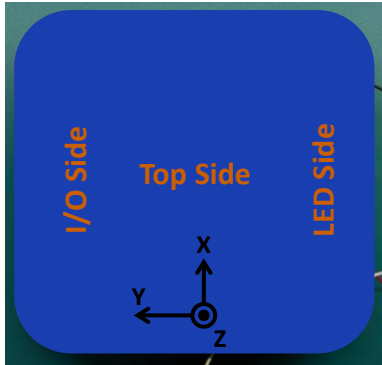


Ant4

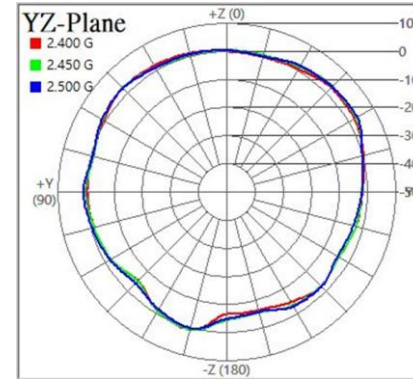


Combine Pattern – Radio 1

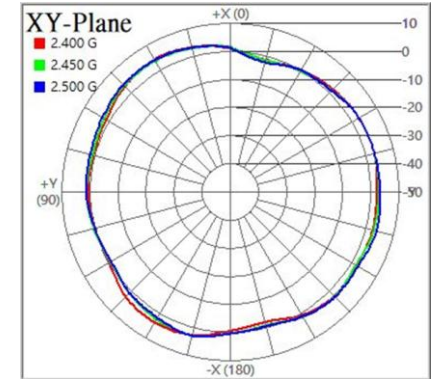
Represent the all X-Y plane using down tiles 30-degree angle.



XZ-Plane



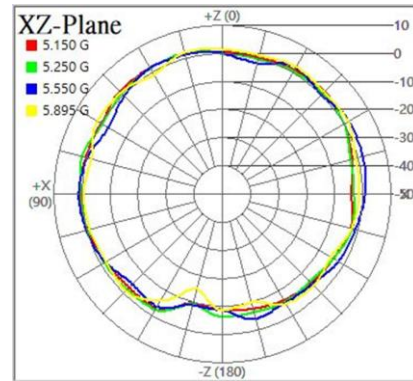
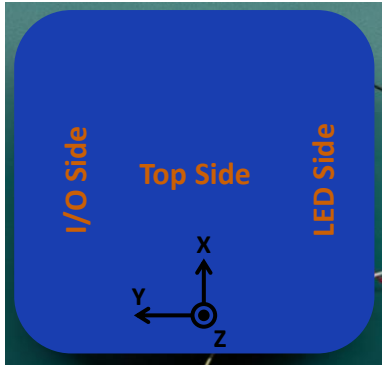
YZ-Plane



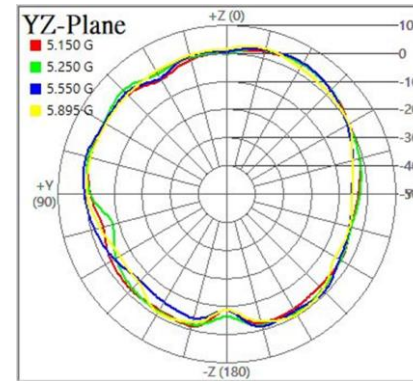
XY-Plane

Combine Pattern – Radio 2

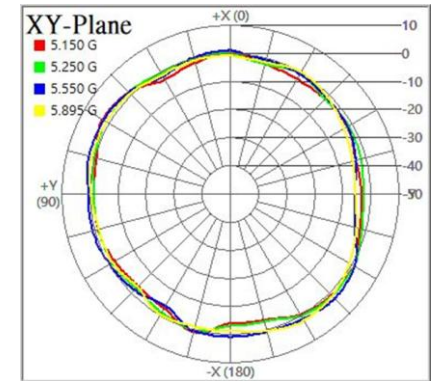
Represent the all X-Y plane using down tiles 30-degree angle.



XZ-Plane



YZ-Plane



XY-Plane

Antenna Efficiency and Gain

Freq. (MHz)	ANT1_2G		ANT2_2G		ANT3_5G		ANT4_5G	
	Efficiency (%)	Peak Gain (dBi)	Efficiency (%)	Peak Gain (dBi)	Efficiency (%)	Peak Gain (dBi)	Efficiency (%)	Peak Gain (dBi)
2400	70.9	3.20	70.6	3.24				
2450	70.8	3.21	70.0	3.30				
2500	71.3	3.16	72.9	3.22				
5150					63.8	3.54	63.7	3.46
5550					64.4	3.81	61.0	3.70
5895					65.0	3.86	60.5	3.57