



Extreme AP5022Fx DVT ANTs Measurement Report

2026/1/23

WNC

WNC Wistron NeWeb Corp.

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■ Antenna Result

- Antenna Type
- Peak Gain
- Radiation Pattern
- Isolation
 - Within Radio
 - Among Radio

■ Antenna List

- BLE0~2
- UWB1~4

Summary of Antenna Type AP5022FX

Brand	WNC Part Number	Antenna Type	Ant.
WNC	95XPAM15.G84	PIFA	6G0
WNC	95XPAM15.G85	PIFA	6G1
WNC	95XPAM15.G87	Alford loop	6G2
WNC	95XPAM15.G88	Alford loop	6G3

Brand	WNC Part Number	Antenna Type	Ant.
WNC	95XPAM15.G53	PIFA	BLE0
WNC	95XPAM15.G54	PIFA	BLE1
WNC	95XPAM15.GAM	Alford loop	BLE2

Brand	WNC Part Number	Antenna Type	Ant.
WNC	95XPAM15.G56	PIFA	SC0
WNC	95XPAM15.G57	PIFA	SC1

Brand	WNC Part Number	Antenna Type	Ant.
WNC	95XPAM15.G81	PIFA	UWB1
WNC	95XPAM15.G82	Alford loop	UWB2
WNC			UWB3
WNC			UWB4

General Information

■ Antenna Information:

— Antenna type and part number :

Show as antenna result description

— Brand: WNC

20 Park Ave. II, Hsinchu Science Park, Hsinchu 308, Taiwan

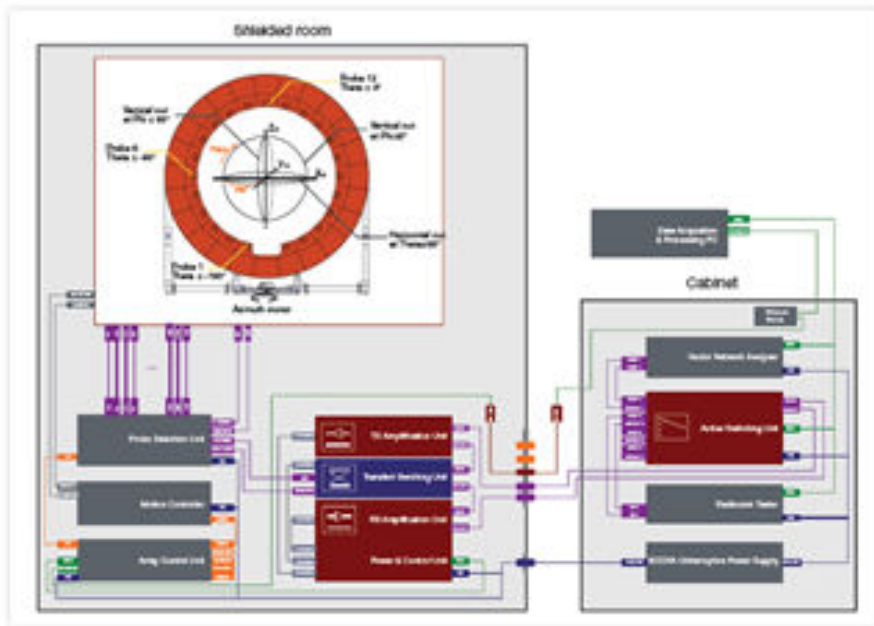
■ Test Date and Member

Date: 2025/11/04

Member: Leo Chuang

Test Information

- Antenna Vendor : WNC
- Test Date (yyymmdd) : 20251104
- Test Engineer : Leo Chuang
- Measurement System : SATIMO SG24-L
- Software Name : Wave Studio
- Software Version : 22.5.6



Test Equipment

- Measurement System: SATIMO SG24-L Chamber

Setup architecture :

SG24-L system :

1. Hardware system (as Figure.1)
2. Software system (Wave Studio)

Test item :

1. Passive radiation properties of antenna

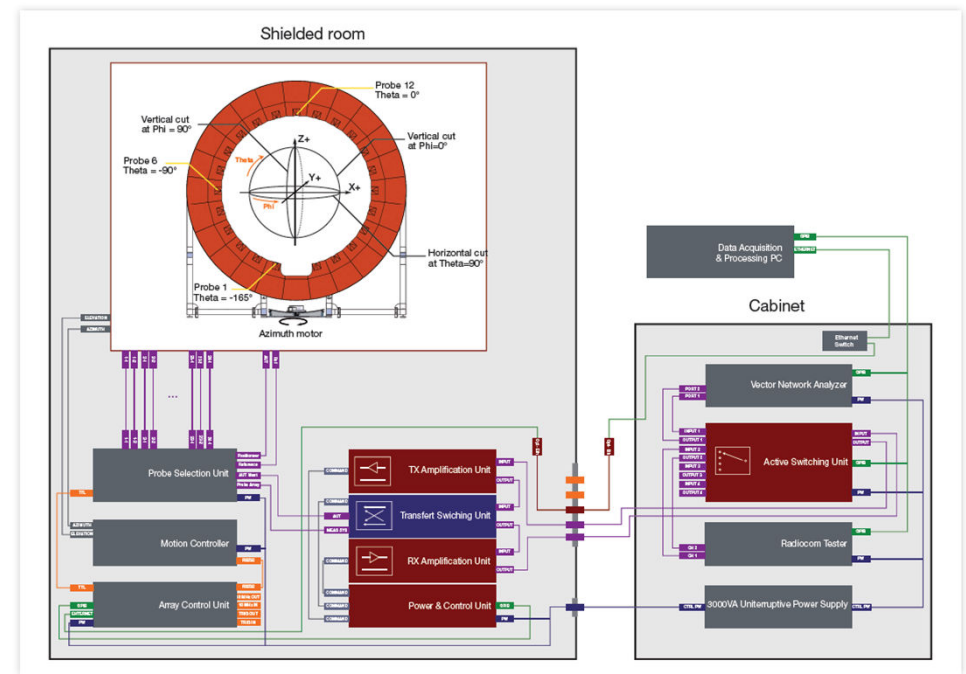


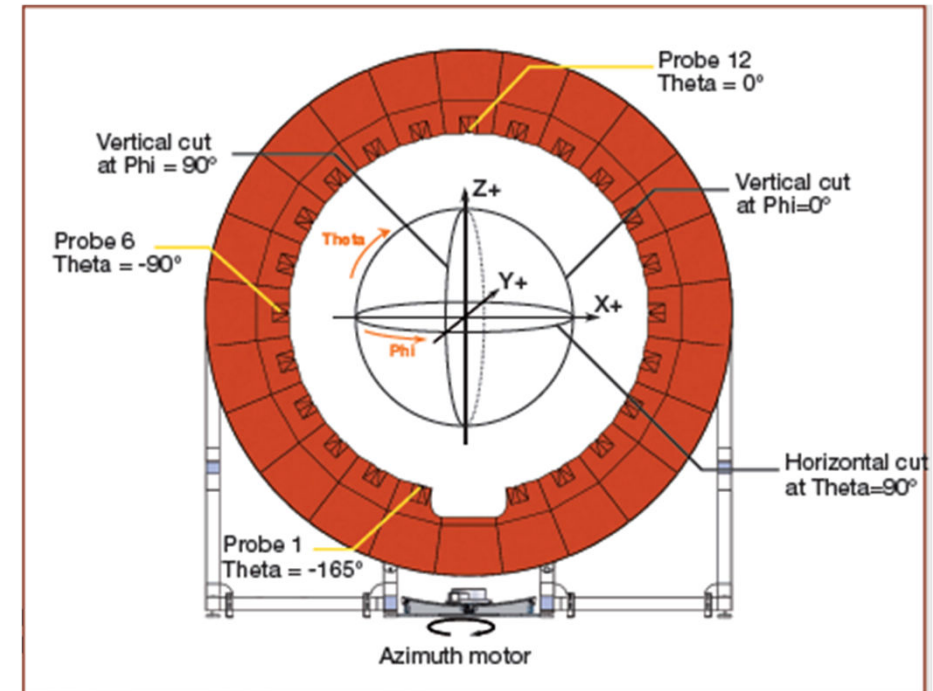
Figure.1 System diagram of SG24-L

- Calibration Information

Device	Type / Model	Serial #	Manufacture	Cal. Date	Cal. Until
Measurement System	SG24-L	HKG1669S	MVG-SATIMO	2025-08-09	2026-10-17
Network Analyzer	Keysight E5080B	MY59203136	Keysight	2025-08-09	2026-10-17

Test Procedure

1. Align and fix the DUT in center of the chamber .
2. Connect the DUT with RF connector of test device .
3. Adjust the settings (name , frequency , dimension) , and operate the Wave Studio program .
4. Get the 3D data by each 3 degrees one step for phi and theta , including efficiency , peak gain , 2D and 3D radiation pattern .
5. This is near field test for antenna verification .
6. This procedure only for passive mode .



Theta : 0 to 180 degrees

Phi : 0 to 360 degrees

DVT Antenna Measurement Summary

Base on the placement as EVT , DVT measurement result similar with EVT result , as result table show .

Result of antenna including cable loss .

Radio	Frequency (GHz)	VSWR	Efficiency (%)	Peak Gain (dBi)	Max Compositd Gain (dBi)	Isolation (within radio)
BLE / 802.15.4	2.4-2.484	< 3.0	~57%	5.7 dBi	NA	21 dB
UWB	7.725-8.25	< 2.0	~ 54 %	5.4 dBi	NA	NA

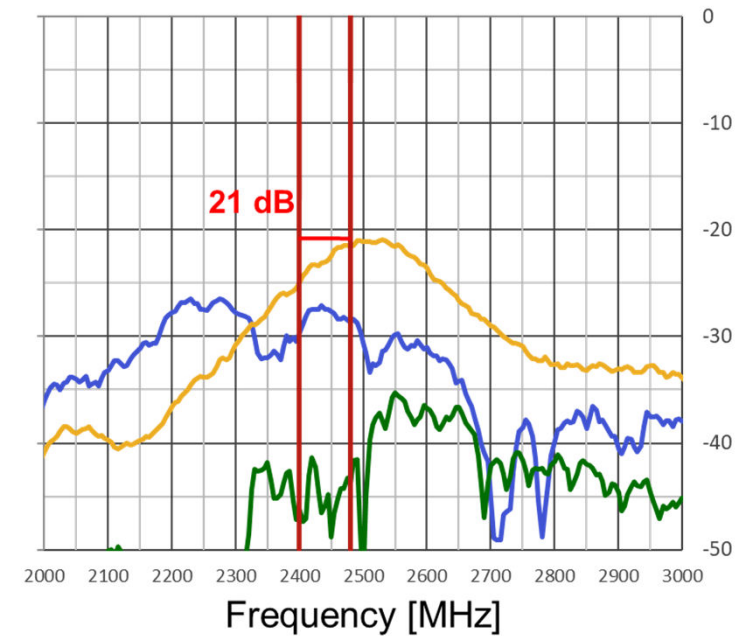
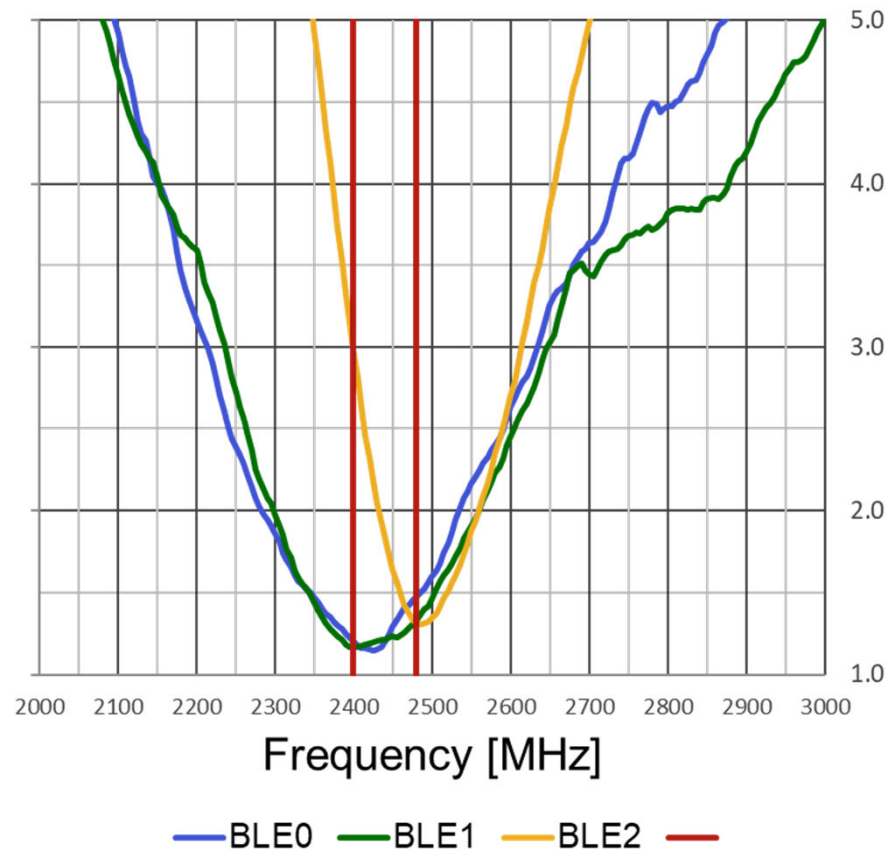
BLE / 802.15.4

Ant	Brand	WNC Part Number	Type
BLE0	WNC	95XPAM15.G53	PIFA
BLE1	WNC	95XPAM15.G54	PIFA
BLE2	WNC	95XPAM15.GAM	Alford loop

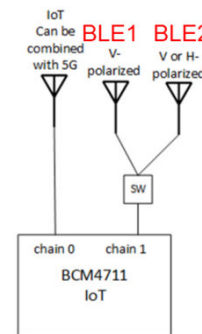
- VSWR
- Average Efficiency
- Peak Gain
- Radiation Pattern
- Isolation (Within Radio)



VSWR & Isolation @ BLE / 802.15.4



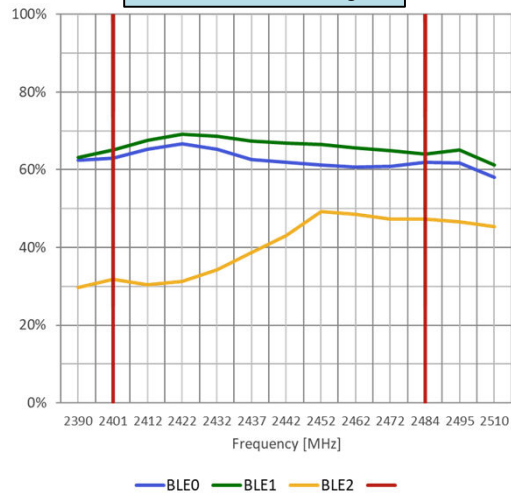
BLE0 BLE0_BLE1 BLE0_BLE2 BLE1_BLE2



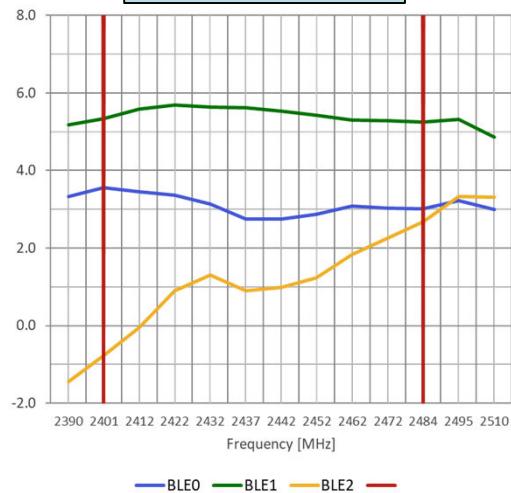
Base on BCM4711 chain 1 setting , BLE1 and BLE2 will not operate in same time by switch controlled .

Efficiency & Peak Gain & Radiation @ BLE / 802.15.4

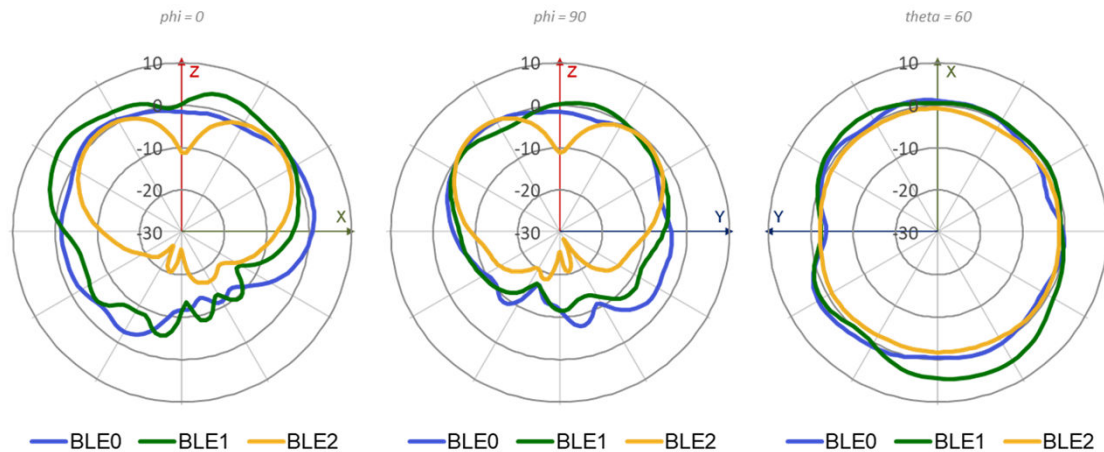
Efficiency



Peak Gain



BLE



2.4GHz	Max	Mean	Min
BLE0	3.6 dBi	3.1 dBi	2.7 dBi
BLE1	5.7 dBi	5.5 dBi	5.3 dBi
BLE2	2.7 dBi	1.1 dBi	-0.8 dBi
Summary	5.7 dBi	3.2 dBi	-0.8 dBi

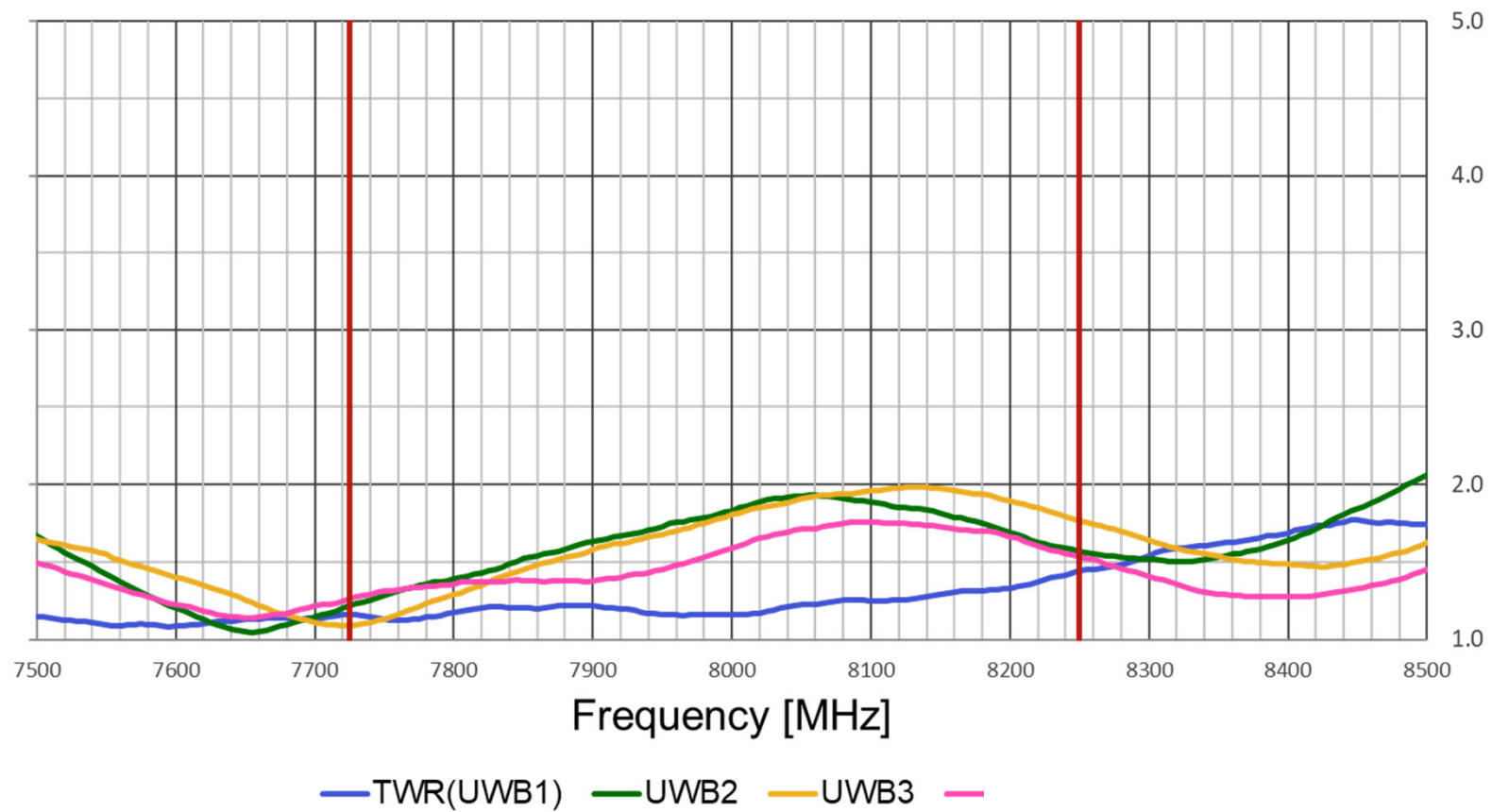
UWB

Ant	Brand	WNC Part Number	Type
UWB1	WNC	95XPAM15.G81	PIFA
UWB2	WNC	95XPAM15.G82	Alford loop
UWB3	WNC		
UWB4	WNC		

- VSWR
- Average Efficiency
- Peak Gain
- Radiation Pattern

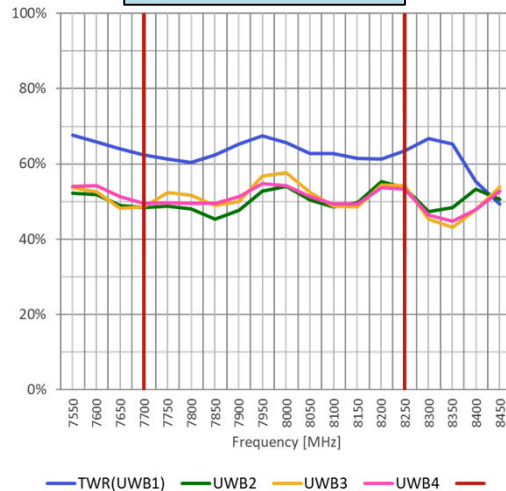


VSWR @ UWB

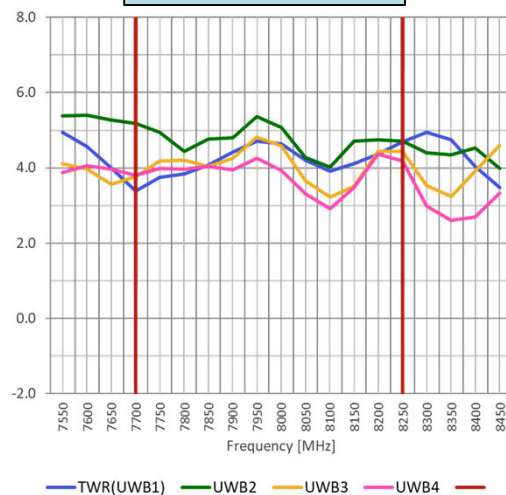


Efficiency & Peak Gain & Radiation @ UWB

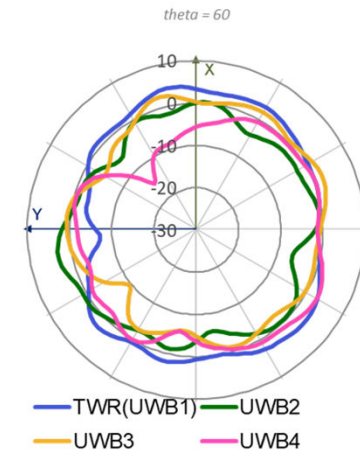
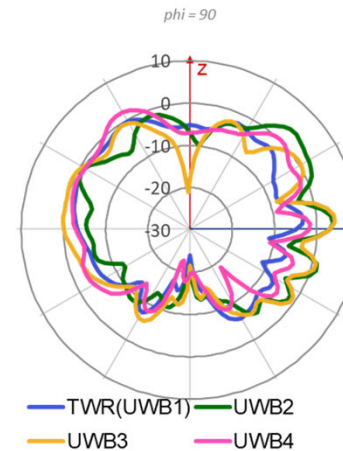
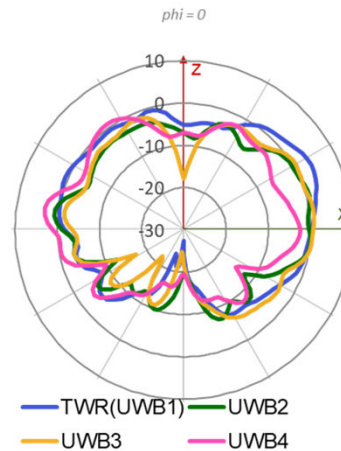
Efficiency



Peak Gain



BLE



8GHz	Max	Mean	Min
TWR	4.7 dBi	4.2 dBi	3.4 dBi
UWB2	5.4 dBi	4.8 dBi	4.0 dBi
UWB3	4.8 dBi	4.1 dBi	3.2 dBi
UWB4	4.4 dBi	3.8 dBi	2.9 dBi
Summary	5.4 dBi	4.2 dBi	2.9 dBi

The logo consists of the letters 'WNC' in a bold, blue, italicized sans-serif font. The 'W' and 'N' are connected, and the 'C' is a simple curve.

WNC

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