



產品承認書

Specification for Approval

客戶 (Customer): 訊舟科技股份有限公司

Customer Part No.:

Product Description: EW-7822UNIX

Lynwave Part No.: ALX21M-222AA8-01

客戶簽核 (Customer Approval)

客戶承認 Customer Approval	核准 (Authorized)	檢驗 (Approved)
	日期： 年 月 日	

內部簽核 (Signature)

日期： 2023 年 05 月 16 日

Approved by	Checked by	Tested by
<i>YungMing</i>	<i>Lisa Wei</i>	<i>Zero Chen</i>

綠億科技股份有限公司

Lynwave Technology Ltd.

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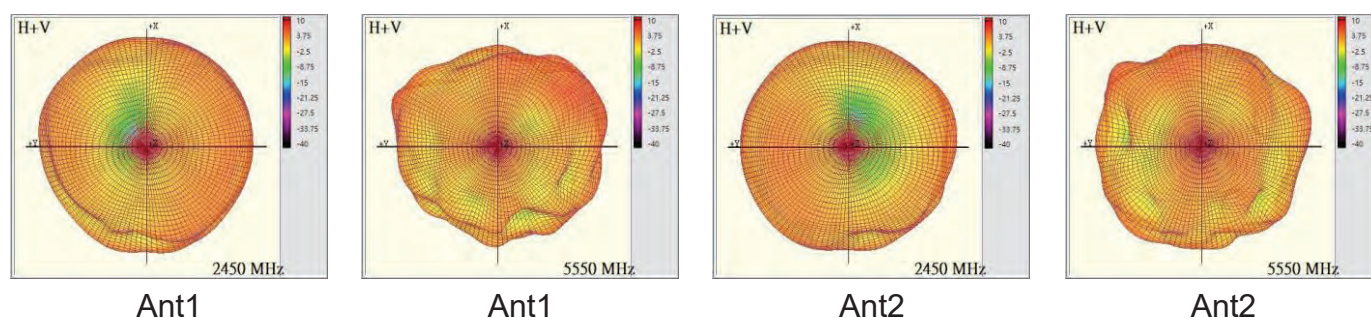
ALX21M-222AA8-01

Features

- Dual band IEEE 802.11 a/b/g/n/ac/ax standard
- 2+5GHz indoor embedded Omni-directional antenna
- High efficiency and quick integration

Applications

- USB Dongle



Electrical Specification

Category	Specification			
Antenna	1		2	
Frequency (MHz)	2400 - 2500	5150 - 5825	2400 - 2500	5150 - 5825
Peak Gain (dBi)	-0.6	2.6	-0.9	3
VSWR	2.5 : 1			
Polarization	Linear			
Power (Watts)	1			
Impedance (Ohms)	50			
Type	PIFA			

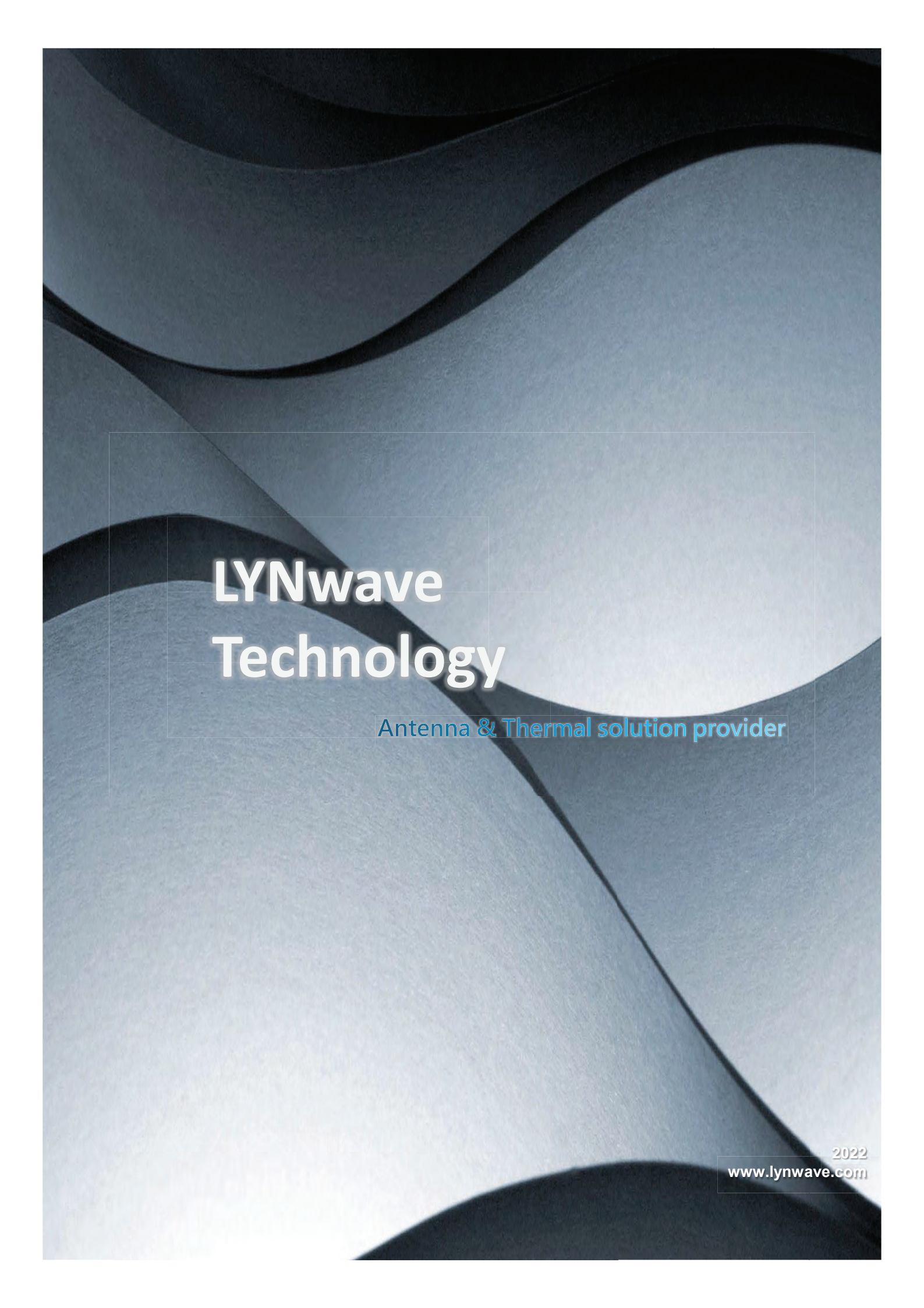
Mechanical Specification

Category	Specification
Dimension (mm)	12.76 x 9.57 x 4.32
Thickness (mm)	0.3
Weight (g)	TBD
Connector	N/A
Cable	N/A
Cable Length (mm)	N/A
Material	Metal (SUS430)
Operating Temp (°C)	-40°C ~ +85°C
Storage Temp (°C)	23 ± 5°C
Storage Humidity (%)	30% ~ 70%

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LYNwave Technology

Antenna & Thermal solution provider

2022
www.lynwave.com

Antenna Test Report

Project Name: EW-7822UNX
Model Name:
Feature: Wifi Dual Band
Application: Dongle

Date	Owner	Revision
01/17	Alex	1. Antenna passive measurement with V1 mockup
02/07	Zino	1. Antenna passive measurement with V1 mockup (new thermal sol.)
05/04	Zino	1. Antenna passive measurement with V2 mockup (without heatsink)
06/23	Zino	1. Antenna passive measurement with T2 mockup
07/06	Zino	1. Add USB GND
07/18	Zino	1. Antenna passive measurement with T3 mockup (Grounding USB)

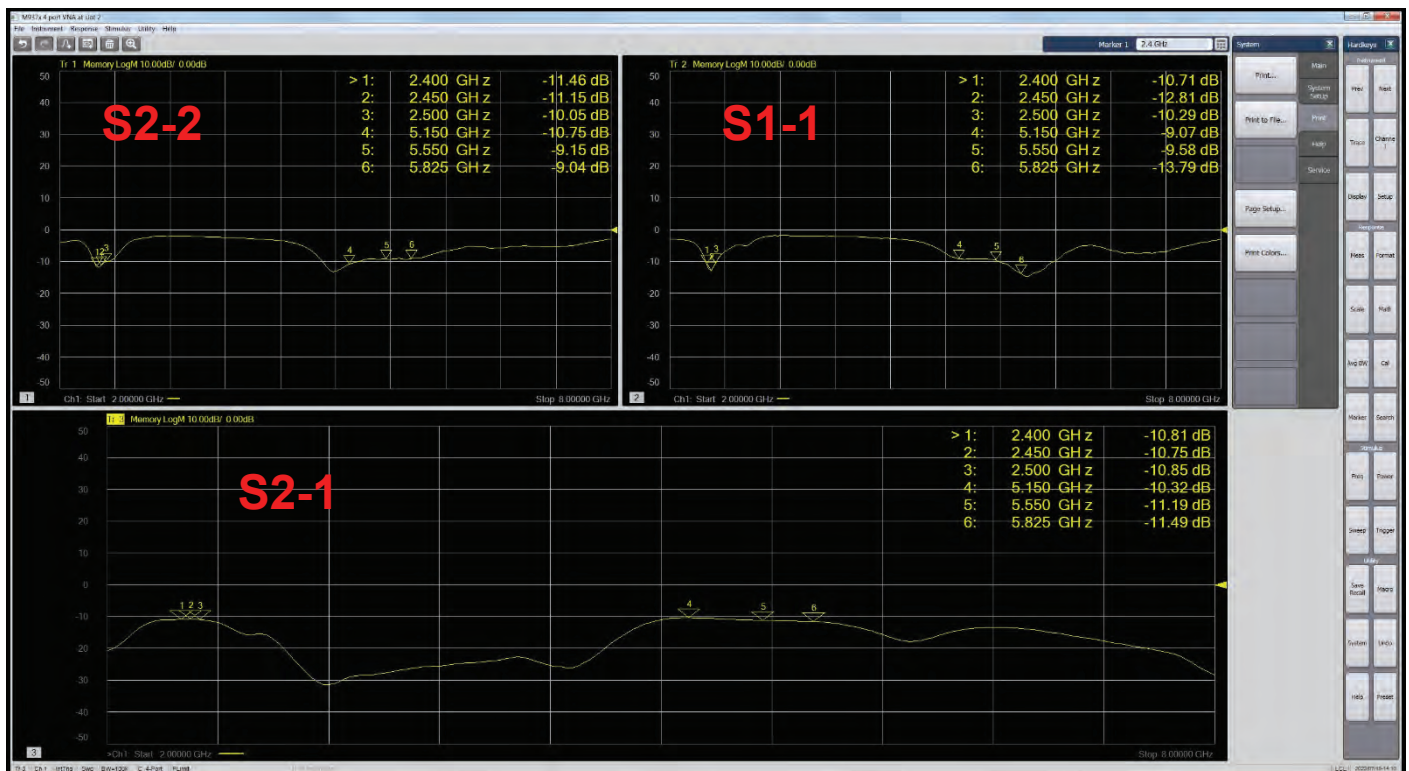
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 - 2. S-Parameters
 - 3. Equipment
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 - 5. 2D/3D Radiation Pattern
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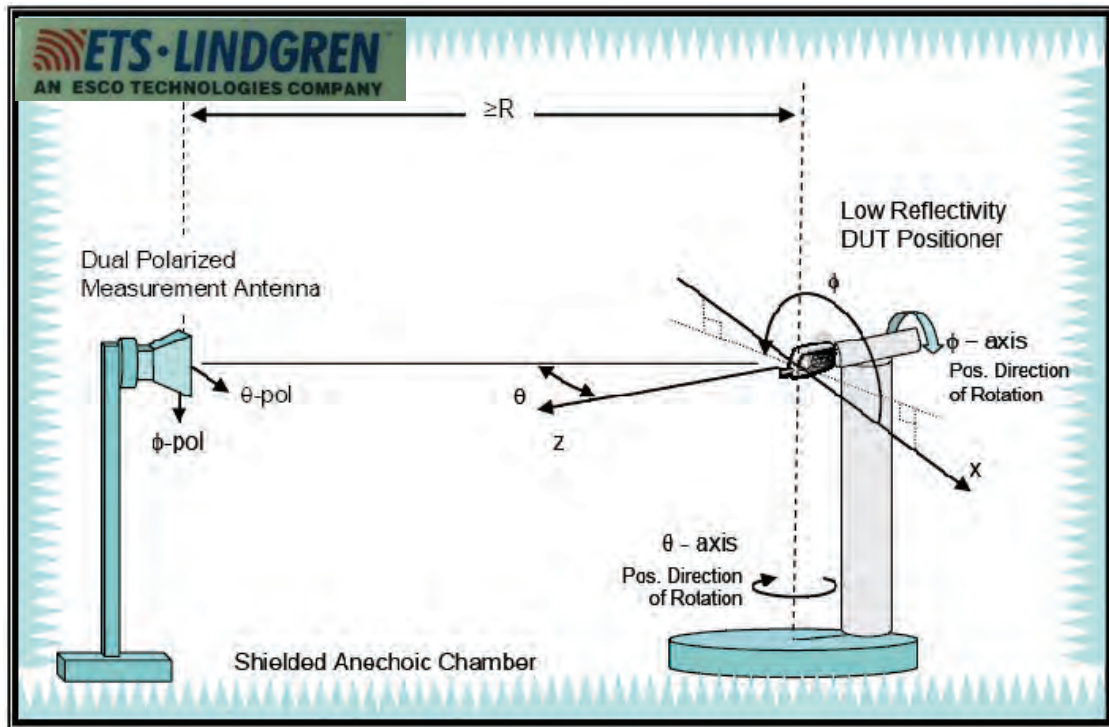
Antenna Placement

Antenna	Description	Frequency
Ant.1	2.4/5G	2400 MHz ~ 2500 MHz / 5150 MHz ~ 5825 MHz
Ant.2	2.4/5G	2400 MHz ~ 2500 MHz / 5150 MHz ~ 5825 MHz

S-Parameters



Equipment : ETS Chamber



Gain Table

Ant.1						
Frequency (MHz)	2400	2450	2500	5150	5550	5825
Efficiency(%)	31	32	33	42	43	42
Peak Gain(dBi)	-1.4	-0.9	-0.6	0.4	1.8	2.6
Ant.2						
Frequency (MHz)	2400	2450	2500	5150	5550	5825
Efficiency(%)	33	33	34	41	43	43
Peak Gain(dBi)	-1.7	-1.1	-0.9	0.5	2.8	3.0

The antenna characteristics

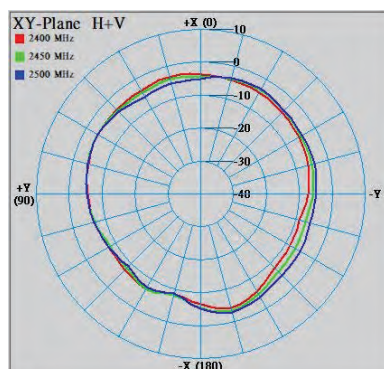
- Return loss < -8dB in operating band
- Isolation
 - All Band > 10 dB
- Efficiency
 - WIFI 2.4GHz Band $\geq 30\%$
 - WIFI 5GHz Band $\geq 40\%$
- Gain
 - WIFI 2.4GHz Band -1.7 ~ -0.6dBi
 - WIFI 5GHz Band 0.4 ~ 3.0dBi

Ant.1_ 2D.3D Radiation Pattern

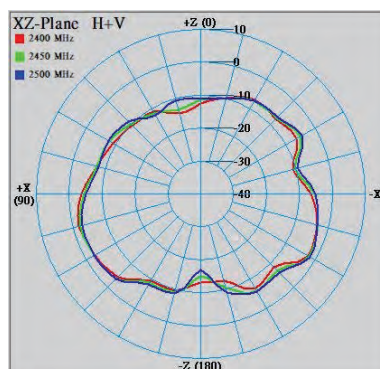
Frequency(MHz) : 2D. 2400~2500
3D. 2450

Radiation Pattern :

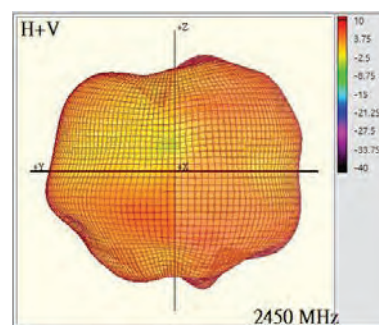
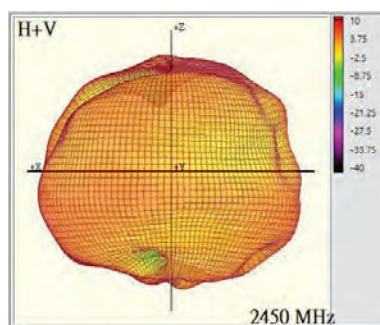
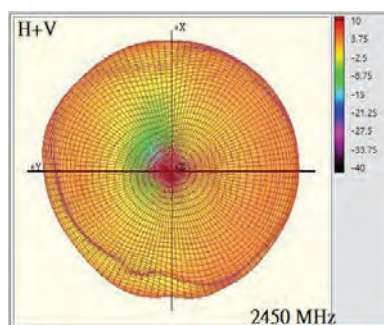
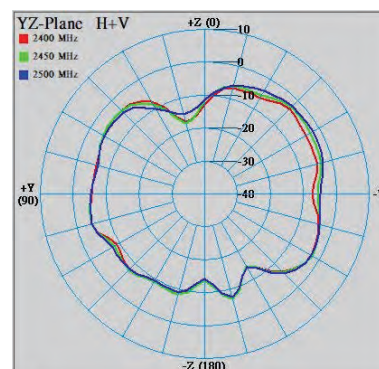
Azimuth Plane



Elevation Plane
phi = 0



Elevation Plane
phi = 90

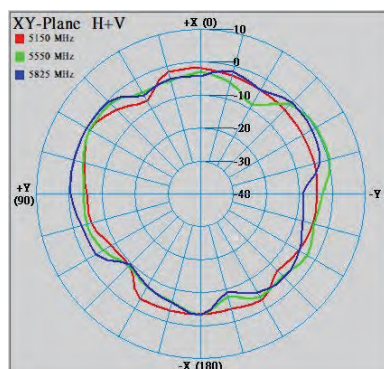


Ant.1_ 2D.3D Radiation Pattern

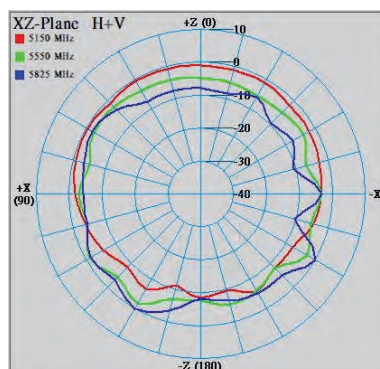
Frequency(MHz) : 2D. 5150~5825
3D. 5550

Radiation Pattern :

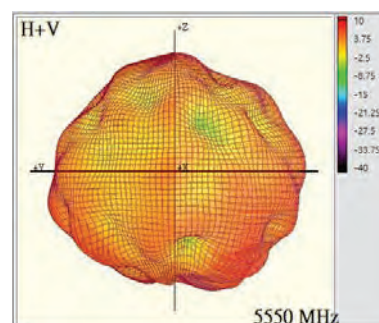
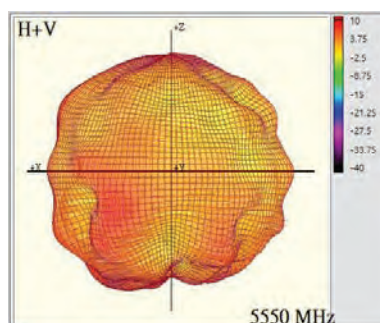
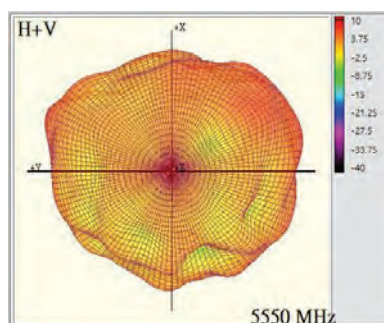
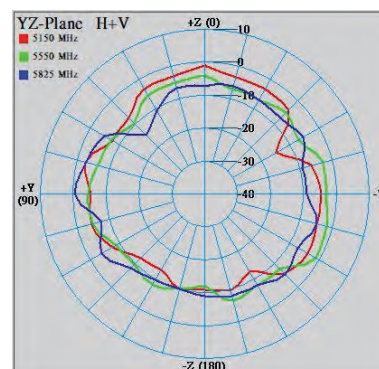
Azimuth Plane



Elevation Plane
phi = 0



Elevation Plane
phi = 90

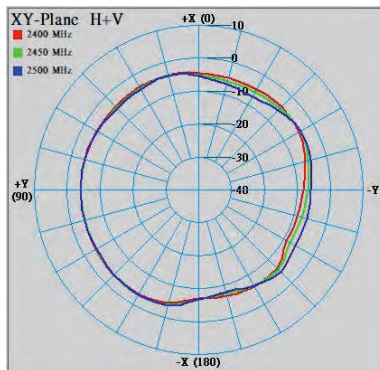


Ant.2_ 2D.3D Radiation Pattern

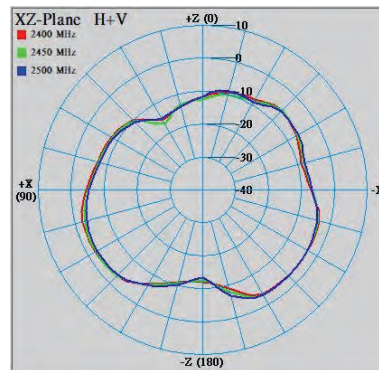
Frequency(MHz) : 2D. 2400~2500
3D. 2450

Radiation Pattern :

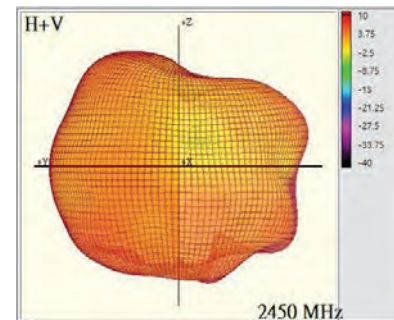
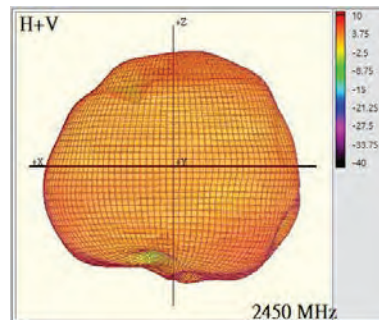
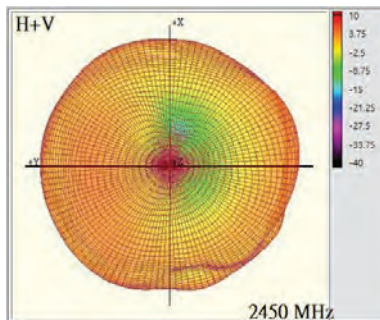
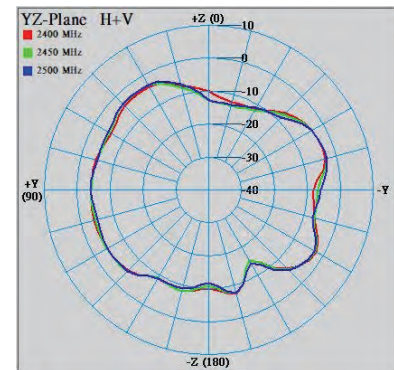
Azimuth Plane



Elevation Plane
phi = 0



Elevation Plane
phi = 90

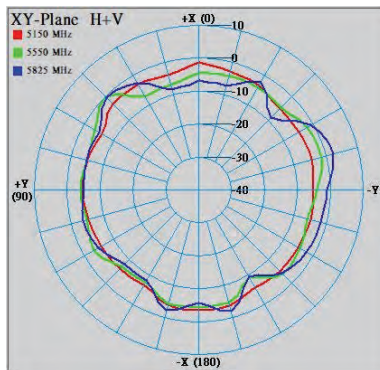


Ant.2_ 2D.3D Radiation Pattern

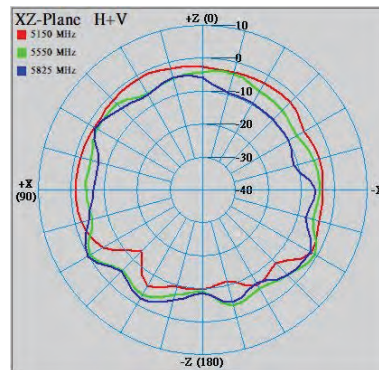
Frequency(MHz) : 2D. 5150~5825
3D. 5550

Radiation Pattern :

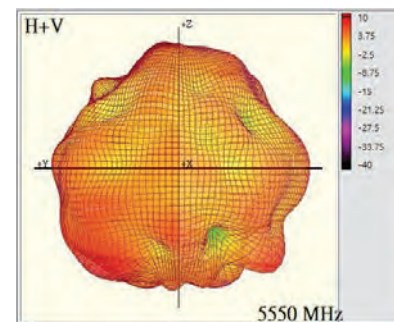
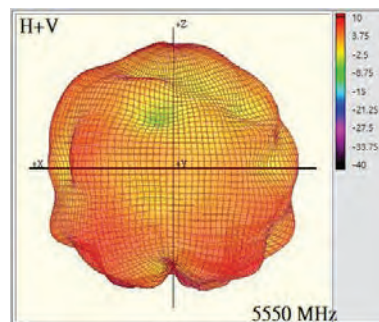
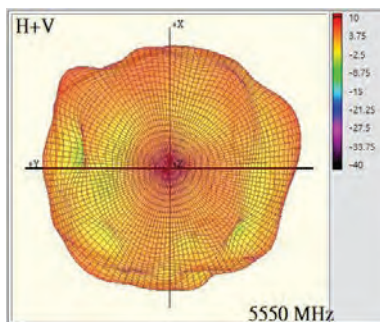
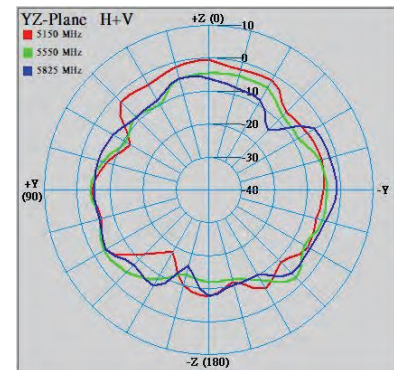
Azimuth Plane



Elevation Plane
phi = 0



Elevation Plane
phi = 90



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