

Antenna test report

Manufacturer	Dongguan Youbi Electronics Co., LTD
Address	Building 79, New Sun Industrial City, Lincun Community, Tangxia Town, Dongguan City, Guangdong Province

1. Test procedures

Standards	Description of Test Item	Result
ANSI/ IEEE 149-2021	IEEE Recommended Practice for Antenna Measurements	Compliant

2. Test Items and Equipment

	Test items	Test equipment
S Parameter	1.Return Loss 2.VSWR	Network analyzer (Agilent E5071B)
The whole machine of Passive parameters	1.Frequency 2.Gain 3.Radiation Pattern	1.3D microwave darkroom (6m*6m*6m) 2.Network analyzer (Agilent E5071B)

3. Test Equipment

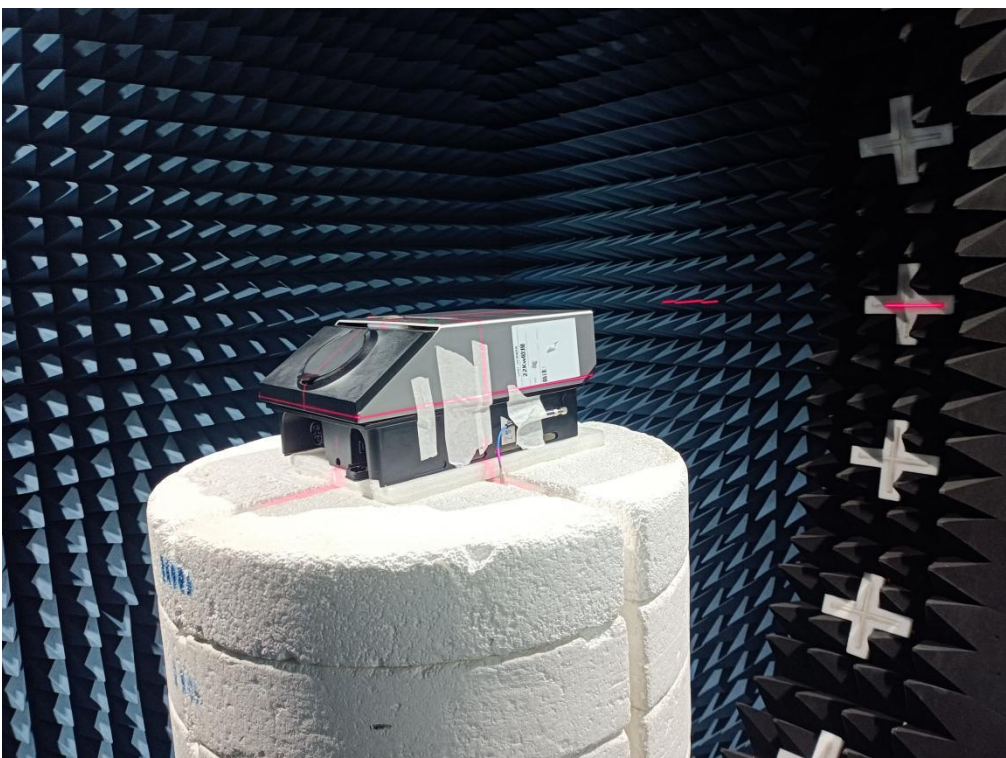
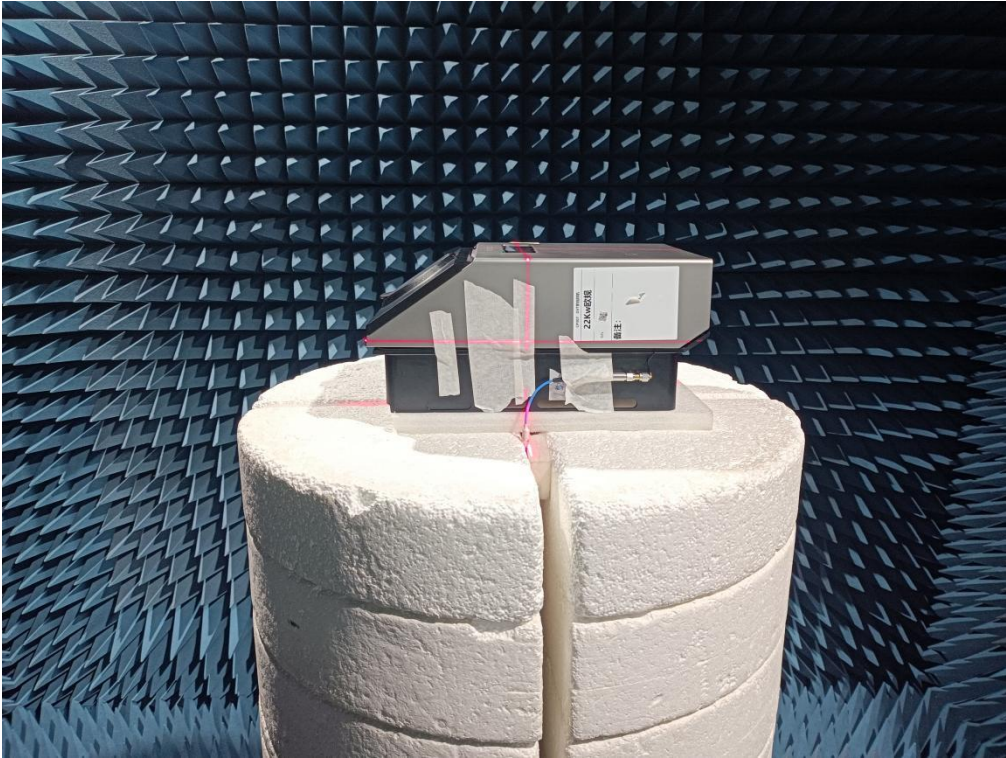
Equipement Name	Serial No.	Type	Manufacture	Cal.Date	Cal.Due Date
Network Analyzer	MY46110140	E5071C	Agilent	2024.05.30	2025.05.29
OTA Chamber	TJ2235-Q1793	AMS-8923-150	ETS	2022-11-30	2025-11-29
Antenna Measurement System	1685	EMQuest EMQ-100 V1.13 Build 21267	ETS	N/A	N/A

4. Name of commercial test software

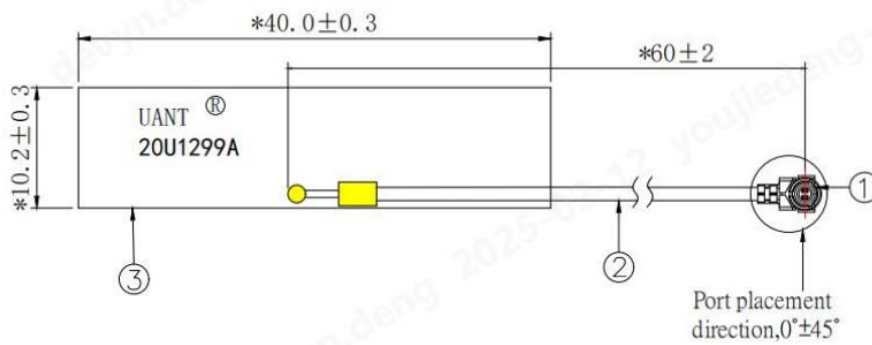
Software Name	Serial No.	Version	Manufacturer
Antenna Measurement System	1685	"EMQuest EMQ-100 V 1.13 Build 21267"	ETS

5. The uncertainty is calculated using the methods suggested in the "Guide to the Expression of Uncertainty in Measurement" (GUM) published by ISO. When the test result is a critical value, we will use the measurement uncertainty to give the judgment result based on the 95% Confidence intervals.

6. DUT Setup Photo



7. PCB Antenna Physical Size (unit: mm)



8. Antenna Electrical Specification

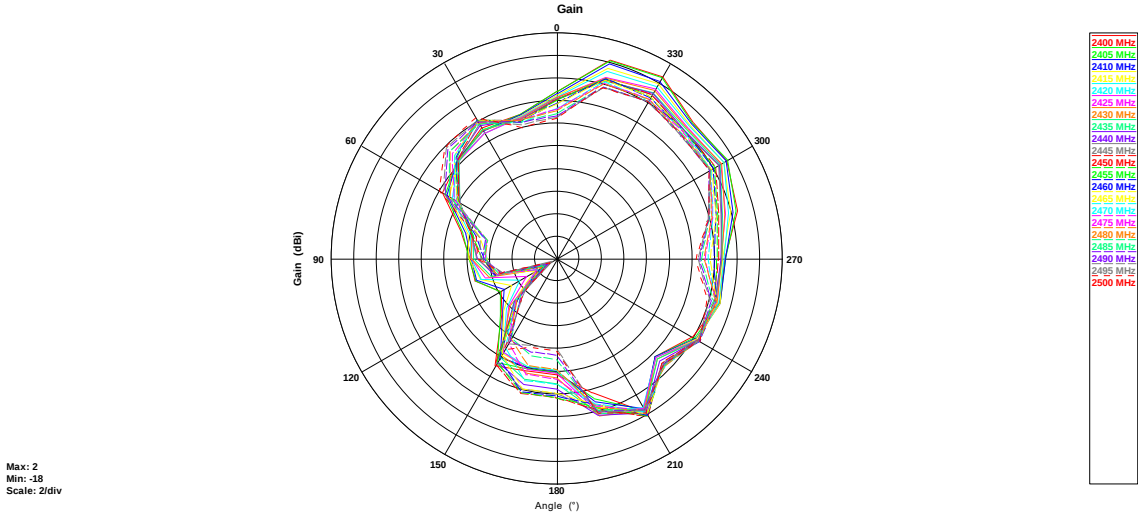
Freq	2.4~2.5GHz
Gain	5.05dBi
VSWR	<2
Impedance	50 ohm
Polarization	Linear
Type of Antenna	FPC Antenna
Outline Dimensions	40mm*10.2mm
Manufacture	EcoFlow
Efficiency	$\geq 50.3\%$
Connector Type	MHF-1-Plug
Operating Temperature	$-40^\circ\text{C} \sim +85^\circ\text{C}$
Storage Temp	$-40^\circ\text{C} \sim +85^\circ\text{C}$

9. 2.4G Antenna Type & Gain

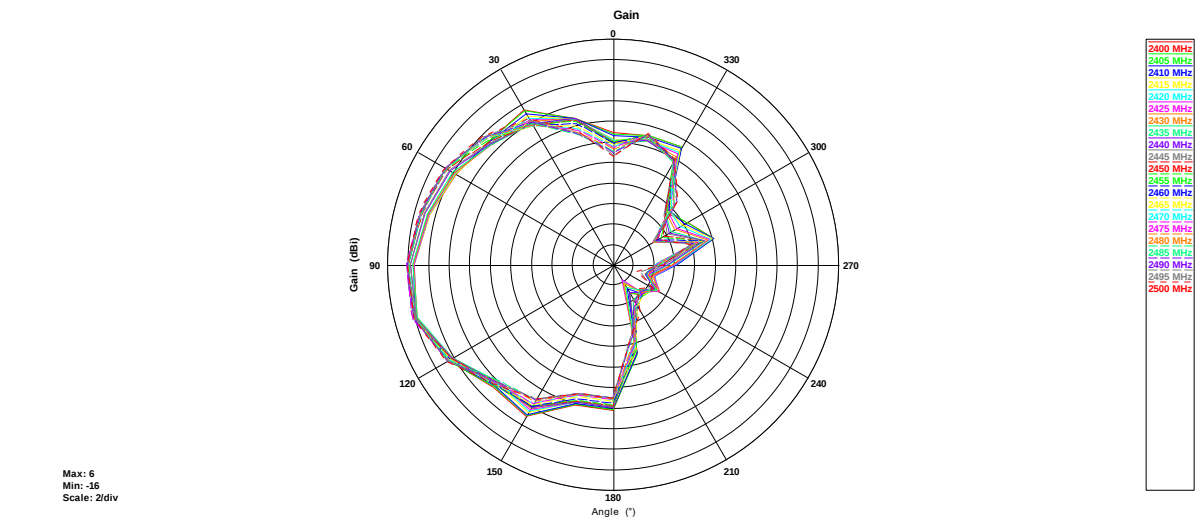
Frequency	Gain(dBi)	Efficiency(%)
2400MHz	4.47	56.92
2405MHz	4.43	56.80
2410MHz	4.39	55.78
2415MHz	4.24	53.65
2420MHz	4.20	52.83
2425MHz	4.18	51.63
2430MHz	4.13	51.09
2435MHz	4.15	50.33
2440MHz	4.29	51.18
2445MHz	4.31	51.15
2450MHz	4.44	51.79
2455MHz	4.53	52.33
2460MHz	4.56	52.40
2465MHz	4.54	51.95
2470MHz	4.52	51.12
2475MHz	4.63	51.72
2480MHz	4.62	51.21
2485MHz	4.62	50.30
2490MHz	4.80	50.94
2495MHz	4.89	50.81
2500MHz	5.05	51.57

10. Pattern and Gain

PHI=0DEG

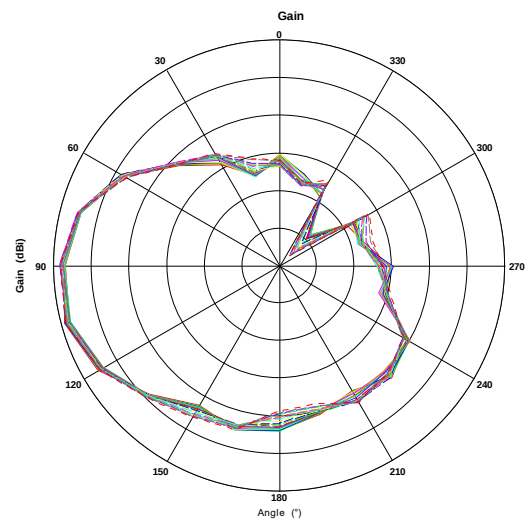


PHI=90DEG



THETA=90DEG

Max: 5
Min: -25
Scale: 5/div



2400 MHz
2405 MHz
2408 MHz
2410 MHz
2415 MHz
2420 MHz
2425 MHz
2430 MHz
2435 MHz
2440 MHz
2445 MHz
2450 MHz
2455 MHz
2460 MHz
2465 MHz
2470 MHz
2475 MHz
2480 MHz
2485 MHz
2490 MHz
2495 MHz
2500 MHz

Tester by: Devyn Deng