PIC04-220080

Dual Band Omni-Directional Antenna

for 2400-2500/5150-5875 MHz

V1.0

Date : 2023/08/04

Prepared by : Devin

Approved by :

Stage : ■ Development V1.0 □ Pilot Run □ Final

寰波科技股份有限公司 SmartAnt Telecom Co., Ltd.

新竹科學工業園區園區二路 58 號 3 樓

3F, No. 58, Park Avenue Ⅱ, Science-based Industrial Park, Hsinchu 300,

Taiwan, R.O.C.

TEL :03-5783002 ext:661 FAX:03-5783312

Confidential document, for FCC certification use only.

Publishing History				
Stage	Version	Reason for Revision	Authors	Issue Date
	V1.0	AM Measurement Report	Devin	2023/08/03

Confidential document, for FCC certification use only.

Content List

1. Specification
2. VSWR Test
   2.1 Test Environment
   2.2 VSWR Test Data
3. Gain and Radiation Pattern Measure.
   3.1 Anechoic Chamber.
   3.2 Gain and Radiation Pattern

Confidential document, for FCC certification use only.

SmartAnt

1. Specification

Dual-Band Omni-Directional Antenna for 2400 - 2500MHz / 4900 - 5875 MHz

Version 1.1

PIC04-220080(AP)

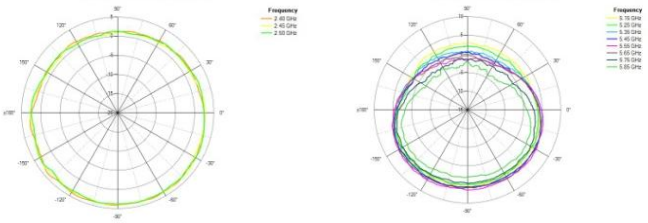
Electrical Specification

Frequency range	2400 - 2500 MHz	5150 - 5875 MHz
Peak Gain	4.5 dBi	7.0 dBi
Average Gain	2.5 dBi	5.0 dBi
VSWR	2.0 : 1 Max	
Polarization	Linear, vertical	
HPBW/horizontal	360°	360°
HPBW/vertical	30°	15°
Power handling	2 W (cw)	
Impedance	50 Ohms	
Connector	N plug	

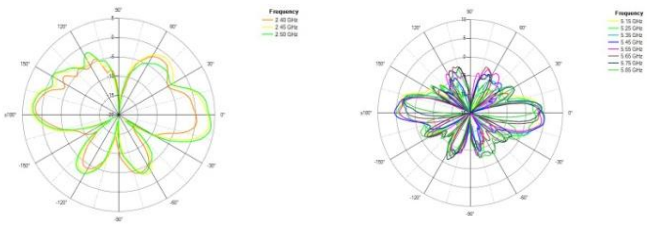
Environmental & Mechanical Characteristics

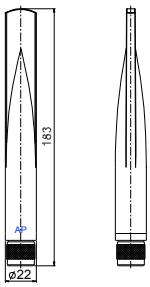
Survival wind speed	216 km/hr
Temperature	-40˚C to +80˚C
Humidity	95% @55℃
Radome color	White(6001-0014820)
Radome material	ABS,UV resistant
Weight	70 g
Dimensions	φ 22 x 183 mm
Waterproof	IP-68
Salt Fog	MIL-STD-810E,Method 509.4

H-plane Co-polarization Pattern



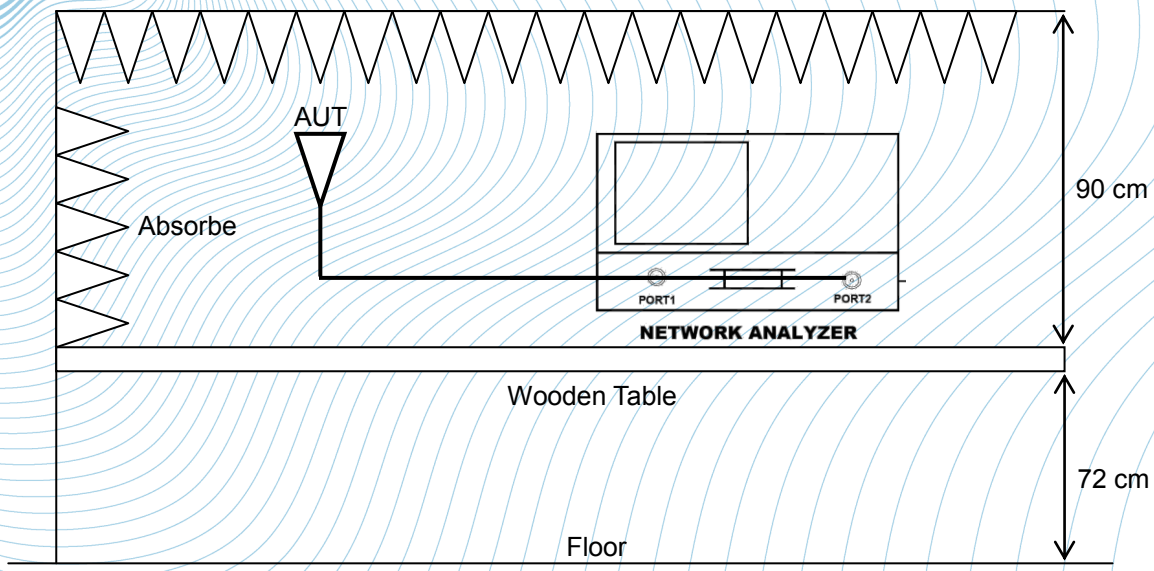
V-plane Co-polarization Pattern



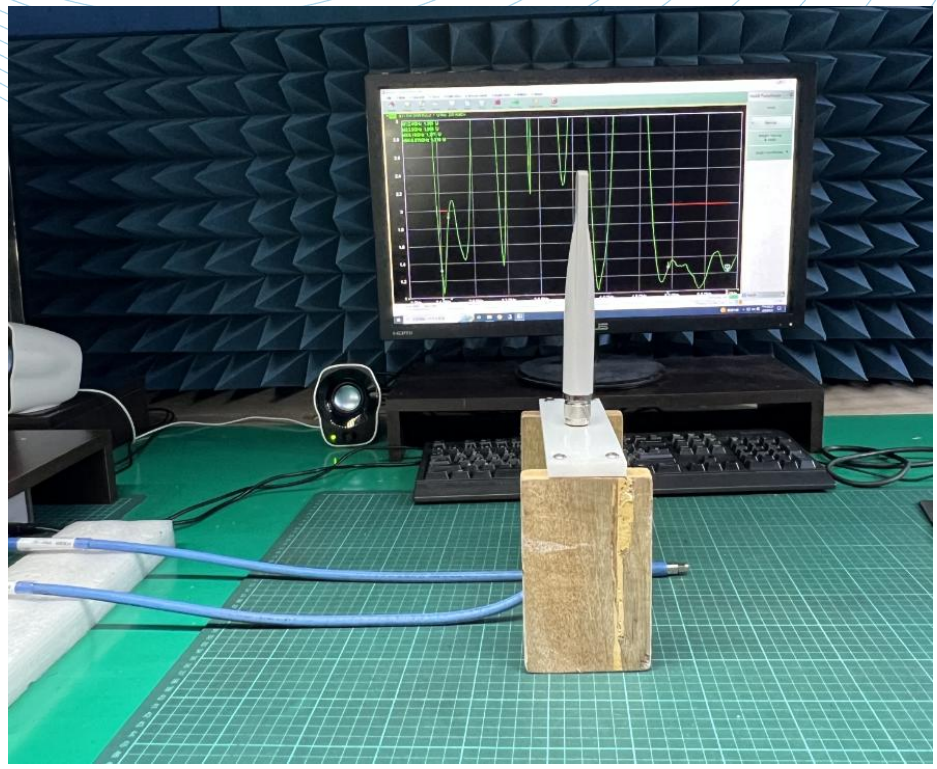


Confidential document, for FCC certification use only.

2.1 Test Environment.

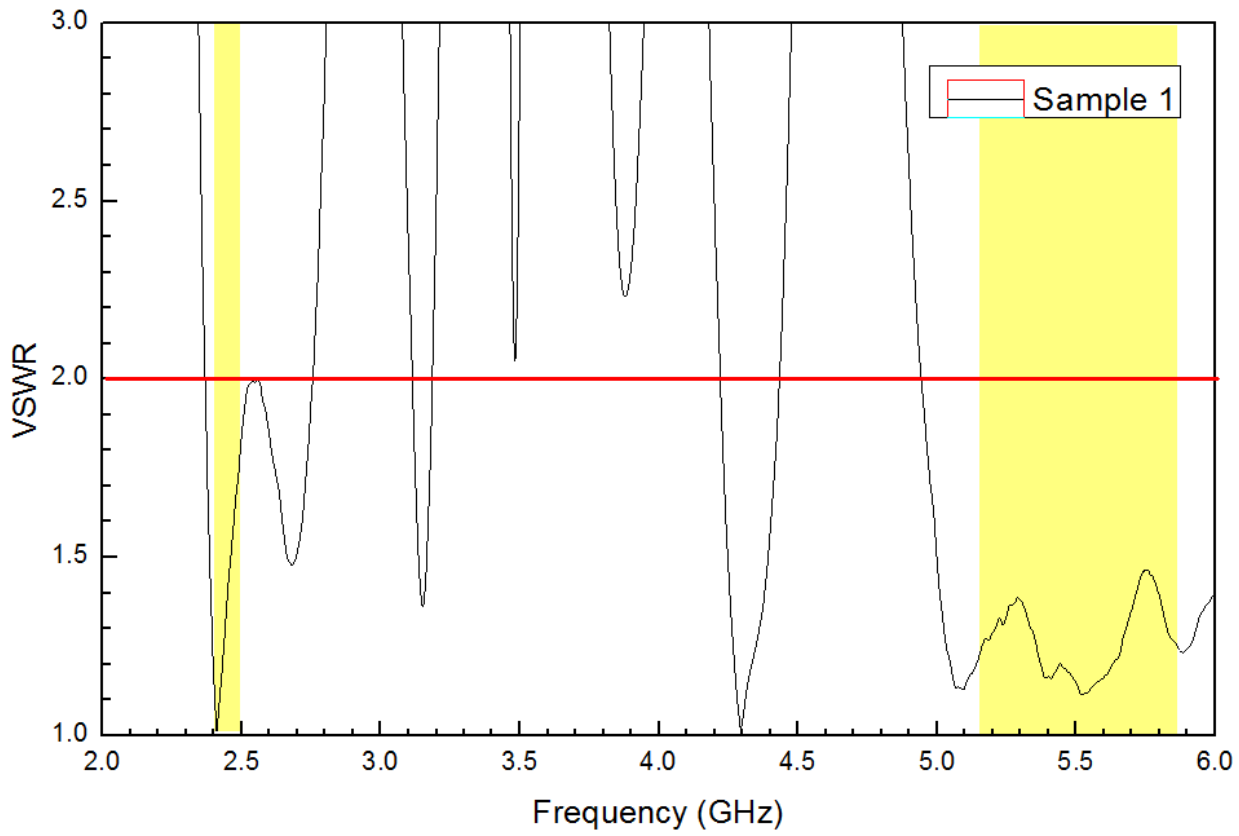


Network Analyzer	Calibrated Available Date
■ Anritsu MS46122B 43.5GHz	2024/12/04
□ Anritsu 37369D	2025/01/19
□ Anritsu MS4623B	2025/02/23
□ Keysight E5071C	2026/04/18
□ Anritsu MS46122B 8GHz	2027/06/13



Confidential document, for FCC certification use only.

2.2 VSWR Test Data

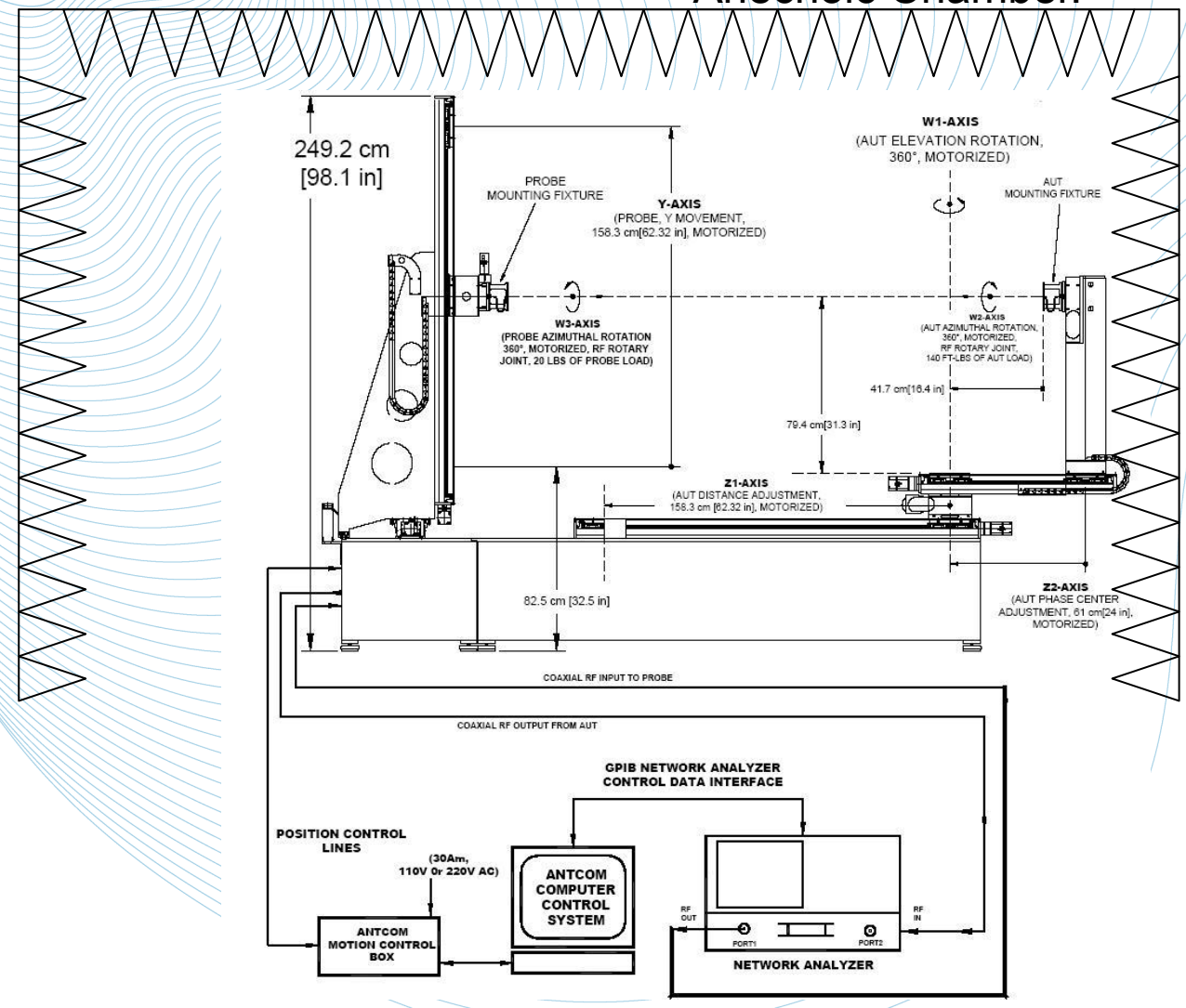


Frequency (GHz)	**2.4**	**2.45**	**2.5**	**Max**	**5.15**	**5.30**	**5.50**	**5.70**	**5.875**	**Max**
Sample 1	1.16	1.41	1.84	1.84	1.22	1.38	1.15	1.35	1.24	1.46

Confidential document, for FCC certification use only.

3.1 Gain and Radiation Pattern Measure

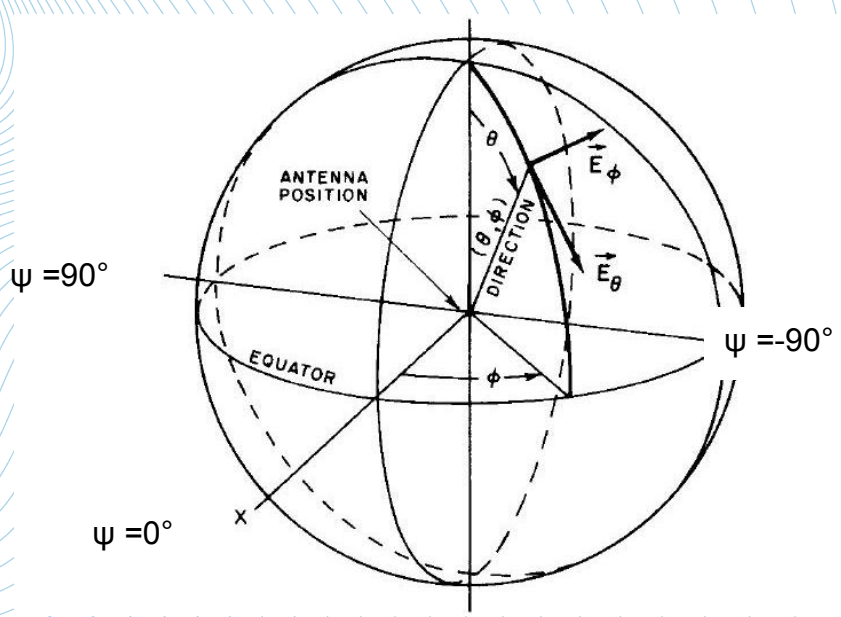
– Anechoic Chamber.



NetWork Analyzer : Agilent 8722ES + 87405

Standard Gain Horn

□ H1734 0.5 - 6.0 GHz	□ 3160-07 8.2 – 12.4 GHz
■ 3160-03 1.7 - 2.6 GHz	□ 3160-08 12.4 – 18 GHz
□ 3160-04 2.6 – 3.95 GHz	□ 3160-09 18 – 26 GHz
■ 3160-05 3.95 – 5.85 GHz	□ 3160-10 26 – 40 GHz
□ 3160-06 5.85 – 8.2 GHz	

Confidential document, for FCC certification use only.

3.2 Gain and Radiation Pattern