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

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	V1.0	AM Measurement Report	Devin	2023/08/03

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SmartAnt

1. Specification

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

Version 1.1

PIC04-220080(AP)

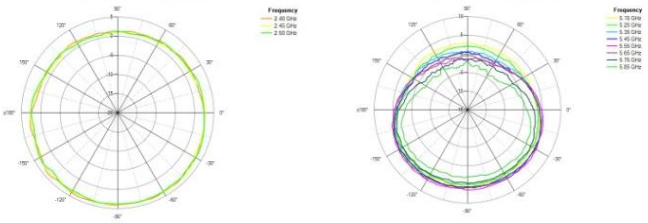
Electrical Specification

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	

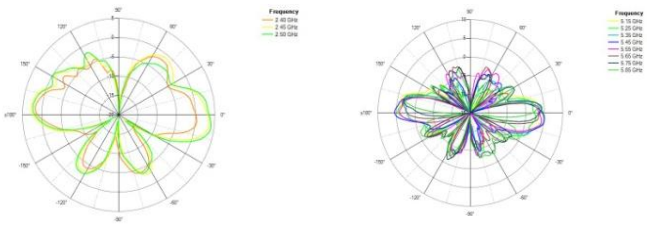
Environmental & Mechanical Characteristics

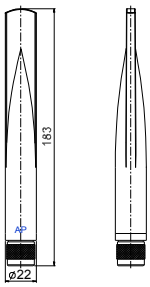
Survival wind speed	216 km/hr
Temperature	-40˚C to +80˚C
Humidity	95% @55℃
Radome color	White(6001-0014820)
Radome material	ABS,UV resistant
Weight	70 g
Dimensions	φ 22 x 183 mm
Waterproof	IP-68
Salt Fog	MIL-STD-810E,Method 509.4

H-plane Co-polarization Pattern



V-plane Co-polarization Pattern





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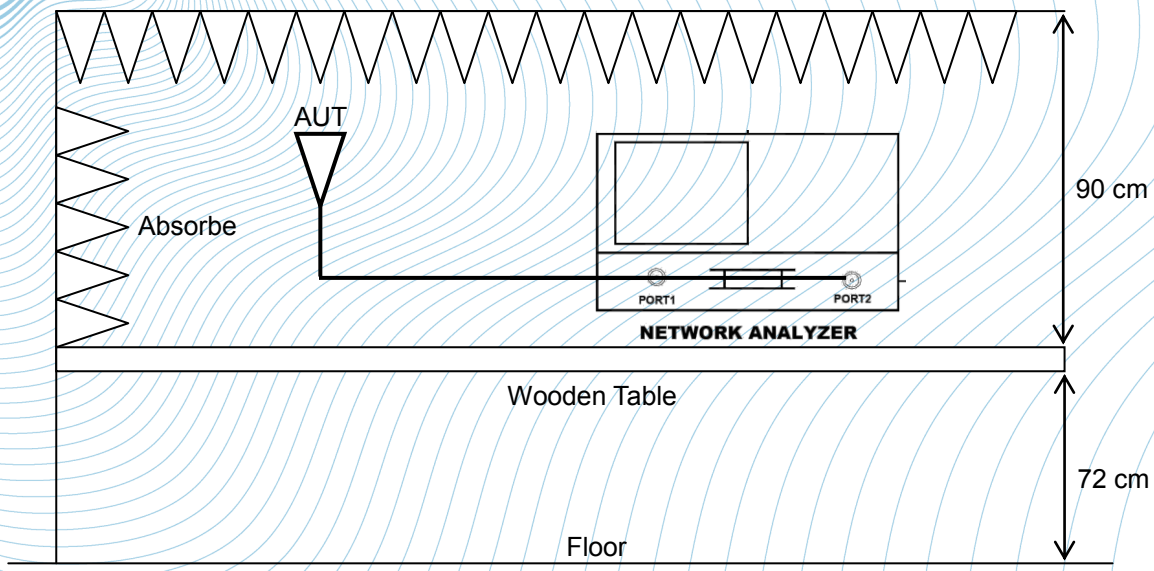
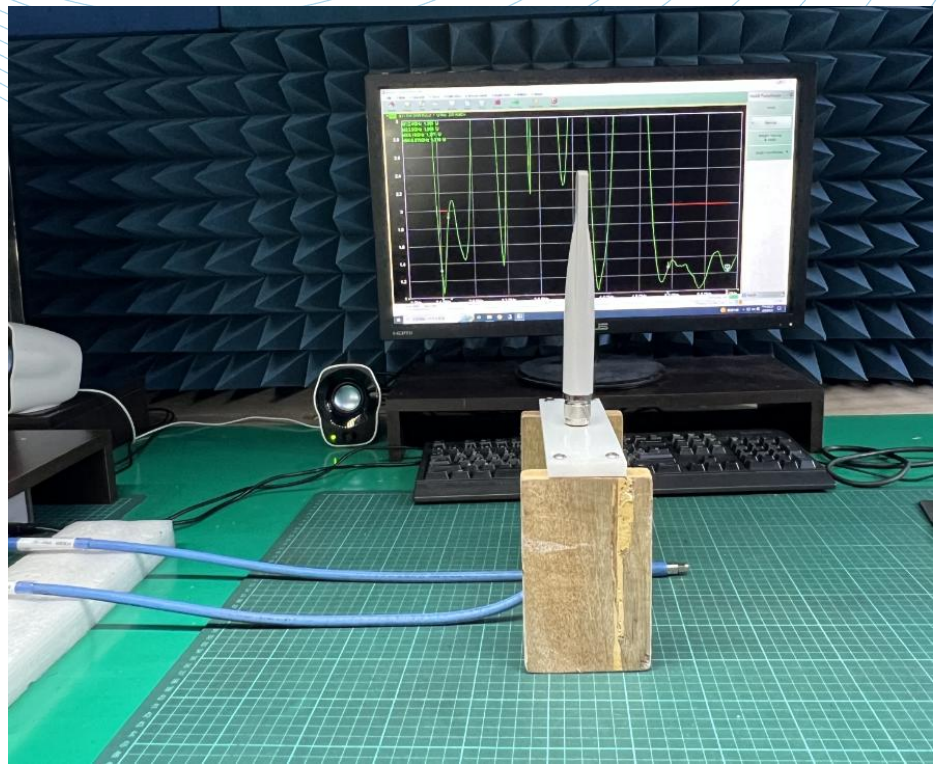
2.1 Test Environment.



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



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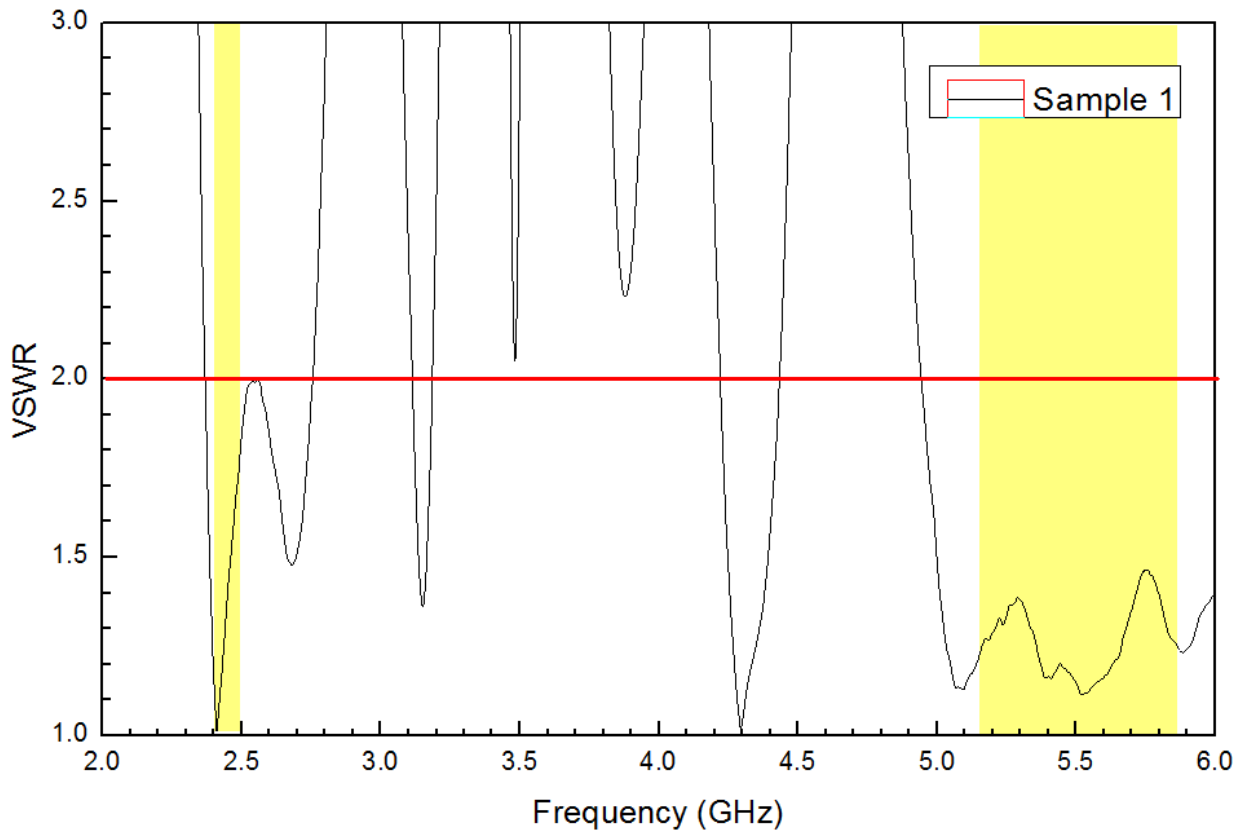
2.2 VSWR Test Data



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

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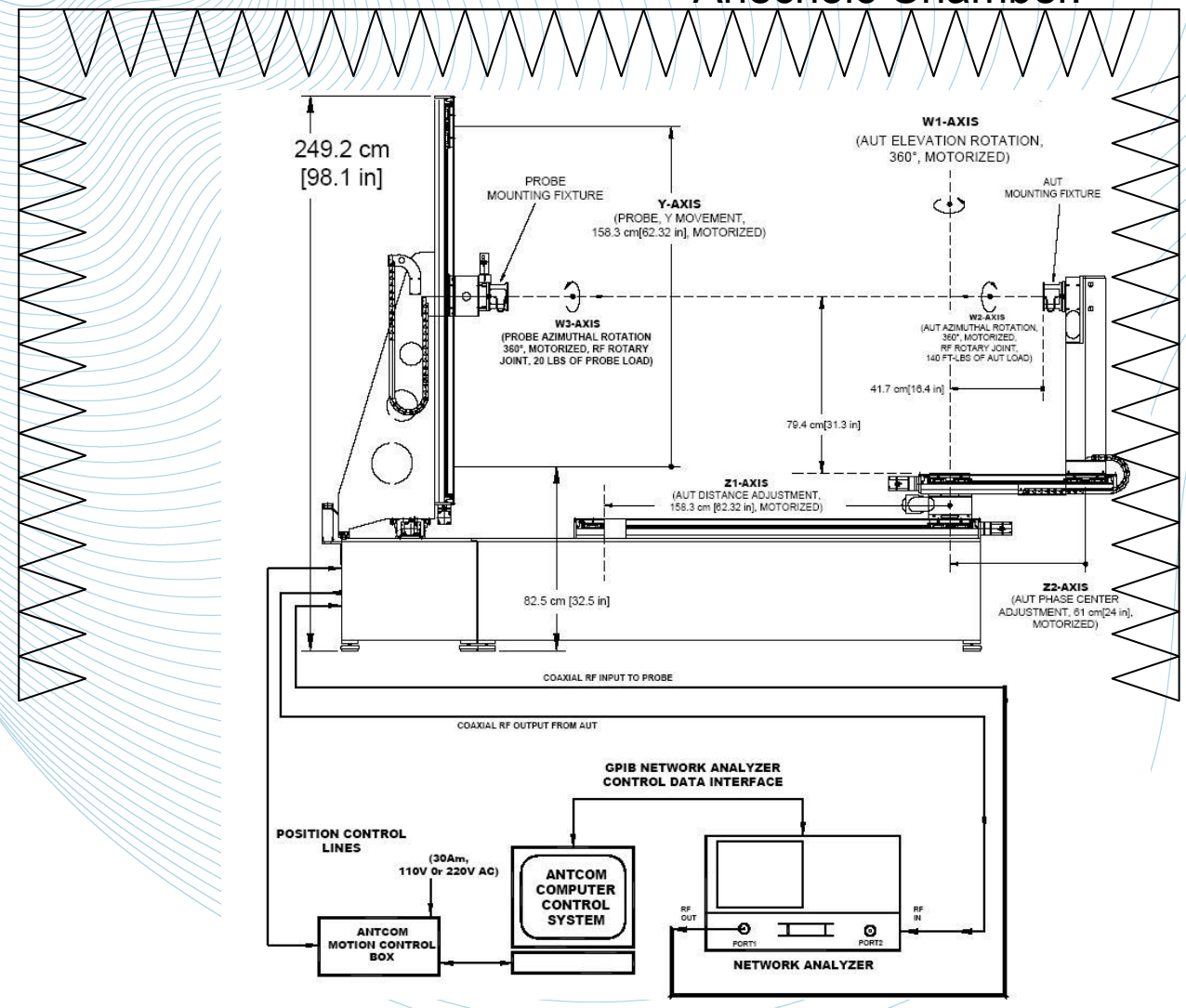
3.1 Gain and Radiation Pattern Measure

– 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	

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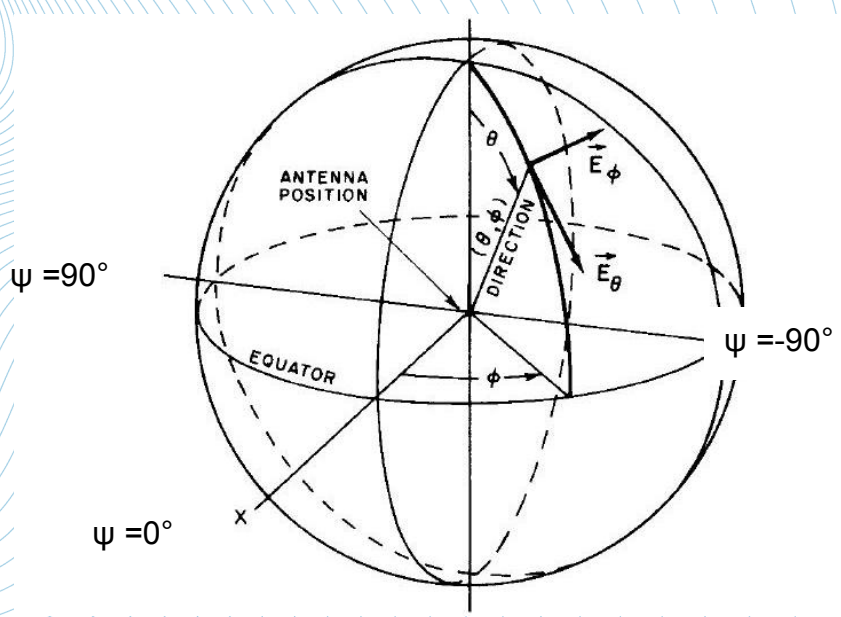
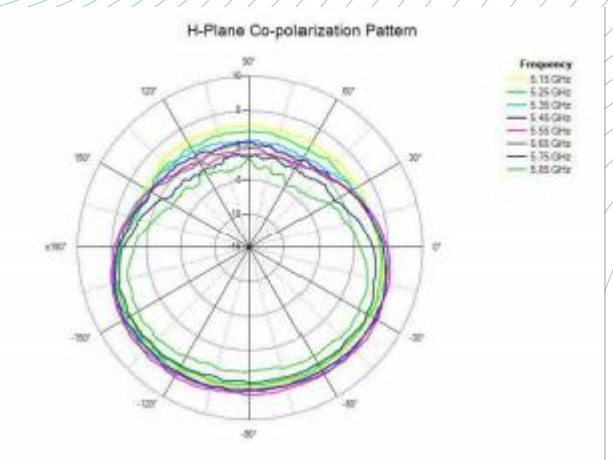
3.2 Gain and Radiation Pattern



5150-5350MHz



Frequency (GHz)	5.15	5.25	5.35
H Max Gain (dBi)	6.11	5.88	6.50
H Average Gain(dBi)	4.12	3.77	4.15
H BW 3dB (degree)	360		

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