SAA04-222060

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

V1.0

Date : 2023/08/04

Prepared by : Alan

Approved by :

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

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Stage	Version	Reason for Revision	Authors	Issue Date
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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

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SmartAnt

1. Specification.

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

Version 4.1

SAA04-222060

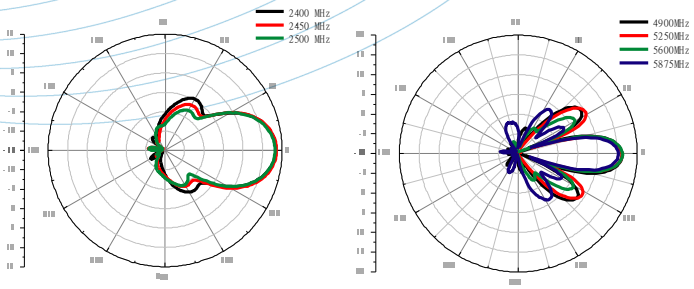
Electrical Specification

Frequency range	2400 - 2500 MHz	4900 - 5875 MHz
Gain	13.5 dBi	15.5 dBi
VSWR	2.0 : 1 (Max)	2.0 : 1 (Max)
Polarization	Linear, vertical	Linear, vertical
HPBW/horizontal	30°	15°
HPBW/vertical	30°	15°
Front to back ratio	15 dB	
Downtilt	0°	
Power handling	10 W (cw)	
Impedance	50 Ohms	
Connector	N Jack	

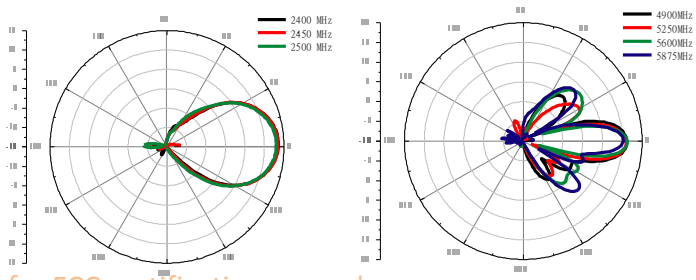
Environmental & Mechanical Characteristics

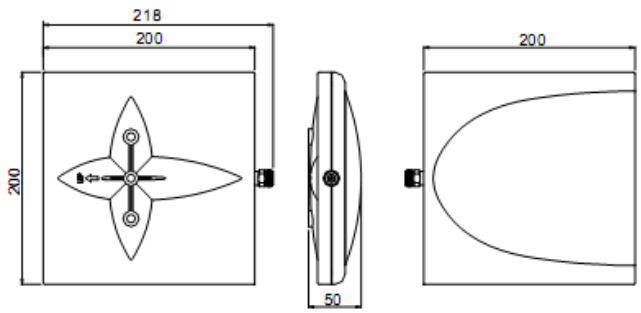
Survival wind speed	180 km/hr
Temperature	-40°C to +80°C
Humidity	95% @55°C
Radome color	Light Gray
Radome material	ABS, UV resistant
Weight	0.4 kg
Dimensions	200 x 218 x 50 mm

H-plane Co-polarization Pattern



V-plane Co-polarization Pattern





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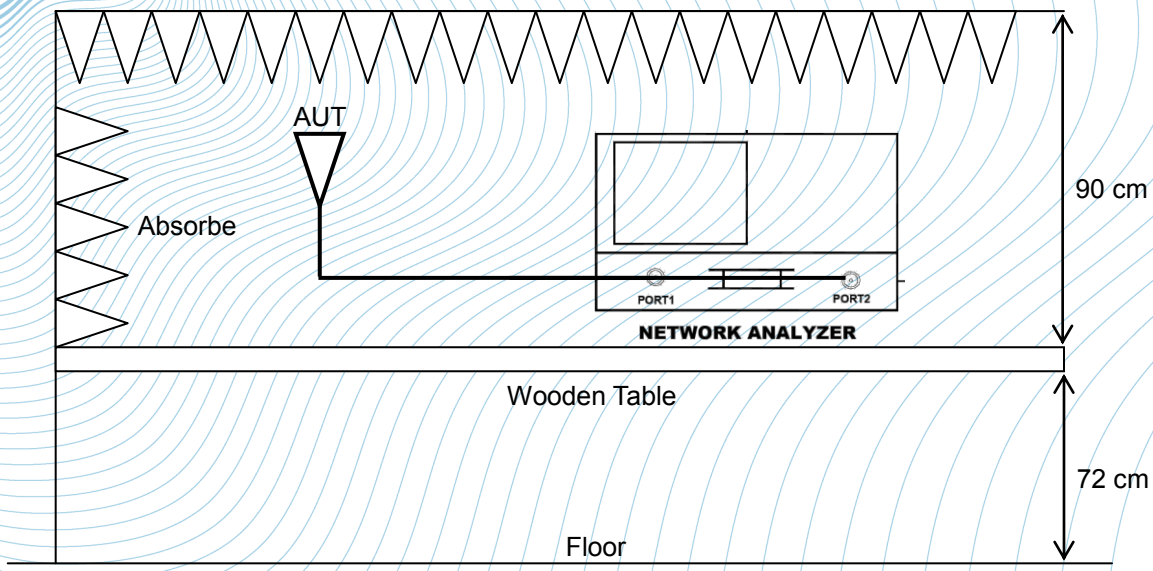
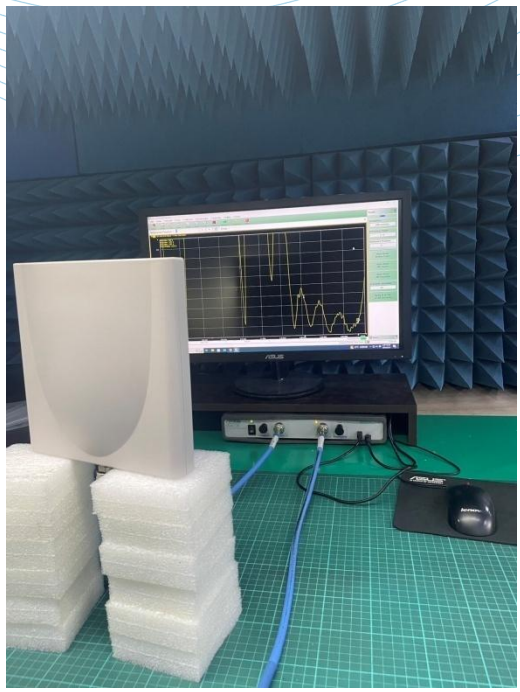
.1 Test Environment.



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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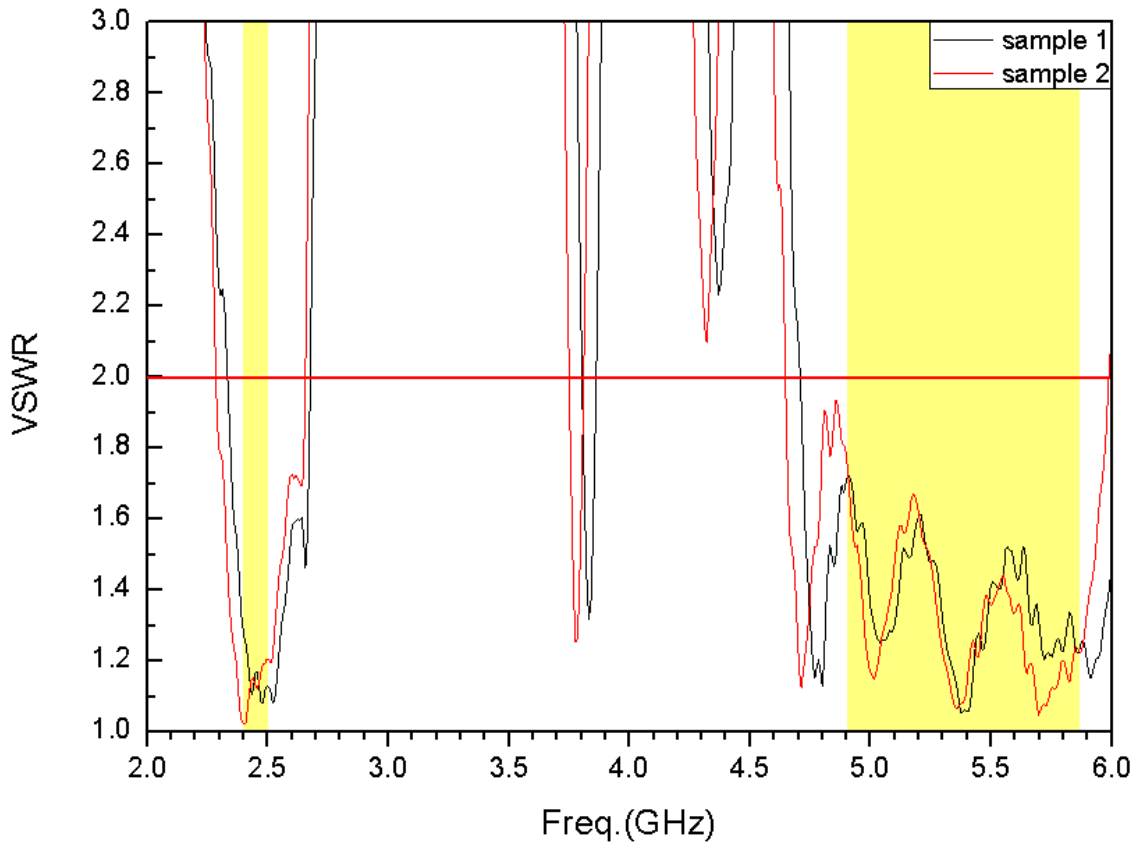
2.2 VSWR Test Data



Frequency (GHz)	**2.4**	**2.45**	**2.5**	**Max**
Sample 1	1.27	1.16	1.12	1.27
Sample 2	1.02	1.12	1.20	1.20

Frequency (GHz)	**4.9**	**5.0**	**5.1**	**5.3**	**5.5**	**5.7**	**5.9**	**Max**
Sample 1	1.72	1.34	1.32	1.28	1.42	1.27	1.16	1.72
Sample 2	1.74	1.16	1.50	1.20	1.35	1.05	1.37	1.74

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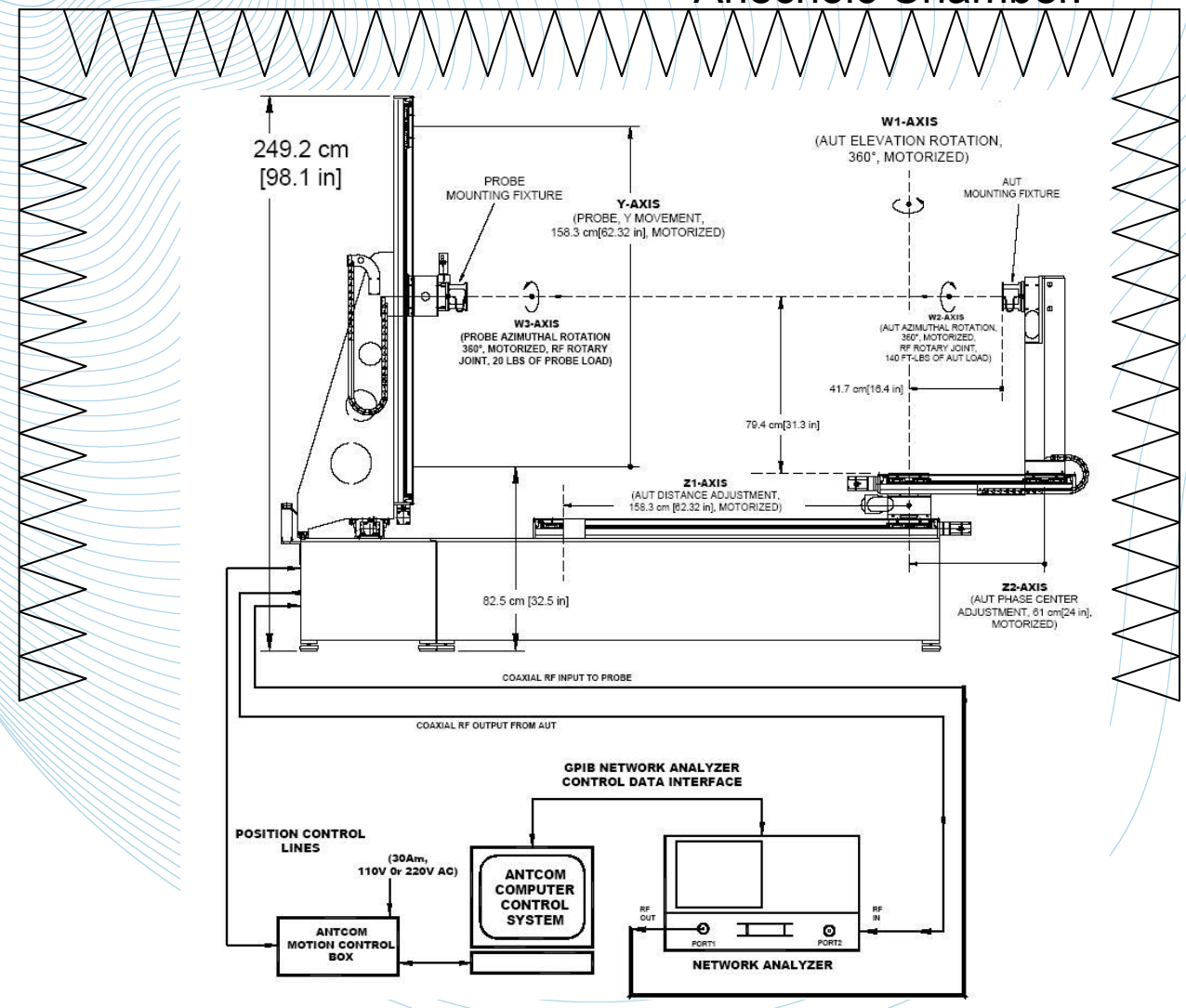
3.1 Gain and Radiation Pattern Measure

– 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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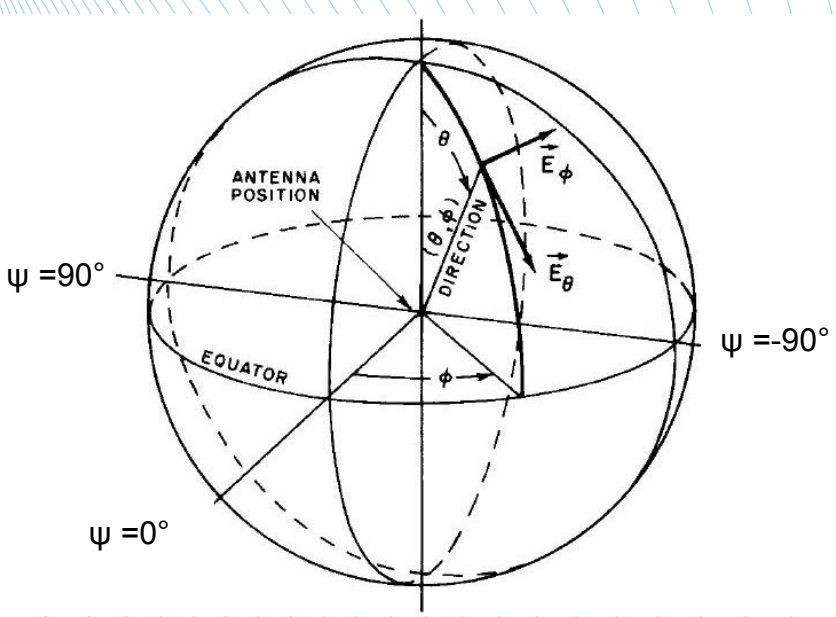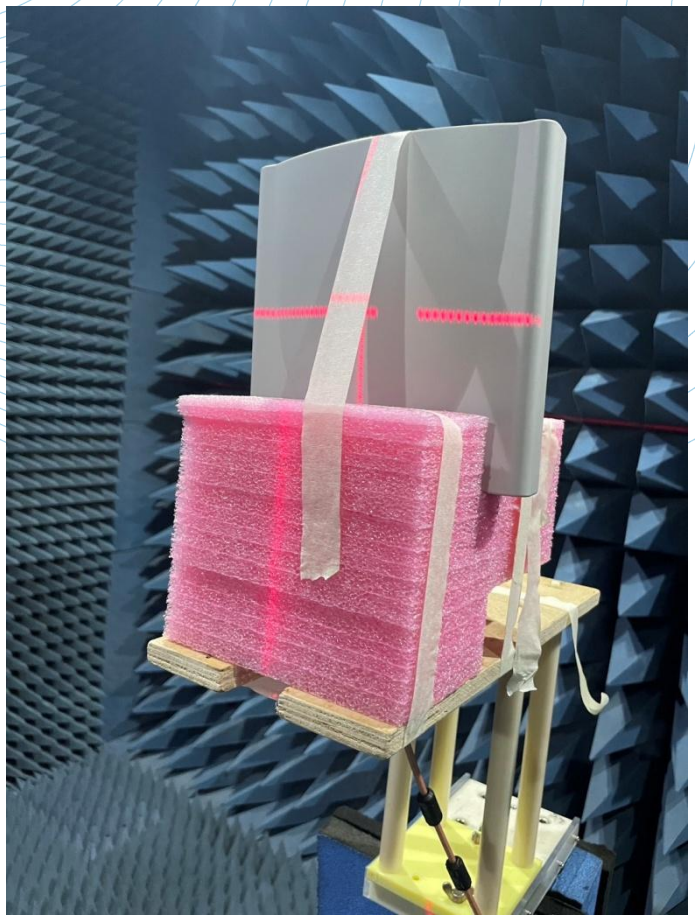
3.2 Gain and Radiation Pattern