

TEST REPORT

Reference No...... : WTU25X07197013W
Applicant : HBC-radiomatic GmbH
Address : Haller Strasse 45 - 53, 74564 Crailsheim, Germany
Manufacturer : The same as Applicant
Address : The same as Applicant
Product Name : TC792-TP
Model No...... : TC792-TP
Standards : ANSI/ IEEE 149-2021
Date of Receipt sample : 2025-07-24
Date of Test..... : 2025-07-24 to 2025-08-20
Date of Issue : 2025-08-20
Test Report Form No. : WTX_IEEE 149
Test Result..... : **Pass**

Remarks:

The results shown in this test report refer only to the sample(s) tested, this test report cannot be reproduced, except in full, without prior written permission of the company. The report would be invalid without specific stamp of test institute and the signatures of approver.

Prepared By:

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Approved by:

Jason Su

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Report version

Version No.	Date of issue	Description
Rev.00	2025-08-20	Original
/	/	/

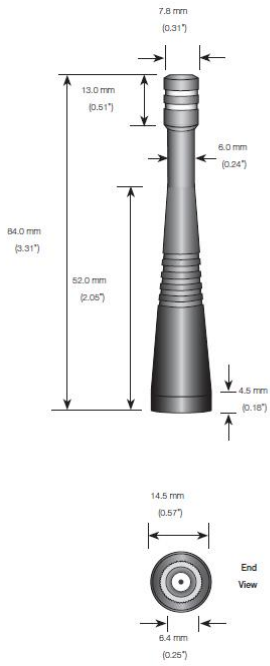
1. GENERAL INFORMATION

1.1 Product Description for Equipment Under Test (EUT)

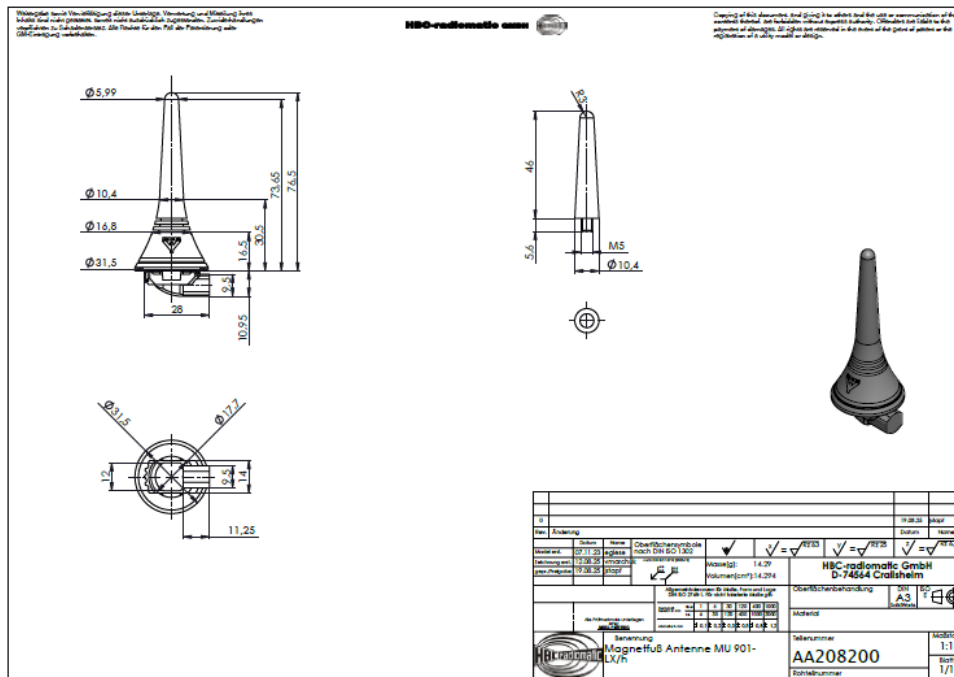
General Description of EUT	
Product Name:	TC792-TP
Trade Name:	HBC-radiomatic
Model No.:	TC792-TP
Adding Model(s):	/
<i>Note: The test data is gathered from a production sample, provided by the manufacturer.</i>	

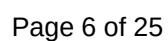
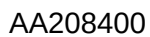
Technical Characteristics of EUT	
Frequency Range:	902-928MHz
Gain of Antenna:	AA208100: -1.77dBi; AA208200: 3.72dBi; AA208300: 1.25dBi; AA208400: 3.75dBi; AB158010/AB158011: 3.15dBi;
Type of Antenna:	AA208100, AA208200, AA208300, AA208400: External Antenna AB158010/AB158011: Dipole Antenna
<i>Note: Antenna AB15801_ (“_” as wildcard for the revision of the part).</i>	

Dimension:
AA208100

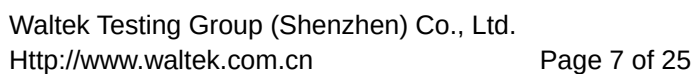


AA208200



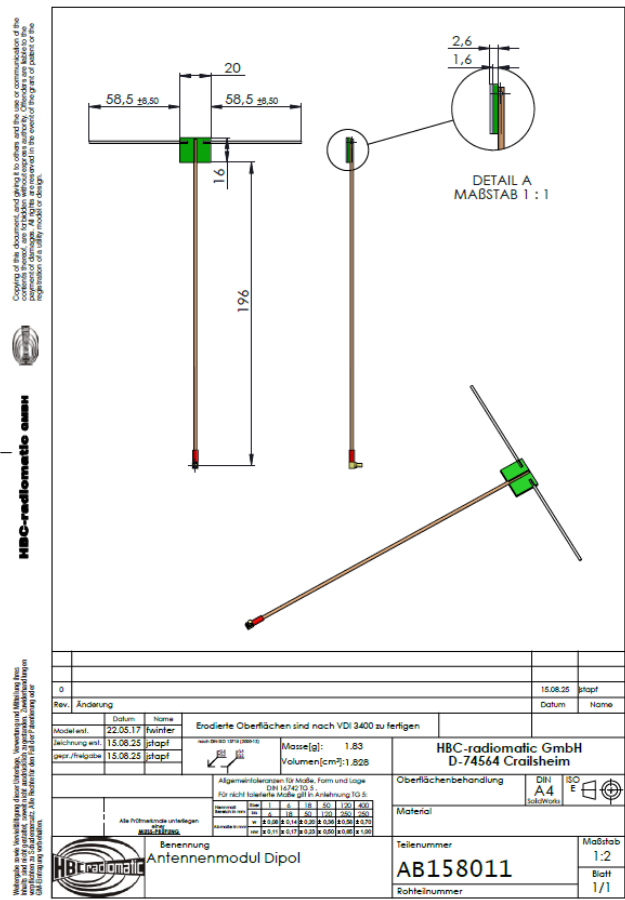


AB158010



Reference No.: WTU25X07197013W

AB158011



2. SUMMARY OF TEST RESULTS

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

N/A: not applicable

3. Antenna Test Configurations

3.1 Test Location

Name:	Shenzhen Morlab Communications Technology Co.,Ltd.
Address:	FL.1-3, Building A, FeiYang Science Park, No.8 LongChang Road, Block67, BaoAn District, ShenZhen, GuangDong Province, P.R. China

3.2 Test Environments

Environments Parameter	Temperature	Voltage	Humidit
NTNV	25° C	--	50%

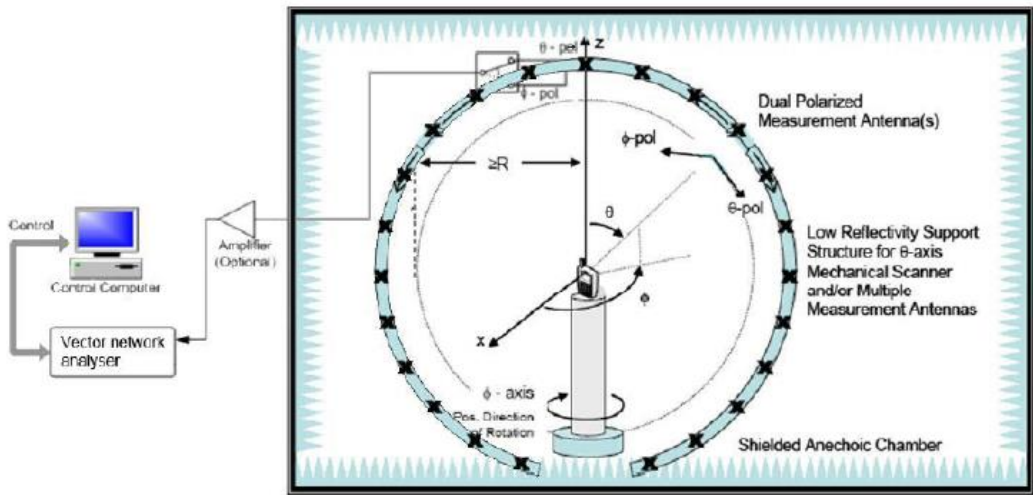
3.3 Test Equipment List

Description	Manufacturer	Model	Serial Number	Cal. Date	Due. Date
Network Analyzer	Agilent	E5071C	MY46110140	2025-05-30	2026-05-29
OTA Chamber	ETS	AMS-8923-150	TJ2235-Q1793	2022-11-30	2025-11-29
Antenna Measurement System	ETS	EMQuest EMQ-100 V1.13 Build 21267	1685	N/A	N/A

3.4 Measurement Uncertainty

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 give the judgment result based on the 95%Confidence intervals.

3.5 Test Setup



4. Antenna Test Result

4.1 Gain and Efficiency

Antenna 1: AA208100

Frequency(MHz)	Gain(dBi)	Efficiency (%)
902	-2.74	22.19
904	-2.66	22.49
906	-2.19	25.12
908	-2.20	25.39
910	-2.25	25.57
912	-2.26	25.76
914	-2.15	26.16
915	-2.06	26.49
916	-1.98	26.80
918	-1.88	27.09
920	-1.85	27.12
922	-1.78	27.38
924	-1.77	27.63
926	-1.78	27.81
928	-1.85	27.75

Antenna 2: AA208200

Frequency(MHz)	Gain(dBi)	Efficiency (%)
902	3.10	45.28
904	3.15	45.72
906	3.60	51.00
908	3.64	51.28
910	3.64	51.18
912	3.66	51.11
914	3.69	51.61
915	3.70	52.11
916	3.72	52.55
918	3.71	52.61
920	3.64	51.96
922	3.59	51.89
924	3.59	52.13
926	3.59	52.18
928	3.52	51.48

Antenna 3: AA208300

Frequency(MHz)	Gain(dBi)	Efficiency (%)
902	0.48	58.96
904	0.53	59.53
906	1.06	66.48
908	1.11	67.06
910	1.09	67.31
912	1.06	67.60
914	1.09	68.56
915	1.14	69.29
916	1.19	69.92
918	1.20	70.15
920	1.19	69.86
922	1.23	70.56
924	1.22	71.40
926	1.25	71.74
928	1.23	71.22

Antenna 4: AA208400

Frequency(MHz)	Gain(dBi)	Efficiency (%)
902	3.41	47.23
904	3.37	46.98
906	3.75	51.42
908	3.68	50.74
910	3.60	49.82
912	3.50	48.97
914	3.45	48.66
915	3.44	48.75
916	3.44	48.80
918	3.38	48.32
920	3.35	47.50
922	3.35	47.17
924	3.37	46.88
926	3.35	46.38
928	3.27	45.40

Antenna 5: AB158010/AB158011

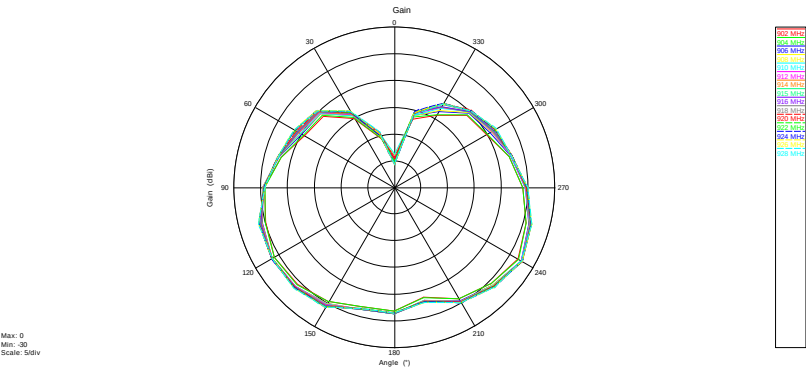
Frequency(MHz)	Gain(dBi)	Efficiency (%)
902	2.13	63.57
904	2.27	65.39
906	2.81	73.92
908	2.85	74.95
910	2.86	75.43
912	2.88	75.95
914	2.91	77.19
915	2.95	78.19
916	3.00	79.16
918	3.07	79.92
920	3.05	79.88
922	3.09	80.77
924	3.14	81.72
926	3.15	82.05
928	3.10	81.18

4.2 Radiation Pattern 2D View

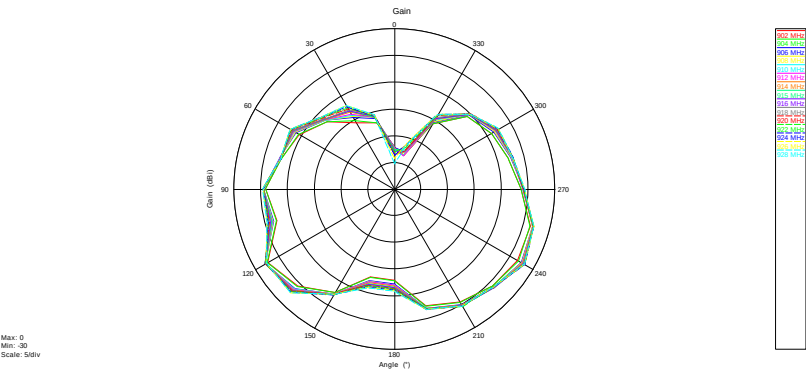
Antenna 1: AA208100

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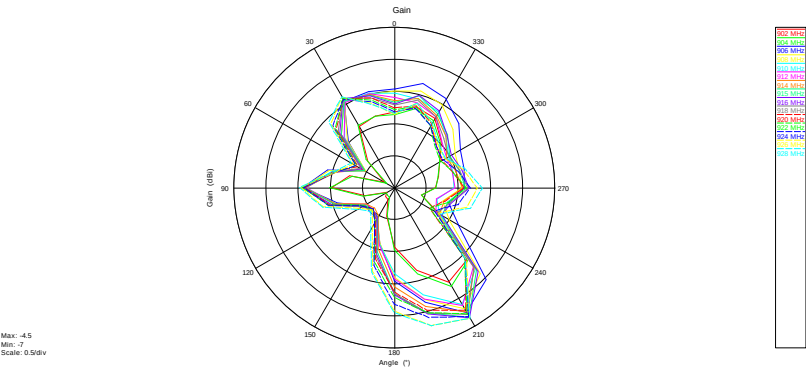
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PHI=90



THETA=90

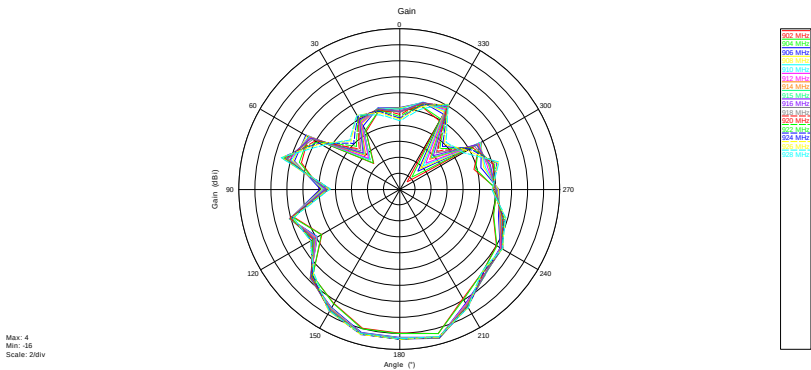


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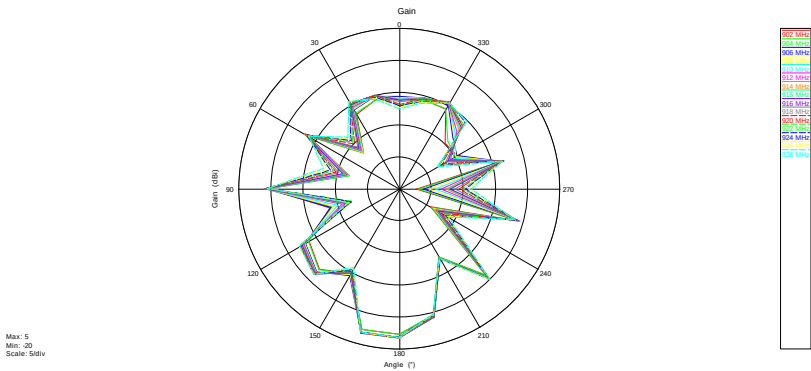
Antenna 2: AA208200

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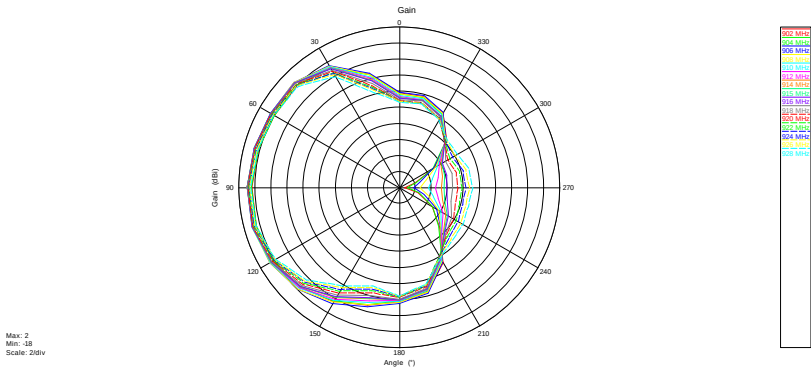
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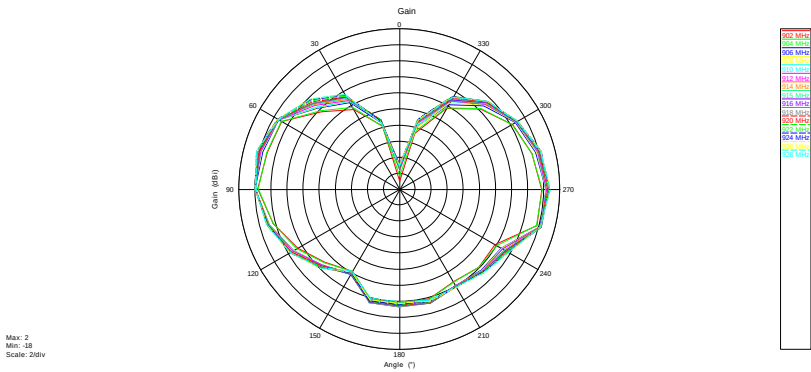


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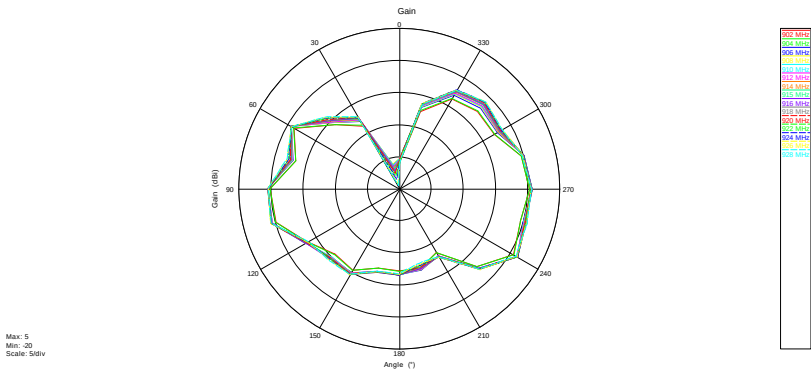
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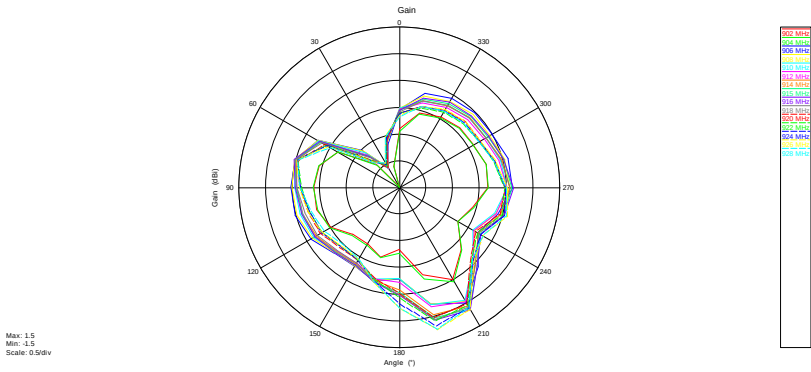
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THETA=90

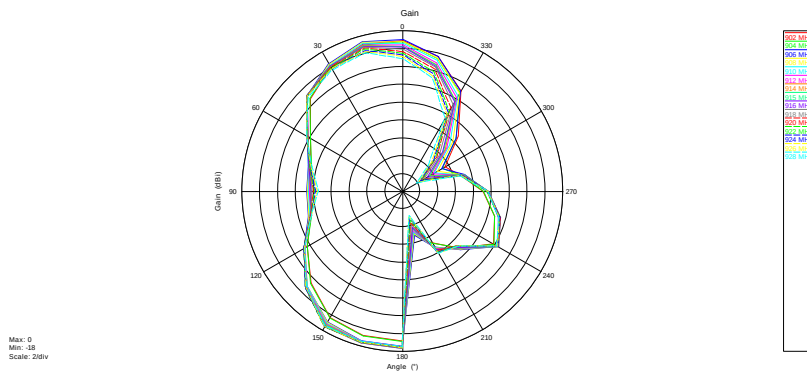


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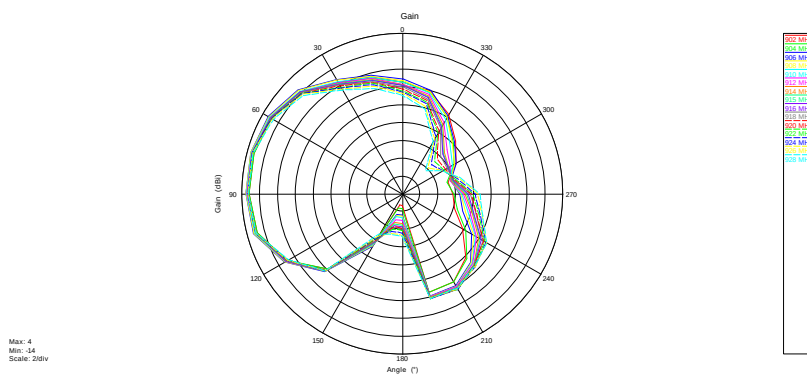
Antenna 4: AA208400

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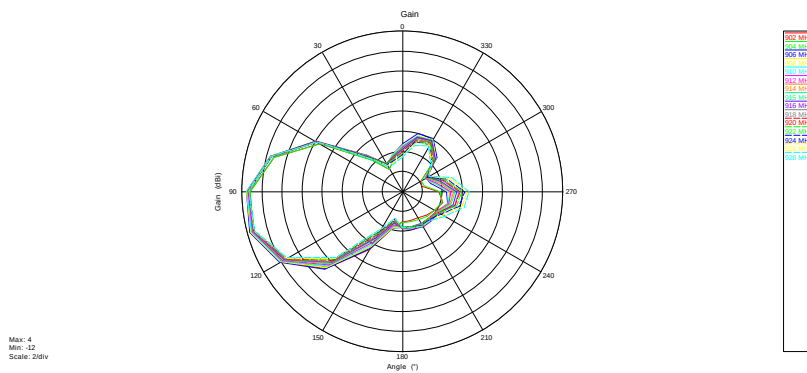
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THETA=90

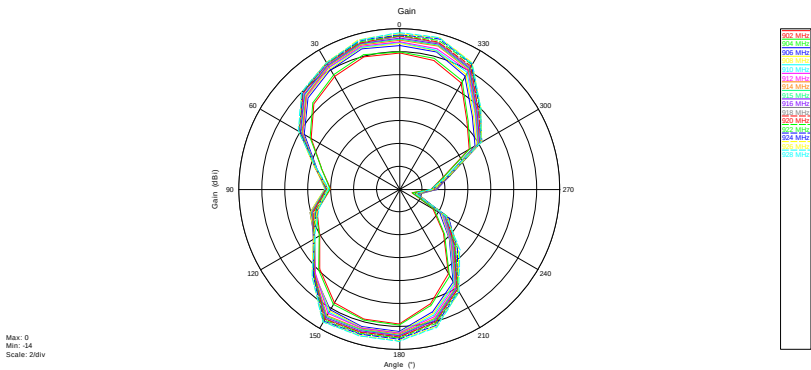


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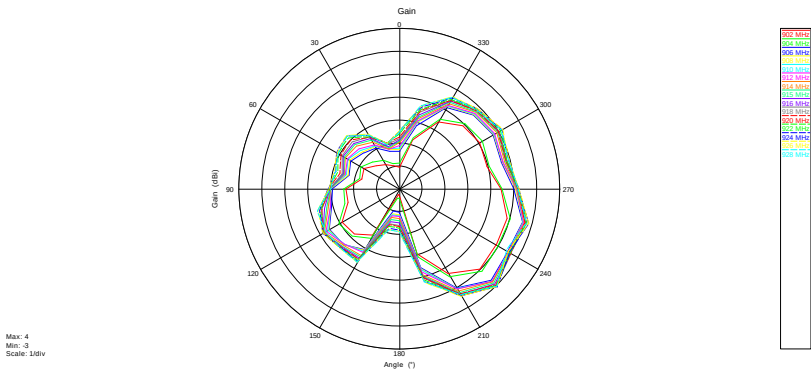
Antenna 5: AB158010/AB158011

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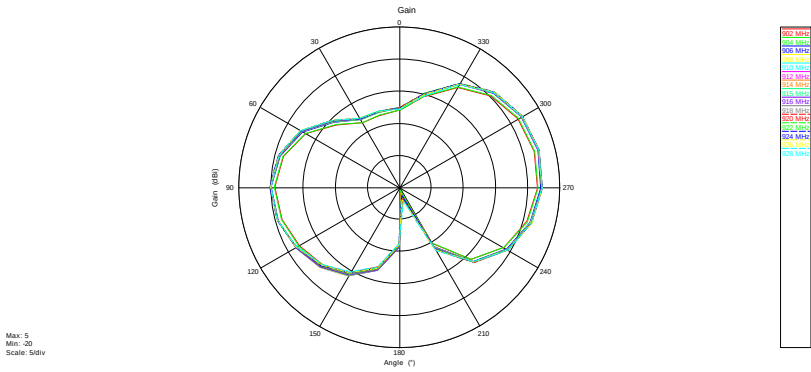
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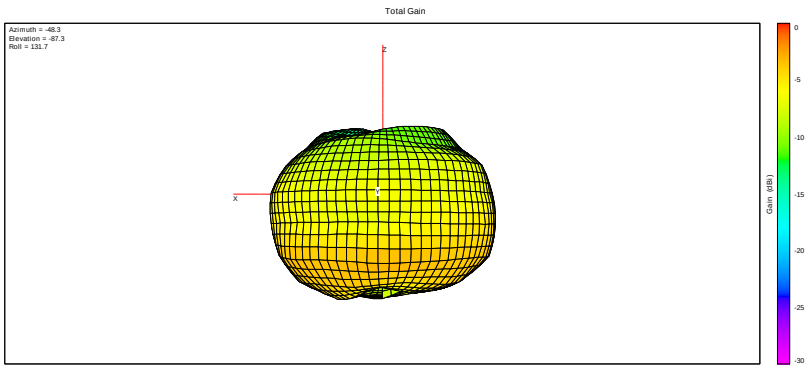
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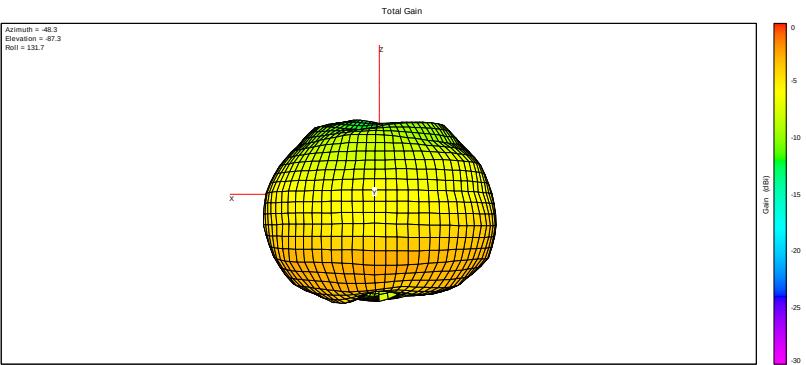
4.3 Radiation Pattern 3D View

Antenna 1: AA208100

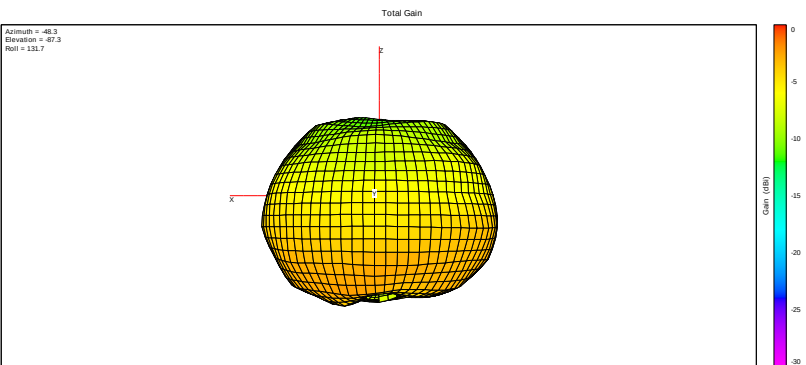
902MHz



915MHz



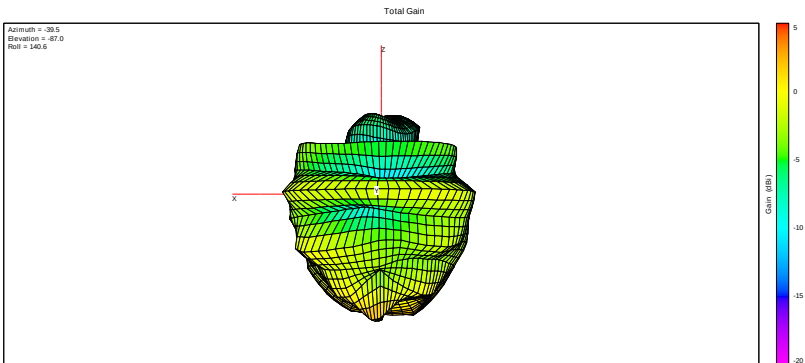
928MHz



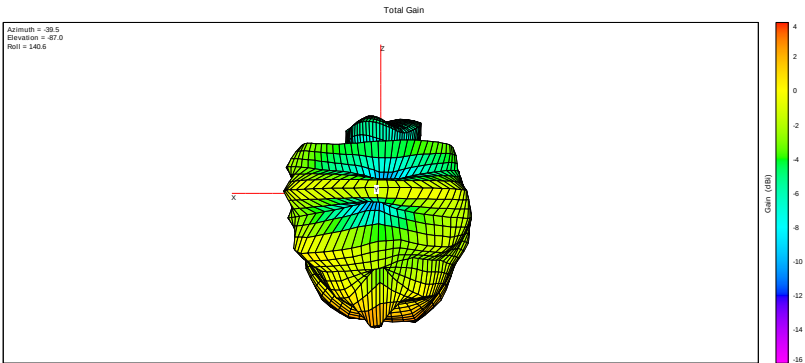
Reference No.: WTU25X07197013W

Antenna 2: AA208200

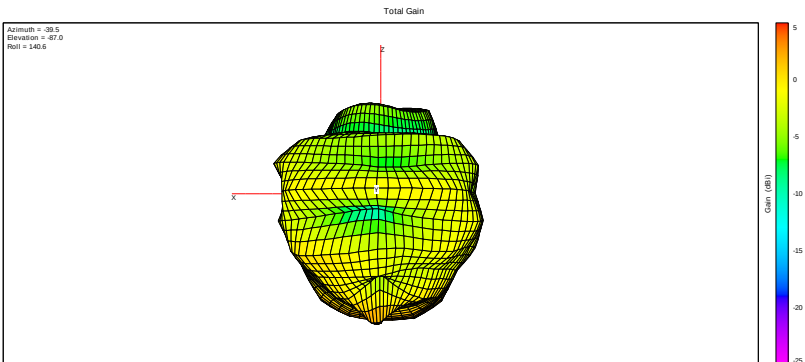
902MHz



915MHz

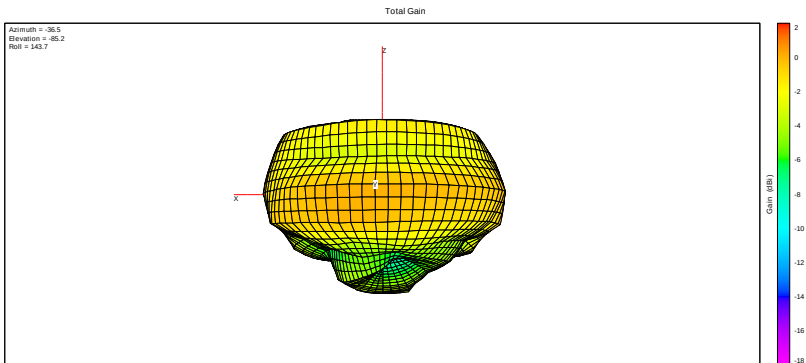


928MHz

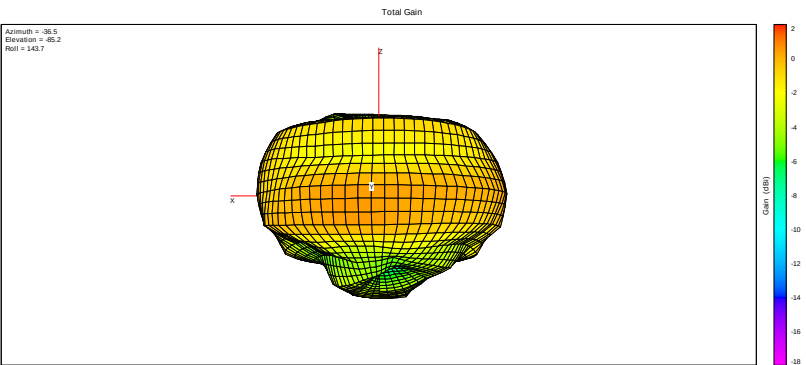


Antenna 3: AA208300

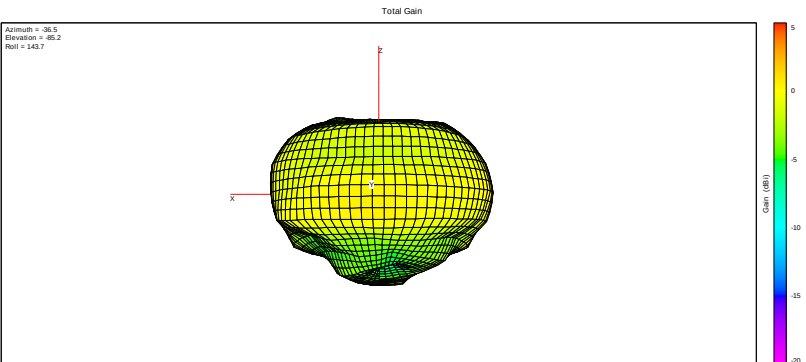
902MHz



915MHz



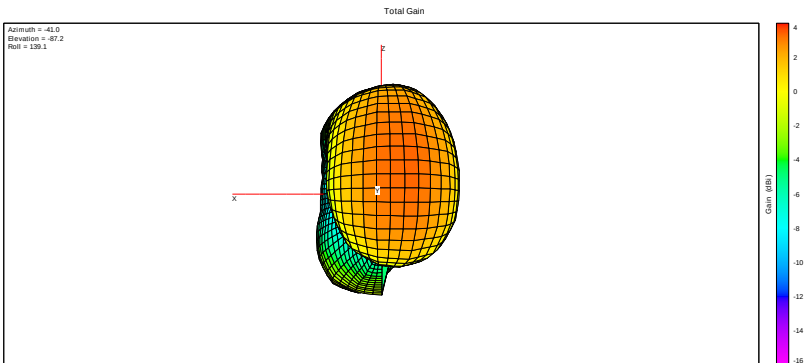
928MHz



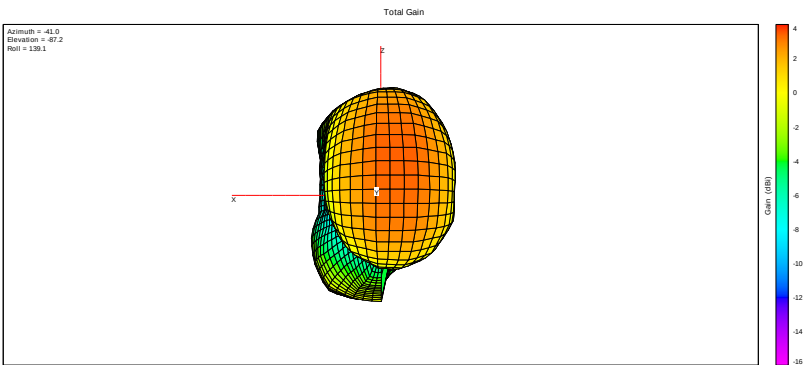
Reference No.: WTU25X07197013W

Antenna 4: AA208400

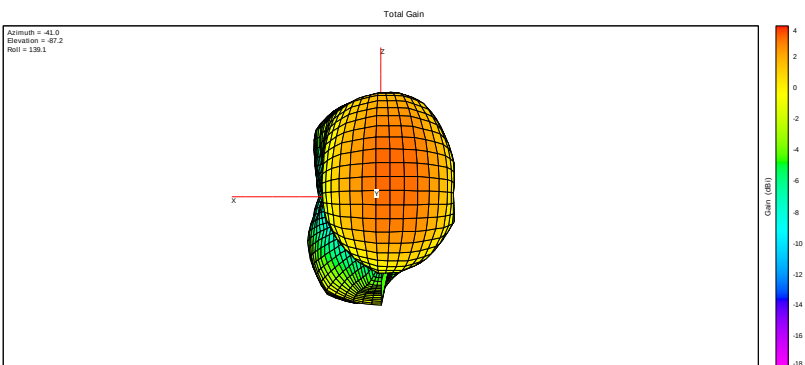
902MHz



915MHz



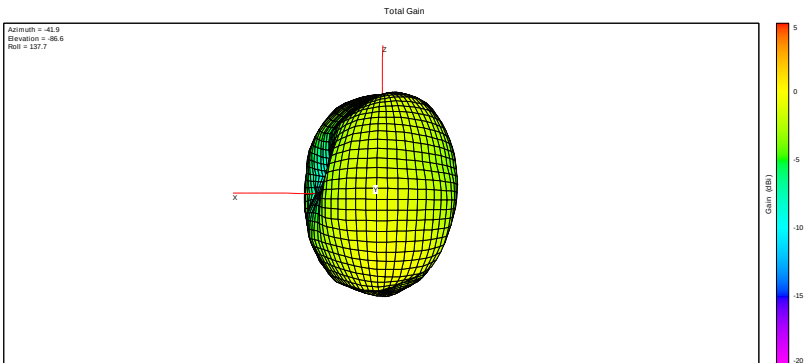
928MHz



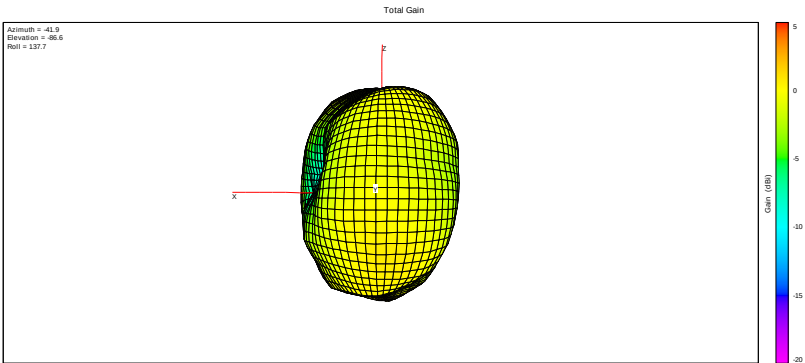
Reference No.: WTU25X07197013W

Antenna 5: AB158010/AB158011

902MHz



915MHz



928MHz

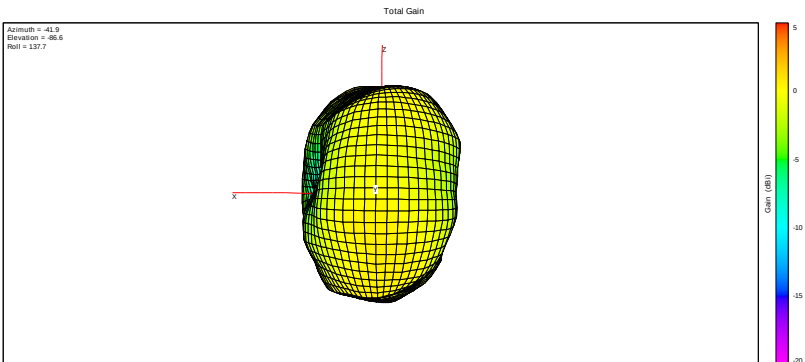


EXHIBIT 1 - EUT PHOTOGRAPHS

Please refer to “ANNEX”

EXHIBIT 2 - TEST SETUP PHOTOGRAPHS

Please refer to “ANNEX”

******* END OF REPORT *******