

OTA

TEST REPORT

ISSUED BY
Shenzhen BALUN Technology Co., Ltd.

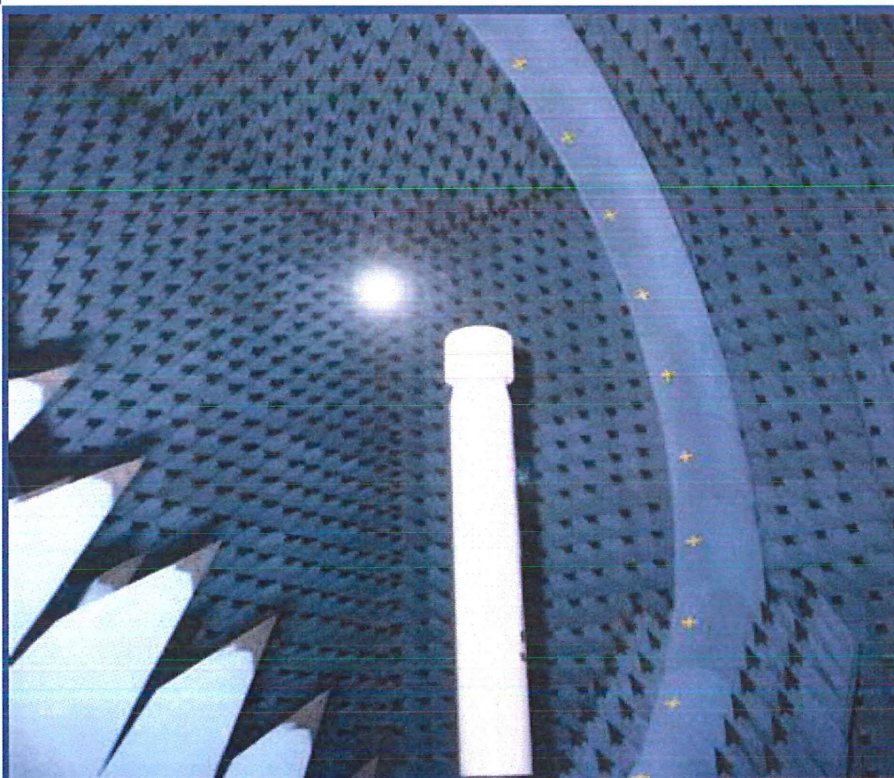


FOR

2.4/5G dual-band copper tube antenna

ISSUED TO
Shenzhen Entronic Technology Co., Ltd.

7701, Building 7, GXY Internet Park, 1009 Baoyuan Rd., Xixiang
Subdistrict, Baoan District, Shenzhen, Guangdong



Tested by: Zong Liyao
Zong Liyao

Date: Dec. 31, 2020

Approved by: Wei Yanquan
Wei Yanquan
(Chief Engineer)

Date: Dec. 31, 2020

Report No: BL-SZ20C0758-902

EUT Name: 2.4/5G dual-band copper tube antenna

Model Name: ET2458F-D5L50IPX

Brand Name: N/A

Test Standard: IEEE149-1979

Maximum: Gain: 3.4I (dBi)

Efficiency: 93%

Test Date: Dec. 24, 2020

Date of Issue: Dec. 31, 2020

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1 Administrative Data (GENERAL INFORMATION)

1.1 Identification of the Testing Laboratory

Company Name	Shenzhen BALUN Technology Co., Ltd.
Address	Block B, 1st FL, Baisha Science and Technology Park, Shahe Xi Road, Nanshan District, Shenzhen, Guangdong Province, P. R. China
Phone Number	+86 755 6685 0100

1.2 Identification of the Responsible Testing Location

Test Location	Shenzhen BALUN Technology Co., Ltd.
Address	Block B, 1st FL, Baisha Science and Technology Park, Shahe Xi Road, Nanshan District, Shenzhen, Guangdong Province, P. R. China
Description	All measurement facilities used to collect the measurement data are located at Block B, FL 1, Baisha Science and Technology Park, Shahe Xi Road, Nanshan District, Shenzhen, Guangdong Province, P. R. China 518055

1.3 Laboratory Condition

Ambient Temperature	19°C to 25°C
Ambient Relative Humidity	45% to 55%
Ambient Pressure	100 kPa to 102 kPa

1.4 Announce

- (1) The test report reference to the report template version v2.2.
- (2) The test report is invalid if not marked with the signatures of the persons responsible for preparing and approving the test report.
- (3) The test report is invalid if there is any evidence and/or falsification.
- (4) The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein.
- (5) This document may not be altered or revised in any way unless done so by BALUN and all revisions are duly noted in the revisions section.
- (6) Content of the test report, in part or in full, cannot be used for publicity and/or promotional purposes without prior written approval from the laboratory.
- (7) The laboratory is only responsible for the data released by the laboratory, except for the part provided by the applicant.

2 PRODUCT INFORMATION

2.1 Applicant Information

Applicant	Shenzhen Entronic Technology Co., Ltd.
Address	7701, Building 7, GXY Internet Park, 1009 Baoyuan Rd., Xixiang Subdistrict, Baoan District, Shenzhen, Guangdong
Contact Person	Nan Liu
Telephone Number	13602625862
E-mail Address	522406858@qq.com

2.2 Manufacturer Information

Manufacturer	Shenzhen Entronic Technology Co., Ltd.
Address	N/A

2.3 Factory Information

Factory	N/A
Address	N/A

2.4 General Description for Equipment under Test (EUT)

EUT Name	2.4/5G dual-band copper tube antenna
Model Name Under Test	ET2458F-D5L50IPX
Serial Model Name	N/A
Model Description	N/A
Antenna Type	Rod Antenna
Dimensions	50*5mm

2.5 Ancillary Equipment

Note: Not applicable.

2.6 Technical Information

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3 SUMMARY OF TEST RESULTS

3.1 Test Standards

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3.2 Test Verdict

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3.3 Test Uncertainty

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 % 6 8 4 % . % / 7 3 8 ! - + 6 ! : % # <<

7 % . <	/ " % 4 7 + / 7 : <
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4 GENERAL TEST CONFIGURATIONS

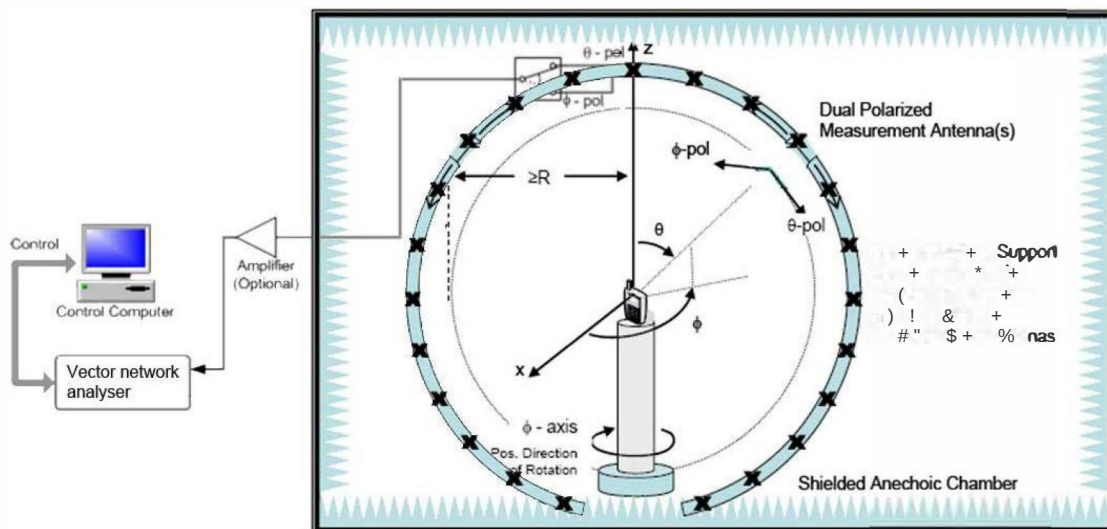
4.1 Test Condition

& 0 5 0 - (? + 0 5 @ @ @ < 3 0 2 E > E				
7 A 3 < 9 7 6 0 7 ? E # + < + 6 0 ? 0	6, 3 0 7 ? E # < 0 > > @ * E	' 0 6 ; 0 < @ 2 0 E	(9 5 ? + 2 0 E	% 0 5 + ? 3 A 0 E @ 6 3 . 3 ? E E
! 9 < 6 + 5 E ' 0 6 ; 0 + ? @ ! 9 . 6 + \$ 9 5 ? + 2 0 E ! ' ! (E	E 9 E E	E 9 E E	! E	E 9 E E

4.2 Test Equipment List

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& E @ 5 ? 3 ; < 9 , 0 E 7 ? 0 7 7 0 + E @ < 0 6 0 7 & E " E & C > ? 0 6 E	E	E	E	E	E

4.3 Test Setup



ANNEX A TEST RESULTS

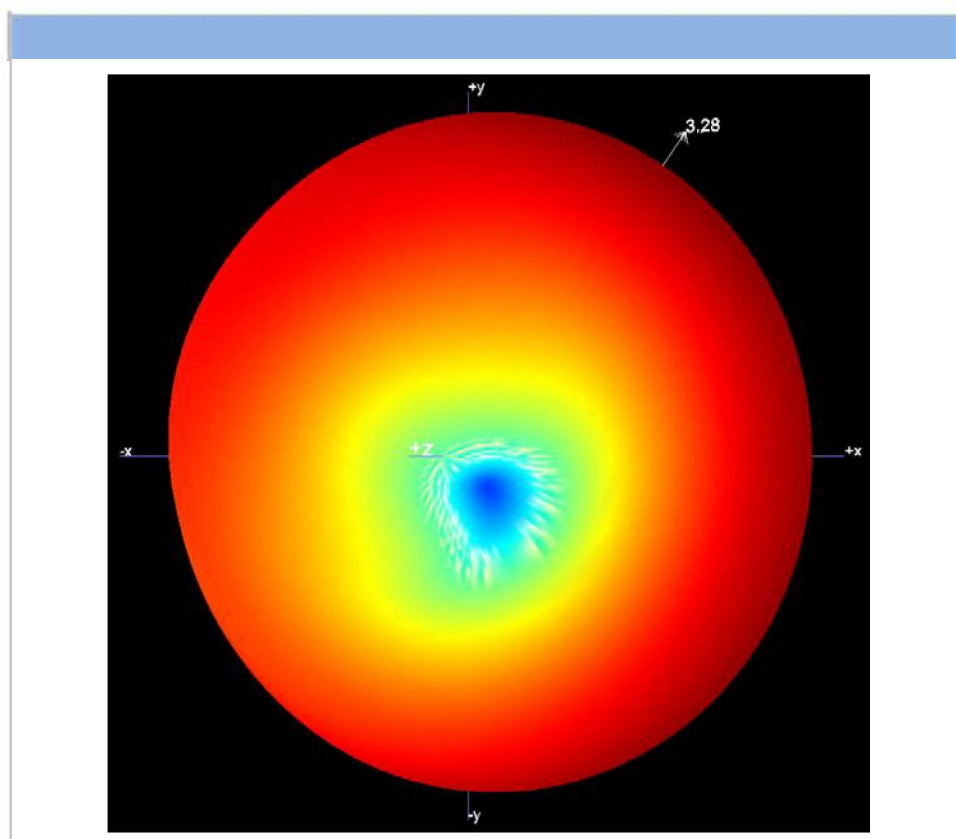
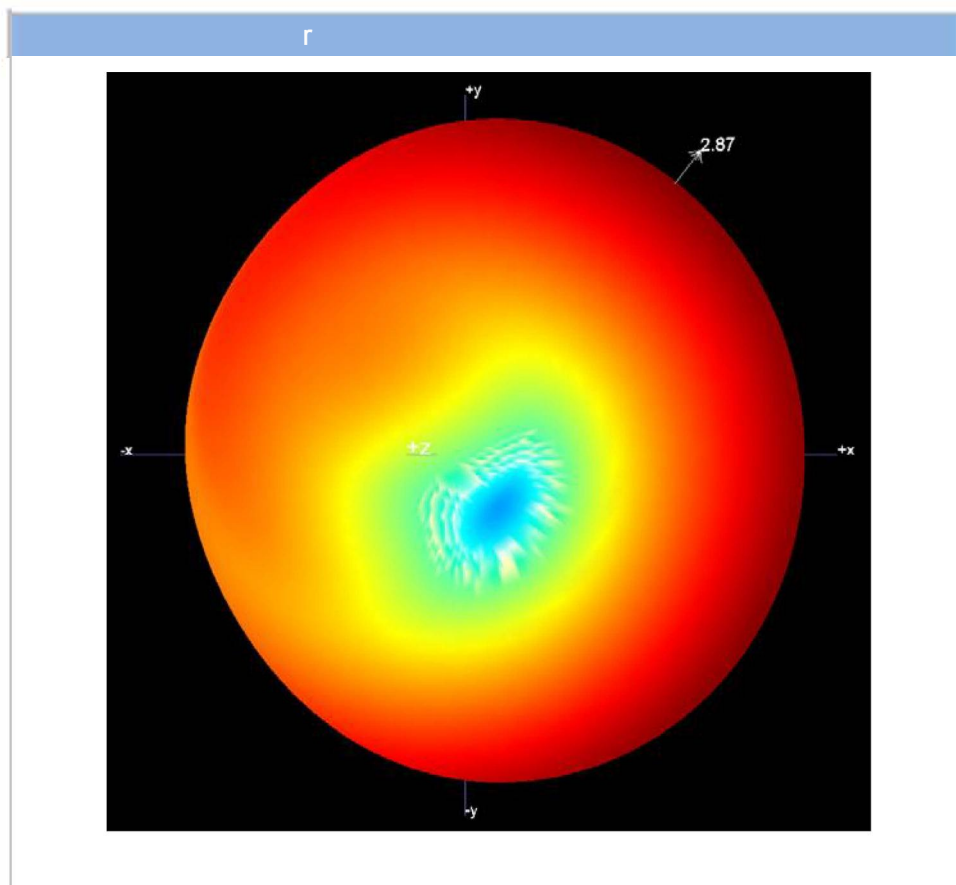
A.1 Gain and Efficiency

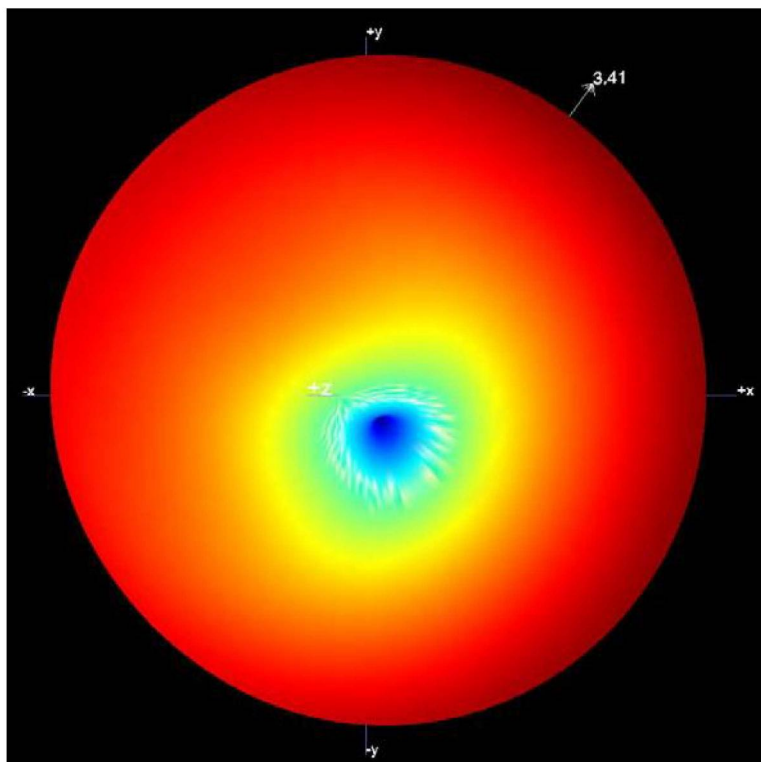
Frequency	Gain (dBi)	Efficiency (%)
2402MHz	2.87	76
2412MHz	3.00	78
2422MHz	3.17	79
2432MHz	3.32	82
2442MHz	3.28	84
2452MHz	3.17	86
2462MHz	3.21	87
2472MHz	3.29	91
2482MHz	3.41	93
2483MHz	3.41	93
5150MHz	-0.38	48
5175MHz	-0.4	48
5200MHz	-0.3	48
5225MHz	-0.94	51
5250MHz	-1.18	53
5275MHz	-1.20	53
5300MHz	-1.63	57
5325MHz	-2.60	55
5350MHz	-2.87	58
5375MHz	-1.10	60
5400MHz	-2.23	60
5425MHz	-1.03	58
5450MHz	-3.27	60
5475MHz	-3.29	60
5500MHz	-3.25	57
5525MHz	-2.80	53
5550MHz	-2.87	53
5575MHz	-3.14	54
5600MHz	-2.67	51
5625MHz	-2.73	50
5650MHz	-2.69	49
5675MHz	-2.96	51
5700MHz	-2.75	50
5725MHz	0	54
5750MHz	-0.74	51
5775MHz	-0.82	52
5800MHz	-0.04	54
5825MHz	-0.44	59
5850MHz	-0.70	63
5875MHz	-0.42	58

5900MHz	-0.80	62
5925MHz	-0.99	66

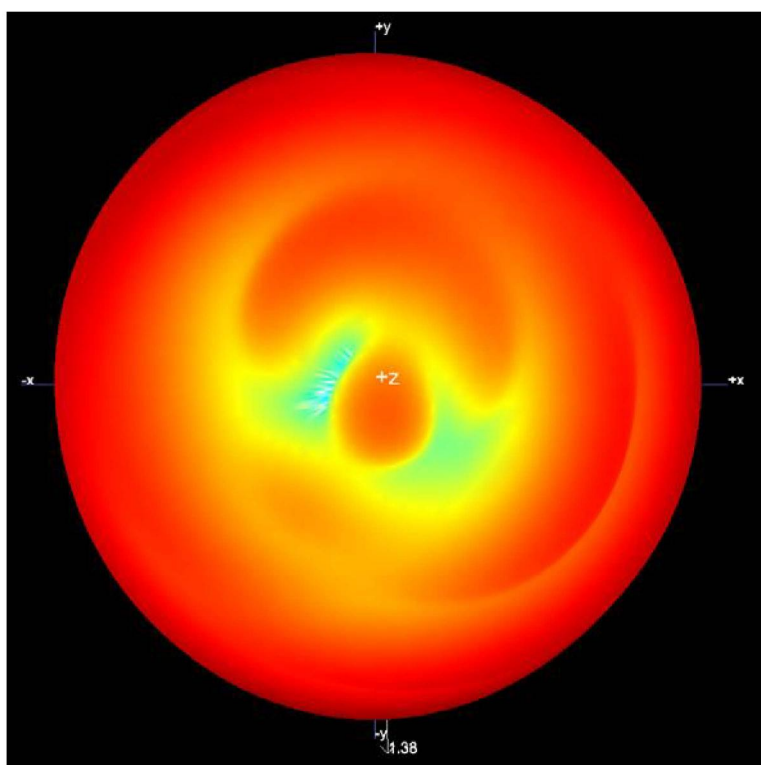
ANNEX B RADIATION PATTERN

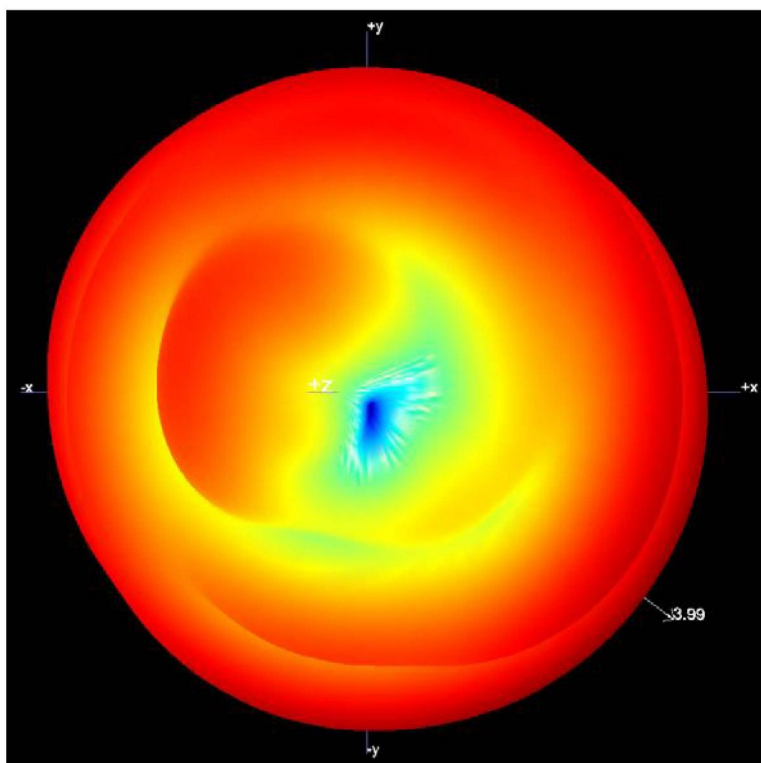
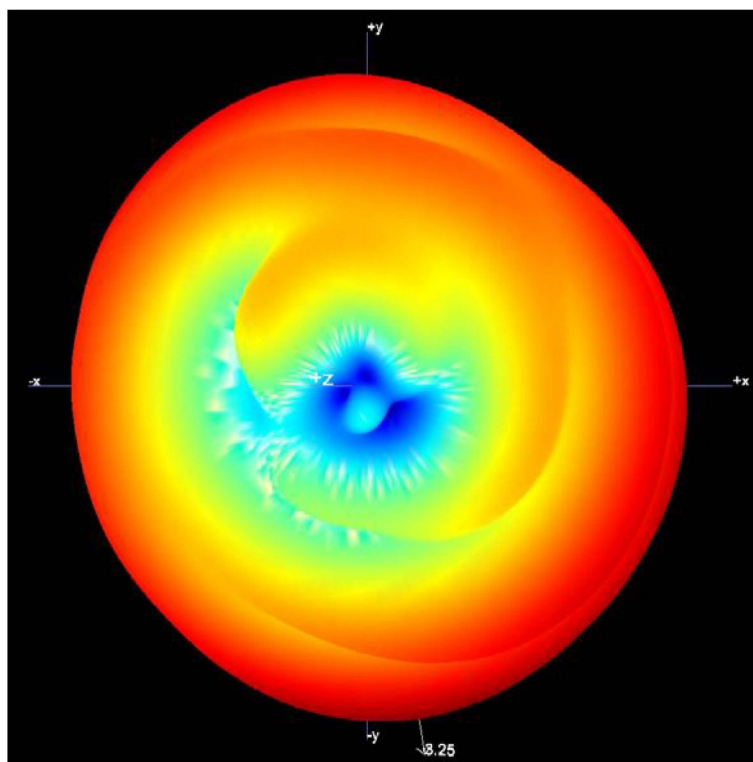
B.1 3D Pattern





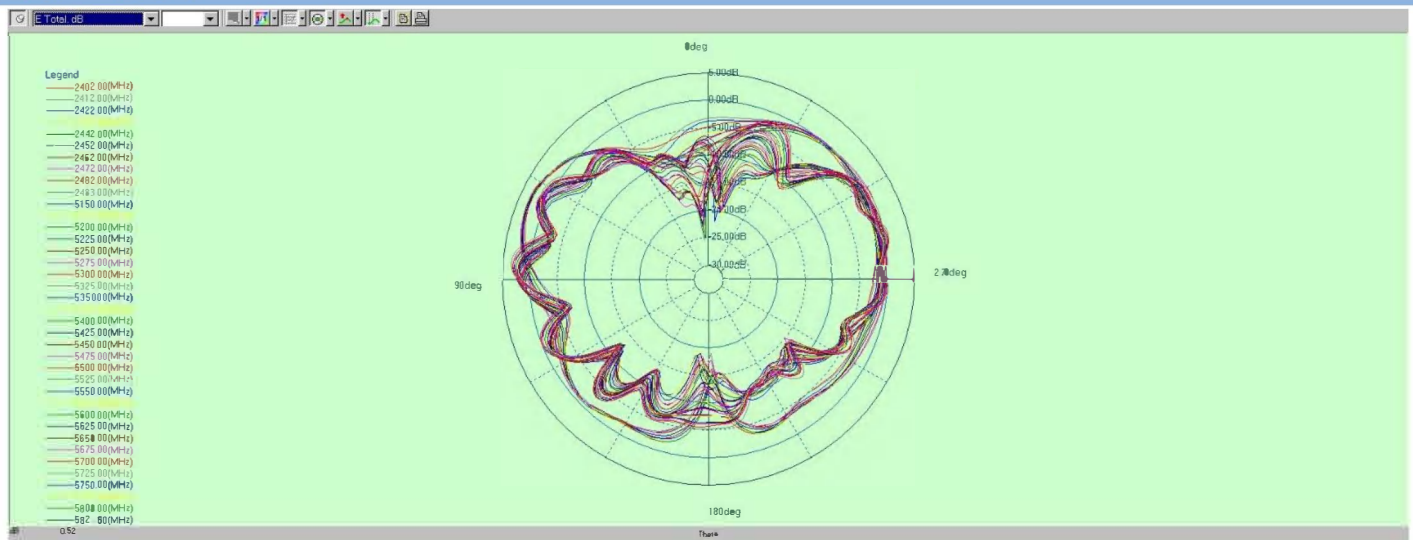
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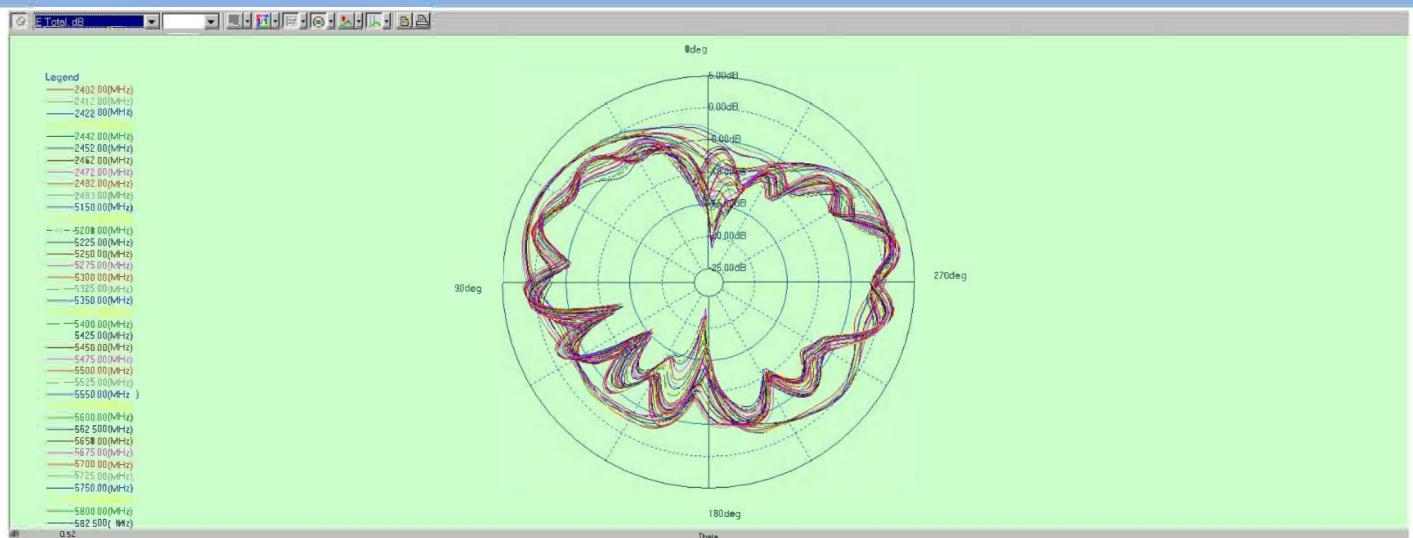


B.2 1D Radiation Pattern

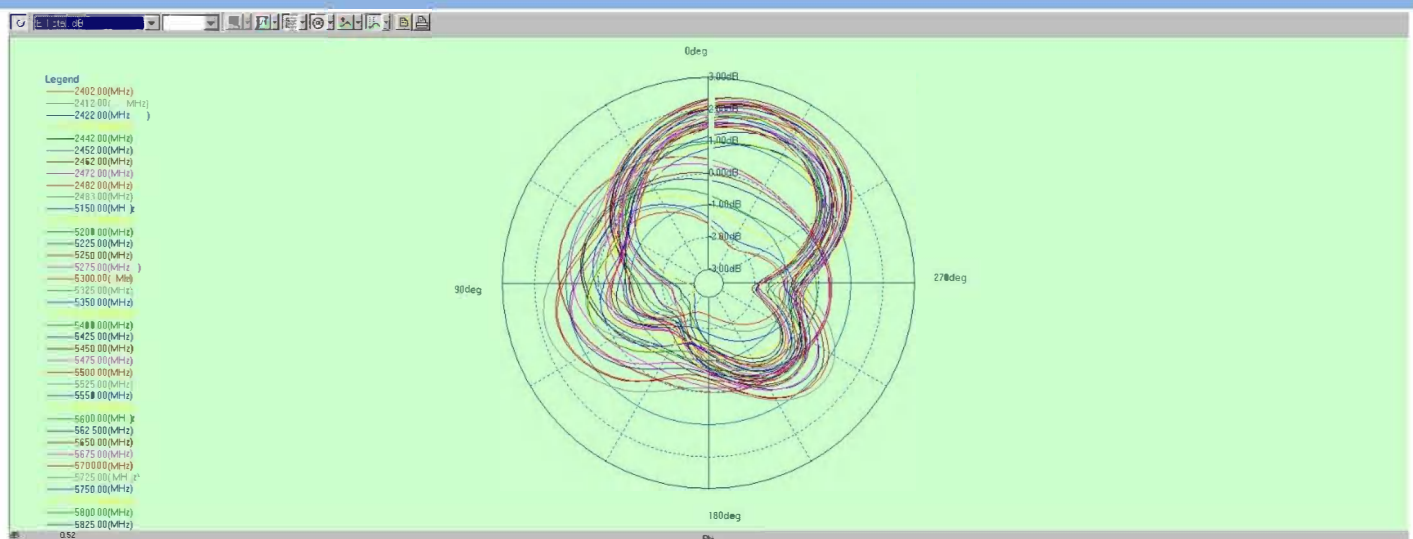
B2.1 PHI=0



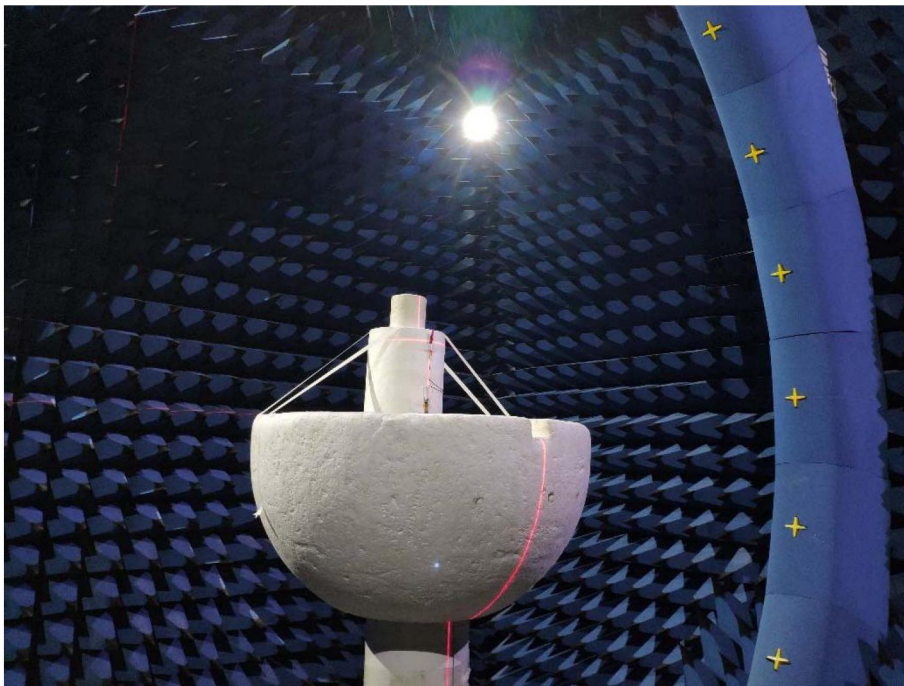
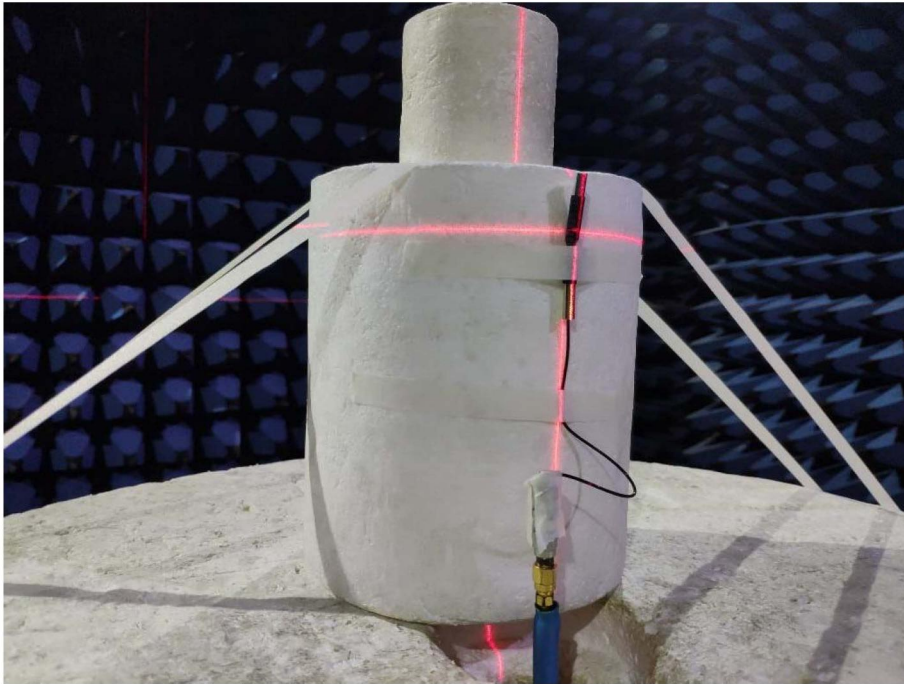
B2.2 PHI=90



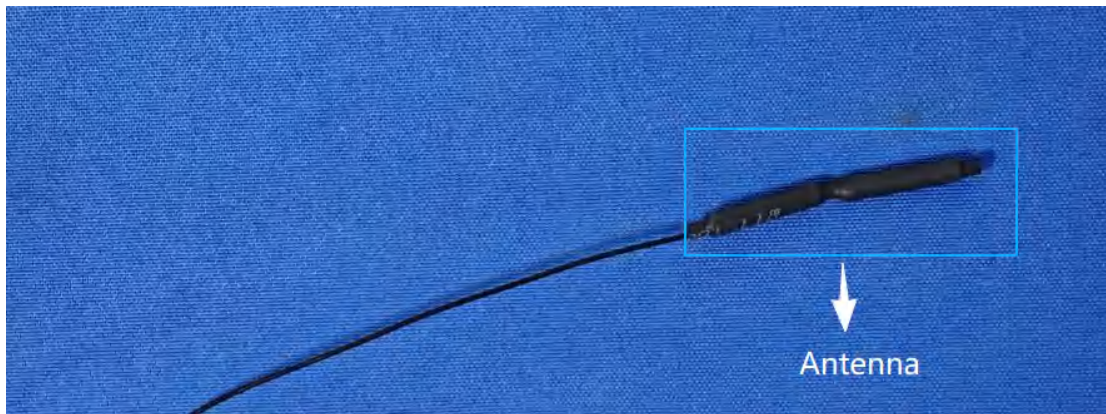
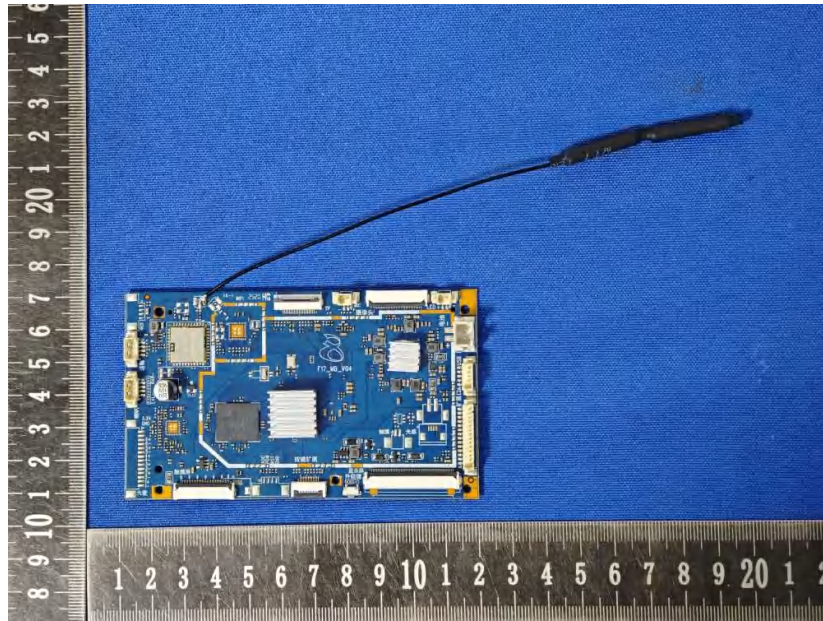
B2.3 THETA=90



ANNEX C TEST SETUP PHOTO



ANNEX D EUT PHOTO



Unit: 243mm * 4mm

--END OF REPORT--