ANTENNA PASSIVE TEST REPORT

Application No.	SZCR2404001186ME
Applicant	Belluscura LLC
Manufacturer	Belluscura LLC
Product Name	X-PLOR
Model No.	50051
Standards	ANSI/IEEE Std 149-2008
Date Initial Sample(s) Received	2024-04-07
Testing Start Date	2024-06-28
Testing Finish Date	2024-07-15
Report Issue Date	2024-07-16

***In the configuration tested, the EUT detailed in this report complied with the standards specified above.**

Keny Xu
EMC Laboratory Manager

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Revision Record				
Version	**Chapter**	**Date**	**Modifier**	**Remark**
01		2024-07-16		Original

Authorized for issue by:				
		Shelgon Li **Prepared by Shelgon Li**		
		Max. Huang **Reviewed by Max Huang**		
		Ervin Li **Approved by Ervin Li**		

2 Revision Version

Report No.	Version	Date	Memo
SZCR2404001186ME	00	07/16	Initial creation of report

3 Contents

4 General Information

4.1 Testing Laboratory

Test Lab	SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch
Address	No. 1 Workshop, M-10, Middle Section, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China. 518057.
Contact	Shelgon Li
Tel.	+86 (0) 755 2532 8628
Fax	+86 (0) 755 2671 0594
E-mail	Shelgon.Li@sgs.com

4.2 Details of Applicant

Applicant's Name	Belluscura LLC
Applicant's Address	5504 Democracy Drive Suite 200, Plano, Texas 75024, United States
Contact	Sydney Wilkins
Tel.	+1 817 304 8553
E-mail	sydney.wilkins@belluscura.com

4.3 Details of Manufacturer

Manufacturer's Name	Belluscura LLC
Manufacturer's Address	5504 Democracy Drive, Suite 200, Plano, TX 75024
Contact	Sydney Wilkins
Tel.	+1 817 304 8553
E-mail	sydney.wilkins@belluscura.com

4.4 General Description of EUT

Device Description:	X-PLOR
Device Manufacturer:	Belluscura LLC
Device Model:	50051
Hardware Version:	N/A
Software Version:	N/A
S/N:	N/A

4.5 Test Procedure

Testing is performed according to the **ANSI/IEEE Std 149-2008**.

4.6 Test Specification

Identity	Document Title
ANSI/IEEE Std 149-2008	IEEE Standard Test Procedures for Antennas

4.7 Laboratory Environment

Temperature	Min. =19℃, Max. = 25℃	
Relative humidity	Min. =40%, Max. =72%	
Shield effect	0.7-6GHz	> 100dB
Ground resistance	<0.5Ω	

4.8 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen Branch
No. 1 Workshop, M-10, Middle Section, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China. 518057.
Tel: +86 755 2601 2053 Fax: +86 755 2671 0594

No tests were sub-contracted.

4.9 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

- **A2LA (Certificate No. 3816.01)**

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory is accredited by the American Association for Laboratory Accreditation(A2LA). Certificate No. 3816.01.

4.10 Deviation from Standards

None

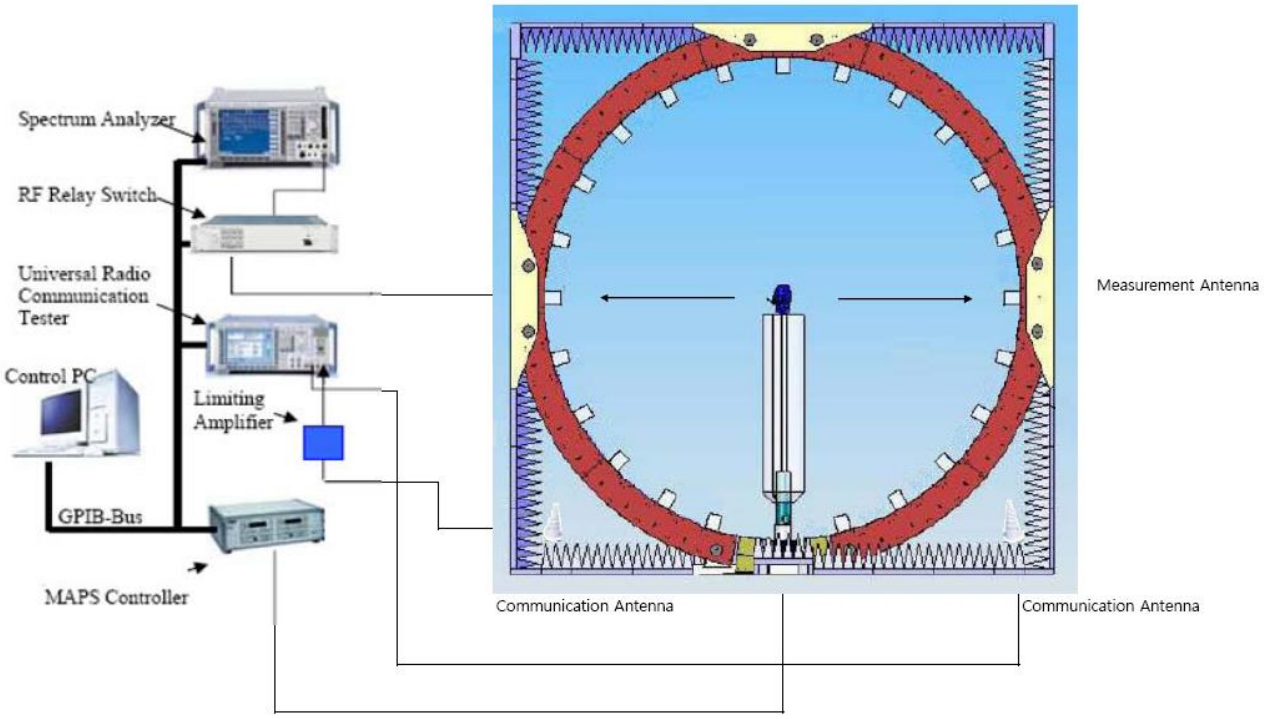
4.11 Abnormalities from Standard Conditions

None

5 OTA Measurements System Configuration

5.1 Test Configuration

Great-Circle-Cut method is used to measure the antenna 3D GAIN of EUT in OTA qualified anechoic chamber. Equipment Under Test (EUT) geometry centre vertical projection at the centre of platform, the distance from EUT to measurement antenna is 5m



F-1. OTA Measurement System Configuration

6 Equipment List

Type of Equipment	Model Number	Manufacture	Calibration Date	Valid Period
Network Analyzer	E5071C S/N MY46523591	Keysight	2024/4/11	2025/4/10
Quad-Ridge Horn Antenna 700 MHz-10 GHz	EMCO 3164-08 S/N 161915	ETS-Lindgren L.P.	N/A	N/A
MAPS Controller	EMCENTER S/N 160485	ETS-Lindgren L.P.	N/A	N/A

7 Measurement Uncertainty

Item	2400-2500 MHz (dB)
Gain	0.88
Efficiency	0.88
Measurement Uncertainty (95% CONFIDENCE INTERVAL) K=2	

8 Test Result

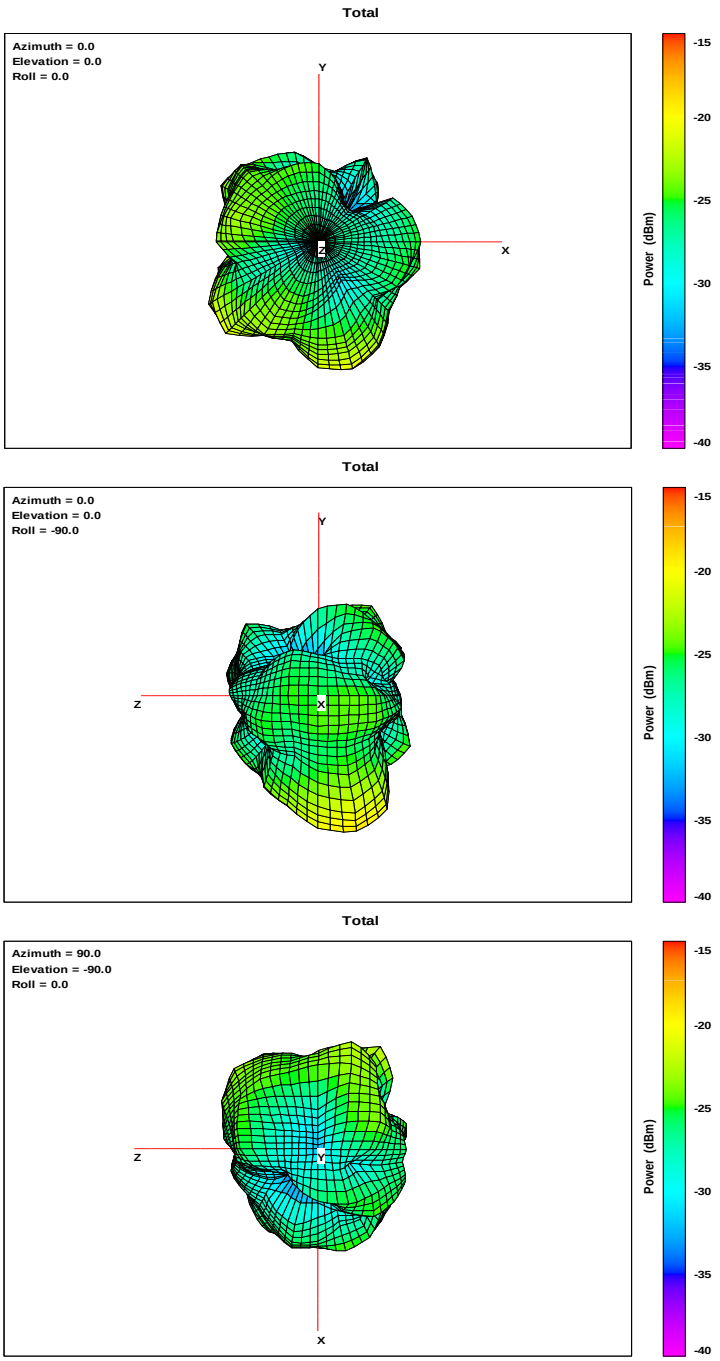
8.1 Test summary

product	Maximum Gain Data			
	Frequency (MHz)	Efficiency (dB)	Efficiency (%)	Gain (dBi)
BT antenna	2455	-25.31	0.29	-19.05

8.2 BT Antenna Test Results

Free Space			
Frequency (MHz)	Efficiency (dB)	Efficiency (%)	Gain (dBi)
2400	-26.02	0.25	-19.63
2402	-26.09	0.25	-19.44
2405	-26.14	0.24	-19.59
2410	-26.18	0.24	-19.72
2415	-26.09	0.25	-19.67
2420	-25.83	0.26	-19.30
2425	-25.90	0.26	-19.42
2430	-25.85	0.26	-19.58
2435	-25.97	0.25	-19.29
2440	-25.81	0.26	-19.55
2441	-25.75	0.27	-19.30
2445	-25.61	0.27	-19.12
2450	-25.57	0.28	-19.14
2455	-25.31	0.29	-19.05
2460	-25.45	0.29	-19.28
2465	-25.45	0.29	-19.18
2470	-25.72	0.27	-19.96
2475	-25.69	0.27	-19.69
2480	-25.76	0.27	-19.94
2482	-25.71	0.27	-20.02
2485	-25.52	0.28	-19.99
2490	-25.48	0.28	-20.01
2495	-25.12	0.31	-19.59
2500	-24.96	0.32	-19.51

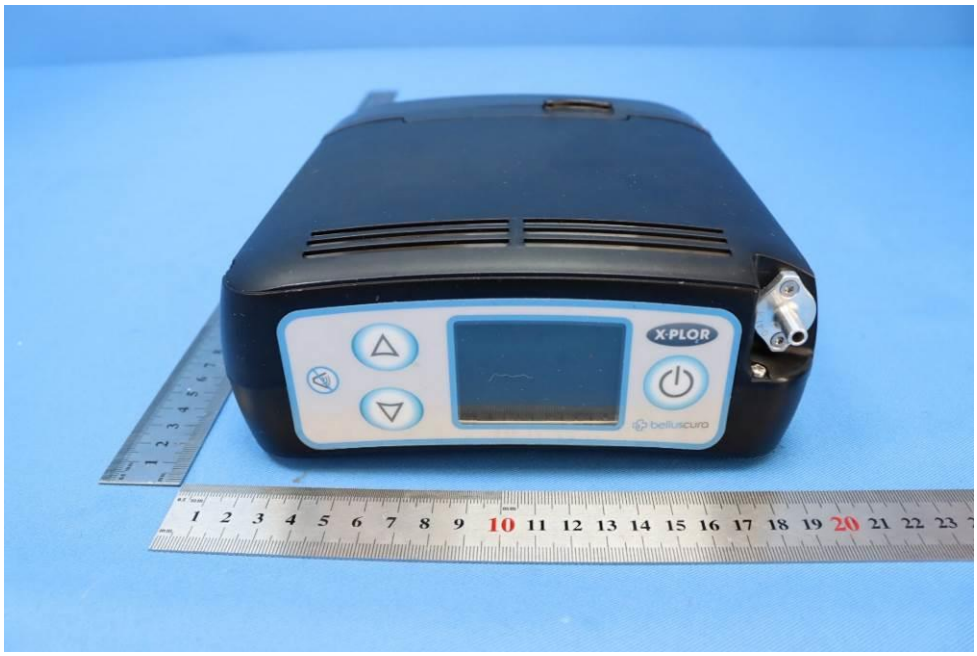
9 3-D Antenna Pattern



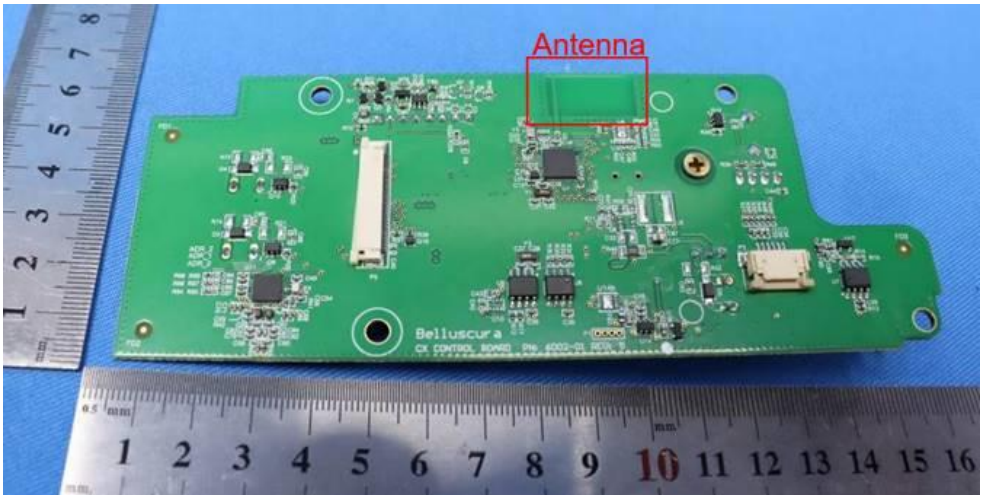
BT Antenna 3-D Antenna Pattern

10 The EUT and Test Configuration

Photo of EUT

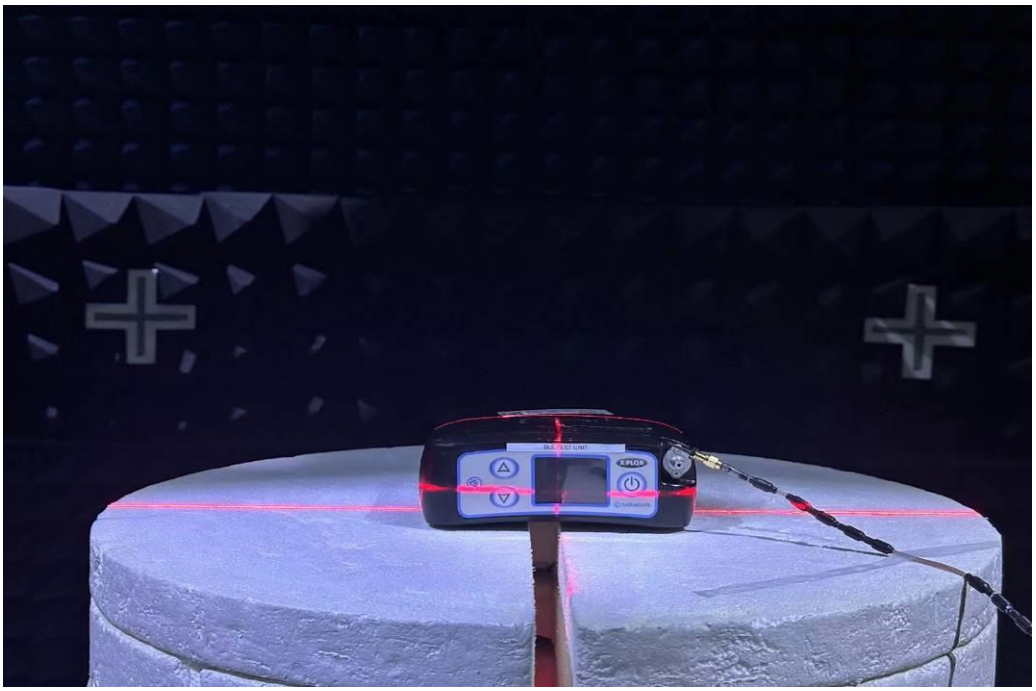


Size of the Antenna(14*7mm)



Size of the Antenna in the EUT

Free Space View



- End of the Report -

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