

Antenna Gain Test Report

Project No.: 4791366726

Client Name: Shenzhen Seauto Technology Co., Ltd.

Client Address: Room 501, Building 1, Phase 1, China Merchants Smart City, Fenghuang Community, Fenghuang Street, Guangming District, Shenzhen.

Product Name: Robotic Pool Cleaner

Product Model: Crab, Niya Sonar 30, Niya Tracker 45, Cr6 Pro

Manufacture: Huizhou Seauto Intelligent Technology Co., LTD

Antenna Type: PCB

Antenna Size: Refer to section 6

Project Engineer: James Qin

Test Standards: ANSI/IEEE std 149-2021

Issued Date: 2024.6.13

UL Verification Services (Guangzhou) Co., Ltd, Song Shan Lake Branch

*This report shall not be reproduced except in full, without the written approval of UL Verification Services (Guangzhou) Co., Ltd,
Song Shan Lake Branch.*

Revision History

Rev.	Issue Date	Revisions	Revised By
V0	2024.6.13	Initial Issue	\

UL Verification Services (Guangzhou) Co., Ltd, Song Shan Lake Branch

*This report shall not be reproduced except in full, without the written approval of UL Verification Services (Guangzhou) Co., Ltd,
Song Shan Lake Branch.*

CONTENTS

1	Test Equipment Information	4
2	Setup block diagram	5
3	Test Temperature and Humidity	6
4	Test Step Flow	7
5	Test Result	8
6	Antenna Dimension	14
7	Photo	15

UL Verification Services (Guangzhou) Co., Ltd, Song Shan Lake Branch

*This report shall not be reproduced except in full, without the written approval of UL Verification Services (Guangzhou) Co., Ltd,
Song Shan Lake Branch.*

1 Test Equipment Information

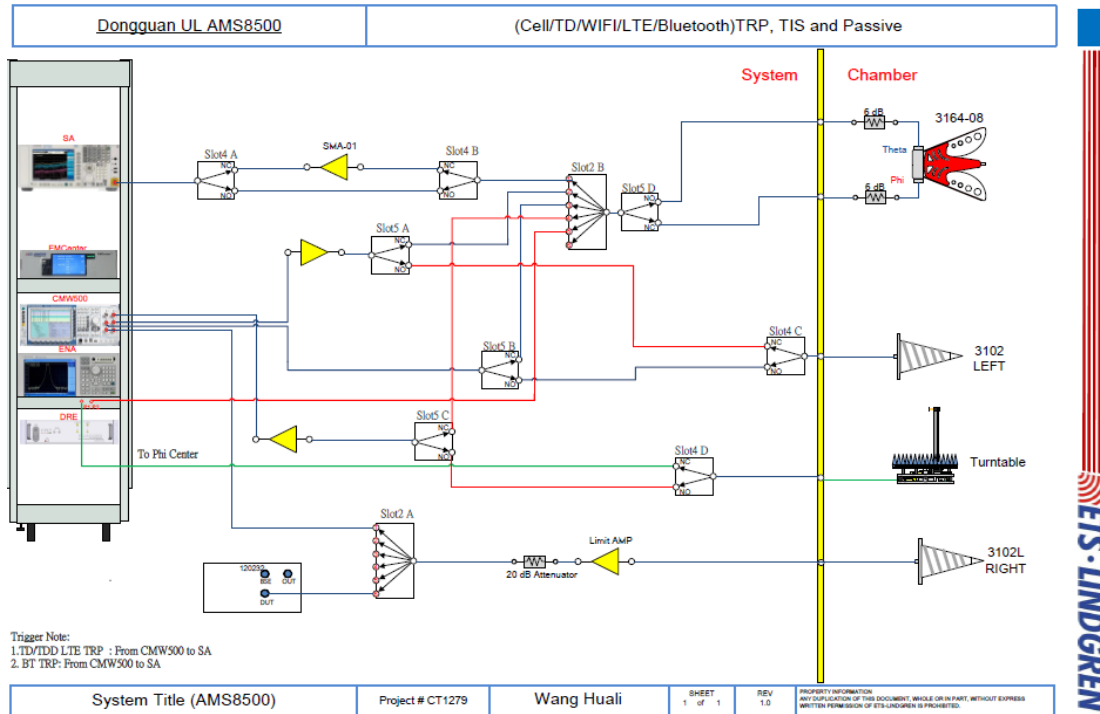
Equipment	Manufacturer	Mode No.	Serial No.	Cal date	Cal Due
Test Chamber	ETS-Lindgren	8500	/	/	/
Test Software	ETS-Lindgren	EMQuest V1.12	1496	/	/
Network Analyzer	Keysight	E5071C	MY46524531	2023.10.12	2024.10.11
EXA Singal Analyzer	Keysight	N9010A	MY55150514	2023.10.12	2024.10.11

UL Verification Services (Guangzhou) Co., Ltd, Song Shan Lake Branch

This report shall not be reproduced except in full, without the written approval of UL Verification Services (Guangzhou) Co., Ltd,

Song Shan Lake Branch.

2 Setup block diagram



UL Verification Services (Guangzhou) Co., Ltd, Song Shan Lake Branch

This report shall not be reproduced except in full, without the written approval of UL Verification Services (Guangzhou) Co., Ltd, Song Shan Lake Branch.

3 Test Temperature and Humidity

Temperature: 23.1°C

Humidity: 59.4%

UL Verification Services (Guangzhou) Co., Ltd, Song Shan Lake Branch

*This report shall not be reproduced except in full, without the written approval of UL Verification Services (Guangzhou) Co., Ltd,
Song Shan Lake Branch.*

4 Test Step Flow

- 1) Maintain the test ambient temperature of 23 ± 2 C, the instrument is powered on and preheated for more than 30 minutes;
- 2) Turn on the darkroom power supply, connect the test cable, and set up the sample according to the standard;
- 3) Outline sets the test content objectives and conducts calibration tests;
- 4) Run the software, when the test is completed, export the corresponding test diagram and test data, and save to the corresponding directory.

5 Test Result

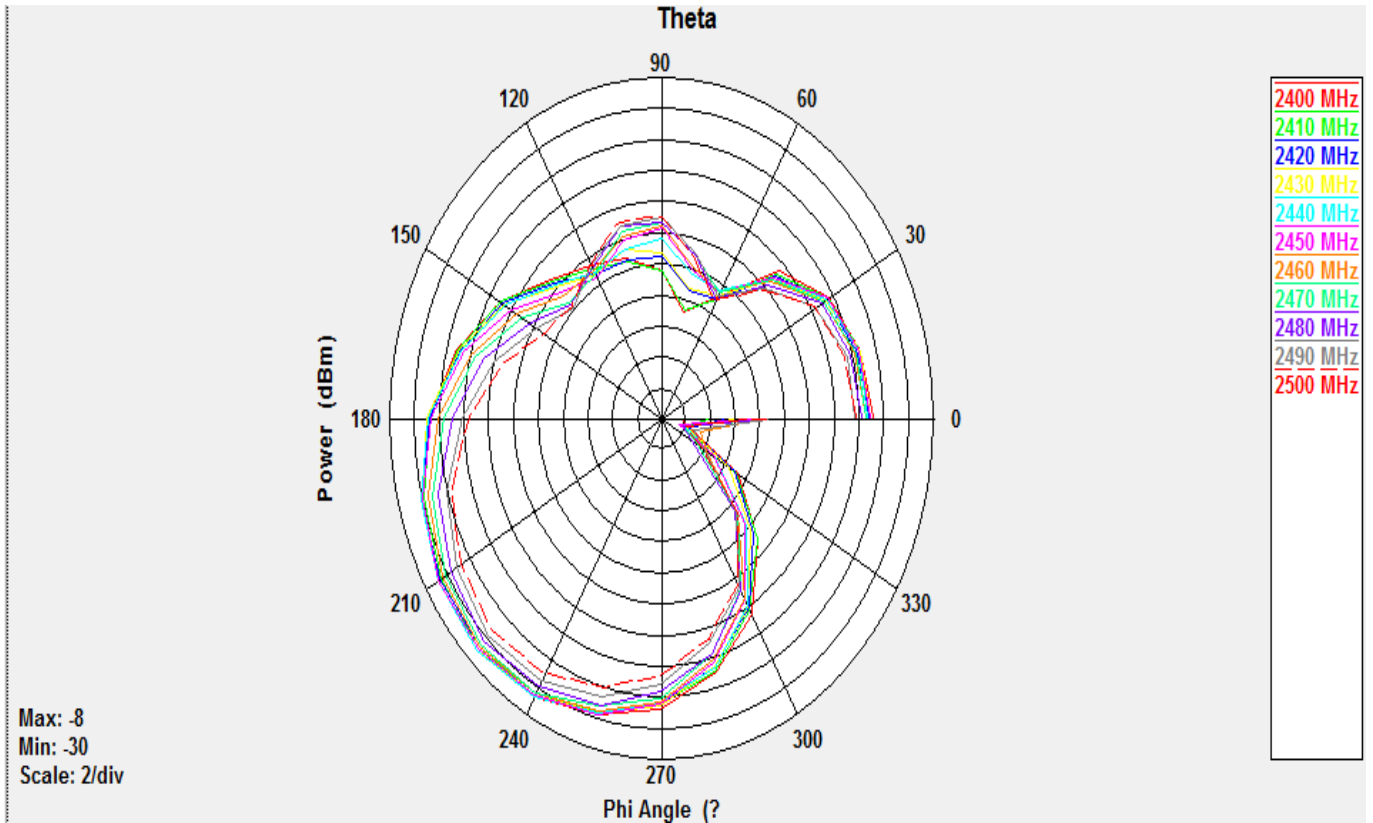
Frequency (MHz)	Efficiency (%)	Gain (dBi)
2400	8.70	-5.05
2410	8.40	-5.24
2420	8.31	-5.24
2430	8.40	-5.11
2440	8.47	-5.12
2450	8.26	-5.18
2460	8.00	-5.22
2470	7.87	-5.32
2480	7.68	-5.30
2490	7.48	-5.49
2500	7.50	-5.56

UL Verification Services (Guangzhou) Co., Ltd, Song Shan Lake Branch

*This report shall not be reproduced except in full, without the written approval of UL Verification Services (Guangzhou) Co., Ltd,
Song Shan Lake Branch.*

Polarization Pattern Photos

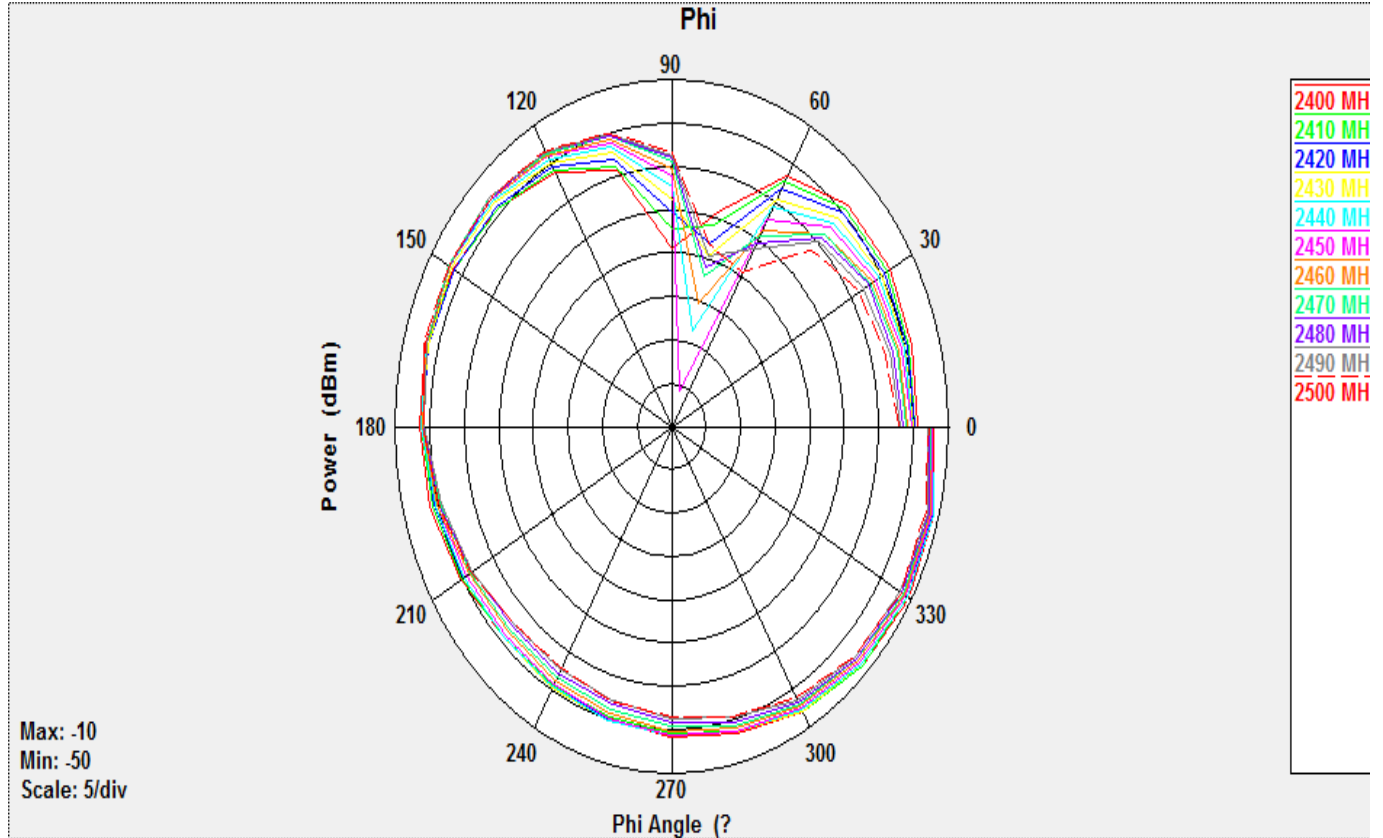
Theta Polarization(Theta Angle=90°)



UL Verification Services (Guangzhou) Co., Ltd, Song Shan Lake Branch

This report shall not be reproduced except in full, without the written approval of UL Verification Services (Guangzhou) Co., Ltd, Song Shan Lake Branch.

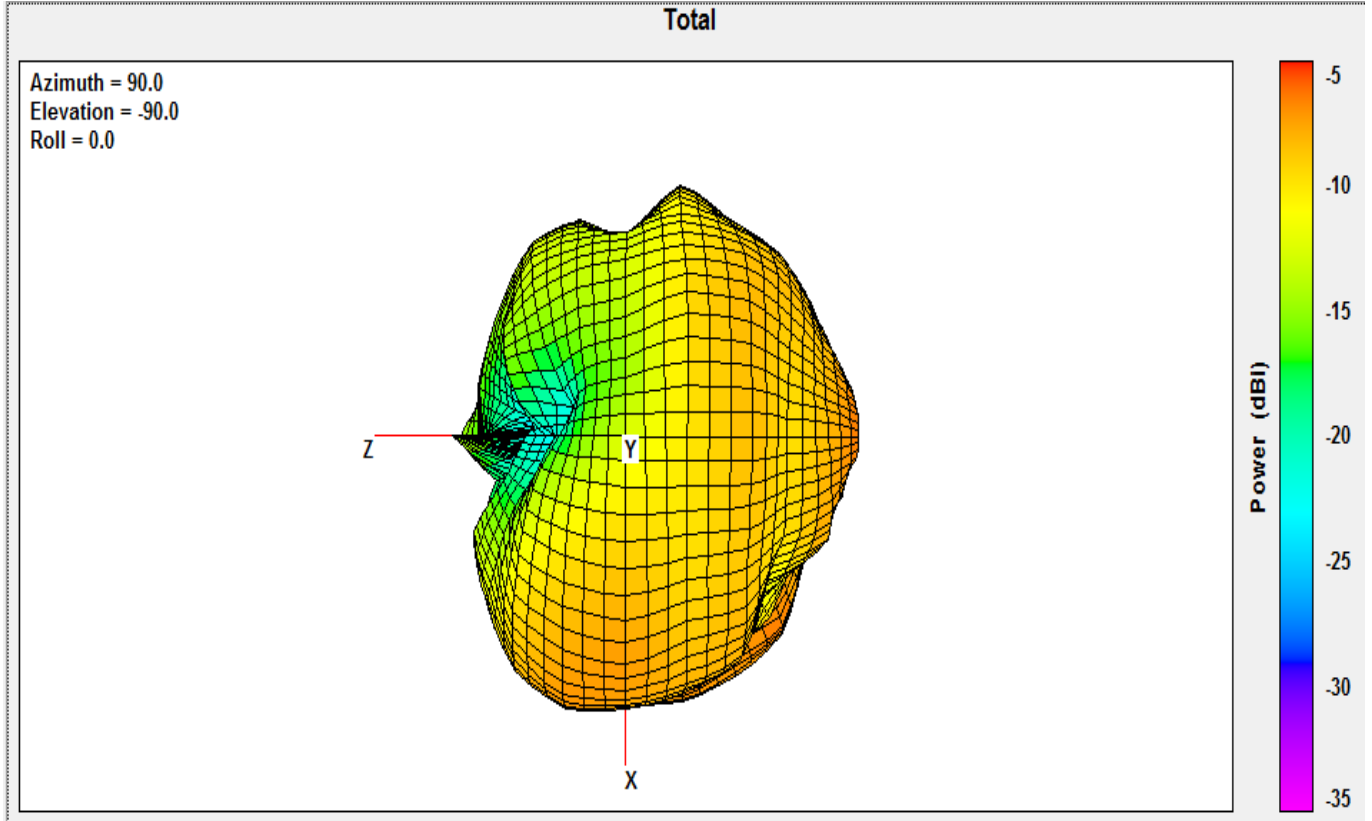
Phi Polarization(Theta Angle=90°)



UL Verification Services (Guangzhou) Co., Ltd, Song Shan Lake Branch

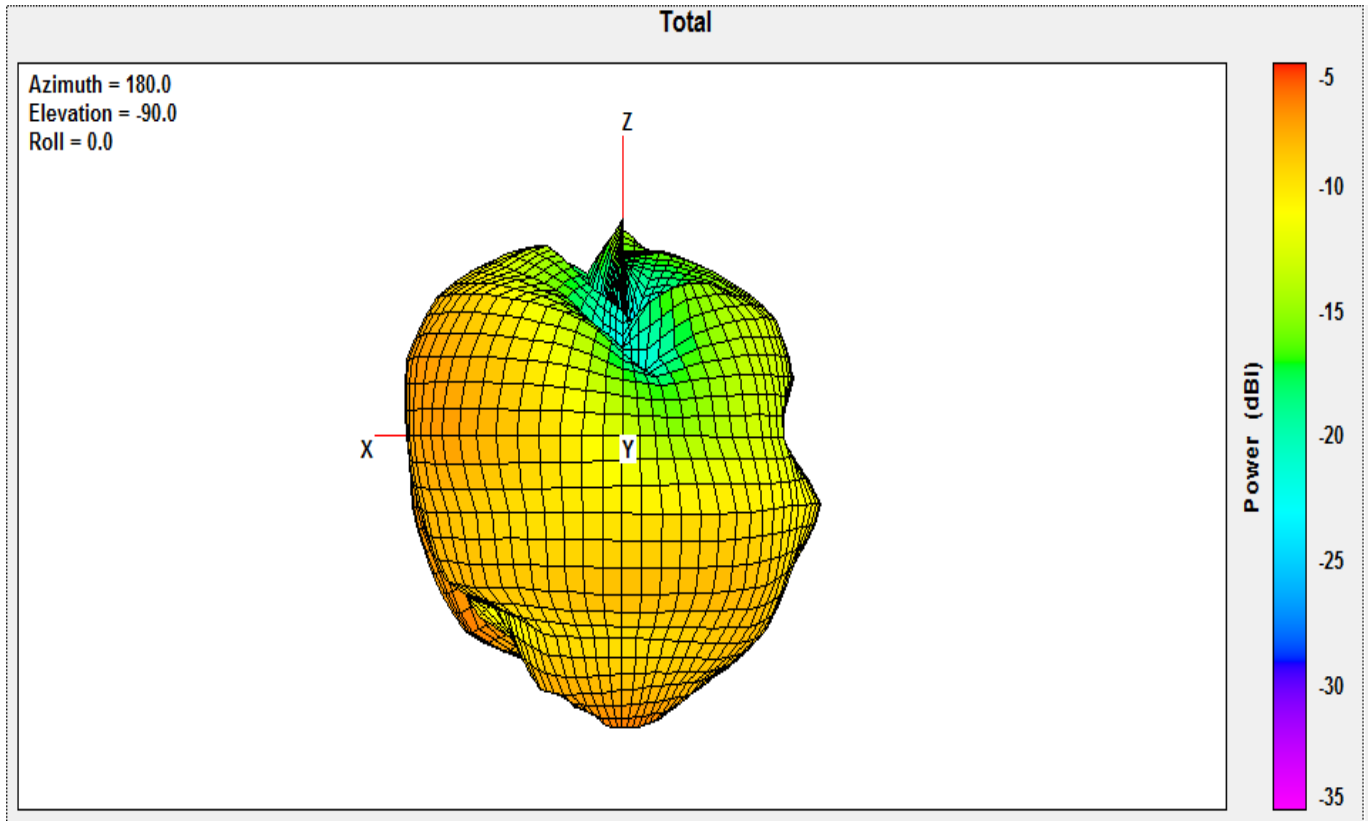
This report shall not be reproduced except in full, without the written approval of UL Verification Services (Guangzhou) Co., Ltd, Song Shan Lake Branch.

Total 3D Plot(Fre.2500MHz)



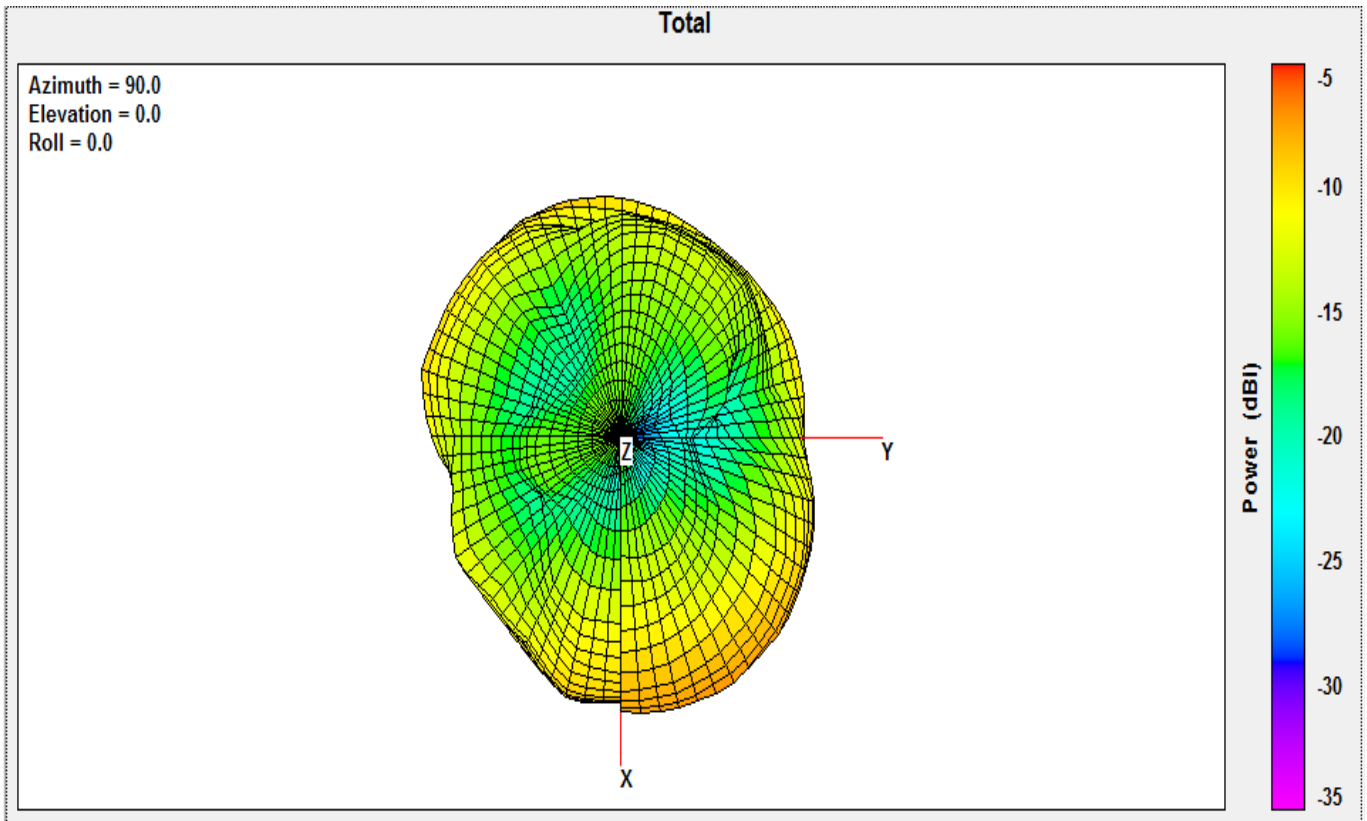
UL Verification Services (Guangzhou) Co., Ltd, Song Shan Lake Branch

This report shall not be reproduced except in full, without the written approval of UL Verification Services (Guangzhou) Co., Ltd, Song Shan Lake Branch.



UL Verification Services (Guangzhou) Co., Ltd, Song Shan Lake Branch

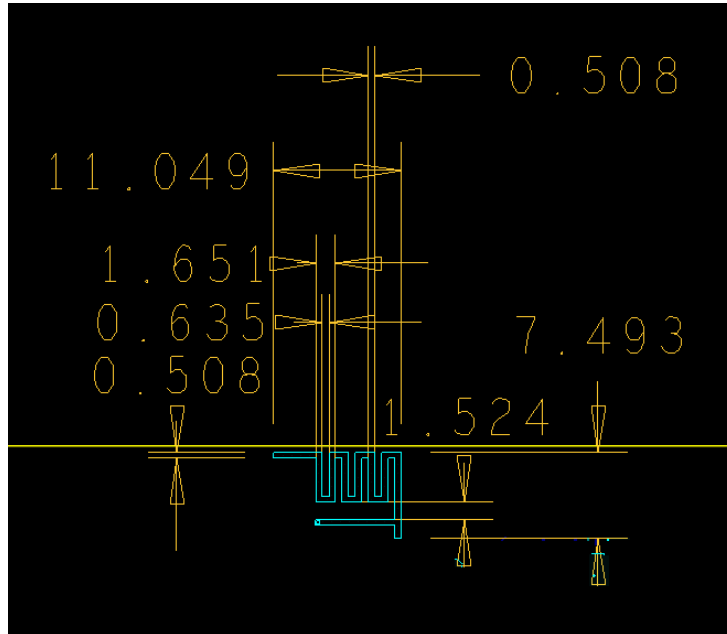
This report shall not be reproduced except in full, without the written approval of UL Verification Services (Guangzhou) Co., Ltd, Song Shan Lake Branch.



UL Verification Services (Guangzhou) Co., Ltd, Song Shan Lake Branch

This report shall not be reproduced except in full, without the written approval of UL Verification Services (Guangzhou) Co., Ltd, Song Shan Lake Branch.

6 Antenna Dimension



UL Verification Services (Guangzhou) Co., Ltd, Song Shan Lake Branch

This report shall not be reproduced except in full, without the written approval of UL Verification Services (Guangzhou) Co., Ltd, Song Shan Lake Branch.

7 Photo



END OF REPORT

UL Verification Services (Guangzhou) Co., Ltd, Song Shan Lake Branch

*This report shall not be reproduced except in full, without the written approval of UL Verification Services (Guangzhou) Co., Ltd,
Song Shan Lake Branch.*