ANTENNA TEST REPORT

For

Antenna

Model Number: LJF02-21043010-R0A

Report Number : WT238000955

Test Laboratory	:	Shenzhen Academy of Metrology and Quality Inspection
Site Location	:	NETC Building, No.4 Tongfa Rd., Xili, Nanshan, Shenzhen, China
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TEST REPORT DECLARATION

Applicant	:	Shenzhen Jiancheng Yunshi Technology Co., Ltd
Address	:	A2101, Building 9, Zone 2, No. 3609 Baishi Road, N anshan District, Shenzhen
Manufacturer	:	Shenzhen Jiancheng Yunshi Technology Co., Ltd
Address	:	A2101, Building 9, Zone 2, No. 3609 Baishi Road, N anshan District, Shenzhen
EUT Description	:	Antenna
MODEL No	:	LJF02-21043010-R0A

Test Standards: IEEE Std 149-1979

The EUT described above is tested by Shenzhen Academy of Metrology and Quality Inspection EMC Laboratory to determine the maximum emissions from the EUT and ensure the EUT to be compliance with the immunity requirements of the EUT. Shenzhen Academy of Metrology and Quality Inspection EMC Laboratory is assumed full responsibility for the accuracy of the test results.

The test report is valid for above tested sample only and shall not be reproduced in part without written approval of the laboratory.

Project Engineer:	(Zhou Li 周立)	Date:	May. 16, 2023
Checked by:	(Wan Xiao Jing 万晓婧)	Date:	May. 16, 2023
Approved by:	(Lin Yi Xiang 林奕翔)	Date:	May. 16, 2023

TABLE OF CONTENTS

TEST REPORT DECLARATION **2**
1. TEST RESULTS SUMMARY **4**
2. GENERAL INFORMATION **5**
2.1. Report information 5
2.2. Laboratory Accreditation and Relationship to Customer 5
3. GENERAL INFORMATION **6**
4. TEST PROCEDURE **6**
5. SUMMATION TEST REPORT **7**
5.1. Equipment Under Test DescRiption 7
5.2. Test Setup 7
6. TEST EQUIPMENT USED **8**
7. TEST DATA **8**
7.1. TEST RESULTS 8

1. TEST RESULTS SUMMARY

Table 1 Test Results Summary

Frequency Band (MHz)	Gain
2402-2480	-1.68
5175-5275	1.47
5725-5825	4.24

Remark: “N/A” means “Not applicable.”

2. GENERAL INFORMATION

2.1. Report information

This report is not a certificate of quality; it only applies to the sample of the specific product/equipment given at the time of its testing. The results are not used to indicate or imply that they are application to the similar items. In addition, such results must not be used to indicate or imply that SMQ approves recommends or endorses the manufacture, supplier or use of such product/equipment, or that SMQ in any way guarantees the later performance of the product/equipment.

The sample/s mentioned in this report is/are supplied by Applicant, SMQ therefore assumes no responsibility for the accuracy of information on the brand name, model number, origin of manufacture or any information supplied.

Additional copies of the report are available to the Applicant at an additional fee. No third part can obtain a copy of this report through SMQ, unless the applicant has authorized SMQ in writing to do so.

The lab will not be liable for any loss or damage resulting for false, inaccurate, inappropriate or incomplete product information provided by the applicant/manufacturer.

2.2. Laboratory Accreditation and Relationship to Customer

The testing report were performed by the Shenzhen Academy of Metrology and quality Inspection EMC Laboratory (Guangdong EMC compliance testing center), in their facilities located at NETC Building, No.4 Tongfa Rd., Xili, Nanshan, Shenzhen, China. At the time of testing, Laboratory is accredited by the following organizations:

China National Accreditation Service for Conformity Assessment (CNAS) accredits the Laboratory for conformance to FCC standards, EMC international standards and EN standards. The Registration Number is CNAS L0579.

The Laboratory is Accredited Testing Laboratory of FCC with Designation number CN1165 and Site registration number 582918.

The Laboratory is registered to perform emission tests with Innovation, Science and Economic Development (ISED), and the registration number is 11177A.

The Laboratory is registered to perform emission tests with VCCI, and the registration number are C-20048, G20076, R-20077, R-20078 and T-20047.

The Laboratory is Accredited Testing Laboratory of American Association for Laboratory Accreditation (A2LA) and certificate number is 3292.01.

3. GENERAL INFORMATION

Over the Air Measurements (Active) are performed in a Satimo SG-24. The SG-24 has 23 probe antennas mounted with equal spacing on a circular arch. Electronic switching of the probe antennas provides outstanding measurement speed. The geometry of the setup, with only a Styrofoam column within 1.6 meters of the EUT, ensures minimum interference and low ripple on the measured radiation patterns.

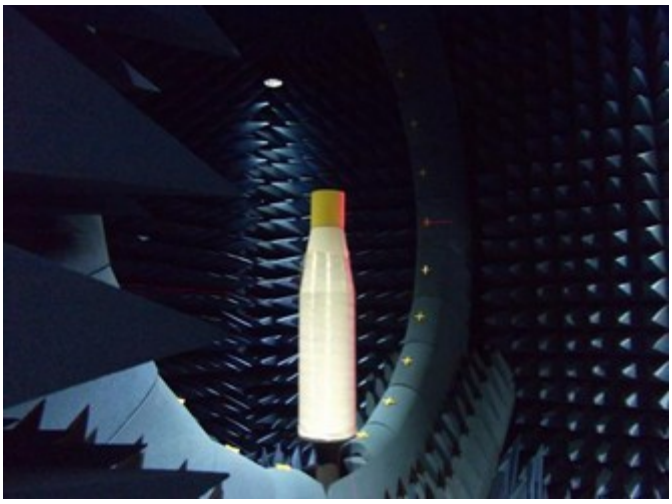


Figure 1– SG-24. The DUT is placed on top of the pedestal, in the center of the system.

4. TEST PROCEDURE

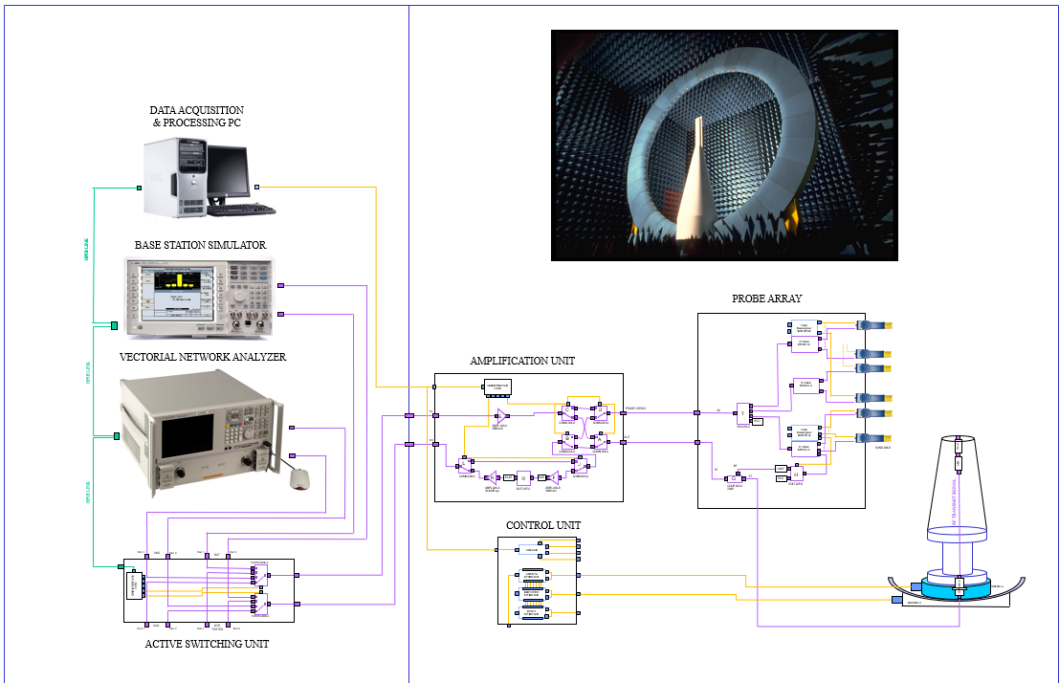
The gain of the antenna was measured in the anechoic chamber Satimo SG24. The chamber provides less than –30 dB reflectivity from 400 MHz through 6 GHz. The chamber size is:8m*5m*5m. The measurement results are calibrated using a dipole antenna. The antenna gain and efficiency are measured with AUT placed in the chamber.

5. SUMMATION TEST REPORT

5.1. Equipment Under Test DescRiption

Date of Measurements:	May. 12, 2023
Device Manufacturer:	Shenzhen Jiancheng Yunshi Technology Co., Ltd
Antenna Type	LOOP
Temperature	22~24 ℃
Relative Humidity	40~50 %

5.2. Test Setup



6. TEST EQUIPMENT USED

Table 2 Test Equipment

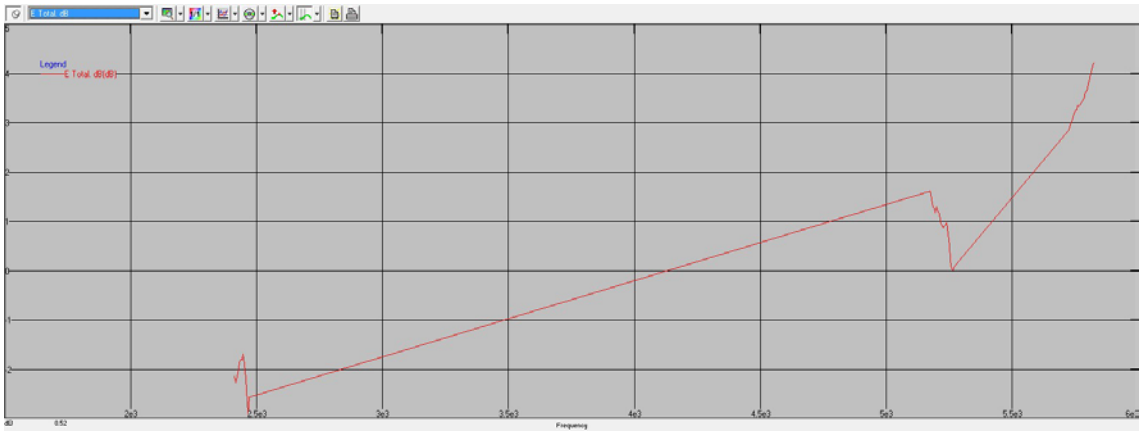
No.	Equipment	Manufacturer	Model No.	LAST CALIB	Period
SB9011/01	Network analyzer	Agilent	E5071C	2023.04.24	1 Year
--	Passive Measurement	SATIMO	1.1.4	--	--

7. TEST DATA

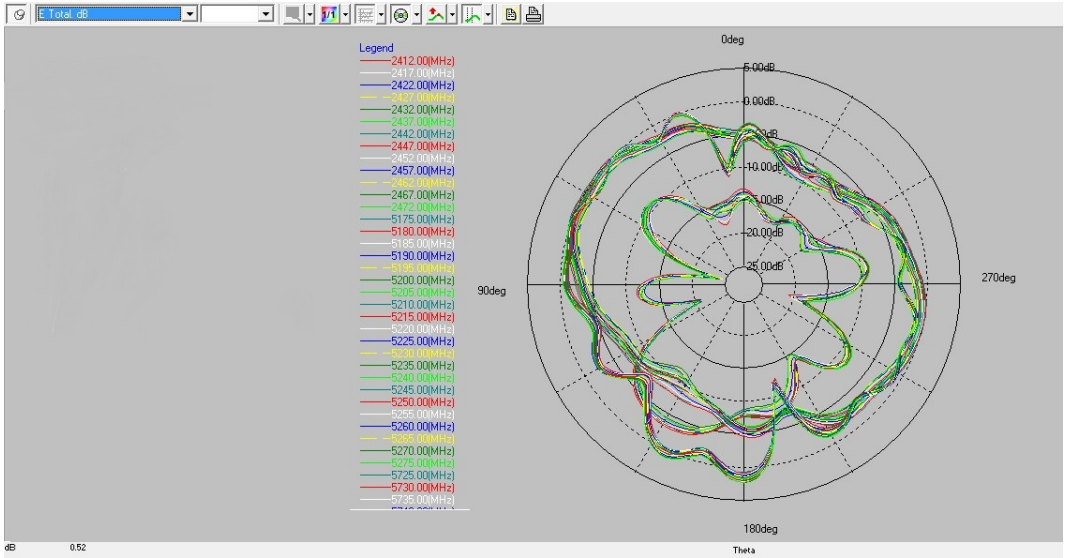
7.1. TEST RESULTS

Frequency	Gain
2402	-1.83
2407	-1.86
2412	-2.14
2417	-2.26
2422	-2.14
2427	-2.08
2432	-1.86
2437	-1.79
2442	-1.79
2447	-1.68
2452	-1.88
2457	-2.18
2462	-2.65
2467	-2.89
2472	-2.56
2480	-2.44
5180	1.47
5185	1.30
5190	1.27
5195	1.19
5200	1.31
5205	1.20
5210	1.17
5215	1.01
5220	0.95
5225	0.88
5230	0.92
5235	0.94
5240	0.98
5245	0.75
5250	0.52
5255	0.22
5260	0.05
5265	0.02

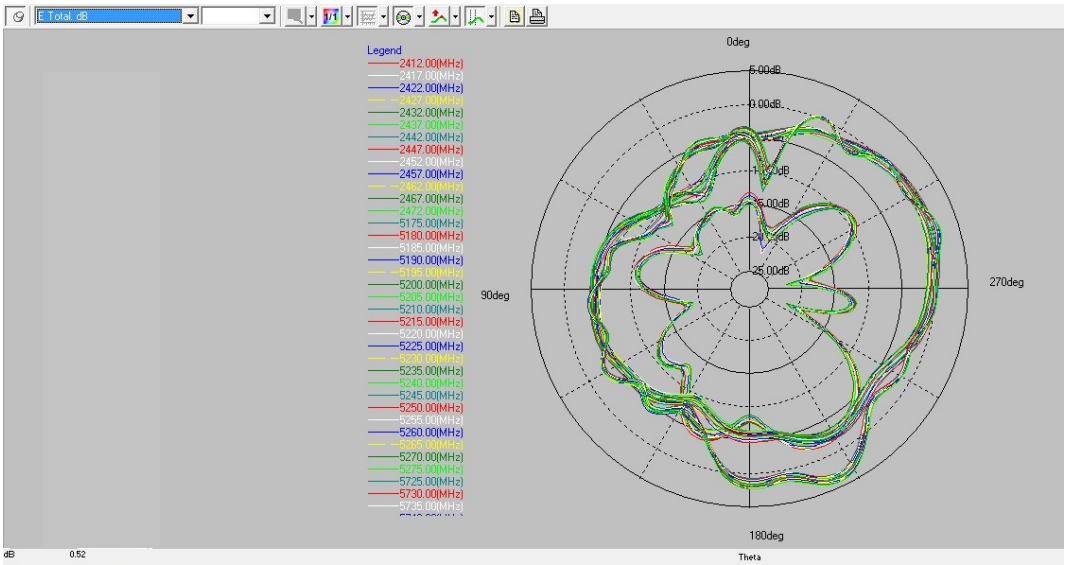
5270	0.11
5275	0.12
5725	2.87
5730	2.97
5735	3.03
5740	3.08
5745	3.18
5750	3.25
5755	3.27
5760	3.35
5765	3.35
5770	3.37
5775	3.45
5780	3.46
5785	3.49
5790	3.64
5795	3.65
5800	3.73
5805	3.84
5810	3.99
5815	4.08
5820	4.17
5825	4.24



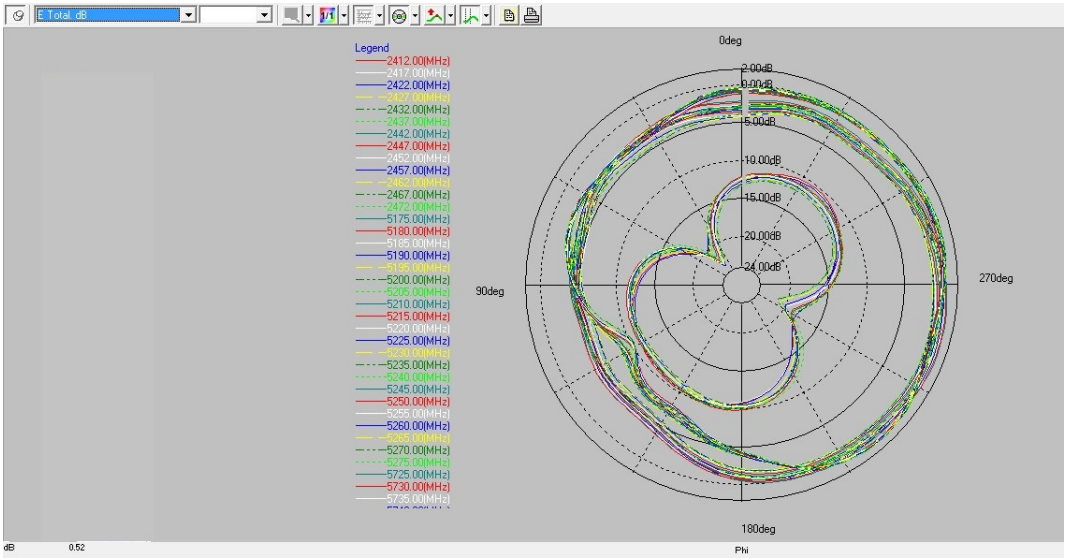
Peak Gain



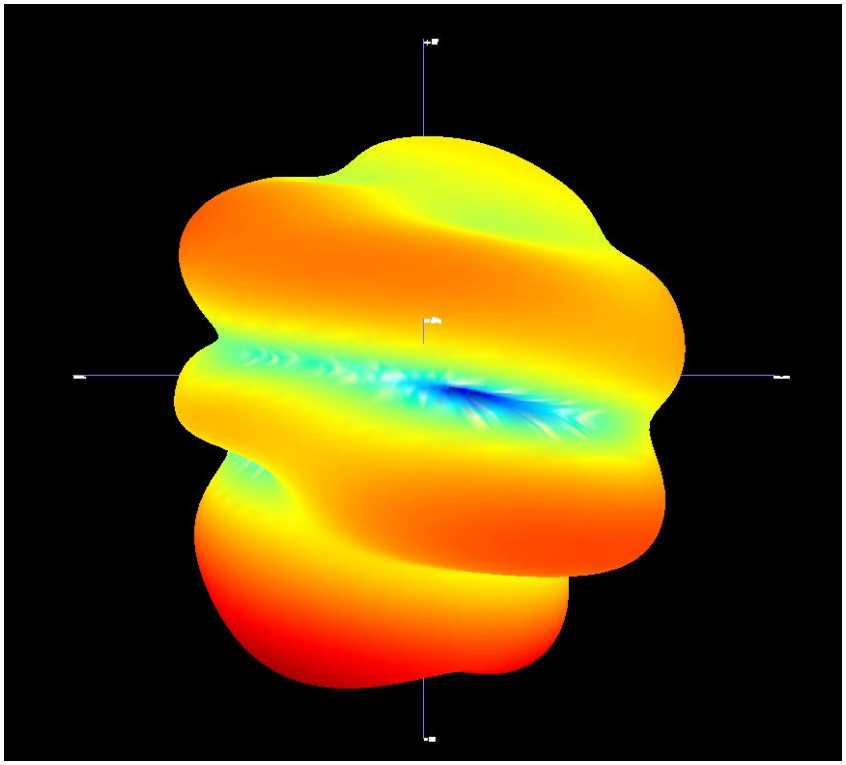
X-Z Plane



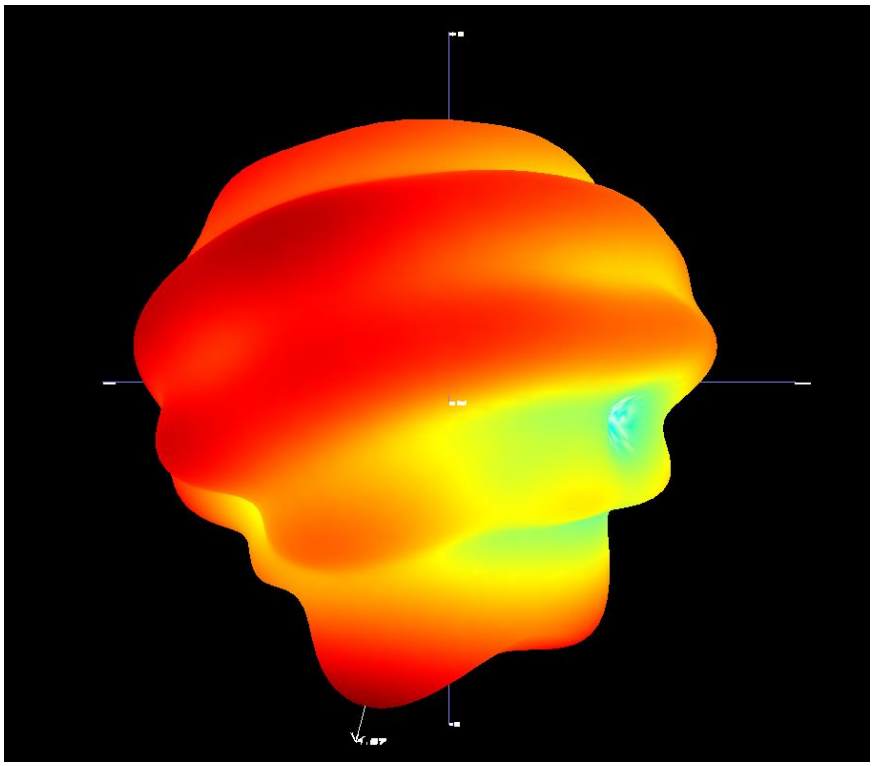
Y-Z Plane



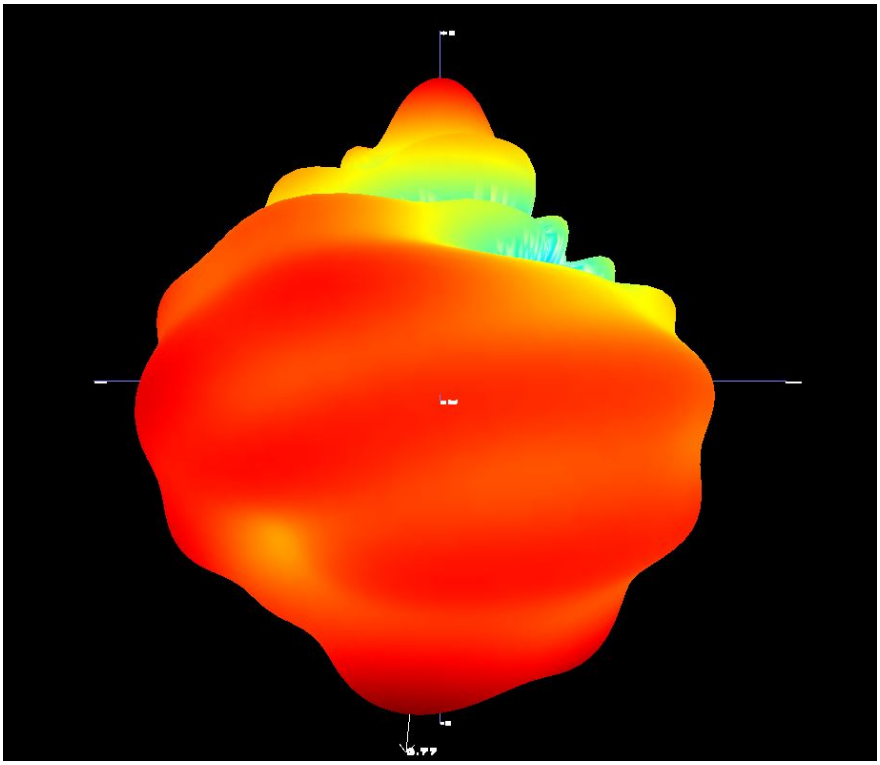
X-Y Plane



2402 MHz



5180 MHz



5800 MHz

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