

ANTENNA TEST REPORT

For

SolaBulb

Model Number: AST-BLBSL-E27

Report Number : WT258502007

Test Laboratory : Shenzhen Academy of Metrology and Quality
Inspection
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Email: complaint@smq.com.cn

TEST REPORT DECLARATION

Applicant : Astera LED Technology GmbH
Address : Schatzbogen 60 81829 Munich Germany
Manufacturer : Astera Manufacturing Limited
Address : 101, 201, 301, 401, 501, Bldg. 3, CLT Science & Technology Park, No. 7, GanLiliu Road, Jihua subdistrict, Longgang District, Shenzhen, Guangdong Province, P.R. China
Factory : \

Address : \

EUT Description : SolaBulb
MODEL No : AST-BLBSL-E27
Trade mark : ASTERA

Test Standards: IEEE149-1979

The EUT described above is tested by Shenzhen Academy of Metrology and Quality Inspection EMC Laboratory. 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:

Aug. 29, 2025

Checked by:

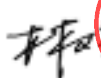


(Wan Xiao Jing 万晓婧)

Date:

Aug. 29, 2025

Approved by:



(Lin Bin 林斌)

Date:

Aug. 29, 2025

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1. TEST RESULTS SUMMARY

Table 1 Test Results Summary

Test Items	Frequency Band (MHz)	Test Results
Antenna Gain (Max)	863-870	-11.55 dBi
	902-928	-14.18 dBi
	2402-2480	2.13 dBi
Efficiency (%)	863-870	2.62%
	902-928	1.61%
	2402-2480	72.10%

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.

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2.2. Laboratory Accreditation and Relationship to Customer

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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.

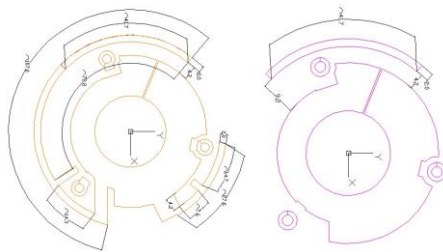


3. PRODUCT DESCRIPTION

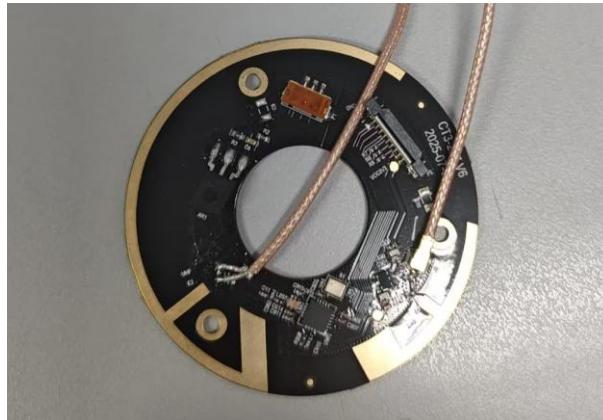
3.1.EUT Description

Description : SolaBulb
Applicant : Astera LED Technology GmbH
Model Number : AST-BLBSL-E27
Frequency Band : 863-870, 902-928, 2402-2480 MHz

Antenna size :



Antenna shape :



Remark: The above information is provided by the customer

3.2.Test Conditions

Date of test: Aug. 27- Aug. 28, 2024
Date of EUT Receive: Aug. 26, 2025
Temperature: 20~24°C
Relative Humidity: 40~50 %

4. TEST EQUIPMENT USED

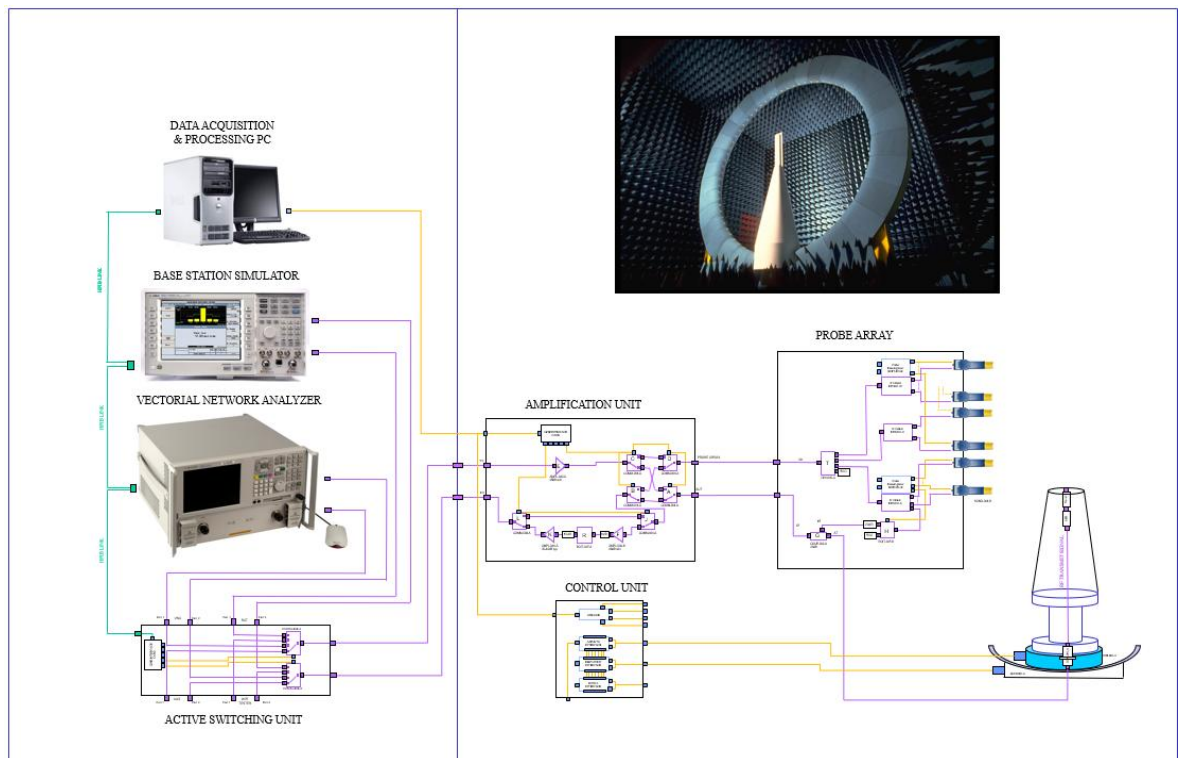
4.1. Test Equipment Used to Measure Conducted Disturbance

Table 2 Test Equipment

No.	Equipment	Manufacturer	Model No.	LAST CAL.	Period
SB9011	Antenna test system	Satimo	SG24	N/A	N/A
SB9011/01	Network analyzer	Agilent	E5071C	Apr. 17, 2025	1 Year
--	Passive Measurement	SATIMO	1.1.4	N/A	N/A

5. ANTENNA TEST

5.1. Test Setup



5.2. Test Data

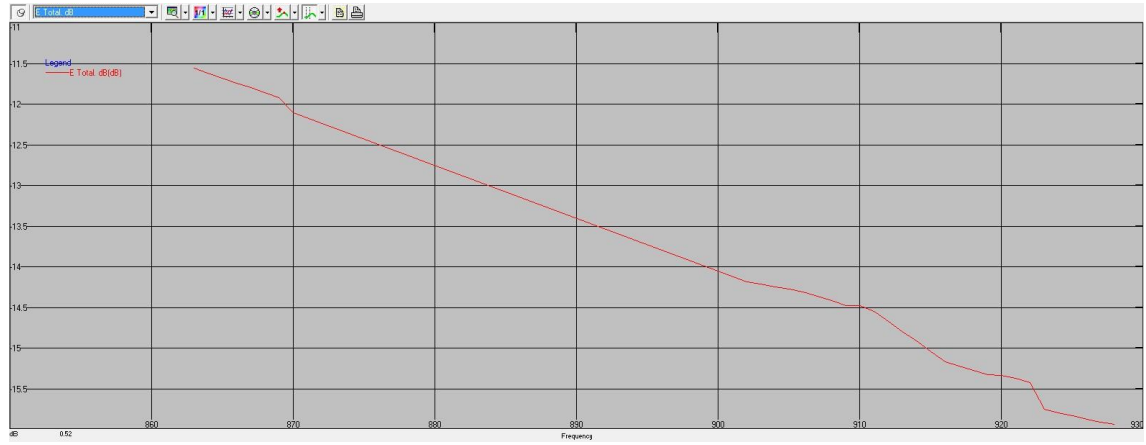
Antenna Gain:

Table 3 Antenna Gain

Frequency band (MHz)	Gain (dBi)
863	-11.55
864	-11.62
865	-11.67
866	-11.74
867	-11.80
868	-11.85
869	-11.91
870	-12.10
902	-14.18
903	-14.21
904	-14.24
905	-14.27
906	-14.30
907	-14.36
908	-14.42
909	-14.48
910	-14.47
911	-14.54
912	-14.67
913	-14.79
914	-14.91
915	-15.04
916	-15.16
917	-15.22
918	-15.27
919	-15.32
920	-15.33
921	-15.37
922	-15.42
923	-15.75
924	-15.79
925	-15.83
926	-15.87
927	-15.90
928	-15.94
2402	0.70
2405	0.75
2410	1.23
2415	1.28
2420	1.30
2425	1.41
2430	1.86
2435	2.09
2440	1.96
2445	2.13
2450	1.66
2455	1.53
2460	1.31

2465	1.12
2470	1.17
2475	1.26
2480	1.37

863-870, 902-928 MHz



2402~2480 MHz

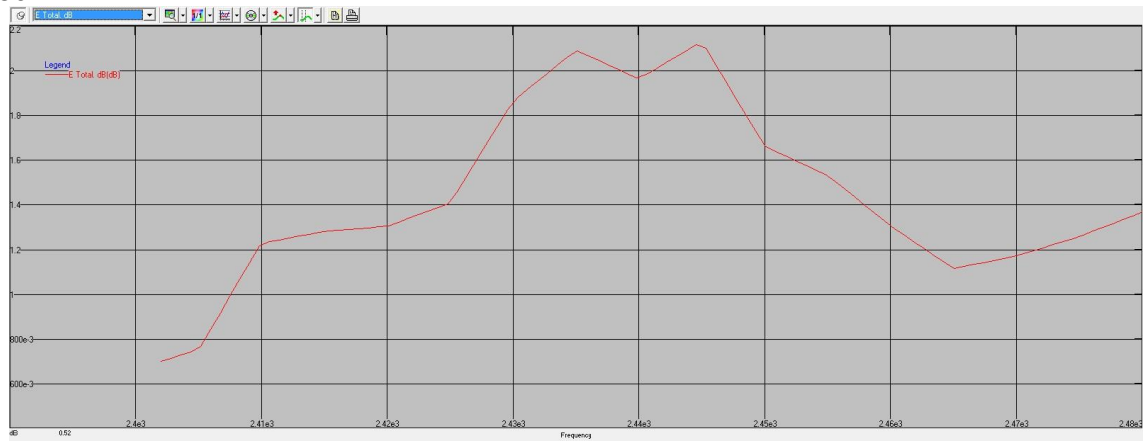
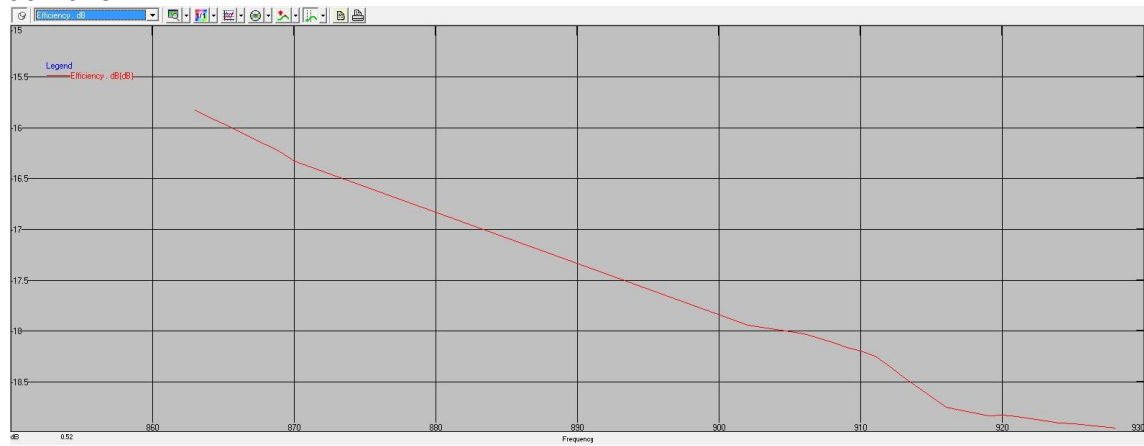


Table 4 Efficiency

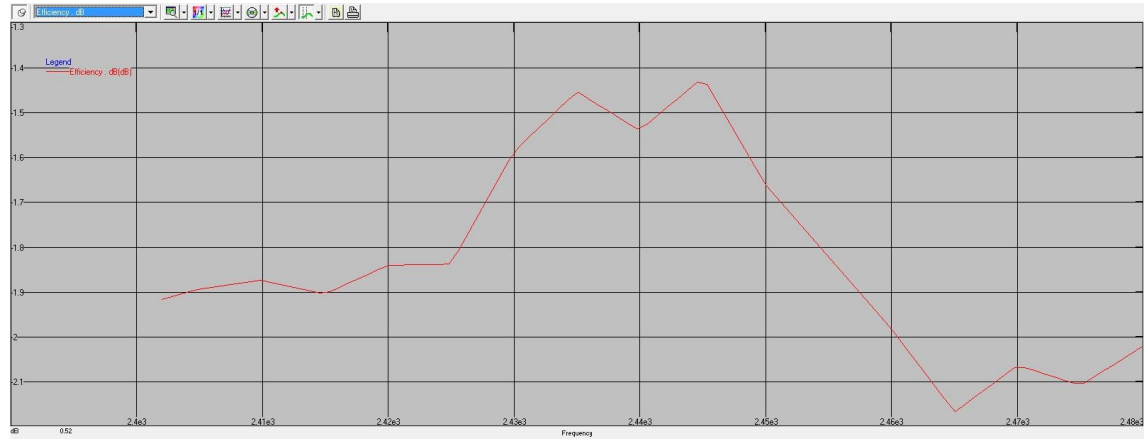
Frequency band (MHz)	Efficiency (%)
863	2.62
864	2.57
865	2.53
866	2.49
867	2.46
868	2.42
869	2.38
870	2.33
902	1.61
903	1.60
904	1.59
905	1.58
906	1.58
907	1.56
908	1.54
909	1.53
910	1.52
911	1.50
912	1.46
913	1.43
914	1.40
915	1.36
916	1.33
917	1.32
918	1.32
919	1.31
920	1.31
921	1.31
922	1.30
923	1.29
924	1.29
925	1.28
926	1.28
927	1.28
928	1.27
2402	64.34
2405	64.68
2410	64.96
2415	64.51
2420	65.47
2425	65.50
2430	69.39
2435	71.57
2440	70.15
2445	72.10
2450	68.21
2455	65.75
2460	63.35
2465	60.72
2470	62.19
2475	61.55

2480	62.82
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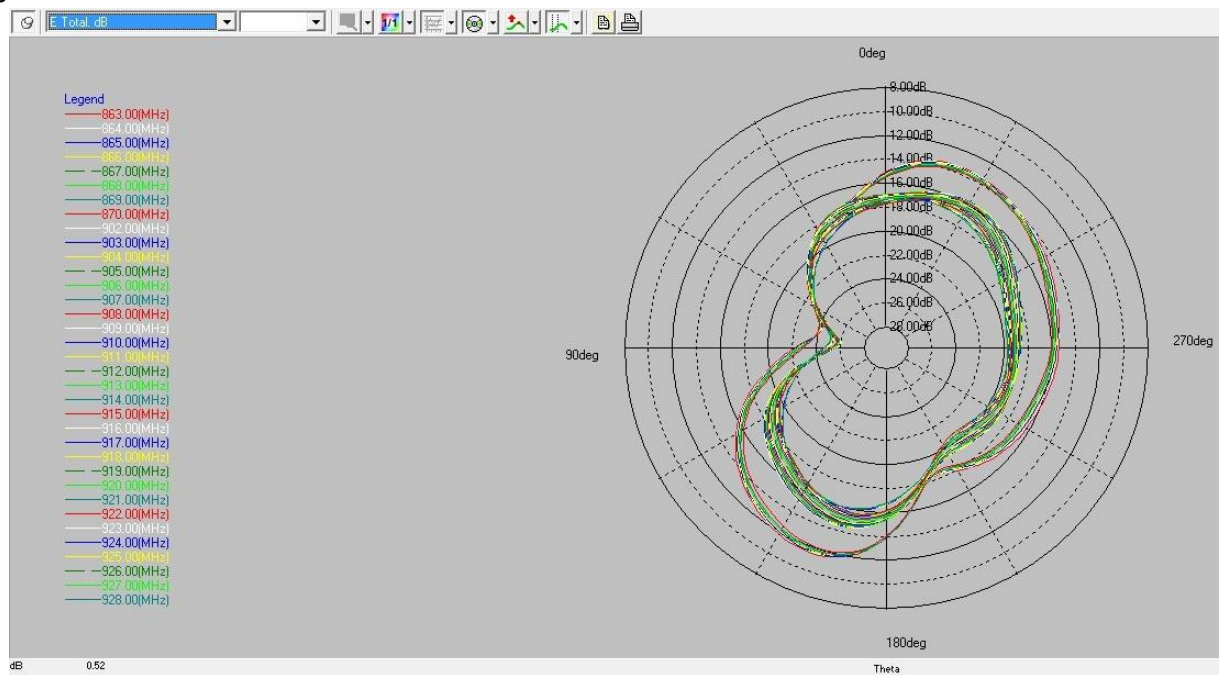
863-870, 902-928 MHz



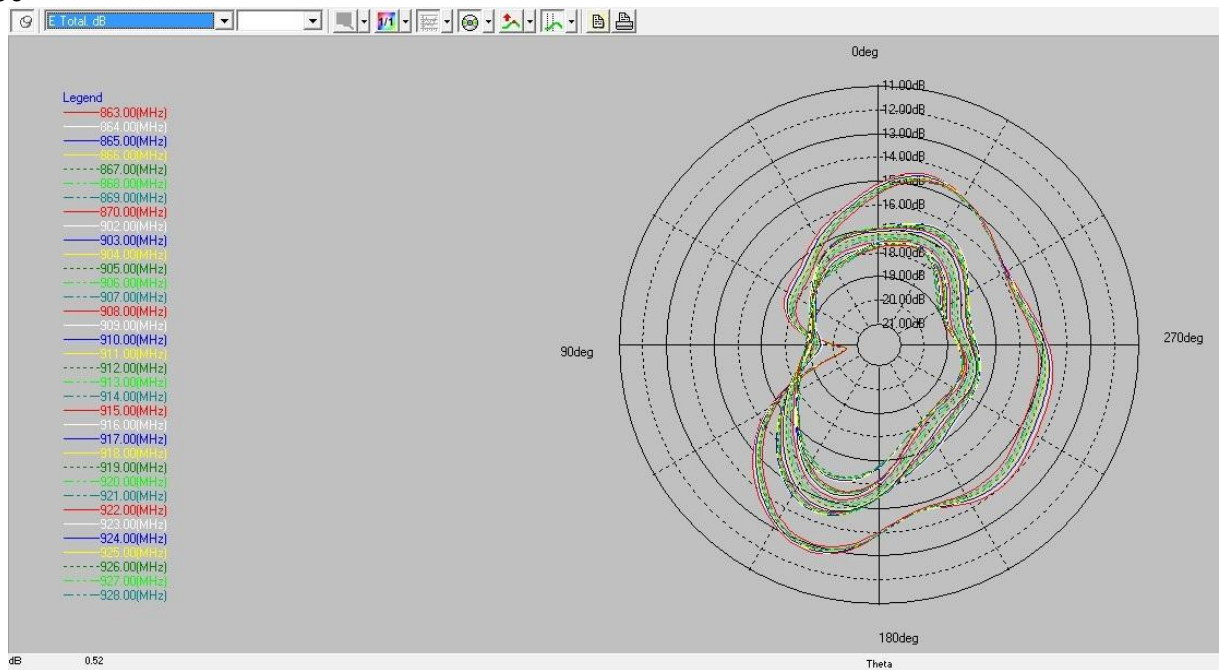
2402~2480 MHz



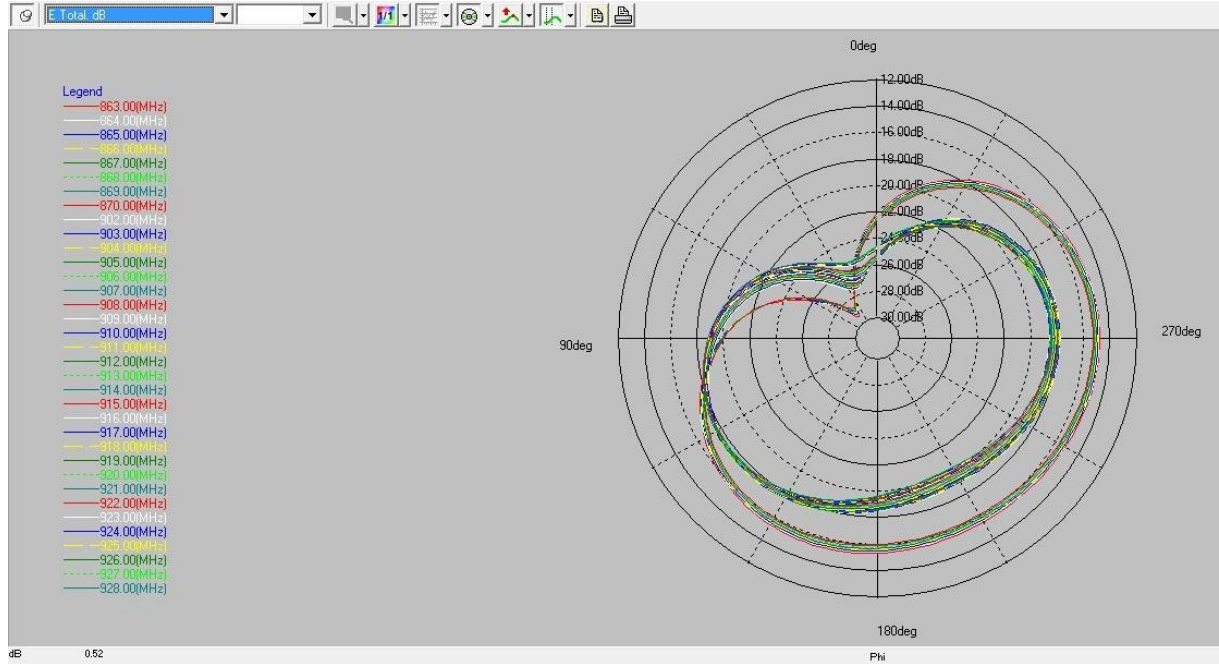
863-870, 902-928 MHz
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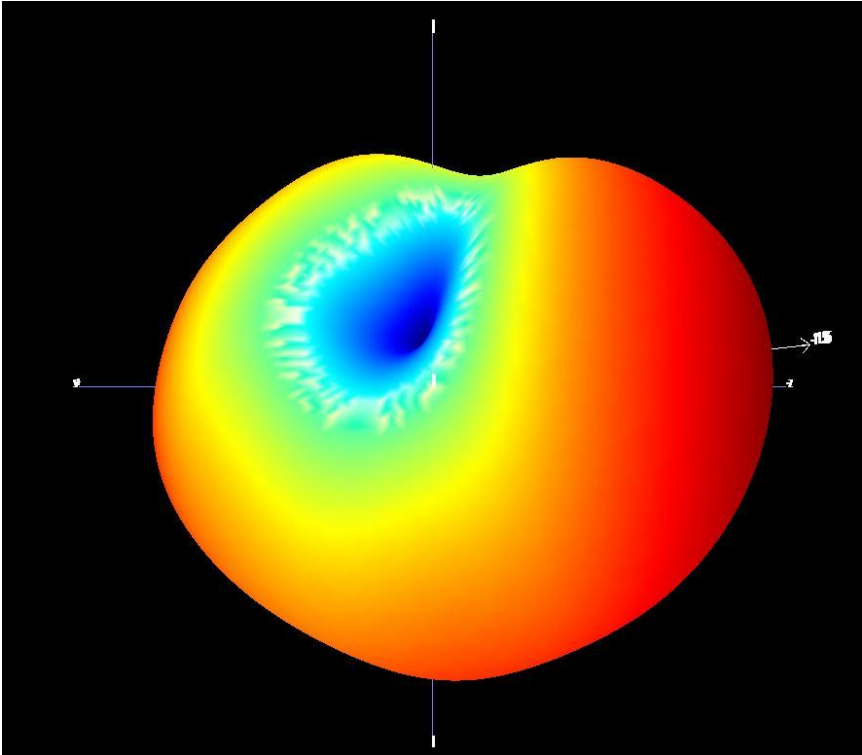
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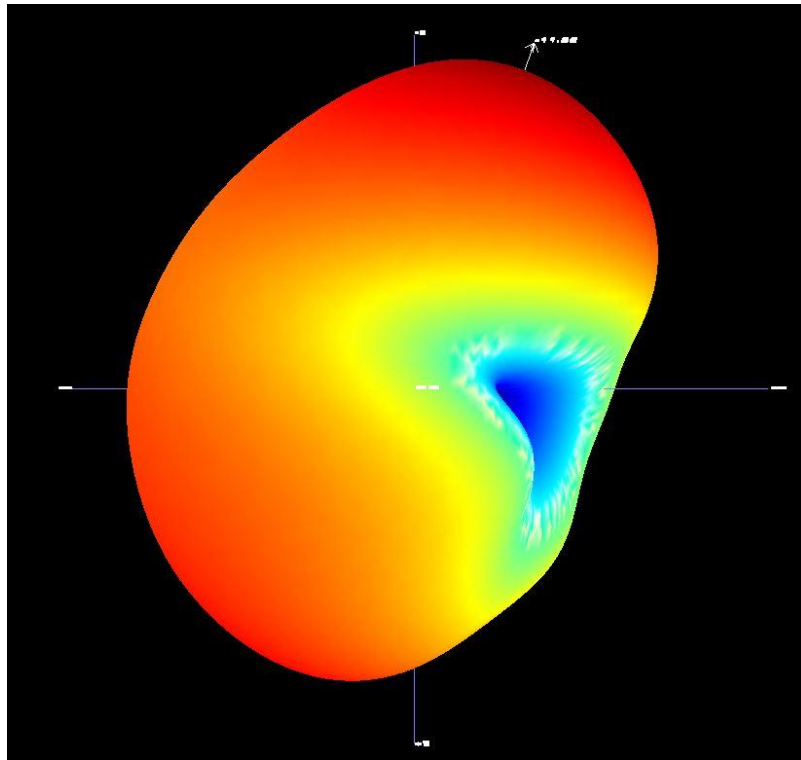
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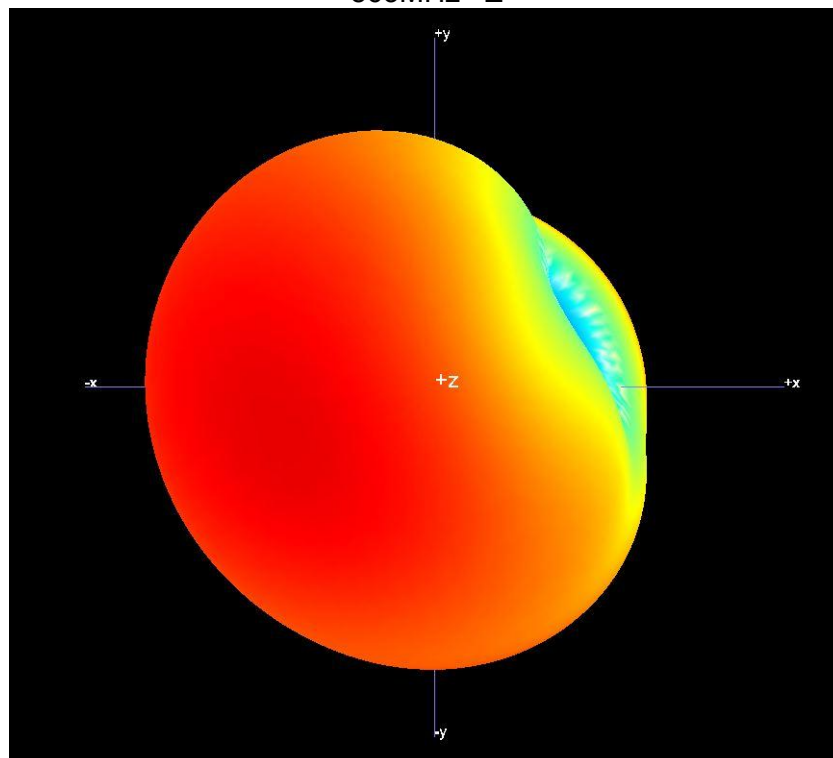
863MHz +X



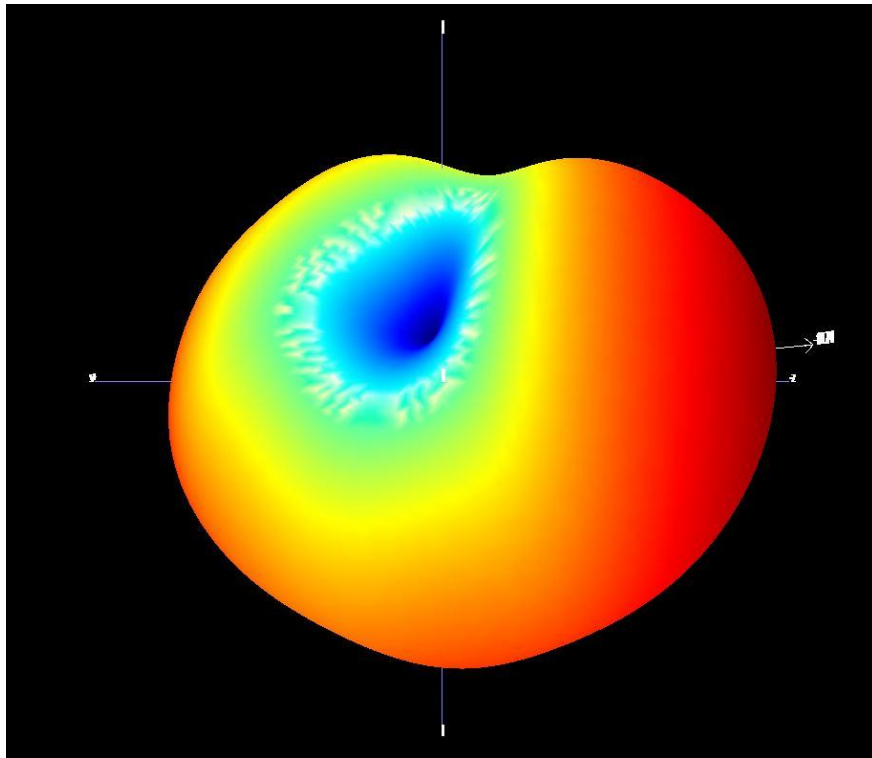
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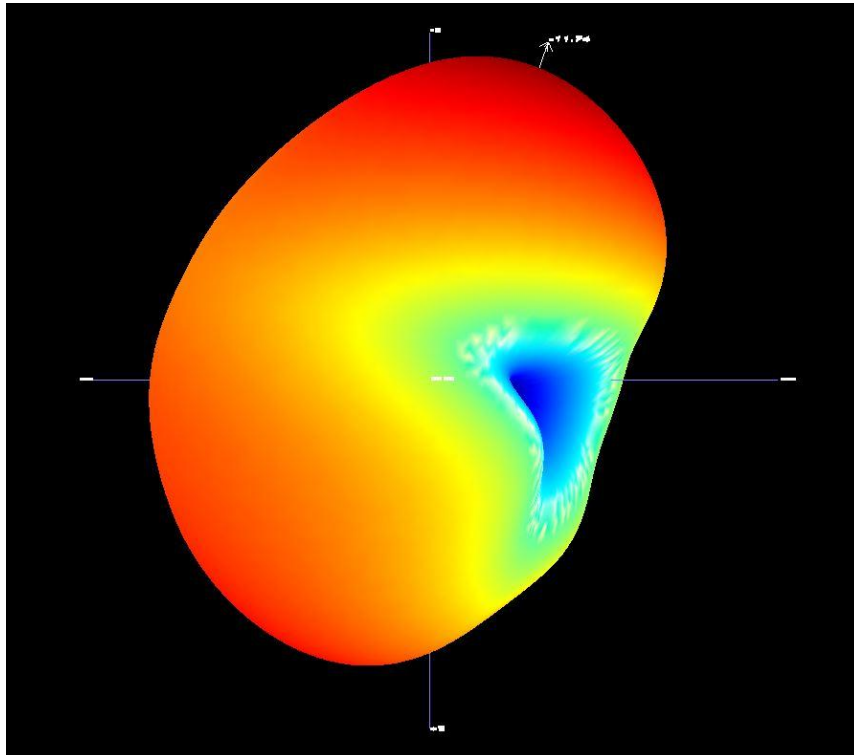
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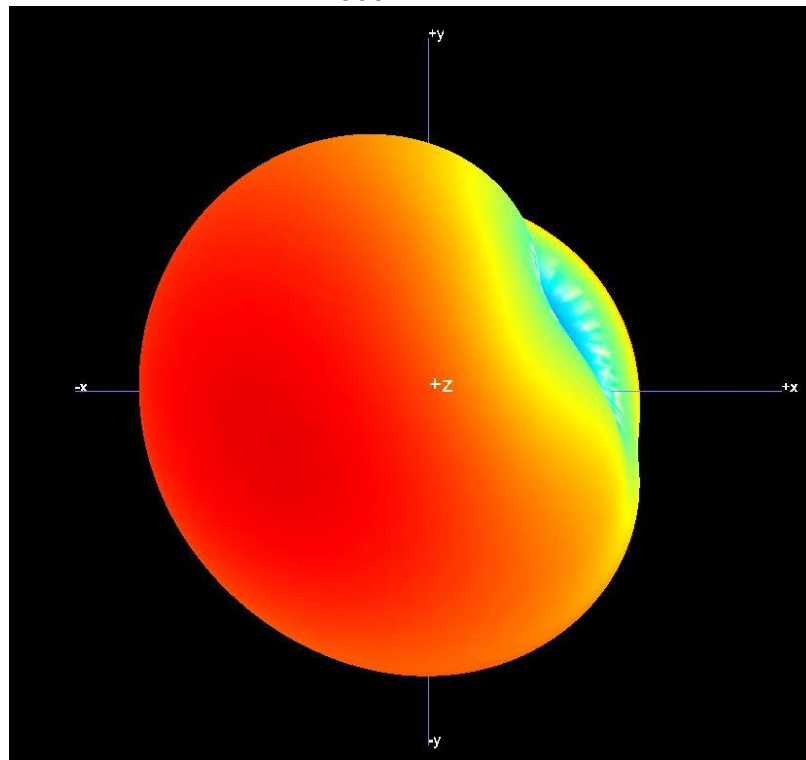
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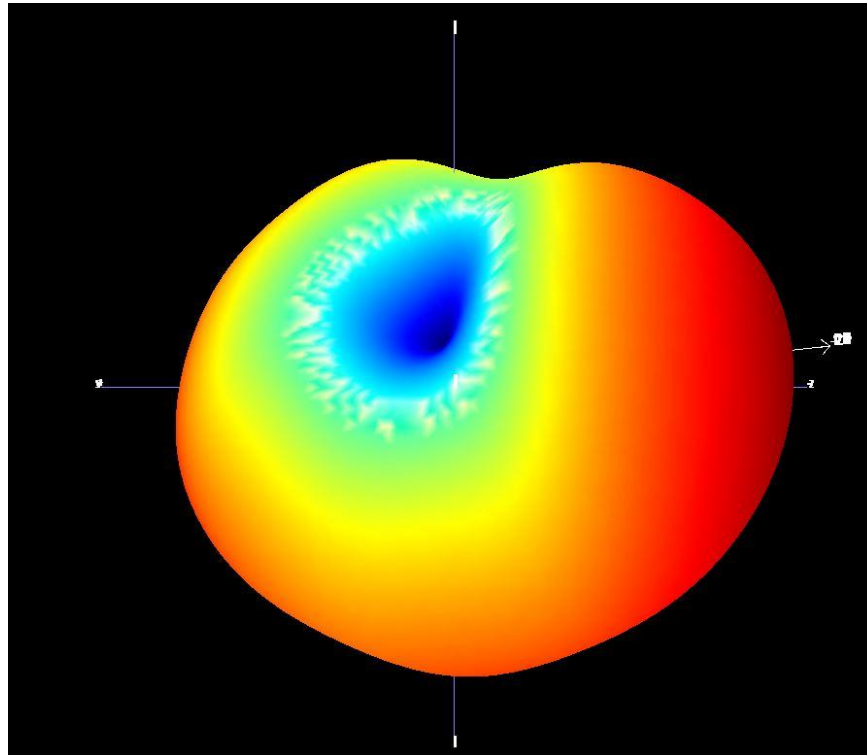
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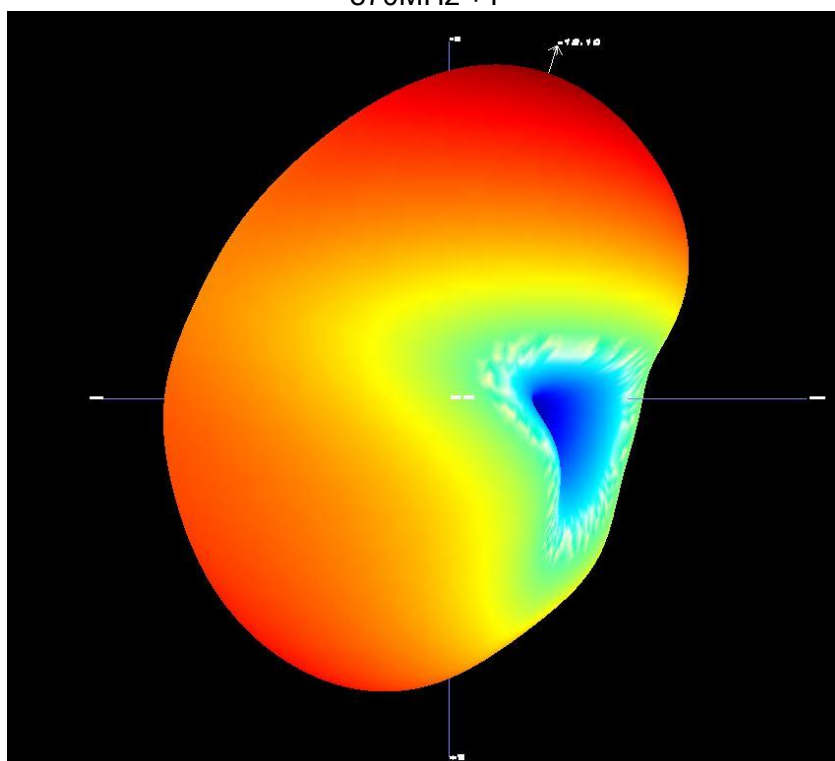
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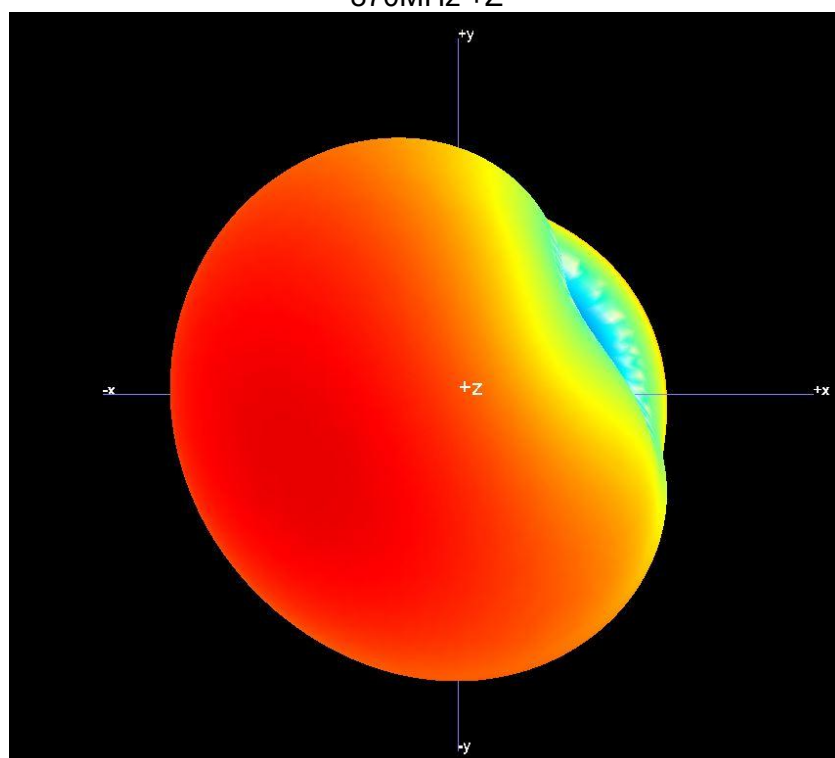
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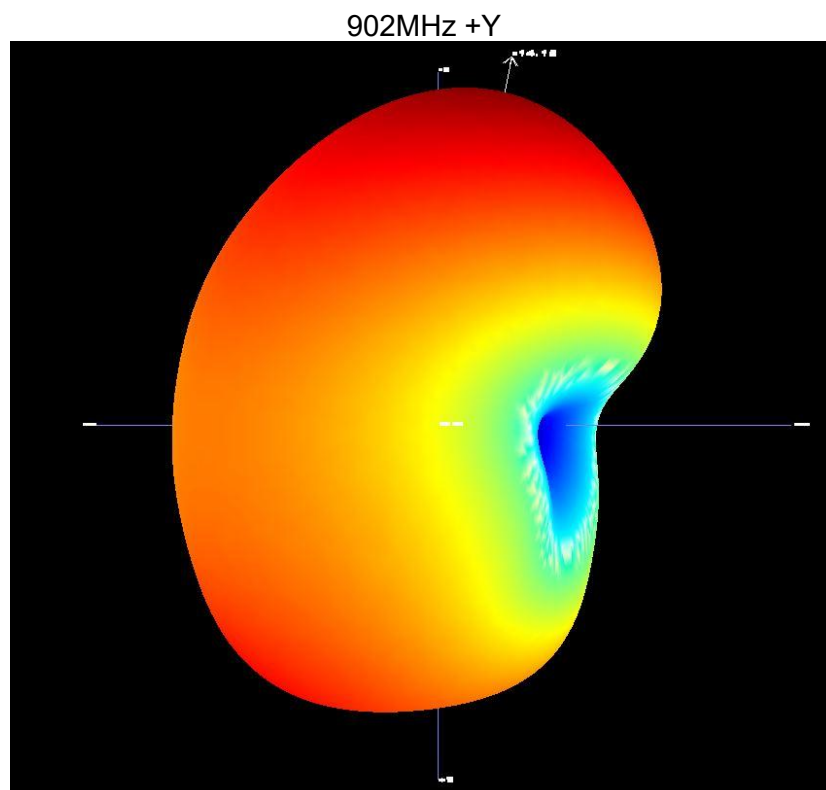
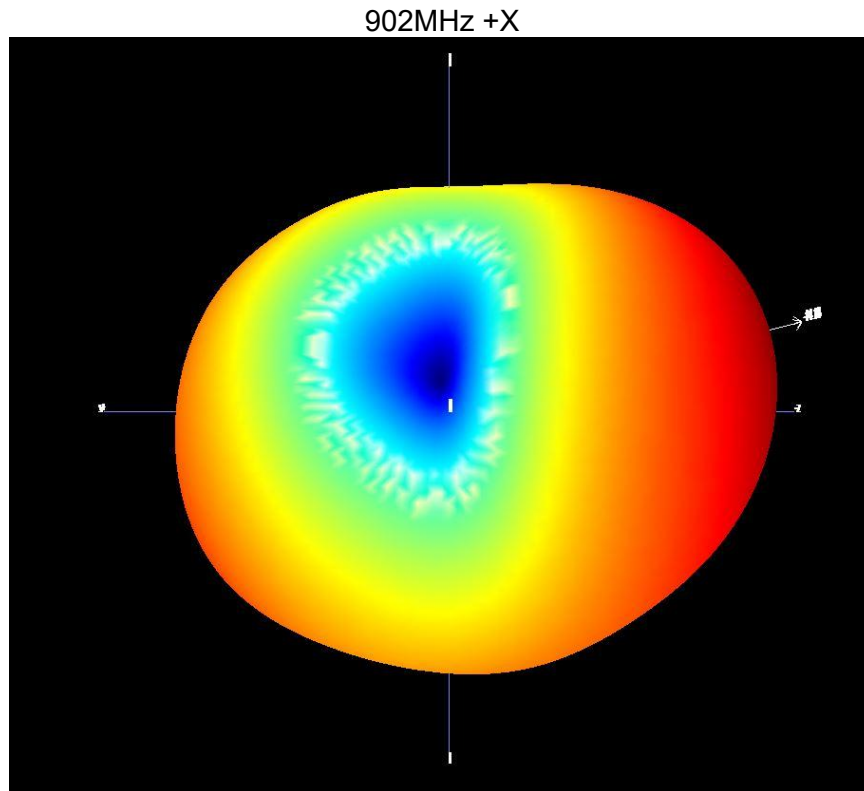


870MHz +Y

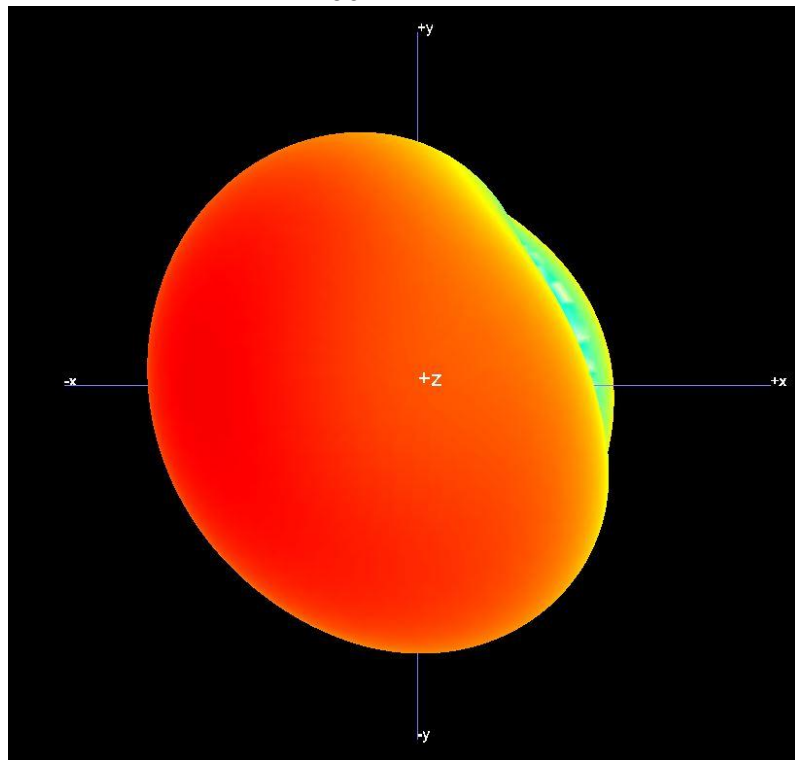


870MHz +Z

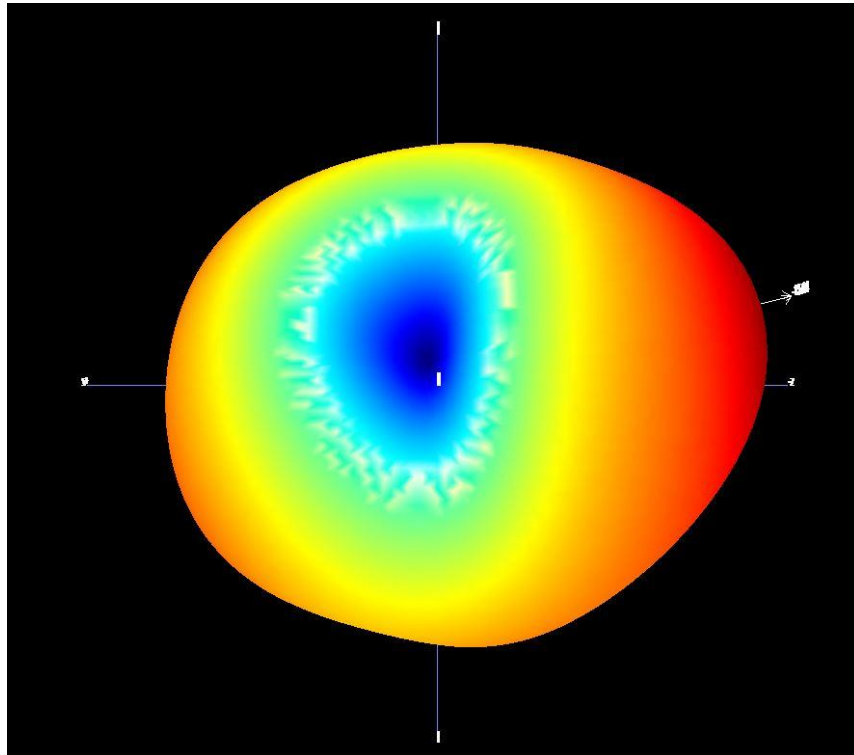




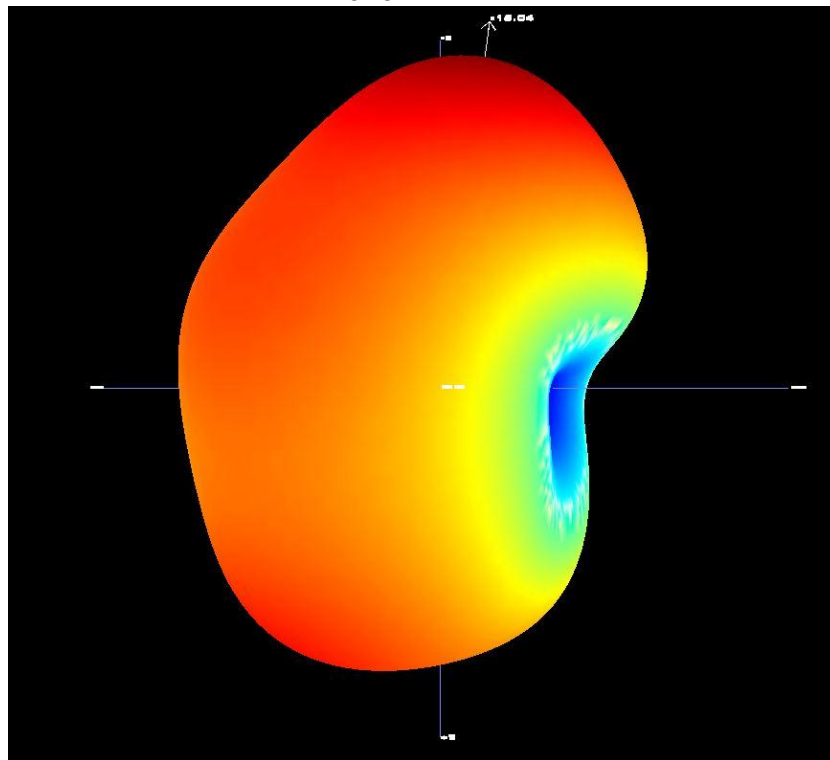
902MHz +Z



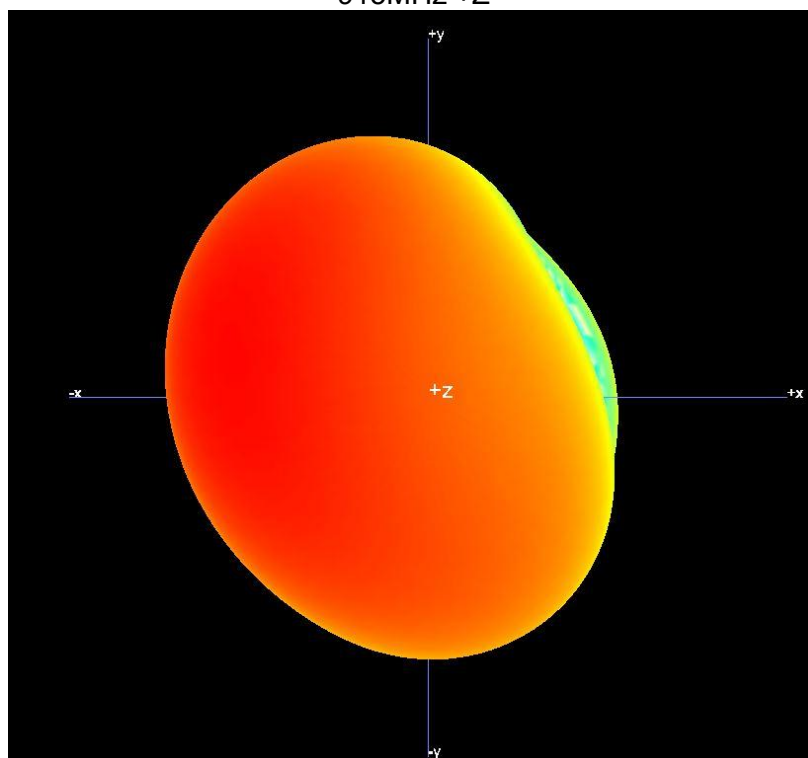
915MHz +X



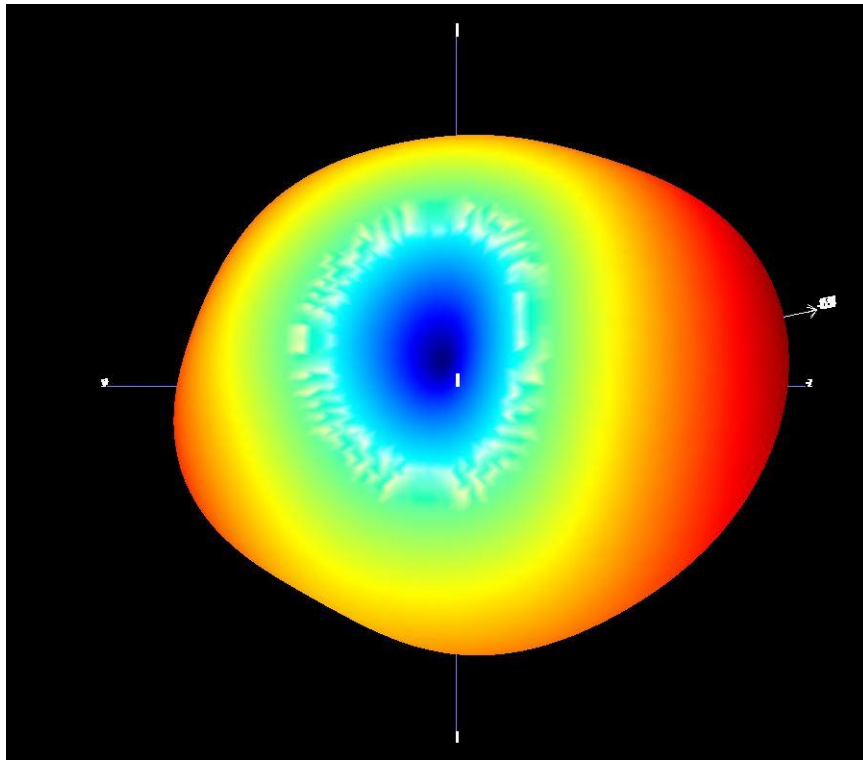
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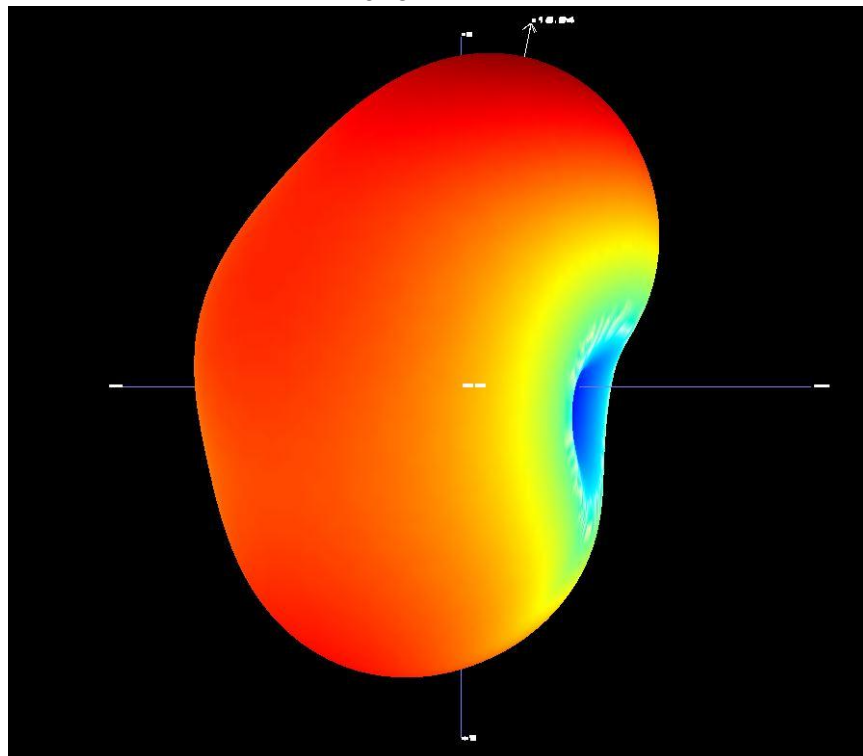
915MHz +Z



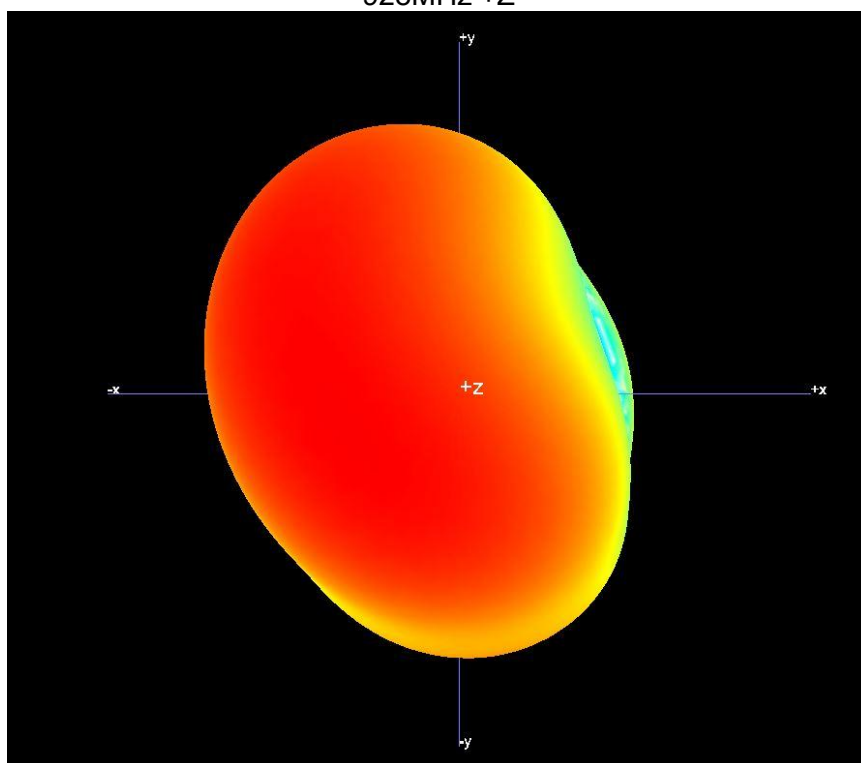
928MHz +X



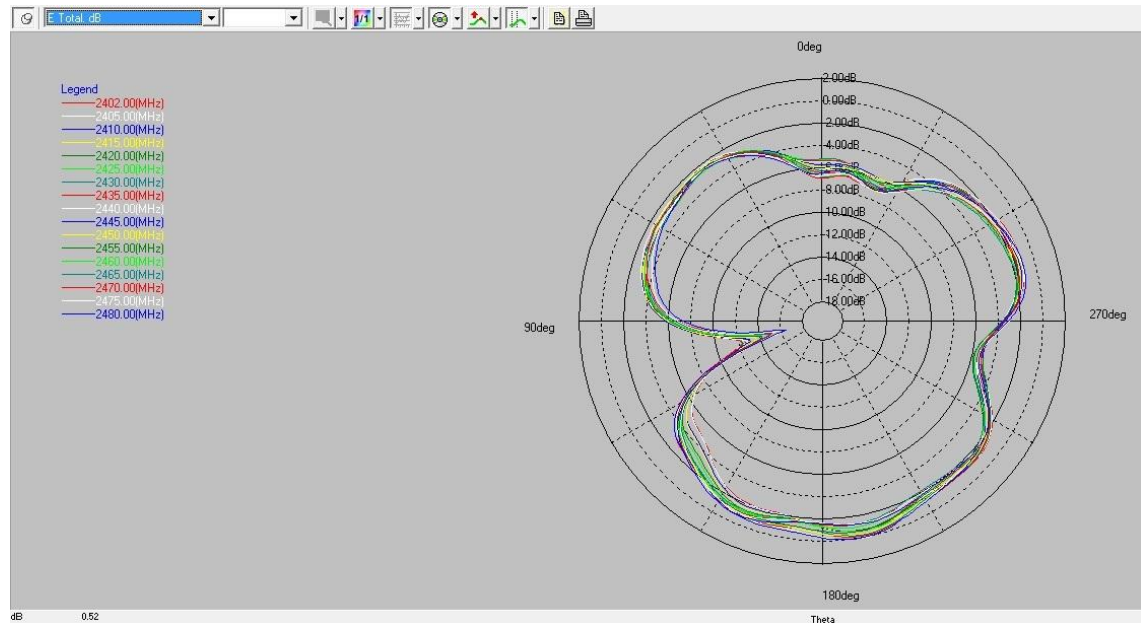
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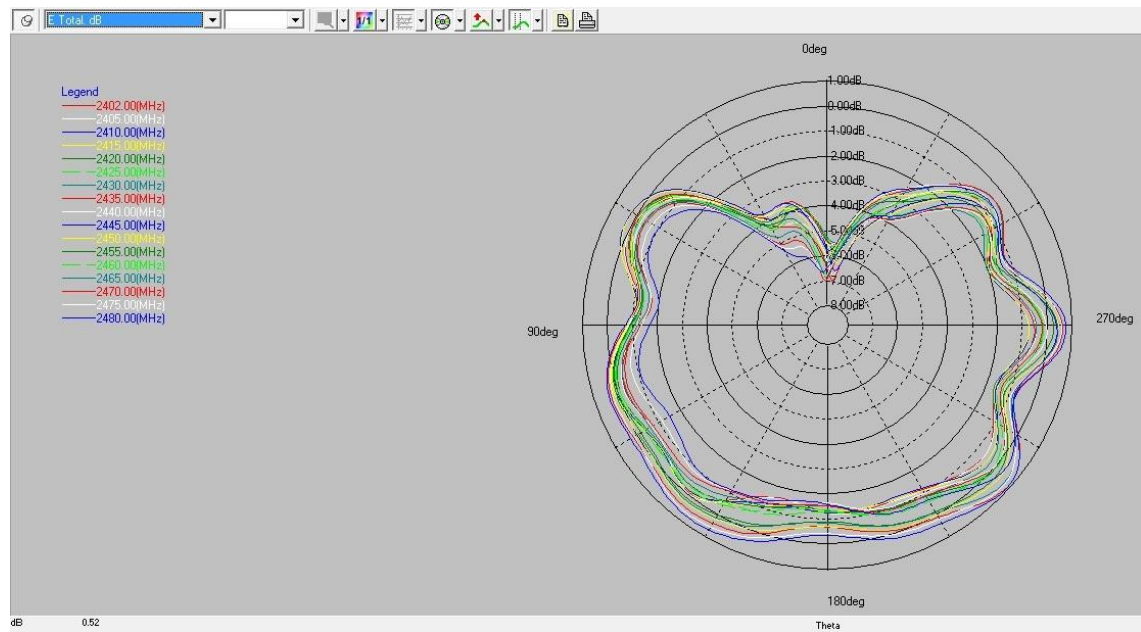
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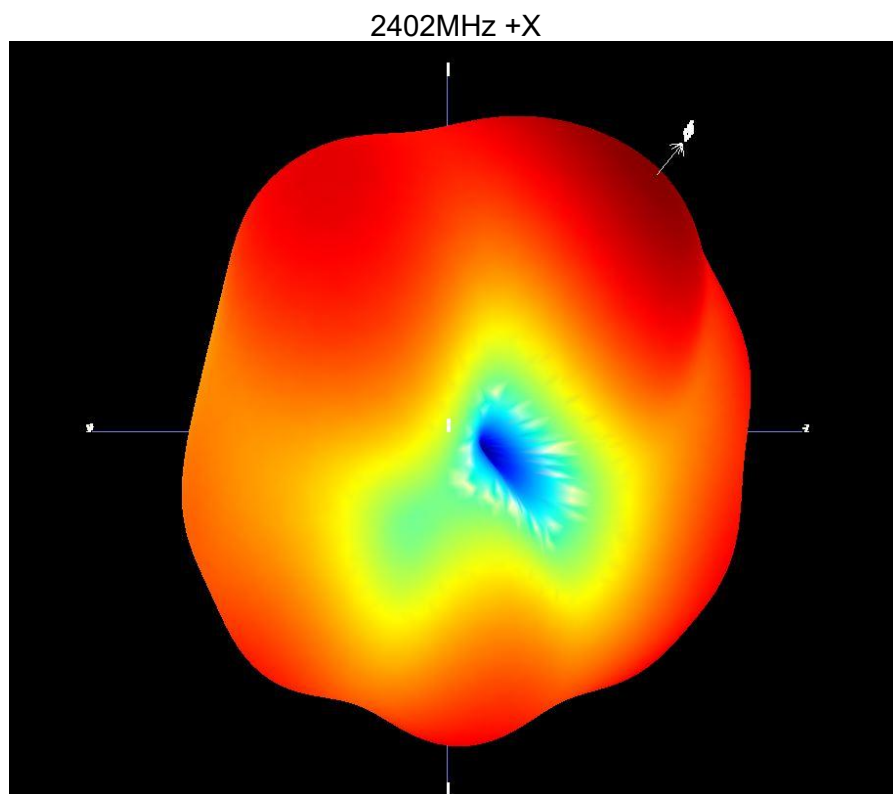
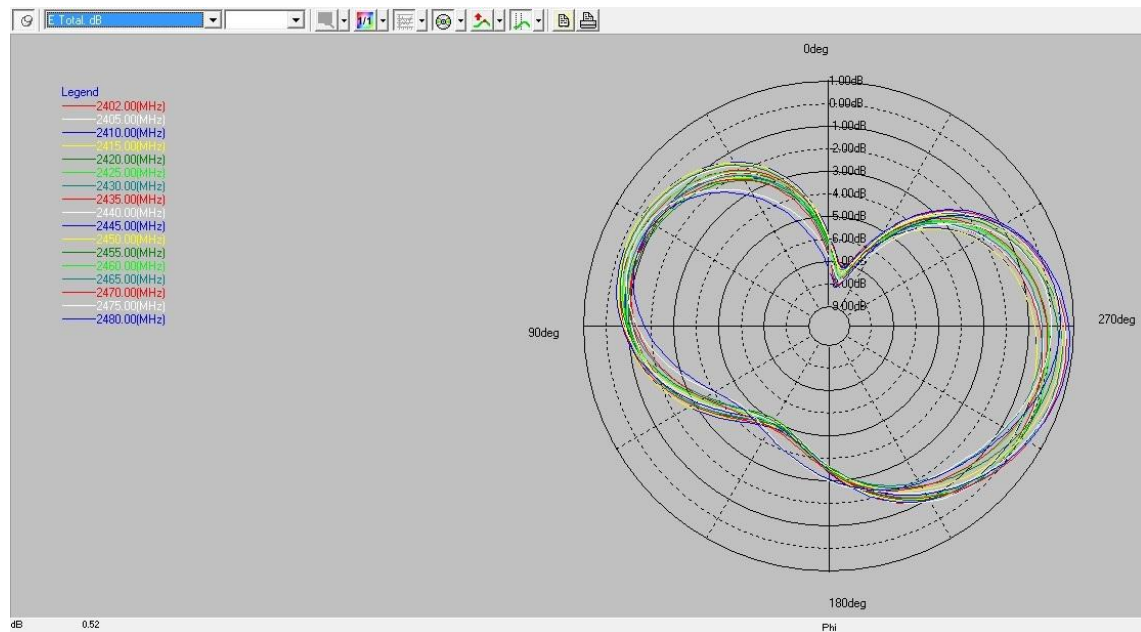
2402-2480 MHz
Phi=0



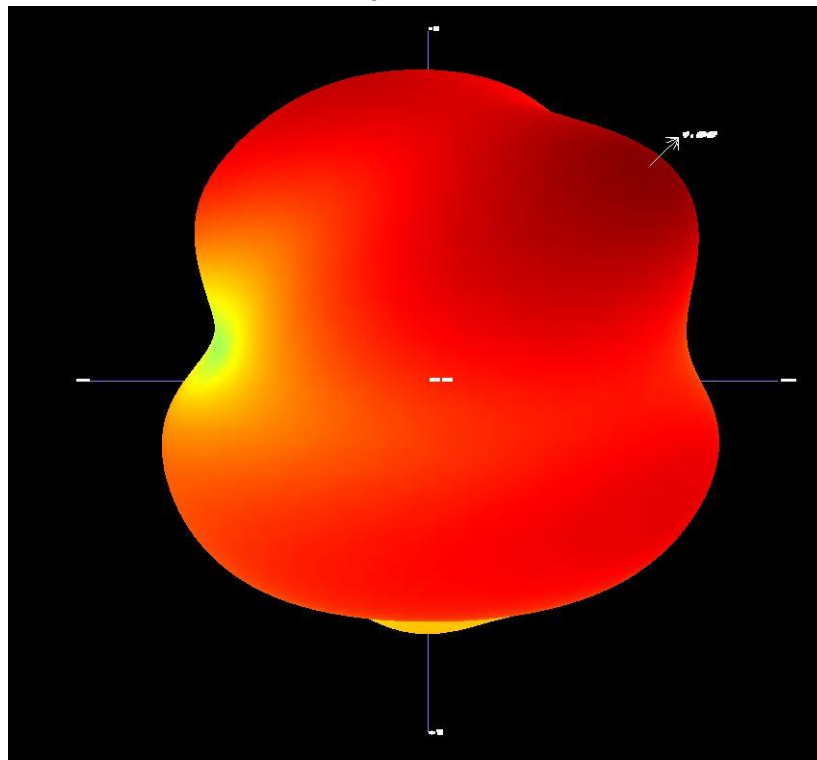
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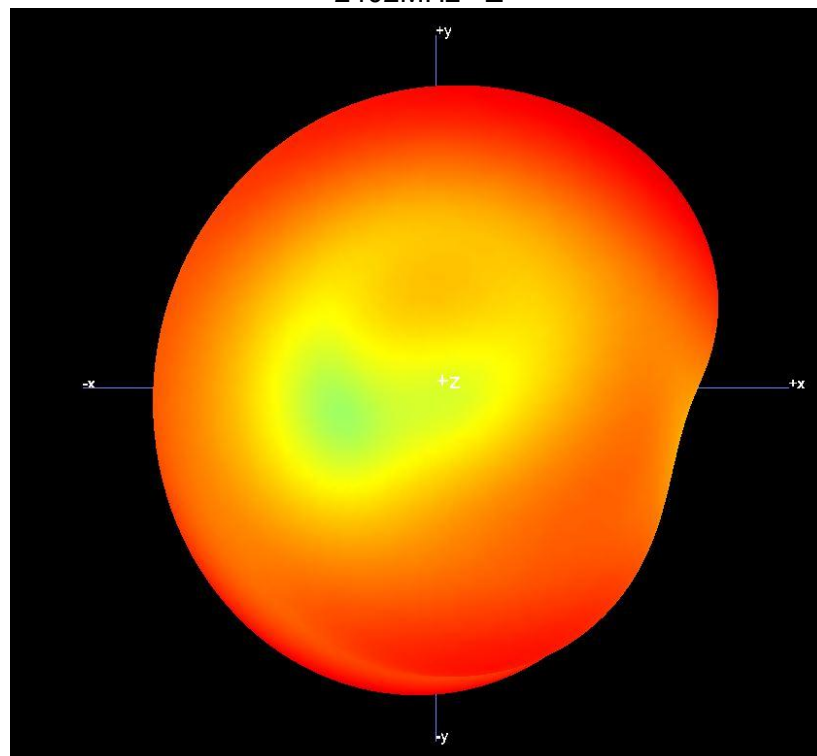
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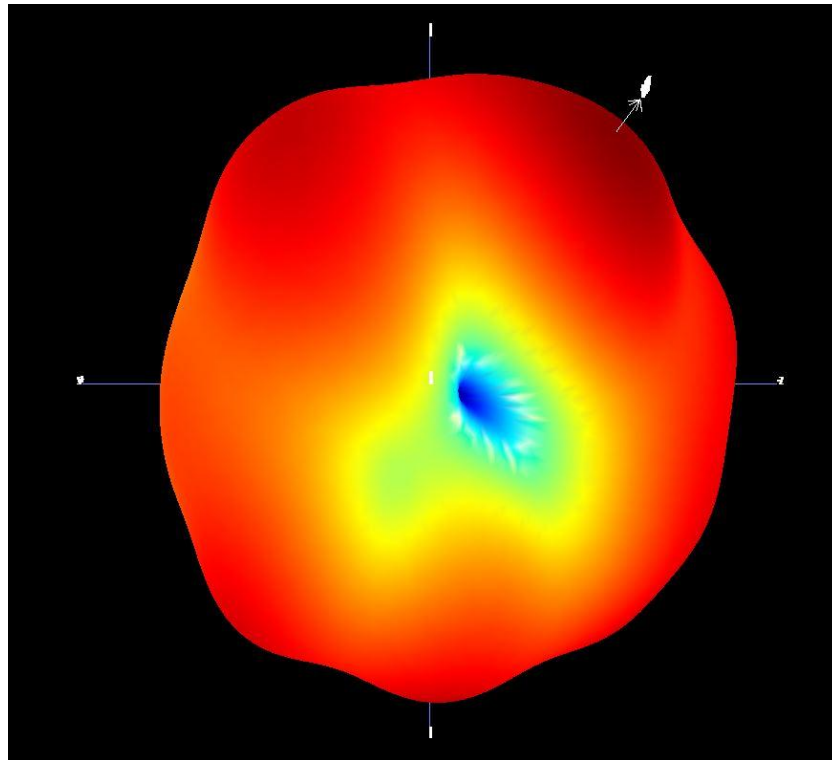
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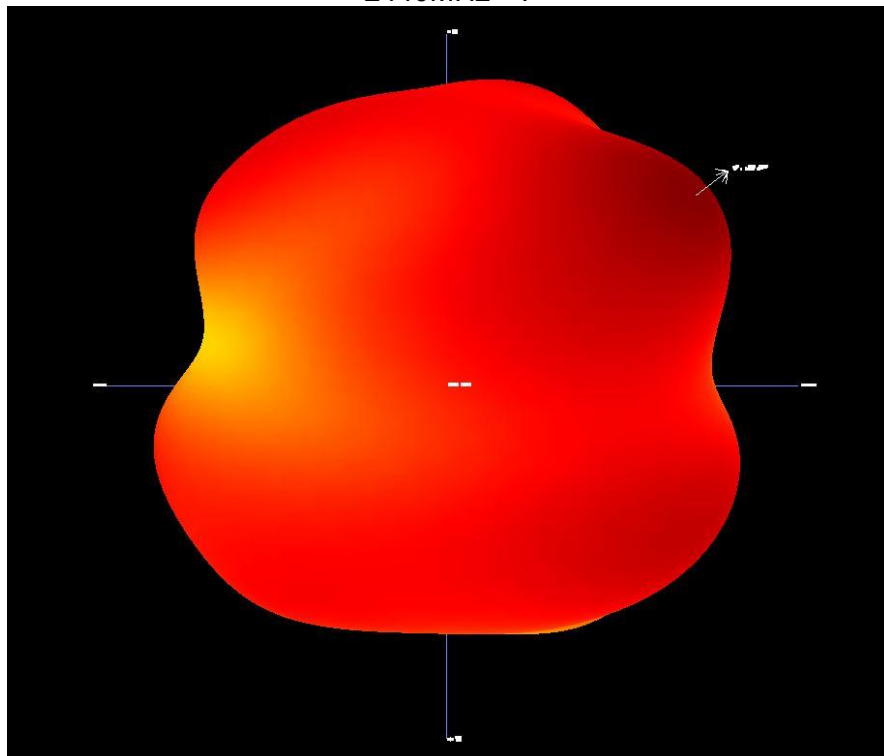
2402MHz +Z



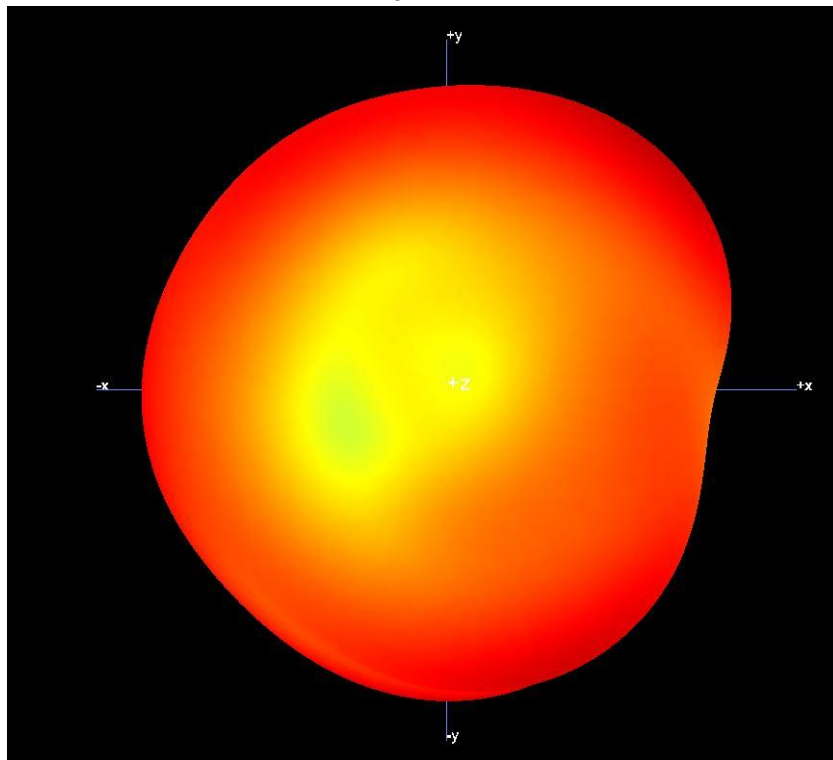
2440MHz +X



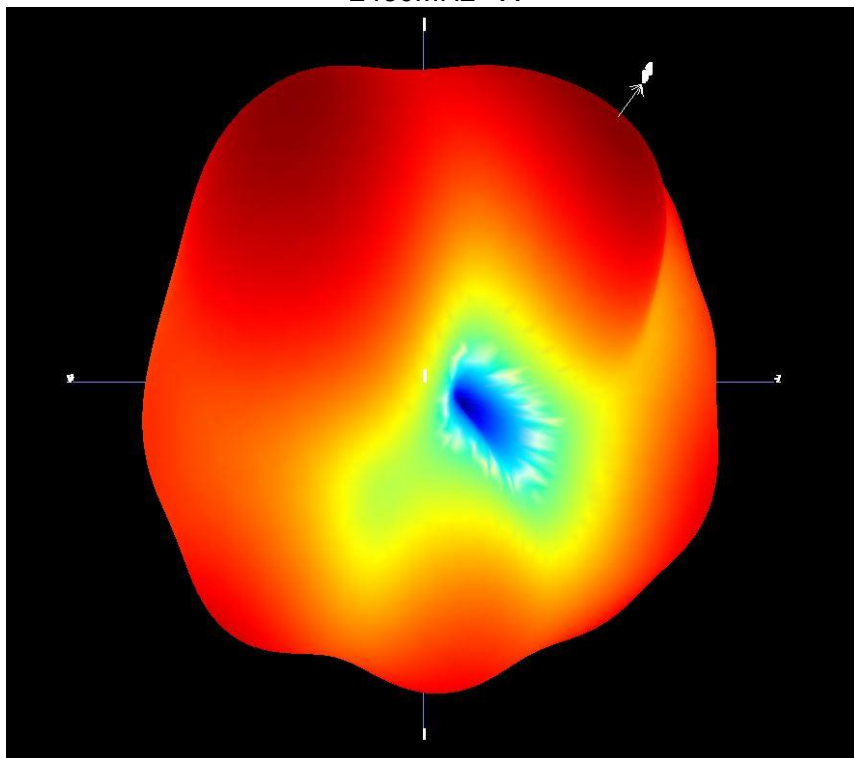
2440MHz +Y



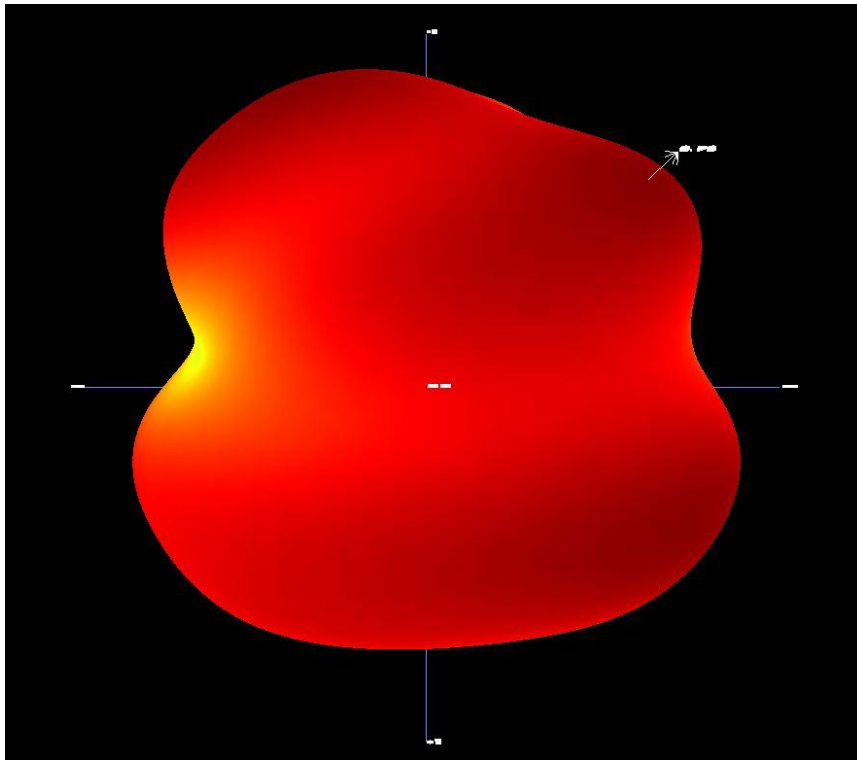
2440MHz +Z



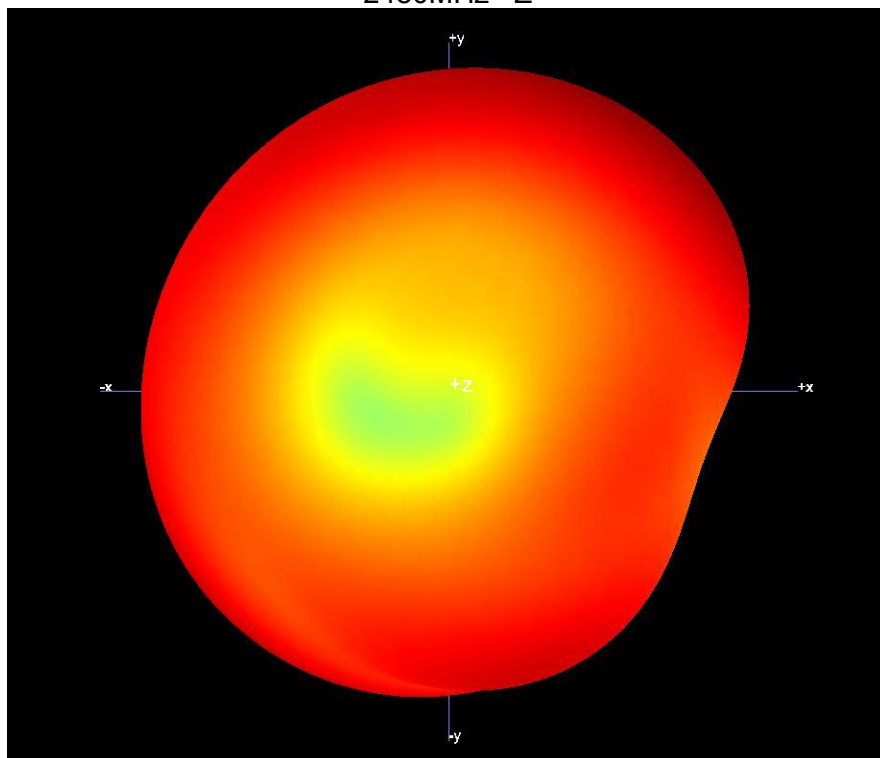
2480MHz +X



2480MHz +Y



2480MHz +Z



APPENDIX I TEST PHOTOS

Photo 1 EUT

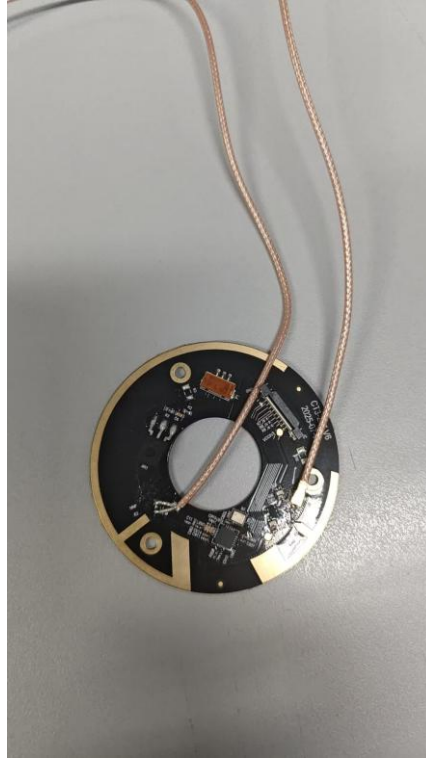


Photo 2 Antenna Test



-----The End-----