

OTA TEST REPORT

Client Information:

Applicant.....: SHANGHAI DINGFEI ELECTRONIC TECHNOLOGY CO.LTD

Address add.....: 255 Xingzhong Road, Fengxian District, Shanghai

Product Name.....: GNSS Receiver

Model Name.....: R61

Date of Test.....20 Jun. 2023

Date of Issue.....20 Jun. 2023

Report Prepared by :

Qi Yao Zhao

(qiyaozhao)

Report Approved by :

Leo Li

(leo Li)



"Shanghai ATBL Technology Co., Ltd." hereby certifies that the test results described in the company's standard test site test report and the structure of the test equipment are recorded in detail based on the actual test situation. The test results of this report are only applicable to the above-mentioned tested prototypes and the equipment described in the report. This report is not allowed to be copied without the written consent of Shanghai ATBL Technology Co.,

Ltd.; Shanghai ATBL Technology Co., Ltd.

Building 8, No. 160 Basheng road, Waigaoqiao Free Trade Zone, Pudong New Area, Shanghai

Tel: +86(0)21-51298625 Web: www.atbl-lab.com

Table of Contents

Revision History-----	3
1. Device list -----	4
2. Sample photo -----	5
3. Test layout-----	6
4. Results Summary -----	7
5. Radiation Pattern/Efficiency-----	8
6. Standing Wave Ratio Test-----	14

Revision History

Rev.	Issue Date	Report No.	Effect Page	Contents
00	20 Jun. 2023	SHATBL2306001	ALL	Initial Issue

1. Device list

Equipment	Manufacturer	Model	Cal. Date	Cal. Due
TEST RECEIVER	R&S	ESPI	Nov 10, 2022	Nov 09, 2023
CMW500	R&S	CMW500	Nov 10, 2022	Nov 09, 2023
Network Analyzer	AGILENT	E5071C	Nov 10, 2022	Nov 09, 2023
Frequency Spectrograph	AGILENT	N9020A	Nov 10, 2022	Nov 09, 2023

2.Sample photo



3.Test layout



4. Results Summary

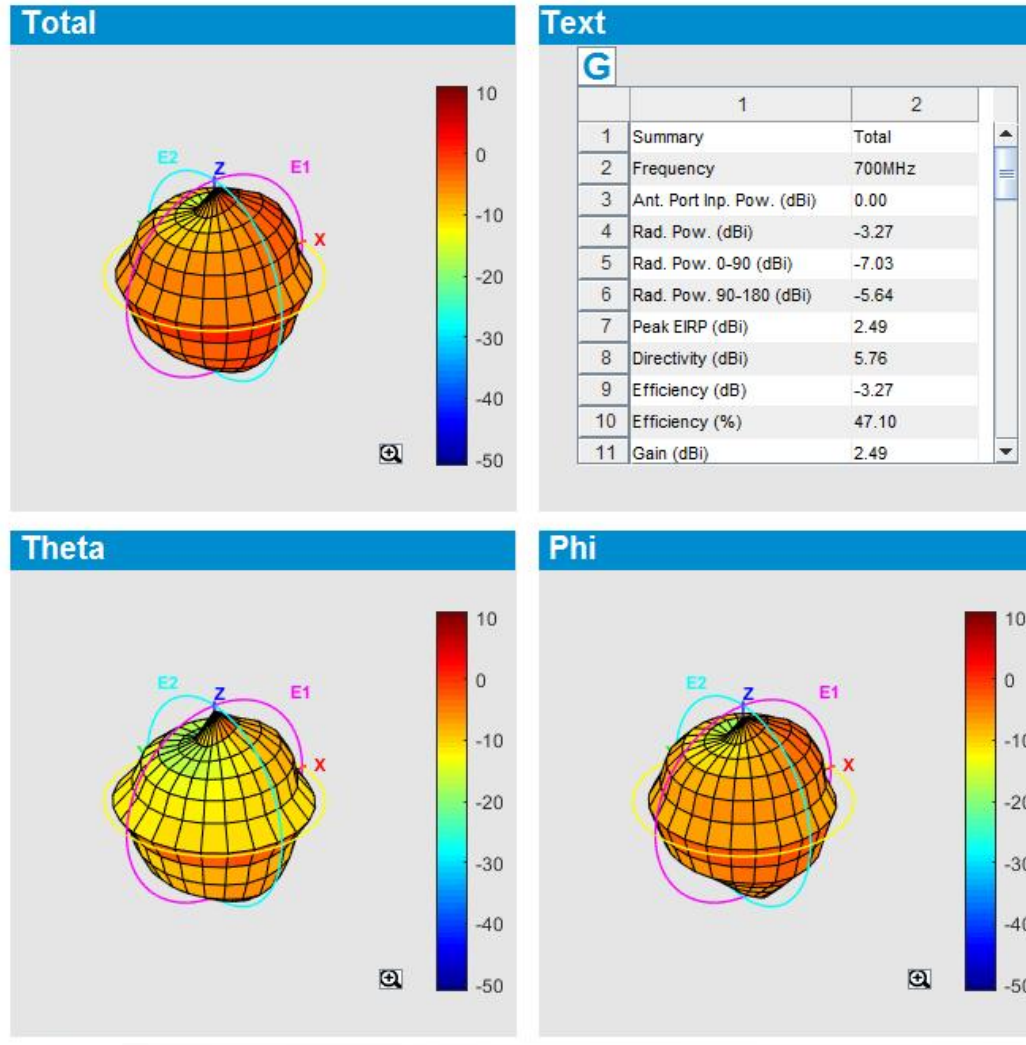
Overview

Test / Position	Free Space																				
Communication System	Gain																				
frequency	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700
Avg Gain	-3.3	-3.2	-3.5	-3.7	-3.0	-2.6	-2.7	-4.0	-3.2	-3.2	-3.8	-3.4	-3.9	-3.2	-2.8	-3.6	-4.5	-4.0	-3.8	-3.7	-3.9
Peak Gain	2.5	2.6	2.6	1.1	1.7	3.6	3.5	0.8	2.6	5.6	1.9	5.2	2.3	3.5	2.9	1.5	-0.2	1.7	1.5	1.6	2.4
Directivity	5.8	5.8	6.1	4.8	4.6	6.1	6.2	4.9	5.9	8.9	5.7	8.6	6.1	6.7	5.7	5.1	4.3	5.7	5.4	5.3	6.2
Efficiency	-3.3	-3.2	-3.5	-3.7	-3.0	-2.6	-2.7	-4.0	-3.2	-3.2	-3.8	-3.4	-3.9	-3.2	-2.8	-3.6	-4.5	-4.0	-3.8	-3.7	-3.9
Efficiency (%)	47.1	48.2	44.5	42.5	50.4	55.5	53.7	39.5	47.5	47.5	42.0	45.9	40.8	47.9	52.4	44.2	35.9	40.0	41.4	42.7	41.1
Gain	2.5	2.6	2.6	1.1	1.7	3.6	3.5	0.8	2.6	5.6	1.9	5.2	2.3	3.5	2.9	1.5	-0.2	1.7	1.5	1.6	2.4
Note																					

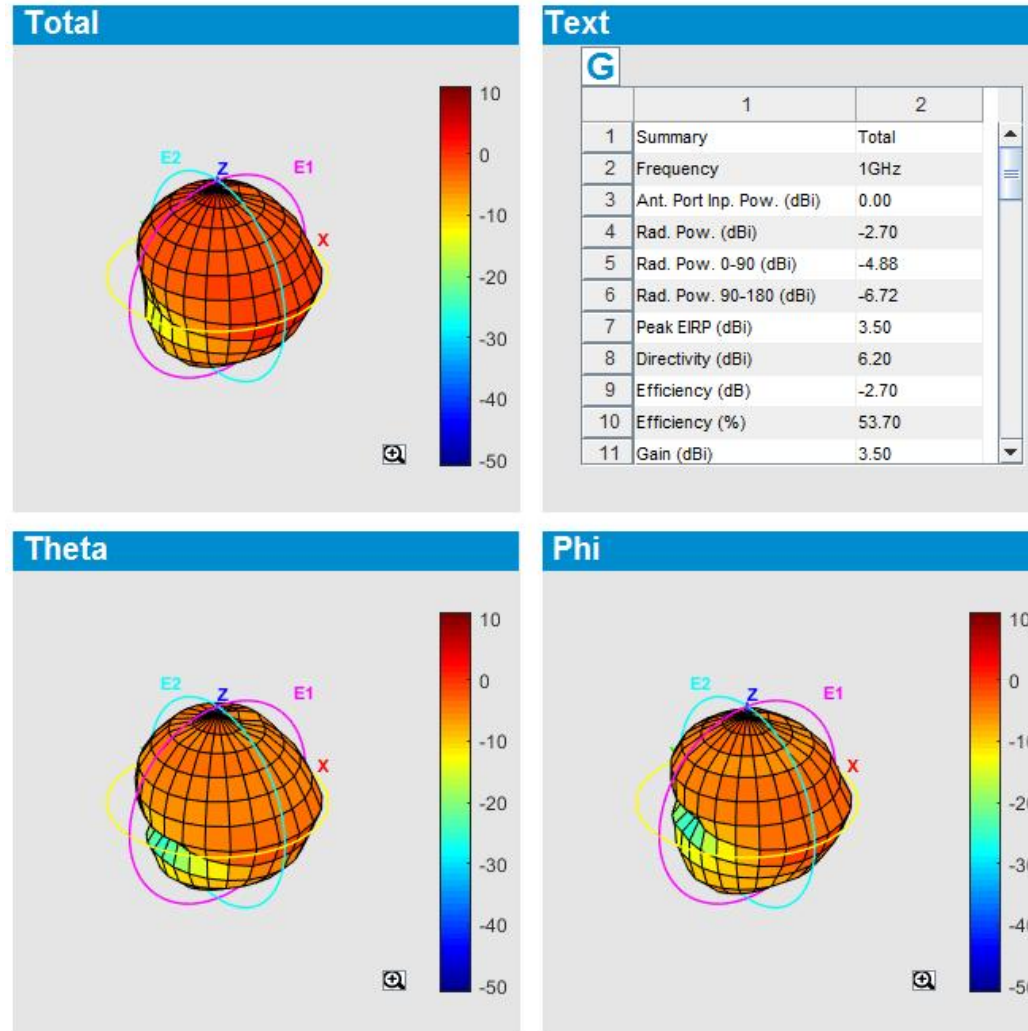
Test / Position	Free Space																				
Communication System	Gain																				
frequency	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350	2400	2450	2500	2550	2600	2650	2700
Avg Gain	-3.9	-3.6	-4.4	-4.1	-4.5	-4.1	-3.8	-3.7	-3.6	-3.5	-2.9	-2.8	-3.5	-3.0	-2.6	-3.5	-2.4	-3.0	-3.3	-3.0	-3.1
Peak Gain	2.4	3.2	1.3	1.3	0.8	-0.3	1.4	0.9	3.9	2.5	4.3	4.3	3.0	2.9	2.9	1.7	4.0	2.9	3.0	1.9	3.0
Directivity	6.2	6.7	5.7	5.4	5.4	3.8	5.2	4.6	7.5	6.1	7.2	7.1	6.5	5.9	5.5	5.2	6.3	5.9	6.3	4.9	6.1
Efficiency	-3.9	-3.6	-4.4	-4.1	-4.5	-4.1	-3.8	-3.7	-3.6	-3.5	-2.9	-2.8	-3.5	-3.0	-2.6	-3.5	-2.4	-3.0	-3.3	-3.0	-3.1
Efficiency (%)	41.1	44.0	36.1	39.3	35.2	38.6	41.9	42.5	43.3	44.3	51.6	53.0	44.8	49.7	54.7	45.0	58.2	49.7	47.3	49.7	49.4
Gain	2.4	3.2	1.3	1.3	0.8	-0.3	1.4	0.9	3.9	2.5	4.3	4.3	3.0	2.9	2.9	1.7	4.0	2.9	3.0	1.9	3.0
Note																					

5. Radiation Pattern/Efficiency

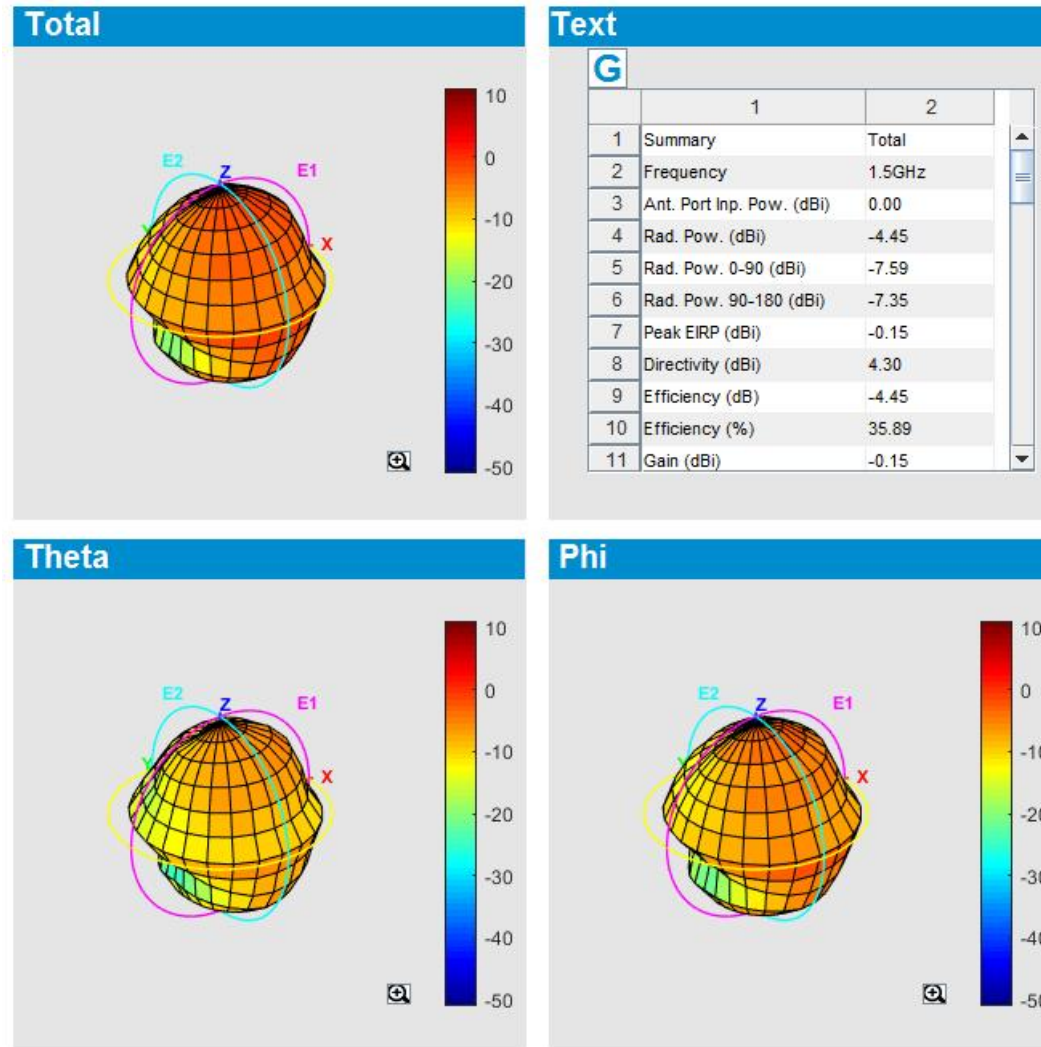
700MHz



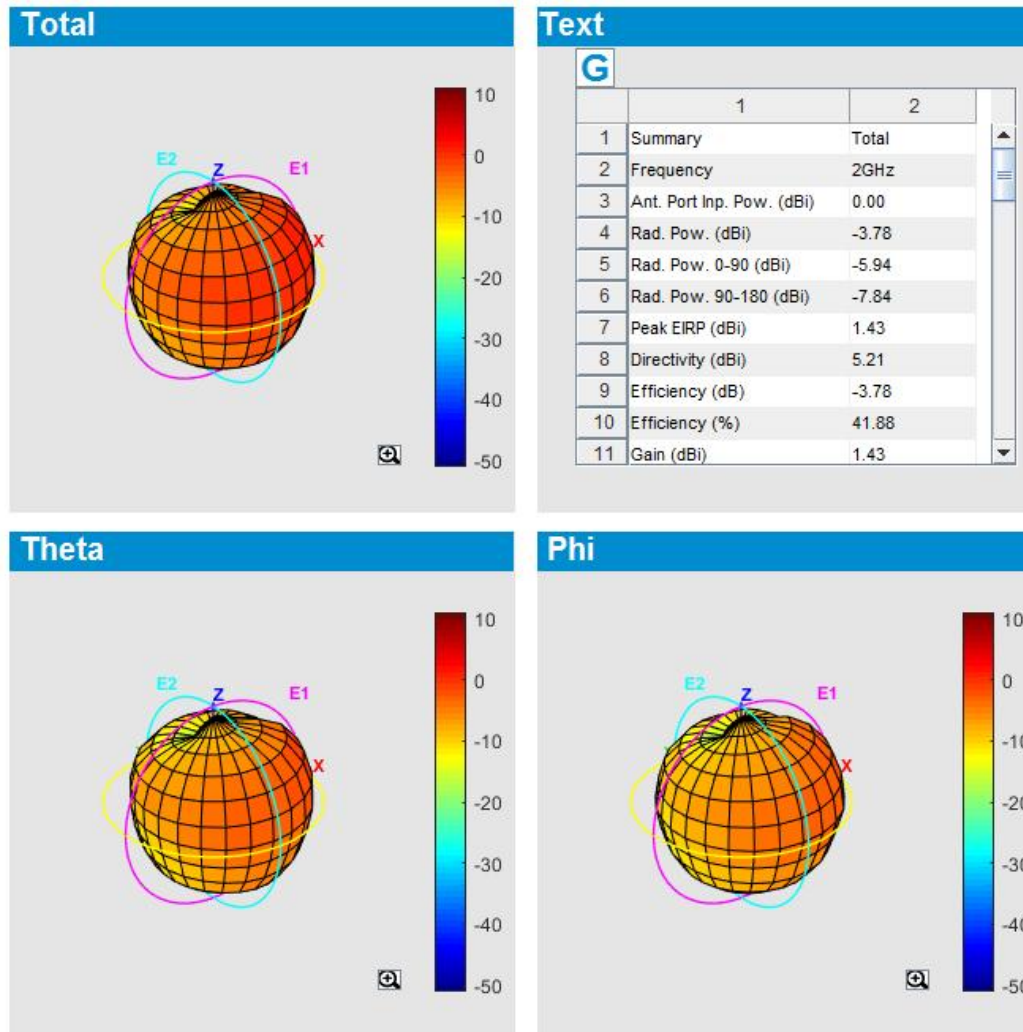
1GHz



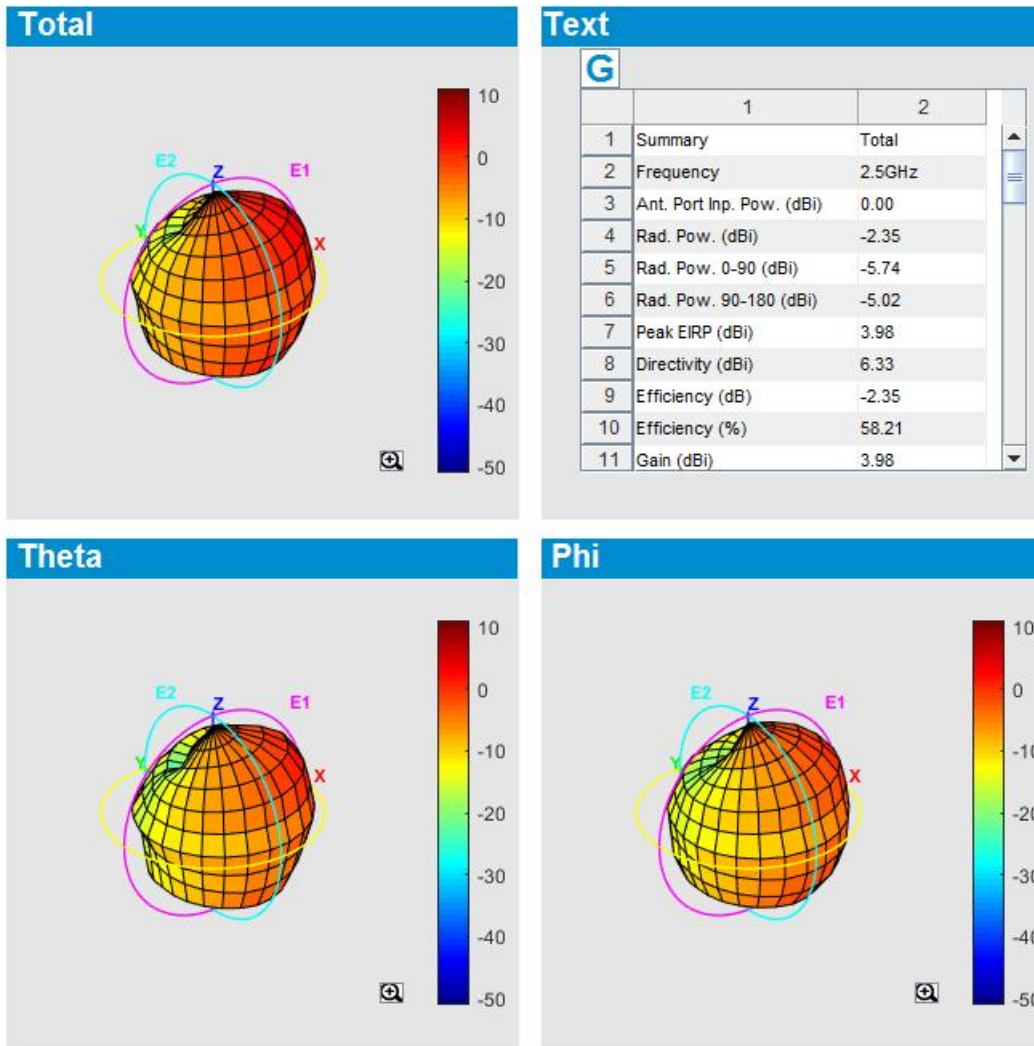
1.5GHz



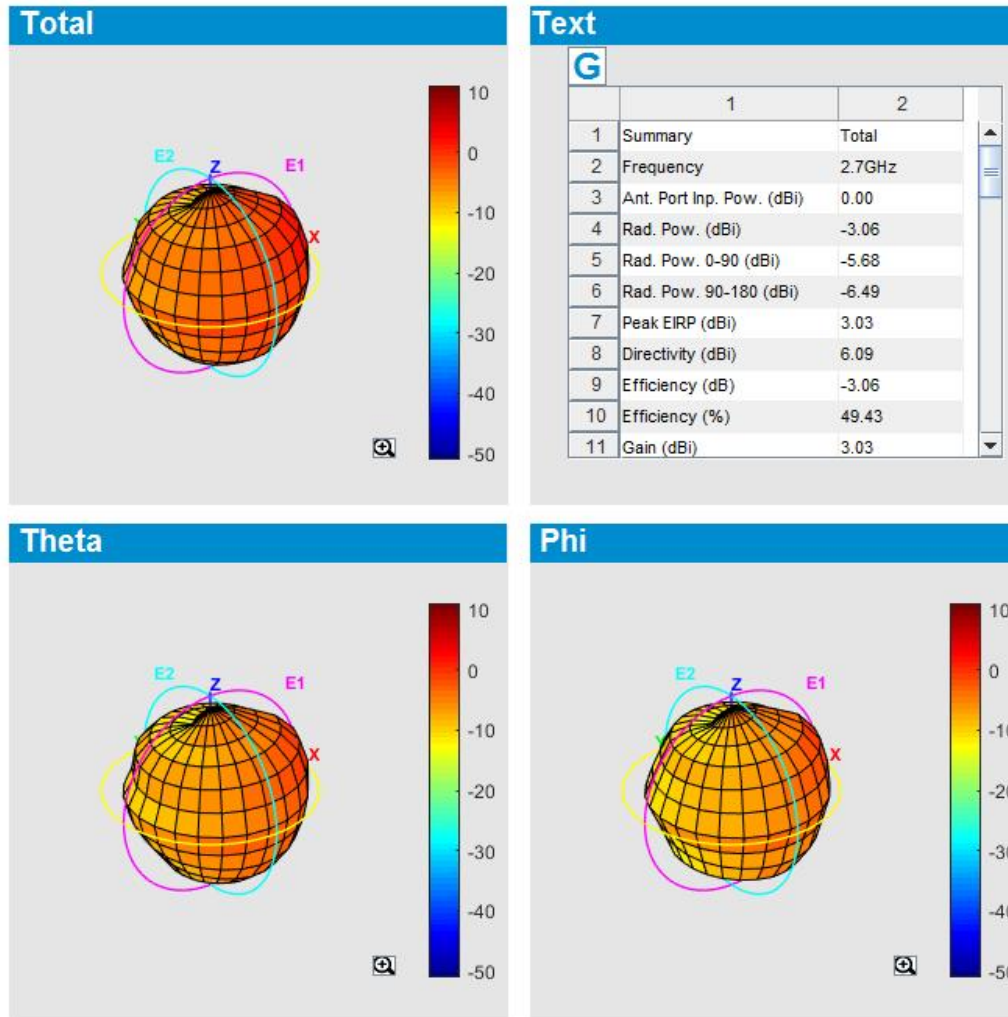
2GHz



2.5GHz



2.7GHz



6. Standing Wave Ratio Test

SWR

