Report No.: SHATBL2304021

OTA TEST REPORT

ClientInformation:

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

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

Product Name.....: GNSS Receiver

Model Name..... : R61

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

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

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Revision History

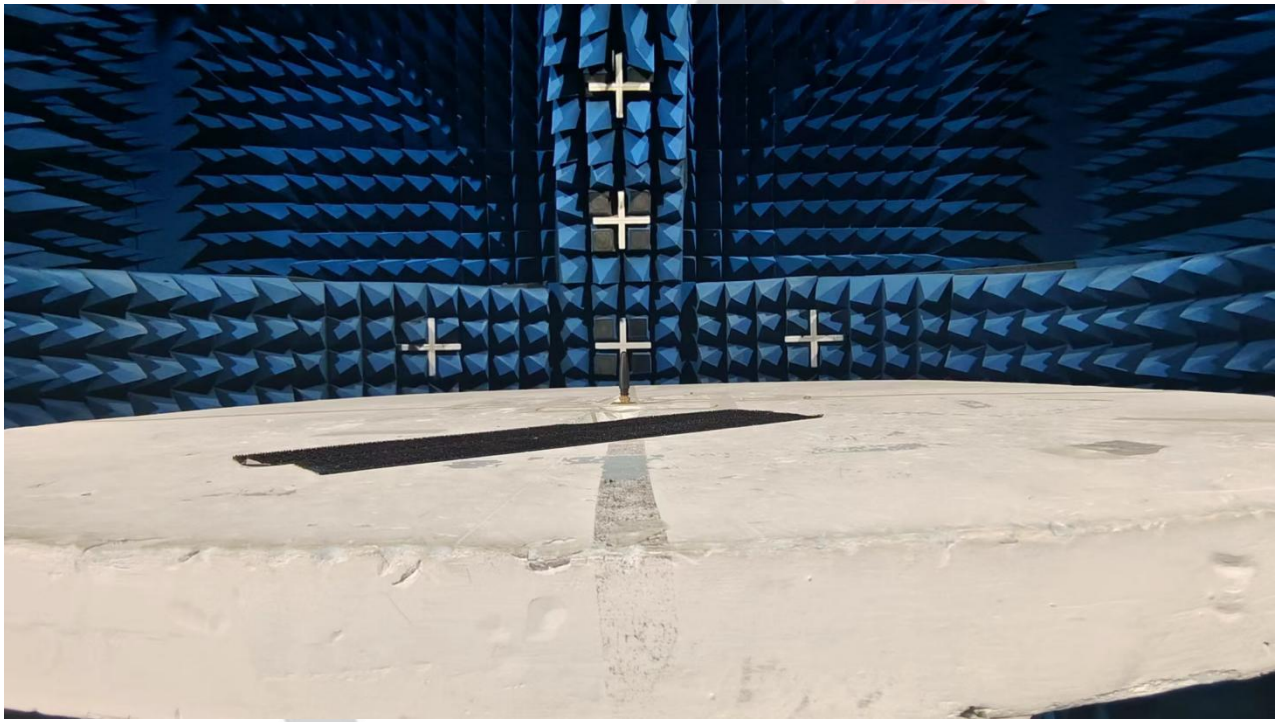
Rev.	Issue Date	Report No.	Effect Page	Contents
00	20 Jun. 2023	SHATBL2306002	ALL	Initial Issue

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



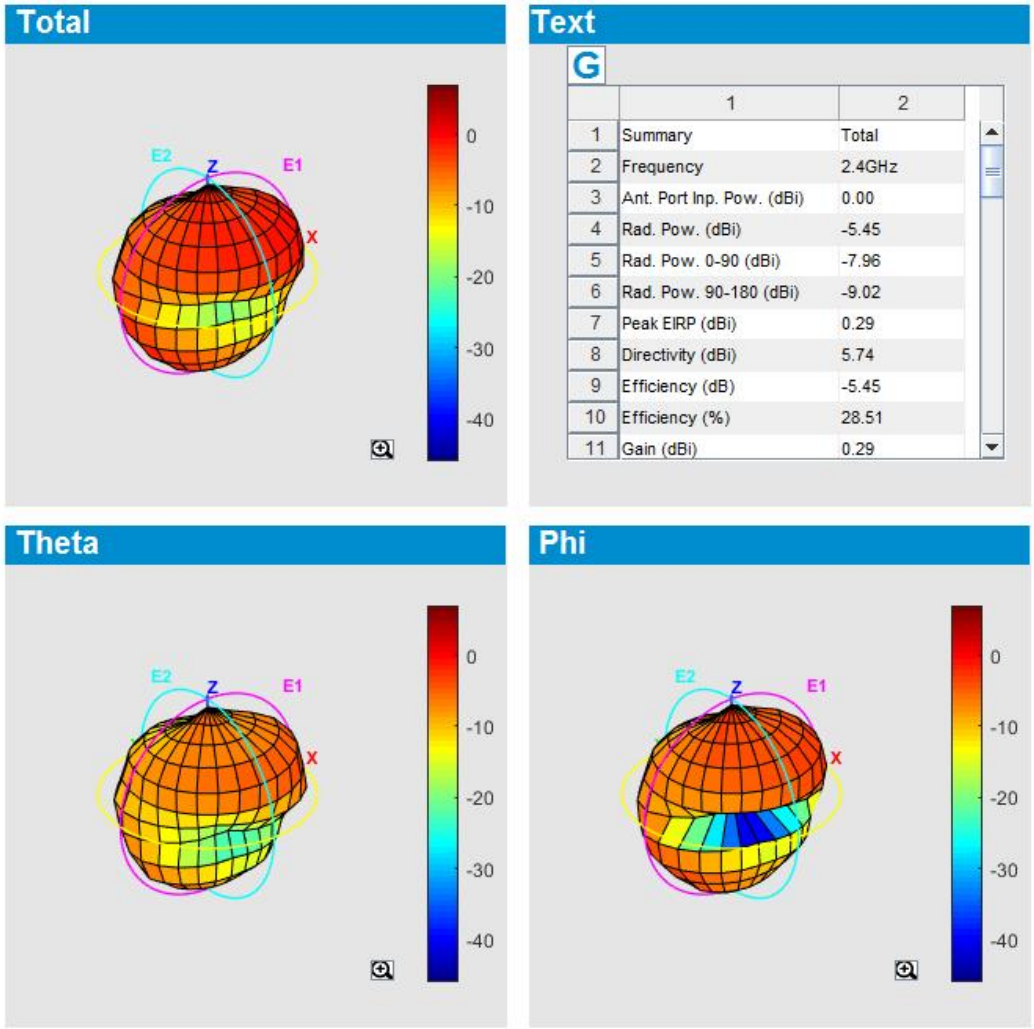
4. Results Summary

Overview

Test / Position	Free Space										
Communication System	Gain										
frequency	2400	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500
Avg Gain	**-5.5**	**-5.7**	**-6.3**	**-5.5**	**-4.9**	**-5.3**	**-6.0**	**-6.3**	**-6.1**	**-5.3**	**-4.6**
Peak Gain	0.3	-0.1	-0.8	-0.4	0.1	-0.1	-0.6	-0.8	-0.6	0.4	1.2
Directivity	5.7	5.6	5.5	5.1	5.0	5.2	5.5	5.5	5.5	5.8	5.8
Efficiency	-5.5	-5.7	-6.3	-5.5	-4.9	-5.3	-6.0	-6.3	-6.1	-5.3	-4.6
Efficiency (%)	**28.5**	**26.7**	**23.4**	**28.3**	**32.5**	**29.6**	**25.0**	**23.5**	**24.4**	**29.3**	**35.0**
Gain	0.3	-0.1	-0.8	-0.4	0.1	-0.1	-0.6	-0.8	-0.6	0.4	1.2
Note											

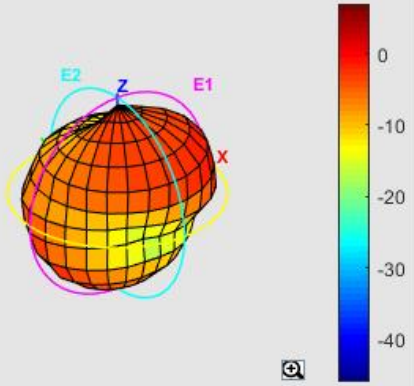
5. Radiation Pattern/Efficiency

2.4GHz



2.42GHz

Total

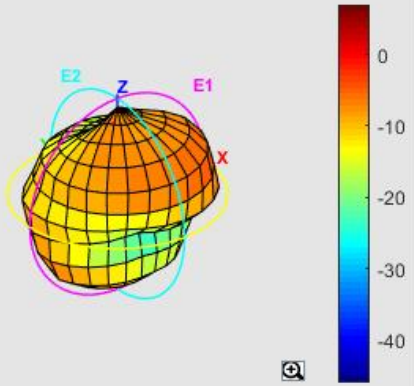


Text

G

	1	2
1	Summary	Total
2	Frequency	2.42GHz
3	Ant. Port Inp. Pow. (dBi)	0.00
4	Rad. Pow. (dBi)	-6.31
5	Rad. Pow. 0-90 (dBi)	-8.91
6	Rad. Pow. 90-180 (dBi)	-9.78
7	Peak EIRP (dBi)	-0.77
8	Directivity (dBi)	5.54
9	Efficiency (dB)	-6.31
10	Efficiency (%)	23.39
11	Gain (dBi)	-0.77

Theta



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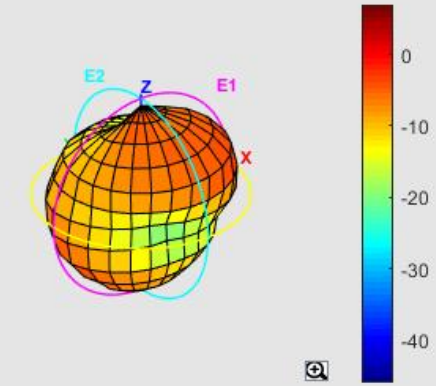
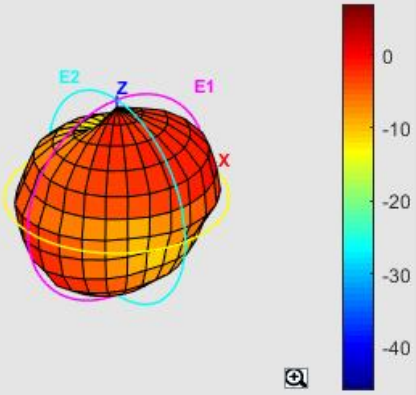


2.44GHz

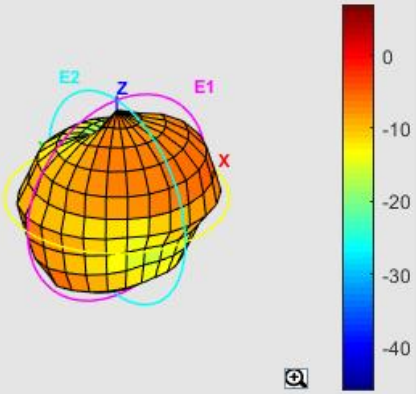
Total



Text

	1	2
1	Summary	Total
2	Frequency	2.44GHz
3	Ant. Port Inp. Pow. (dBi)	0.00
4	Rad. Pow. (dBi)	-4.88
5	Rad. Pow. 0-90 (dBi)	-7.46
6	Rad. Pow. 90-180 (dBi)	-8.36
7	Peak EIRP (dBi)	0.07
8	Directivity (dBi)	4.95
9	Efficiency (dB)	-4.88
10	Efficiency (%)	32.51
11	Gain (dBi)	0.07

Theta



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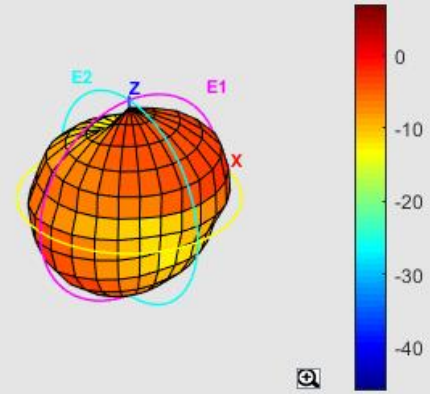
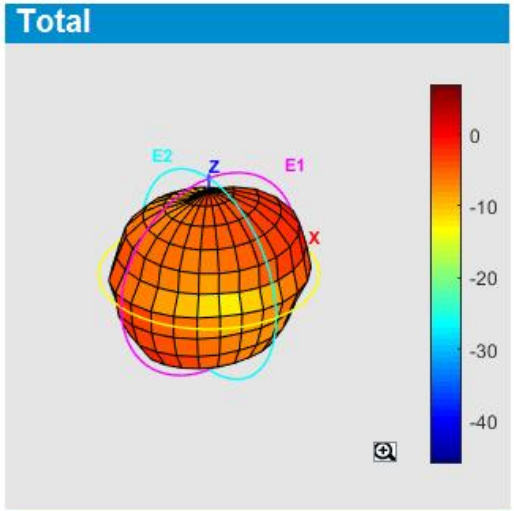
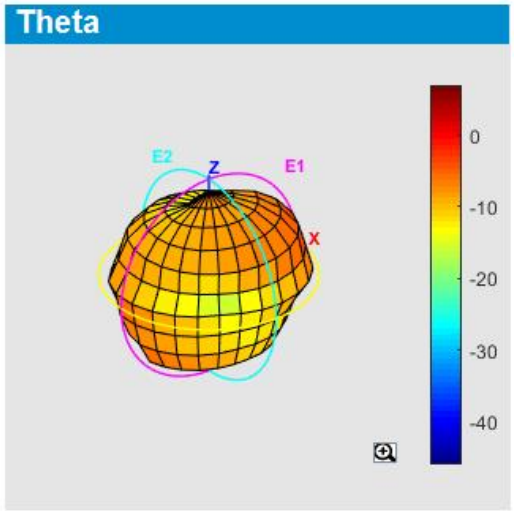


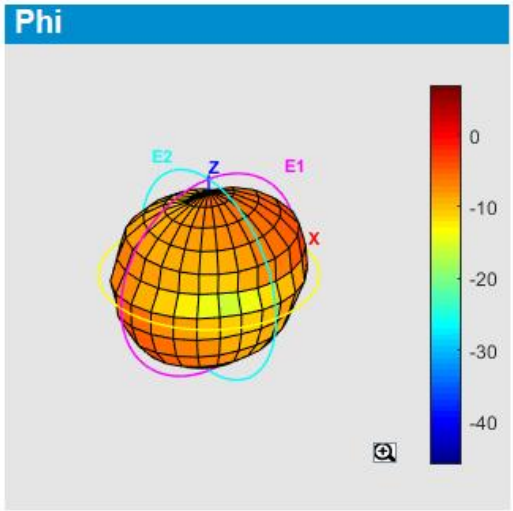
2.46GHz



Text

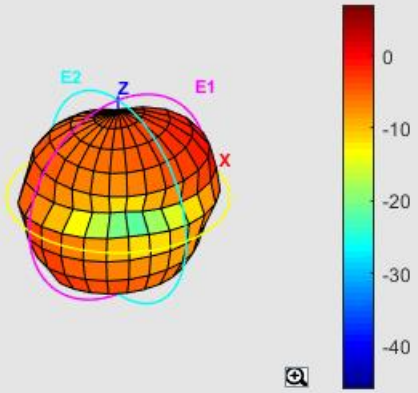
	1	2
1	Summary	Total
2	Frequency	2.46GHz
3	Ant. Port Inp. Pow. (dBi)	0.00
4	Rad. Pow. (dBi)	-6.03
5	Rad. Pow. 0-90 (dBi)	-8.49
6	Rad. Pow. 90-180 (dBi)	-9.67
7	Peak EIRP (dBi)	-0.56
8	Directivity (dBi)	5.47
9	Efficiency (dB)	-6.03
10	Efficiency (%)	24.95
11	Gain (dBi)	-0.56





2.48GHz

Total

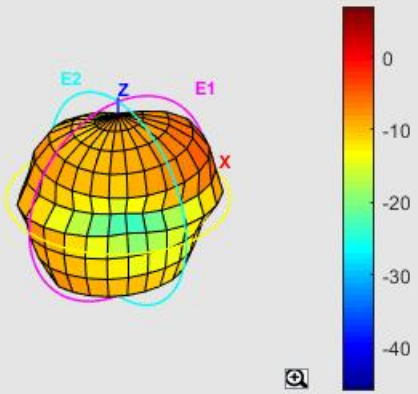


Text

G

	1	2
1	Summary	Total
2	Frequency	2.48GHz
3	Ant. Port Inp. Pow. (dBi)	0.00
4	Rad. Pow. (dBi)	-6.13
5	Rad. Pow. 0-90 (dBi)	-8.97
6	Rad. Pow. 90-180 (dBi)	-9.31
7	Peak EIRP (dBi)	-0.60
8	Directivity (dBi)	5.53
9	Efficiency (dB)	-6.13
10	Efficiency (%)	24.38
11	Gain (dBi)	-0.60

Theta



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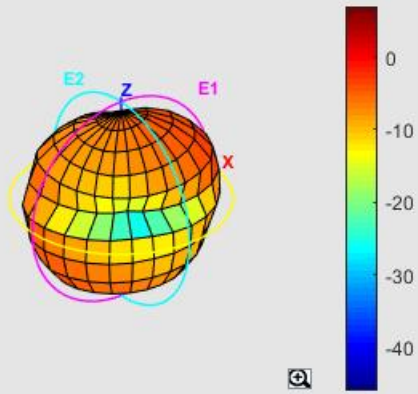
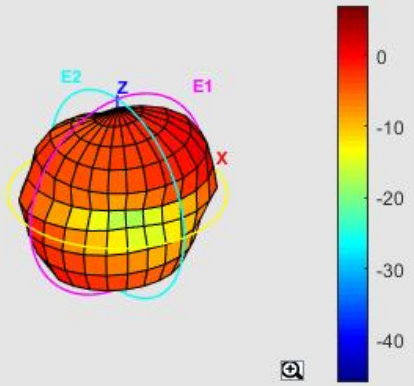


2.5GHz

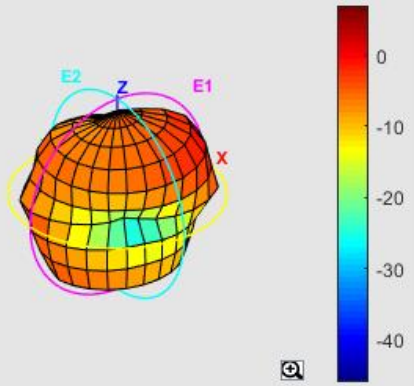
Total



Text

	1	2
1	Summary	Total
2	Frequency	2.5GHz
3	Ant. Port Inp. Pow. (dBi)	0.00
4	Rad. Pow. (dBi)	-4.56
5	Rad. Pow. 0-90 (dBi)	-7.53
6	Rad. Pow. 90-180 (dBi)	-7.61
7	Peak EIRP (dBi)	1.20
8	Directivity (dBi)	5.76
9	Efficiency (dB)	-4.56
10	Efficiency (%)	34.99
11	Gain (dBi)	1.20

Theta



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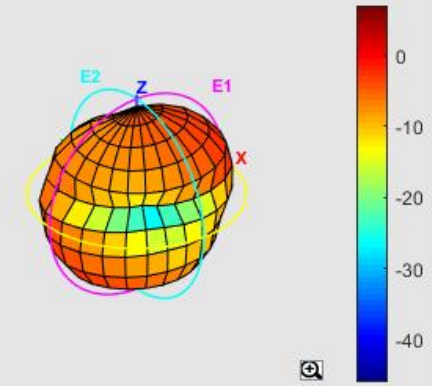

6. Standing Wave Ratio Test

SWR