

ANTENNA GAIN AND PATTERN MEASUREMENT REPORT
For Gain value reference

FOR

Lingo Biosensor

PART/MODEL NUMBER: 44600

DATE ISSUED: June 21, 2024

REPORT NUMBER: 14872762-01V2

Prepared for
Abbott Diabetes Care Inc.
1360 South Loop Road Suite 200
Alameda, California, 94502
U.S.A.

Prepared by
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Revision History

| <u>Rev.</u> | <u>Issue Date</u> | <u>Revisions</u> | <u>Revised By</u> |
|-------------|-------------------|---|-------------------|
| V1 | 08/25/2023 | Initial Issue | |
| V2 | 06/21/2024 | Part number and EUT updated, report number typo corrected | Casey Dial |

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1 ATTESTATION OF TEST RESULTS

| | |
|--------------------------|--------------------------------|
| Company Name and Address | Abbott Diabetes Care Inc. |
| | 1360 South Loop Road Suite 200 |
| | Alameda, California, 94502 |
| | U.S.A. |
| EUT Description | Lingo Biosensor |
| Part/Model | 44600 |
| Date Tested | 08/24/2023 |

| APPLICABLE STANDARDS | |
|---------------------------------------|------------------|
| STANDARD | TEST RESULTS |
| Non-standard Test Method* | Information Only |
| *Reference Section 2 Test Methodology | |

UL Verification Services Inc. tested the above equipment in accordance with the requirements set forth in the above standards. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. It is the manufacturer's responsibility to assure that additional production units of this model are manufactured with identical electrical and mechanical components. All samples tested were in good operating condition throughout the entire test program. Measurement Uncertainties are published for informational purposes only and were not taken into account unless noted otherwise.

This document may not be altered or revised in any way unless done so by UL Verification Services Inc. and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL Verification Services Inc. will constitute fraud and shall nullify the document. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP/A2LA, NIST, or any agency of the U.S. Government.

This report contains data provided by the customer which can impact the validity of results. UL Verification Services Inc. is only responsible for the validity of results after the integration of the data provided by the customer.

Approved & Released For
 UL Verification Services Inc. By:



Ekta Budhbhatti
 OTA SUPERVISOR
 UL Verification Services Inc.

Tested and Prepared By:



Casey Dial
 TEST ENGINEER
 UL Verification Services Inc.

2 TEST METHODOLOGY

The 3D Passive Antenna Pattern tests documented in this report were performed using a dual polarized quad-ridged horn antenna mounted on the theta scanning arm with a resolution (increment) of 15° for both elevation and azimuth utilizing ETS-Lindgren EMQuest Data Acquisition and Analysis Software.

The 2D Passive Antenna Pattern tests documented in this report were performed using a dual polarized quad-ridged horn antenna mounted on the theta scanning arm with a fixed elevation and a resolution (increment) of 2° for azimuth utilizing ETS-Lindgren EMQuest Data Acquisition and Analysis Software.

3 TEST FACILITIES

The test sites and measurement facilities used to collect data are located at 47173 Benicia Street, Fremont, California, USA. The test was performed in OTA A.

| Test Site used for testing | |
|-------------------------------|-------------------------------------|
| OTA Lab A (Theta Arm Chamber) | <input checked="" type="checkbox"/> |
| OTA Lab B (MAPS Chamber) | <input type="checkbox"/> |

- Test operator and Report writer: Casey Dial
- Report reviewed by: Ekta Budhbhatti

4 TEST AND MEASUREMENT EQUIPMENT

The following test and measurement equipment was utilized for the tests documented in this report:

| TEST EQUIPMENT LIST | | | | | |
|------------------------|--------------|--------|------------|-----------------|-----------------|
| Description | Manufacturer | Model | Asset | Cal Date | Cal Due |
| PNA-L Network Analyzer | Agilent | N5230C | MY49001404 | 27 January 2023 | 31 January 2024 |

| TEST SYSTEM & SOFTWARE – OTA A | | | | |
|--------------------------------|--------------|--|--------------------------|---------|
| Description | Manufacturer | Model | SW Version | Asset |
| OTA Test Chamber | ETS-Lindgren | AMS8800 | N/A | 1100181 |
| OTA Test Software | ETS-Lindgren | EMQuest Data Acquisition and Analysis Software | 1.15 build 27347 SN:1229 | 231770 |

5 DEVICE UNDER TEST INFORMATION

| Antenna | |
|-----------------------|---------------------------|
| Manufacturer | Abbott Diabetes Care Inc. |
| Part/Model Number | 44600 |
| Frequency range (MHz) | 2402, 2440, 2480 |
| Device/Antenna type | PCB Loop Antenna |

5.1 END PRODUCT DESCRIPTION

The antenna is a printed circuit antenna utilizing a proprietary diplexed design for 13.56MHz and 2.4GHz communications. The antenna is constructed as part of the device circuit board.

6 RESULT SUMMARY

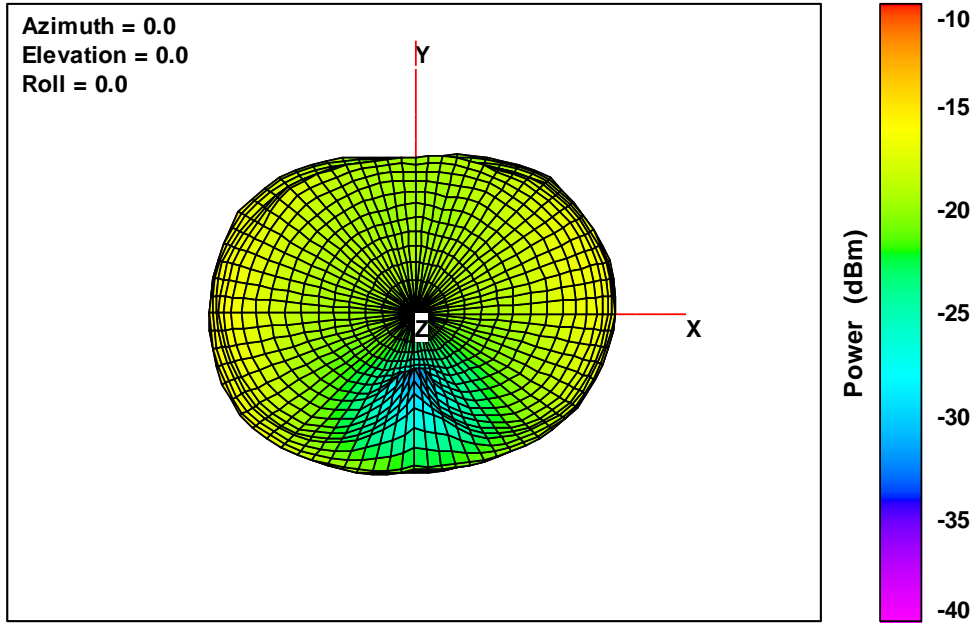
6.1 Passive Antenna Pattern

| Measurement | Frequency (MHz) | | |
|--------------------|-----------------|--------|--------|
| | 2402 | 2440 | 2480 |
| 3D Peak Gain (dBi) | -13.03 | -11.99 | -10.86 |
| 2D/Peak Gain (dBi) | -12.59 | -11.68 | -10.77 |

7 PLOTS

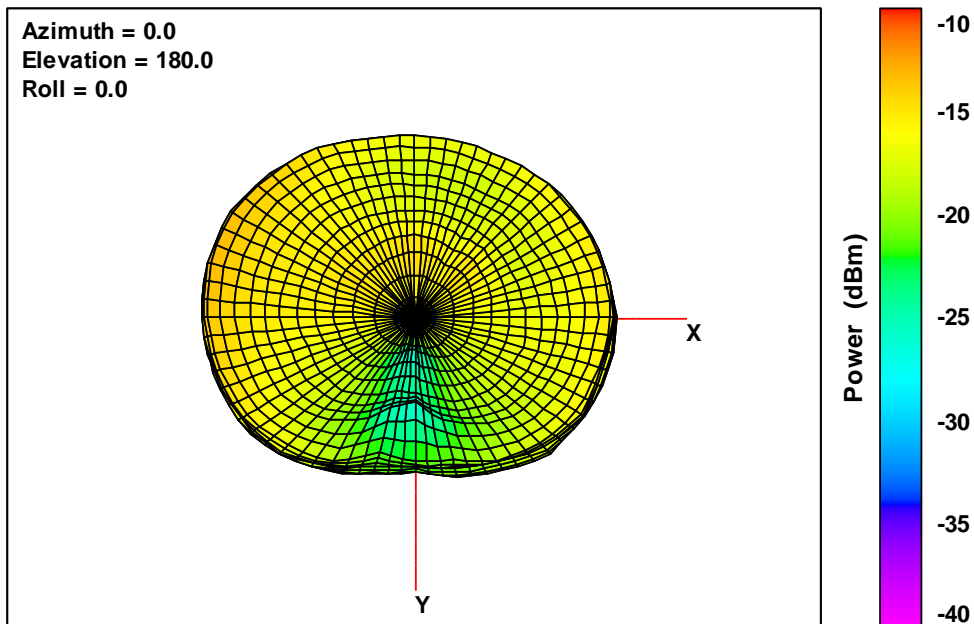
7.1 3D PASSIVE- 2402 MHz

Total EIRP, Top View



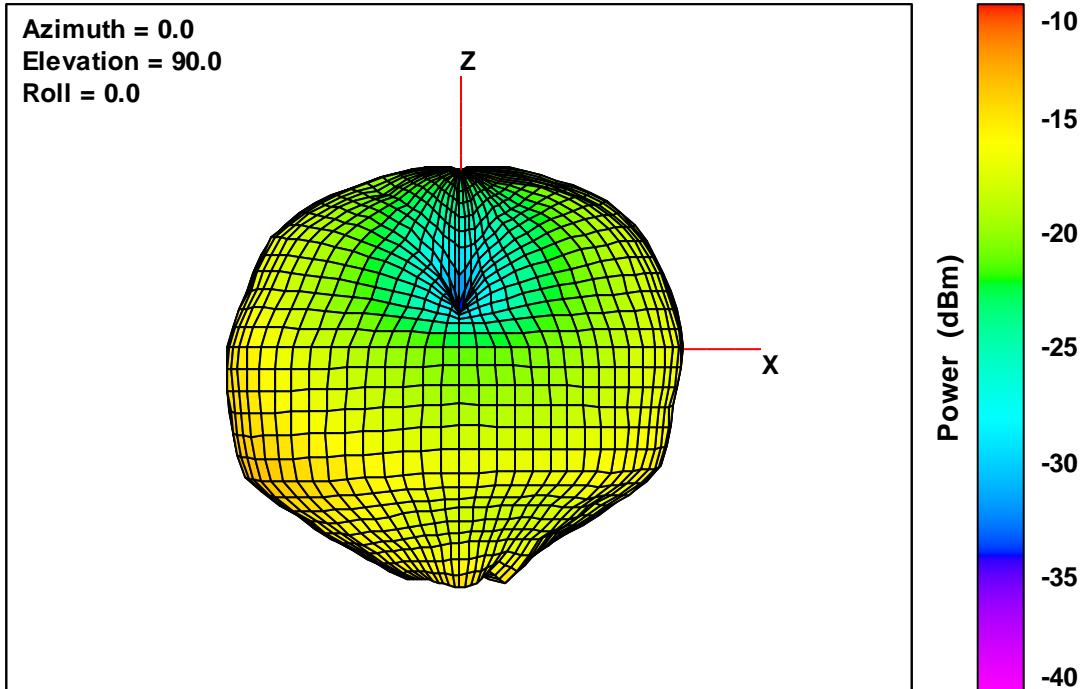
Free-Space Total EIRP, Top View, 2402 MHz

Total EIRP, Bottom View



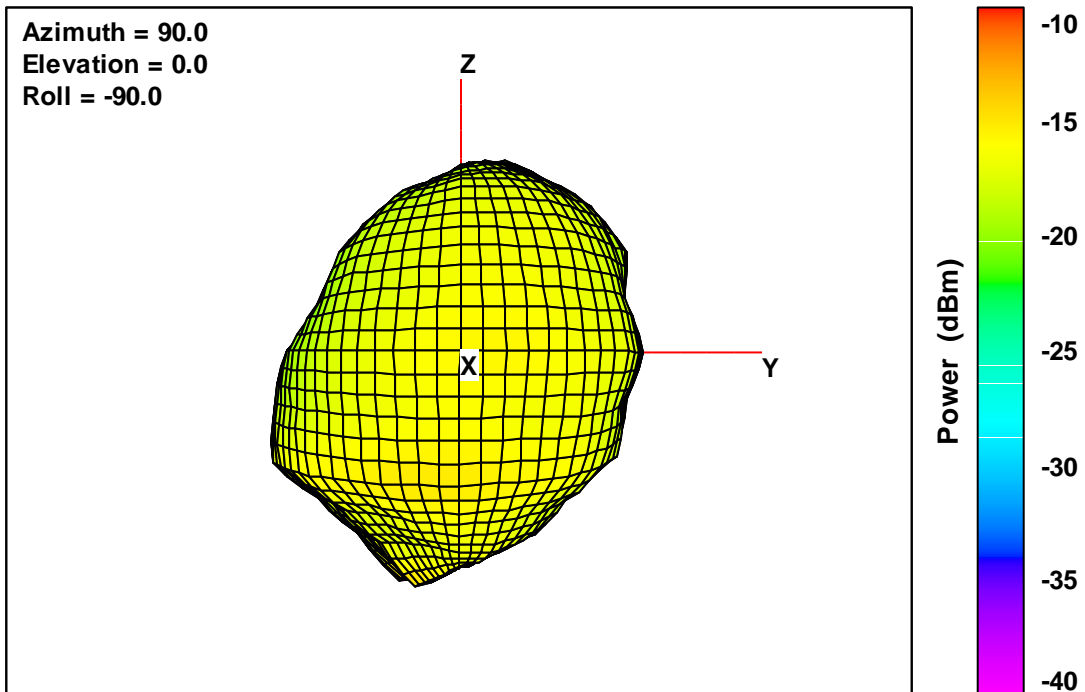
Free-Space Total EIRP, Bottom View, 2402 MHz

Total EIRP, Left Side View



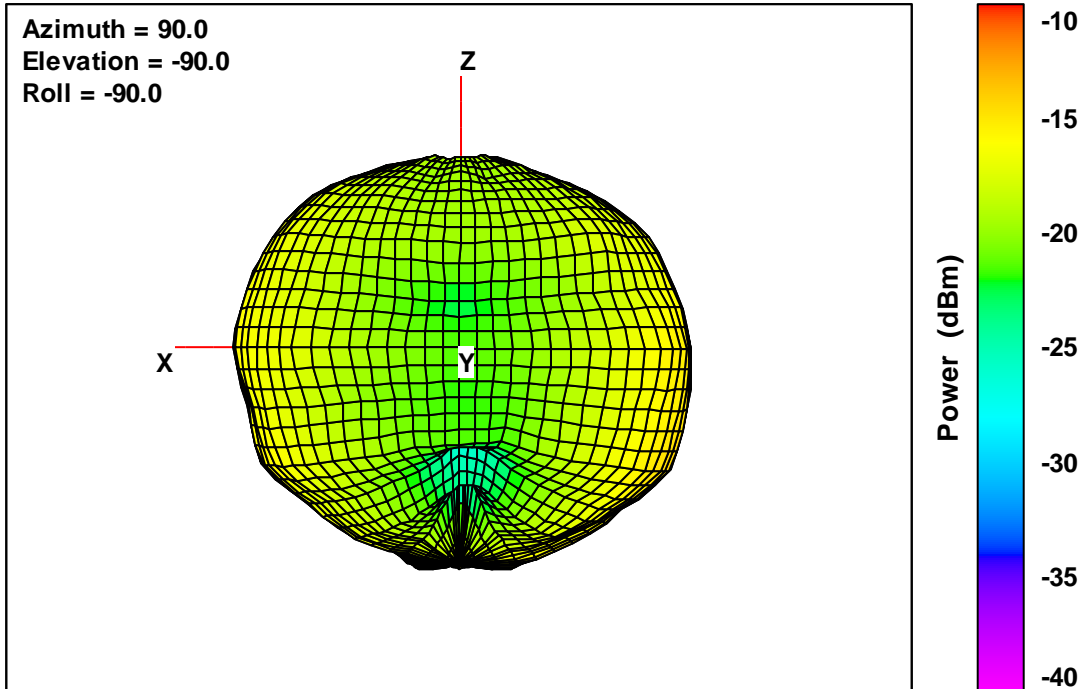
Free-Space Total EIRP, Left Side View, 2402 MHz

Total EIRP, Front Face View



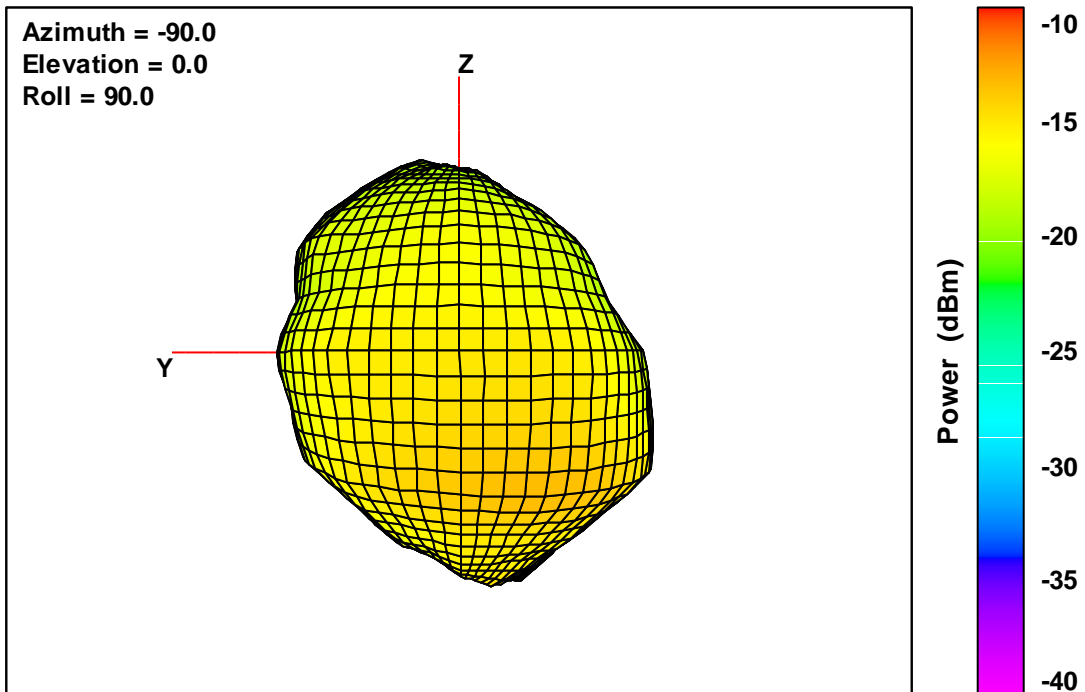
Free-Space Total EIRP, Front Face View, 2402 MHz

Total EIRP, Right Side View



Free-Space Total EIRP, Right Side View, 2402 MHz

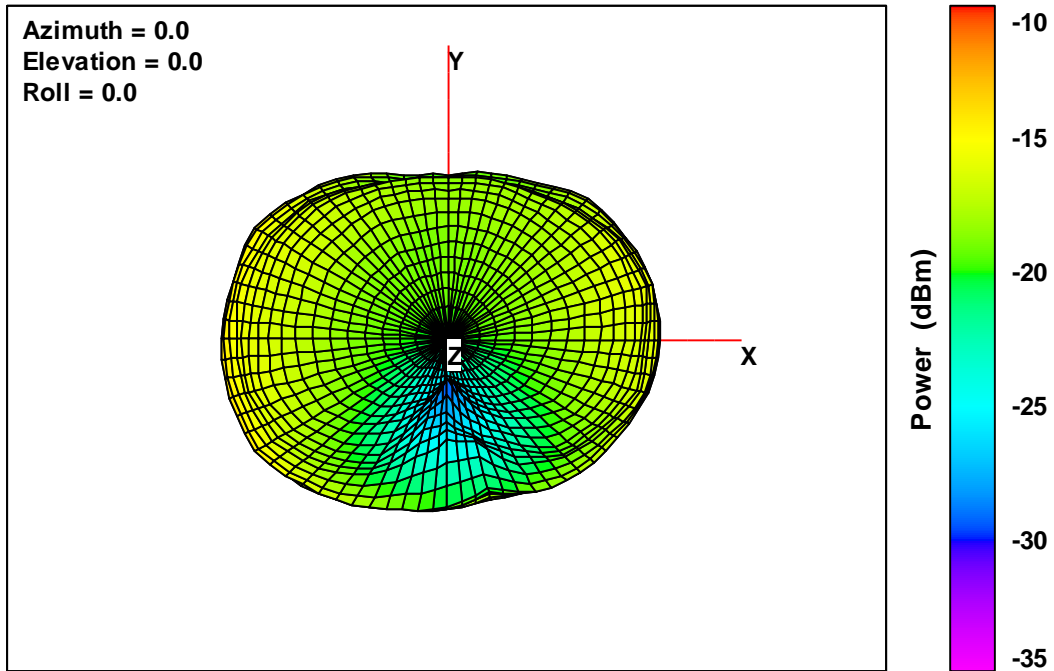
Total EIRP, Back Face View



Free-Space Total EIRP, Back Face View, 2402 MHz

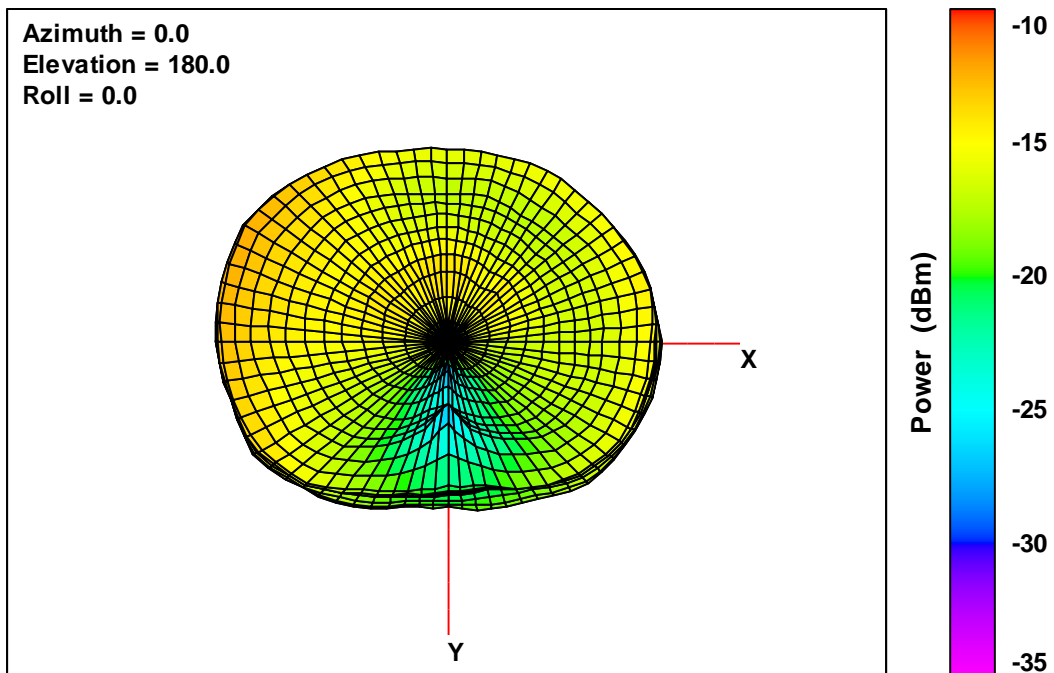
7.2 3D PASSIVE- 2440 MHz

Total EIRP, Top View



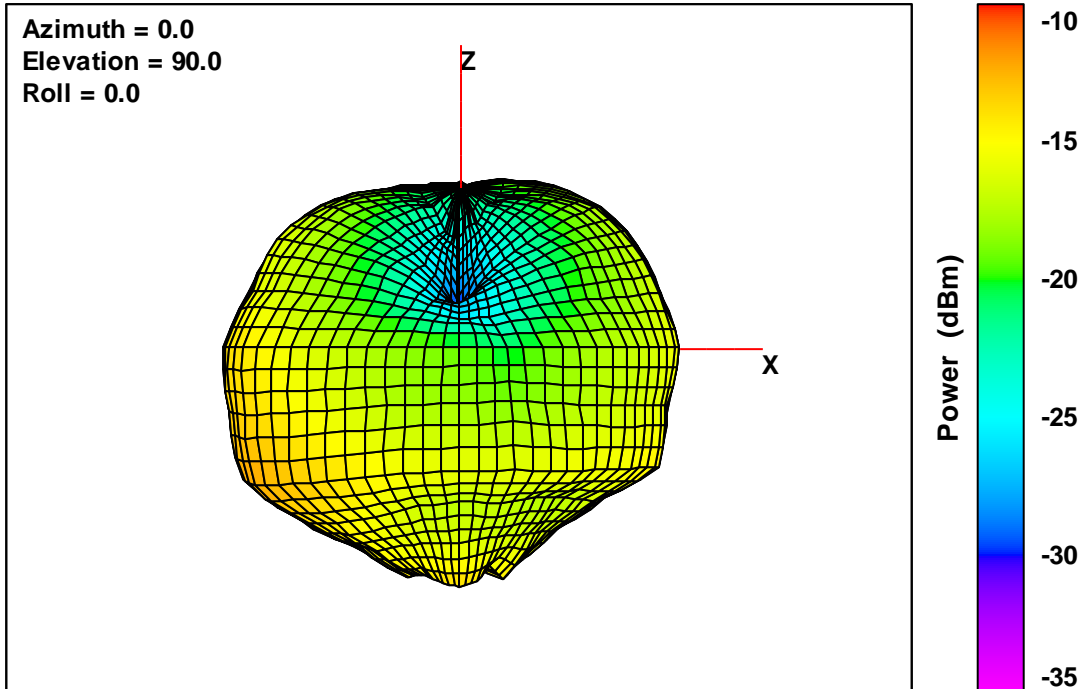
Free-Space Total EIRP, Top View, 2440 MHz

Total EIRP, Bottom View



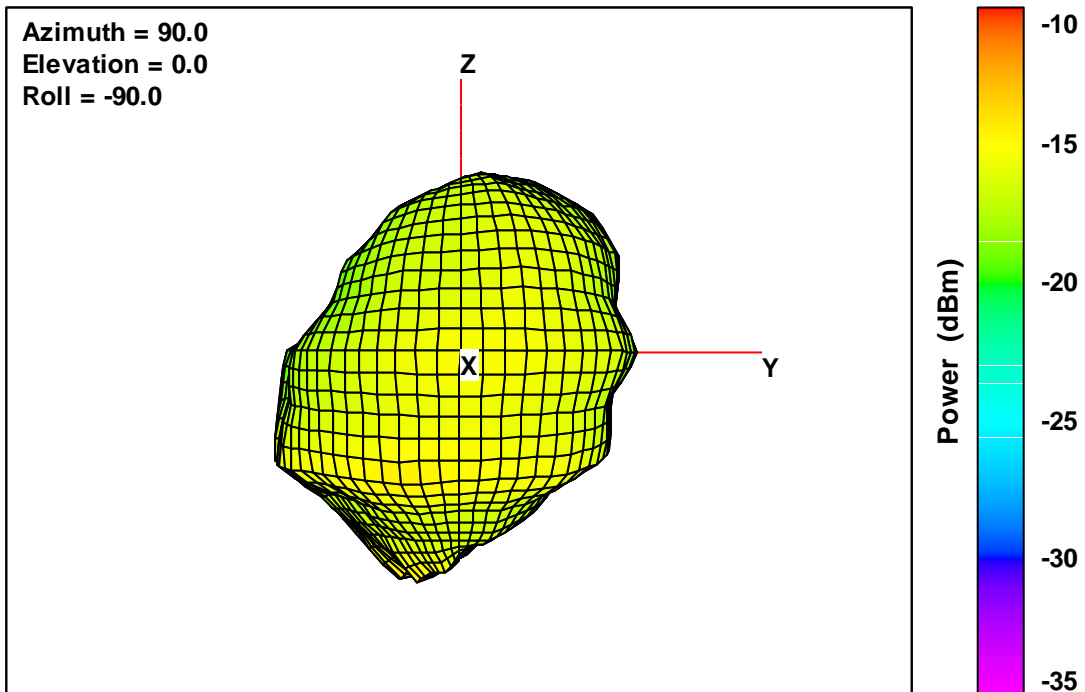
Free-Space Total EIRP, Bottom View, 2440 MHz

Total EIRP, Left Side View



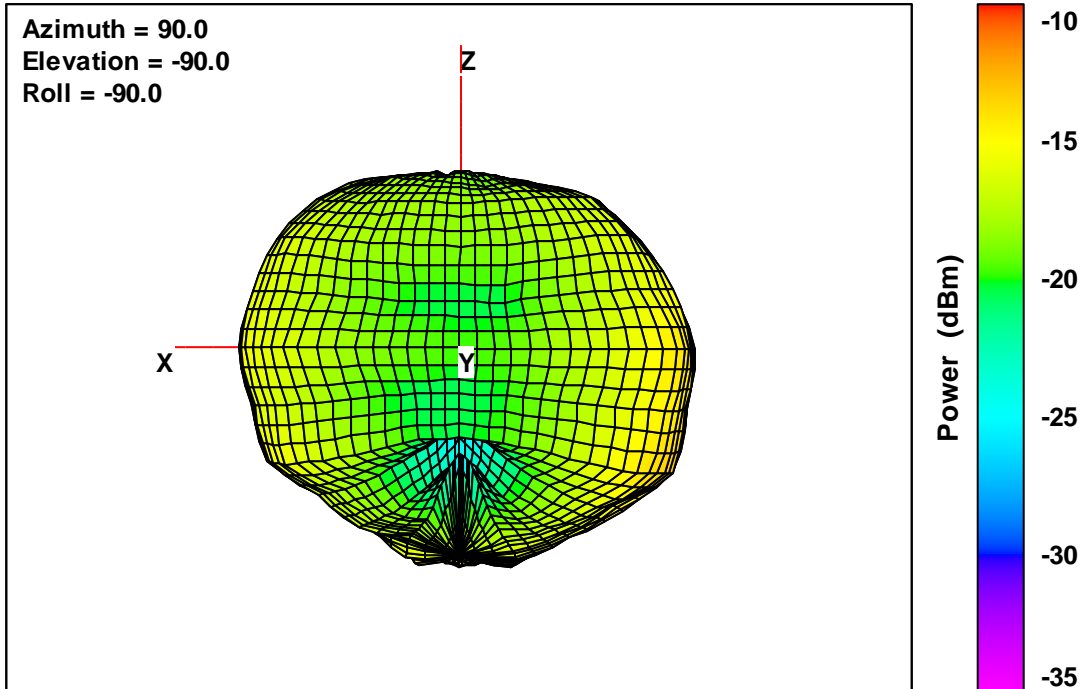
Free-Space Total EIRP, Left Side View, 2440 MHz

Total EIRP, Front Face View

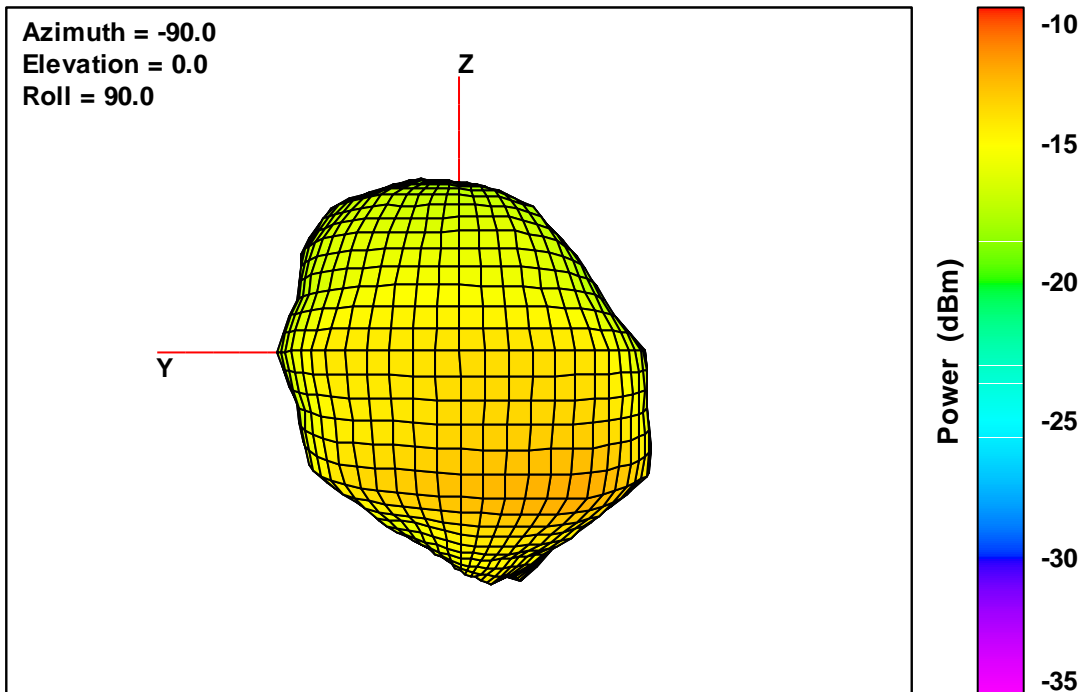


Free-Space Total EIRP, Front Face View, 2440 MHz

Total EIRP, Right Side View

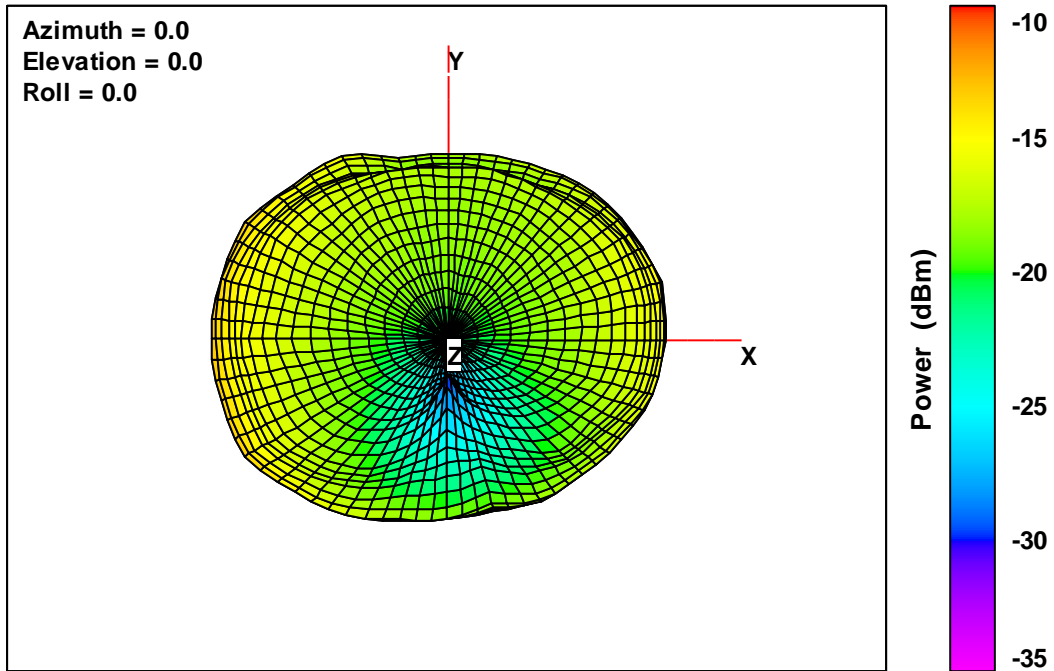


Total EIRP, Back Face View



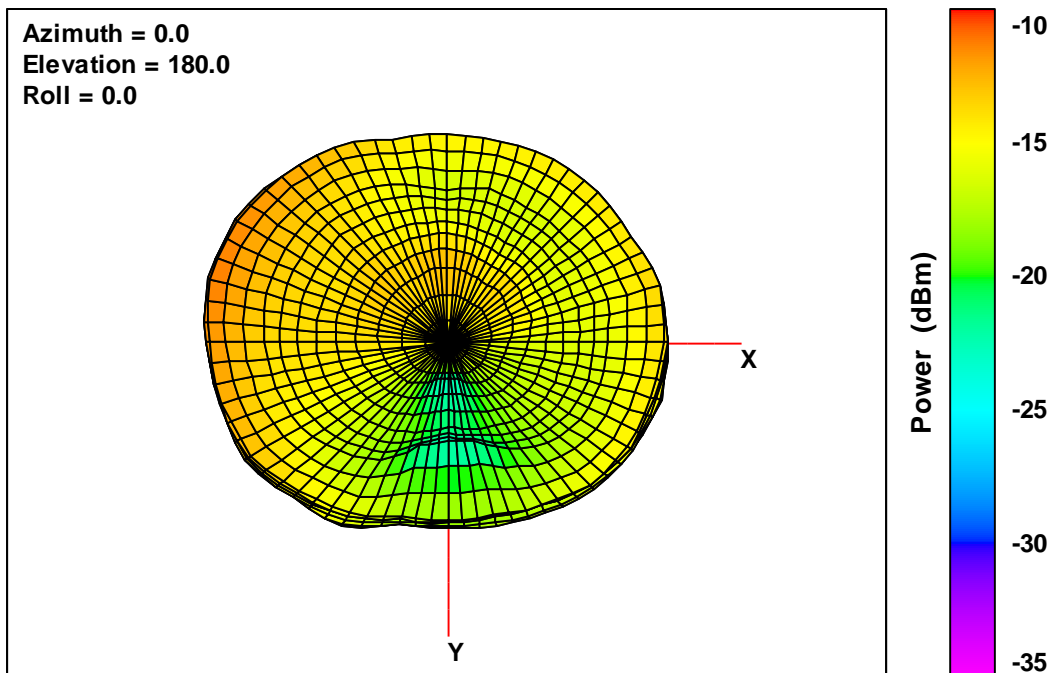
7.3 3D PASSIVE- 2480 MHz

Total EIRP, Top View



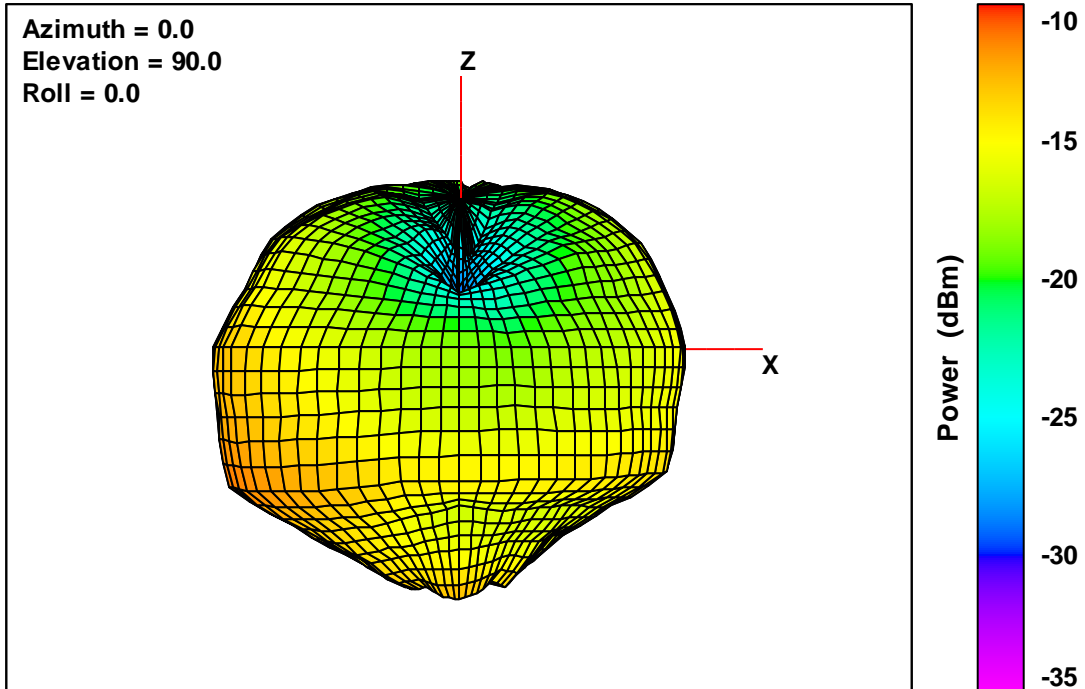
Free-Space Total EIRP, Top View, 2480 MHz

Total EIRP, Bottom View



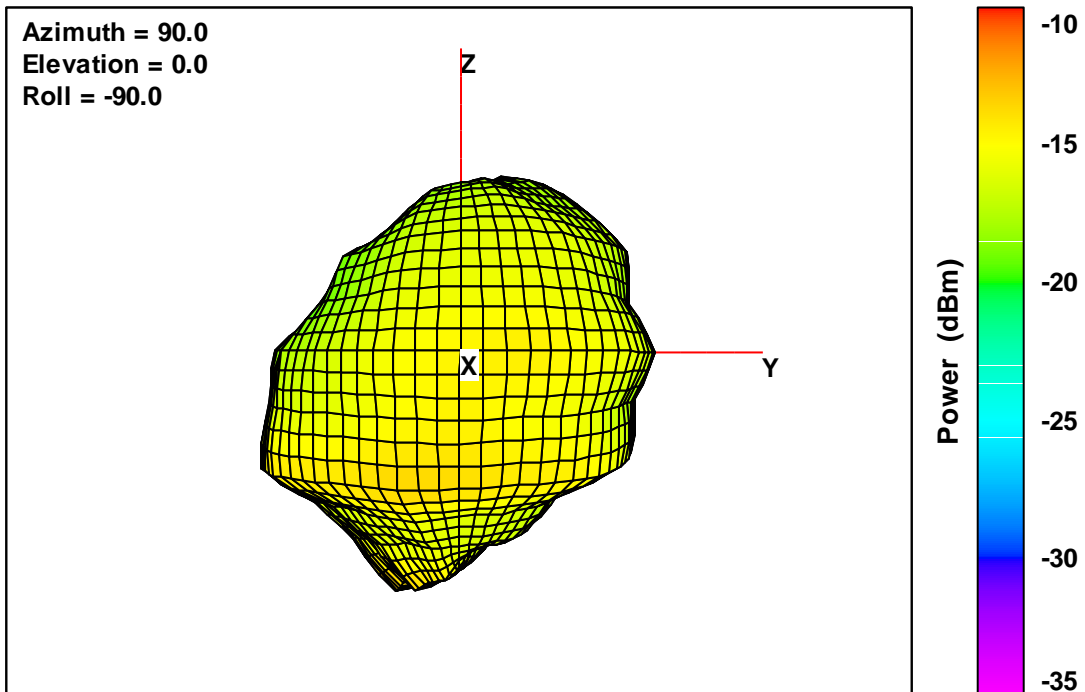
Free-Space Total EIRP, Bottom View, 2480 MHz

Total EIRP, Left Side View



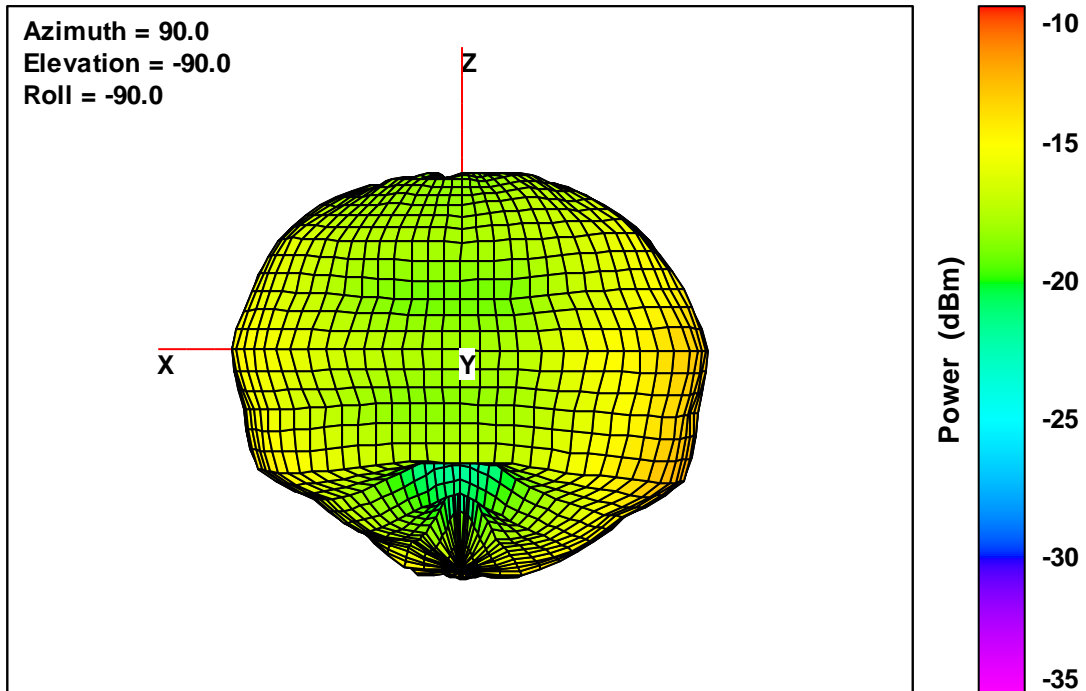
Free-Space Total EIRP, Left Side View, 2480 MHz

Total EIRP, Front Face View

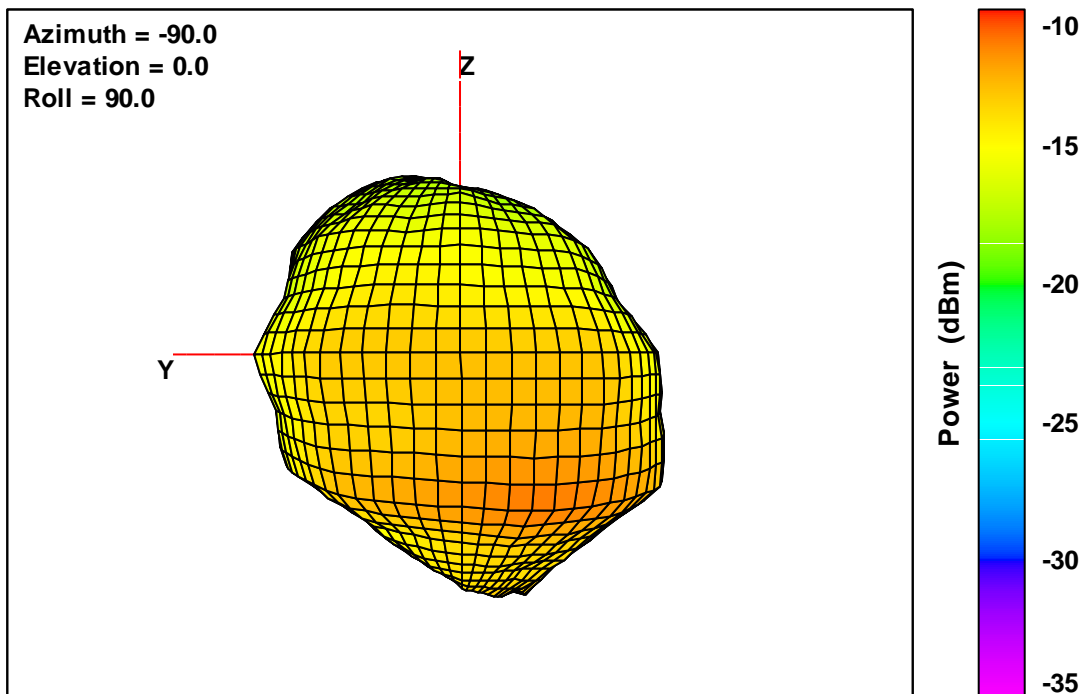


Free-Space Total EIRP, Front Face View, 2480 MHz

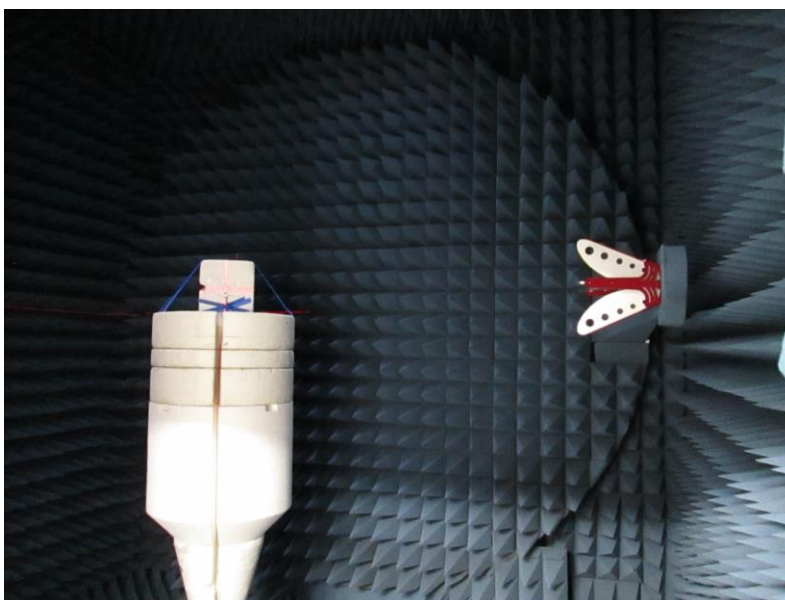
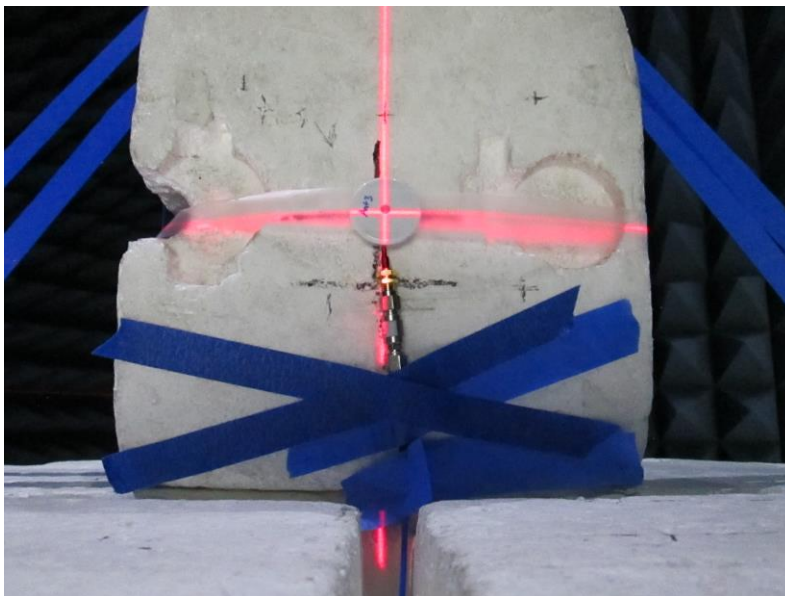
Total EIRP, Right Side View



Total EIRP, Back Face View



8 TEST SETUP



END OF REPORT