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ANTENNA GAIN AND PATTERN MEASUREMENT REPORT

For Gain value reference

FOR

IMPALA

PART/MODEL NUMBER: AC-027

DATE ISSUED: January 3, 2024

REPORT NUMBER: 14554504-O1V4

Prepared for
AliveCor, Inc
189 N. Bernardo Avenue, Ste 100
Mountain View, California, 94043
U.S.A.

Prepared by
UL VERIFICATION SERVICES INC.
47173 BENICIA STREET
FREMONT, CA 94538, U.S.A.
TEL: (510) 319-4000
FAX: (510) 661-0888

Revision History

Rev.	Issue Date	Revisions	Revised By
V1	05/31/2023	Initial Issue	
V2	06/15/2023	Re-measured data with correct EUT configuration	E. Budhbhatti
V3	10/25/2023	Corrected Test Freq. on Page 7 to 2402MHz	
V4	01/03/2024	Revised End Product Description	G.Rincand

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TEL: (510) 319-4000

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1 ATTESTATION OF TEST RESULTS

Company Name and Address	AliveCor.
	189 N. Bernardo Avenue, Ste 100
	Mountain View, California, 94043
	U.S.A.
EUT Description	Impala
Part/Model	AC-027
Date Tested	06/13/2023

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:

E.B.

Ekta Budhbhatti
OTA SUPERVISOR
UL Verification Services Inc.

Tested and Prepared By:

Casey Dial

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 FACILITY

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)	☒
OTA Lab B (MAPS Chamber)	☐

- 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	27 January 2024
OTA Test Software	ETS-Lindgren	EMQuest;V1.15 build 27347	231770	-	-

5 DEVICE UNDER TEST INFORMATION

Antenna	
Manufacturer	AliveCor, Inc
Part/Model Number	AC-027
Frequency range (MHz)	2402, 2440, 2480
Device/Antenna type	Printed on PC board internal antenna

5.1 END PRODUCT DESCRIPTION

The EUT is Impala, a device that records a diagnostic resting electrocardiogram (ECG) of a user, and transmits it over a Bluetooth low energy (BLE) wireless interface.

6 RESULT SUMMARY

6.1 Passive Antenna Pattern

Measurement	Frequency (MHz)		
	2402	2440	2475
3D Gain (dBi)	1.05	0.47	-0.37
2D/Peak Gain (dBi)	1.28	0.70	0.07

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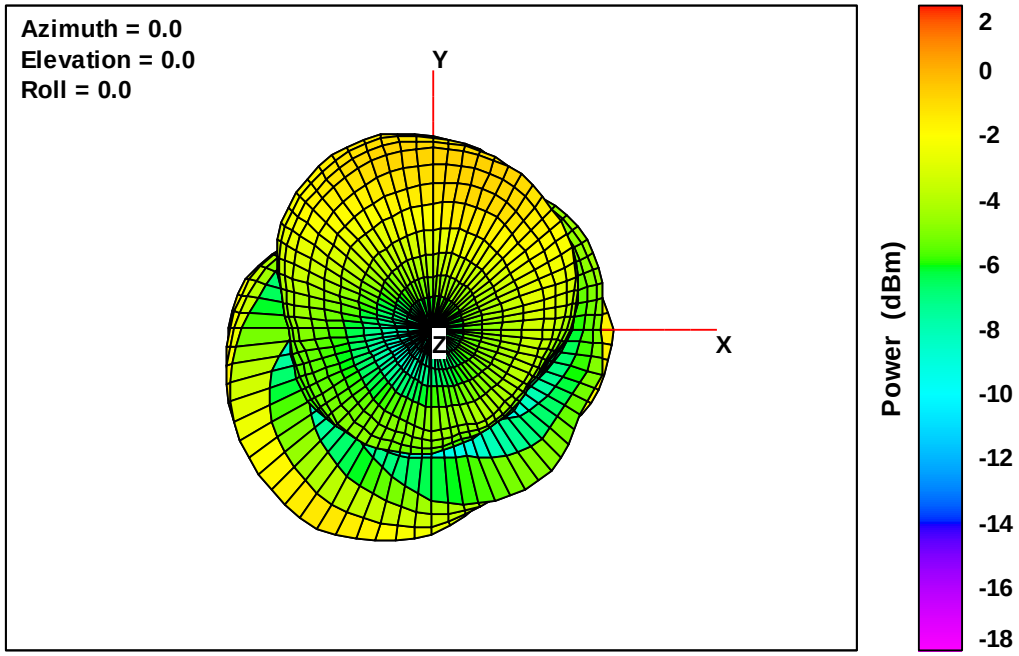
7 PLOTS

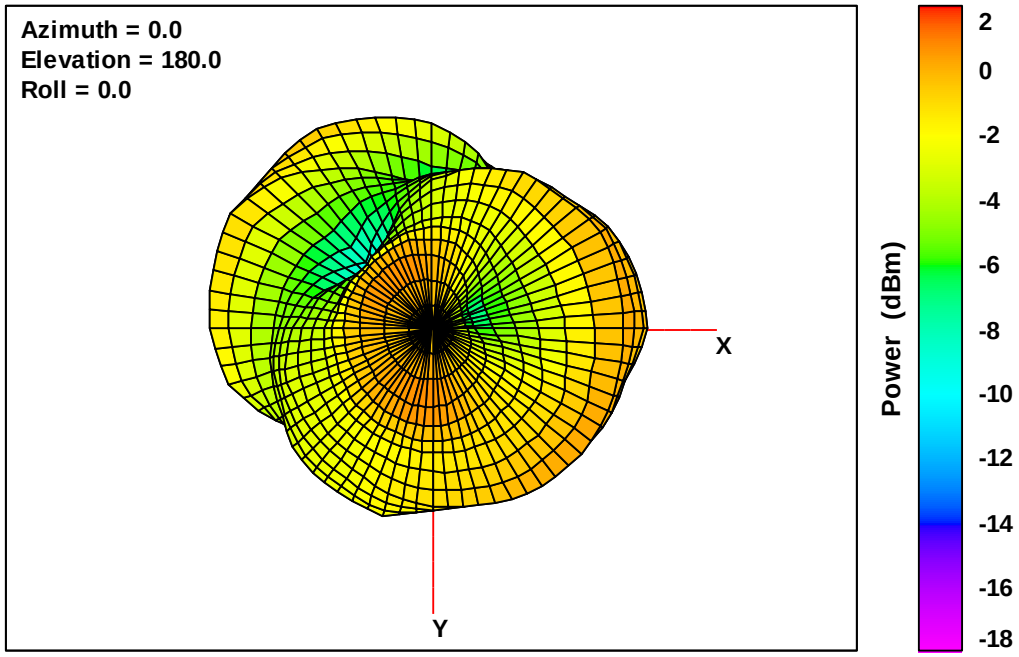
7.1 3D PASSIVE- 2402 MHz

Total EIRP, Top View



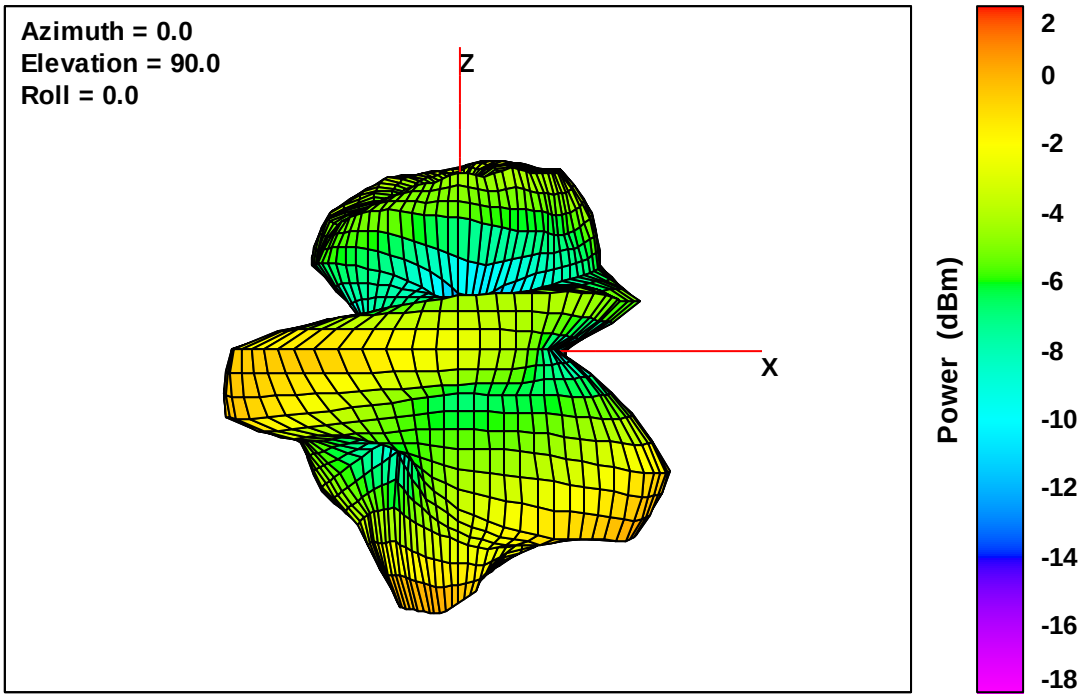
Free-Space Total EIRP, Top View, 2402 MHz

Total EIRP, Bottom View



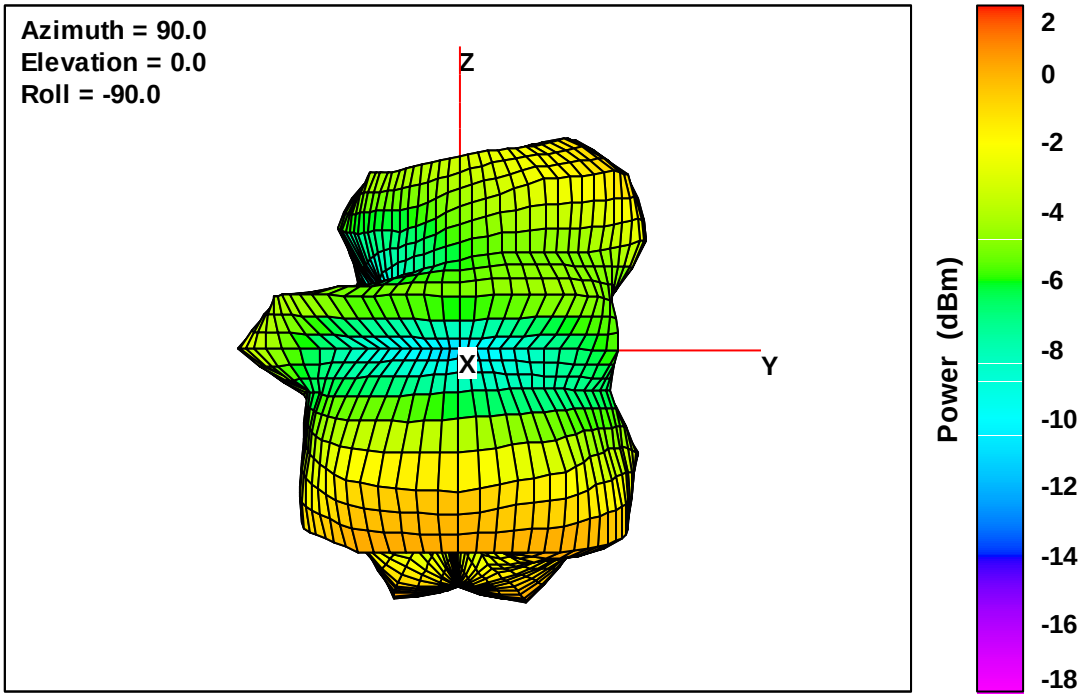
Free-Space Total EIRP, Bottom View, 2402 MHz

Total EIRP, Left Side View



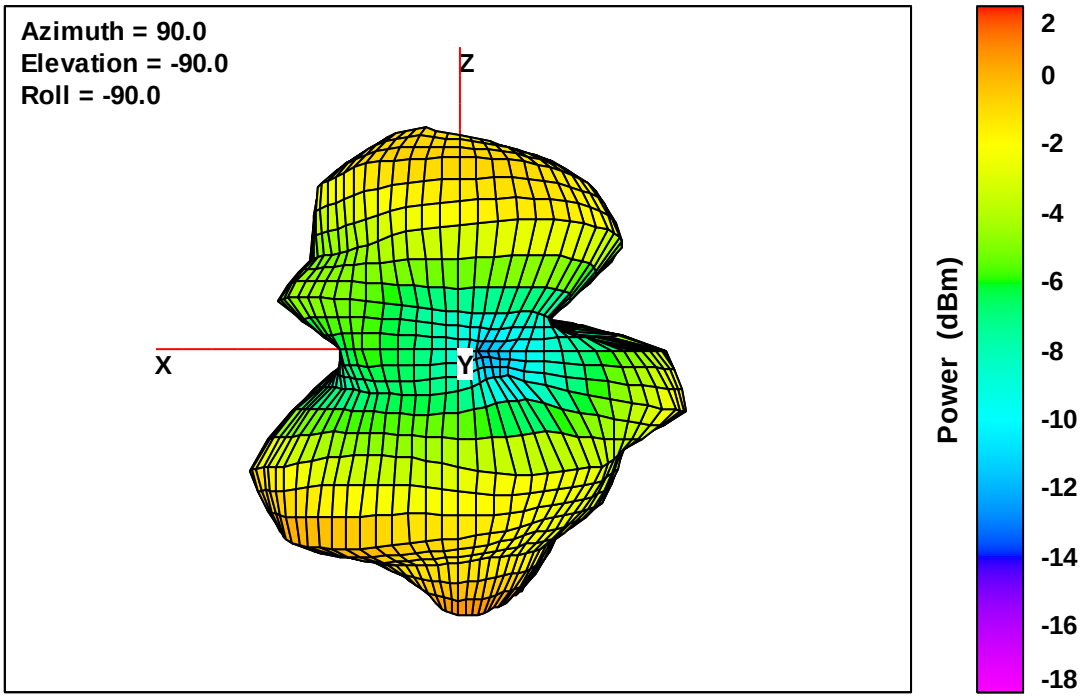
Free-Space Total EIRP, Left Side View, 2402 MHz

Total EIRP, Front Face View



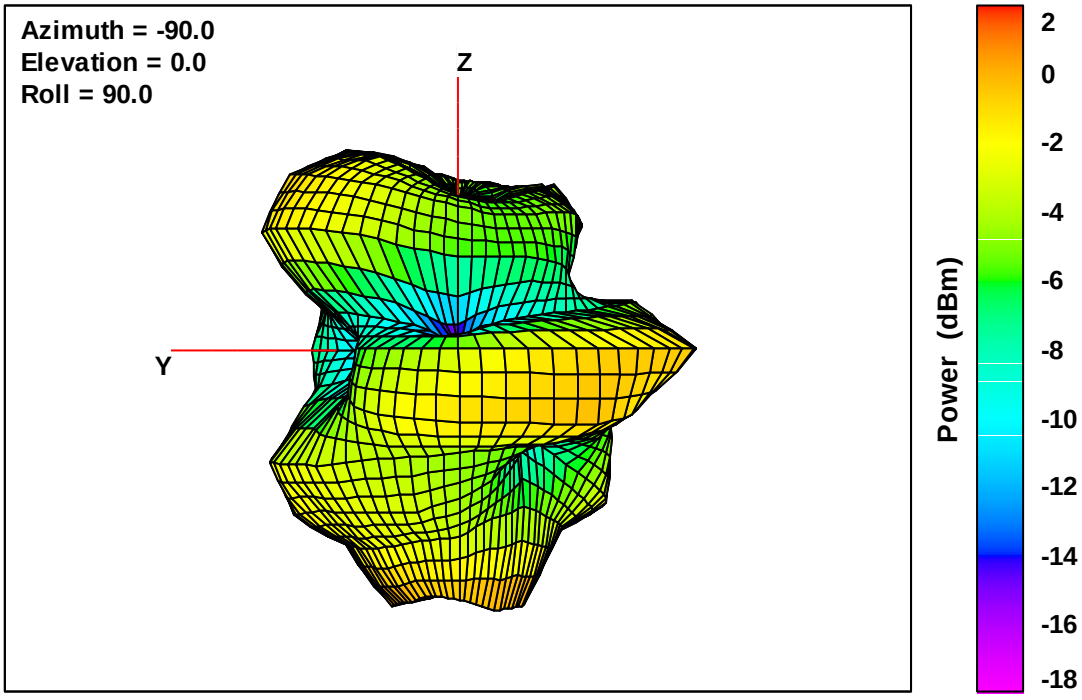
Free-Space Total EIRP, Front Face View, 2402 MHz

Total EIRP, Right Side View



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

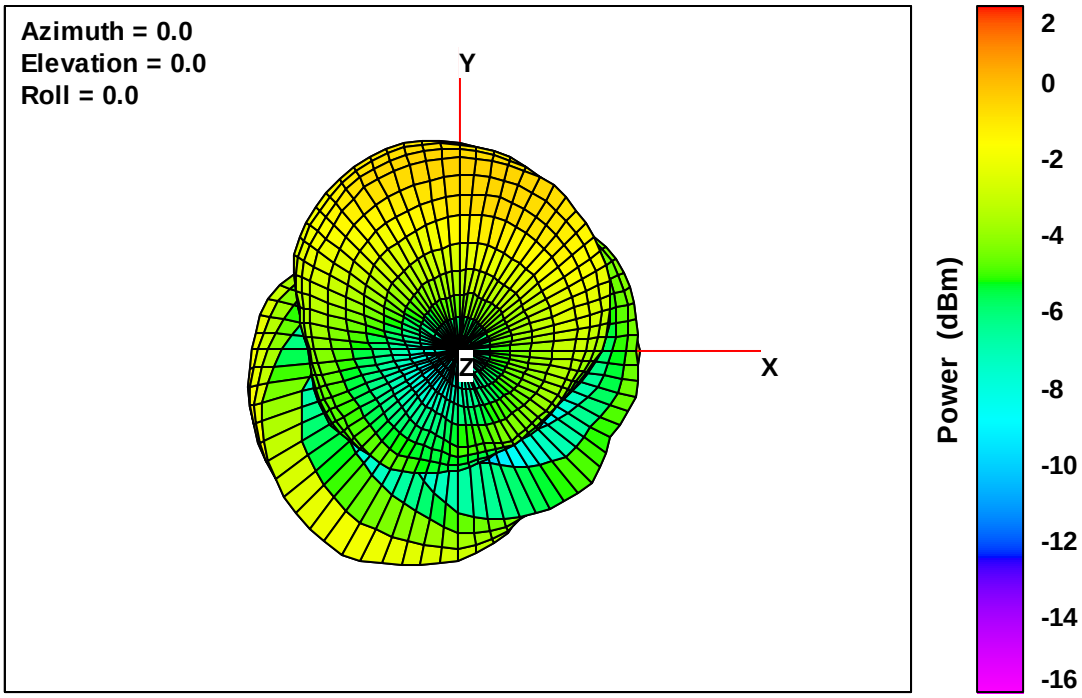
Total EIRP, Back Face View



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

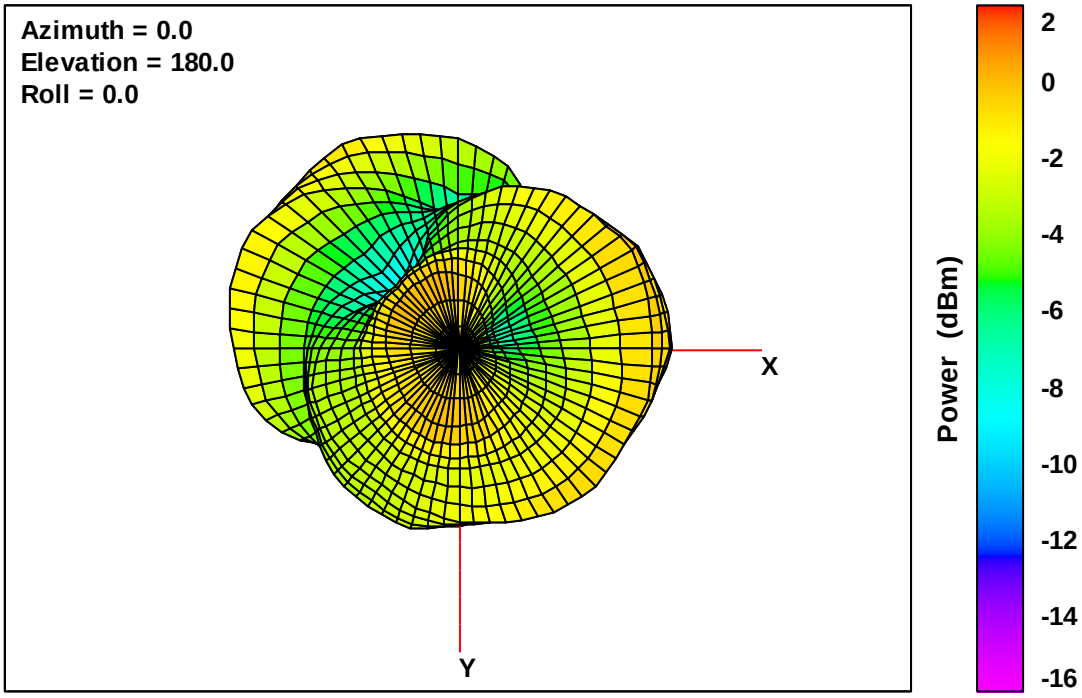
7.2 3D PASSIVE- 2440 MHz

Total EIRP, Top View



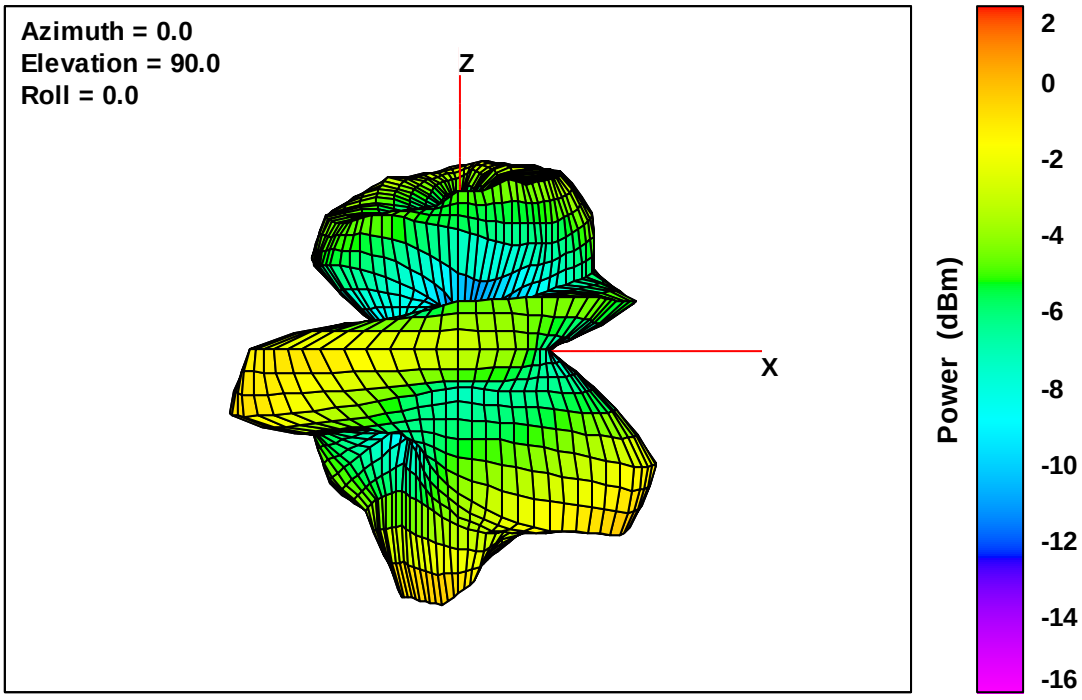
Free-Space Total EIRP, Top View, 2440 MHz

Total EIRP, Bottom View



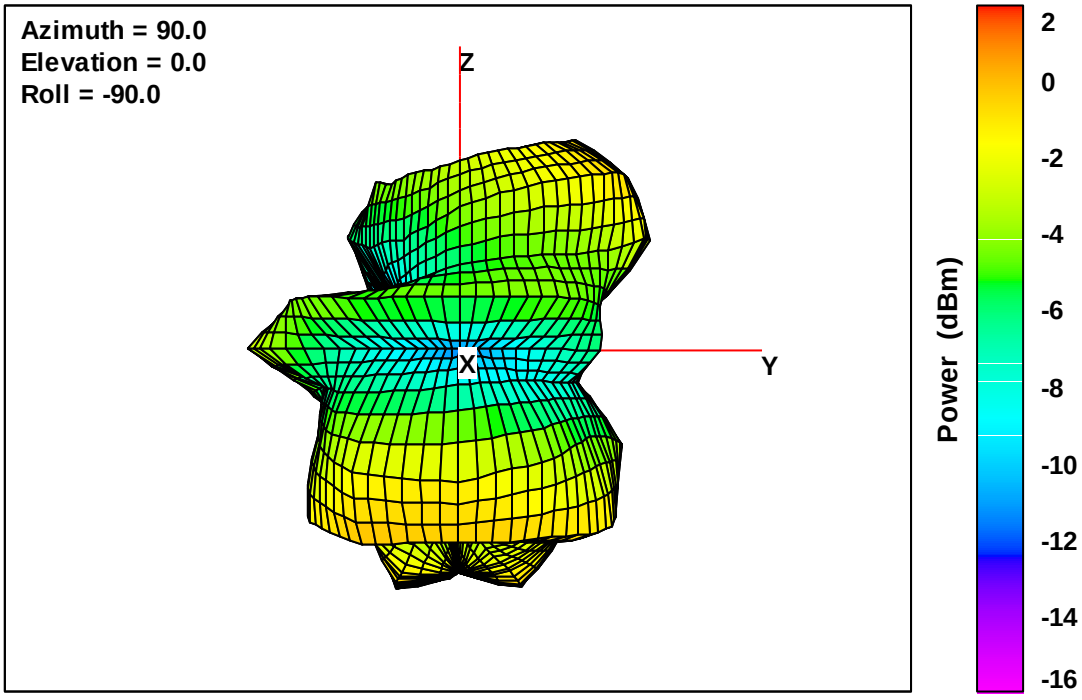
Free-Space Total EIRP, Bottom View, 2440 MHz

Total EIRP, Left Side View



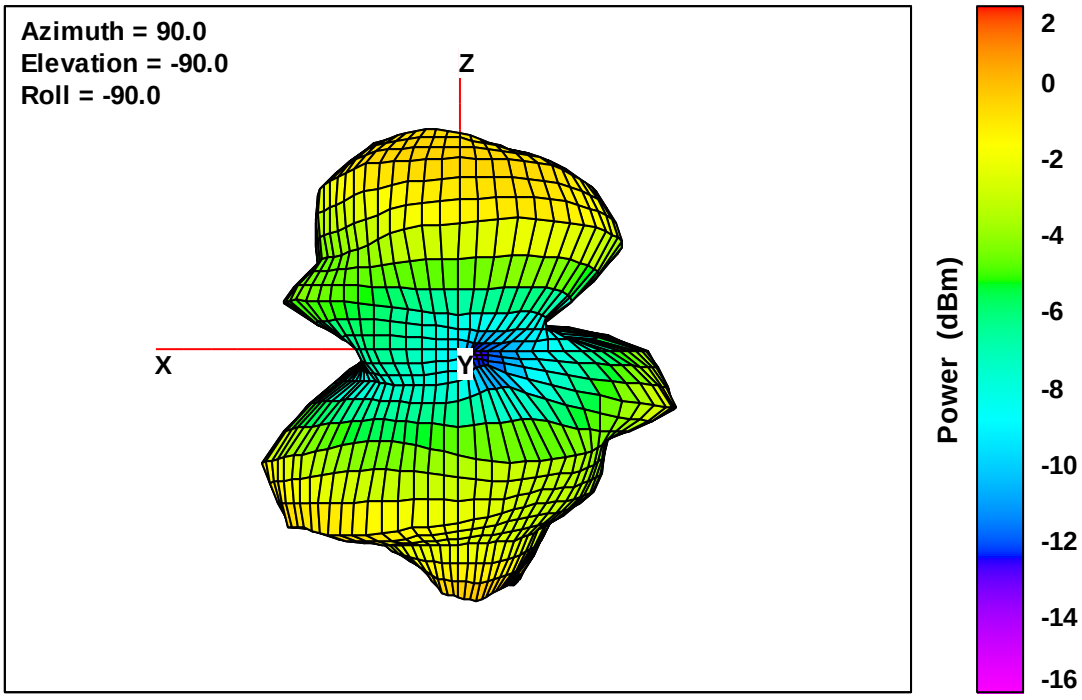
Free-Space Total EIRP, Left Side View, 2440 MHz

Total EIRP, Front Face View



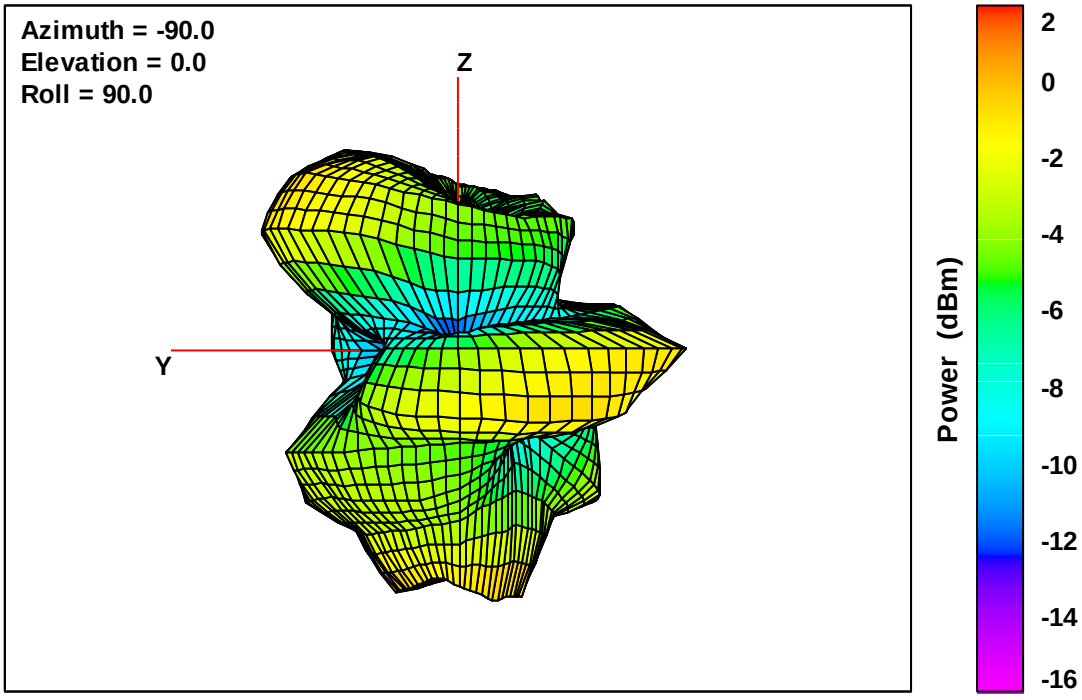
Free-Space Total EIRP, Front Face View, 2440 MHz

Total EIRP, Right Side View



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

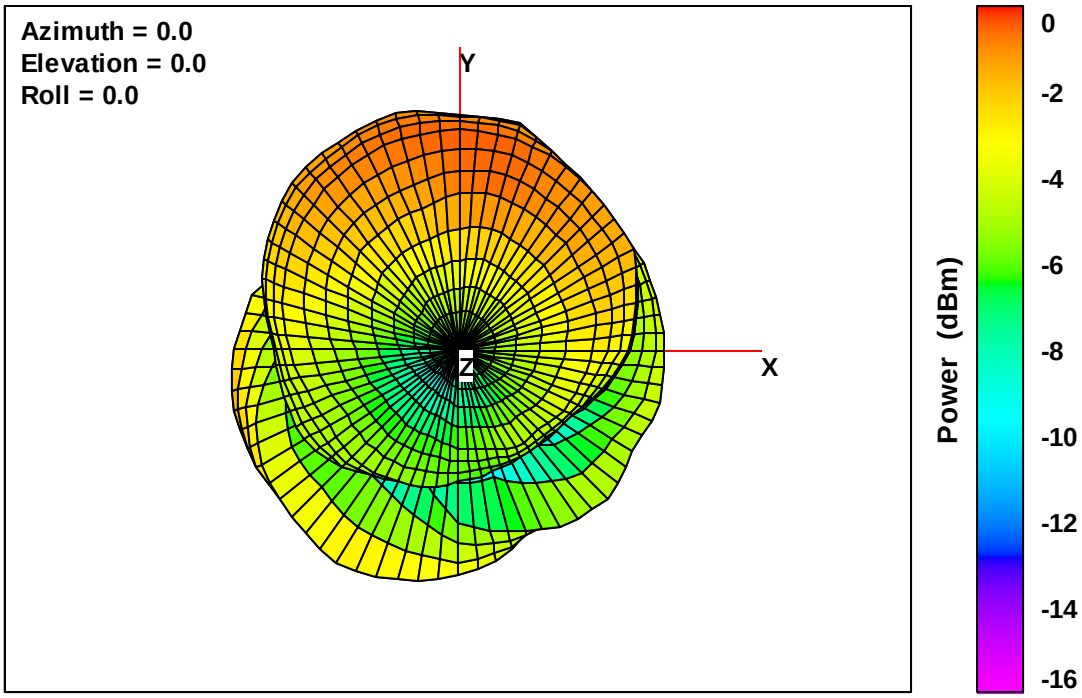
Total EIRP, Back Face View



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

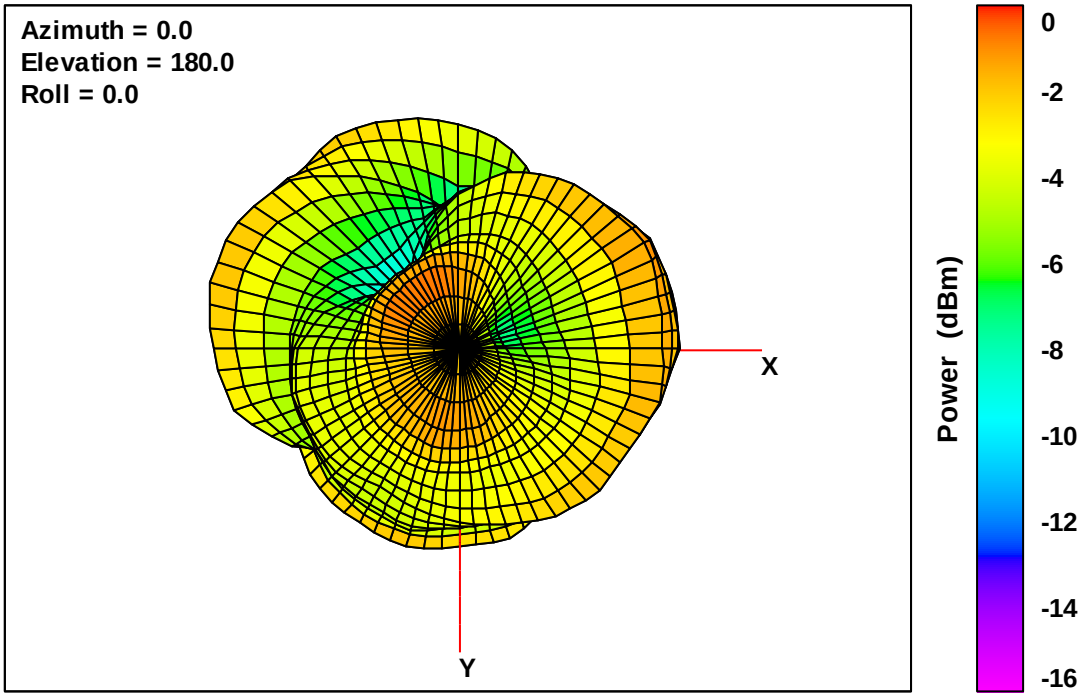
7.3 3D PASSIVE- 2480 MHz

Total EIRP, Top View



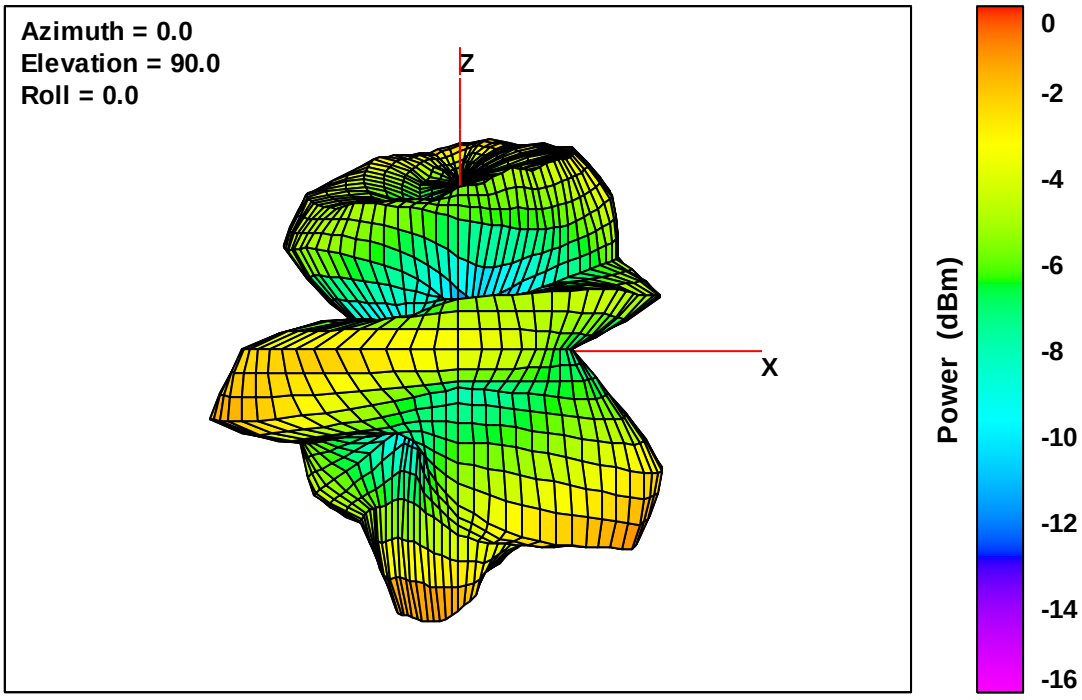
Free-Space Total EIRP, Top View, 2480 MHz

Total EIRP, Bottom View



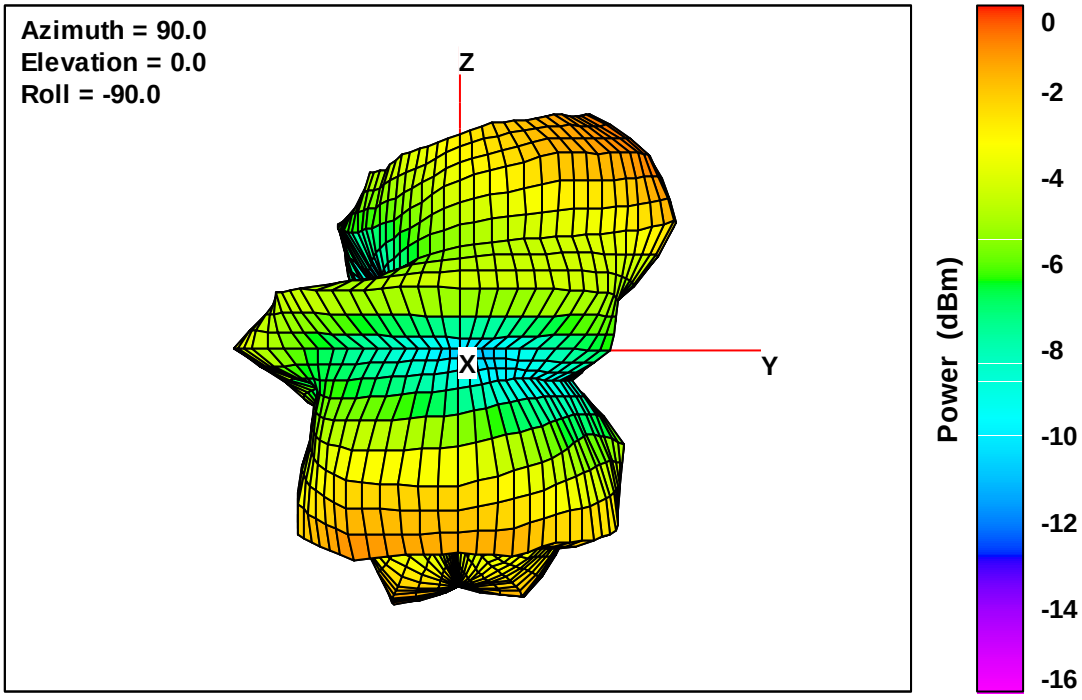
Free-Space Total EIRP, Bottom View, 2480 MHz

Total EIRP, Left Side View



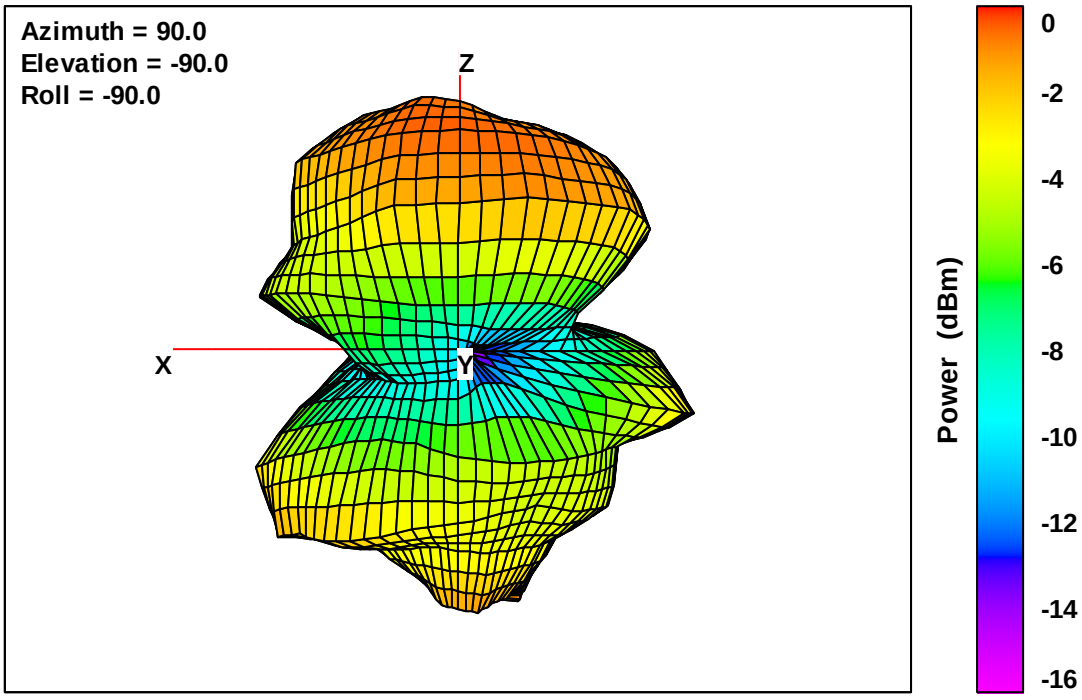
Free-Space Total EIRP, Left Side View, 2480 MHz

Total EIRP, Front Face View



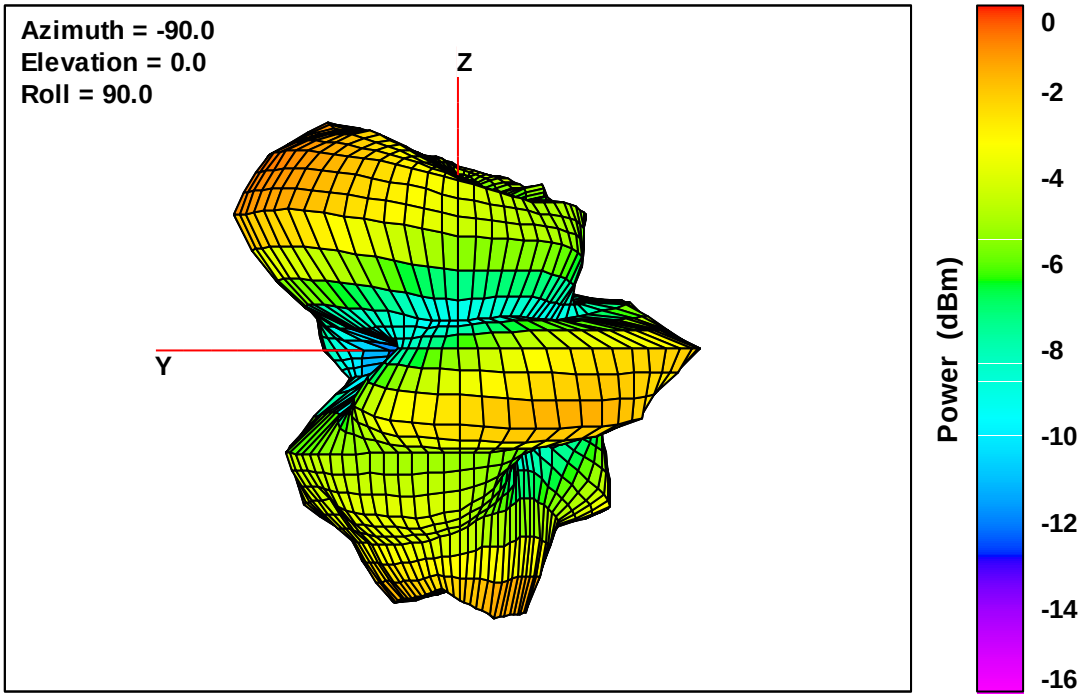
Free-Space Total EIRP, Front Face View, 2480 MHz

Total EIRP, Right Side View



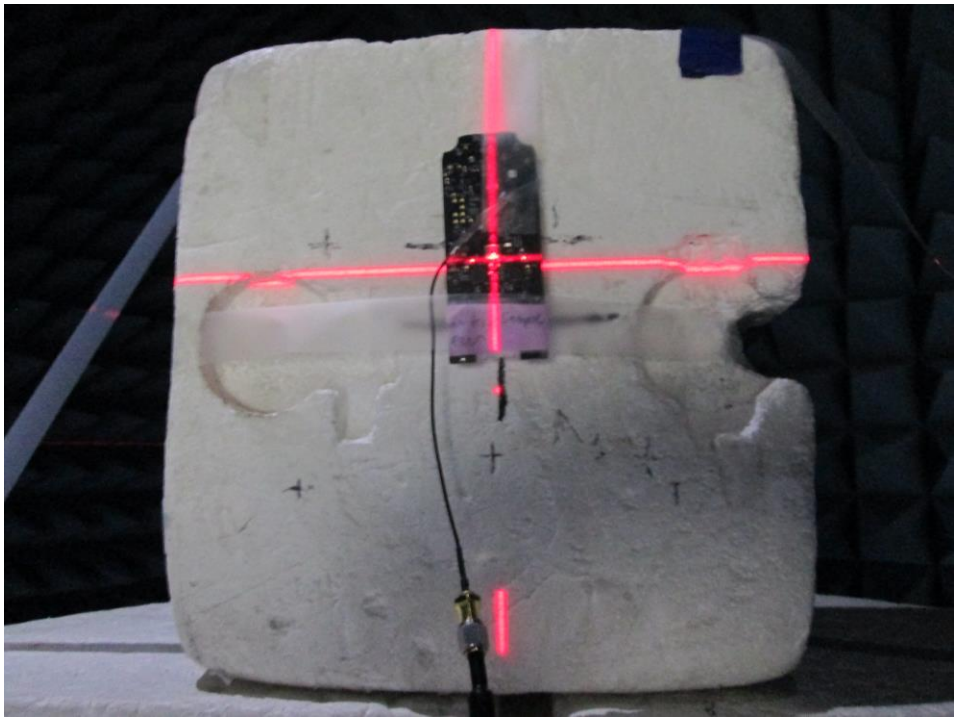
Free-Space Total EIRP, Right Side View, 2480 MHz

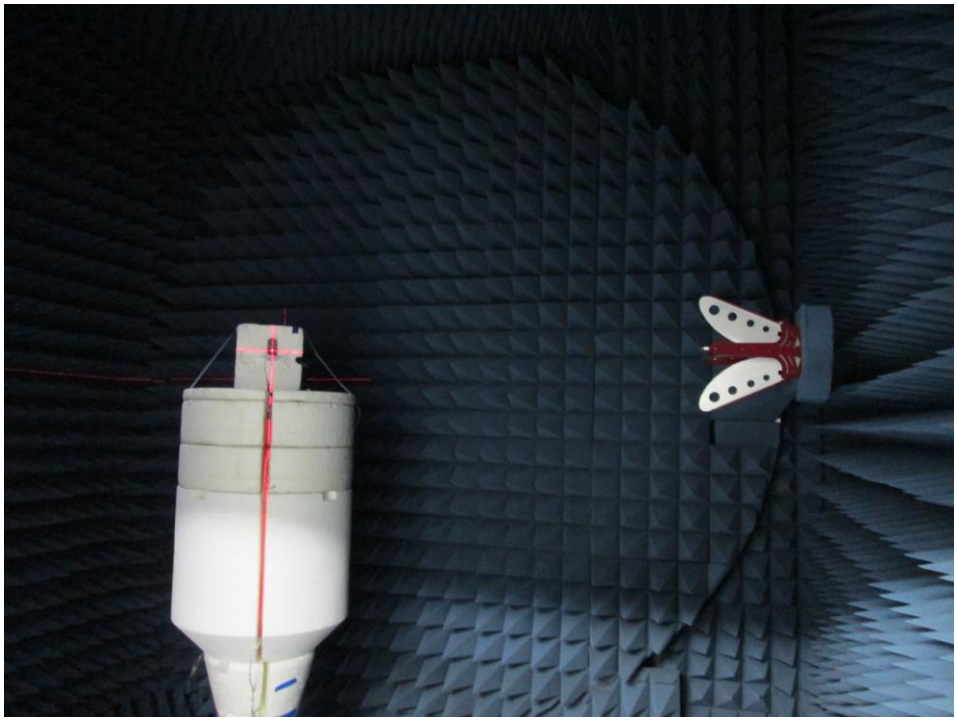
Total EIRP, Back Face View



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

8 TEST SETUP





END OF REPORT

UL VERIFICATION SERVICES INC. 47173 BENICIA STREET, FREMONT, CA 94538, USA
TEL: (510) 319-4000