



REPORT No.: SZ21060208E01

TEST REPORT

APPLICANT : Guangzhou Universal Electronics Service Co.,Ltd.

PRODUCT NAME : BV TDC(YouSee) BLE RCU 2021

MODEL NAME : i

TRADE NAME : N/A

BRAND NAME : N/A

STANDARD(S) : ANSI/IEEE Std 149-2008

RECEIPT DATE : 2021-06-17

TEST DATE : 2021-06-21

ISSUE DATE : 2021-06-22



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MORLAB

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Change History		
Version	Date	Reason for change
1.0	2021-06-22	First edition



1. Technical Information

Note: Provide by manufacturer.

1.1. Applicant and Manufacturer Information

Applicant:	Guangzhou Universal Electronics Service Co.,Ltd.
Applicant Address:	18th Floor, Building No.1 of Tower 4, Hailunbao Creative Park, Yushan Road, Shatou Street, Panyu District, Guangzhou
Manufacturer:	N/A
Manufacturer Address:	N/A

1.2. Equipment Under Test (EUT) Description

Wireless Type	Bluetooth
Frequency	2402MHz-2480MHz
IMEI	N/A
Colour	Black
Sample No.	#1 with weight、#2 with weight、#2 without weight、#1 without weight

2. Test Results

2.1. Applied Reference Documents

Leading reference documents for testing:

No.	Identity	Document Title
1	ANSI/IEEE Std 149-2008	IEEE Standard Test Procedures for Antennas

2.2. Test Conditions

Test Environment Conditions:

Relative Humidity:	25 ... 75 %
Temperature:	+10 °C to +30 °C

2.3. Test Results lists

2.3.1. Gain and Efficiency

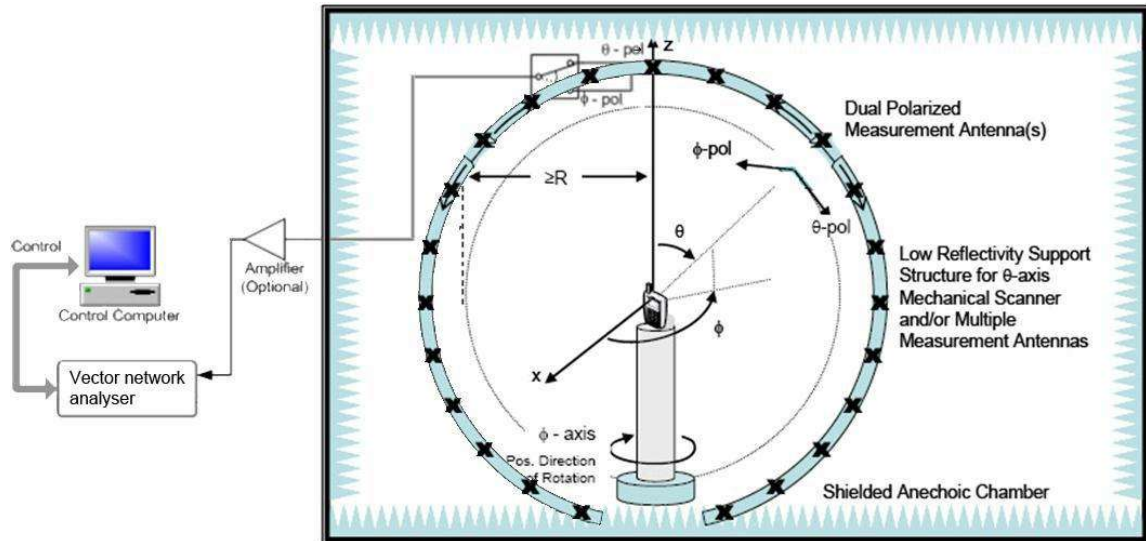
Frequency (MHz)	Gain (dBi)		Efficiency (%)		Efficiency (dB)	
	#1 with weight	#2 with weight	#1 with weight	#2 with weight	#1 with weight	#2 with weight
2400	-0.46	-0.05	37.21	30.73	-4.29	-5.12
2402	-0.47	-0.15	37.21	30.82	-4.29	-5.11
2410	-0.53	-0.32	36.29	30.09	-4.40	-5.22
2420	-0.69	-0.50	35.04	29.08	-4.55	-5.36
2430	-0.72	-0.65	34.54	28.45	-4.62	-5.46
2440	-0.57	-0.76	35.03	28.78	-4.56	-5.41
2450	-0.51	-0.65	35.82	29.41	-4.46	-5.31
2460	-0.51	-0.61	35.58	29.17	-4.49	-5.35
2470	-0.66	-0.77	34.35	28.23	-4.64	-5.49
2480	-1.07	-0.92	33.07	27.46	-4.81	-5.61
2490	-1.15	-1.03	31.76	26.75	-4.98	-5.73
2500	-1.07	-1.02	31.47	26.95	-5.02	-5.69



Frequency (MHz)	Gain (dBi)		Efficiency (%)		Efficiency (dB)	
	#1 without weight	#2 without weight	#1 without weight	#2 without weight	#1 without weight	#2 without weight
2400	0.63	0.30	28.44	35.04	-5.46	-4.55
2402	0.60	0.27	28.56	35.04	-5.44	-4.55
2410	0.41	0.10	28.20	34.23	-5.50	-4.66
2420	0.25	0.07	27.68	32.96	-5.58	-4.82
2430	0.08	-0.05	27.70	32.06	-5.58	-4.94
2440	0.10	0.03	28.64	32.20	-5.43	-4.92
2450	0.31	0.02	29.89	32.71	-5.24	-4.85
2460	0.15	0.01	30.28	32.18	-5.19	-4.92
2470	0.16	-0.22	29.91	30.64	-5.24	-5.14
2480	0.09	-0.47	29.63	29.21	-5.28	-5.34
2490	-0.10	-0.54	29.39	27.82	-5.32	-5.56
2500	0.02	-0.67	29.95	27.40	-5.24	-5.62

Annex A Photographs

1. Test Setup

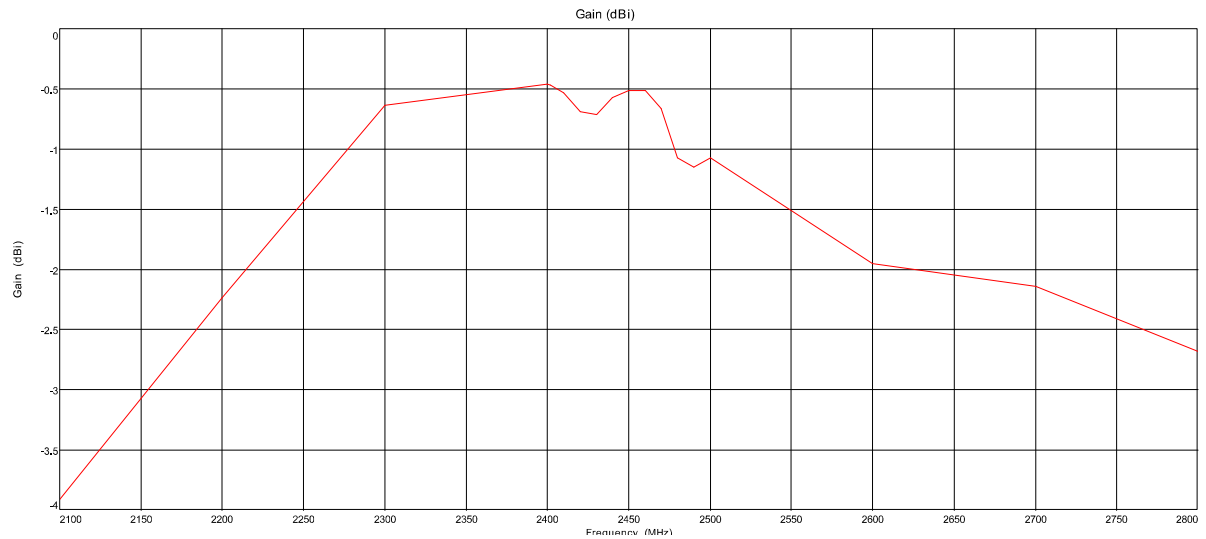




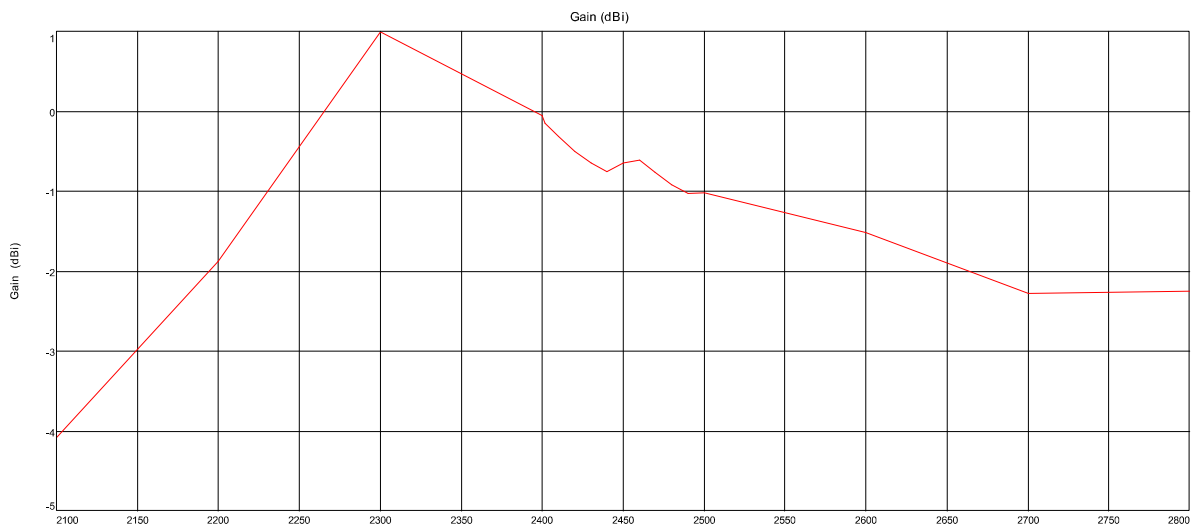
Annex B Figures

1. 2D Radiation Pattern

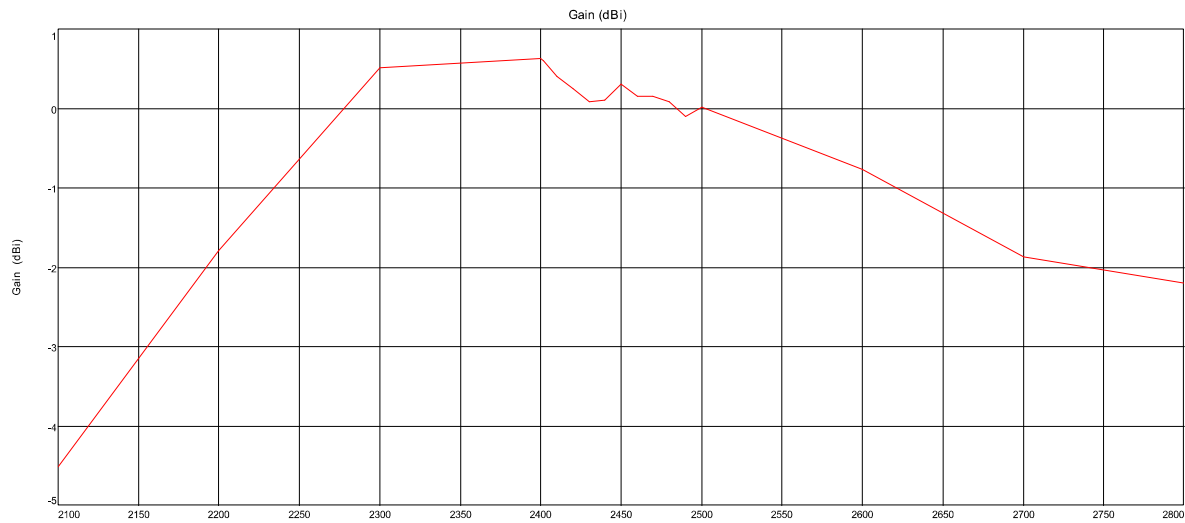
Gain



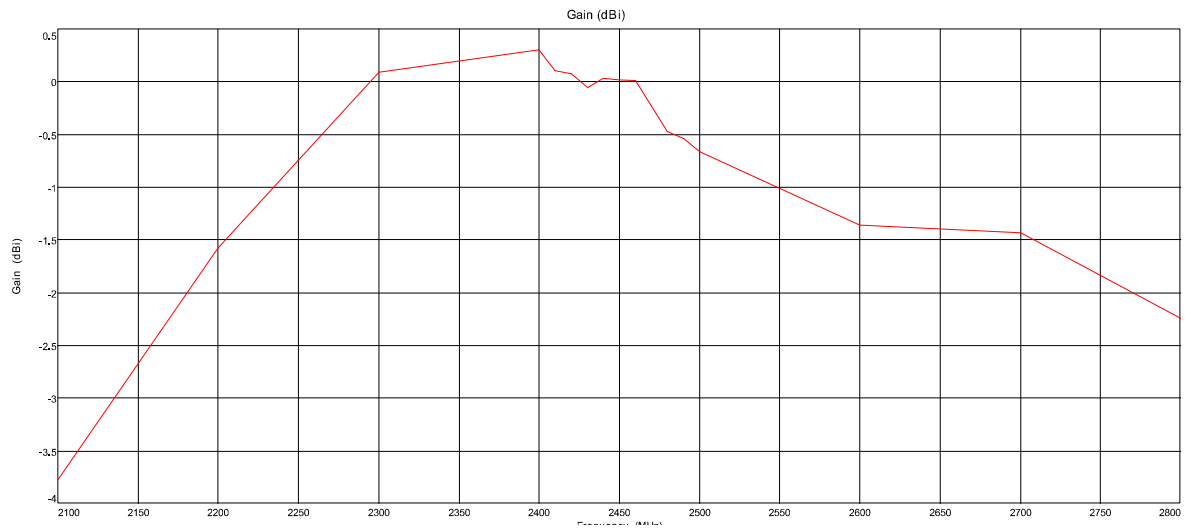
#1 with weight



2# with weight



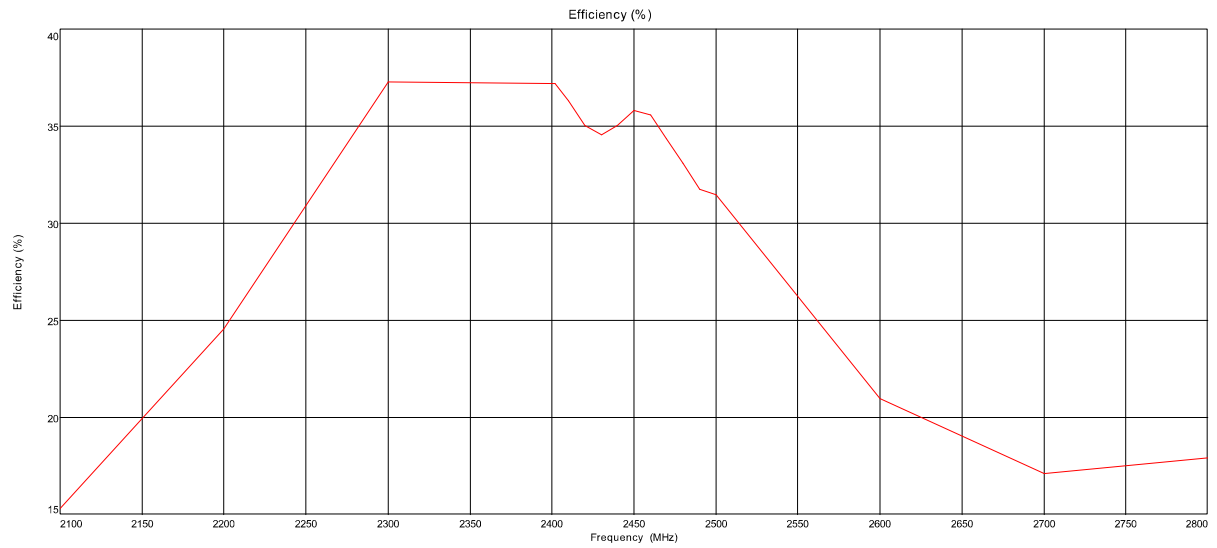
#1 without weight



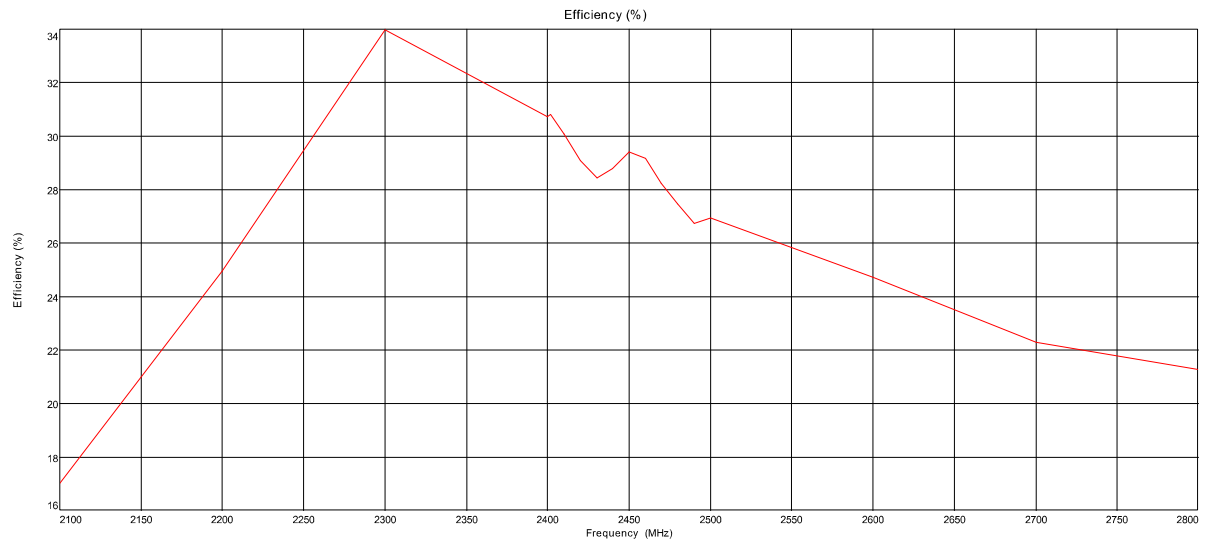
#2 without weight



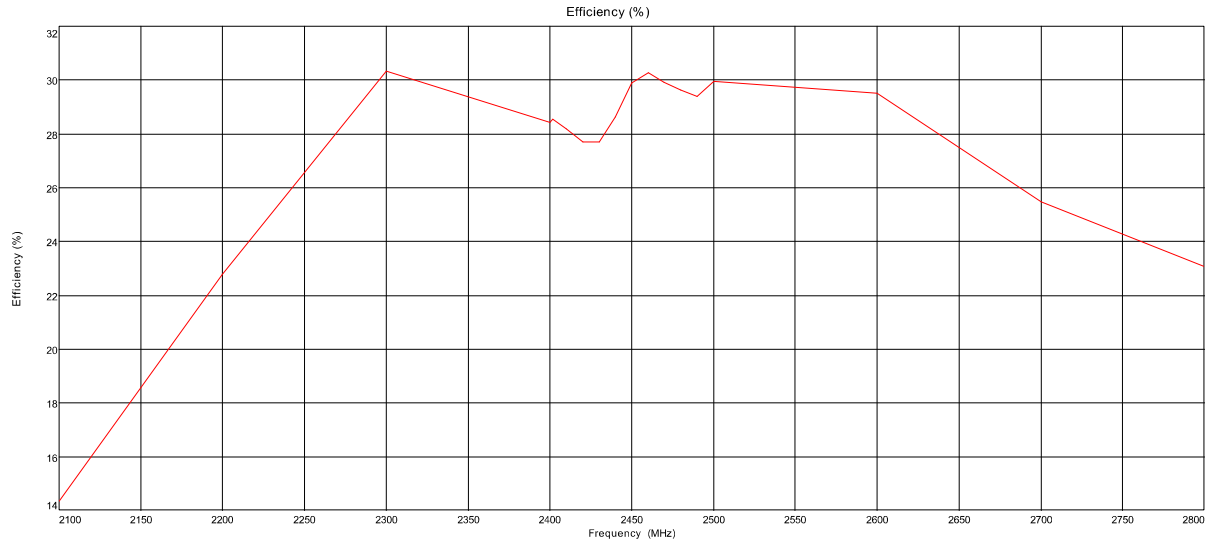
Efficiency



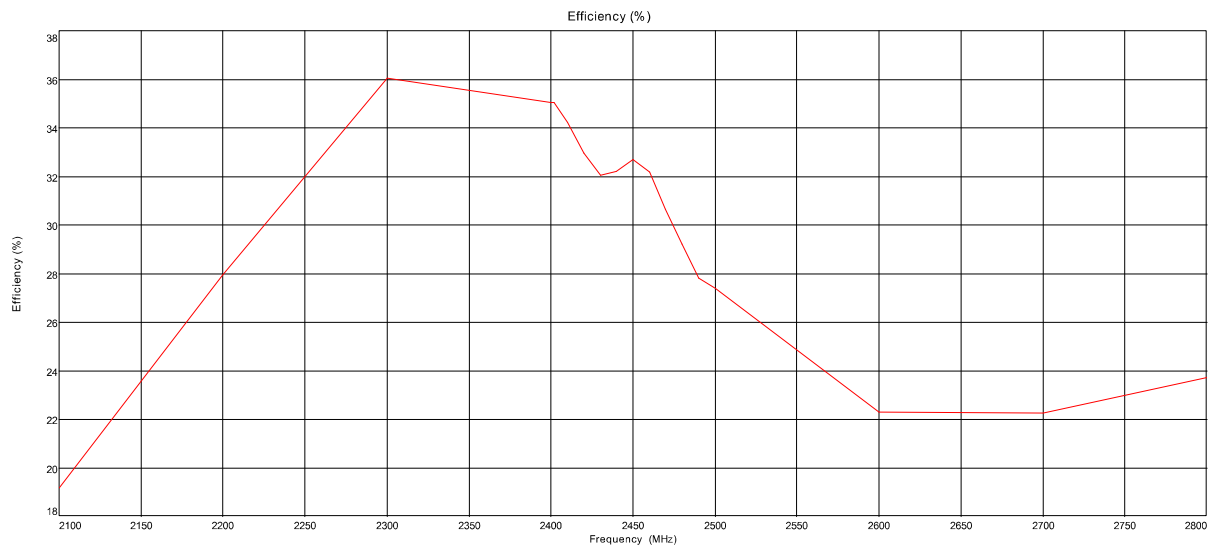
#1 with weight



#2 with weight



#1 without weight

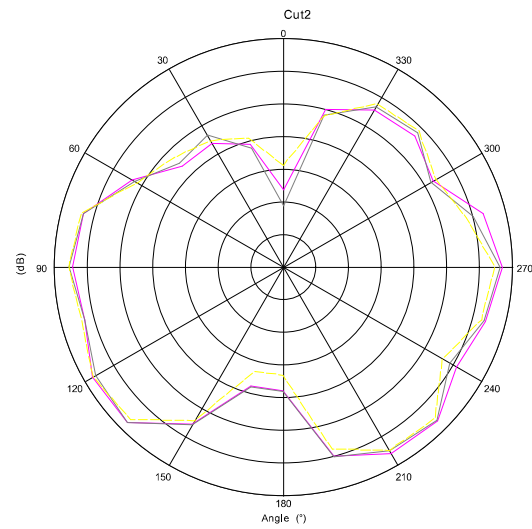


#2 without weight

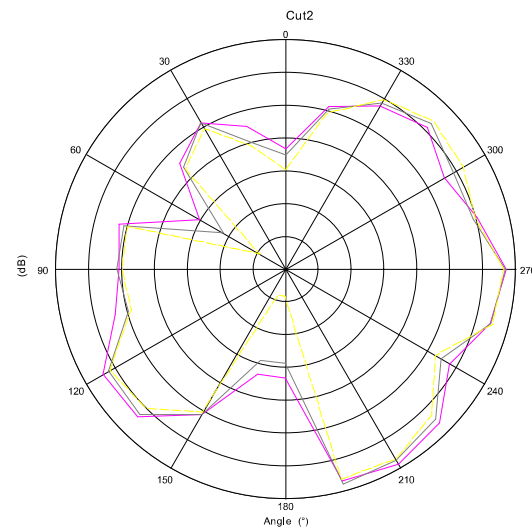


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Phi=0°



#1 with weight

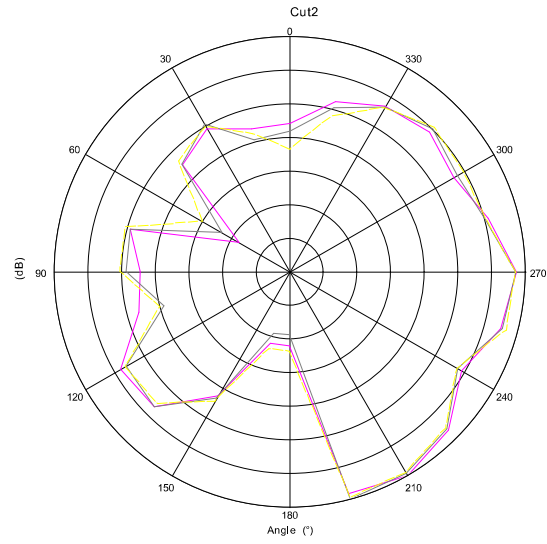


#2 with weight

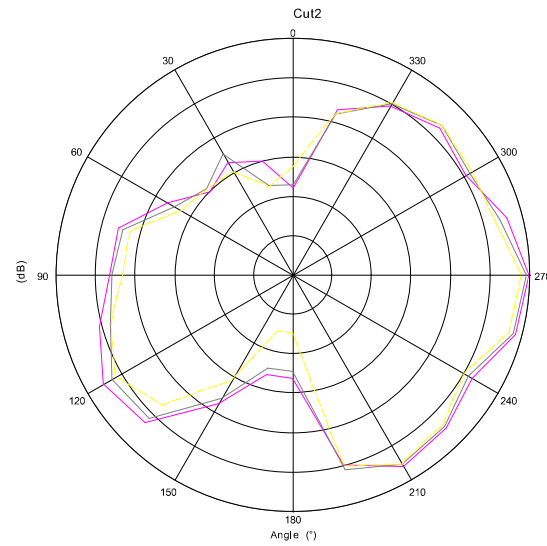




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#1 without weight

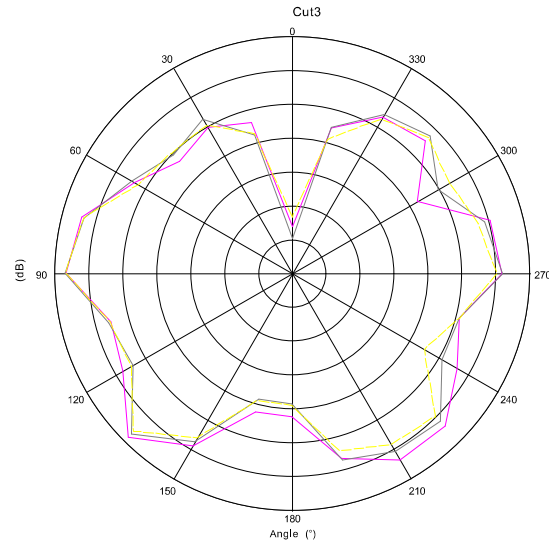


#2 without weight

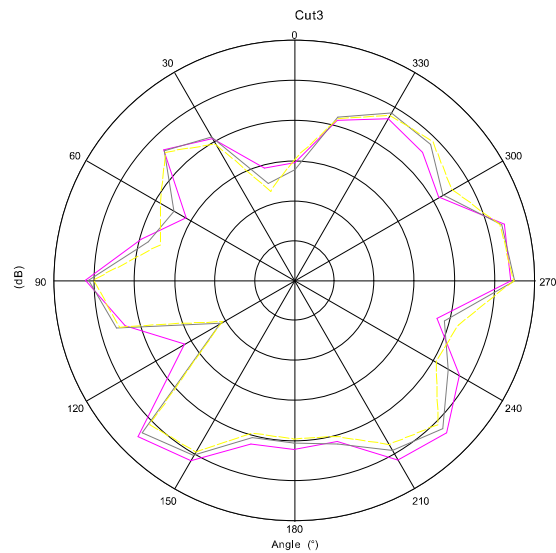


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Phi=90°



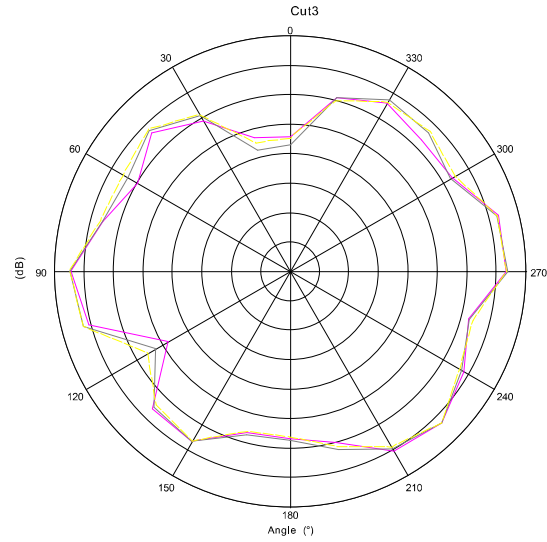
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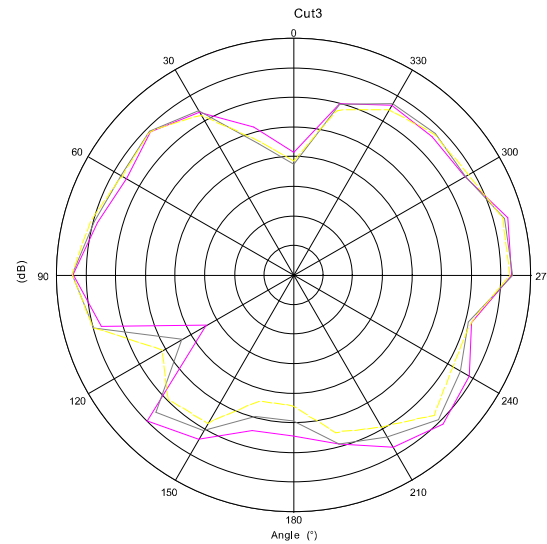
#2 with weight



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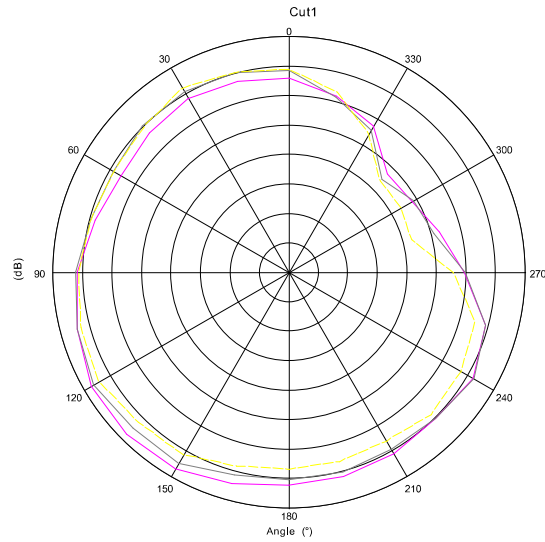
#1 without weight



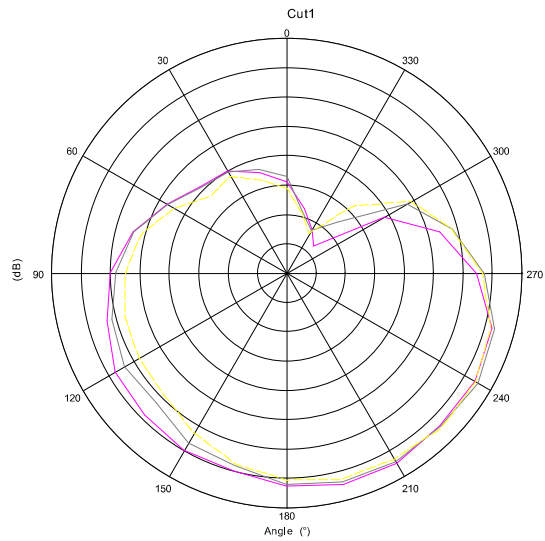
#2 without weight



Theta=90°



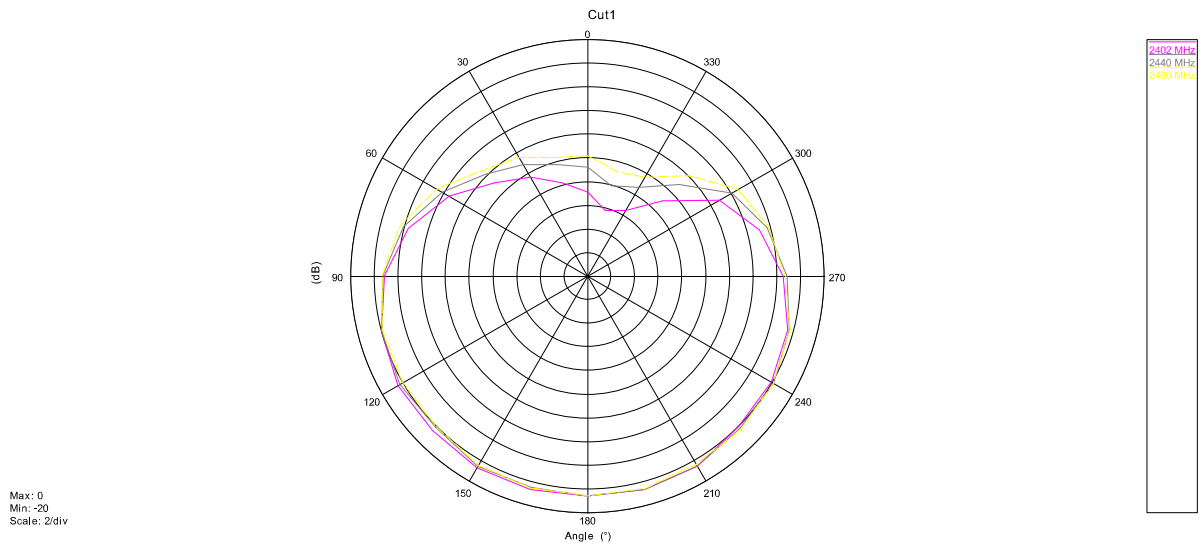
#1 with weight



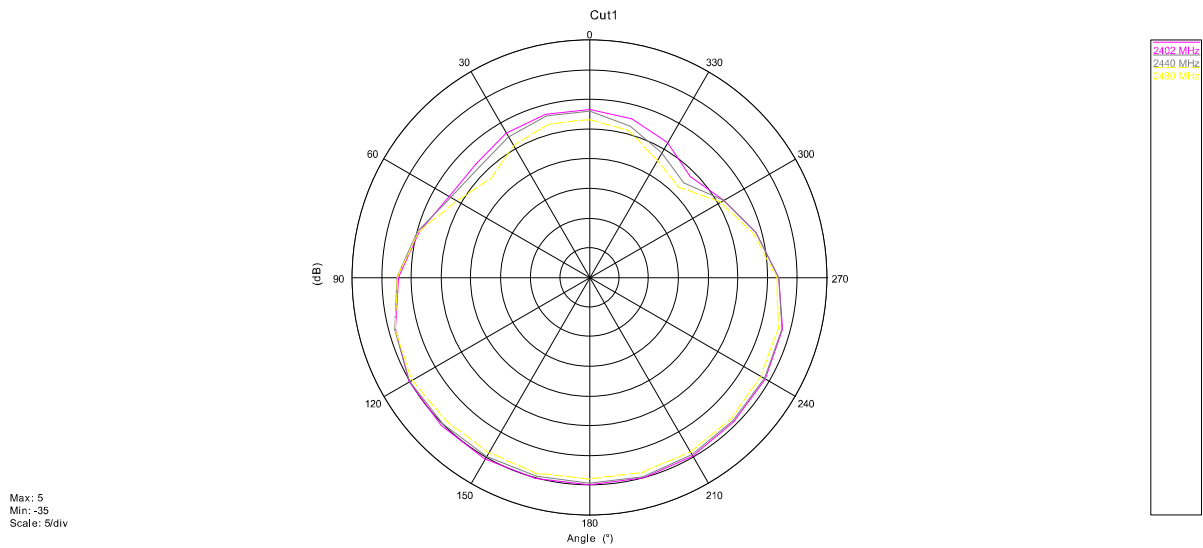
#2 with weight



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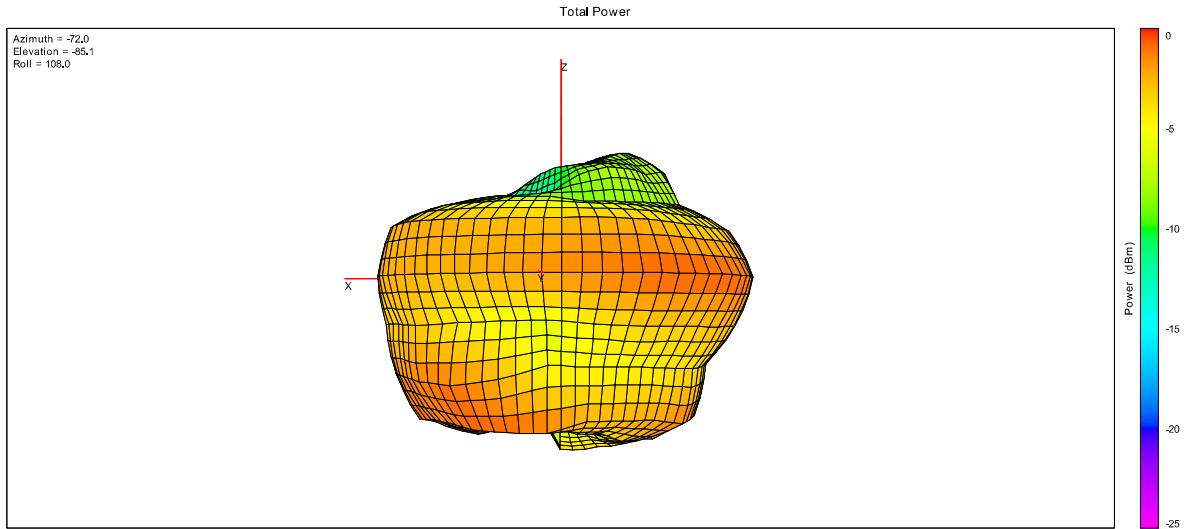


#1 without weight

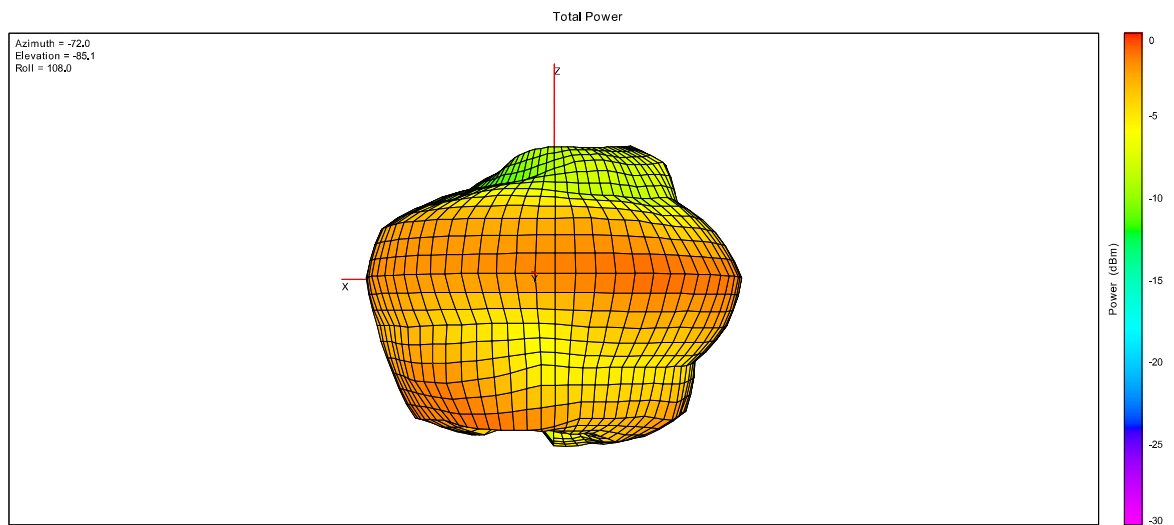


#2 without weight

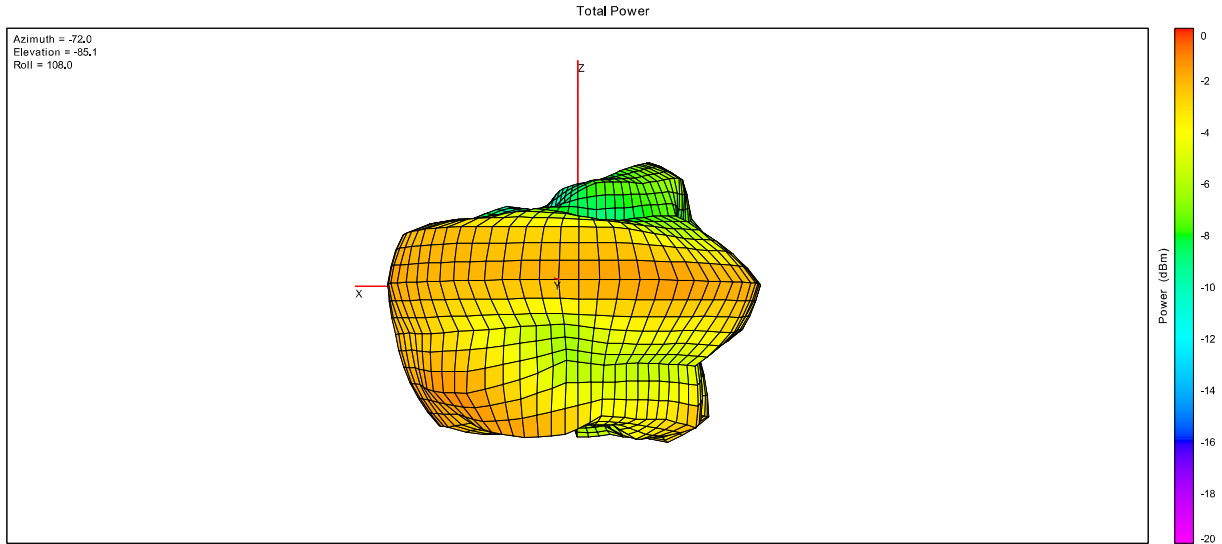
2. 3D Radiation Pattern



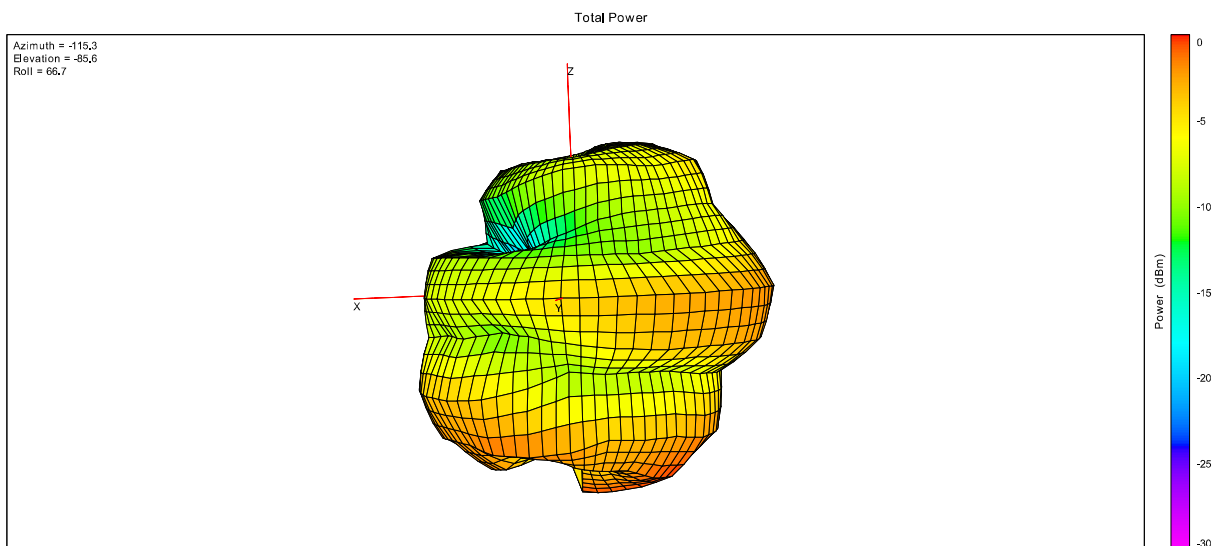
2402MHz_#1with weight



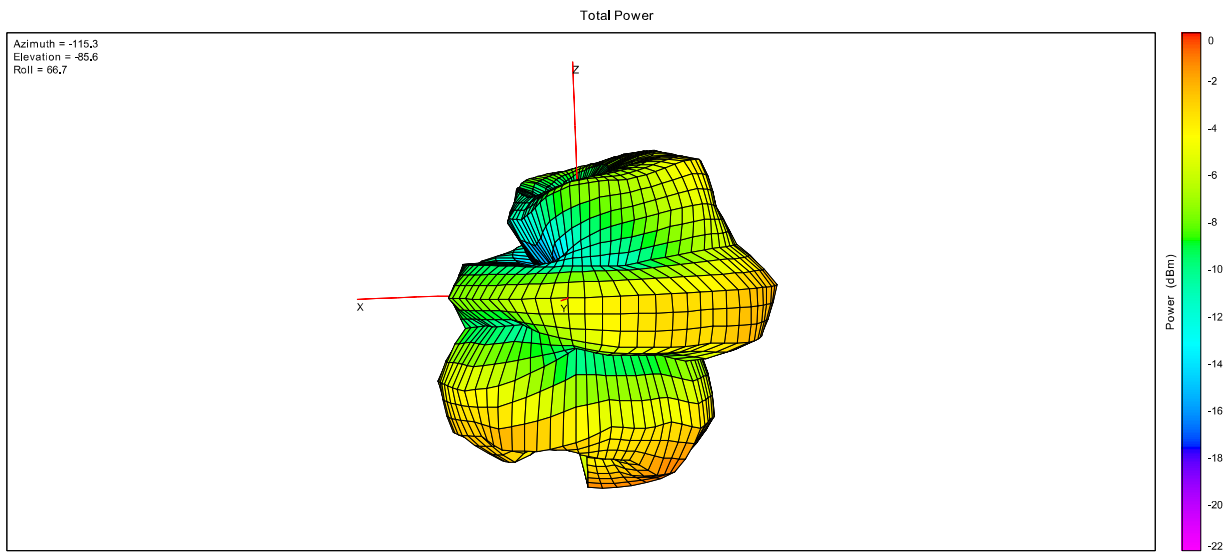
2440MHz_#1with weight



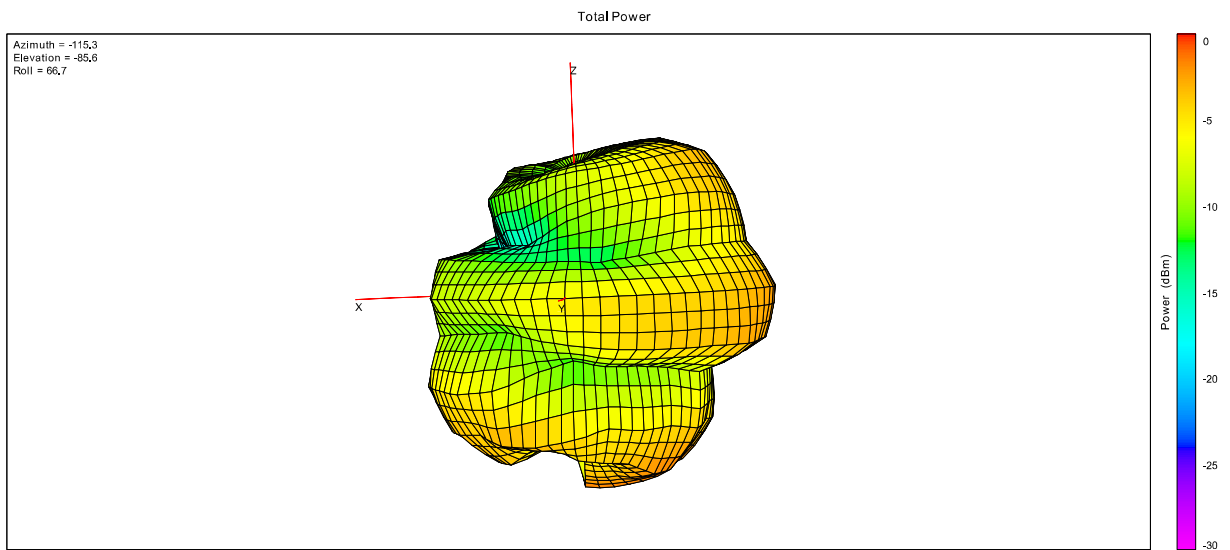
2480MHz_#1 with weight



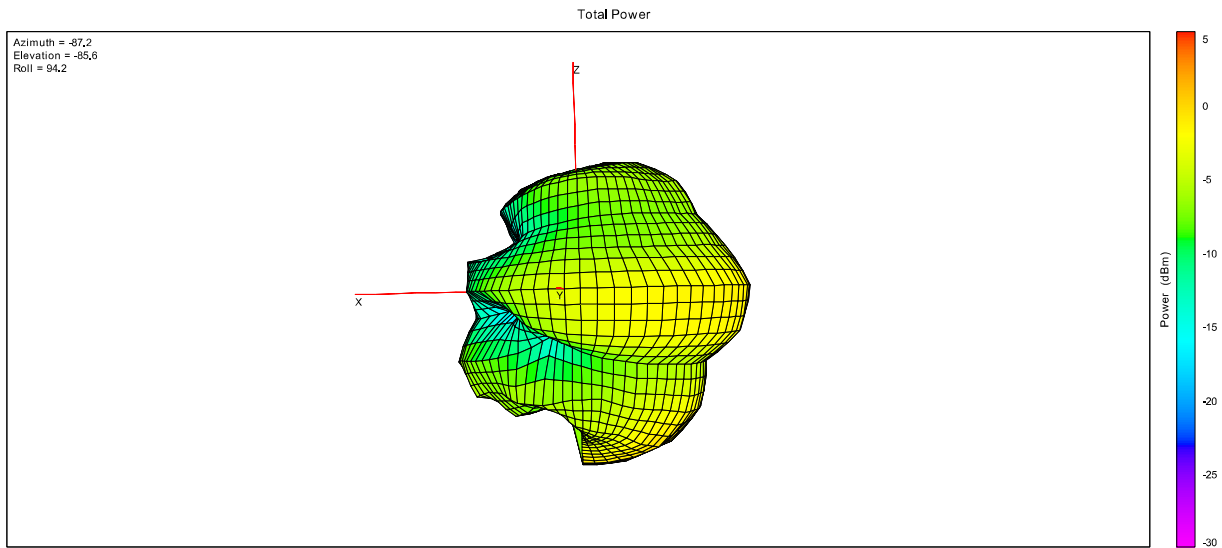
2402MHz_#2 with weight



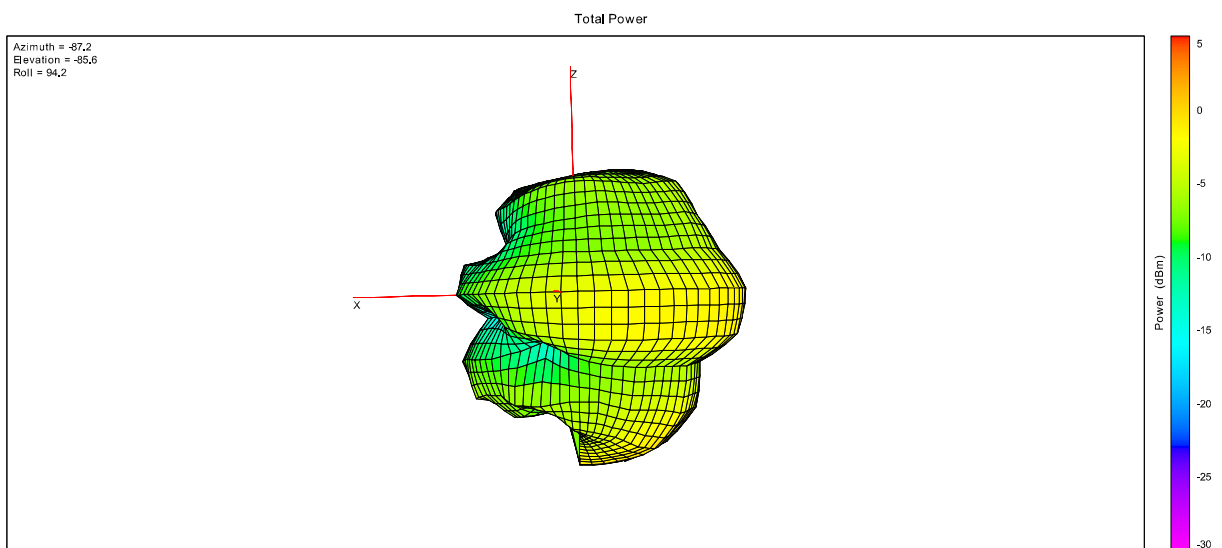
2440MHz_#2 with weight



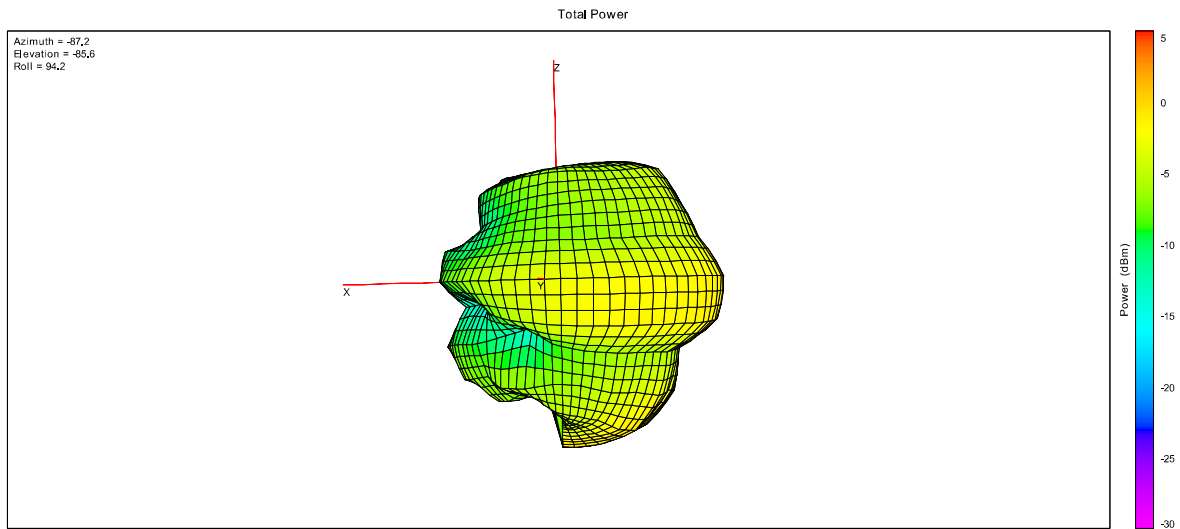
2480MHz_#2 with weight



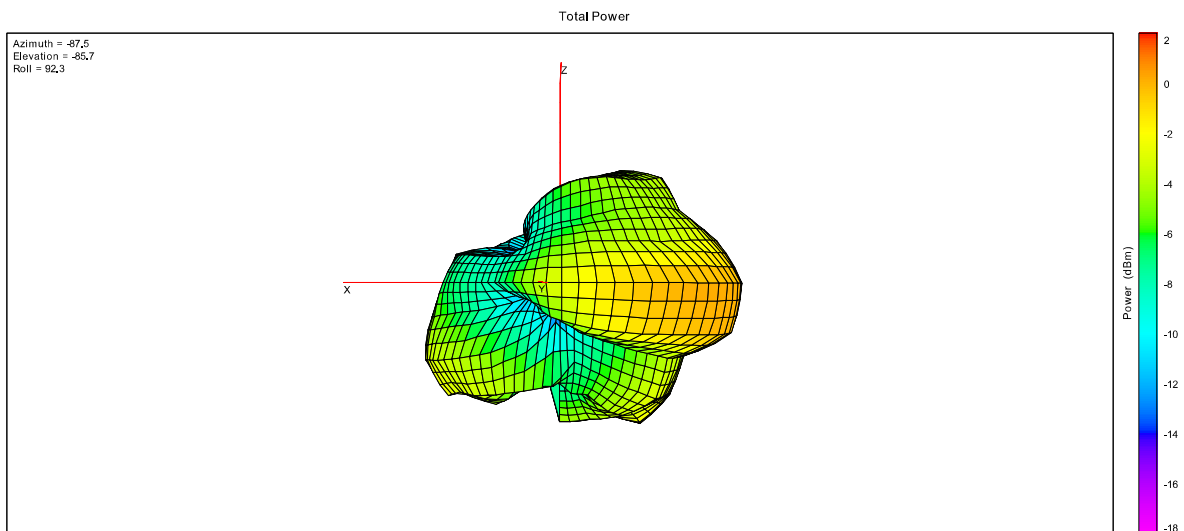
2402MHz_#1 without weight



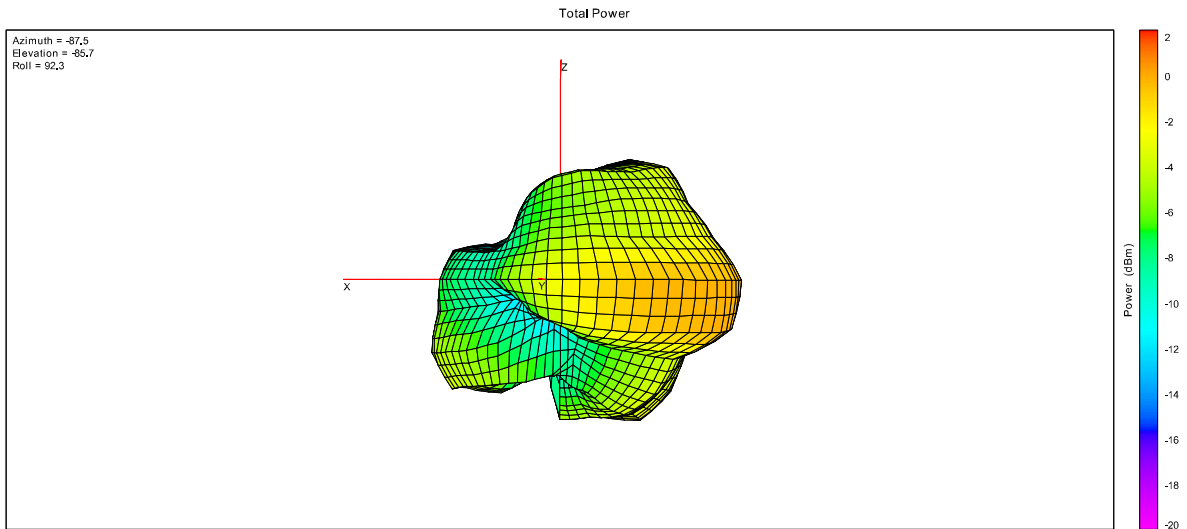
2440MHz_#1 without weight



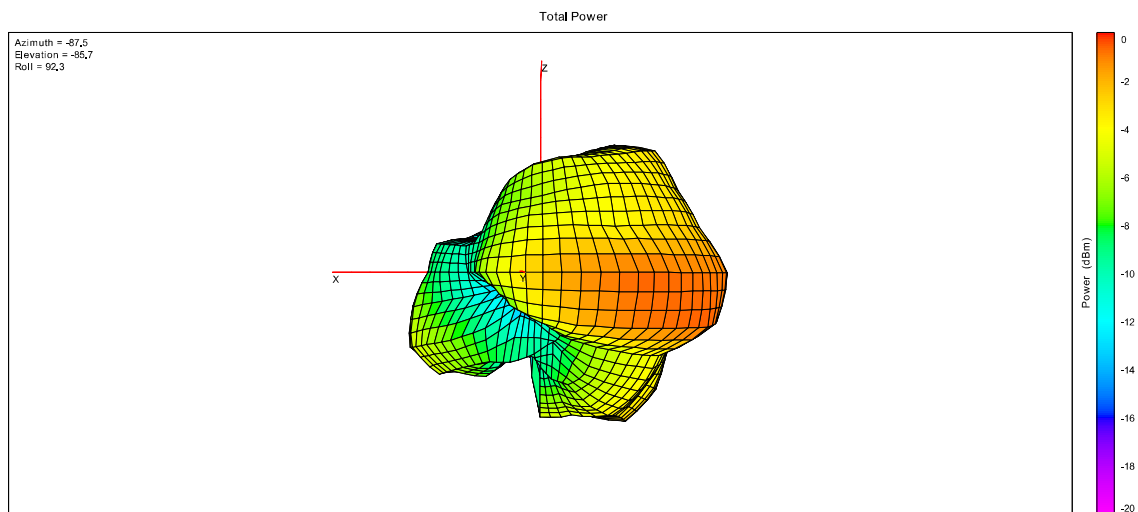
2480MHz_#1 without weight



2402MHz_#2 without weight



2440MHz_#2 without weight



2480MHz_#2 without weight



Annex D General Information

1.1 Identification of the Responsible Testing Laboratory

Laboratory Name:	Shenzhen Morlab Communications Technology Co., Ltd.
Laboratory Address:	FL1-3, Building A, FeiYang Science Park, No.8 LongChang Road, Block67, BaoAn District, ShenZhen , GuangDong Province, P. R. China
Telephone:	+86 755 36698555
Facsimile:	+86 755 36698525

1.2 Identification of the Responsible Testing Location

Name:	Shenzhen Morlab Communications Technology Co., Ltd.
Address:	FL1-3, Building A, FeiYang Science Park, No.8 LongChang Road, Block67, BaoAn District, ShenZhen , GuangDong Province, P. R. China

1.3 Test Equipments Utilized

No.	Equipement Name	Serial No.	Type	Manufa cturer	Cal.Date	Cal.Due Date
1	Network Analyzer	MY461101 40	E5071C	Agilent	2021.03.17	2022.03.16
2	OTA Chamber	TJ2235-Q 1793	AMS-8923-150	ETS	2020.01.06	2023.01.05
3	Antenna Measurement System	1685	EMQuest EMQ-100 V 1.13 Build 21267	ETS	N/A	N/A

END OF REPORT