

## Antenna Test Report

**Report No.: E4/2020/20001**

**Test Plan: Non-compliance with ISO17025**

**Applicant Name: Dyson Operations Pte Ltd**

**Manufacturer Name: Dyson Operations Pte Ltd**

**Product Name: N277 MAIN and AUX ANTENNAS**

**Model Number: N277 MAIN and AUX ANTENNAS**

**Measurements performed at**

**SGS Taiwan Ltd.**

**Hwaya District, Taiwan**

**Issued Date: March 16, 2020**

	Name	Date & Signature
Prepared by:	Shawn Yen Asst. Supervisor	<i>Shawn Yen</i> March 16, 2020
Approved by:	Dragon Wu Asst. Manager	<i>Dragon Wu</i> March 16, 2020

Distribution

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## Measurement System Information

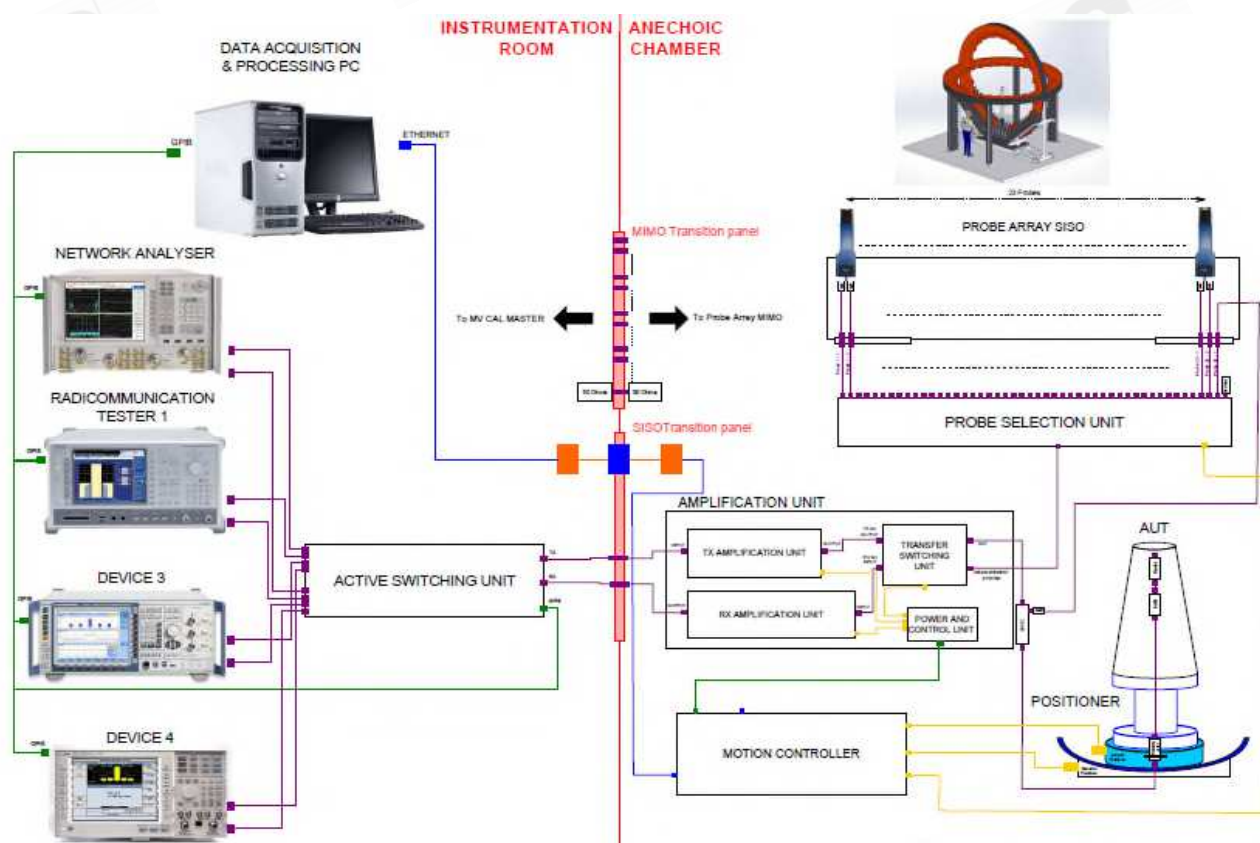
### General Information

#### Testing Condition:

- Temperature:  $22 \pm 3^\circ\text{C}$
- Humidity:  $< 80\%$

#### Measurement Facility:

- Measurement Chamber: MVG 3D fully anechoic chamber and its measuring system (Stargate-24-L)
- Base Station Simulator: Anritsu MT8820C (or R&S CMU200)
- Network Analyzer: Agilent E5071C



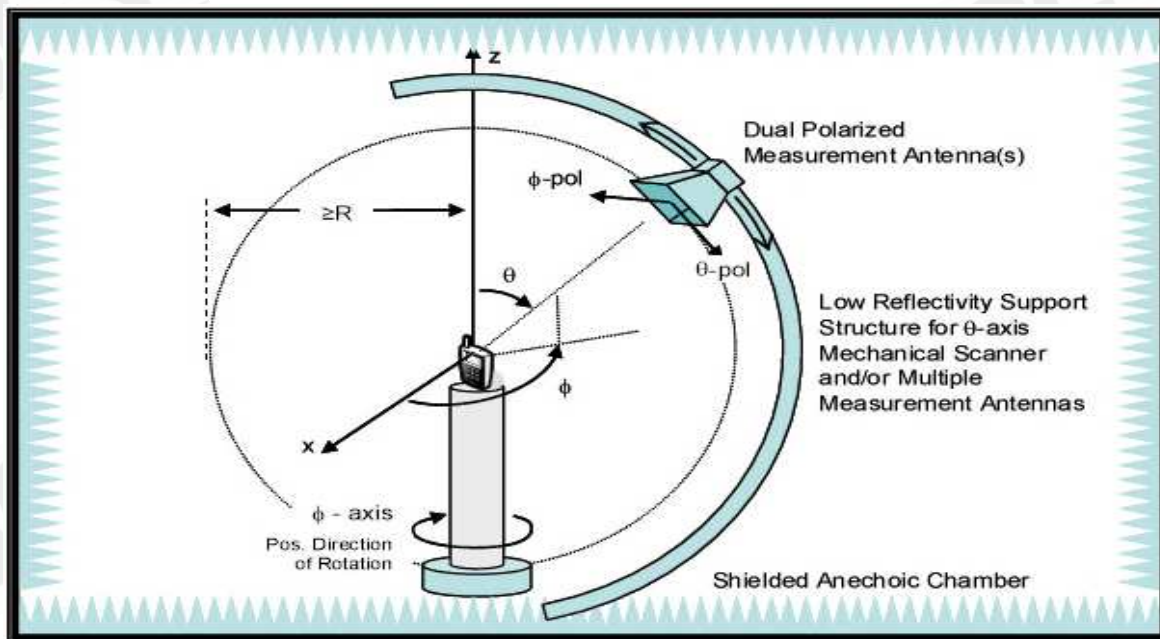
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Measurements are performed in a MVG **Stargate-24-L** with the StarAct interface for a base station simulator. The **Stargate-24-L** has 23 probe antennas mounted with equal spacing on a circular arch. Electronic switching of the probe antennas provides outstanding measurement speed. The geometry of the setup, with only a Styrofoam column within 1.6 meters of the EUT, ensures minimum interference and low ripple on the measured radiation patterns. The DUT is placed on top of the pedestal, in the center of the system.

## Typical Setup for MVG Stargate-24-L:



## Instruments View



## Inside View



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**Testing Laboratory: Identification of the Responsible Test Laboratory.**● **OTA Laboratory:****SGS Taiwan Ltd. Electronics & Communication Laboratory**

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● **Testing Location:**

No. 2, Keji 1<sup>st</sup> Rd., Hwaya Technology Park, Guishan District, Taoyuan City, Taiwan 33383.

**Details of Applicant:**

<b>Applicant's name:</b>	<b>Dyson Operations Pte Ltd</b>
<b>Applicant's address:</b>	<b>The Ascent, 2 Science Park Drive, Tower B, #03-13/26, Science Park 1, Singapore (118222)</b>
<b>Contact person:</b>	<b>Sim Zhi Wei</b>
<b>Telephone:</b>	<b>+65 6871 5836</b>
<b>Fax:</b>	<b>+65 6275 0622</b>
<b>E-mail:</b>	<b>zhiwei.sim@dyson.com</b>

**Details of Manufacturer:**

<b>Manufacturer's name:</b>	<b>Dyson Operations Pte Ltd</b>
<b>Manufacturer's address:</b>	<b>The Ascent, 2 Science Park Drive, Tower B, #03-13/26, Science Park 1, Singapore (118222)</b>
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**Details of EUT:**

Device Description:	N277 MAIN and AUX ANTENNAS
Device Manufacturer:	Dyson Operations Pte Ltd
Device Model:	N277 MAIN and AUX ANTENNAS
Hardware Version:	DVT1
Software Version:	NA
FCC ID:	NA
Frequency Range:	WiFi Dual Band: 2400MHz ~ 2500MHz, 4700MHz ~ 6000MHz
Antenna Type:	Internal antenna

**Duration of Tests:**

Sample Receive Date:	2020-01-31
Test Starting Date:	2020-01-31
Test Ending Date:	2020-01-31
Report Issued Date:	2020-03-16

**List of Equipment****Equipment Summary Sheet**

Equipment Description	Manufacturer	Identification no.	Current calibration date	Next calibration date
Universal Radio Communication tester	Anritsu	MT8820C	2019/10/11	2020/10/10
Network Analyzer	Agilent	E5071C	2019/12/13	2020/12/12
Sleeve Dipole	MVG	SD740	2019/01/17	2021/01/16
Dual Ridge Horn	MVG	SH800	2019/08/20	2020/08/19
Stargate-24-L probe array	MVG	Stargate-24-L	2019/11/13	2020/11/12
Measurement software	MVG	SPM V1.9	N/A	N/A

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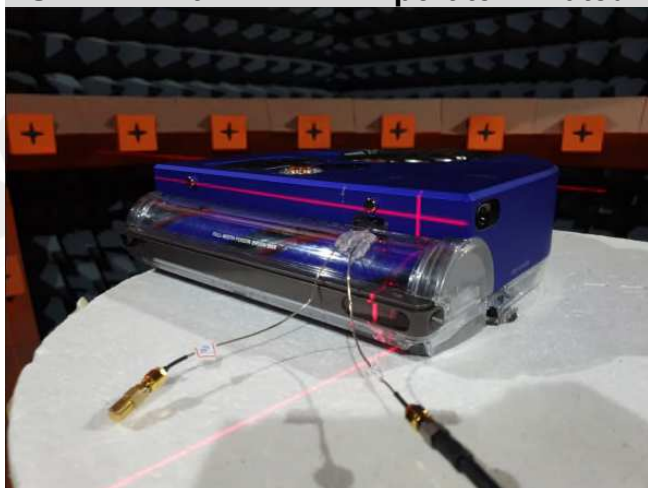
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## Test Setup

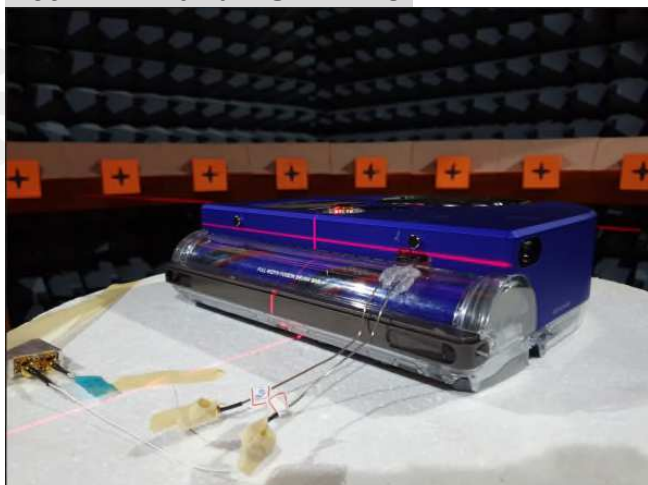
### MAIN ANT with AUX ANT port terminated with 50 ohm



### AUX ANT with MAIN ANT port terminated with 50 ohm



### Both MAIN and AUX ANT



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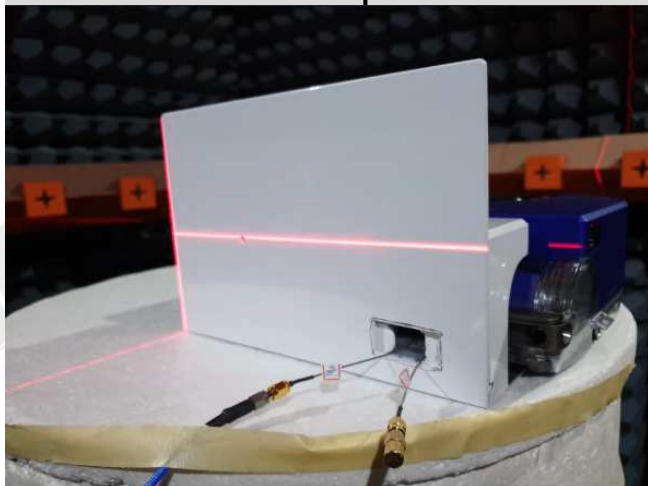
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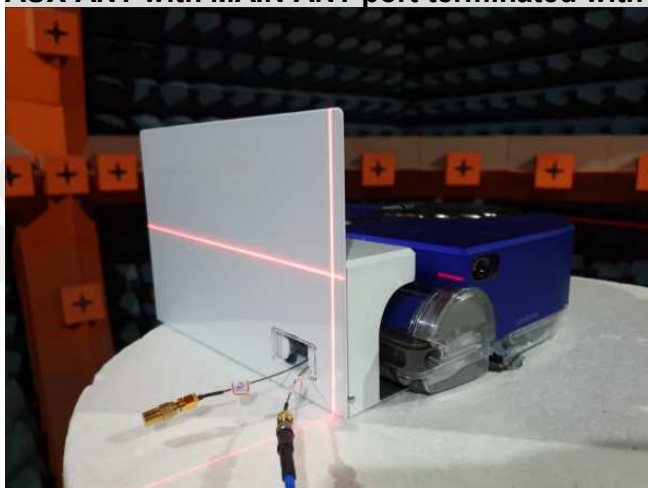
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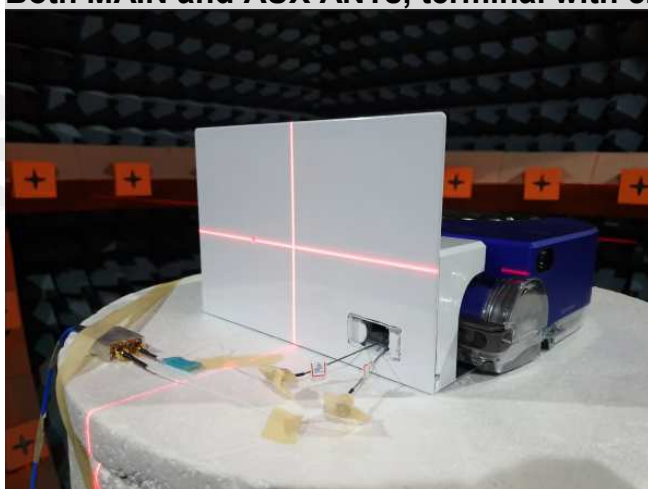
**MAIN ANT with AUX ANT port terminated with 50 ohm, terminal with charging stand**



**AUX ANT with MAIN ANT port terminated with 50 ohm, terminal with charging stand**



**Both MAIN and AUX ANT, terminal with charging stand**



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**Antenna Gain and Efficiency****MAIN ANT with AUX ANT port terminated with 50 ohm**

Add coax-cable loss

Frequency (MHz)	Max Antenna Gain (dBi)	Min Antenna Gain (dBi)	Min Antenna Gain (90%) (dBi)	Antenna Efficiency (%)	Average Gain (dBi)
2412.00	3.62	-24.83	-7.92	61.62%	-2.10
2442.00	3.84	-23.69	-6.99	65.21%	-1.86
2472.00	3.90	-30.93	-7.08	65.15%	-1.86
5180.00	5.44	-24.04	-10.67	72.26%	-1.41
5500.00	6.17	-26.81	-9.33	70.74%	-1.50
5700.00	4.66	-28.60	-11.70	57.75%	-2.38
5720.00	4.87	-28.53	-11.85	56.58%	-2.47
5800.00	4.54	-32.73	-12.16	57.99%	-2.37
5825.00	5.10	-27.07	-11.21	61.50%	-2.11

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## Without\_ coax-cable loss

Frequency (MHz)	Max Antenna Gain (dBi)	Min Antenna Gain (dBi)	Antenna Efficiency (%)	Average Gain (dBi)
2400.00	3.62	-23.41	53.09%	-2.75
2402.00	3.51	-23.31	53.26%	-2.74
2412.00	3.12	-25.33	54.92%	-2.60
2417.00	3.12	-26.80	55.77%	-2.54
2422.00	2.95	-25.70	56.40%	-2.49
2427.00	2.71	-24.10	57.13%	-2.43
2432.00	2.90	-23.27	57.65%	-2.39
2437.00	3.16	-21.89	57.98%	-2.37
2440.00	3.28	-23.00	58.08%	-2.36
2442.00	3.34	-24.19	58.12%	-2.36
2447.00	3.39	-27.08	57.89%	-2.37
2452.00	3.38	-28.08	57.36%	-2.41
2457.00	3.30	-33.46	56.75%	-2.46
2462.00	3.19	-37.37	56.56%	-2.48
2467.00	3.26	-31.85	56.85%	-2.45
2472.00	3.40	-31.43	58.06%	-2.36
2480.00	3.41	-26.03	58.18%	-2.35
2484.00	3.34	-24.59	57.63%	-2.39
2500.00	2.99	-27.11	54.90%	-2.60
4700.00	3.83	-32.02	41.85%	-3.78
4720.00	4.52	-28.96	40.08%	-3.97
4740.00	4.61	-30.22	41.36%	-3.83
4760.00	4.51	-31.20	42.06%	-3.76
4780.00	4.62	-29.39	44.49%	-3.52
4800.00	4.35	-27.74	46.35%	-3.34
4820.00	4.45	-29.77	48.57%	-3.14
4840.00	4.65	-30.70	52.19%	-2.82
4860.00	4.54	-27.93	52.90%	-2.77
4880.00	4.71	-28.28	55.66%	-2.54
4900.00	4.62	-34.34	57.45%	-2.41
4920.00	4.58	-27.22	58.26%	-2.35
4940.00	4.83	-30.09	58.03%	-2.36
4960.00	5.02	-31.54	59.71%	-2.24
4980.00	5.01	-36.47	59.30%	-2.27
5000.00	4.88	-32.66	58.94%	-2.30
5020.00	4.72	-27.22	58.77%	-2.31
5040.00	4.74	-28.88	57.82%	-2.38
5060.00	4.91	-28.48	57.77%	-2.38
5080.00	4.99	-27.22	56.23%	-2.50
5100.00	5.44	-29.88	53.53%	-2.71
5120.00	6.48	-26.05	56.11%	-2.51
5140.00	5.26	-26.65	55.15%	-2.58
5160.00	4.16	-23.97	55.70%	-2.54

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Frequency (MHz)	Max Antenna Gain (dBi)	Min Antenna Gain (dBi)	Antenna Efficiency (%)	Average Gain (dBi)
5180.00	4.44	-25.04	57.40%	-2.41
5200.00	4.47	-33.48	57.04%	-2.44
5220.00	4.78	-26.77	61.12%	-2.14
5240.00	4.64	-27.05	57.02%	-2.44
5260.00	4.54	-26.71	56.48%	-2.48
5280.00	4.52	-27.23	58.61%	-2.32
5300.00	4.94	-29.00	58.75%	-2.31
5320.00	5.19	-28.60	56.94%	-2.45
5340.00	4.90	-35.57	57.11%	-2.43
5360.00	4.56	-29.03	55.12%	-2.59
5380.00	4.81	-27.64	56.07%	-2.51
5400.00	5.07	-27.42	56.69%	-2.47
5420.00	4.84	-33.95	53.61%	-2.71
5440.00	4.99	-26.20	55.57%	-2.55
5460.00	5.17	-29.21	54.77%	-2.61
5480.00	5.28	-27.41	56.23%	-2.50
5500.00	5.17	-27.81	56.19%	-2.50
5520.00	5.01	-30.64	54.87%	-2.61
5540.00	4.72	-27.46	51.69%	-2.87
5560.00	5.08	-27.98	53.41%	-2.72
5580.00	5.09	-32.62	52.87%	-2.77
5600.00	5.07	-25.50	49.57%	-3.05
5620.00	4.88	-24.86	49.42%	-3.06
5640.00	4.43	-27.16	48.32%	-3.16
5660.00	4.18	-28.38	49.50%	-3.05
5680.00	3.46	-33.81	44.83%	-3.48
5700.00	3.66	-29.60	45.87%	-3.38
5720.00	3.87	-29.53	44.94%	-3.47
5740.00	4.08	-28.78	46.31%	-3.34
5760.00	3.75	-28.76	44.93%	-3.47
5780.00	3.61	-31.89	45.49%	-3.42
5800.00	3.54	-33.73	46.06%	-3.37
5820.00	4.10	-29.45	49.31%	-3.07
5825.00	4.10	-28.07	48.85%	-3.11
5840.00	4.11	-27.57	47.29%	-3.25
5860.00	4.40	-28.45	50.67%	-2.95
5880.00	4.53	-26.49	51.02%	-2.92
5900.00	4.79	-24.79	50.78%	-2.94
5920.00	5.33	-27.43	51.17%	-2.91
5940.00	5.30	-24.20	50.74%	-2.95
5960.00	5.31	-29.62	49.52%	-3.05
5980.00	5.20	-27.71	47.74%	-3.21
6000.00	5.30	-31.27	46.20%	-3.35

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**AUX ANT with MAIN ANT port terminated with 50 ohm****Add coax-cable loss**

Frequency (MHz)	Max Antenna Gain (dBi)	Min Antenna Gain (dBi)	Min Antenna Gain (90%) (dBi)	Antenna Efficiency (%)	Average Gain (dBi)
2402.00	3.58	-29.88	-7.78	66.33%	-1.78
2412.00	3.49	-25.65	-7.63	67.69%	-1.70
2440.00	5.03	-29.70	-7.73	71.16%	-1.48
2442.00	5.01	-28.56	-7.79	70.61%	-1.51
2472.00	4.54	-24.69	-8.48	65.73%	-1.82
2480.00	4.27	-27.33	-8.91	61.90%	-2.08
5180.00	6.16	-28.10	-10.50	74.49%	-1.28
5500.00	5.86	-27.93	-11.59	81.48%	-0.89
5700.00	5.32	-29.30	-11.40	87.42%	-0.58
5720.00	5.61	-28.04	-11.07	85.89%	-0.66
5800.00	5.19	-33.66	-11.34	86.18%	-0.65
5825.00	5.80	-32.25	-10.70	85.67%	-0.67

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# Without\_ coax-cable loss

Frequency (MHz)	Max Antenna Gain (dBi)	Min Antenna Gain (dBi)	Antenna Efficiency (%)	Average Gain (dBi)
2400.00	3.13	-30.50	59.01%	-2.29
2402.00	3.08	-30.38	59.11%	-2.28
2412.00	2.99	-26.15	60.32%	-2.20
2417.00	3.24	-26.20	61.08%	-2.14
2422.00	3.73	-38.75	62.04%	-2.07
2427.00	4.10	-23.69	63.54%	-1.97
2432.00	4.34	-24.68	64.31%	-1.92
2437.00	4.49	-28.70	63.99%	-1.94
2440.00	4.53	-30.20	63.42%	-1.98
2442.00	4.51	-29.06	62.93%	-2.01
2447.00	4.44	-28.29	61.17%	-2.13
2452.00	4.26	-25.34	59.89%	-2.23
2457.00	4.19	-24.33	59.76%	-2.24
2462.00	4.18	-22.38	60.12%	-2.21
2467.00	4.12	-23.64	59.61%	-2.25
2472.00	4.04	-25.19	58.59%	-2.32
2480.00	3.77	-27.83	55.17%	-2.58
2484.00	3.68	-30.53	53.90%	-2.68
2500.00	3.97	-26.43	53.87%	-2.69
4700.00	2.95	-26.83	27.41%	-5.62
4720.00	3.53	-25.52	26.13%	-5.83
4740.00	3.68	-29.17	27.01%	-5.68
4760.00	3.67	-29.04	27.81%	-5.56
4780.00	3.64	-29.60	29.21%	-5.35
4800.00	3.44	-30.02	30.16%	-5.21
4820.00	3.48	-31.90	30.11%	-5.21
4840.00	3.94	-31.61	33.10%	-4.80
4860.00	4.11	-33.27	33.65%	-4.73
4880.00	4.20	-31.18	33.37%	-4.77
4900.00	4.46	-30.07	34.46%	-4.63
4920.00	4.59	-32.55	35.94%	-4.44
4940.00	4.42	-31.87	36.38%	-4.39
4960.00	4.61	-31.96	38.83%	-4.11
4980.00	4.57	-32.29	39.23%	-4.06
5000.00	4.92	-27.25	43.14%	-3.65
5020.00	5.19	-28.20	45.98%	-3.37
5040.00	5.13	-31.45	47.15%	-3.27
5060.00	4.30	-32.09	48.01%	-3.19
5080.00	3.72	-36.71	49.03%	-3.09
5100.00	4.77	-27.81	51.05%	-2.92
5120.00	5.59	-27.51	53.13%	-2.75
5140.00	5.06	-28.59	52.40%	-2.81
5160.00	5.03	-34.67	55.93%	-2.52

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Frequency (MHz)	Max Antenna Gain (dBi)	Min Antenna Gain (dBi)	Antenna Efficiency (%)	Average Gain (dBi)
5180.00	5.16	-29.10	59.17%	-2.28
5200.00	4.93	-25.45	59.00%	-2.29
5220.00	5.31	-25.42	62.74%	-2.02
5240.00	5.09	-25.39	59.53%	-2.25
5260.00	4.48	-27.38	60.75%	-2.16
5280.00	4.05	-29.33	62.26%	-2.06
5300.00	4.75	-29.73	63.30%	-1.99
5320.00	5.17	-34.01	62.57%	-2.04
5340.00	5.24	-31.14	63.59%	-1.97
5360.00	5.29	-30.37	62.28%	-2.06
5380.00	5.36	-27.06	63.49%	-1.97
5400.00	5.41	-27.99	64.86%	-1.88
5420.00	5.14	-32.52	62.63%	-2.03
5440.00	5.39	-35.17	64.62%	-1.90
5460.00	5.30	-34.40	63.62%	-1.96
5480.00	5.33	-29.06	64.69%	-1.89
5500.00	4.86	-28.93	64.72%	-1.89
5520.00	4.34	-28.09	64.32%	-1.92
5540.00	4.06	-29.80	62.30%	-2.05
5560.00	4.09	-36.33	65.42%	-1.84
5580.00	4.11	-31.91	66.74%	-1.76
5600.00	3.84	-27.36	64.73%	-1.89
5620.00	3.69	-26.85	67.58%	-1.70
5640.00	3.47	-29.29	67.48%	-1.71
5660.00	3.79	-29.56	69.64%	-1.57
5680.00	3.59	-31.04	66.64%	-1.76
5700.00	4.32	-30.30	69.44%	-1.58
5720.00	4.61	-29.04	68.23%	-1.66
5740.00	4.20	-31.26	70.82%	-1.50
5760.00	3.77	-32.44	67.73%	-1.69
5780.00	4.02	-32.62	69.14%	-1.60
5800.00	4.19	-34.66	68.45%	-1.65
5820.00	4.70	-33.02	68.33%	-1.65
5825.00	4.80	-33.25	68.05%	-1.67
5840.00	5.19	-31.55	67.40%	-1.71
5860.00	5.15	-30.76	68.98%	-1.61
5880.00	4.86	-30.62	66.64%	-1.76
5900.00	5.33	-29.75	65.39%	-1.84
5920.00	5.92	-29.09	66.32%	-1.78
5940.00	6.01	-28.91	65.00%	-1.87
5960.00	5.90	-29.02	64.27%	-1.92
5980.00	5.64	-32.32	63.07%	-2.00
6000.00	5.56	-32.47	62.24%	-2.06

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**Both MAIN and AUX ANTs****Add coax-cable loss**

Frequency (MHz)	Max Antenna Gain (dBi)	Min Antenna Gain (dBi)	Min Antenna Gain (90%) (dBi)	Antenna Efficiency (%)	Average Gain (dBi)
2412.00	5.34	-27.14	-6.29	83.10%	-0.80
2442.00	5.10	-23.51	-6.49	89.06%	-0.50
2472.00	4.39	-23.75	-6.98	82.45%	-0.84
5180.00	7.79	-24.80	-8.36	75.96%	-1.19
5500.00	7.88	-27.55	-7.76	72.06%	-1.42
5700.00	6.33	-28.73	-8.23	74.75%	-1.26
5720.00	6.39	-31.82	-8.00	74.15%	-1.30
5800.00	6.42	-27.65	-8.88	62.20%	-2.06
5825.00	6.22	-23.80	-8.83	65.27%	-1.85

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## Without\_ coax-cable loss

Frequency (MHz)	Max Antenna Gain (dBi)	Min Antenna Gain (dBi)	Antenna Efficiency (%)	Average Gain (dBi)
2400.00	4.87	-24.33	69.81%	-1.56
2402.00	4.86	-24.90	69.21%	-1.60
2412.00	4.84	-27.64	74.07%	-1.30
2417.00	4.78	-26.43	73.08%	-1.36
2422.00	4.80	-30.11	72.20%	-1.41
2427.00	4.69	-30.79	75.22%	-1.24
2432.00	4.69	-27.16	71.06%	-1.48
2437.00	4.59	-23.88	75.33%	-1.23
2440.00	4.75	-23.56	73.99%	-1.31
2442.00	4.60	-24.01	79.37%	-1.00
2447.00	4.82	-23.19	75.37%	-1.23
2452.00	4.39	-20.33	72.56%	-1.39
2457.00	4.23	-21.71	72.00%	-1.43
2462.00	3.97	-23.13	70.48%	-1.52
2467.00	3.88	-23.94	74.69%	-1.27
2472.00	3.89	-24.25	73.48%	-1.34
2480.00	4.26	-25.25	74.29%	-1.29
2484.00	4.30	-27.68	75.46%	-1.22
2500.00	4.42	-19.99	69.33%	-1.59
4700.00	4.59	-23.80	45.97%	-3.38
4720.00	5.34	-24.86	57.61%	-2.39
4740.00	5.70	-23.84	56.37%	-2.49
4760.00	5.14	-27.78	53.74%	-2.70
4780.00	6.00	-25.49	61.40%	-2.12
4800.00	6.02	-28.76	66.20%	-1.79
4820.00	6.75	-26.91	65.65%	-1.83
4840.00	6.76	-24.15	71.08%	-1.48
4860.00	6.41	-24.67	73.01%	-1.37
4880.00	6.85	-23.96	81.67%	-0.88
4900.00	6.50	-30.98	71.26%	-1.47
4920.00	5.63	-28.06	61.81%	-2.09
4940.00	5.84	-24.55	60.88%	-2.15
4960.00	5.93	-23.28	63.72%	-1.96
4980.00	5.87	-25.93	68.37%	-1.65
5000.00	5.84	-21.84	68.34%	-1.65
5020.00	5.87	-24.85	69.37%	-1.59
5040.00	5.69	-31.17	68.10%	-1.67
5060.00	5.75	-29.18	68.28%	-1.66
5080.00	5.81	-24.40	67.70%	-1.69
5100.00	5.64	-28.17	67.80%	-1.69
5120.00	6.26	-25.88	68.74%	-1.63
5140.00	6.22	-27.61	60.82%	-2.16
5160.00	6.22	-29.12	59.80%	-2.23

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Frequency (MHz)	Max Antenna Gain (dBi)	Min Antenna Gain (dBi)	Antenna Efficiency (%)	Average Gain (dBi)
5180.00	6.79	-25.80	60.34%	-2.19
5200.00	6.65	-28.81	58.42%	-2.33
5220.00	7.24	-28.42	60.88%	-2.16
5240.00	7.03	-24.96	58.81%	-2.31
5260.00	7.06	-22.89	57.57%	-2.40
5280.00	7.32	-23.16	59.96%	-2.22
5300.00	6.87	-26.22	59.38%	-2.26
5320.00	6.23	-26.35	60.10%	-2.21
5340.00	6.26	-25.20	59.12%	-2.28
5360.00	6.34	-27.49	56.47%	-2.48
5380.00	6.42	-31.46	59.37%	-2.26
5400.00	6.50	-29.62	58.01%	-2.36
5420.00	6.67	-27.00	51.88%	-2.85
5440.00	6.96	-25.75	53.03%	-2.76
5460.00	6.96	-27.75	56.66%	-2.47
5480.00	6.89	-27.94	57.56%	-2.40
5500.00	6.88	-28.55	57.24%	-2.42
5520.00	6.74	-29.09	58.48%	-2.33
5540.00	6.41	-24.76	60.90%	-2.15
5560.00	6.24	-25.03	62.73%	-2.02
5580.00	6.16	-26.30	60.29%	-2.20
5600.00	5.63	-30.30	56.43%	-2.48
5620.00	5.46	-27.77	58.06%	-2.36
5640.00	5.49	-28.62	57.51%	-2.40
5660.00	5.29	-27.29	58.98%	-2.29
5680.00	4.85	-26.54	58.06%	-2.36
5700.00	5.33	-29.73	59.37%	-2.26
5720.00	5.39	-32.82	58.90%	-2.30
5740.00	5.47	-23.39	56.81%	-2.46
5760.00	5.34	-28.72	51.54%	-2.88
5780.00	5.40	-29.42	51.80%	-2.86
5800.00	5.42	-28.65	49.41%	-3.06
5820.00	5.37	-26.24	51.81%	-2.86
5825.00	5.22	-24.80	51.85%	-2.85
5840.00	5.22	-24.67	51.96%	-2.84
5860.00	4.85	-25.61	50.55%	-2.96
5880.00	4.60	-26.78	51.22%	-2.91
5900.00	5.15	-25.12	52.76%	-2.78
5920.00	5.72	-26.01	59.41%	-2.26
5940.00	5.90	-26.16	58.46%	-2.33
5960.00	5.95	-27.36	56.37%	-2.49
5980.00	5.66	-32.00	55.46%	-2.56
6000.00	5.33	-32.26	53.11%	-2.75

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**MAIN ANT with AUX ANT port terminated with 50 ohm, terminal with charging stand****Add coax-cable loss**

Frequency (MHz)	Max Antenna Gain (dBi)	Min Antenna Gain (dBi)	Min Antenna Gain (90%) (dBi)	Antenna Efficiency (%)	Average Gain (dBi)
2412.00	2.96	-25.62	-8.01	61.22%	-2.13
2442.00	3.66	-24.70	-7.30	64.16%	-1.93
2472.00	3.97	-26.30	-7.33	63.63%	-1.96
5180.00	5.74	-28.10	-10.74	69.32%	-1.59
5500.00	5.23	-25.44	-11.80	64.44%	-1.91
5700.00	4.55	-24.79	-11.00	53.55%	-2.71
5720.00	4.68	-25.34	-11.08	52.90%	-2.77
5800.00	4.27	-28.55	-11.56	48.76%	-3.12
5825.00	5.12	-25.57	-10.66	51.84%	-2.85

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## Without\_ coax-cable loss

Frequency (MHz)	Max Antenna Gain (dBi)	Min Antenna Gain (dBi)	Antenna Efficiency (%)	Average Gain (dBi)
2400.00	2.46	-28.04	52.78%	-2.78
2402.00	2.45	-28.30	53.02%	-2.76
2412.00	2.46	-26.12	54.56%	-2.63
2417.00	2.52	-25.10	55.06%	-2.59
2422.00	2.60	-26.96	55.25%	-2.58
2427.00	2.63	-26.70	55.85%	-2.53
2432.00	2.71	-25.85	56.51%	-2.48
2437.00	2.95	-26.79	56.99%	-2.44
2440.00	3.09	-26.21	57.15%	-2.43
2442.00	3.16	-25.20	57.19%	-2.43
2447.00	3.33	-26.49	56.86%	-2.45
2452.00	3.37	-29.87	56.39%	-2.49
2457.00	3.33	-25.03	55.89%	-2.53
2462.00	3.30	-25.63	55.67%	-2.54
2467.00	3.31	-26.61	55.78%	-2.53
2472.00	3.47	-26.80	56.71%	-2.46
2480.00	3.32	-26.38	56.56%	-2.48
2484.00	3.04	-26.97	56.02%	-2.52
2500.00	2.43	-21.94	53.60%	-2.71
4700.00	5.23	-34.97	43.32%	-3.63
4720.00	5.65	-33.35	41.89%	-3.78
4740.00	5.66	-29.35	43.99%	-3.57
4760.00	5.60	-28.48	45.47%	-3.42
4780.00	5.42	-27.85	46.01%	-3.37
4800.00	5.10	-32.98	45.69%	-3.40
4820.00	5.21	-26.86	48.57%	-3.14
4840.00	5.03	-29.92	51.83%	-2.85
4860.00	4.86	-33.86	51.95%	-2.84
4880.00	5.29	-31.27	54.42%	-2.64
4900.00	5.57	-30.23	55.65%	-2.55
4920.00	5.77	-26.27	55.57%	-2.55
4940.00	5.87	-25.09	54.81%	-2.61
4960.00	6.13	-25.53	56.23%	-2.50
4980.00	6.16	-27.88	55.65%	-2.55
5000.00	6.20	-27.01	55.39%	-2.57
5020.00	6.26	-29.26	55.60%	-2.55
5040.00	6.22	-30.06	55.28%	-2.57
5060.00	5.36	-29.26	55.49%	-2.56
5080.00	4.45	-26.96	54.39%	-2.64
5100.00	4.78	-37.75	51.98%	-2.84
5120.00	5.52	-28.93	54.31%	-2.65
5140.00	5.07	-25.54	53.15%	-2.75
5160.00	4.84	-27.46	53.62%	-2.71

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Frequency (MHz)	Max Antenna Gain (dBi)	Min Antenna Gain (dBi)	Antenna Efficiency (%)	Average Gain (dBi)
5180.00	4.74	-29.10	55.06%	-2.59
5200.00	4.75	-28.49	54.45%	-2.64
5220.00	5.60	-29.54	58.26%	-2.35
5240.00	5.97	-35.04	54.21%	-2.66
5260.00	5.43	-33.07	53.49%	-2.72
5280.00	4.92	-32.86	55.17%	-2.58
5300.00	5.46	-33.71	55.33%	-2.57
5320.00	5.69	-34.48	53.38%	-2.73
5340.00	5.59	-31.89	53.77%	-2.69
5360.00	5.36	-29.76	52.11%	-2.83
5380.00	5.33	-29.67	52.65%	-2.79
5400.00	5.30	-27.61	52.95%	-2.76
5420.00	5.14	-28.09	49.97%	-3.01
5440.00	5.28	-28.22	51.15%	-2.91
5460.00	4.13	-26.53	50.08%	-3.00
5480.00	3.25	-28.20	51.13%	-2.91
5500.00	4.23	-26.44	51.19%	-2.91
5520.00	4.96	-28.66	49.64%	-3.04
5540.00	4.36	-29.07	46.39%	-3.34
5560.00	4.21	-25.42	48.05%	-3.18
5580.00	4.11	-28.46	47.55%	-3.23
5600.00	3.84	-31.64	44.73%	-3.49
5620.00	3.50	-32.68	44.77%	-3.49
5640.00	3.07	-26.51	44.16%	-3.55
5660.00	3.33	-26.29	45.49%	-3.42
5680.00	3.23	-29.30	41.39%	-3.83
5700.00	3.55	-25.79	42.54%	-3.71
5720.00	3.68	-26.34	42.02%	-3.77
5740.00	3.70	-32.02	41.00%	-3.87
5760.00	3.49	-28.20	37.60%	-4.25
5780.00	3.35	-29.50	38.18%	-4.18
5800.00	3.27	-29.55	38.73%	-4.12
5820.00	4.08	-27.61	41.53%	-3.82
5825.00	4.12	-26.57	41.18%	-3.85
5840.00	4.15	-28.63	40.26%	-3.95
5860.00	4.02	-34.95	45.60%	-3.41
5880.00	3.84	-31.32	48.24%	-3.17
5900.00	3.89	-27.37	47.74%	-3.21
5920.00	4.02	-30.17	47.84%	-3.20
5940.00	4.04	-33.57	47.12%	-3.27
5960.00	4.17	-35.85	45.60%	-3.41
5980.00	4.08	-32.11	43.67%	-3.60
6000.00	4.05	-35.19	41.88%	-3.78

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**AUX ANT with MAIN ANT port terminated with 50 ohm, terminal with charging stand****Add coax-cable loss**

Frequency (MHz)	Max Antenna Gain (dBi)	Min Antenna Gain (dBi)	Min Antenna Gain (90%) (dBi)	Antenna Efficiency (%)	Average Gain (dBi)
2402.00	4.11	-26.01	-8.87	62.03%	-2.07
2412.00	4.15	-22.77	-8.93	63.02%	-2.01
2440.00	4.51	-29.89	-8.54	66.67%	-1.76
2442.00	4.49	-27.89	-8.56	66.01%	-1.80
2472.00	4.26	-21.59	-9.20	60.94%	-2.15
2480.00	4.27	-22.55	-9.56	56.94%	-2.45
5180.00	6.87	-34.59	-11.17	71.06%	-1.48
5500.00	6.86	-28.16	-10.52	79.69%	-0.99
5700.00	7.04	-28.45	-11.04	86.04%	-0.65
5720.00	6.75	-29.22	-11.12	84.56%	-0.73
5800.00	6.23	-28.40	-11.14	84.68%	-0.72
5825.00	6.89	-27.28	-10.60	83.99%	-0.76

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## Without\_ coax-cable loss

Frequency (MHz)	Max Antenna Gain (dBi)	Min Antenna Gain (dBi)	Antenna Efficiency (%)	Average Gain (dBi)
2400.00	3.64	-27.84	55.23%	-2.58
2402.00	3.61	-26.51	55.28%	-2.57
2412.00	3.65	-23.27	56.17%	-2.51
2417.00	3.83	-22.76	56.96%	-2.44
2422.00	4.02	-25.02	58.13%	-2.36
2427.00	4.07	-29.55	59.77%	-2.23
2432.00	4.09	-36.15	60.56%	-2.18
2437.00	4.05	-33.88	60.08%	-2.21
2440.00	4.01	-30.39	59.42%	-2.26
2442.00	3.99	-28.39	58.83%	-2.30
2447.00	3.86	-24.57	57.03%	-2.44
2452.00	3.80	-22.73	55.85%	-2.53
2457.00	3.81	-23.06	55.90%	-2.53
2462.00	3.86	-22.06	56.32%	-2.49
2467.00	3.81	-21.93	55.60%	-2.55
2472.00	3.76	-22.09	54.31%	-2.65
2480.00	3.77	-23.05	50.75%	-2.95
2484.00	3.71	-22.60	49.40%	-3.06
2500.00	3.53	-31.65	48.94%	-3.10
4700.00	3.66	-33.14	26.89%	-5.70
4720.00	3.93	-32.48	25.70%	-5.90
4740.00	3.99	-31.06	26.47%	-5.77
4760.00	4.23	-32.86	27.05%	-5.68
4780.00	4.46	-31.05	28.16%	-5.50
4800.00	4.50	-34.67	29.07%	-5.37
4820.00	4.39	-31.02	28.86%	-5.40
4840.00	4.75	-34.26	31.18%	-5.06
4860.00	4.58	-31.64	30.95%	-5.09
4880.00	4.36	-32.10	30.32%	-5.18
4900.00	4.47	-33.91	31.27%	-5.05
4920.00	4.76	-39.31	32.86%	-4.83
4940.00	4.79	-30.90	33.47%	-4.75
4960.00	5.09	-28.42	35.95%	-4.44
4980.00	5.17	-28.48	36.42%	-4.39
5000.00	5.59	-31.06	40.17%	-3.96
5020.00	5.99	-27.44	43.08%	-3.66
5040.00	6.14	-28.60	44.38%	-3.53
5060.00	5.37	-32.50	45.35%	-3.43
5080.00	4.63	-31.48	46.49%	-3.33
5100.00	5.48	-28.17	48.62%	-3.13
5120.00	6.09	-32.06	50.58%	-2.96
5140.00	5.64	-31.58	49.96%	-3.01
5160.00	5.84	-32.29	53.26%	-2.74

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Frequency (MHz)	Max Antenna Gain (dBi)	Min Antenna Gain (dBi)	Antenna Efficiency (%)	Average Gain (dBi)
5180.00	5.87	-35.59	56.44%	-2.48
5200.00	5.57	-31.74	56.13%	-2.51
5220.00	6.32	-31.87	59.83%	-2.23
5240.00	6.43	-27.41	56.86%	-2.45
5260.00	5.62	-24.55	58.18%	-2.35
5280.00	4.92	-27.75	59.59%	-2.25
5300.00	5.66	-30.97	60.63%	-2.17
5320.00	6.22	-28.47	60.26%	-2.20
5340.00	6.27	-27.59	61.10%	-2.14
5360.00	6.26	-33.19	60.03%	-2.22
5380.00	6.36	-33.59	61.56%	-2.11
5400.00	6.39	-29.69	62.96%	-2.01
5420.00	6.21	-32.26	60.93%	-2.15
5440.00	6.41	-27.79	63.11%	-2.00
5460.00	6.30	-27.44	62.22%	-2.06
5480.00	6.37	-34.92	63.61%	-1.97
5500.00	5.86	-29.16	63.30%	-1.99
5520.00	5.43	-27.81	62.80%	-2.02
5540.00	5.24	-25.60	60.89%	-2.15
5560.00	5.39	-25.02	63.98%	-1.94
5580.00	5.48	-25.23	65.48%	-1.84
5600.00	5.19	-30.77	63.44%	-1.98
5620.00	5.31	-34.55	66.24%	-1.79
5640.00	5.40	-31.22	66.13%	-1.80
5660.00	5.79	-32.20	68.20%	-1.66
5680.00	5.81	-32.65	65.51%	-1.84
5700.00	6.04	-29.45	68.34%	-1.65
5720.00	5.75	-30.22	67.17%	-1.73
5740.00	5.45	-31.33	69.72%	-1.57
5760.00	4.96	-34.91	66.95%	-1.74
5780.00	5.17	-33.41	68.14%	-1.67
5800.00	5.23	-29.40	67.26%	-1.72
5820.00	5.77	-28.74	67.03%	-1.74
5825.00	5.89	-28.28	66.72%	-1.76
5840.00	6.28	-27.47	66.02%	-1.80
5860.00	6.22	-30.22	67.74%	-1.69
5880.00	5.95	-34.22	65.46%	-1.84
5900.00	5.94	-34.23	64.19%	-1.93
5920.00	6.01	-27.73	65.23%	-1.86
5940.00	5.87	-28.17	64.12%	-1.93
5960.00	5.72	-30.04	63.32%	-1.98
5980.00	5.47	-29.87	62.30%	-2.05
6000.00	5.34	-35.56	61.68%	-2.10

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**Both MAIN and AUX ANT, terminal with charging stand****Add coax-cable loss**

Frequency (MHz)	Max Antenna Gain (dBi)	Min Antenna Gain (dBi)	Min Antenna Gain (90%) (dBi)	Antenna Efficiency (%)	Average Gain (dBi)
2412.00	4.34	-26.20	-8.14	62.65%	-2.03
2442.00	4.77	-22.59	-7.91	69.28%	-1.59
2472.00	4.13	-25.30	-8.64	60.90%	-2.15
5180.00	5.51	-24.10	-8.28	70.45%	-1.52
5500.00	6.01	-27.07	-7.81	68.56%	-1.64
5700.00	5.36	-31.18	-8.14	65.44%	-1.84
5720.00	5.49	-26.45	-7.94	65.65%	-1.83
5800.00	6.43	-28.50	-8.60	64.56%	-1.90
5825.00	6.50	-25.48	-8.73	66.32%	-1.78

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## Without\_coax-cable loss

Frequency (MHz)	Max Antenna Gain (dBi)	Min Antenna Gain (dBi)	Antenna Efficiency (%)	Average Gain (dBi)
2400.00	4.08	-32.90	54.87%	-2.61
2402.00	4.02	-34.39	54.97%	-2.60
2412.00	3.84	-26.70	55.84%	-2.53
2417.00	3.87	-27.15	57.03%	-2.44
2422.00	3.83	-24.24	57.36%	-2.41
2427.00	3.86	-22.55	58.06%	-2.36
2432.00	4.17	-23.51	62.23%	-2.06
2437.00	4.34	-22.50	63.77%	-1.95
2440.00	4.05	-23.32	58.80%	-2.31
2442.00	4.27	-23.09	61.74%	-2.09
2447.00	4.27	-21.72	61.53%	-2.11
2452.00	4.15	-21.25	59.90%	-2.23
2457.00	3.99	-22.05	57.64%	-2.39
2462.00	3.77	-21.95	55.39%	-2.57
2467.00	3.59	-26.33	53.19%	-2.74
2472.00	3.63	-25.80	54.28%	-2.65
2480.00	3.06	-24.04	51.23%	-2.90
2484.00	3.00	-23.15	53.30%	-2.73
2500.00	2.58	-24.94	48.03%	-3.19
4700.00	4.75	-25.88	43.45%	-3.62
4720.00	5.19	-23.87	48.17%	-3.17
4740.00	4.77	-23.09	44.54%	-3.51
4760.00	4.97	-23.09	43.70%	-3.59
4780.00	5.28	-22.54	46.97%	-3.28
4800.00	4.77	-27.78	40.76%	-3.90
4820.00	4.94	-23.10	41.43%	-3.83
4840.00	5.00	-23.02	42.27%	-3.74
4860.00	4.81	-23.93	41.63%	-3.81
4880.00	5.85	-26.24	50.49%	-2.97
4900.00	5.59	-28.93	48.84%	-3.11
4920.00	4.41	-35.65	44.00%	-3.57
4940.00	4.57	-26.78	45.55%	-3.42
4960.00	4.86	-24.57	46.63%	-3.31
4980.00	4.80	-24.59	43.68%	-3.60
5000.00	4.69	-30.28	44.92%	-3.48
5020.00	4.85	-27.97	49.74%	-3.03
5040.00	5.05	-26.10	50.84%	-2.94
5060.00	5.33	-23.53	52.34%	-2.81
5080.00	5.41	-28.37	52.17%	-2.83
5100.00	5.45	-26.88	51.82%	-2.85
5120.00	5.51	-25.78	53.88%	-2.69
5140.00	4.47	-28.93	52.04%	-2.84
5160.00	3.85	-29.88	51.72%	-2.86

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Frequency (MHz)	Max Antenna Gain (dBi)	Min Antenna Gain (dBi)	Antenna Efficiency (%)	Average Gain (dBi)
5180.00	4.51	-25.10	55.96%	-2.52
5200.00	4.27	-27.70	53.26%	-2.74
5220.00	4.94	-25.92	54.53%	-2.63
5240.00	4.05	-27.20	52.07%	-2.83
5260.00	3.93	-32.97	53.25%	-2.74
5280.00	4.10	-30.55	53.59%	-2.71
5300.00	4.70	-30.20	57.83%	-2.38
5320.00	4.69	-27.02	54.85%	-2.61
5340.00	4.35	-36.23	54.36%	-2.65
5360.00	4.65	-28.96	54.12%	-2.67
5380.00	5.16	-34.83	53.24%	-2.74
5400.00	5.33	-28.44	53.97%	-2.68
5420.00	5.16	-31.68	53.63%	-2.71
5440.00	5.39	-27.63	53.93%	-2.68
5460.00	5.13	-30.39	56.31%	-2.49
5480.00	4.98	-29.64	54.61%	-2.63
5500.00	5.01	-28.07	54.46%	-2.64
5520.00	4.86	-32.58	53.75%	-2.70
5540.00	4.67	-24.81	53.16%	-2.74
5560.00	5.20	-28.24	56.50%	-2.48
5580.00	5.25	-30.96	58.19%	-2.35
5600.00	4.63	-32.54	55.11%	-2.59
5620.00	4.61	-29.83	52.40%	-2.81
5640.00	4.25	-27.72	52.20%	-2.82
5660.00	4.15	-29.27	53.25%	-2.74
5680.00	4.01	-28.10	51.71%	-2.86
5700.00	4.36	-32.18	51.98%	-2.84
5720.00	4.49	-27.45	52.15%	-2.83
5740.00	4.98	-26.04	52.16%	-2.83
5760.00	5.13	-26.63	51.98%	-2.84
5780.00	5.38	-27.57	50.79%	-2.94
5800.00	5.43	-29.50	51.28%	-2.90
5820.00	5.46	-26.55	51.82%	-2.86
5825.00	5.50	-26.48	52.68%	-2.78
5840.00	5.42	-28.51	53.10%	-2.75
5860.00	5.59	-24.98	54.89%	-2.60
5880.00	5.58	-28.86	55.43%	-2.56
5900.00	5.93	-28.98	59.16%	-2.28
5920.00	6.10	-25.41	55.25%	-2.58
5940.00	5.46	-23.81	55.95%	-2.52
5960.00	5.00	-26.84	50.23%	-2.99
5980.00	4.81	-31.54	51.90%	-2.85
6000.00	4.46	-32.40	46.22%	-3.35

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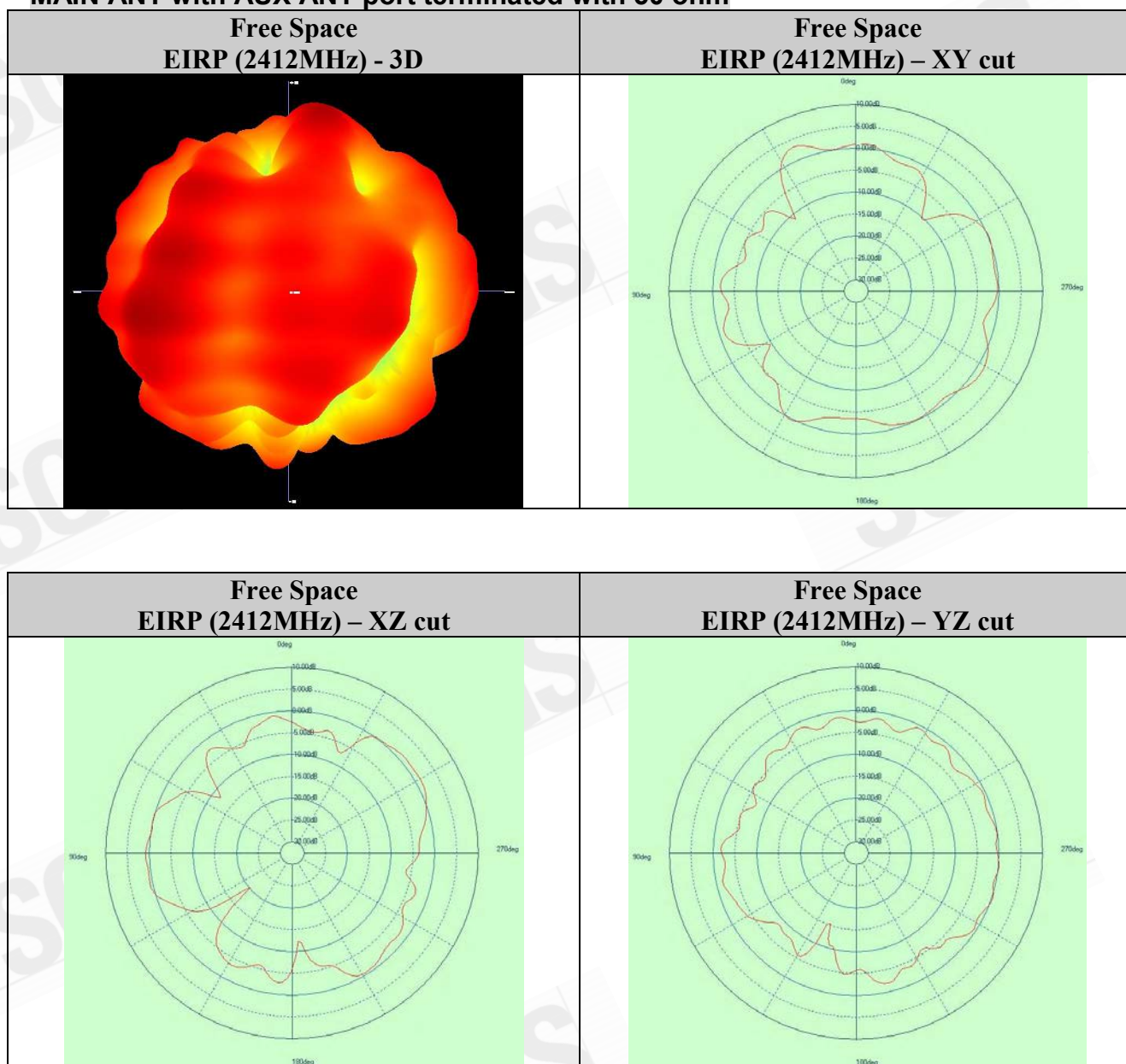
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## Antenna 3D Plot Matrix

All plots in this section show the total EIRP ( $EIRP_{\theta} + EIRP_{\phi}$ ) with the +x-axis pointing out of the page, +y-axis pointing right, and +z-axis pointing up.

### MAIN ANT with AUX ANT port terminated with 50 ohm

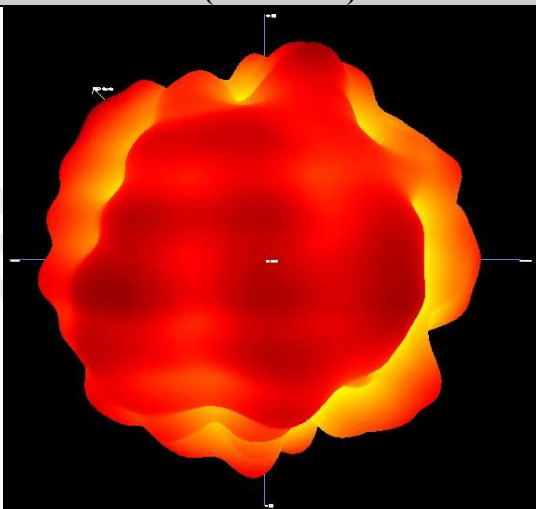


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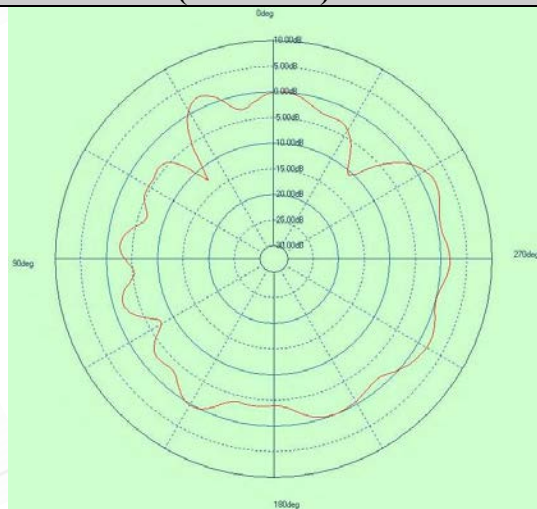
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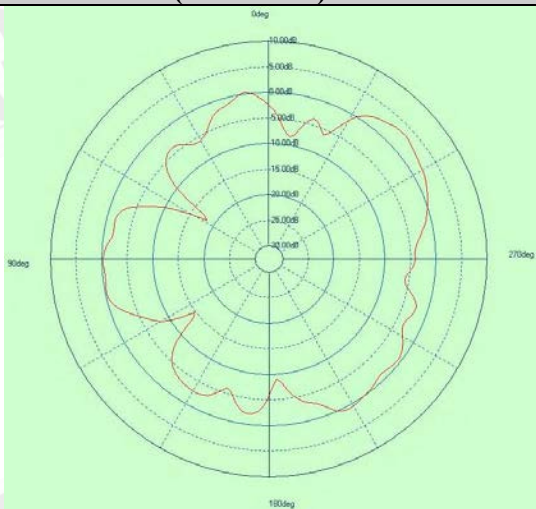
**Free Space  
EIRP (2442MHz) - 3D**



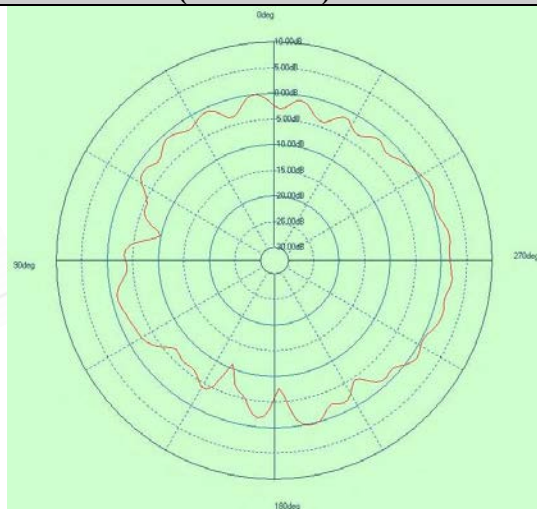
**Free Space  
EIRP (2442MHz) – XY cut**



**Free Space  
EIRP (2442MHz) – XZ cut**



**Free Space  
EIRP (2442MHz) – YZ cut**



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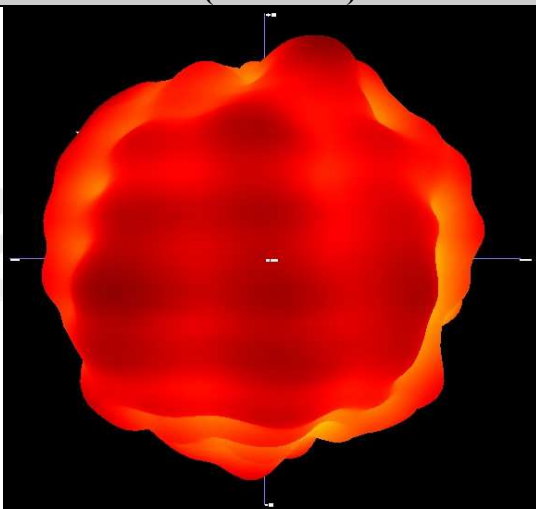
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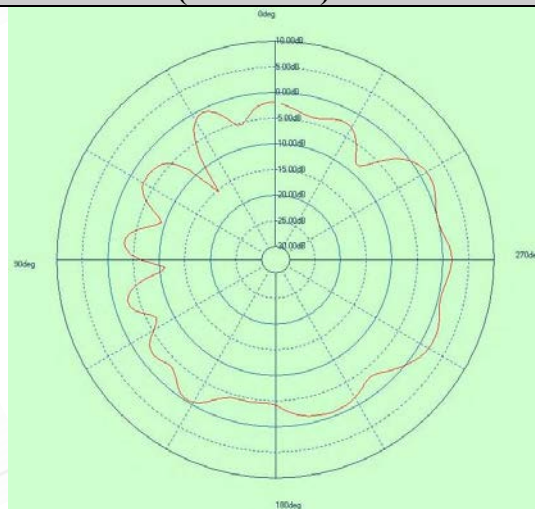
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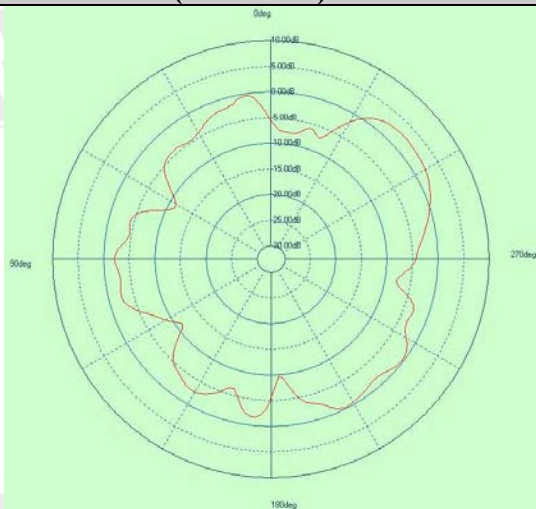
**Free Space  
EIRP (2472MHz) - 3D**



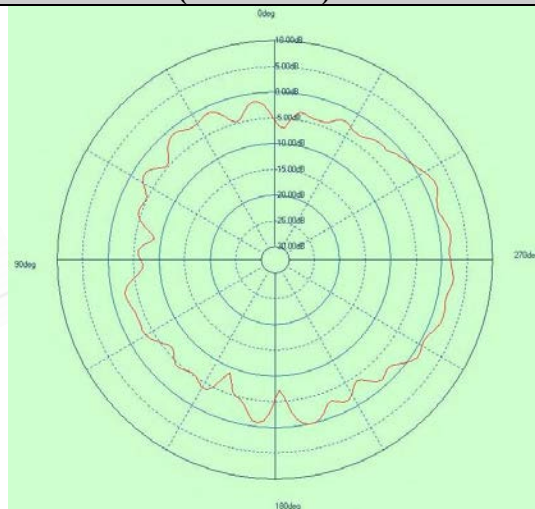
**Free Space  
EIRP (2472MHz) - XY cut**



**Free Space  
EIRP (2472MHz) - XZ cut**



**Free Space  
EIRP (2472MHz) - YZ cut**

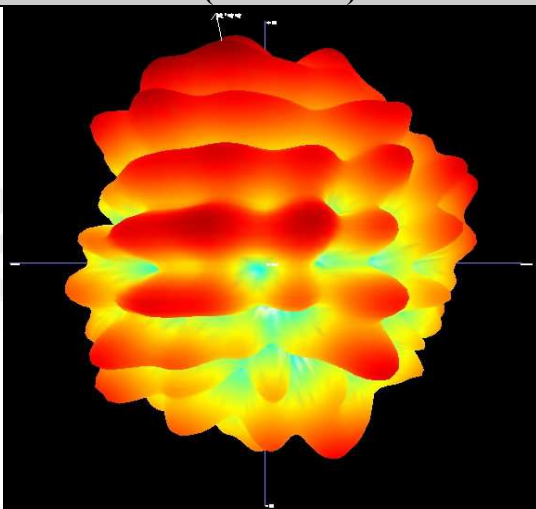


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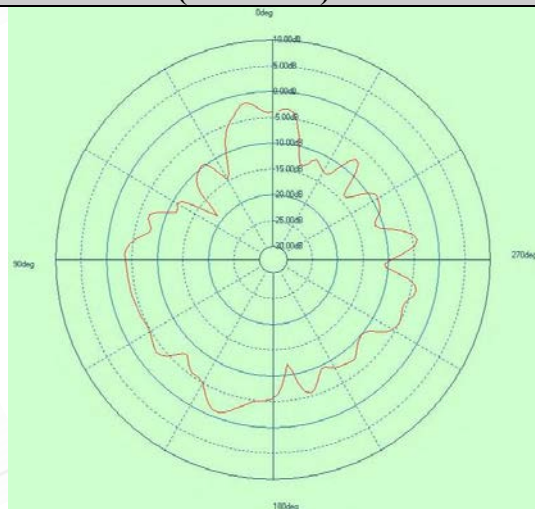
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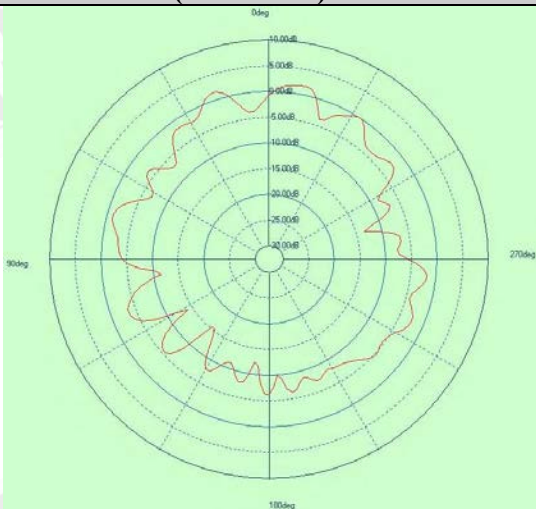
**Free Space  
EIRP (5180MHz) - 3D**



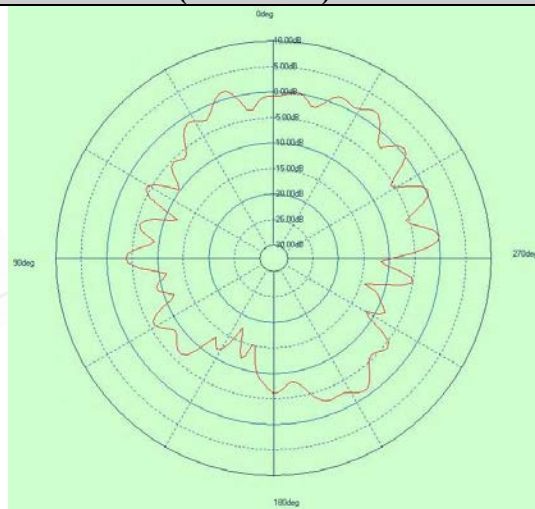
**Free Space  
EIRP (5180MHz) - XY cut**



**Free Space  
EIRP (5180MHz) - XZ cut**



**Free Space  
EIRP (5180MHz) - YZ cut**



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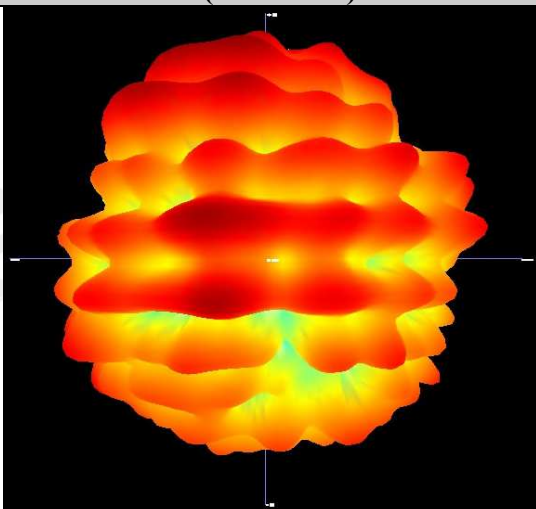
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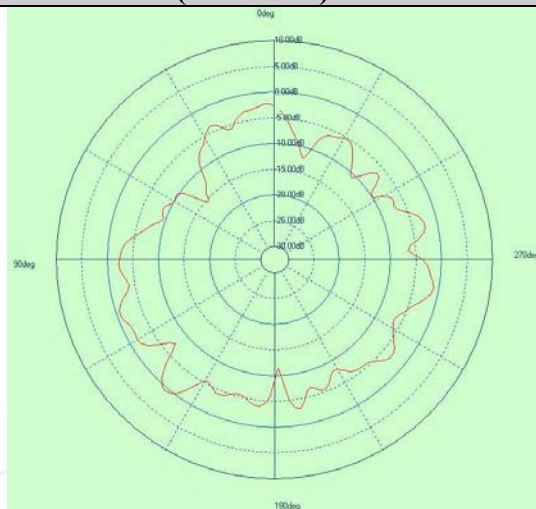
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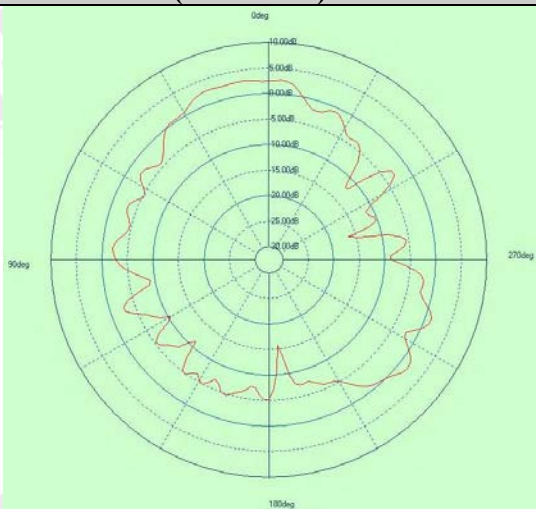
**Free Space  
EIRP (5500MHz) - 3D**



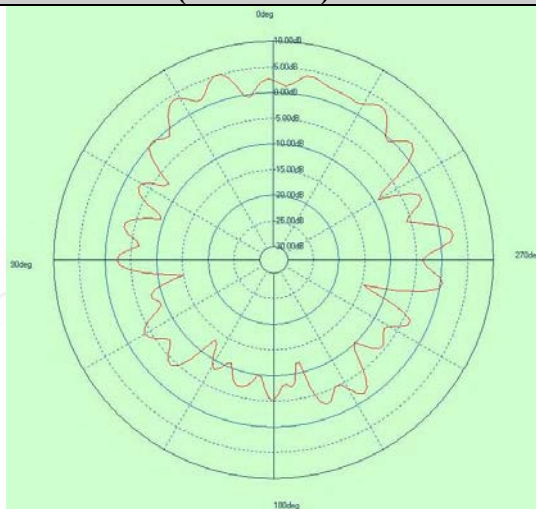
**Free Space  
EIRP (5500MHz) - XY cut**



**Free Space  
EIRP (5500MHz) - XZ cut**



**Free Space  
EIRP (5500MHz) - YZ cut**



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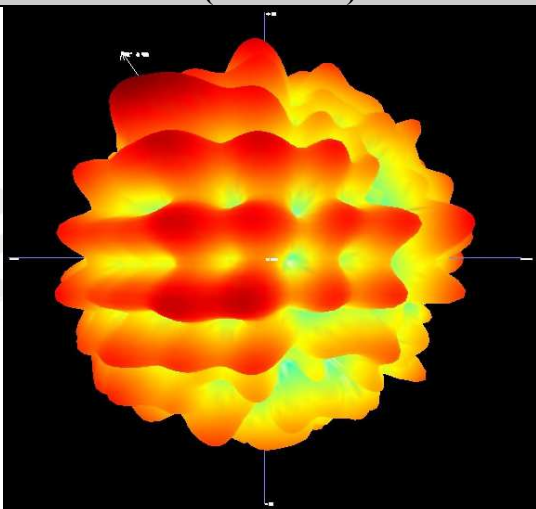
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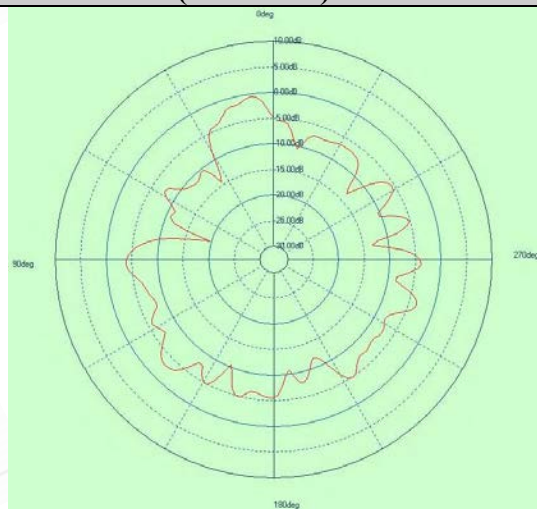
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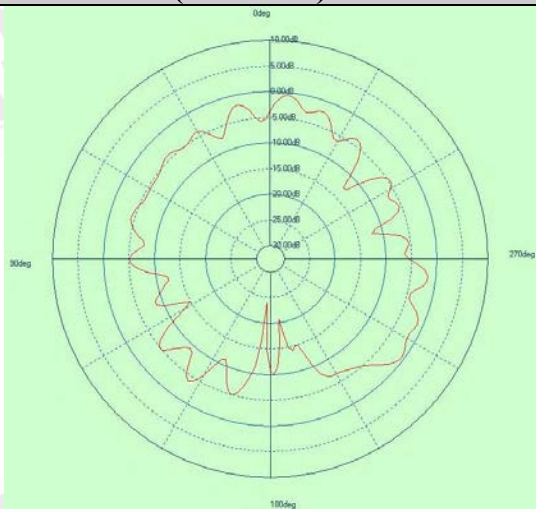
**Free Space  
EIRP (5825MHz) - 3D**



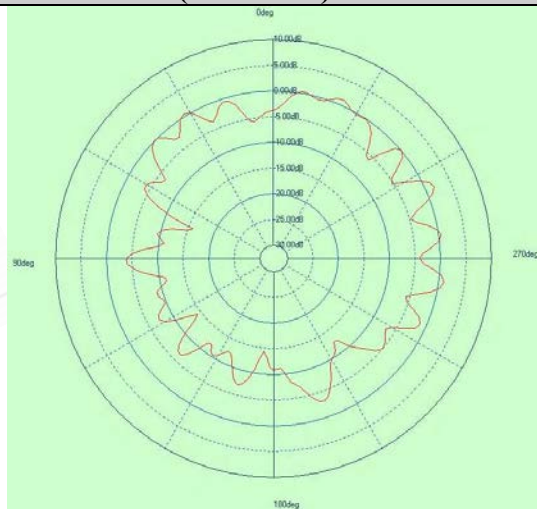
**Free Space  
EIRP (5825MHz) - XY cut**



**Free Space  
EIRP (5825MHz) - XZ cut**



**Free Space  
EIRP (5825MHz) - YZ cut**



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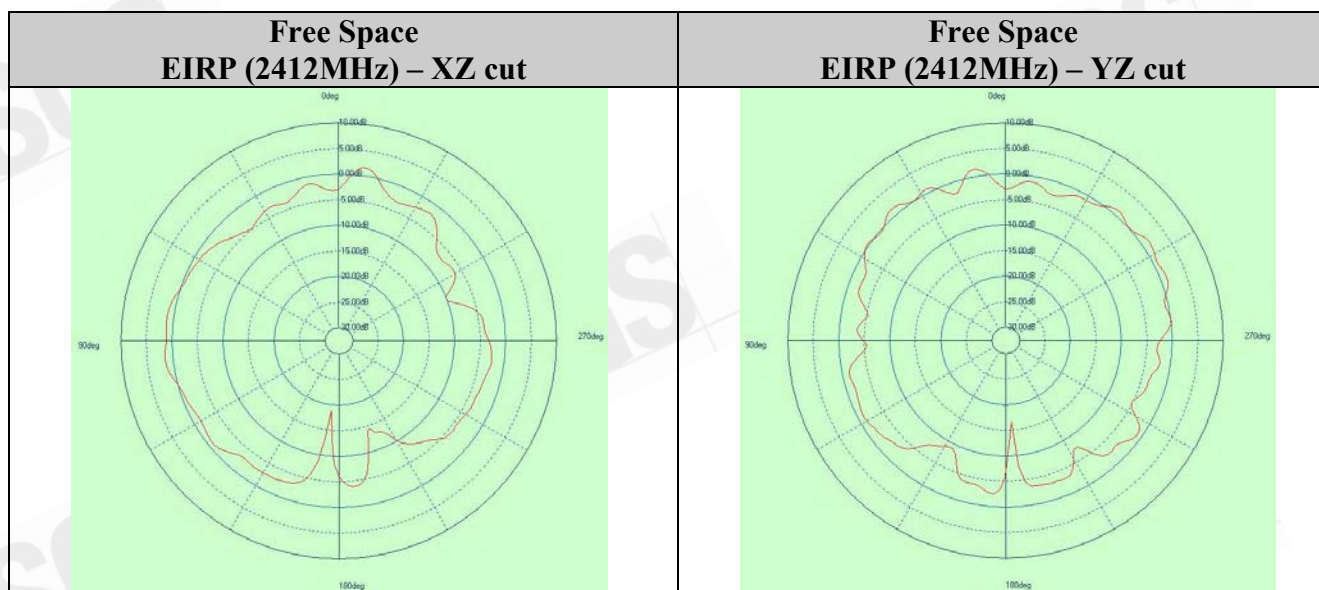
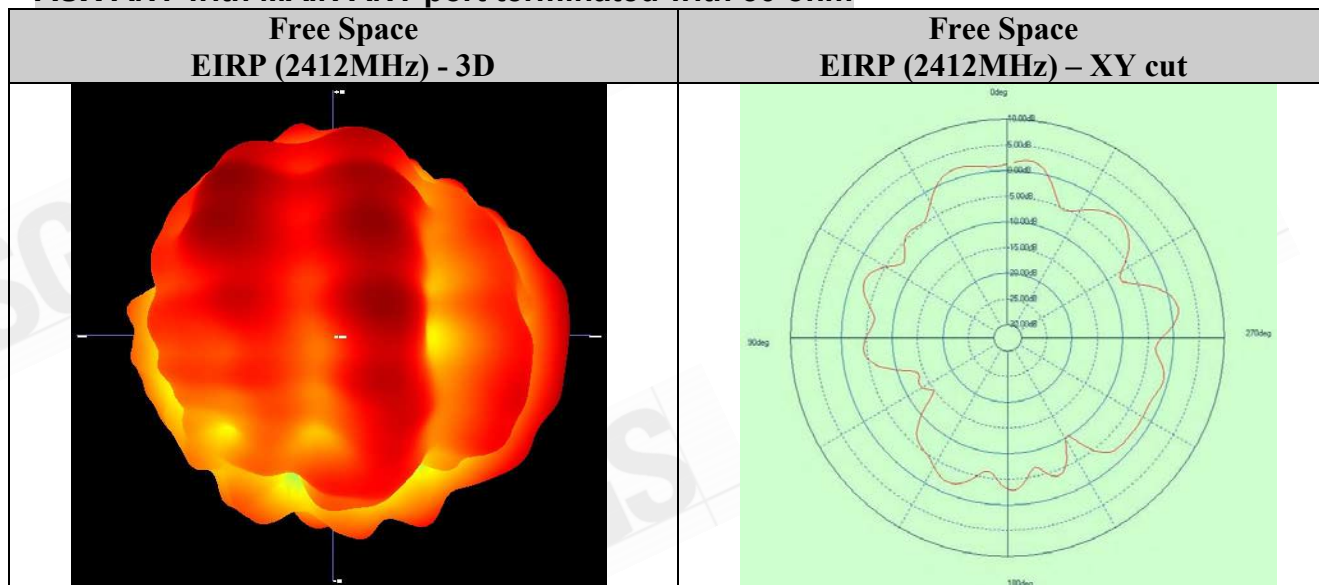
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## AUX ANT with MAIN ANT port terminated with 50 ohm



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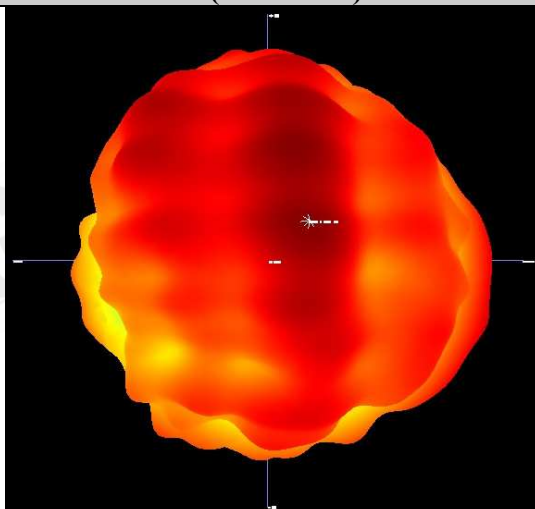
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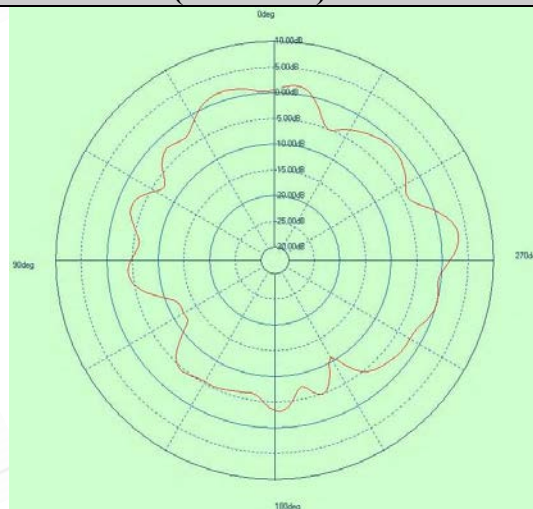
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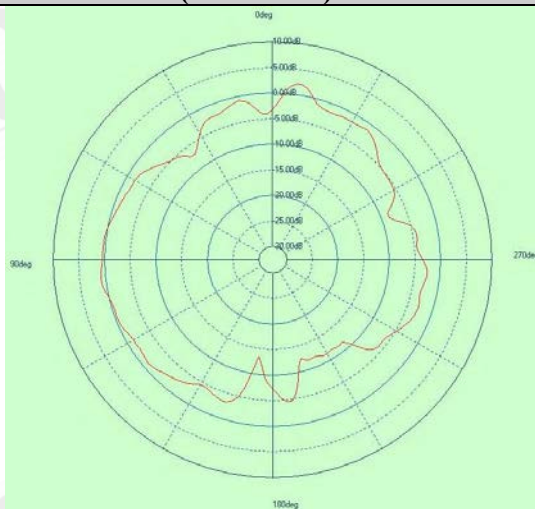
**Free Space  
EIRP (2442MHz) - 3D**



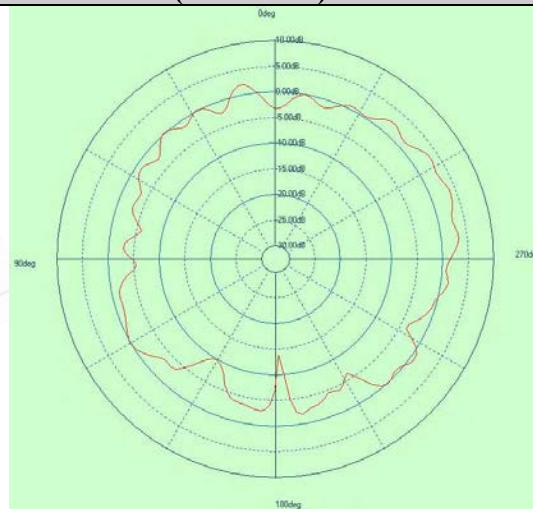
**Free Space  
EIRP (2442MHz) - XY cut**



**Free Space  
EIRP (2442MHz) - XZ cut**



**Free Space  
EIRP (2442MHz) - YZ cut**

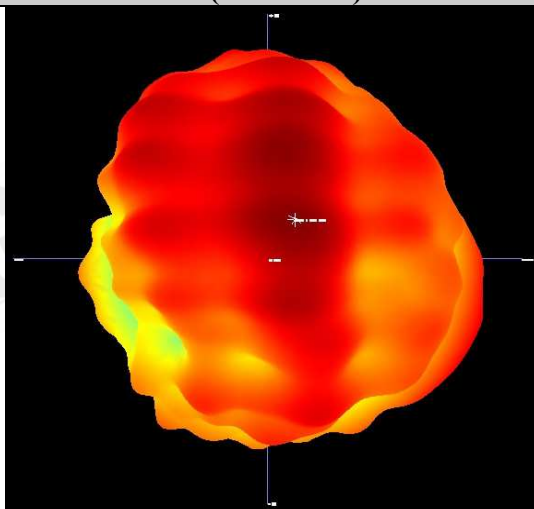


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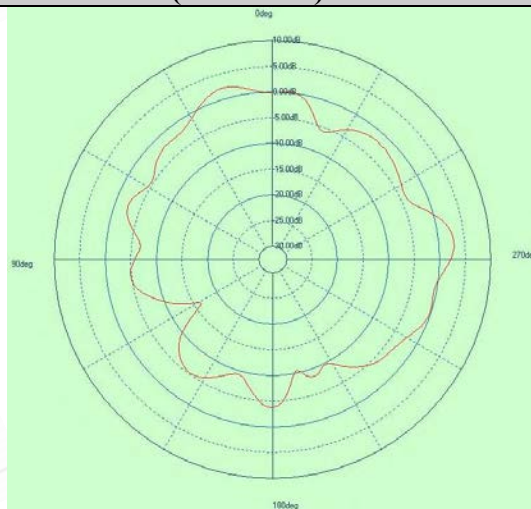
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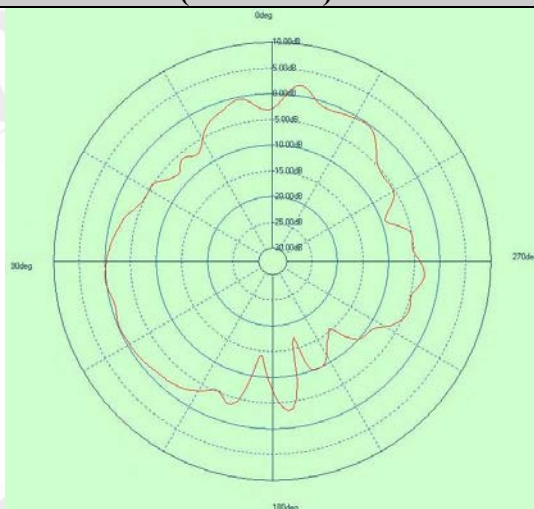
**Free Space  
EIRP (2472MHz) - 3D**



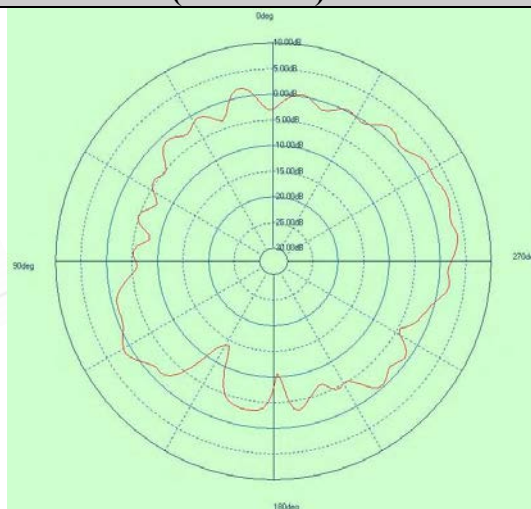
**Free Space  
EIRP (2472MHz) – XY cut**



**Free Space  
EIRP (2472MHz) – XZ cut**



**Free Space  
EIRP (2472MHz) – YZ cut**



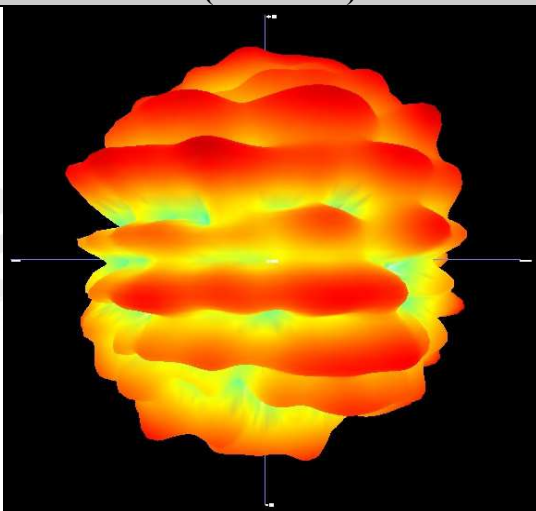
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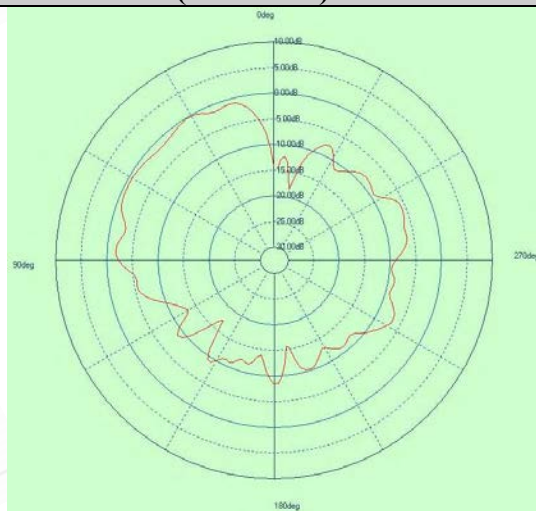
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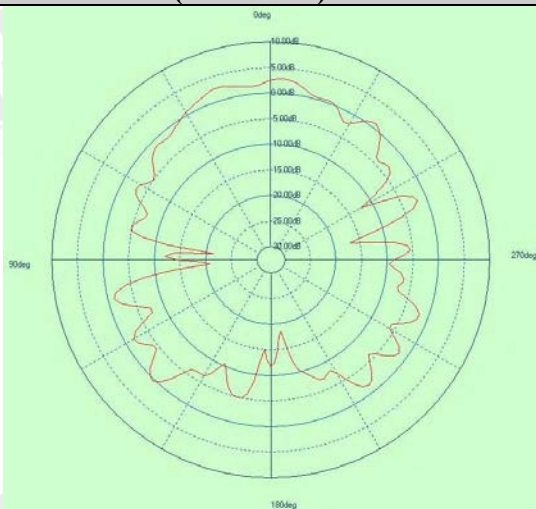
**Free Space  
EIRP (5180MHz) - 3D**



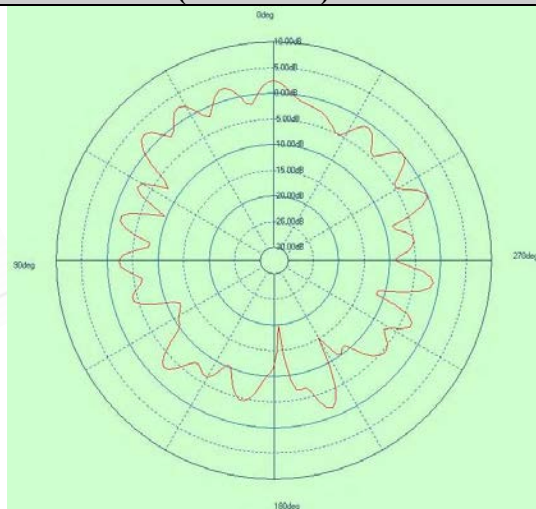
**Free Space  
EIRP (5180MHz) - XY cut**



**Free Space  
EIRP (5180MHz) - XZ cut**



**Free Space  
EIRP (5180MHz) - YZ cut**

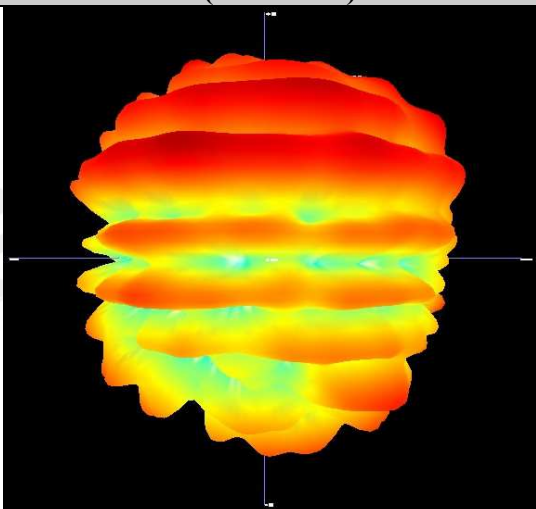


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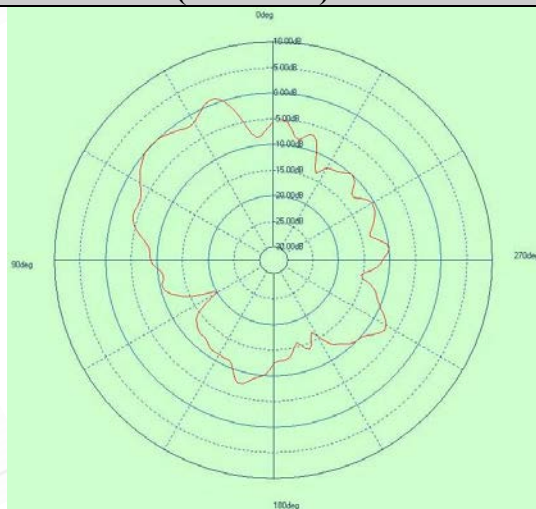
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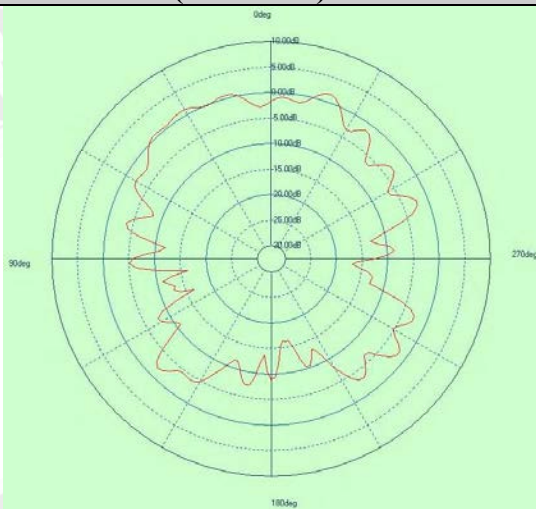
**Free Space  
EIRP (5500MHz) - 3D**



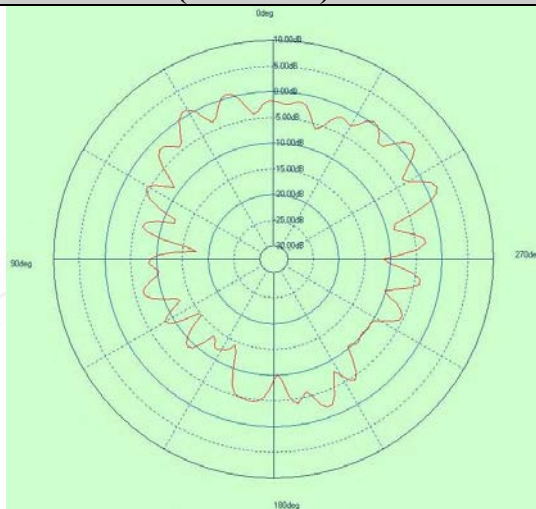
**Free Space  
EIRP (5500MHz) - XY cut**



**Free Space  
EIRP (5500MHz) - XZ cut**



**Free Space  
EIRP (5500MHz) - YZ cut**



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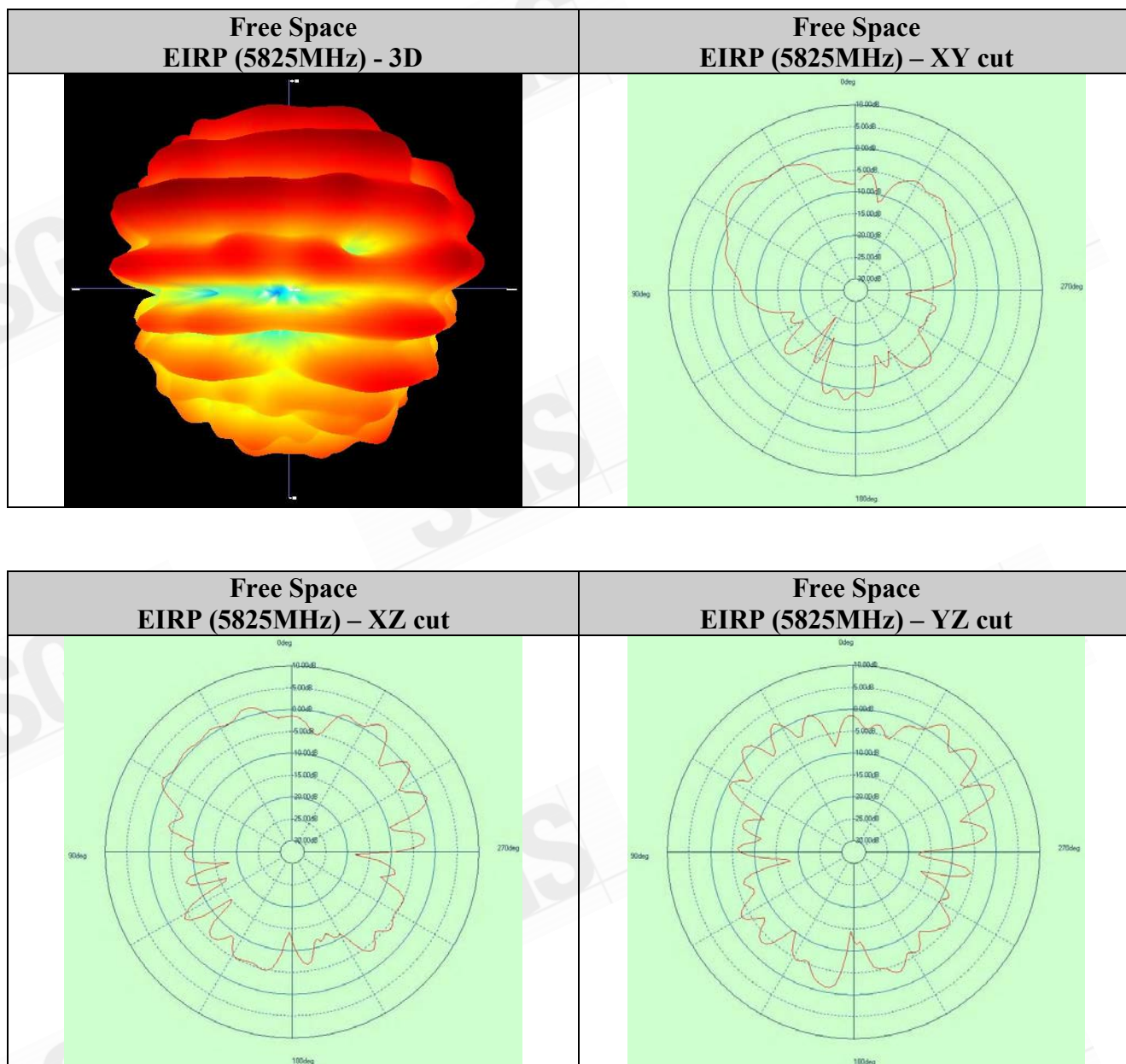
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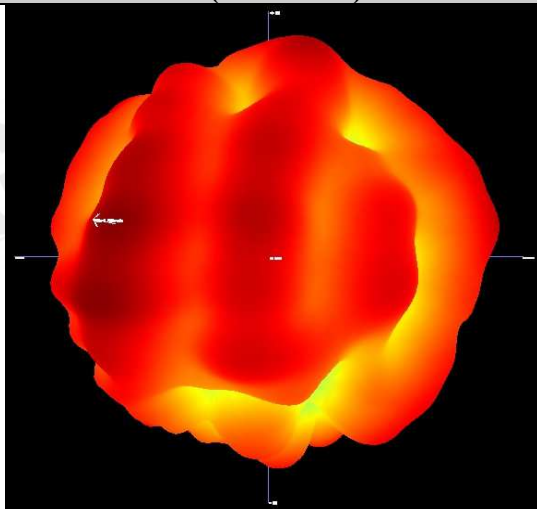
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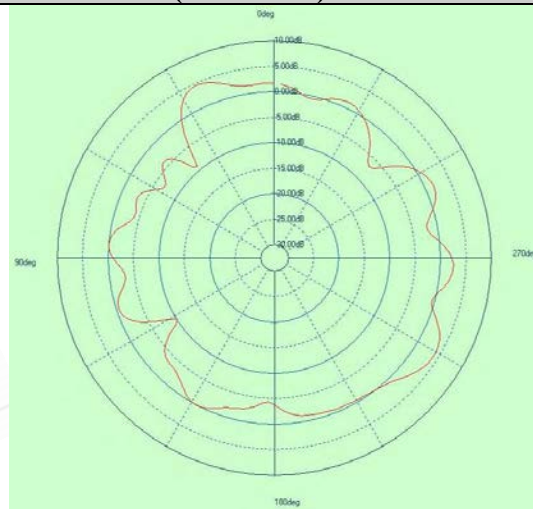


## Both MAIN and AUX ANTs

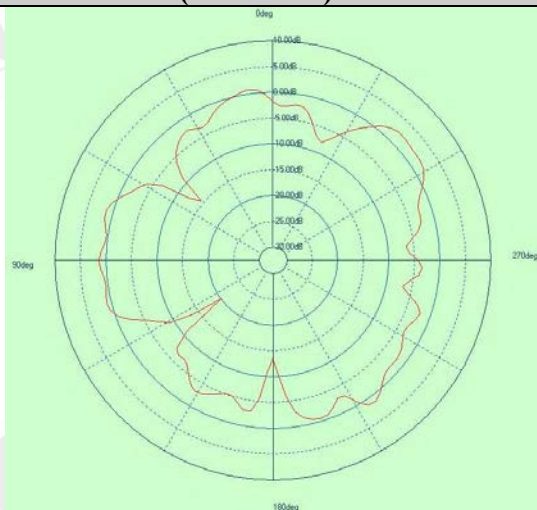
**Free Space  
EIRP (2412MHz) - 3D**



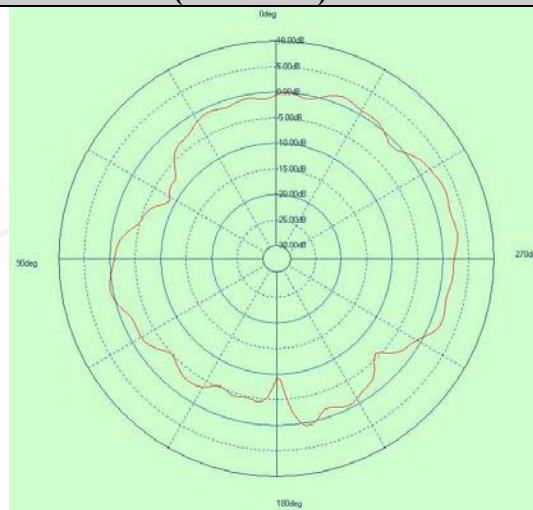
**Free Space  
EIRP (2412MHz) - XY cut**



**Free Space  
EIRP (2412MHz) - XZ cut**



**Free Space  
EIRP (2412MHz) - YZ cut**



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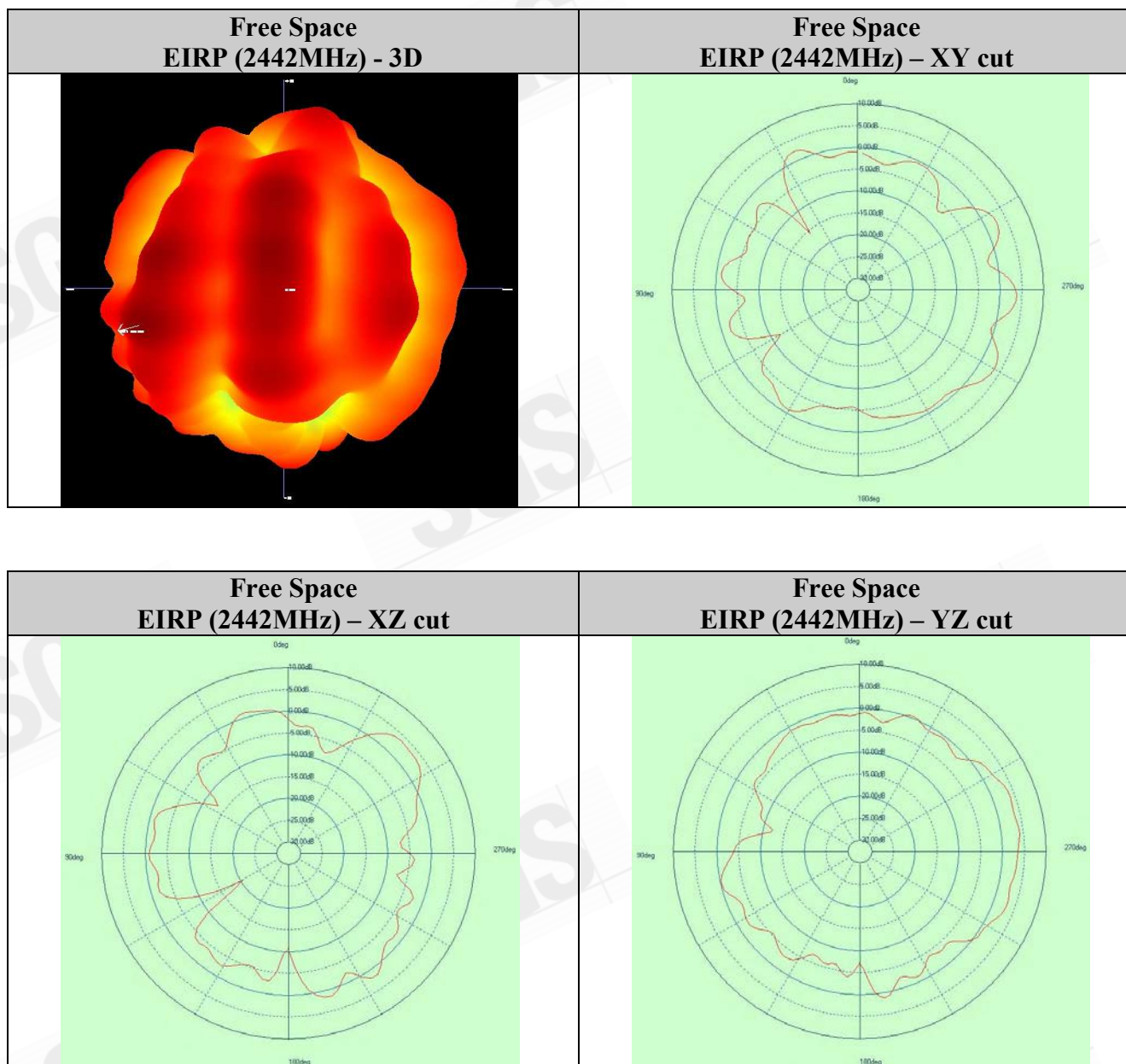
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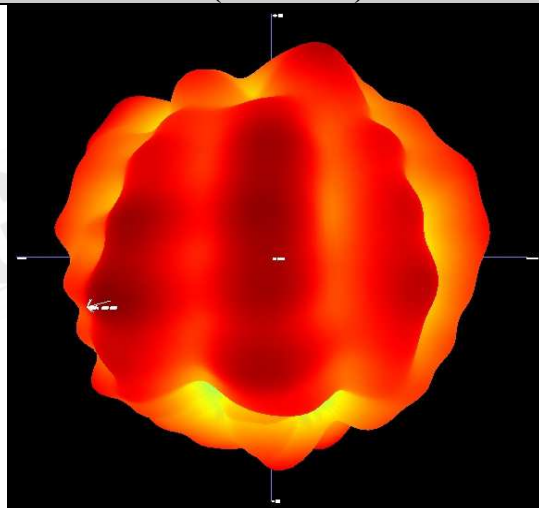
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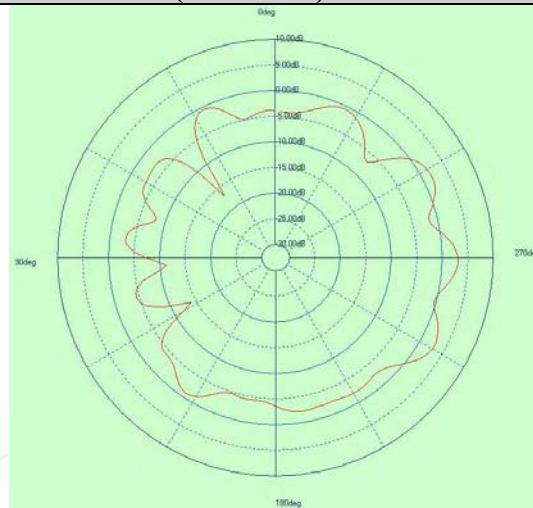
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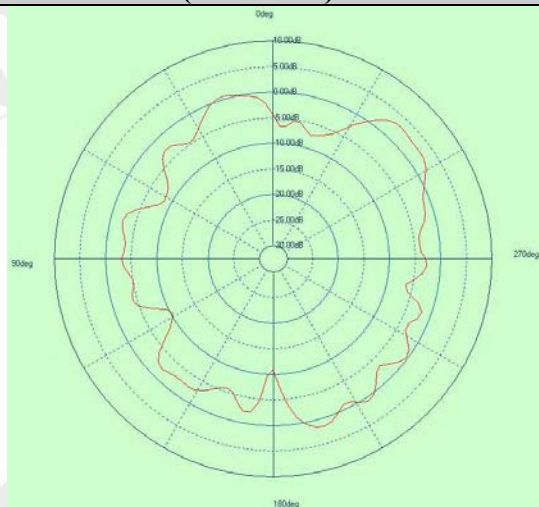
**Free Space  
EIRP (2472MHz) - 3D**



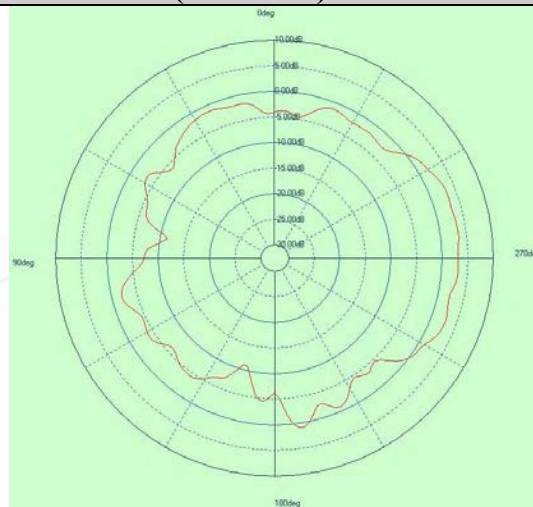
**Free Space  
EIRP (2472MHz) - XY cut**



**Free Space  
EIRP (2472MHz) - XZ cut**



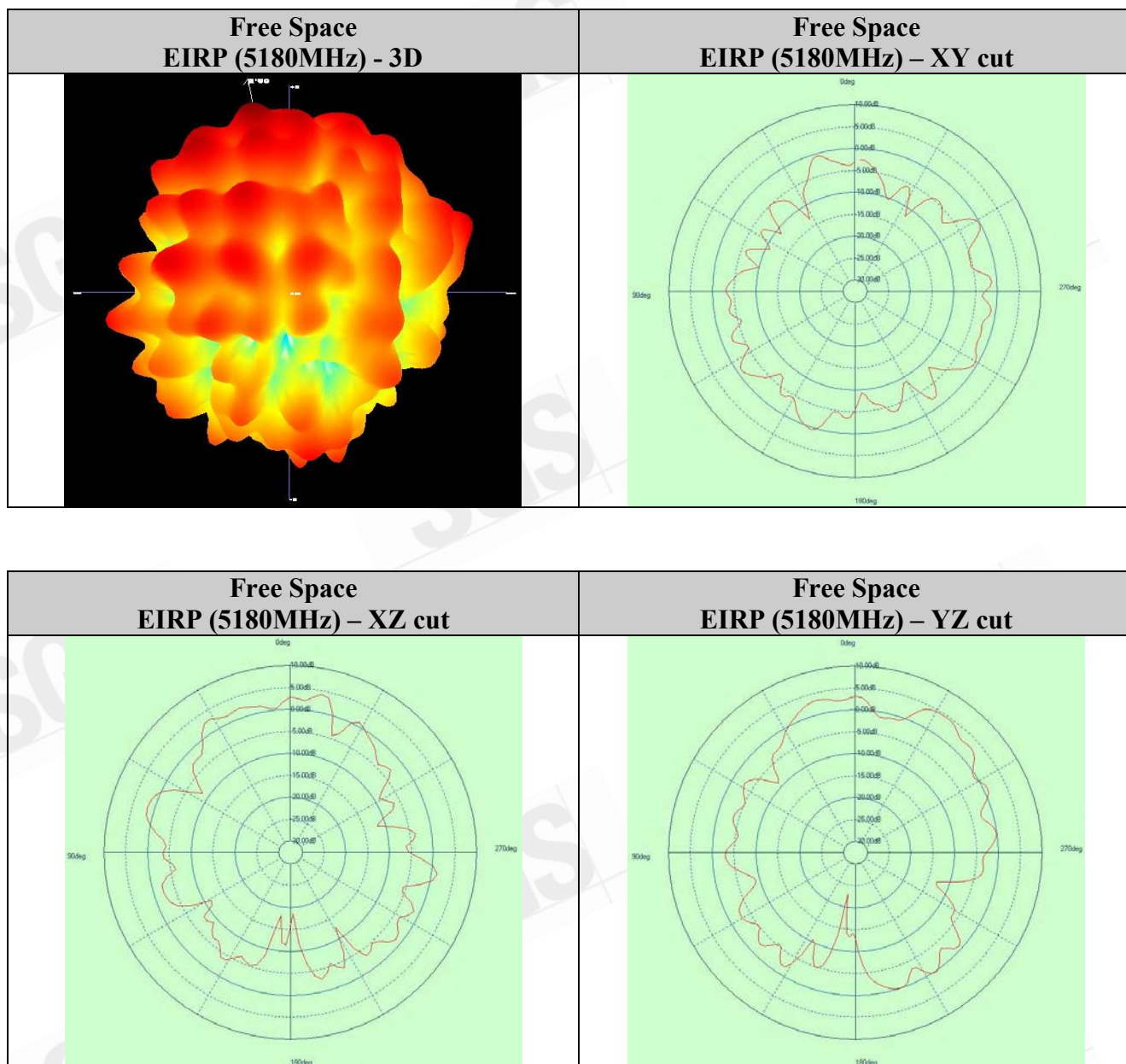
**Free Space  
EIRP (2472MHz) - YZ cut**



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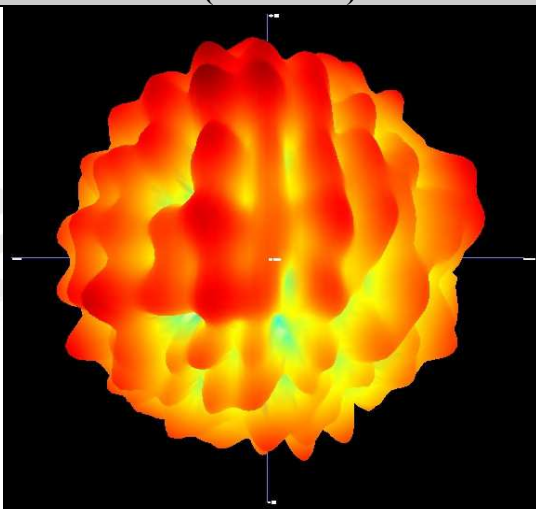


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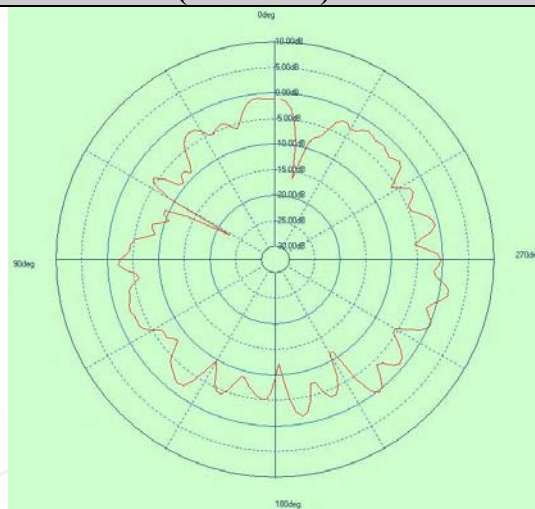
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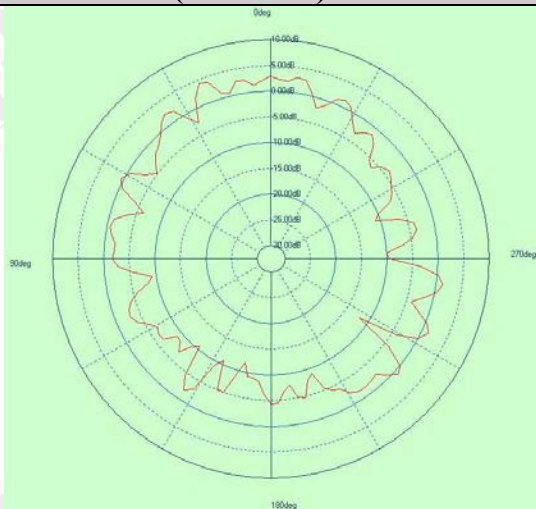
**Free Space  
EIRP (5500MHz) - 3D**



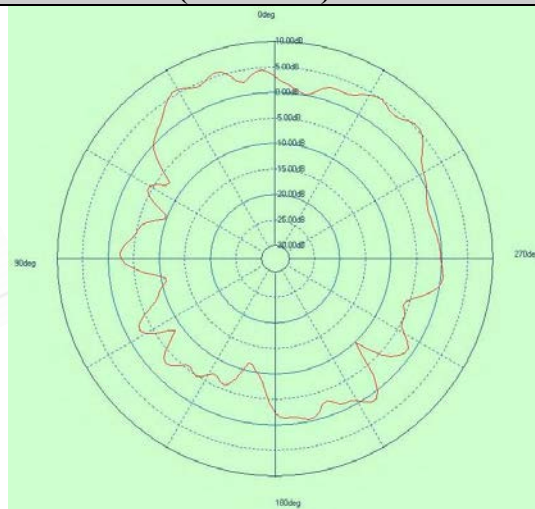
**Free Space  
EIRP (5500MHz) - XY cut**



**Free Space  
EIRP (5500MHz) - XZ cut**



**Free Space  
EIRP (5500MHz) - YZ cut**



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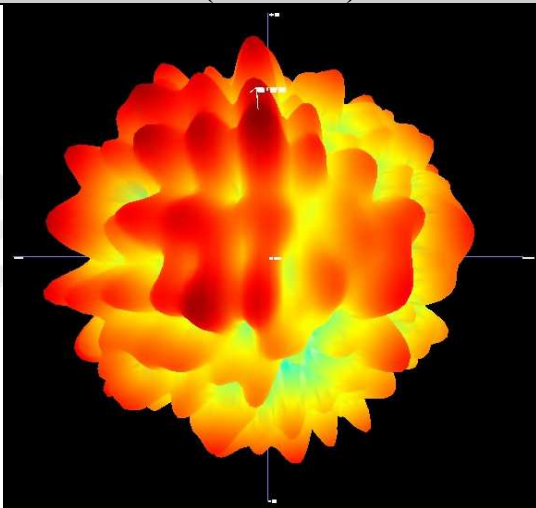
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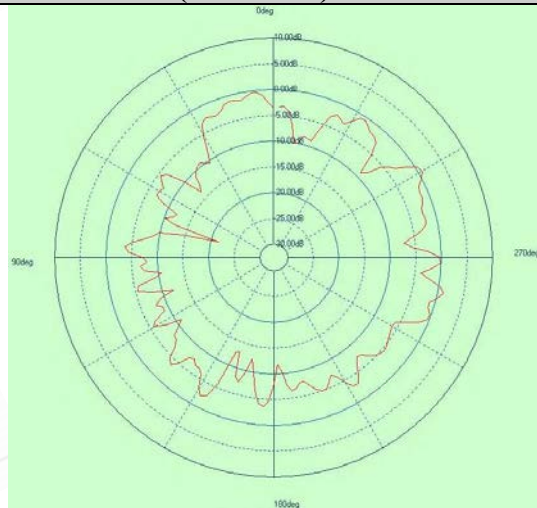
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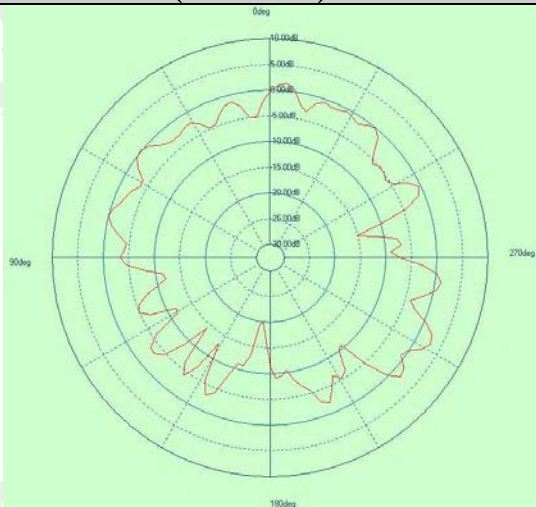
**Free Space  
EIRP (5825MHz) - 3D**



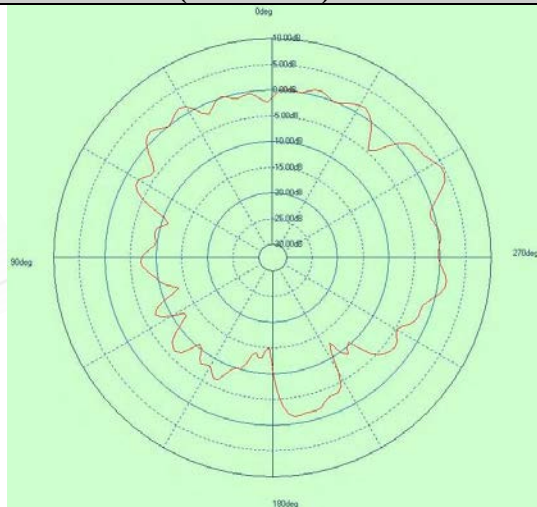
**Free Space  
EIRP (5825MHz) - XY cut**



**Free Space  
EIRP (5825MHz) - XZ cut**



**Free Space  
EIRP (5825MHz) - YZ cut**



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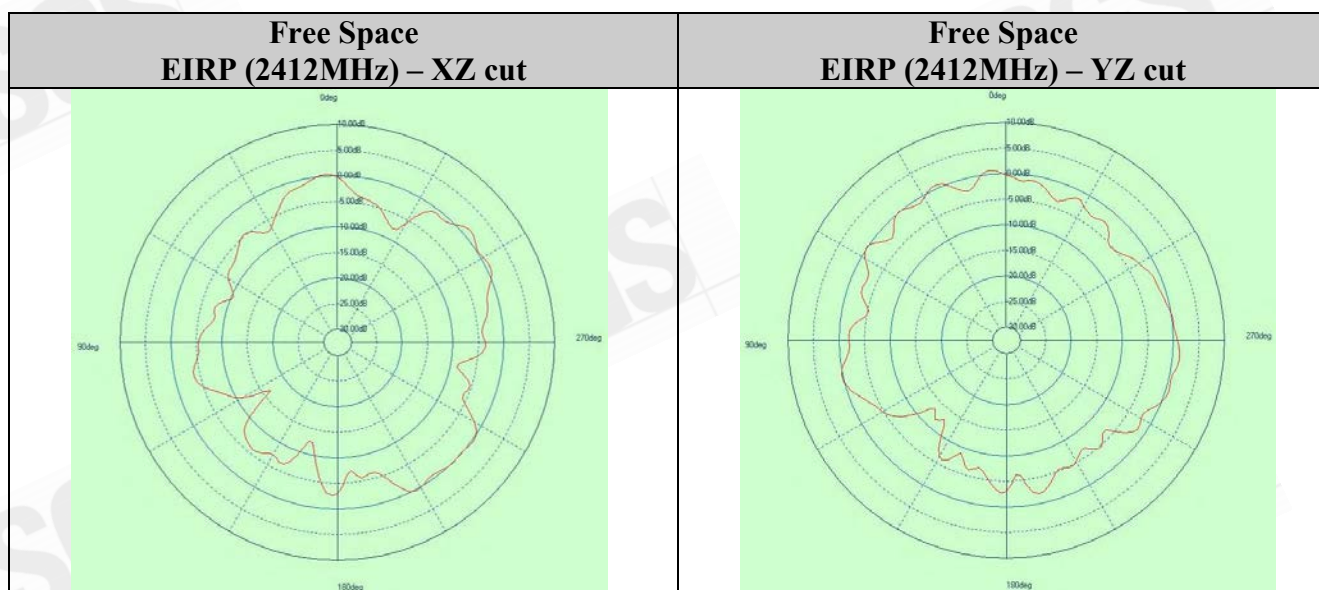
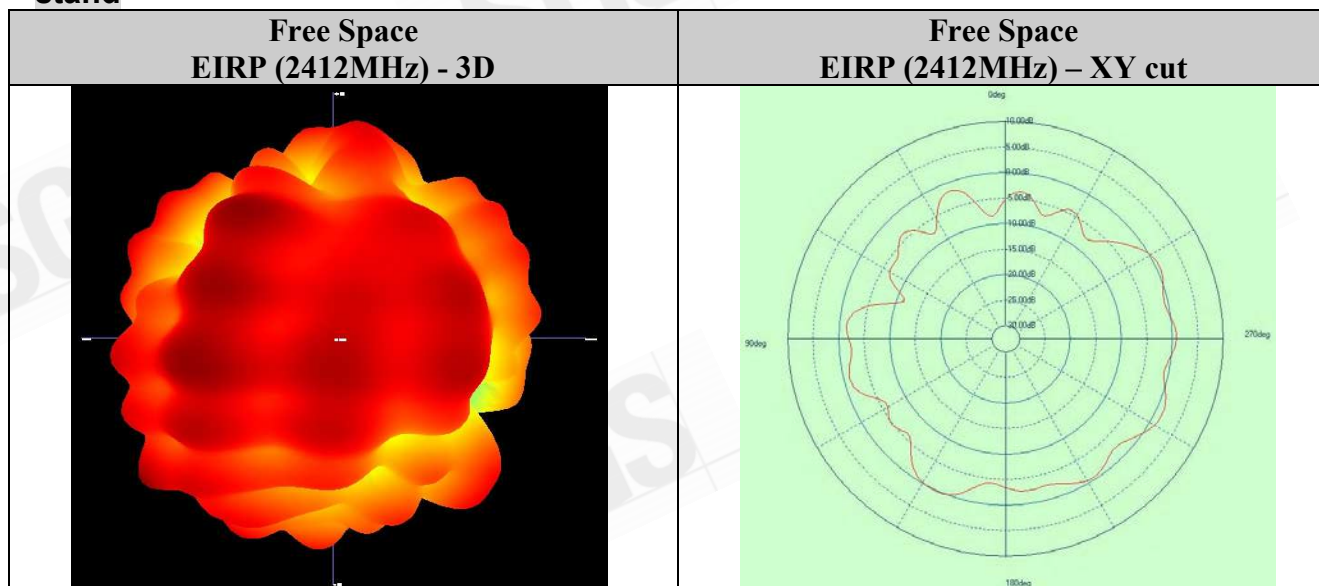
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## MAIN ANT with AUX ANT port terminated with 50 ohm, terminal with charging stand



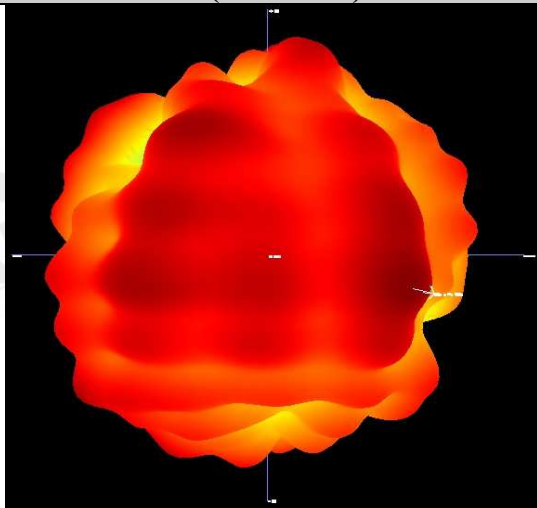
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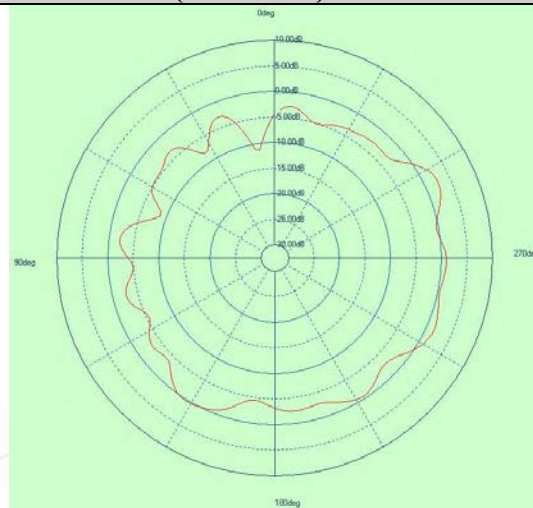
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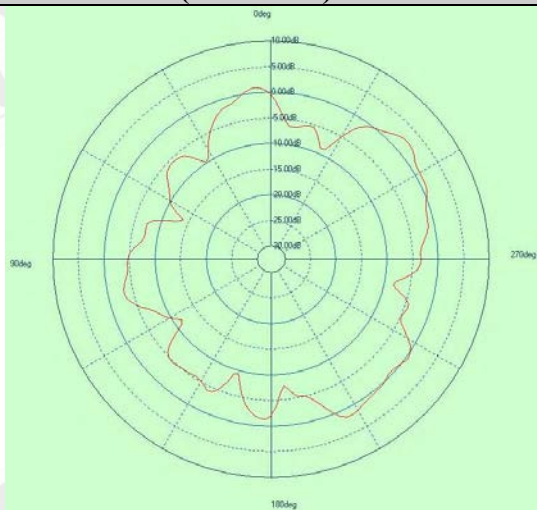
**Free Space  
EIRP (2442MHz) - 3D**



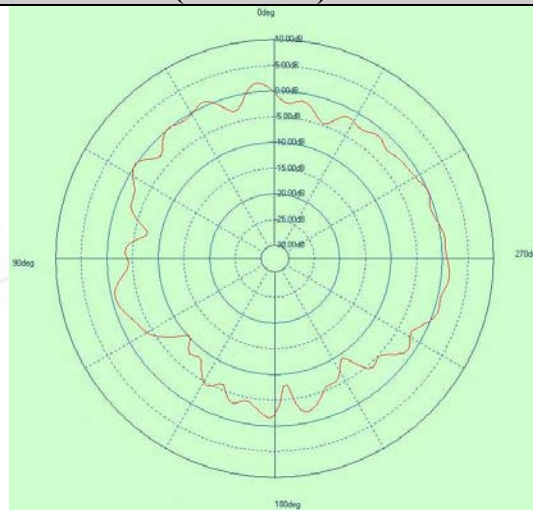
**Free Space  
EIRP (2442MHz) - XY cut**



**Free Space  
EIRP (2442MHz) - XZ cut**



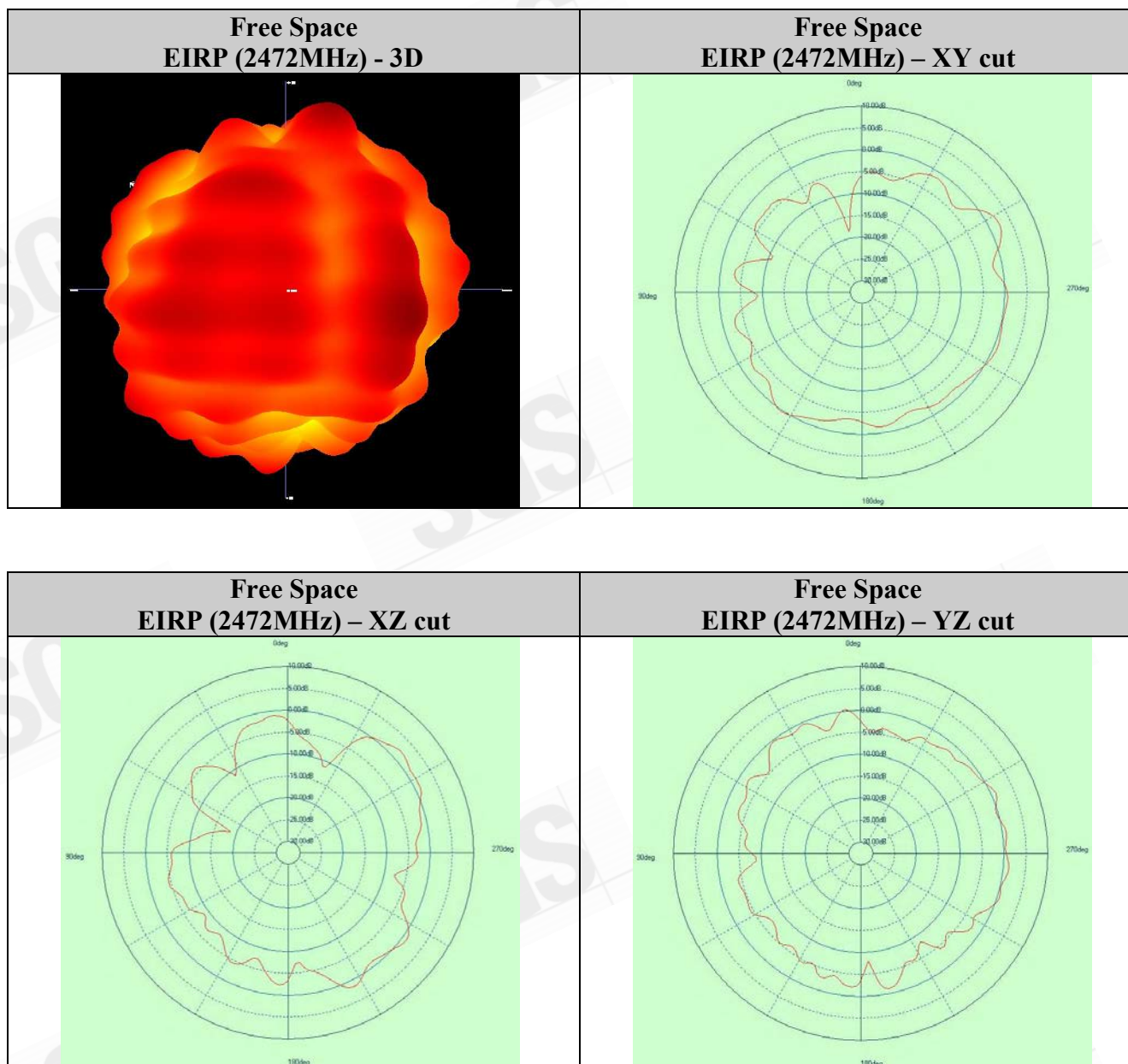
**Free Space  
EIRP (2442MHz) - YZ cut**



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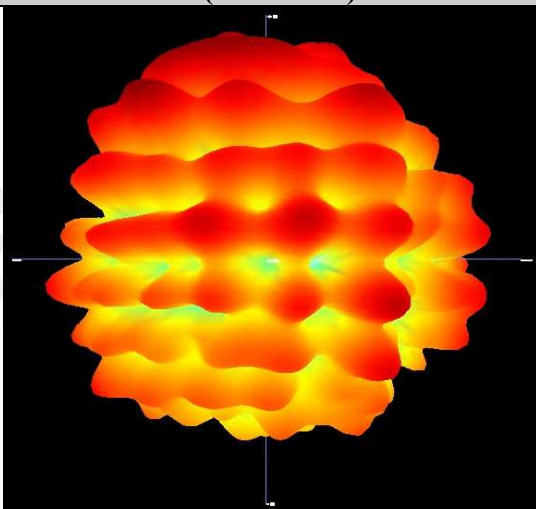


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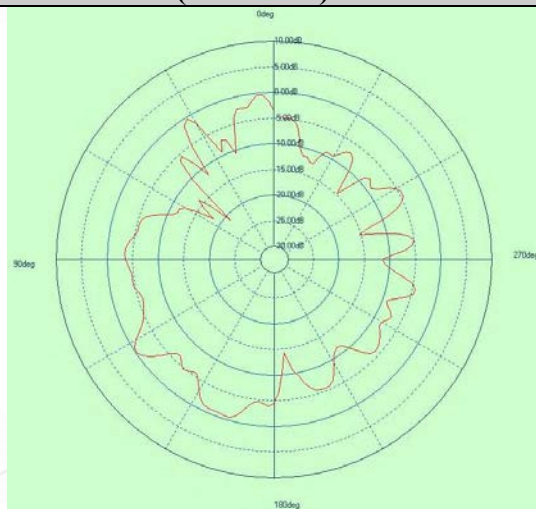
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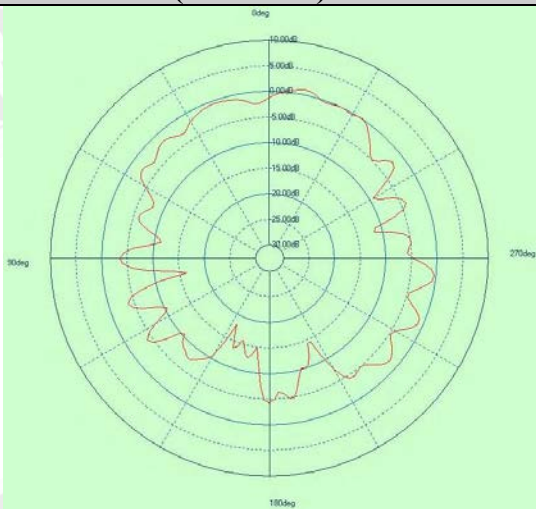
**Free Space  
EIRP (5180MHz) - 3D**



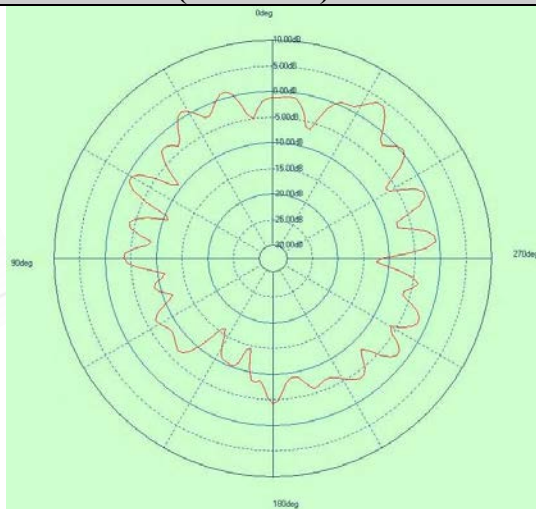
**Free Space  
EIRP (5180MHz) - XY cut**



**Free Space  
EIRP (5180MHz) - XZ cut**



**Free Space  
EIRP (5180MHz) - YZ cut**



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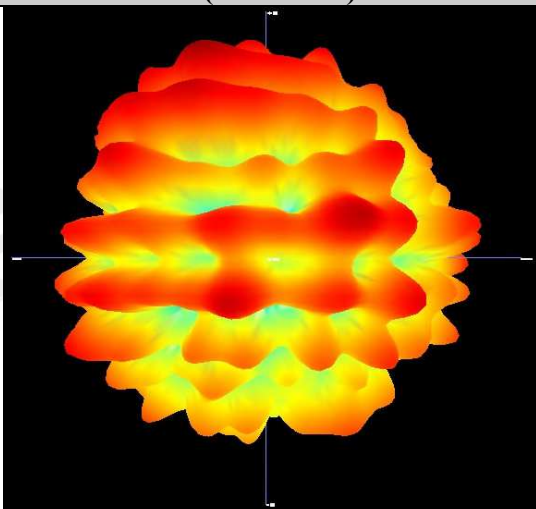
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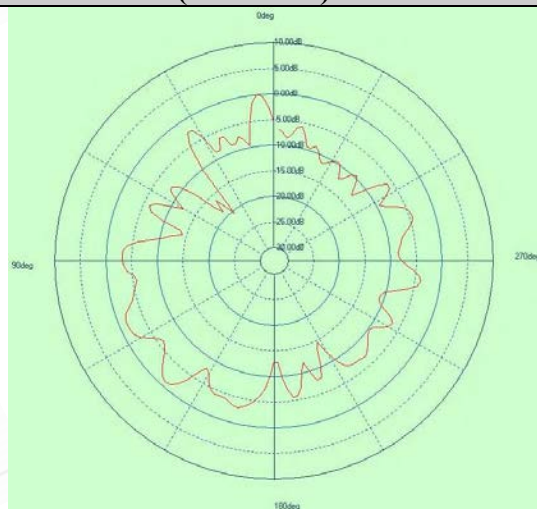
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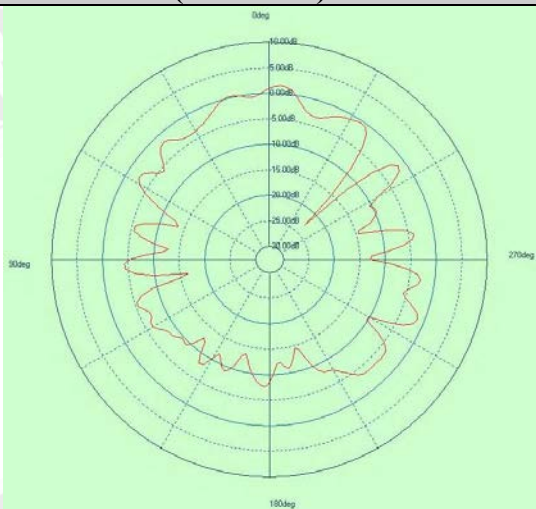
**Free Space  
EIRP (5500MHz) - 3D**



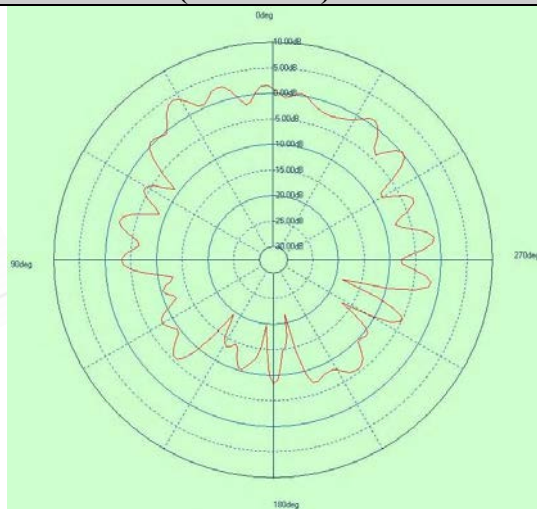
**Free Space  
EIRP (5500MHz) - XY cut**



**Free Space  
EIRP (5500MHz) - XZ cut**



**Free Space  
EIRP (5500MHz) - YZ cut**



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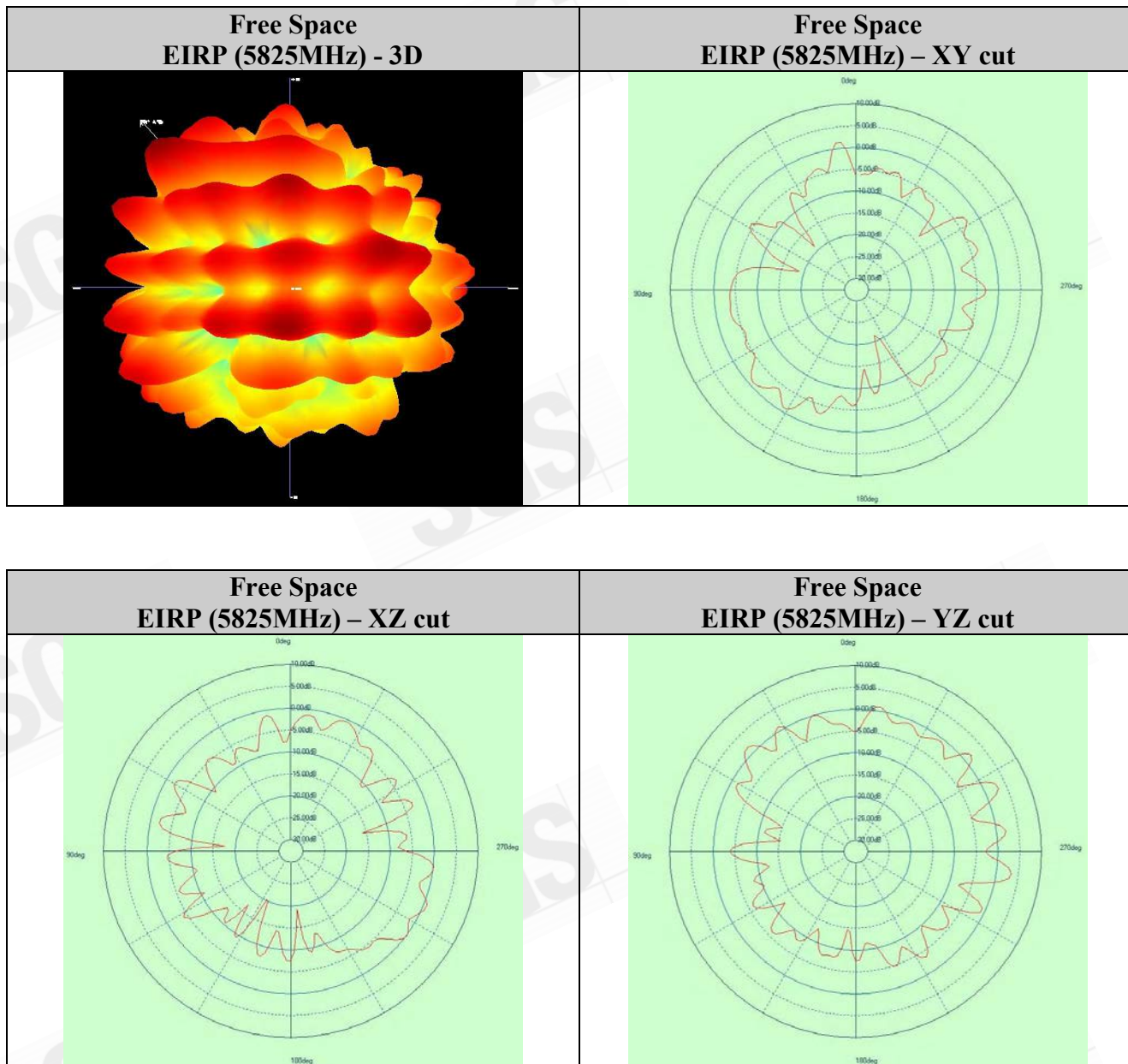
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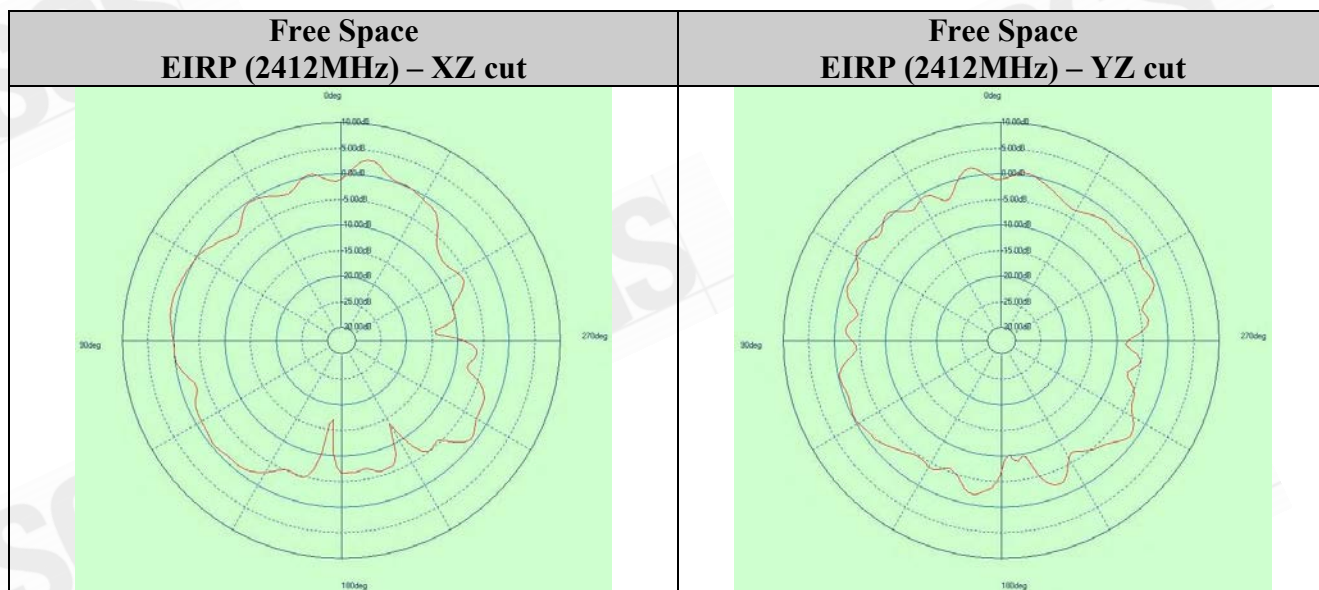
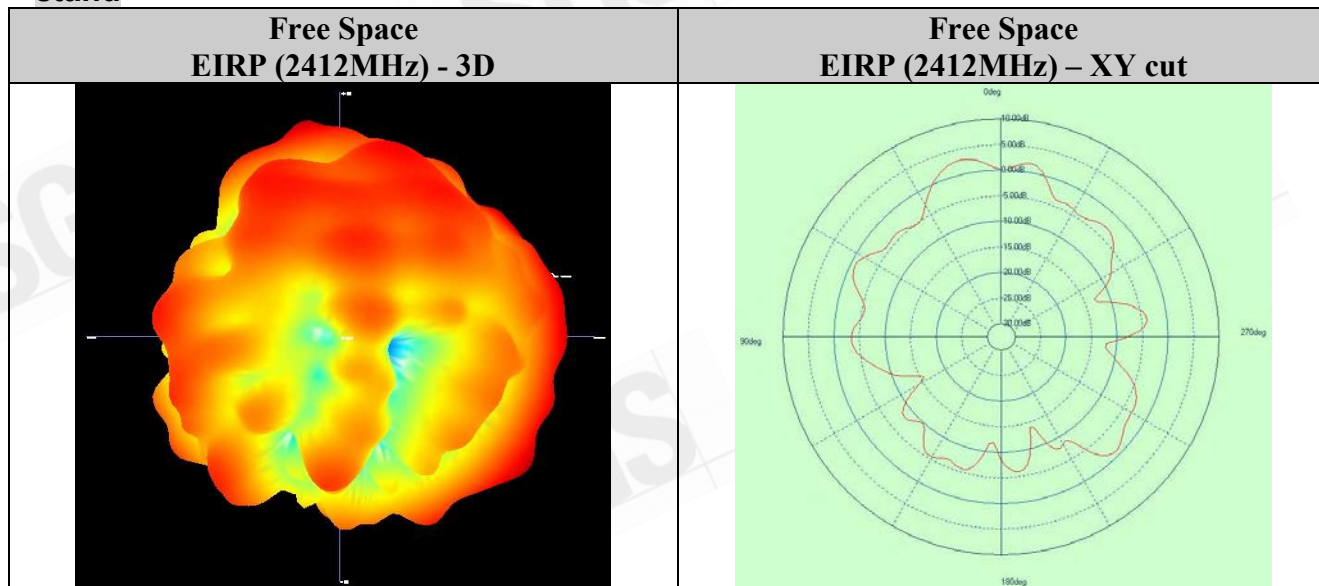
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## AUX ANT with MAIN ANT port terminated with 50 ohm, terminal with charging stand

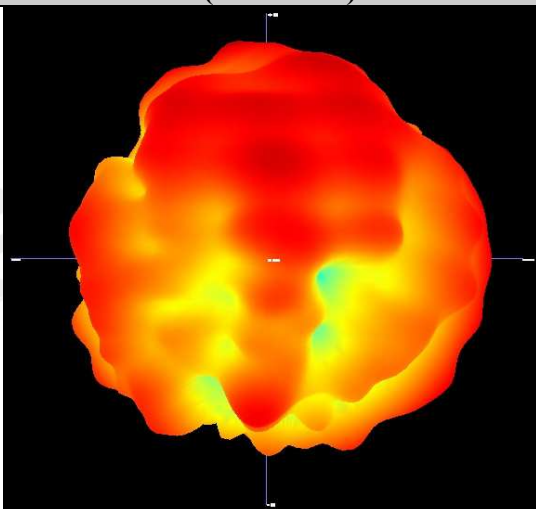


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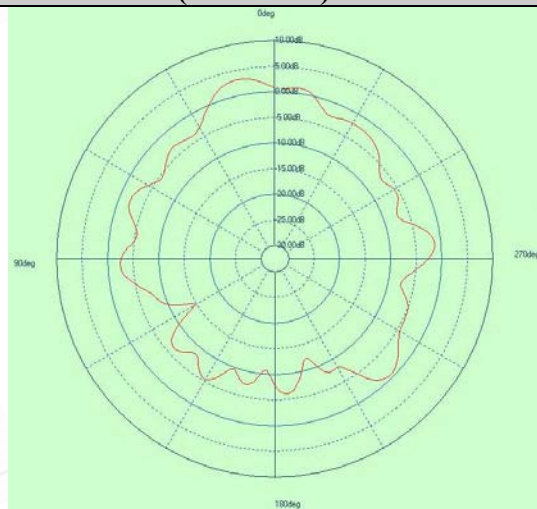
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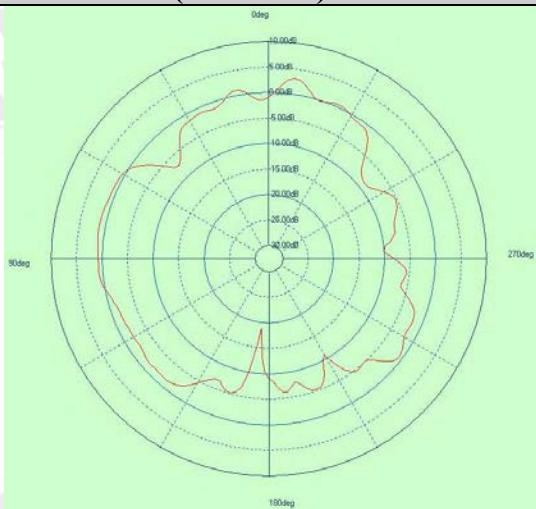
**Free Space  
EIRP (2442MHz) - 3D**



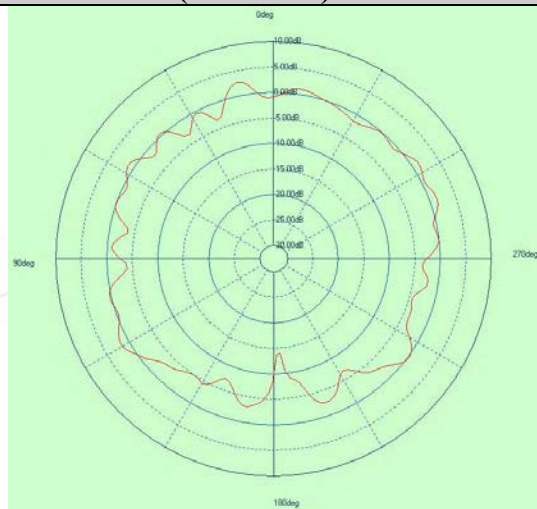
**Free Space  
EIRP (2442MHz) – XY cut**



**Free Space  
EIRP (2442MHz) – XZ cut**



**Free Space  
EIRP (2442MHz) – YZ cut**



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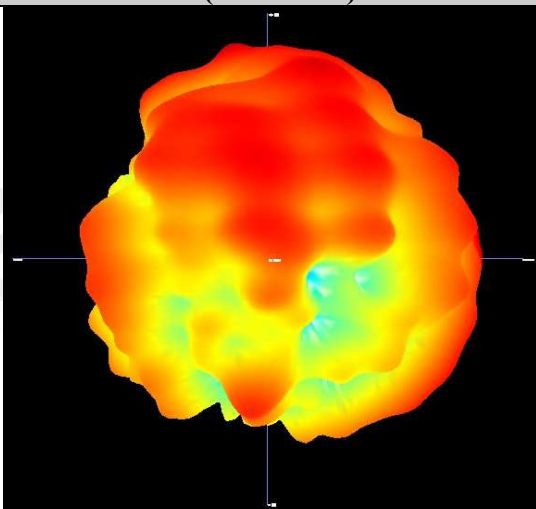
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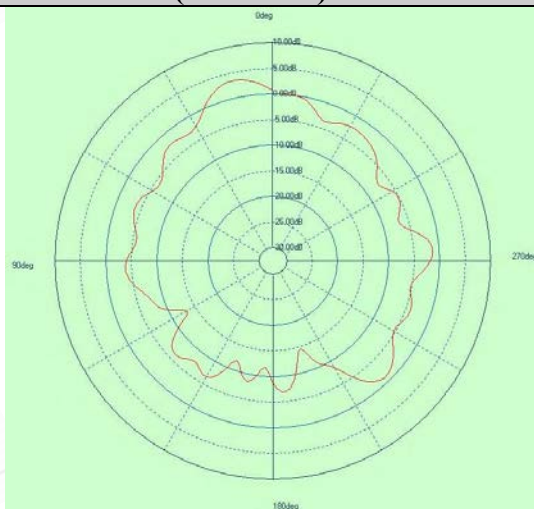
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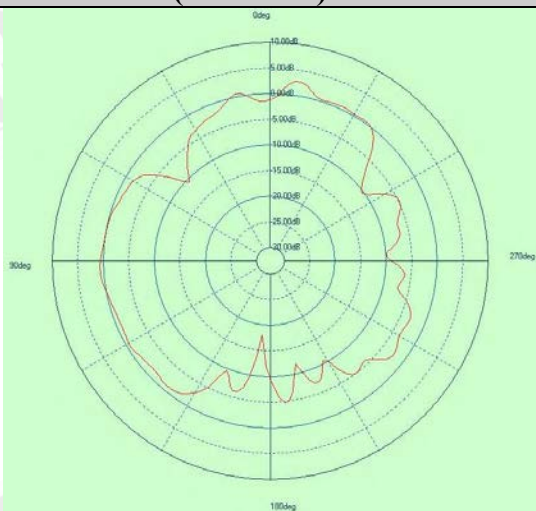
**Free Space  
EIRP (2472MHz) - 3D**



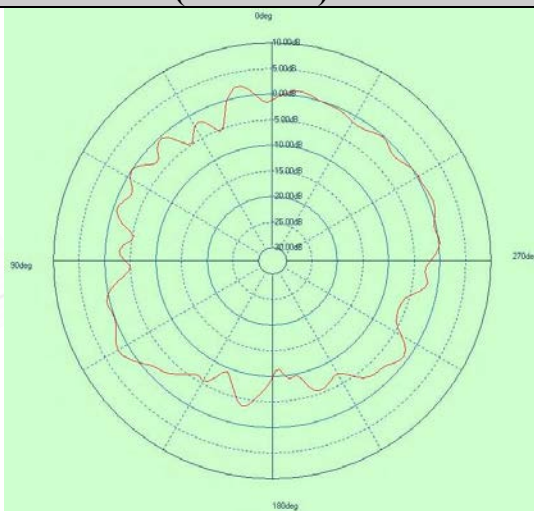
**Free Space  
EIRP (2472MHz) - XY cut**



**Free Space  
EIRP (2472MHz) - XZ cut**



**Free Space  
EIRP (2472MHz) - YZ cut**



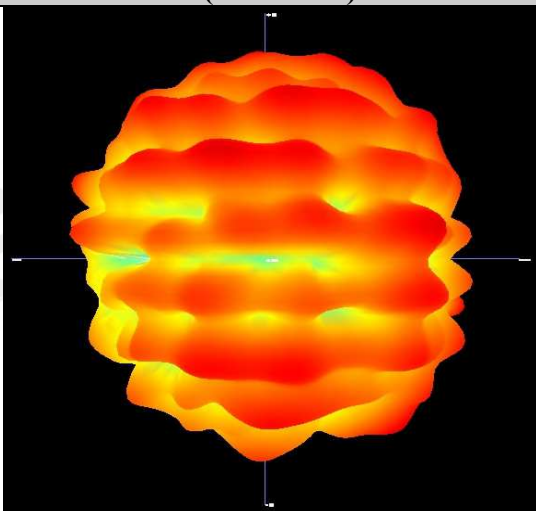
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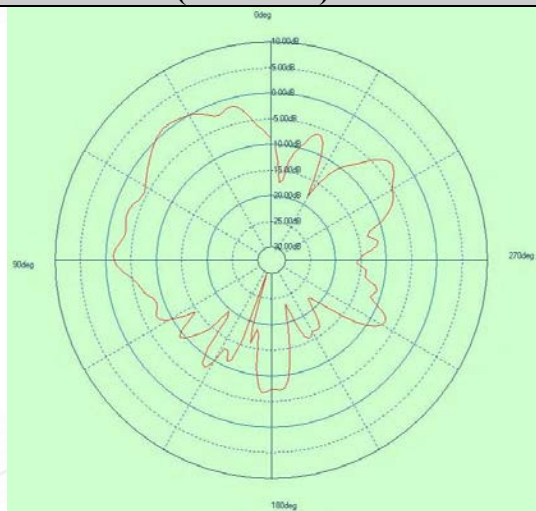
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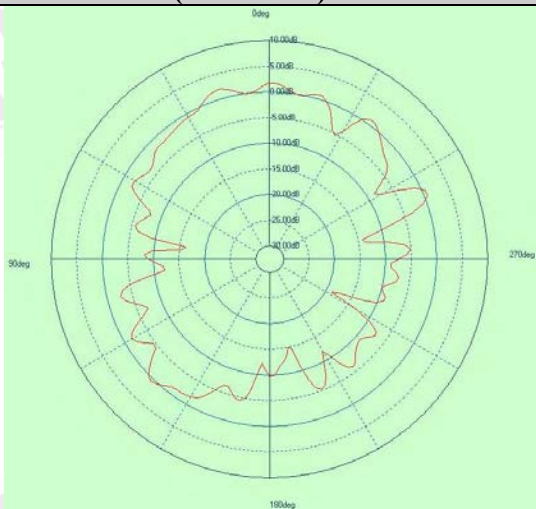
**Free Space  
EIRP (5180MHz) - 3D**



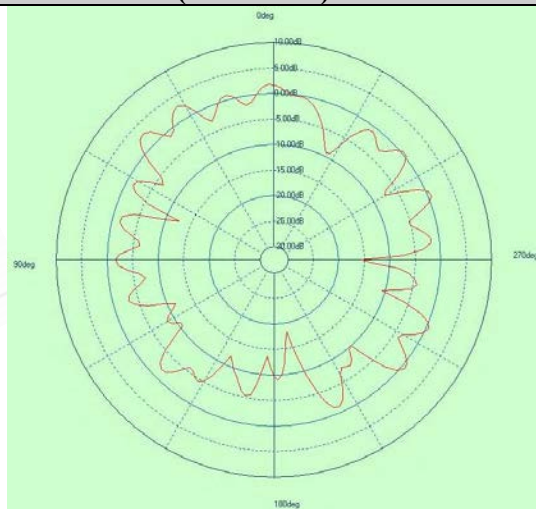
**Free Space  
EIRP (5180MHz) - XY cut**



**Free Space  
EIRP (5180MHz) - XZ cut**



**Free Space  
EIRP (5180MHz) - YZ cut**



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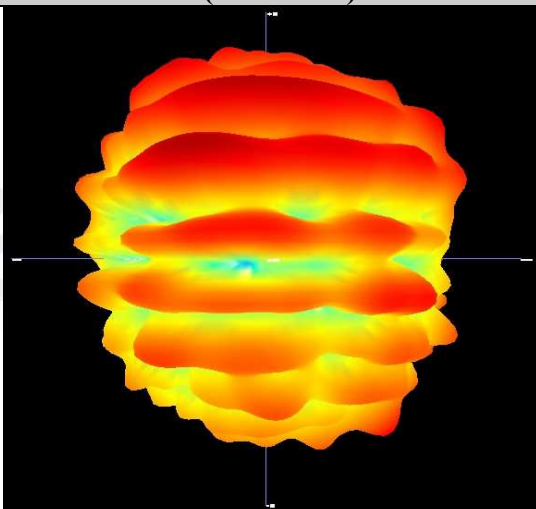
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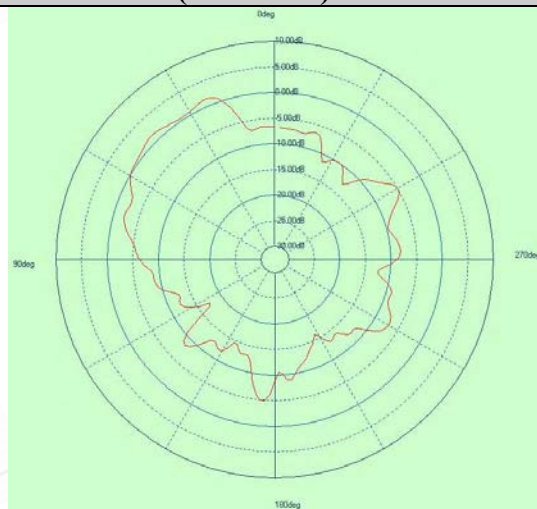
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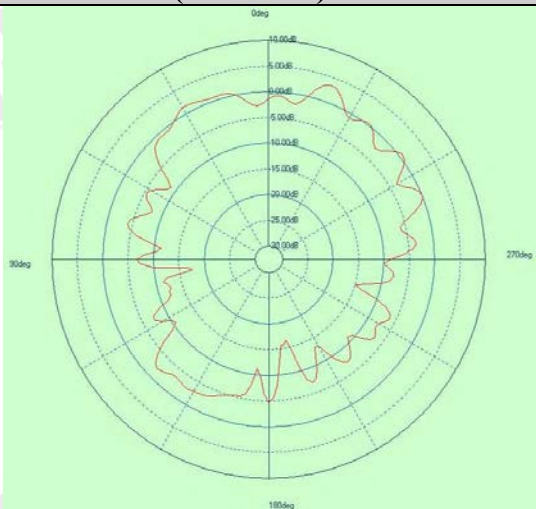
**Free Space  
EIRP (5500MHz) - 3D**



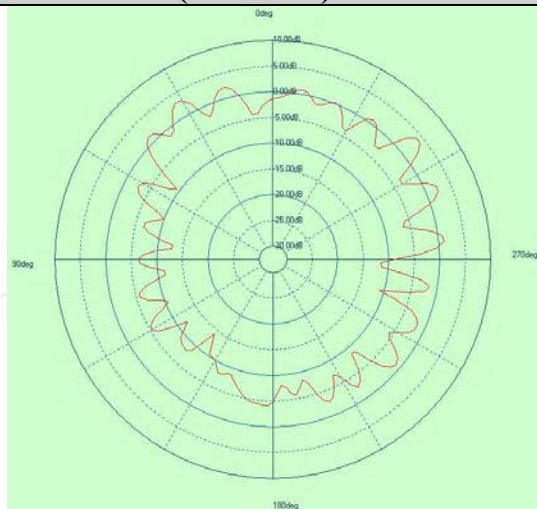
**Free Space  
EIRP (5500MHz) - XY cut**



**Free Space  
EIRP (5500MHz) - XZ cut**



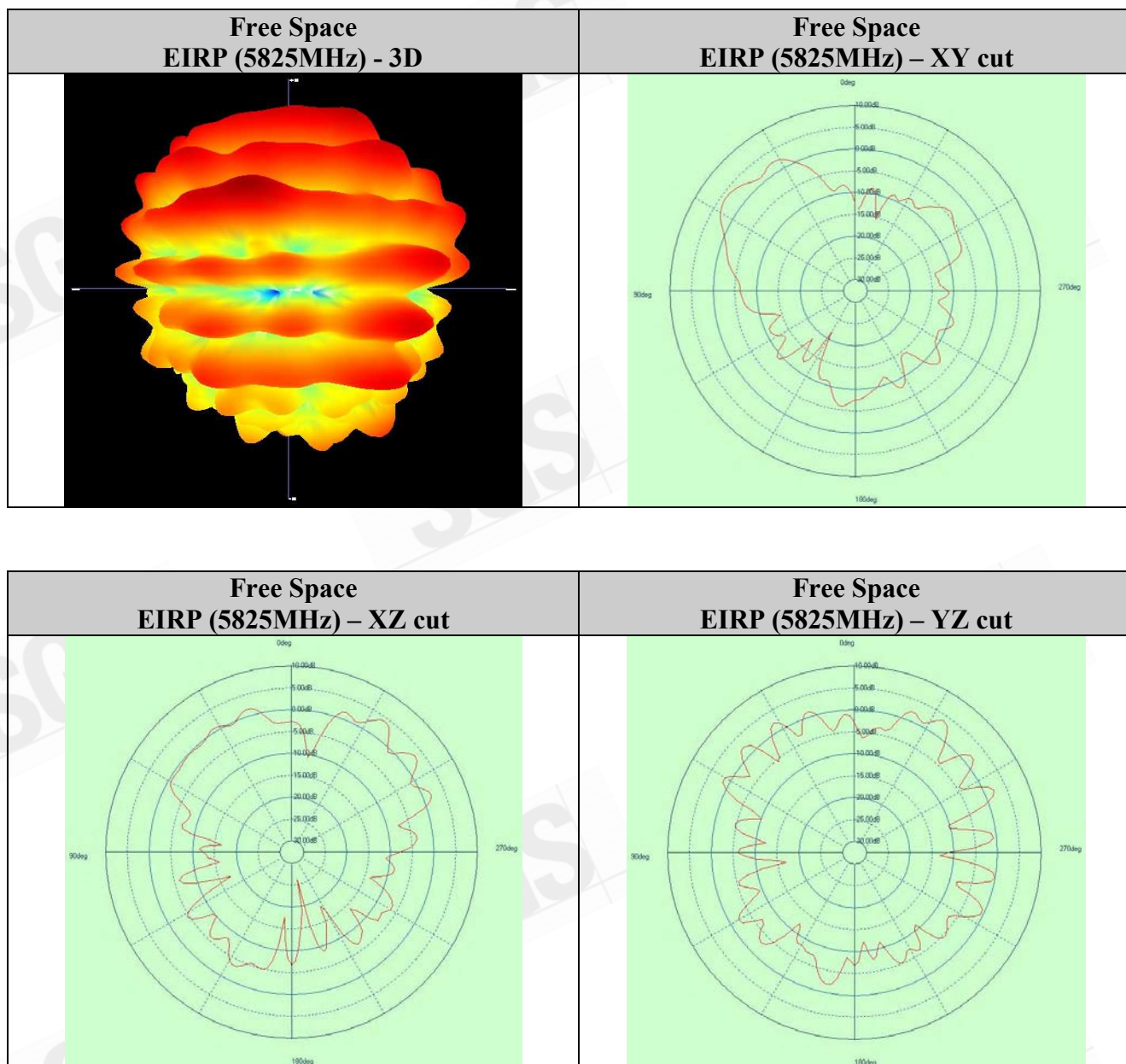
**Free Space  
EIRP (5500MHz) - YZ cut**



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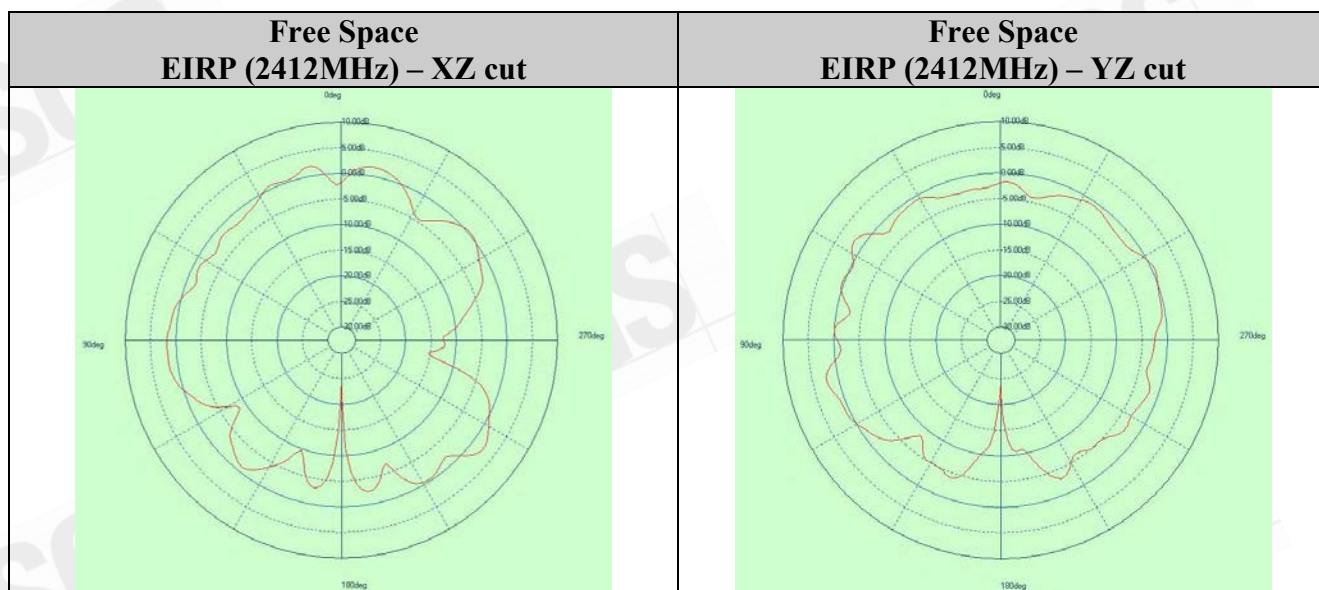
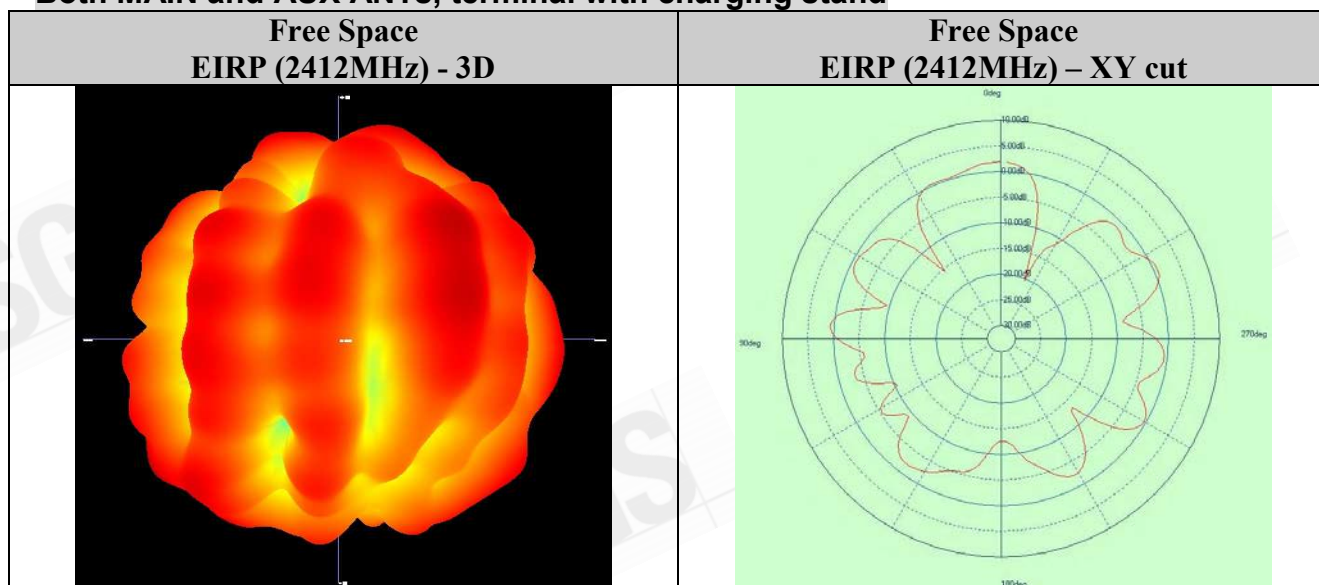
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## Both MAIN and AUX ANT, terminal with charging stand



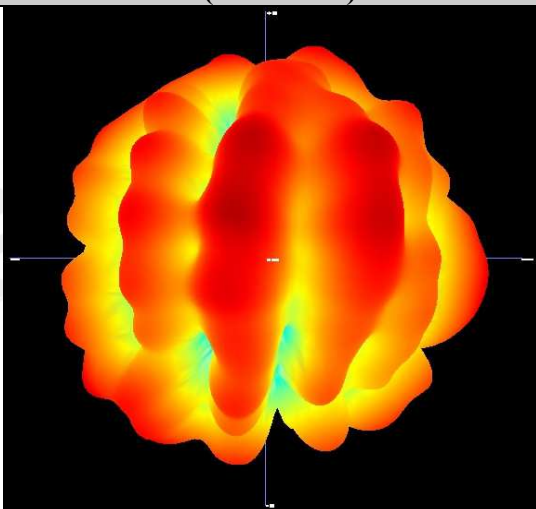
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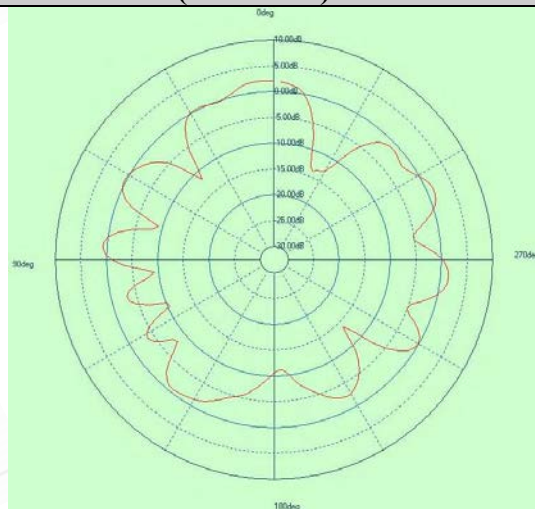
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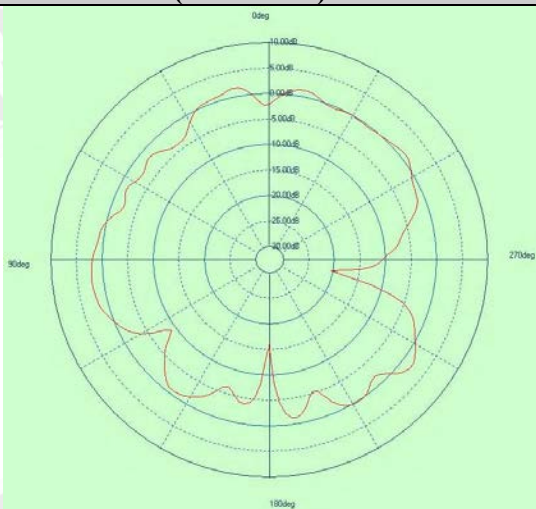
**Free Space  
EIRP (2442MHz) - 3D**



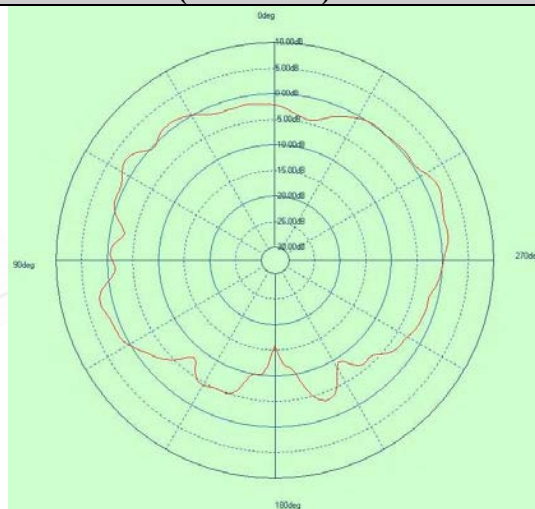
**Free Space  
EIRP (2442MHz) - XY cut**



**Free Space  
EIRP (2442MHz) - XZ cut**



**Free Space  
EIRP (2442MHz) - YZ cut**



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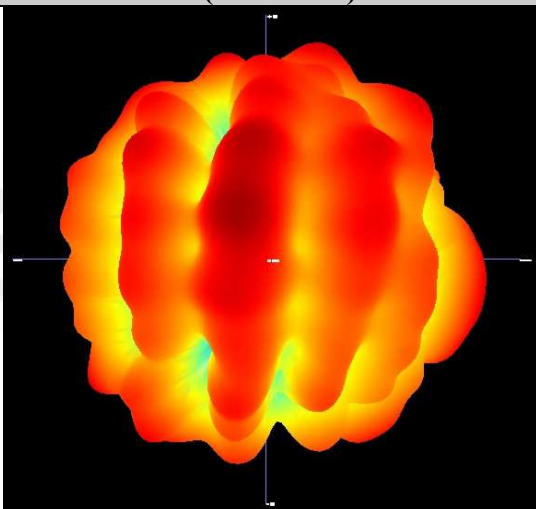
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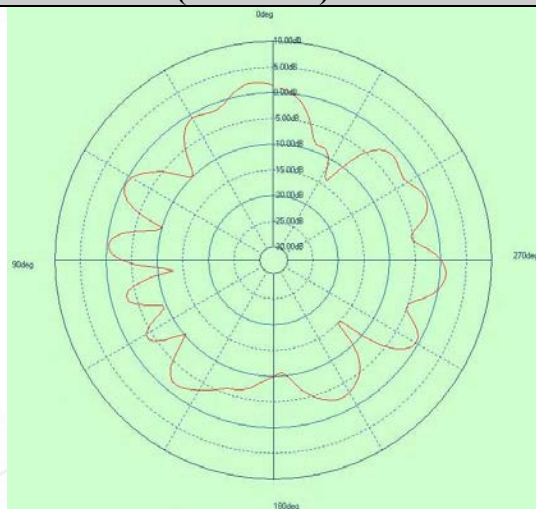
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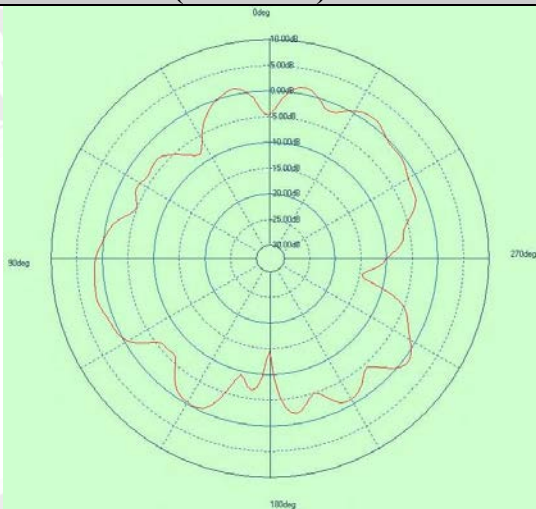
**Free Space  
EIRP (2472MHz) - 3D**



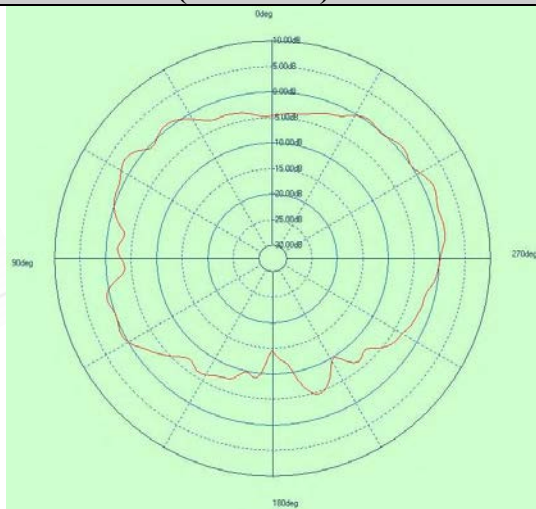
**Free Space  
EIRP (2472MHz) - XY cut**



**Free Space  
EIRP (2472MHz) - XZ cut**



**Free Space  
EIRP (2472MHz) - YZ cut**

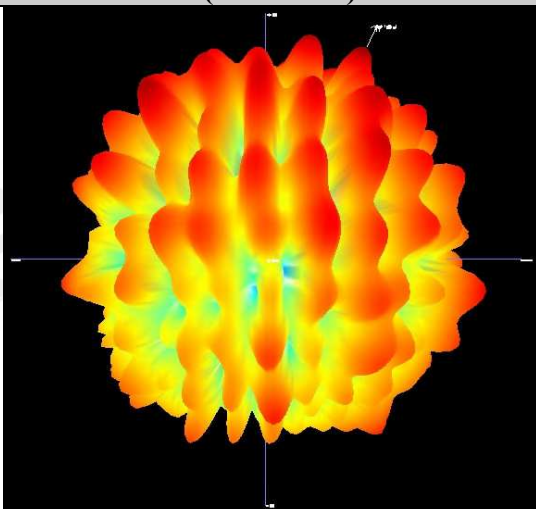


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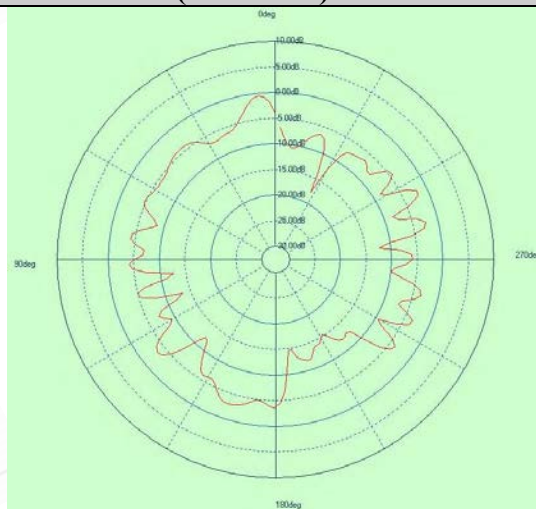
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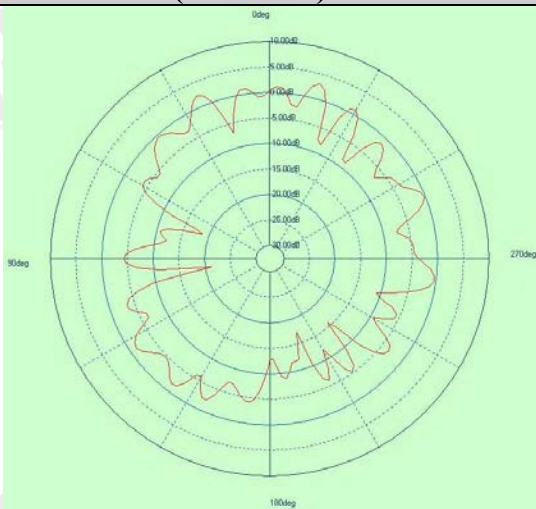
**Free Space  
EIRP (5180MHz) - 3D**



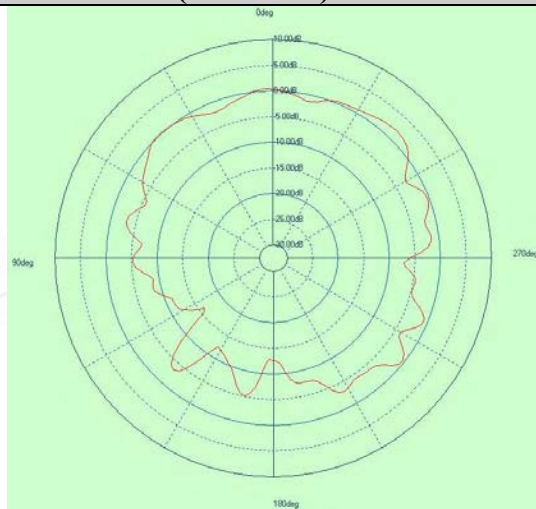
**Free Space  
EIRP (5180MHz) - XY cut**



**Free Space  
EIRP (5180MHz) - XZ cut**



**Free Space  
EIRP (5180MHz) - YZ cut**



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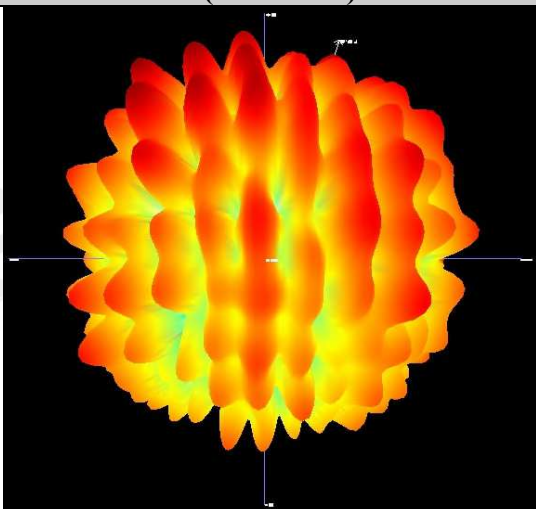
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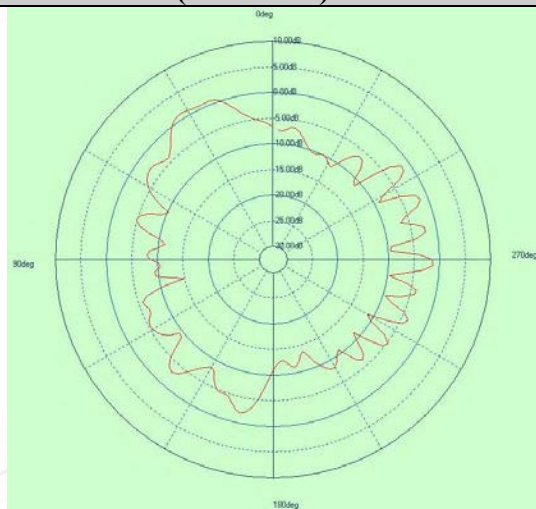
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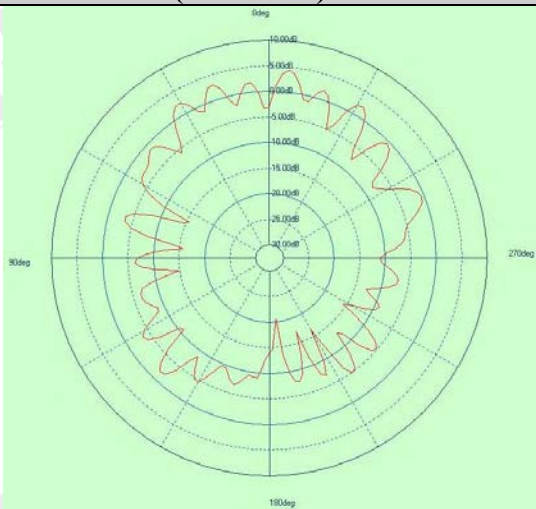
**Free Space  
EIRP (5500MHz) - 3D**



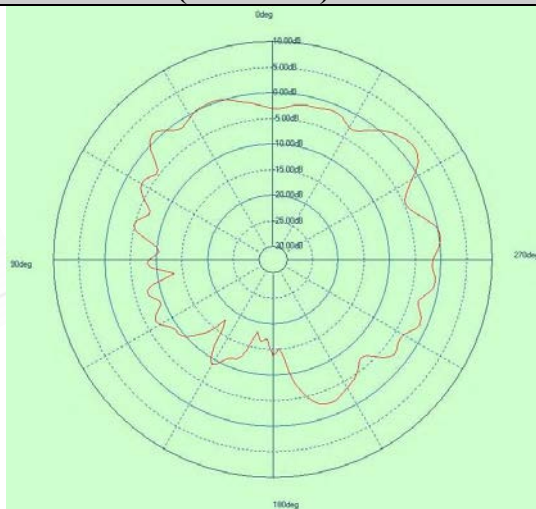
**Free Space  
EIRP (5500MHz) - XY cut**



**Free Space  
EIRP (5500MHz) - XZ cut**



**Free Space  
EIRP (5500MHz) - YZ cut**



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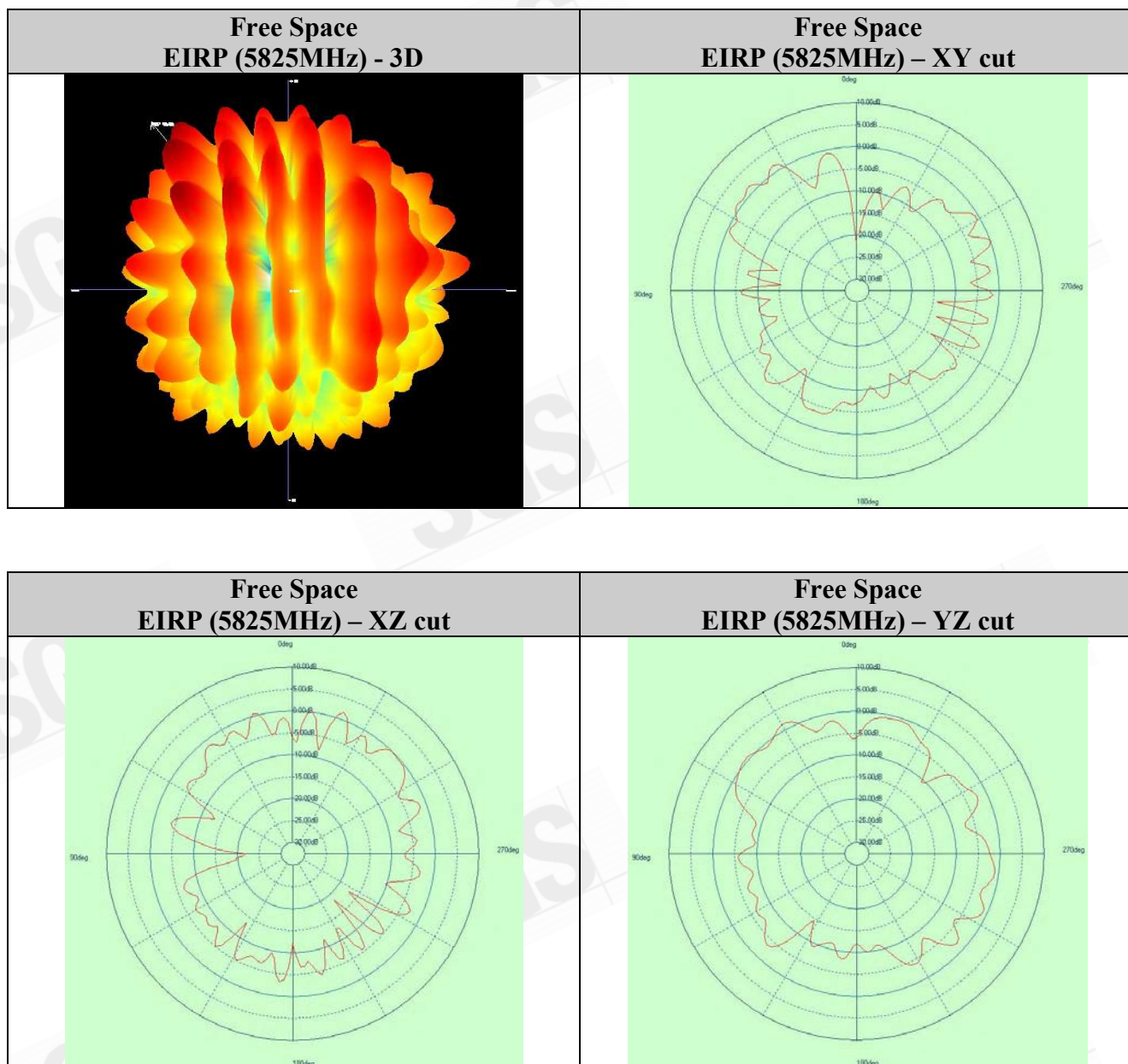
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