Antenna

YP0009AA Datasheet

Antenna Services

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Status: Released

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About the Document

Revision History

Version	Date	Author	Note
1.0	2020-11-26	Toby WANG	Initial
1.1	2021-07-25	Toby WANG	1. Updated the working temperature and added detailed passive electrical specifications (Chapter 3). 2. Updated the drawing (Chapter 5).

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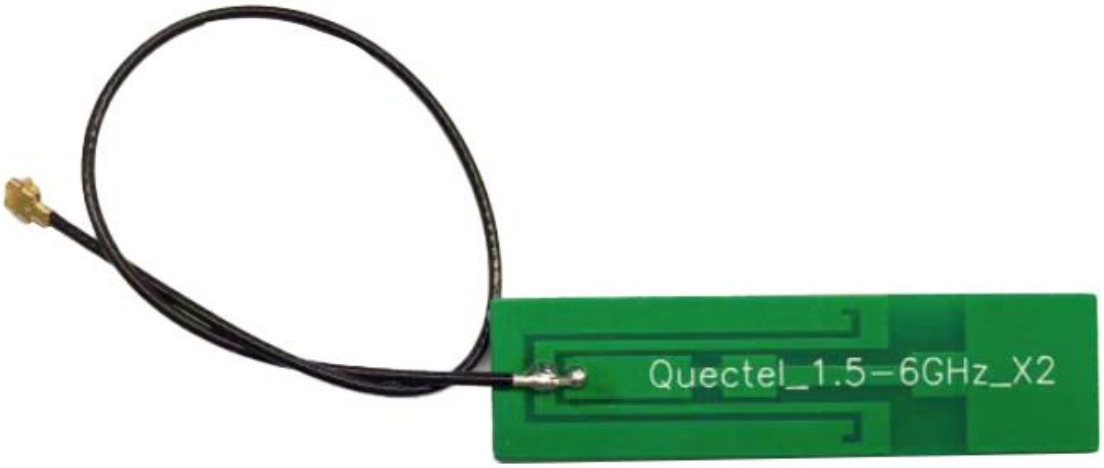
1 Product Description

The antenna is designed for superior performance, and can be widely used for wireless applications.

We provide comprehensive antenna design support such as simulation, testing and manufacturing for custom antenna solutions to meet your specific application needs.

2 Product Features

- 1.5_6G_Antenna
- High efficiency
- Excellent performance



3 Product Specifications

Passive Electrical Specifications	
Frequency Range	1500–6000 MHz
Input Impendence	50 Ω
VSWR	≤ 3.0
Gain	≤ 4.42 dBi
Polarization Type	Linear

Detailed Passive Electrical Specifications								
Frequency Range (MHz)	**698–960**	**1176–1280**	**1400–1610**	**1710–2170**	**2170–2690**	**3300–4000**	**4000–5000**	**5000–6000**
VSWR (Max.)	-	-	1.3	1.97	2.8	1.7	1.6	1.3
Average Efficiency (%)	-	-	47	43	50	49	48	46
Max. Peak Gain (dBi)	-	-	2.3	1.8	3.2	2.8	4.2	3.6

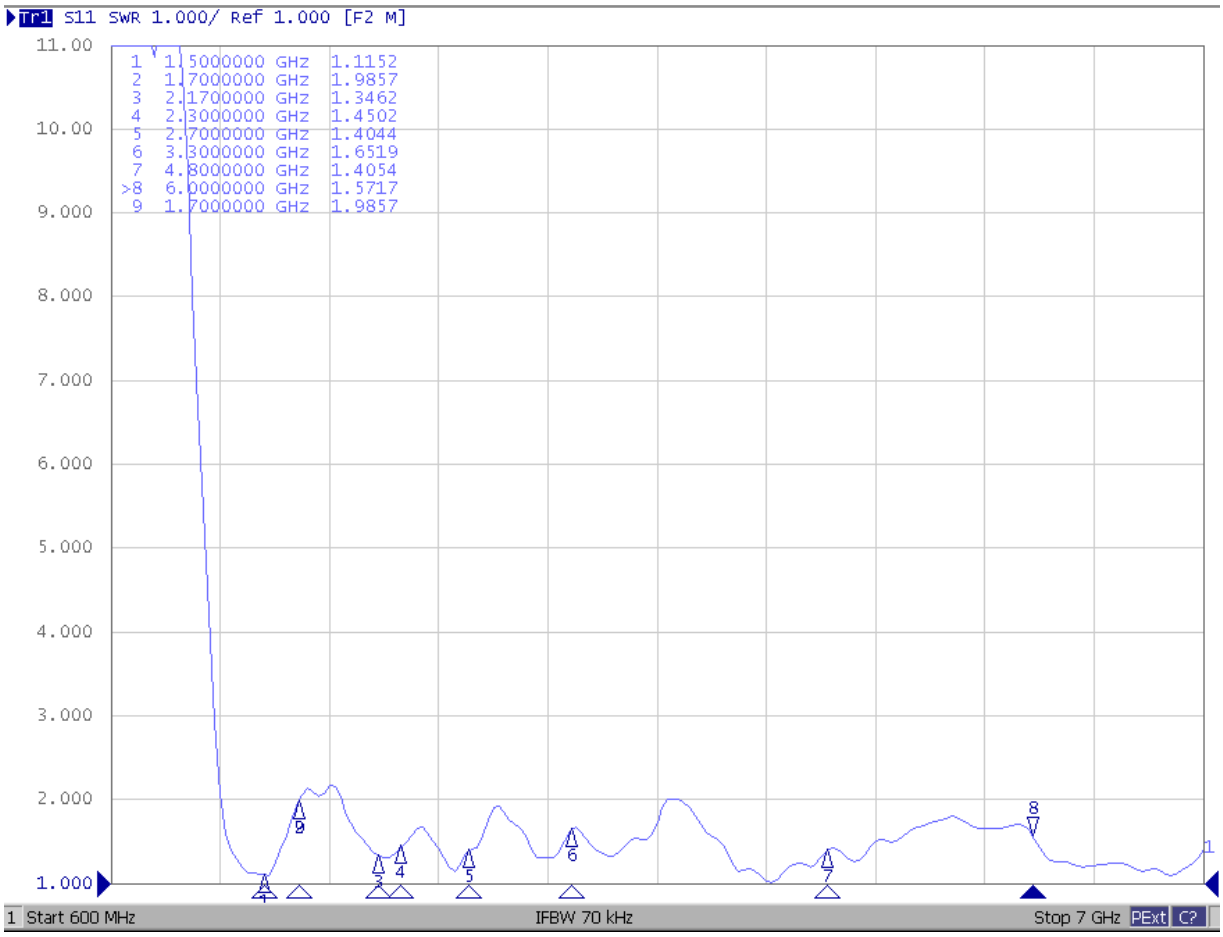
Mechanical Specifications	
Antenna Size	49 mm × 13 mm × 0.95 mm
Casing	FR4
Connector Type	IPEX MHF_4
Working Temperature	-40 °C to +85 °C
Radome Color	Green
Mounting Type	Adhesive

4 Overall Performance

4.1. Test Environment

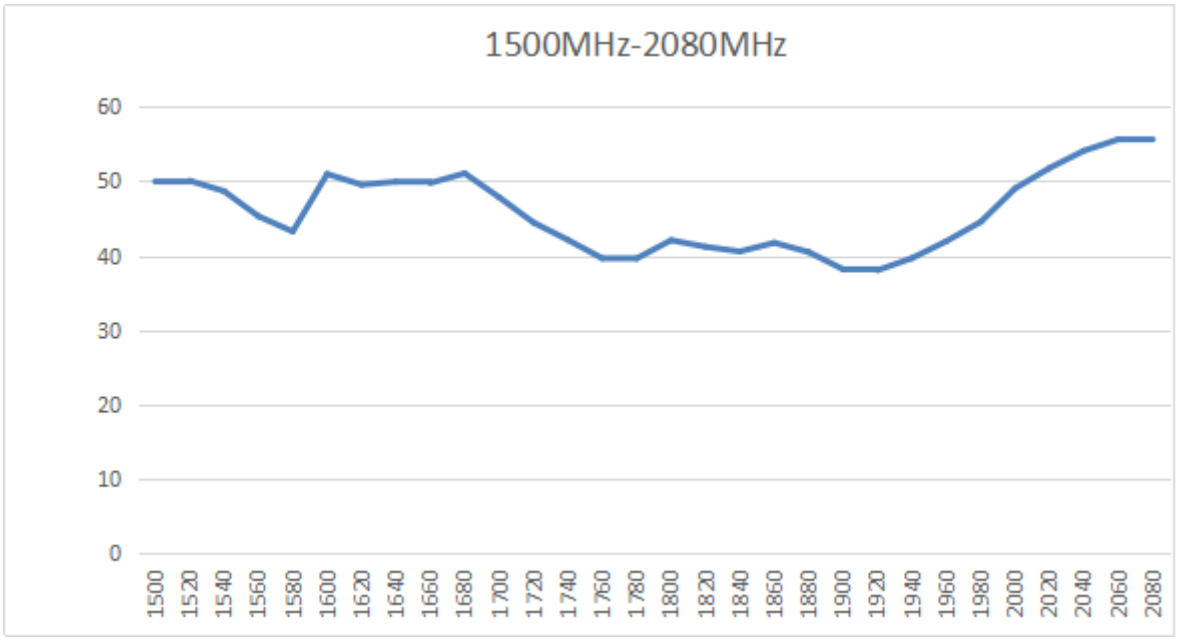
- KEYSIGHT VNA Network Analyzer E5063A 100 kHz – 8.5 GHz
- RayZone® 2800 Chamber 5G (FR1) SISO/MIMO, 400 MHz – 8.0 GHz.

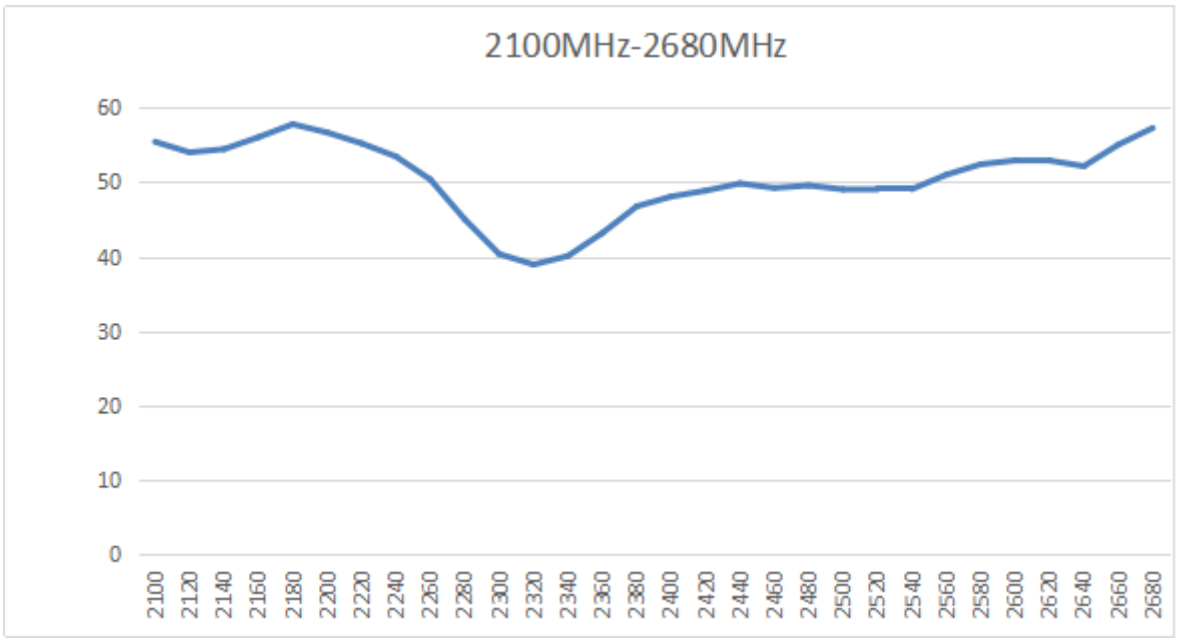
4.2. VSWR

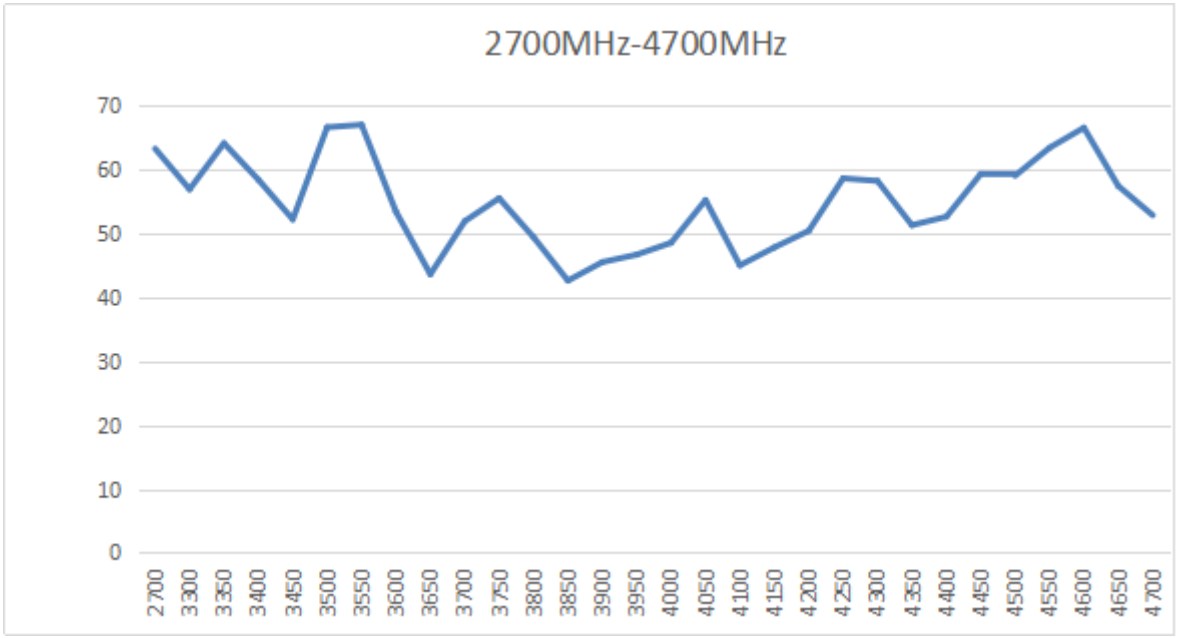


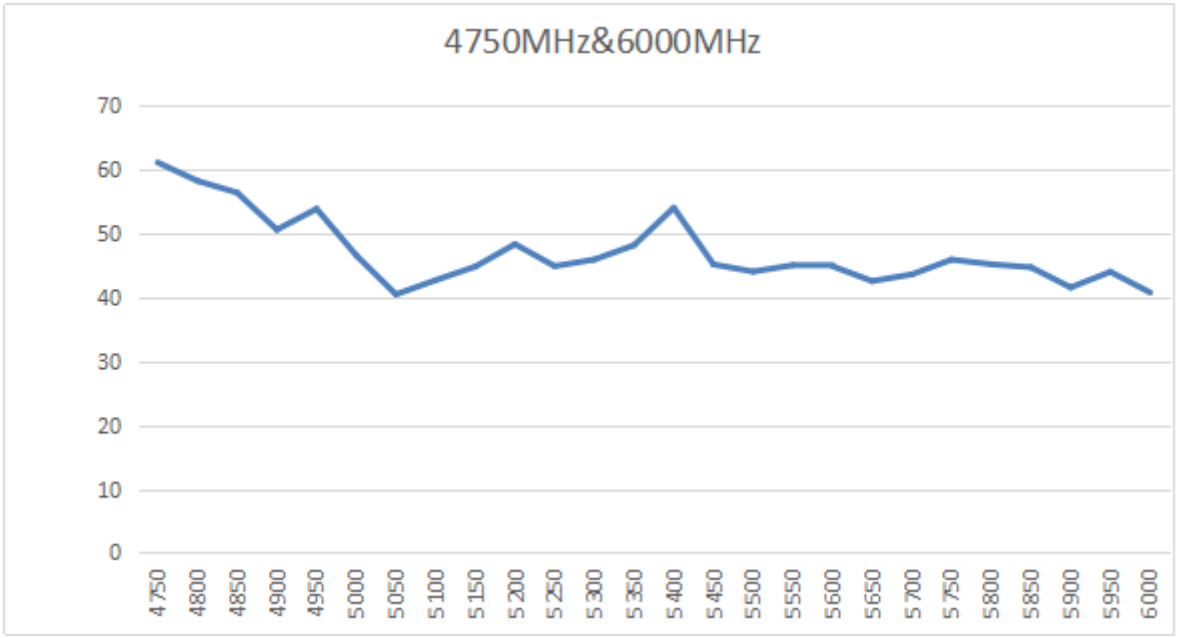
Frequency (MHz)	1500	1700	2170	2300	2700	3300	4800	6000
VSWR	1.12	1.99	1.35	1.45	1.40	1.65	1.41	1.57

4.3. Efficiency



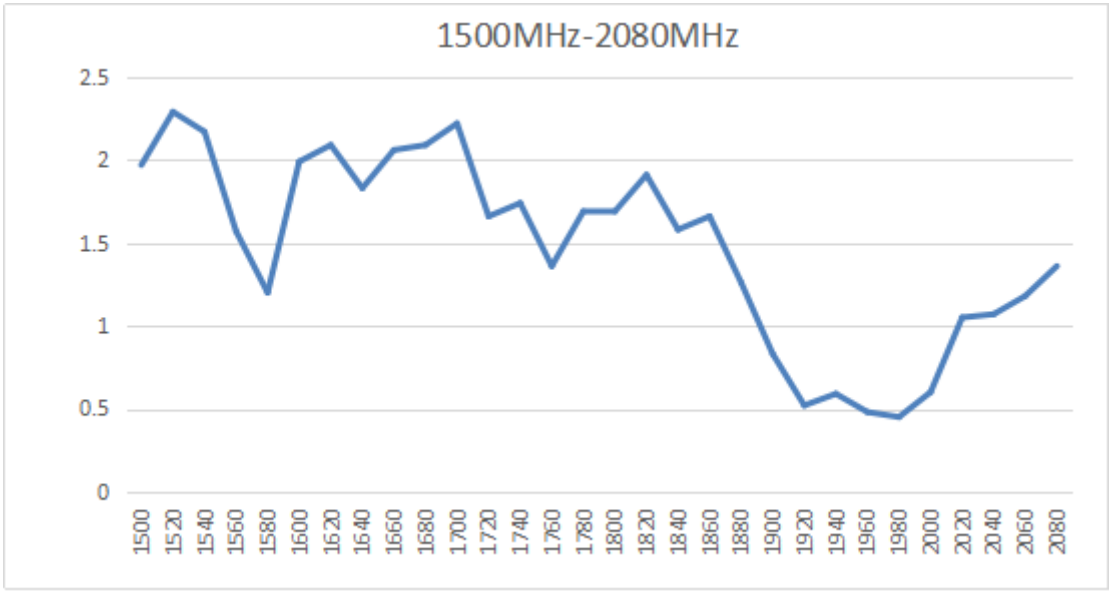


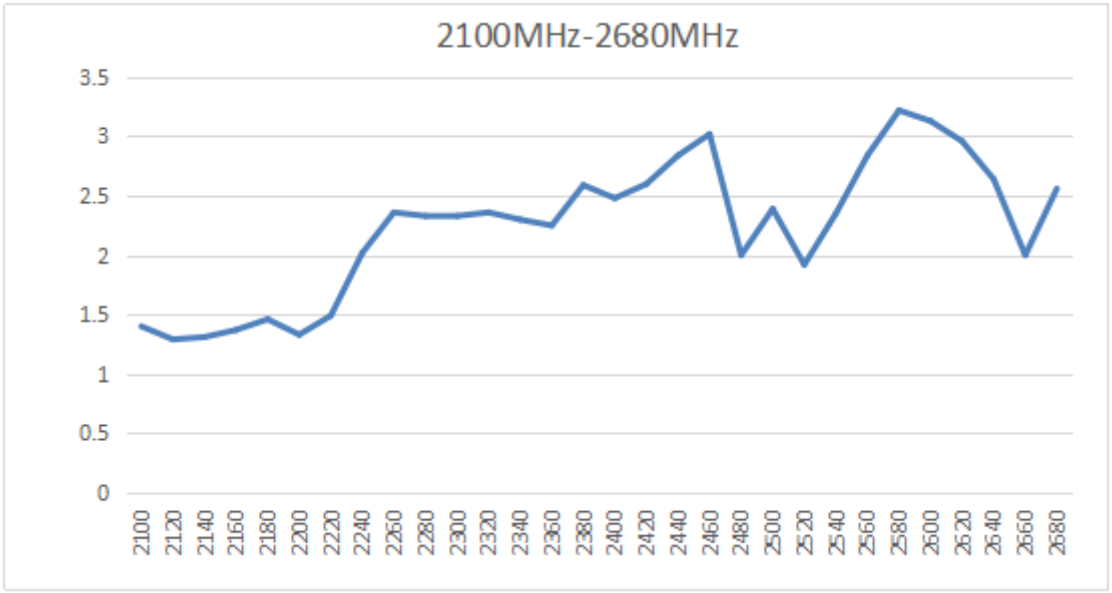


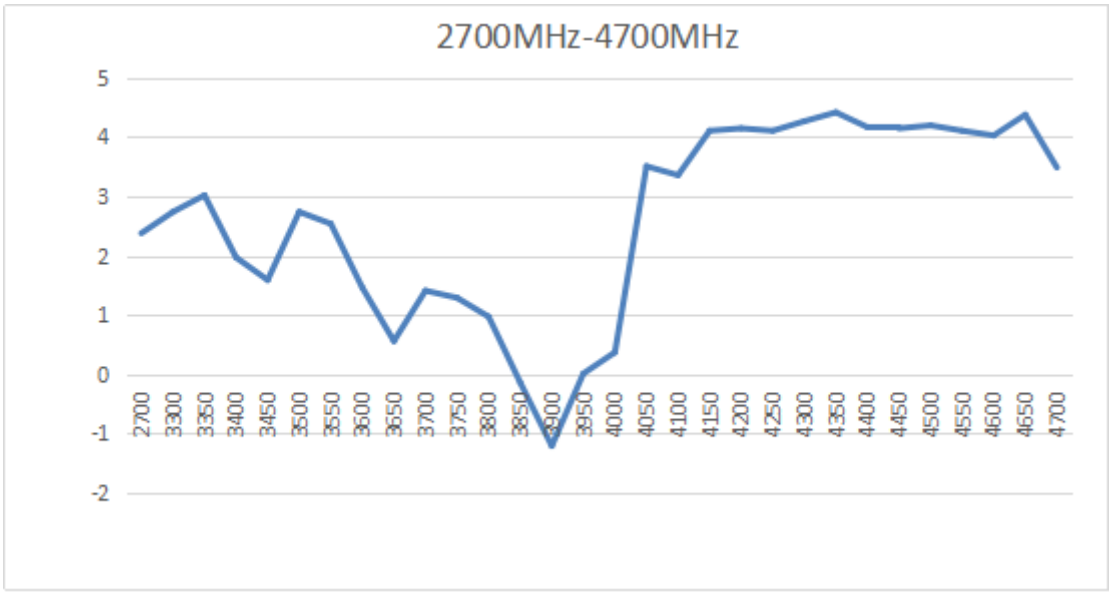


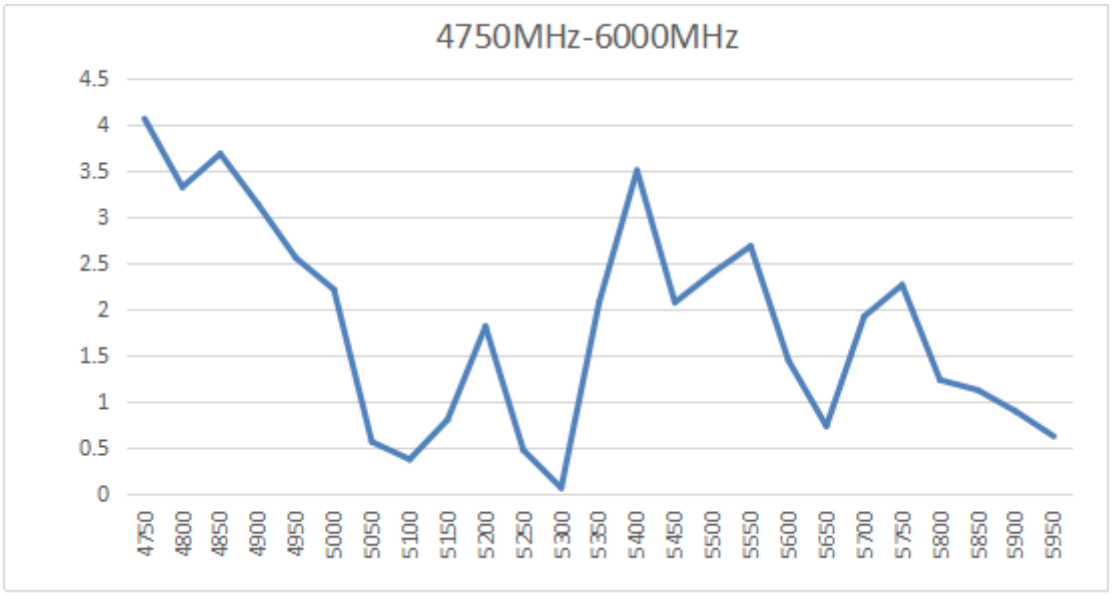
Frequency (MHz)	1500	1800	2160	2300	2680	3300	5000	6000
Efficiency (%)	49.95	42.07	56.02	40.36	57.26	56.9	46.56	40.75

4.4. Gain


1500MHz-2080MHz
2.5
2
1.5
1
0.5
0
1500
1520
1540
1560
1580
1600
1620
1640
1660
1680
1700
1720
1740
1760
1780
1800
1820
1840
1860
1880
1900
1920
1940
1960
1980
2000
2020
2040
2060
2080

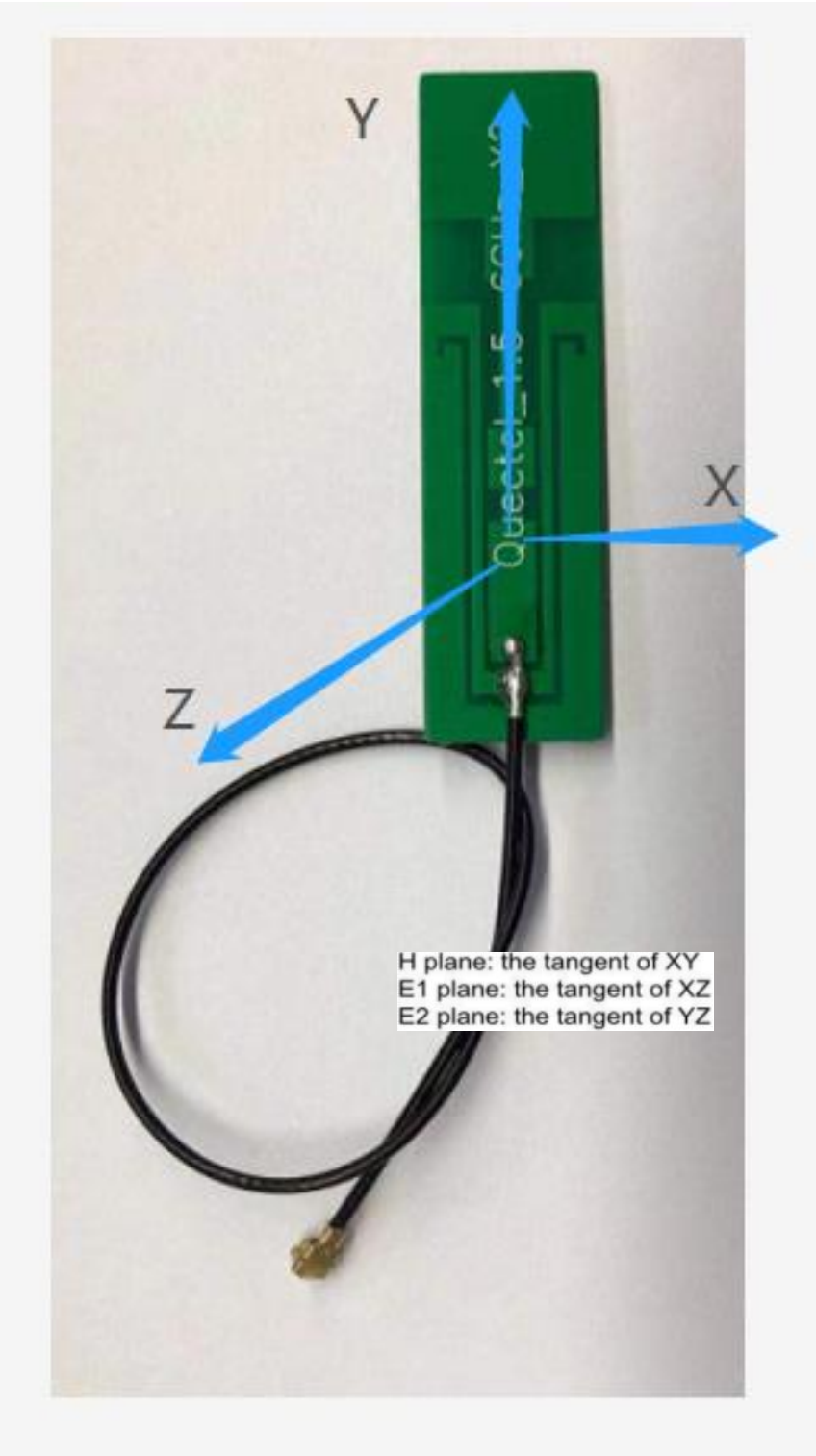

2100MHz-2680MHz
3.5
3
2.5
2
1.5
1
0.5
0
2100
2120
2140
2160
2180
2200
2220
2240
2260
2280
2300
2320
2340
2360
2380
2400
2420
2440
2460
2480
2500
2520
2540
2560
2580
2600
2620
2640
2660
2680

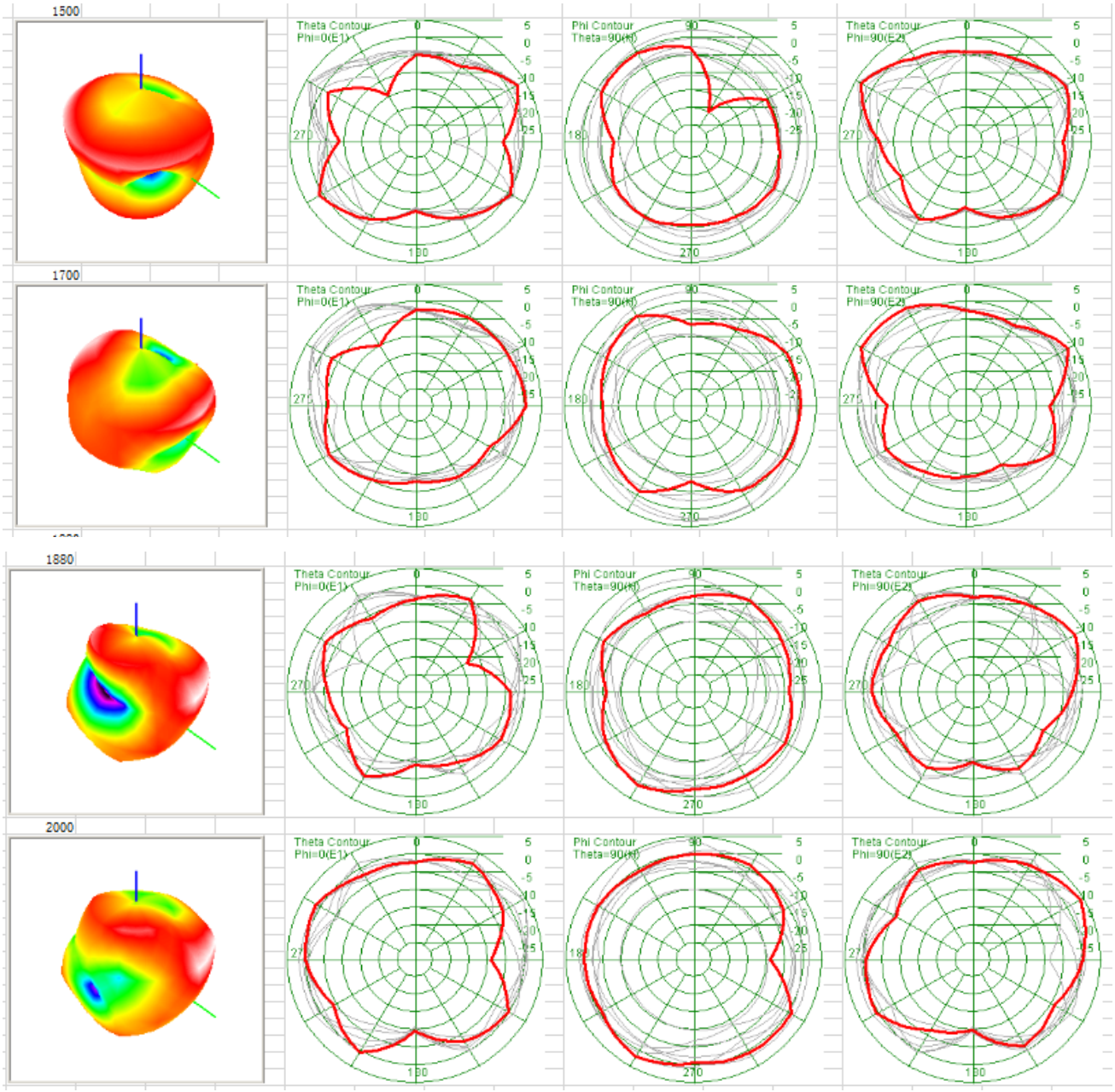


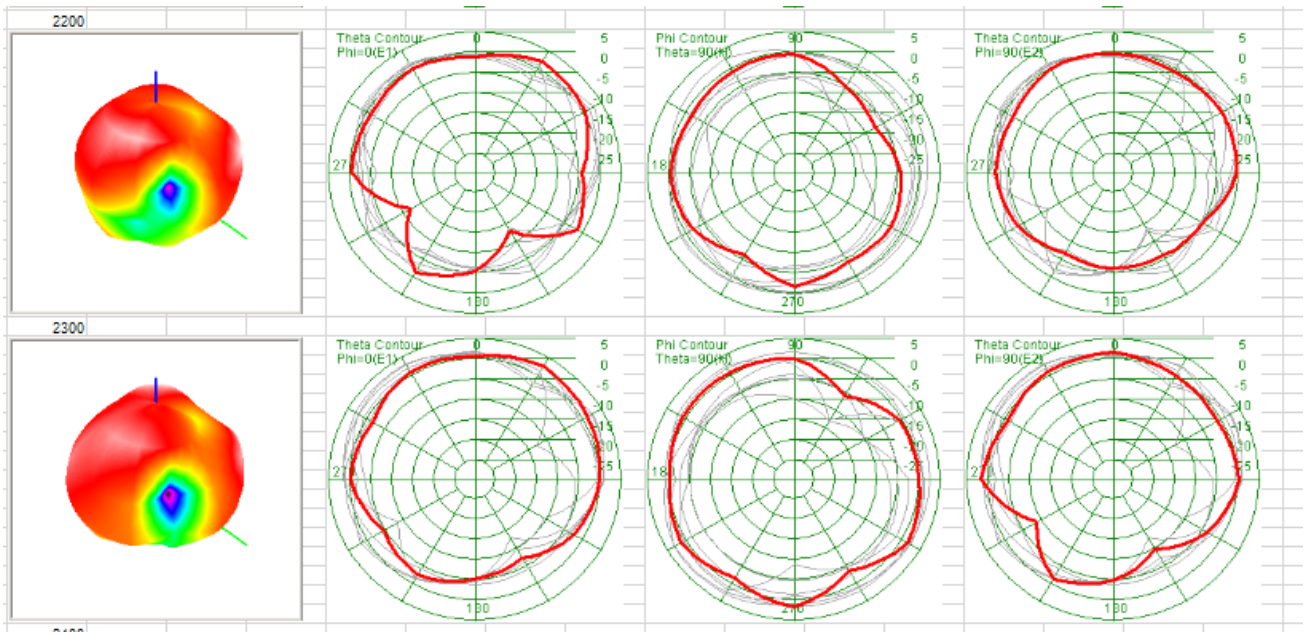


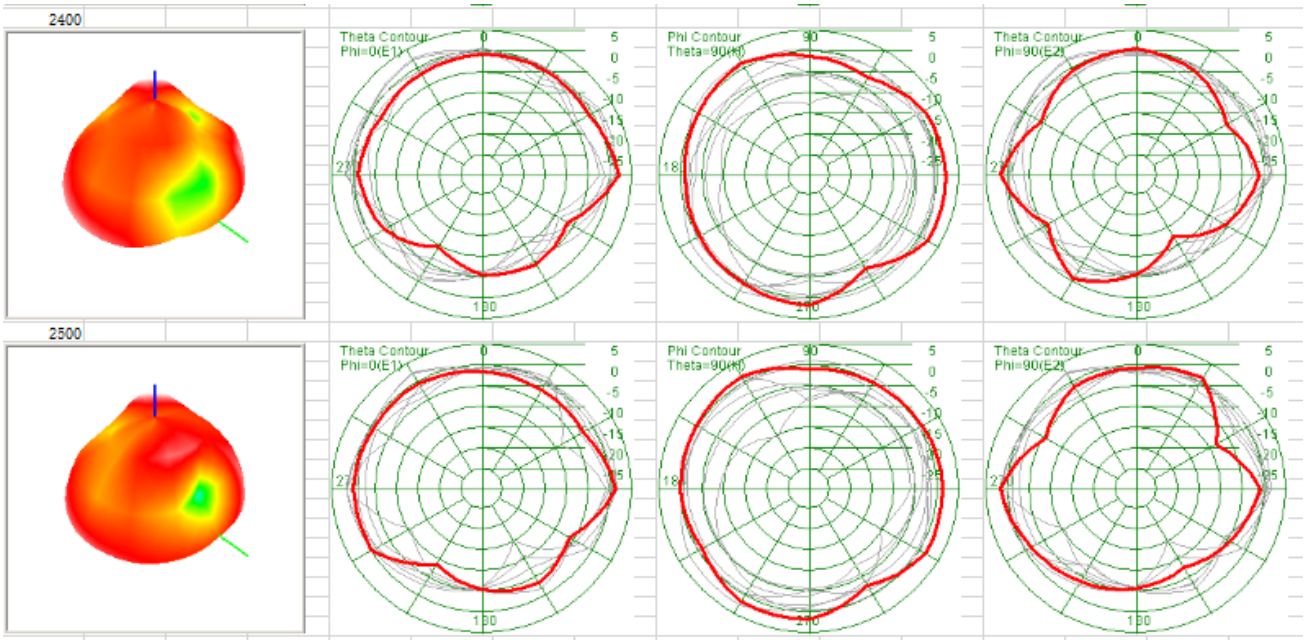
Frequency (MHz)	1500	1800	2160	2300	2680	3300	5000	6000
Gain (dBi)	1.97	1.69	1.37	2.33	2.56	2.74	2.21	-0.64

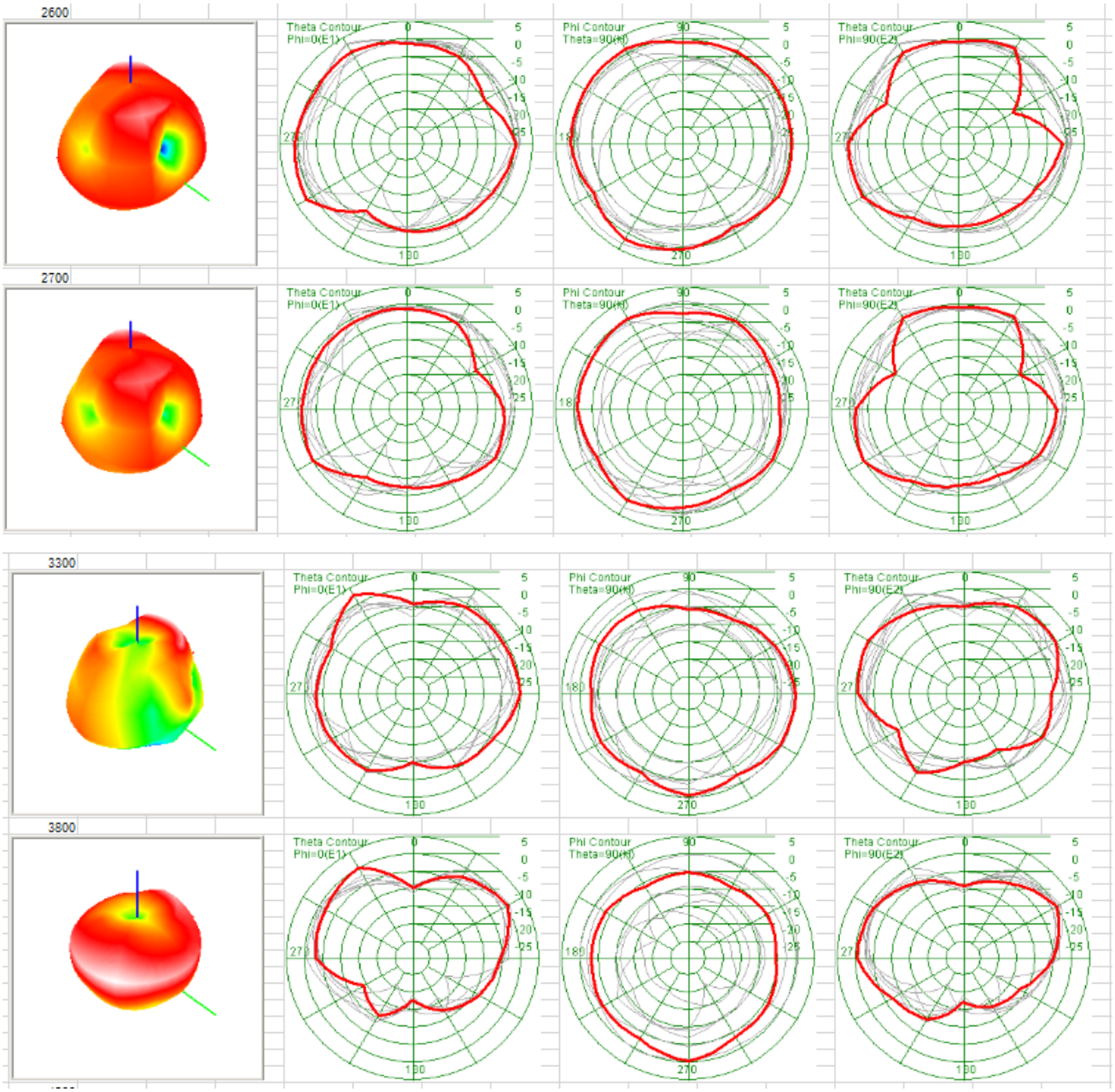
4.5. Radiation Pattern

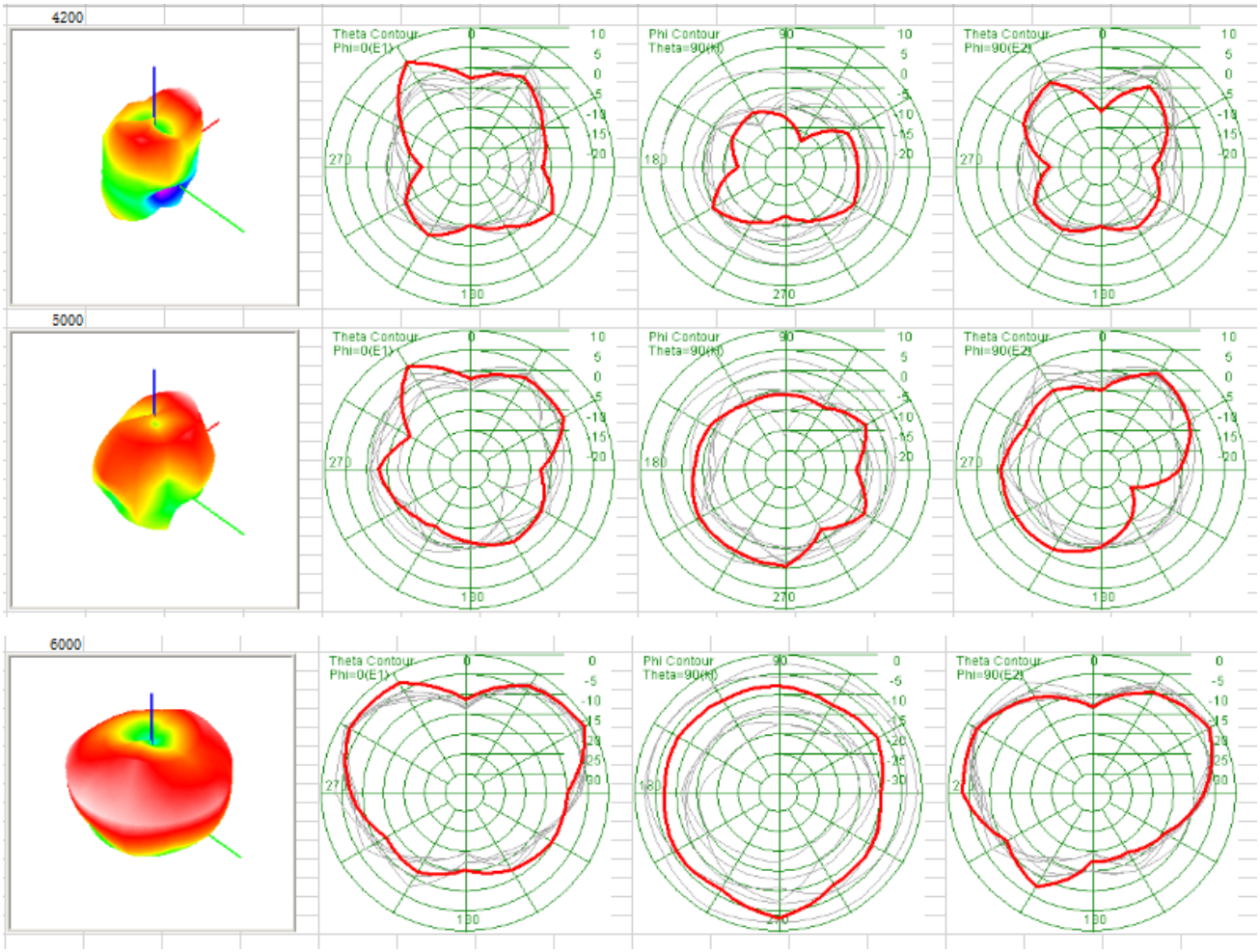



1500
Theta Contour
Phi=0(E1)
Phi Contour
Theta=90(H)
Theta Contour
Phi=90(E2)
1700
1880
2000


2200
Theta Contour
Phi=0(E1)
Phi Contour
Theta=90(H)
Theta Contour
Phi=90(E2)
2300
Theta Contour
Phi=0(E1)
Phi Contour
Theta=90(H)
Theta Contour
Phi=90(E2)


2400
Theta Contour
Phi=0(E1)
Phi Contour
Theta=90(H)
Theta Contour
Phi=90(E2)
2500
Theta Contour
Phi=0(E1)
Phi Contour
Theta=90(H)
Theta Contour
Phi=90(E2)


2600
Theta Contour
Phi=0(E1)
Phi Contour
Theta=90(H)
Theta Contour
Phi=90(E2)
2700
Theta Contour
Phi=0(E1)
Phi Contour
Theta=90(H)
Theta Contour
Phi=90(E2)
3300
Theta Contour
Phi=0(E1)
Phi Contour
Theta=90(H)
Theta Contour
Phi=90(E2)
3800
Theta Contour
Phi=0(E1)
Phi Contour
Theta=90(H)
Theta Contour
Phi=90(E2)


4200
Theta Contour
Phi=0(E1)
Phi Contour
Theta=90(H)
Theta Contour
Phi=90(E2)
5000
Theta Contour
Phi=0(E1)
Phi Contour
Theta=90(H)
Theta Contour
Phi=90(E2)
6000
Theta Contour
Phi=0(E1)
Phi Contour
Theta=90(H)
Theta Contour
Phi=90(E2)

5 Product Size