



深圳市博格斯通信技术有限公司
shenzhen bogesi communication technology co., ltd

Product specification

客 户: Shenzhen Fibocom Wireless Co., Ltd.

客户编码: _____

产品描述: 5G external rubber sleeve antenna

制造商编码: GHT-019A (RA version)

产品制造商: Shenzhen Bogesi Communication Technology Co., Ltd.

承认日期: 2021/8/9

Supplier signature	Customer signature
	

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Use range:

Applicable to Shenzhen Fibocom Wireless Co., Ltd. 5G antenna solution.

Electrical Specifications:

Electrical Specifications	700-1000MHz;1400-6000MHz	Material	ABS
input resistance	50 Ω	Plastic material	Rubber cap:ABS
Standing wave ratio	≤ 3.0		Adapter 1: ABS
Polarization mode	Linear polarization		Adapter 2:ABS
Operating temperature	- 40 $^{\circ}\text{C}$ ~ + 65 $^{\circ}\text{C}$	RF cable specifications	RG-178
Storage temperature	- 40 $^{\circ}\text{C}$ ~ + 80 $^{\circ}\text{C}$	Connector specifications	SMA Male J
Connector torque test	200 ~ 1000 g.cm	Joint tension test	SMA $\geq$ 3 Kg
Gain	700-1000MHz:1.17dBi	Connector torque test	200 ~ 1000 g.cm
	1400-1690MHz:3.21dBi		
	1700-2000MHz:3.10dBi		
	2010-2480MHz:3.36dBi		
	2490-2750/3350-3570MHz:2.56dBi		
	3580-3850MHz:2.99dBi		
	5000-5490MHz:4.49dBi		
	5500-6000MHz:3.32dBi		

Test conditions and methods:

Test conditions and instruments	Test Methods	Test Results
Microwave anechoic chamber far-field test system Aglient E5071B network analyzer	1. Assemble the antenna to be tested on the prototype and make a passive test fixture 2. Put the passive fixture on the test fixture in the dark room and establish a connection with the network analyzer 3. Use test software to test antenna passive data	See test data



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Test data:

BGS-036(700-1000)_30du	Frequency (MHz)	Directivity (dBi)	Avg Gain(dBi)	Efficiency (%)	Peak Gain(dBi)
	700	4.06	-4.12	38.75	-0.06
	710	4.27	-4.09	39.04	0.19
	720	4.40	-3.87	41.02	0.53
	730	4.42	-3.71	42.52	0.71
	740	4.49	-3.75	42.14	0.74
	750	4.52	-3.91	40.62	0.60
	760	4.60	-3.93	40.44	0.66
	770	4.65	-3.90	40.76	0.76
	780	4.57	-3.65	43.11	0.92
	790	4.29	-3.34	46.32	0.94
	800	3.85	-3.12	48.71	0.72
	810	3.38	-2.97	50.49	0.41
	820	2.98	-2.82	52.19	1.42
	830	2.64	-2.65	54.28	1.55
	840	2.33	-2.35	58.15	1.61
	850	2.03	-1.91	64.47	1.66
	860	1.72	-1.46	71.43	1.61
	870	1.85	-1.13	77.15	1.55
	880	2.20	-1.02	79.03	1.17
	890	2.30	-1.21	75.66	1.91
	900	2.24	-1.58	69.49	0.66
	910	2.08	-1.83	65.60	0.25
	920	1.94	-2.10	61.70	-0.16
	930	2.01	-2.33	58.51	-0.32
	940	2.29	-2.63	54.60	-0.34
	950	2.63	-3.17	48.21	-0.54
	960	2.84	-4.02	39.59	-1.19
	970	2.86	-5.11	30.86	-2.25
	980	2.83	-6.14	24.34	-3.31
	990	2.96	-7.09	19.55	-4.13
	1000	3.30	-7.55	17.57	-4.26

BGS-036(1400-1690)_30du	Frequency (MHz)	Directivity (dBi)	Avg Gain(dBi)	Efficiency (%)	Peak Gain(dBi)
	1400	3.67	-0.82	82.77	1.85
	1410	3.49	-0.88	81.60	1.61
	1420	3.34	-0.92	80.85	1.42
	1430	3.35	-0.76	83.95	1.59
	1440	3.51	-0.57	87.70	1.94
	1450	3.71	-0.49	89.24	1.22
	1460	3.88	-0.51	88.83	1.36
	1470	3.90	-0.74	84.33	1.16
	1480	3.81	-0.89	81.41	1.92
	1490	3.68	-0.98	79.86	1.70
	1500	3.63	-0.85	82.17	1.78
	1510	3.70	-0.76	84.04	2.94
	1520	3.84	-0.73	84.47	3.10
	1530	3.92	-0.71	84.83	3.21
	1540	3.91	-1.01	79.19	2.90
	1550	3.87	-1.21	75.68	2.66
	1560	3.81	-1.33	73.68	2.48
	1570	3.80	-1.28	74.45	2.52
	1580	3.87	-1.10	77.67	2.77
	1590	3.99	-0.96	80.24	3.04
	1600	4.09	-0.99	79.62	3.10
	1610	4.13	-1.14	76.92	2.99
	1620	4.13	-1.32	73.76	2.81
	1630	4.12	-1.53	70.25	2.59
	1640	4.16	-1.56	69.82	2.60
	1650	4.31	-1.43	71.93	2.88
	1660	4.46	-1.27	74.63	2.19
	1670	4.60	-1.10	77.58	2.50
	1680	4.72	-1.09	77.74	2.62
	1690	4.79	-1.16	76.54	2.63

	Frequency (MHz)	Directivity (dBi)	Avg Gain(dBi)	Efficiency (%)	Peak Gain(dBi)
BGS- 036(1700- 2000)_30du	1700	4.84	-0.99	79.71	1.81
	1710	4.87	-1.13	77.05	1.88
	1720	4.89	-1.03	78.81	1.86
	1730	4.88	-1.00	79.47	1.89
	1740	4.86	-0.92	80.92	1.94
	1750	4.80	-0.98	79.75	1.82
	1760	4.70	-1.12	77.25	1.58
	1770	4.64	-1.35	73.33	1.29
	1780	4.59	-1.48	71.12	1.11
	1790	4.58	-1.48	71.06	2.10
	1800	4.59	-1.51	70.55	3.08
	1810	4.60	-1.50	70.86	3.10
	1820	4.60	-1.61	68.98	2.99
	1830	4.59	-1.78	66.43	2.81
	1840	4.56	-1.92	64.24	2.64
	1850	4.57	-2.07	62.06	1.00
	1860	4.59	-2.09	61.82	1.00
	1870	4.63	-2.03	62.66	1.00
	1880	4.66	-1.89	64.75	1.77
	1890	4.64	-1.79	66.19	1.85
	1900	4.58	-1.84	65.45	1.74
	1910	4.50	-1.92	64.22	1.80
	1920	4.41	-2.13	61.20	1.33
	1930	4.31	-2.25	59.50	1.44
	1940	4.23	-2.36	58.01	1.42
	1950	4.18	-2.23	59.88	1.33
	1960	4.10	-2.27	59.32	1.33
	1970	3.97	-2.35	58.17	1.42
	1980	3.89	-2.49	56.35	1.40
	1990	3.85	-2.70	53.71	1.15
	2000	3.89	-2.82	52.24	1.07

	Frequency (MHz)	Directivity (dBi)	Avg Gain(dBi)	Efficiency (%)	Peak Gain(dBi)
BGS- 036(2010- 2480)_30du	2010	3.96	-2.82	52.22	1.14
	2020	4.09	-2.69	53.82	1.40
	2030	4.18	-2.53	65.84	1.65
	2040	4.19	-2.45	56.95	1.75
	2050	4.17	-2.46	56.74	1.71
	2060	4.14	-2.49	56.37	1.65
	2070	4.16	-2.60	54.96	1.56
	2080	4.21	-2.67	54.13	1.54
	2090	4.29	-2.74	53.26	1.55
	2100	4.35	-2.68	53.90	1.67
	2110	4.36	-2.83	52.08	1.53
	2120	4.30	-3.00	50.09	1.30
	2130	4.23	-3.16	48.29	1.07
	2140	4.20	-3.32	46.54	0.88
	2150	4.25	-3.33	46.42	0.92
	2160	4.36	-3.30	46.80	1.07
	2170	4.47	-3.16	48.33	1.31
	2180	4.52	-2.98	50.40	1.54
	2190	4.50	-2.84	52.00	1.66
	2200	4.46	-2.70	53.68	1.76
	2210	4.43	-2.66	54.21	1.77
	2220	4.50	-2.51	56.17	2.00
	2230	4.60	-2.22	60.04	2.39
	2240	4.69	-1.81	65.86	2.88
	2250	4.66	-1.39	72.60	3.27
	2260	4.53	-1.17	76.43	3.36
	2270	4.34	-1.06	78.36	3.28
	2280	4.19	-1.18	76.19	3.01
	2290	4.14	-1.23	75.29	2.91
	2300	4.13	-1.38	72.78	2.75
	2310	4.15	-1.45	71.64	2.70
	2320	4.12	-1.47	71.23	2.65
	2330	3.96	-1.55	69.94	2.40
	2340	3.74	-1.59	69.41	2.15
	2350	3.57	-1.76	66.70	1.81
	2360	3.47	-1.87	65.07	1.60
	2370	3.48	-1.89	64.71	1.59
	2380	3.51	-1.89	64.65	1.62
	2390	3.55	-1.84	65.49	1.71
	2400	3.50	-1.87	65.04	1.63
	2410	3.37	-1.87	65.08	1.51
	2420	3.30	-1.96	63.67	1.34
	2430	3.26	-2.10	61.64	1.16
	2440	3.28	-2.08	61.89	1.20
	2450	3.39	-2.03	62.62	1.35
	2460	3.48	-1.86	65.23	1.62
	2470	3.49	-1.66	68.19	1.83
	2480	3.47	-1.43	71.97	1.04

	Frequency (MHz)	Directivity (dBi)	Avg Gain(dBi)	Efficiency (%)	Peak Gain(dBi)
BGS- 036(2490- 2750,3350- 3570)_30du	2490	3.36	-1.27	74.58	1.08
	2500	3.34	-1.24	75.22	1.10
	2510	3.40	-1.25	74.91	1.14
	2520	3.42	-1.30	74.20	1.13
	2530	3.44	-1.30	74.18	1.52
	2540	3.47	-1.20	75.86	1.27
	2550	3.56	-1.16	76.53	0.98
	2560	3.61	-1.17	76.46	1.07
	2570	3.64	-1.29	74.23	1.35
	2580	3.64	-1.36	73.06	1.28
	2590	3.52	-1.48	71.18	1.04
	2600	3.40	-1.56	69.79	1.83
	2610	3.34	-1.69	67.81	1.66
	2620	3.31	-1.79	66.17	1.52
	2630	3.38	-1.84	65.48	1.54
	2640	3.43	-1.98	63.45	1.46
	2650	3.42	-2.09	61.79	1.33
	2660	3.37	-2.13	61.27	1.24
	2670	3.30	-2.23	59.78	1.06
	2680	3.25	-2.22	60.02	1.04
	2690	3.27	-2.18	60.47	1.09
	2700	3.30	-2.17	60.62	1.12
	2710	3.36	-2.07	62.04	1.29
	2720	3.37	-2.07	62.06	1.30
	2730	3.34	-2.12	61.36	1.22
	2740	3.30	-2.19	60.42	1.12
	2750	3.45	-2.13	61.18	1.32
	3350	3.25	-1.77	66.50	1.48
	3360	3.27	-1.70	67.67	1.57
	3370	3.26	-1.68	67.85	1.58
	3380	3.19	-1.72	67.31	1.47
	3390	3.11	-1.65	68.38	1.46
	3400	3.02	-1.61	68.98	1.41
	3410	2.98	-1.57	69.71	1.41
	3420	2.90	-1.51	70.65	1.39
	3430	2.80	-1.53	70.38	1.27
	3440	2.88	-1.53	70.26	1.35
	3450	3.03	-1.50	70.84	1.54
	3460	3.26	-1.45	71.60	1.81
	3470	3.59	-1.39	72.61	2.25
	3480	3.91	-1.35	73.33	2.56
	3490	4.12	-1.37	73.01	1.75
	3500	4.32	-1.40	72.46	1.93
	3510	4.44	-1.51	70.69	1.94
	3520	4.53	-1.64	68.60	1.89
	3530	4.71	-1.63	68.66	1.07
	3540	4.87	-1.63	68.76	1.24
	3550	5.01	-1.50	70.78	1.51
	3560	5.15	-1.34	73.44	1.81
	3570	5.20	-1.22	75.57	1.99

	Frequency (MHz)	Directivity (dBi)	Avg Gain(dBi)	Efficiency (%)	Peak Gain(dBi)
BGS- 036(3580- 3850)_30du	3580	5.21	-1.17	76.38	2.04
	3590	5.08	-1.24	75.16	1.84
	3600	5.02	-1.28	74.56	1.74
	3610	4.92	-1.36	73.07	1.56
	3620	4.90	-1.40	72.47	1.50
	3630	4.85	-1.45	71.69	1.41
	3640	4.86	-1.51	70.57	1.35
	3650	4.79	-1.60	69.23	1.19
	3660	4.76	-1.64	68.51	1.12
	3670	4.76	-1.70	67.68	1.07
	3680	4.76	-1.67	68.15	1.09
	3690	4.86	-1.65	68.36	1.21
	3700	4.86	-1.70	67.53	1.16
	3710	4.75	-1.85	65.26	1.90
	3720	4.65	-1.88	64.90	1.77
	3730	4.56	-1.97	63.58	1.99
	3740	4.58	-1.95	63.80	2.33
	3750	4.58	-1.90	64.59	2.55
	3760	4.76	-1.80	66.04	2.99
	3770	4.89	-1.66	68.18	2.88
	3780	4.88	-1.60	69.21	2.21
	3790	4.75	-1.59	69.31	1.99
	3800	4.71	-1.61	69.07	1.10
	3810	4.49	-1.70	67.61	2.79
	3820	4.41	-1.69	67.72	2.72
	3830	4.40	-1.72	67.30	2.68
	3840	4.44	-2.01	62.88	2.43
	3850	4.41	-1.70	67.58	2.70

	Frequency	Directivi	Avg	Efficienc	Peak
	(MHz)	ty (dBi)	Gain(dBi)	y (%)	Gain(dBi)
BCS-036 (5000-5490)_30da	5000	6.12	-1.81	65.87	4.31
	5010	6.15	-1.83	65.59	4.32
	5020	6.13	-1.80	66.05	4.32
	5030	6.12	-1.89	64.65	4.23
	5040	6.14	-2.09	61.78	4.05
	5050	6.09	-2.09	61.74	3.99
	5060	6.09	-2.09	61.74	4.00
	5070	6.02	-2.04	62.56	3.98
	5080	6.11	-2.07	62.13	4.04
	5090	6.12	-2.07	62.07	4.05
	5100	6.13	-2.04	62.55	4.09
	5110	6.17	-2.00	63.11	4.17
	5120	6.17	-2.08	61.96	4.09
	5130	6.21	-2.08	61.90	4.13
	5140	6.26	-2.14	61.05	4.12
	5150	6.32	-2.26	59.39	4.06
	5160	6.31	-2.13	61.26	4.18
	5170	6.34	-2.20	60.31	4.15
	5180	6.29	-2.20	60.32	4.09
	5190	6.39	-2.20	60.28	4.19
	5200	6.41	-2.23	59.77	4.17
	5210	6.40	-2.244	59.67	4.15
	5220	6.40	-2.12	61.40	4.29
	5230	6.42	-2.20	60.32	4.22
	5240	6.45	-2.22	59.91	4.22
	5250	6.49	-2.28	59.18	4.21
	5260	6.47	-2.33	58.45	4.14
	5270	6.45	-2.37	57.99	4.08
	5280	6.52	-2.31	58.73	4.21
	5290	6.60	-2.34	58.33	4.25
	5300	6.66	-2.36	58.13	4.30
	5310	6.68	-2.37	57.89	4.31
	5320	6.68	-2.31	58.70	4.36
	5330	6.69	-2.26	59.47	4.43
	5340	6.71	-2.28	59.10	4.43
	5350	6.70	-2.29	58.97	4.40
	5360	6.73	-2.26	59.37	4.46
	5370	6.74	-2.25	59.59	4.49
	5380	6.77	-2.31	58.79	4.47
	5390	6.78	-2.35	58.26	4.44
	5400	6.79	-2.45	56.87	4.34
	5410	6.79	-2.50	56.20	4.29
	5420	6.74	-2.58	55.27	4.17
	5430	6.70	-2.61	54.81	4.09
	5440	6.70	-2.73	53.32	3.97
	5450	6.61	-2.72	53.49	3.89
	5460	6.57	-2.80	52.53	3.77
	5470	6.51	-2.83	52.14	3.68
	5480	6.49	-2.83	52.08	3.66
	5490	6.36	-2.88	51.49	3.47

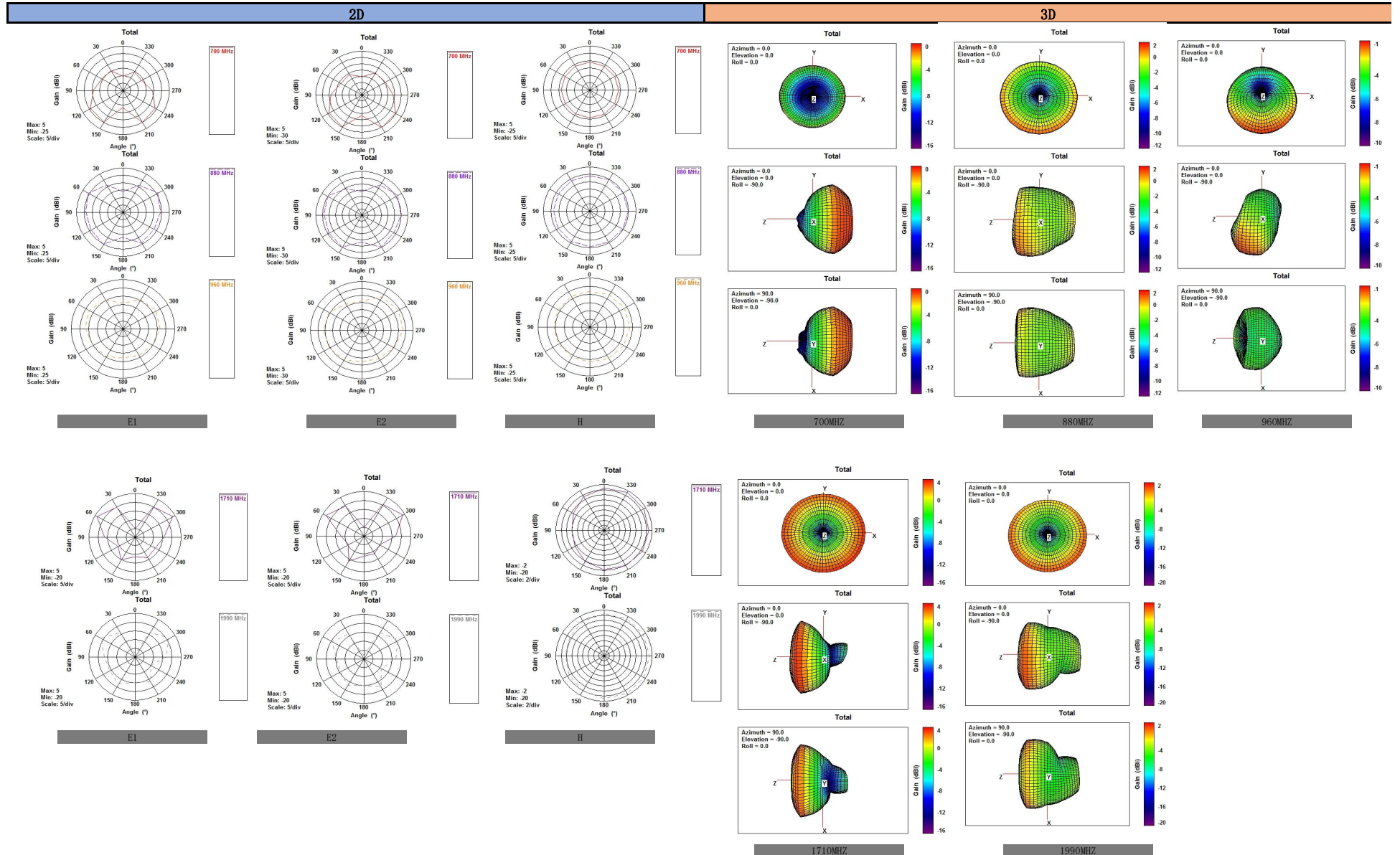
	Frequency	Directivi	Avg	Efficienc	Peak
	(MHz)	ty (dBi)	Gain(dBi)	y (%)	Gain(dBi)
BCS-036 (5500-6000)_30da	5500	6.30	-2.98	50.41	3.32
	5510	6.24	-3.07	49.35	3.17
	5520	6.17	-3.15	48.37	3.02
	5530	6.07	-3.18	48.14	2.89
	5540	5.97	-3.19	48.00	2.78
	5550	5.83	-3.18	48.05	2.65
	5560	5.75	-3.18	48.05	2.56
	5570	5.61	-3.25	47.30	2.36
	5580	5.56	-3.26	47.21	2.30
	5590	5.42	-3.30	46.82	2.12
	5600	5.26	-3.32	46.61	1.94
	5620	4.85	-3.19	47.96	1.66
	5630	4.65	-3.19	47.94	1.45
	5640	4.55	-3.20	47.84	1.34
	5650	4.48	-3.27	47.15	1.21
	5660	4.33	-3.21	47.72	1.12
	5670	4.25	-3.10	48.94	1.15
	5680	3.97	-2.98	50.33	0.99
	5690	3.90	-2.93	50.99	0.98
	5700	3.90	-2.89	51.42	1.01
	5710	4.11	-2.94	50.81	1.17
	5720	4.10	-2.97	50.42	1.13
	5730	4.02	-3.00	50.08	1.01
	5740	4.03	-2.89	51.42	1.14
	5750	4.03	-2.86	51.74	1.17
	5760	4.14	-2.83	52.08	1.31
	5770	4.02	-2.84	52.04	1.19
	5780	4.01	-2.88	51.54	1.13
	5790	4.05	-2.92	51.07	1.14
	5800	4.11	-2.92	51.01	1.19
	5810	4.09	-2.93	50.94	1.16
	5820	4.12	-2.90	51.27	1.22
	5830	4.17	-2.90	51.32	1.28
	5840	4.05	-2.83	52.12	1.22
	5850	4.18	-2.71	53.63	1.47
	5860	4.22	-2.78	52.69	1.44
	5870	4.27	-2.80	52.43	1.46
	5880	4.17	-2.83	52.15	1.34
	5890	4.07	-2.76	52.93	1.30
	5900	4.03	-2.70	53.67	1.33
	5910	3.97	-2.65	54.27	1.31
	5920	3.92	-2.71	53.52	1.21
	5930	3.92	-2.85	51.93	1.08
	5940	3.84	-2.91	51.14	0.92
	5950	3.71	-2.95	50.66	0.76
	5960	3.80	-2.90	51.24	0.90
	5970	3.83	-2.81	52.36	1.02
	5980	3.81	-2.78	52.76	1.04
	5990	3.77	-2.81	52.31	0.96
	6000	3.80	-2.83	52.07	0.96

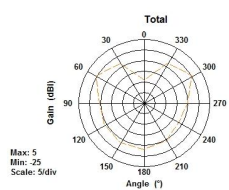


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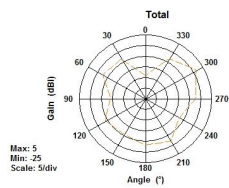
shenzhen bogesi communication technology co.,ltd

Direction map:

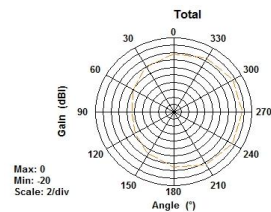




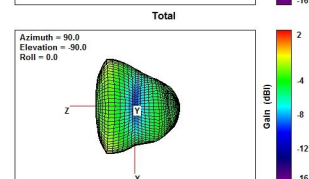
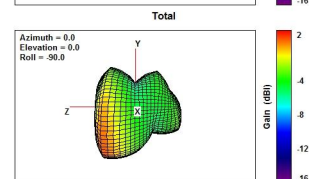
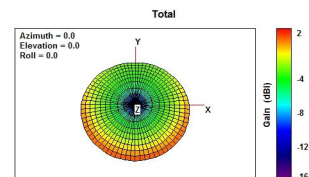
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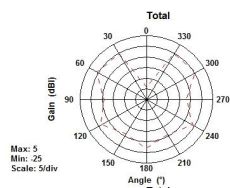
2170 MHz



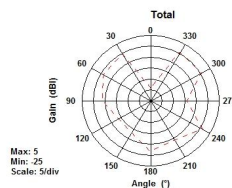
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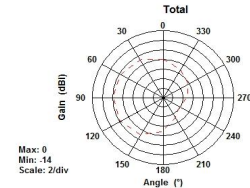
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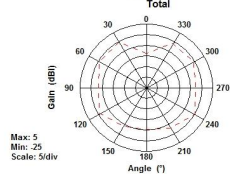
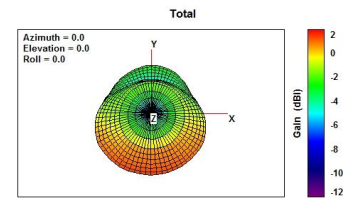
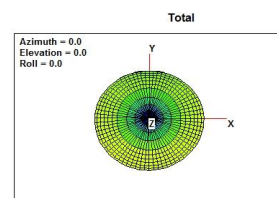
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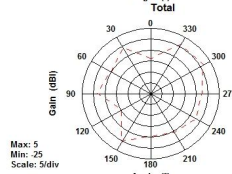
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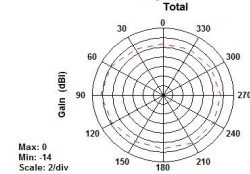
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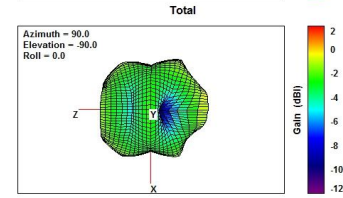
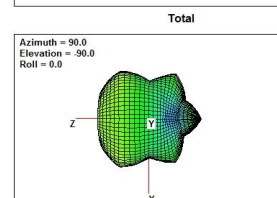
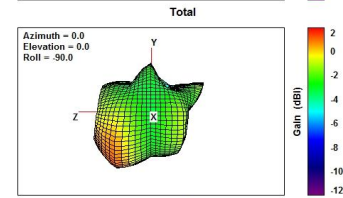
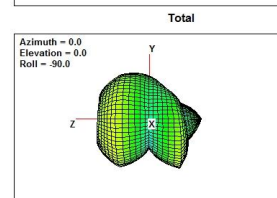
3350 MHz



3350 MHz

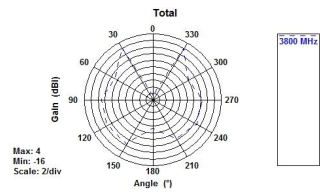


3350 MHz

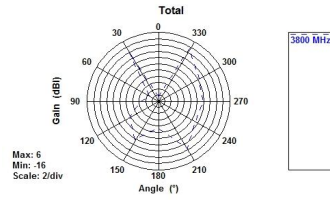


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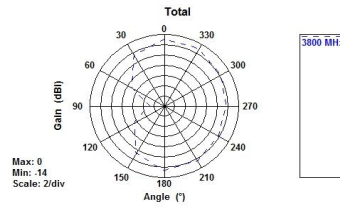
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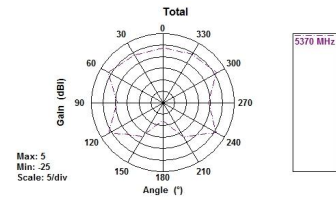
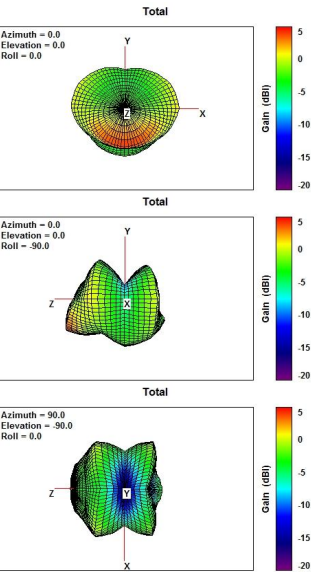
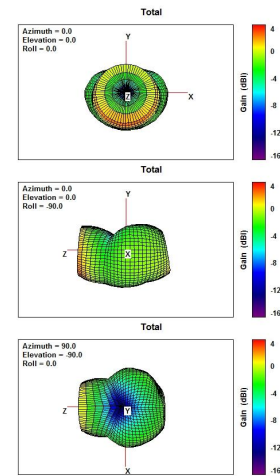
E1



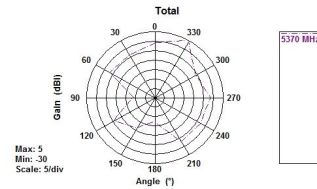
E2



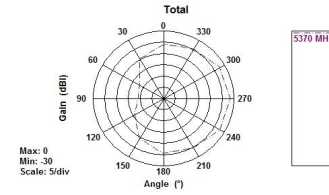
H



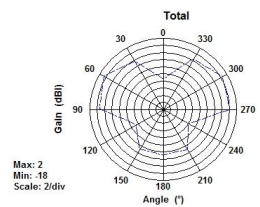
E1



E2

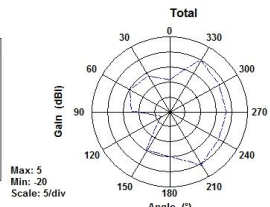


H



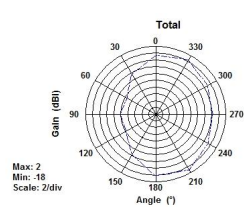
E1

6000 MHz



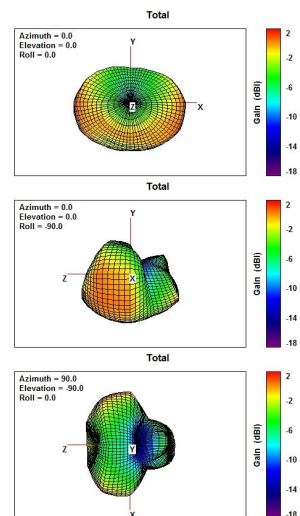
E2

6000 MHz



H

6000 MHz

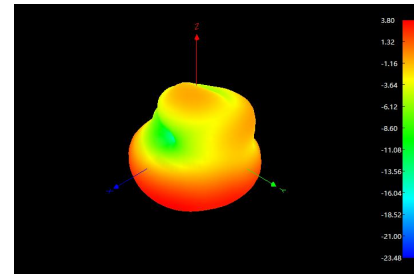
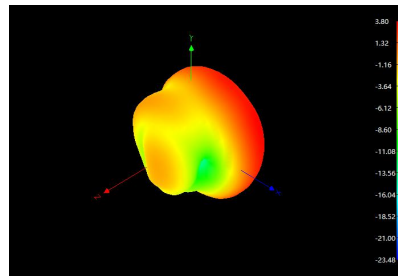
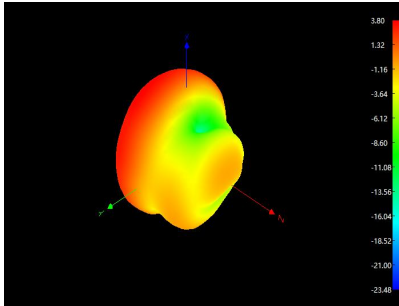


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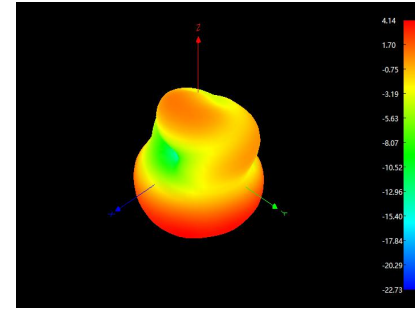
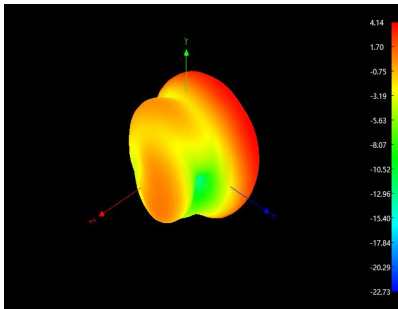
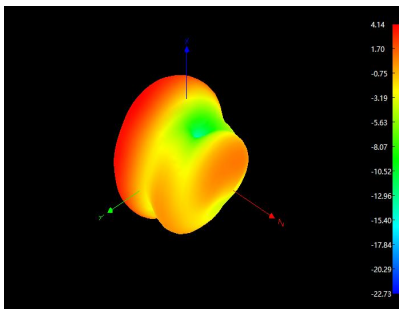


Direction map:

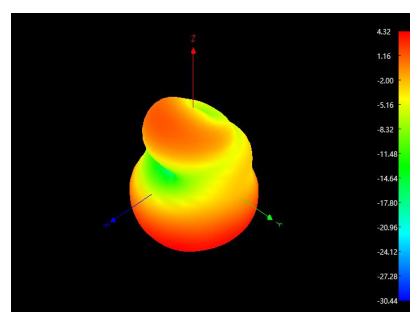
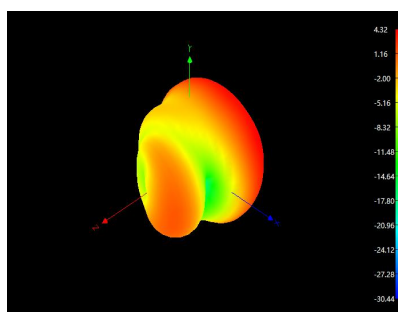
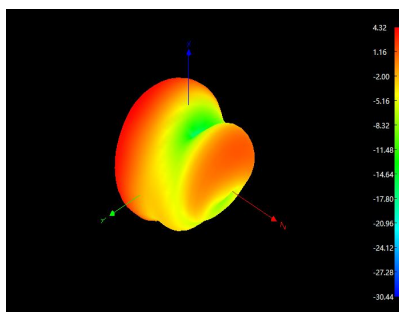
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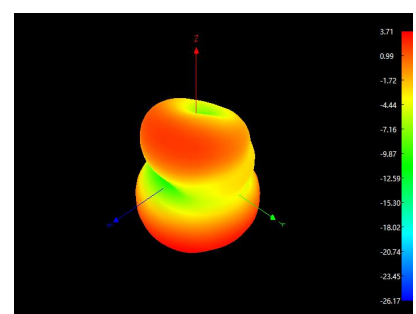
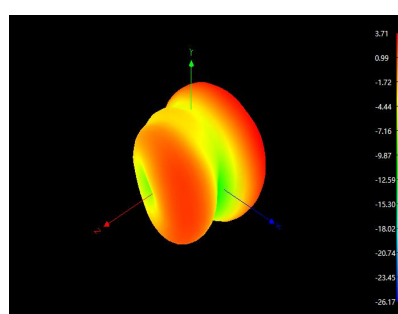
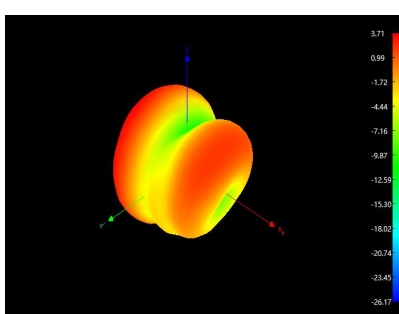
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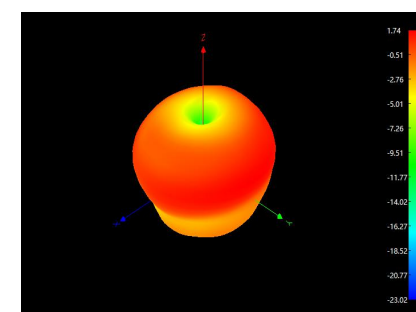
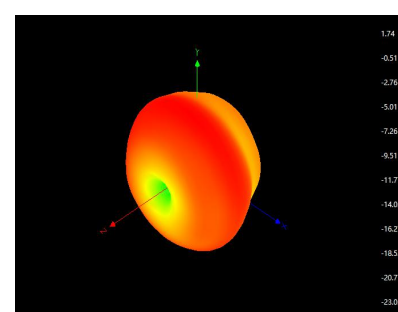
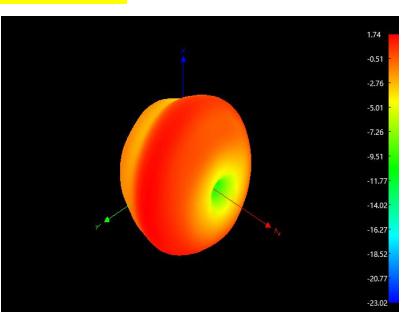
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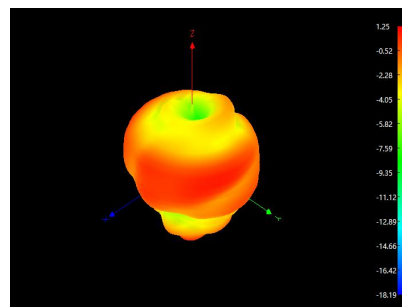
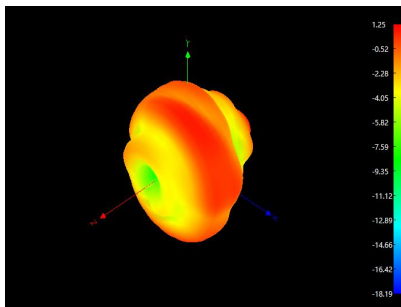
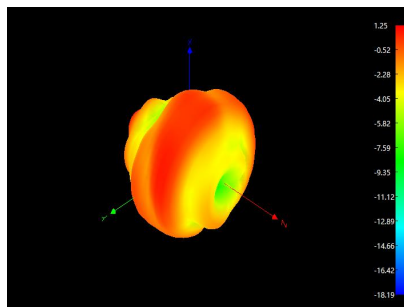
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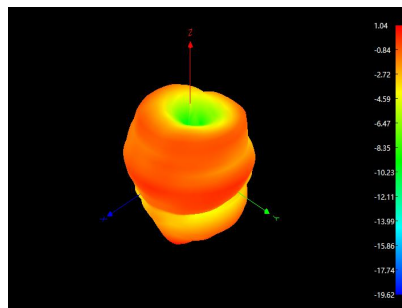
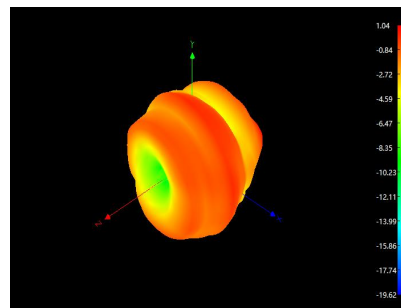
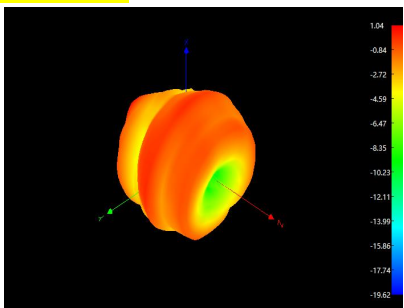
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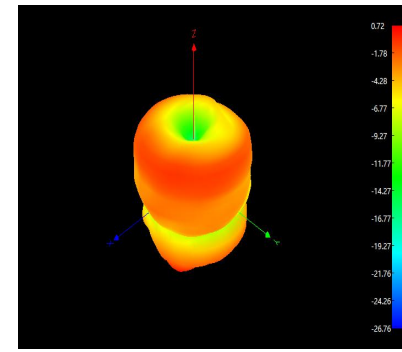
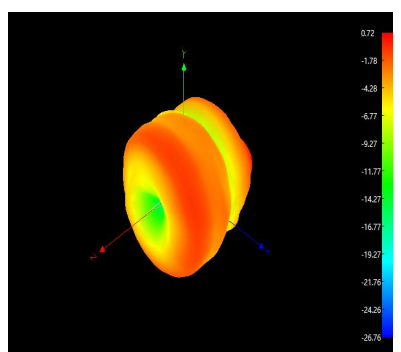
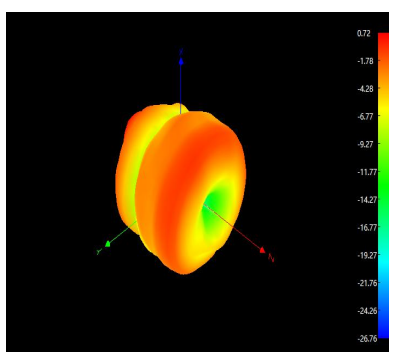
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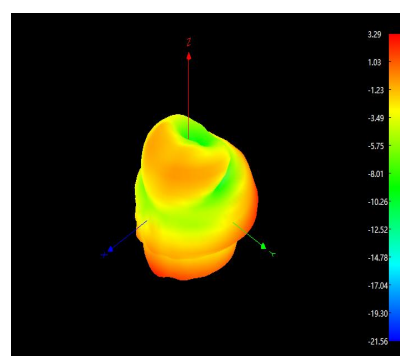
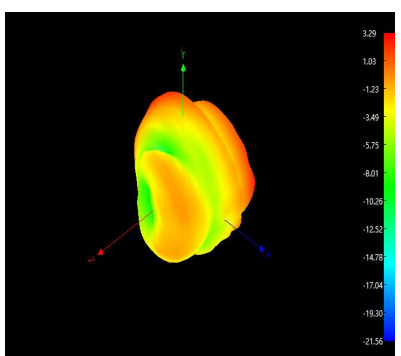
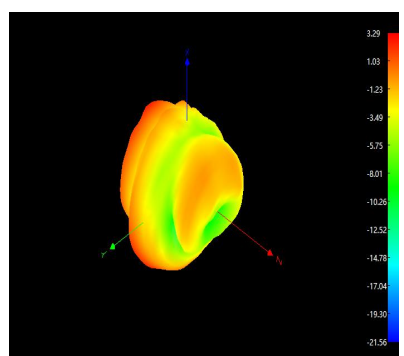
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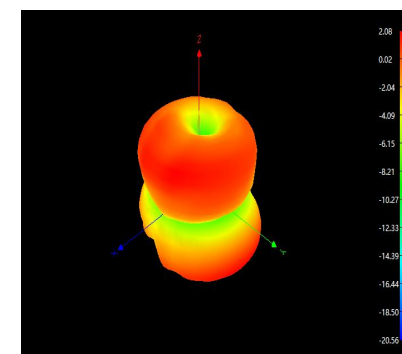
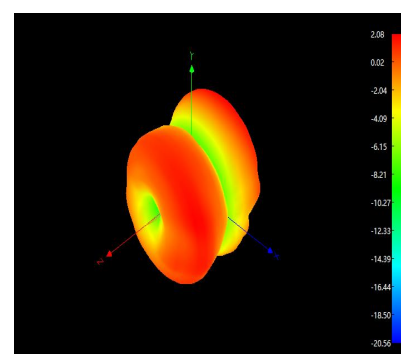
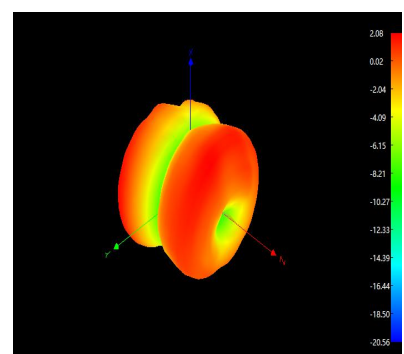
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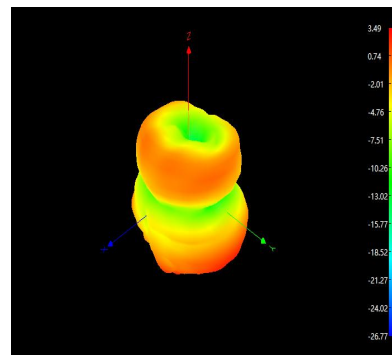
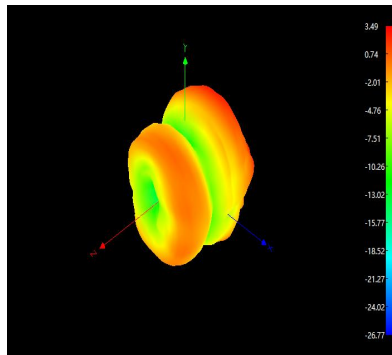
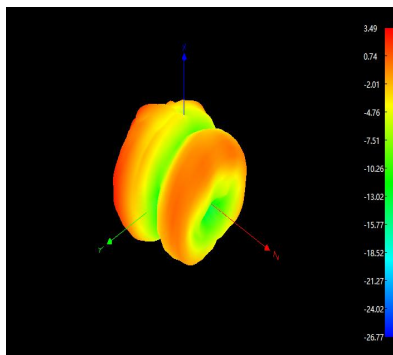
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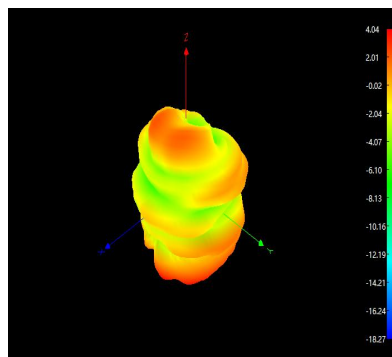
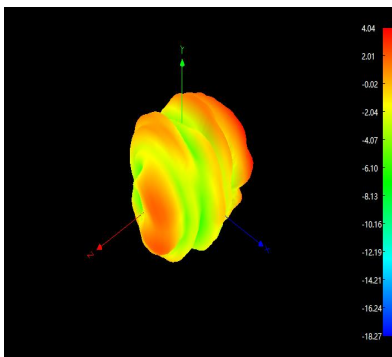
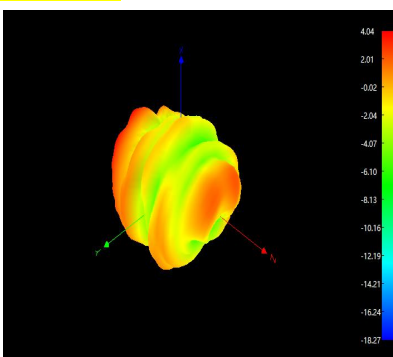
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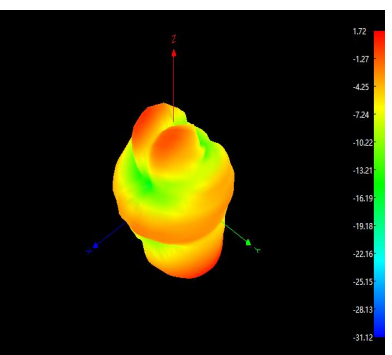
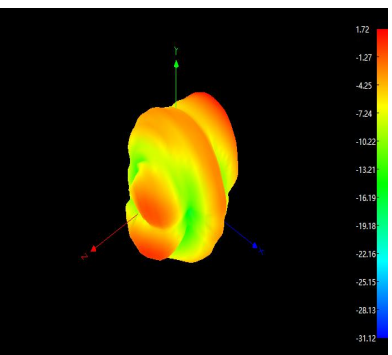
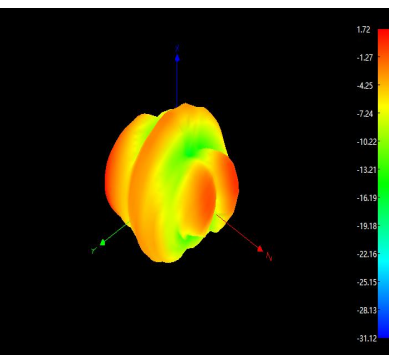
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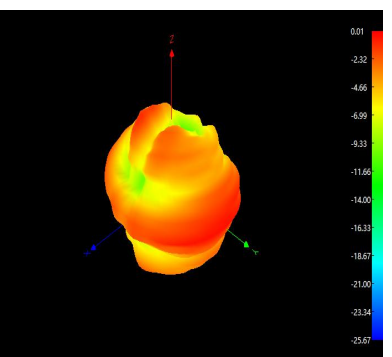
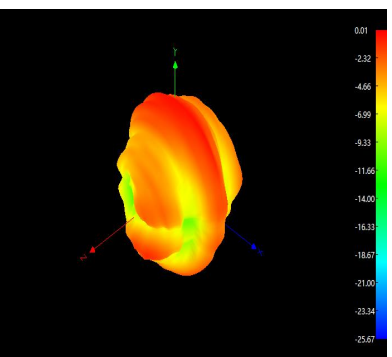
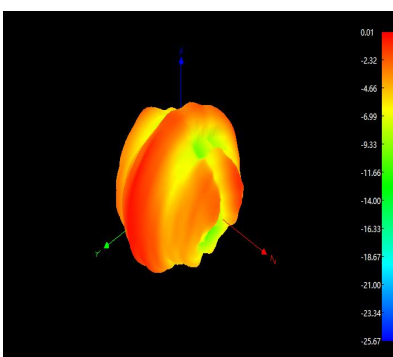
4500



5000



5500



6000

