

1. Main antenna

(a) Main antenna information

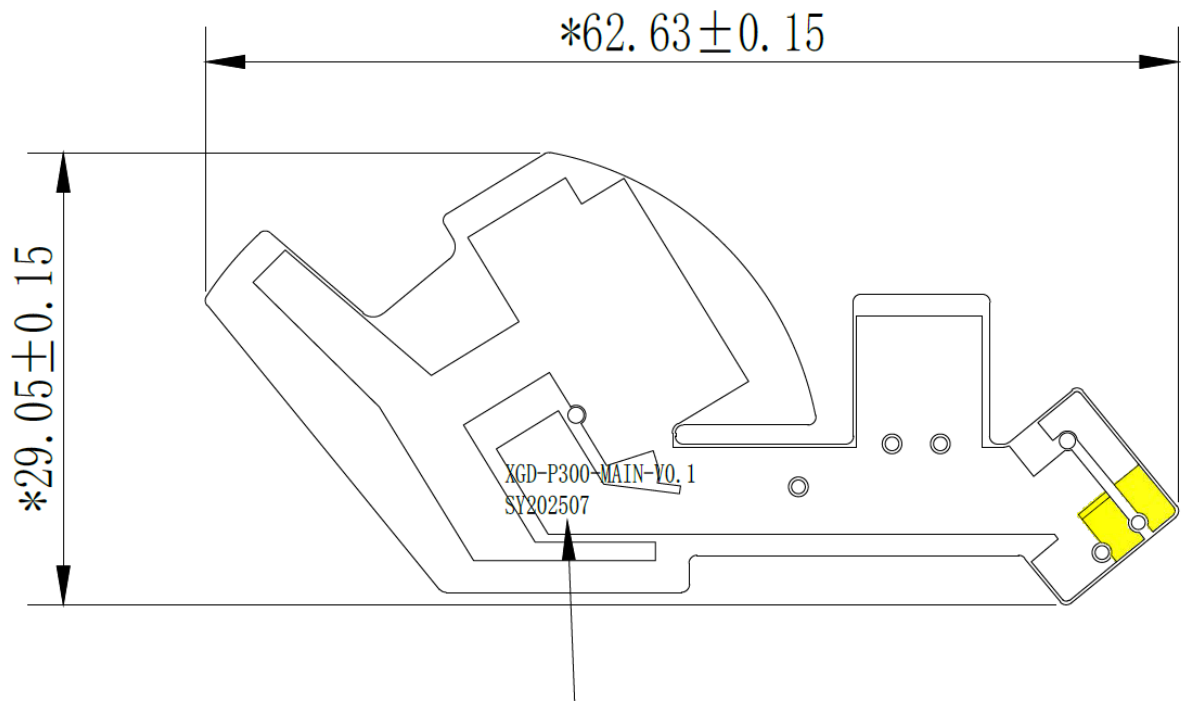
Manufacturer: Sunnyway Technology (China) Co., Ltd.

Address: Floor 6, Building 5, Nam Tai Inno Park, Guangming District, Shenzhen, Guangdong, China.

Antenna Type: FPC

Antenna Brand: Sunnyway

Antenna Model: XGD-P300-MAIN-V0.1



(b)antenna passive data

Frequency (Mhz)	Efficiency (%)	MaxGain (dBi)
700	35.06	-2.96
710	43.55	-0.69
720	35.73	-0.85
730	31.05	-1.07
740	28.64	-1.01
750	41.88	0.08
760	43.85	-0.22
770	34.67	-1.36
780	26	-2.24
790	29.91	-2.38
800	31.83	-1.65
810	25.06	-1.14
820	26.12	-1.49
830	30.48	-1.24
840	36.9	-0.59
850	40.27	-0.6
860	37.93	-0.73
870	40.64	-0.5
880	38.99	-0.5
890	41.3	-0.76
900	34.91	-1.47

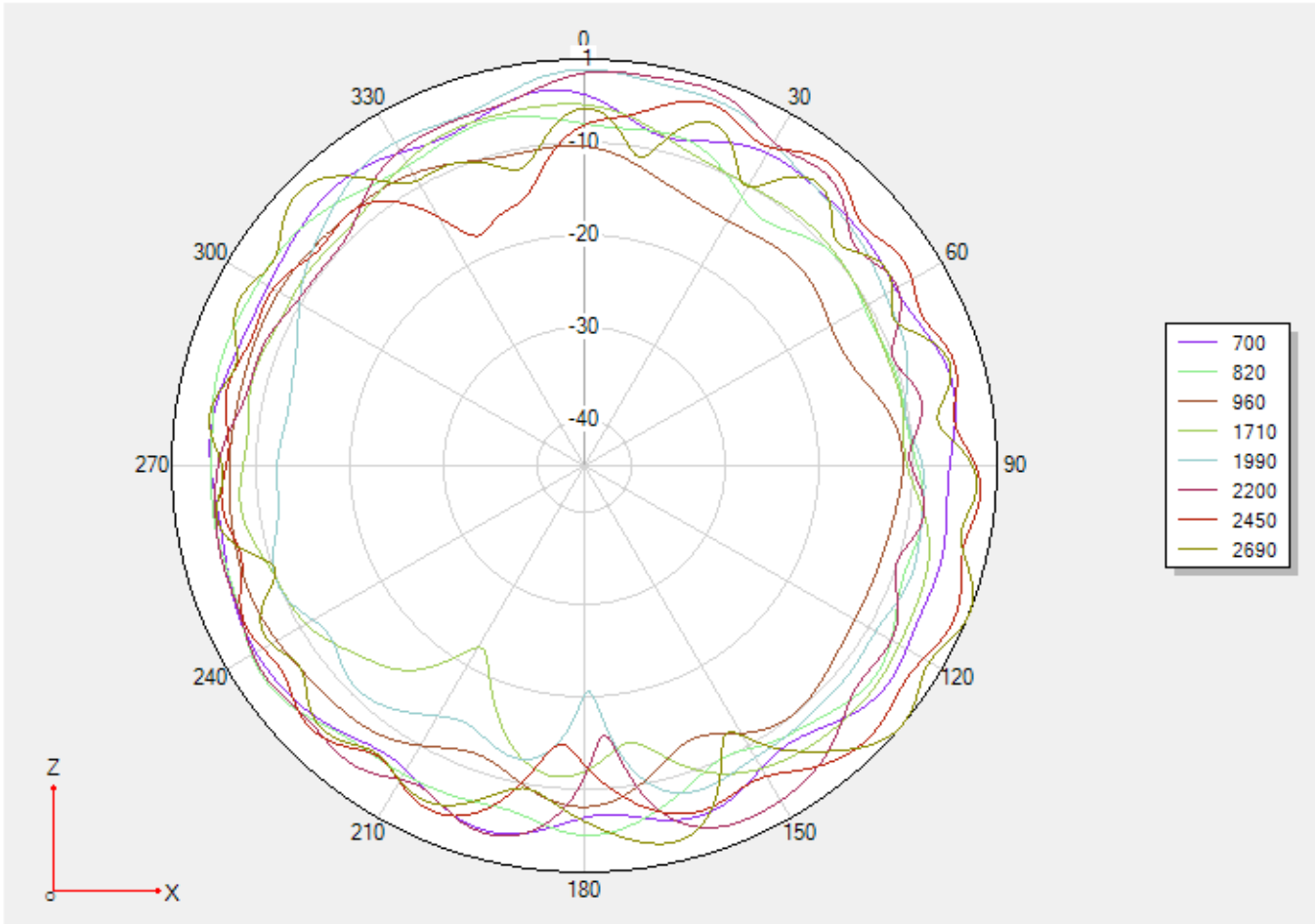
Frequency (Mhz)	Efficiency (%)	MaxGain (dBi)
2010	26.12	-1.85
2020	28.18	-1.64
2030	25.41	-1.73
2040	28.77	-1.3
2050	22.28	-1.93
2060	25.12	-1.09
2070	22.13	-1.49
2080	25.53	-1.21
2090	23.23	-1.45
2100	30.06	-0.81
2110	28.05	-1.18
2120	30.83	-1.46
2130	29.72	-1.68
2140	30.76	-1.42
2150	29.11	-1.08
2160	31.05	-0.43
2170	28.05	-0.77
2180	29.85	-0.63
2190	32.43	-0.3
2200	31.77	-0.22
2210	28.91	-0.49

910	32.06	-2.06
920	26.18	-2.95
930	22.54	-3.64
940	16.11	-4.11
950	13.61	-4.3
960	15.67	-3
970	20.09	-1.44
980	24.15	-0.6
990	31.12	0.91
1000	37.84	2.1
1700	27.67	-2.1
1710	30.62	-1.12
1720	34.59	-0.63
1730	39.08	0.34
1740	40.93	0.43
1750	38.82	0.46
1760	35.65	-0.39
1770	38.37	-0.53
1780	33.65	-1.69
1790	33.11	-2.31
1800	32.66	-2.3
1810	34.67	-2.21
1820	29.99	-3.04
1830	30.76	-3.25
1840	31.48	-2.76
1850	30.27	-2.73
1860	29.99	-2.37
1870	26.73	-3.14
1880	29.04	-2.85
1890	30.27	-2.53
1900	29.65	-2.63
1910	26.18	-2.32
1920	27.86	-1.44
1930	24.83	-1.68
1940	26.92	-1.36
1950	24.27	-1.69
1960	30.97	-0.6
1970	27.67	-0.89
1980	33.5	-0.06
1990	27.16	-1.12
2000	30.97	-1.06

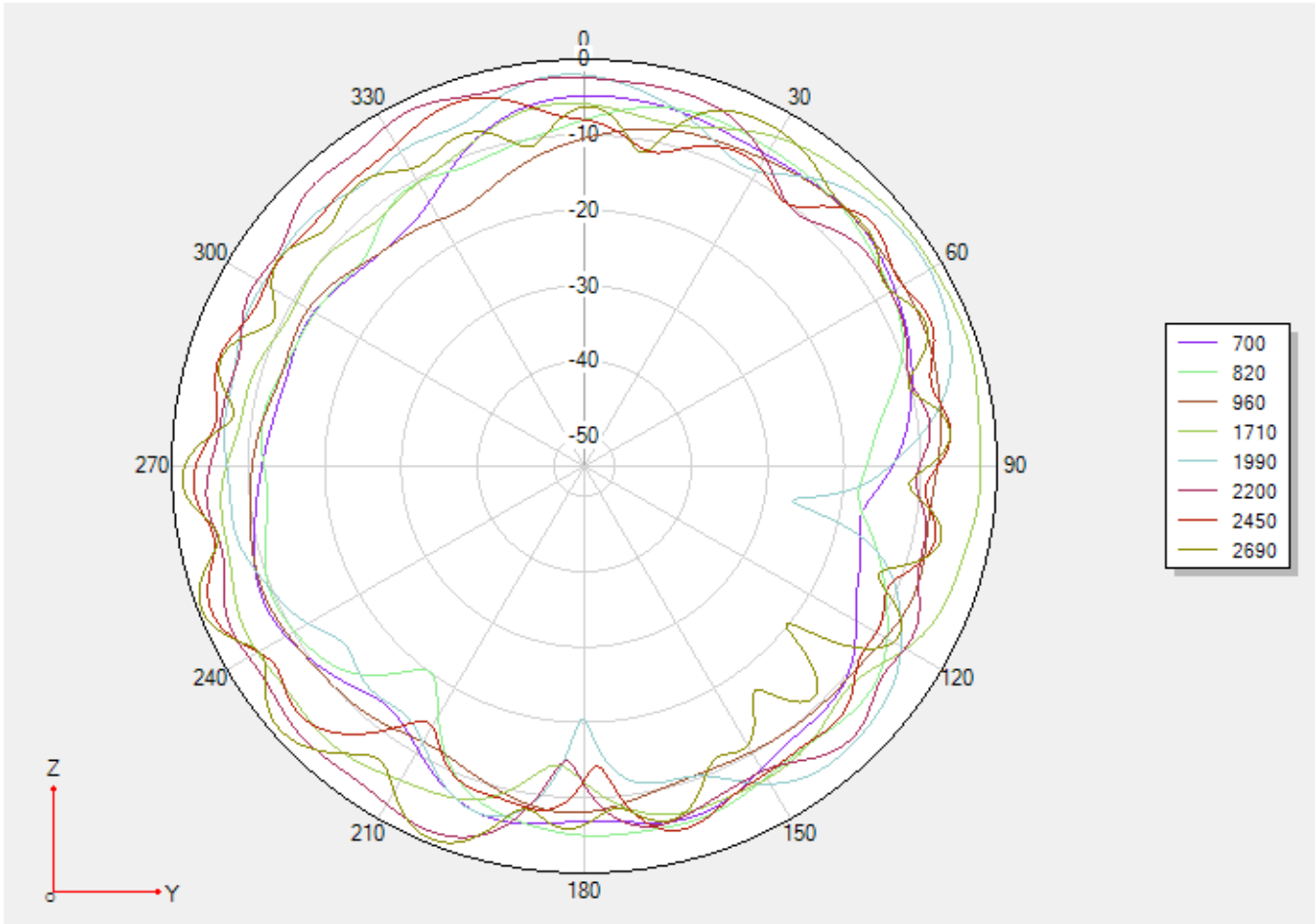
2220	28.05	-0.7
2230	25.76	-1.01
2240	23.01	-1.47
2250	25.35	-1.15
2260	24.55	-1.18
2270	27.8	-1.01
2280	29.58	-0.73
2290	31.7	-0.88
2300	30.83	-0.97
2310	35.97	-0.19
2320	31.7	-0.87
2330	36.56	-0.21
2340	36.14	-0.4
2350	36.9	-0.2
2360	35.89	-0.52
2370	39.99	0.23
2380	34.2	-0.46
2390	38.55	0.27
2400	37.07	-0.17
2410	37.67	0.3
2420	32.73	-0.65
2430	35.48	0.35
2440	35.65	0.15
2450	41.02	1.38
2460	40.55	0.99
2470	41.02	1.58
2480	41.78	1.31
2490	44.26	2.15
2500	42.76	1.8
2510	46.77	2.84
2520	50.7	3.2
2530	50.35	3.65
2540	46.99	3.38
2550	45.5	3.53
2560	45.39	3.55
2570	46.99	4
2580	44.36	3.74
2590	45.5	3.91
2600	41.5	3.54
2610	45.5	4.01
2620	42.95	3.85
2630	44.57	3.94
2640	41.78	3.73
2650	43.85	4.29
2660	39.9	4.26
2670	42.36	4.71
2680	37.5	4.38
2690	38.55	4.59
2700	35.08	4.21

(c) Directional diagram

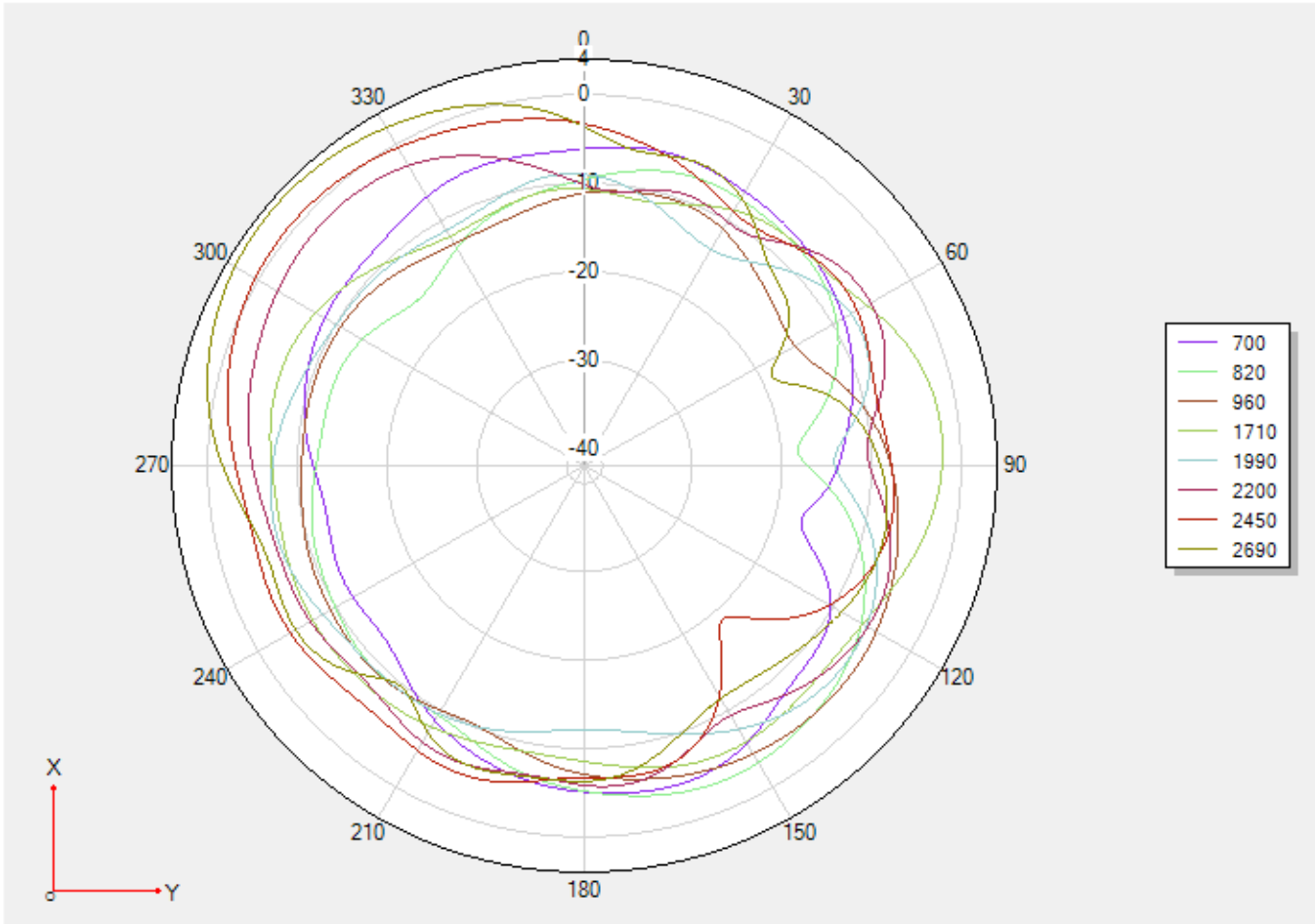
Phi 0



Phi 90



Theta 90



2. Div antenna

(a) Div antenna information

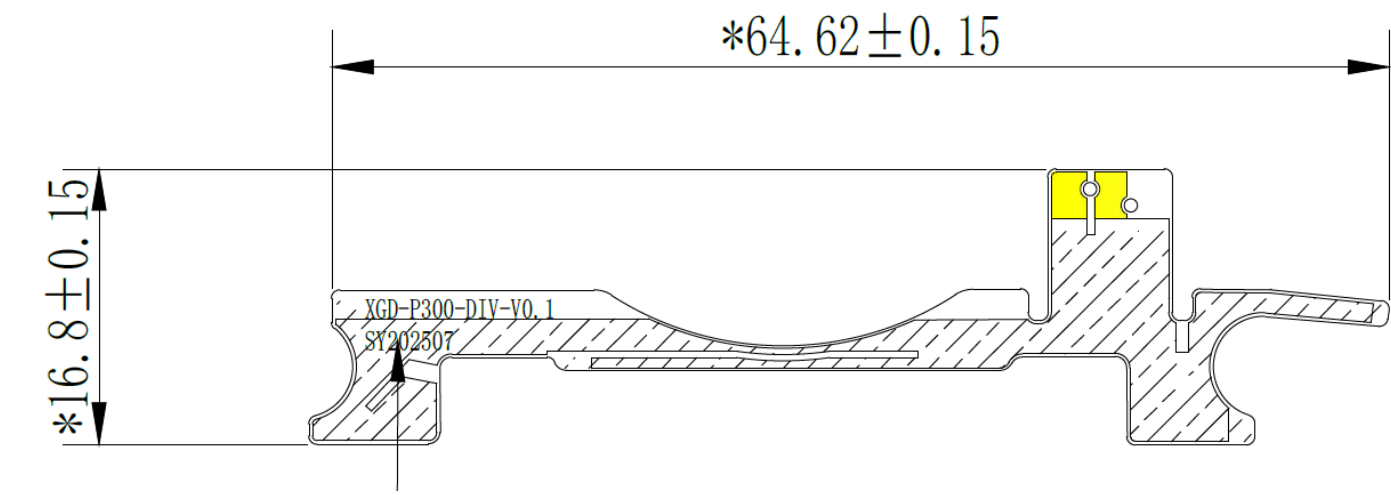
Manufacturer: Sunnyway Technology (China) Co., Ltd.

Address: Floor 6, Building 5, Nam Tai Inno Park, Guangming District, Shenzhen, Guangdong, China.

Antenna Type: FPC

Antenna Brand: Sunnyway

Antenna Model: XGD-P300-DIV-V0.1



(b)antenna passive data

Frequency (Mhz)	Efficiency (%)	MaxGain (dBi)
700	4.39	-10.77
710	5.87	-8.84
720	6.17	-8.22
730	8	-7.11
740	9.33	-6
750	14.06	-4.88
760	17.5	-4.32
770	16.83	-4.34
780	16.71	-4.63
790	12.82	-6.15
800	11.99	-6.5
810	11.3	-6.84
820	9.44	-8.01
830	8.49	-8.6
840	7.74	-8.88
850	6.24	-9.77
860	4.51	-11.35
870	4.35	-11.72
880	3.74	-12.54
890	3.77	-12.53
900	3.33	-12.95
910	3.03	-12.99
920	2.3	-13.48
930	2	-13.09

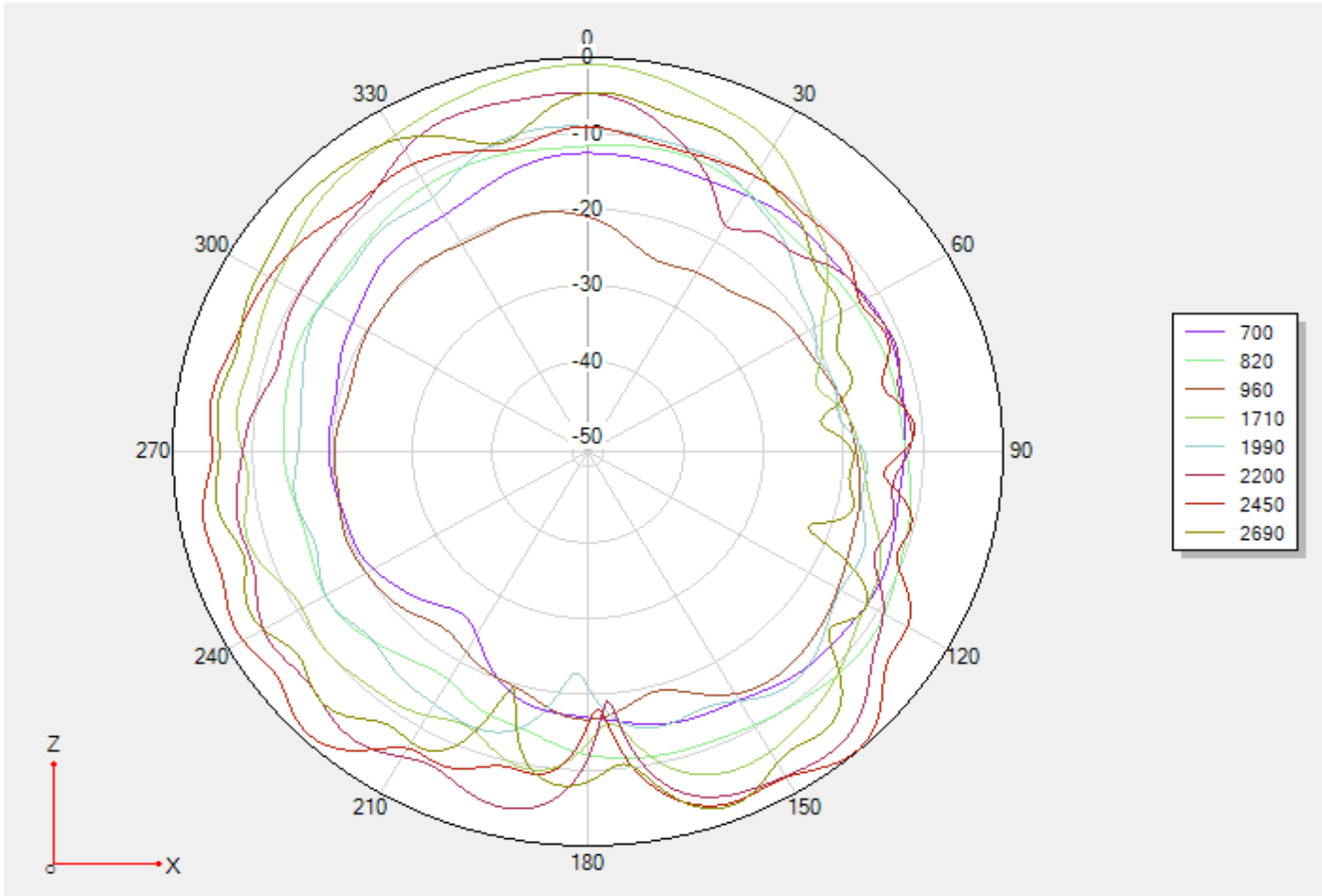
Frequency (Mhz)	Efficiency (%)	MaxGain (dBi)
2010	9.23	-5.6
2020	10.26	-5.16
2030	9.91	-5.44
2040	11.22	-4.95
2050	8.97	-5.26
2060	10.99	-4.29
2070	9.98	-4.67
2080	12.47	-4.29
2090	12.22	-4.28
2100	15.28	-3.66
2110	15.1	-3.6
2120	17.82	-3.19
2130	17.46	-3.31
2140	19.05	-2.6
2150	18.84	-2.22
2160	19.77	-1.79
2170	18.62	-1.76
2180	20.65	-1.3
2190	22.91	-0.37
2200	24.1	0.02
2210	23.82	0.07
2220	24.55	-0.33
2230	25.76	0.03
2240	24.15	-0.76

940	1.55	-13.46
950	1.27	-14.19
960	1.27	-13.98
970	1.24	-14.21
980	1.03	-15.46
990	0.99	-15.48
1000	0.94	-15.23
1700	18.41	-0.82
1710	18.75	-0.86
1720	21.48	-0.89
1730	25.64	-0.19
1740	25.7	-0.6
1750	26	-0.35
1760	26.12	-0.35
1770	27.16	-0.05
1780	25.18	-0.62
1790	25.29	-0.51
1800	21.09	-1.47
1810	21.28	-1.32
1820	17.86	-2.35
1830	15.7	-2.84
1840	15.24	-3.11
1850	16.03	-2.52
1860	14.22	-3.14
1870	12.16	-4.18
1880	12.5	-4.2
1890	10.89	-4.85
1900	9.73	-5.27
1910	9.16	-5.22
1920	9.04	-4.82
1930	7.74	-5.94
1940	8.65	-5.78
1950	7	-7.28
1960	8.65	-6.9
1970	8.15	-7
1980	9.84	-5.53
1990	8.51	-5.95
2000	10.72	-4.86

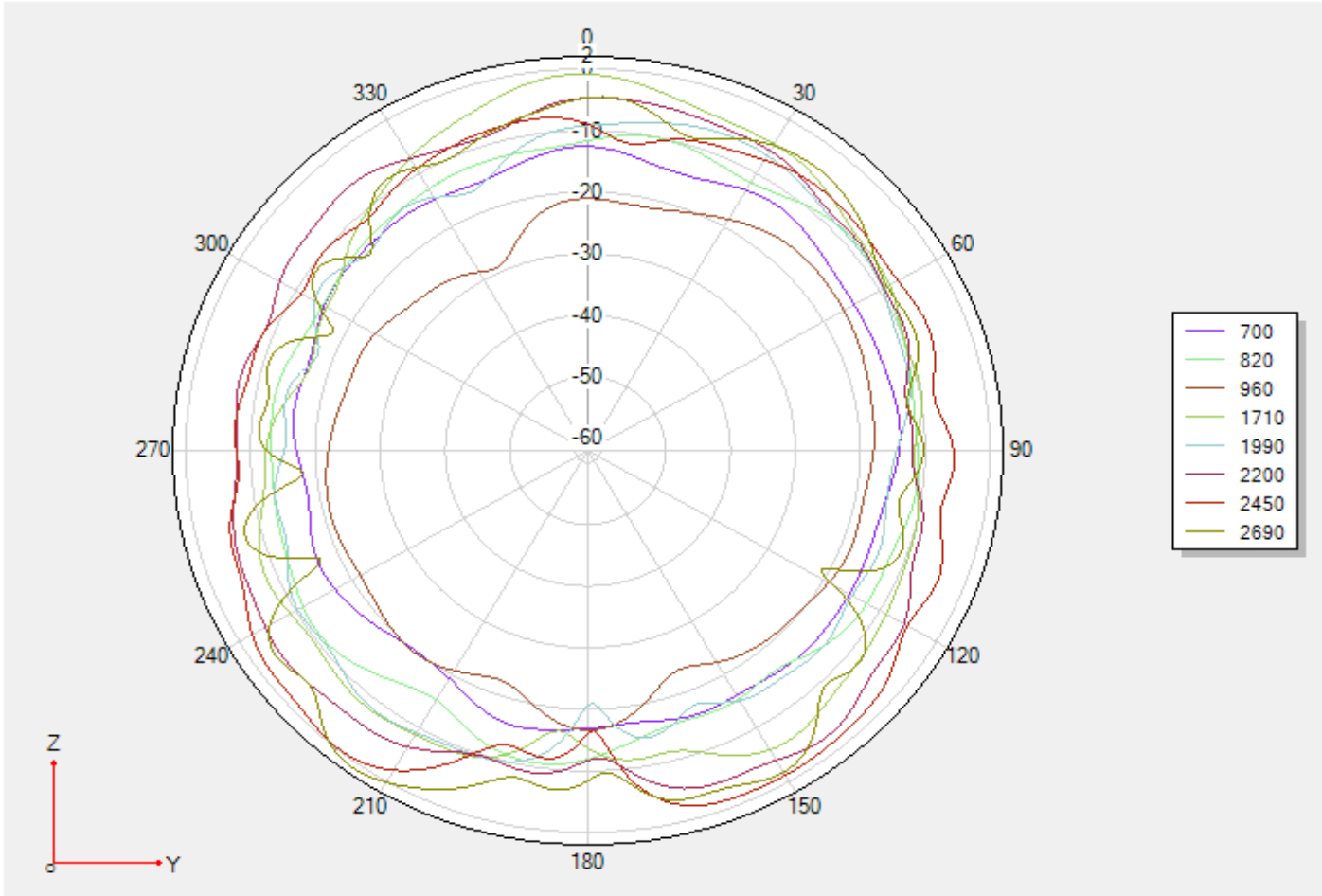
2250	27.16	-0.23
2260	27.35	-0.33
2270	30.9	0.51
2280	28.84	0.29
2290	30.34	0.95
2300	26.36	0.36
2310	26.73	1.18
2320	20.75	0
2330	23.5	1.17
2340	21.63	0.2
2350	24.15	0.76
2360	24.95	-0.21
2370	30.83	0.62
2380	27.93	-0.36
2390	33.73	0.54
2400	31.92	-0.19
2410	33.88	0.3
2420	28.25	-1.11
2430	29.38	-0.6
2440	28.44	-0.99
2450	31.92	-0.02
2460	29.58	-0.35
2470	28.91	-0.01
2480	27.61	-0.06
2490	27.93	0.39
2500	25.29	0.16
2510	26.36	0.76
2520	27.67	0.99
2530	27.35	1.11
2540	24.38	0.49
2550	23.12	0.22
2560	22.91	-0.08
2570	22.44	-0.09
2580	20.75	-0.56
2590	20.99	-0.24
2600	18.62	-0.85
2610	19.36	-0.48
2620	18.32	-0.46
2630	18.41	-0.36
2640	16.94	-0.59
2650	18.03	0.19
2660	16.94	0.46
2670	18.71	1.19
2680	17.91	1.42
2690	19.23	1.72
2700	18.71	1.76

(c) Directional diagram

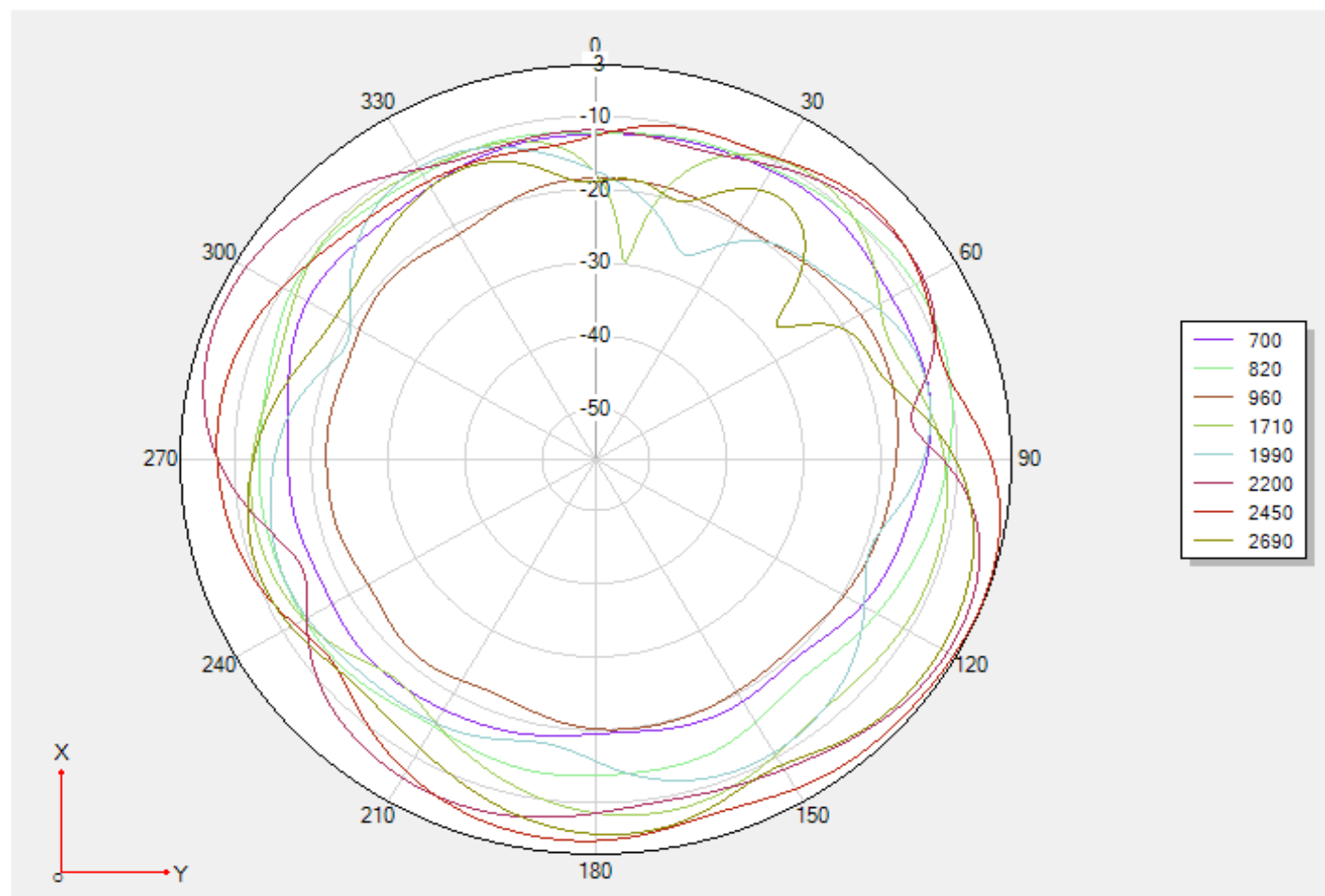
Phi 0



Phi 90



Theta 90



3. WIFI&BT antenna

(a) WIFI&BT antenna information

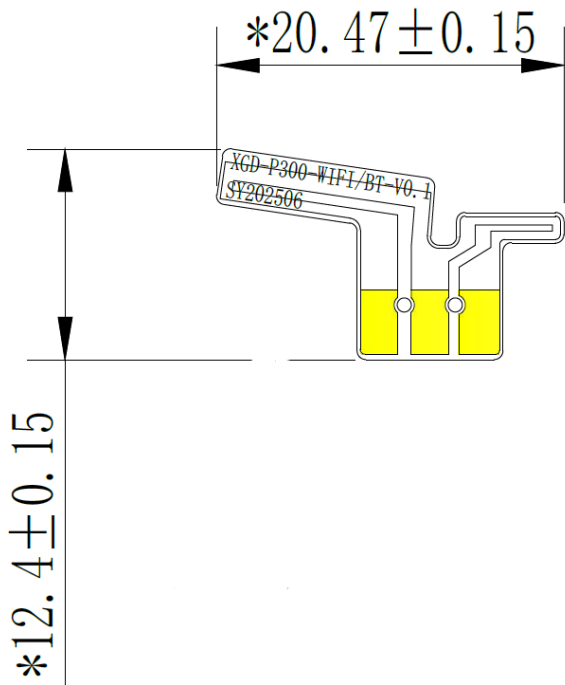
Manufacturer: Sunnyway Technology (China) Co., Ltd.

Address: Floor 6, Building 5, Nam Tai Inno Park, Guangming District, Shenzhen, Guangdong, China.

Antenna Type: FPC

Antenna Brand: Sunnyway

Antenna Model: XGD-P300-WIFI/BT-V0.1



(b)antenna passive data

Frequency (Mhz)	Efficiency (%)	MaxGain (dBi)
2400	42.66	-0.99
2410	43.19	-1.01
2420	36.3	-2.12
2430	36.06	-2.11
2440	37.1	-1.96
2450	37.86	-1.98
2460	37.29	-1.96
2470	37.1	-1.88
2480	36.49	-1.76
2490	36.12	-1.81
2500	36.85	-1.42
5150	30.18	1.22
5160	29.36	1.1
5170	30.23	1.27
5180	30.04	1.21
5190	30.8	1.27
5200	30.8	1.2
5210	31.18	1.18
5220	31.23	1.08
5230	31.13	1.89

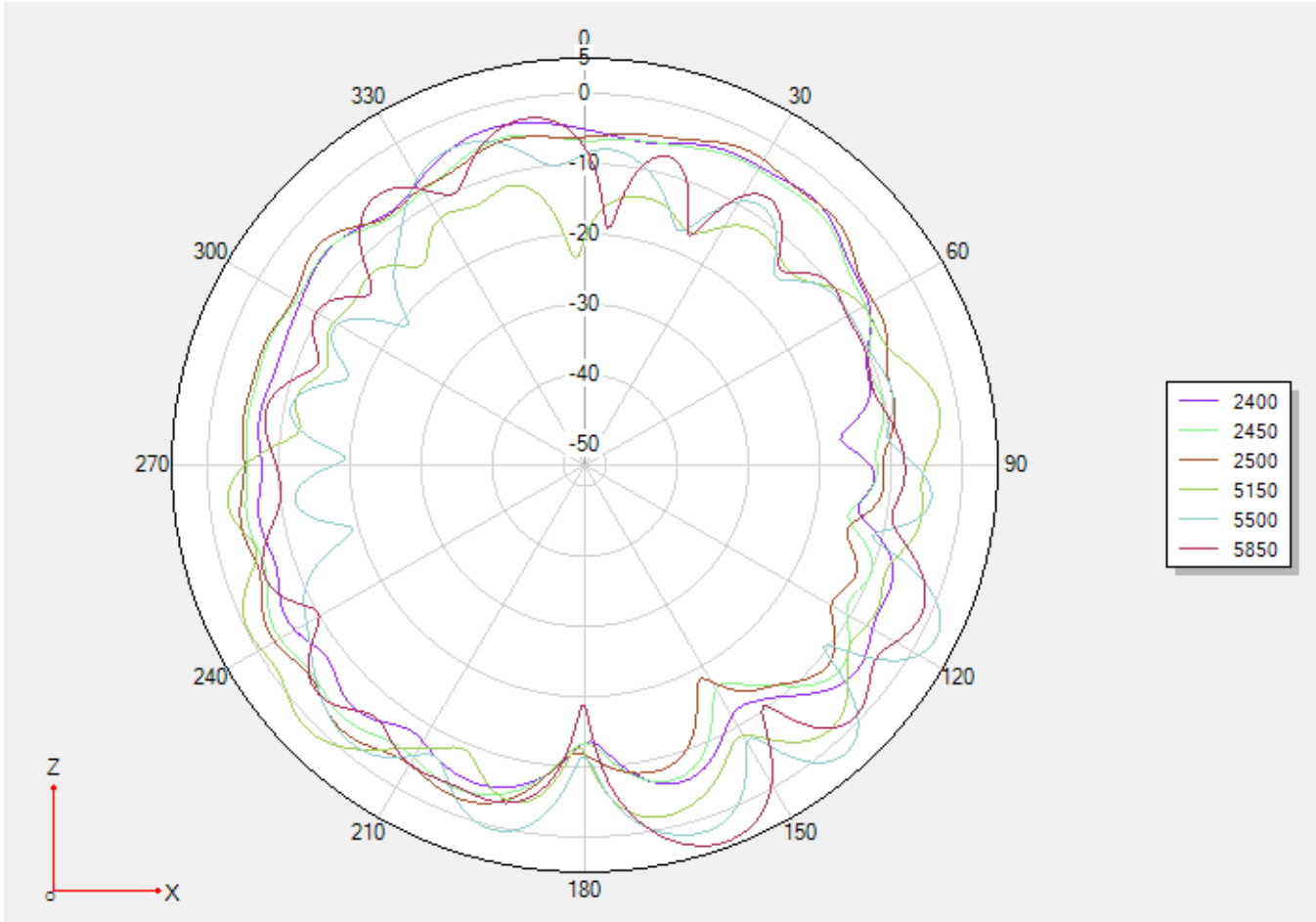
Frequency (Mhz)	Efficiency (%)	MaxGain (dBi)
5460	39.38	1.51
5470	38.84	1.3
5480	40.2	1.38
5490	41.12	1.5
5500	40.55	1.26
5510	40.48	1.26
5520	40.69	1.3
5530	40.69	1.37
5540	40.27	1.35
5550	42.58	1.77
5560	41.41	1.73
5570	43.5	2.08
5580	41.19	2.07
5590	44.04	2.62
5600	41.92	2.62
5610	44.36	3.03
5620	42.43	2.81
5630	46.98	3.49
5640	45.32	3.41
5650	48.19	4

5240	32.08	1.41
5250	32.13	1.5
5260	32.59	1.83
5270	32.44	2.05
5280	33.88	1.75
5290	32.91	1.68
5300	34.72	2.19
5310	33.33	1.89
5320	35.88	1.36
5330	34.38	1.06
5340	36.67	1.72
5350	35	1.51
5360	37.29	1.99
5370	35.29	1.7
5380	37.16	2.08
5390	35.12	1.74
5400	38.84	2.42
5410	36.92	2.14
5420	39.58	2.52
5430	37.67	1.96
5440	39.44	2.03
5450	38.25	1.55

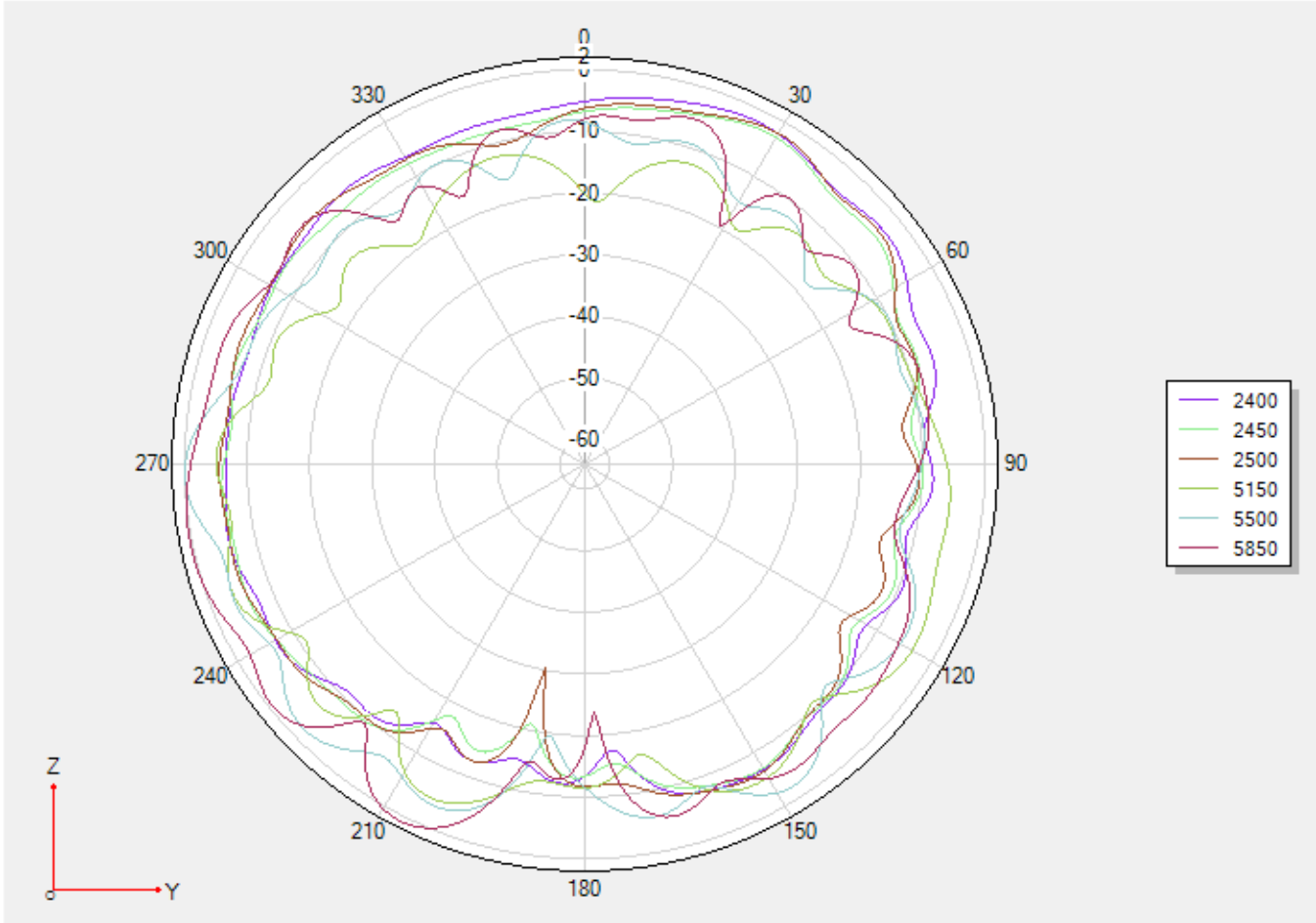
5660	45.32	3.79
5670	49.17	4.41
5680	47.07	4.23
5690	48.64	4.51
5700	47.41	4.43
5710	50.55	5
5720	49.36	4.95
5730	49.9	5.13
5740	49.99	5.11
5750	48.73	5.05
5760	51.02	5.27
5770	48.64	5.12
5780	52.76	5.51
5790	50.36	5.35
5800	51.98	5.38
5810	49.54	5.15
5820	52.76	5.37
5830	50.18	5.21
5840	52.56	5.47
5850	50.36	5.3

(c) Directional diagram

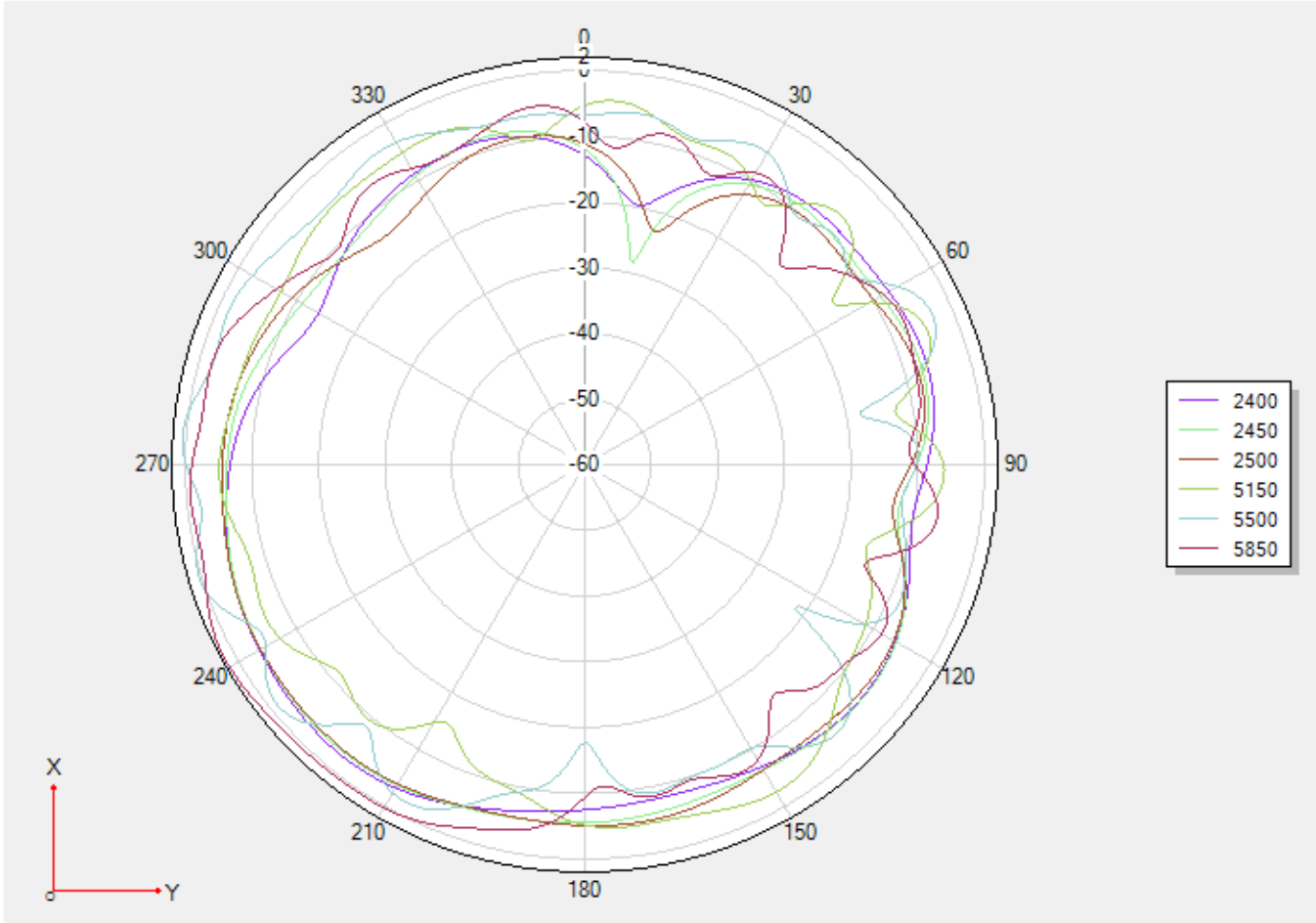
Phi 0



Phi 90



Theta 90



4. GPS antenna

(a) GPS antenna information

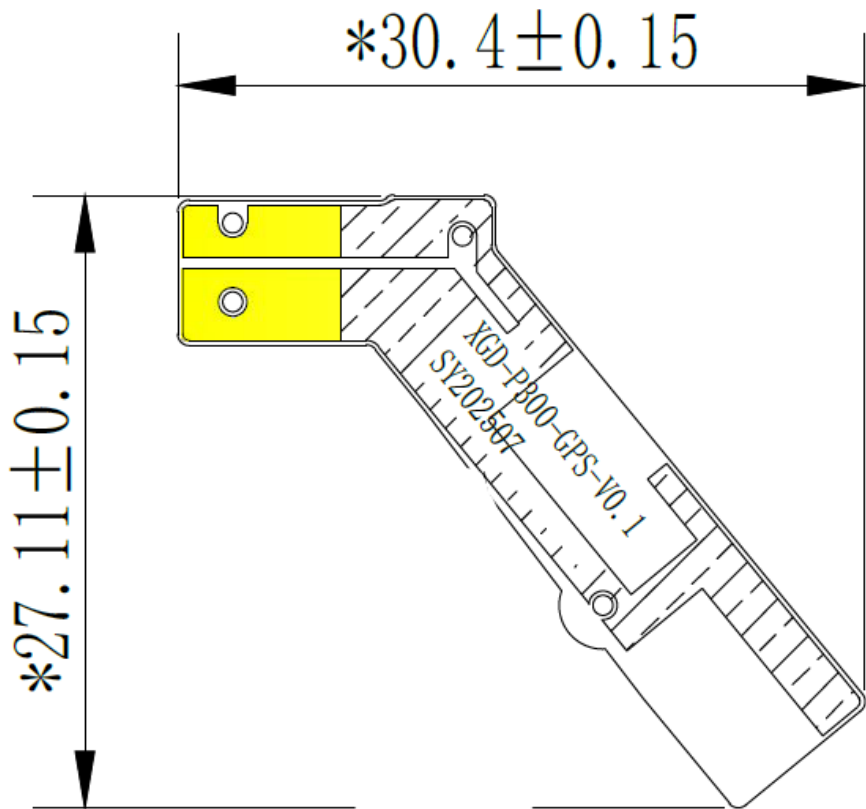
Manufacturer: Sunnyway Technology (China) Co., Ltd.

Address: Floor 6, Building 5, Nam Tai Inno Park, Guangming District, Shenzhen, Guangdong, China.

Antenna Type: FPC

Antenna Brand: Sunnyway

Antenna Model: XGD-P300-GPS-V0.1

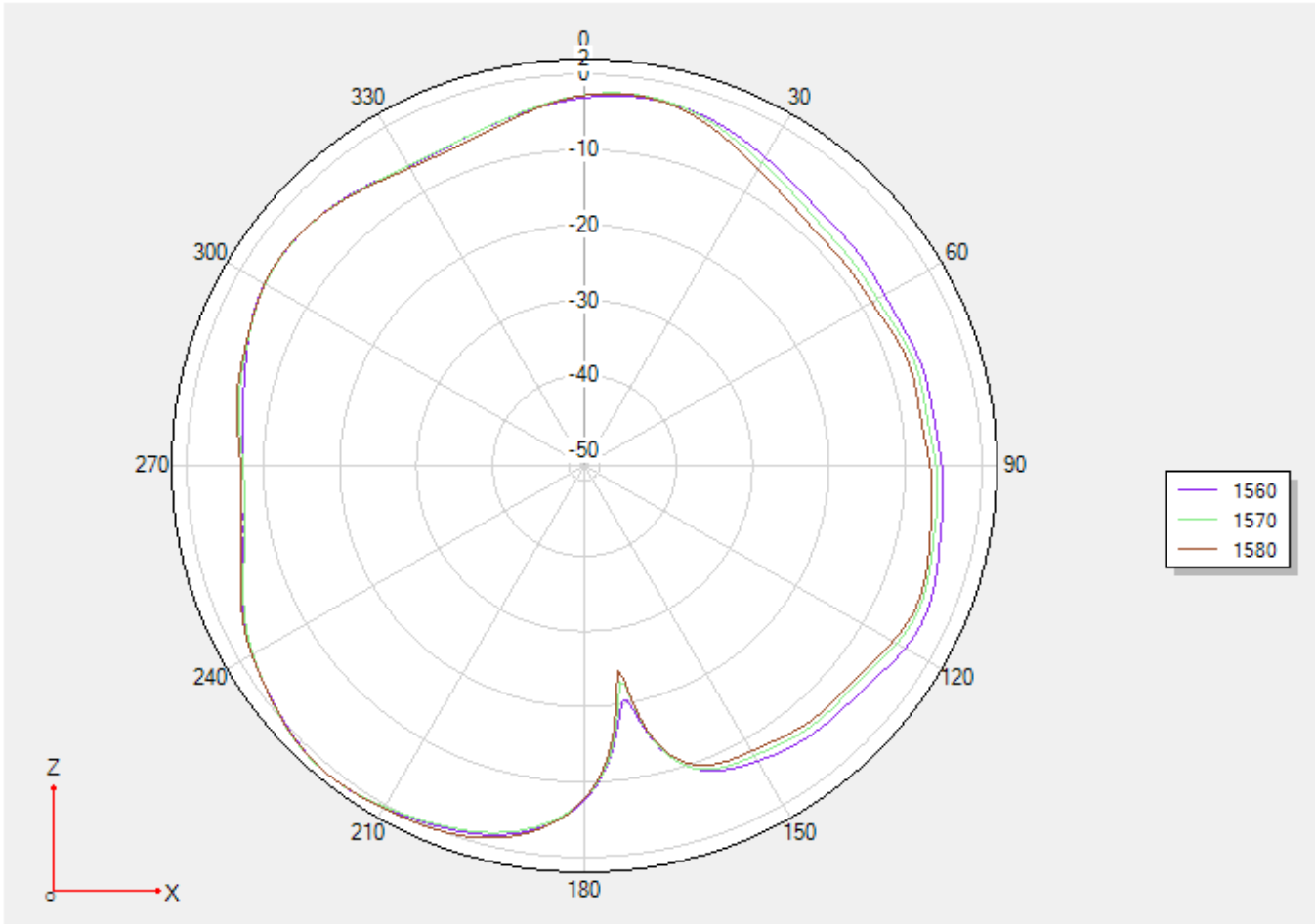


(b)antenna passive data

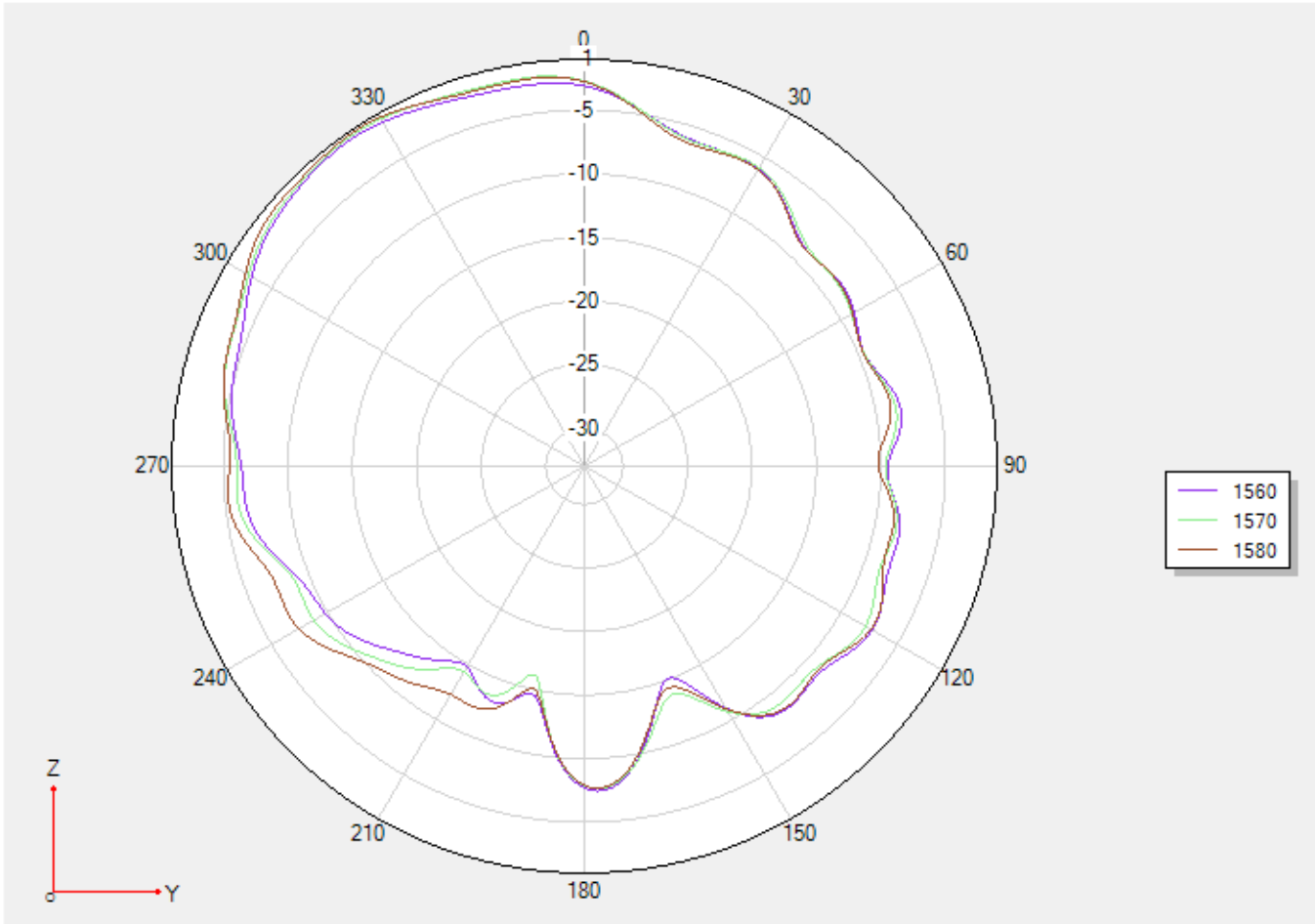
Frequency (Mhz)	Efficiency (%)	MaxGain (dBi)
1500	41.4	0.74
1510	41.59	0.43
1520	46.77	1.45
1530	46.67	1.05
1540	44.67	1.14
1550	42.27	0.68
1560	49.77	1.92
1570	48.98	1.85
1580	48.98	2.15
1590	42.66	1.21
1600	46.24	1.95

(c) Directional diagram

Phi 0



Phi 90



Theta 90

