

Antenna Test Report

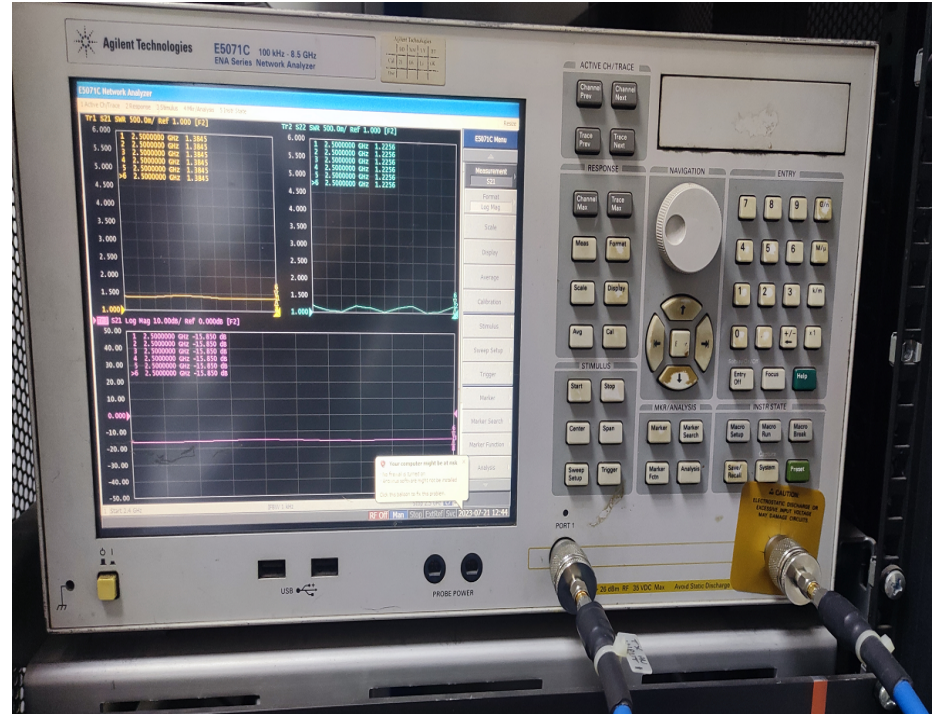
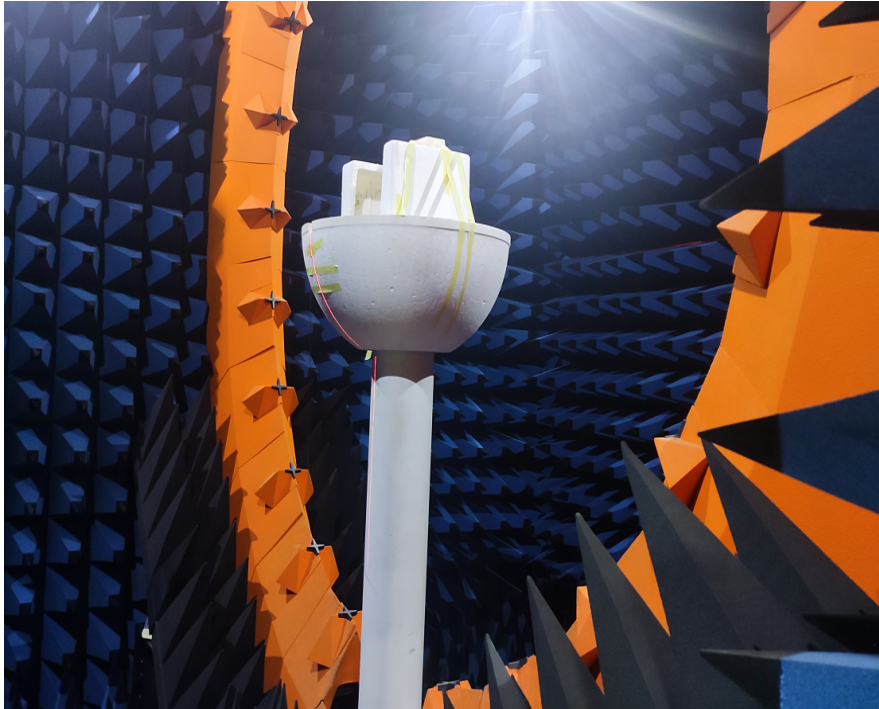
*Test Lab:Exceltek Electronics Technology
(Dongguan) Co.,Ltd*

*manufacturer:Exceltek Electronics Technology
(Dongguan) Co.,Ltd*

1. The Equipment of Active Test

1: SATIMO SG24S 4x4x4 m (3D)

2: Network Analyzer-AGILENT E5071C



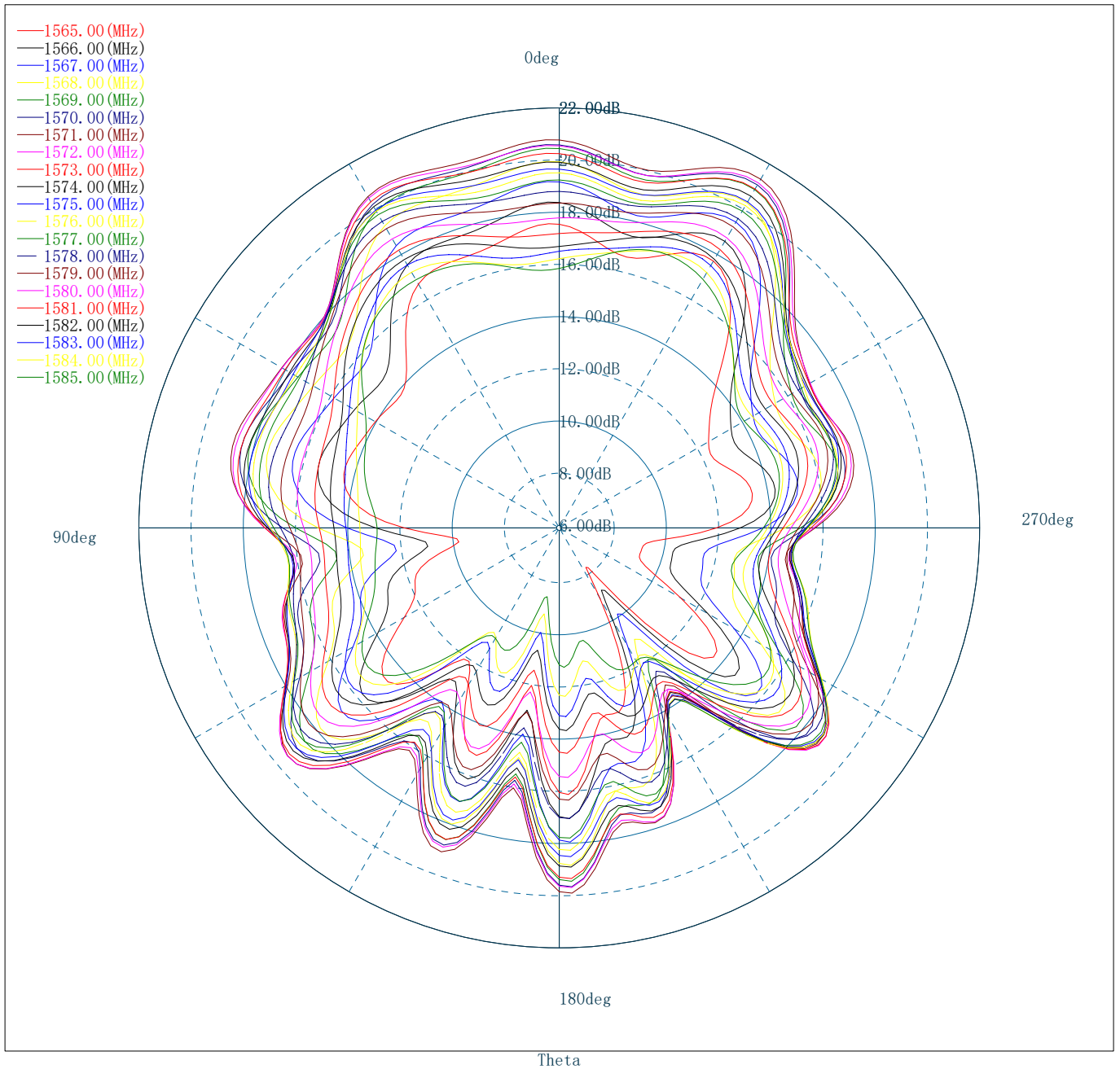
2 .GPS antenna Efficiency and Gain

(Test results at 5m RG174 Length)

GPS antenna

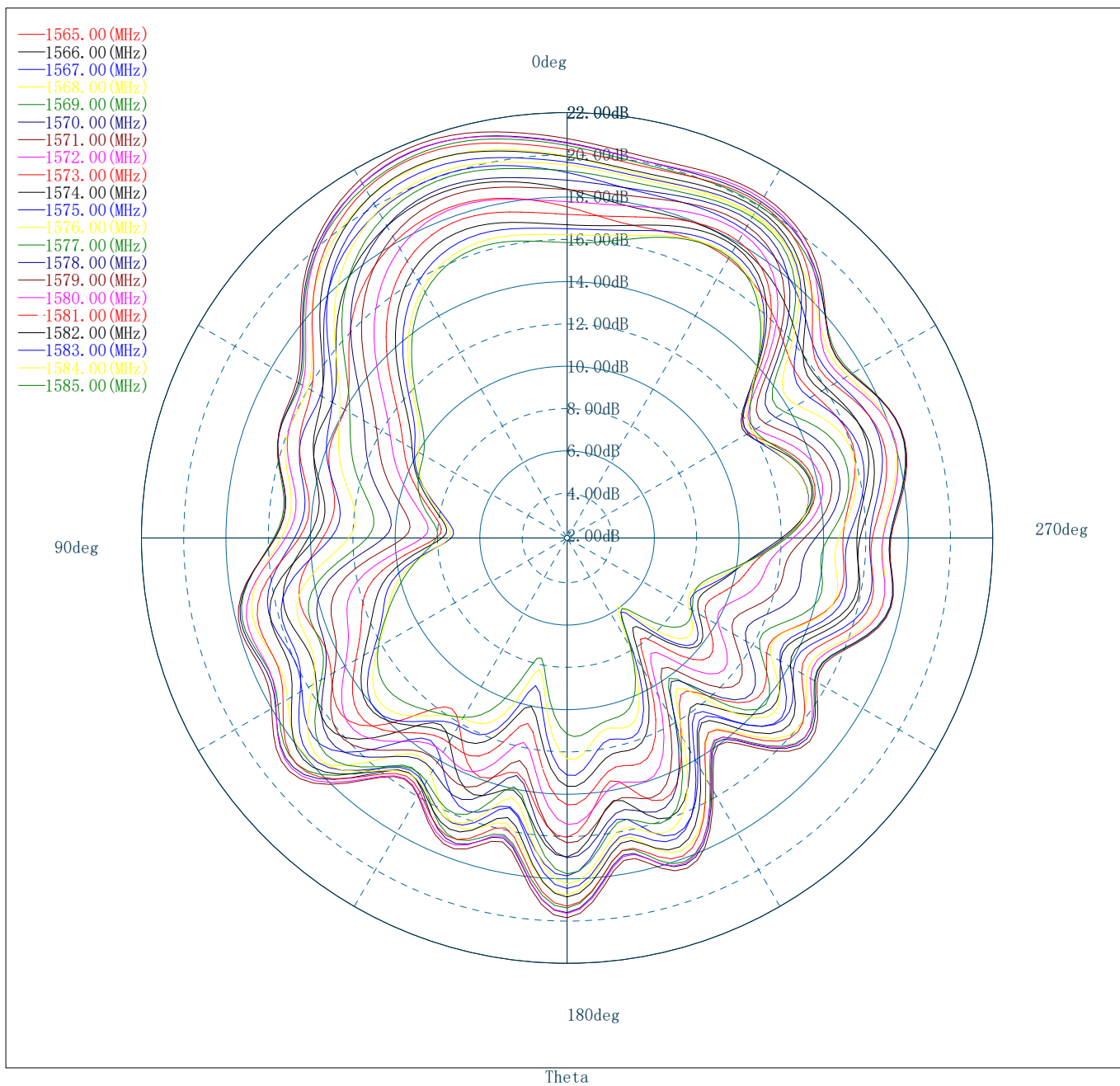
Frequency(MHz)	Efficiency (%)	Peak GAIN (dBi)
1565	26	18
1566	32	19
1567	39	20
1568	47	20
1569	54	20
1570	57	21
1571	60	21
1572	58	21
1573	55	21
1574	51	21
1575	48	20
1576	46	20
1577	43	20
1578	40	20
1579	37	19
1580	32	19
1581	29	18
1582	26	18
1583	24	18

1583	22	17
1584	21	17
1585	24	17

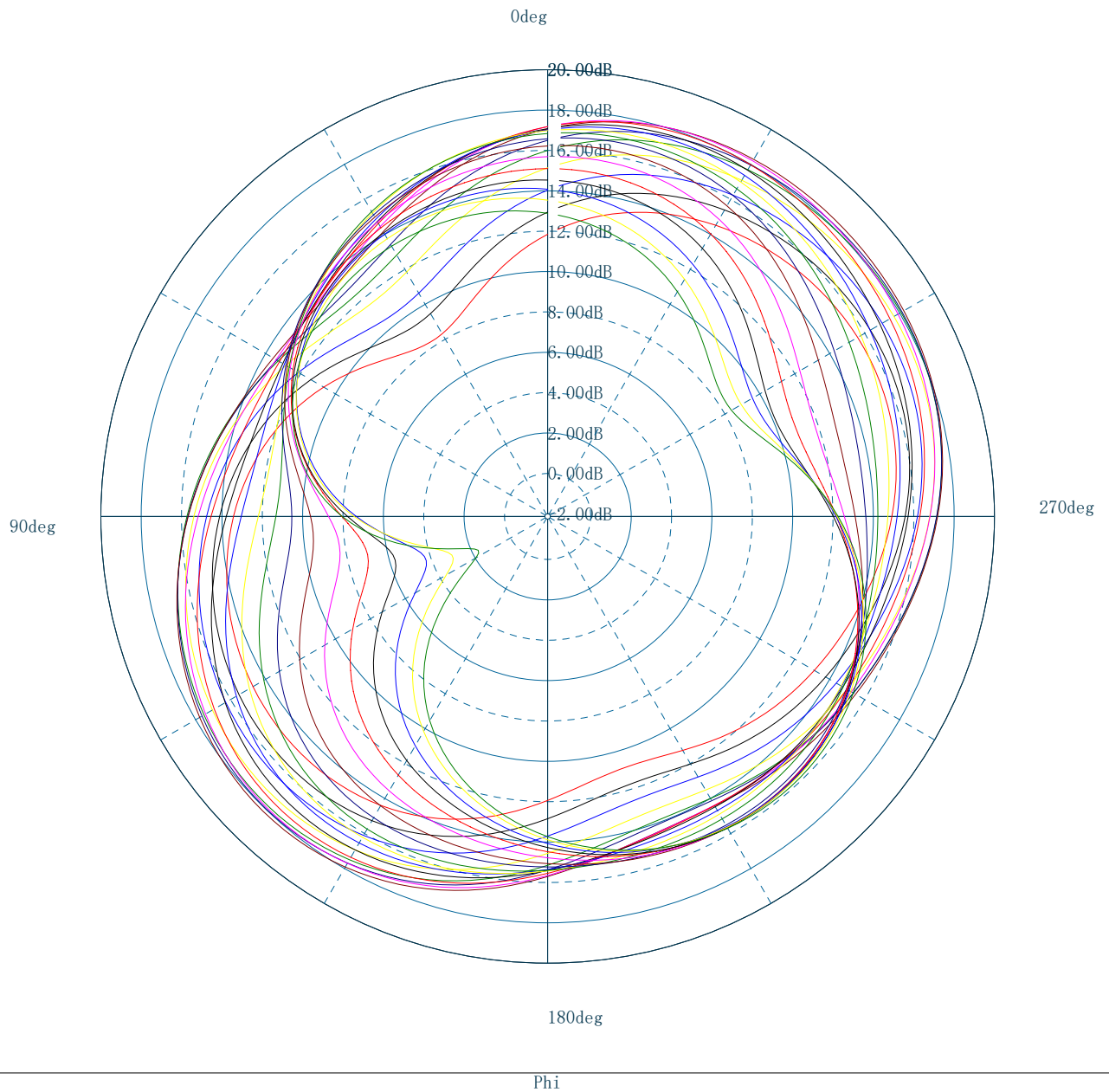


GPS Antenna Radiation Pattern

GPS+4G_GPS Phi90



GPS Antenna Radiation Pattern



GPS Antenna Radiation Pattern

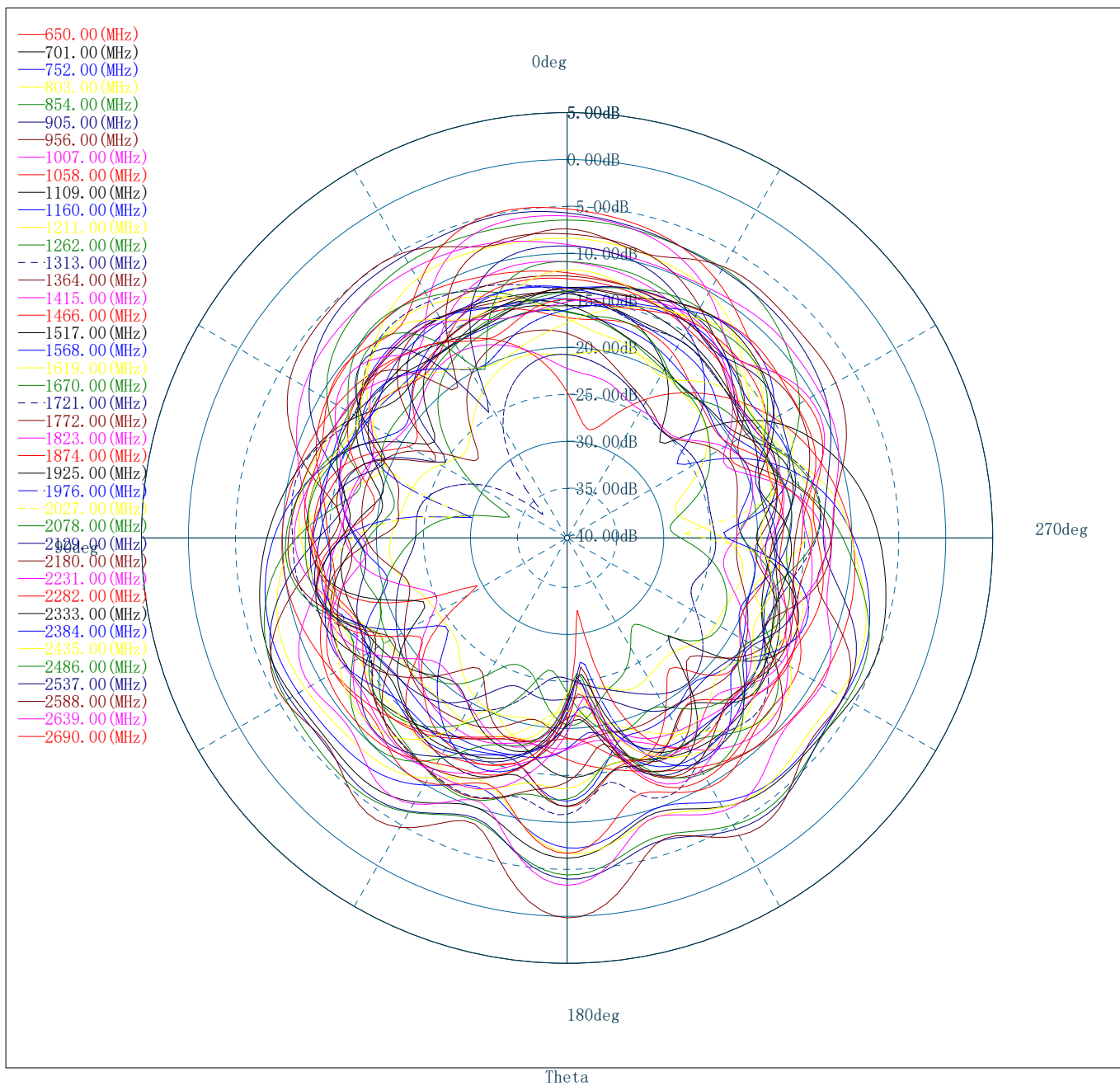
3. 4G antenna Efficiency and Gain

(Test results at 5 m RG174 length)

4G antenna

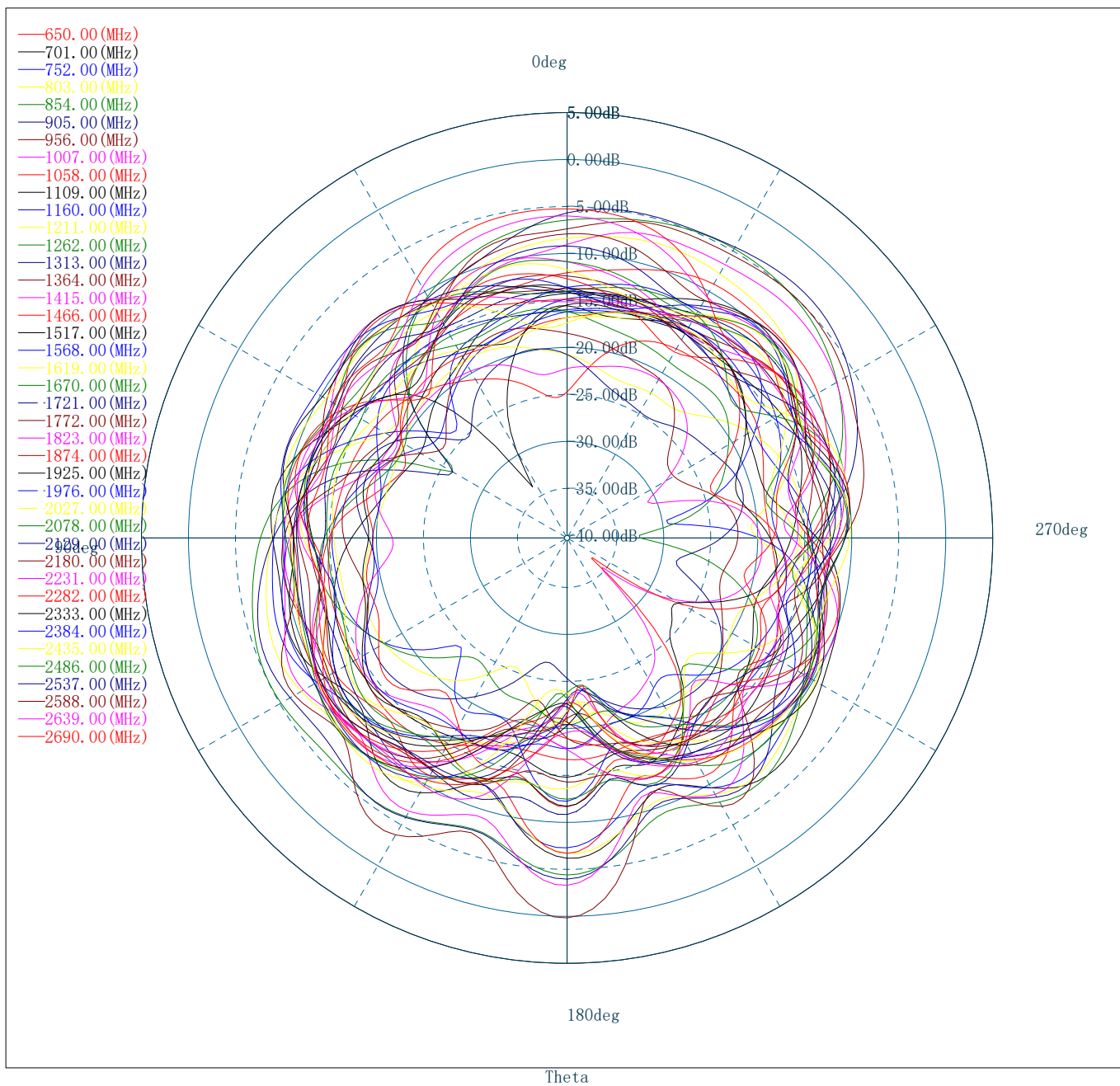
Frequency(Hz)	Efficiency (%)	Peak GAIN (dBi)
650000000	5%	-8.97
701000000	11%	-5.05
752000000	9%	-5.93
803000000	10%	-6.17
854000000	16%	-4.36
905000000	16%	-3.95
956000000	16%	0.16
1007000000	11%	-3.32
1058000000	6%	-6.72
1109000000	3%	-12.53
1160000000	2%	-12.27
1211000000	1%	-15.13
1262000000	1%	-13.77
1313000000	1%	-15.36
1364000000	1%	-13.30
1415000000	1%	-13.18
1466000000	2%	-11.67
1517000000	2%	-11.73
1568000000	3%	-12.35
1619000000	4%	-10.39
1670000000	4%	-9.62
1721000000	5%	-9.62
1772000000	5%	-9.65
1823000000	5%	-7.47
1874000000	4%	-7.56
1925000000	3%	-10.34
1976000000	3%	-10.82
2027000000	4%	-9.32
2078000000	3%	-9.79
2129000000	4%	-10.04
2180000000	4%	-9.49
2231000000	4%	-9.18
2282000000	5%	-8.40
2333000000	5%	-8.20
2384000000	5%	-8.54
2435000000	5%	-7.76
2486000000	5%	-7.94
2537000000	5%	-8.83
2588000000	5%	-7.70
2639000000	5%	-5.88
2690000000	6%	-4.79

GPS+4G_4G Phi0



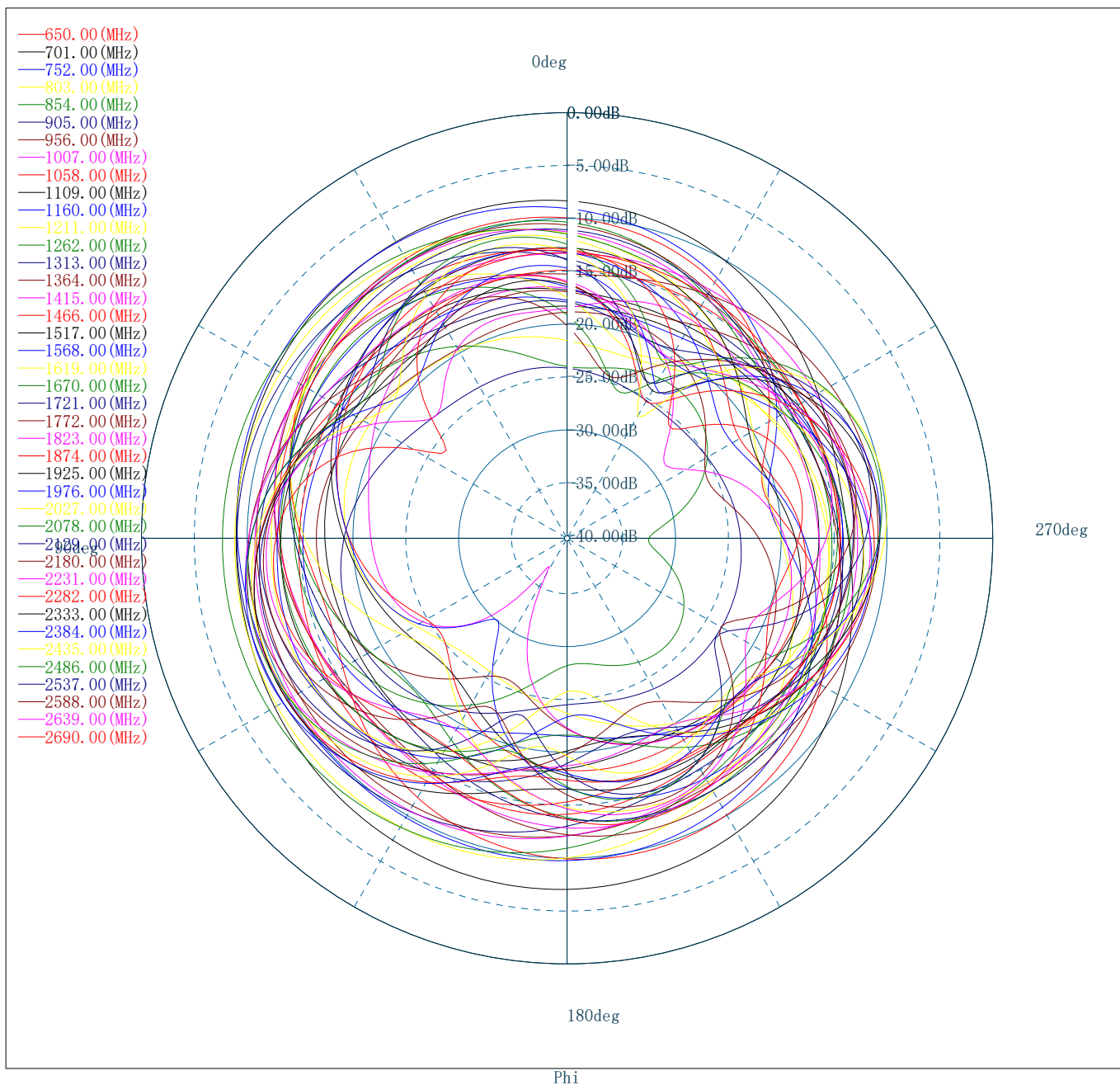
4G Antenna Radiation Pattern

GPS+4G_4G Phi90



4G Antenna Radiation Pattern

GPS+4G_4G Theta90



4G Antenna Radiation Pattern

