

Antenna Test Report

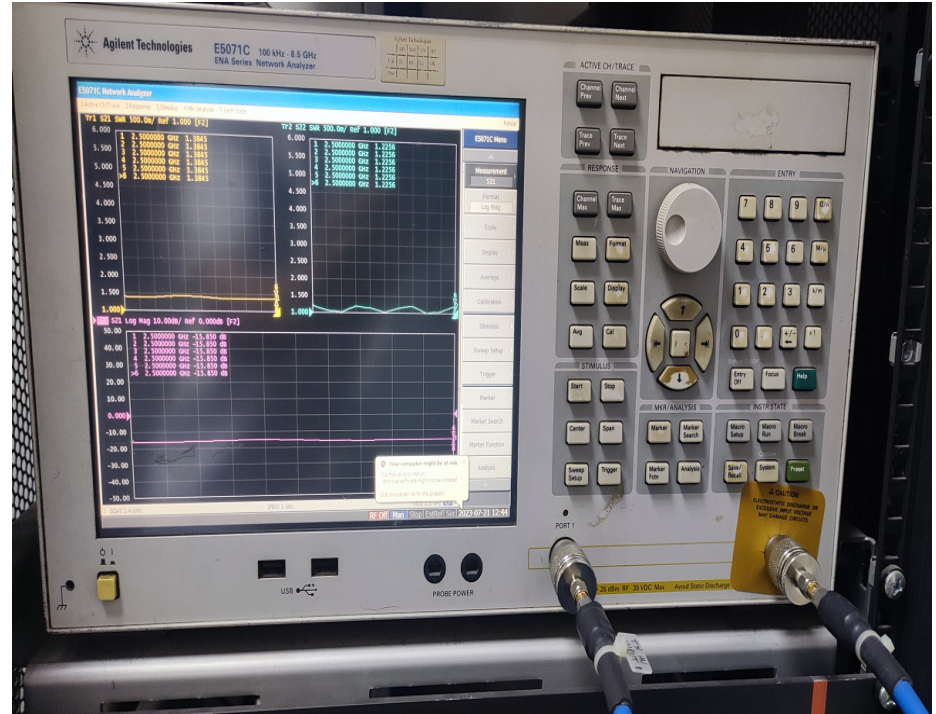
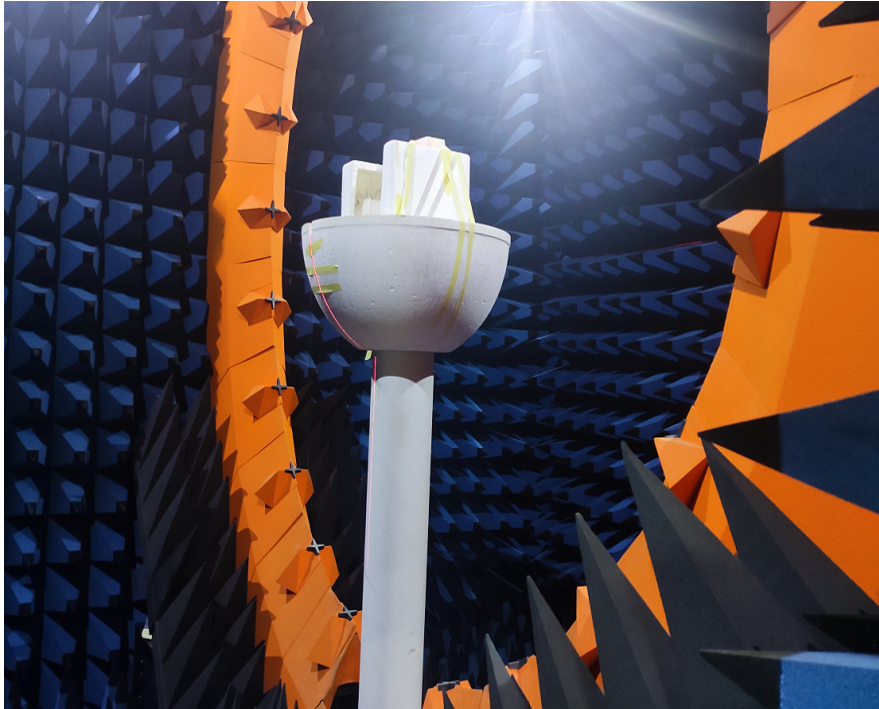
*Test Lab:Exceltek Electronics Technology
(Dongguan) Co.,Ltd*

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

1. The Equipment of Active Test

1: SATIMO SG24S 4x4x4 m (3D)

2: Network Analyzer-AGILENT E5071C



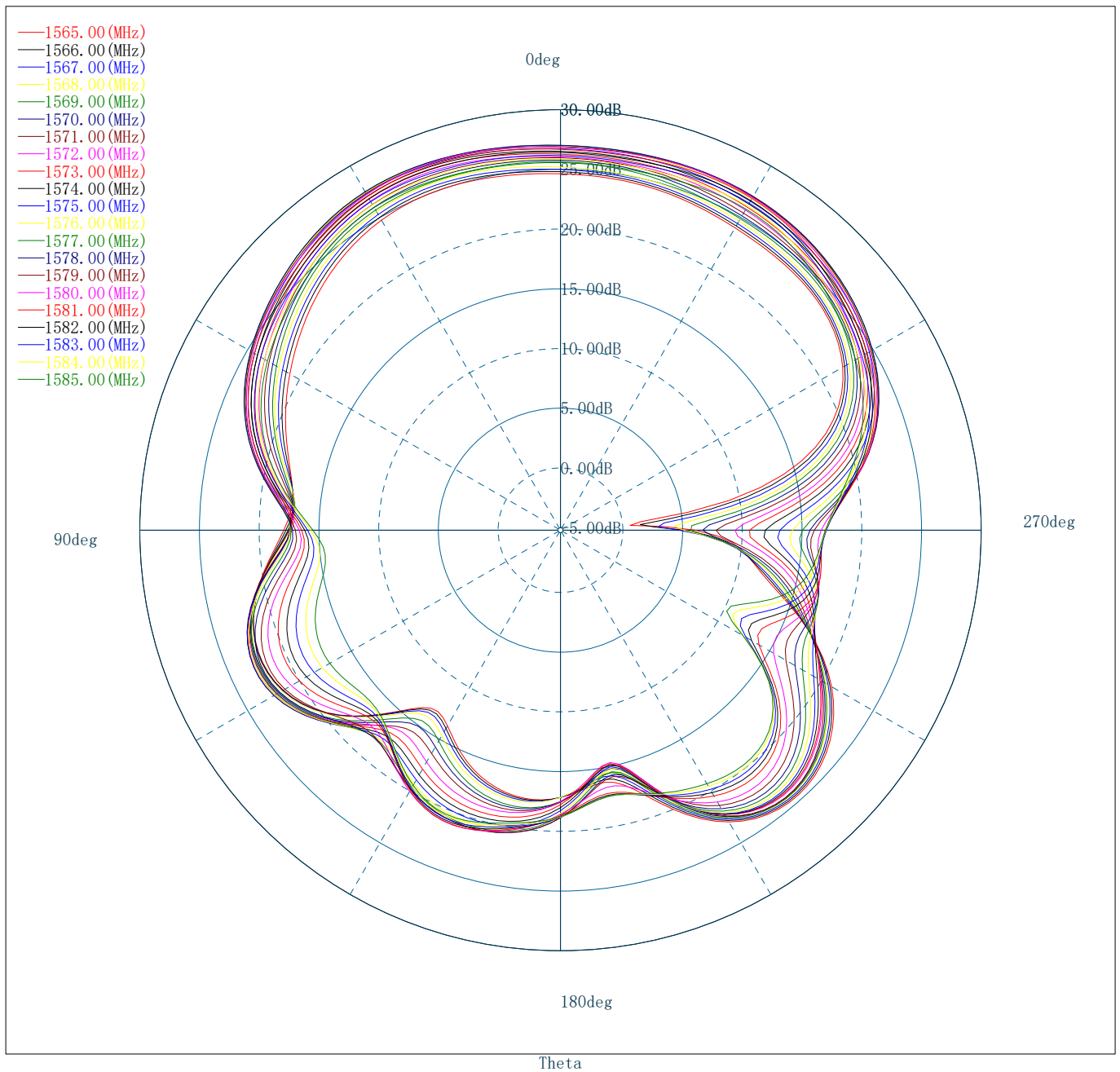
2 .GPS antenna Efficiency and Gain

(Test results at 1.5m RG174 Length)

GPS Antenna

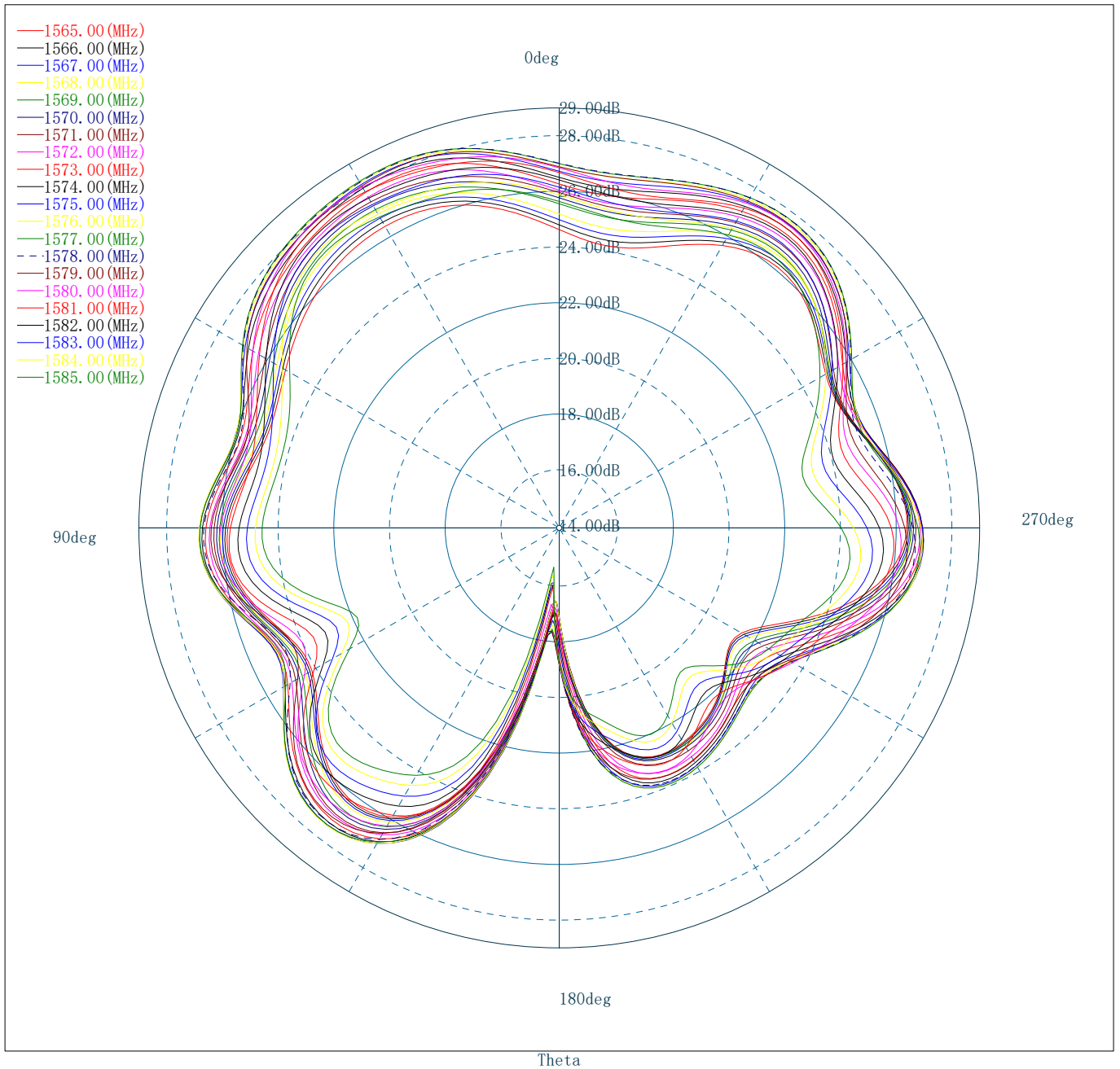
Frequency(MHz)	Efficiency (%)	Peak GAIN (dBi)
1565	25	27
1566	26	27
1567	27	27
1568	28	27
1569	29	27
1570	30	27
1571	31	28
1572	33	28
1573	34	28
1574	36	28
1575	37	28
1576	38	28
1577	38	28
1578	38	28
1579	36	28
1580	34	28
1581	32	28
1582	30	28
1583	28	28

1583	25	27
1584	25	27
1585	24	27



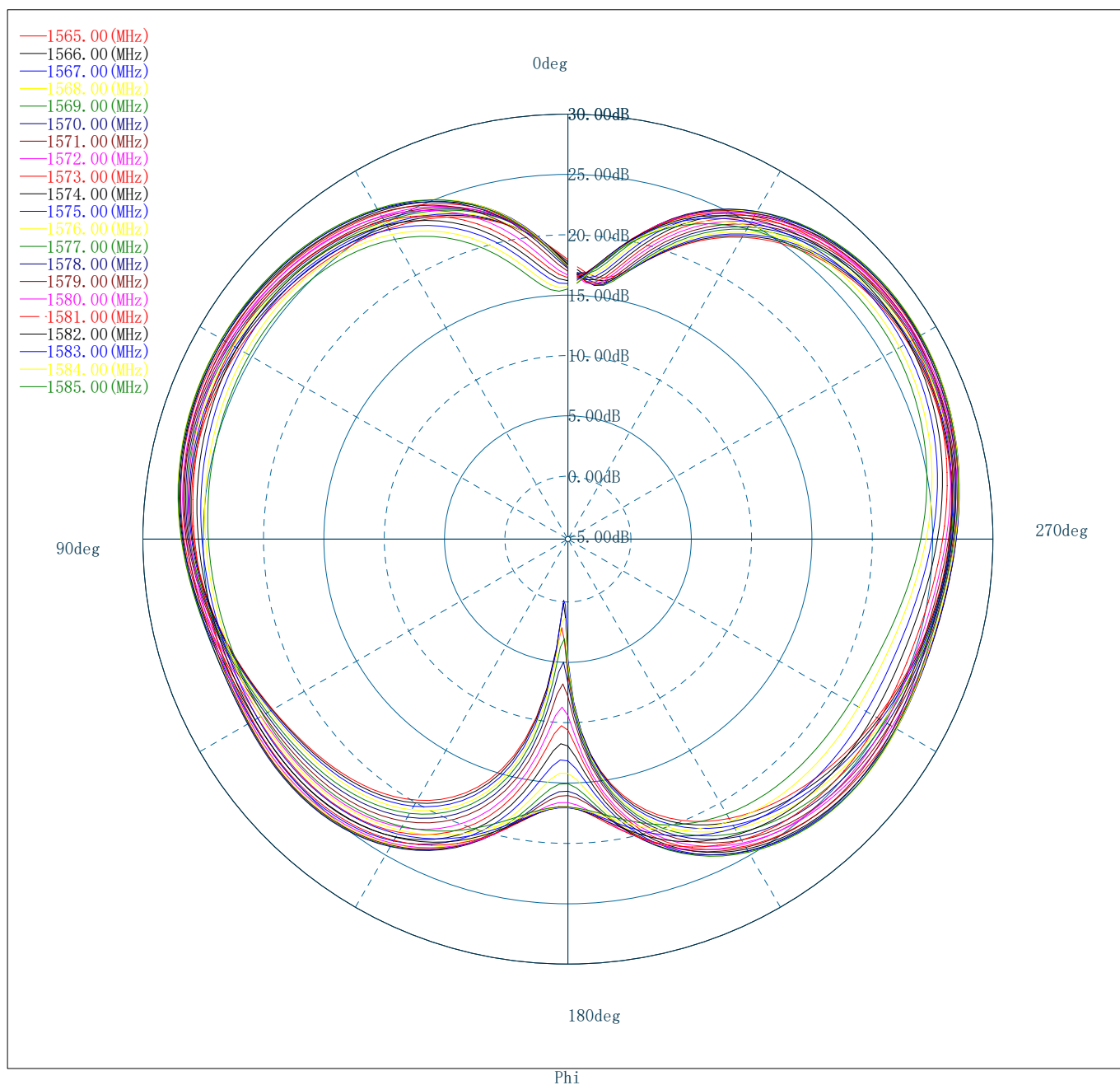
GPS Antenna Radiation Pattern

GPS+4G+wifi_GPS Phi90



GPS Antenna Radiation Pattern

GPS+4G+wifi_GPS Theta90



GPS Antenna Radiation Pattern

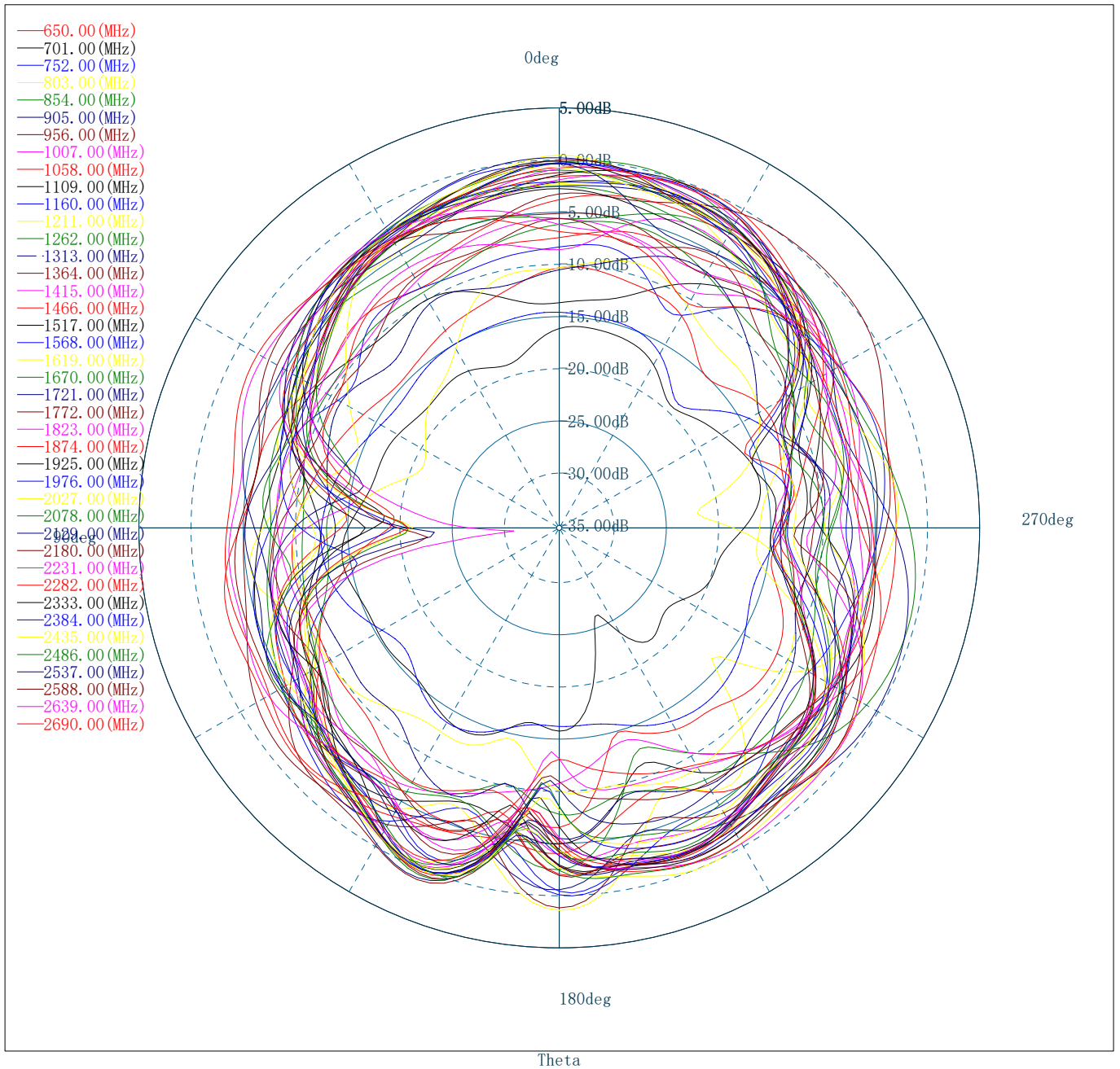
3. 44G antenna Efficiency and Gain

(Test results at 1.5m RG174 length)

4G antenna

Frequency(Hz)	Efficiency (%)	Peak GAIN (dBi)
650000000	27%	-1.06
701000000	19%	-3.02
752000000	27%	0.05
803000000	39%	1.74
854000000	36%	-0.51
905000000	48%	0.09
956000000	41%	1.15
1007000000	21%	-3.17
1058000000	7%	-6.24
1109000000	2%	-13.49
1160000000	4%	-10.78
1211000000	7%	-7.39
1262000000	15%	-5.44
1313000000	11%	-5.39
1364000000	22%	-1.78
1415000000	26%	-1.38
1466000000	31%	-0.86
1517000000	33%	-1.61
1568000000	46%	-0.07
1619000000	51%	0.78
1670000000	48%	0.27
1721000000	49%	1.20
1772000000	48%	1.50
1823000000	46%	-0.05
1874000000	48%	0.28
1925000000	47%	0.64
1976000000	46%	0.69
2027000000	45%	0.37
2078000000	43%	0.63
2129000000	46%	0.94
2180000000	46%	0.62
2231000000	44%	0.57
2282000000	45%	0.86
2333000000	44%	0.34
2384000000	42%	0.43
2435000000	43%	0.99
2486000000	42%	1.09
2537000000	39%	1.29
2588000000	37%	1.11
2639000000	36%	0.15
2690000000	37%	0.76

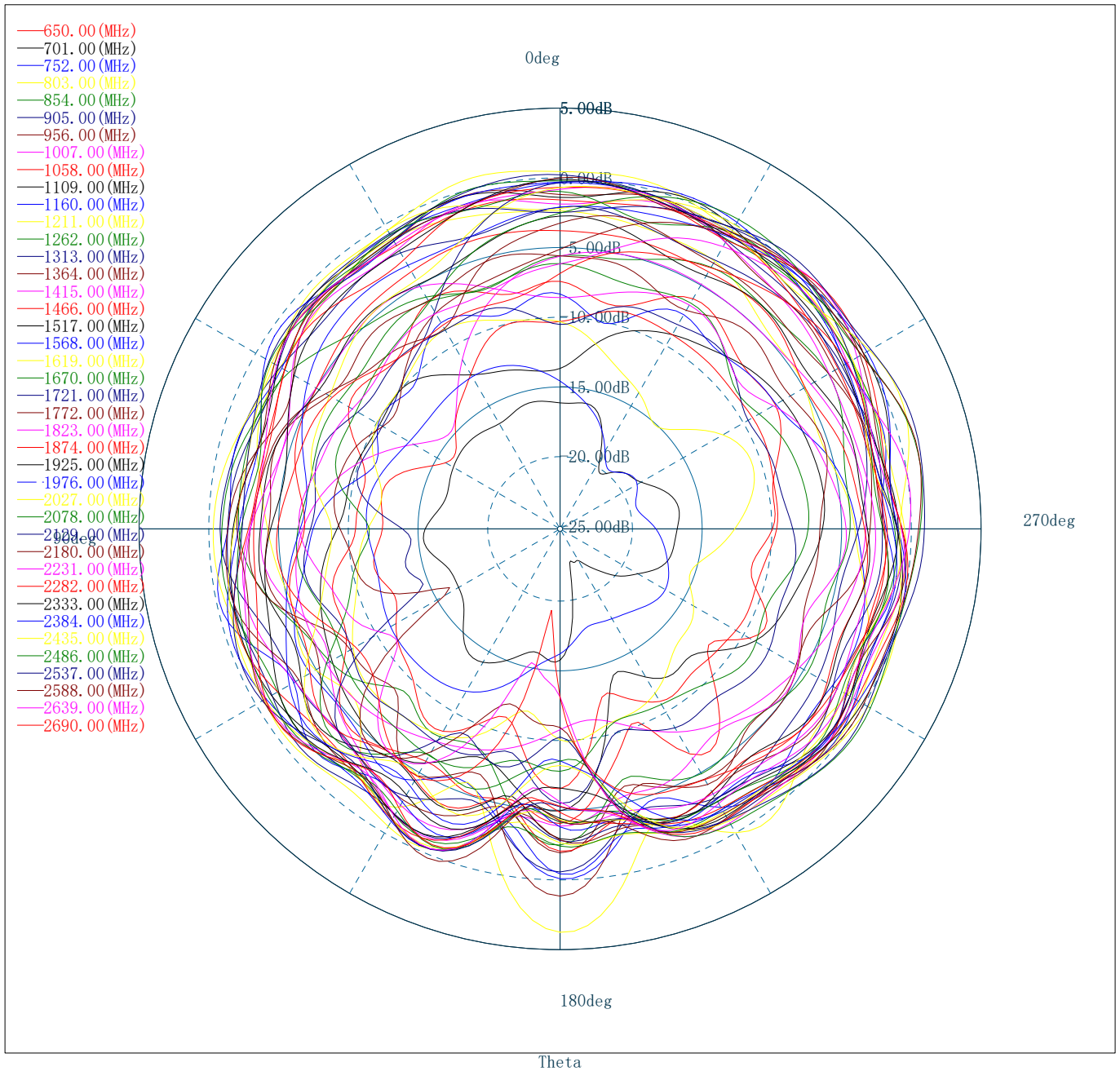
GPS+4G+wifi_4G Phi0



4G Antenna Radiation Pattern

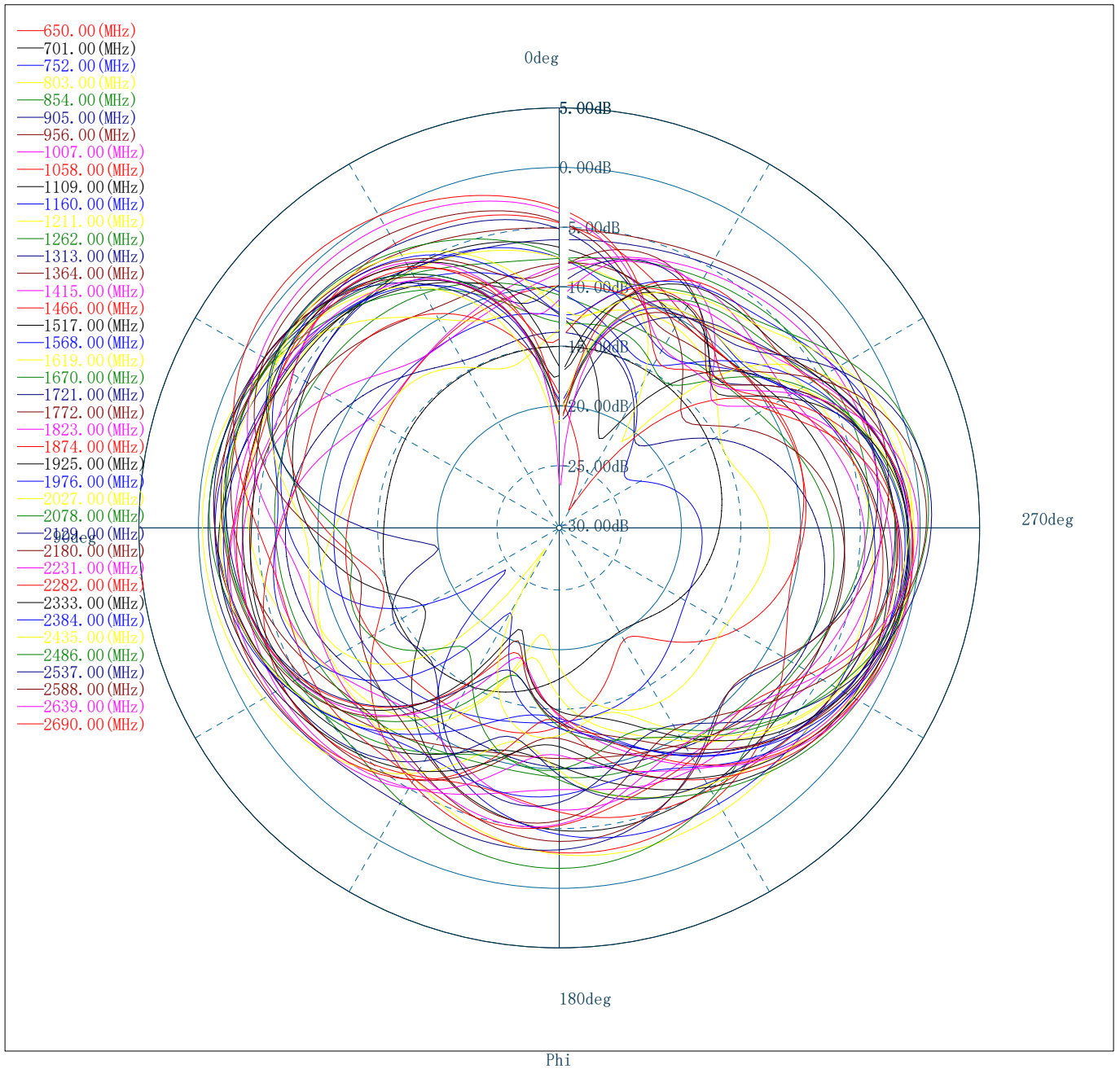
Exceltek Electronics Technology (Dongguan) Co.,Ltd

GPS+4G+wifi_4G Phi90



4G Antenna RRadiation Pattern

GPS+4G+wifi_4G Theta90



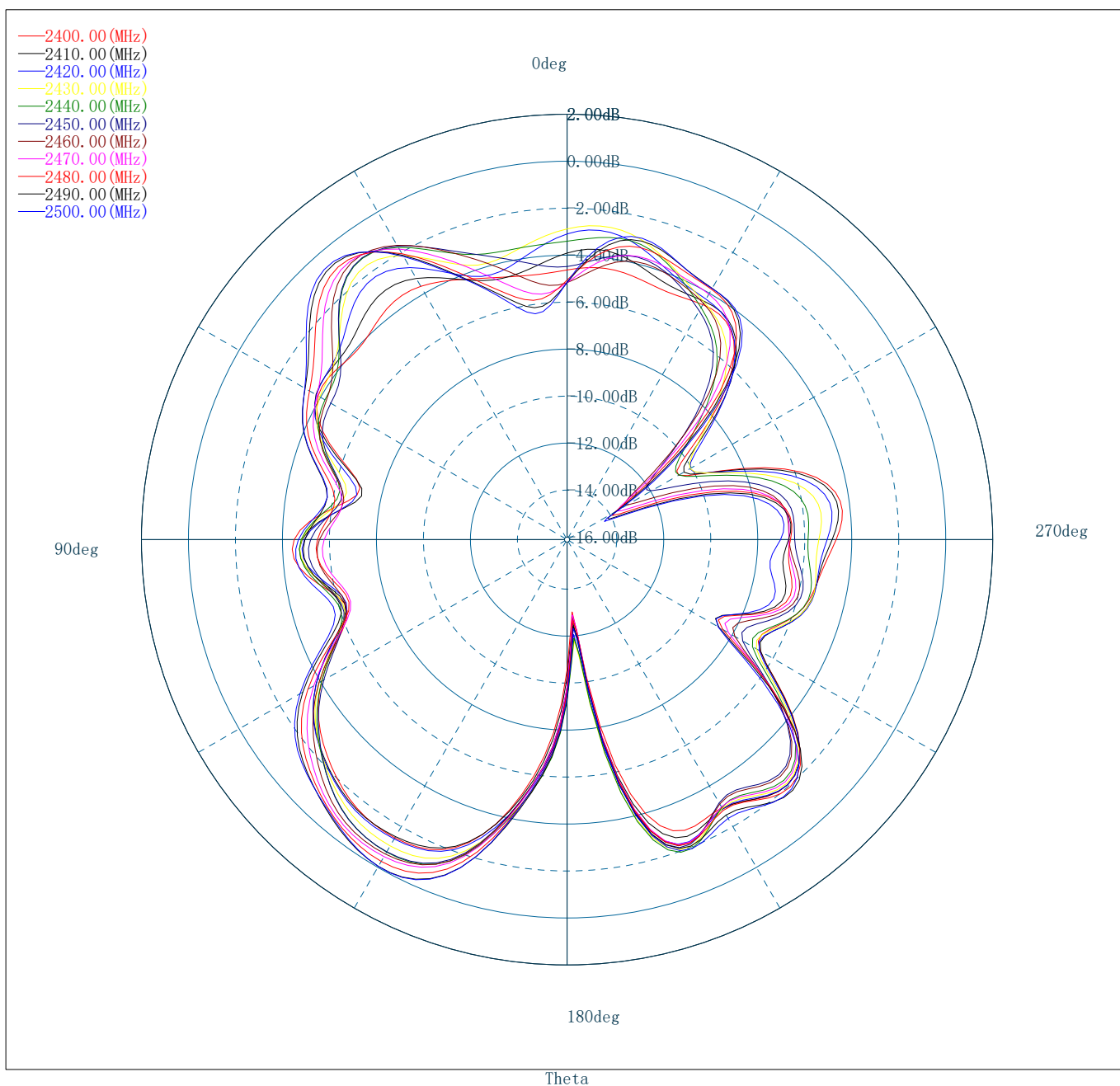
4G Antenna RRadiation Pattern

4.WIFI antenna Efficiency and Gain

(Test results at 1.5 m RG174 length)

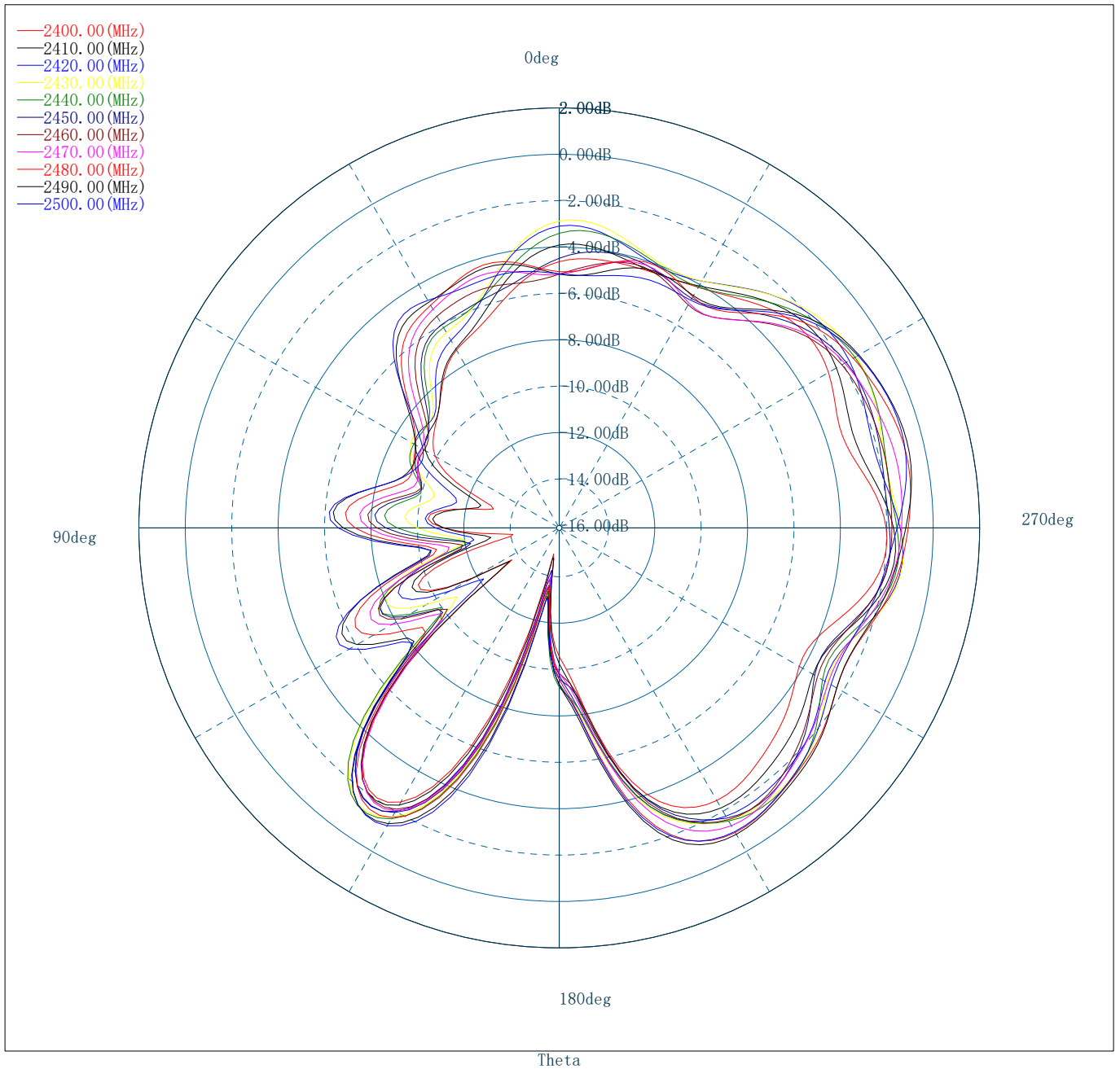
WIFI Antenna

Frequency(Hz)	Efficiency (%)	Peak GAIN (dBi)
2400000000	31%	0.01
2410000000	33%	0.36
2420000000	35%	0.64
2430000000	36%	0.82
2440000000	36%	0.83
2450000000	34%	0.65
2460000000	35%	0.71
2470000000	36%	0.89
2480000000	38%	1.11
2490000000	39%	1.11
2500000000	38%	0.88



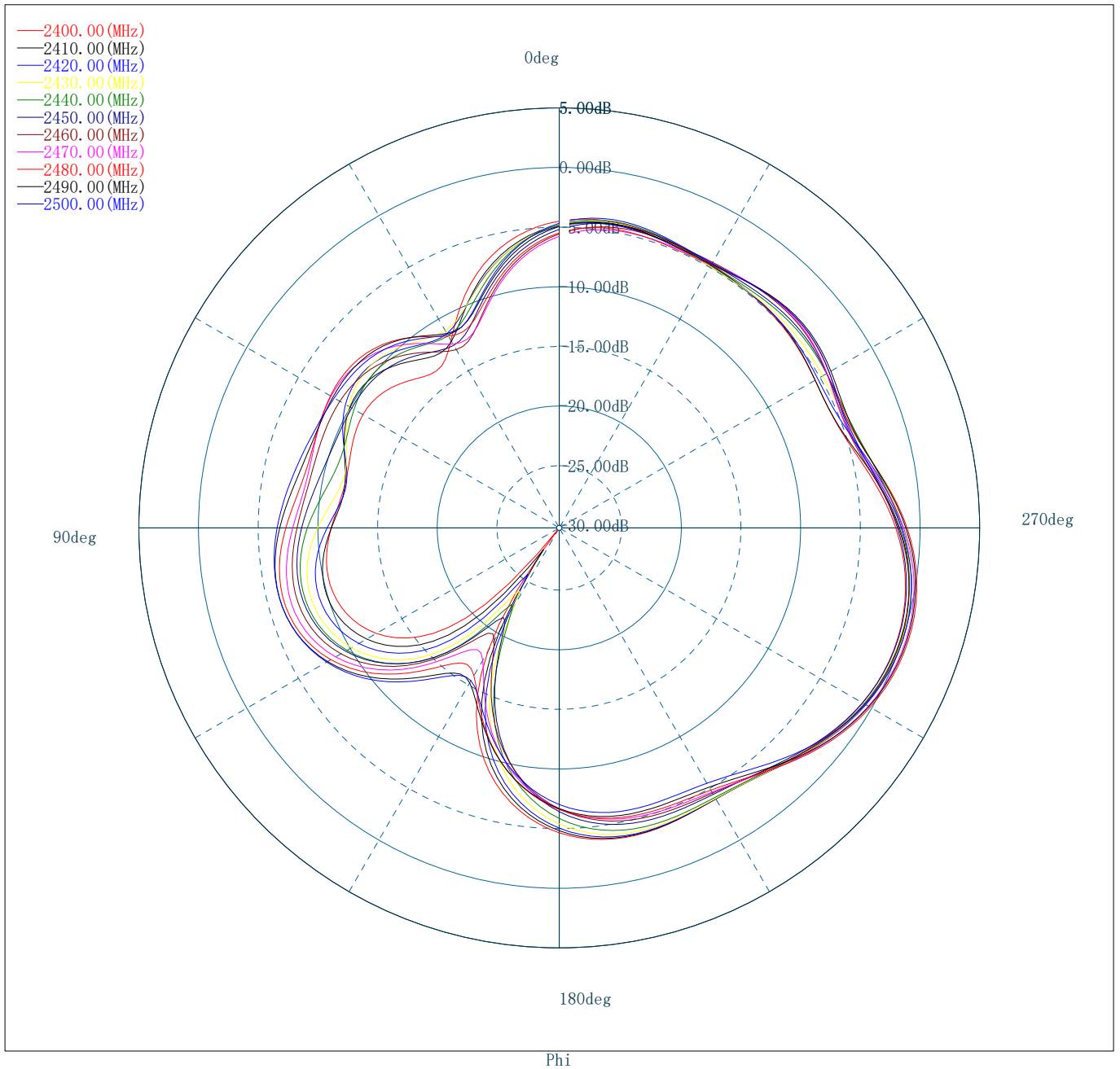
WIFI Antenna RRadiation Pattern

GPS+4G+wifi_wifi Phi90



WIFI Antenna RRadiation Pattern

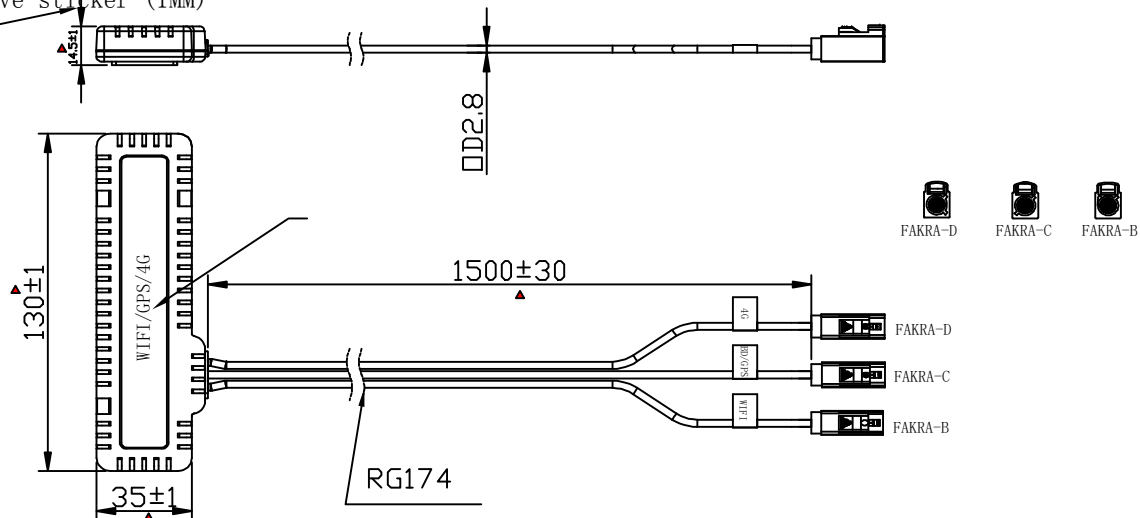
GPS+4G+wifi_wifi Theta90



WIFI Antenna RRadiation Pattern

REV	DESCRIPTION	DATE	ECN	ENG
01	DRAWING RECEIVED	20230625	*****	HENRY

This size includes a thickness of 3M adhesive sticker (1MM)



technical requirement:

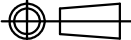
1. GNSS Antenna characteristics:

- 1) GPS:1575.42±1.023MHz; BD: 1561±2.046MHz;
- 2) 3.0-3.6V;
- 3) Max 14mA@3.3V;
- 4) 28±3dB;
- 5) VSWR:2.0 Max;
- 6) <1.5dB;

2. 4824-960MHz&1710-2690MHz, VSWR:3.0 Max,
WIFI:2400-2500MHz: VSWR≤2.0

3. Appearance: The surface of the plastic shell is smooth, and the surface of the surface and bottom shell are treated with material spark marks, without scratches, sharp edges, scratches, and other phenomena;

Storage temperature: -40-90℃; operation temperature: -40-85℃, Complies with ROHS requirements.

THIRD ANGLE PROJECTION 	DRAWING APPROVAL		 Exceltek Electronics Technology(DG) Co.,Ltd		
	DWN: 陈海明				
	CHK: 刘松				
TOLERANCES UNLESS OTHERWISE SPECIFIED	APPD: 刘松		CUS:	CUS P/N: B0508016645	
			EXC P/N: RT12006		
ONE PLACE DECIMAL .X ±0.30	SIZE: A4	UNIT: mm	TITLE: RG174*1.5M/FAKRA-B-C-D		
TWO PLACE DECIMAL .XX ±0.30					
THREE PLACE DECIMAL .XXX N/A					
HOLE DIA. VARIATION .XX N/A	SCALE: - : -		SHEET: 1 OF 1	CUS REV: NA	EXC REV: 01
ANGULAR DIMENSION (ENG) N/A					

BILL OF MATERIAL