



Hi-Target Surveying Instrument Co., Ltd.

V200/V5 4G Antenna Datasheet

File number: YFZ-2022-3258

Product version: V1.0

Antenna type: Loop

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1 Term

dBi	Decibel relative isotropic antenna
VSWR	Voltage Standing Wave Ratio
GSM	Global Service for Mobile communication
DCS	Digital Communication System
CDMA	Code Division Multiple Access
WCDMA	Wideband Code Division Multiple Access

2 Test Equipment

Vector Network Analyzer

Comprehensive Tester

Microwave Anechoic Chamber

3 Operation Frequency

System	Upload	Download
GSM850	824MHz~849 MHz	869MHz~894 MHz
GSM900	890MHz~915 MHz	935MHz~960MHz
DCS1800	1710MHz~1785 MHz	1805MHz~1880 MHz
PCS1900	1850MHz~1910 MHz	1930MHz~1990 MHz
CDMA800	824MHz~835 MHz	870MHz~880 MHz
CDMA2000	880MHz~849 MHz	869MHz~894 MHz
WCDMA900	1920MHz~915 MHz	925MHz~960 MHz
WCDMA2100	MHz~1980 MHz	2110MHz~2170 MHz
TD-BAND 39	1880MHz~1920 MHz	
TD-BAND 34	2010MHz~2025 MHz	2010MHz~2025 MHz
LTE	699MHz~2700 MHz	

4 Test Project

4.1 VSWR Chart

4.2 Smith Chart

4.3 2D Radiation Pattern

4.4 Gain and Efficiency

5 Test Method

Standard number: GB/T 9410-2008

Standard name: General Technical Specifications for Mobile Communication Antennas

6 Test Indicators and Data Charts

6.1 VSWR

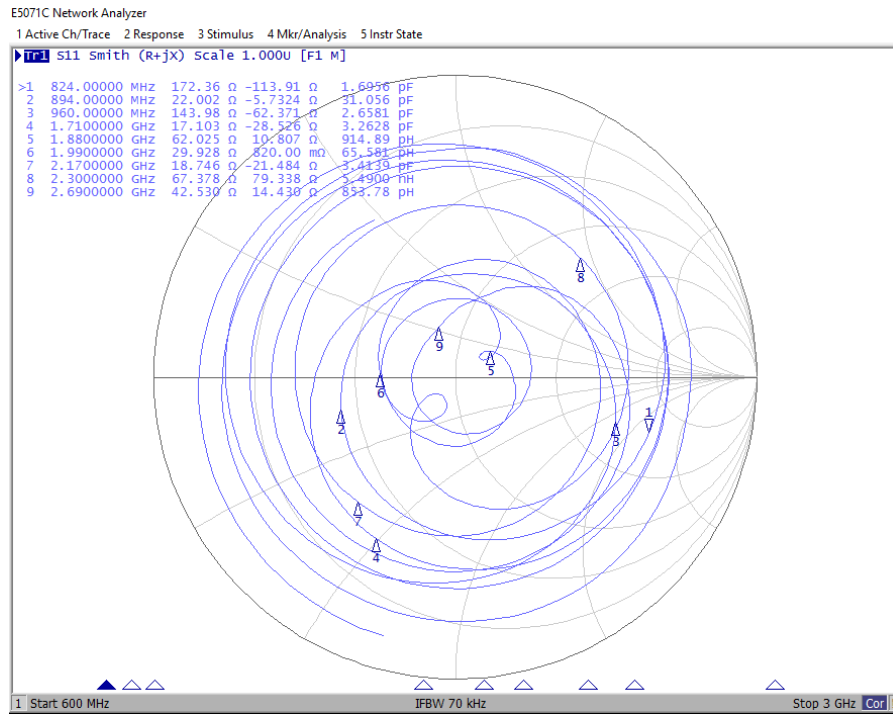
6.1.1 VSWR Chart



6.1.2 VSWR Data

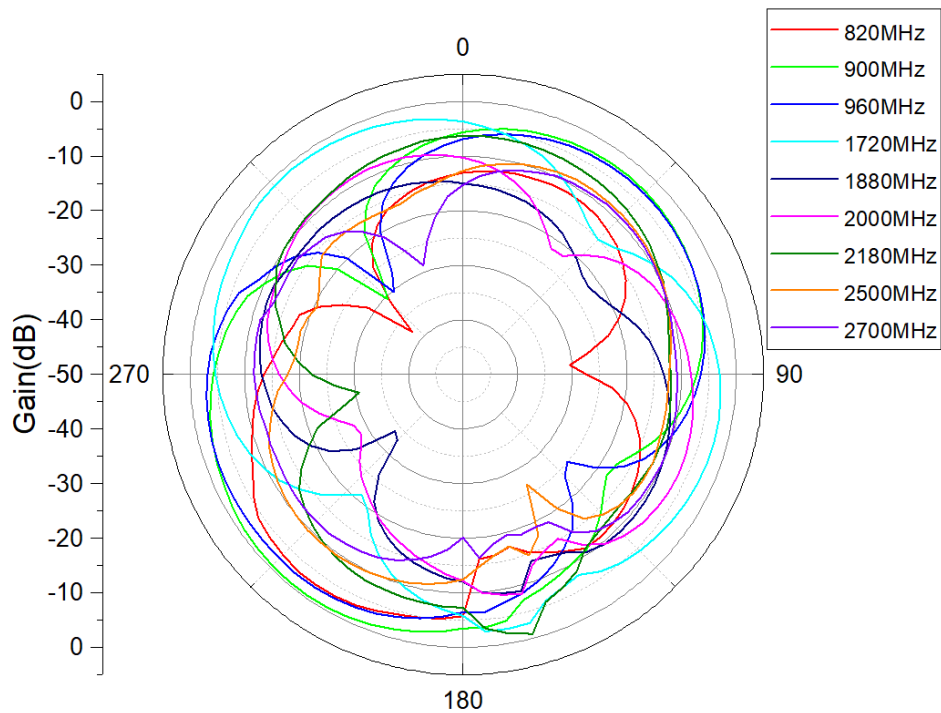
Freq/MHz	824	894	960	1710	1880	1990	2170	2700
VSWR	4.9862	2.3218	3.4710	1.0513	1.3404	1.6568	3.2118	1.4740

6.2 Smith Chart

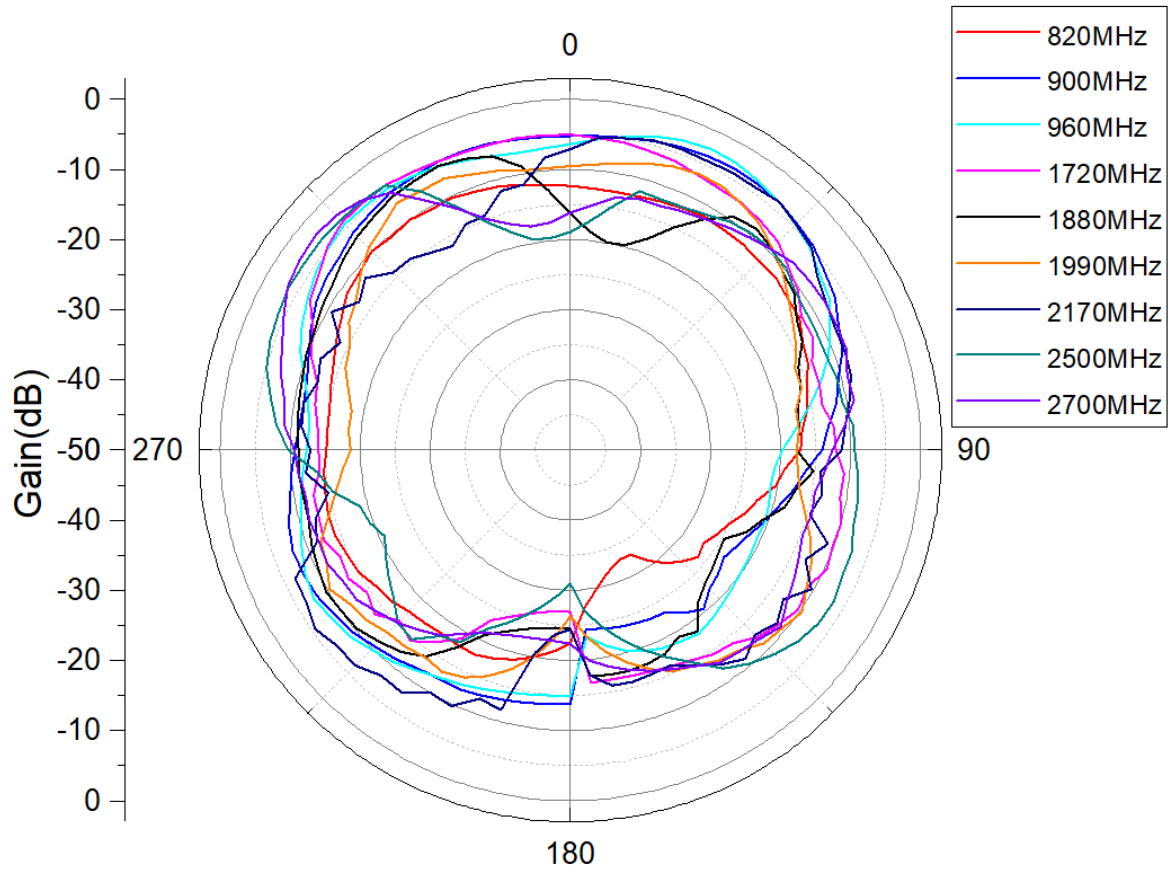


6.3 2D Radiation Pattern

6.3.1 H-plane



6.3.2 E-plane

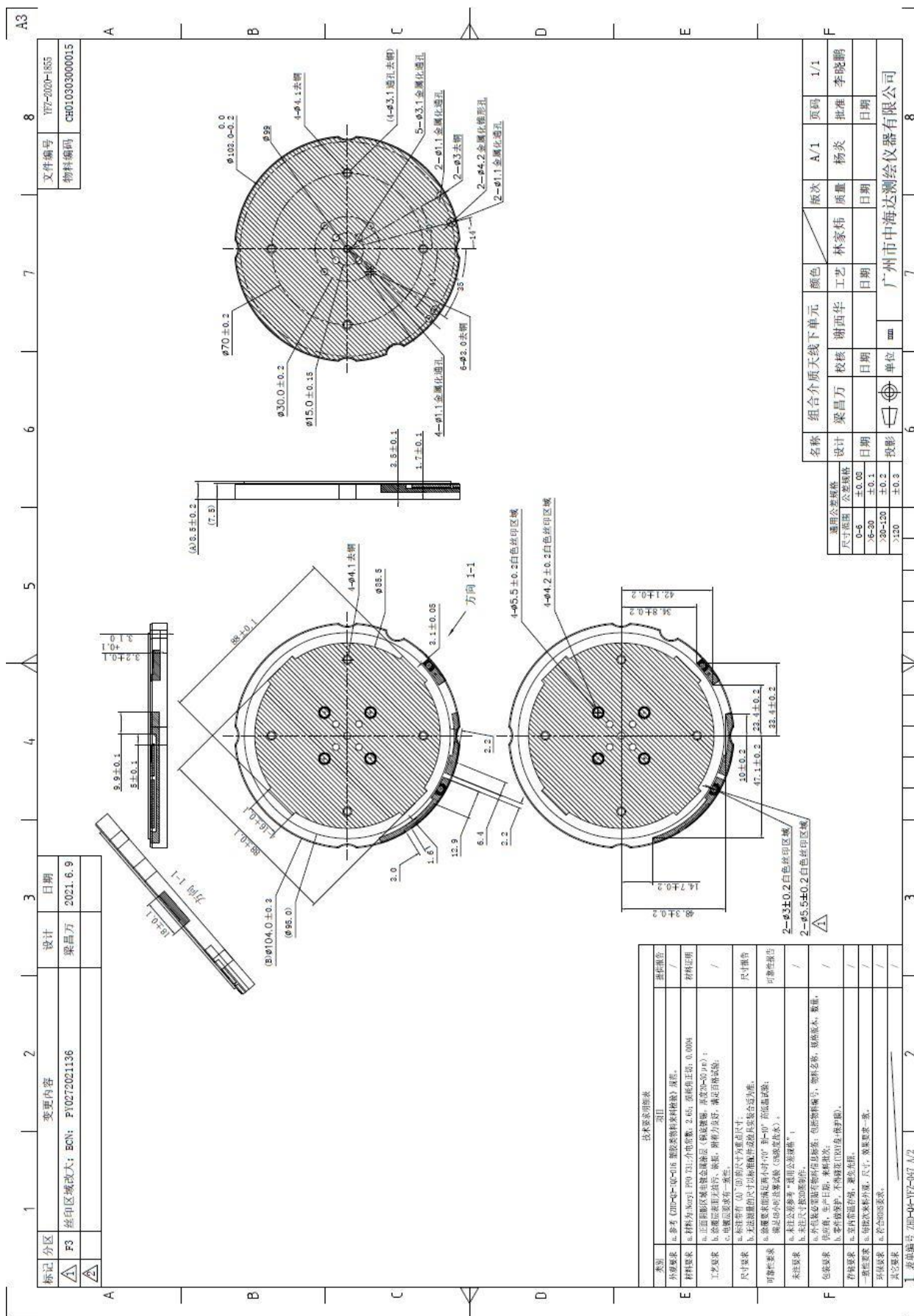


6.4 Gain and Efficiency

Frequency[GHz]	Efficiency	Max Gain[dBi]
0.82	10.35351	-1.96027
0.84	14.20927	-0.70108
0.86	20.69251	-0.06497
0.88	25.47639	-0.34635
0.9	27.60911	-0.35266
0.92	29.8739	0.390107
0.94	30.89001	0.402802
0.96	25.00749	-0.34117
1.7	11.43058	-3.51687
1.72	14.38274	-2.94824
1.74	20.5489	-1.52455
1.76	24.4148	-0.42311
1.78	26.786	-0.17831
1.8	34.14789	0.849672
1.82	37.92618	1.466434

1.84	42.4196	1.795268
1.86	45.25888	2.439467
1.88	30.79824	0.964763
1.9	46.24696	3.230989
1.92	43.70853	2.993899
1.94	44.72254	3.04346
1.96	41.40497	2.407672
1.98	41.44944	2.220532
2	39.15196	1.727399
2.02	36.39499	1.164934
2.04	32.07373	0.465743
2.06	27.09835	-0.90167
2.08	28.60072	-0.5384
2.1	28.50387	-0.37165
2.12	27.18347	-0.33387
2.14	27.45735	-0.1293
2.16	24.13528	-0.66487
2.18	24.26852	-0.71936
2.2	23.0078	-0.97643
2.22	24.53621	-0.87369
2.24	24.0121	-0.93465
2.26	23.36897	-1.25463
2.28	24.92698	-0.5813
2.3	22.65814	-0.18293
2.32	21.42719	-0.65905
2.34	19.73935	-1.30608
2.36	24.18014	-0.50047
2.38	26.21579	-0.21857
2.4	33.76606	1.048091
2.42	43.03727	2.450785
2.44	48.35957	3.072484
2.46	54.87069	3.372492
2.48	52.66272	2.766975
2.5	53.31455	2.328862
2.52	48.96493	1.873199
2.54	51.44248	2.136308
2.56	54.59171	3.364669
2.58	53.9593	3.9019
2.6	55.21827	4.067381
2.62	53.3715	3.80523
2.64	51.8835	2.826871
2.66	51.3394	2.8141
2.68	50.8021	2.7222
2.7	49.2301	2.696045

7 Mechanical Drawing(Units:mm)



8 Photograph of Antenna Prototype

