



福州中天迅通信技术有限公司

Fuzhou ZHONGTIANXUN Communication Technology Co., Ltd

Fuzhou Address: Building 45, Unit SC02, 2nd Floor, Jinshan Industrial Zone,
Cangshan District, Fuzhou City, Fujian Province

项目名称(Project Name): DX8-WIFI/BT/GPS

天线型号(Antenna model): DX8-W/B/G Ant1

A

物料编码(Item number): E.03.01148

MPN 码 (MPN) : B0680370D

日期 (Date) : 2026-1-7

设计公司: 福州中天迅通信技术有限公司

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版本 version	日期 date	状态 status
A1	2025-6-3	初版。 First issue.
A2	2025-11-19	项目名称变更为 DX8，丝印更新。 The project name has been changed to DX8. screen printing update.
A3	2026-1-7	性能数据更新， Performance data update.





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1 名词解释 (Explanation of Nouns)

dBi	Decibel relative isotropic antenna
Tx	Transmit frequency
Rx	Receive frequency
TRP	Total Radiated Power
TIS	Total Isotropic Sensitivity
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 测试设备 (Test equipment)

矢量网络分析仪 (Vector network analyzer)

安捷伦 8753E (Agilent 8753E)

频谱分析仪 (Frequency analyzer)

综合测试仪 (General-purpose tester)

安捷伦 8960 E5515C

标准高性能无反射屏蔽暗室 (High performance no-reflection shielding darkroom)

ETS

8m*4m*4m

3 适用频段 (Applied frequency band)

频段	频率
Frequency Band	Frequency
WIFI/BT/GPS	2400-2500MHz, 5150-5850MHz, 1575.42MHz。

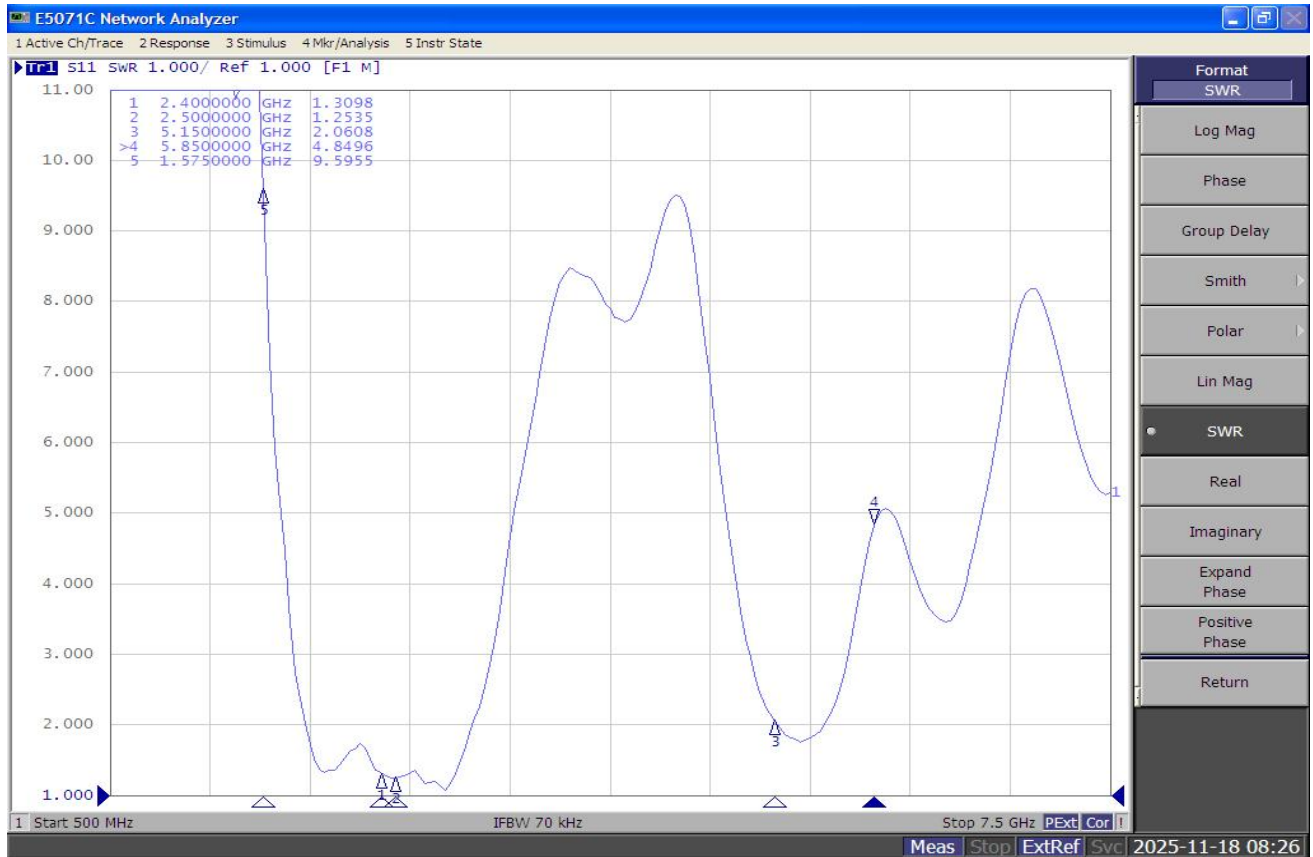




4. 测试指标和数据图表 (Test project)

4.1 驻波图 (VSWR)

WIFI





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GPS



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4.2 无源效率 (Antenna passive test)

WIFI

chNo	Freq (MHz)	Gain (dBi)	Efficiency_Pcent (%)
1	2400	1.80774749	30.51913729
2	2410	2.601160269	33.52267849
3	2420	2.979816479	36.27748108
4	2430	2.934650139	35.65095044
5	2440	2.629556494	33.78295865
6	2450	2.622862186	33.8502655
7	2460	2.502907072	32.66491071
8	2470	2.269254505	31.99688909
9	2480	1.967344519	31.12912347
10	2490	1.622511299	30.65635062
11	2500	1.758194849	33.84552054
12	5150	-0.560681426	23.48289693
13	5200	0.419246279	25.33742676
14	5250	2.69112702	31.20338448
15	5300	1.535022055	32.21655066
16	5350	1.471628249	33.62554801
17	5400	1.828947612	33.40348257





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18	5450	1.755080495	33.34531595
19	5500	-0.060480489	24.93412497
20	5550	0.842483447	24.55028203
21	5600	-1.971174881	25.21790778
22	5650	-2.014461964	24.29642388
23	5700	-2.241803386	23.32896965
24	5750	-2.017545827	23.05039279
25	5800	-2.145806922	22.79786935
26	5850	-2.419204269	22.79388721



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GPS

chNo	Freq (MHz)	Gain (dBi)	Efficiency_Pcent (%)
1	1550	-0.580424364	37.10895295
2	1555	-0.522253129	38.27021156
3	1560	-0.524369156	39.85422826
4	1565	-0.556507231	40.94058921
5	1570	-0.521113426	41.81050011
6	1575	-0.420233373	42.5815049
7	1580	-0.391637893	42.78086956
8	1585	-0.357452008	43.08680509
9	1590	-0.290188121	43.52710416
10	1595	-0.159496875	44.64569572
11	1600	0.227474381	49.20592212
12	1605	0.276422197	49.62620139
13	1610	0.224799282	49.95871164
14	1615	0.200456793	49.64632985
15	1620	0.105579005	48.85886348





4.3 有源数据 (Active test data)

频段	参数\信道	1	7	13
Frequency band	Parameter \ Channel			
WIFI-B	TRP (dBm)	12.89	12.77	12.95
	TIS (dBm))			-81.27
频段	参数\信道	1	7	13
Frequency band	Parameter \ Channel			
WIFI-G	TRP (dBm)	12.47	12.35	12.12
	TIS (dBm)			-65.17
频段	参数\信道	1	7	13
Frequency band	Parameter \ Channel			
WIFI-N	TRP (dBm)	11.92	12.15	11.97
	TIS (dBm)			-61.98
频段	参数\信道	36	100	165
Frequency band	Parameter \ Channel			
WIFI-A	TRP (dBm)	8.95	8.54	8.63
	TIS (dBm)			-64.36

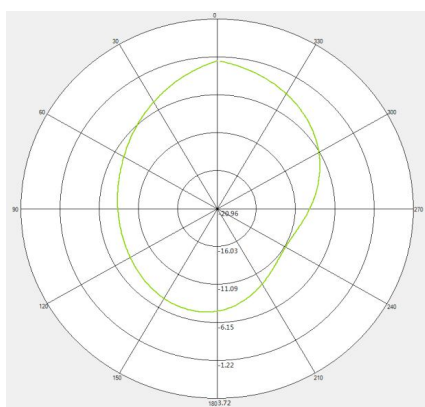




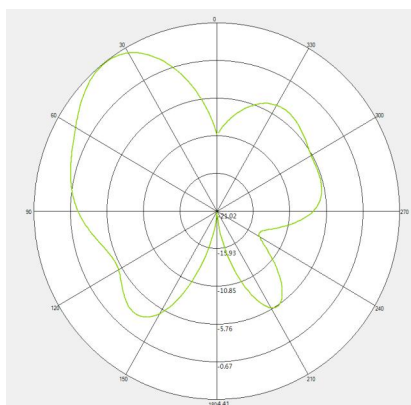
4.4 2D 方向图 (2D pattern)

2450MHz

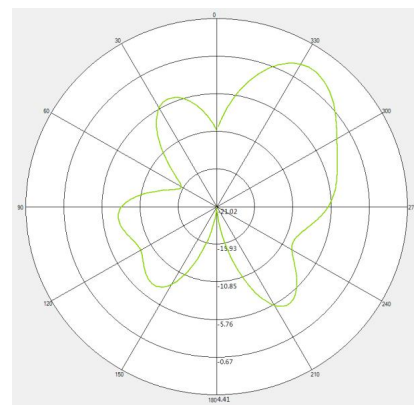
XOY



XOZ

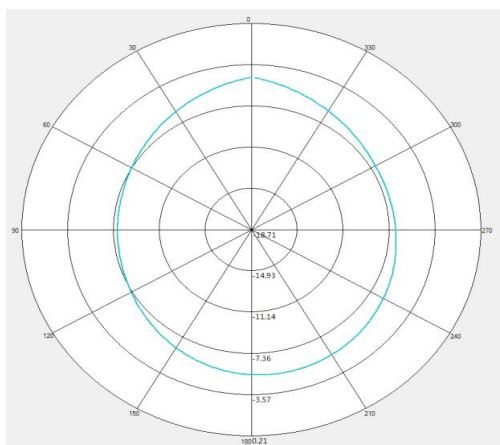


YOZ

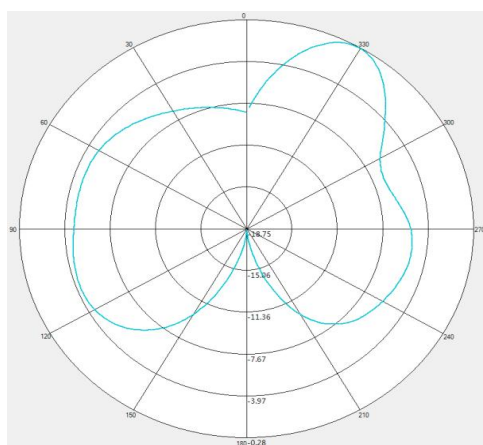


5200MHz

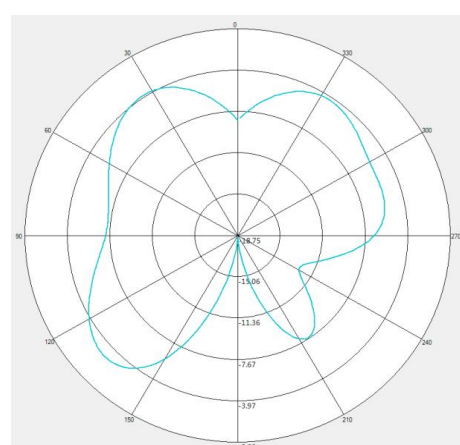
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XOZ



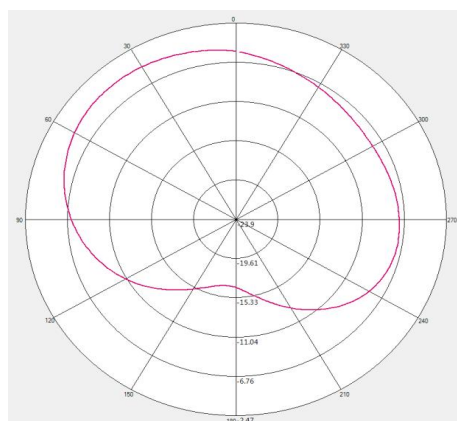
YOZ



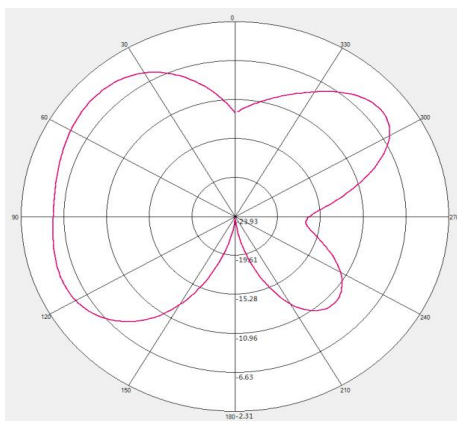


5750MHz

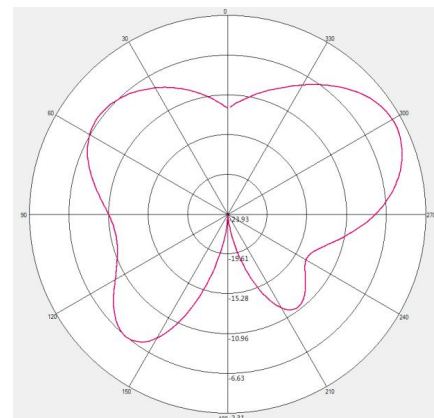
XOY



XOZ

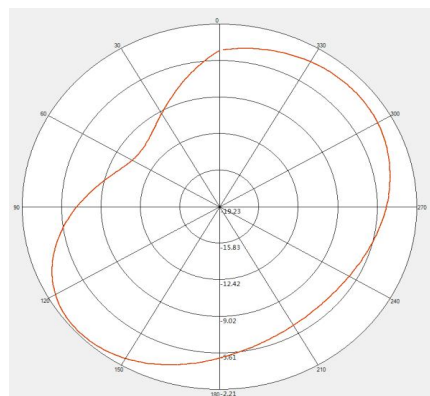


YOZ

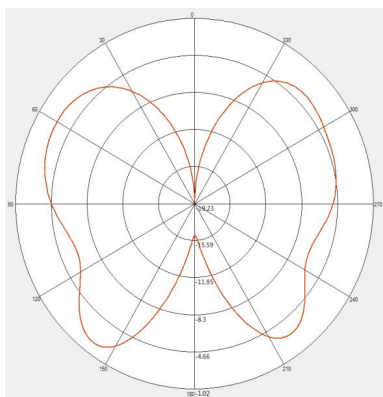


1575MHz

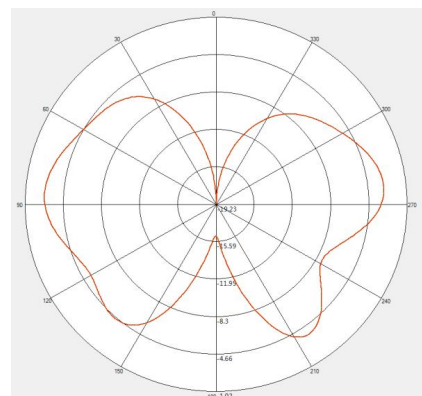
XOY



XOZ



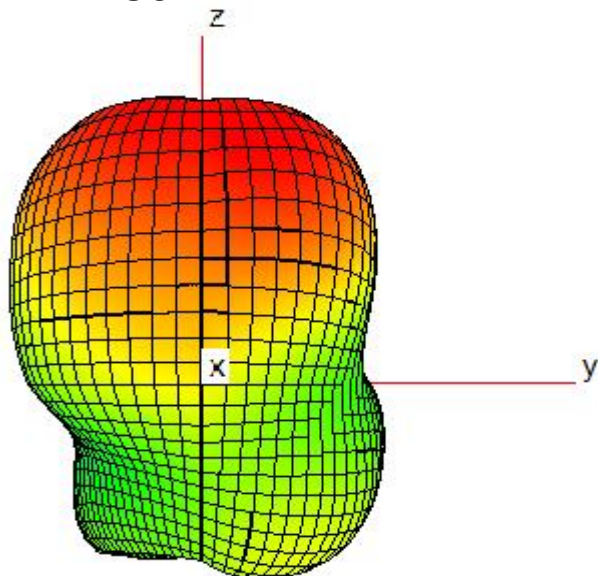
YOZ



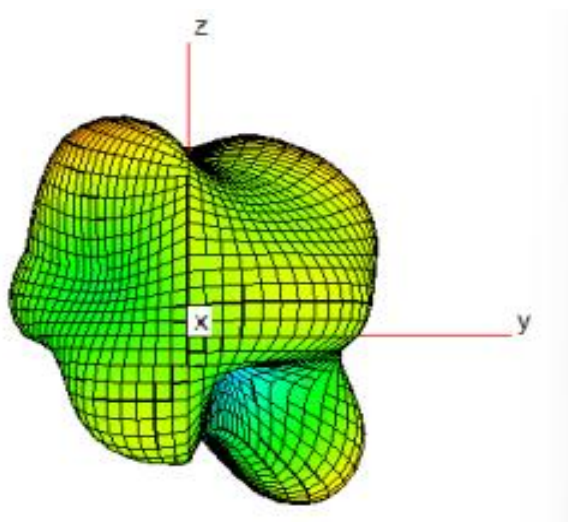


4.5 3D 方向图 (3D pattern)

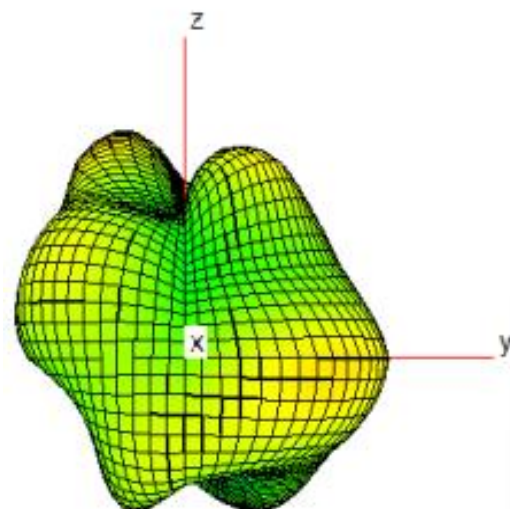
2450MHz



5200MHz



5750MHz

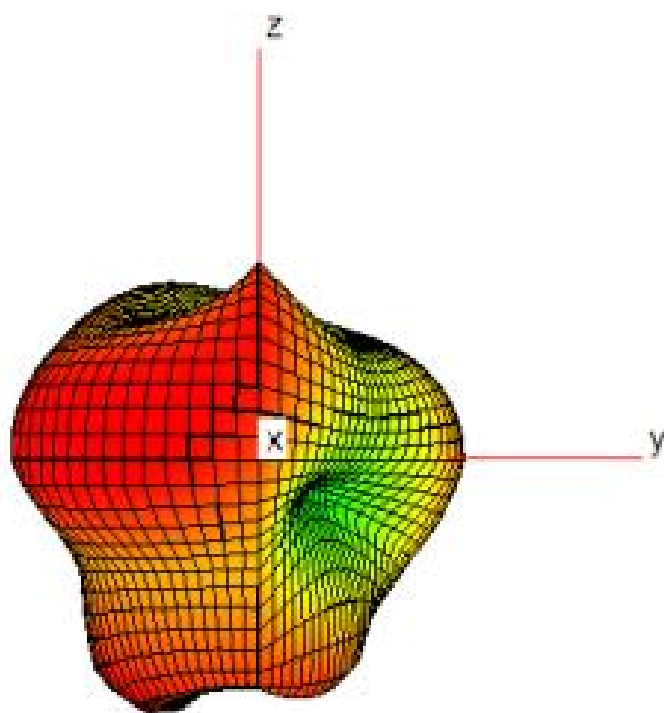




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1575MHz



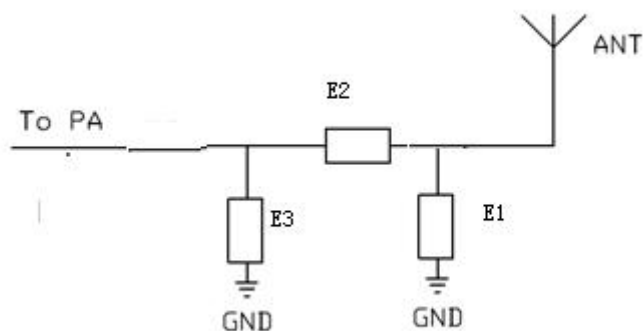
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5. 匹配说明 (Matching circuit)

WIFI

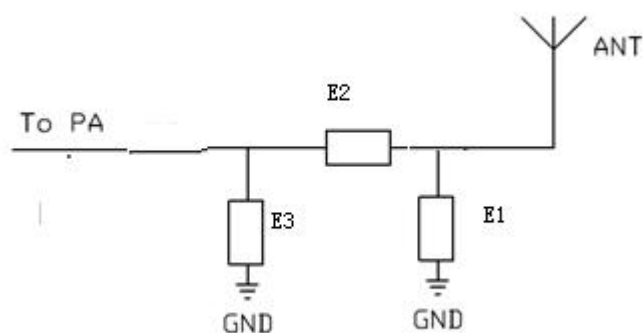


匹配说明 Matching structure	WIFI
E1	NC
E2	3.3nH
E3	NC





GPS



匹配说明 Matching structure	GPS
E1	8.2nH
E2	2pF
E3	NC





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