



深圳市安威无线科技有限公司

行业领先的一站式通信射频天线解决方案制造商

L408C Test Report

Anweishu 频: Tang Di

Mobile phone number: 13713280126

Antenna manufacturer name: Shenzhen Anwei Wireless Technology Co., Ltd

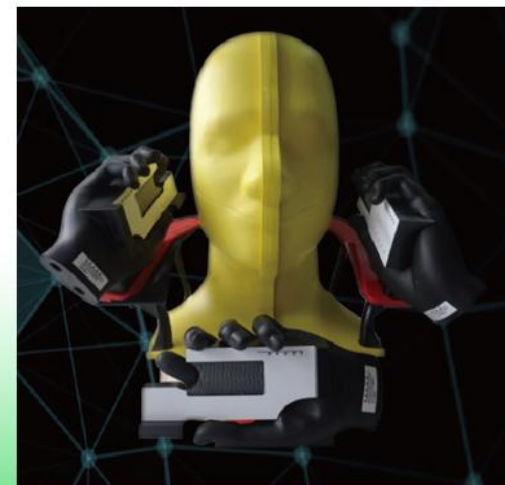
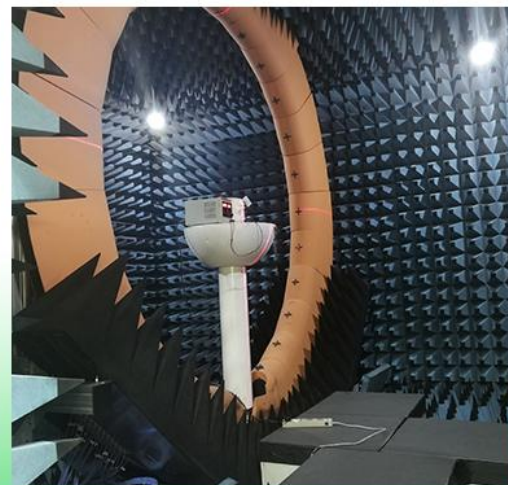
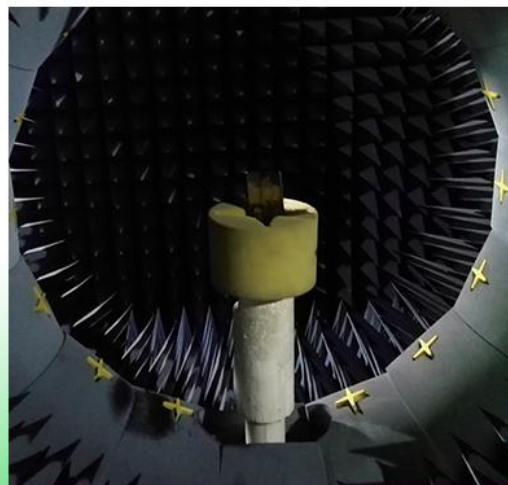
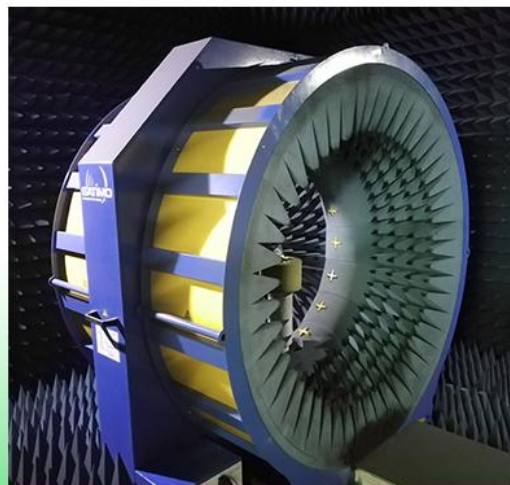
Address: 2nd Floor, East, Building 5, Yifenghua Industrial Park, Dalang Street, Longhua District, Shenzhen

Time: 2024.12.7

携手共进 共创未来



version	date	Content summary
V1	2024.12.7	Test data



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“质量第一，服务至上”是安威一直以来的发展宗旨

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Main Antenna Test Data (Free)

Band	Channel	Total	TIS
FDD_B1	18050	17.34	
	18300	17.52	
	18550	17.05	-91.6
FDD_B2	18650	16.23	
	18900	17.20	
	19150	17.01	-91.0
FDD_B3	19250	17.42	
	19575	17.56	
	19900	17.46	-91.5
FDD_B5	20450	17.01	
	20525	17.21	
	20600	18.05	-91.5
FDD_B7	20800	17.21	
	21100	18.1	
	21400	17.20	-90.6
FDD_B8	21500	17.24	
	21625	17.18	
	21750	16.43	-90
FDD_B20	24200	17.5	
	24300	17.09	
	24400	17.19	-90.7

Band	Channel	Total	TIS
FDD_B28	27260	16.56	
	27360	17.04	
	27469	17.17	-90.0
	27410	17.24	
	27510	17.16	
	27600	17.4	-90.1
TDD_B34	36250	17.24	
	36275	18.01	
	36300	18.44	-90.2
TDD_B38	37850	17.24	
	38000	18.04	
	38150	17.56	-91.0
TDD_B39	38350	17.46	
	38450	17.09	
	38550	17.31	-90.1
TDD_B40	38750	16.10	
	39150	16.02	
	39550	16.14	-88.0
TDD_B41	40490	18.04	
	40620	17.64	
	40940	17.51	-89.0

Band	Channel	Total	TIS
WCDMA_B1	9612	17.24	
	9750	17.46	
	9888	17.2	-103.1
WCDMA_B2	9262	17.31	
	9400	17.79	
	9538	17.24	-103.2
WCDMA_B8	2712	17.52	
	2787	17.45	
	2863	17.00	-102.2
WCDMA_B5	4132	17.14	
	4183	17.46	
	4233	17.2	-104.0

Band	Channel	Total	TIS
GSM 850	128	26.24	
	190	27.14	
	251	27.04	-102.1
GSM 900	1	27.01	
	62	26.25	
	124	26.15	-102.0
DCS 1800	512	24.56	
	698	25.14	
	885	25.24	-103.0
PCS 1900	512	25.45	
	661	25.12	
	810	24.23	-102.5

WiFi test data (free)

BAND	2.4GWIFI			5GWIFI		
CHANNEL	low	medium	high	low	medium	high
TRP (dBm)	12.24	12.18	12.28	10.04	10.12	10.43
TIS (dBm)	-80.89	-80.62	-80.57	-70.21	-70.2	-71.46

Antenna gain

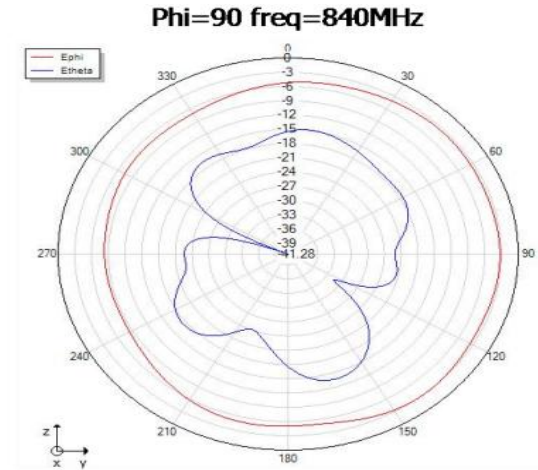
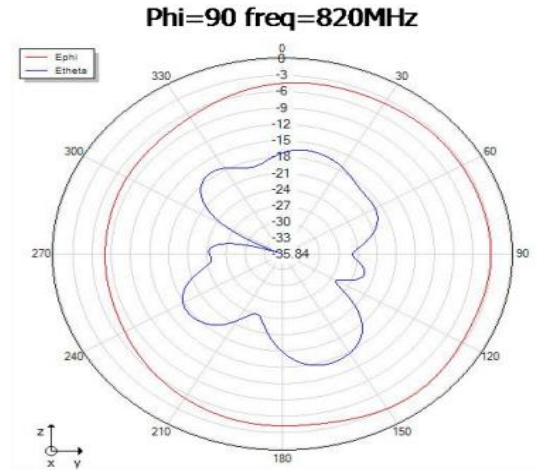
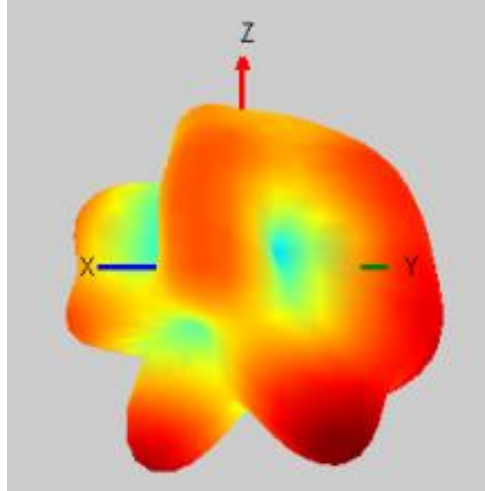
Band	Channel	gain(dbi)	
FDD_B1	18050		
	18300	1.2	
	18550		
FDD_B2	18650		
	18900	1.4	
	19150		
FDD_B3	19250		
	19575	1.2	
	19900		
FDD_B5	20450		
	20525	-0.8	
	20600		
FDD_B7	20800		
	21100	2.1	
	21400		
FDD_B8	21500		
	21625	-1.1	
	21750		
FDD_B20	24200		
	24300	-0.8	
	24400		

Band	Channel	gain(dbi)	
FDD_B28	27260		
	27360	-2.2	
	27469		
	27410		
	27510	-2.3	
	27600		
TDD_B34	36250		
	36275	2.1	
	36300		
TDD_B38	37850		
	38000	2.3	
	38150		
TDD_B39	38350		
	38450	1.8	
	38550		
TDD_B40	38750		
	39150	1.9	
	39550		
TDD_B41	40490		
	40620	1.1	
	40940		

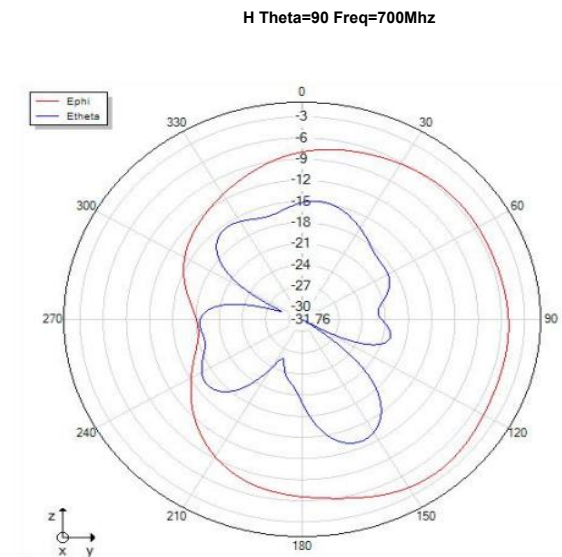
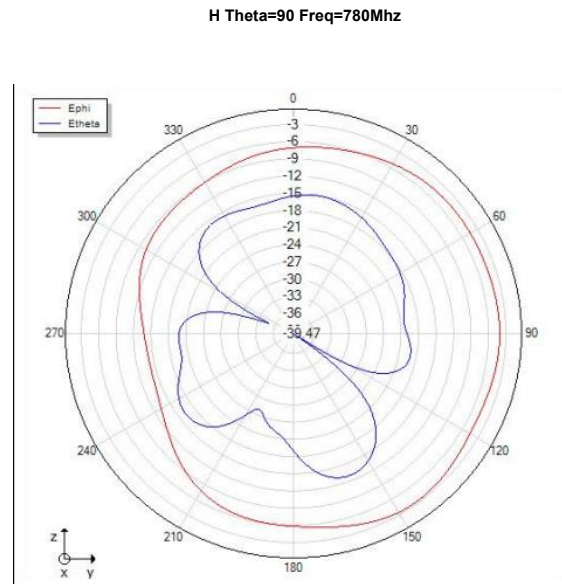
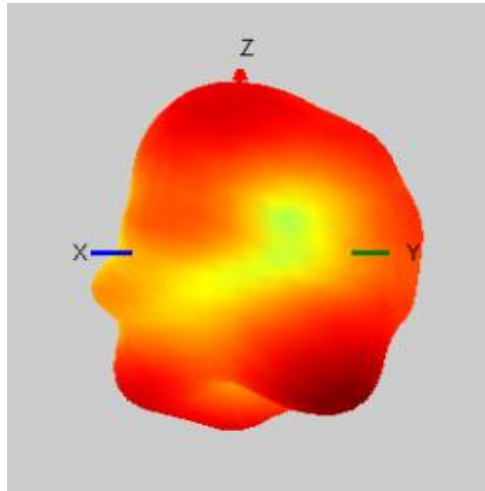
Band	Channel	gain(dbi)	
WCDMA_B1	9612		
	9750	1.2	
	9888		
WCDMA_B2	9262		
	9400	1.4	
	9538		
WCDMA_B8	2712		
	2787	-1.1	
	2863		
WCDMA_B5	4132		
	4183	-0.8	
	4233		
GSM 850	128		
	190	-0.8	
	251		
GSM 900	1		
	62	-1.1	
	124		
DCS 1800	512		
	698	1.2	
	885		

Band	Channel	gain(dbi)	
PCS 1900	512		
	661	1.4	
	810		
2.4WiFi	1		
	6	1.8	
	11		
5GWiFi	36		
	64	2.4	
	165		
GPS			
	1575.42	0.8	
BT	0		
	39	1.8	
	78		

Directional diagram



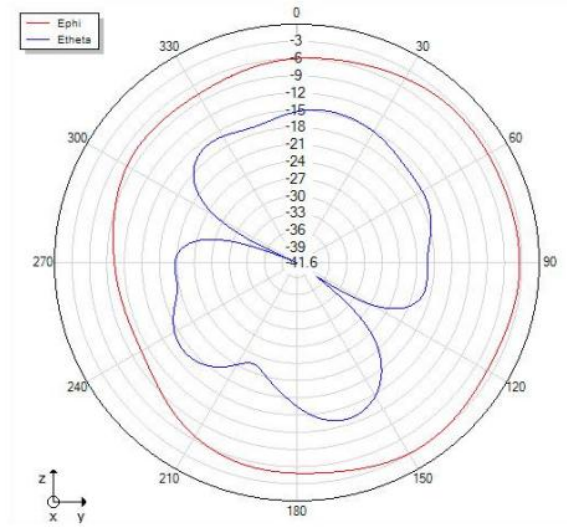
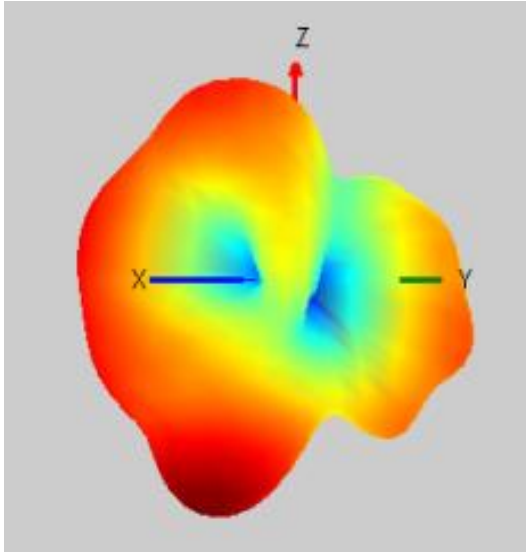
GSM850 、 WCDMA B5 、 FDD B5/20



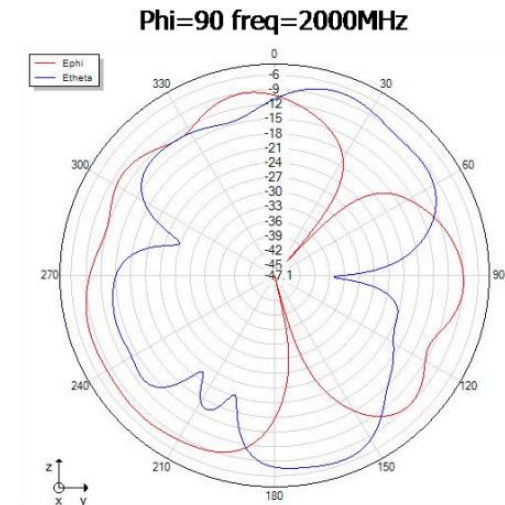
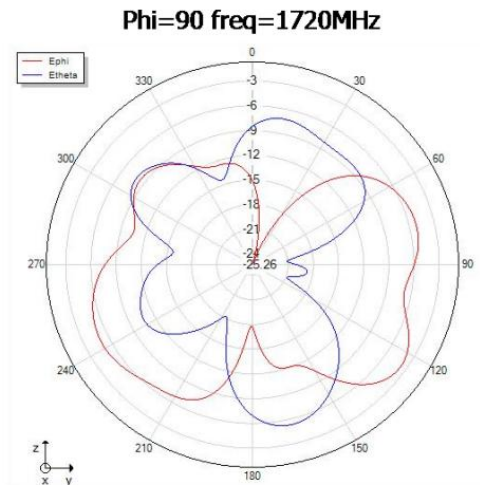
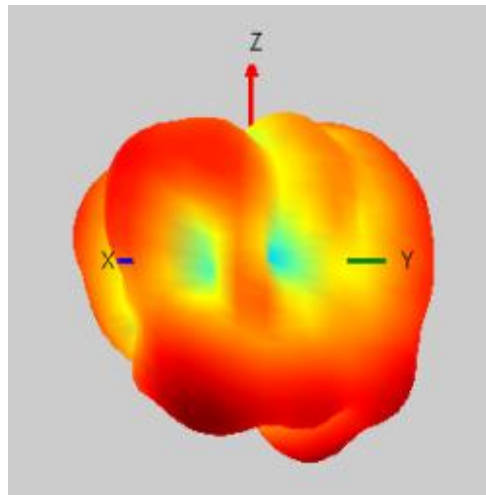
GSM900、 WCDMA B8 、 FDD B8

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Directional diagram



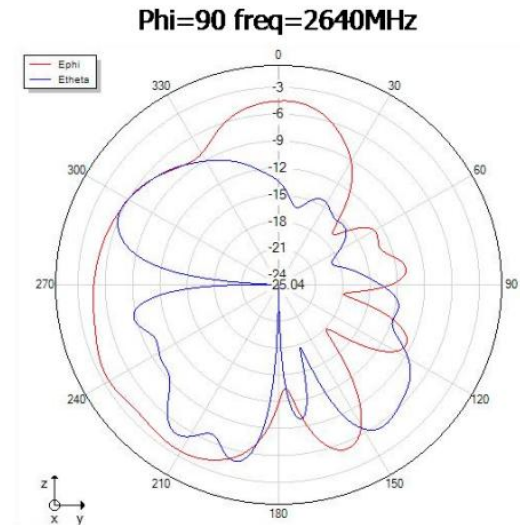
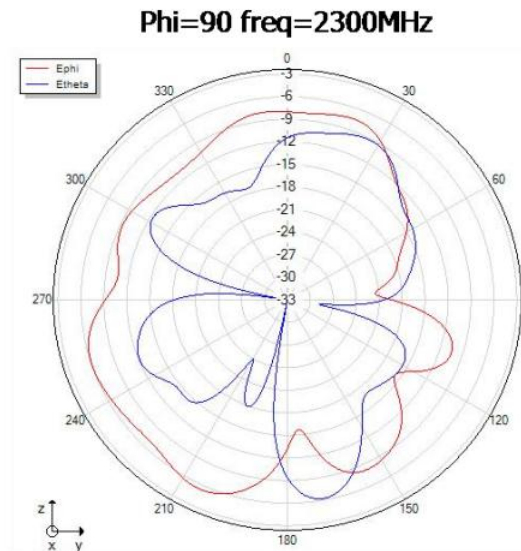
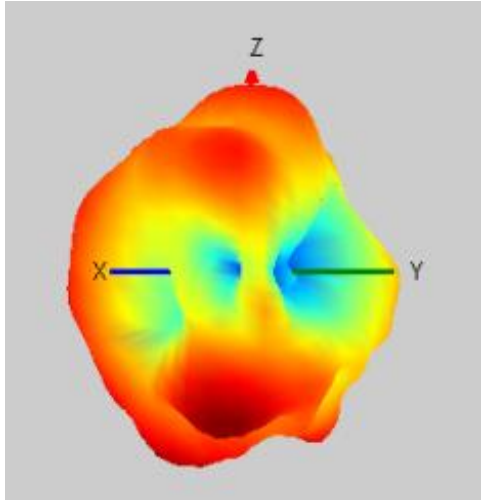
FDD B28



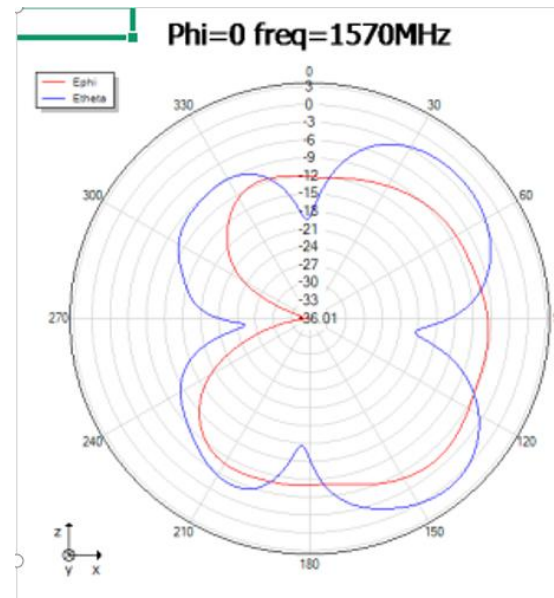
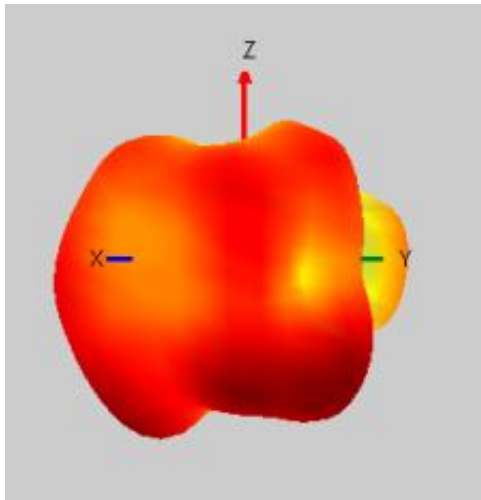
FDD B1 B2 B3 TDD B34 B39 DCS1800 PCS1900 WCDMA
B1 B2

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Directional diagram

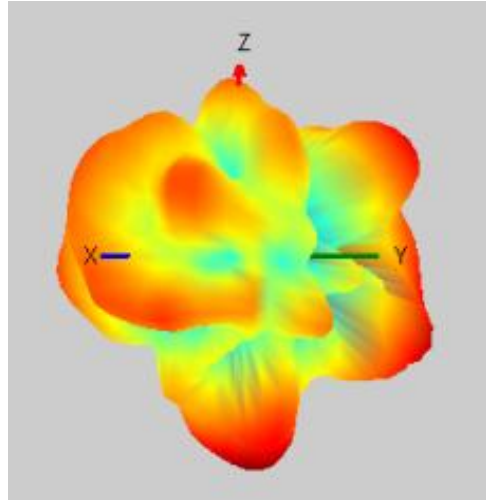


FDD B7 TDD B40 B38 B41

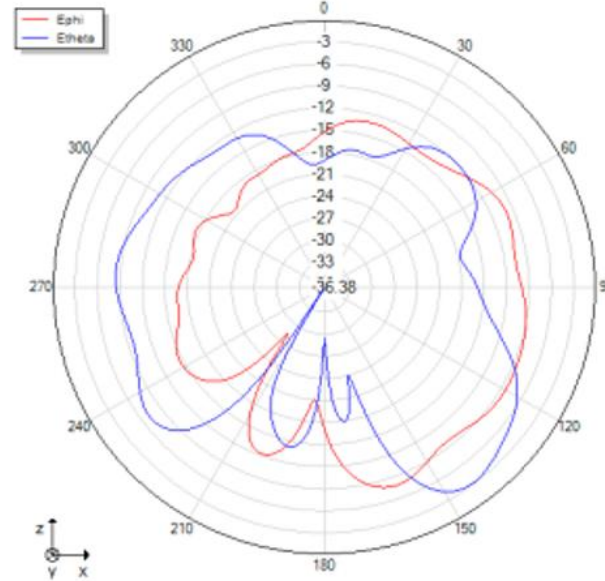


gps

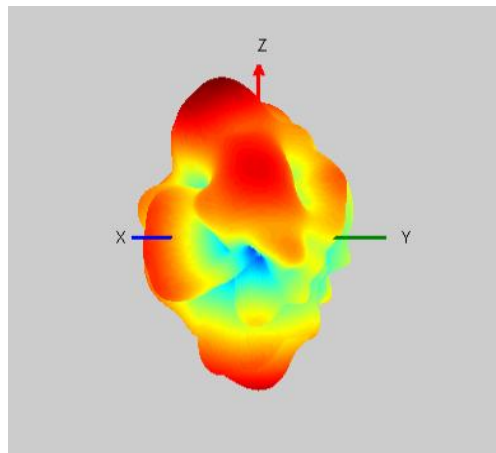
Directional diagram



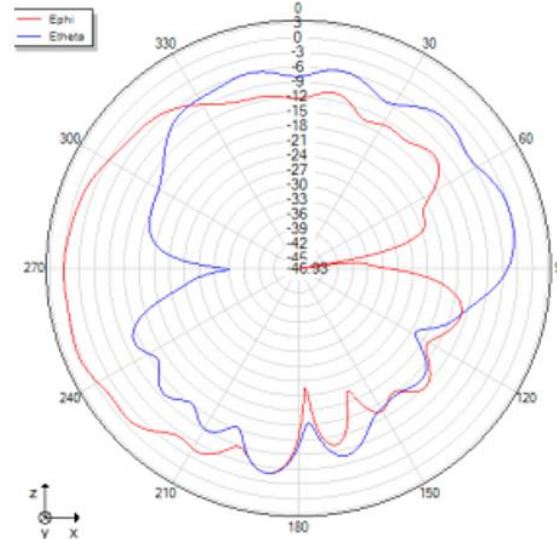
Phi=0 freq=2400MHz



2.4GWIFI



Phi=0 freq=5500MHz



5GWIFI

GPS test data

CNR	ID	CNR	ID	CNR	ID	CNR
22.6/-	G3	36.6/-	G6	36.3/-	G14	26.0/-
42.4/-	G19	29.3/-	G22	43.4/-	G30	31.0/-
0.0/-	R68	26.0/-	R69	0.0/-	R73	33.0/-
12.7/-	R80	0.0/-	R83	0.0/-	R84	0.0/-
0.0/-	R87	0.0/-	B1	27.6/-	B2	0.0/-
0.0/-	B4	29.3/-	B5	0.0/-	B7	38.9/-
36.4/-	B19	32.2/-	B20	0.0/-	B22	22.1/-
23.2/-	B26	36.2/-	B35	41.6/-	E30	18.0/-
33.0/-	Q3	29.0/-	Q4	0.0/-	S39	0.0/-

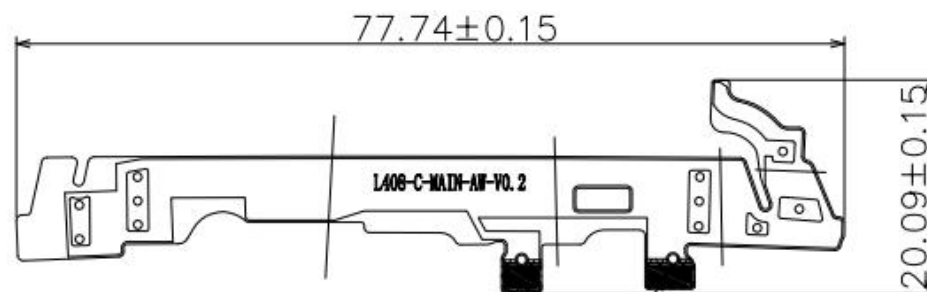
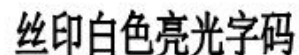
三. NFC读卡距离

卡类型	距离 (cm)	天线材质
Type1 (Topaz-512)	3.5	FPC+纳米晶
Type2 (Mifare-Ultralight)	3.5	
Type3 (Sony-Felica)	3.0	
Type4 (Mifare-Desfire)	3.0	
Type5 (15693)	4.0	
Resident ID card	2.5	



四. NFC产品分析与总结

- 4.1、读卡距离跟卡片的兼容性有关，以上距离只针对测试卡片
- 4.2、电容的精度建议采用高些的



红色网格填充为PET补强 (T=0.2mm)

技术要求: 半对半材料

技术要求:

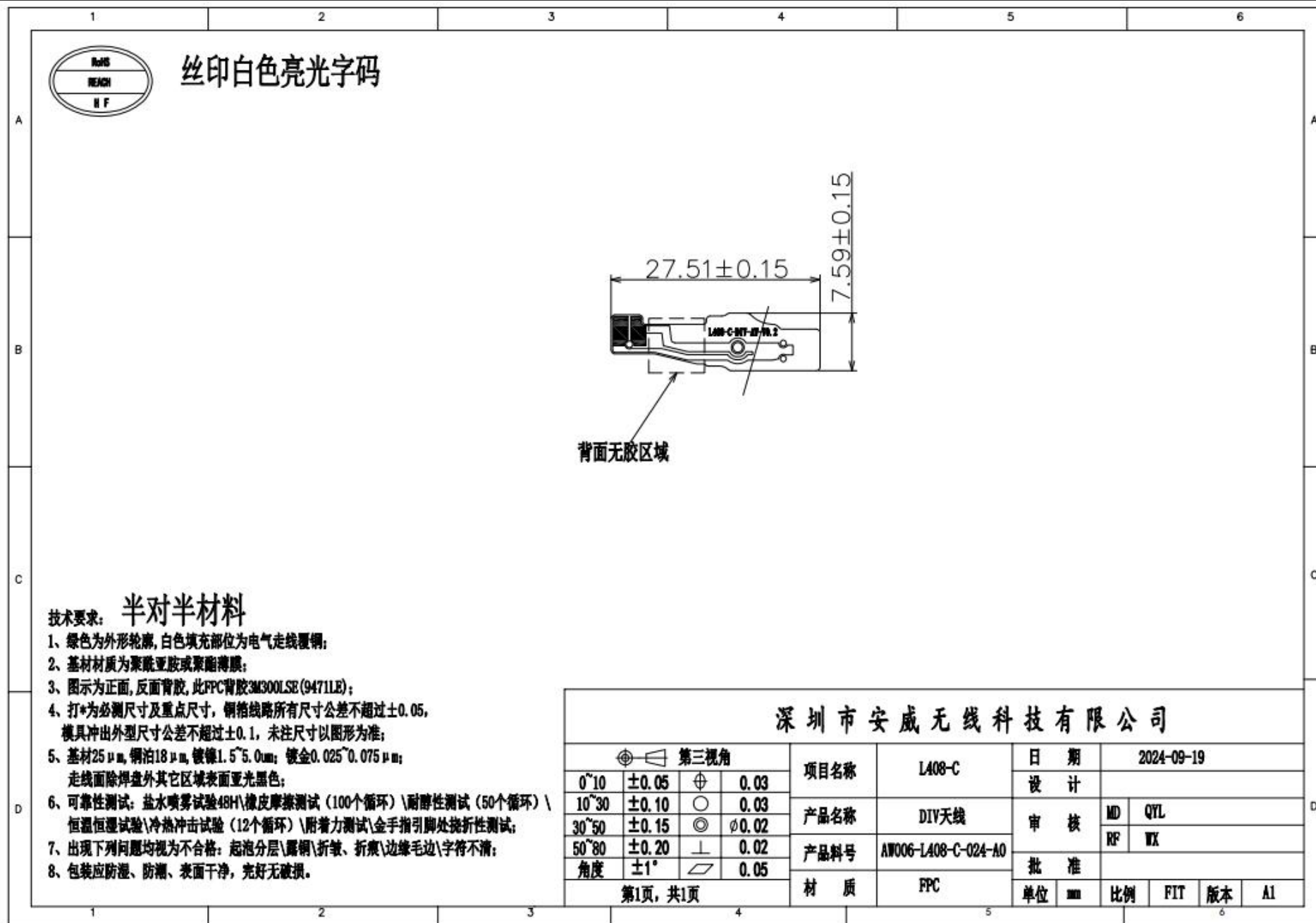
- 1、绿色为外形轮廓，白色填充部位为电气走线覆铜；
- 2、基材材质为聚酰亚胺或聚醚薄膜；
- 3、图示为正面，反面背胶，此FPC背胶3M300LSE(94711LE)；
- 4、打*为必测尺寸及重点尺寸，铜箔线路所有尺寸公差不得超过 ± 0.05 ，
模具冲出外型尺寸公差不得超过 ± 0.1 ，未注尺寸以图形为准；
- 5、基材 $25\mu\text{m}$ ，铜箔 $18\mu\text{m}$ ，镀锌 $1.5\sim 5.0\mu\text{m}$ ；镀金 $0.025\sim 0.075\mu\text{m}$ ；
走线面除焊盘外其它区域表面亚光黑色；
- 6、可靠性测试：盐雾喷雾试验48H\橡皮摩擦测试(100个循环)\耐醇性测试(50个循环)\
恒温恒湿试验\冷热冲击试验(12个循环)\附着力测试\金手指引脚处挠折性测试；
- 7、出现下列任何问题均视为不合格：起泡\分层\露铜\折皱、折痕\边缘毛边\字符不清；
- 8、包装应防潮、防潮、表面干净，完好无破损。

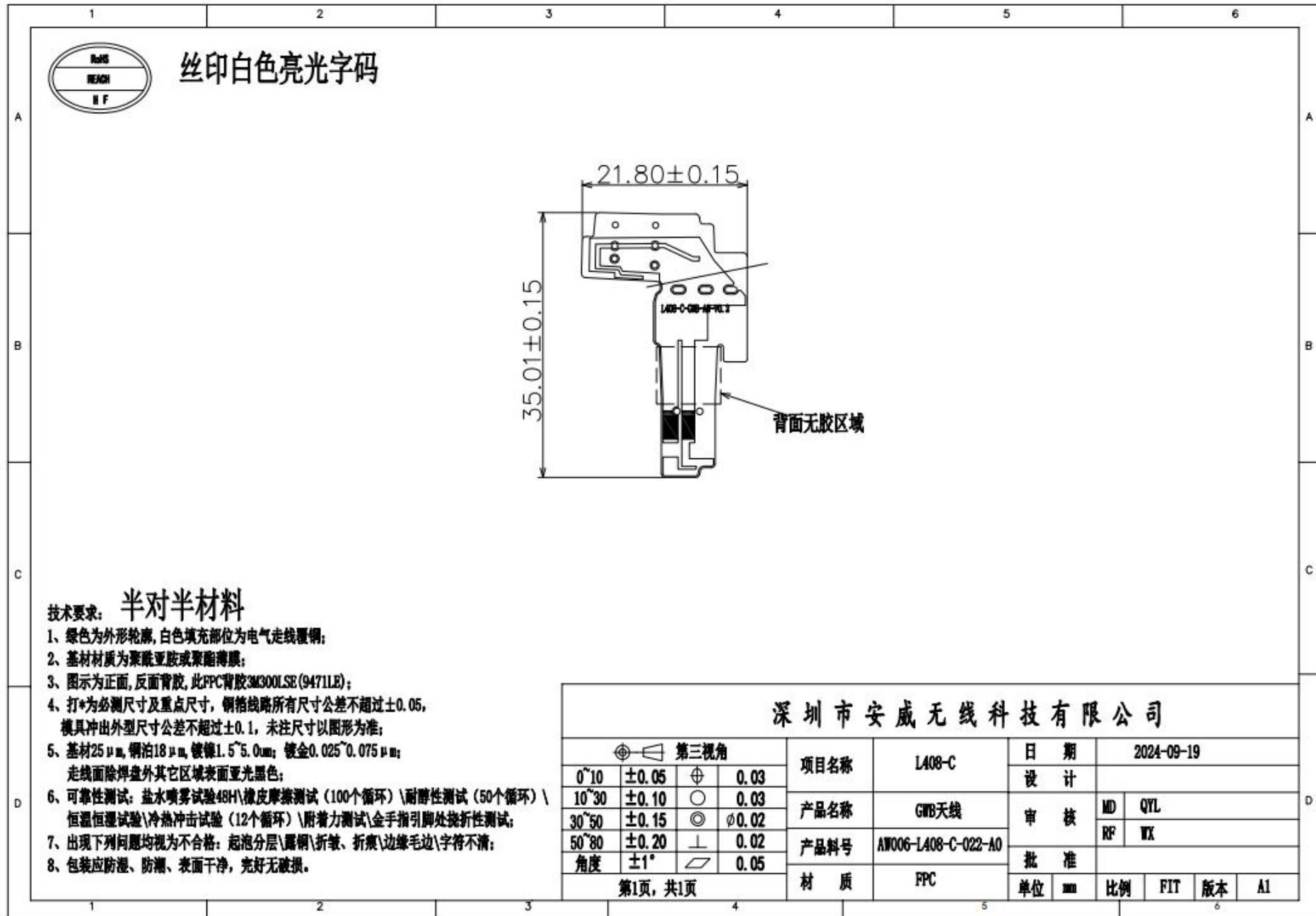
深圳市安威无线科技有限公司

第三视角				项目名称	L408-C	日 期		2024-09-19			
0°~10	±0.05		0.03			设 计					
10°~30	±0.10		0.03	产品名称	MAIN天线	审 核	MD	QYL			
30°~50	±0.15		0.02				RF	WX			
50°~80	±0.20		0.02	产品料号	AW006-L408-C-021-A0	批 准					
角度	±1°		0.05								
第1页, 共1页				材 质	FPC	单位	mm	比例	FIT	版本	A1

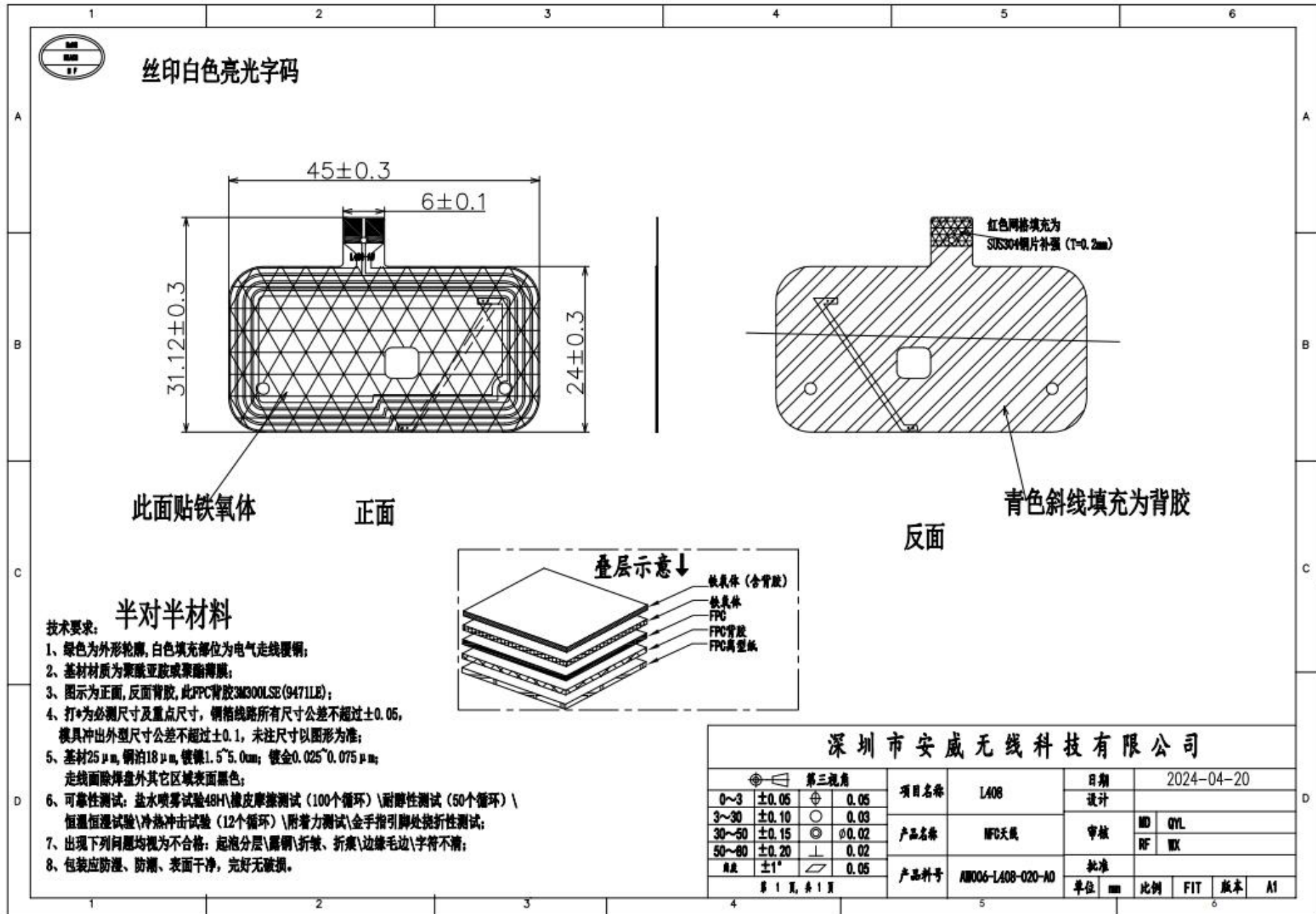
第1页, 共1页

Dimensional drawings





Dimensional drawings





深圳市安威无线科技有限公司

行业领先的一站式通信射频天线解决方案制造商

The End

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