

# ANWEI communication Equipment Co.,Ltd

## APPROVAL SHEET

客户 Customer	Youmi	规格型号 Specs	G7 5G
安威料号 Part Number	G7 5G-ANT0-AW G7 5G-ANT1-AW G7 5G-ANT2-AW G7 5G-ANT3-AW G7 5G-ANT4-AW G7 5G-ANT5-AW G7 5G-2.4GWIFI/GPS/ 5GWIFI-AW G7 5G-NFC/FM-AW	频段 Frequency Band	G4P+W1/2/4/5/6/8/19+FDD1/2/3/4/5/7/8/12/13/17/19/20/25/26/28A/B/66/71+TDD34/38/39/40/41 NR1/2/3/5/7/8/20/29/66/71/38/40/41/77/78
颜色 Color	Black	版本 Edition	REV:A
销售 Salesperson	Mr.Xie	设计 Design	Tang di
结构 Structure	Qin yunlin		
日期 Date	1/23/2024		

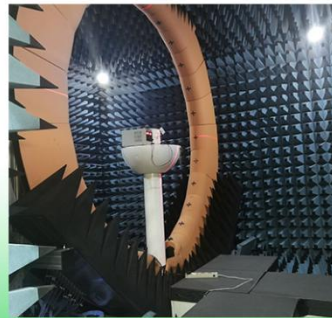
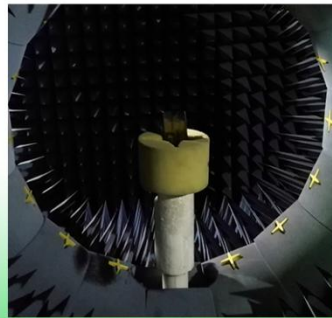
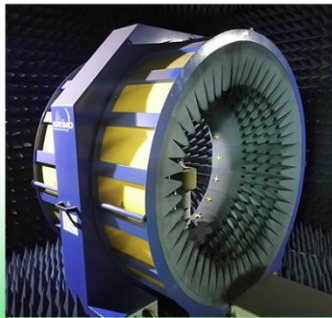
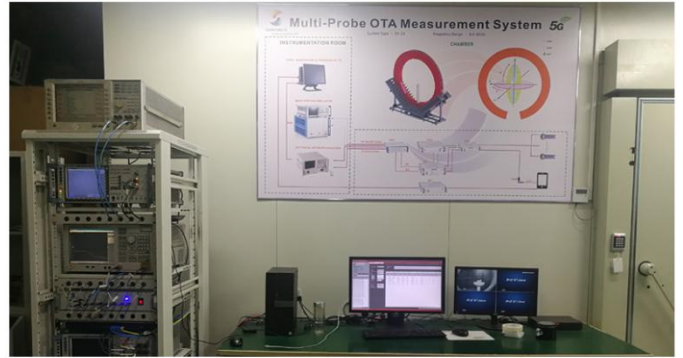
客户确认 Customer confirmation:

ANT Manufacturers: ANWEI communication Equipment Co.,Ltd  
 Address:2nd Floor, East Block, Building 5, Yifenghua Innovation Industrial Park, Huaning Road, Dalang Street, Longhua District, Shenzhen City, Guangdong Province

**携手共进共创未来**  
 Join hands to create the future

● 项目开发环境

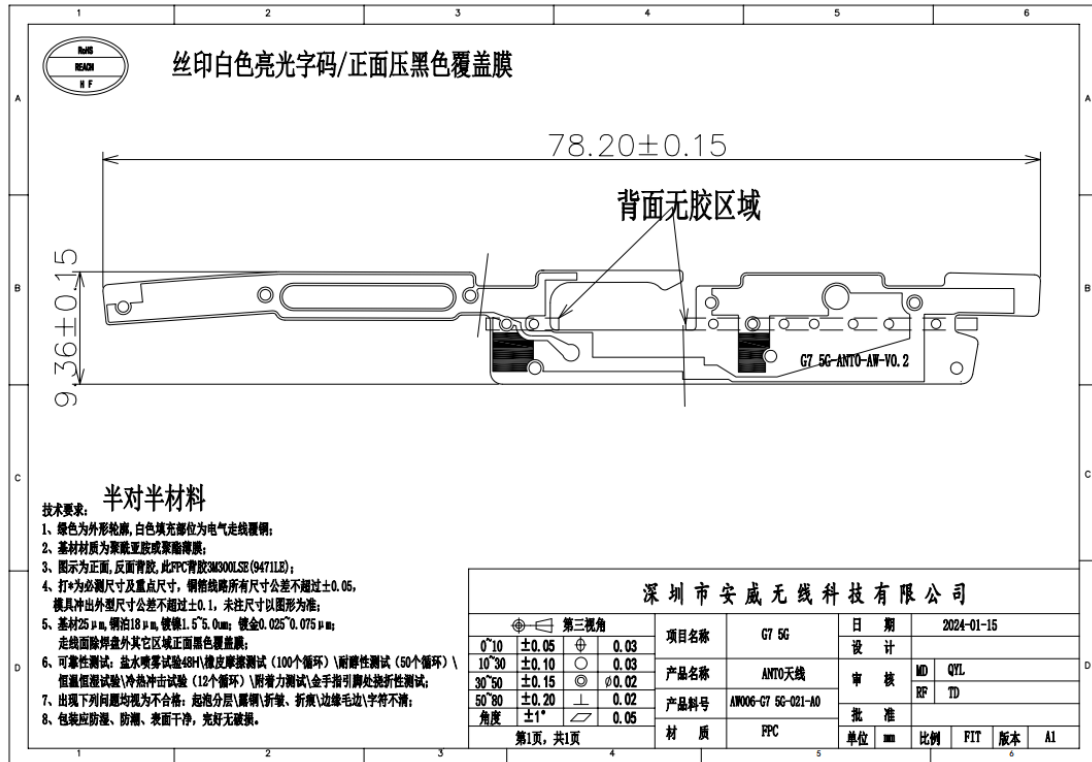
Project development environment



安威无线一直都是您值得信赖且优秀的合作伙伴，我们为您提供全方位一站式的的产品以及技术服务！

“质量第一，服务至上”是安威一直以来的发展宗旨

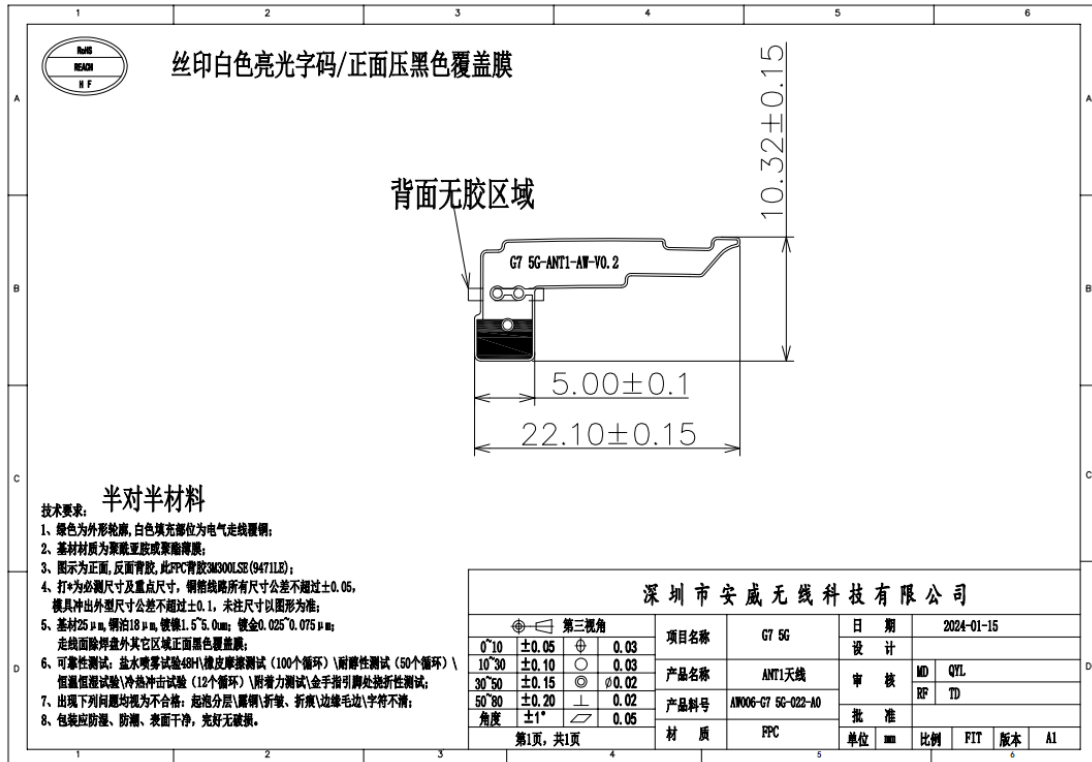
### Main ANT (antenna 0)



工作频段(Working frequency band): GSM850/900 WCDMB5/6/8/ /19

FDD5/7/8/12/13/17/19/20/26/28AB/71 TDD 38/40/41 NR5/8/20/28/71/38/40/41

### DIV ANT (antenna 1)



工作频段(Working frequency band):DCS1800、PCS1900、WCDMA1/2/4、FDD1/2/3/4/7/66/TDD34/39 NR1/2/3/7/66

### DIV ANT (antenna 2):

123456

丝印白色亮光字码/正面压黑色覆盖膜

**技术要求: 半对半材料**

- 绿色为外形轮廓, 白色填充部位为电气走线覆铜;
- 基材材质为聚酰亚胺或聚四氟乙烯;
- 图示为正面, 反面背胶, 此FPC背胶3M300LSE (9471LE);
- 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;
- 基材25 μm, 铜箔18 μm, 镀镍1.5 μm, 镀金0.025~0.075 μm; 走线面除焊盘外其它区域正面黑色覆盖膜;
- 可靠性测试: 盐雾喷雾试验48H\橡皮摩擦测试(100个循环)\耐磨性测试(50个循环)\高温恒湿试验\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;
- 出现下列问题均视为不合格: 起翘分层\露铜\折痕\折痕\边缘毛边\字符不清;
- 包装应防震、防潮、表面干净, 完好无破损。

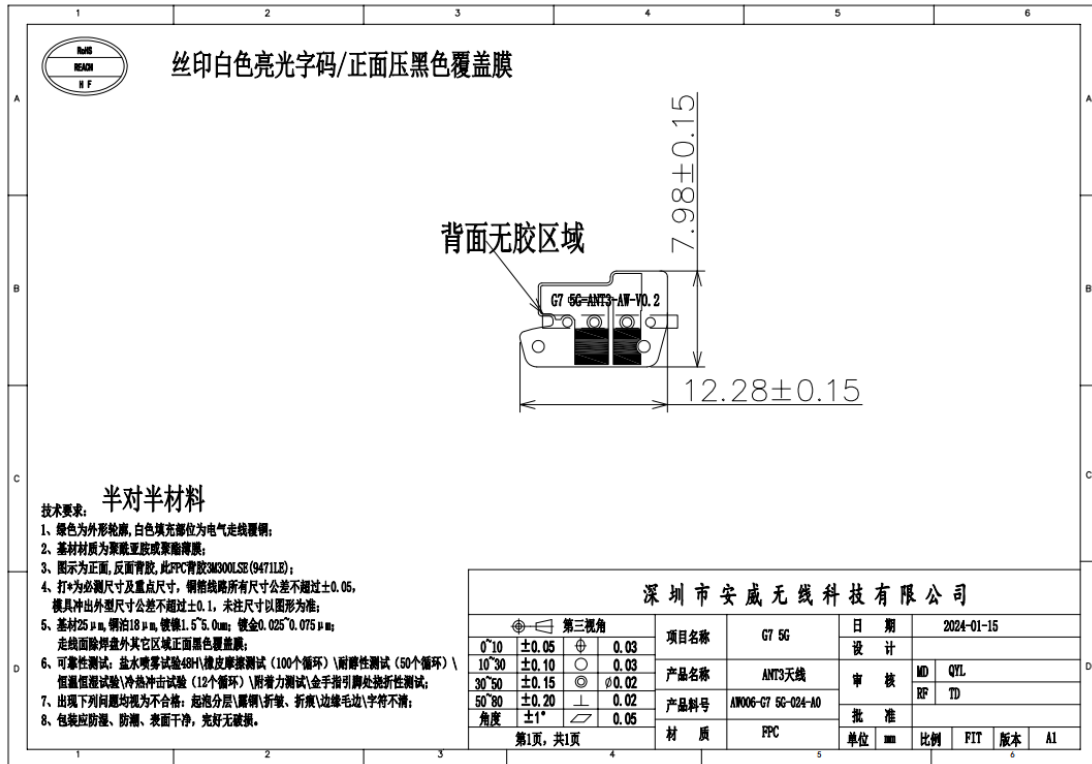
深圳市安威无线科技有限公司

第三视角		项目名称	G7 5G	日期	2024-01-15	
0°/10	±0.05	设计		设计		
10°/30	±0.10	产品名称	ANT2天线	审核	MD	QYL
30°/50	±0.15	产品料号	AW006-G7 5G-023-A0	批准	RF	TD
50°/80	±0.20	材质	FPC	单位	比例	FIT 版本 A1
角度	±1°					
第1页, 共1页						

工作频段(Working frequency band):N77/78

携手共进 共创未来

### DIV ANT (antenna 3):



工作频段(Working frequency band):LTE1/37/38/40/40 NR1/3/7/38/40/41/77/78

### DIV ANT (antenna 4):

123456

丝印白色亮光字码/正面压黑色覆盖膜

**半对半材料**

技术要求:

- 绿色为外形轮廓,白色填充部位为电气走线覆铜;
- 基材材质为聚酰亚胺或聚酰亚胺薄膜;
- 图示为正面,反面背胶,此FPC背胶3M300LSE(9471LE);
- 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;
- 基材25 $\mu$ m,铜箔18 $\mu$ m,镀镍1.5 $\mu$ m,0um;镀金0.025 $\mu$ m,0.075 $\mu$ m;走线面除焊盘外其它区域正面黑色覆盖膜;
- 可靠性测试:盐水喷雾试验(48H)\橡皮摩擦测试(100个循环)\耐磨性测试(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\金手指引脚处弯折性测试;
- 出现下列问题均视为不合格:起泡分层\露铜\折痕、折痕\边缘毛边\字符不清;
- 包装应防潮、防潮、表面干净,完好无破损。

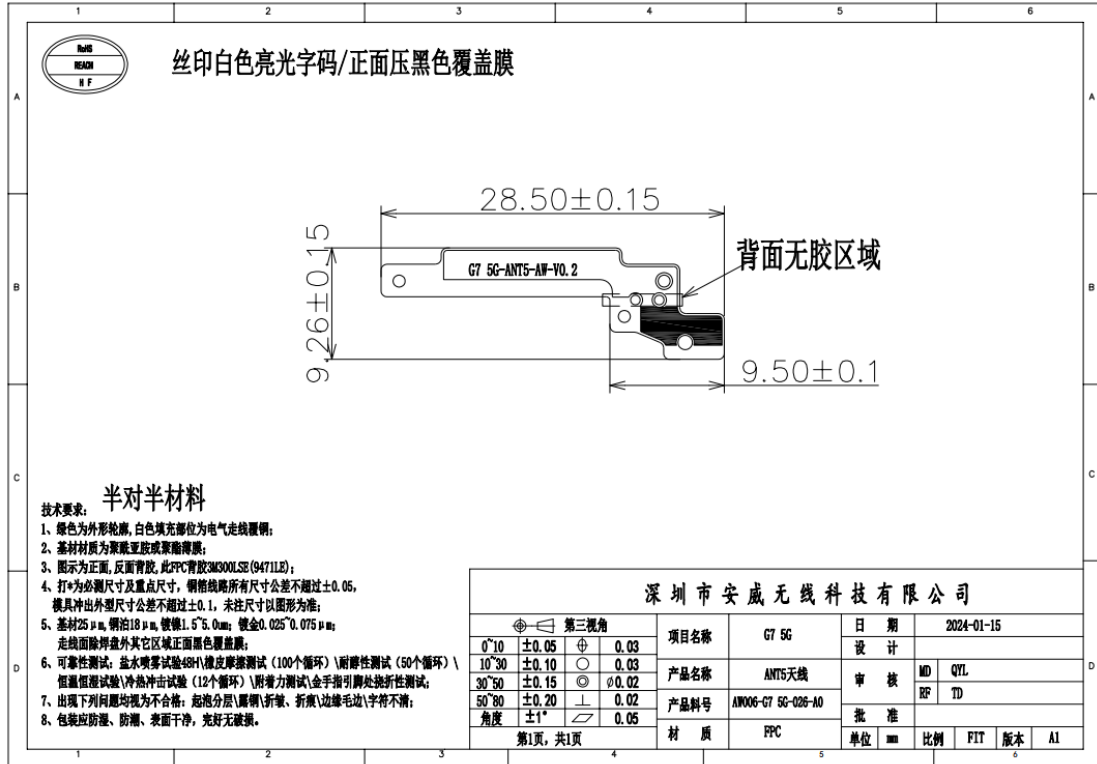
深圳市安威无线科技有限公司

第三视角	项目名称	G7 5G	日期	2024-01-15	
0°/10	±0.05	Φ	0.03	设计	
10°/30	±0.10	○	0.03	审核	MD QYL
30°/50	±0.15	◎	φ0.02		RF TD
50°/80	±0.20	⊥	0.02	批准	
角度	±1°	∠	0.05		单位
第1页,共1页		材质	FPC	比例	FIT
				版本	A1

123456

工作频段(Working frequency band):LTE1/3/ NR1/3/7/38/40/41/77/78

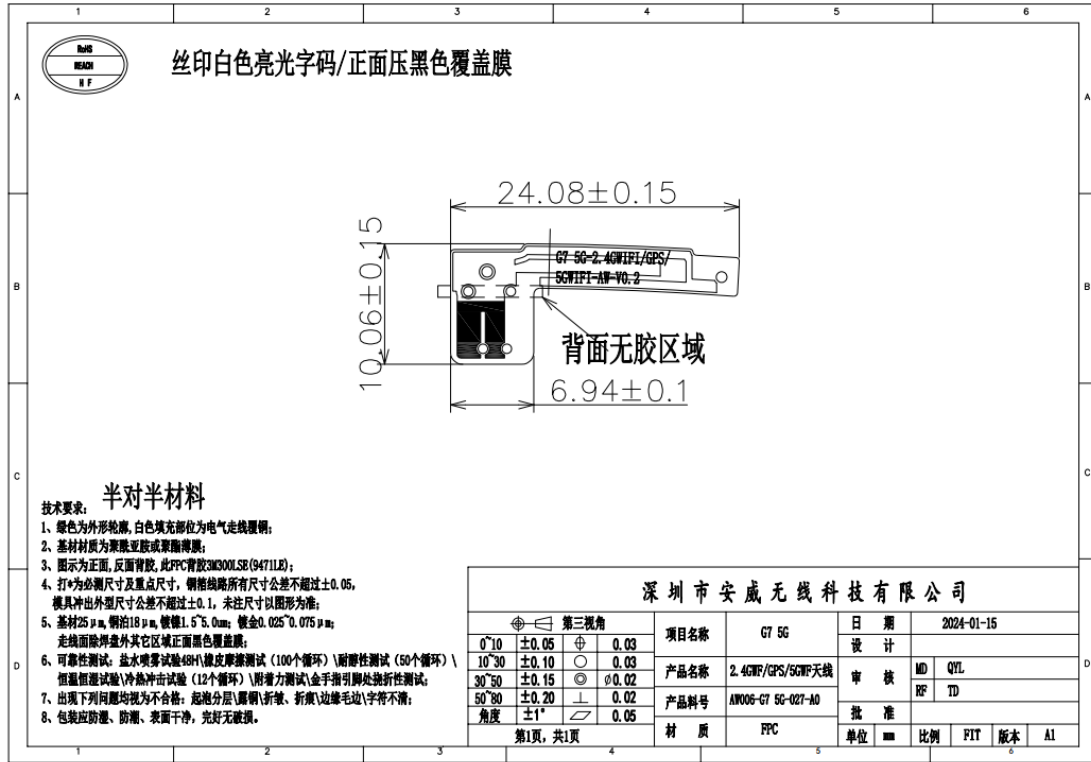
### DIV ANT (antenna5):



工作频段(Working frequency band):LTE1/3/ NR1/3/7/38/40/41/77/78



GPS/BT/WIFI antenna

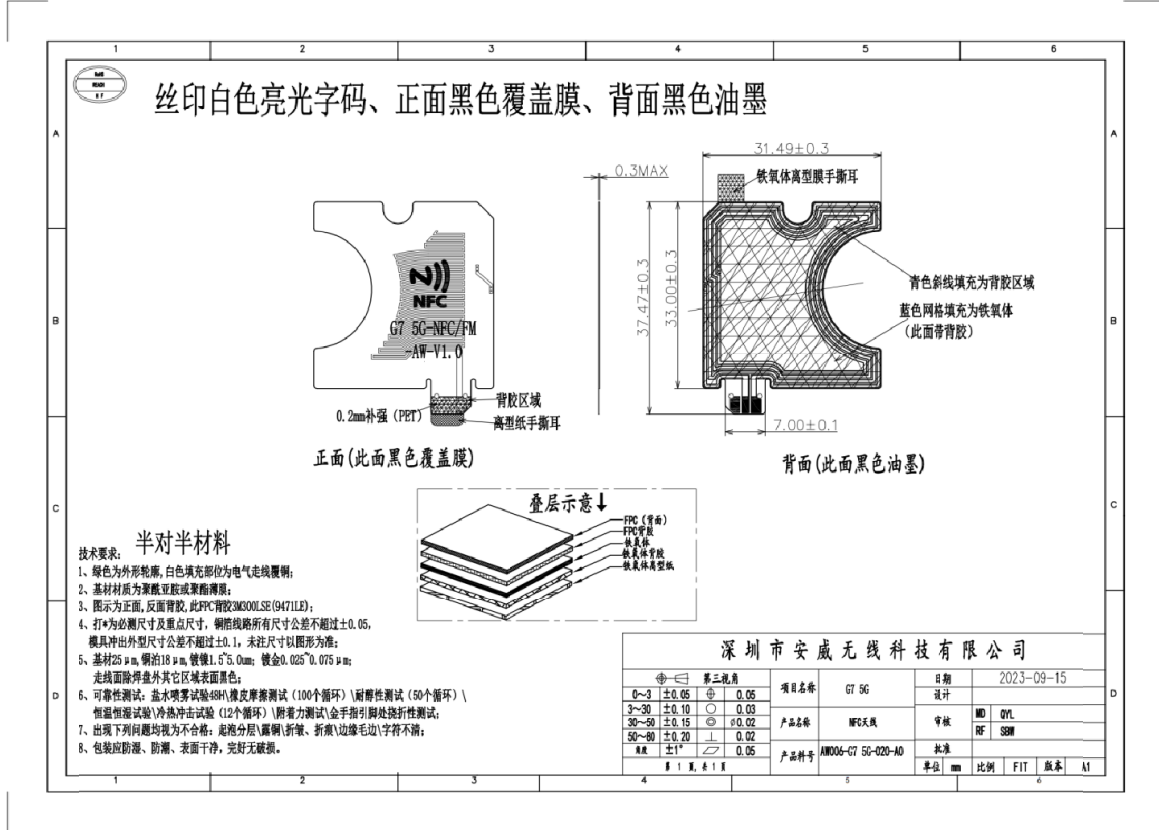


GPS 天线工作频段 (Working frequency band of GPS antenna) : 1559MHZ~1616MHZ

5GWIFI 工作频段 (Working frequency band of 5GWIFI antenna) : 5100MHZ~5850MHZ

2.4GWIFI/BT 工作频段 (Working frequency band of 2.4GWIFI/BT antenna) : 2400MHZ~2500MHZ

NFC antenna



### ANWEI ANT TRP&TIS parameter Summary of G7-5G

Band	Channel	Total	TIS
GSM850	128	24.98	
	190	25.98	
	251	26.07	100.73
GSM900	1	26.38	
	62	25.94	
	124	25.34	97.24
DCS1800	512	23.83	
	698	23.53	
	885	25.64	105.52
PCS1900	512	27.45	
	661	27.81	
	810	26.95	104.12
TDD_B34	36250	19.51	
	36275	20.22	
	36300	19.41	92.7
TDD_B38	37850	15.04	
	38000	14.32	
	38150	13.09	86.09
TDD_B39	38350	18.54	
	38450	18.31	
	38550	18.17	91.04
TDD_B40	38750	19.52	
	39150	18.66	
	39550	17.8	88.13
TDD_B41	40620	13.16	87.92

Band	Channel	Total	TIS
FDD_B1	18050	19.4	
	18300	19.06	
	18550	19.38	91.67
FDD_B2	18650	19.22	
	18900	18.69	
	19150	18.61	92.59
FDD_B3	19250	18.07	
	19575	18.56	
	19900	18.99	91.63
FDD_B4	20000	17.8	
	20175	17.99	
	20350	18.11	91.03
FDD_B5	20450	16.45	
	20525	16.65	
	20600	16.46	87.65
FDD_B7	20800	16.89	
	21100	15.6	
	21400	12.53	86.39
FDD_B8	21500	15.87	
	21625	15.85	
	21750	15.75	86.02
FDD_B12	23060	16.8	
	23095	16.79	
	23130	15.87	90.07
FDD_B13	23230	14.72	86.3

Band	Channel	Total	TIS
FDD_B17	23780	17.78	
	23790	17.64	
	23800	16.78	89.05
FDD_B18	23900	15.75	
	23925	16.21	
	23950	16	90.48
FDD_B19	24050	16.45	
	24075	16.27	
	24100	16.03	88.53
FDD_B20	24200	16.61	
	24300	16.52	
	24400	16.19	86.76
FDD_B25	26090	19.31	
	26365	18.92	
	26640	18.75	92.93
FDD_B26	26740	15.75	
	26865	15.49	
	26990	15.97	85.58
FDD_B28	27260	17.97	
	27360	17.45	
	27469	16.79	87.02
	27410	17.73	
	27510	17.14	
	27600	16.89	87.3

Band	Channel	Total	TIS
FDD_B66	132022	17.41	
	132322	17.22	
	132622	17.41	92.91
FDD_B71	133172	14.64	
	133297	14.74	
	133422	14.8	87.57

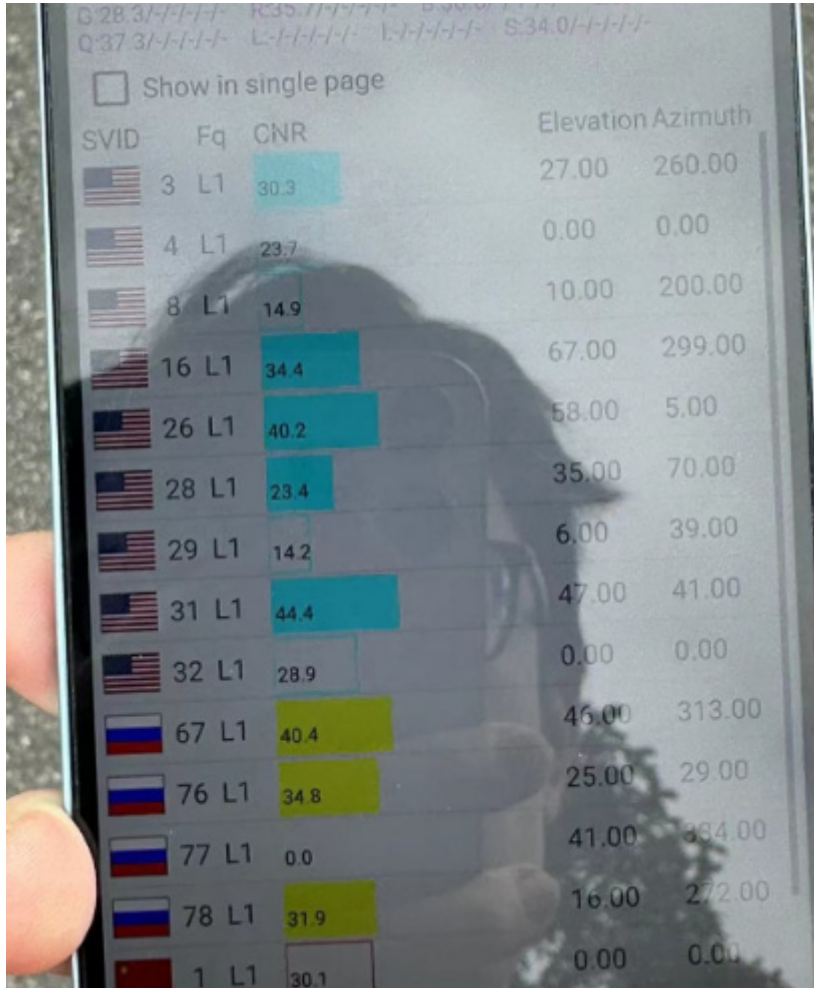
Band	Channel	Total	TIS
WCDMA_B1	9612	19.08	
	9750	18.99	
	9888	19.08	106.03
WCDMA_B2	9262	19.25	
	9400	18.71	
	9538	18.43	105.73
WCDMA_B4	1312	18.86	
	1413	19.2	
	1513	19.63	103.74
WCDMA_B5	4132	15.7	
	4183	15.44	
	4233	15.37	99.18

Band	Channel	Total	TIS
WCDMA_B8	2712	16.51	
	2787	16.43	
	2863	16.18	99.57
WCDMA_B6	4162	15.62	
	4175	15.34	
	4188	15.24	101.57
WCDMA_B19	312	15.67	
	412	15.43	
	437	15.2	100.23
CDMA800	283	15.7	
	384	15.37	
	777	15.16	97.28
CDMA1900	25	18.08	
	600	18.21	
	1175	18.07	103.34

Band	Channel	Total	TIS
n1-15k-10M	385000	19.85	
n1-15k-10M	390000	19.46	
n1-15k-10M	395000	19.66	-91.54
n2-15k-10M	371000	19.69	
n2-15k-10M	376000	19.66	
n2-15k-10M	381000	20.06	-93.41
n3-15k-10M	343000	17.32	
n3-15k-10M	349500	17.84	
n3-15k-10M	356000	16.4	-93.21
n5-15k-10M	165800	15.69	
n5-15k-10M	167300	15.7	
n5-15k-10M	168800	15.85	-87.93
n7-15k-10M	501000	19.17	
n7-15k-10M	507000	16.18	
n7-15k-10M	513000	13.57	-86.55
n8-15k-10M	177000	15.4	
n8-15k-10M	179500	15.79	
n8-15k-10M	182000	15.81	-87.18
n20-15k-10M	167400	15.79	
n20-15k-10M	169400	15.78	
n20-15k-10M	171400	15.24	-87.14

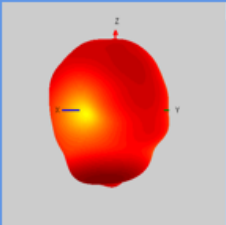
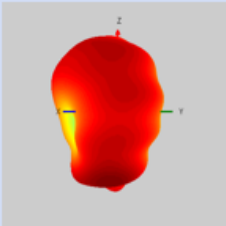
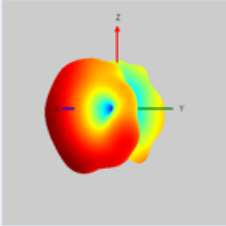
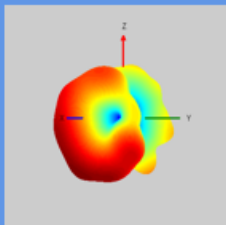
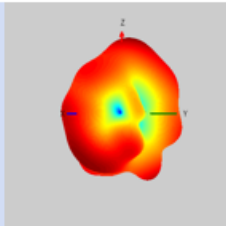
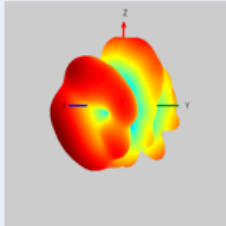
Band	Channel	Total	TIS
n28-15k-10M	141600	17.06	
n28-15k-10M	145100	16.52	
n28-15k-10M	148600	15.98	-87.4
n66-15k-10M	343000	19.77	
n66-15k-10M	349000	17.84	
n66-15k-20M	344000	19.65	-88.81
n71-15k-10M	133600	15.05	
n71-15k-10M	136100	15.2	
n71-15k-10M	138600	14.9	-86.8
n38-30k-10M	515000	13.95	
n38-30k-10M	519000	13.1	
n38-30k-10M	523000	13.99	-89.45
n40-30k-10M	461000	17.49	
n40-30k-10M	470000	16.78	
n40-30k-10M	479000	15.51	-91.74
n41-30k-100	509202	17.17	
n41-30k-100	518598	16.01	
n41-30k-100	528000	15.25	-82.25
n77-30k-100	623334	23.55	
n77-30k-100	650000	20.21	
n77-30k-100	676666	23.38	-85.97
n78-30k-100	623334	24.43	
n78-30k-100	636666	24.41	
n78-30k-100	650000	20.91	-83.59

### GPS/WIFI 测试(GPS/WIFI Test)

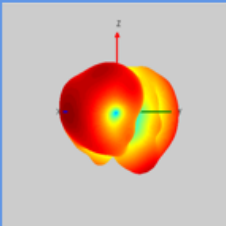
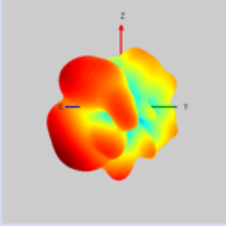
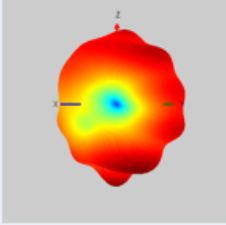


Standard	Channel	Total	TIS
WIFI_B	1	10.49	80.1
	6	11.75	80.2
	11	10.84	80.5
WIFI_A	36	10.96	72.68
	64	10.12	72.2
	165	9.45	72.3

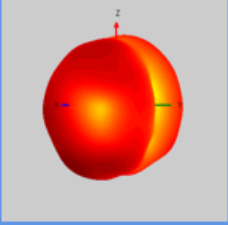
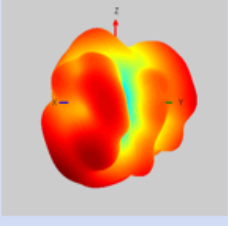
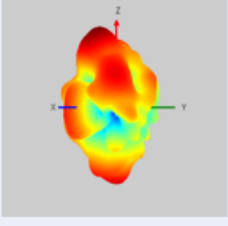
方向图 (Antenna Pattern)

<p>GSM900/FDD B8/WCDMA B8 NR B8</p>	
<p>GSM900/FDD B5/B20/WCDMA B5 CDMA BC0 NR B5/20</p>	
<p>GSM1700/FDD B3/NR B3/66</p>	
<p>PCS1900/FDD B2/WCDMA B2 TDD B34/B39 CDMA BC1 NR B2</p>	
<p>FDD B1/WCDMA B1/NR B1</p>	
<p>TDD B40 NR B40</p>	



TDD B38/B41/NR 41	 A 3D radiation pattern plot showing a main lobe oriented along the z-axis, with a color scale from blue (low) to red (high).
FDD B7 NR B7	 A 3D radiation pattern plot showing a main lobe oriented along the z-axis, with a color scale from blue (low) to red (high).
FDD 28A/B NR 71	 A 3D radiation pattern plot showing a main lobe oriented along the z-axis, with a color scale from blue (low) to red (high).

NR 77	 A 3D radiation pattern plot showing a main lobe oriented along the z-axis, with a color scale from blue (low) to red (high).
NR 78	 A 3D radiation pattern plot showing a main lobe oriented along the z-axis, with a color scale from blue (low) to red (high).

GPS	
2.4GWIFI/BT	
5GWIFI	

## 天线增益(Antenna gain)

Standard Band	Frequency	Gain(dbi)
TDD_LTE TDD_B34	2020	1.0
TDD_LTE TDD_B38/N38	2580	-1.51
TDD_LTE TDD_B39	1900	0.88
TDD_LTE TDD_B40/N40	2310	-0.93
TDD_LTE TDD_B41	2593	-1.49
FDD_LTE FDD_B1/N1	1925	0.99
FDD_LTE FDD_B2/N2	1855	0.88
FDD_LTE FDD_B3 /N3	1715	-0.56
FDD_LTE FDD_B4	1715	-0.86
FDD_LTE FDD_B5/N5	829	-2.53
FDD_LTE FDD_B7/N7	2505	-1.49
FDD_LTE FDD_B8/N8	885	-2.69
FDD_LTE FDD_B12	704	-2.89
FDD_LTE FDD_B13	782	-2.76
FDD_LTE FDD_B17	709	-2.89
FDD_LTE FDD_B18	820	-2.53
FDD_LTE FDD_B19	835	-2.54
FDD_LTE FDD_B20/N20	837	-2.54
FDD_LTE FDD_B25	1880	-0.56
FDD_LTE FDD_B26	819	-1.56
FDD_LTE FDD_B28	708	-2.9
FDD_LTE FDD_B28/N28	723	-2.8
FDD_LTE FDD_B66/N66	1745	-0.56
FDD_LTE FDD_B71/N71	680	-3.61
WCDMA WCDMA_B1	1922.4	0.99
WCDMA WCDMA_B2	1852.4	0.88
WCDMA WCDMA_B4	1712.4	-0.86
WCDMA WCDMA_B5	826.4	-2.53
WCDMA WCDMA_B8	882.4	-2.69
WCDMA WCDMA_B6	835	-2.53
WCDMA WCDMA_B19	832.4	-2.53

GSM	GSM850	824.2	-2.53
GSM	GSM900	890.2	-2.69
GSM	PCS1900	1850.2	0.88
GSM	DCS1800	1710.2	-0.86
2.4GWIFI		2412	1.98
5GWIFI		5825	1.92
GPS		1575	1.56
BT		2400	1.98
NR	NR_B77	3400	2.57
NR	NR_B78	3400	2.78