

日期：2023-11-18

博派L6502天线测试报告

项目	射频负责人	结构负责人	频段
L6502	李新	岑工	GSM:850/900/1800/1900 WCDMA850/1700/1900 LTE:B2/4/5/12/13/17/25/26/ 41/66/71 WIFI/GPS/BT
备注：			

本公司已经评审并符合 GB/T19001-2016/ISO9001：2015质量管理体系标准适用条款的要求
深圳市福田区泰然四路泰然科技园212栋701. www.tyquant.com

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- 1, 测试环境
- 2, 匹配电路设计
- 3, 天线测试报告
- 4, 环境处理建议



天宇通天线

深圳市天宇通电子科技有限公司

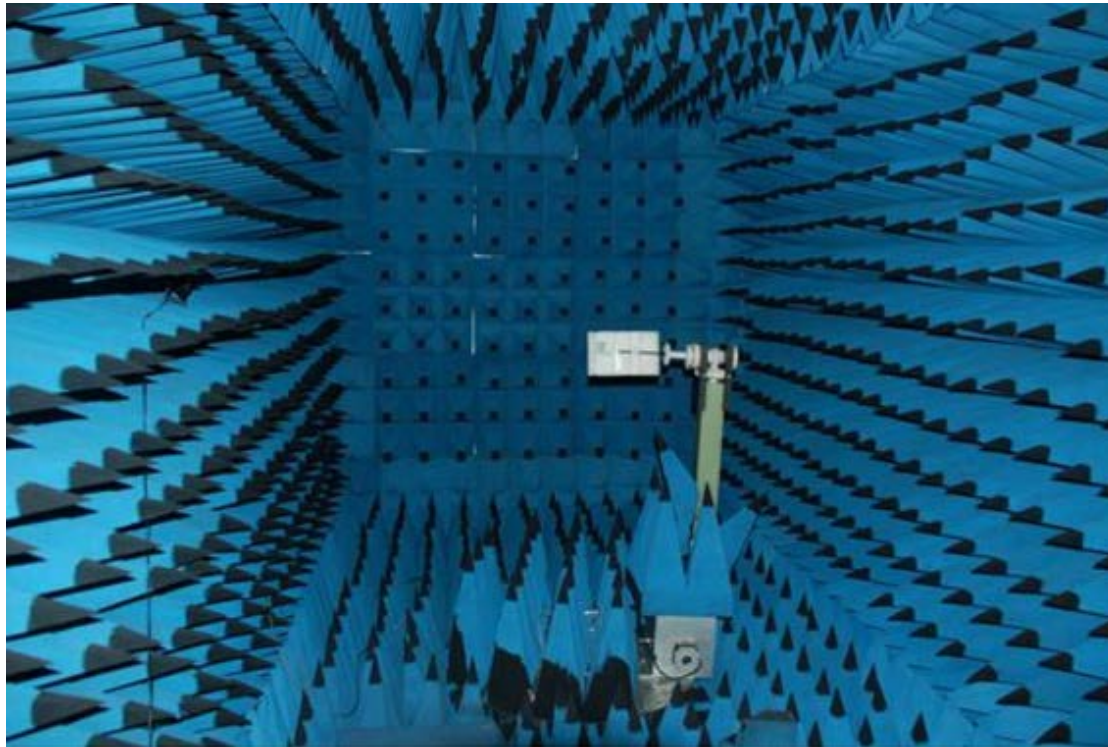
专心，专业，专注做最好的天线

1. 测试环境

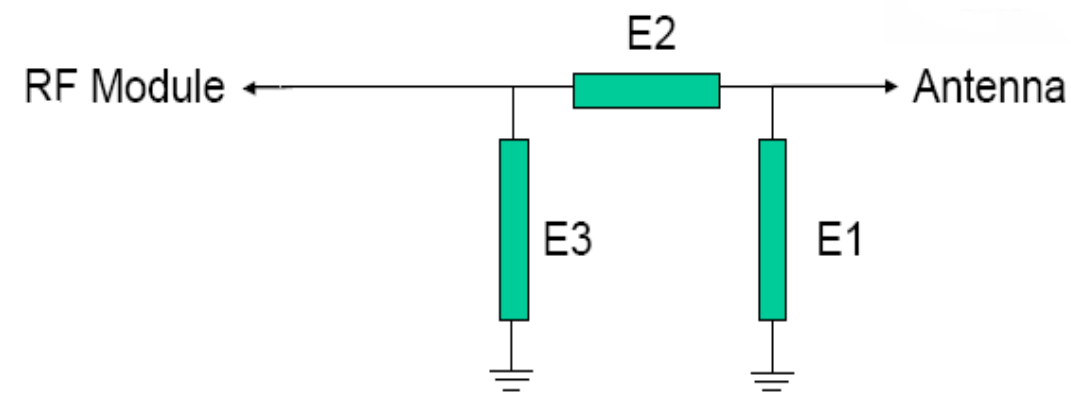
测试系统: ETS 3D屏蔽暗室

测试环境: 温度 $22^{\circ}\text{C} \pm 3^{\circ}\text{C}$, 湿度 $50\% \pm 15\%$

测试设备: 测试无源数据时, 使用惠普8753E 网络分析仪
测试有源数据时, 使用E5515C-8960 3G全功能综测仪
测试有源数据时, 使用8820C 4G全功能综测仪



2. 匹配电路设计



Element	Value
E1(0402)	15nH
E2(0402)	0欧姆
E3(0402)	空置

3. 1 2G测试报告

	EGSM900			Remarks	DCS1800			Remarks
Channel	1	62	124		512	698	885	
MaxPower (dBm)	28.9	28.8	28.6		28.1	28.5	28.8	
TRP(dBm)	25.8	25.6	25.5		23.8	24.3	24.6	
MaxSensitivity(dBm)			-103.8				-106.8	
TIS(dBm)			-100.6				-102.6	
	EGSM850			Remarks	PCS1900			Remarks
Channel	128	190	250		512	661	810	
MaxPower (dBm)	30.8	30.5	30.2		29.1	29.2	29.0	
TRP(dBm)	27.5	27.3	26.8		25.2	25.3	25.1	
MaxSensitivity(dBm)			-105.3				-106.7	
TIS(dBm)			-102.1				-102.5	

3.2 3G测试报告

	WCDMA850			Remarks		WCDMA1700			Remarks
Channel	4357	4408	4458		Channel	1537	1638	1738	
MaxPower (dBm)	21.3	21.5	20.9		MaxPower (dBm)	21.1	21.5	21.6	
TRP(dBm)	18.2	18.3	17.8		TRP(dBm)	16.8	17.3	17.5	
MaxSensitivity(dBm)			-105.5		MaxSensitivity(dBm)			-107.8	
TIS(dBm)			-102.3		TIS(dBm)			-103.6	
	WCDMA1900			Remarks					
Channel	9663	9800	9937						
MaxPower (dBm)	22.3	22.2	21.9						
TRP(dBm)	18.2	18.1	17.8						
MaxSensitivity(dBm)			-107.1						
TIS(dBm)			-103.2						

3. 4 4G测试报告

	LTE-B2			Remarks	LTE-B4			Remarks
Channel	19250	19575	19900		20000	20150	20350	
MaxPower (dBm)	22.1	22.2	21.9		20.9	21.5	21.6	
TRP(dBm)	18.2	18.3	17.8		16.8	17.3	17.5	
MaxSensitivity(dBm)			-96.8				-96.9	
TIS(dBm)			-92.6				-92.8	
	LTE-B5			Remarks	LTE-B12			Remarks
Channel	20450	20525	20600		23060	23095	23130	
MaxPower (dBm)	21.3	21.5	20.9		20.2	20.3	20.5	
TRP(dBm)	18.2	18.3	17.8		17.3	17.5	17.6	
MaxSensitivity(dBm)			-93.5				-93.5	
TIS(dBm)			-90.3				-90.6	

3. 6 4G测试报告

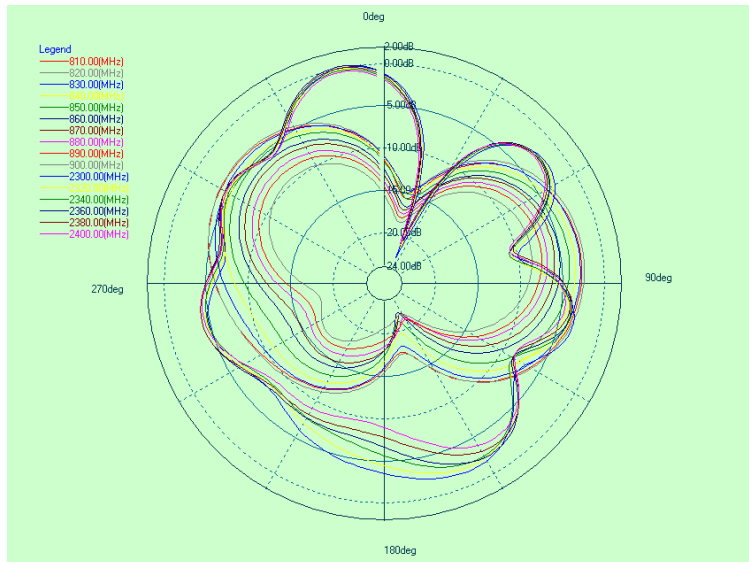
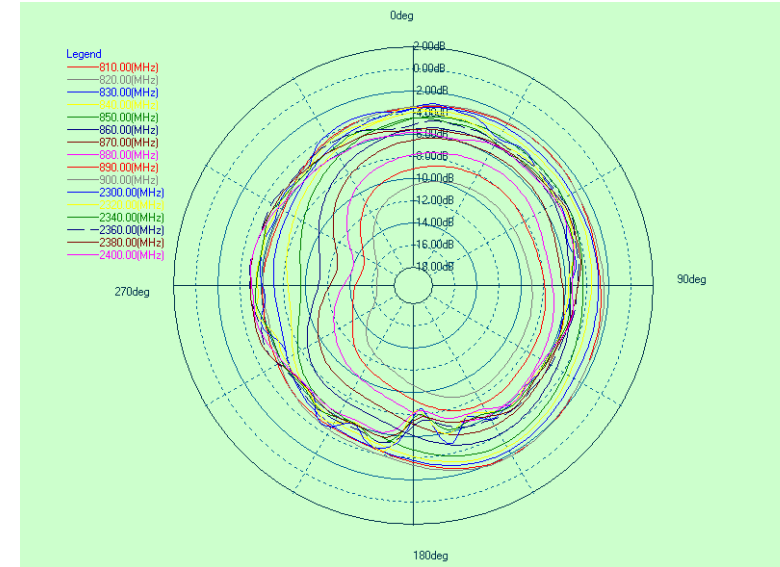
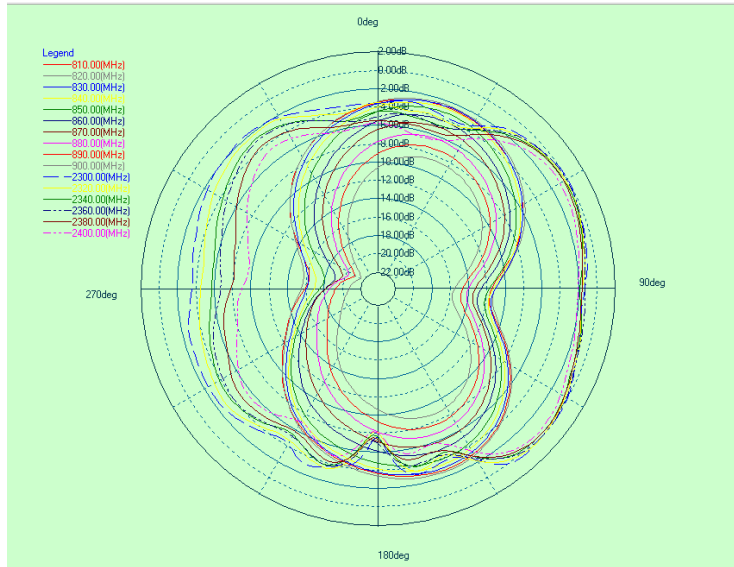
	LTE-B13			Remarks	LTE-B17			Remarks
Channel	23195	23230	23265		23780	23790	23800	
MaxPower (dBm)		21.0			20.2	20.3	20.5	
TRP(dBm)		17.9			17.3	17.5	17.6	
MaxSensitivity(dBm)		-93.1					-93.5	
TIS(dBm)		-90.2					-90.6	
	LTE-B25			Remarks	LTE-B26			Remarks
Channel	26090	26350	26640		26740	26865	26990	
MaxPower (dBm)	21.9	22.2	22.1		21.3	20.9	20.8	
TRP(dBm)	17.8	18.3	18.2		18.2	17.8	17.6	
MaxSensitivity(dBm)			-95.9				-93.6	
TIS(dBm)			-91.8				-90.5	

3. 8 4G测试报告

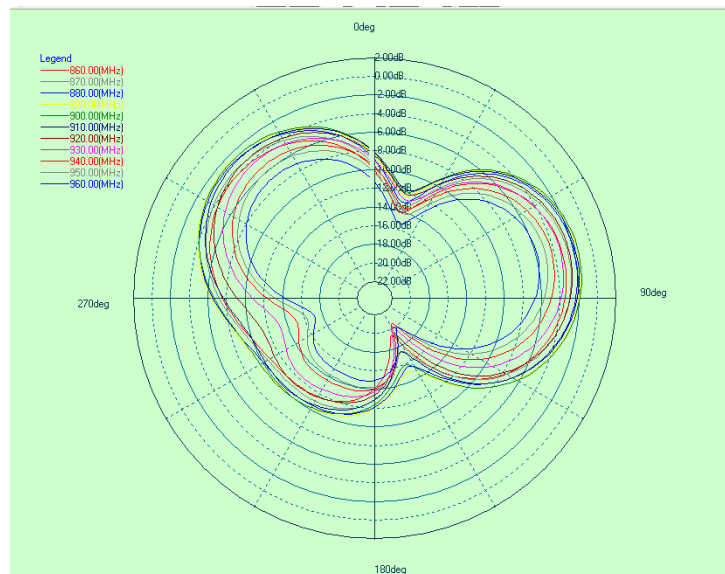
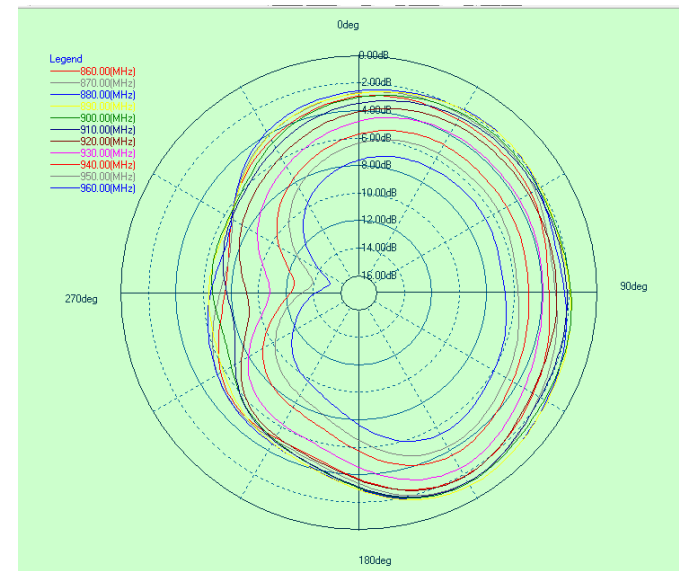
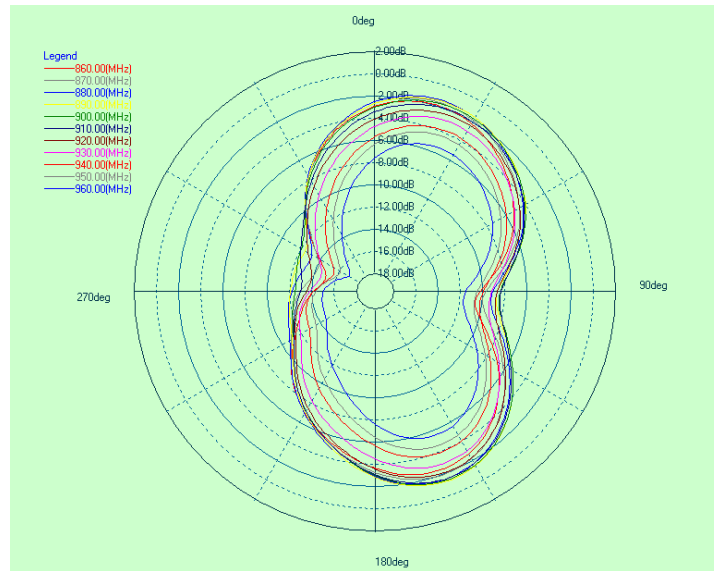
	LTE-B41（10MHz）			Remarks	LTE-B66			Remarks
Channel	40240	40620	41220		132022	132333	132622	
MaxPower (dBm)	23.5	23.7	22.5		20.8	21.5	21.6	
TRP(dBm)	19.6	19.8	18.6		16.6	17.3	17.5	
MaxSensitivity(dBm)			-96.5				-96.1	
TIS(dBm)			-92.6				-92.2	
	LTE-B71			Remarks				Remarks
Channel	133122	133297	133472					
MaxPower (dBm)	19.9	20.0	20.1					
TRP(dBm)	17.1	17.2	17.3					
MaxSensitivity(dBm)			-92.5					
TIS(dBm)			-89.6					

天线增益

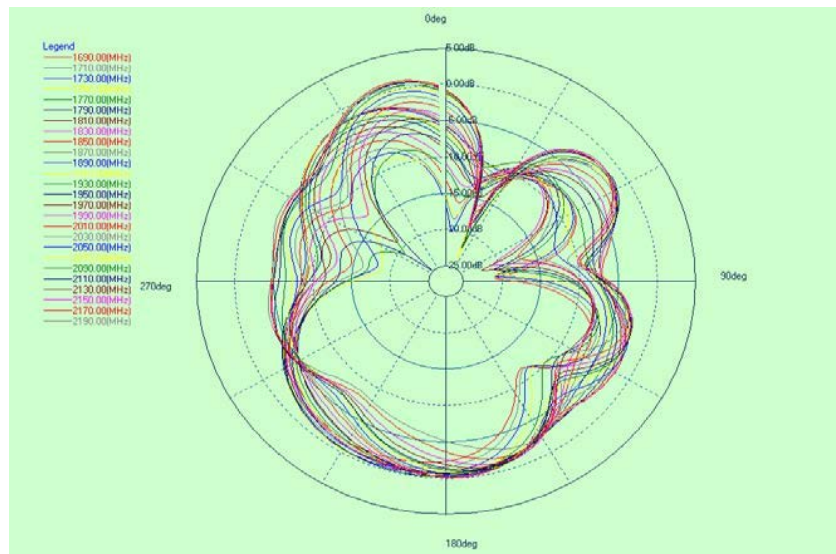
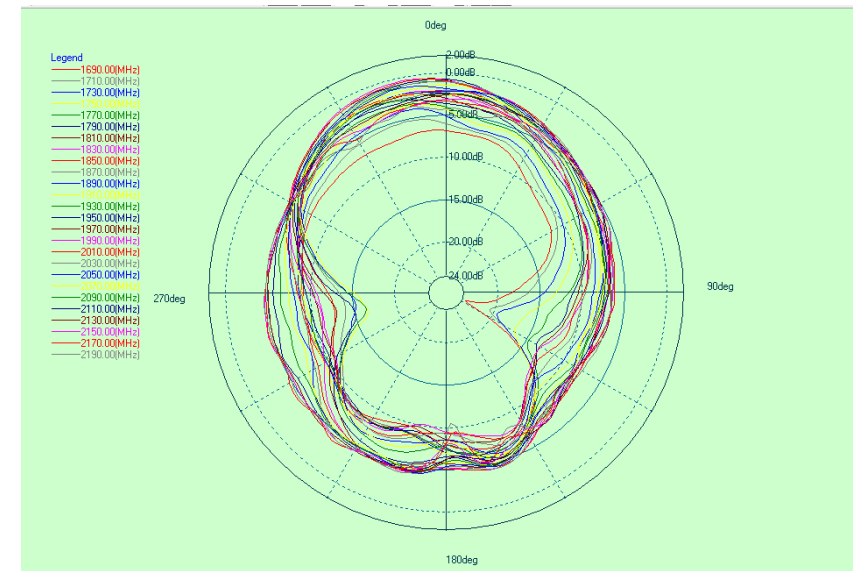
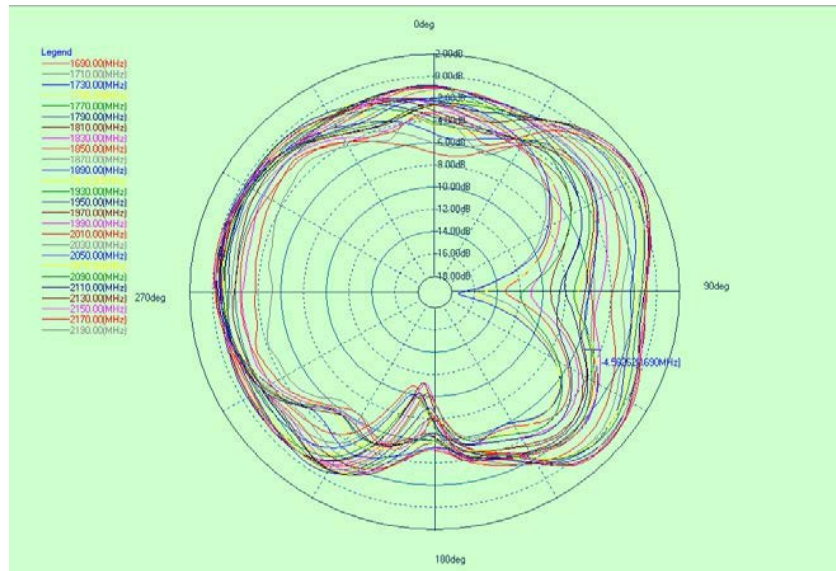
2G	Frequency	Effi (%)	Gaim (dBi)
GSM 850	824–896 MHz	19.5	0.4
GSM 900	880–960 MHz	18.6	0.3
DCS (1800)	1710–1880 MHz	26.8	0.7
PCS (1900)	1880–1990 MHz	28.2	0.8
3G			
WCDMA B2	1850–1990 MHz	26.8	0.7
WCDMA B4	1710–2160 MHz	25.5	0.6
WCDMA B5	824–896 MHz	19.5	0.4
4G			
LTE B2/25	1850–1990 MHz	26.8	0.7
LTE B4/66	1710–2200 MHz	25.5	0.6
LTE B5/26	816–896 MHz	19.5	0.4
LTE B12/13/17	698–798MHz	17.3	0.3
LTE B41	2500–2690 MHz	29.2	0.9
LTE B71	616–698 MHz	16.8	0.2
WIFI, BT/5GWIFI	2.4-2.5/5.1-5.9 GHz	36.8	1.2
GPS	1575 MHz	35.2	1.1



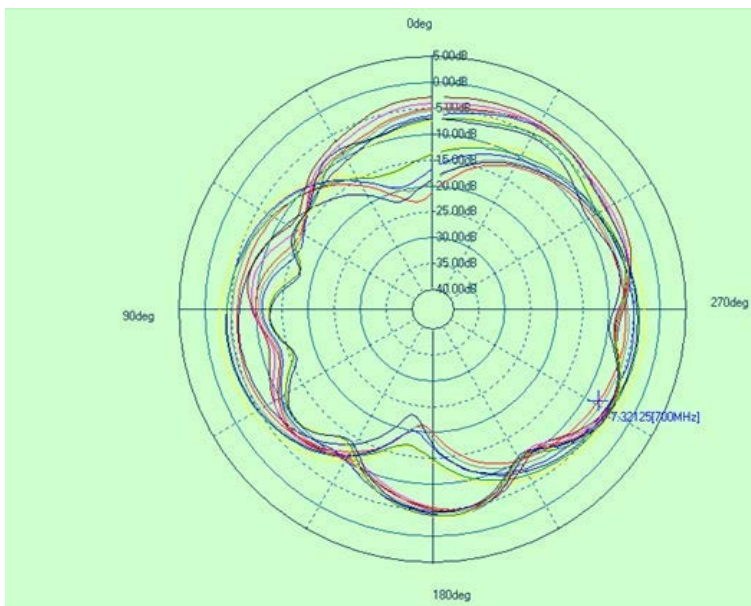
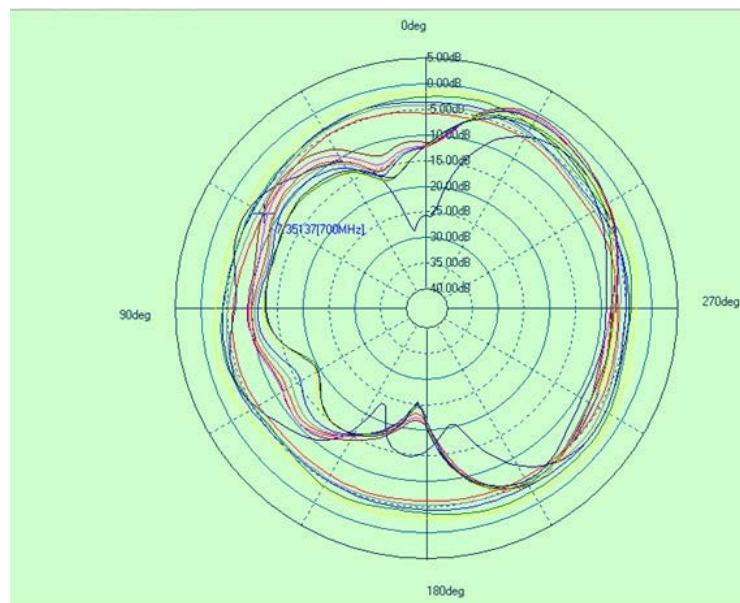
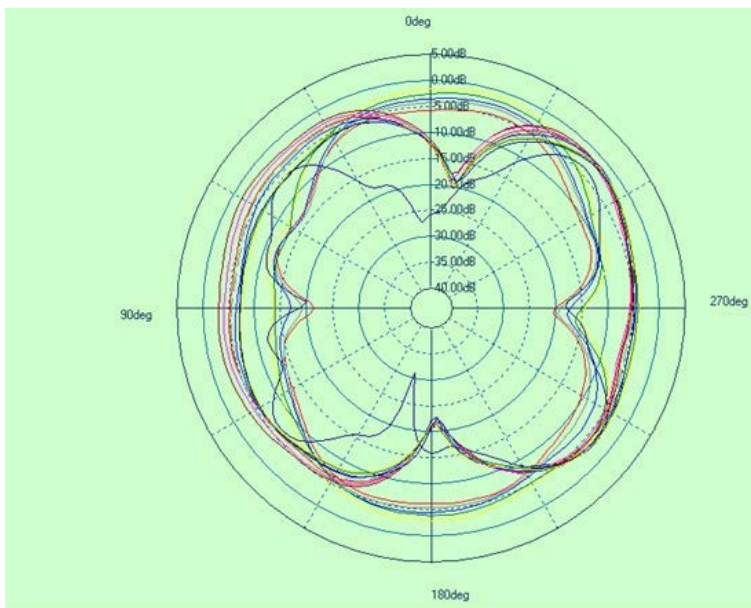
GSM850, WCDMA B5, LTE:B5/26



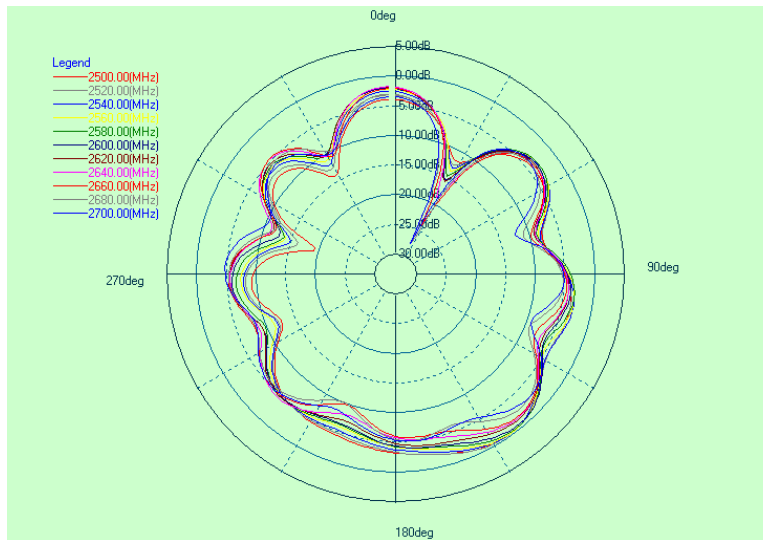
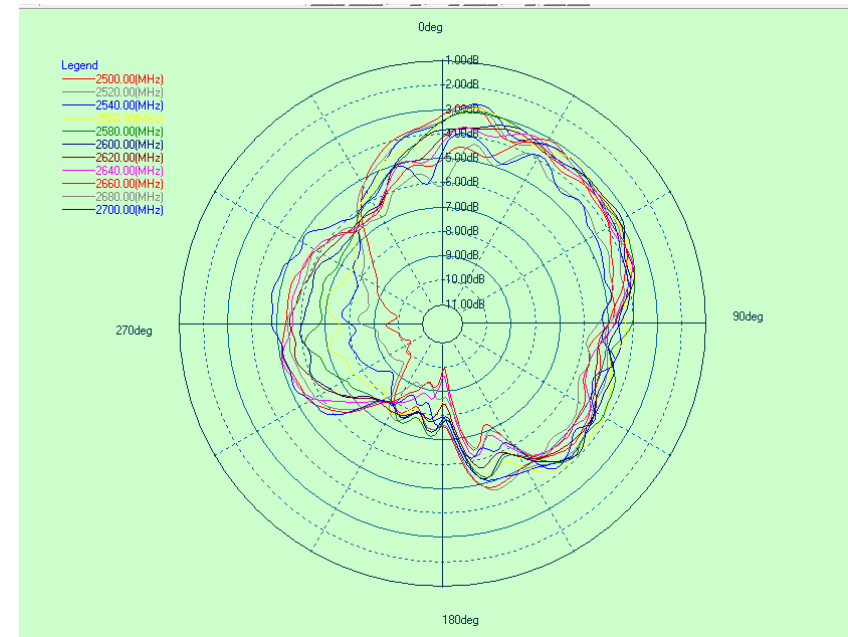
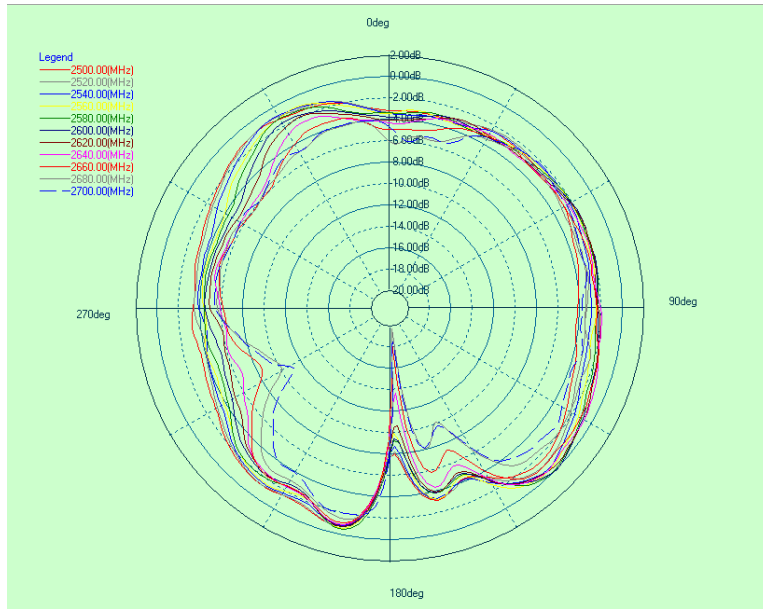
GSM900



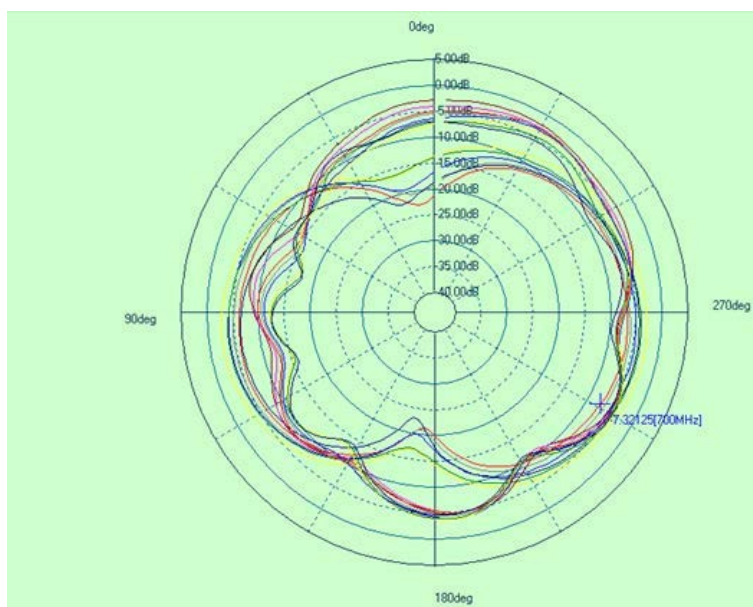
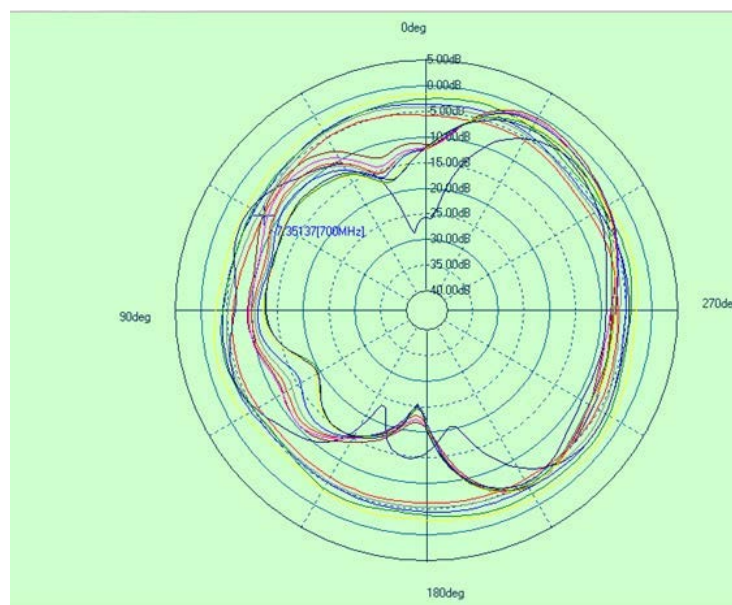
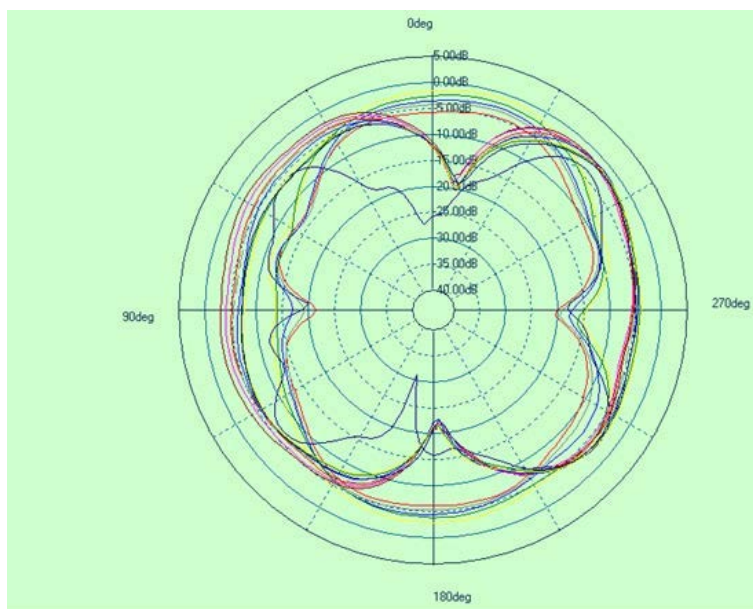
WCDMA B2/4, LTE: B2/4/25/66



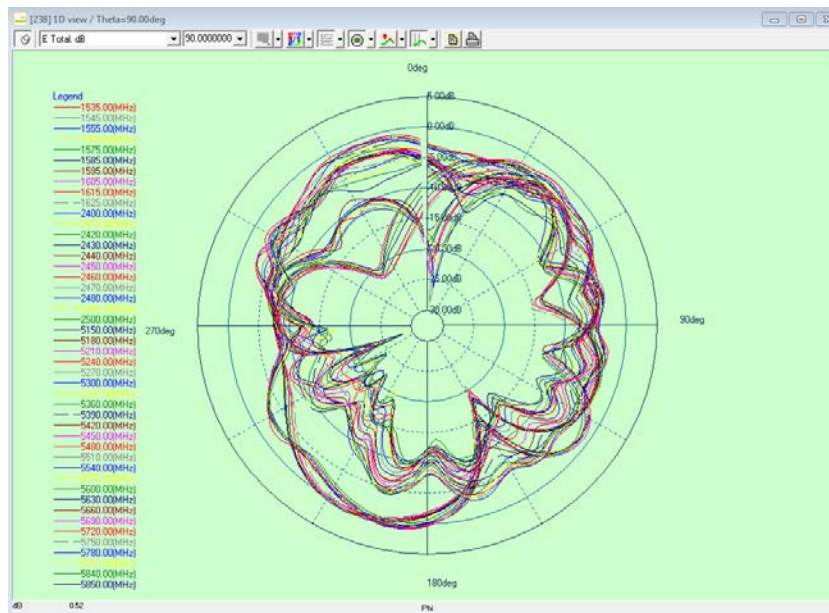
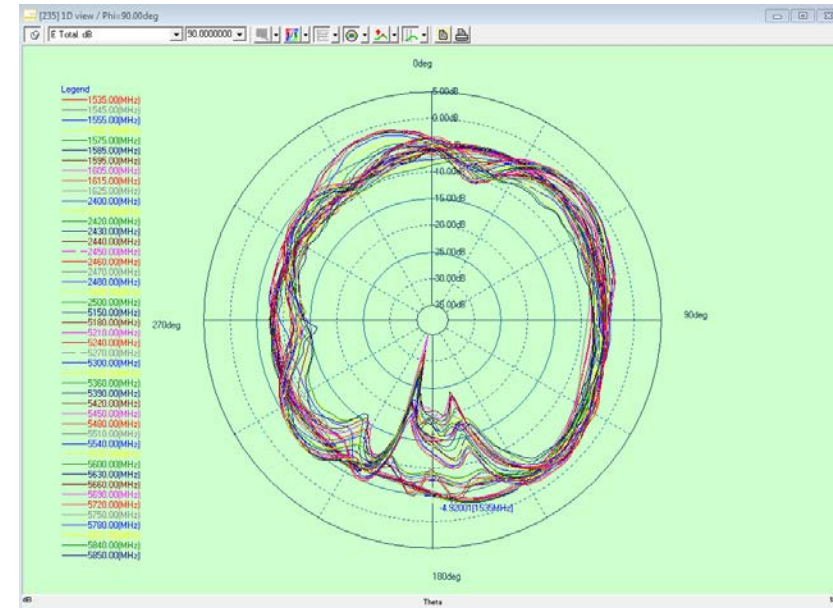
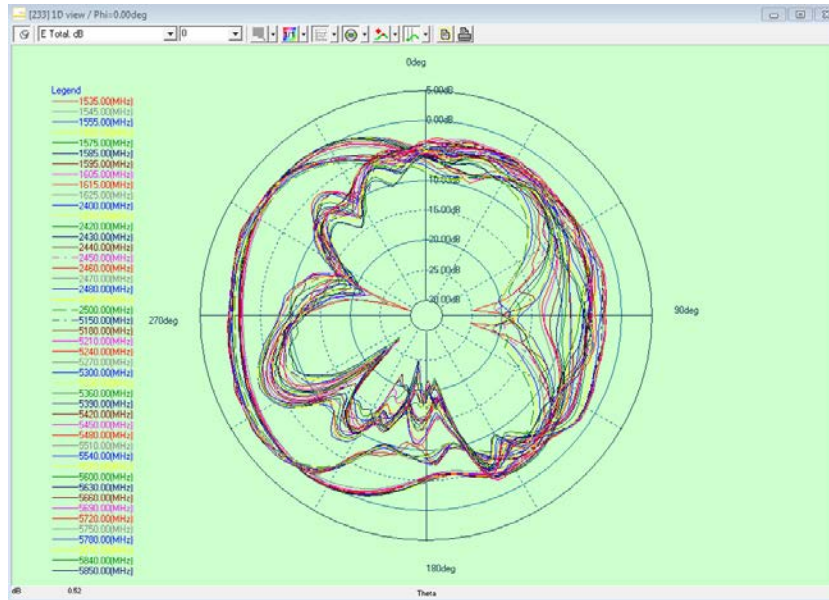
LTE:B12/13/17



LTE:B41

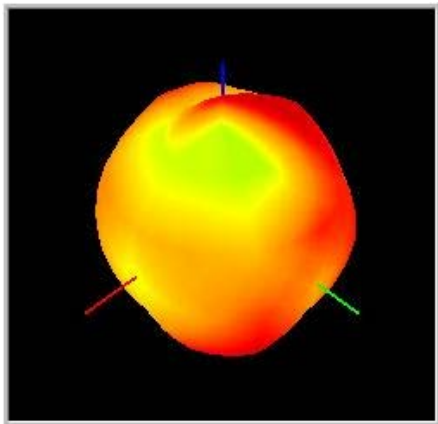


LTE:B71

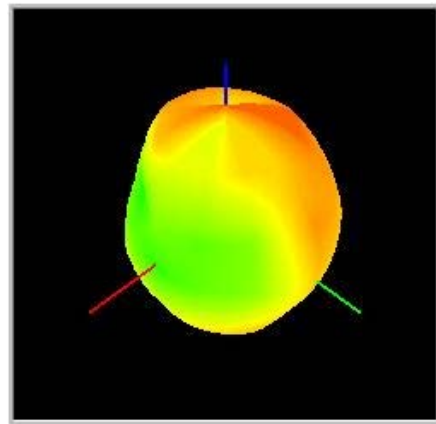


GPS/WIFI/BT

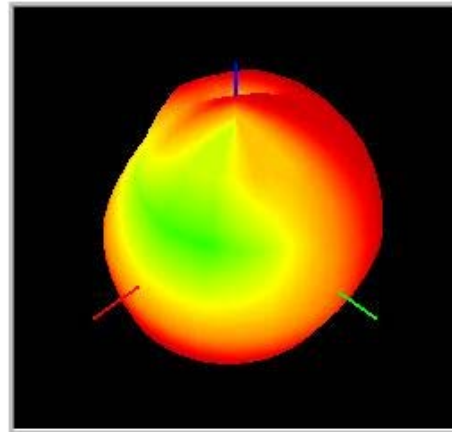
3.9 Antenna Pattern



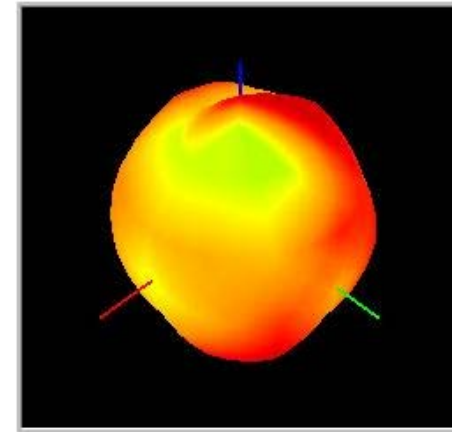
B2/25



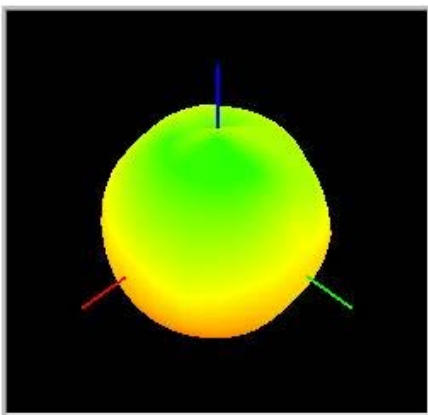
B4



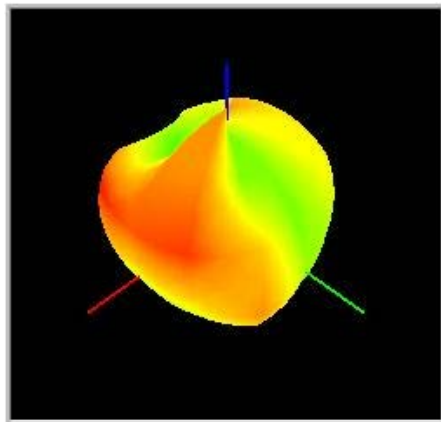
B5



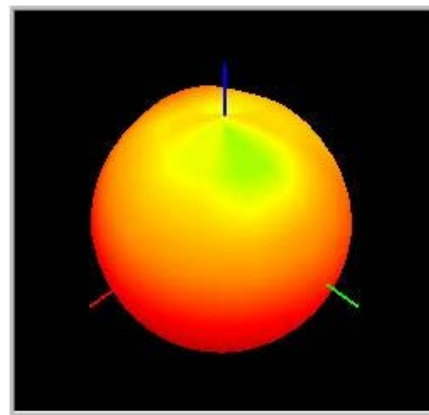
B8



B12/13/17



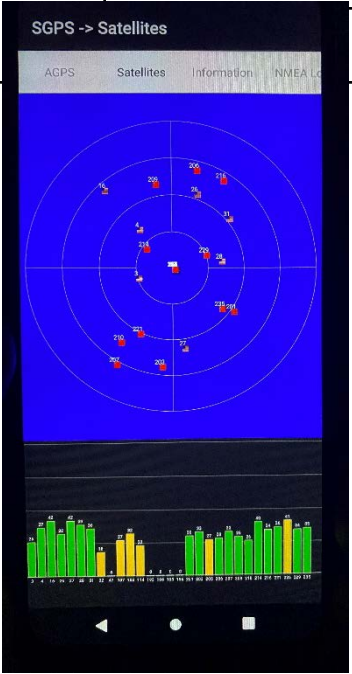
B41



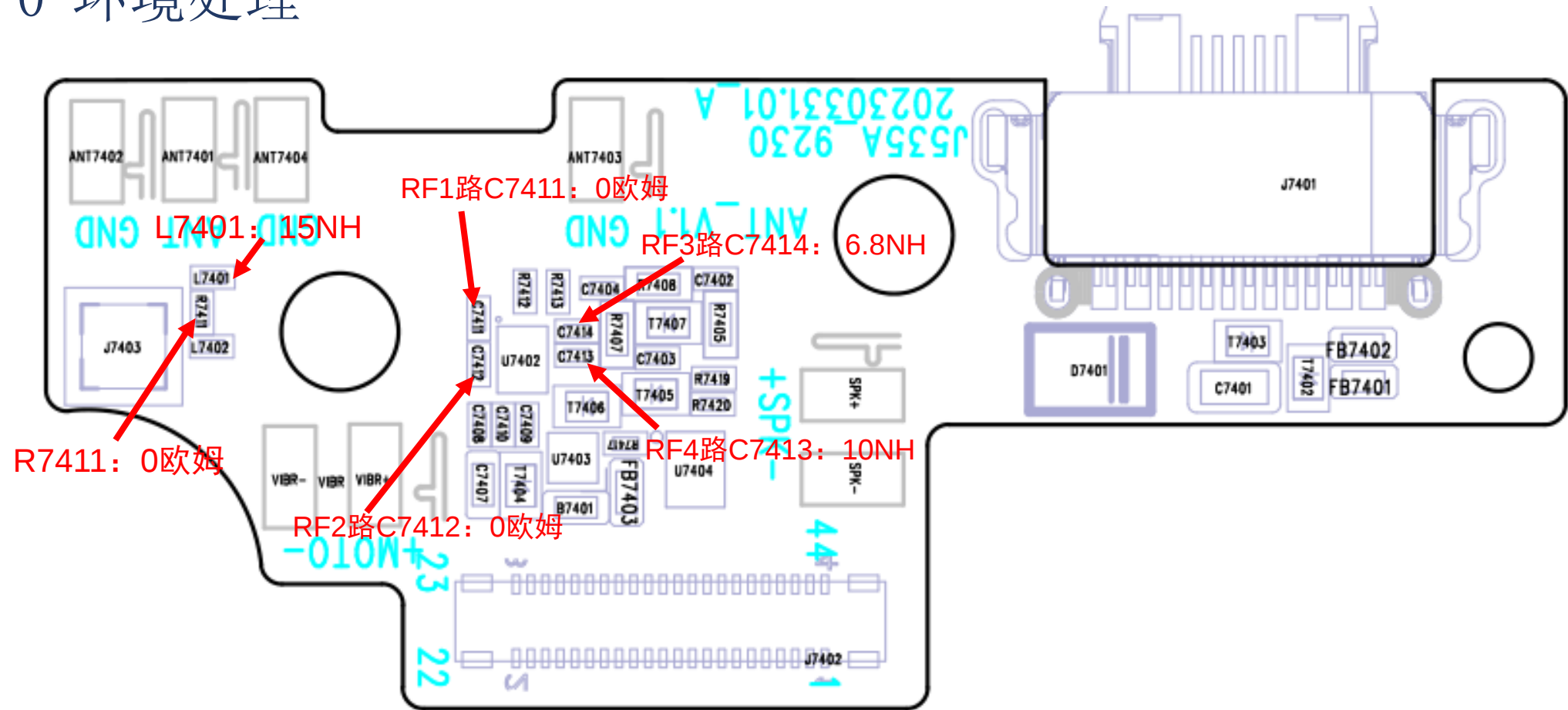
B71

3. 4 GPS/WIFI/BT测试报告

GPS	最大信号强度	搜星数量	冷启动定位时间	天气状况
	42	11	90S	晴
WIFI	距路由器WIFI信号满格距离		无障碍正常上网距离	
	5m		10m	
BT	无障碍通话距离		无障碍播放音频距离	
	6m		10m	



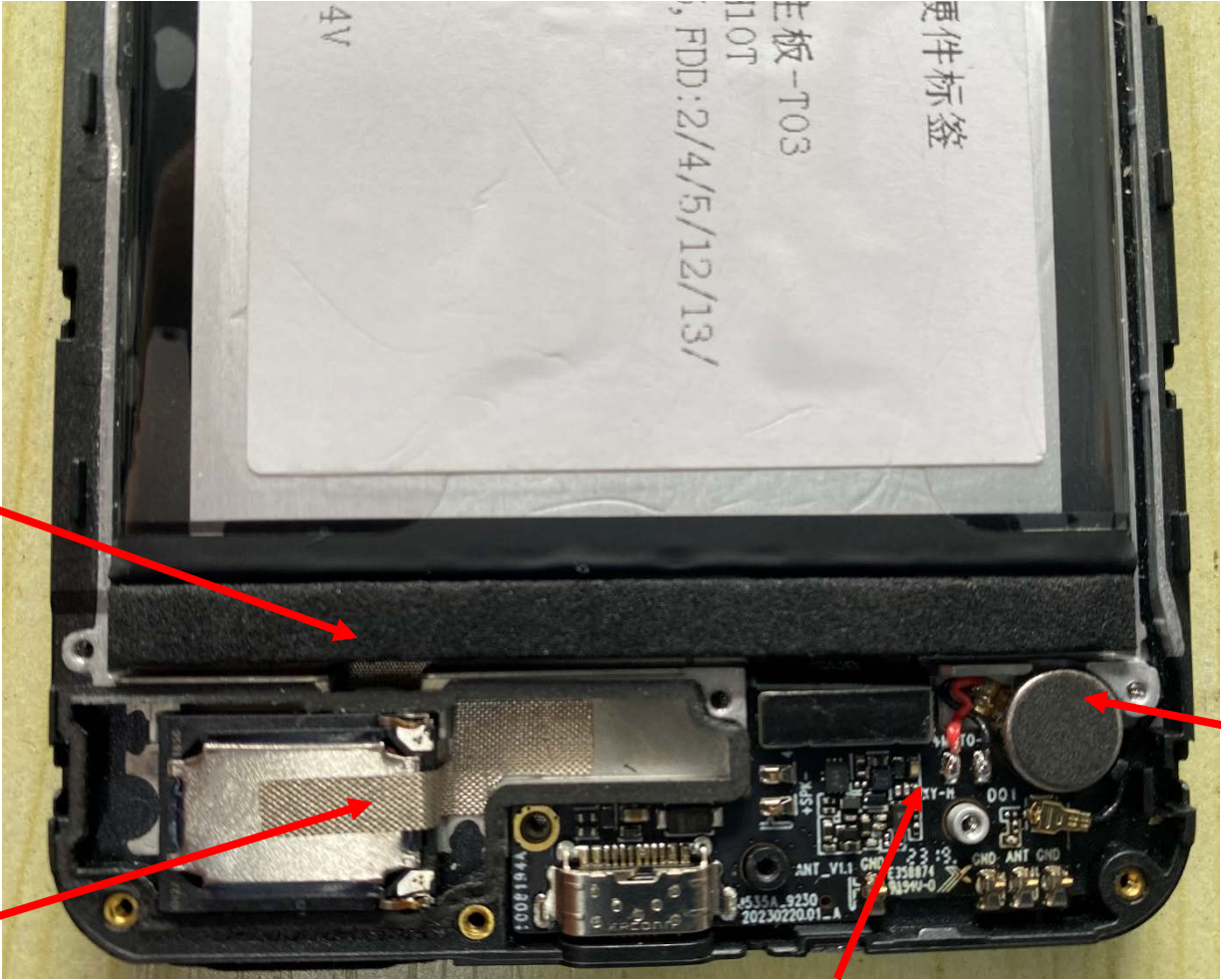
4.0 环境处理



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屏排线屏蔽接地

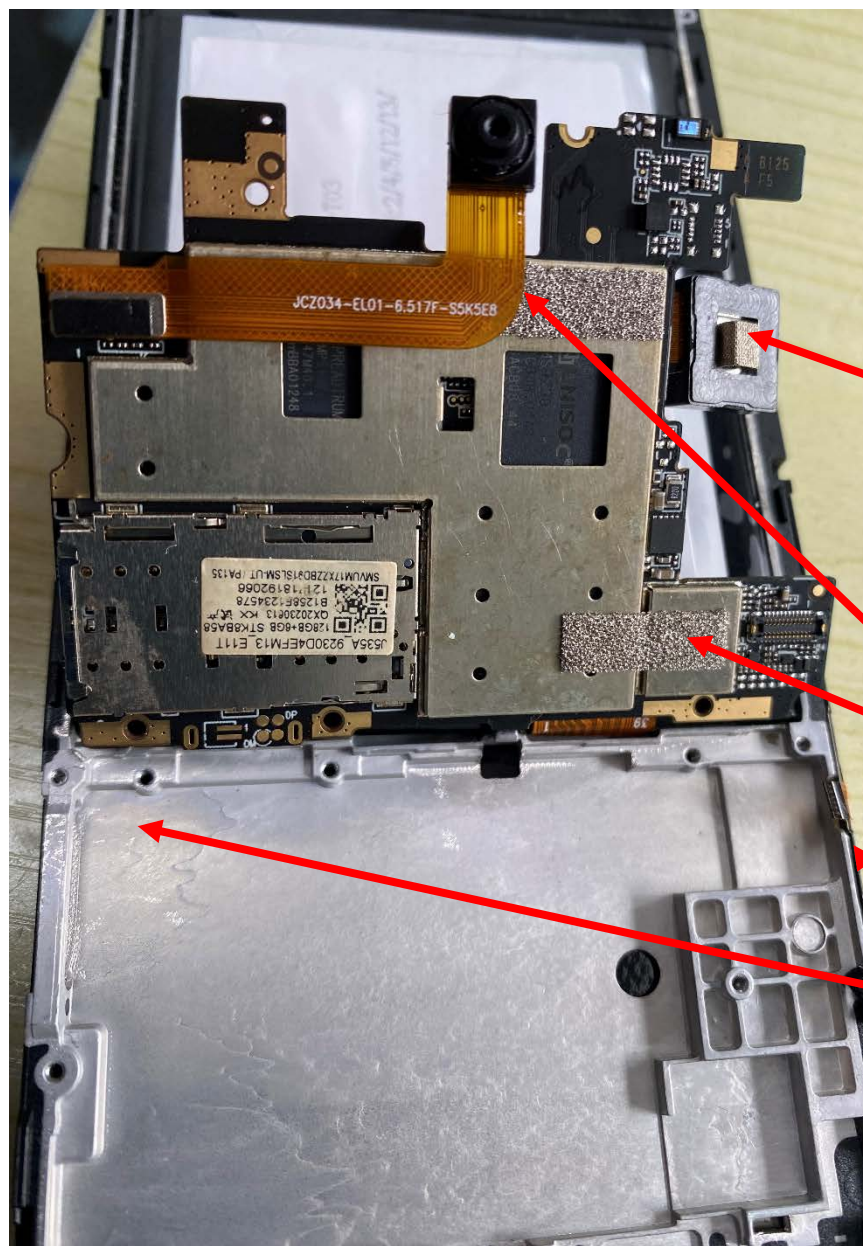
喇叭磁钢接地



马达接地

小板背面接地

4.1 环境处理



摄像头接地

屏蔽罩贴导电毯接地

屏框两边和面壳接地

4.2 Antenna

