深圳麒鑫通达科技有限公司

天线测试数据报告

Antenna test data report

客户：联永科技
项目：S545
频段：G4+W2/W4/W5+LTE-FDD-B2/B4/B5/B12/B17/B66/B71
天线：马斐（134 1821 8312）
日期：2023年05月10日

测试项目与设备

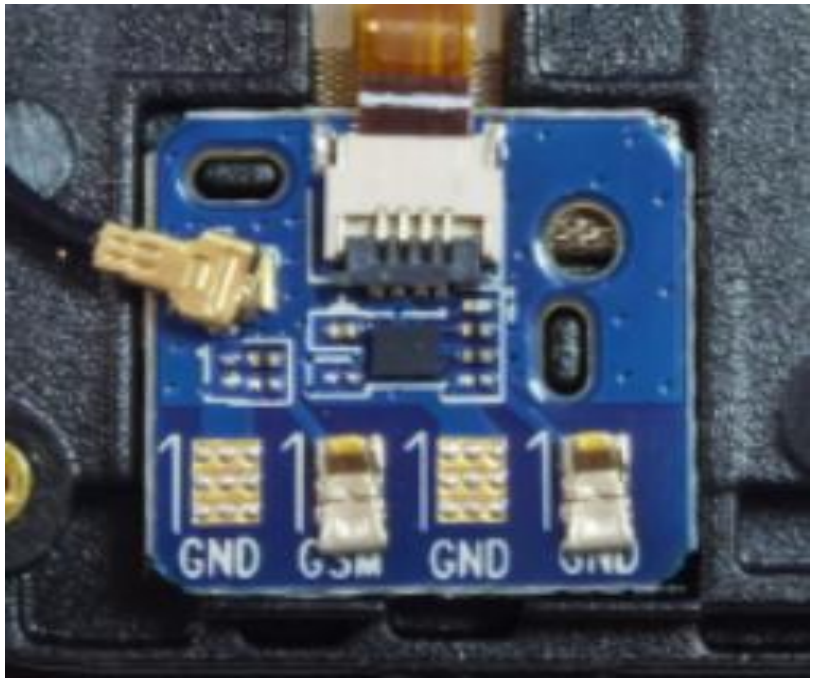
	测试项目	设备
1. S参数	1. 回损(RL) 2. 驻波比(VSWR)	网络分析仪： Agilent 5071B
2. 耦合功率测试	1. 发射功率 （power） 2. 接收灵敏度(level)	综测仪： CMW500/8960 暗 室：6*4*3微波暗室

调试版本记录

版本	日期	调试概述
	2023-03-16	带B71频段机器测试。
	2023-03-23	更新软件后测试。

整机及主板型号图示

射频开关逻辑

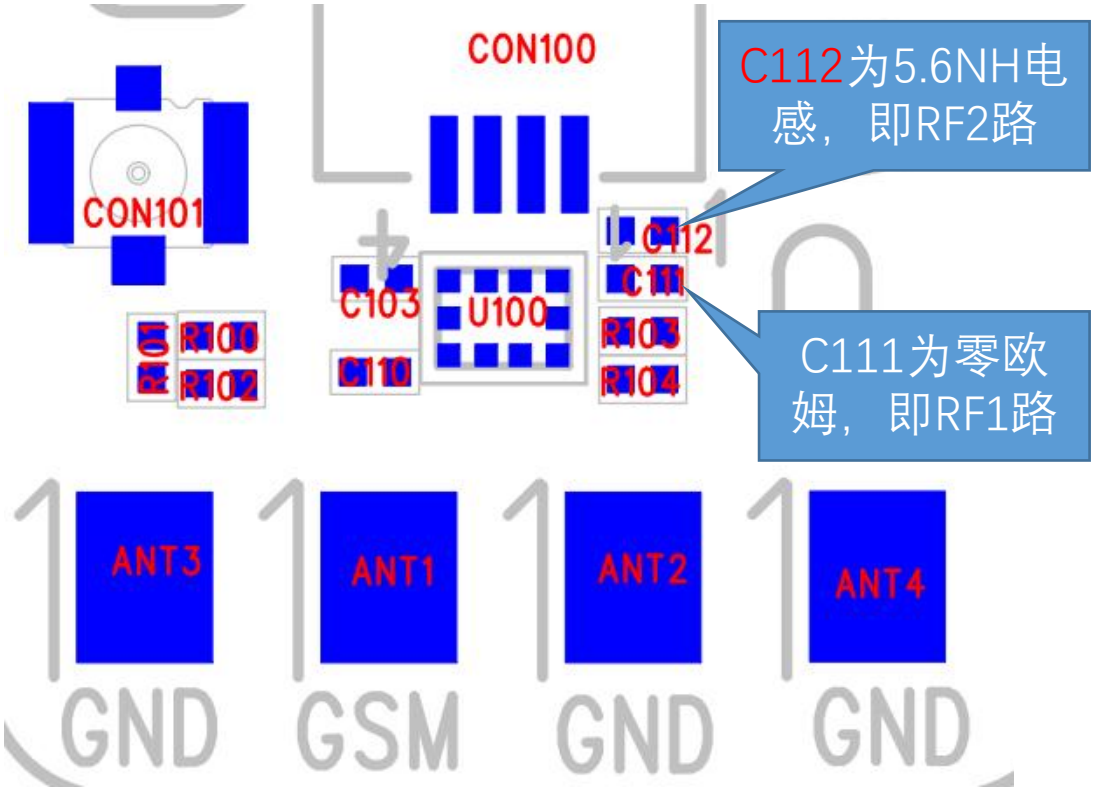


开关逻辑：

RF1路：GSM850/900/1800/1900+W2/4/5+LTE-FDD-B2/B4/B5/B66 (零欧姆)

RF2路：LTE-FDD-B12/B17/B71 (5.6NH)

射频开关

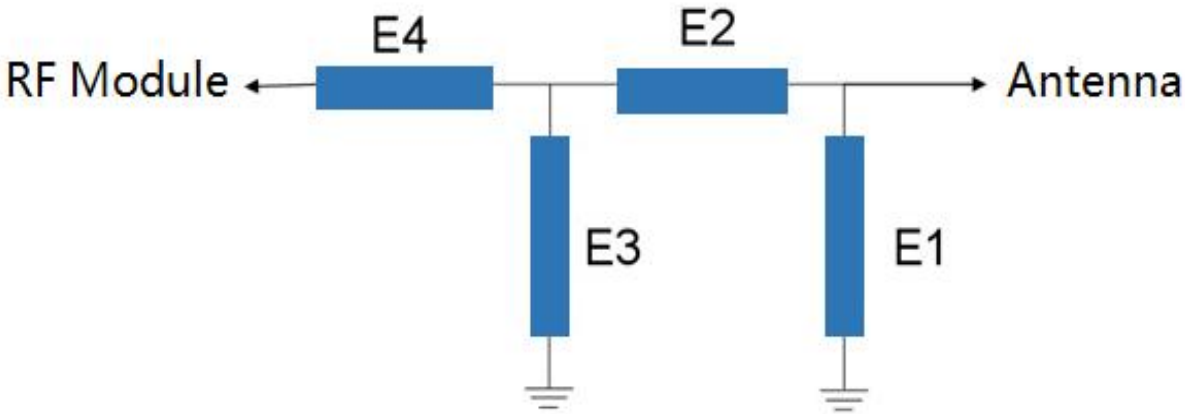


调谐电路

RF1：主馈角保持不变。调谐馈角与地短接状态(C111为零欧姆）。该通路除了B12/B17/B71以外其他频段正常使用。

RF2：主馈角上保持不变，调谐馈脚处用5.6NH电感调谐B12/B17/B71用（C112）。该通路B12/B17/B71正常使用。

主信号源匹配电路图



Element	Value
E1	未更改
E2	未更改
E3	未更改
E4	未更改

天线辐射测试数据（有源）

手机型号	1#	备注说明					
测试项目		GSM900测量数值			DCS1800测量数值		
信　道		1	62	120	512	698	885
TRP(dBm)		25.04	25.28	26.18	25.21	26.4	26.53
TIS(dBm)				-103.44			-104.46
测试项目		GSM850测量数值			PCS1900测量数值		
信　道		128	190	251	512	661	810
TRP(dBm)		26.09	26.03	25.87	25.45	25.11	25.35
TIS(dBm)				-103.55			-105.28
测试项目		WCDMA850测量数值			WCDMA1700测量数值		
信　道		4357	4400	4458	1537	1618	1738
TRP(dBm)		15.32	15.14	15.48	17.81	17.84	17.95
TIS(dBm)				-102.3			-105.23

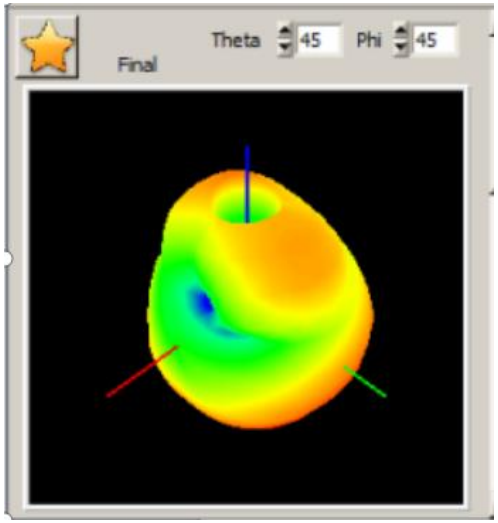
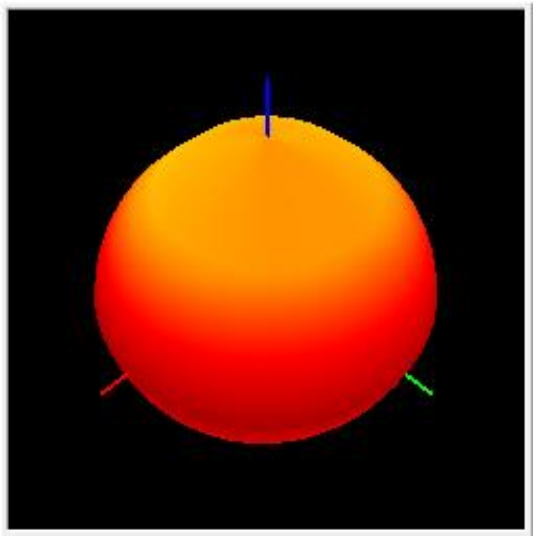
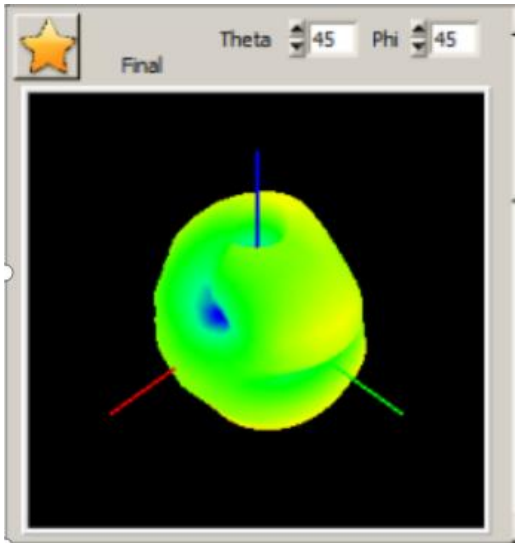
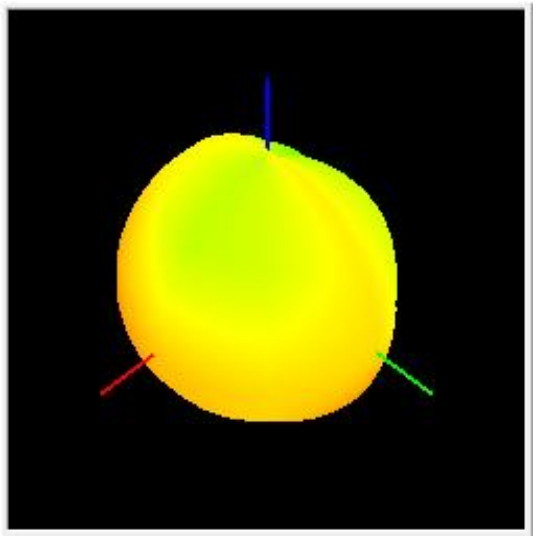
天线辐射测试数据（有源）

手机型号	1#	备注说明					
测试项目		WCDMA1900测量数值					
信　道		9662	9800	9938			
TRP(dBm)		18.43	19.22	19.6			
TIS(dBm)				-105.65			
测试项目		LTE-FDD-B2			LTE-FDD-B4		
信　道		650	900	1150	2000	2175	2350
TRP(dBm)		18.66	18.74	18.69	18.12	17.76	17.75
TIS(dBm)				-93.35			-93.65
测试项目		LTE-FDD-B5			LTE-FDD-B12		
信　道		2450	2525	2600	5780	5790	5800
TRP(dBm)		15.45	15.13	15.22	14.6	15.12	15.03
TIS(dBm)				-91.71			-92.43

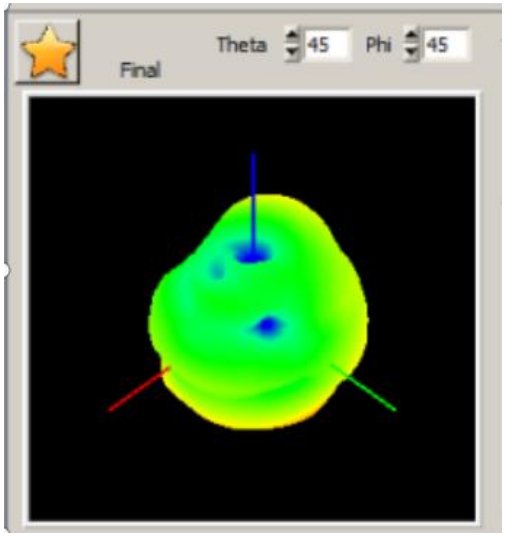
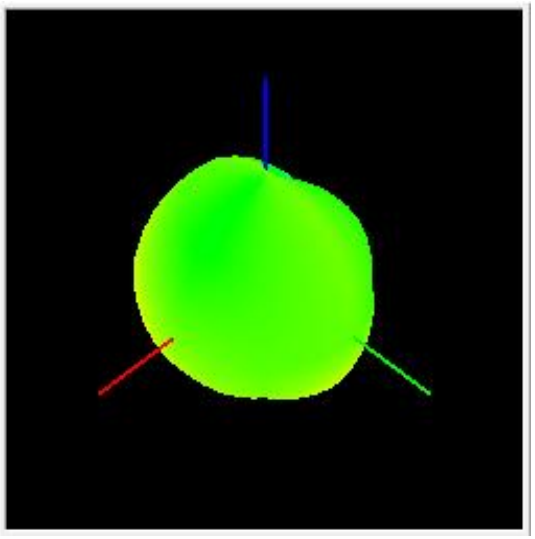
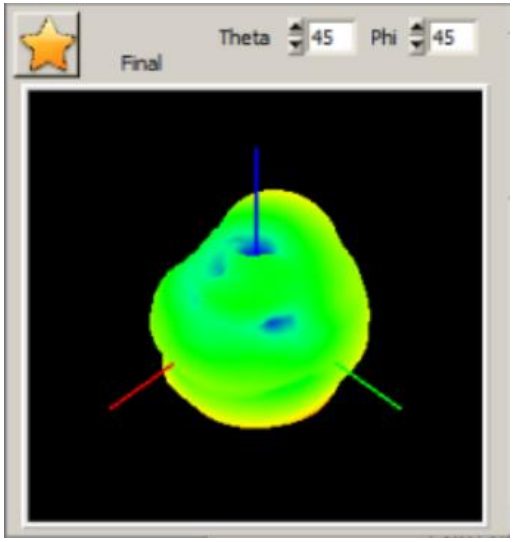
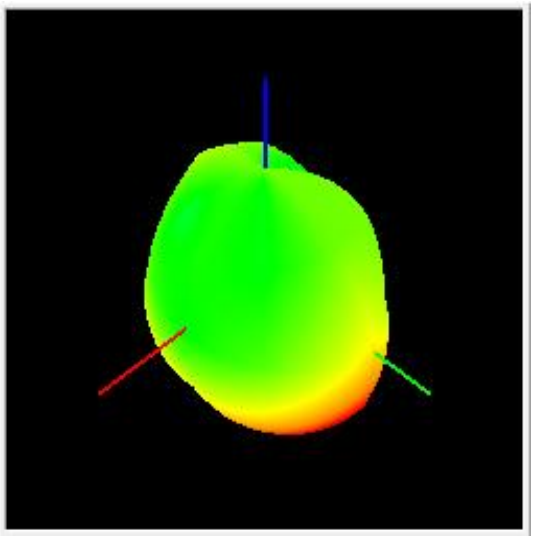
天线辐射测试数据（有源）

手机型号	1#	备注说明					
测试项目		LTE-FDD-B17			LTE-FDD-B66		
信　道		9260	9420	9600	L	M	H
TRP(dBm)		15.32	15.57	15.64	17.98	17.49	17.31
TIS(dBm)				-91.75			-92.98
测试项目		LTE-FDD-B71					
信　道		L	M	H			
TRP(dBm)		12.28	14.26	15.06			
TIS(dBm)				-89.52			

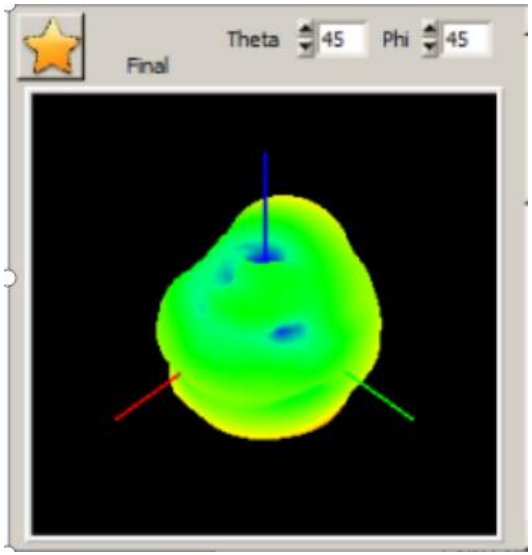
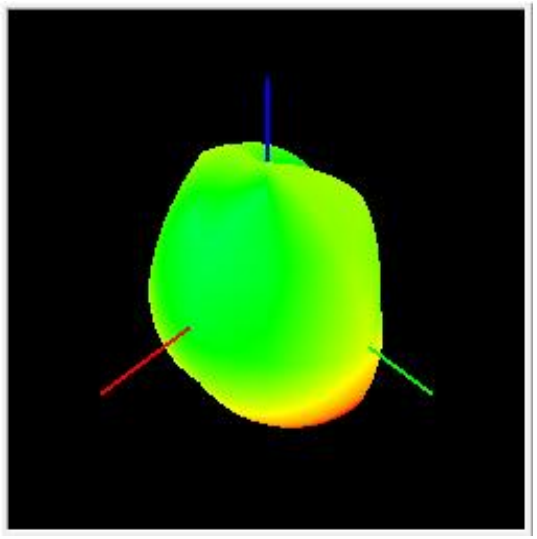
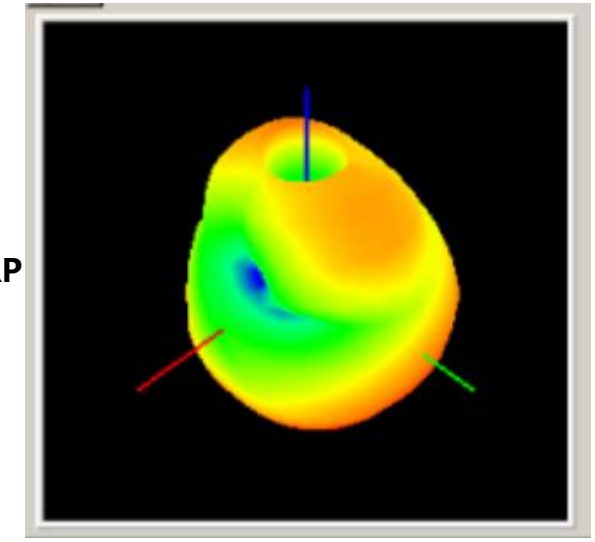
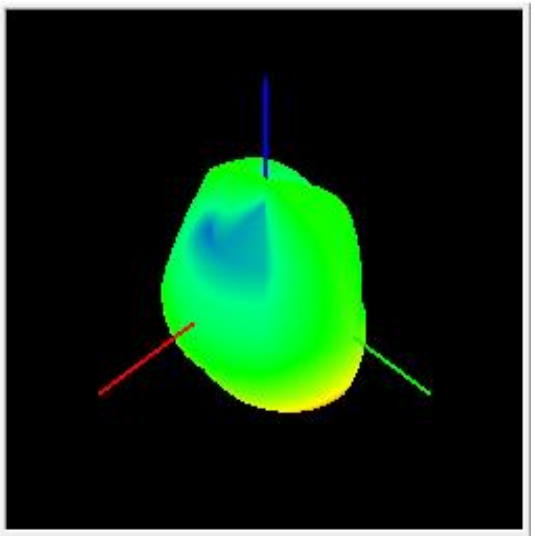
场型图

GSM850 -TRP		GSM850 -TIS	
GSM900 -TRP		GSM900 -TIS	

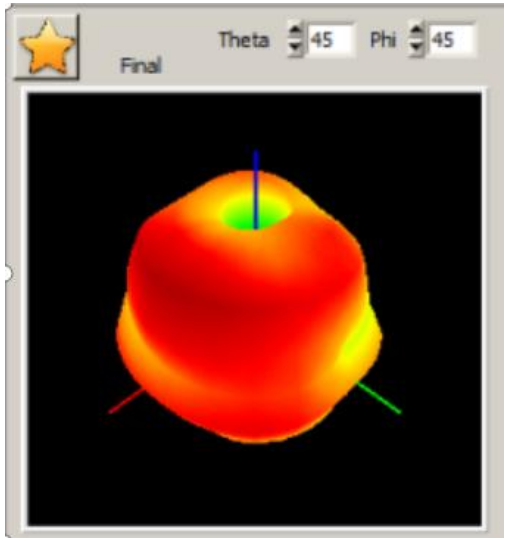
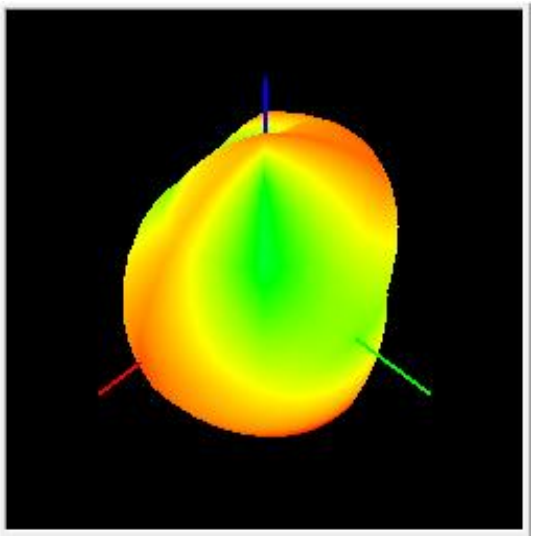
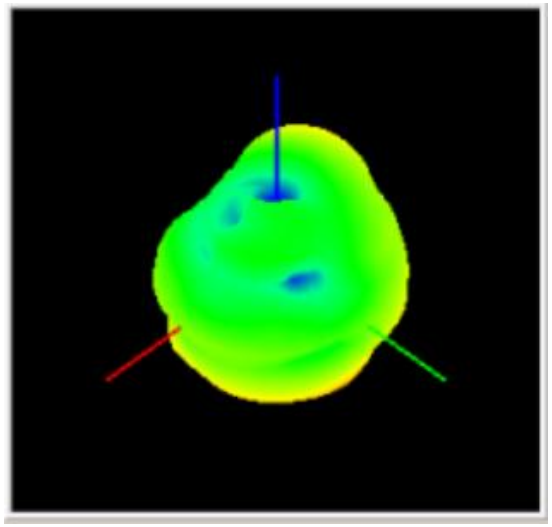
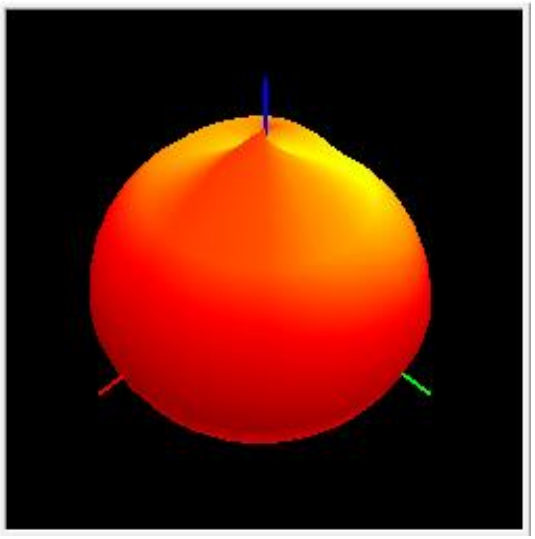
场型图

DCS1800 -TRP		DCS1800 -TIS	
PCS1900 -TRP		PCS1900 -TIS	

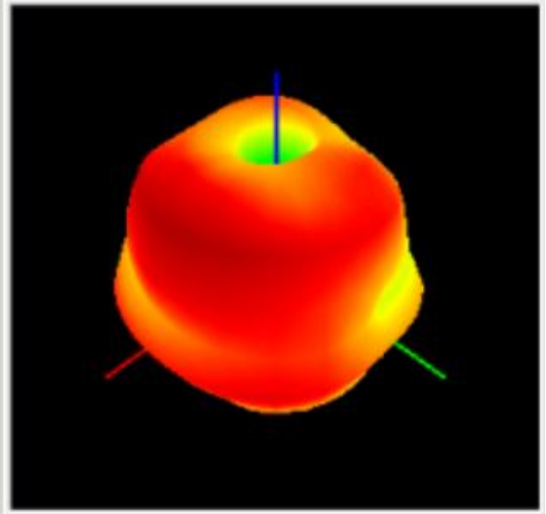
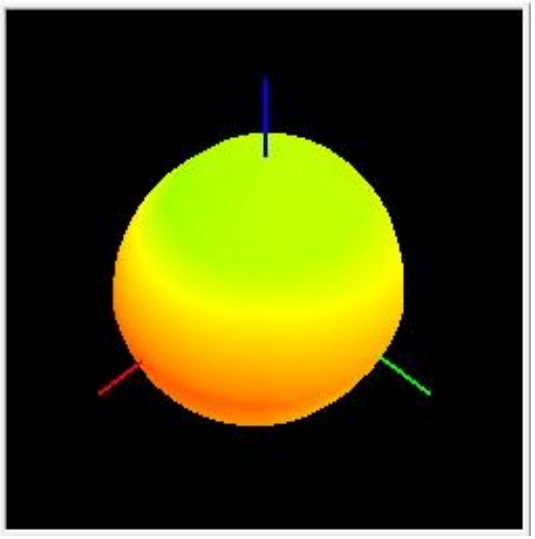
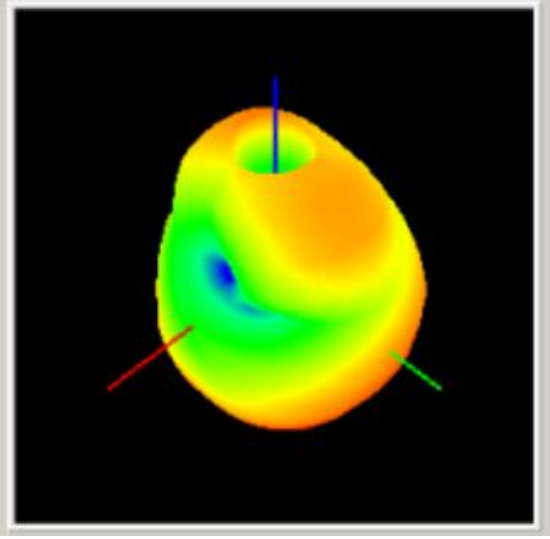
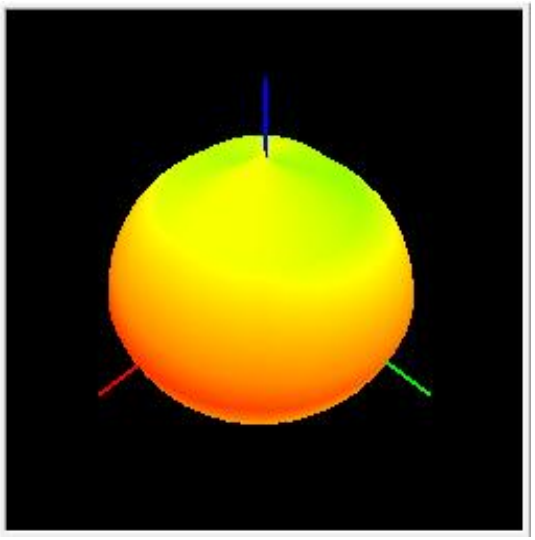
场型图

W2-TRP		W2-TIS	
W5-TRP		W5-TIS	

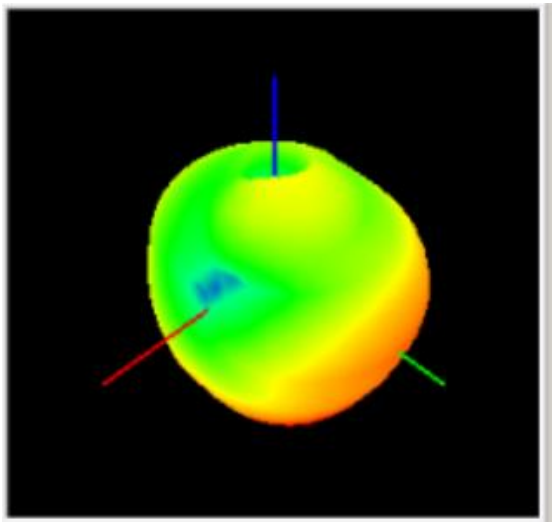
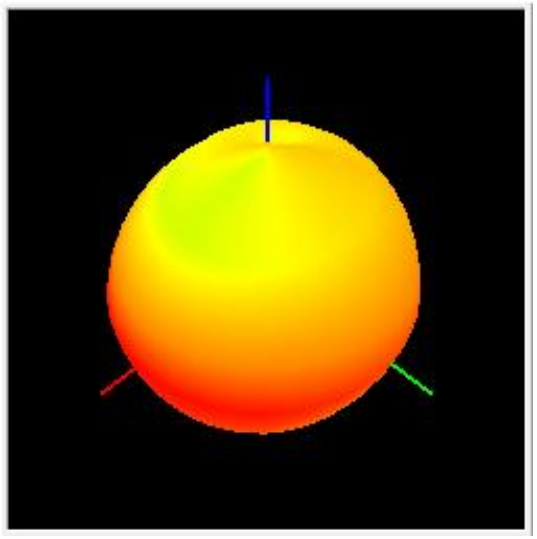
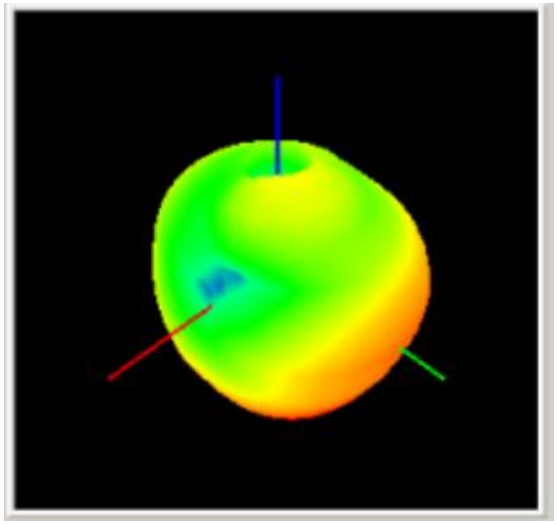
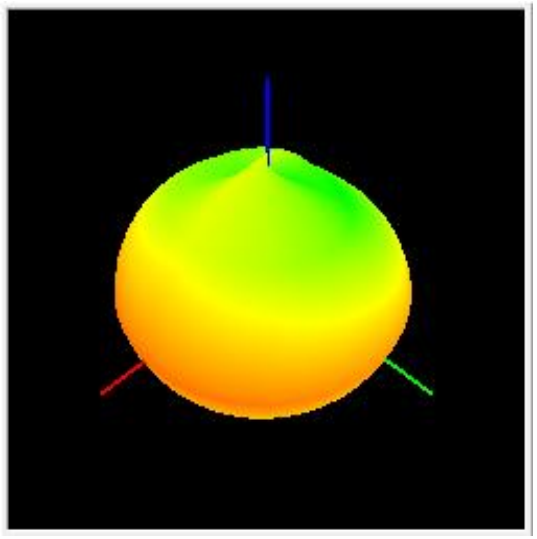
场型图

W4-TRP		W4-TIS	
FDD-B2-TRP		FDD-B2-TIS	

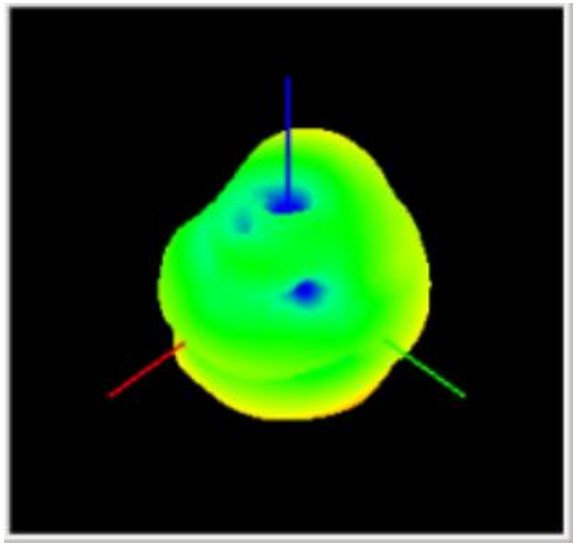
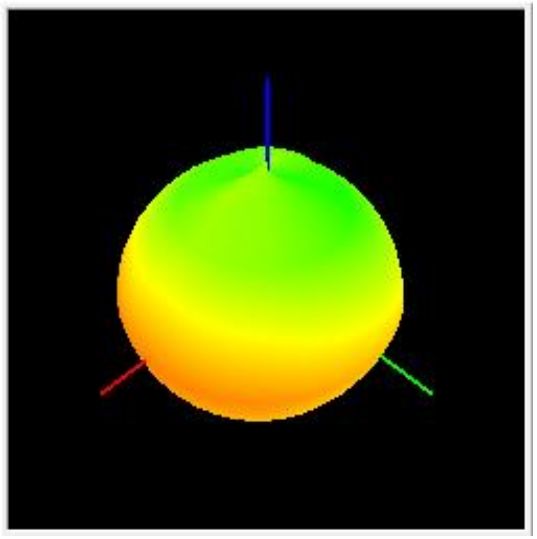
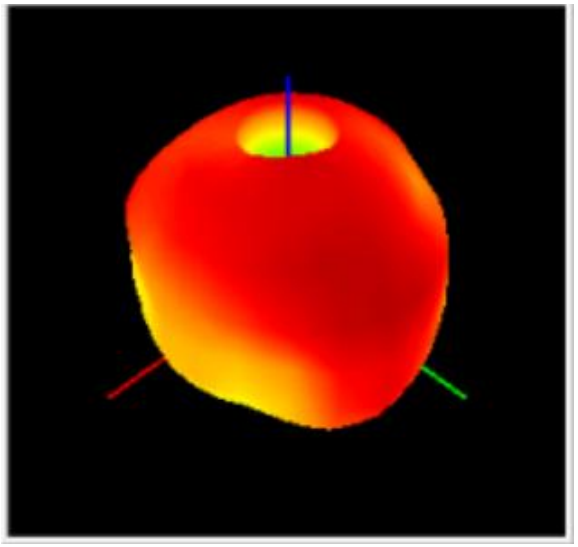
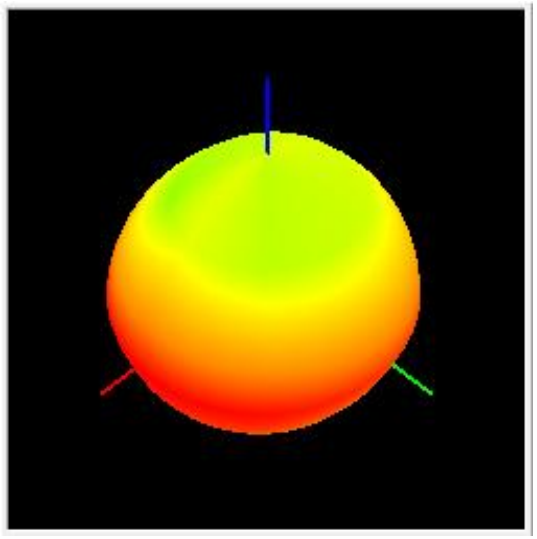
场型图

FDD-B4-TRP		FDD-B4-TIS	
FDD-B5-TRP		FDD-B5-TIS	

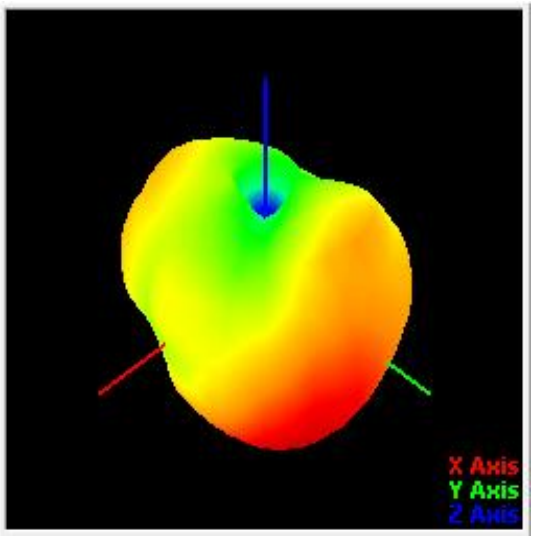
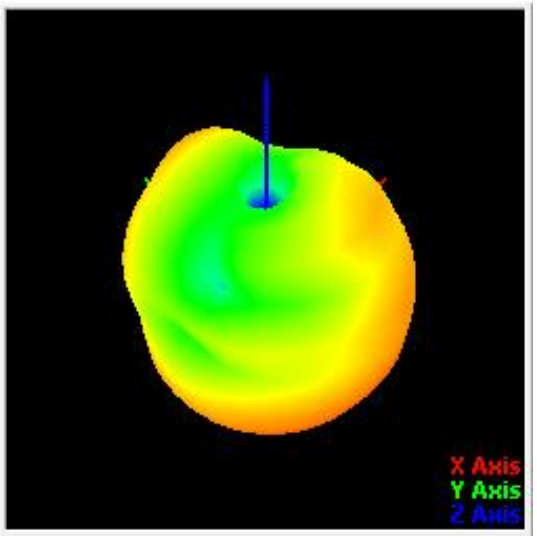
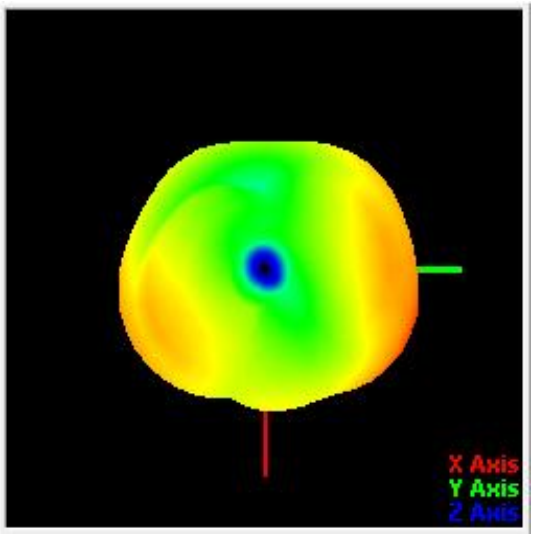
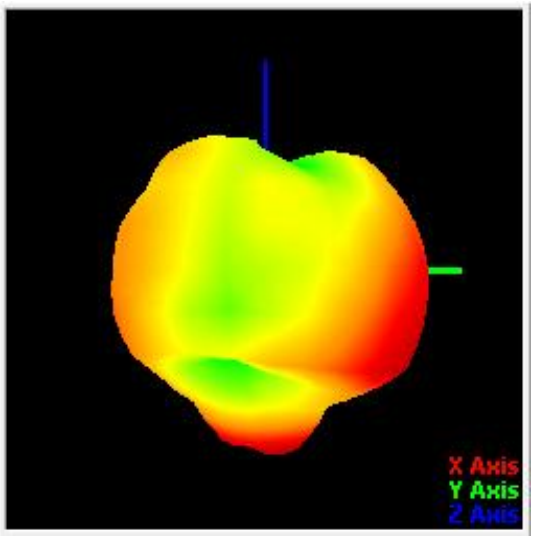
场型图

FDD-B12-TRP		FDD-B12-TIS	
FDD-B17-TRP		FDD-B17-TIS	

场型图

FDD-B66-TRP		FDD-B66-TIS	
FDD-B71-TRP		FDD-B71-TIS	

WIFI+BT-场型图

WIFI+BT-2400MHZ		WIFI+BT-2430MHZ	
WIFI+BT-2460MHZ		WIFI+BT-2490MHZ	

天线增益

R53天线增益

Band	Max Gain
GSM850	0.2dBi
GSM900	0.23dBi
DCS1800	0.5dBi
PCS1900	0.57dBi
WCDMA1900	0.57dBi
WCDMA1700	0.5dBi
WCDMA850	0.2dBi
BAND 2	0.57dBi
BAND 4	0.5dBi
BAND 5	0.2dBi
BAND 12	0.15dBi
BAND 17	0.15dBi
BAND 66	0.55dBi
BAND 71	0.1dBi
GPS	0.46dBi
Bluetooth/WiFi	0.9dBi

努力为客户提供更佳的服务

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