



琦沃-LS16天线测试报告

Antenna Design And Test Report



报告版本: V5.0

报告日期: 2022年8月27日星期六



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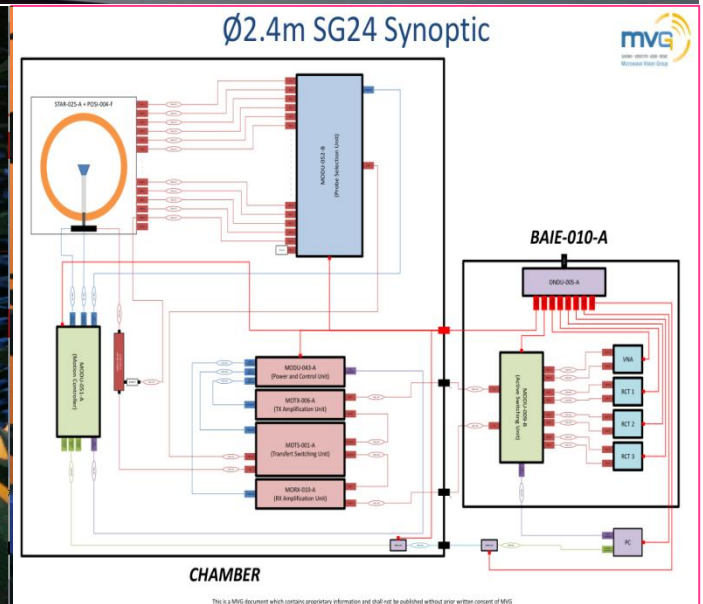
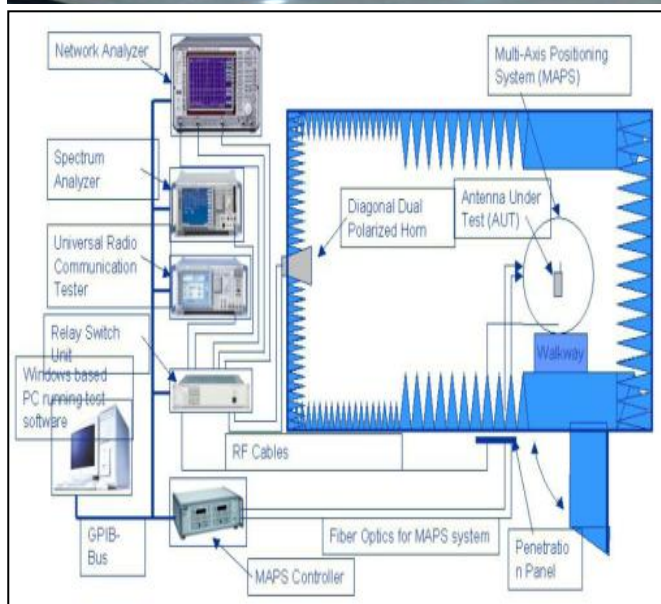
总结

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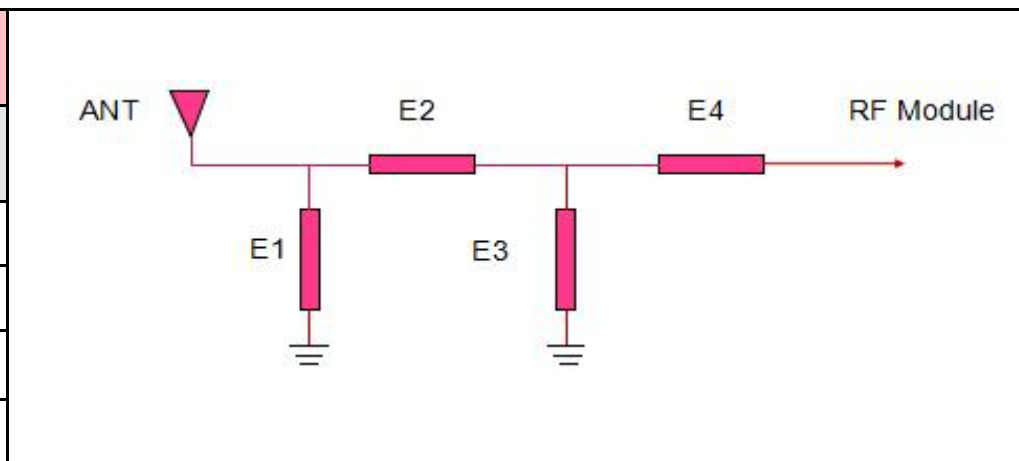
天线设计频段: antenna design spectrum	BT
天线类型: Type of antenna	PIFA

报告版本: Report version	日期 Date	内容 Content
V1	2022.08.10	天线调试报告
V2	2022.08.12	天线调试报告
V3	2022.08.20	新样机-样品天线测试报告
V4	2022.08.26	天线测试报告
V5	2022.08.27	天线测试报告(无源更改出线方式)

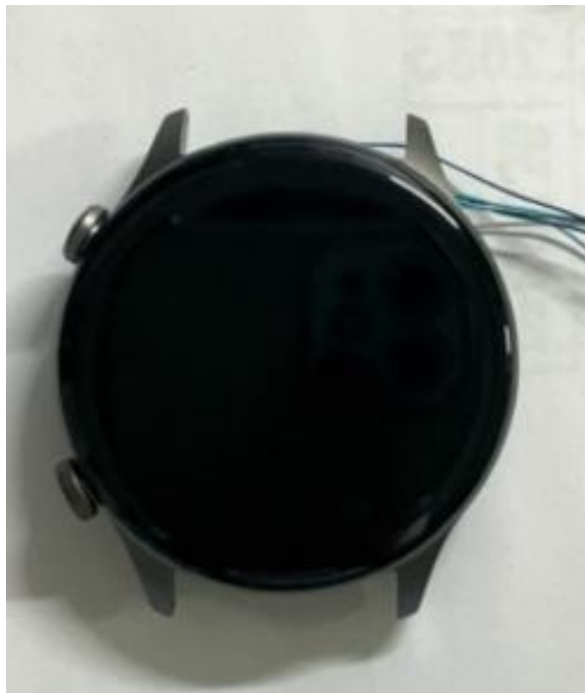


3座远场3D全电波微波暗室实验室系统，1座MVG SG24LT (Satmio) 近场3D微波暗室实验室系统（与国家相关实验室同步）

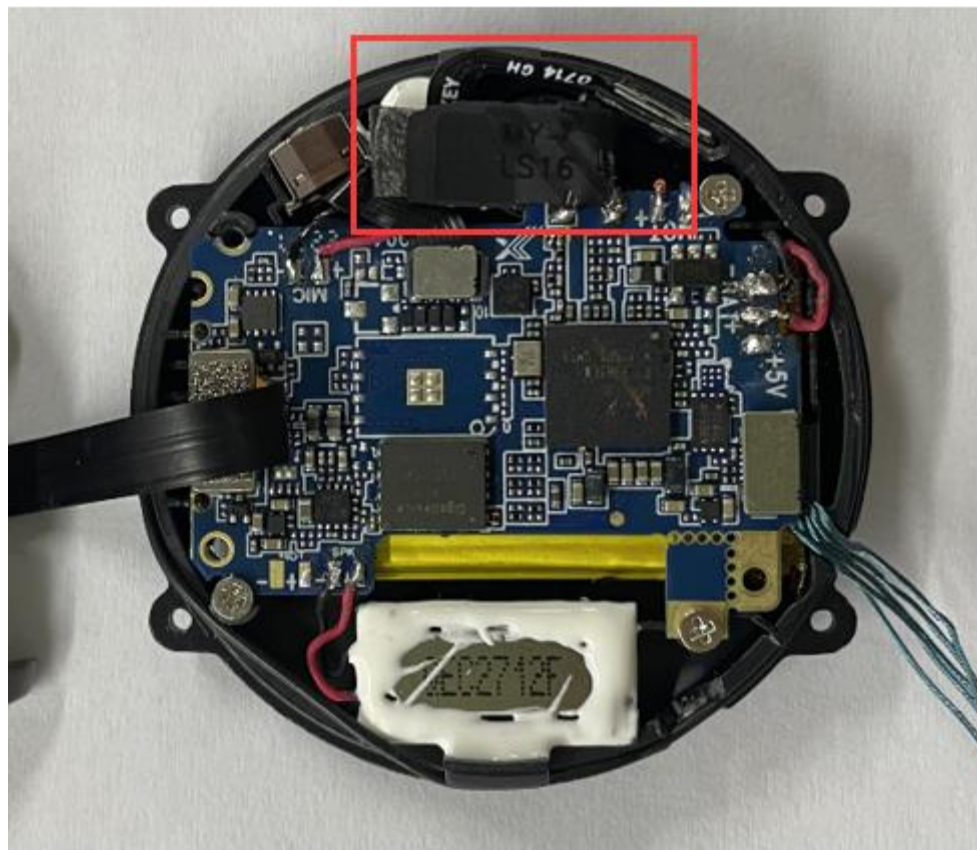
主天线设计: main antenna design		副天线设计: Deputy antenna design		分集天线设计: Diversity antenna design	
元件 Element	值 Value	元件 Element	值 Value	元件 Element	值 Value
E1(0402):	N/A	E1(0402):	N/A	E1(0402):	N/A
E2(0402):	N/A	E2(0402):	N/A	E2(0402):	N/A
E3(0402):	N/A	E3(0402):	N/A	E3(0402):	N/A
E4(0402):	N/A	E4(0402):	N/A	E4(0402):	N/A



备注：匹配电路未更改。

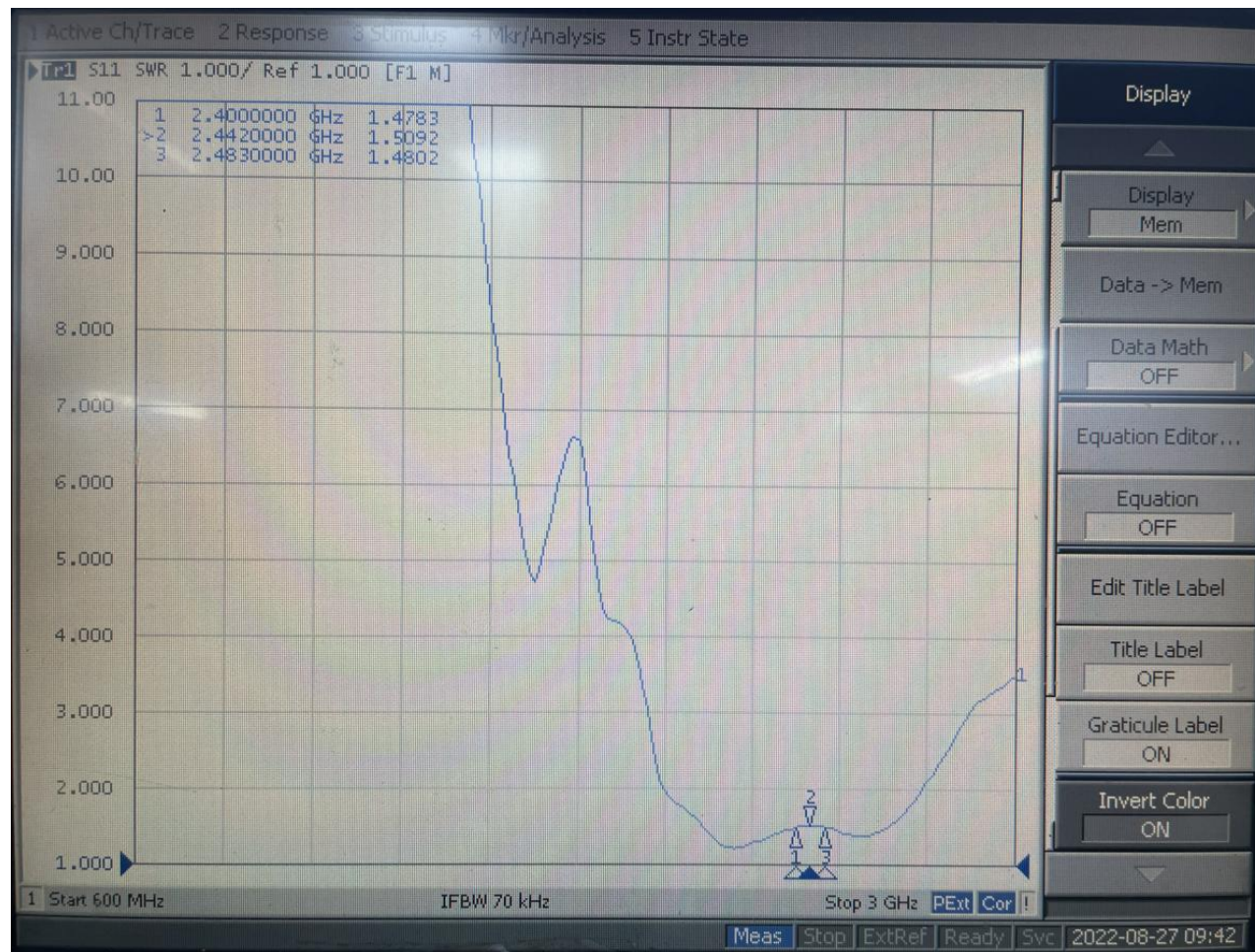


整机图



天线安装位置如上图所示，马达线材需远离天线放置。天线下方贴泡棉垫高。

无源驻波图



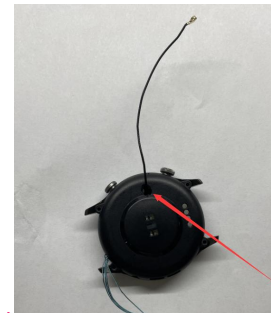
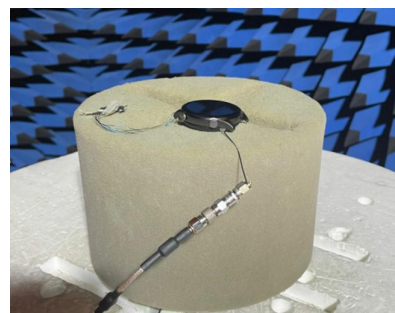
BT天线无源参数：VSWR 截图 测量仪器：Agilent Technologies E5071B 300kHz-8.5GHz ENA Series Network Analyzer

自由空间

Frequency	Efficiency	Gain . dBi
2400000000	13.85%	-2.601439626
2410000000	13.55%	-2.593900995
2420000000	13.00%	-3.082291332
2430000000	12.82%	-3.354817878
2440000000	12.74%	-3.357213857
2450000000	12.50%	-3.304297867
2460000000	12.64%	-3.44918647
2470000000	13.00%	-3.709300257
2480000000	13.14%	-3.820205959
2490000000	13.40%	-3.767290834
2500000000	14.15%	-3.561546028

人手

Frequency	Efficiency	Gain . dBi
2400000000	9.04%	-4.310285778
2410000000	8.82%	-4.396611113
2420000000	8.41%	-4.939290685
2430000000	8.28%	-5.504968896
2440000000	8.28%	-5.785046843
2450000000	8.32%	-6.055889597
2460000000	8.56%	-5.845761792
2470000000	8.90%	-5.333601741
2480000000	9.19%	-5.336483428
2490000000	9.51%	-4.977534488
2500000000	10.06%	-4.411325671



BT天线 无源效率增益 测量仪器: Agilent Technologies E5071B 300kHz-8.5GHz ENA Series Network Analyzer 暗室系统: MVG SG24LT (Satmio)

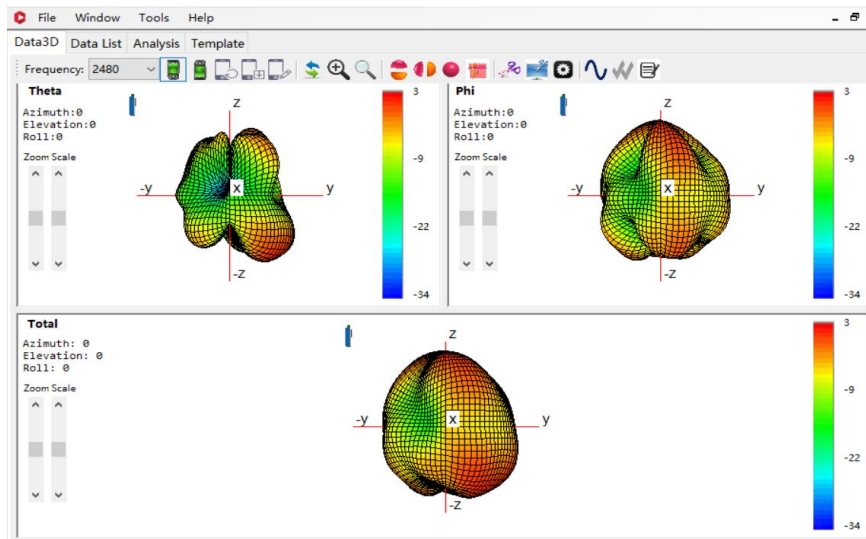
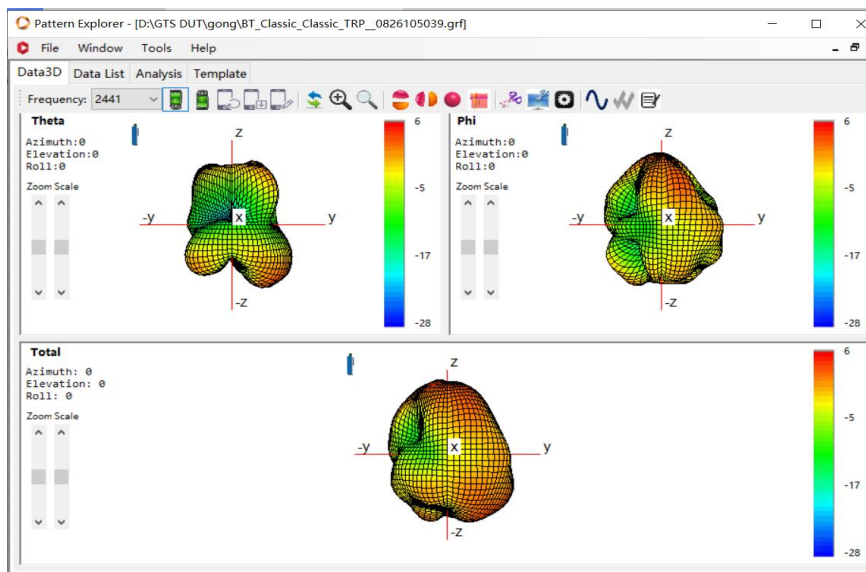
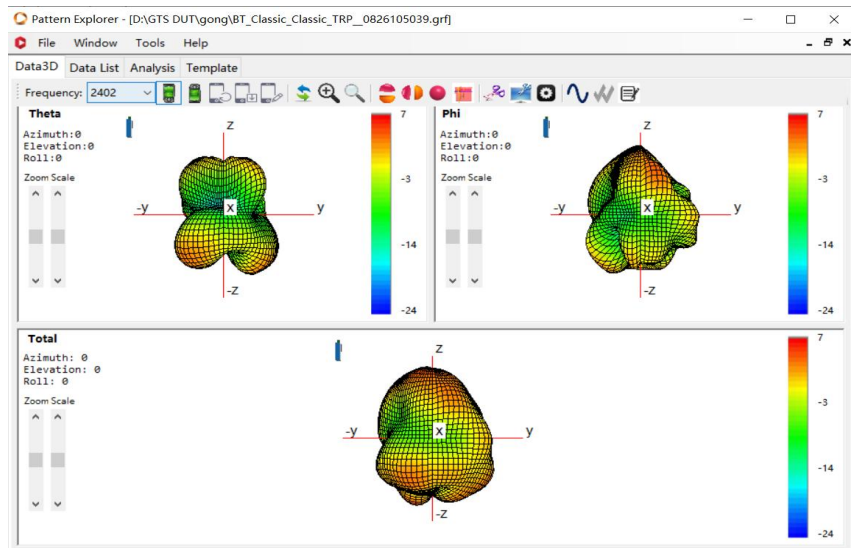


CLASSIC	自由空间		
chNo	0	39	78
Freq (MHz)	2402	2441	2480
TRP (dBm)	1.824013642	1.058744782	-1.05116759
EIRP_X (dBm)	5.27707765	4.80863463	2.51009829
TIS (dBm)	-87.8020598	-87.24132648	-85.76591743
EIS_X (dBm)	-91.30468399	-91.08271473	-89.34322877

CLASSIC	人手		
chNo	0	39	78
Freq (MHz)	2402	2441	2480
TRP (dBm)	-1.320940219	-2.266781867	-4.327288382
EIRP_X (dBm)	3.05906465	0.61944963	-1.17572271
TIS (dBm)	-84.79746484	-83.72336597	-82.52443553
EIS_X (dBm)	-89.2307701	-86.65961953	-85.68931111

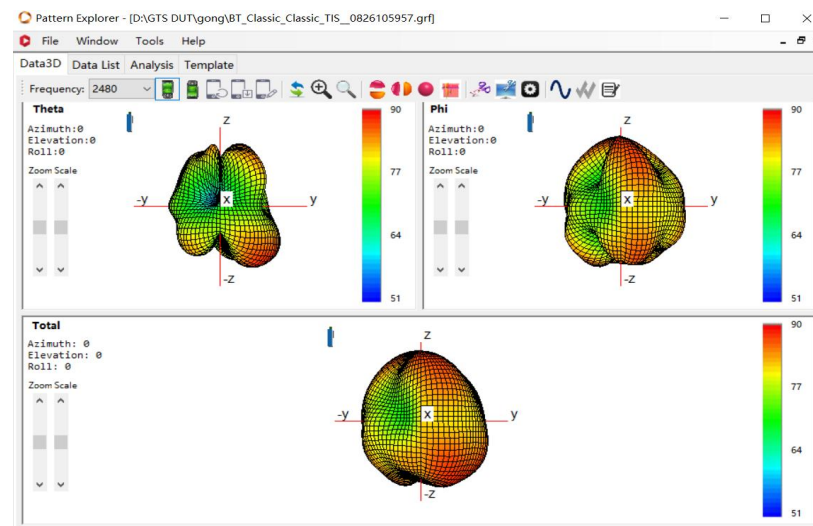
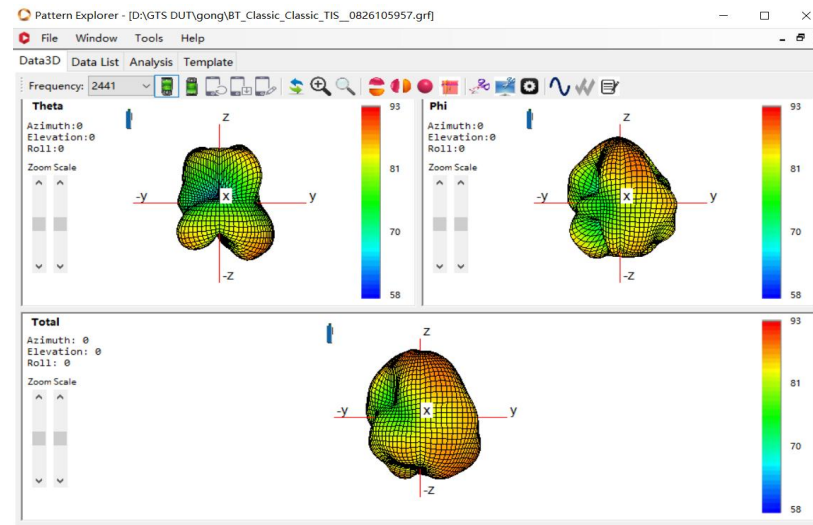
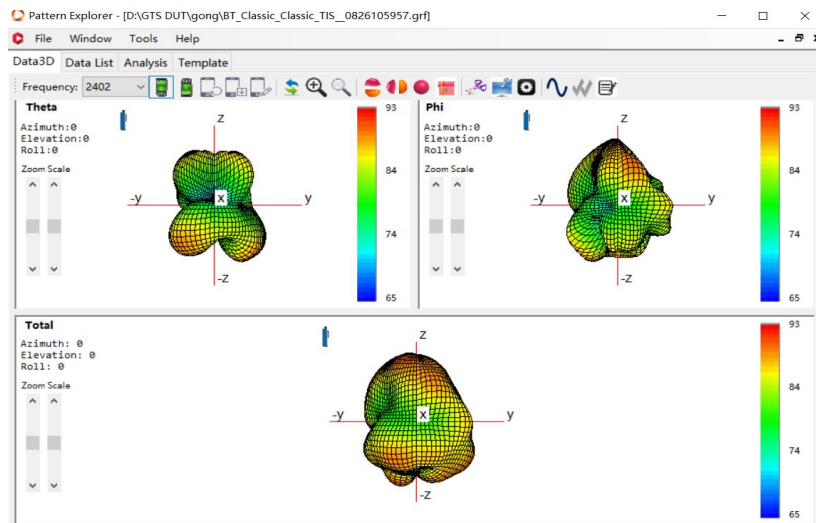


CLASSIC 自由空间 TRP



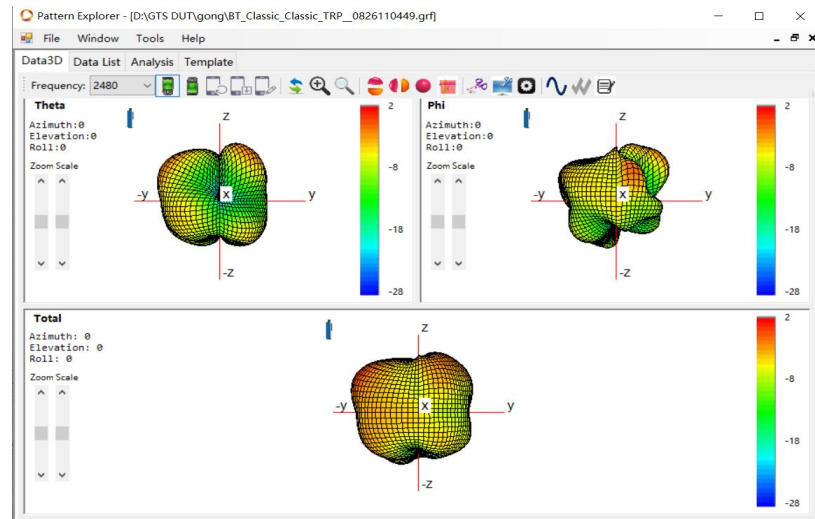
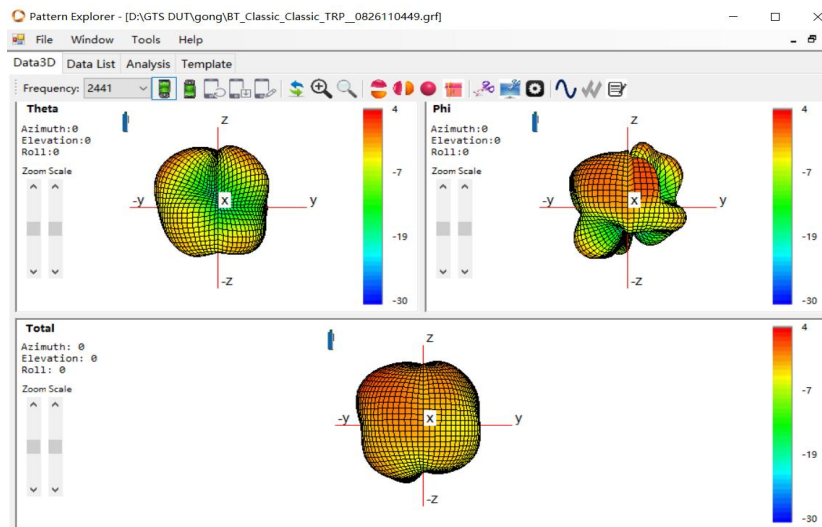
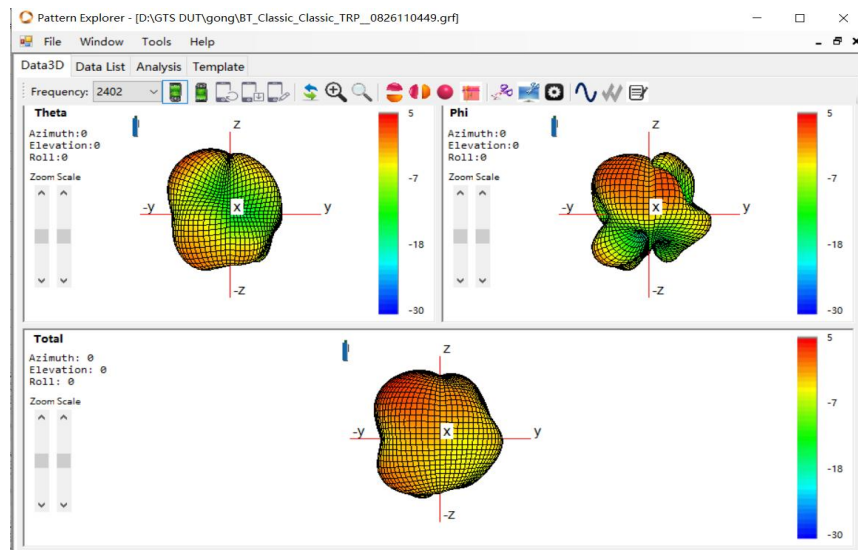


CLASSIC 自由空间 TIS



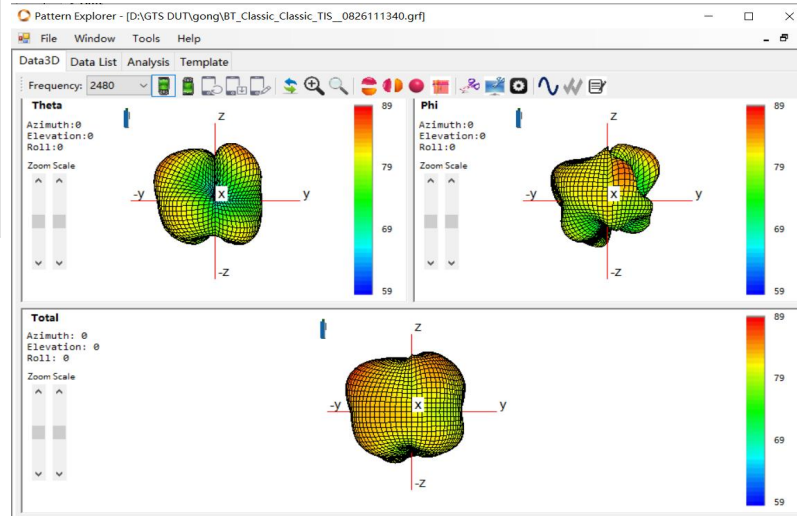
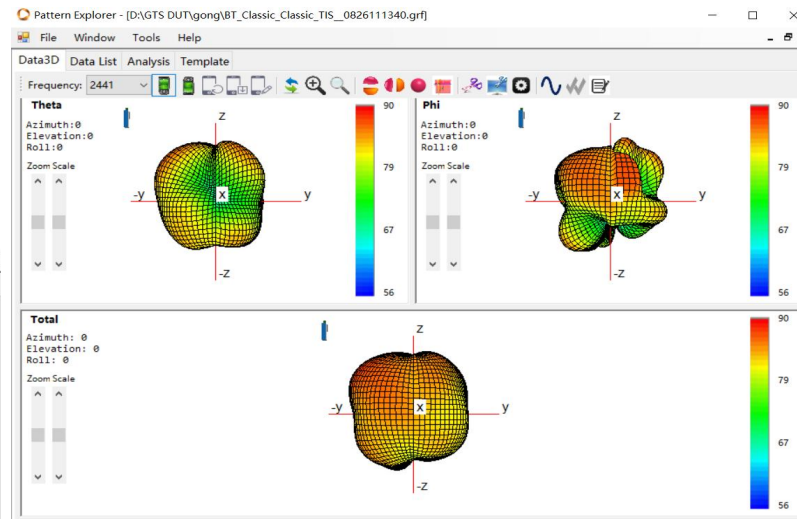
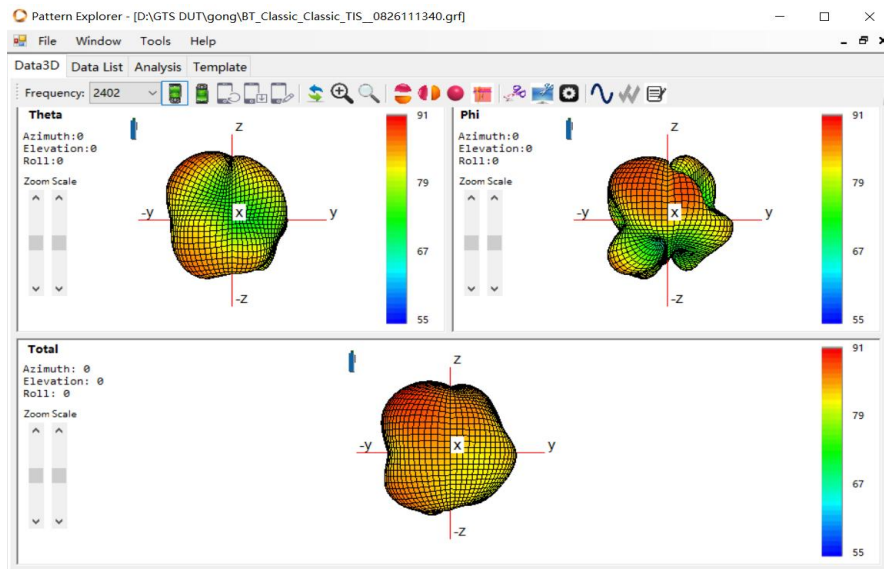


CLASSIC 人手 TRP





CLASSIC 人手 TIS



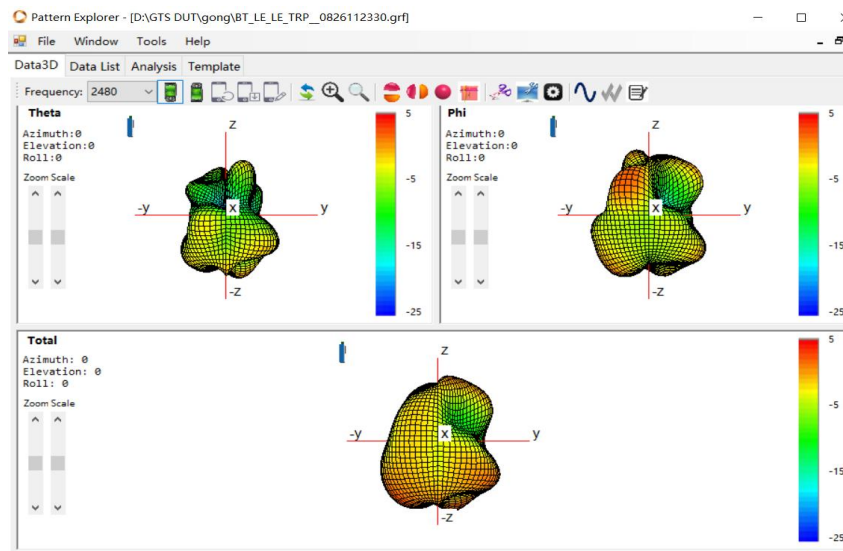
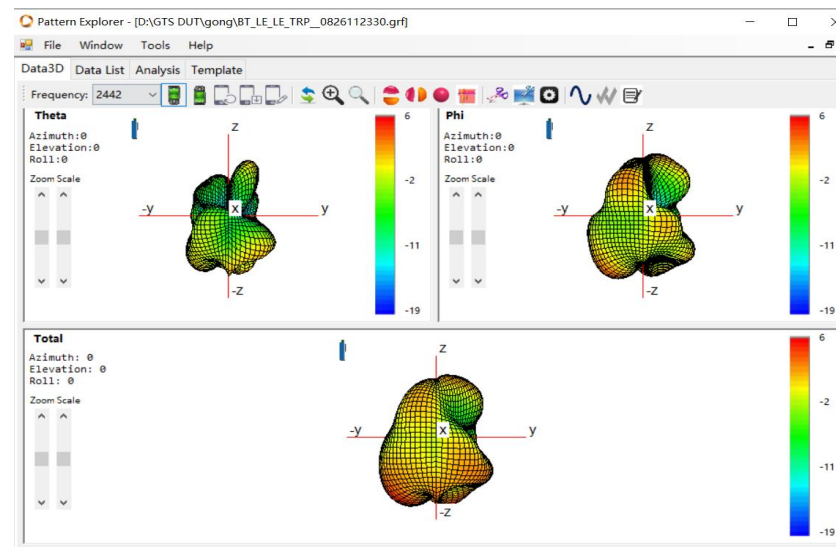
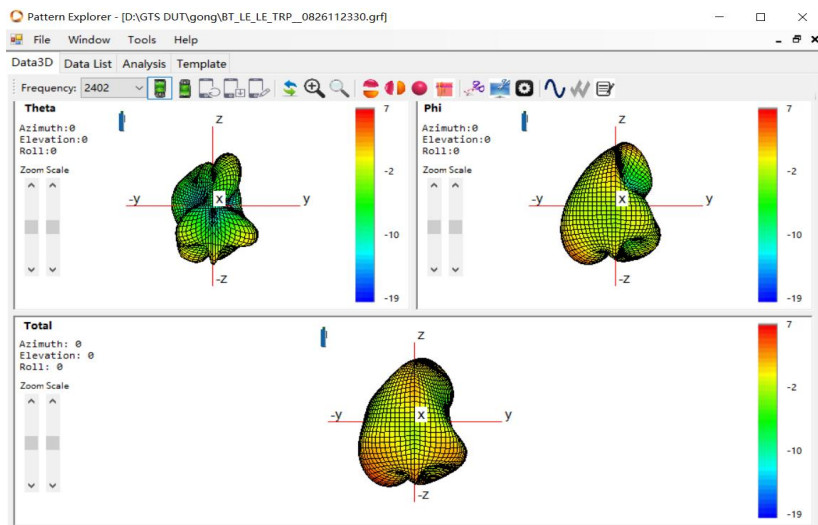


BLE	自由空间		
chNo	0	20	39
Freq (MHz)	2402	2442	2480
TRP (dBm)	0.367629759	-0.215405738	-1.984729679
EIRP_X (dBm)	4.47370565	3.93397933	1.26189829
TIS (dBm)	-89.56660645	-89.38249075	-88.63859374
EIS_X (dBm)	-93.6390981	-93.48029931	-91.85454757

BLE	人手		
chNo	0	20	39
Freq (MHz)	2402	2442	2480
TRP (dBm)	-3.526744692	-4.274619253	-4.792617565
EIRP_X (dBm)	0.49282565	-0.41697157	-0.10855781
TIS (dBm)	-86.40560091	-85.29689938	-85.80856801
EIS_X (dBm)	-90.42517125	-89.15454706	-90.49262777

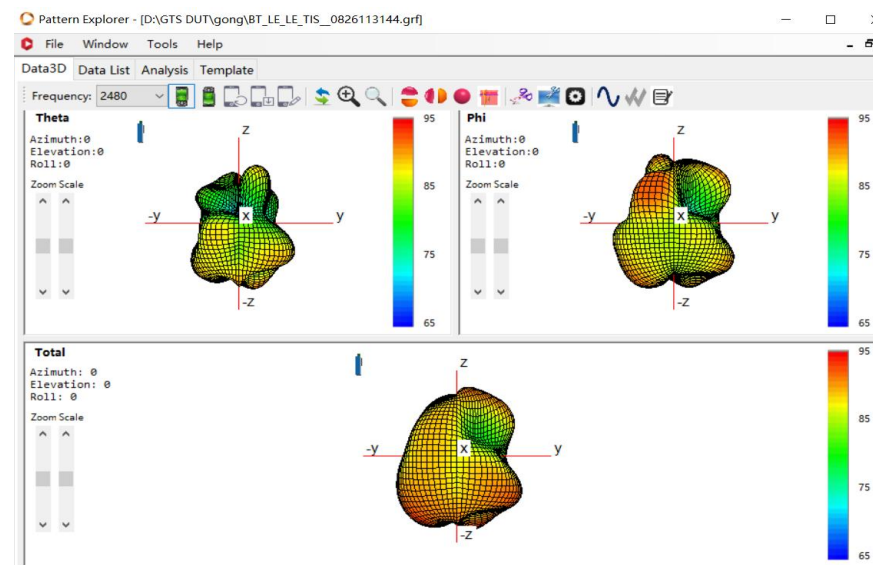
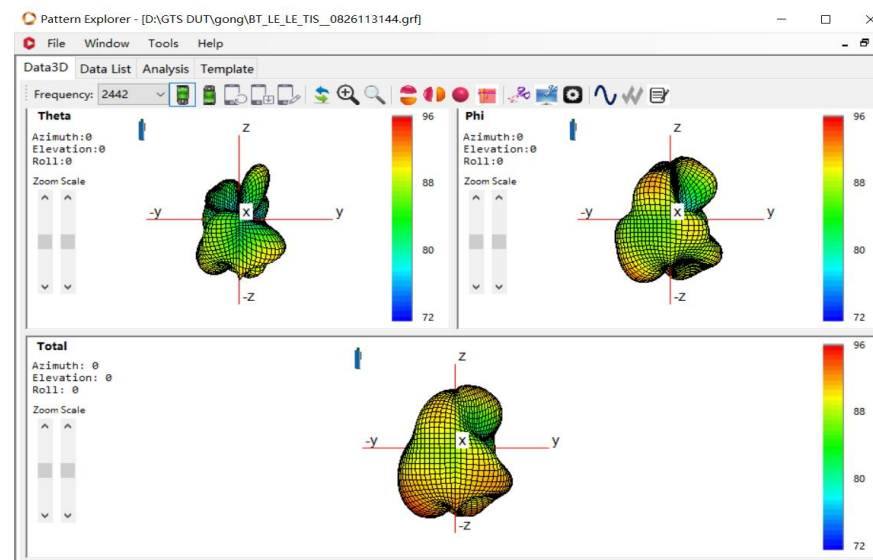
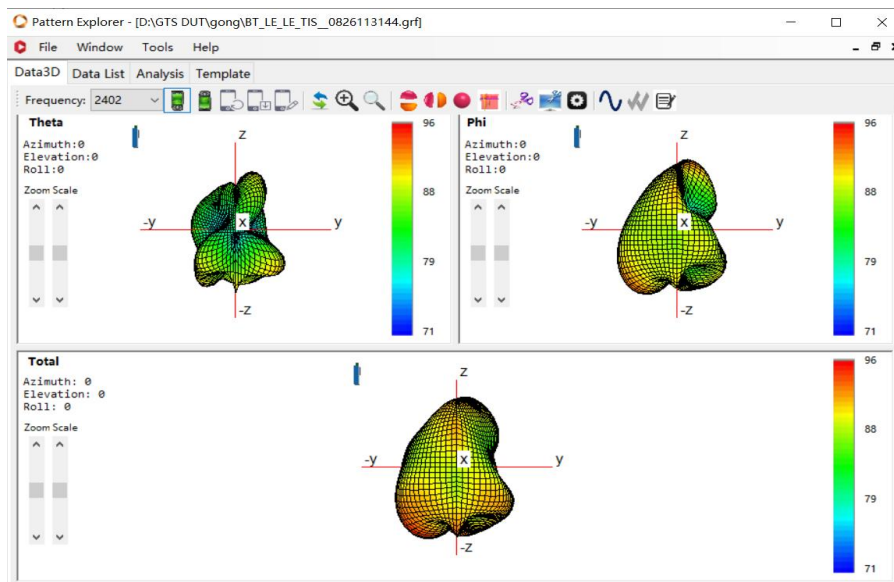


BLE 自由空间 TRP



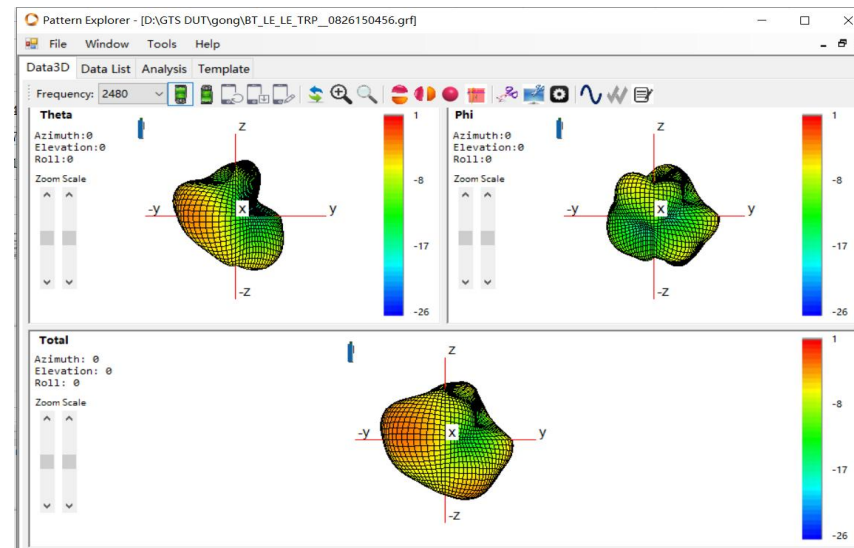
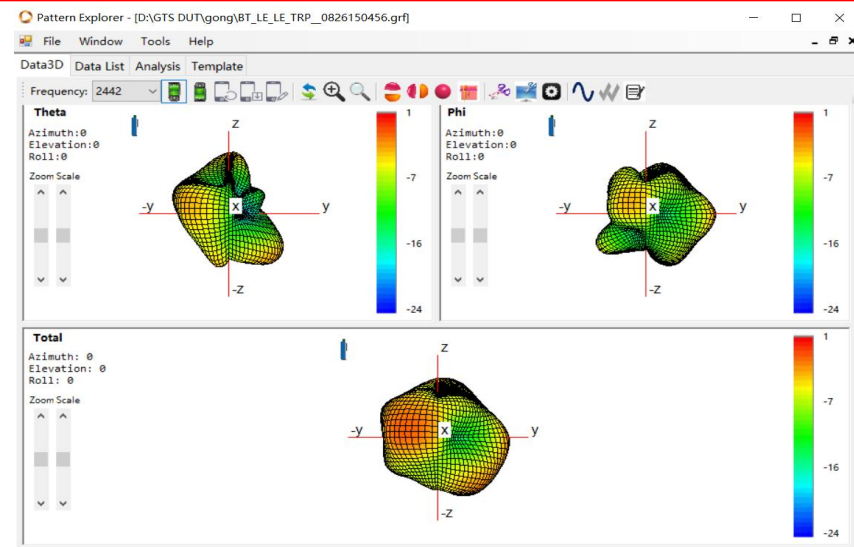
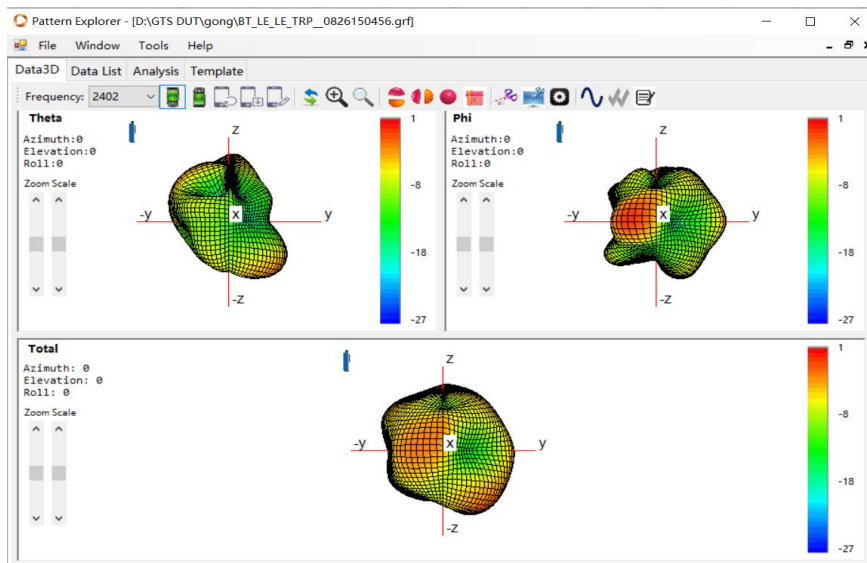


BLE 自由空间 TIS



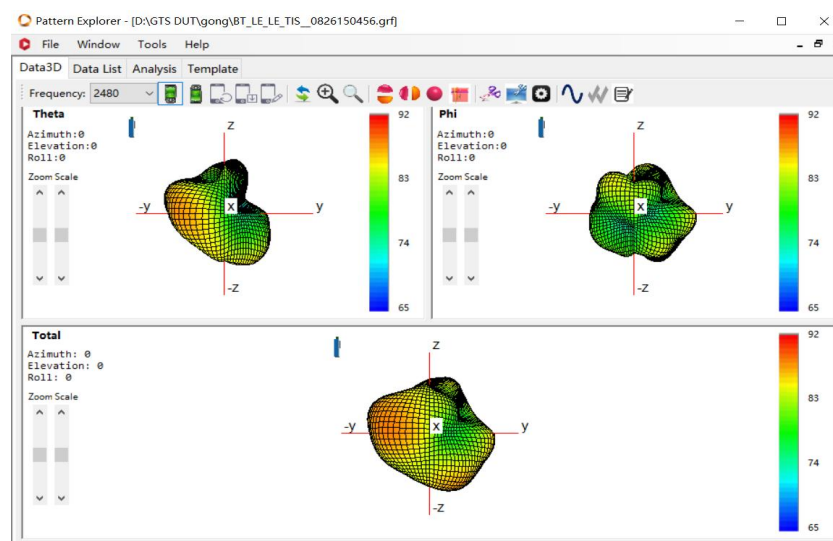
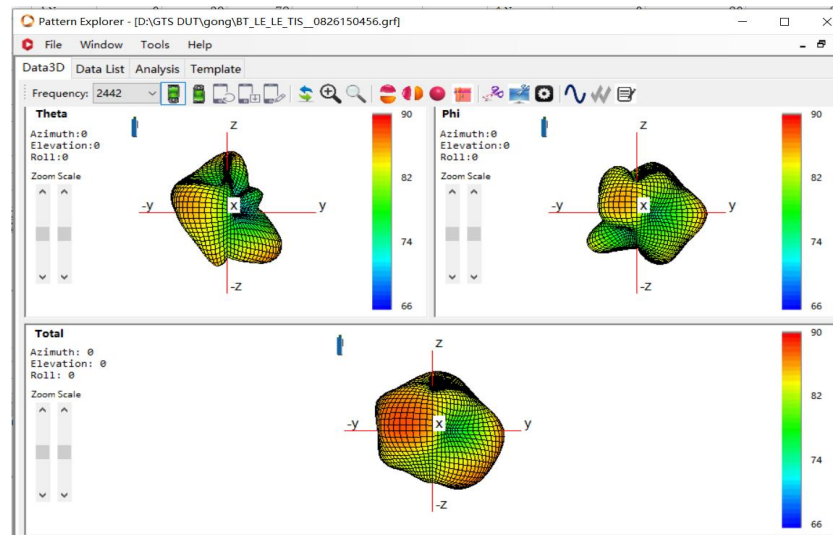
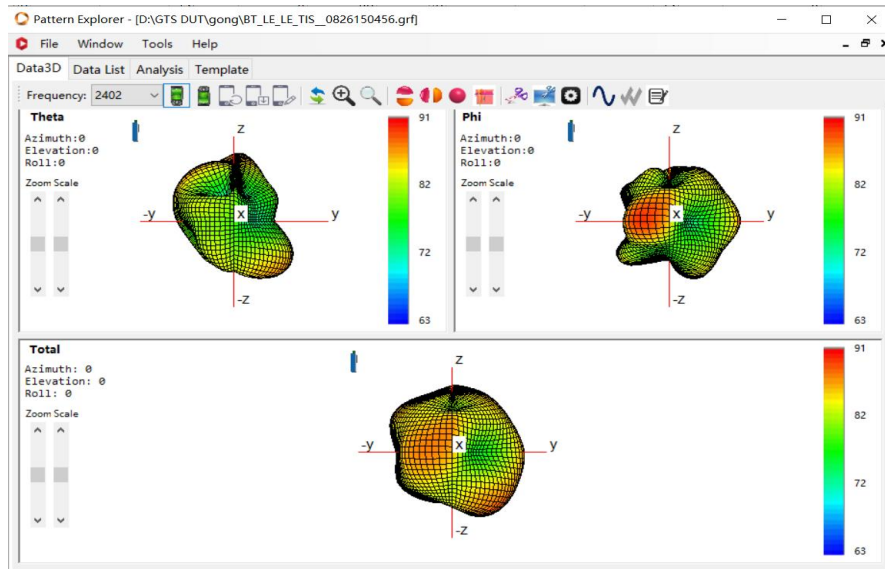


BLE 人手 TRP





BLE 人手 TIS





总结 Conclusion



- 以上是样品天线测试所得数据。以贵司确认为准。
- 如有疑问，请电话联系，谢谢。



01

报告中天线匹配电路是否改动，天线有关的环境处理是否增加，将直接影响天线性能，请仔细确认查看。

02

贵司如有最新试产或更新产品（如软件，ESD，物料等）请尽快提供我司进行验证，以确认天线性能是否有变化影响。

03

倘若贵司需要送第三方检测机构复测或客户测试，请务必先与我司进行天线相关测试确认，因主板·装配的一致性，以及天线组装的差异等因素，均可能导致天线参数的偏差。

谢谢

THANK YOU

如有疑问 请联系我们

日常服务时间：周一至周六 9:00-18:00

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