

BG2 Project Antenna Material Requirement Specification

Customer Name: Qiwu

Customer Name: BG2

Product Name: Antenna assembly

Product Specifications: See BOM table listing for details

Material Code: ~~LDS Bracket: DB24154726; Bluetooth Antenna: 04.QXX.00103; ANT+~~

Antenna: 04.QXX.00104

Change content resume:

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RF				

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the signature):

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Development Design Engineer/Date	SQE Engineer/Date	Head of Procurement/Date	Development Manager Approval/Date

catalogs

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1. summarize

1.1 Scope of application

This requirement specifies the _____ Antenna Technical Requirements and Material Requirements specification for the product. This requirement applies to **BG2** antenna selection, testing and acceptance of BG2 products.

1.2 Project Basic Information

Antenna Name:	BG2
Antenna bands:	GPS: L1:1575.42Mhz L5:1176.45Mhz WIFI:2.4 G BLE:2.4G
Antenna Type:	PIFA

2. Requirements for technical indicators

2.1 Introduction of test items and equipment

list of items	Test items	installations
S11 Parameter s	VSWR, Return Loss	network analyzer
active test	TRP, TIS	Integrated tester, microwave darkroom
passive testing	Gain, efficiency	network analyzer

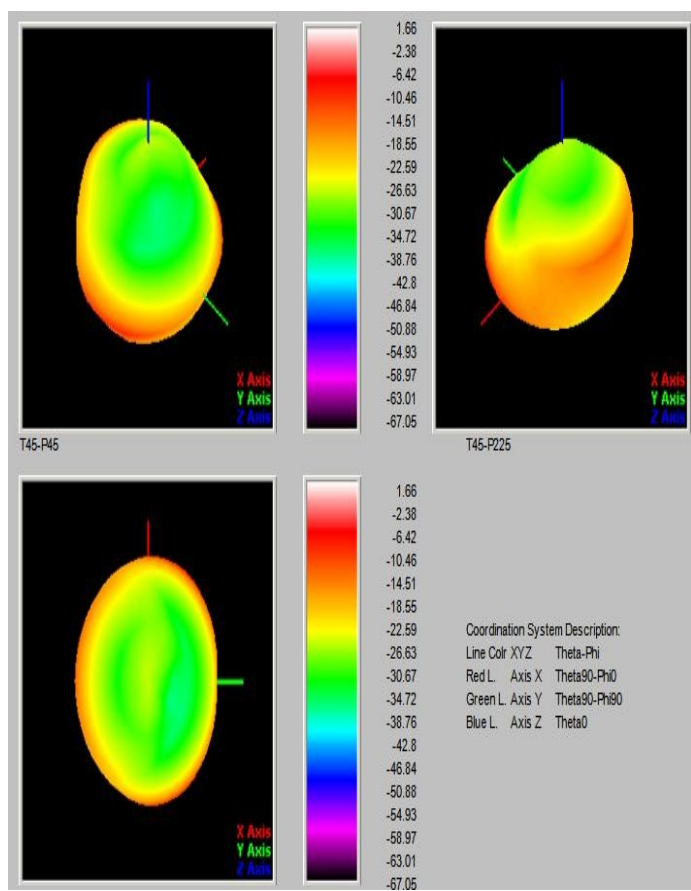
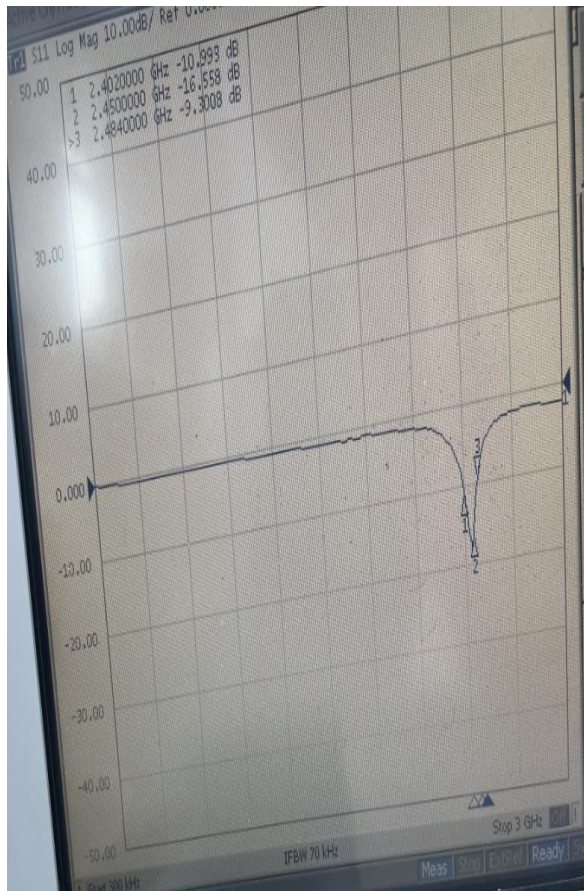
2.2.1 Test Description

Test tools: Agilent 8960 synthesizer, R&SCMW500, full-wave far-field ETS darkroom, high-precision positioning system and its controller, and computer with automatic test program

Test environment: Temperature $22^{\circ}\text{C} \pm 3^{\circ}\text{C}$, Humidity $50\% \pm 15$

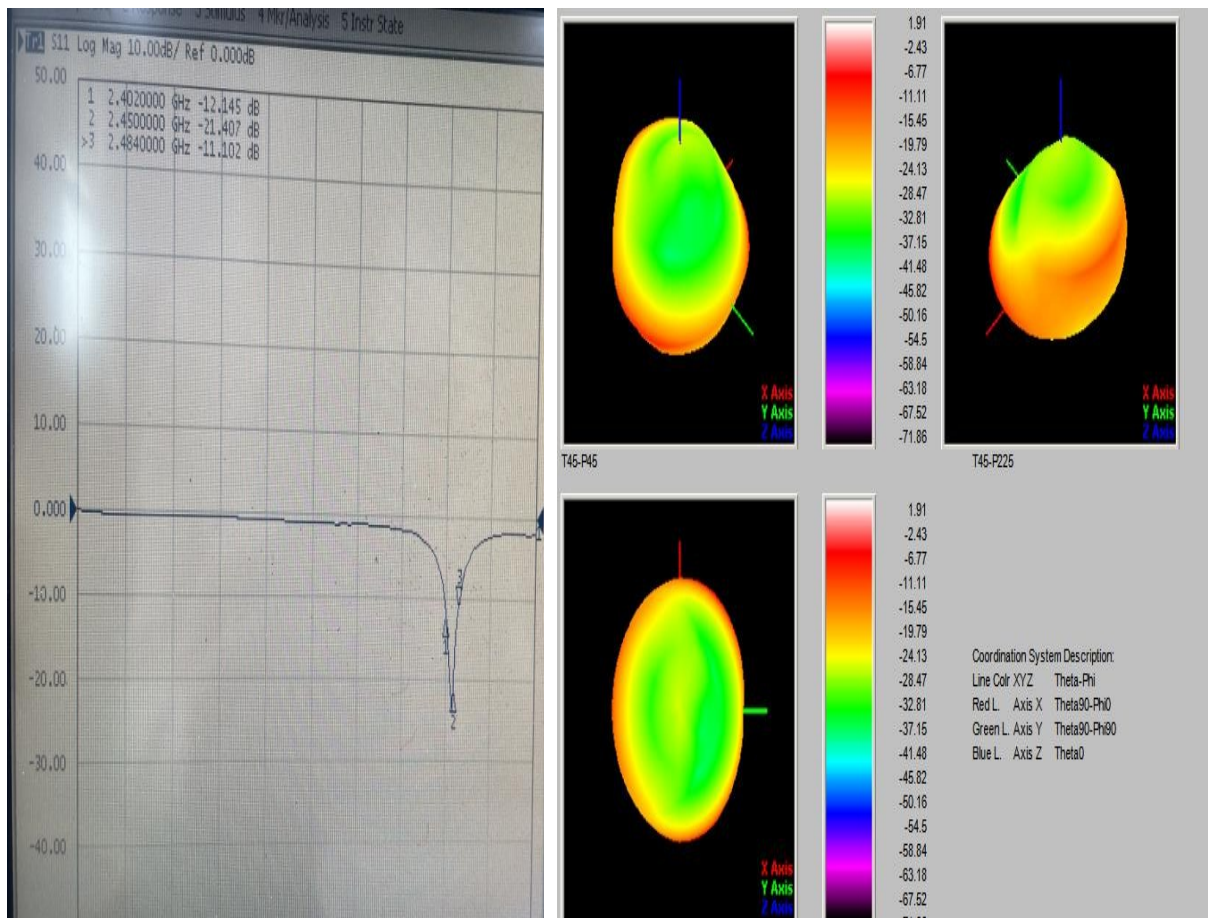
Test Method: The DUT is placed in the center position of the rotary table with H surface and fixed at the same level with the center position of the horn antenna. The positioning system makes the DUT rotate in the whole sphere to satisfy the high-precision three-dimensional positioning. Each RF instrument, turntable controller and PC with automatic test software communicate through GPIB interface.

2.2.2 BLE1 Passive Parameters - 2.4G



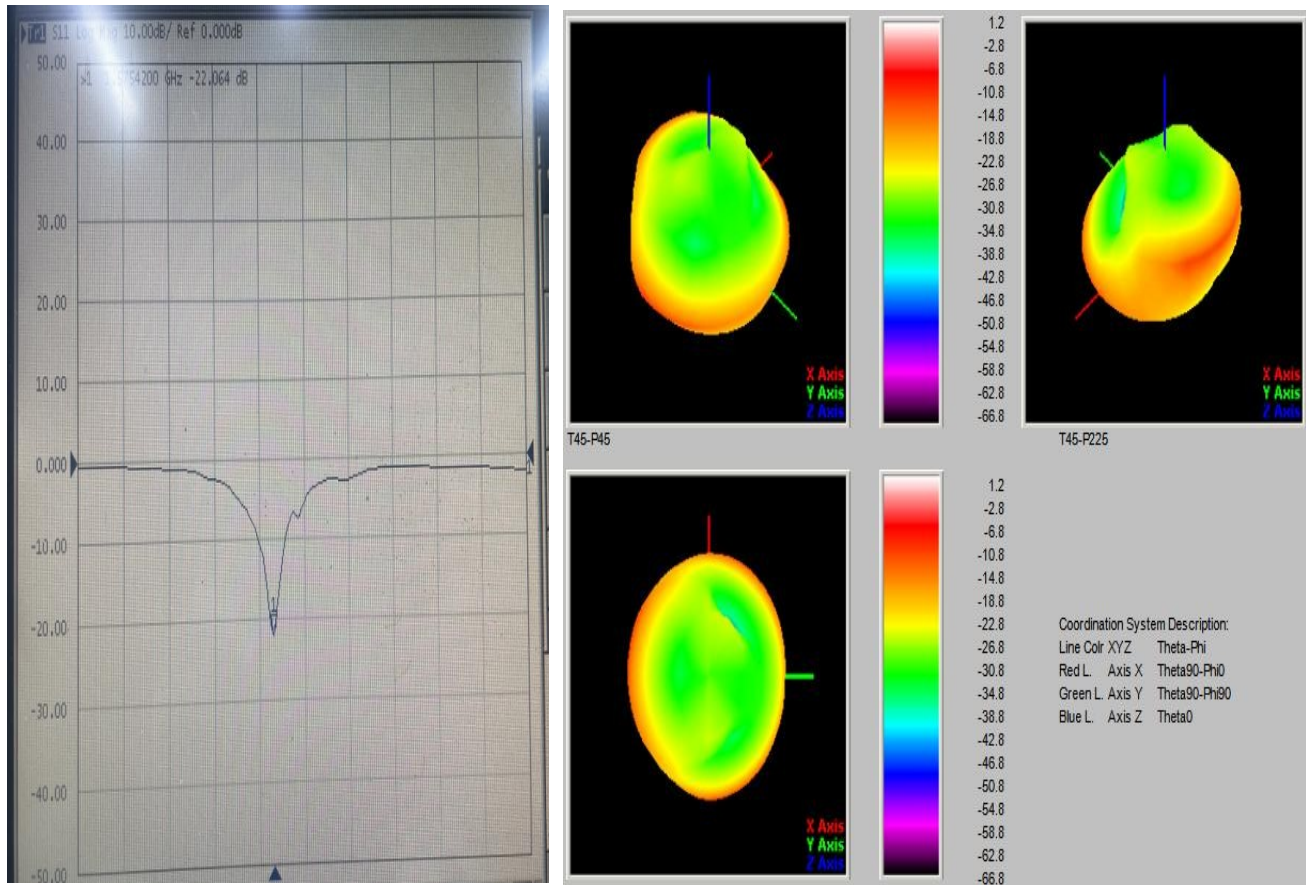
Freq (2.4G)	Effi (%)	gain(dbi)
2400MHZ	42.7%	1.3
2410MHZ	43.5%	1.2
2420MHZ	45.8%	1.3
2430MHZ	46.1%	1.2
2440MHZ	50.8%	1.3
2450MHZ	51.1%	1.2
2460MHZ	50.1%	1.2
2470MHZ	49.4%	1.1
2480MHZ	47.5%	1.2
2490MHZ	46.3%	1.2
2500MHZ	45.2%	1.3

2.2.3 BLE2 Antenna Passive Parameters



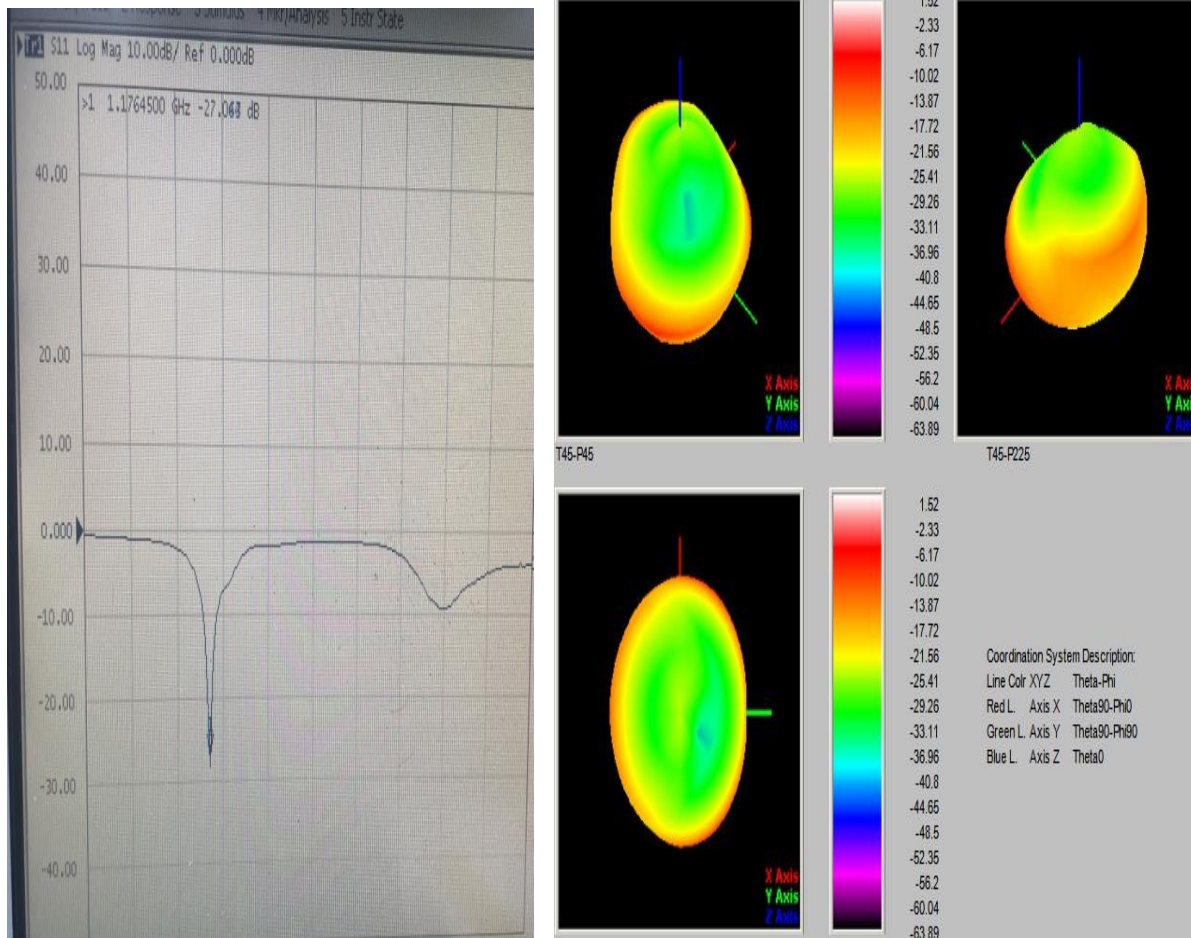
Freq (2.4G)	Effi (%)	Gain(dbi)
2400MHZ	45.4%	0.9
2410MHZ	46.2%	1.1
2420MHZ	47.1%	1.2
2430MHZ	48.0%	1.3
2440MHZ	49.1%	1.2
2450MHZ	50.4%	1.4
2460MHZ	51.3%	1.5
2470MHZ	50.0%	1.3
2480MHZ	48.2%	1.1
2490MHZ	47.5%	1.2
2500MHZ	46.4%	1.3

2.2.4 Antenna Passive Parameters-GPS-L1



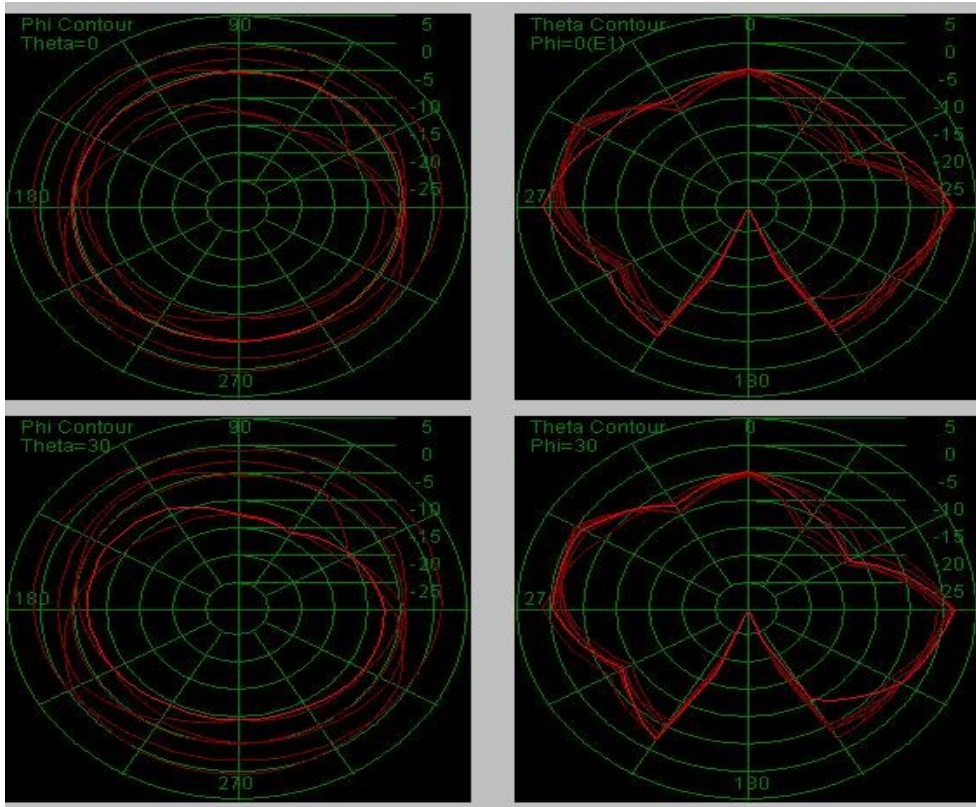
Freq(L1)	Effi (%)	Gain(dbi)
1555MHZ	39.6%	0.8
1560MHZ	40.4%	0.7
1565MHZ	41.6%	0.9
1570MHZ	43.7%	1.1
1575MHZ	43.5%	1.0
1580MHZ	44.6%	1.1
1585MHZ	43.5%	0.9
1590MHZ	41.2%	0.8

2.2.5 Antenna Passive Parameters-GPS-L5

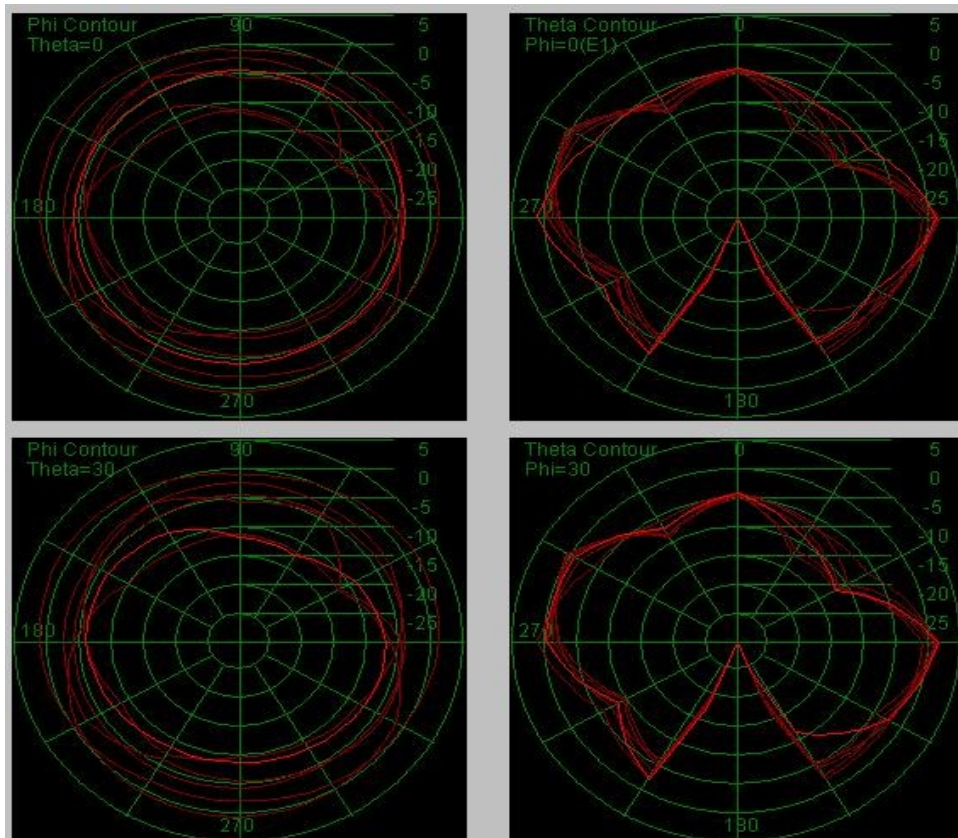


Freq(L5)	Effi (%)	Gain(dbi)
1150MHZ	40.2%	0.9
1155MHZ	43.5%	1.1
1160MHZ	44.6%	1.2
1165MHZ	45.3%	1.3
1170MHZ	46.4%	1.2
1175MHZ	43.7%	1.0
1180MHZ	44.0%	0.9
1185MHZ	40.1%	0.9

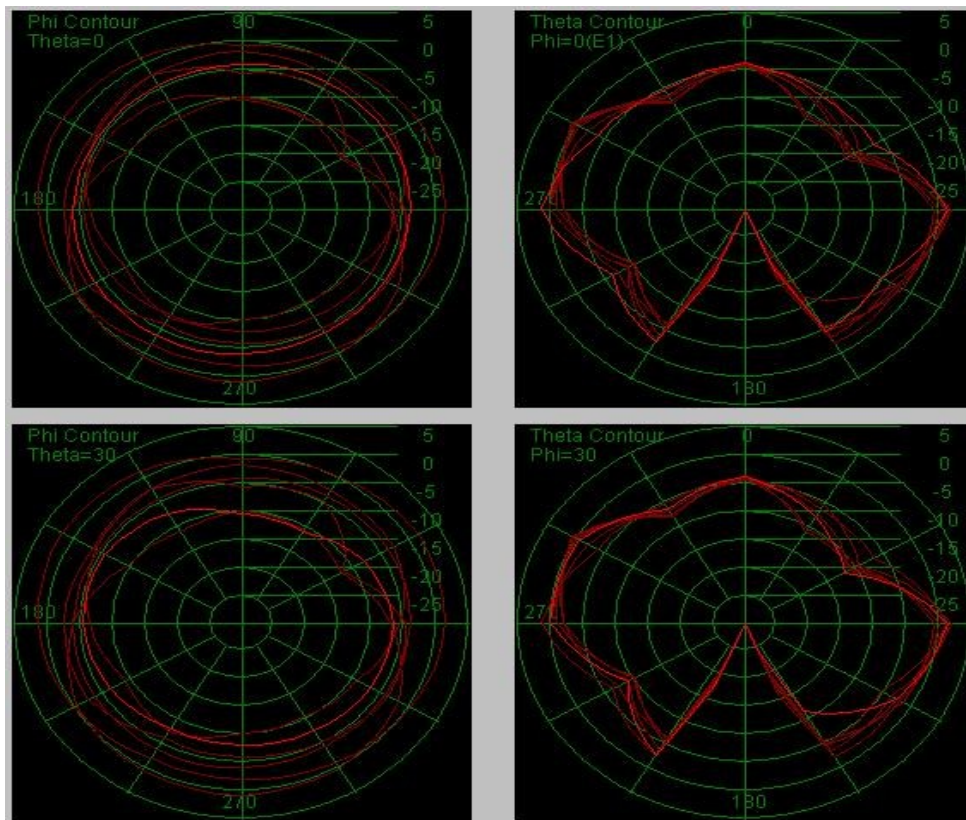
2.2.6 BLE1-2D Diagram



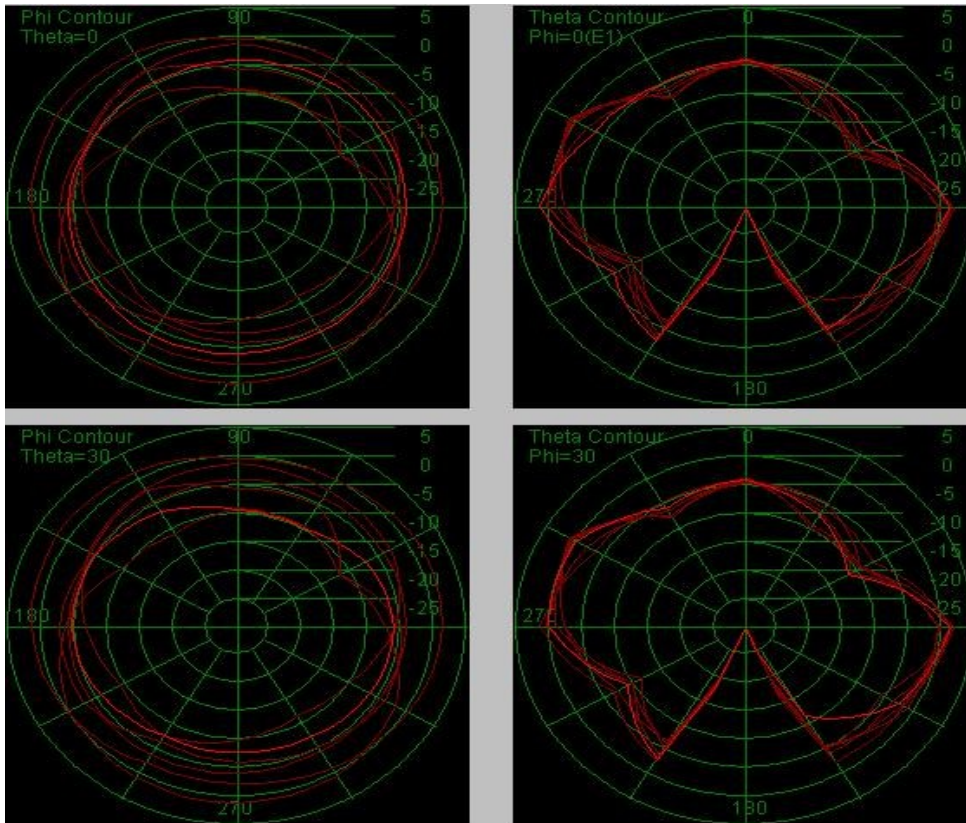
2.2.7 BLE2-2D Diagram



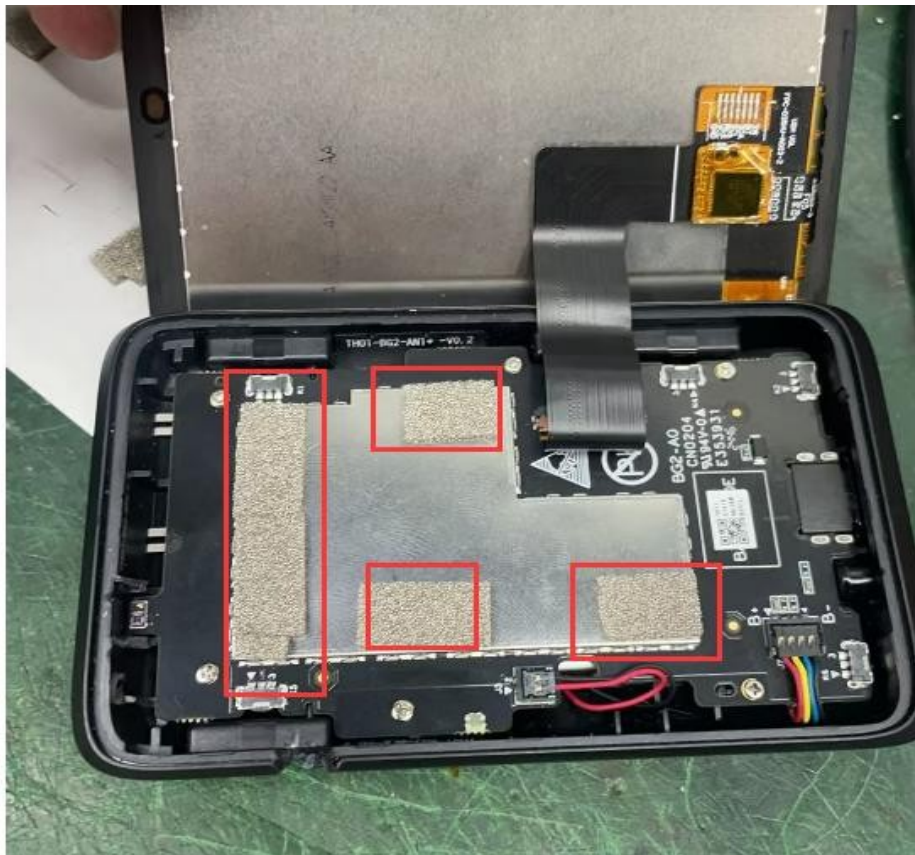
2.2.8 GPS-L1-2D Diagram



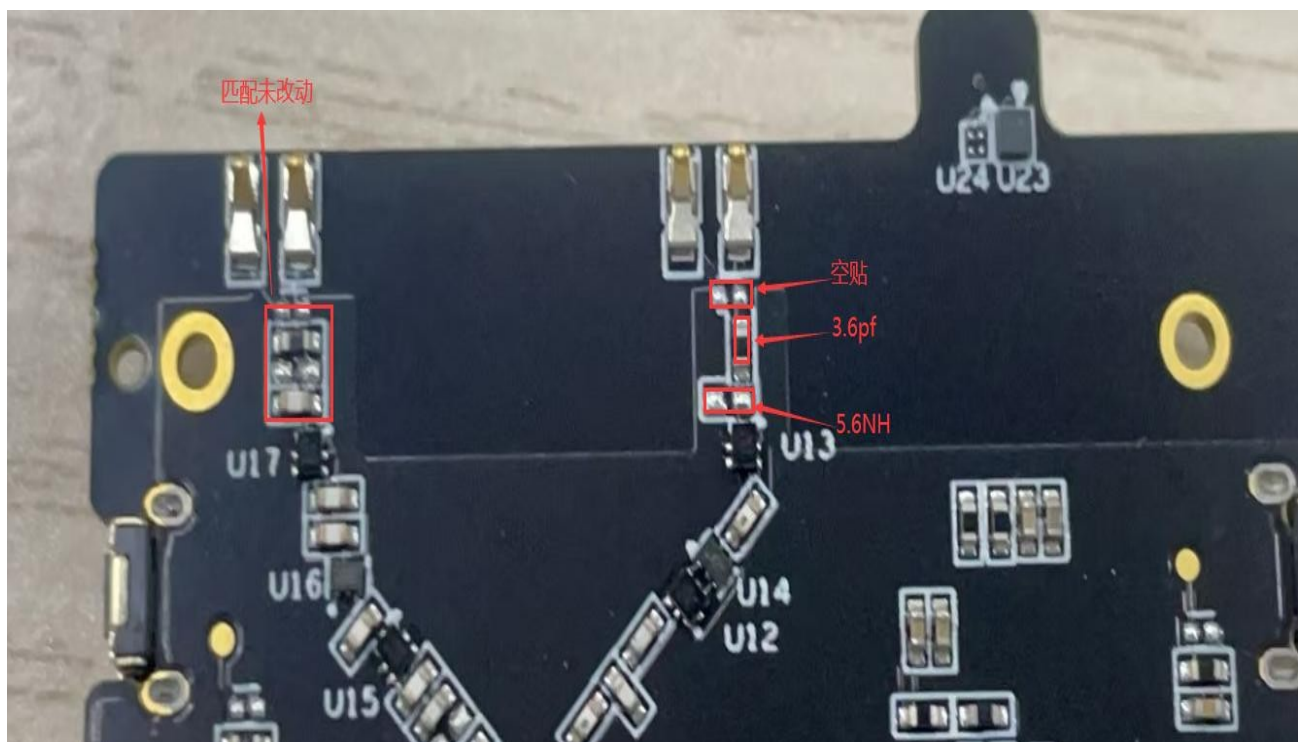
2.2.9 GPS-L5-2D Diagram



2.2.10 environmental treatment



2.2.11 match



3. Engineering drawings

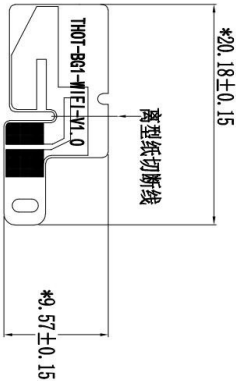
LDS Bracket

[illegible]

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BL1-Antenna

1		2		3		4		5		6	
								标记		签 名	
										修改内容	
										日期	
A											
B											
C											
技术要求:											
1. FPC基材规格:		PI基材:		电铸铜 1对半							
		电铸铜 (单面胶):		0.5oz (ED)							
		双面胶:		TESA 68532							
2. 电镀规格:		镀镍: 3~8um		镀金: 0.075UM							
3. 表面油墨要求:		表面油墨颜色:		亚光黑色		其它要求					
		印刷字体颜色:		亮黑							
		印刷字体高度:		按图纸要求							
4. 可靠性要求:		1. 可靠性测试: 盐雾腐蚀试验、霉菌试验、高低温冲击试验、高低温贮存试验、冷热冲击试验、正反面通断, 油漆表面要求对折不开裂, 不可划伤等.									
		2. 正面通断:									
		1. 外形公差±0.10;									
		2. 铜箔线路公差±0.05;									
		3. 铜箔到外形的公差±0.15;									
		4. 孔对孔位置公差±0.10; 孔到外形位置公差±0.15;									
		5. 金手指尺寸公差±0.20;									
		6. 其它未标注尺寸参照2D图纸.									
5. 公差要求:		标注数字的尺寸均为重要尺寸, 其它参照2D图纸									
6. 重点管控尺寸:		涉及物料必须符合RoHS要求									
7. RoHS要求:		用PE袋包装, 每袋数量100PCS, 包装袋外有标识									
8. 包装要求:											
1		2		3		4		5		6	
深圳市昱晟通讯设备有限公司											
第三视角											
0~3		±0.08		±0.10		±0.12		±0.15		±1°	
3~30		±0.10		±0.12		±0.15		±0.20		±1°	
30~50		±0.12		±0.15		±0.20		±0.25		±1°	
50~80		±0.15		±0.20		±0.25		±0.30		±1°	
角度		第 1 页, 共 1 页		材料		产品料号		641001-10-TA		FPC	
		项目名称		BG1		日期		20240130		设计	
		产品名称		WIFI-FPC		审核		MD		FJW	
		产品料号		641001-10-TA		批准		RF		tdl	
		单位		mm		比例		FTT		版本	
		R:A									





4. bill of materials



深圳市昱晟通讯设备有限公司

Shenzhen Yusheng Communication Equipment Co., LTD

641006 (BG2)-BOM表

版次: T:A

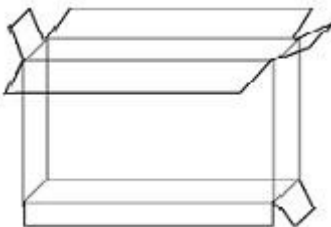
客户: 641

机种: 641006

制订日期: 2024/12/10

项次	*物料编码	*物料名称	物料类别名称	*机型	规格型号	颜色	*计量单位	用量	备注
1	641006-1A-TA	LDS天线组件		BG2	黑色 LDS 工艺 镭雕化镀	黑色	PCS	1	
1.1	641006-1A-01-TA	天线支架		BG2	54.37*9.71*11.35 LDS专用材料	黑色	PCS	1	客供支架
1.2	641006-1A-02-TA	天线线路		BG2	银白色 化镀铜 8-12UM、镍2-4UM	银白色	PCS	1	
2	641006-1B-TA	ANT+天线		BG2	黑色 FPC 电解铜 1对半 镀金 9.2*21.83*0.12 mm	黑色	PCS	1	
2.1	641006-1B-01-TA	ANT+-FPC		BG2	黑色 FPC 电解铜 1对半 镀金 9.2*21.83*0.12 mm	黑色	PCS	1	
3	641006-1C-TA	BLE1天线		BG2	黑色 FPC 电解铜 1对半 镀金 18.21*7.55*0.12 mm	黑色	PCS	1	
3.1	641006-1C-01-TA	BLE1-FPC		BG2	黑色 FPC 电解铜 1对半 镀金 20.18*9.57*0.13 mm	黑色	PCS	1	
确认:			审核:			制作: 闭业智			

5. Packing Diagram

Packing method diagram																
Diethylammonium chloride	Antenna components															
material number	641006															
Item Model	BG2															
Packing Details	Carton Size 1: 270*260*200MM Carton Size 2: 260*200*200MM Carton size 3. Depends on order quantity/volume															
	Packing method	Minimum Packing 100pcs in a pack, in order to fill the waterproof bag, a Waterproof bags for up to 1000 materials														
	Total number of boxes loaded	Packing according to order quantity														
Labeling requirements	Label Size 1: Universal 100*100mm label size 2: According to customer requirements	深圳市昱晟通讯设备有限公司 <table><tr><td>客户名称</td><td>*****</td></tr><tr><td>订单编号</td><td>*****</td></tr><tr><td>项目名称</td><td>*****</td></tr><tr><td>物料编码</td><td>*****</td></tr><tr><td>数 量</td><td>****pcs</td></tr><tr><td>出货日期</td><td>****年**月**日</td></tr><tr><td colspan="2">地址：深圳市光明新区光明大道南太云创谷园区2栋4楼4A</td></tr></table>	客户名称	*****	订单编号	*****	项目名称	*****	物料编码	*****	数 量	****pcs	出货日期	****年**月**日	地址：深圳市光明新区光明大道南太云创谷园区2栋4楼4A	
客户名称	*****															
订单编号	*****															
项目名称	*****															
物料编码	*****															
数 量	****pcs															
出货日期	****年**月**日															
地址：深圳市光明新区光明大道南太云创谷园区2栋4楼4A																
caveat																
1. Due to the limitation of the order quantity, the box size of each material is selected according to the total order quantity or the physical volume.																

2. Storage temperature: room temperature
3. Storage conditions: stored in a cool and dry place

6. Manufacturer Information

6.1 Manufacturer Name: Shenzhen Yusheng Communication Equipment Co.

6.2 Manufacturer's address: 407-411, 4/F, Building 2, South Taiyun Chuanggu Park, Guangming Avenue, Guangming New District, Shenzhen, China.