

Confirmation of Material

Supplier: Shenzhen Fubang wireless Technology Co., LTD
Model NO: E11
Product Name: Three-in-one antenna
Spec/Type:
Material code: 01.02.05.02.11.002
Colour: black
Address: 3 / F, Building 1, Dalang Lianjian Science and Technology Industrial Park, Longhua District, Shenzhen
Contacts/phone: Zhang Haiyan 13691727201

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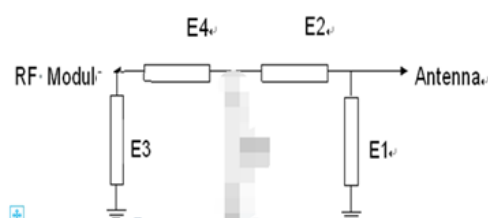
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1、Specification

This report mainly provides the testing conditions of various electric and structural performance parameters for cell phone antenna ----E11 Picture 1 shows the antenna designed by FUBANG.



2 、 Matching circuit diagram



Element	Value
E1(0402)	
E2(0402)	0 欧姆
E3(0402)	
E4(0402)	0 欧姆
Note:	

3、 VSWR Testing

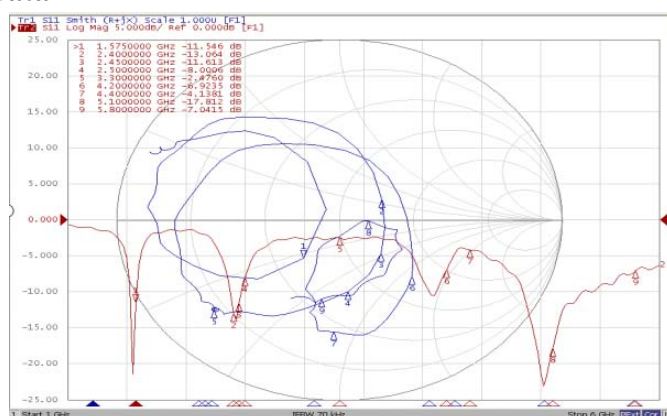
3.1 Testing connection

The VSWR testing devices are connected in sequence: Agilent5071C Network Analyzer → Testing Cable → Customer-providing Devices.

3.2 VSWR

The following table expresses the VSWR value of antenna's two edges of its frequency range. With regard to the relevant diagram of VSWR

3.3 Testing data



E11 WBG Return Loss

GPS/WIFI/BT 天线指标				
频段	频率 (MHz)	VSWR	频率 (MHz)	VSWR
	发射端		接收端	

GPS	1575	≤ 2.0		
WIFI/BT	2400	≤ 2.0	2500	≤ 1.3

4、Test the efficiency of the antenna Testing

4.1 Testing field

FB Microwave Anechoic Chamber : testing frequency ranges from 400MHz to 6GHz and the 40cm diameter spherical quiet zone, the chamber provides less than -90dB reflectivity from 400MHz—6GHz.

4.2 Testing results

The following table indicates the testing results related to Power and Sensitivity in Microwave Anechoic Chamber, concerning the relative diagram.

Freq	Efficiency	Freq	Efficiency
1540	33%	2400	36%
1550	33%	2420	36%
1560	35%	2440	38%
1570	37%	2460	37%
1580	37%	2480	38%
1590	35%	2500	37%

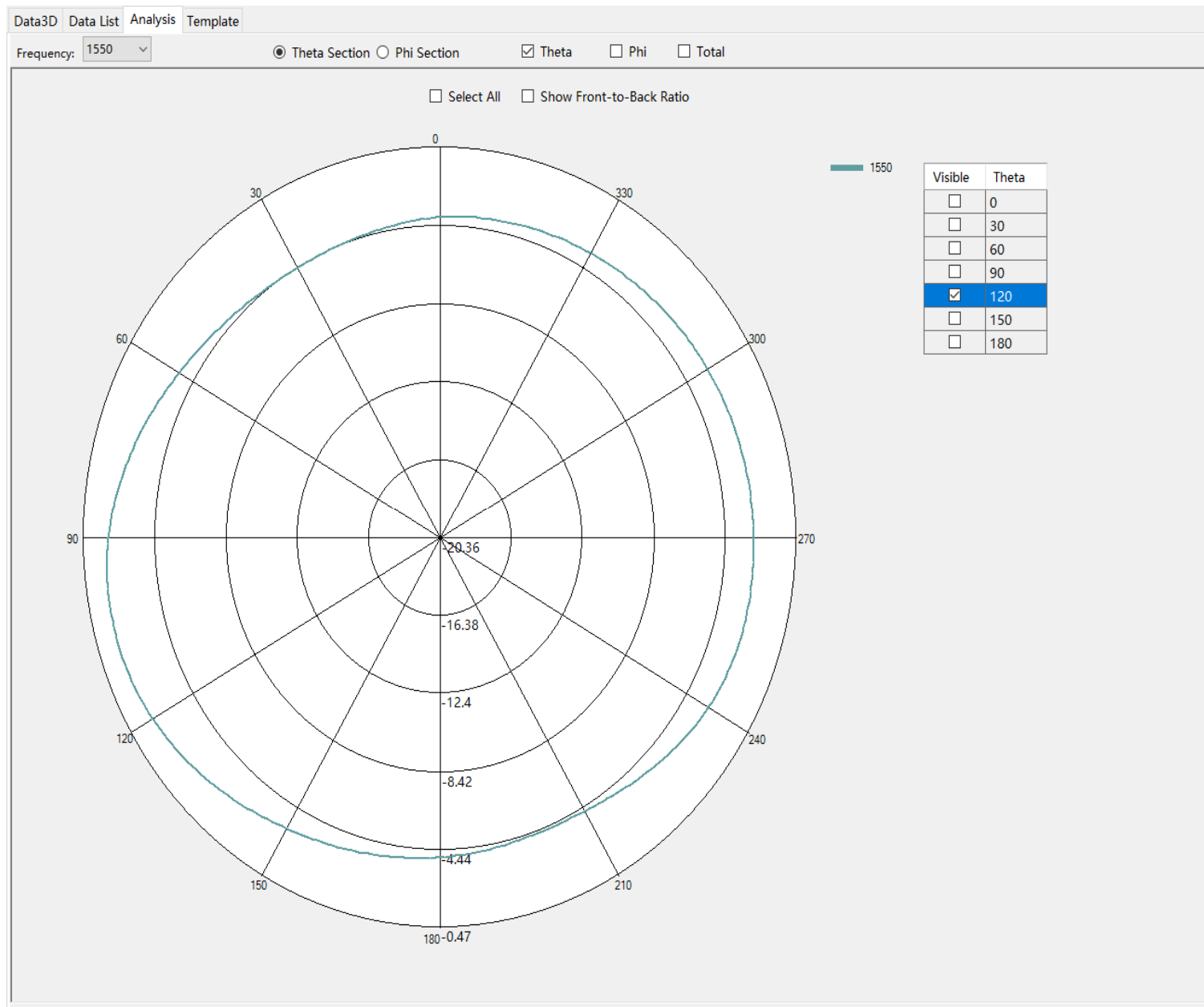
Freq	Efficiency	Freq	Efficiency	Freq	Efficiency
5100	23%	5440	30%	5800	31%
5120	21%	5460	28%	5820	32%
5140	22%	5480	30%	5840	32%
5160	21%	5500	28%	5860	33%
5180	22%	5520	28%	5880	29%
5200	23%	5540	30%	6000	31%

WIFI	TRP		TIS
11b-11M	1	12.14	
	6	13.5	
	11	13.55	-81.59
11a-54M	40	11.4	
	56	10.93	
	157	9.83	-70.29

Antenna Gain

Band	Gain (dBi)
BT	-1.5
2.4G WIFI	-1.5

5G WIFI	-1.6
GPS	-1.2



5、Environmental treatment

Environment handling of the original machine.

6.Engineering Draw

深圳市孚邦无线技术有限公司

SHENZHEN FUBANG ANTENNA TECHNOLOGY CO., LTD

盐水喷雾试验报告

salt spray test report

报告编号:FUBQA220802076

日期:8月2日

产品名称 Product name	E11 三合一天线	送检部门 Inspection department	研发	料号 Serial No	01.02.05.02.11.002	试样数量 Qty		5
试验日期 Date	7月31日	试验时间 Test time	48H	开始START	7月31日10:00	客户Customer		
				结束OVER	8月2日10:00	供应商Supplier	/	
试验条件 Condition	项目 Item				标准 Standard	实测Actually measure		条件判定 Judge
						MAX	MIN	
	试验前产品清洗 Test before cleaning products				GB/T2423.17-2006	用清水清洗		OK
	产品放置方法 Location mode				GB/T2423.17-2006	15° ~30°		OK
	压缩空气动力 Compressed air power				(1.0±0.1)Kg/cm	1.1	0.9	OK
	实验室温度 Laboratory temperature				35±1℃	36℃	34℃	OK
	实验室相对湿度 Test chamber relative humidity				85%RH	/		OK
	环境温度 Environment temperature				常温	/		OK
	压力桶温度 The pressure barrel temperature				47±1℃	48℃	46℃	OK
	盐水桶温度 Brine hourse temperature				35±2℃	37℃	33℃	OK
	盐水浓度 Brine density				1:20(5±1)%	5% NaCL溶液		OK
	盐雾沉降量 Spray volume				1~2ml/H/80cm²	1.7	1.4	OK
	NaCL品质 NaCL				工业盐	建新氯化钠		OK
	蒸馏水品质 Distilled water				饮用纯净水	纯净水		OK
	其它 Other				/	/		OK
试验结果 Experiment a result	白色腐蚀率				GB/T6461-02	无		OK
	样件试验后的外观				GB/T6461-02	/		OK
说明： 1. 盐雾试验作业标准依照中华人民共和国国家标准 GB/T2423.17-2006执行。 2. 试件外观判定标准依照中华人民共和国国家标准GB/T6461-02标准执行。 3. 判定方法：试样表面白色腐蚀率为0%为保护级别10级；白色腐蚀率为0~0.1% 为保护级别9级；白色腐蚀率为0.1%~0.25%为保护级别8级					Explain: 1.Salt fog experiments homework standard according to the People's Republic of China national standard GB/T2423.17-2006 performances. 2. Judge standard according to the People's Republic of China national standard GB/T6461-02 standard a performance. 3. Judge a method:Try the kind surface white corrosion rate as 0% for protect Class 10 classes;The white corrosion rate is 0~0.1% is protect Class 9 classes;The white corrosion rate is 0.1% ~ 0.25% is to protect Class 8 classes			
批准 Grant			审核 Examine		试验员Test clerk			
刘丽萍			刘丽萍		Wind			

FUB-4-PG-051/A.1

9.QC Engineering Chart

QC Engineering Chart

Customer(客户)	醋比		Written By(制作)	付仁松	Orig. Date(制作日期)	2020.12.27
Description(零件名称)	FPC天线		Revised By(校订)	杨文杰	Revised Date(校订日期)	2020.12.27
			Approved By(确认)	莫思远	Approved Date(确认日期)	2020.12.27
流程编号 Process Number	流程名称 Process Name	制程描述 Process Description	产品 Product	控制项目 control item	检验方式 check mode	频率 Freq
1	IQC	来料检验	成品	外观、颜色、材质、版本	抽检，按GB2828-2003一般II级水平，AQL：CR=0，MAJ=0.4，MIN=1.0抽样	每批
				盐水喷雾试验	SPCS	每批
				尺寸	SPCS	每批
				RoHS符合性	标识全检	每批
				外观、材质、颜色、版本	抽检，按GB2828-2003一般II级水平，AQL：CR=0，MAJ=0.4，MIN=1.0抽样	每批
			包装材料	尺寸	SPCS	每批
				RoHS符合性	标识全检	每批
				外观	全检	每天
2	FQC	外观检验	成品	外观	全检	每天
3	出货检验	出货检验	成品	包装标识	全检	每批
				外观	抽检，按GB2828-2003一般II级水平，AQL：CR=0，MAJ=0.4，MIN=1.0抽样	每批
				重点尺寸	SPCS	每批
				RoHS符合性	标识全检	每批

深圳市孚邦无线技术有限公司

SHENZHEN FUBANG Electronic TECHNOLOGY CO., LTD

镀金厚度检验报告

Gold thick test report

报告编号:FUBQA220802078

日期:8月2日

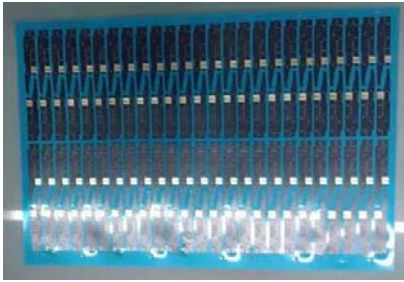




品名 Product name	E11 三合一天线					料号 Serial No	01.02.05.02.11.002					批 量 Batch	5PCS			
厚度标准	AU: 0.5uin, NI:50-150uin															
序号 Number	测试结果 Test results															备注Remark
	CU um					NI um										
	1#	2#	3#	4#	5#	1#	2#	3#	4#	5#						
1	0.55	0.53	0.55	0.57	0.52	117.75	105.67	113.61	105.49	118.7						
以下空白																
量具代号 Code	牛津仪器 Smartlink										最终判定 OK					
备注 Remarks																

FUB-4-PG-067/A.1

核准: 刘丽萍

审核: 刘丽萍

检验员: Wind

 <p>用 PE 膜打包 with PE film packaging</p>	 <p>防潮防水 PET 袋封装 Moistureproof waterproof PET bag packaging</p>	 <p>放于纸箱内 Put in the cartons</p>
 <p>纸箱用胶带封口 Carton sealing with duct tape</p>	 <p>包装箱整箱外观 Cases appearance</p>	