

Shenzhen Koobee Communication Co. , Ltd.

Confirmation of Material

		1 W 1	
Supplier:		bang Wireless Co., Ltd.	
Model NO:	K652	-	
Product Name:	Lower ma	in antenna	
Spec/Type:			
Material code:	01. 02. 05. 0	02. 16522. 002	
Colour:	B1	lack	
Address:	Construction Sciential Park,	1, Dalang Joint ence and Technology Longhua District, nen City	
Contacts/phone:	Zhang Haiya	n 13691727201	

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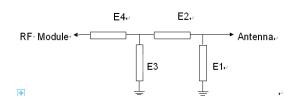
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1. Specification

This report mainly provides the testing conditions of various electric and structural performance parameters for cell phone antenna ----K6522Q4HX Picture 1 shows the antenna designed by FUBANG.



2 Matching circuit diagram



Element	Value
E1(0402)	5.1nh
E2(0402)	0 Ω
E3(0402)	
E4(0402)	0 Ω
Note: 公共端	12nh,RF1=0
Ω ,RF2=6.8nh,RF3	=27nh, FF4=NC

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



K6522Q4HX DANT VSWR/Return Loss

Main antenna VSWR										
Freq(MHz)	2170	2300	2400	2500	2700					
Free Space	4.13	2.15	2.63	3.45	3.09	1.22	1.65	2.05	1.97	

4. Test the efficiency of the antenna Testing

4.1 Testing field

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

4.2 Testing results

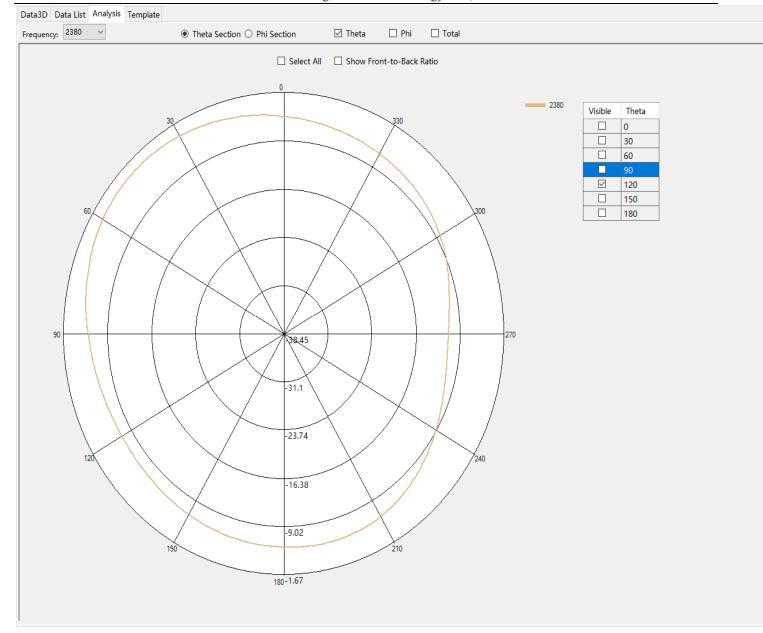
The following table indicates the testing results related to Power and Sensitivity in Microwave Anechoic Chamber, concerning the relative diagram.

Band		TRP		TIS
GSM850	26.98	27.37	27.27	-102.98
GSM900	25.5	25.78	25.57	-102.88
DCS1800	25.52	25.11	25.17	-107.33
PCS1900	27	27.03	26.81	-106.53
W1	19.57	19.36	19.39	-106.41
W2	19.36	19.23	19.37	-109.7
W4	17.45	17.65	17.86	-107.55
W5	16.65	16.41	16.26	-106.85
W8	15.8	15.7	15.9	-106.86
1	20.17	20	19.95	-96.05
2	19.94	19.9	19.97	-97.44
4	18.33	18.51	18.75	-96.72
5	17.73	17.75	17.62	-93.94
7	19.93	19.89	19.59	-94.85
8	15.95	16.08	16.02	-94.01
12	14.73	14.99	15.16	-92.62
13	16.05	16.13	15.76	-96.04
28	16.48	16.61	16.94	-92.76
66	16.73	16.45	15.47	-91.56

Antenna Gain

Band Gain (dBi)

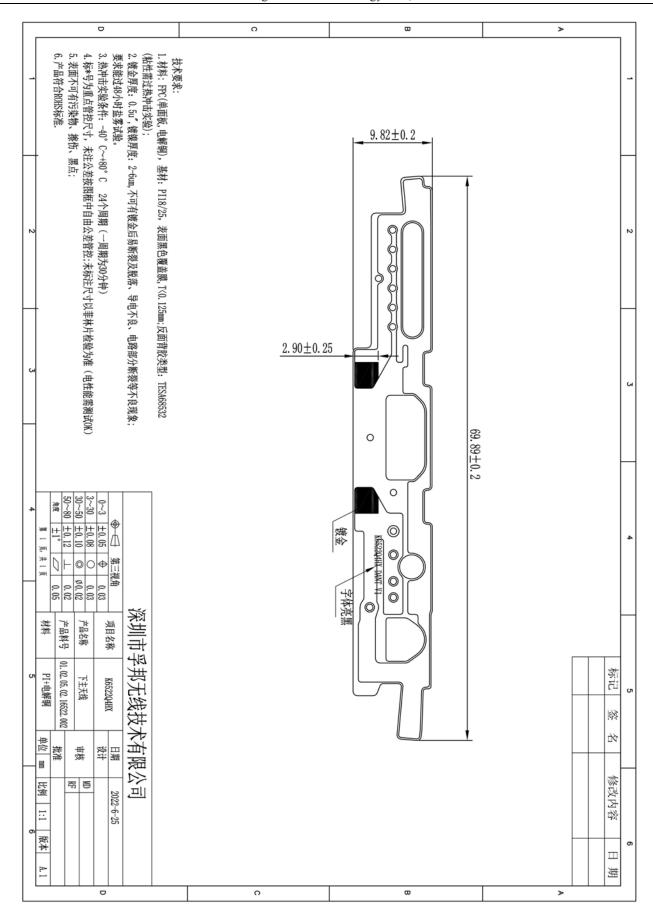
GSM850	-2.8
GSM900	-2.8
DCS1800	-2.4
PCS1900	-2.2
W1	-2.1
W2	-2.2
W4	-2.5
W5	-2.8
W8	-2.8
1	-2.1
2	-2.2
4	-2.5
5	-2.8
7	-2.3
8	-2.8
12	-3.0
13	-3.0
28	-3.0
66	-2.5



5. Environmental treatment

Environment handling of the original machine.

6.Engineering Draw



7. Measurement Report

深圳市孚邦无线技术有限公司

SHENZHEN FUBANG Electronic TECHNOLOGY CO., LTD 全尺寸检测报告

报告编	号:Fl	JBQA20220	62903	34								202	22年6月29日
	品名 Product name K6522Q4HX 下主天线		三天线	订单 Orde	单号 r NO.			类 别	[□模具零件 □材料评估			
料 号 Serial № 01.02.		01. 02. 05.	02. 165	22. 002		批 量 Batch		5PCS		у	■送样评估		□其他
序号	逐	面规格	量具			测试结	果 Test	results	3		判定R	esult	
Number		ifications	Tool	1#	2#	3#	4#	5#	6#	7#	OK	NG	备注Remark
1	69.	89±0.20	Р	69. 93	69.86	69. 90	69.88	69.85			OK		
2	9.8	32±0.20	P	9. 76	9.82	9.80	9.83	9. 78			OK		
3	2.	9±0.25	P	3. 05	3. 02	3. 07	2. 98	2. 97			OK		
	ß	下空白											
												最终判定	
量具代号 Code 卡尺 C				Ŧ	分尺 M	投	影仪(二	次元)P	钢力	₹ S			最終判定 al results
Cod	ie											OK	
备注 Remarks													

FUB-4-PG-062/A. 1

核准: 审核: 检验员: Wind

8. Reliability Test Report

深圳市孚邦无线技术有限公司

salt spray test report

报告编号:FUBQA220629086

日期:6月29日

产品名称 Product name	K6522Q4HX 送检部门 下主天线 Inspection 研		研发	料号 Serial №	01. 02. 05. 02. 16522. 002	试样数量 Qty		5
试验日期	4月27日	试验时间	48H	开始START	4月27日10:00	客户Cu	stomer	
Date	4月27日	Test time	4611	结束OVER	4月29日10:00	供应商S	upplier	/
		16日 14…			标准		tually sure	条件判定
		项目 Ite	n		Standard	MAX	MIN	Judge
	试验前产品清洗	Test before o	cleaning p	roducts	GB/T2423. 17-2006	用清水清洗		OK
	产品放置方法 Lo	cation mode			GB/T2423. 17−2006 15° ~30°		OK	
	压缩空气动力 Co	mpressed air	power		(1.0 ± 0.1) Kgf/cm	1.1	0.9	OK
	实验室温度 Labo	ratory tempe	rature		35±1℃	36℃	34℃	OK
	实验室相对湿度	Test chamber	relative	humidity	85%RH	,	/	OK
试验条件 Condition	环境温度 Enviro	nment temper	ature		常温	,	/	OK
	压力桶温度 The	pressure ba	rrel tempe	erature	47±1℃	48℃	46℃	OK
	盐水桶温度 Bri	ne hourse te	nperature		35±2℃ 37℃ 33℃		33℃	OK
	盐水浓度 Brine	density			1:20(5±1)%	5% Na	CL溶液	OK
	盐雾沉降量 Spra	y volume			$1{\sim}2\mathrm{m}1/\mathrm{H}/80\mathrm{cm}^{\mathrm{a}}$	1.7	1.4	OK
	NaCL品质 NaCL				工业盐	建新領	氰化钠	OK
	蒸馏水品质 Dist	illed water			饮用纯净水	纯剂	争水	OK
	其它 Other				/	/		OK
试验结果	白色腐蚀率				GB/T6461-02 无		£	OK
Experiment a result	样件试验后的外观	R			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 $^{\circ}$ 0.1% is protect Class 9 classes;The white corrosion rate is 0.1% $^{\circ}$ 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

Description(零件名称) 流程编号 Process Customer(客户) 流程名称 Process Name QC FQC ΙQC Outgo 出货检验 外观检 Incom 来料检 器 制程描 Proce inspe ing ing 器 述 FPC天线 帮比 goods finish materi als finish Packa 包装材料 finish Product goods 出出 政品 及品 成品 ing Color、材质Materials Color、材质Materials 外观Appearance、颜色 外观Appearance、颜色 Approved By(确认) Revised By(校订) Written By(制作) ROHS Conformity ROHS Conformity ROHS Conformity 外观Appearance 外观Appearance 包装标识 Package label 重点尺寸 Important Size RoHS符合性 Salt spray test 盐水喷雾试验 RoHS符合性 RoHS符合性 版本Version 尺寸 版本Version control iten 尺寸 Size 控制项目 RestrainGB2828-2003 General RestrainGB2828-2003 General RestrainGB2828-2003 General MAJ=0.4, MIN=1.0Sampling MAJ=0.4, MIN=1.0Sampling 标识全检labeling inspection MAJ=0.4, MIN=1.0Sampling II level, AQL: CR=0, II level, AQL: CR=0, 标识全检labeling inspection II level, AQL: CR=0, 标识全检labeling 全检full inspection 全检full inspection Batch inspection, Batch inspection, Batch inspection, inspection 检验方式 check mode 杨文杰 莫思远 付仁松 5PCS 5PCS full full full 每批 Each Batch 每批 Each Bat-' 每批 Each Batch 每批 Each 每批 Each Batch 每批 Each 每批 Each 频率Freq Batch » Basis 《FPC Inspection standard》 目检Visual inspection、依据《FPC检验标准》Basis《FPC Inspection standard》 《零 for product packaging identification) & * Visual inspection, Basis «Specification 《FQC检验指导书》《FQC inspection instruc 每个包装是否贴有环保标识? 标识是否符合要 《可靠性试验标准》 每个包装是否贴有环保标识?标识是否符合要 Visual inspection, Basis «Specification 二次元进行量测 The quadratic element is for product packaging identification» 用直尺量测量相应尺寸/实装Use ruler to measure corresponding dimension/actual 二次元进行量测 The quadratic element is 求? Is there an environmental label on each package? Does the logo meet the each package? Does the logo meet the each package? Does the logo meet :个包装是否贴有环保标识? 标识是否符合要 Is there an environmental label on Is there an environmental label on Reliability test standard》 件图纸》 件图纸》 检验方法 Check method Approved Date(确认日期) Revised Date(校订日期) Orig. Date(制作日期) 《Part drawing》 《Part drawing》 BOM》 the Inspection standard》 图纸》《Part drawing》 质证明》《Material 图纸》《Part drawing》 Inspection standard》 frawing of finished product 《成品外观图》 packaging identification» 《FPC检验标准》《FPC meets the requirements, no missing paste meets the requirements, 《零件图纸》《Part drawing》 meets the requirements, no «FPC Inspection standard» 《零件图纸》《Part drawing》 《FPC Inspection standard》 «Specification for product (Reliability test standard 标识符合要求, 无漏贴Mark 标识符合要求, 无漏贴Mark 标识符合要求,无漏贴Mark 质证明》《Material 《FPC检验标准》《FPC Evaluation standard 《可靠性试验标准》 missing paste 《FPC检验标准》 《FPC检验标准》 判定标准 (BOM) «Exterior g 条件 本 4000年本 2020.12.27 2020.12.27 2020.12.27 no Inspe QC FQC ЮC 担当 IQC repor produ Finis hed Repor Report IQC Test Record Test 表记录 FQC Test IQC Test ct

QC Engineering Chart

10.Gold thick Test Teport

深圳市孚邦无线技术有限公司

SHENZHEN FUBANG Electronic TECHNOLOGY CO., LTD

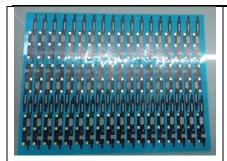
镀金厚度检验报告

Gold	
thick	
test	
report	

FUB-4-PG-067/A. 1 核准: 刘丽萍	备注 Remarks	量具代号 Code				1		序号 Number		厚度标准	品 名 Product name	报告编号:FUBQA220629088		
						0. 55	1#					A220629		
						0. 53	2#				K6522Q4HX	088		
						0. 57	3#	CU um			K6522Q4HX 下主天线			
						0.54	4#		災		2.00			
审核:刘丽萍		牛津仪器			八八	0.51	5#]试结果]		巻 Seri			
0 丽萍	SmartLin	牛津仪器 SmartLink		以下空白	112. 16	1#		测试结果 Test results	AU:	料号 Serial No	OOIG MITCH FEST TEDOTE			
		^						105. 43	2#		ts	AU: 0.5uin, NI:50-150uin	01. 02.	יפטר דפ
						115. 34	3#	NI um		I:50-150u	01. 02. 05. 02. 16522. 002	1001		
						108. 53	4#			in	22. 002			
检验员:						117.5	5#				#t Ba₁			
: Wind											批 量 Batch			
		最终判定 OK						备注Remark			5PCS	日期:6月29		

11.Packing Specification

Shenzhen Fubang Wireless Technology Co., Ltd.



用 PE 膜打包 with PE film packaging



防潮防水 PET 袋封装 Moistureproof waterproof PET bag packaging



放于纸箱内 Put in the cartons



纸箱用胶带封口 Carton sealing with duct tape



包装箱整箱外观 Cases appearance