

供应商名称: 深圳市博格斯通信技术有限公司

产 品 承 认 书

Specification for Approval

客户名称

Client Name: 北京神州安付科技股份有限公司

品 牌

Brand Name: 博格斯

原厂料号

No: AFB-054A (RA 版)

物料规格&描叙

Description: QF100-L511E-2S 云喇叭 4G 天线

产品制造商 (全称)

Manufacturer: 深圳市博格斯通信技术有限公司

物料类别

Part Name: 4G 天线

物料编号

Materiel No.: 123020062-11

物料描述

Description: 云喇叭 4G 天线, 型号: QF100-L511E-2S AFB-054A (BGS)241024

供 应 商 签 章	客 户 签 章
	承 认: 确 认:

供应商联系地址: 深圳市高新技术产业园中区科技中一路 19 号赛百诺基因治疗园 B 栋 3 楼

308 室

供应商联系人: 袁世军

联系电话及传真: TEL: 0755-86037167

FAX: 0755-86539353



SPECIFICATION FOR APPROVAL/产品承认书

Customer Name

客户名称：北京神州安付科技股份有限公司

Customer P/N.

客户料号：123020062-11

Product Description

产品描述：QF100-L511E-2S 云喇叭 4G 天线

BGS P/N

博格斯料号：AFB-054A （RA版）

Manufacturer

制造商：深圳市博格斯通信技术有限公司

Approve Date

承认日期：2024年11月20日

BGS Sign and Seal/博格斯签章	Customer Sign and Seal/客户签章

Change the content/变更内容	Version/版本	Date/日期
初版	RA	2024/11/20

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1.Antenna Specification/ 天线技术参数

1.1: Electrical Specification/ 电气特性	
Freq.Range/ 频段范围（MHz）	703-960,1710-2690
Impedance/ 阻抗（Ω）	50
VSWR/ 驻波比	≤3
Directional/ 辐射方向	Omni directional
Polarization/ 极化方式	Linear
Gain/ 增益（dBi）	703-960MHz:: 0.09
	1710-2690MHz: 3.11
1.2: Mechanical Specification/ 机械指标	
Material/ 材质	FPC
RF Cable Type/ 射频线型号	N/A
Connector Type/ 连接器类型	N/A
1.3: Environmental Specification/ 环境指标	
Operation temp/ 工作温度	-40℃～+85℃
Long-term storage temperature/ 长期储存温度	+19℃～+23℃

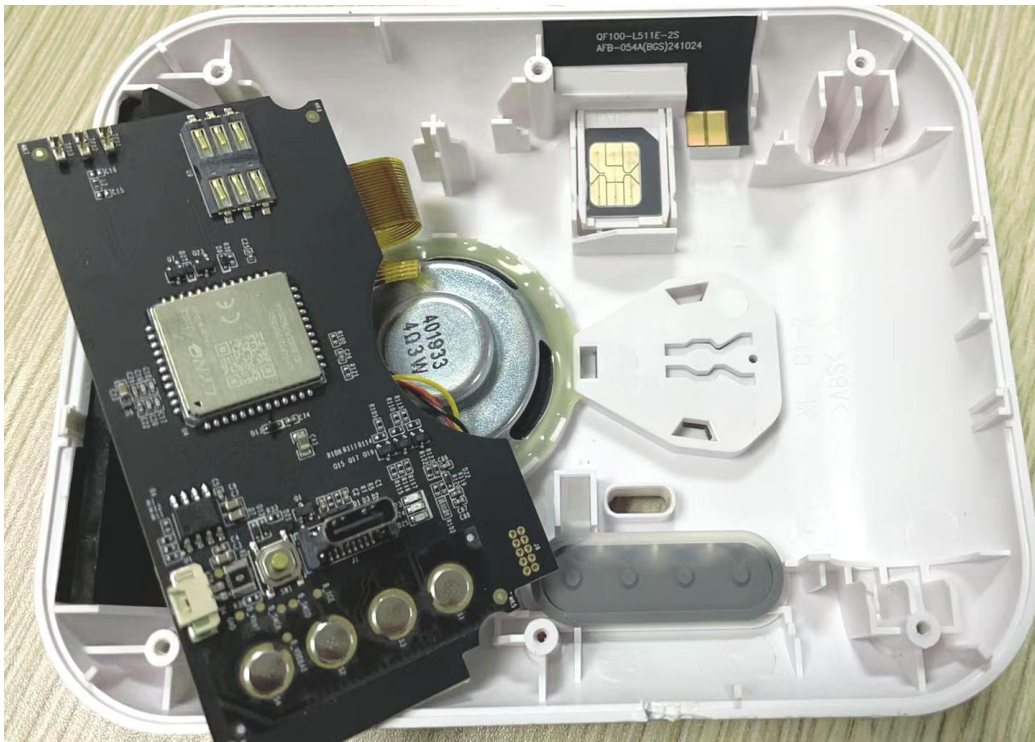


2. Antenna Picture and Installation Instructions/天线图片及安装说明

2.1: Antenna Picture/天线图片



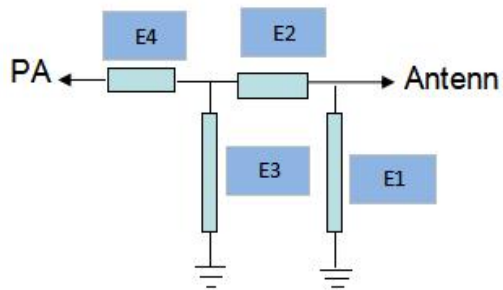
2.2: Installation Instructions/天线装配图





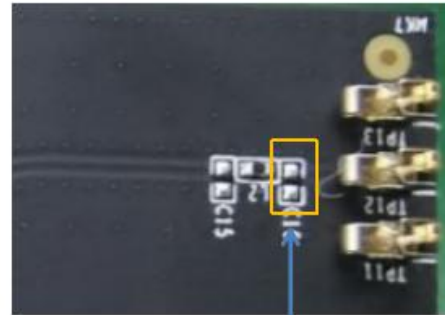
3.Test Report/测试报告

3.1: The matching circuits/匹配电路



Element	4G主天线
	Value
E1	10NH
E2	0欧姆
E3	N/A
E4	0欧姆

天线匹配有更改，对地并联10NH电感



并10NH

3.2: Active test data/有源测试数据

Band	Channel	TRP	TIS
LTE1 (10M)	Low	20.1	-94.13
	Mid	20.19	-94.18
	High	20.25	-94.12
LTE3 (10M)	Low	20.12	-93.34
	Mid	20.08	-93.27
	High	20.13	-93.26
LTE5 (10M)	Low	19.34	-90.26
	Mid	18.69	-90.18
	High	18.06	-90.12
LTE7 (10M)	Low	18.29	-92.19
	Mid	19.13	-92.2
	High	18.24	-92.17
LTE8 (10M)	Low	19.15	-90.19
	Mid	18.22	-90.17
	High	17.11	-90.03
LTE20 (10M)	Low	19.65	-90.14
	Mid	19.05	-90.23
	High	18.72	-90.34
LTE28 (10M)	Low	15.42	-89.1
	Mid	15.73	-89.16
	High	16.14	-90.17
LTE38 (20M)	Low	19.33	-89.2
	Mid	19.1	-89.1
	High	19.12	-89.3
LTE40 (20M)	Low	19.17	-89.16
	Mid	18.68	-89.4
	High	18.33	-89.2
LTE41 (20M)	Low	19	-88.8
	Mid	19.1	-88.9
	High	18.44	-89



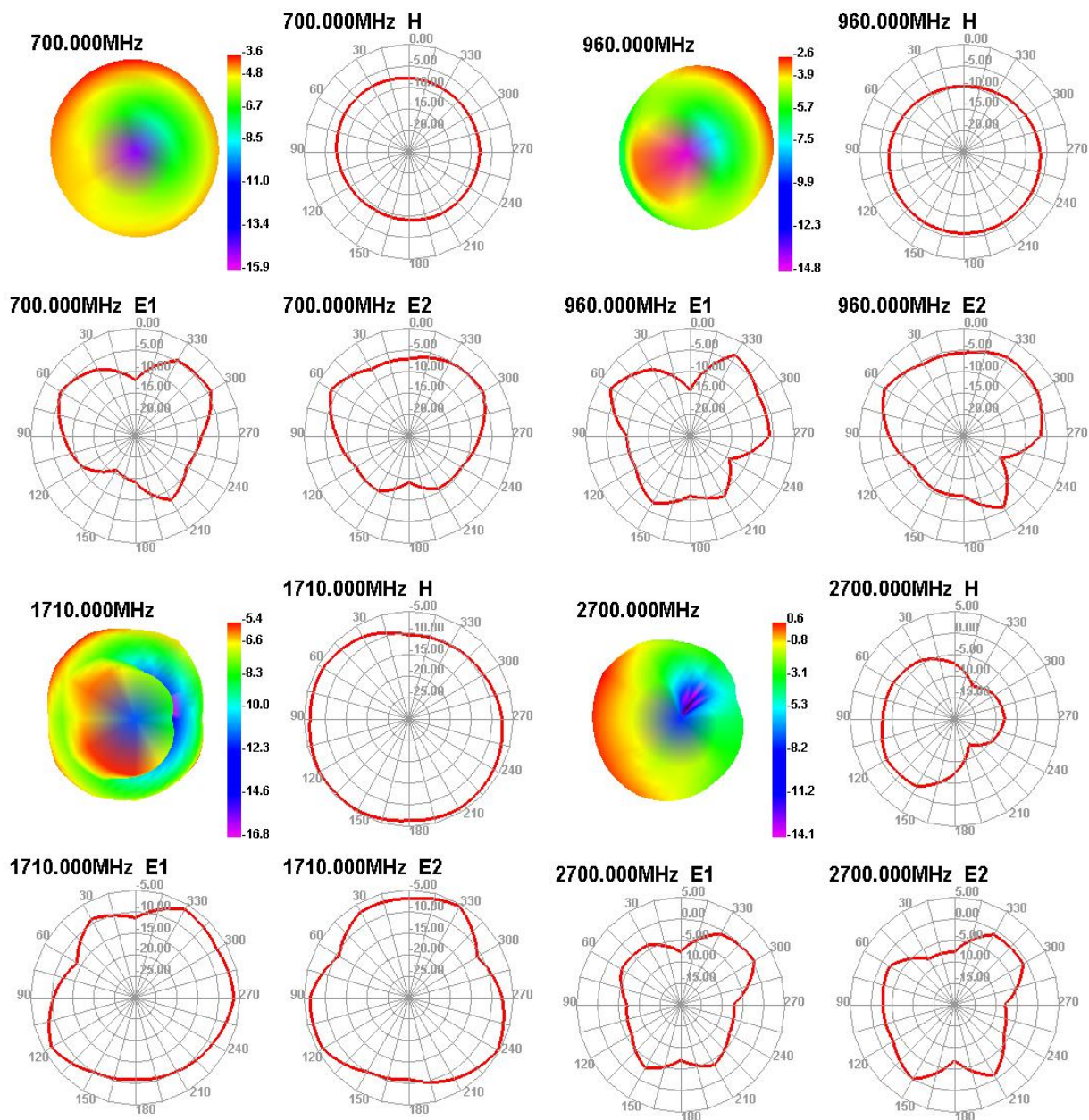
深圳市博格斯通信技术有限公司

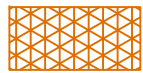
shenzhen bogesi communication technology co.,ltd

3.3 Antenna efficiency and gain/天线效率与增益

Freq (MHz)	Effi (%)	Gain (dBi)	Freq (MHz)	Effi (%)	Gain (dBi)	Freq (MHz)	Effi (%)	Gain (dBi)
700	25.99	-3.58	1700	32.44	-6.72	2200	47.58	3.03
710	24.04	-5.58	1710	34.69	-5.43	2210	50.46	3.11
720	24.6	-5.34	1720	33.62	-4.23	2220	52.07	2.99
730	20.73	-6.36	1730	31.78	-3.12	2230	52.35	2.62
740	24.72	-5.32	1740	33.49	-2.49	2240	51.07	1.96
750	29.49	-5.91	1750	36.5	-1.82	2250	49.09	1.17
760	28.79	-4.38	1760	36.45	-0.92	2260	50.83	0.9
770	31.68	-3.53	1770	40.76	-0.42	2270	50.77	0.93
780	20.25	-3.25	1780	42.3	-0.09	2280	51.44	1
790	23.36	-2.48	1790	40.77	0.01	2290	56.49	1.35
800	26.63	-1.76	1800	41.91	0.55	2300	56.97	1.4
820	33.46	-0.8	1810	43.66	1.08	2310	58.8	1.55
830	32.2	-0.44	1820	45.58	1.5	2320	58.49	1.52
840	37.9	0.09	1830	49.9	2.02	2330	55.46	1.17
850	37.16	-0.02	1840	51.47	2.26	2340	51.73	1.23
860	34.38	-0.34	1850	49.65	2.25	2350	50.61	1.71
870	32.09	-0.68	1860	48.19	2.34	2360	51.75	2.28
880	33.64	-0.78	1870	46.27	2.46	2370	53.47	2.56
890	35.28	-1.2	1880	40.29	2.22	2380	50.56	2.11
900	32.65	-3.44	1890	32.36	1.51	2390	47.05	2.33
910	32.74	-6.67	1900	34.08	0.06	2400	38.74	1.27
920	32.72	-7.15	1910	29.47	-1.79	2410	44.79	2.07
930	36.41	-4.61	1920	27.97	-2.84	2420	47.01	2.15
940	36.27	-3.31	1930	28.74	-2.3	2430	51.58	2.19
950	38.58	-2.85	1940	30.66	-2.08	2440	53.94	1.99
960	28.48	-2.64	1950	31.95	-2.02	2450	52.73	1.96
			1960	35.28	-1.4	2460	53.12	1.97
			1970	29.33	-0.75	2470	54.6	1.87
			1980	34.43	-0.14	2480	56.77	1.89
			1990	38.42	0.22	2490	57.59	1.97
			2000	39.44	0.06	2500	57.16	2.03
			2010	42.79	0.13	2510	56.91	2.25
			2020	45.04	0.15	2520	56.32	2.37
			2030	45.86	0.53	2530	53.05	2.01
			2040	45.29	0.64	2540	52.26	1.85
			2050	46.39	0.75	2550	47.94	1.42
			2060	47	0.75	2560	42.83	0.96
			2070	45.61	0.57	2570	42.92	0.86
			2080	43.3	0.3	2580	40.69	1.05
			2090	39.96	0.04	2590	44.41	1.6
			2100	35.33	-0.15	2600	45.17	1.69
			2110	32.71	0.3	2610	43.4	1.34
			2120	31.21	0.74	2620	39.56	0.59
			2130	31	1.15	2630	36.43	0.03
			2140	35.26	1.95	2640	37.15	-0.03
			2150	40.36	2.62	2650	39.55	0.12
			2160	44.04	2.93	2660	42.77	0.49
			2170	43.81	2.77	2670	43.84	0.58
			2180	46.37	3.05	2680	44.12	0.62
			2190	48.18	3.19	2690	45.43	0.67
						2700	46.41	0.63

3.4: Directional diagram/方向图





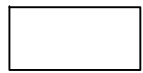
..... 补强部分
Reinforcing part



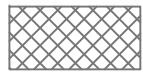
..... 丝印部分
Screen printing part



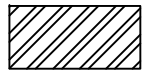
..... 镀金部分
Gold-plated part



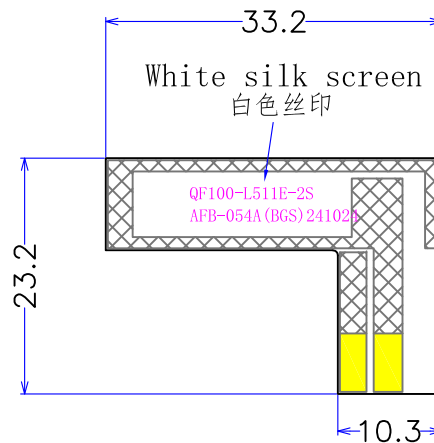
..... 空膜部分
Empty membrane part



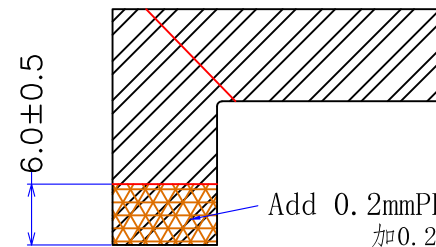
..... 线路部分
Line section



..... 背胶部分
Part of gum



Front view
正面



Back view
背面

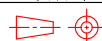
The backing is divided into tow sections
背胶纸分割如图

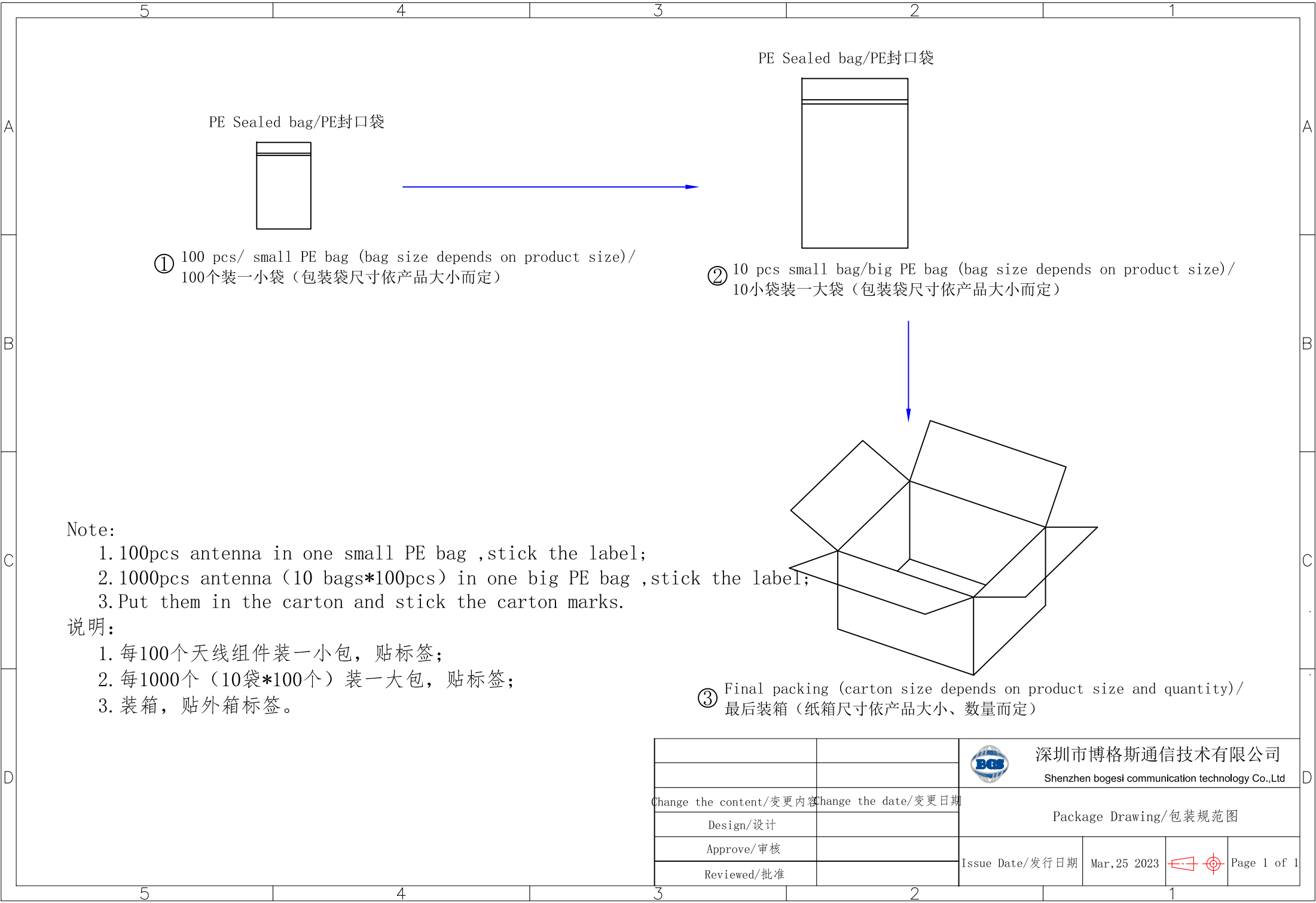
Requirements:

1. Material :FPC+PET, one and a half pairs of electrolytic copper, black oil printed on the surface, feed point gold-plated 0.5μ ".
2. Double-sided tape with 3M-467, the edge can not expose copper.
3. There can be no contaminants, scratches, black spots on the surface, and burrs and other phenomena on the edge.
4. Single package, 100PCS/ small package, 10 small packages and a large package.

要求:

1. 材料:FPC+PET, 一对半电解铜, 表面印黑油, 馈点镀金 0.5μ "。
2. 双面胶用3M-467, 边缘不能露铜。
3. 表面不可以有污染物、擦伤、黑点, 边缘部分不能出现毛刺等现象。
4. 单个包装, 100PCS/小包, 10小包装一大包。

		 深圳市博格斯通信技术有限公司 Shenzhen Bogesi Communication Ttechnology co.,ltd			
Modify content 变 更 内 容	Modify date 变 更 日 期	Product NO. 产 品 编 号	AFB-054A	Material is qualitative 材 质	FPC+PET
limits of tolerance; Others less than ± 0.2 公差范围 其它不超过 ± 0.2	Designer 设计	Client NO. 零 件 编 号	\	Version of this 版 本	RA
	Auditing 审核	Part name 零 件 名 称	Antenna 天 线	Item no. 项 目 号	AFB-054
	Approve 核准	Publish date 发 行 日 期	Oct 30, 2024		第1页 共1页 page 1/1





6.ROHS Report/ROHS报告

Product Description 产品描述		QF100-L511E-2S 云喇叭4G 天线	BGS P/N 博格斯料号		AFB-054A			Declaration Date 宣告日期		2024/11/20
No. 序号	Part name 部件名称	Homogeneous Material Name 均质材料名称	The homogeneous material contains the value of RoHS restricted substance（ppm） 均质物料内含有RoHS限制物质的量值（ppm）						Certification number 检测报告编号	Test date 检测日期
			Cd	Pb	Hg	Cr+6	PBB	PBDE		
1	FPC	Electrolytic flexible copper-clad foil substrate 有胶柔性覆铜板	ND	ND	ND	ND	ND	ND	SHAEC24000428806	2024/1/12
2		Solder resist ink/阻焊油墨	ND	ND	ND	ND	ND	ND	ETR23202417A02	2024/2/26
3		3M glue/3M胶	ND	ND	ND	ND	ND	ND	SHAEC23021627701	2023/12/27
4		Gold/镀金	ND	ND	ND	ND	ND	ND	A2240158803101001E	2024/3/30

Notes:

Material analysis expansion table is similar to our company's machine type BOM, which describes the composition of each material provided by the supplier, and then conducts RoHS control on each component (or the supplier shall conduct RoHS compliance management on his supplier, and provide tripartite inspection certificate).

A complete material analysis expansion table that includes:

1. Material expansion table: component composition decomposition
2. Third-party verification report of each component

说明:

材质分析展开表类似于我们公司的机种BOM，就供应商提供的每个物料进行组成说明，然后就每一种组成进行ROHS控制（或者说供应商要对他的供应商进行ROHS符合性管理，提供每三方检测证明）。

一份完整的材质分析展开表，它包括:

- 1 材质展开表:零件组成分解
- 2 各组成的第三方验证报告