深圳市博格斯通信技术有限公司
shenzhen bogesi communication technology co.,ltd

SPECIFICATION FOR APPROVAL/产品承认书

Customer Name
客户名称：

Customer P/N.
客户料号：

Product Description
产品描述： HX-HMI-01 WIFI

BGS P/N
博格斯料号： HXW-001A （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： 2023年5月15日

BGS Sign and Seal/供应商签章	Customer Sign and Seal/客户签章
审核 杨勤 高泉平	

Change the content/变更内容	Version/版本	Date/日期
First Release/初版	RA	2023/5/15

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Directory/目录

Cover/封面----------1

Directory/目录----------2

Antenna Specification/天线技术参数----------3

Antenna Picture and Installation Instructions/天线图片及安装说明----------4

Test Report/测试报告----------5

Finished Product Drawing/成品图----------6

Package Drawing/包装图----------7

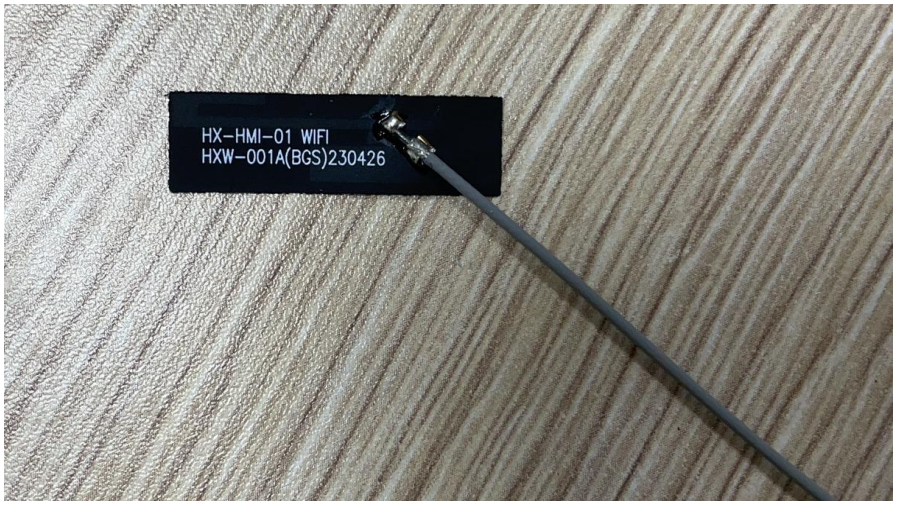
ROHS Report/ROHS报告----------8

1.Antenna Specification/天线技术参数

1.1: Electrical Specification/电气特性	
Freq.Range/频段范围（MHz）	2400-2500；5150-5850
Impedance/阻抗（Ω）	50
VSWR/驻波比	≤3.0
Directional/辐射方向	Omni directional
Polarization/极化方式	Linear
Peak Gain/峰值增益（dBi）	2400-2500：1.41
	5150-5850：2.86
1.2: Mechanical Specification/机械指标	
Material/材质	FPC
RF Cable Type/射频线型号	二代端子 Second generation terminal
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

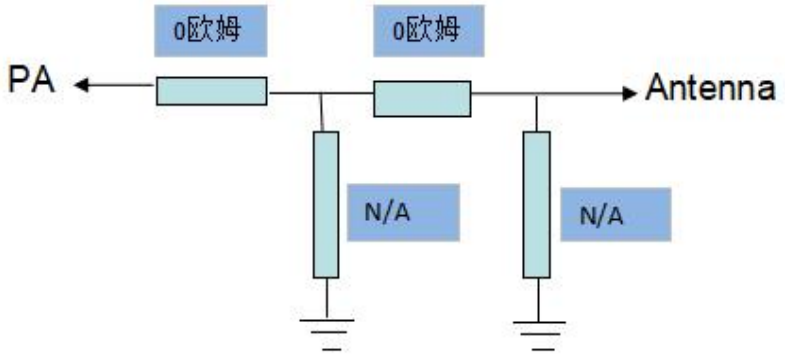
2.1: Antenna Picture/天线图片



2.2: Installation Instructions/安装说明

3.Test Report/测试报告

3.1: The matching circuits/匹配电路

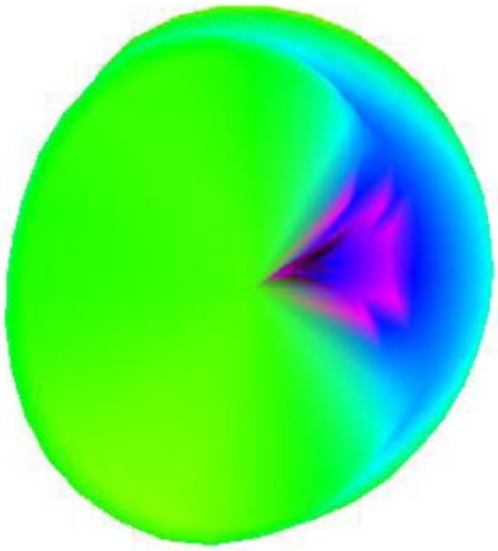


3.2: Antenna efficiency and gain/天线效率与增益

Freq (MHz)	Effi (%)	Gain (dBi)	Freq (MHz)	Effi (%)	Gain (dBi)
2400	35.98	1.24	5160	40.54	0.36
2410	36.9	1.41	5180	42.62	0.77
2420	35.89	1.22	5200	45.66	1.37
2430	38.39	1.35	5220	47.5	1.81
2440	35.86	0.83	5240	48.29	2.36
2450	35.54	0.71	5260	46.73	2.29
2460	32.69	-0.19	5280	51.11	2.8
2470	33.54	-0.37	5300	51.2	2.59
2480	30.45	-1.32	5320	49.15	2.3
2490	30.58	-1.27	5340	49.8	2.5
2500	28.31	-2.49	5360	49.68	2.82
			5380	51.66	2.77
			5400	50.09	2.51
			5420	50.93	2.69
			5440	49.15	2.64
			5460	46.79	2.32
			5480	47.09	2.17
			5500	48.59	2.21
			5520	49.1	2.43
			5540	55.12	2.86
			5560	55.52	2.67
			5580	54.76	2.4
			5600	52.72	2.21
			5620	52.23	2.14
			5640	50.4	2.14
			5660	50.83	2.11
			5680	51.2	2.2
			5700	49.84	2.38
			5720	47.44	2.48
			5740	46.09	2.01
			5760	43.78	1.24
			5780	40.04	0.79
			5800	40.64	0.83

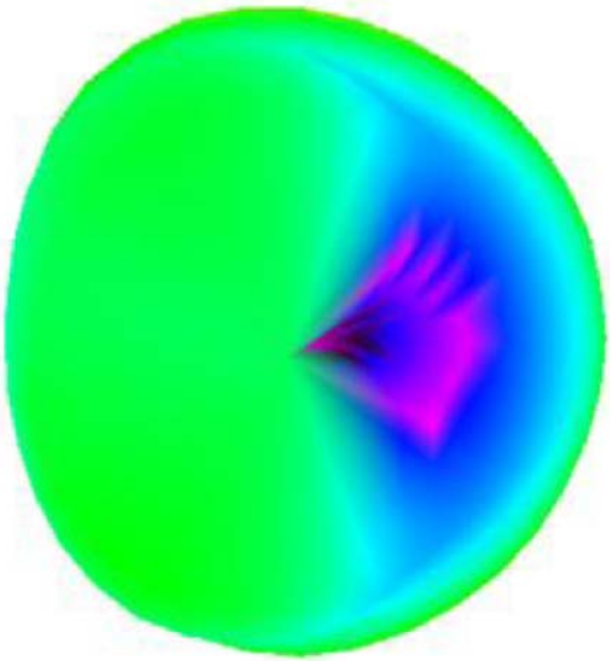
2.4G

2450MHz

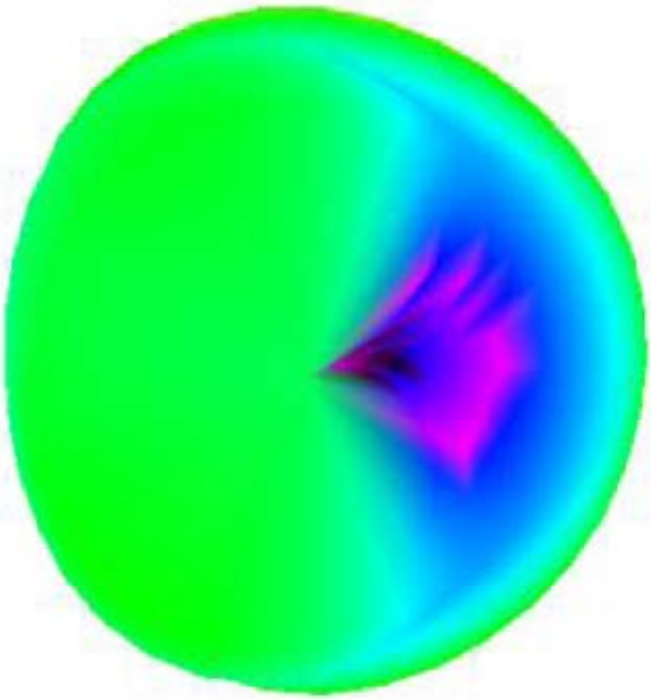


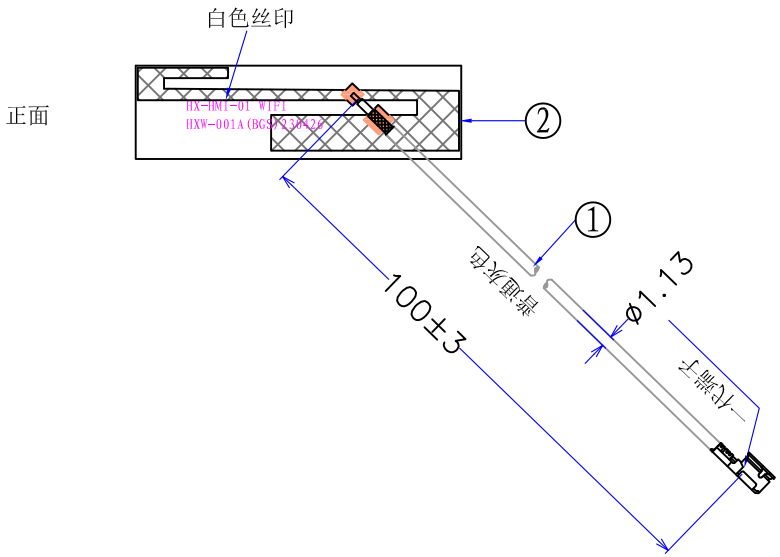
5G

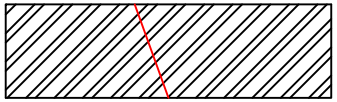
5150MHz



5740MHz







背胶纸分成两段

.....丝印部分

.....抗氧化部分

.....空膜部分

.....线路部分

.....背胶部分

注意:

1、每100个天线组件装一小包,10小包装1大包，再装箱

2、若丝印内容有增加"+"或"-"是我司用于区分供应商的标志，但产品性能、材质、加工工艺完全相同。

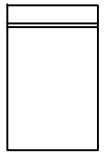
NO.	PART NO.	NAME	DESCRIPTION	QT'Y
②	HXW-001A-01A	天线辐射单元	FPC,一对半电解铜，表面做雾面黑油，馈点抗氧化	1
①	HXW-001A-20J	射频连接线	OD0.81MM，黑色外被,一端剥镀，一端铆二代连接器	1

变更内容			变更日期
公差范围	其它不超过±0.2	设计	
		审核	
		核准	

深圳市博格斯通信技术有限公司
Shenzhen bogesi communication technology Co.,Ltd

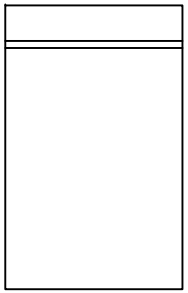
产品编号	HXW-001A	材 质	FPC+CABLE
客户编号		版 本	RA
零件名称	天线组件	项目号	HXW-001
发行日期	2023-5-15		第1页 共1页

PE Sealed bag/PE封口袋

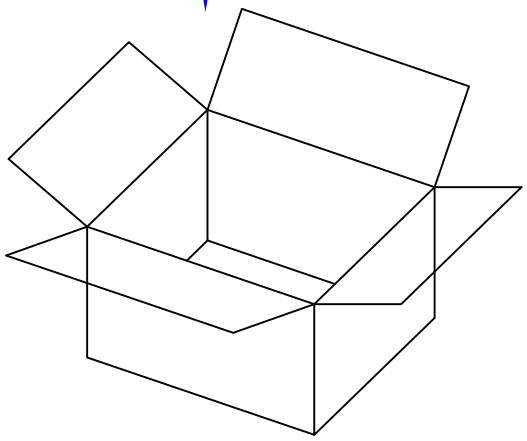


① 100 pcs/ small PE bag (bag size depends on product size)/
100个装一小袋（包装袋尺寸依产品大小而定）

PE Sealed bag/PE封口袋



② 100 pcs small bag/big PE bag (bag size depends on product size)/
10小袋装一大袋（包装袋尺寸依产品大小而定）



③ Final packing (carton size depends on product size and quantity)/
最后装箱（纸箱尺寸依产品大小、数量而定）

Note:

1. 100pcs antenna in one small PE bag ,stick the label;
2. 1000pcs antenna (10 bags*100pcs) in one big PE bag ,stick the label;
3. Put them in the carton and stick the carton marks.

说明:

1. 每100个天线组件装一小包，贴标签;
2. 每1000个（10袋*100个）装一大包，贴标签;
3. 装箱，贴外箱标签。

		深圳市博格斯通信技术有限公司 Shenzhen bogesi communication technology Co.,Ltd			
Change the content/变更内容	Change the date/变更日期	Package Drawing/包装规范图			
Design/设计					
Approve/审核		Issue Date/发行日期	Mar,25 2023		Page 1 of 1
Reviewed/批准					

6.ROHS Report/ROHS报告

Product Description 产品描述		HX-HMI-01 WIFI	BGS P/N 博格斯料号		HXW-001A			Declaration Date 宣告日期		2023/5/15
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	SHAEC23001049106	2023/2/15
2		Solder resist ink/阻焊油墨	ND	ND	ND	ND	ND	ND	ETR22705905	2022/8/5
3		3M glue/3M胶	ND	ND	ND	ND	ND	ND	SHAEC2217569205	2022/12/30
4	Wire 线材	RF coaxial cable/RF同轴电缆	ND	ND	ND	ND	ND	ND	SZXEC2202766604	2022/8/18
5	Terminals 端子	Gold plating/电镀金	ND	ND	ND	ND	ND	ND	A2220404860101001C	2022/9/17
6		PBT/胶芯	ND	4.47	ND	ND	ND	ND	ETR22800749	2022/8/10
7		Tin Phosphor Bronze/铜板	ND	ND	ND	ND	ND	ND	CANEC2301145809	2023/2/8

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