Product Number:JSP-18123-06BM

Product Name:2.4GHz Antenna

Specification For Approval

Date : 2022/02/15

File No. : XBL2022021501

Version : 1.0

Customer : 长虹

Customer P/N: JSP-18123-06BM

Sinbolin P/N : JSP-18123-06BM

Description : 2.4GHz Antenna

Sinbolin Checked By:
Customer Approved By:

Sinbolin Technology Inc.

No.218, Laixinde Zhigu Industrial Park, No.12 West Industrial Road, Songshan LakeScience&Technologic Industry Park., Dongguan city, Guangdong province

TEL : 86-769-23078845 Phone : 13929204545

Index:

1. Revision History

Revision	Date	Change Notification	Description
1.0	2022/02/15	初版	

2. Specification

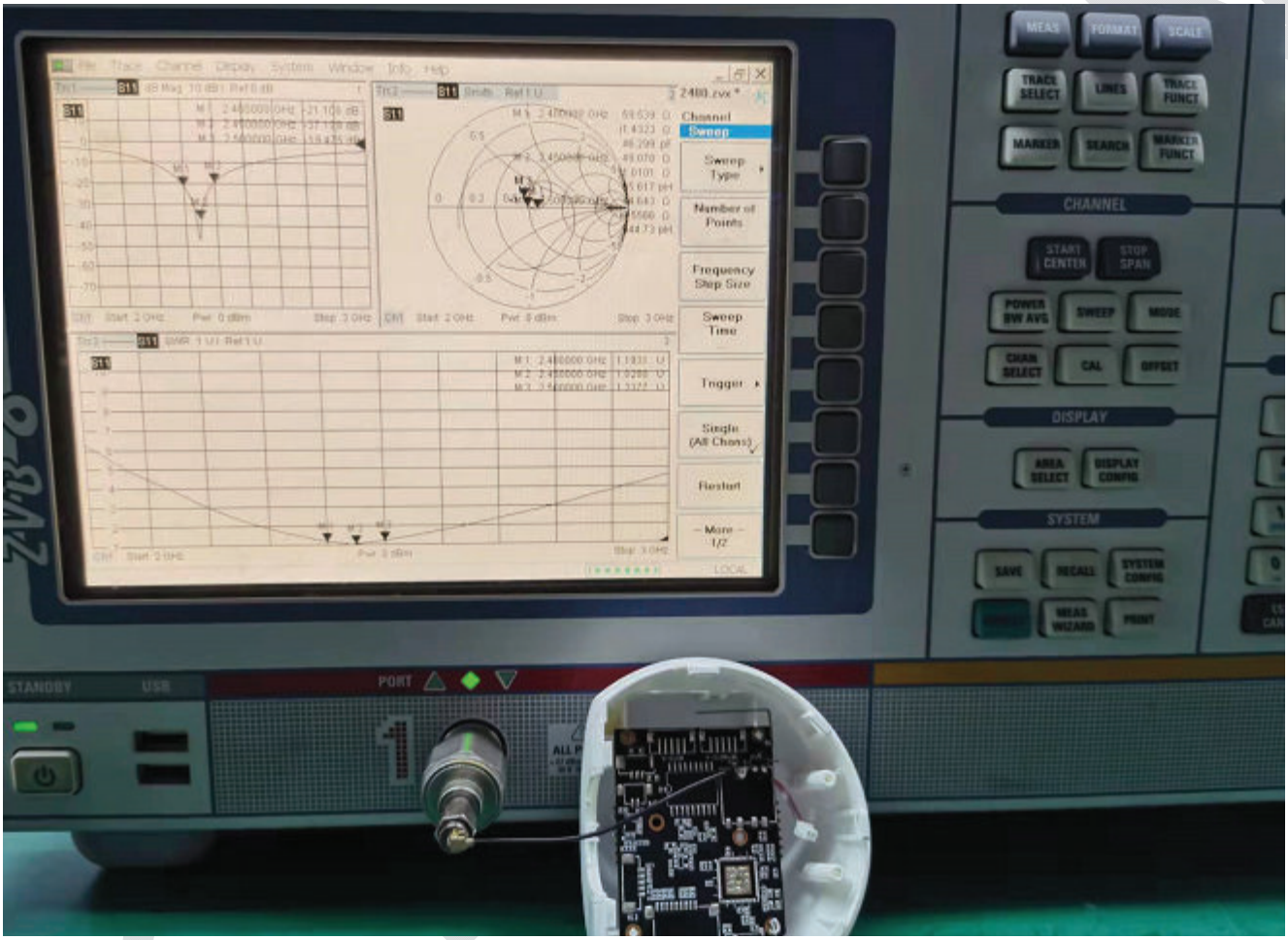
Sample Photo	
	
A. Electrical Characteristics	
Frequency	**2400 ~ 2500 MHz**
V.S.W.R.	**<= 2.0** **Test data from the model test**
Peak Gain	2.51 **dBi**
Polarization	**Line**
Impedance	**50 Ohm**
B. Material & Mechanical Characteristics	
Material of Radiator	**CU**
Material of Plastic	
Cable Type	
Connector Type	
C. Environmental	
Operation Temperature	**- 40 ˚C ~ + 70 ˚C**
Storage Temperature	**- 40 ˚C ~ + 80 ˚C**

3. Characteristics and Reliability Test

Test Items 測試項目		Test Condition and Procedure 測試方法	Requirements 要求	Result 結果
C1	V.S.W.R. 電壓駐波比	Set DUT on Network Analyzer; make individual calibration to test 設置網路分析儀參數進行測試	Directive DUT specification 符合待測物規範	PASS
C3	Antenna Gain 天線增益	Set DUT on Antenna Chamber; make individual calibration to test 設置天線暗室參數進行測試	Directive DUT specification 符合待測物規範	PASS
M1	Vibration 震動	GB / T2423.48-2008 Amplitude: 0.03 inch (1.5mm); Freq: 20 to 80 to 20 Hz 3 directions; 2 hours for each direction 振幅 1.5mm；頻率 20~80~20Hz；3 個方向各 2H	1. No Visual Damage 2. Frequency Tol.≤5% 無明顯外觀不良;頻率偏移≤5%	PASS
M2	Random Drop 跌落	GB / T2423.8-1995 Single：Height: 1.0 Meter; 3 directions; 1 time for each direction 單支天線，高 1m；3 個方向各 1 次	1. No parts separated、fracture 2. Frequency Tol.≤5% 產品無脫落、斷裂;頻率偏移≤5%	PASS
M4	Pull Test 拉力	Holding with individual specification; force applied to axis of terminal .單獨定義產品端子拉力	1. Directive DUT specification 2. Frequency Tol.≤5% 符合待測物規範;頻率偏移≤5%	PASS
M6	Dimension 尺寸	Inspection of dimension, color, material, package, surface process.检查尺寸,颜色,材料,包装,表面處理	Directive DUT specification 符合待測物規範	PASS
E2	Salt Spray 鹽霧	GB / T 2423.17-2008 Temp: 35°C; RH: ≥ 95%; NaCl solution: ≥ 5%;Time: 24H 溫度 35°C；濕度≥95%;鹽水濃度≥5%；測試 24H	1. No Visual Damage 2. Frequency Tol.≤5% 無明顯外觀不良;頻率偏移≤5%	PASS
E3	Temperature and Humidity Chamber 恒溫恒濕	GB / T 2423.3-2006 Temp: 80°C / 12 H; -40°C / 12H RH: ≥ 90%; Time: 24H 溫度 80°C 測試 12H 轉-40°C 測試 12H；濕度≥ 90%；時間 24H	After 2 Hours Recovery 1. No Visual Damage 2. Frequency Tol.≤5% 恢復 2H 后，無明顯外觀不良;頻率偏移≤5%	PASS
E4	Thermal Shock 冷熱衝擊	GB / T 2423.22 - 2008 - 40° C (30 minutes) to + 80° C (30 minutes); Cycles: 24 - 40° C 測試 30 分轉 80° C 測試 30 分為一個週期；共 24 週期	After 2 Hours Recovery 1. No Visual Damage 2. Frequency Tol.≤5% 恢復 2H 后，無明顯外觀不良;頻率偏移≤5%	PASS
E5	Aging	GB /T 2423.2 - 2008	After 2 Hours Recovery	

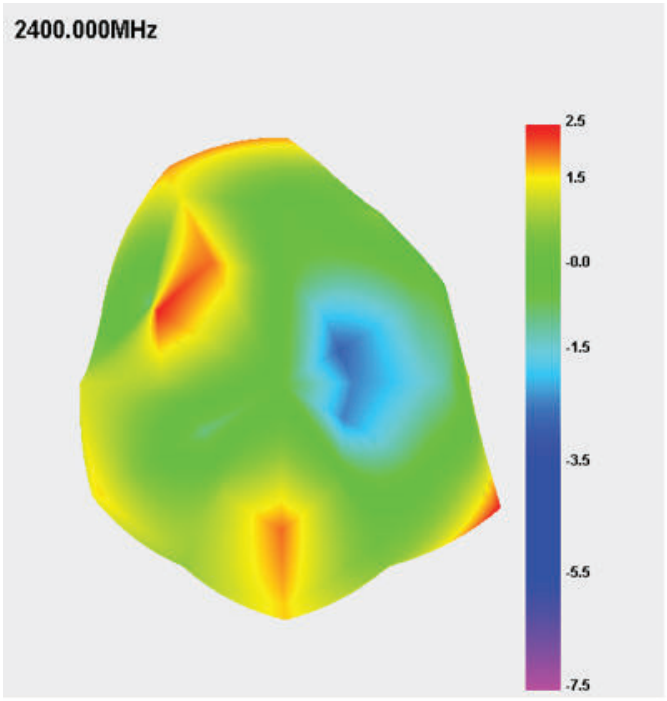
	test 老化	Temp: 80°C; Time: 24 hours 溫度 80° C，測試 24H	1. No Visual Damage 2. Frequency Tol.≤5% 無明顯外觀不良;頻率偏移≤5%	PASS
R1	RoHS	With Reference to IEC 62321:2008 with flow chart 參考 IEC 62321 測試流程	Directive RoHS 2011/65/EU 符合 RoHS 2011/65/EU 標準	PASS

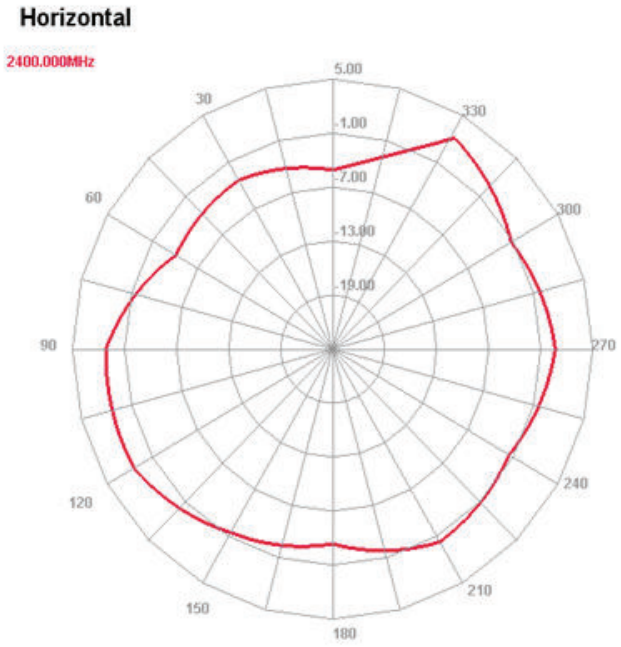
4. Antenna - S Parameter Test Data

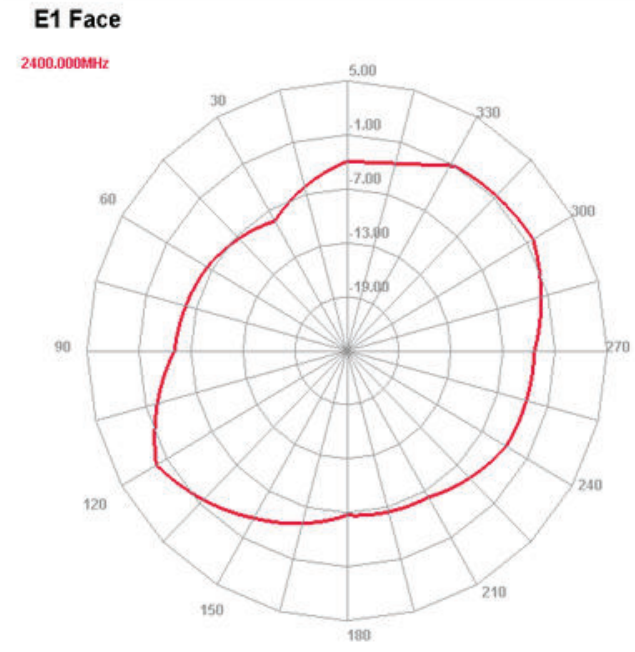


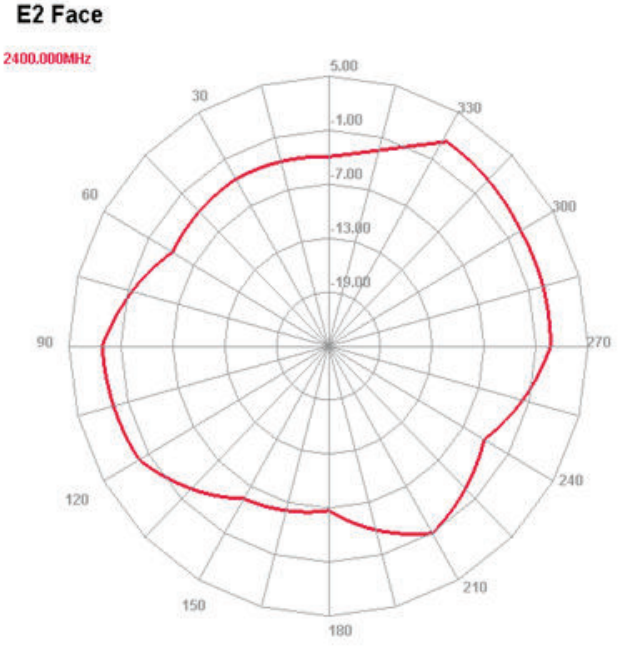
5. Antenna - Radiation Pattern Test Data

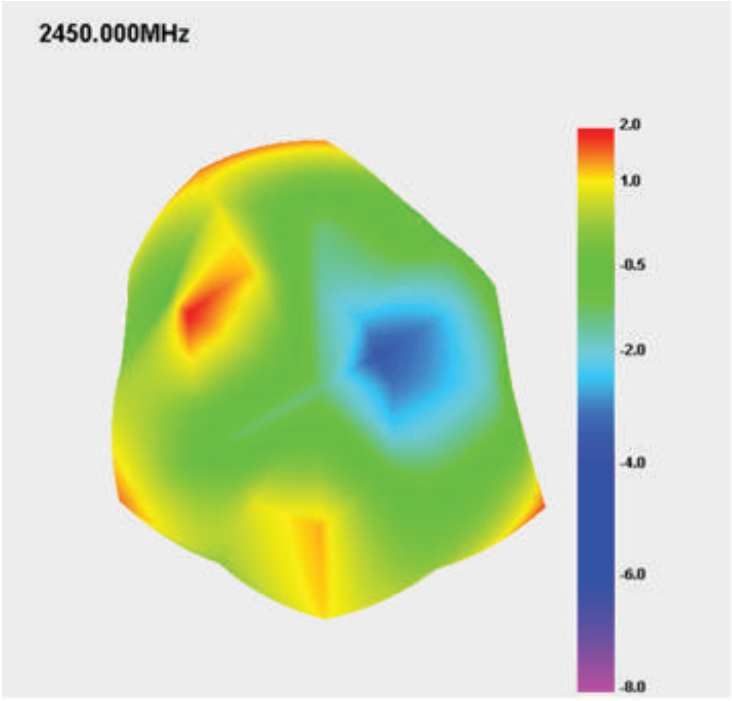
Passive Test For WIFI2400										
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHIS (%)	DHIS (%)	Max (dB)	Min (dB)	irectivit (dBi)	Beamwidth (3dB)
2400	69.32	-1.59	2.47	0.32	35.439	33.882	2.47	-19.76	4.06	0
2410	69.39	-1.59	2.37	0.22	35.403	33.987	2.37	-19.22	3.96	0
2420	68.48	-1.64	2.36	0.21	34.924	33.555	2.36	-19.23	4.01	0
2430	66.76	-1.75	2.29	0.14	34.133	32.626	2.29	-19.22	4.04	0
2440	65.48	-1.84	2.25	0.1	33.631	31.849	2.25	-19.11	4.08	0
2450	62.09	-2.07	2.03	-0.12	32.092	29.999	2.03	-19.23	4.1	0
2460	61	-2.15	1.87	-0.28	31.67	29.332	1.87	-19.37	4.01	0
2470	61.63	-2.1	1.85	-0.3	31.916	29.71	1.85	-19.42	3.95	0
2480	60.85	-2.16	1.9	-0.25	31.304	29.541	1.9	-19.75	4.06	0
2490	63.92	-1.94	2.12	-0.03	32.643	31.278	2.12	-19.62	4.06	0
2500	68.17	-1.66	2.51	0.36	34.608	33.562	2.51	-19.86	4.17	0

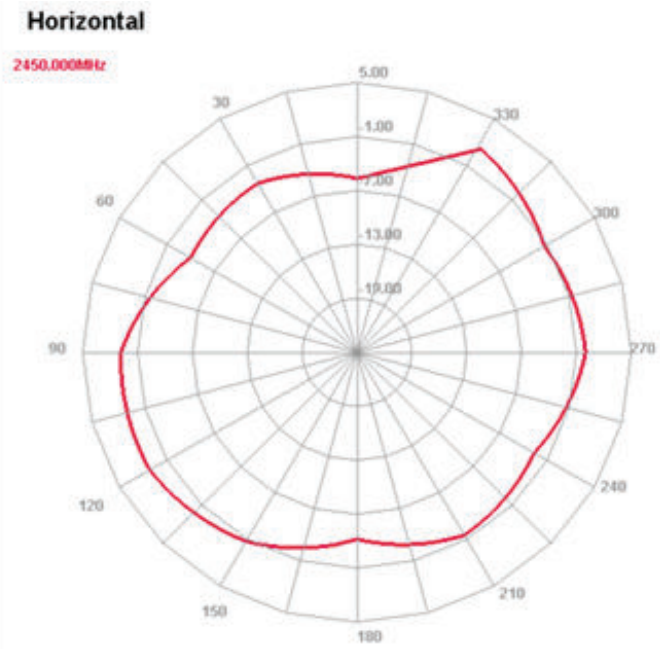


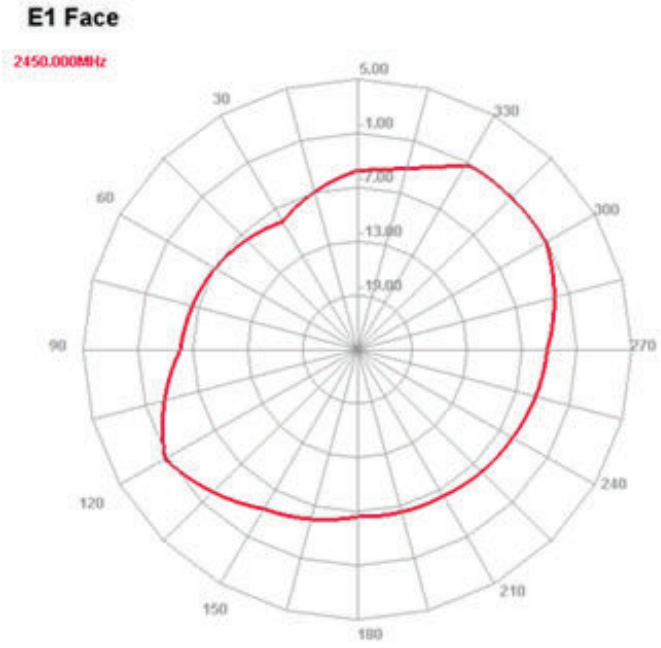


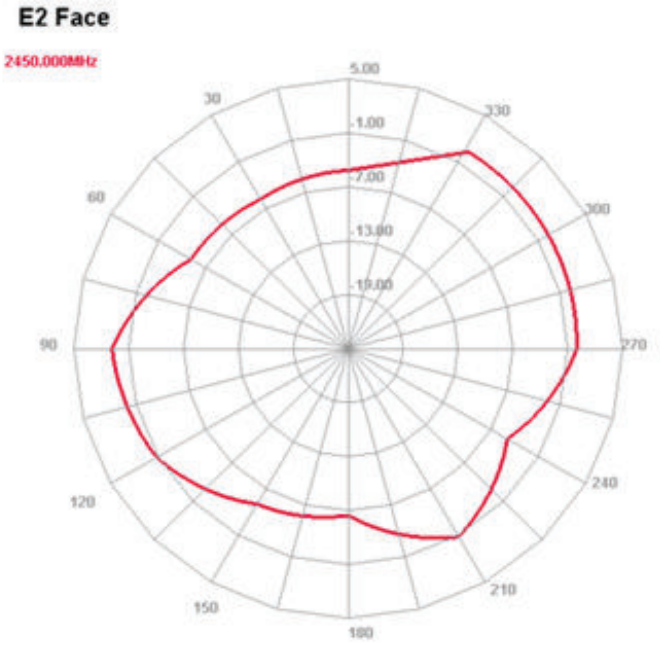





2450.000MHz
2.0
1.0
-0.5
-2.0
-4.0
-6.0
-8.0

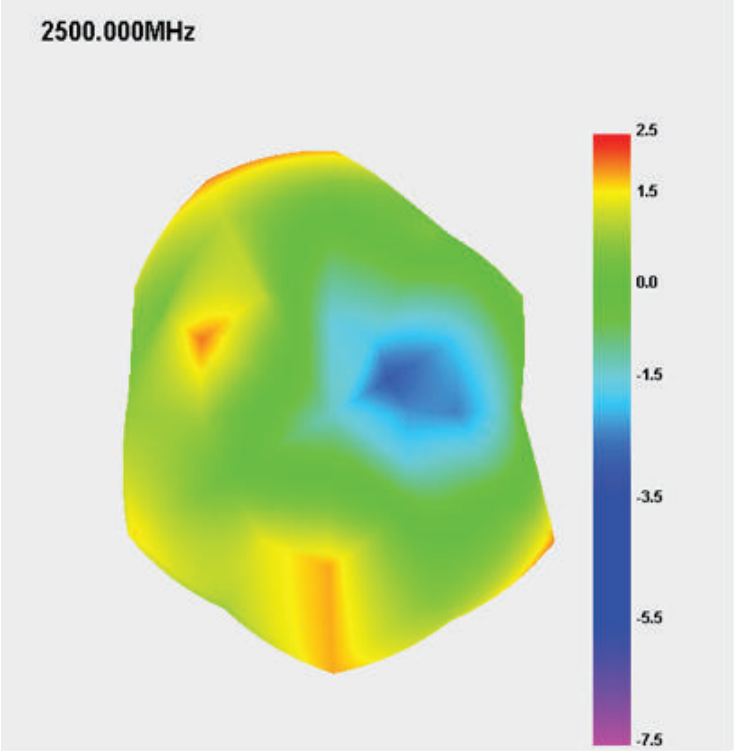

Horizontal
2450.000MHz
5.00
1.00
-7.00
-13.00
-19.00
30
330
60
300
90
270
120
240
150
210
180

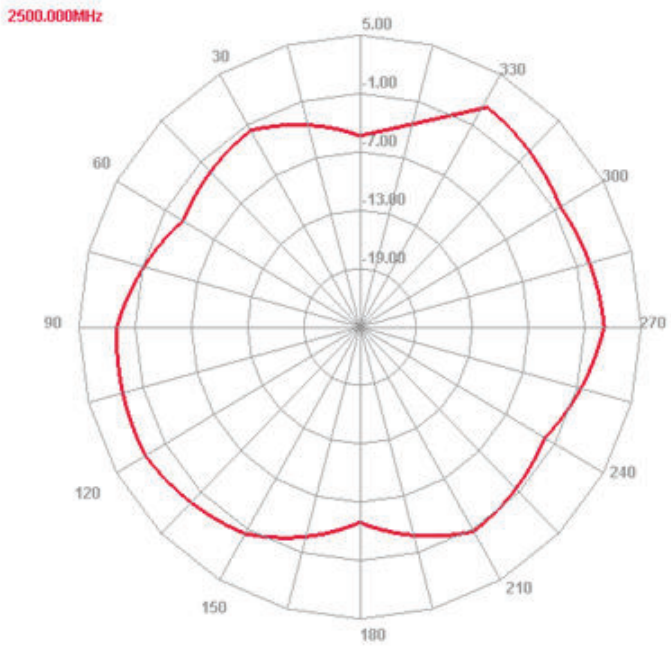

E1 Face
2450.000MHz
5.00
1.00
-7.00
-13.00
-19.00
30
330
60
300
90
270
120
240
150
210
180

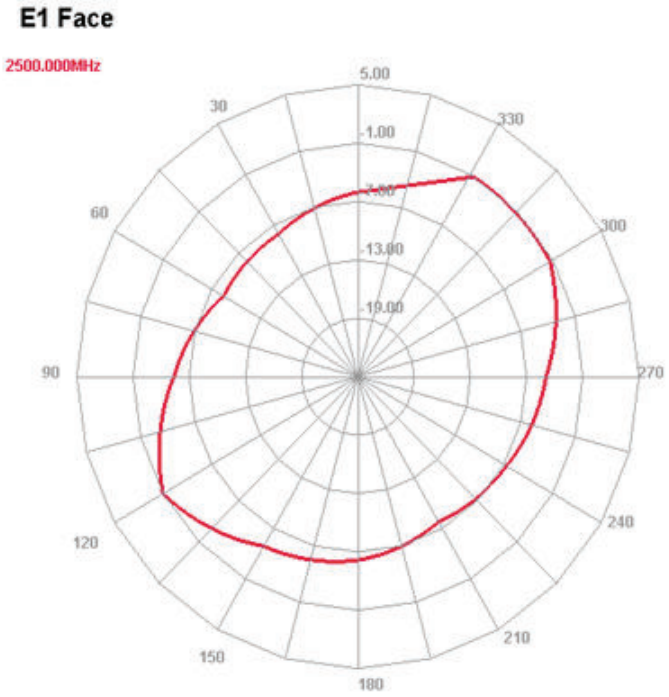

E2 Face
2450.000MHz
5.00
1.00
-7.00
-13.00
-19.00
30
330
60
300
90
270
120
240
150
210
180

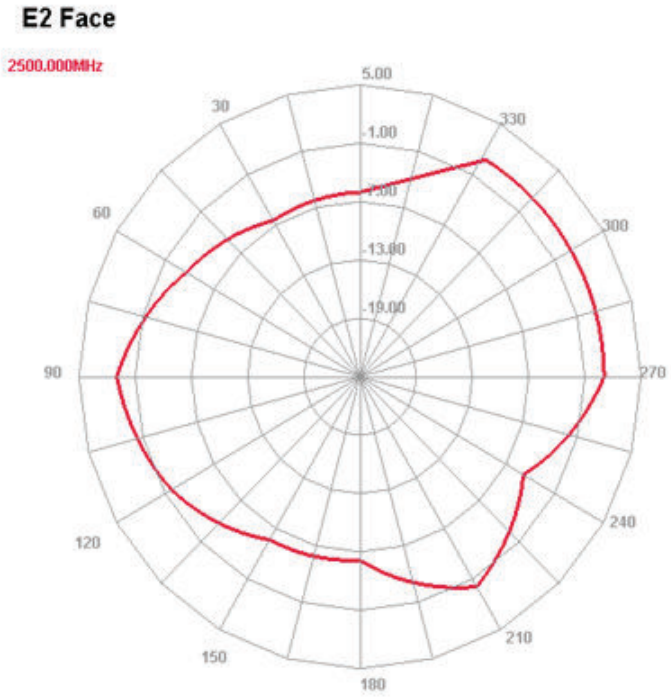
Product Number:JSP-18123-06BM

Product Name:2.4 GHz Antenna



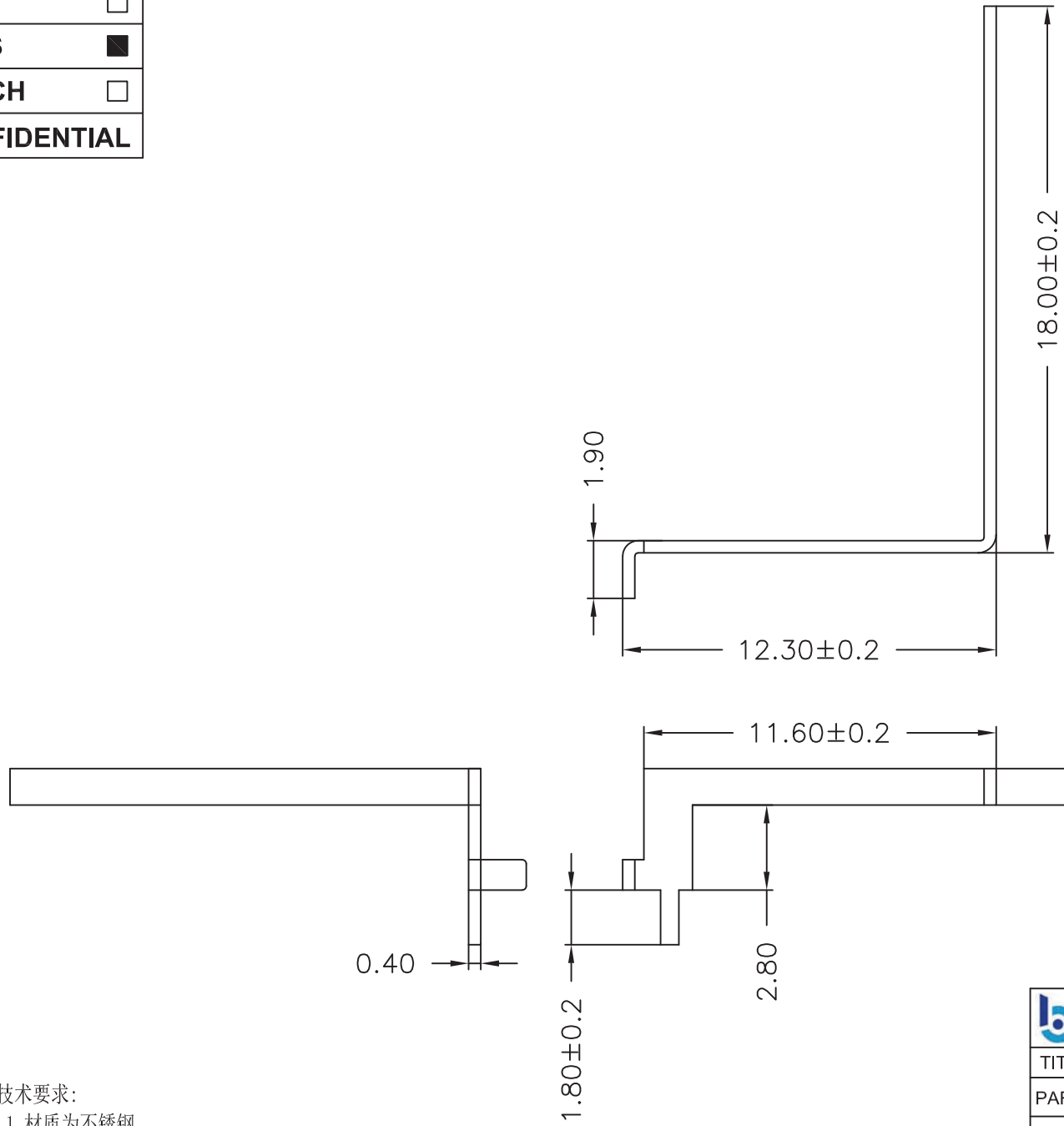






HF	☐
RoHS	■
REACH	☐
CONFIDENTIAL	

SIGN	DATE	DESCRIPTION	APPROVER
A			
B			
C			



技术要求:
1. 材质为不锈钢
2. 颜色为本色

信博联 SINBOLIN 东莞市信博联电子科技有限公司					
TITLE: L形金属片			CUSTOMER P/N: /		
PART NO.: JSP-18123-06BM				Standard Tolerance	
				X.X ±0.1	0.02
				X.XX ±0.05	0.03
				X° ±1	0.05
APP BY	CHK BY	RF BY	DES BY	UNITS: mm	0.03
City 2022/02/14	Yixin 2022/02/14		YJH 2022/02/14	SCALE: 1/1	0.05
				REVISION: A	0.05

测试报告

No. CANEC2103381602　　日期: 2021年03月15日　第1页,共4页

佛山市南海浩旺精密薄钢有限公司
佛山市南海九江镇九江工业园园北四路

以下测试之样品是由申请者所提供及确认：不锈钢

SGS工作编号：	CP21-009795 - GZ
型号：	304
样品接收日期：	2021年03月10日
测试周期：	2021年03月10日 - 2021年03月15日
测试要求：	根据客户要求测试
测试方法：	请参见下一页
测试结果：	请参见下一页
结论：	基于所送样品进行的测试，镉、铅、汞、六价铬的测试结果符合欧盟RoHS指令2011/65/EU附录II的修正指令(EU) 2015/863的限值要求。

通标标准技术服务有限公司广州分公司
授权签名

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CANEC2103381602

Dongyu Xie谢冬育
批准签署人

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中国·广州·经济技术开发区科学城科珠路198号　邮编: 510663　t (86-20) 82155555　sgs.china@sgs.com

测试结果 :

测试样品描述 :

样品编号	SGS样品ID	描述
SN1	CAN21-033816.001	银灰色金属片

备注 :

(1) 1 mg/kg = 0.0001%

(2) MDL = 方法检测限

(3) ND = 未检出 (< MDL)

(4) "-" = 未规定

RoHS指令2011/65/EU附录II的修正指令(EU) 2015/863

测试方法 : 参考IEC 62321-4:2013+A1:2017, IEC62321-5:2013, IEC 62321-7-1:2015, 采用 ICP-OES 和 UV-Vis 进行分析.

测试项目	限值	单位	MDL	*001*
镉 (Cd)	100	mg/kg	2	ND
铅 (Pb)	1,000	mg/kg	2	ND
汞 (Hg)	1,000	mg/kg	2	ND
六价铬(Cr(VI))▾	-	μg/cm²	0.10	ND

备注 :

(1) 最大允许极限值引用自RoHS指令(EU) 2015/863 。

(2) IEC 62321 系列等同于 EN 62321 系列
https://www.cenelec.eu/dyn/www/f?p=104:30:1742232870351101::::FSP_ORG_ID,FSP_LANG_ID:1258637,25

(3) ▾=a. 当六价铬的浓度高于0.13 μg/cm²时，样品为阳性，即含有六价铬；
b. 当六价铬的浓度为ND(低于0.10 μg/cm²)时，样品为阴性，即未检测到六价铬；
c. 当六价铬的浓度介于0.10 μg/cm²与0.13 μg/cm²之间时，无法直接判定是否检测到六价铬，因不同个体的样品表面差异可能会影响测定结果；
由于未获知样品的存储条件和生产日期，样品的六价铬测试结果仅能代表测试时样品含六价铬的状态。

除非另有说明，此报告结果仅对测试的样品负责。本报告未经本公司书面许可，不可部分复制。检测报告仅用于客户科研、教学、内部质量控制、产品研发等目的，仅供内部参考。

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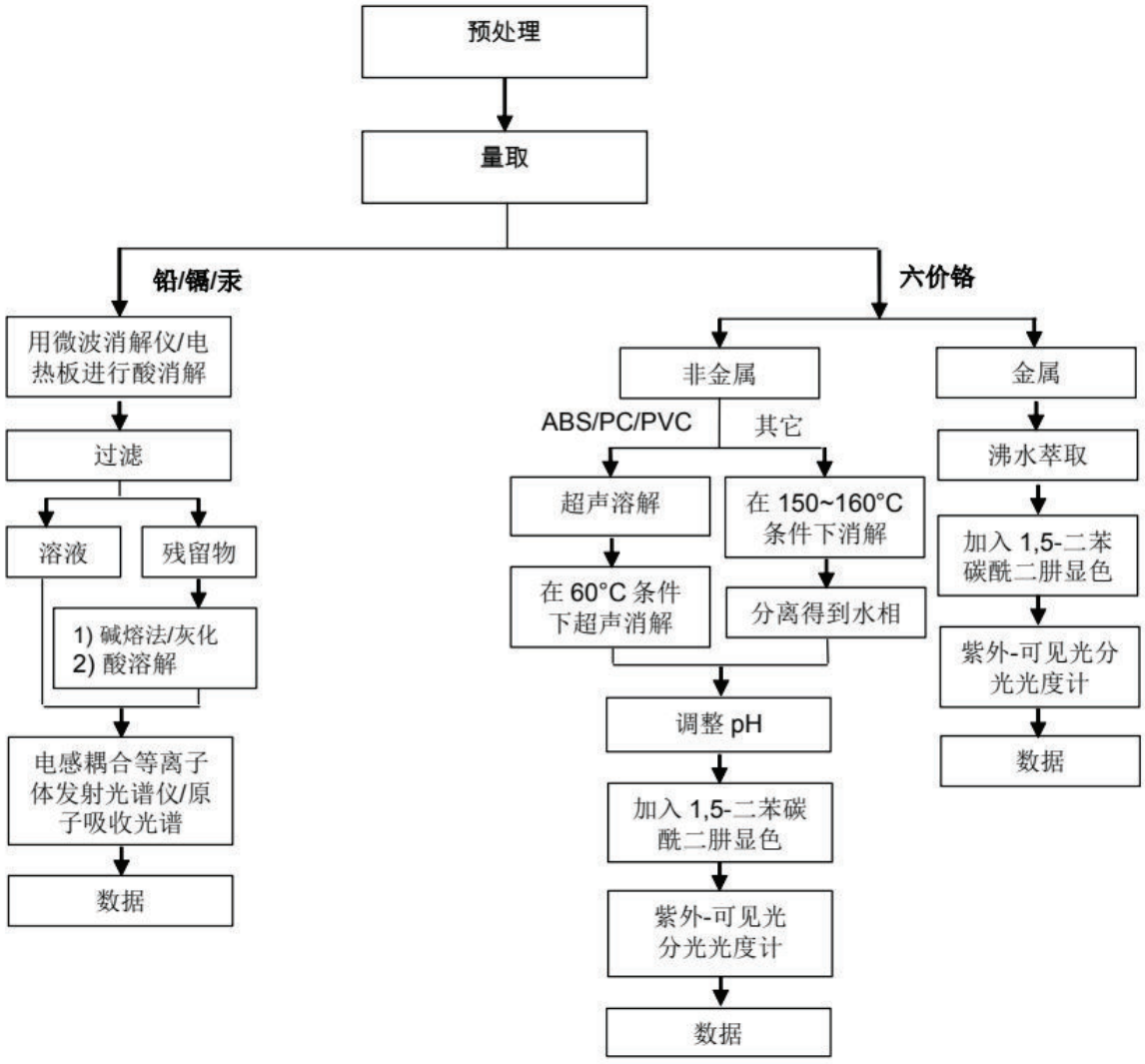
附件

Pb/Cd/Hg/Cr^{6+} 测试流程图

1）样品按照下述流程被完全消解（六价铬测试除外）。



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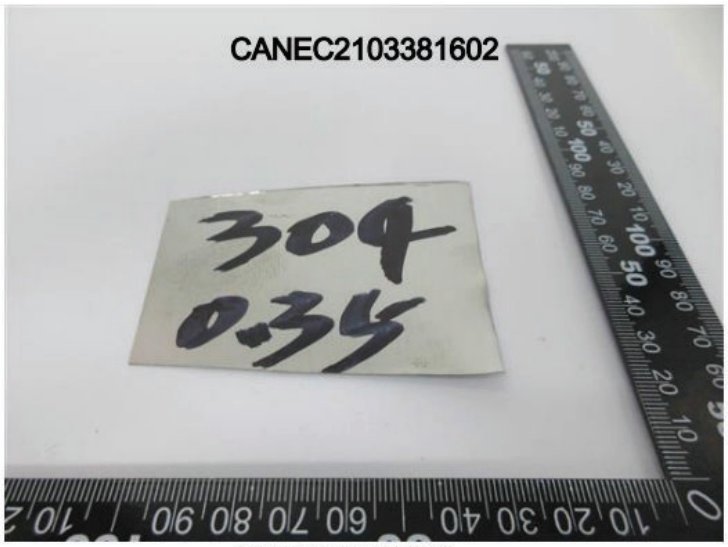
样品照片:



CAN21-033816.001

此照片仅限于随SGS正本报告使用

*** 报告完 ***

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