

# 样品承认书

## Part Approved Sheet

<b>Customer/客户名称</b>	惠州市新明海科技有限公司
<b>Edition P.N/料号版本</b>	13.0404.0069-00
<b>Product Name/产品名称</b>	2.4G天线
<b>Type Specification/型号规格</b>	EP900-WIFI, 一佳, 2.4GHz 天线, TPE, 黑色, 1/4-36UNS-2B, ROSH, Ø12×L79.5mm

<b>Prepared by</b> 供应商拟制 (或盖章) /日期	<b>Checked by</b> 审核/日期	<b>Approved by</b> 批准/日期
<b>2023.04.08</b>	<b>2023.04.08</b>	<b>2023.04.08</b>

定制件 (非标)     标准件

<b>Customer Approval</b> 客户承认回签 (或盖章) /日期	<b>Checked by</b> 审核/日期	<b>Checked by</b> 品质审核/日期	<b>Approved by</b> 批准/日期

供应商名称: 东莞市一佳电子通讯科技有限公司  
 公司地址: 东莞市长安镇沙头社区木鱼路 59 号元富工业区  
 联系人: 陈松华                      联系电话: 15857812915  
 传 真: 0769-82586086              邮 件: [chen\\_songhua@126.com](mailto:chen_songhua@126.com)



# 承认书项目表

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RoHS

Compatible

CUSTOMER

PART NO

REV.

DESCRIPTION

DATE



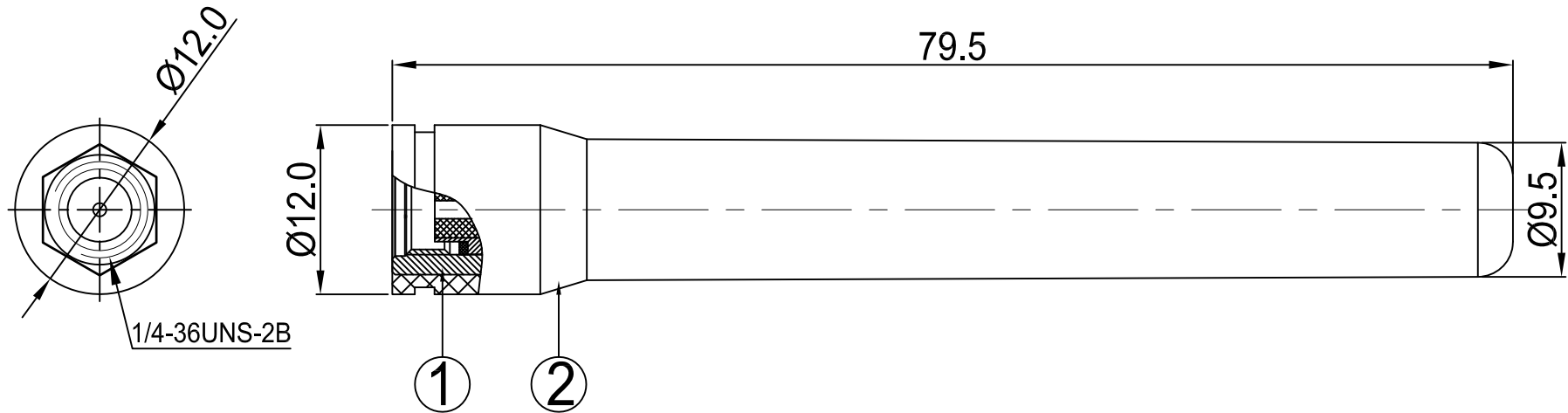
首次发行

2022-12-15



更换接头

2023-04-07



东莞市一佳电子通讯科技有限公司

Tel: 0769-82586086

Dongguan YiJia Electronics Communication Technology Co., Ltd. Fax: 0769-82586086

PART NAME: 2.4GHz Antenna

PART NO.: YJ101.047.002.102A

DATE: 2023-04-07

APPROVED BY

CHECKED BY

DESIGNED BY



Tolerance

陈松华

林斌

陈俊

UNITS: mm

X.X ±0.50

SCALE: 1/1

X.XX ±0.15

REVISION: B

X° ±3°

2	Antenna Cap	TPE ,Color:Black	TPE	PLA10113A.B01	1
1	SMA Male Reverse	Au Plated	Cu	CON100XXA.P02	1
NO	PART NAME	DESCRIPTION	Material	Part Number	Q.TY

1

2

3

4

5

6

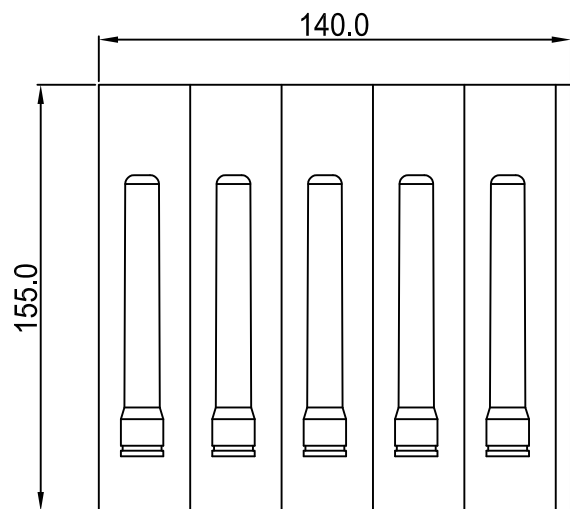
7

8

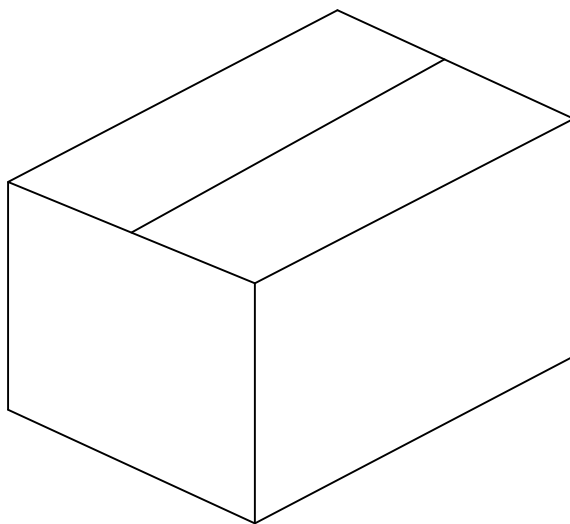
**RoHS**  
Compatible

包装说明

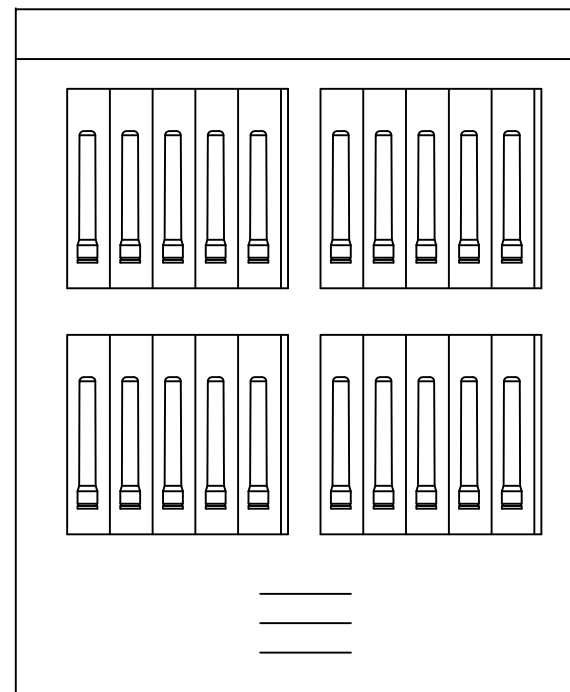
REV.	DESCRIPTION	DATE
△	首次发行	2023-03-06



1. 5PCS/排袋



3. 1000PCS/箱



2. 100PCS/PE袋



东莞市一佳电子通讯科技有限公司

Dongguan YiJia Electronics Communication Technology Co.,Ltd. Tel.:0769-82586086 Fax:0769-82586086

PART NAME: 2.4GHz Antenna

PART NO.: YJ101.047.002.102A

DATE: 2023-03-06

APPROVED BY

CHECKED BY

DESIGNED BY



Tolerance

陈松华

林斌

陈俊

UNITS: mm

X.X ±0.50

SCALE: 1/1

X.XX±0.15

REVISION: A

X° ±3°

甲方图档 空白



# 天线规格

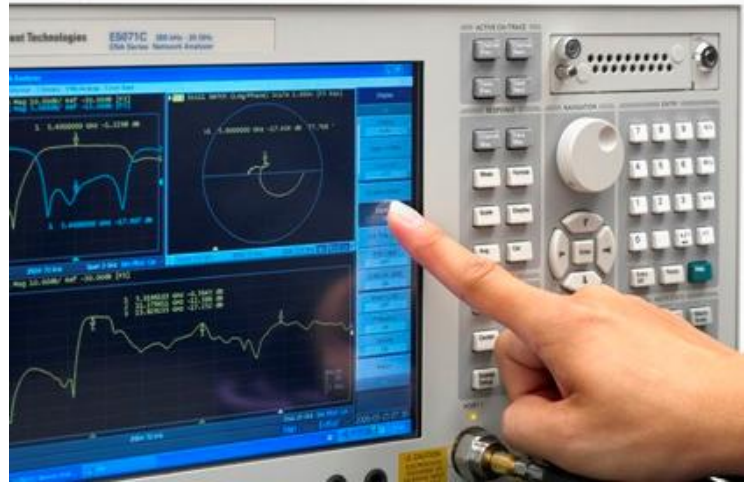
## Antenna Specification

<b>Electrical Properties</b>	
Frequency	2.4-2.5GHz
Impedance	50 Ohm Nominal
V.S.W.R	2.0 Max
Gain	2.33dBi
Radiation	Omni-directional
Polarization	Linear
<b>Physical Properties</b>	
Connector	SMA Male Reverse
Cable Type	None
Cable Length	None
Cable Color	None
Operating Temp.	-40 ~ +85 °C
Storage Temp / Humidity	25 ± 5 °C / <70%

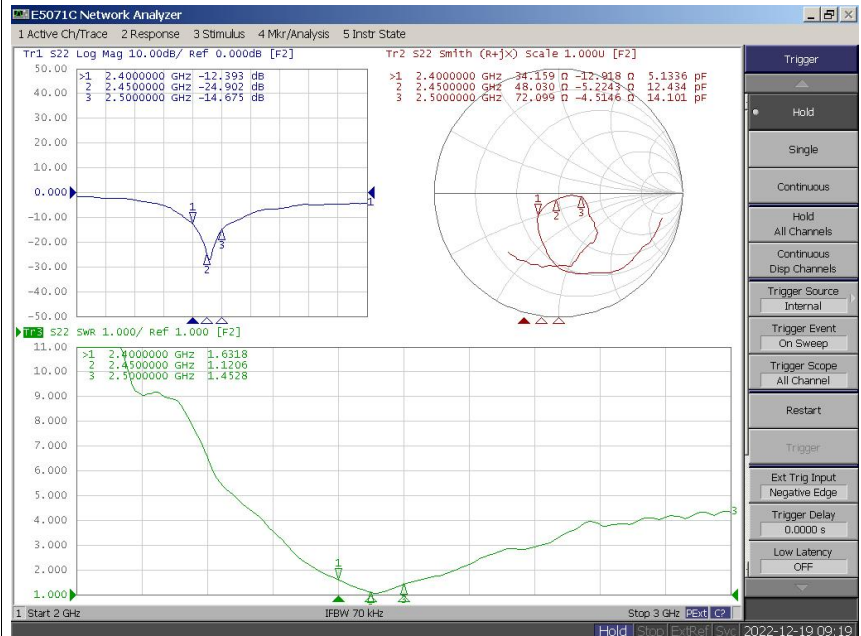


# Antenna Performance Test

**Agilent  
E5071B**

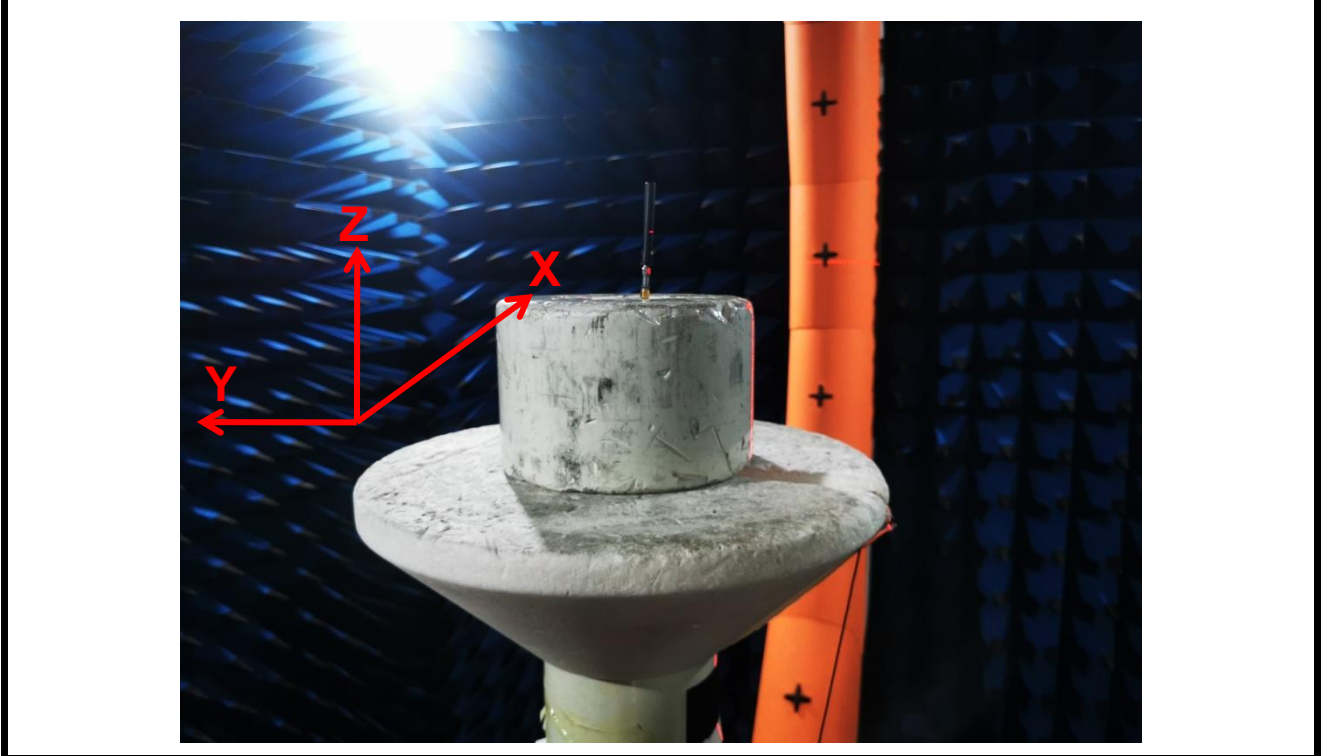
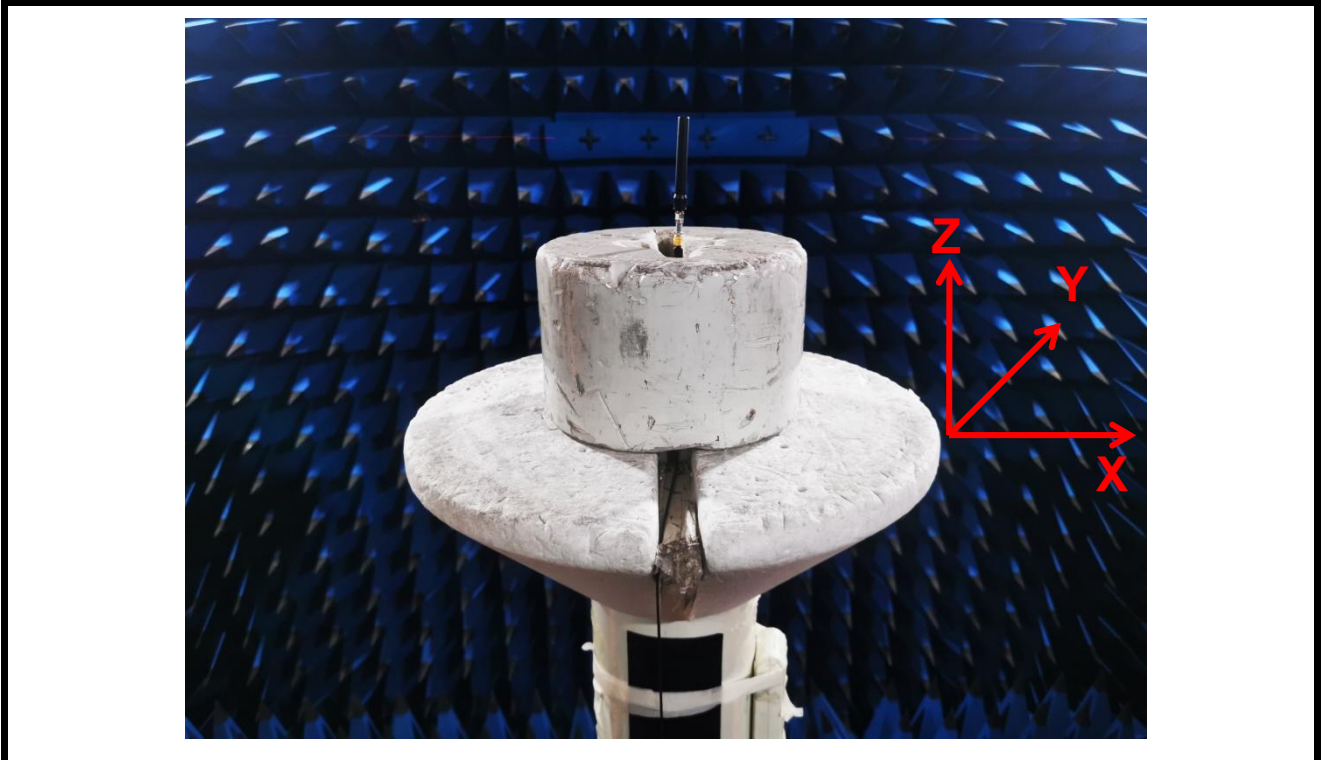


**S  
Parameter  
Test //  
WIFI  
Antenna**





## *Antenna Passive Test*







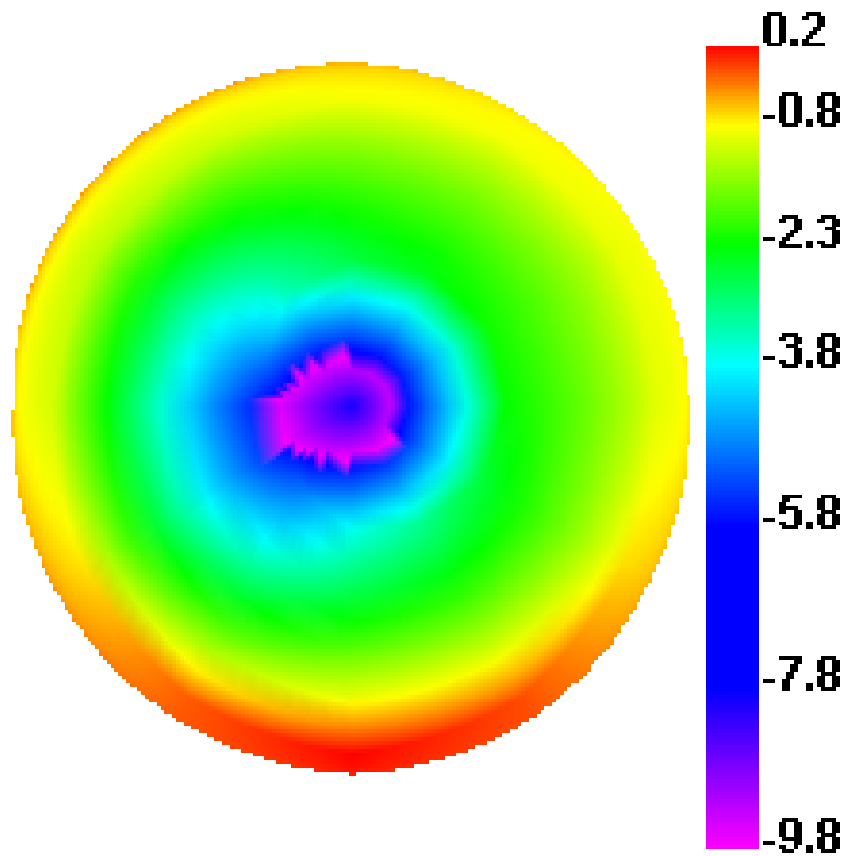
### Passive Test For WiFi Antenna

Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
2400	66.8	-1.8	0.2
2410	69.9	-1.6	0.6
2420	70.3	-1.5	0.8
2430	71.6	-1.5	1.0
2440	71.8	-1.4	1.2
2450	77.0	-1.1	1.6
2460	78.0	-1.1	1.8
2470	80.6	-0.9	2.0
2480	79.4	-1.0	2.0
2490	78.3	-1.1	2.1
2500	78.9	-1.0	2.33



## Radiation Pattern For WIFI Antenna(2400MHz)

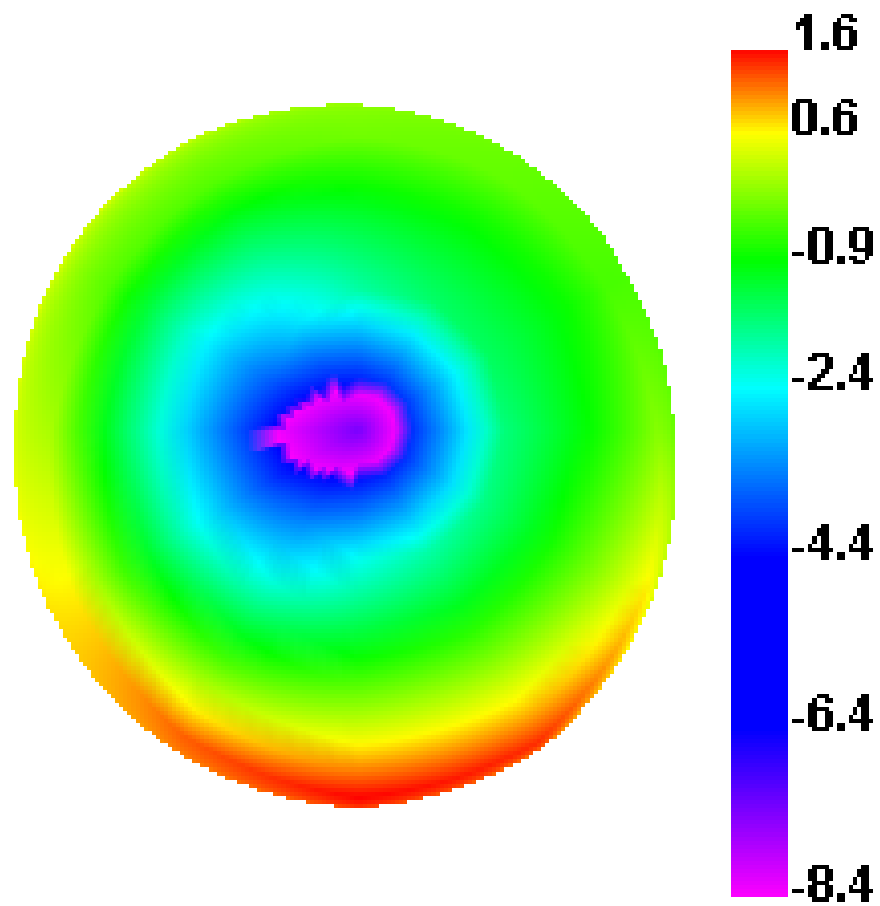
**2400.000MHz**





## Radiation Pattern For WIFI Antenna(2450MHz)

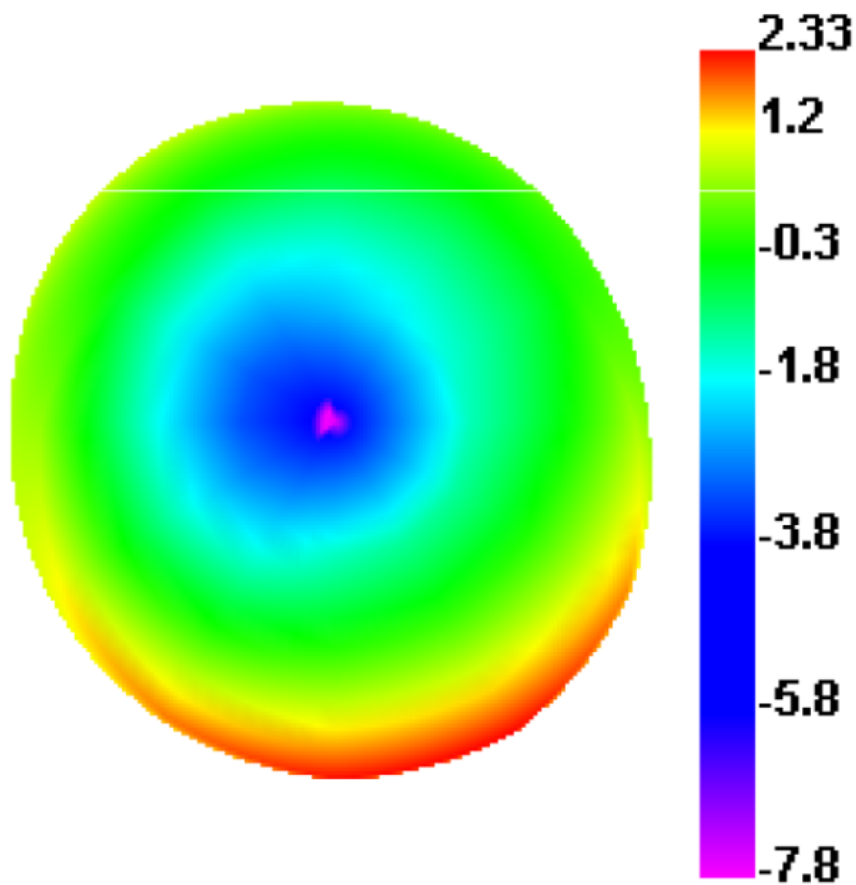
**2450.000MHz**





## Radiation Pattern For WIFI Antenna(2500MHz)

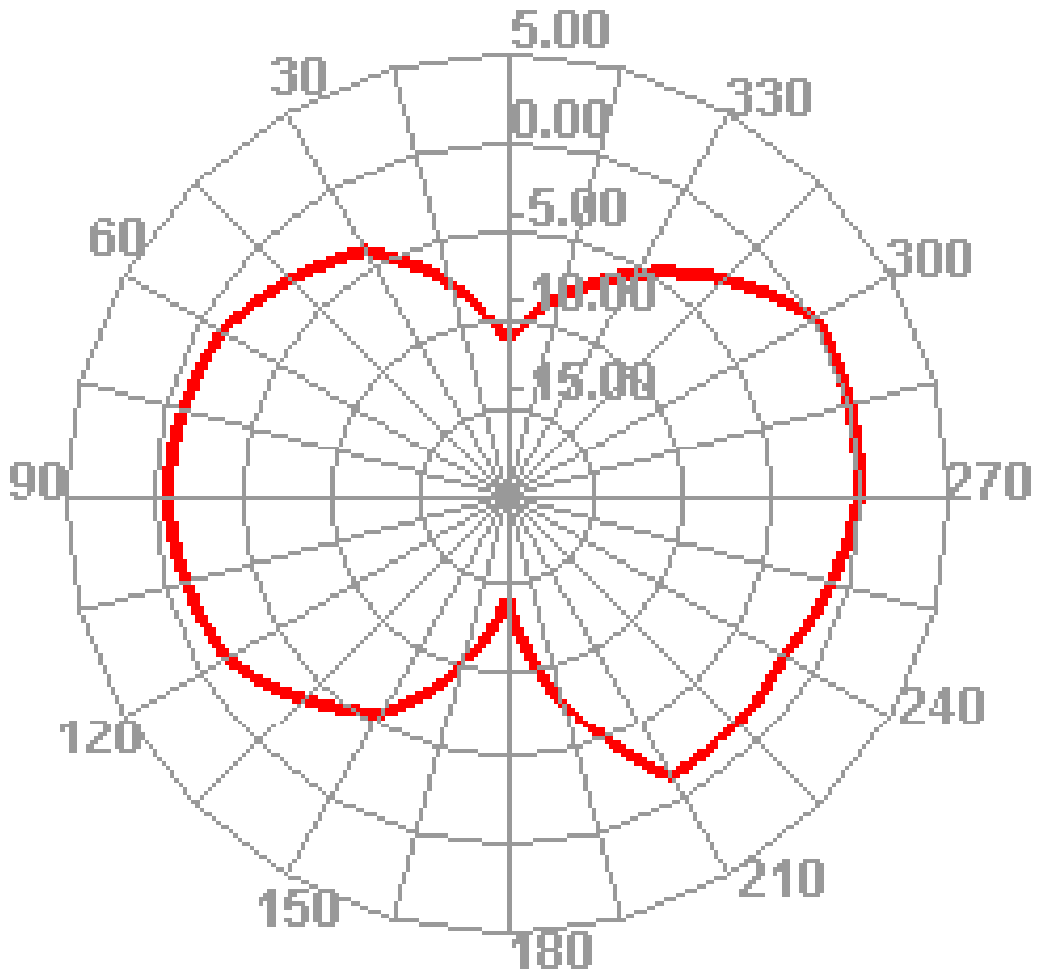
**2500.000MHz**





Radiation Pattern For WIFI Antenna(2400MHz)

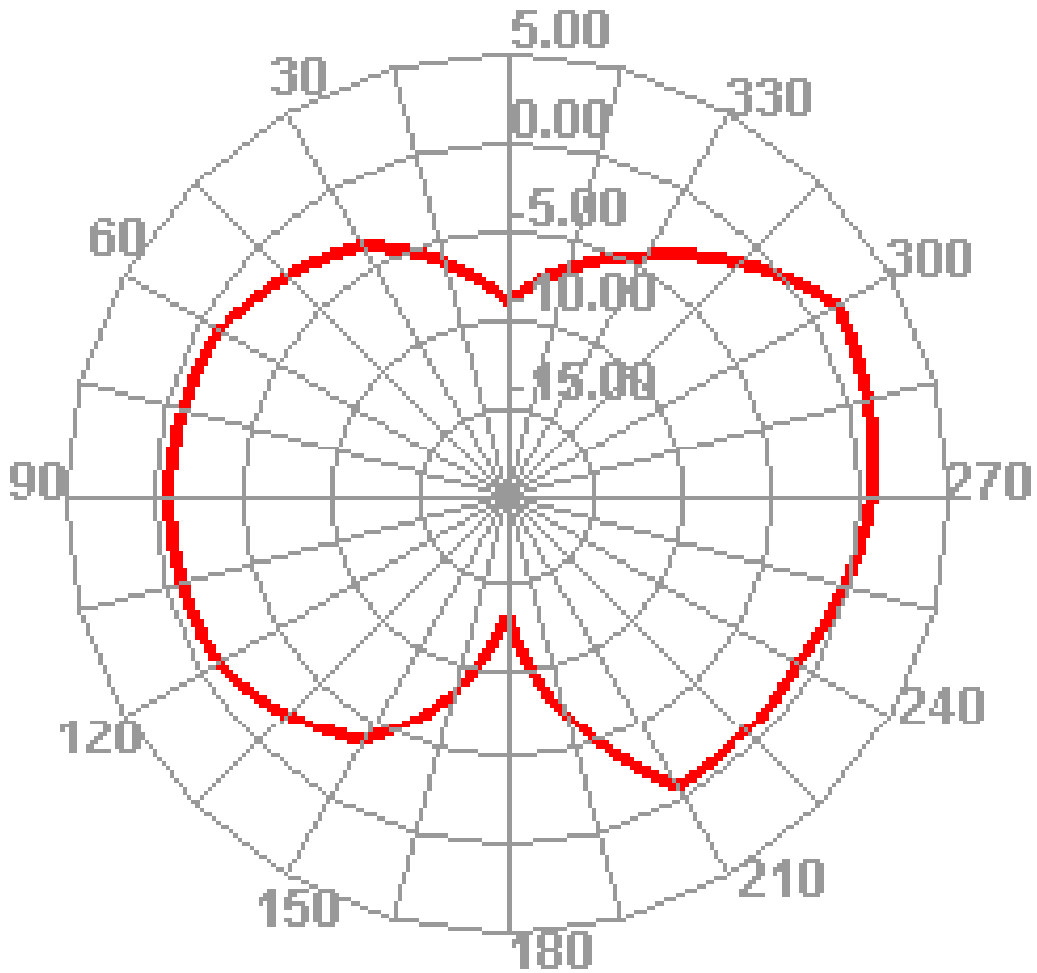
**2400.000MHz E2**





Radiation Pattern For WIFI Antenna(2450MHz)

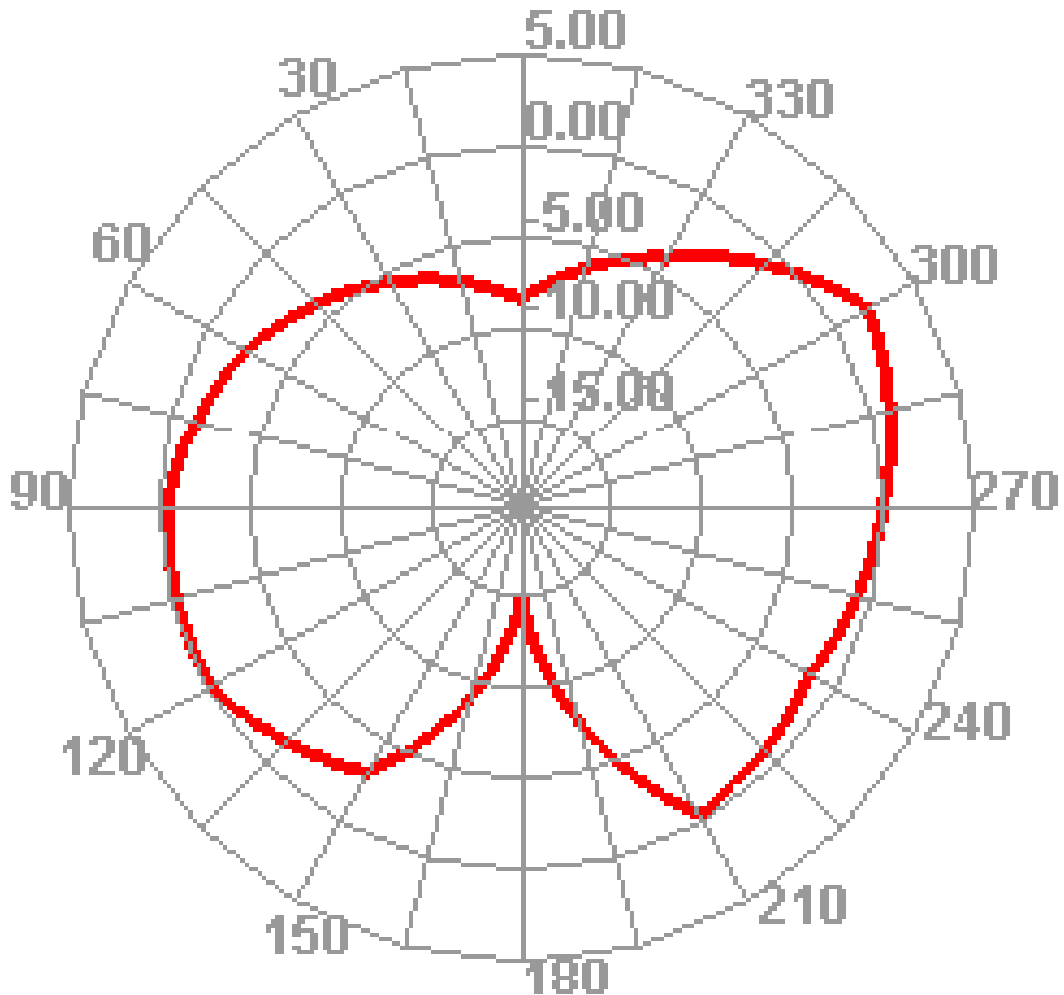
**2450.000MHz E2**





Radiation Pattern For WIFI Antenna(2500MHz)

**2500.000MHz E2**





***WIFI  
Antenna***









# 东莞市一佳电子通讯科技有限公司

Dongguan Yijia Electronics Communication Science&Technology Co.,Ltd.

## 样品检验报告

NO:20230303-1

客户/供方	新明海	产品编号	YJI01.047.002.102A					产品名称	2.4GHZ Antenna	
送检数量	5pcs	检验数量	5pcs					检验日期	2023.4.7	
第几次打样	第一次			责任工程师			覃剑勇			
材料组合	塑胶	外壳								
	五金	接头、铜管								
	其它	线材								
项次	检验项目	规格要求	检验记录					判定		检验工具(方法)
			1	2	3	4	5	OK	NG	
1	外观	表面无脏污.刮伤.破损	OK	OK	OK	OK	OK	OK		目视
2	性能	SWR	OK	OK	OK	OK	OK	OK		网络分析仪
3	尺寸	9.5+/-0.50	9.65	9.58	9.6	9.63	9.55	OK		卡尺
4		79.5+/-0.50	79.40	79.56	79.60	79.46	79.66	OK		卡尺
5		12.0+/-0.50	12.10	12.13	12.08	12.10	12.06	OK		卡尺
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
最终结果判定:		<input checked="" type="checkbox"/> 合格 <input type="checkbox"/> 不合格								
备注	单位:mm									

审核:杨智

确认:刘双虎

检验员:李若晴



# 东莞市一佳电子通讯科技有限公司

Dongguan Yijia Electronics Communication Science & Technology Co., Ltd.

## 产品测试报告

产品名称	2.4GHZ Antenna	规格型号	YJI01.047.002.102A	测试开始时间	2023.4.6
送样部门	工程	客户/供应商	新明海	测试完成时间	2023.4.7
试验原因	<input type="checkbox"/> 正常检验 <input checked="" type="checkbox"/> 新料件 <input type="checkbox"/> 料件更换 <input type="checkbox"/> 品质异常				
测试项目	恒温恒湿测试。				
测试标准	在+80° 90%RH —40° 条件下，测试24h，天线的可靠性。				
测试设备	恒温恒湿测试机。				
实测条件	1. 常温25摄氏度，湿度65%下试验。 2. +80° 90%RH —40° 24h。				
测试方法	1. 将测试条件设定为 +80° 90%RH —40° 24h。 2. 将样品放入测试机的测试室内。 3. 开机进行测试。 4. 记录数据。				

### 测试结果:

序号	测试条件	测试后状况	单项结果	
			<input checked="" type="checkbox"/>	<input type="checkbox"/>
1	+80° 90%RH —40° 24h	正常	<input checked="" type="checkbox"/>	Passed
			<input type="checkbox"/>	Rejected
2	+80° 90%RH —40° 24h	正常	<input checked="" type="checkbox"/>	Passed
			<input type="checkbox"/>	Rejected
3	+80° 90%RH —40° 24h	正常	<input checked="" type="checkbox"/>	Passed
			<input type="checkbox"/>	Rejected
4	+80° 90%RH —40° 24h	正常	<input checked="" type="checkbox"/>	Passed
			<input type="checkbox"/>	Rejected
5	+80° 90%RH —40° 24h	正常	<input checked="" type="checkbox"/>	Passed
			<input type="checkbox"/>	Rejected

判定

Passed

Rejected

### 备注(试验机图片)



核准:

杨智

审核:

刘双虎

试验人:

李若晴

文件编号: QC-F26-A

## Component - Plastics

E189230

## Guide Information

**BADA AG**

UNTERE STRUT 1, BUEHL/BADEN 77815 DE

**UL TPE-S (x) A FR01**

Thermoplastic Elastomer (TPE) "Badaflex TPE-S", furnished as pellets

<u>Color</u>	<u>Min. Thk</u> <u>(mm)</u>	<u>Flame</u> <u>Class</u>	<u>HWI</u>	<u>HAI</u>	<u>RTI</u> <u>Elec</u>	<u>RTI</u> <u>Imp</u>	<u>RTI</u> <u>Str</u>
ALL	0.4	V-0	-	-	50	50	50
	3.0	V-0	-	-	50	50	50

Comparative Tracking Index (CTI): -  
Dielectric Strength (kV/mm): -  
High-Voltage Arc Tracking Rate (HVTR): -  
Dimensional Stability (%): -

Inclined Plane Tracking (IPT) kV: -  
Volume Resistivity (10<sup>x</sup> ohm-cm): -  
High Volt, Low Current Arc Resis (D495): -

x - represents shore hardness level between 40A and 90A

ANSI/UL 94 small-scale test data does not pertain to building materials, furnishings and related contents. ANSI/UL 94 small-scale test data is intended solely for determining the flammability of plastic materials used in the components and parts of end-product devices and appliances, where the acceptability of the combination is determined by UL.

Report Date: 2017-03-23

Last Revised: 2017-03-23

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**IEC and ISO Test Methods**

Test Name	Test Method	Units	Thk (mm)	Value
Flammability	IEC 60695-11-10	Class (color)	0.4	V-0 (ALL)
			3.0	V-0 (ALL)
Glow-Wire Flammability (GWFI)	IEC 60695-2-12	°C	-	-
Glow-Wire Ignition (GWIT)	IEC 60695-2-13	°C	-	-
IEC Comparative Tracking Index	IEC 60112	Volts (Max)	-	-
IEC Ball Pressure	IEC 60695-10-2	°C	-	-
ISO Heat Deflection (1.80 MPa)	ISO 75-2	°C	-	-
ISO Tensile Strength	ISO 527-2	MPa	-	-
ISO Flexural Strength	ISO 178	MPa	-	-
ISO Tensile Impact	ISO 8256	kJ/m <sup>2</sup>	-	-
ISO Izod Impact	ISO 180	kJ/m <sup>2</sup>	-	-
ISO Charpy Impact	ISO 179-2	kJ/m <sup>2</sup>	-	-

# 物质安全数据表 (MSDS)

## 1、物料及厂商资料

中文名称: HPb59-1、HPb59-3、C3601、C3602、C3604铜合金
用途: 用于水暖卫浴、玩具文具、电子电器、汽车配件、五金加工等工业领域
企业名称: 东莞市荣耀金属材料有限公司
地址: 东莞市寮步镇竹园村元英路原裕盛市场 B1栋 1号
邮编: 523000
电子地址邮编: 770182901@qq.com
传真号码: +86-0769-2198 7103
企业应急电话: +86-0769-2198 7103
技术说明书编码: 无
生效日期: 2022-08-16
国家应急电话: 112 119



## 2、成份/组成信息

混合物			
物料名称: HPb59-1、HPb59-3、C3601、C3602、C3604铜合金			
化学成份			
化学元素	名称	CAS No.	百分比 (wt%)
Cu	铜	7440-50-8	57-61
Fe	铁	7439-89-6	<0.5
Ni	镍	7440-02-0	<0.3
Sn	锡	7439-89-6/7440-31-5	<1.0
Pb	铅	7439-92-1	1.8-3.7
Cd	镉	7440-43-9	<0.01
Zn	锌	7440-66-6	余量





### 3、危害辨识资料

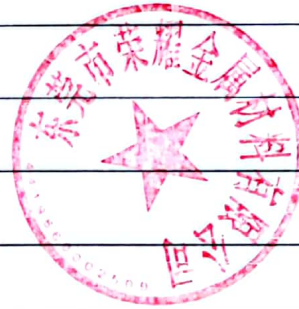
危害或危害信息：粉尘和烟雾有危害
对眼睛的影响：刺激性
对皮肤的影响：长期接触粉尘的工人常发生接触性皮炎
吸入的影响：引起呼吸道刺激症状，发生支气管炎或支气肺炎，甚至肺水肿
吞咽的影响：吞咽存在危害，恶心、呕吐、腹泻
慢性症状：长期吸入可引起肺部纤维组织增生

### 4、急救措施

皮肤接触：脱去污染的衣着，用肥皂水及清水彻底冲洗，就医
眼睛接触：立即翻开上下眼睑，用流动清水或生理盐水冲洗至少 15 分钟，就医
吸入、吞咽：迅速脱离现场至空气新鲜处，误服者立即漱口，饮牛奶或鸡蛋清就医

### 5、消防措施

危险特征：其粉体遇高温、明火能燃烧
有害燃烧产物：氧化铜
灭火方法及灭火剂：干粉、沙土
灭火注意事项：禁止用水



### 6、泄漏处理方法

应急处理：隔离泄漏污染区，周围设警示标志，切断火源。应急处理人员戴好防毒面具，穿一般消防防护服。
消除方法：避免扬尘，使用无火花工具收集于干燥净洁有盖的容器中，转移回收。当水体收到污染时，可采用加入纯碱中和，使铜以碱式碳酸铜形式沉淀而从水中转入污泥中，而污泥再做进一步的无害化处理。对于受铜污染的土壤，可采取排土、土层改良、深耕、施加石灰质矿物及磷酸钙等措施治理。

### 7、操作处理与储存



<p><b>操作注意事项:</b> 制品边缘及断面容易割伤皮肤, 应小心处置 机械加工 (如切削及研磨等), 如产生粉尘应小心眼睛及皮肤接触, 需佩戴保护器具</p>
<p><b>储存注意事项:</b> 储存于干燥通风良好室内场所或具有温湿度控制之空间; 严禁暴露于室外或温湿度高的密闭空间; 避免与酸、碱、盐类等化学物质一起储存。</p>

8、接触控制/个体防护

<p>暴露限制: Cu⇒ OSHA PEL: 1.0mg/m<sup>3</sup></p>	<p>Pb⇒ OSHA PEL: 0.05mg/m<sup>3</sup></p>
<p>Fe⇒ OSHA PEL: 1.0mg/m<sup>3</sup></p>	<p>Sn⇒ OSHA PEL: 2.0mg/m<sup>3</sup></p>
<p>Zn⇒ OSHA PEL: 10.0mg/m<sup>3</sup></p>	
<p>工程控制: 安装排气装置, 在熔铸时应安装通风装置 (熔铸时由于金属挥发会产生粉尘)</p>	
<p>个人防护措施: 一般不需特殊防护, 但需防止烟尘危害</p>	

9、物理及化学性质

<p>外观与性状: 黄色金属</p>		
<p>气味: 无味</p>	<p>PH 值: N/A</p>	<p>密度: 约为 8.5g/cm<sup>3</sup></p>
<p>蒸气压: N/A</p>	<p>蒸气密度: N/A</p>	<p>熔点: 约为 900℃</p>
<p>溶解性: 不溶于水, 溶于碱、盐酸、硫酸</p>		
<p>主要用途: 用于加工机械、电子零部件如螺钉螺母、阀件、五金零件等</p>		

10、稳定性及反应活性

<p>稳定性: 一边条件下相当稳定</p>	<p>禁配物: N/A</p>
<p>避免接触条件: 酸、碱、盐类禁止接触</p>	<p>聚合危害: N/A</p>
<p>分解产物: N/A</p>	

11、毒性资料

<p>急毒性: 属微毒类。污染来源为冶金、电镀、催化、仪表、合金和化工等的水和废渣</p>	
<p>亚急性和慢性毒性: 无相关资料</p>	
<p>刺激性: 无相关资料</p>	<p>致敏性: 粉尘接触皮肤少数人过敏</p>
<p>致突变性: 无相关资料</p>	<p>致畸性: 无相关资料</p>
<p>致癌性: 无相关资料</p>	<p>其它: 无相关资料</p>



## 12、生态学资料

生态毒性：无相关资料	生物降解性：无相关资料
非生物降解性：无相关资料	生物富集或生物积累性：无相关资料
其它有害作用：利用含铜废水灌溉农田或施用含铜污泥，铜可积累在土壤中。随水进入到土壤中的铜可被土壤吸持。土壤中的腐殖酸、富里酸含有羧基、酚基、羰基等含氧基团，能与铜形成螯合物而固定铜	

## 13、废弃处置

废弃物性质：工业固体废物
废弃处置方法：回收再利用
废弃注意事项：与其他废弃物分开放置，便于在利用

## 14、运输信息

危险货物编号：非危险货物	UN 编号：N/A
包装标识：N/A	包装类别：N/A
包装方法：散装或包装箱	
运输注意事项：防止货物跌落、重压、渗水	

## 15、法规信息

无相关法规
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## 16、其他信息

参考文献：GB16483《化学品安全技术说明书编写规定》
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# 物质安全资料表

## 1. 化學品及廠商資料

化學品名稱	TPE 100A
建議用途及限制使用	注塑加工
製造者	东莞市宇邦塑胶有限公司
地址	东莞市樟木头镇塑胶原料市场三期B61号
電話	0769-87126360
傳真電話	0769-87126361

## 2. 危害性分類

物品危害分類	無(不屬於 GHS 27 種危害分類)
標示內容	無(不屬於 GHS 27 種危害分類)
其他危害	眼睛:細粉或加工過程發煙, 進入眼睛可能對眼睛造成刺激。 皮膚:加工過程高溫熔融狀態, 若接觸皮膚可能引起皮膚燙傷。 吸入:細粉或加工過程發煙, 進入呼吸道可能對呼吸道造成刺激。 食入:若誤食, 建議就醫取出。

## 3. 成分辨識資料

化學名稱	Styrene- Butadiene Copolymer	Mineral Oil	Additives
含量	>72.5 %	≤ 28.5%	≤ 2 %
化學式	(C <sub>8</sub> H <sub>8</sub> . C <sub>5</sub> H <sub>8</sub> O <sub>2</sub> . C <sub>4</sub> H <sub>4</sub> ) x	-	-
CAS No.	9003-55-8	64742-54-7	Proprietary
危害性不純物	無		

## 4. 急救措施

不同暴露途徑之急救方

式:

吸入

若吸入熔融樹脂逸出之氣體, 將患者移至通風處, 立即送醫。

皮膚接觸

若接觸到橡膠粒或橡膠粉末, 以清水沖洗。

若接觸到熔膠, 以大量(肥皂)水沖洗患部及衣物, 立即送醫。

眼睛接觸

若接觸到橡膠粒或橡膠粉末, 以大量清水至少沖洗 15 分鐘。若有不適, 立即送醫。

若接觸到高溫熔融樹脂逸出之氣體, 以大量清水至少沖洗 15 分鐘。若有不適, 立即送醫。

食入

催吐, 以清水漱口, 若有不適, 立即送醫。

最重要症狀及危害效應

未經加工時, 無危害。加工時, 燙傷危害。

對醫師之提示

無需特殊解毒劑，是病患之症狀給予支持性療法。

## 5. 消防措施

適用滅火劑	水、泡沫、乾粉
滅火時可能遭遇之特殊危害	無
特殊滅火程序	移除可燃物
消防人員設備	使用供氧式呼吸防護具

## 6. 洩漏處理方法

個人應注意事項	若塑膠粒或塑膠粉末殘留於地面上，可能會導致人員滑倒。
環境注意事項	為防止鳥類或魚類由排水系統中攝食，須徹底回收
清理方法	回收或廢棄

## 7. 安全處置與儲存方法

處置	操作處所須嚴禁煙火，做好整理整頓以避免粉塵累積。為防止塵爆，空氣輸送管路、袋濾器及儲槽須加裝靜電消除裝置，並確實接地。袋濾器之濾材採導電性材質。
儲存	存放於陰涼處所，避免直射陽光、雨淋及急遽之溫差。儲存處嚴禁煙火

## 8. 暴露預防措施

控制參數：  
容許濃度(TLV) 可吸入粉塵濃度 5mg/m<sup>3</sup>，全天濃度不超過 10mg/m<sup>3</sup> 為上限。  
個人防護設備：  
呼吸防護 清洗成型機時使用防毒面具。  
手部防護 接觸熔膠時使用皮手套。  
眼睛防護 平時使用安全眼鏡，清洗成型機時使用護目鏡  
皮膚及身體防護 長袖作業服  
衛生措施 身體接觸膠粒後，若殘留細粉，建議清洗。

## 9. 物理及化學性質

物質狀態	固態
形狀	粒狀
顏色	白色
氣味	無
熔點	無
PH 值	無
沸點	無

易燃性	低
閃火點	不適用
分解溫度	不適用
自燃溫度	不適用
爆炸界限	不適用
蒸氣壓	極微小可忽略不計
蒸氣密度	無(固體)
密度	0.92~0.95
溶解度	不溶於水
辛醇/水分配係數	無
嗅覺閾值	無

## 11. 毒性資料

暴露途徑	無毒害
症狀	無
急毒性	無
慢毒性或長期毒性	無
刺激性	分解後之橡膠所產生的煙及蒸氣會刺激眼睛

## 12. 生態資料

生態毒性	無生態毒性
持久性及降解性	水無法溶解，於環境周遭呈安定狀態殘存，於陽光長期照射後將呈現表層剝離狀態，目前不預期能經生化作用而分解。
生物蓄積性	不適用
土壤中之流動性	無法經生化作用分解，於陸上環境將殘存於土壤中。
其他不良效應	為防止被海洋生物或鳥類攝食，嚴禁丟棄至海洋或水域。

## 13. 廢棄物處理

廢棄處置方法：

適當之焚化爐燃燒或掩埋法。不適當之焚化爐可能會產生有毒氣體如 CO, HCN, AN 及 SM.

#### 14. 運送資料

國際運送規定	避免弄潮或被草率處理，包裝不要受損。 若包裝受損，將造成膠粒灑出，容易有滑倒或摔倒情形發生，應盡速處理。
聯合國運輸名稱	不適用
運輸危害分類	不適用
包裝類別	不適用
海洋污染物	無
特殊運送方法及注意事項	無

#### 15. 法規資料

適用法規	職業安全衛生法 職業安全衛生設施規則 勞工作業環境空氣中有害物容許濃度標準 道路交通安全規則 事業廢棄物貯存清除處理方法及設施標準
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#### 16. 其他資料

# Test Report

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Date: 06 Sep 2022

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Client Name : DONGGUAN RONGYAO METAL MATERIAL CO.,LTD.

Client Address : NO.1, BUILDING B1, OLD YUSHENG MARKET, YUANYING ROAD, ZHUYUAN VILLAGE, LIAOBU TOWN, DONGGUAN CITY

Sample Name : C3604

The above sample(s) and information were provided by the client.

SGS Job No. : SZIN2208009637PC - SZ  
 Date of Sample Received : 10 Aug 2022  
 Testing Period : 10 Aug 2022 - 16 Aug 2022  
 Test Requested : Selected test(s) as requested by the client.  
 Test Method(s) : Please refer to next page(s).  
 Test Result(s) : Please refer to next page(s).

Result Summary :

Test Requested	Conclusion
EU RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU- Lead, Mercury, Cadmium, Hexavalent chromium, Polybrominated biphenyls (PBBs), Polybrominated diphenyl ethers (PBDEs), Bis(2-ethylhexyl) phthalate (DEHP), Butyl benzyl phthalate (BBP), Dibutyl phthalate (DBP) and Diisobutyl phthalate (DIBP)	PASS

Signed for and on behalf of  
 SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch



Ford Shi  
 Approved Signatory



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Test Result(s) :

Test Part Description :

Specimen No.	SGS Sample ID	Description
SN1	SZX22-027110.001	Golden metal

Remarks :

- (1) 1 mg/kg = 0.0001%
- (2) MDL = Method Detection Limit
- (3) ND = Not Detected ( < MDL )
- (4) "-" = Not Regulated

**EU RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU- Lead, Mercury, Cadmium, Hexavalent chromium, Polybrominated biphenyls (PBBs), Polybrominated diphenyl ethers (PBDEs), Bis(2-ethylhexyl) phthalate (DEHP), Butyl benzyl phthalate (BBP), Dibutyl phthalate (DBP) and Diisobutyl phthalate (DIBP)**

Test Method : With reference to IEC 62321-4:2013+AMD1:2017, IEC62321-5:2013, IEC 62321-7-1:2015, IEC 62321-6:2015 and IEC 62321-8:2017, analyzed by ICP-OES, UV-Vis and GC-MS.

Test Item(s)	Limit	Unit	MDL	001
Cadmium (Cd)	100	mg/kg	2	35
Lead (Pb)	1000	mg/kg	2	26420▲
Mercury (Hg)	1000	mg/kg	2	ND
Hexavalent Chromium (Cr(VI))▼	-	µg/cm <sup>2</sup>	0.10	ND
Sum of PBBs	1000	mg/kg	-	ND
Monobromobiphenyl	-	mg/kg	5	ND
Dibromobiphenyl	-	mg/kg	5	ND
Tribromobiphenyl	-	mg/kg	5	ND
Tetrabromobiphenyl	-	mg/kg	5	ND
Pentabromobiphenyl	-	mg/kg	5	ND
Hexabromobiphenyl	-	mg/kg	5	ND
Heptabromobiphenyl	-	mg/kg	5	ND
Octabromobiphenyl	-	mg/kg	5	ND
Nonabromobiphenyl	-	mg/kg	5	ND
Decabromobiphenyl	-	mg/kg	5	ND
Sum of PBDEs	1000	mg/kg	-	ND
Monobromodiphenyl ether	-	mg/kg	5	ND
Dibromodiphenyl ether	-	mg/kg	5	ND
Tribromodiphenyl ether	-	mg/kg	5	ND
Tetrabromodiphenyl ether	-	mg/kg	5	ND



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# Test Report

No. SZXML2202711007

Date: 06 Sep 2022

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Test Item(s)	Limit	Unit	MDL	001
Pentabromodiphenyl ether	-	mg/kg	5	ND
Hexabromodiphenyl ether	-	mg/kg	5	ND
Heptabromodiphenyl ether	-	mg/kg	5	ND
Octabromodiphenyl ether	-	mg/kg	5	ND
Nonabromodiphenyl ether	-	mg/kg	5	ND
Decabromodiphenyl ether	-	mg/kg	5	ND
Dibutyl phthalate (DBP)	1000	mg/kg	50	ND
Butyl benzyl Phthalate (BBP)	1000	mg/kg	50	ND
Bis(2-ethylhexyl) Phthalate (DEHP)	1000	mg/kg	50	ND
Diisobutyl Phthalate (DIBP)	1000	mg/kg	50	ND

Notes :

- (1) The maximum permissible limit is quoted from RoHS Directive (EU) 2015/863.
- (2) IEC 62321 series is equivalent to EN 62321 series.
- (3) ▼= a. The sample is positive for CrVI if the CrVI concentration is greater than 0.13 µg/cm<sup>2</sup>. The sample coating is considered to contain CrVI
  - b. The sample is negative for CrVI if CrVI is ND (concentration less than 0.10 µg/cm<sup>2</sup>). The coating is considered a non-CrVI based coating
  - c. The result between 0.10 µg/cm<sup>2</sup> and 0.13 µg/cm<sup>2</sup> is considered to be inconclusive - unavoidable coating variations may influence the determination.

Information on storage conditions and production date of the tested sample is unavailable and thus Cr(VI) results represent status of the sample at the time of testing.

Remark▲: According to the declaration from the client, Lead (Pb) is exempted by EU RoHS directive 2011/65/EU based on [ANNEX III 6(c)]: Copper alloy containing up to 4 % lead by weight.

Unless otherwise stated, the decision rule for conformity reporting is based on Binary Statement for Simple Acceptance Rule (w=0) stated in ILAC-G8:09/2019.



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# Test Report

No. CANEC222287071

Date: 31 Oct 2022

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Client Name : DONGGUAN YUBANG PLASTIC CO., LTD

Client Address : B61, PHASE III, ZHANGMUTOU PLASTIC RAW MATERIAL MARKET, DONGGUAN

Sample Name : TPE

Model No. : 100A

The above sample(s) and information were provided by the client.

SGS Job No. : CP22-058120 - GZ

Date of Sample Received : 26 Oct 2022

Testing Period : 26 Oct 2022 - 31 Oct 2022

Test Requested : Selected test(s) as requested by the client.

Test Method(s) : Please refer to next page(s).

Test Result(s) : Please refer to next page(s).

Result Summary :

Test Requested	Conclusion
EU RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU- Lead, Mercury, Cadmium, Hexavalent chromium, Polybrominated biphenyls (PBBs), Polybrominated diphenyl ethers (PBDEs), Bis(2-ethylhexyl) phthalate (DEHP), Butyl benzyl phthalate (BBP), Dibutyl phthalate (DBP) and Diisobutyl phthalate (DIBP)	PASS
Halogen	See Results

Signed for and on behalf of  
SGS-CSTC Standards Technical Services Co., Ltd. Guangzhou Branch

*Jessie Li*

Jessie Li  
Approved Signatory

scan to see the report



12FE32A0



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# Test Report

No. CANEC2222870701

Date: 31 Oct 2022

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Test Result(s) :

Test Part Description :

Specimen No.	SGS Sample ID	Description
SN1	CAN22-228707.001	White plastic grains

Remarks :

- (1) 1 mg/kg = 0.0001%
- (2) MDL = Method Detection Limit
- (3) ND = Not Detected ( < MDL )
- (4) "-" = Not Regulated

**EU RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU- Lead, Mercury, Cadmium, Hexavalent chromium, Polybrominated biphenyls (PBBs), Polybrominated diphenyl ethers (PBDEs), Bis(2-ethylhexyl) phthalate (DEHP), Butyl benzyl phthalate (BBP), Dibutyl phthalate (DBP) and Diisobutyl phthalate (DIBP)**

Test Method : With reference to IEC 62321-4:2013+A1:2017, IEC 62321-5:2013, IEC 62321-7-2:2017 , IEC 62321-6:2015 and IEC 62321-8:2017, analyzed by ICP-OES , UV-Vis and GC-MS .

Test Item(s)	Limit	Unit	MDL	001
Cadmium (Cd)	100	mg/kg	2	ND
Lead (Pb)	1000	mg/kg	2	ND
Mercury (Hg)	1000	mg/kg	2	ND
Hexavalent Chromium (CrVI)	1000	mg/kg	8	ND
Sum of PBBs	1000	mg/kg	-	ND
Monobromobiphenyl	-	mg/kg	5	ND
Dibromobiphenyl	-	mg/kg	5	ND
Tribromobiphenyl	-	mg/kg	5	ND
Tetrabromobiphenyl	-	mg/kg	5	ND
Pentabromobiphenyl	-	mg/kg	5	ND
Hexabromobiphenyl	-	mg/kg	5	ND
Heptabromobiphenyl	-	mg/kg	5	ND
Octabromobiphenyl	-	mg/kg	5	ND
Nonabromobiphenyl	-	mg/kg	5	ND
Decabromobiphenyl	-	mg/kg	5	ND
Sum of PBDEs	1000	mg/kg	-	ND
Monobromodiphenyl ether	-	mg/kg	5	ND
Dibromodiphenyl ether	-	mg/kg	5	ND
Tribromodiphenyl ether	-	mg/kg	5	ND
Tetrabromodiphenyl ether	-	mg/kg	5	ND



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# Test Report

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<u>Test Item(s)</u>	<u>Limit</u>	<u>Unit</u>	<u>MDL</u>	<u>001</u>
Pentabromodiphenyl ether	-	mg/kg	5	ND
Hexabromodiphenyl ether	-	mg/kg	5	ND
Heptabromodiphenyl ether	-	mg/kg	5	ND
Octabromodiphenyl ether	-	mg/kg	5	ND
Nonabromodiphenyl ether	-	mg/kg	5	ND
Decabromodiphenyl ether	-	mg/kg	5	ND
Dibutyl phthalate (DBP)	1000	mg/kg	50	ND
Butyl benzyl phthalate (BBP)	1000	mg/kg	50	ND
Bis (2-ethylhexyl) phthalate (DEHP)	1000	mg/kg	50	ND
Diisobutyl Phthalates (DIBP)	1000	mg/kg	50	ND

**Notes :**

- (1) The maximum permissible limit is quoted from RoHS Directive (EU) 2015/863.
- (2) IEC 62321 series is equivalent to EN 62321 series
- (3) The restriction of DEHP, BBP, DBP and DIBP shall apply to medical devices, including in vitro medical devices, and monitoring and control instruments, including industrial monitoring and control instruments, from 22 July 2021.

**Halogen**

Test Method : With reference to EN 14582:2016, analysis was performed by IC.

<u>Test Item(s)</u>	<u>Unit</u>	<u>MDL</u>	<u>001</u>
Fluorine (F)	mg/kg	50	ND
Chlorine (Cl)	mg/kg	50	ND
Bromine (Br)	mg/kg	50	ND
Iodine (I)	mg/kg	50	ND

Unless otherwise stated, the decision rule for conformity reporting is based on Binary Statement for Simple Acceptance Rule (  $w=0$  ) stated in ILAC-G8:09/2019.

