SINAWELL
司南微电子

Confirmation of Sample
样品承认书

司南微电子（深圳）有限公司

SINAWELL Electronics(Shenzhen) Co., Ltd.

Customer Name	Shenzhen cannice Technology Co., Ltd
Product Name	A1593-R
Customer Item Number	
Project name	A1593-R
Product brand	SN
Product model	SN1523-BT-R

Appendix	■ cover	■ buleprint	☐ FAI report	☐ CPK report告
	■Reliability Test Report	☐ 3D model	■ RoHS	☐ UN38.3

Supplier Signature	Make	Audit	Approval
	Chen de	Li xiao long	Zhang ping

Customer Signature	Make	Audit	Approval

Admit condition	☐ admit	☐ Denial of recognition
	☐ Conditional recognition Conditions to be satisfied:	
	☐ Provisional recognition limit____PCS	

Supplier Information:
Name ： SINAWELL Electronics(Shenzhen) Co., Ltd. Contacts ： Zhang wen feng
ADD: **5th Floor, Building C, Sanhe Industrial Zone, Yongxin Street, Shiyan Subdistrict, Bao'an District, Shenzhen City**
TLE ： 0755-29988460 Fax ： 0755-29988470
EMAIL: zwf@sinawell.cn

Rev：B

The Main Antenna Sample Confirmation

Customer	Shenzhen CANNICE Technology Co., Ltd.			
Project Name	A1593-R		Date	2026-03-24
Project NO.	SN1523-BT-R	Notes	FPC touch + antenna	
Frequency Range	BT			
Designed By	RF Engineer		Structural Engineer	
Checked By	Engineering Manager			
Client’ s Approval				

Designer：SINAWELL Electronics(Shenzhen) Co., Ltd.

Add：5th Floor, Building C, Sanhe Industrial Zone, Yongxin Street, Shiyan Subdistrict, Bao'an District, Shenzhen City

Table of Contents

1. Specification description

This specification describes the status of the A1593-R internal antenna with a frequency band of 2400mHz-2480mHz.

2. Antenna appearance

3. Electrical performance

3.1. Antenna band

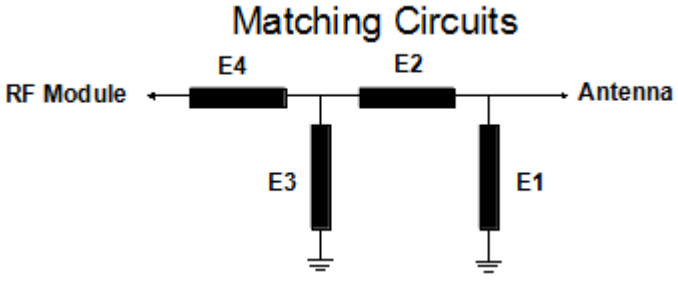
	BT
Transmitting band(MHz)	2400MHz-2500MHz

3.2. Matching Circuit

After the test point is at the antenna connector (RF test port), see the figure below.

1. BT antenna matching.

Element	Value
E1(0402)	Nc
E2(0402)	0Ω
E3(0402)	NC
E4(0402)	NC

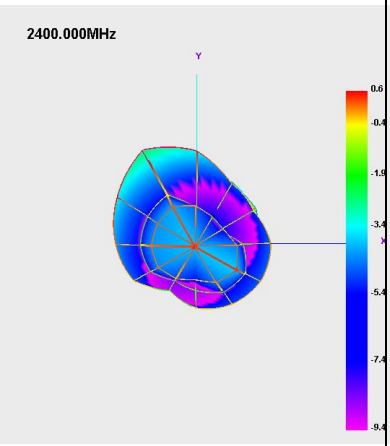
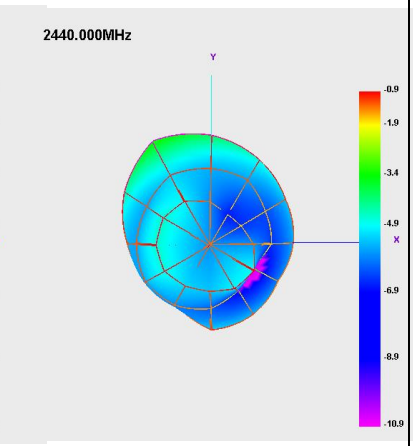
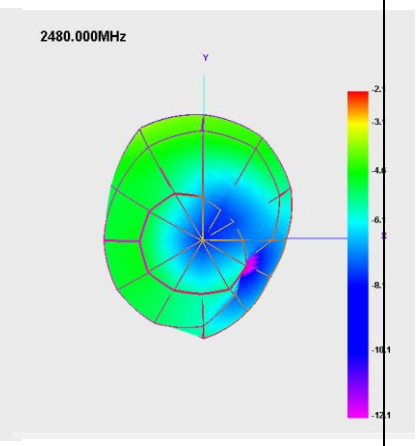


3.3. Return Loss

BT VSWR+ Return

	Resonant Point Range(MHz)	Frequency point(MHz)/Maximum Echo Loss(dB)		
	2400-2500		2400	2500
		VSWR	1.76	1.88
		Return loss	-11.202	-10.298

3.4. Antenna Gain

Channel	0	39	78
Gain	0.61dBi	-0.92dBi	-2.08dBi
Gain diagram			
Channel	0	39	78
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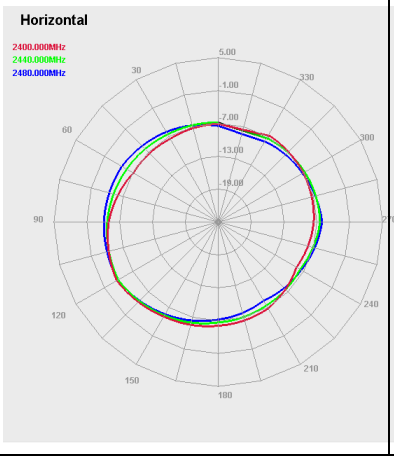
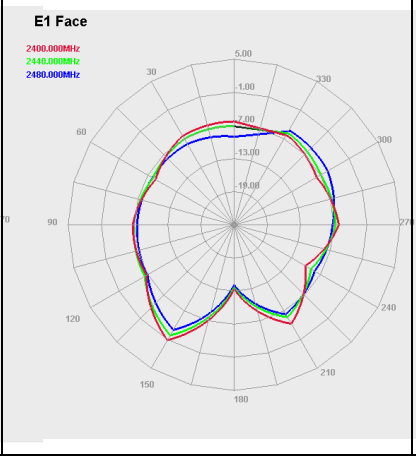
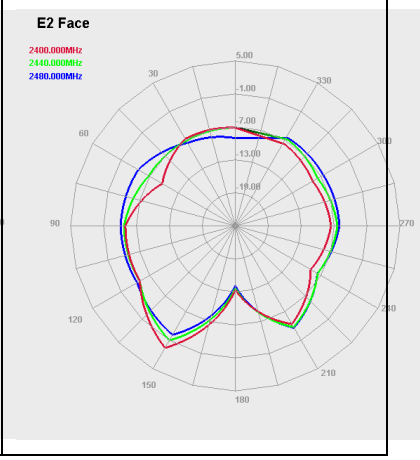
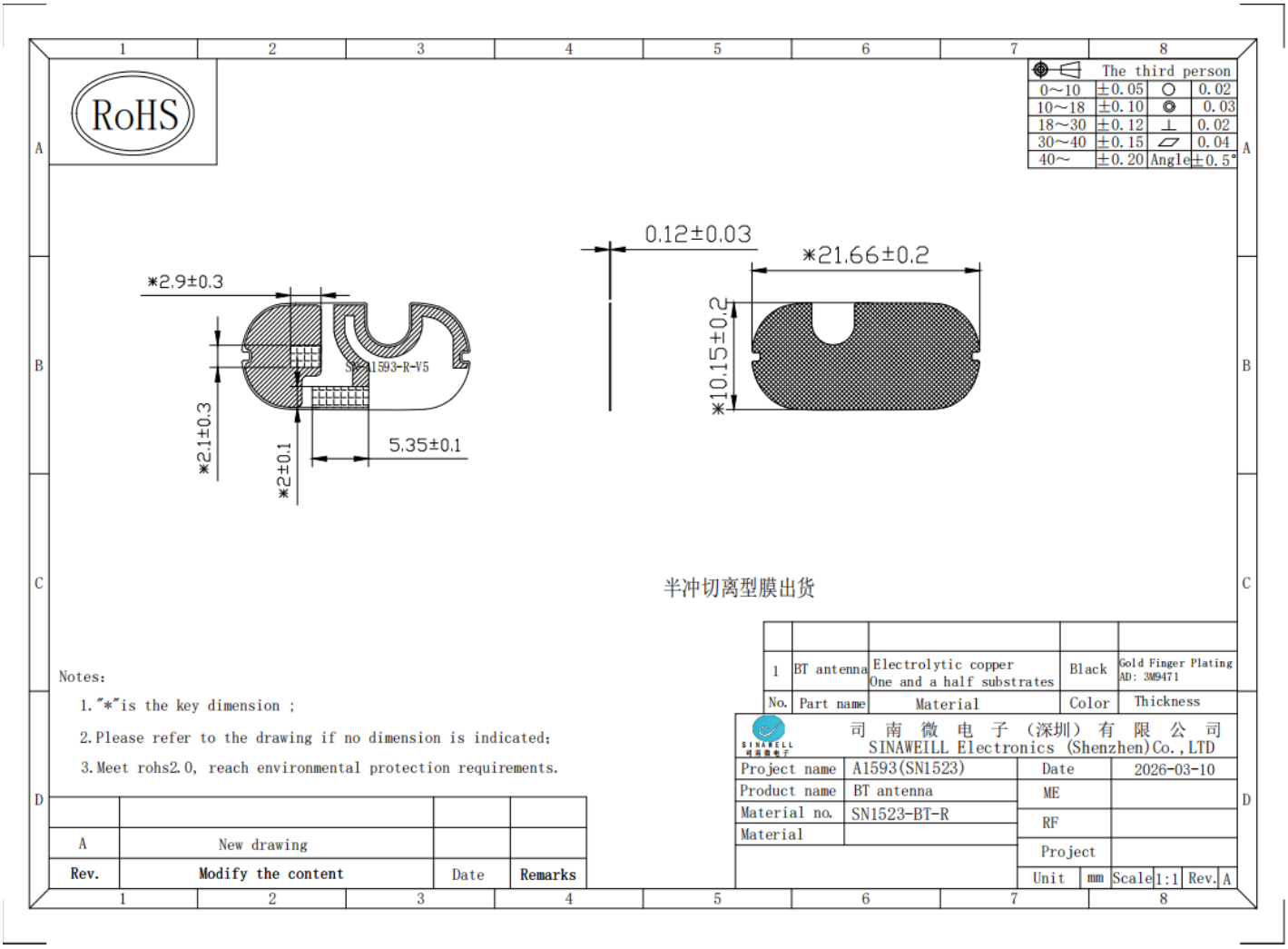
Gain diagram			

Passive Test For D4										
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHIS (%)	DHIS (%)	Max (dB)	Min (dB)	Attenut Hor	Attenut Ver
2400	25.33	-5.96	0.61	-1.54	9.113	16.219	0.61	-13.35	49.45	48.8
2410	25.75	-5.89	0.32	-1.83	9.414	16.332	0.32	-13.42	49.39	48.83
2420	26.01	-5.85	-0.04	-2.19	9.786	16.227	-0.04	-13.67	49.37	48.95
2430	25.48	-5.94	-0.53	-2.68	9.984	15.495	-0.53	-13.66	49.4	48.77
2440	25.32	-5.97	-0.92	-3.07	10.267	15.05	-0.92	-13.68	49.51	48.69
2450	26.43	-5.78	-1.1	-3.25	11.084	15.347	-1.1	-13.27	49.47	48.71
2460	26.5	-5.77	-1.4	-3.55	11.396	15.101	-1.4	-13.44	49.6	48.83
2470	26.34	-5.79	-1.66	-3.81	11.638	14.702	-1.66	-13.53	49.36	48.8
2480	26.02	-5.85	-2.08	-4.23	11.804	14.216	-2.08	-14.11	49.27	49.25
2490	26	-5.85	-2.43	-4.58	12.092	13.911	-2.43	-15	49.45	49.67
2500	25.75	-5.89	-2.9	-5.05	12.316	13.431	-2.9	-15.73	49.63	49.25

4. Appearance structure

4.1. Antenna Material

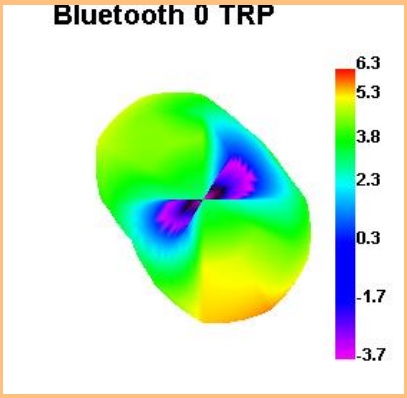
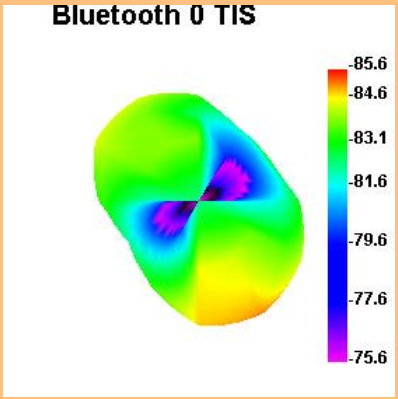
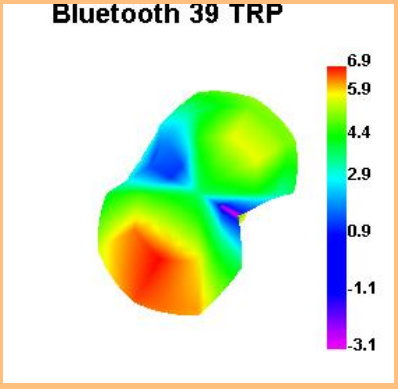
FPC Mechanical drawing(Annex I)

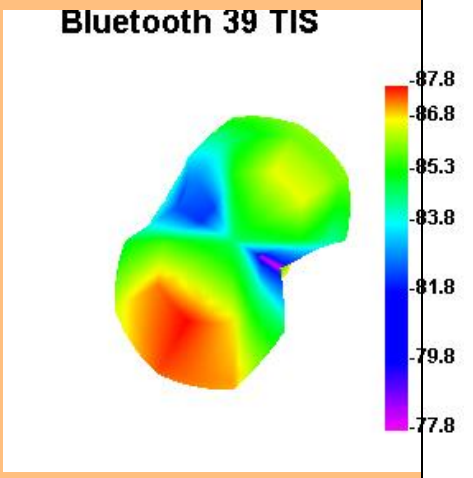
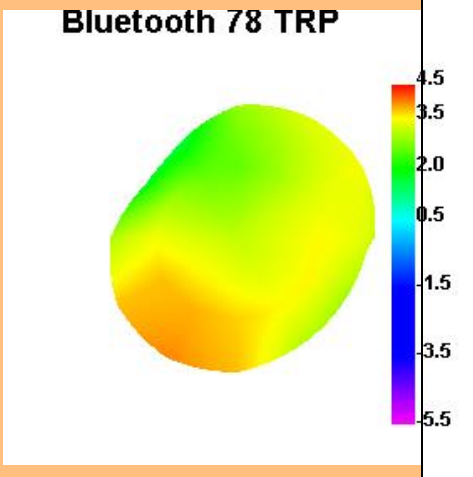
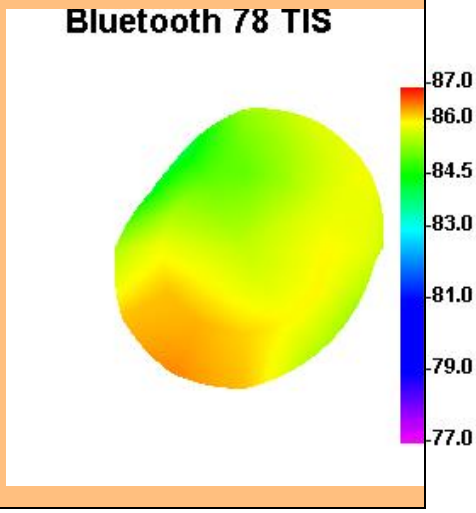


Focus on size

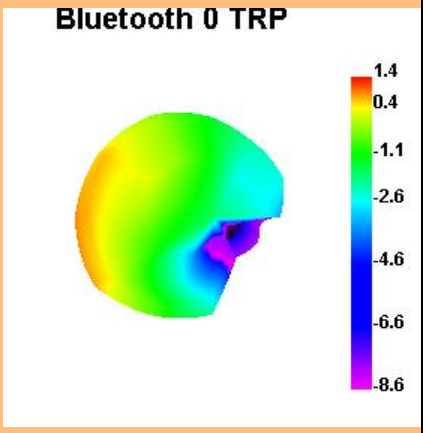
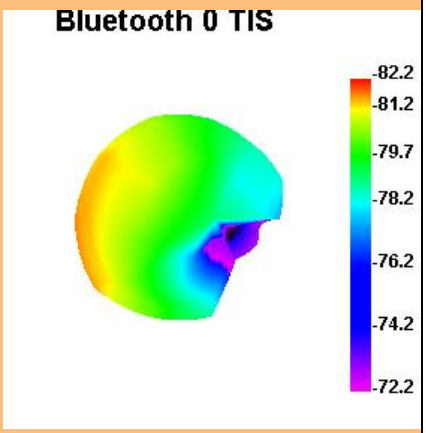
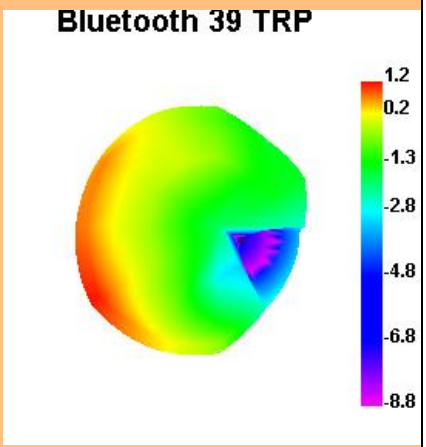
NO	Size（mm）	Tolerance(mm)	Notes
1	27.35	±0.2	
2	4.65	±0.2	
3	0.12	±0.02	
4	1.3	±0.1	
5			
6			

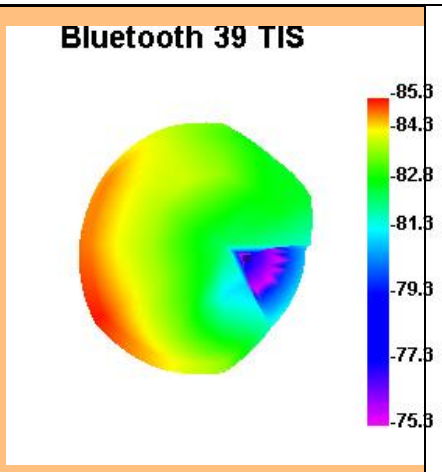
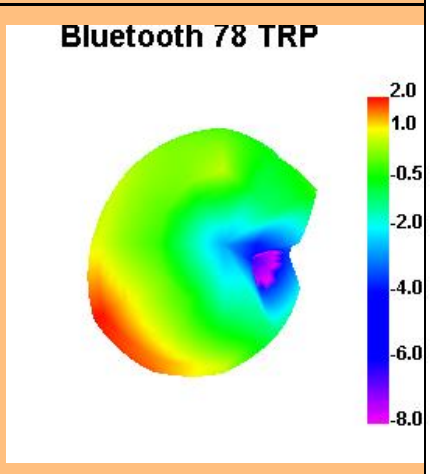
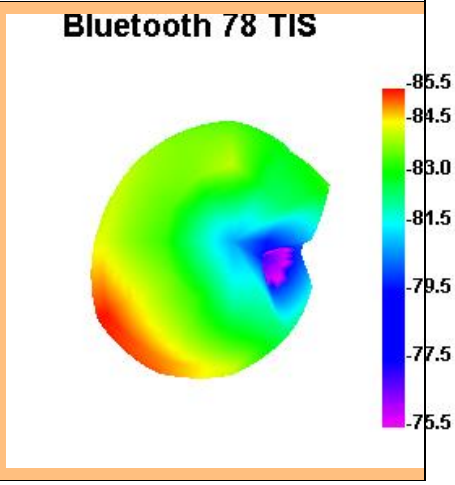
3D Test Report (Freedom)

BT	Channel	3DCoupling Test	Field strength map
TRP	0	2.72	
TIS	0	-82	
TRP	39	3.03	

TIS	39	-84.01	
TRP	78	-0.94	
TIS	78	-81.56	

（Head）

BT	Channel	3DCoupling Test	Field strength map
TRP	0	-3.83	
TIS	0	-76.97	
TRP	39	-3.25	

TIS	39	-80.82	
TRP	78	-2.6	
TIS	78	-80.99	

Size Report

	Customer	cannice	Project Name	A1382-R		Measurement Date	2024-07-09	
	Supplier	sinawell	Measurement Tool	Quadratic		Unit	mm	
NO	dimension	Toleranca	Measure 1	Measure 2	Measure 3	Measure 4	Measure 5	determine
1	27.35	±0.2	27.39	27.42	27.40	27.38	27.38	OK
2	4.65	±0.2	4.62	4.63	4.63	4.67	4.65	OK
3	0.12	±0.02	0.12	0.12	0.12	0.12	0.12	OK
4	1.3	±0.1	1.26	1.28	1.28	1.25	1.29	OK
5								
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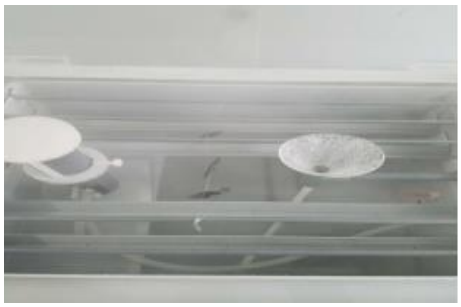
DRAWN BY： De Chen APPROVED BY：Wenfeng Zhang

Salt fog Report

Customer Name	CANNICE	Corax	A1382-R	Tester	De Chen
Test Quantity	5PCS	Test Item	Salt fog	Test Date	2024-07-09
Test conditions	1.Temperature：35℃				
	2.Humidity：98%，PH：6.5-7.2				
	3.Temperature in the box：37℃				
	4.Test duration：24hours				
	5.Drug concentration：5%NaCl				
Testing procedure	1.Put the product in the salt mist box.				
	2.Place the product at the right angle.				
	3.set the relevant parameters and start the spray.				
	4.Complete the removal of the experimental product. Before inspection, wash the product with clean water and place it at room temperature for two hours.				
TEST	Projects	Before testing	After testing	test result	remarks
	Coating	/	/	/	
	Conductivity	Well	Well	qualified	
	Resistance	Well	Well	qualified	
	Cohesion	Well	Well	qualified	

DRAWN BY： De Chen APPROVED BY：Wenfeng Zhang

Explanation of FPC Preservation Period

Ⅰ.Preservation conditions: temperature 21 +4: humidity 60% H +10%.

Ⅱ. Exit Guarantee

1.Appearance Guarantee: No oxidation occurs during 12 months of storage in original packaging.

2.Functional Assurance

A:One year to ensure good welding continuity.

B:Ensure good conductivity within two years.

Ⅲ、 Points for Attention in FPC Welding

1. FC itself has hygroscopicity. It is suggested to preheat the three-layer plate (including) for 30 minutes before use, and bake it for 120 minutes at 100 in order to avoid bursting due to hygroscopicity and rapid oxidation during operation.

2. HOT BAR jobs

A: FPC is used for cooked pressing. CVI should be crossed over glass to avoid suspension, resulting in fracture of copper during bending.

B: FPC avoids the use of dead angle and is liable to cause fracture.

3: SMT operation: The plating part should be shielded to prevent atomization in flow welding.

4: Hand welding operation: the working temperature of soldering iron should not exceed 290 C, and the time of soldering iron staying on the plate surface should not exceed 10 seconds.

SERENGETI

覆铜板检验报告
PI CCL Quality Test Report

日期（DATE）：2023-11-09

品名(Product Name)	SHISE252018FY1
PI 厚度（PI Film Thickness）μm	25
胶着剂厚（Adhesive Thickness）μm	20
铜箔厚度（Copper Foil Thickness）μm	18
幅宽（Width）mm	250
生产日期（P/Date）	2023-11-08
保质期（Shelf life）	2023-11-08-2024-11-07

工厂地址：江苏省太仓市太平北路 168 号
TEL：0512-53378333 FAX：0512-53378355
Factory Address: No. 168 Taping North Road, TaiCang City, JiangSu Province, China

测试项目 Item		品质标准（Spec）	测试结果（Result） 生产批号（LOT NO.）			测试方法（Test Method）
			23B08A**	***		
厚度 Thickness(μm)		±10%	63	***		SERENGETI SPEC
剥离强度 Peel Strength(kgf/cm)	A 面	≥0.7	1.22	***		IPC-TM-650 2.4.9
	B 面					
尺寸安定性 Dimensional Stability(%)	MD	<±0.2%	-0.0813	Nothing		IPC-TM-650 2.2.4
	TD		0.0073	Follows		
焊锡耐热性 Solder Resistance		300℃*10SEC 无分层起泡	PASS	***		IPC-TM-650 2.4.13
外观 Appearance		无凸点、撞损、裁切不良、皱痕等等	OK	***		SERENGETI SPEC

注：1、保存条件：常温常湿保存一年（Deadline of reserve is 1 year in normal condition）。
2、以上测试项目仅供参考（Above test for reference only）。

苏州赛伦格蒂电子材料有限公司

审核：邮

2023-11-08 品保部

Quality Assurance Certificate

Customer Name: Shenzhen Kenaixin Technology Co., Ltd

Our commitment A1382product,Has been produced and inspected according to your company's technical quality indicators or supply quality agreement, All indicators are qualified, Factory approval.

Product raw material list

Category	Name of material	Material pecifications	Suppliers
FPC	Substrate	Half-and-half adhesive substrate	Cai Renge di
	Back Glue	3M 9471 LE	3M
	Positive ink	Black oil （PSM-800）	U-LI
	Character ink	hite characters （KTM-150F）	Glory
	Gold plated	1 U	Get Rich