

FPC 天线样品承认书

The Main FPC Touch & Antenna Sample Confirmation

客户名称 Customer	深圳市科奈信科技有限公司			
项目名称 Project Name	A1531-L		日期	2025-5-09
			Date	
物料编号 Project NO.	SN1387	备注	FPC Antenna	
		Notes		
客户料号				
频段 Frequency Range	BT			
设计 Designed By	RF Engineer		Structural Engineer	
审核 Checked By	Engineering Manager			
客户确认 Client' s Approval				

设计单位：司南微电子（深圳）有限公司
Designer: SINAWELL Electronics(Shenzhen) Co., Ltd.

地 址：深圳市宝安区新安 28 区大宝路 49-1 号金富来大厦 A 座 712-717
Add: 712-717, Block A Jinfulai Building,49-1 Dabao Road,Xinan 28th area,Baoan District,Shenzhen,China

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1. 规格书概述
- 该规格书描述 A1531-L 内置式 FPC 天线的状况，其频段为 BT。
2. FPC 天线外观



3. 电性能

3.1. 天线频段

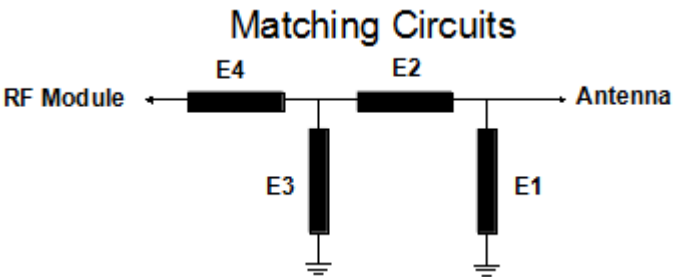
	BT
发射频段(MHz)	2400MHz-2500MHz

3.2. 匹配电路

测试点在天线连接器(射频测试口)后，见下图

1. BT 天线匹配。

Element	Value
E1	NC
E2	0 欧姆
E3	NC
E4	0 欧姆

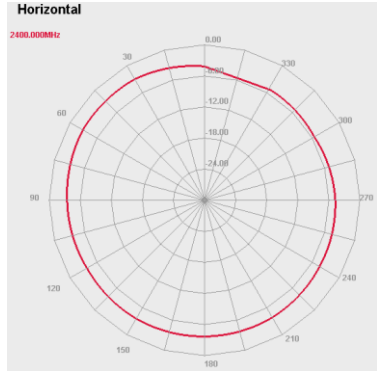
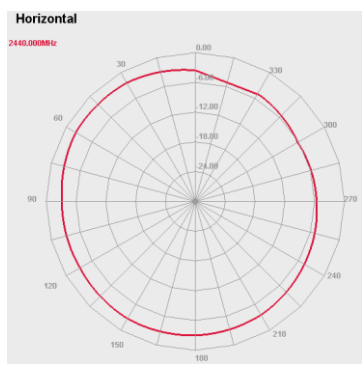
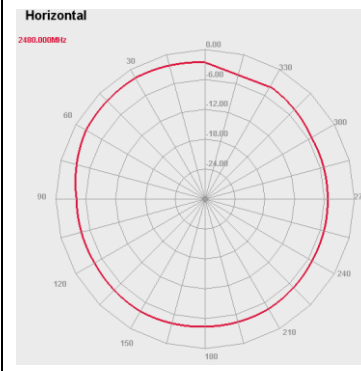


3.3. 回波损耗

BT VSWR+ Return

	谐振点范围(MHz)	频点(MHz)/最大回波损耗(dB)		
	2400-2500		2400	2500
		VSWR	1.71	1.9
		Return loss	-11.634	-10.163

3.4. 天线增益

Channel	0	39	78
Gain	-2.86dBi	-2.9dBi	-2.88dBi
Gain diagram			

Passive Test For										
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHS (%)	DHS (%)	Max (dB)	Min (dB)	Attenuat Hor	Attenuat Ver
2400	28.53	-5.45	-2.86	-5.01	14.131	14.396	-2.86	-18.1	46.5	45.85
2410	32.02	-4.95	-2.82	-4.55	15.584	16.439	-2.4	-18.33	46.61	46.05
2420	33.84	-4.71	-2.51	-4.21	16.207	17.638	-2.06	-18.29	46.59	46.17
2430	35.59	-4.49	-2.37	-3.84	16.869	18.716	-1.69	-18.4	46.77	46.14
2440	32.38	-4.9	-2.79	-4.19	15.406	16.971	-2.04	-18.82	46.79	45.97
2450	29.78	-5.26	-2.9	-4.61	14.233	15.55	-2.46	-18.23	46.58	45.82
2460	28.78	-5.41	-2.42	-4.57	13.807	14.975	-2.42	-16.83	46.74	45.97
2470	26.9	-5.7	-3.01	-4.67	12.649	14.254	-2.52	-15.27	46.54	45.98
2480	27.98	-5.53	-2.88	-4.09	12.812	15.171	-1.94	-15.04	46.48	46.46
2490	23.64	-6.26	-3.25	-4.48	10.444	13.194	-2.33	-15.41	46.53	46.76
2500	22.2	-6.54	-3.47	-4.4	9.427	12.774	-2.25	-15.09	46.77	46.39

4. 外观结构

4.1. FPC 天线材质 FPC

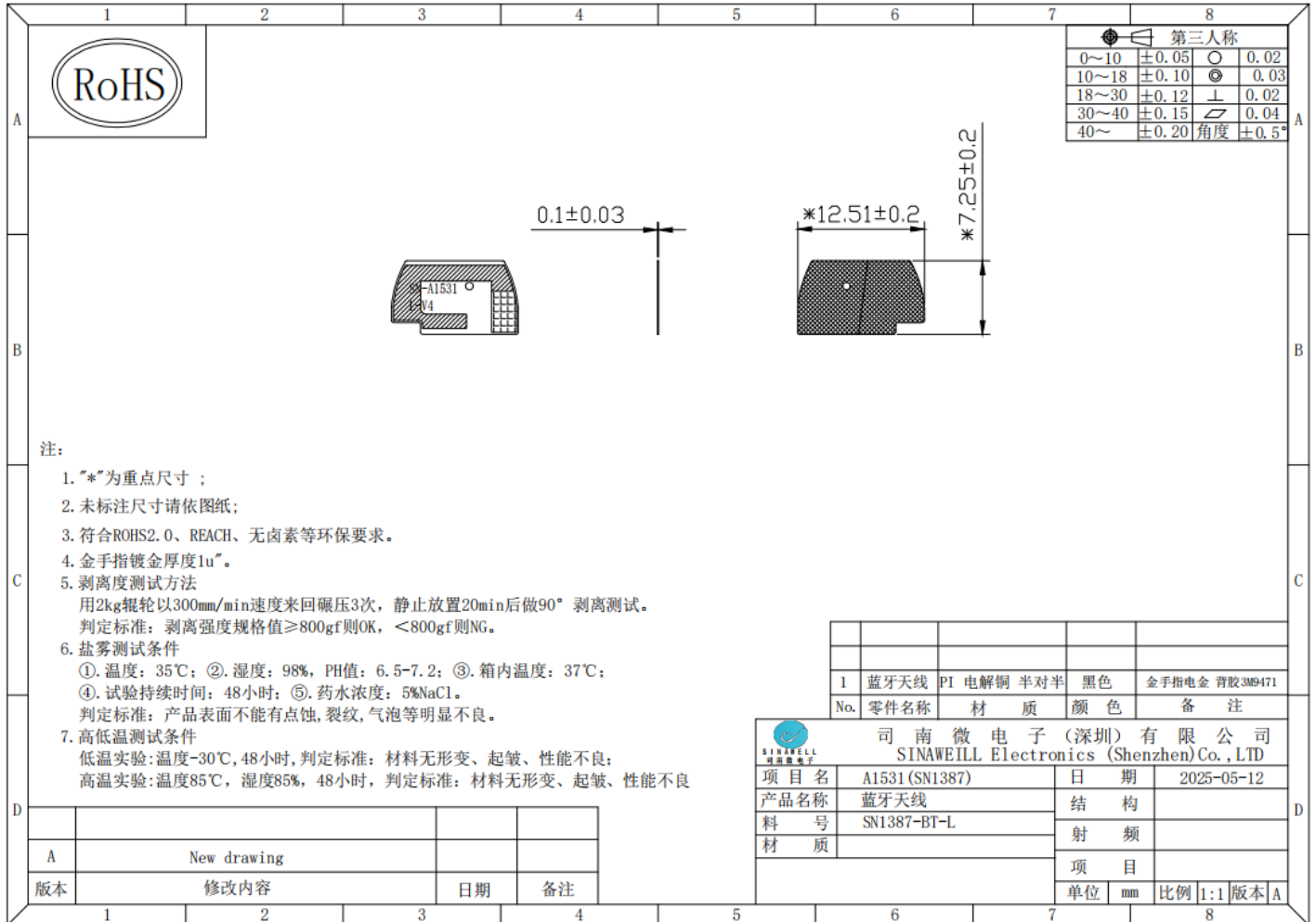
5. 备注

(电性能测试报告)
电性能测试报告中，为厂家提供的 3D 暗室数据，
如下表格格式

附录一：结构图纸

附录二(电性能测试报告)

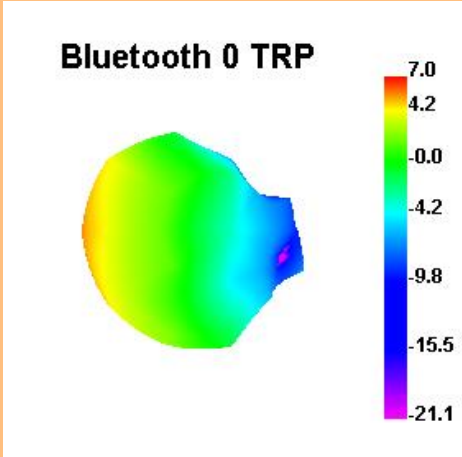
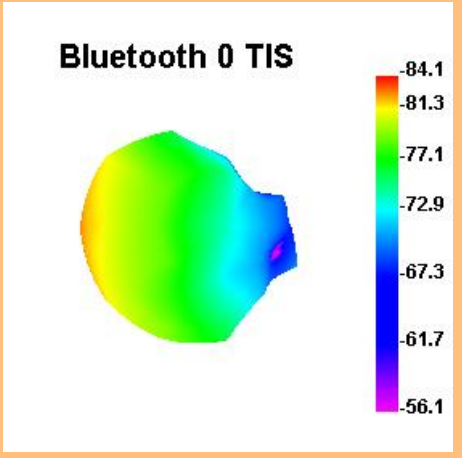
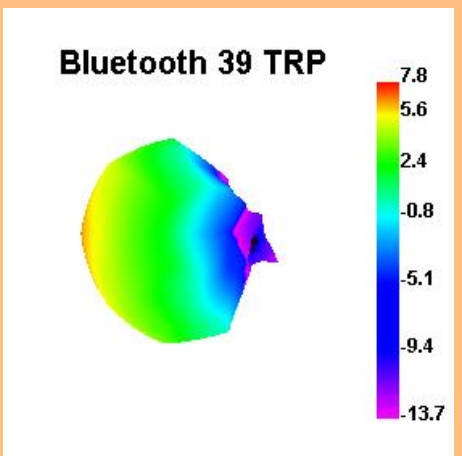
FPC 结构图纸

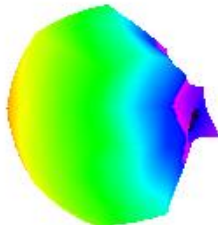
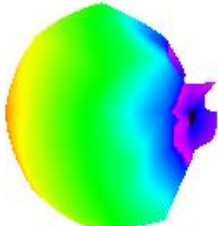
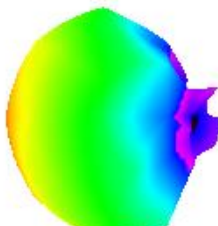


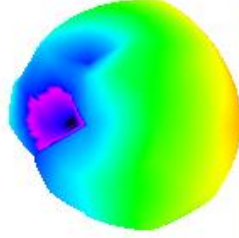
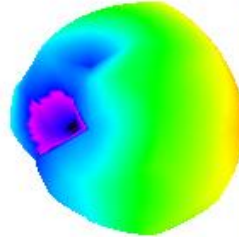
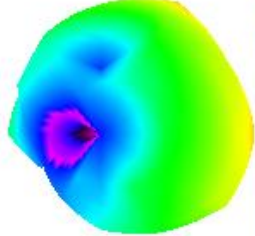
重点尺寸

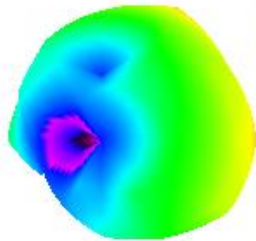
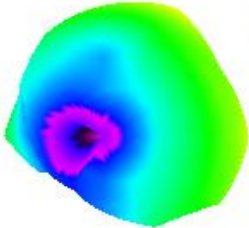
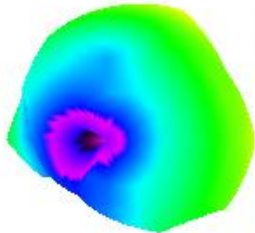
NO	尺寸	公差	
1	12.51	±0.2	
2	7.25	±0.2	
3	0.1	±0.03	
4	0.1	±0.03	

3D 测试报告

BT	Channel	3D 耦合测试	场强图
TRP	0	3.21	Bluetooth 0 TRP 
TIS	0	-86.45	Bluetooth 0 TIS 
TRP	39	2.76	Bluetooth 39 TRP 

TIS	39	-86.78	Bluetooth 39 TIS 
TRP	78	2.43	Bluetooth 78 TRP 
TIS	78	-86.57	Bluetooth 78 TIS 

BT	Channel	3D 耦合测试	场强图
TRP	0	-2.52	Bluetooth 0 TRP 
TIS	0	-80.72	Bluetooth 0 TIS 
TRP	39	-1.73	Bluetooth 39 TRP 

TIS	39	-81.78	Bluetooth 39 TIS  -87.6 -85.4 -82.0 -78.6 -74.2 -69.7 -65.2
TRP	78	-1.15	Bluetooth 78 TRP  5.3 3.1 -0.3 -3.6 -8.1 -12.6 -17.1
TIS	78	-80.97	Bluetooth 78 TIS  -87.5 -85.2 -81.9 -78.5 -74.0 -69.5 -65.1