

FPC 天线样品承认书

The Main FPC Antenna Sample Confirmation

客户名称 Customer	Shenzhen CANNICE Technology Co., Ltd.			
项目名称 Project Name	Z1291-BT-L		日期	2024-01-24
			Date	
物料编号 Project NO.	SN1155-BT-L	备注	FPC 天线	
		Notes		
客户料号	300012000278			
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				

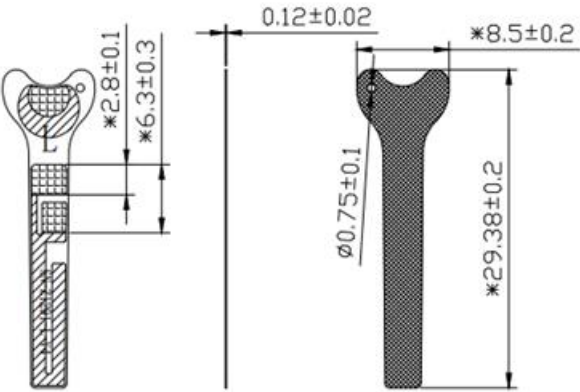
设计单位：司南微电子（深圳）有限公司
Designer: SINAWELL Electronics(Shenzhen) Co., Ltd.

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

1. Specification overview

This specification describes the condition of the Z1291-BT-L built-in FPC antenna in the BT frequency band.

2. Appearance of the FPC antenna



1. Electrical properties

1.1. Antenna frequency band

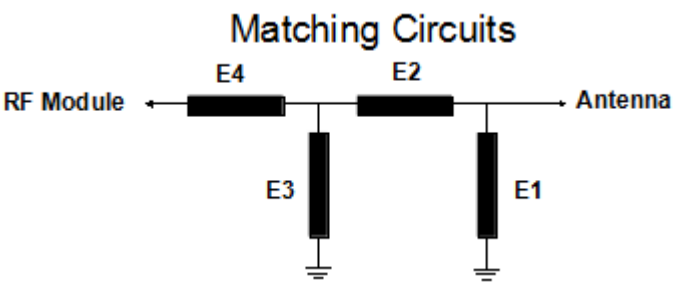
	BT
Transmitting band (MHz)	2400MHz-2500MHz

1.2. Matching circuit

The test point is behind the antenna connector (RF test port), see the figure below

1. BT Antenna matching。

Element	Value
E1(0402)	NC
E2(0402)	0 欧姆
E3(0402)	NC

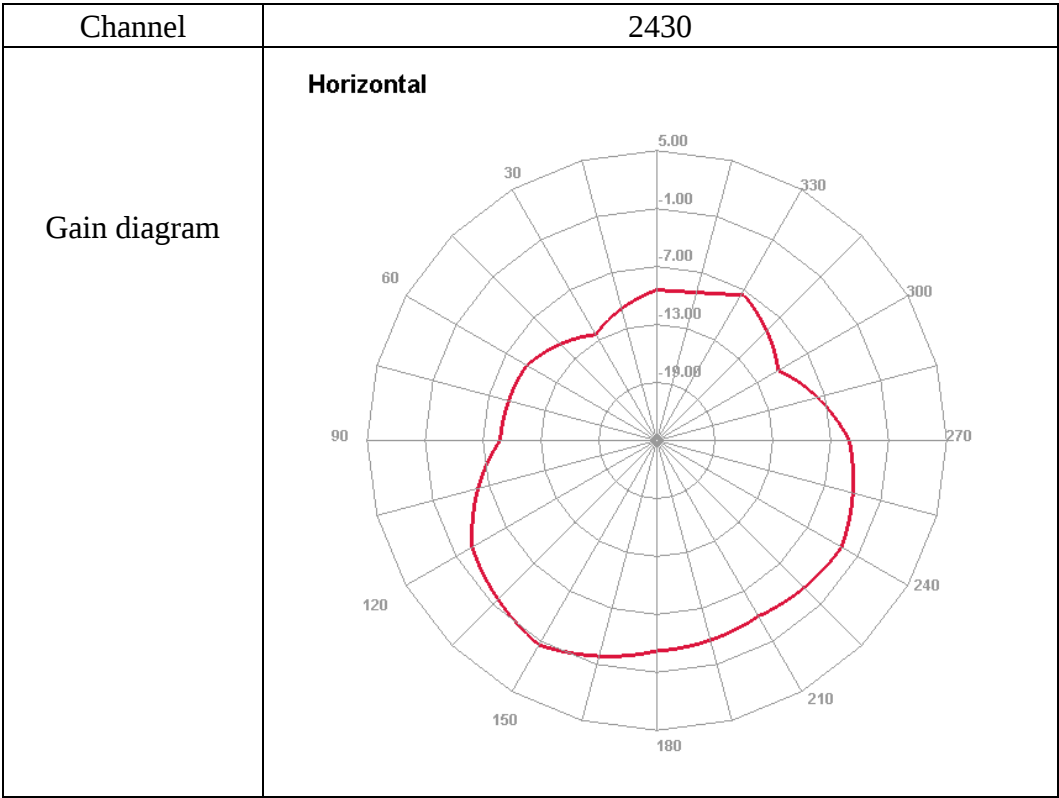


1.3. Return loss

BT VSWR+ Return

	Resonant point range (MHz)	Frequency point (MHz)/ Max return loss (dB)		
			2400	2500
		VSWR	1.95	1.89
		Return loss	-9.85	-10.23

3.4 Gain



Passive Test For BT										
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHS (%)	DHS (%)	Max (dB)	Min (dB)	Attenut Hor	Attenut Ver
2400	23.13	-6.36	-0.13	-2.28	14.446	8.681	-0.13	-15.62	46.5	45.85
2410	23.88	-6.22	0	-2.15	15.085	8.791	0	-16.21	46.61	46.05
2420	25.92	-5.86	0.21	-1.94	16.498	9.421	0.21	-16.99	46.59	46.17
2430	29.76	-5.26	0.7	-1.45	19.136	10.627	0.7	-17.48	46.77	46.14
2440	29.84	-5.25	0.64	-1.51	19.389	10.447	0.64	-18.61	46.79	45.97
2450	26.28	-5.8	0	-2.15	17.205	9.07	0	-19.92	46.58	45.82
2460	27.46	-5.61	0.15	-2	17.965	9.493	0.15	-19.78	46.74	45.97
2470	25.99	-5.85	-0.16	-2.31	17.026	8.96	-0.16	-19.85	46.54	45.98
2480	26.78	-5.72	-0.14	-2.29	17.493	9.285	-0.14	-19.24	46.48	46.46
2490	29.81	-5.26	0.4	-1.75	19.453	10.355	0.4	-18.58	46.53	46.76
2500	29.69	-5.27	0.38	-1.77	19.235	10.46	0.38	-17.99	46.77	46.39

2. Appearance and structure

2.1. FPC antenna material FPC

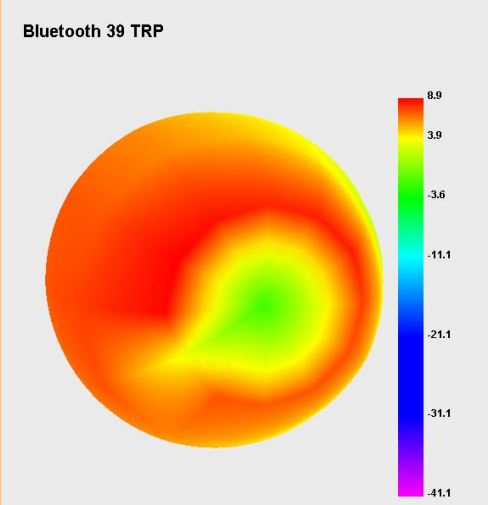
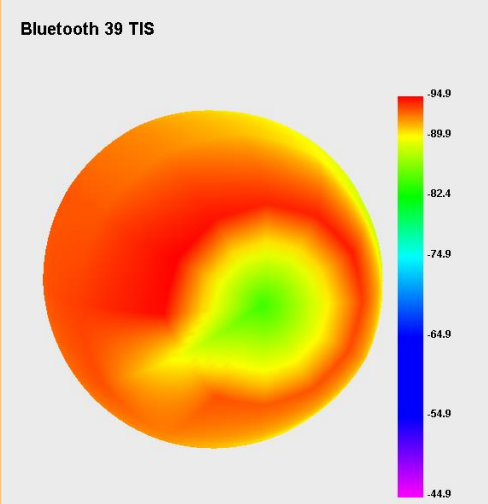
3. Remarks (Electrical Performance test report)

In the electrical performance test report, 3D darkroom data provided by the manufacturer,
The following table format

Appendix I: Electrical performance test report

3D Test report (FS)

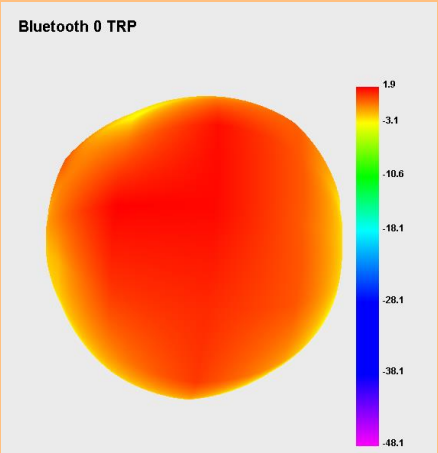
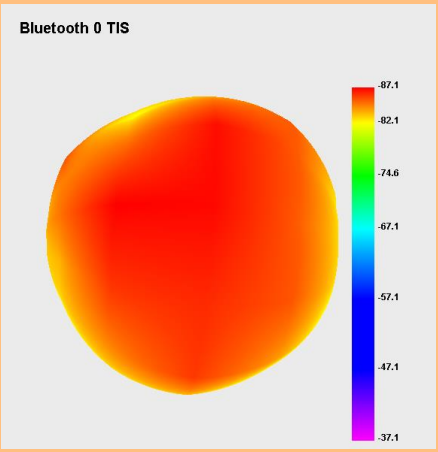
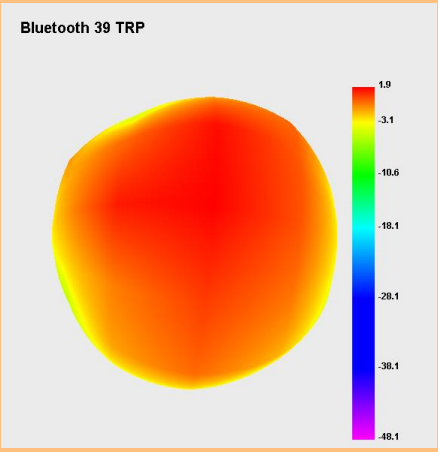
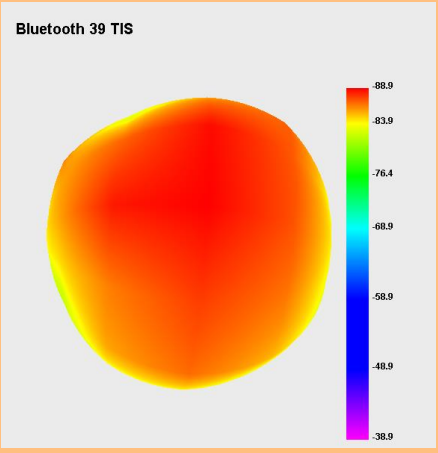
BT	Channel	3DCoupling test	Field intensity pattern
TRP	0	1.08	Bluetooth 0 TRP

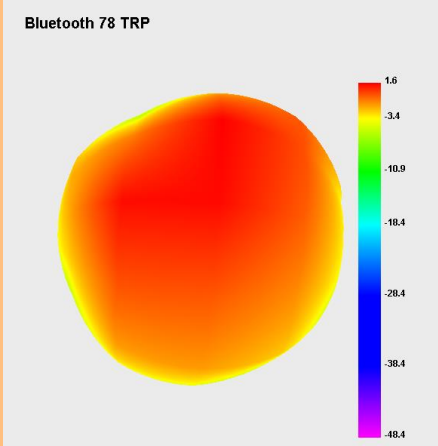
TIS	0	-87.95	
TRP	39	4.96	Bluetooth 39 TRP
TIS	39	-90.96	Bluetooth 39 TIS

TRP	78	3.63	Bluetooth 78 TRP
TIS	78	-89.46	Bluetooth 78 TIS

3D Test Report (BH)

BT	Channel	3DCoupling test	Field intensity pattern
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TRP	0	-1.86	Bluetooth 0 TRP
TIS	0	-83.43	Bluetooth 0 TIS
TRP	39	-2.53	Bluetooth 39 TRP
TIS	39	-84.53	Bluetooth 39 TIS

TRP	78	-3.15	Bluetooth 78 TRP 
TIS	78	-84.38	Bluetooth 78 TIS 