

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-R		日期	2024-01-24
			Date	
物料编号 Project NO.	SN1155-BT-R	备注	FPC 天线	
		Notes		
客户料号	300012000279			
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.

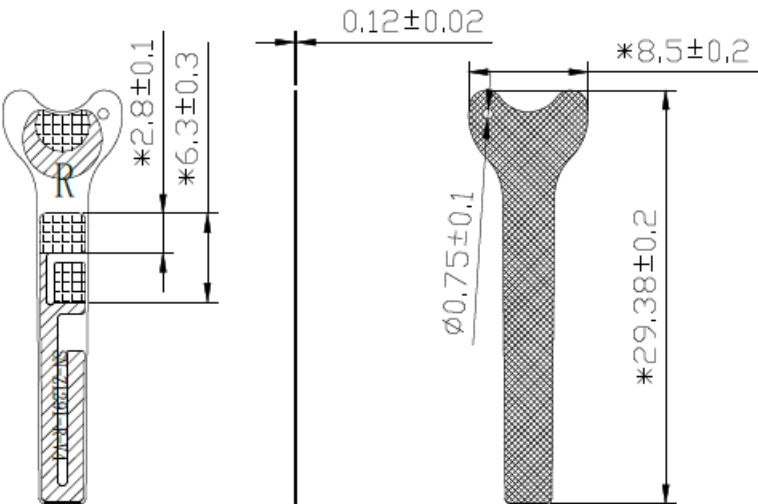
地 址：深圳市宝安区新安 28 区大宝路 49-1 号金富来大厦 A 座 712-717

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-R built-in FPC antenna in the BT frequency band.

2. Appearance of the FPC antenna



1. Electrical properties

1.1. Antenna frequency band

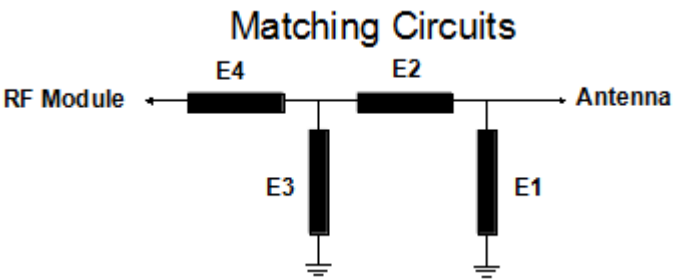
	BT
Transmitting band (MHz)	2400MHz-2500MHz

1.2. Antenna matching

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 Ω
E3(0402)	NC



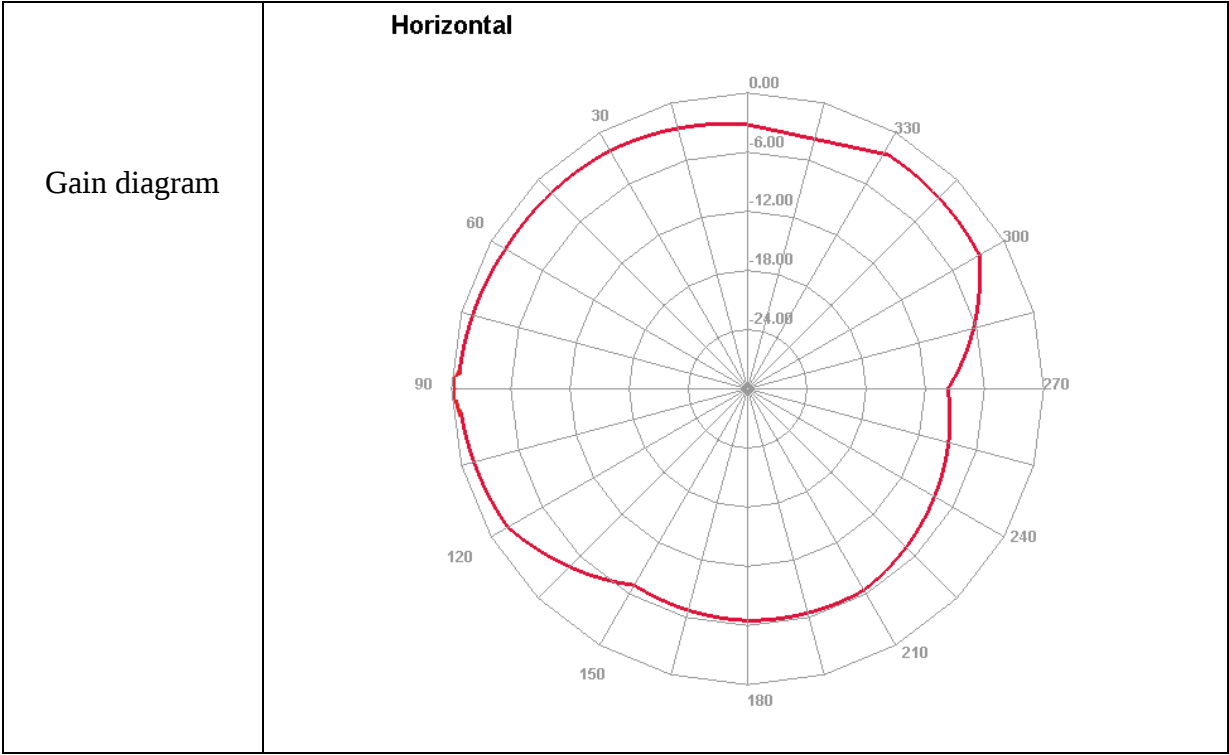
1.3. Return loss

BT VSWR+ Return

	Resonant point range (MHz)	Frequency point (MHz)/ Max return loss (dB)		
	2400-2500		2400	2500
		VSWR	1.74	1.83
		Return loss	-11.35	-10.69

3.4 Gain

Channel	2500
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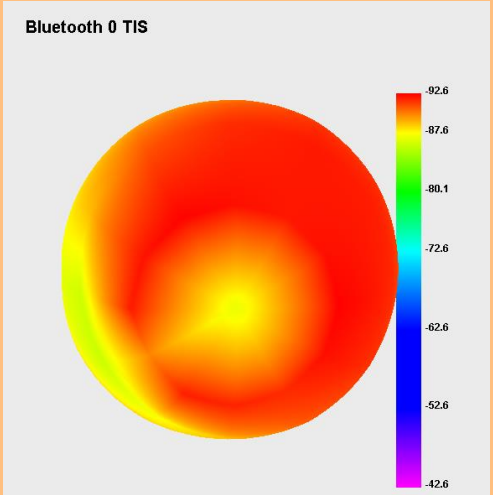
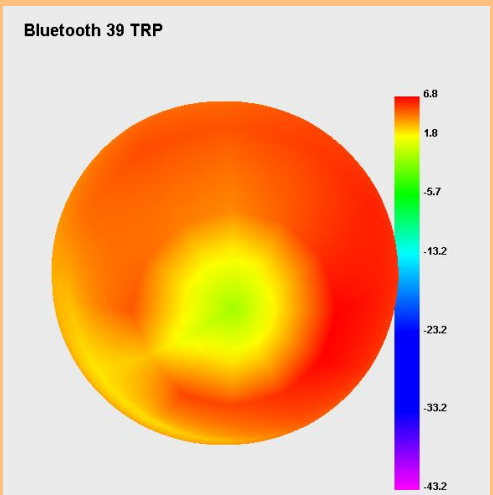
Passive Test For BT										
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHS (%)	DHS (%)	Max (dB)	Min (dB)	Attenut Hor	Attenut Ver
2400	30.8	-5.11	-0.63	-2.78	18.006	12.796	-0.63	-19.1	46.5	45.85
2410	33.29	-4.78	-0.33	-2.48	19.344	13.945	-0.33	-16.46	46.61	46.05
2420	33.39	-4.76	-0.44	-2.59	19.21	14.177	-0.44	-15.03	46.59	46.17
2430	34.26	-4.65	-0.57	-2.72	19.441	14.815	-0.57	-14.35	46.77	46.14
2440	35.54	-4.49	-0.65	-2.8	19.963	15.575	-0.65	-16.32	46.79	45.97
2450	34.79	-4.59	-0.5	-2.65	19.44	15.352	-0.5	-17.7	46.58	45.82
2460	35.26	-4.53	-0.04	-2.19	19.673	15.584	-0.04	-16.5	46.74	45.97
2470	29.99	-5.23	-0.47	-2.62	16.728	13.258	-0.47	-15.96	46.54	45.98
2480	29.72	-5.27	-0.41	-2.56	16.445	13.278	-0.41	-14.73	46.48	46.46
2490	31.38	-5.03	-0.13	-2.28	17.397	13.979	-0.13	-13.47	46.53	46.76
2500	31.45	-5.02	0	-2.15	17.593	13.859	0	-12.86	46.77	46.39

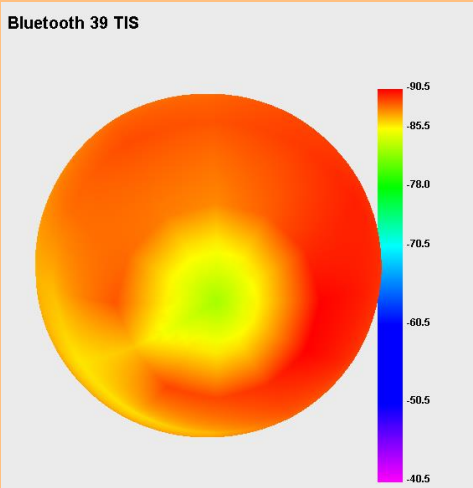
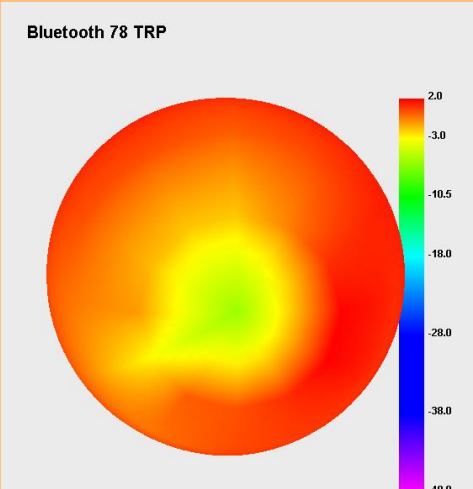
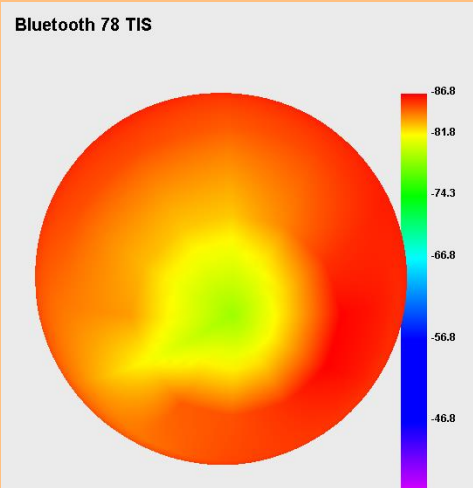
4. Appearance and structure

4.1. FPC antenna material
FPC

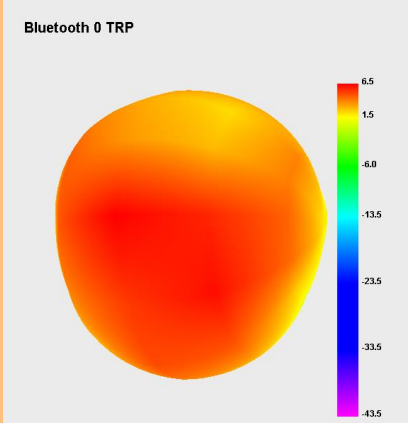
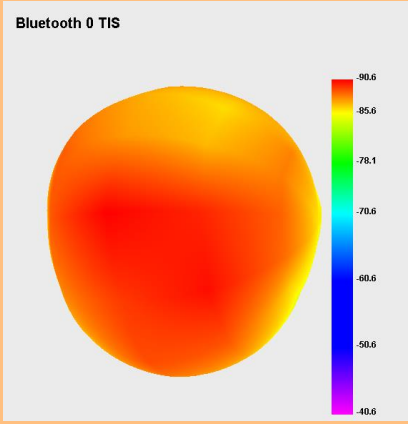
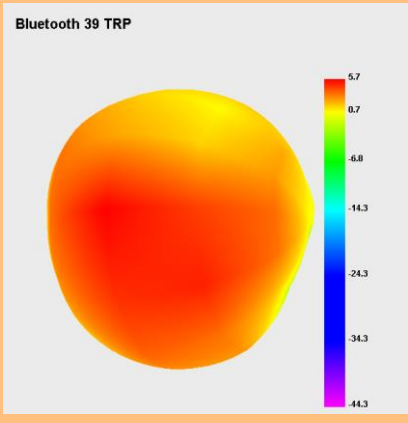
Appendix I (Electrical Performance Test Report)

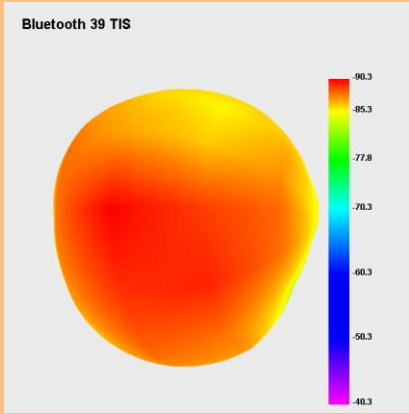
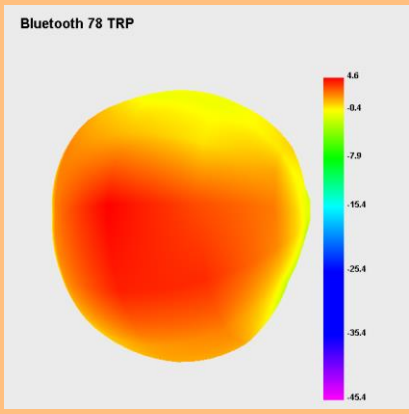
3D Test report (FS)

BT	Channel	3D Coupling test	Field intensity pattern
TRP	0	2.99	
TIS	0	-89.32	Bluetooth 0 TIS
TRP	39	4.05	Bluetooth 39 TRP

TIS	39	-87.75	Bluetooth 39 TIS
TRP	78	0.32	Bluetooth 78 TRP
TIS	78	-85.13	Bluetooth 78 TIS

3D Test report (BH)

BT	Channel	3D 耦合测试	场强图
TRP	0	0.99	Bluetooth 0 TRP
TIS	0	-86.1	Bluetooth 0 TIS
TRP	39	0.87	Bluetooth 39 TRP

TIS	39	-85.43	Bluetooth 39 TIS
TRP	78	-0.67	Bluetooth 78 TRP
TIS	78	-85.51	Bluetooth 78 TIS