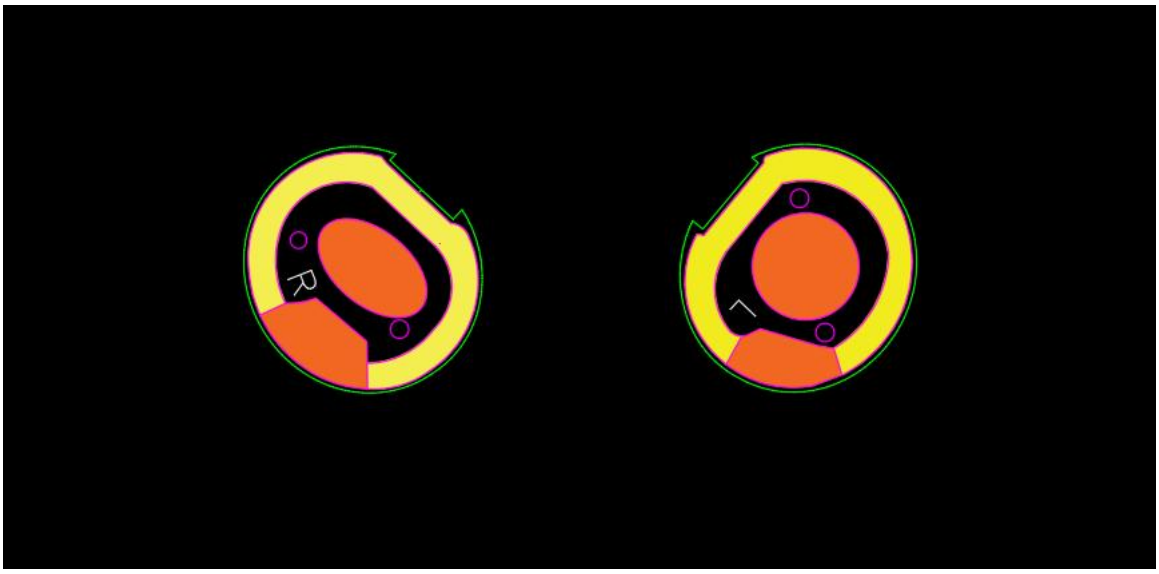
WIFI /&BT FPC Antenna

A2147(HA-A25T/A18T/Z250T)

1. Explanation of Product Number

S	2	B	4	B	B	1	F	3	B	0	1	0	0	0
				(1)	(2)		(3)	(4)		(5)				



Product Description:

Tolerances (Unless otherwise specified) X : ± 1 X.X : ± 0.1 X.XX : ± 0.01 Angle : ± Hole Dia. : ±		深圳市福伯特电子有限公司	
Scale :	Unit：mm	Fbetter International (H.K.) Co.LTD.	
Drawn By : Shelley	Checked By : Simon		
Designed By :Simon	Approved By :Kevin	Professional Elec. Component Distributer	
TITLE： WIFI FPCB Antenna		PART NO.	S2B4BB1F3B01000
			REV. A

(1) Product Categories:

B:BT Antenna

(2) Dimensions:

B1: 10.38*10.7*0.13(mm)

(3) Material:

F: FPC

(4) Working Frequencies:

1B: 2.4G-2.5G

(5) Antenna Series:

01: Serial number

2. Features

*Stable and reliable in performances
*RoHS compliance
*Low cost

3. Applications

*WIFI IEEE802.11/BT

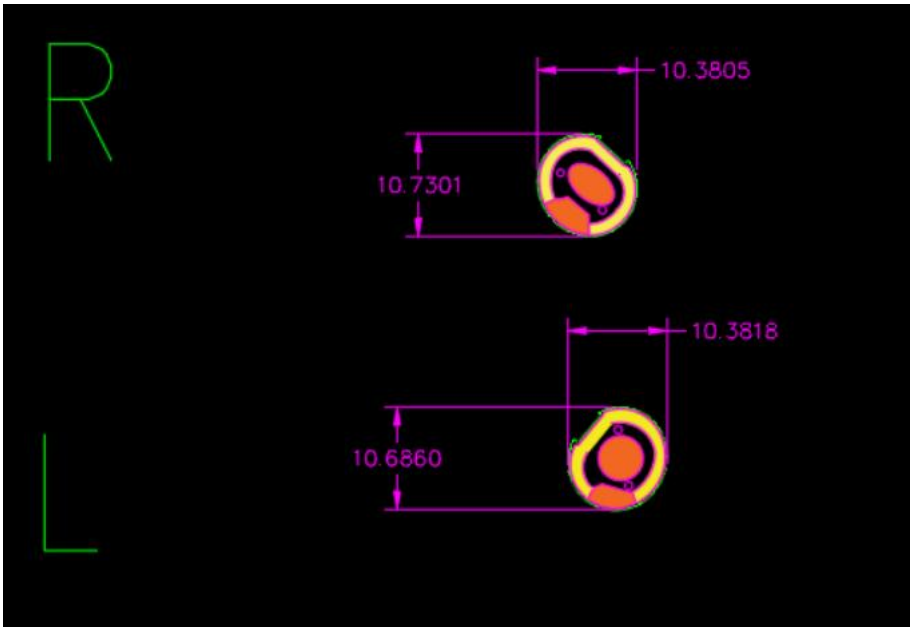
4. Description

* YINGFENMG FPCB antenna series are specially designed for 2.4G-2.5G band application. Based on YINGFENG proprietary designs and processes, this FPCB antenna has excellent stability and sensitivity to consistently provide high signal reception efficiency.

5. Antenna Electrical Specifications :

Characteristics	Specifications			Unit
Outline Dimensions	10.38*10.7*0.13			mm
Frequency	2400~2500			MHz
Impedance	50			Ω
Polarization	Linear Polarization			
Return Loss Table	Return Loss			
Freq.Band	2.4G Hz	2.45G Hz	2.5G Hz	
dB	-16.98	-29.81	17.34	

6. Dimensions (unit: mm)



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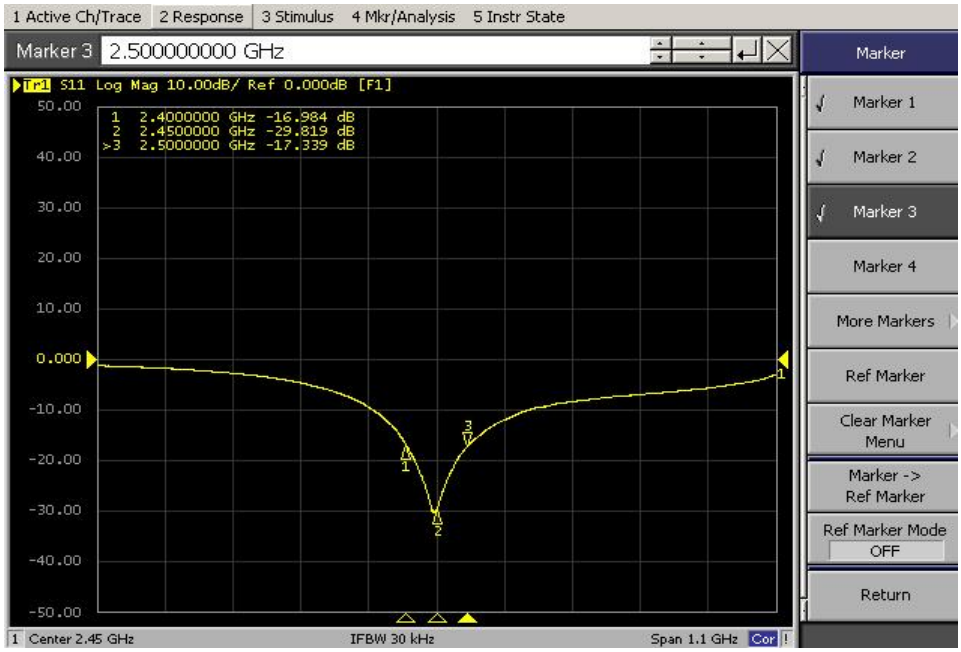
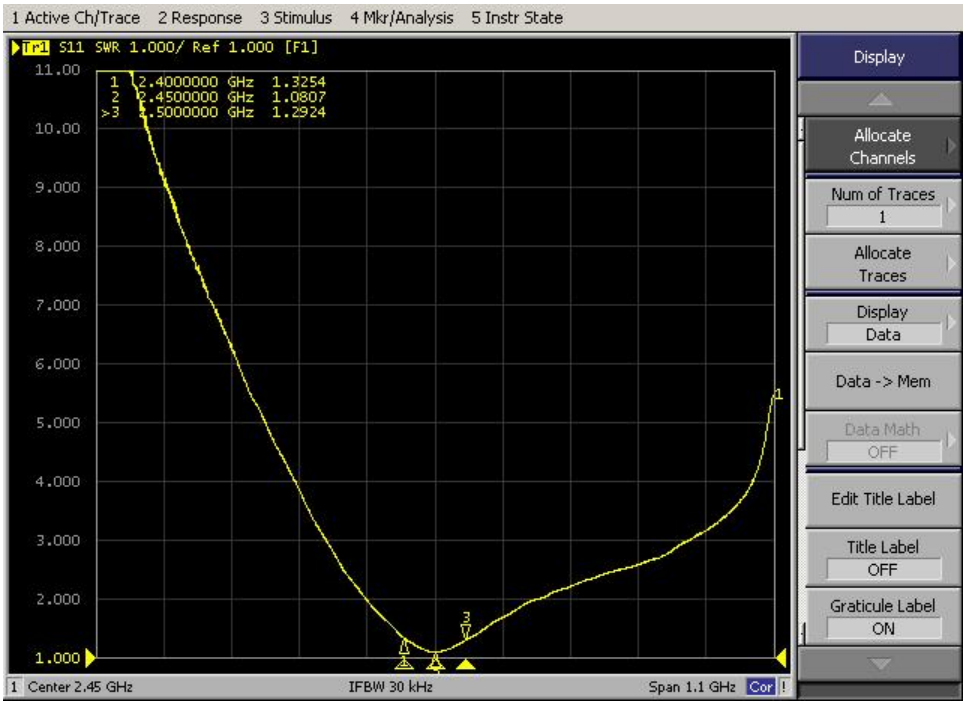
公差：±0.5mm

7. Measurement Characteristics:

(1) Return Loss



(2) VSWR



Tolerances (Unless otherwise specified) **X : ± 1 X.X : ± 0.1 X.XX : ± 0.01** **Angle : ± Hole Dia. : ±**		深圳市福伯特电子有限公司	
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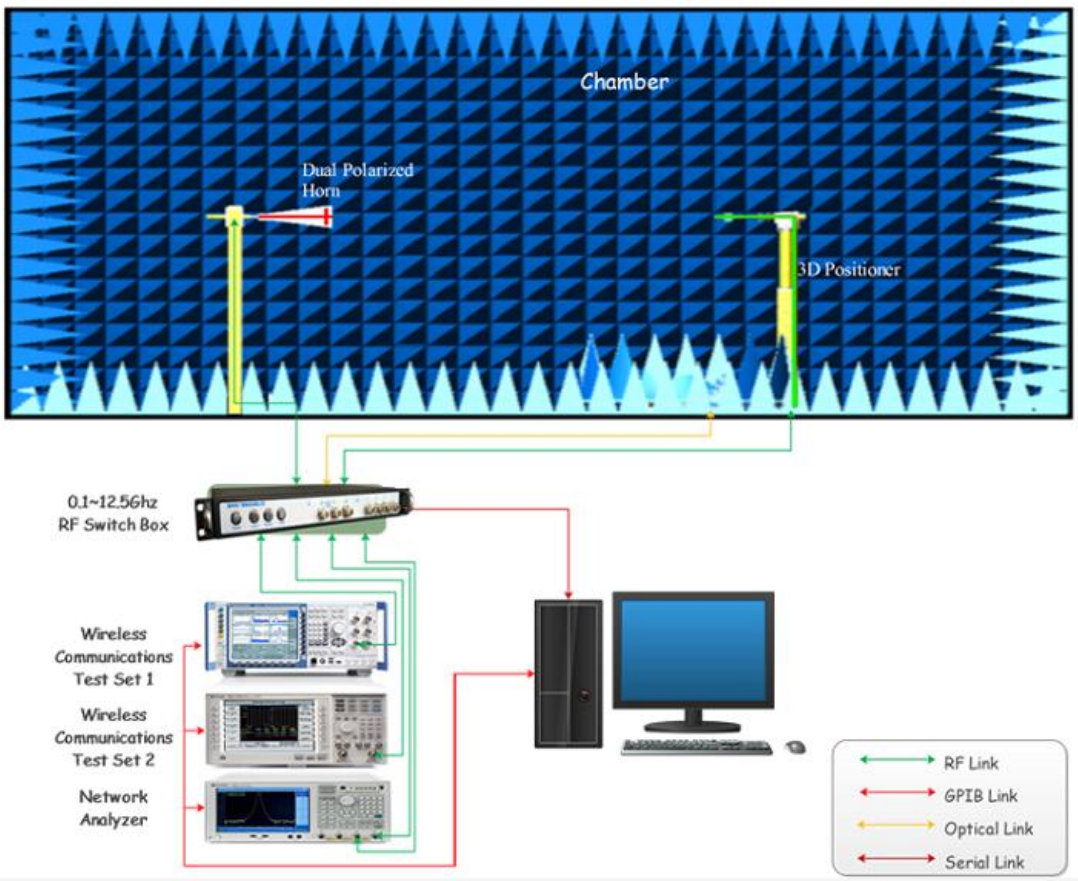
8. Three D Radiation Pattern measurements



Conduction

R

TRM/CA/01/C (Output Power)
Packet Length Tested: DH1

Hopping ON	Any	Limits
Average Power	8.34 dBm	
Max Power	8.56 dBm	< 20.00 dBm
Min Power	8.12 dBm	> -6.00 dBm
Peak Power	8.68 dBm	< 23.00 dBm
Total Packets Failed	0	
Total Packets Tested	100	
Result	Pass	

TRM/CA/08/C (Initial Carrier)
Packet Length Tested: DH1

Hopping ON	Any	Limits
Average Offset	-0.7 kHz	
Max Offset	4.5 kHz	<= 75 kHz
Min Offset	-6.8 kHz	<= 75 kHz
Total Packets Failed	0	
Total Packets Tested	100	
Result	Pass	

L

Overall Result: PASS

TRM/CA/01/C (Output Power)
Packet Length Tested: DH1

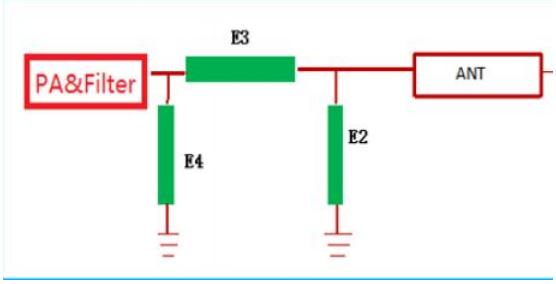
Hopping ON	Any	Limits
Average Power	8.31 dBm	
Max Power	8.49 dBm	< 20.00 dBm
Min Power	8.07 dBm	> -6.00 dBm
Peak Power	8.59 dBm	< 23.00 dBm
Total Packets Failed	0	
Total Packets Tested	100	
Result	Pass	

TRM/CA/08/C (Initial Carrier)
Packet Length Tested: DH1

Hopping ON	Any	Limits
Average Offset	-0.3 kHz	
Max Offset	3.0 kHz	<= 75 kHz
Min Offset	-5.1 kHz	<= 75 kHz
Total Packets Failed	0	
Total Packets Tested	100	
Result	Pass	

match

Ele ment	paramete r value（R/L)
ANT	FPC
E2	NC
E3	2nh
E4	2.4pf



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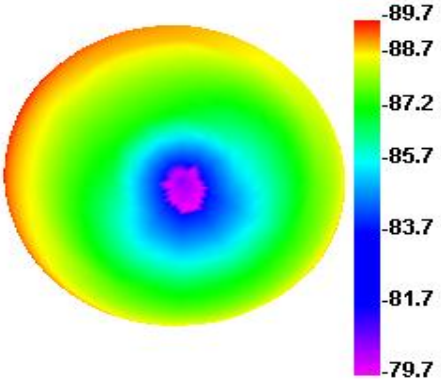
		REV.	A

9.OTA Radiation Pattern

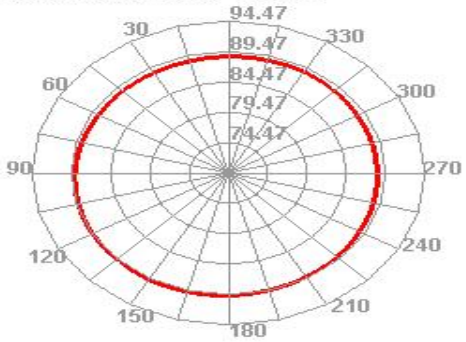
9-1.3D Gain Pattern (Radiation Pattern at 2450 MHz)

R (free field)			
Test	Bluetooth TIS		
Result	0	39	78
Frequency (MHz)	2402	2441	2480
TRP(dBm)	0.77	1.88	1.37
TIS(dBm)	-87.31	-88.52	-89.04

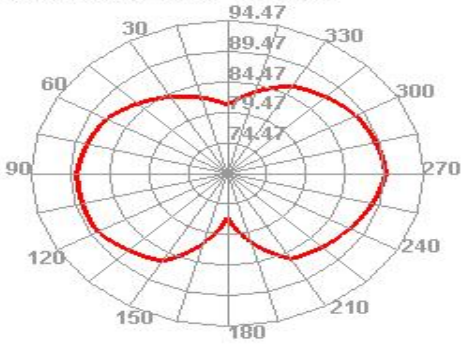
Bluetooth 39 TIS



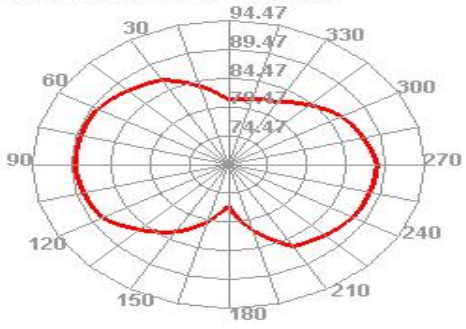
Bluetooth 39 TIS H



Bluetooth 39 TIS E1



Bluetooth 39 TIS E2



Tolerances (Unless otherwise specified) **X : ± 1 X.X : ± 0.1 X.XX : ± 0.01** **Angle : ± Hole Dia. : ±**		深圳市福伯特电子有限公司	
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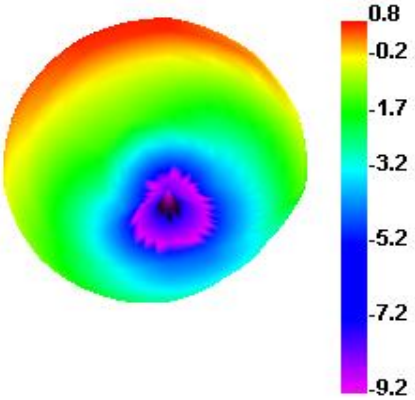
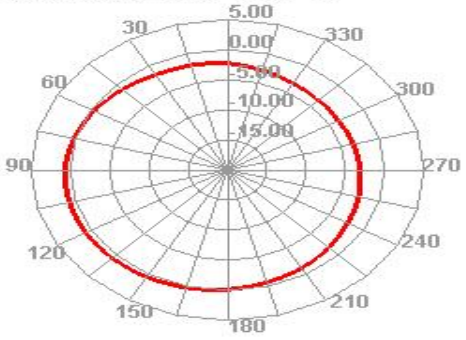
			REV. **A**

L(free field)			
Test	Bluetooth TIS		
Result	0	39	78
Frequency (MHz)	2402	2441	2480
TRP(dBm)	0.23	1.14	1.67
TIS(dBm)	-88.23	-89.43	-88.34

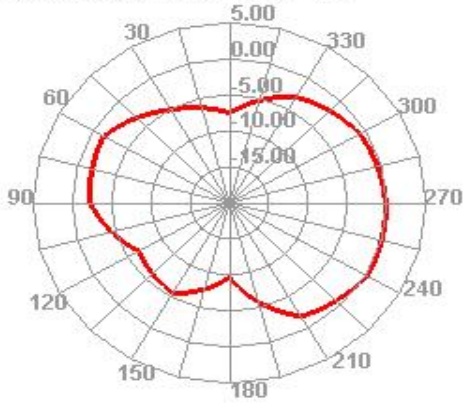
Bluetooth 39 TRP



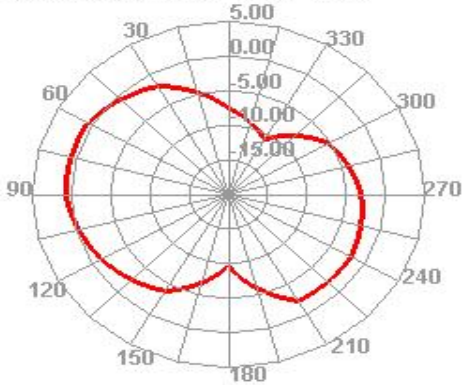
Bluetooth 39 TRP H



Bluetooth 39 TRP E1



Bluetooth 39 TRP E2



Tolerances (Unless otherwise specified) **X : ± 1** **X.X : ± 0.1** **X.XX : ± 0.01** **Angle : ±** **Hole Dia. : ±**		深圳市福伯特电子有限公司	
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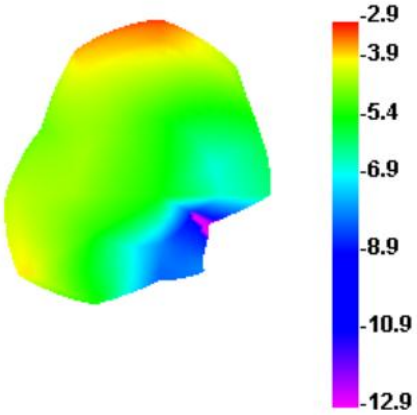
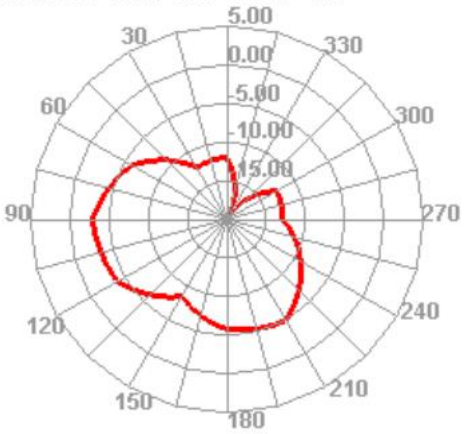
			REV. **A**

R(headform)			
Test	Bluetooth TIS		
Result	0	39	78
Frequency (MHz)	2402	2441	2480
TRP(dBm)	-6.26	-7.19	-7.2
TIS(dBm)	-80.13	-79.67	-78.13

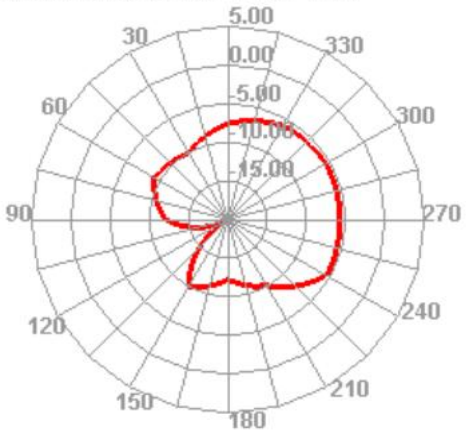
Bluetooth 39 TRP



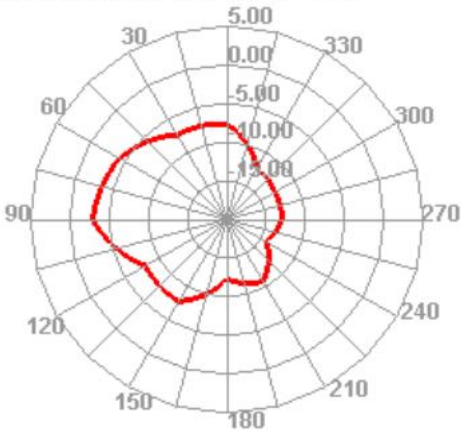
Bluetooth 39 TRP H



Bluetooth 39 TRP E1



Bluetooth 39 TRP E2



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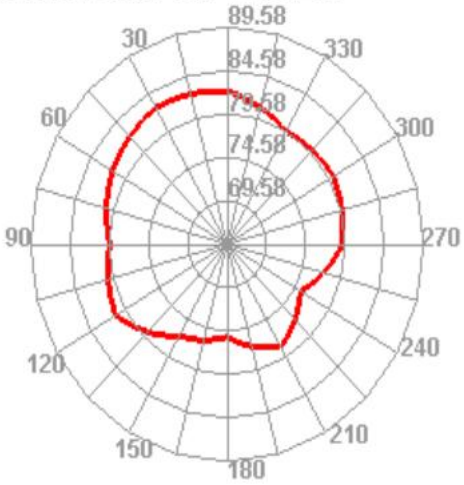
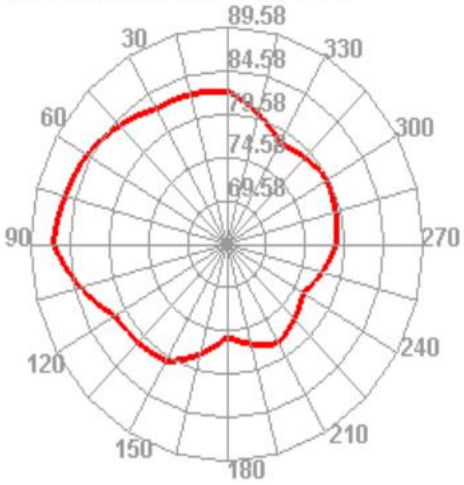
			REV. **A**

Lheadform)			
Test	Bluetooth TIS		
Result	0	39	78
Frequency (MHz)	2402	2441	2480
TRP(dBm)	-5.85	-6.2	-6.19
TIS(dBm)	-79.08	-80.43	-80.97

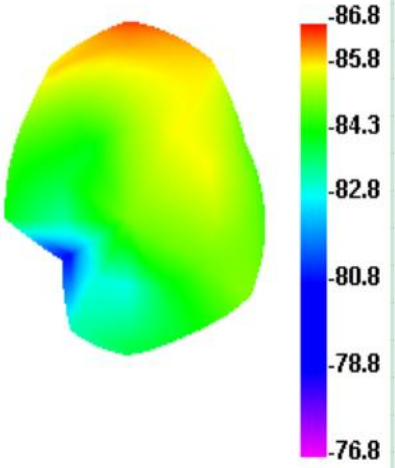
Bluetooth 39 TIS E1



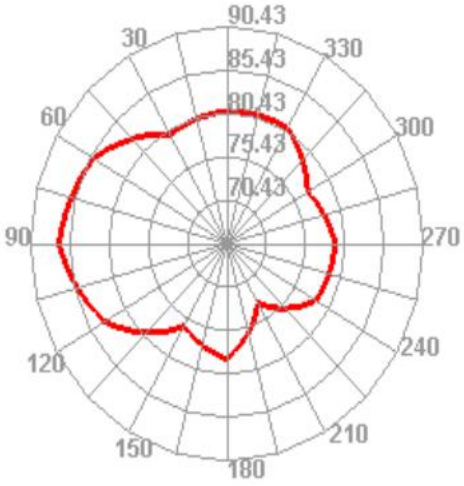
Bluetooth 39 TIS E2



Bluetooth 78 TIS



Bluetooth 78 TIS H



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9-2.complete machine Efficiency Table

R

Passive Test For BT			
Freq	Effi	Effi	Gain
(MHz)	(%)	(dB)	(dBi)
2400	12.44	-9.05	-3.36
2410	12.31	-9.1	-3.56
2420	11.94	-10.03	-4.6
2430	12.26	-9.89	-4.44
2440	13.18	-10.37	-4.93
2450	12.94	-10.03	-4.63
2460	10.02	-10.96	-5.57
2470	10.36	-10.78	-5.37
2480	10.33	-11.35	-5.99

L

Passive Test For BT			
Freq	Effi	Effi	Gain
(MHz)	(%)	(dB)	(dBi)
2400	10.79	-12.37	-4.45
2410	10.51	-12.59	-4.65
2420	11.48	-13.49	-5.51
2430	12.05	-12.97	-5.08
2440	12.29	-12.76	-5.91
2450	11.19	-12.08	-4.4
2460	11.63	-12.5	-4.09
2470	10.97	-11.57	-4.44
2480	10.95	-11.58	-4.73

10.Revision Control:

Revision	Date	Content	Remark
A	Mar.12.2022		N/A

Packaging method

The FPC antenna is assembled and affixed to the customer supply shell material, and the quantity is subject to the actual order.