tuya | Global Intelligent Platform

Antenna Test Report

BT3L Antenna test report

Version 1.0.0 Date：2020-05-12 NO：0000000001

Product Name:	BT3L
Antenna Type:	PCB antenna
Writer:	Yinhua Zhang
Maximum	Gain：2.5dBi
	Efficiency:62.86%

Content

1. General Description 3
2. Technical Information 3
3. Test Standards 4
4. Test Item.....4
5. Test Photo.....4
Appendix A Antenna Dimension.....5
Appendix B S11/VSWR 5
Appendix C Gain and Efficiency 6
Appendix D Radiation Pattern(1D and 3D) 7
Appendix E Test Setup Photo 9

1. General Description

EUT Name	BT3L Antenna
Wireless type	Bluetooth
Manufacturer	Hangzhou Tuya Information Technology Co., Ltd
Address	Room 701, Building 3, More Center, No.87 GuDun Road, Hangzhou, Zhejiang, China
Antenna Type	PCB antenna
Dimensions	Appendix A

2. Technical Information

Frequency Range	2402MHz~2480MHz
Test Frequency	2400,2410.....2500MHz

3. Test Standards

Identity	Document Title
IEEE 149-1979	IEEE Standard Test Procedures for Antennas

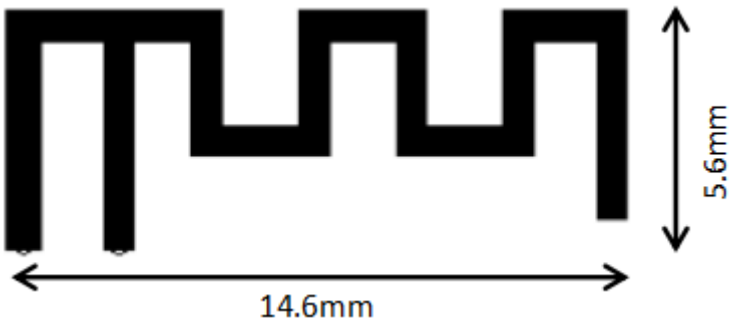
4. Test Item

Report Section	Description
Appendix B	S11/VSWR
Appendix C	Gain and Efficiency
Appendix D	Radiation Pattern（1D and 3D）

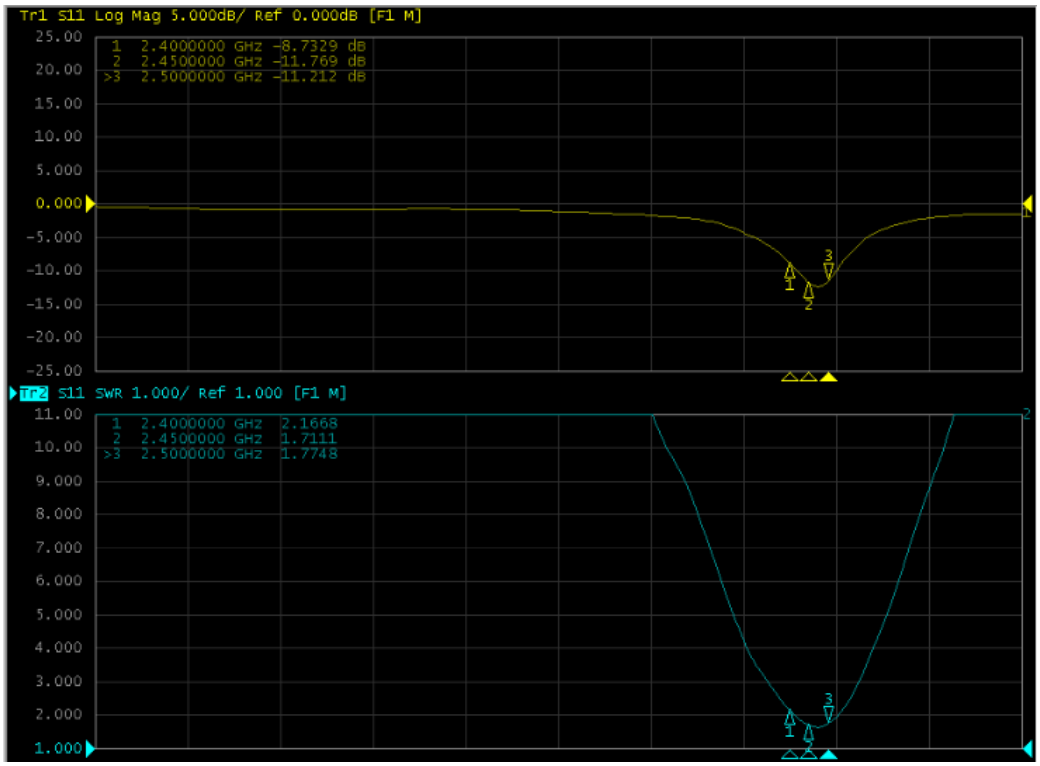
5. Test Photo

Report Section	Description
Appendix E	Test Setup Photo

Appendix A Antenna Dimension



Appendix B S11/VSWR



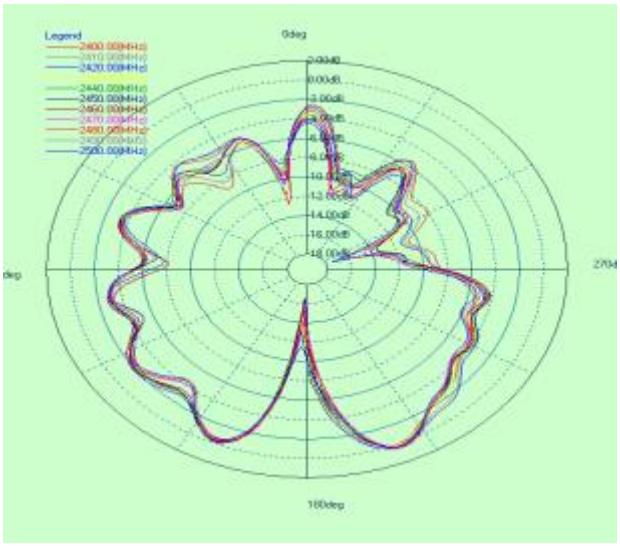
Frequency (MHz)	2400	2450	2500
Return Loss	-8.73	-11.76	-11.21
VSWR	2.16	1.71	1.77

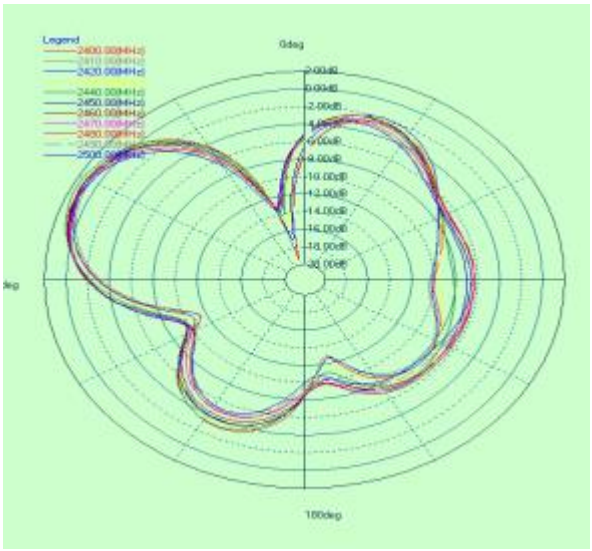
Appendix C Gain and Efficiency

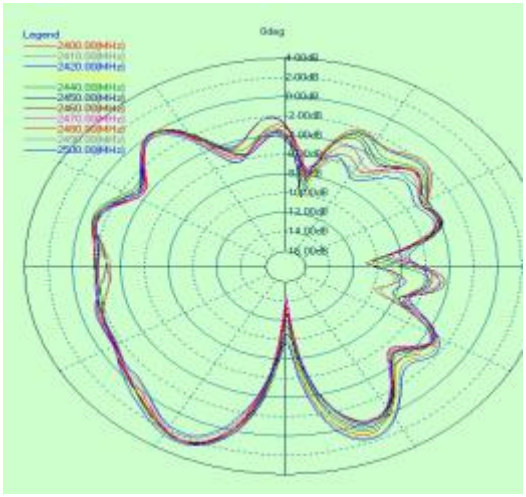
Frequency (MHz)	Efficiency(%)	Gain（dBi）
2400	52.29%	1.62
2410	52.17%	1.71
2420	53.14%	1.93
2430	54.16%	1.98
2440	57.62%	2.00
2450	59.64%	2.17
2460	61.55%	2.45
2470	60.64%	2.38

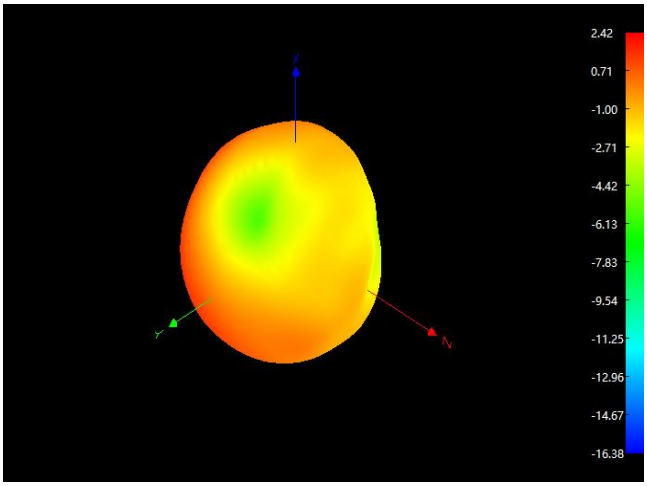
2480	62.86%	2.50
2490	59.85%	2.30
2500	60.41%	2.49

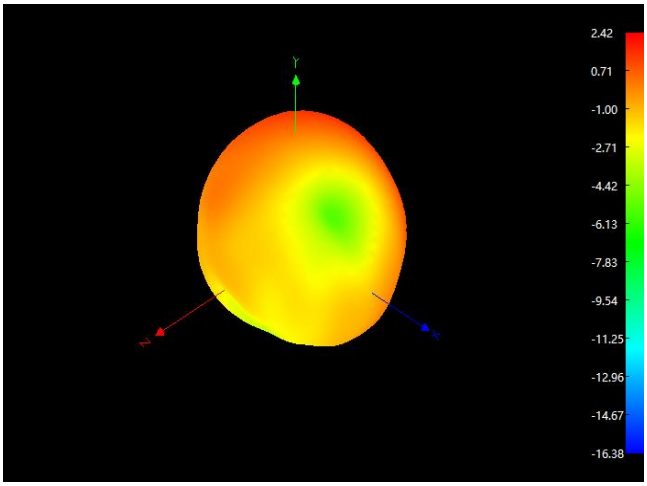
Appendix D Radiation Pattern(1D and 3D)

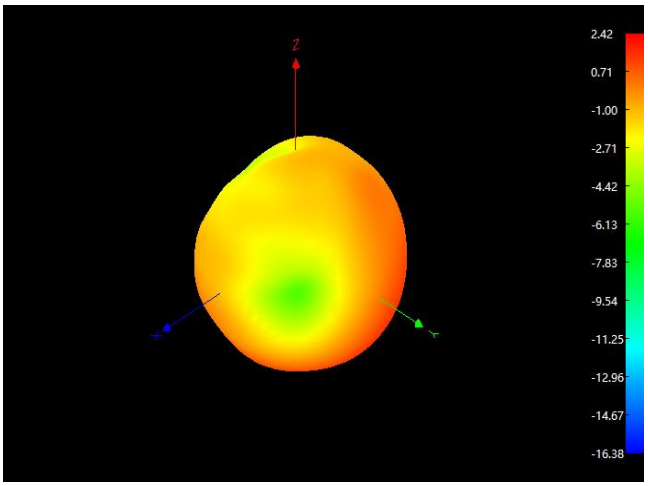
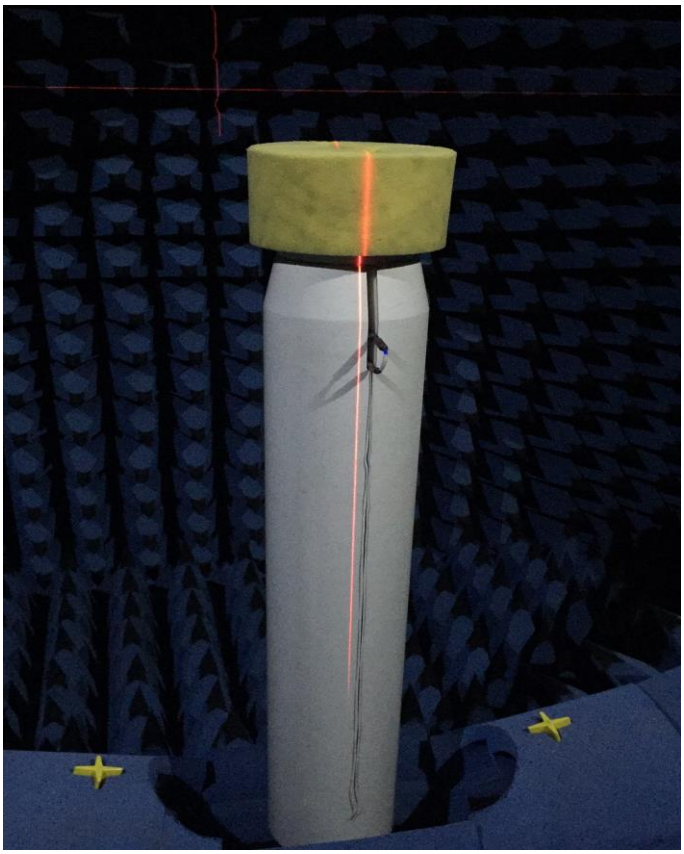





Legend
0deg


2.42
0.71
-1.00
-2.71
-4.42
-6.13
-7.83
-9.54
-11.25
-12.96
-14.67
-16.38


2.42
0.71
-1.00
-2.71
-4.42
-6.13
-7.83
-9.54
-11.25
-12.96
-14.67
-16.38



Appendix E Test Setup Photo