



ONE PLUS ONE
Wireless Communication

深圳市一加一无线通讯技术有限公司

- Shenzhen One Plus One Wireless Communication Technology Co., LTD

深圳市宝安区航城街道航城锦驰产业园 B1 栋 7 楼

- 7th Floor, Building B1, Hangcheng Jinchi Industrial Park, Hangcheng Street, Baoan District, Shenzhen City

Project: iTECH BOLD 3	Author: Haiou.Zhu	File Name: iTECH BOLD 3.doc
Date: 2023-2-2		
Revision:		
CONFIDENTIAL Shenzhen OnePlusOne Wireless Communication Technology Co.,Ltd.		

承认书

APPROVAL SHEET

客户 Customer	爱保护 SHENZHEN SMART CARE TECHNOLOGY LIMITED
项目名 Project	Itouch-Air4
规格 Specification	BT 5.1 Antennas

APPROVAL			
OnePlusOne:			
RF Check	ME Check	QC Check	Confirm By
李学成	/	王启强	陈文飞
Customer:			
EE Check	PM Check	QC Check	Confirm By
/	黎德即	李萍	陈清

Date:	Revision:	Updates and changes:	Issued by:
2022.12.21	A	Initial sheet 承认签章后请寄回承认书一份	Haiou.Zhu
: return to us one copy of "APPROVAL SHEET" with your approved signatures			

Project: iTECH BOLD 3	Author: Haiou.Zhu	File Name: iTECH BOLD 3.doc
Date: 2023-2-2		
Revision:	A	
CONFIDENTIAL		
Shenzhen OnePlusOne Wireless Communication Technology Co.,Ltd.		

Contents

1	ANTENNA DESCRIPTION	1-4
1.1	Part number	1-4
1.2	Antenna pictures.....	1-4
2	ELECTRICAL PERFORMANCE.....	2-4
2.1	Specification	2-4
2.2	Measurement Set-up.....	2-4
2.2.1	VSWR and Return Loss	2-4
2.2.2	Efficiency and Gain.....	2-4
3	REFERENCE MEASUREMENT DATA	3-5
3.1	Passive	3-5
3.2	Active.....	3-5
4	MECHANICAL DESCRIPTION.....	4-7
4.1	Drawings.....	4-7

Project: iTECH BOLD 3	Author: Haiou.Zhu	File Name: iTECH BOLD 3.doc
Date: 2023-2-2		
Revision:		
CONFIDENTIAL Shenzhen OnePlusOne Wireless Communication Technology Co.,Ltd.		

1 Antenna description

It summarize **BT 5.1** antennas for project iTECH BOLD 3 antenna's frequency band is **2400-2500MHz**. **BT 5.1** antenna's type is Monopole

1.1 Part number

Part number of antenna: iTECH BOLD 3

1.2 Antenna pictures

See test report

2 Electrical Performance

2.1 Specification

BT	
Frequency Range	2400MHz~2500MHz <-5 >30
Return Loss	
Efficiency	

2.2 Measurement Set-up

2.2.1 VSWR and Return Loss

VSWR measurements (S_{11}) were performed using an Agilent ENA series Network Analyzer and the previously described test fixture. Coaxial chokes were used to mitigate surface currents on the outside of the cabling. The testing was performed in free space.

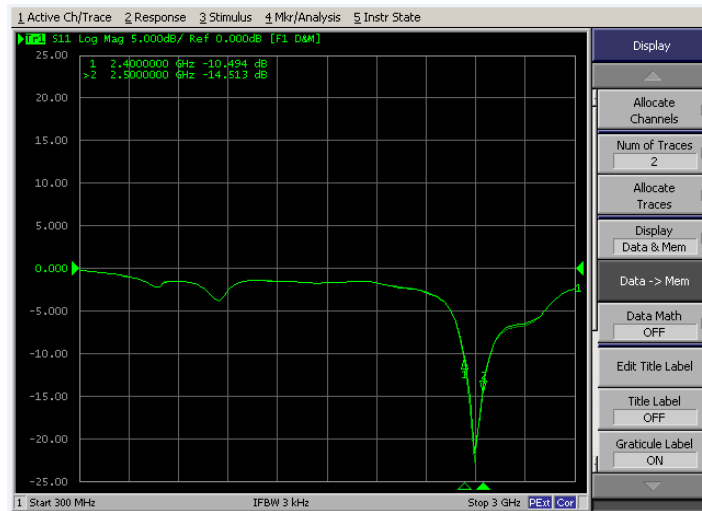
2.2.2 Efficiency and Gain

The gain of the antenna was measured in OPO's 3D anechoic chamber in Shenzhen, China. The chamber is a ETS system capable of doing tests from 380MHz to 6GHz. Coaxial chokes on the feed cable were used to mitigate surface currents during passive tests. The measurement results are calibrated using dipole standards. For TRP and TIS the chamber uses a 8960 / MT8820C to establish the connection with the mobile device and read the power.

Project: iTECH BOLD 3	Author: Haiou.Zhu	File Name: iTECH BOLD 3.doc
Date: 2023-2-2		
Revision:	A	
CONFIDENTIAL Shenzhen OnePlusOne Wireless Communication Technology Co.,Ltd.		

3 Reference measurement data

3.1 Passive

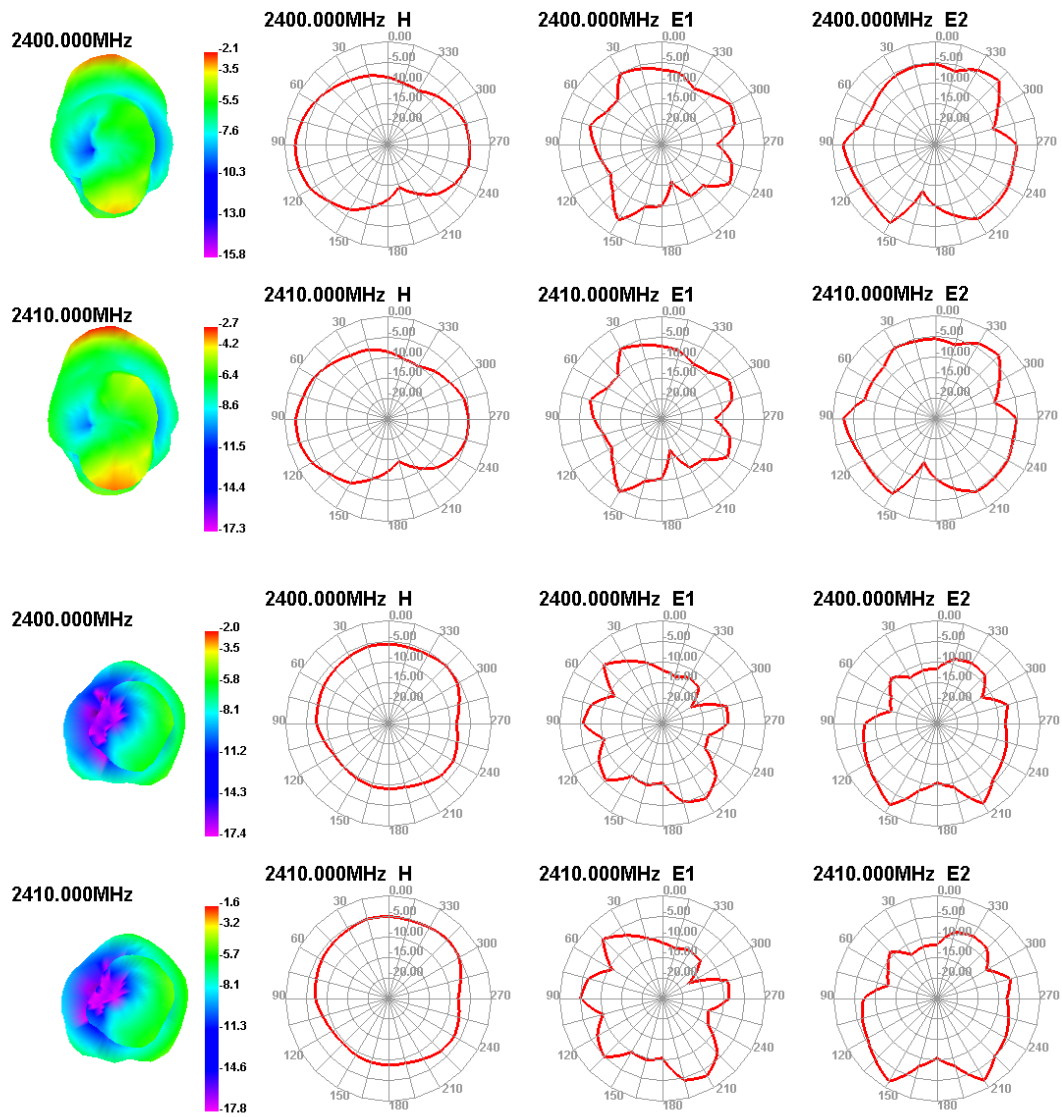


Return SWR

3.2 Active

Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
2400	31.63	-5	-1.5
2410	28.39	-5.47	-1.81
2420	28.69	-5.42	-1.65
2430	27.29	-5.64	-2.05
2440	25.73	-5.89	-2.25
2450	27.1	-5.67	-2.08
2460	26.39	-5.79	-1.93
2470	22.14	-6.55	-2.35
2480	24.14	-6.17	-2.18
2490	24.48	-6.11	-1.94
2500	22.85	-6.41	-1.82

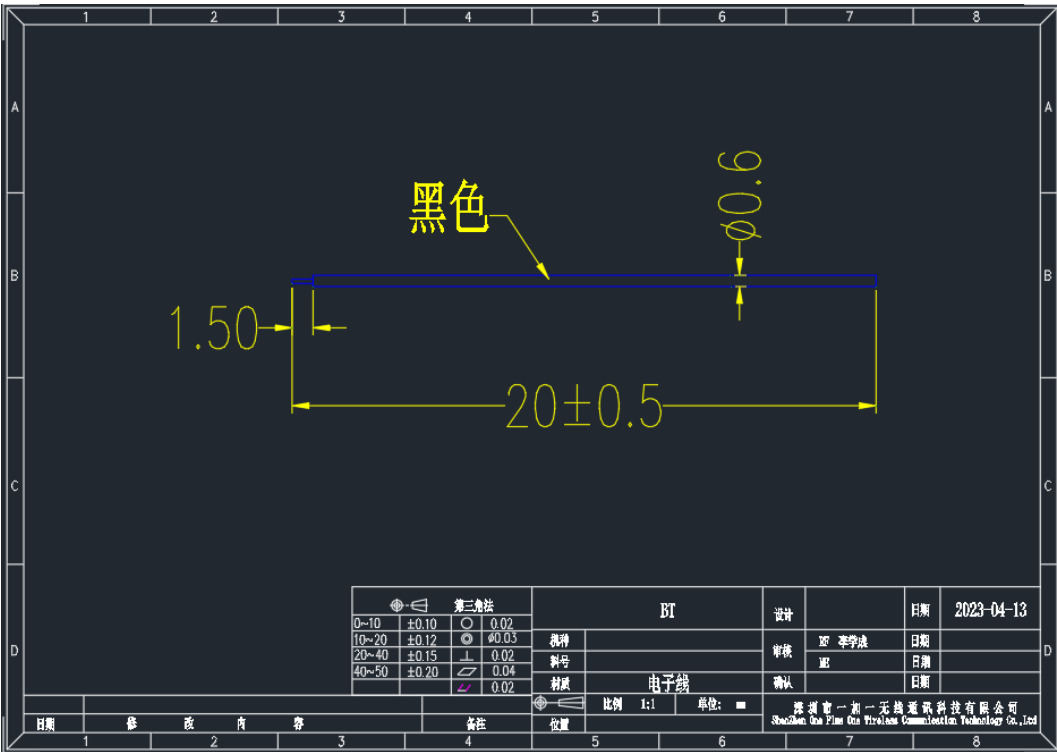
Project: iTECH BOLD 3	Author: Haiou.Zhu	File Name: iTECH BOLD 3.doc
Date: 2023-2-2		
Revision:	A	
CONFIDENTIAL		
Shenzhen OnePlusOne Wireless Communication Technology Co.,Ltd.		



Project: iTECH BOLD 3	Author: Haiou.Zhu	File Name: iTECH BOLD 3.doc
Date: 2023-2-2		
Revision:		
CONFIDENTIAL Shenzhen OnePlusOne Wireless Communication Technology Co.,Ltd.		

4 Mechanical description

4.1 Drawings



Project: iTECH BOLD 3	Author: Haiou.Zhu	File Name: iTECH BOLD 3.doc
Date: 2023-2-2		
Revision:	A	
CONFIDENTIAL		
Shenzhen OnePlusOne Wireless Communication Technology Co.,Ltd.		