



**ONE PLUS ONE**  
Wireless Communication

深圳市一加一无线通讯技术有限公司

# 承认书

## APPROVAL SHEET

客户 Customer	爱保护
项目名 Project	F9
料号 Part NO.	
规格 Specification	BT Antennas

APPROVAL			
OnePlusOne:			
RF Check	ME Check	QC Check	Confirm By
Customer:			
EE Check	PM Check	QC Check	Confirm By

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Project: F9	Author: Haiou.Zhu	File Name: F9_APP_A.doc
Date: 2022-07-15		
Revision:	A	
<b>CONFIDENTIAL</b>		
Shenzhen OnePlusOne Wireless Communication Technology Co.,Ltd.		

Date:	Revision:	Updates and changes:	Issued by:
2022.07.15	A	Initial sheet	Haiou.Zhu

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# 1 Antenna description

It summarize BT antennas for project F9BT antenna's frequency band is 2400-2500MHz. BT antenna's type is IFA

## 1.1 Part number

Part number of antenna: F9

## 1.2 Antenna pictures



# 2 Electrical Performance

## 2.1 Specification

BT	
Frequency Range	2400MHz~2500MHz
Return Loss	<-5 >25%
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.

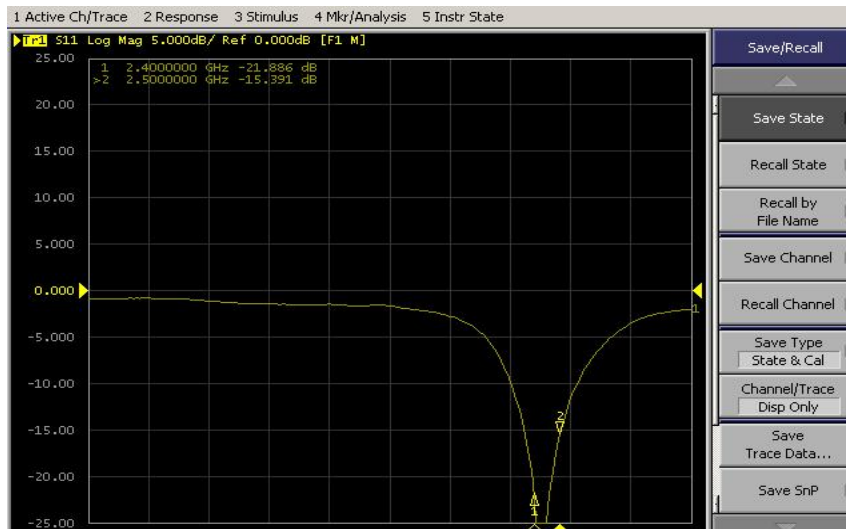
### 2.2.2 Efficiency and Gain

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.

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### 3 Reference measurement data

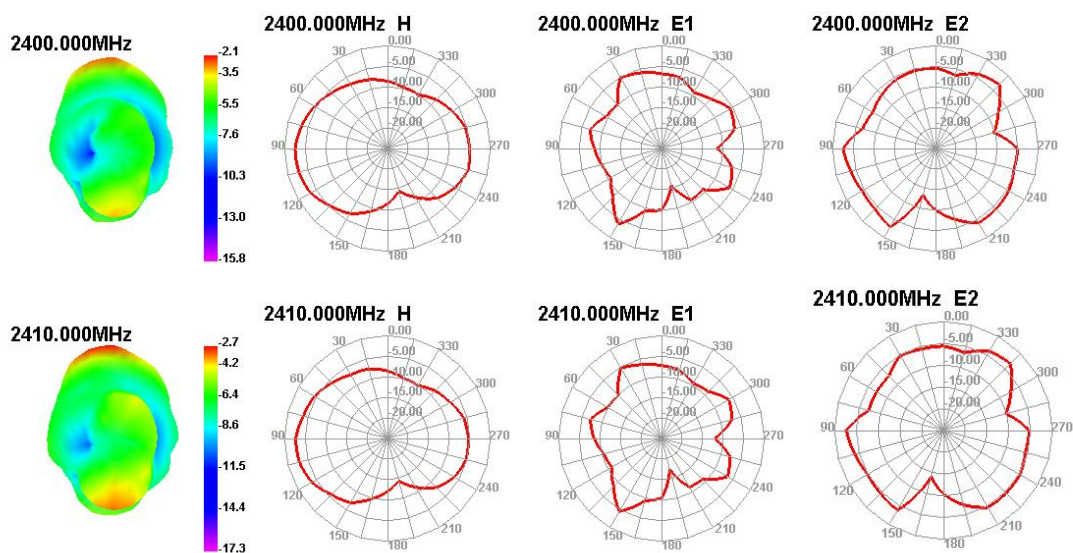
#### 3.1 Passive



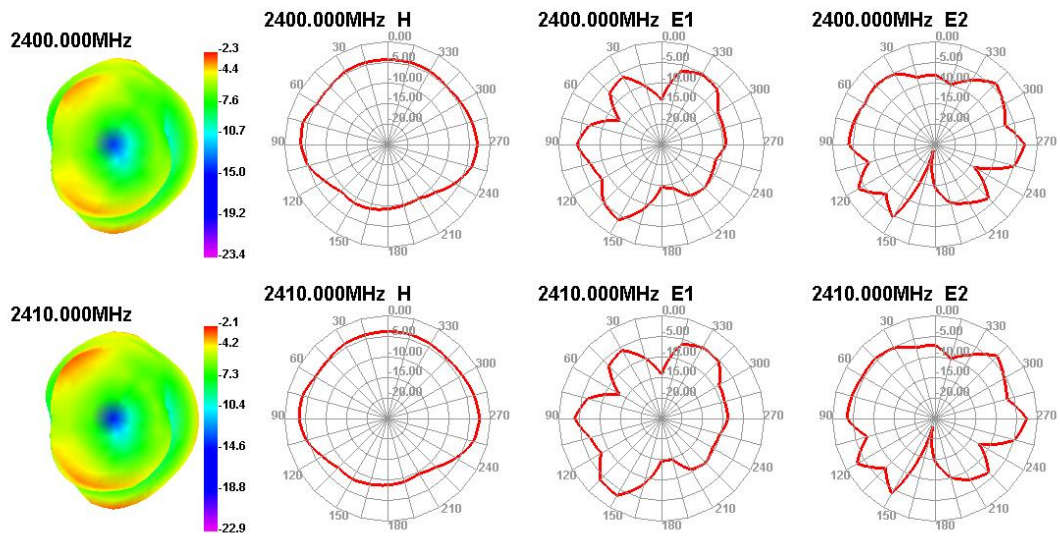
Return SWR

#### 3.2 Active

Passive Test For BT 2.4G				
Freq (MHz)	Effi (%)	Gain (dBi)		
2400	87	1.15		
2450	88	1.15		
2500	87	1.15		



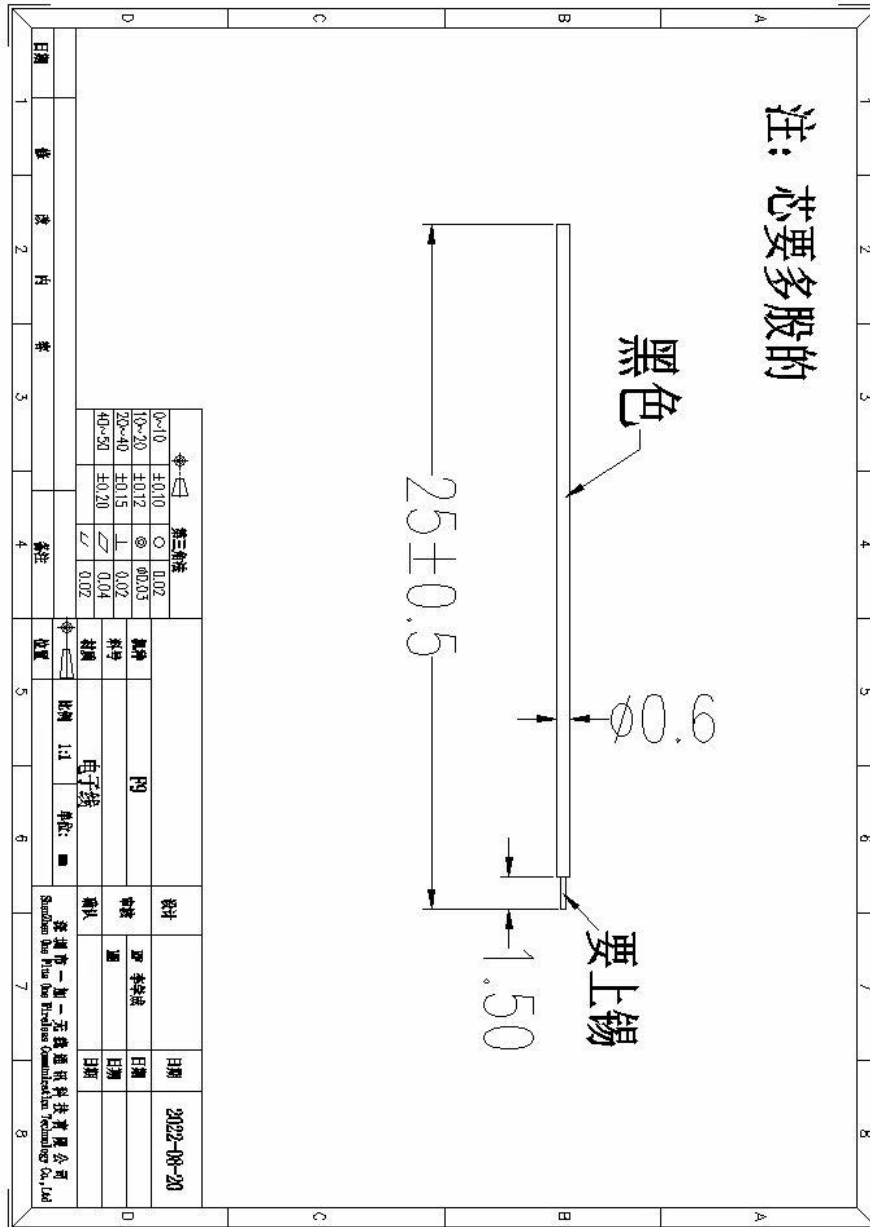
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# 4 Mechanical description

## 4.1 Drawings



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