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	深圳市爱保护科技有限公司
项目名 Project	F34 PRO
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

Contents

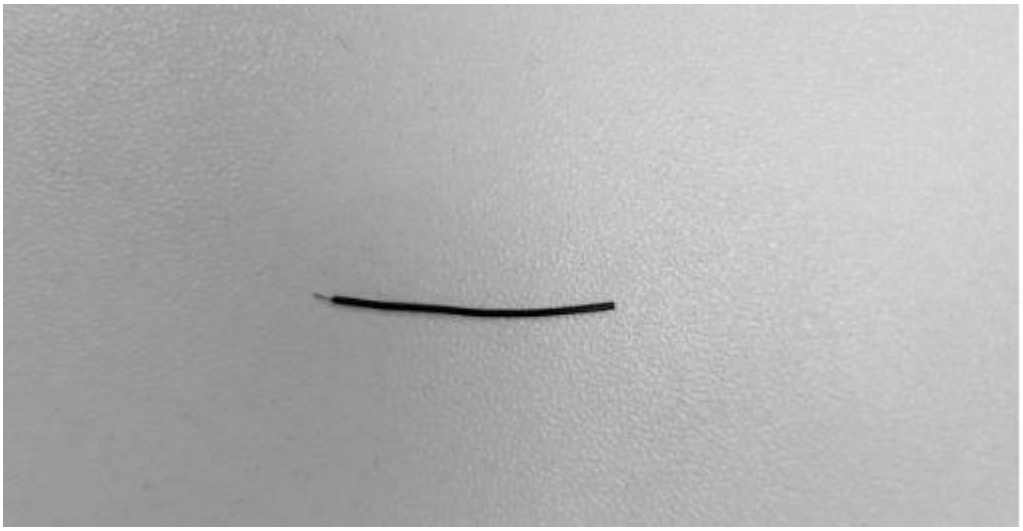
1 Antenna description

It summarize BT 5.3 antennas for project S3PRO antenna's frequency band is 2400-2480MHz. BT 5.3 antenna's type is Monopole

1.1 Part number

Part number of antenna：S3PRO

1.2 Antenna pictures



2 Electrical Performance

2.1 Specification

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

2.2 Measurement Set-up

2.2.1 VSWR and Return Loss

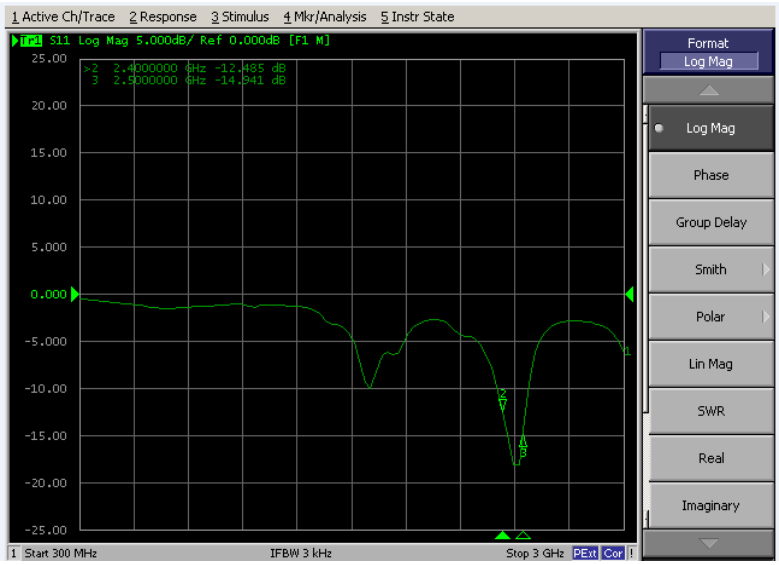
VSWR measurements (S_{11}) were performed using an Agilent ENA series Network Analyzer and the previously described test fixture. Coaxial chokes were used to mitigate surface currents on the outside of the cabling. The testing was performed in free space.

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.

3 Reference measurement data

3.1 Passive

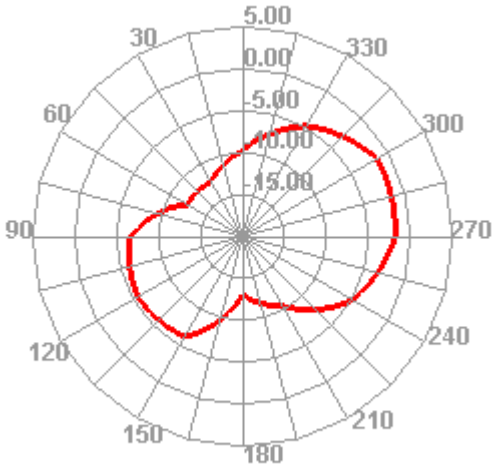


Return SWR

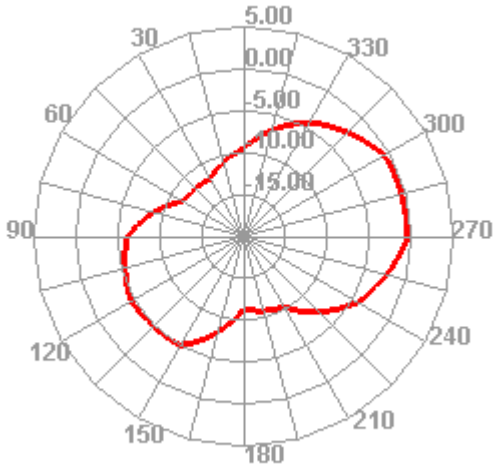
3.2 Active

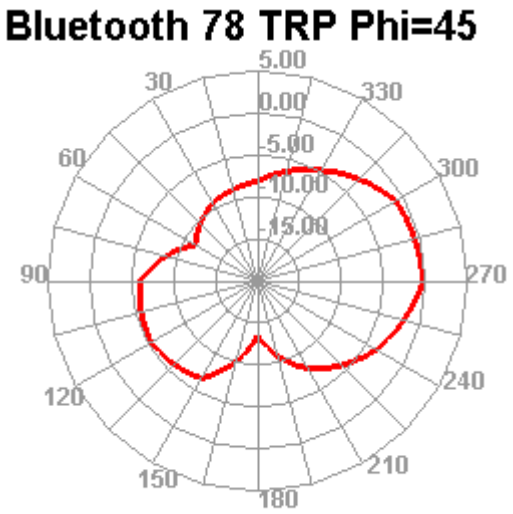
Passive Test For BT			
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
2400	20.11	-6.97	0.58
2410	19.79	-7.04	-0.74
2420	22.47	-6.48	-0.85
2430	20.84	-6.81	-0.68
2440	20.91	-6.80	-0.69
2450	19.74	-7.05	-1.16
2460	23.83	-6.23	0.3
2470	20.19	-6.95	-2.03
2480	20.6	-6.86	-1.41
2490	20.43	-6.90	-2.5
2500	19.89	-7.01	-1.73

Bluetooth 0 TRP Phi=45



Bluetooth 39 TRP Phi=45




Bluetooth 78 TRP Phi=45
5.00
0.00
-5.00
-10.00
-15.00
30
330
60
300
90
270
120
240
150
210
180

4 Mechanical description

4.1 Drawings