ONE PLUS ONE
Wireless Communication

深圳市一加一无线通讯技术有限公司

APPROVAL SHEET

868 外置天线

(外置天线 antenna)

OnePlusOne :

Project:	868 外置天线		
RF Check		QC Check	
ME Check		Confirm By	

Customer: 粹海科技

Project:	868 外置天线		
EE Check		QC Check	
PM Check		Confirm By	

Date:	Revision:	Updates and changes:	Issued by:
2016-11-2	A	Initial sheet	Dabin.Zhu

Contents

1 Antenna description

It summarize 外置天线 antenna for project 外置天线-R/L. 外置天线 antenna's frequency band is 868-915MHz. 外置天线 antenna's type is Monopole.

1.1 Part number

Part number of antenna：外置天线-R/外置天线-L

1.2 Antenna pictures

2 Electrical Performance

2.1 Specification

外置天线	
Frequency Range	868MHz~930MHz
Return Loss	<-5
Efficiency	>35%

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.

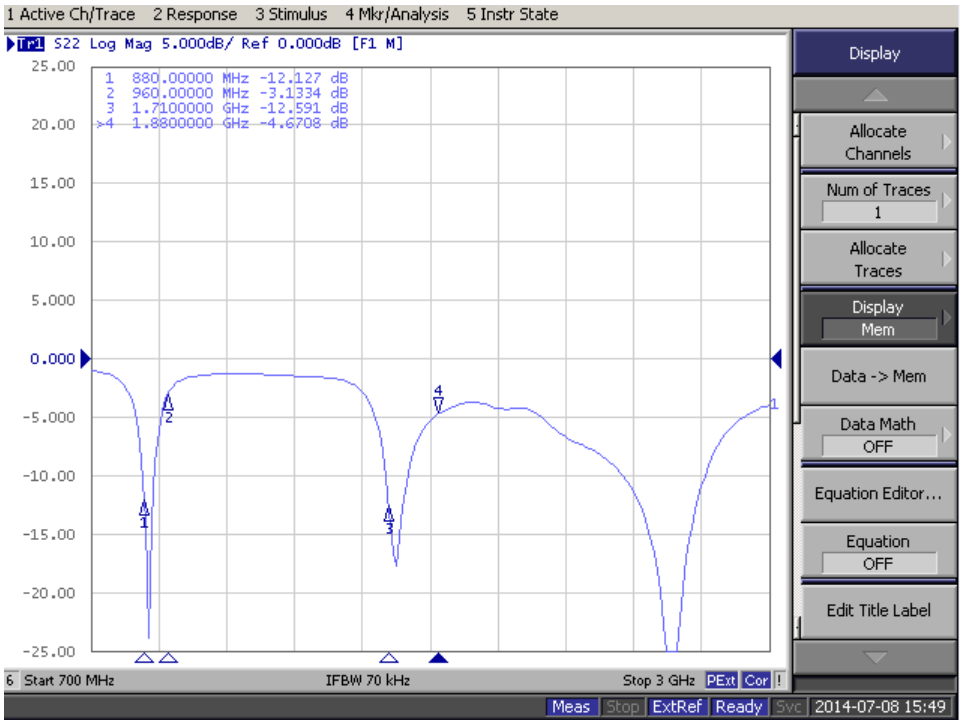
2.2.2 Efficiency and Gain

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

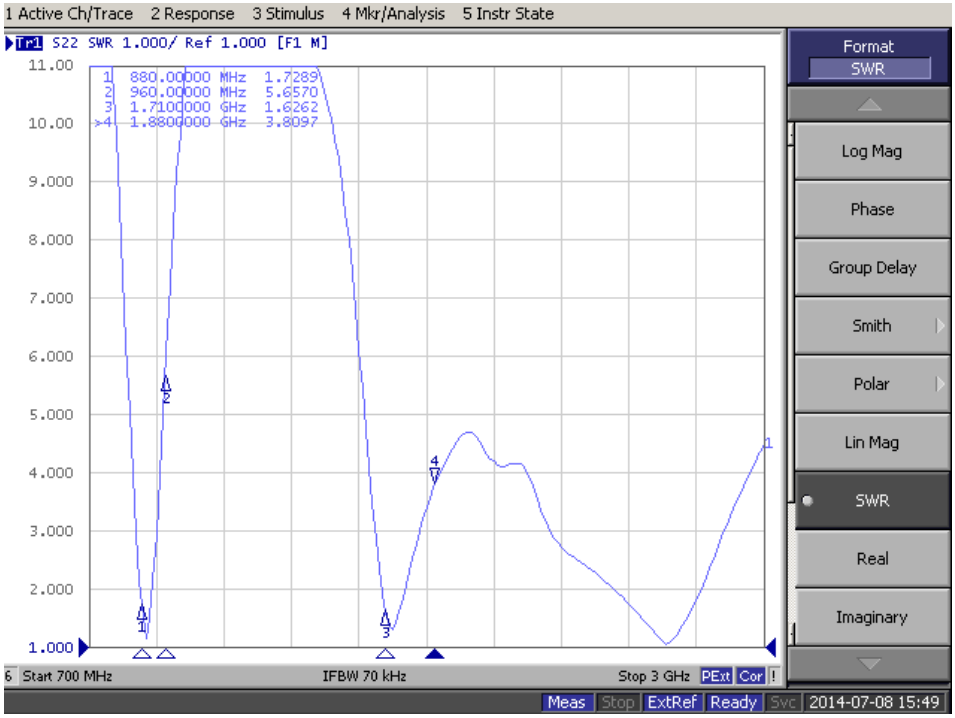
mitigate surface currents during passive tests. The measurement results are calibrated using dipole standards. For TRP and TIS the chamber uses a 8960 / MT8820C to establish the connection with the mobile device and read the power.

3 Reference measurement data

3.1 Passive - 外置天线

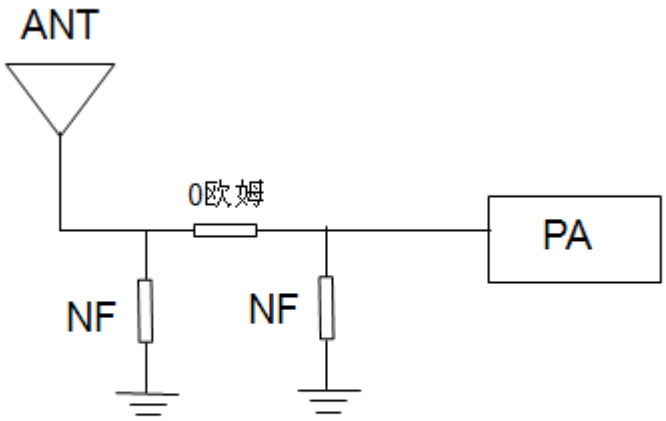


外置天线-RL



外置天线- VSWR

3.2 Matching Circuit description



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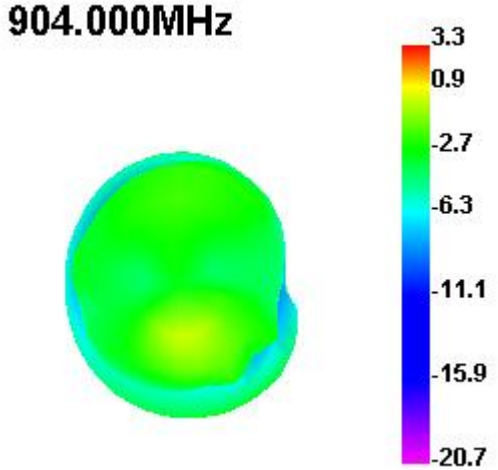
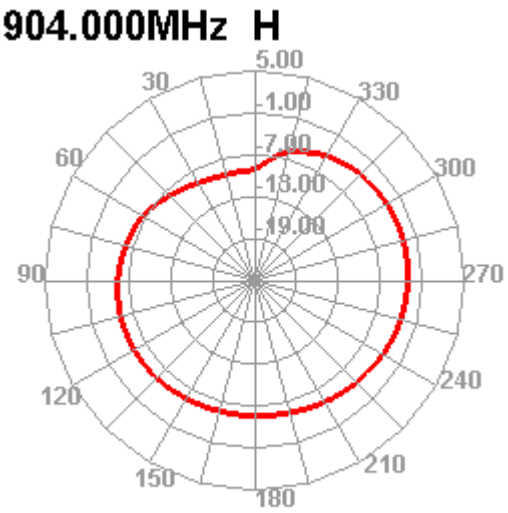
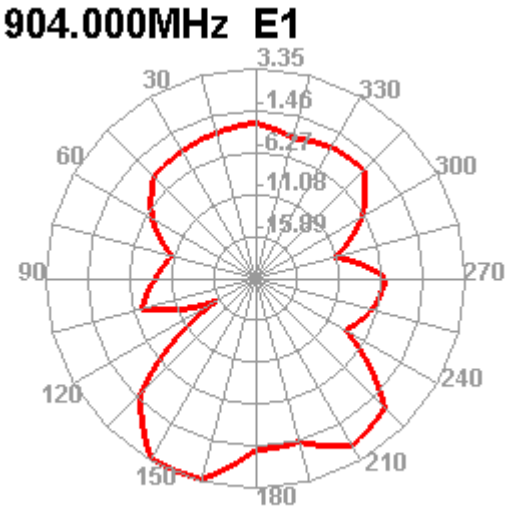
3.3 Passive-EFF

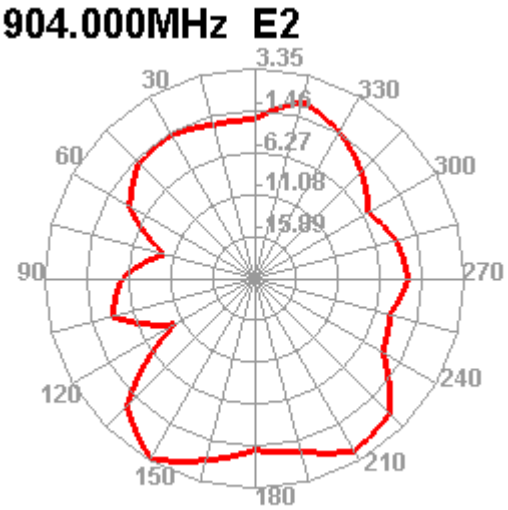
Freq (MHz)	Effi (%)	Gain (dBi)
868	51.76	3.43
904	50.42	3.35
918	49.68	3.18
922.5	49.64	2.69

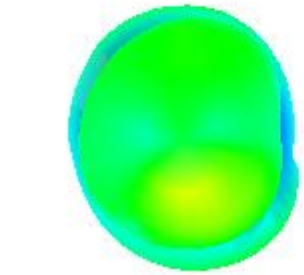
3.4 Radiated pattern



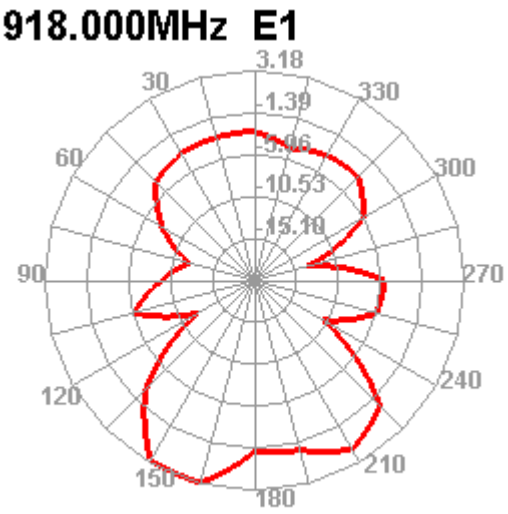








918.000MHz
3.2
0.9
-2.5
-6.0
-10.5
-15.1
-19.7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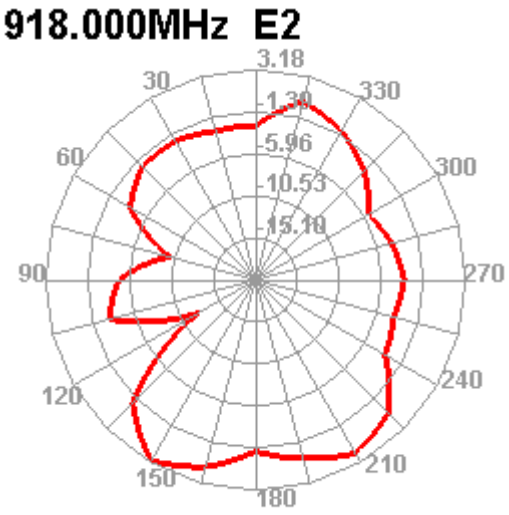
-1.39
-5.96
-10.53
-15.10
30
330
60
300
90
270
120
240
150
210
180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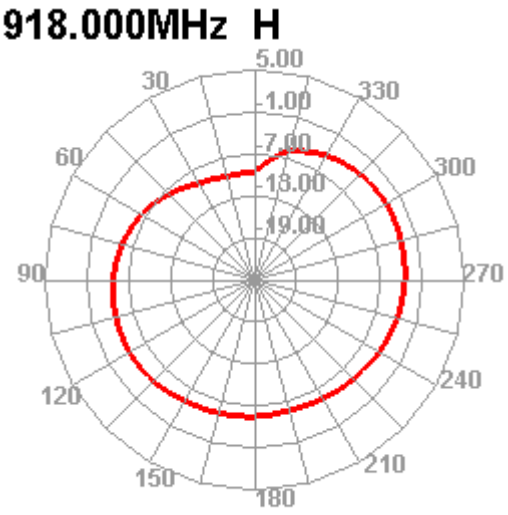
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60
300
90
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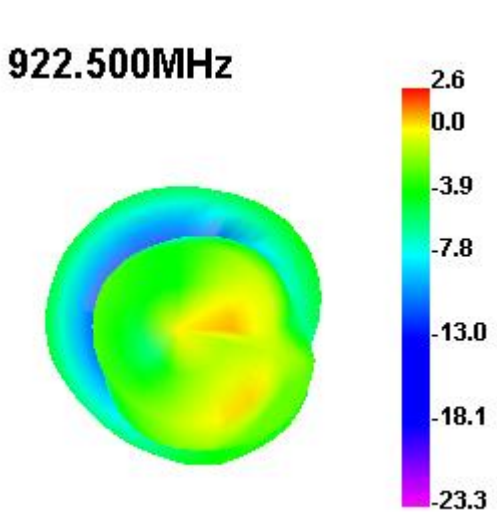
120
240
150
210
180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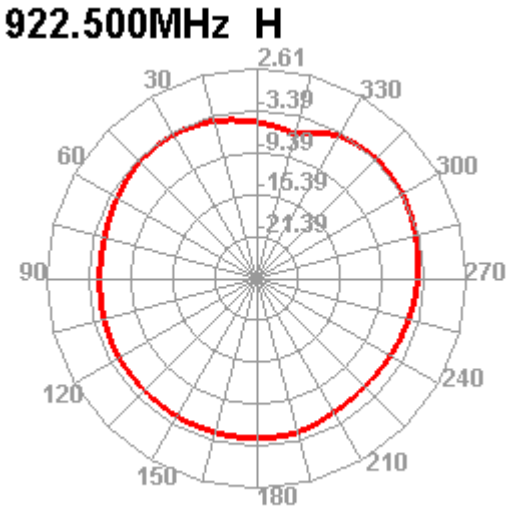
0.0
-3.9
-7.8
-13.0
-18.1
-23.3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-3.39
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-15.39
-21.39
30
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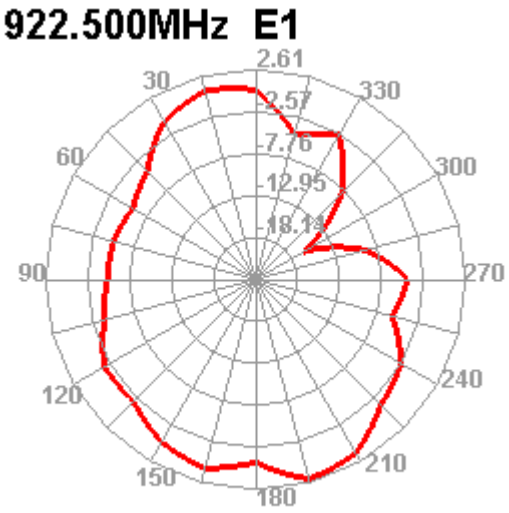
60
300
90
270
120
240
150
210
180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2.61
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-18.14
30
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60
300
90
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120
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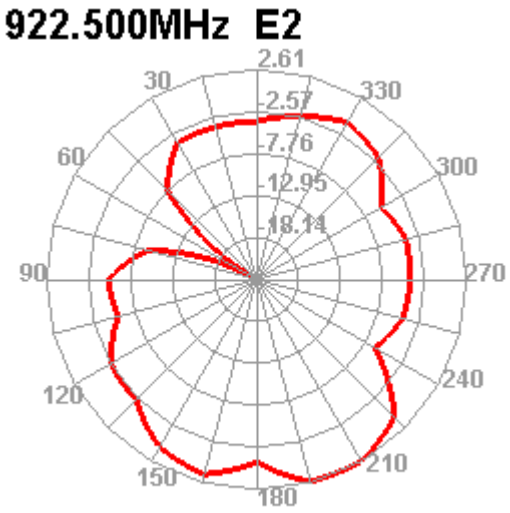
150
210
180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-7.76
-12.95
-18.14
30
330
60
300
90
270
120
240
150
210
180