



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	欧伦特
项目名 Project	AM1
料号 Part NO.	
规格 Specification	WIFI 2.4G 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: AM1	Author: Mei Ting Huang	File Name: AM1_APP_A.doc
Date: 2024-01-12		
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Shenzhen OnePlusOne Wireless Communication Technology Co.,Ltd.		

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2024-01-12	A	Initial sheet	Mei Ting Huang

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1 Antenna description

It summarize WIFI antennas for project AM1. WIFI ,antenna's frequency band is 2400–2500MHz, 5G–5.8MHz,

1.1 Part number

Part number of antenna: AM1 Antenna pictures



2 Electrical Performance

2.1 Specification

WIFI	
Frequency Range	2.4-2.5GHz
Return Loss	<-5
Efficiency	>45%

2.1.1 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.

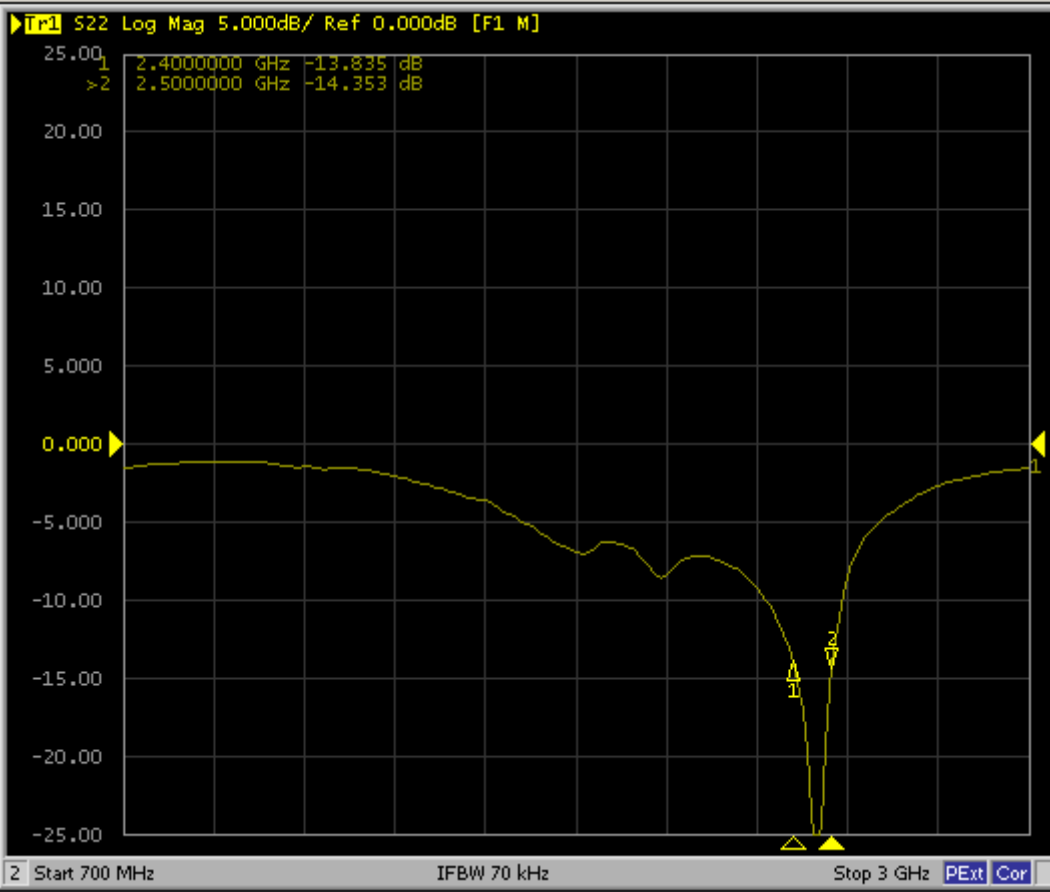
2.1.2 Efficiency and Gain

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 Loss

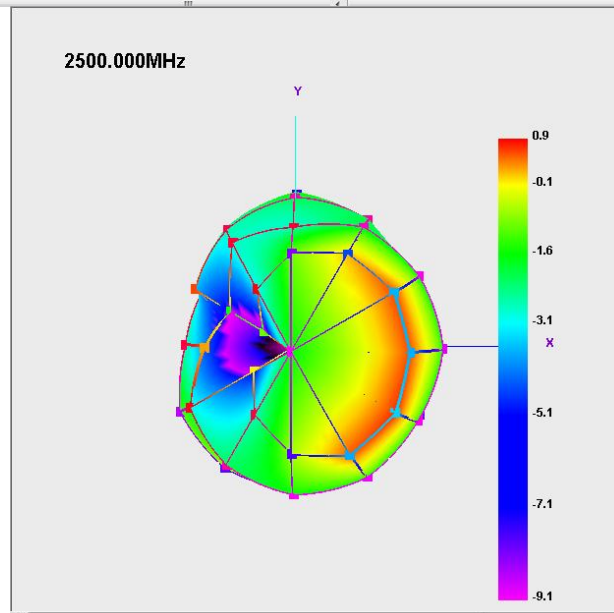
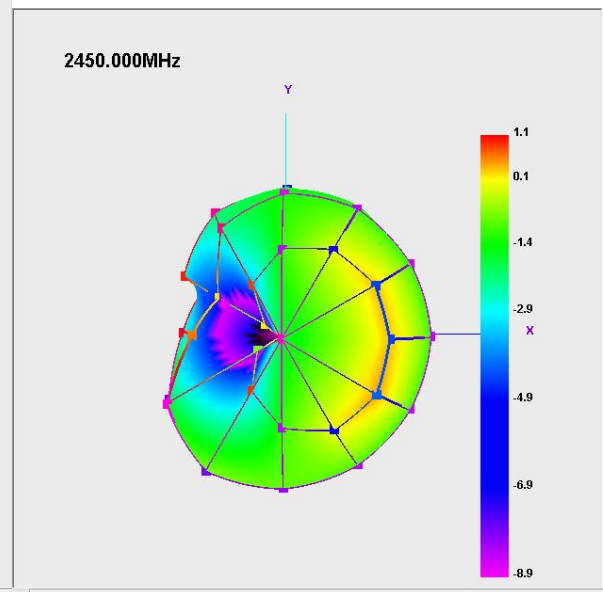
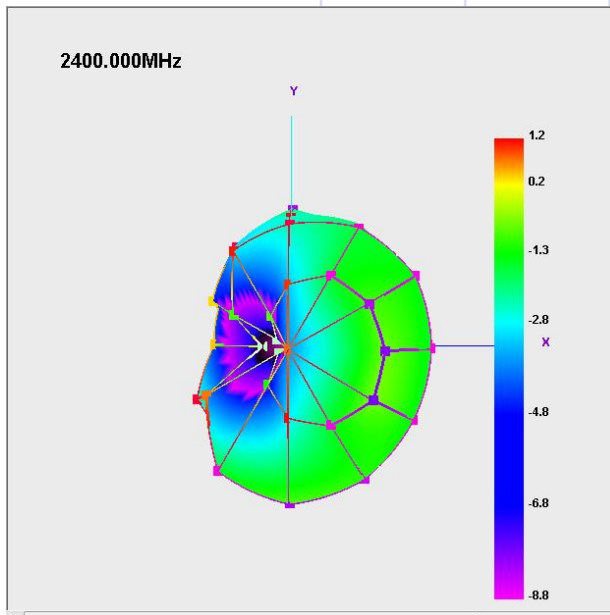
802.11b : 11Mbps			
Wifi 2G TRP		ifi 2G TIS	
1	6	11	11
2412	2437	2462	2462
11.87	11.53	11.76	-81.78

802.11g : 54Mbps			
Wifi 2G TRP		ifi 2G TIS	
1	6	11	11
2412	2437	2462	2462
11.53	11.46	11.58	-69.29

802.11n : MCS7			
Wifi 2G TRP		ifi 2G TIS	
1	6	11	11
2412	2437	2462	2462
11.21	11.14	11.54	-61.73

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Passive Test For WiFiWIFI			
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
2400	44.3	-3.54	1.22
2410	50.62	-2.96	1.75
2420	42.59	-3.71	0.84
2430	58.38	-2.34	2.06
2440	47.67	-3.22	1.24
2450	46.31	-3.34	1.12
2460	53.61	-2.71	1.79
2470	55.78	-2.53	1.89
2480	48.37	-3.15	1.37
2490	50.63	-2.96	1.51
2500	42.06	-3.76	0.87



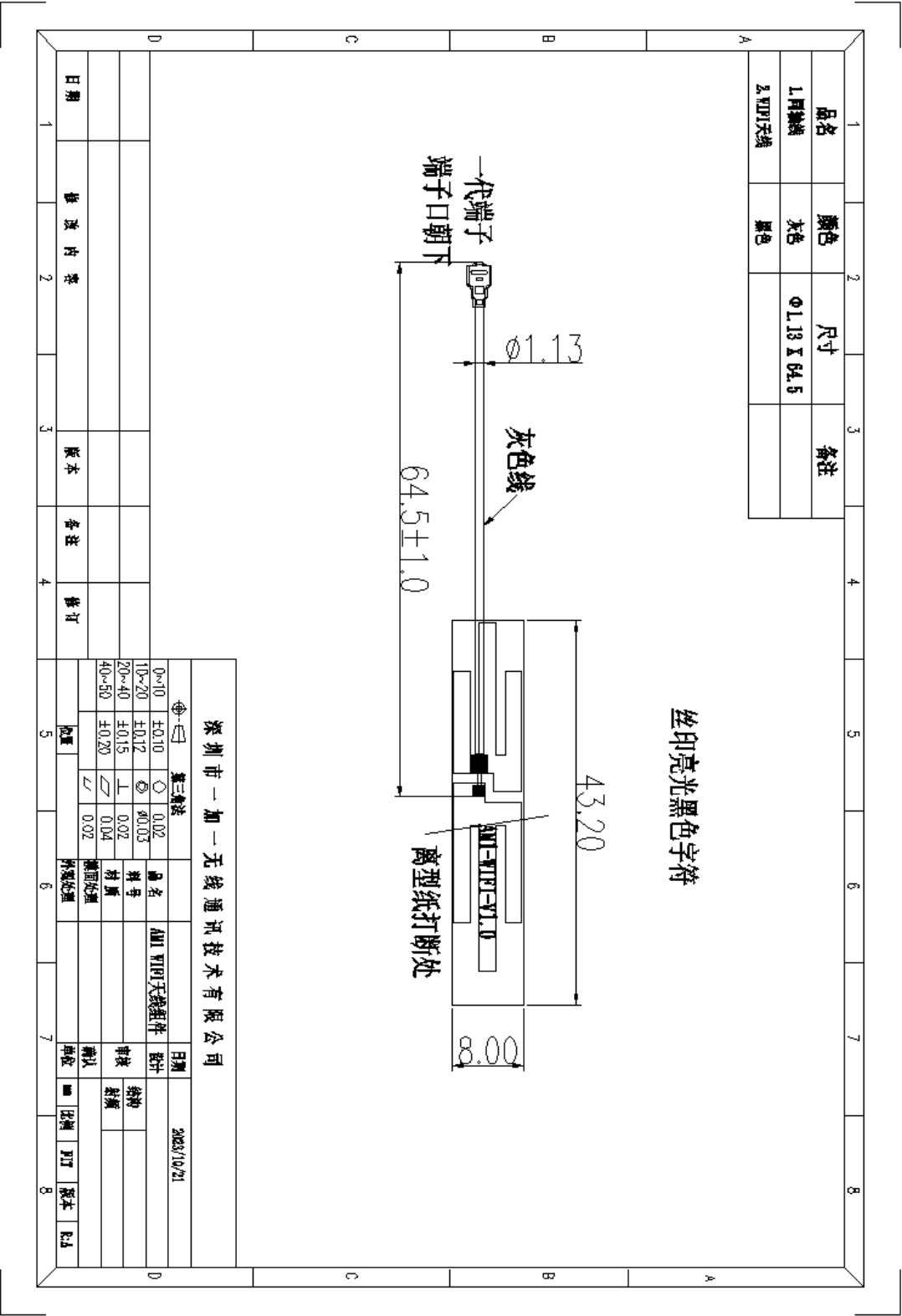
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3.2 Matching Circuit Description

4 Mechanical description

4.1 Drawings

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