



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	AM13
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:AM13	Author: Haiou.Zhu	File Name: AM13_APP_A.doc
Date: 2023-03-13		
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CONFIDENTIAL		
Shenzhen OnePlusOne Wireless Communication Technology Co.,Ltd.		

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1 Antenna description

It summarize BT antennas for project AM13. BT antenna's frequency band is 2400-2500MHz. BT antenna's type is IFA

1.1 Part number

Part number of antenna: AM13

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.

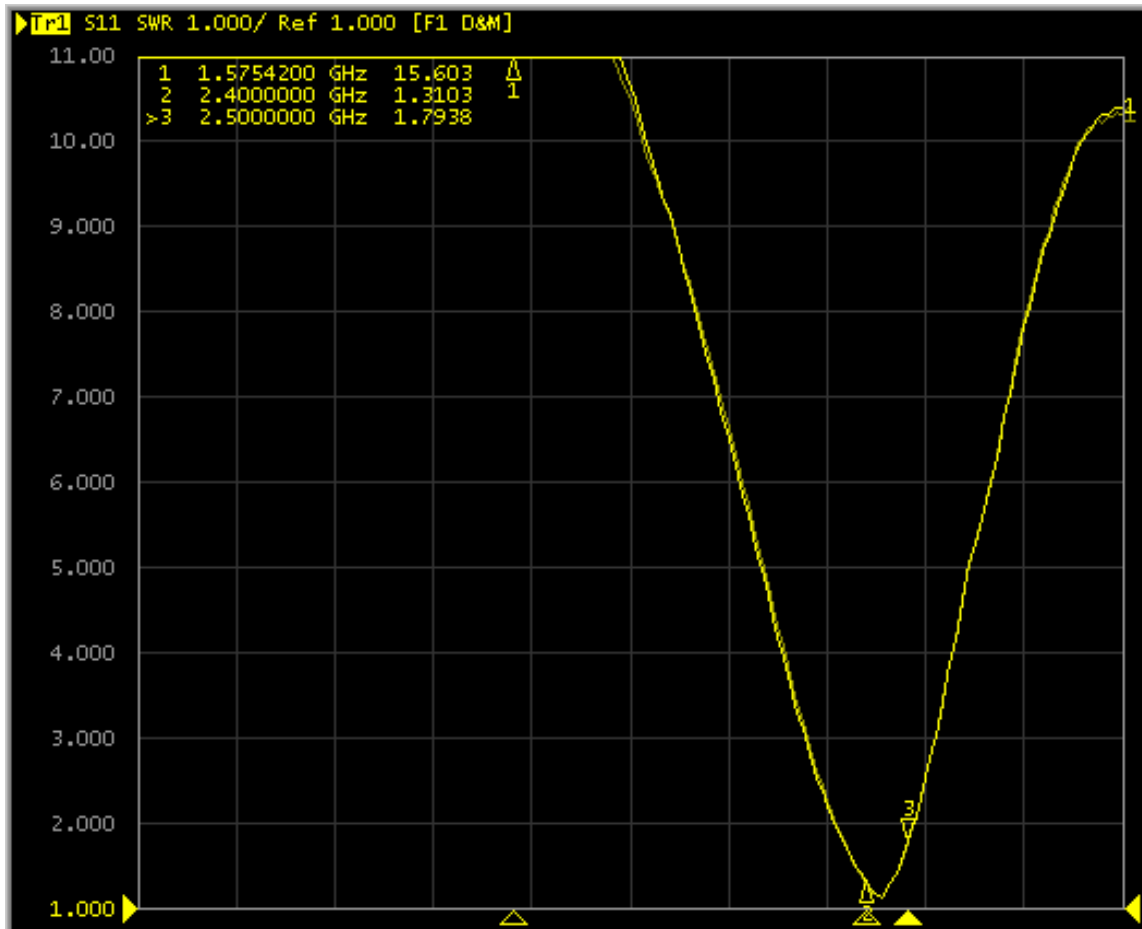
2.2.2 Efficiency and Gain

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.

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3 Reference measurement data

3.1 Passive



Return SWR

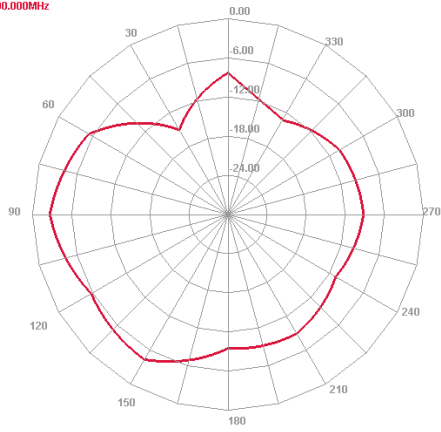
3.2 Active

Passive Test For 2.4			
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
2400	20.76	-6.83	-2.65
2410	22.82	-6.42	-2.10
2420	19.61	-7.07	-2.43
2430	20.9	-6.8	-2.19
2440	21.71	-6.63	-2.22
2450	18.48	-7.33	-2.97
2460	22.65	-6.45	-2.29
2470	20.45	-6.89	-2.79
2480	21.63	-6.65	-2.56
2490	16.3	-7.88	-3.86
2500	17.29	-7.62	-3.75

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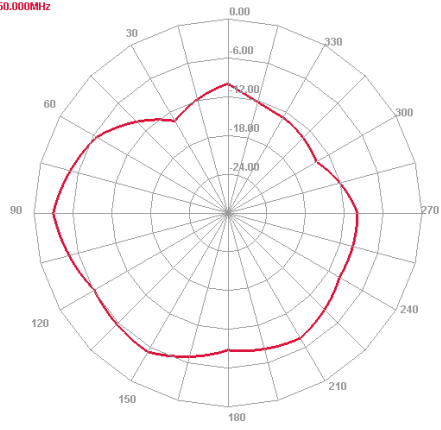
Phi = 45

2400.000MHz



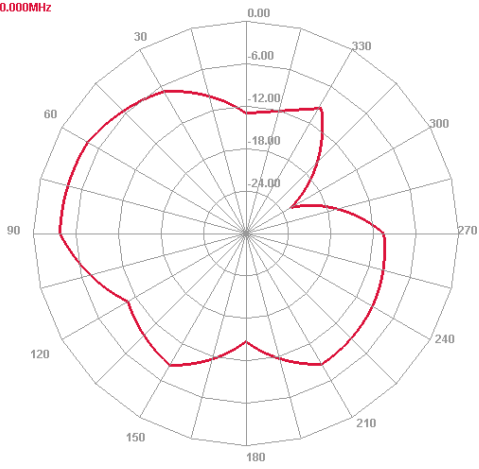
Phi = 45

2450.000MHz



Phi = 45

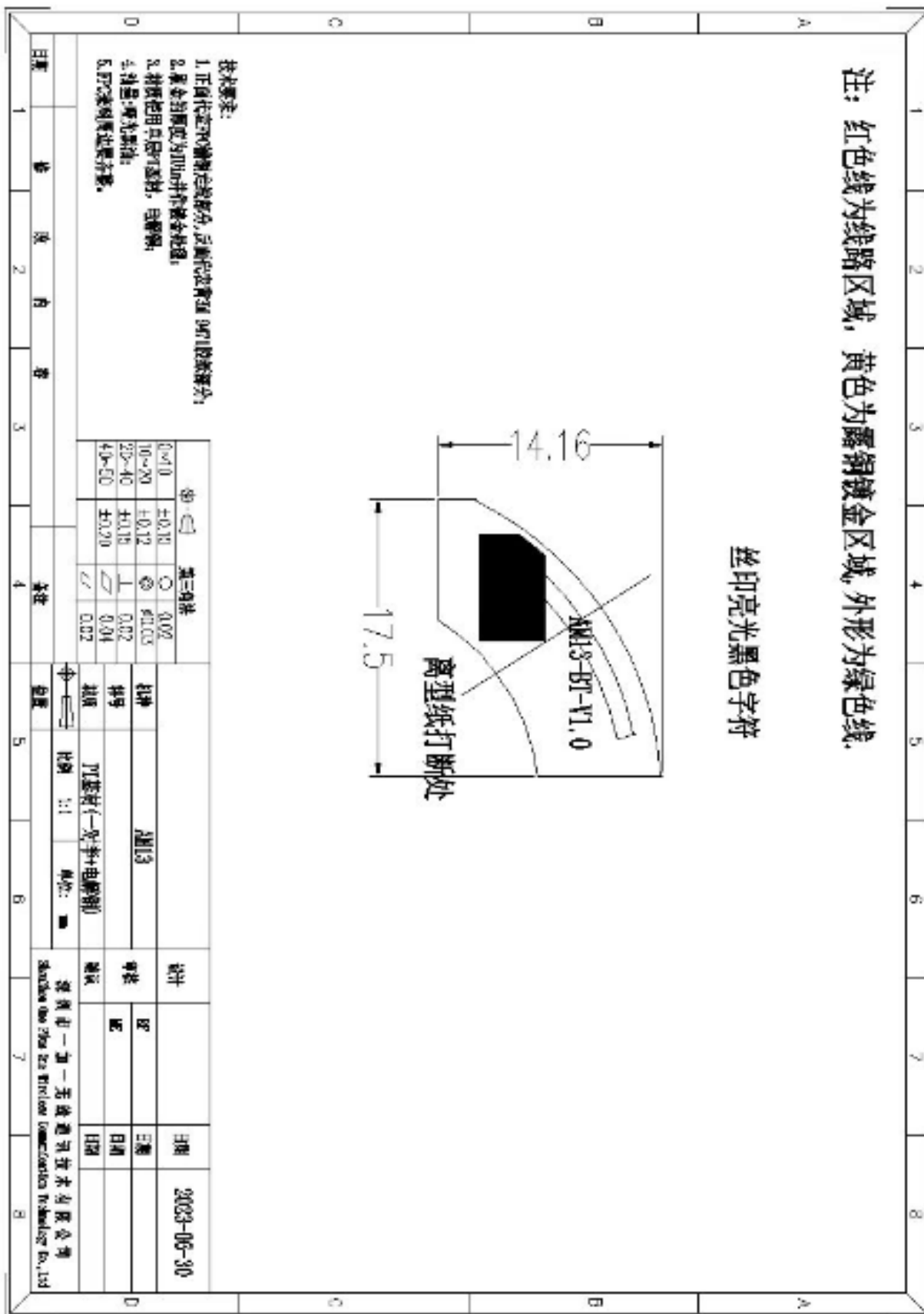
2500.000MHz



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4 Mechanical description

4.1 Drawings



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