# Specification Approval Letter

# Approval Sheet

client's name _____ Ex _____

(Customer Name)

product name X15CW-S90WIFI antenna

(Specification)

Customer part number _____

(Customer P/N)

Product part number _____

(O/I)

Sample delivery date 2023-11-28

(Date)

| | | | |
|---|---|---|---|
| frequency band | 2.4WIFI | | |
| Version | A | | |
| radio frequency | Chen Mushao | confirm | |
| structure | Yang Xuezhong | | |
| client confirmation | | | |
| date | | | |



Shenzhen Deshiqin Technology Co., Ltd.
Dosking MicroElectronics Co.,Ltd
address:Private Enterprise Science and Technology Park, Xili University Town, Nanshan District, Shenzhen2Building (Hong Kong Hung Kai Building) West Tower403
TEL:0755-88602767 FAX:0755-82793883

# Head record

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5. Structural drawings


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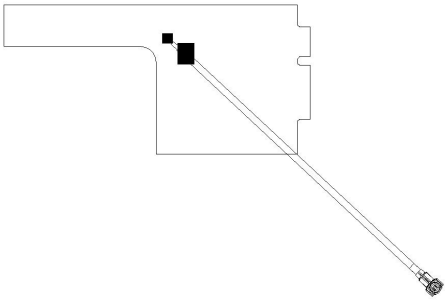
1. Project pictures (for reference only)

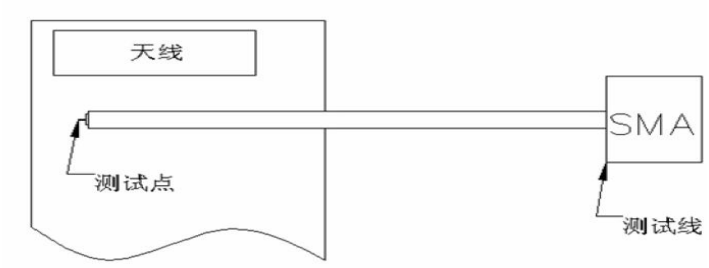


WIFI antenna

## 2. Passive testing

Purpose: Test the passive parameters of the antenna as accurately as possible.

Method: This fixture uses a 50-ohm coaxial cable. One end is connected to the test point at the back end of the matching circuit (the front section of the RF test hole) of the machine's motherboard, and the other end is connected to the SMA connector. The details are as follows:

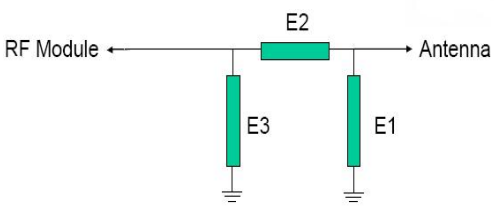



The following table is a test guide for the performance of the X15CW-S90WIFI mass-produced antenna.Tag:

| X15CW-S90WIFI antenna | | | | |
|---|---|---|---|---|
| | Frequency(MHz) | VSWR | Frequency(MHz) | VSWR |
| frequency band | The transmitting end | | Receiving end | |
| 2.4G WIFI | 2400-2500 | ≤3.0 | 2400-2500 | ≤3.0 |

3. Matching circuit

antenna(Match no changes)



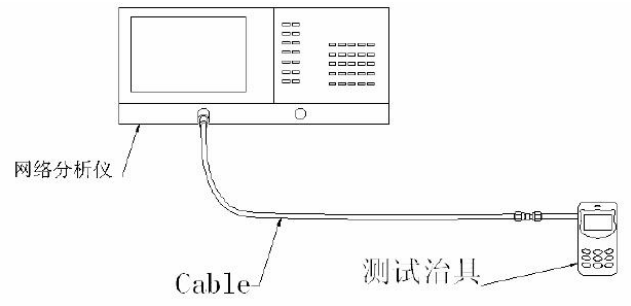

| Element | match value |
|---|---|
| E1(0402) | |
| E2(0402) | 0 ohms |
| E3(0402) | |

# 4. S11 test

4.1 S11 Test Method Description Specifications

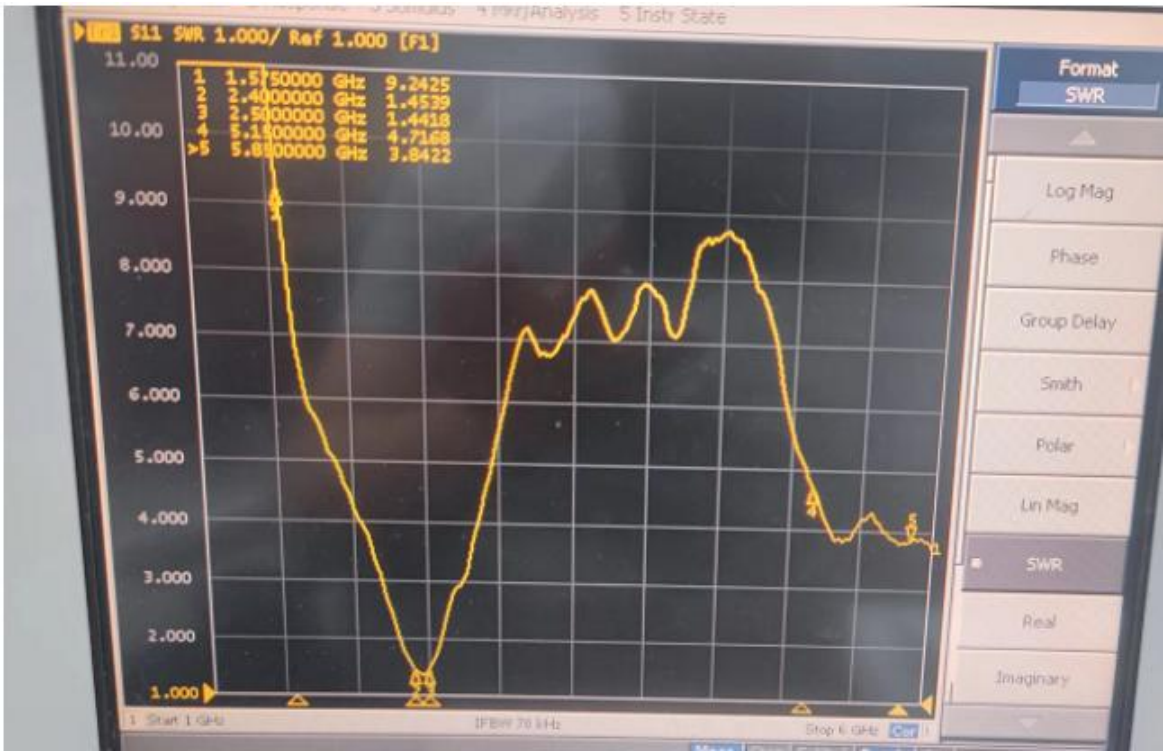
The VSWR test device is connected in sequence: E5071B Network Analyzer → 50 ohm coaxial cable → 120mm long copper tube → Test Fixture.

How to handle the test fixture: Use a hard cable to lead out the SMA-J connector from the 50 ohm test point of the antenna on the mobile phone PCB, connect it to a copper tube covered with a choke, and then connect it to other devices in turn.




Test diagram

S11 passive standing wave diagram




## 2.4WIFI efficiency/gain

| WiFi |
|---|



deep
Dosking MicroElectronics Co.,Ltd
address:Private Enterprise Science and Technology Park, Xili University Town, Nanshan District, Shenzhen2Building (Hong Kong Hung Kai Building) West Tower403
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| Freq | Effi | Gain |
|---|---|---|
| (MHz) | (%) | (DBi) |
| 2400 | 30.03 | 0.02 |
| 2420 | 31.52 | 0.09 |
| 2440 | 31.79 | 0.12 |
| 2460 | 32.36 | 0.14 |
| 2480 | 32.57 | 0.16 |
| 2500 | 32.6 | 0.18 |

3DPin



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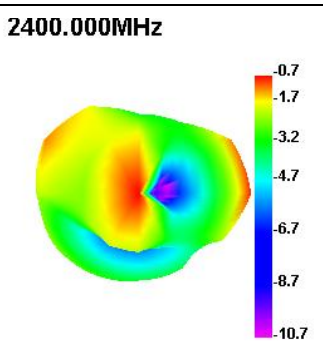


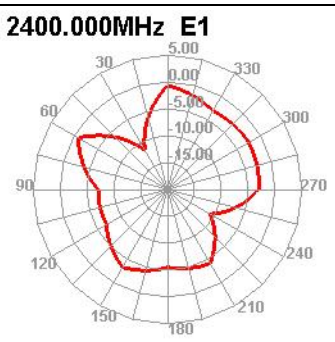


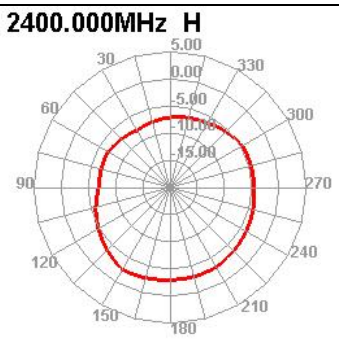


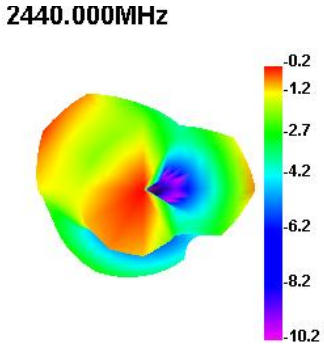


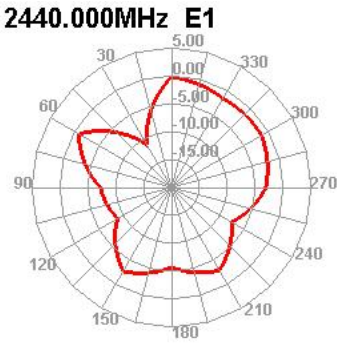


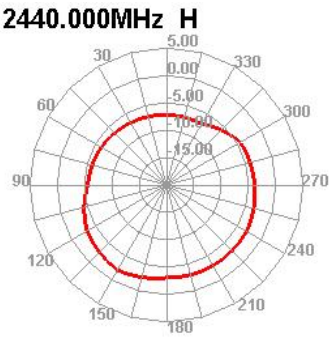


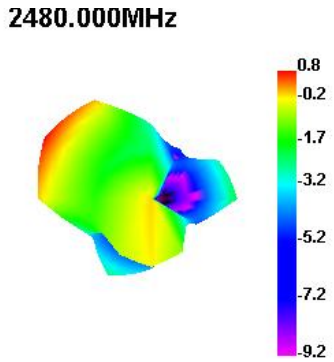


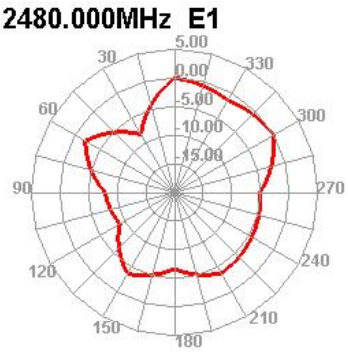


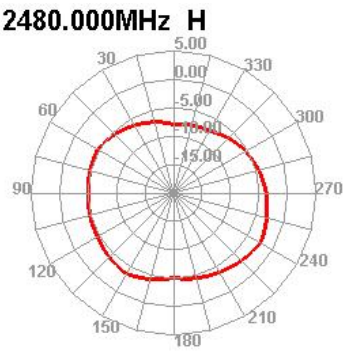


5: Structural drawings


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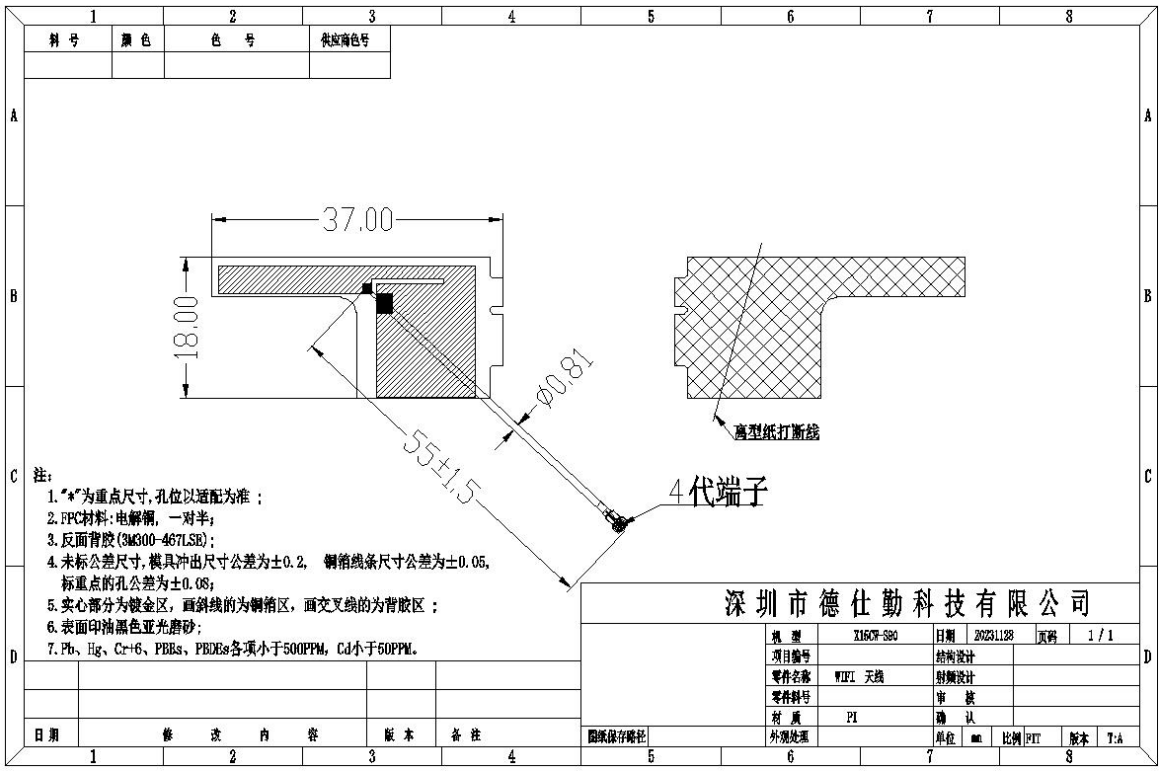
料号
颜色
色号
供应商色号
37.00
18.00
φ0.81
55±1.5
4代端子
离型纸打断线
注：
1.“*”为重点尺寸,孔位以适配为准；
2.FPC材料:电解铜，一对半；
3.反面背胶(3M300-467LSE)；
4.未标公差尺寸,模具冲出尺寸公差为±0.2，铜箔线条尺寸公差为±0.05,
标重点的孔公差为±0.08；
5.实心部分为镀金区，画斜线的为铜箔区，画交叉线的为背胶区；
6.表面印油黑色亚光磨砂；
7.Pb、Hg、Cr+6、PBBs、PBDEs各项小于500PPM，Cd小于50PPM。
日期
修改内容
版本
备注
深圳市德仕勤科技有限公司
机型
X16CF-S80
日期
20231128
页码
1/1
项目编号
结构设计
零件名称
WIFI 天线
射频设计
零件料号
审核
材质
PI
确认
图纸保存路径
外观处理
单位
mm
比例
FIT
版本
T:A