



Shenzhen Shengtuo Electronic Technology Co., Ltd

## SPECIFICATION FOR APPROVAL

**CUSTOMER:**


**PART NAME:** RF Antenna Assembly

**PART NO.:**

**REVISION:**

**ST. P/NO.:**

**REV.: XI**

	MANUFACTURER SIGNATURE	CUSTOMER SIGNATURE
APPROVED BY :	Zhou Wenbin Shenzhen Shengtuo Electronics Co., Ltd	
DATE :	01.09.2024	5/6/2024

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# RF Antenna Assembly

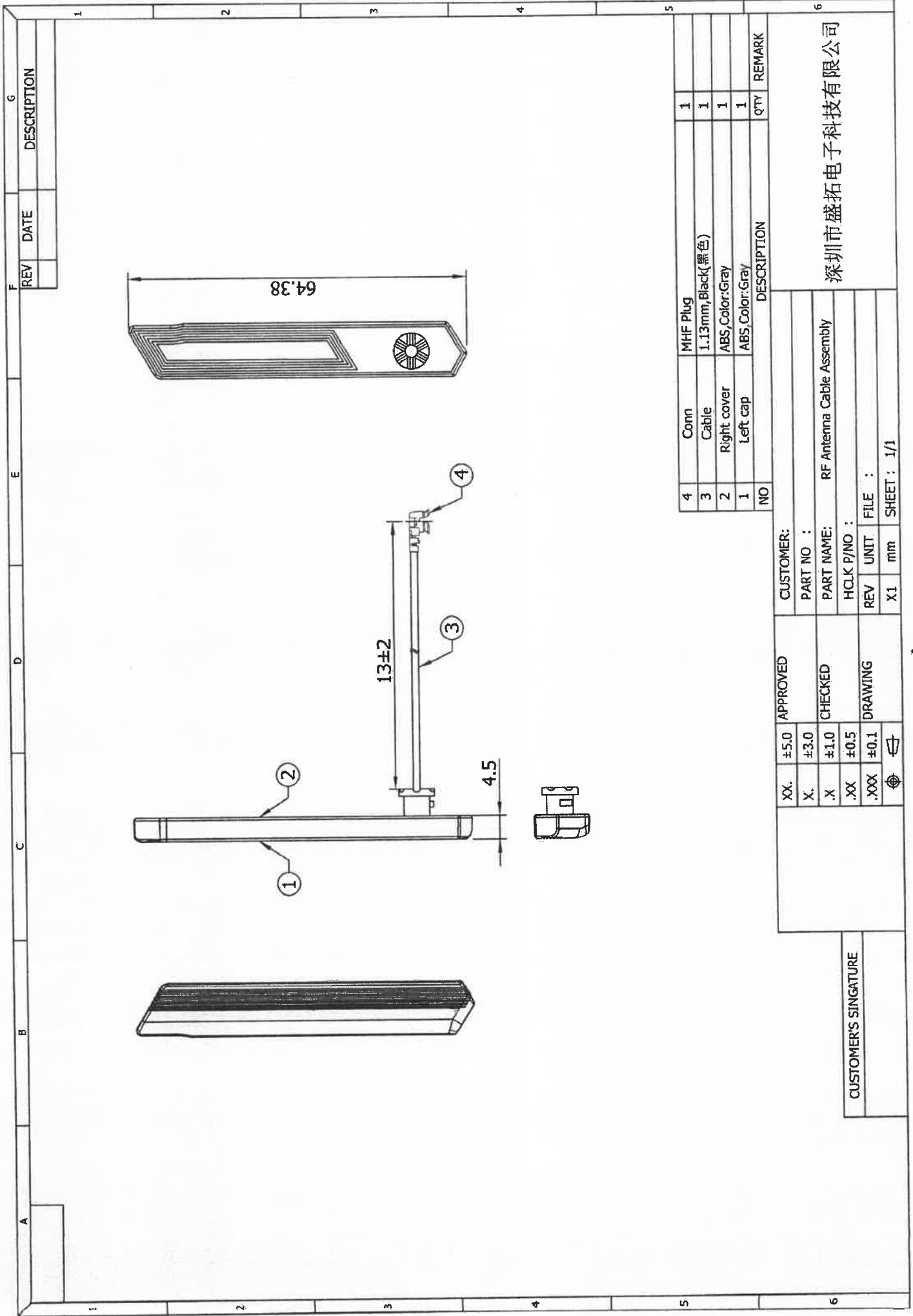
## Specification

### 1. Electrical Properties :

- 1.1 Frequency Range..... 2.4~2.5&5.15~5.85&5.9~7.125GHz
- 1.2 Impedance ..... 50Ω Nominal
- 1.3 VSWR ..... 2.0 :1Max.
- 1.4 Return Loss..... 9.5 dB Max.
- 1.5 Gain(peak)..... 3.0 dBi
- 1.6 Efficiency..... 50%
- 1.7 Cable..... Φ 1.13mm Coaxial Cable,Black
- 1.8 Connector..... MHF Connector

### 2. Physical Properties :

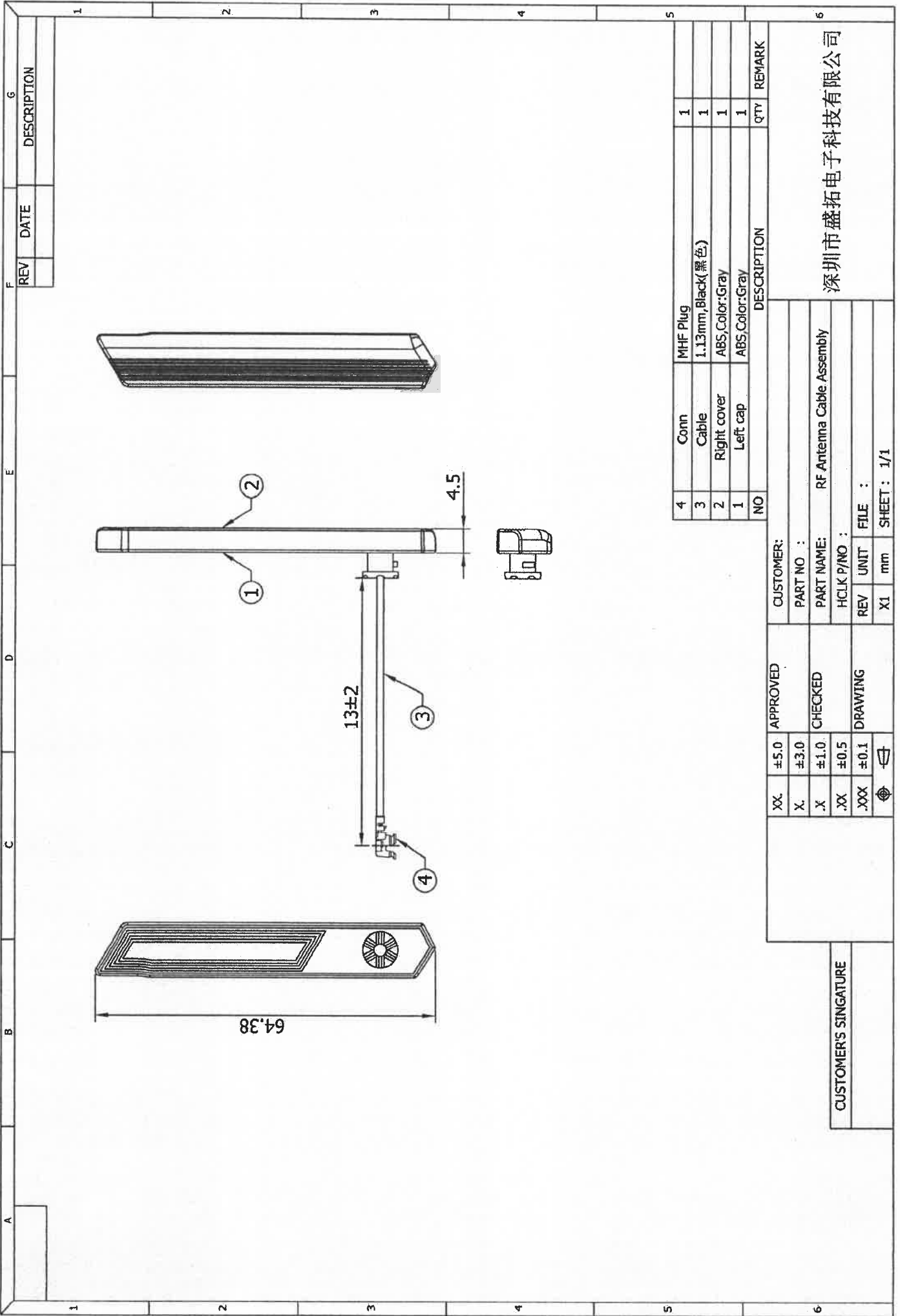
- 2.1 Operating Temp. .... -10°C ~ +60°C
- 2.2 Storage Temp. .... -10°C ~ +70°C



REV	DATE	DESCRIPTION

NO	DESCRIPTION	QTY	REMARK
4	Conn	1	
3	Cable	1	MHF Plug 1.13mm,Black(黑色)
2	Right cover	1	ABS,Color:Gray
1	Left cap	1	ABS,Color:Gray

APPROVED		CUSTOMER:	
XX. ±5.0		PART NO :	
X. ±3.0		PART NAME:	RF Antenna Cable Assembly
.X ±1.0	CHECKED	HCLK P/NO :	
.XX ±0.5		REV	UNIT
.XXX ±0.1	DRAWING	X1	mm
☉		FILE :	SHEET : 1/1
CUSTOMER'S SIGNATURE		深圳市盛拓电子科技有限公司	



REV	DATE	DESCRIPTION

NO	DESCRIPTION	QTY	REMARK
4	Conn	1	
3	Cable	1	
2	Right cover	1	
1	Left cap	1	

CUSTOMER:	
PART NO :	
PART NAME:	RF Antenna Cable Assembly
HCLK P/NO :	
REV	UNIT
X1	mm
FILE :	
SHEET :	1/1

XX	±5.0	APPROVED
X	±3.0	
.X	±1.0	CHECKED
.XX	±0.5	
.XXX	±0.1	DRAWING

CUSTOMER'S SIGNATURE	
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深圳市盛拓电子科技有限公司



# **WIFI Antenna Test Report**

**Version: 1.0**

**Released Date: 2024/01/08**

**Prepared By: Blue**

**Reviewed By:**



# Contents

- Revised History
- Specification
- Antenna Placement & Solution
- Test Setup for S-parameter Measurement
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- Results Summary (peak gain, efficiency )



# Revision History

Released Date	Version	Revised Record
2024/01/08	1.0	■WIFI Antenna Test Report



# Specification

## Requirements of Antenna Design

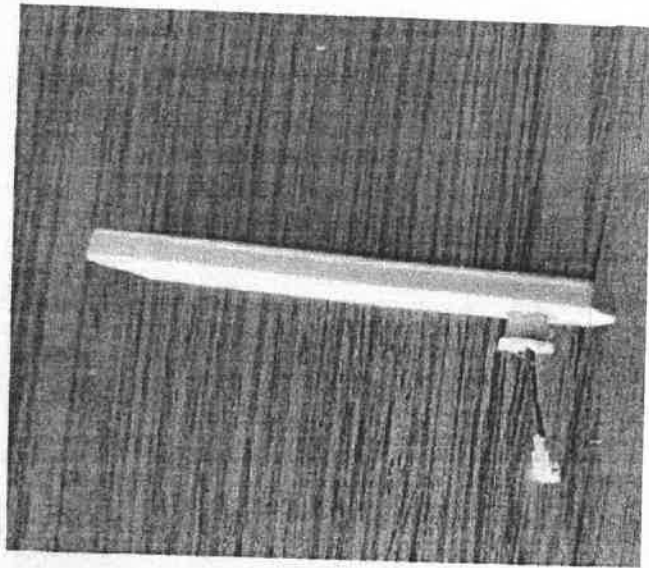
RF Function	Number of ANT	Frequency Band	Remark
Wi-Fi	1	2.4~2.5&5.15~5.85&5.9~7.125GHz	

## Requirements of Measurement

Test Item	Specification	Remark
VSWR	2.0:1 Max	TBD
Peak Gain	3 dBi	TBD
Efficiency	50%	TBD

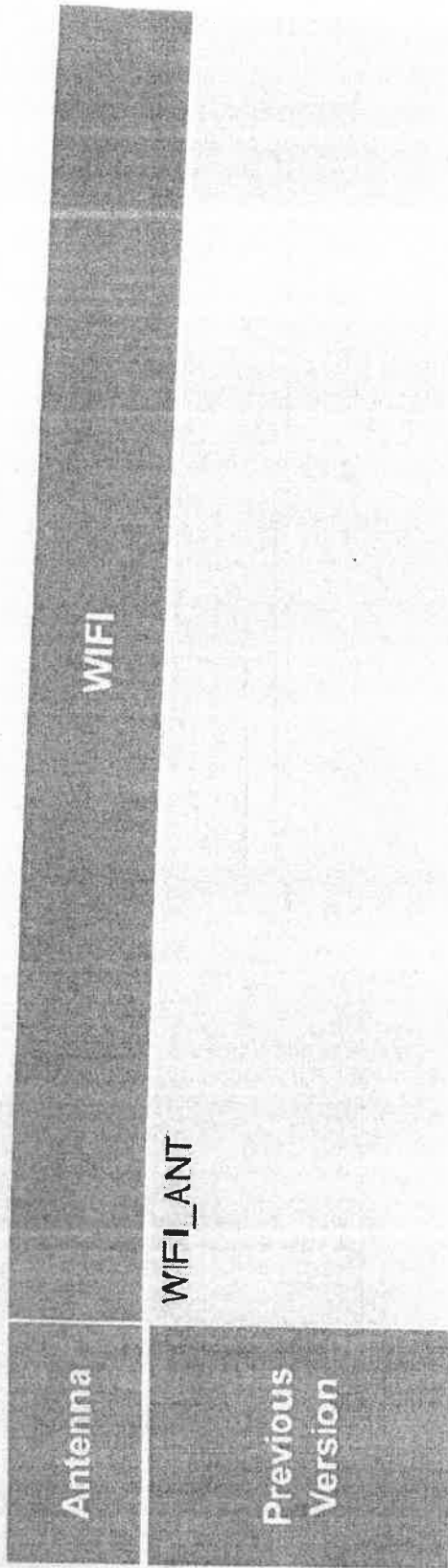


# Antenna Placement & Solution



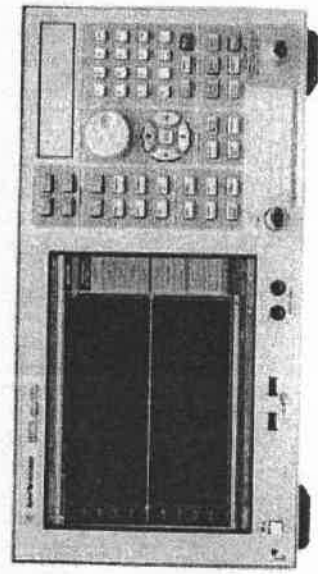
Antenna	ANT_Type	Size (φ* H)	Cable Length (mm)	Cable Type
.4G_ANT	PCB			

# Antenna Placement & Solution



# Test Setup for S-parameter

## Measurement



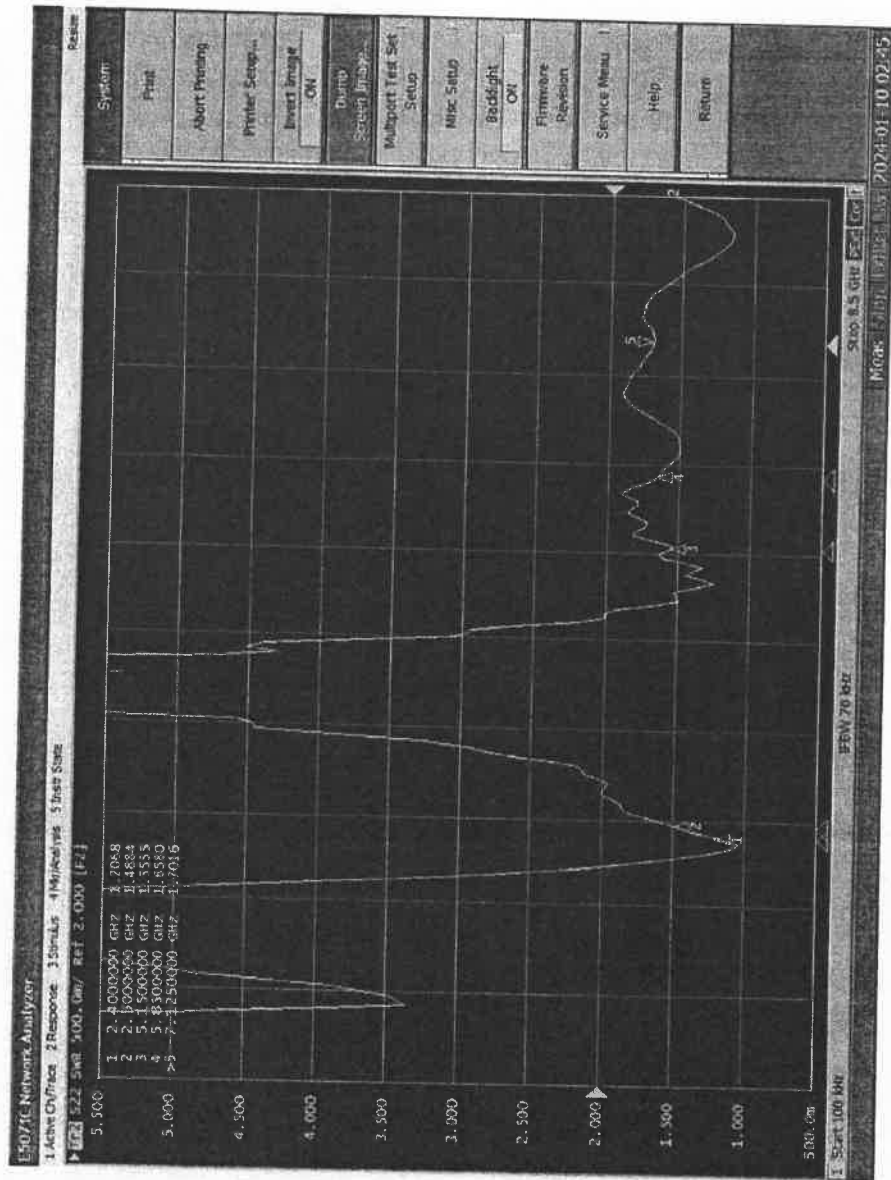
Equipment	Brand	Model
Network Analyzer	Keysight	E5071C



# VSWR Results

(Criterion: 2.0:1 Max)

Ant



SI 深圳市盛拓电子有限公司

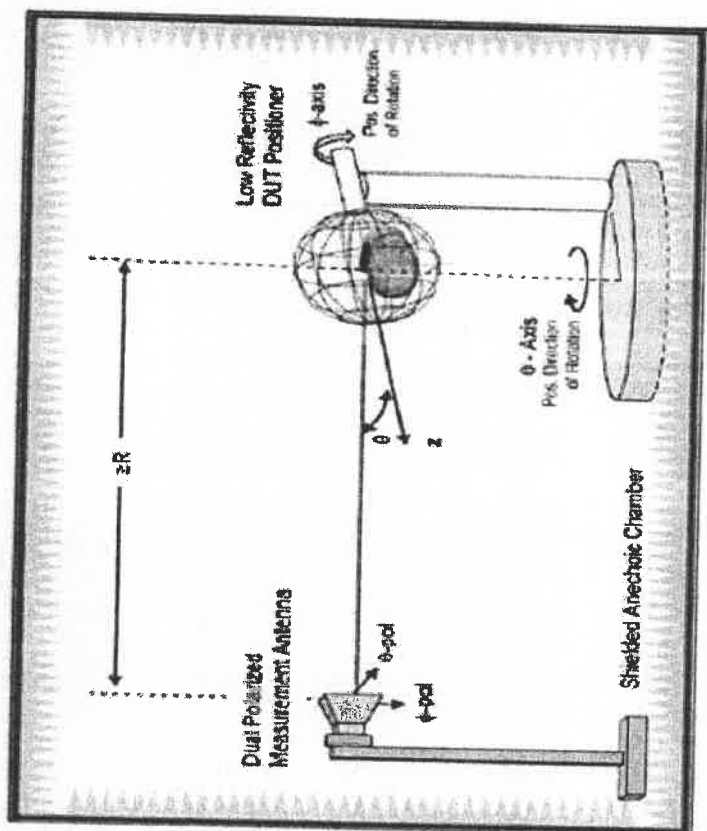
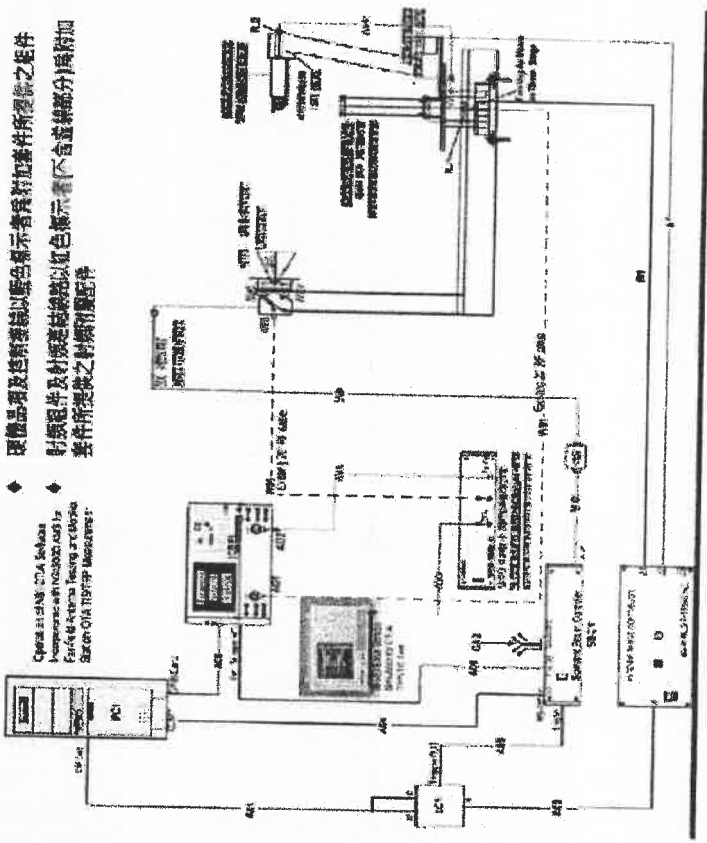
投影片 8

AI

Administrator: 2024/1/10

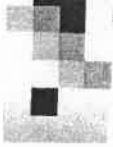
# Chamber Information

- ◆ 環境品項及技術規格以藍色標示者為附加條件所選擇之組件
- ◆ 材料組件及材料規格以灰色標示者(不在此規格分)為附加條件所選擇之材料組件



Chamber	Brand	Model	Location
WavePro	WavePro	FFC-700	China, shenzhen

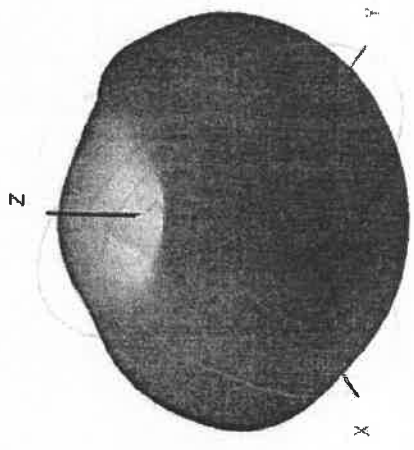
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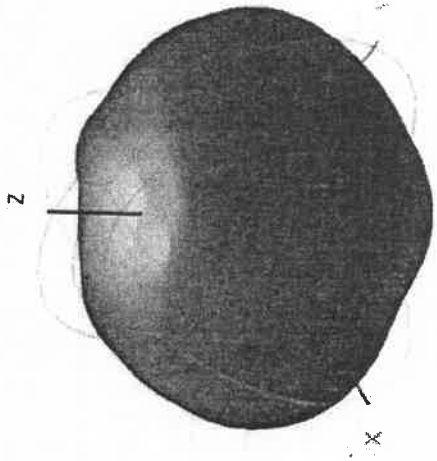
# 3D Radiation Pattern Results

ANT

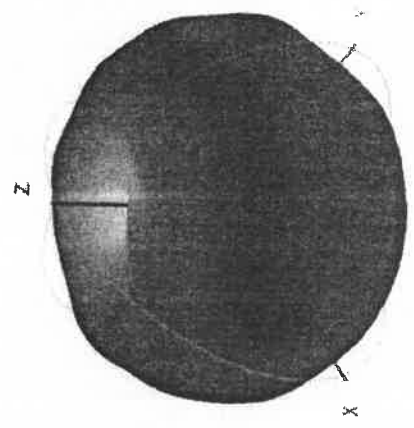
2400MHz



2500MHz



5150MHz

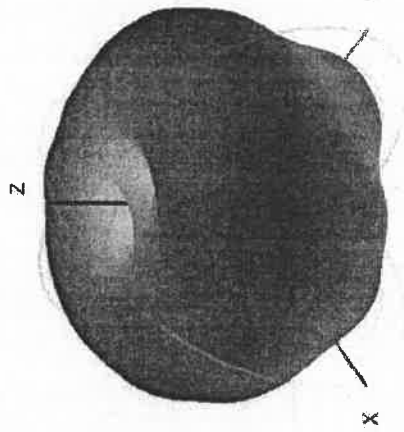




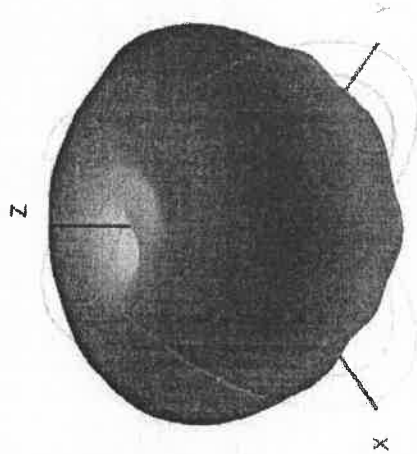
# 3D Radiation Pattern Results

ANT

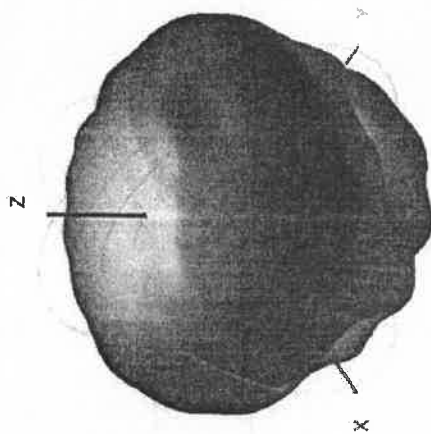
5850MHz



5950MHz



7125MHz





# Results Summary

VSWR (Criterion: 2.0:1 Max)

Frequency (MHz)	VSWR
2400	1.2
2500	1.48
5150	1.55
5850	1.65
7125	1.7

# Results Summary

Frequency (MHz)	Ant1	
Frequency (MHz)	Peak Gain (dBi)	Efficiency (%)
2400	2.24	58.01
2500	2.80	63.29
5150	3.26	59.76
5850	3.65	61.84
7125	3.48	63.50