上海增信电子有限公司
Signal Plus Technology Co., Ltd.

规格承认书
SPECIFICATION FOR APPROVAL

日期
DATE: 2024.12.24

版本
REV.: B

客户
CUSTOMER: 时空奇点

客户料号
CUSTOMER P/N: P1

品名
PART NAME: 内置FPC天线，BT天线 for P1

供方料号
SUPPLIER P/N: 6306F00014

送样日期Date: 送样数量Q'TY: Pcs

客户确认CUSTOMER APPROVED BY		
核准 Approvaled by	审核 Checked by	确认 Confirmed by

供方确认SUPPLIER SIGNATURE		
核准 Approvaled by	审核 Checked by	拟制 Prepared by
Andy		Cindy

ZX-QT-RD-0011-A1

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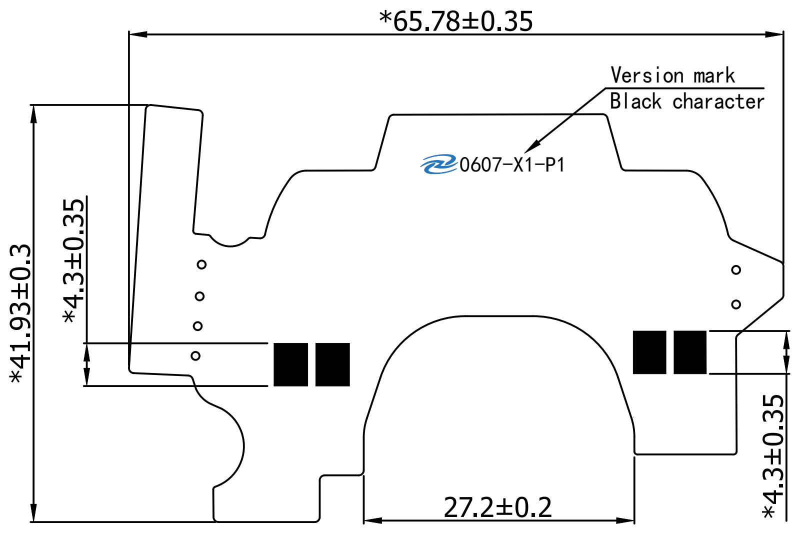
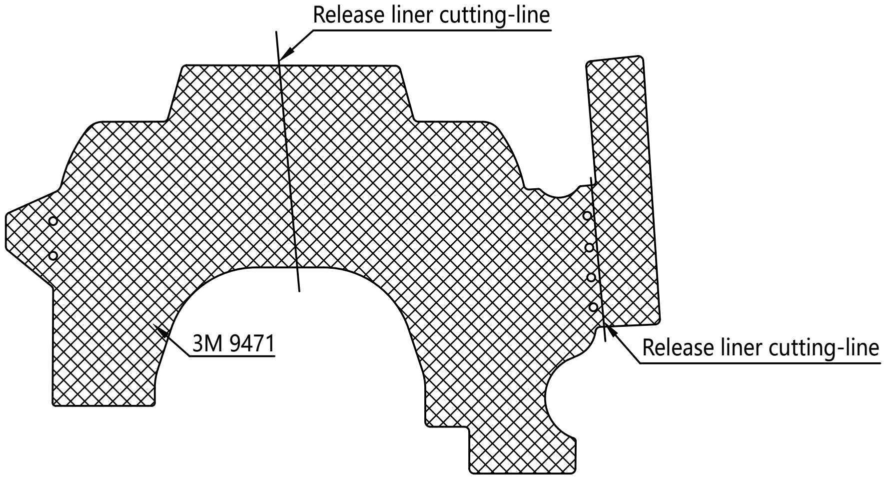
REV	DATE	DESCRIPTION
X1	04/30-2024	New Issue



Front view



Back view

■ Gold Finger

□ Solder resist ink

▨ Adhesive

NOTE:

1.Antenna appearance :White solder resist ink;

2.The Antenna structure: PI(1.0mil)+Cu(0.5 oz)+3M 9471 Adhensive;

3.The thickness of Gold-Plated≥0.025μm;

4.The Gold Finger complied with the 48H salt spray test;

5.The appearance can not be creased or scratched,etc;

6.The antenna complied with ROHS 2.0 ;

7.Important dimensions marked with "*",and () for reference.

NO	DESCRIPTION		Q'TY	REMARK
1	BT&LTE Antenna	FPC:PI+Cu+3M9471;Color:White	1	502-1-0607-X1

CUSTOMER'S SIGNATURE

XXX.	±2.0	APPROVED	CUSTOMER:		
XX.	±1.0		PART NO:		
X.	±0.5	CHECKED	PART NAME: BT&LTE antenna for P1		
.X	±0.3		Z&X P/NO: 6306F00014		
.XX	±0.2	DRAWING	REV	UNIT	FILE:
			X1	mm	SHEET: 1/1

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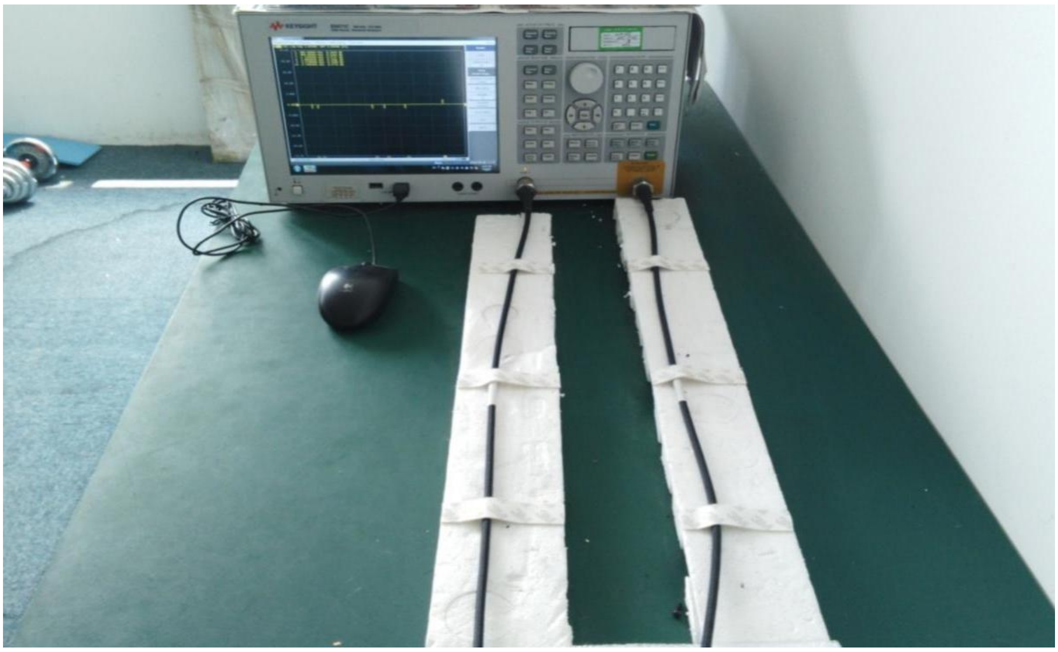
Antenna Test Report

1. RF Fixture Experiment

1.1 Test Setup

1.1.1 VNA Test Setup

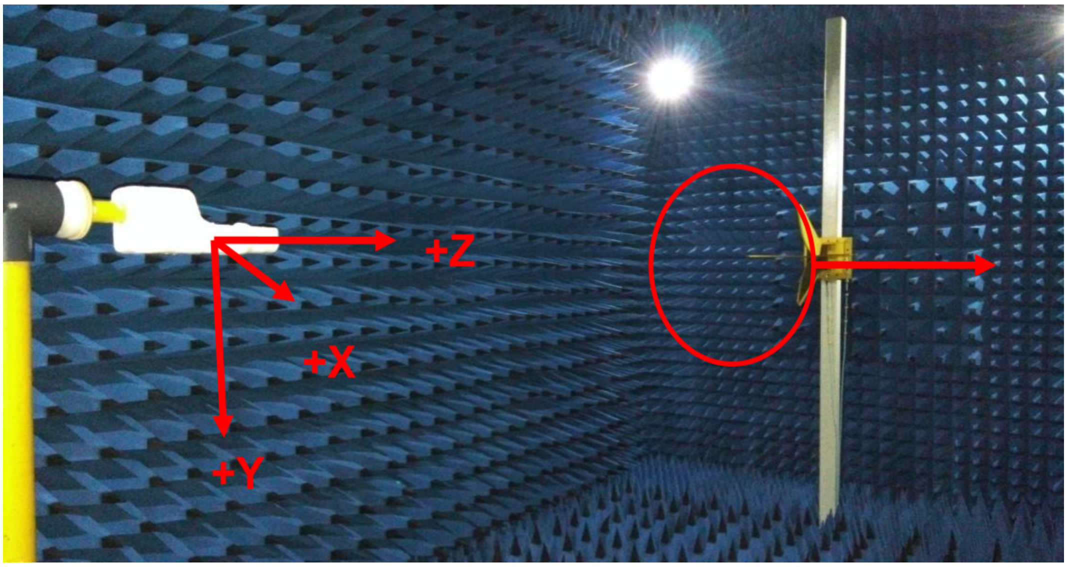
VSWR and Return Loss measurements (S11) were performed using an KeySight E5071C Network Analyzer. The isolation between antennas is also tested. The testing was performed with apparatus in free space.



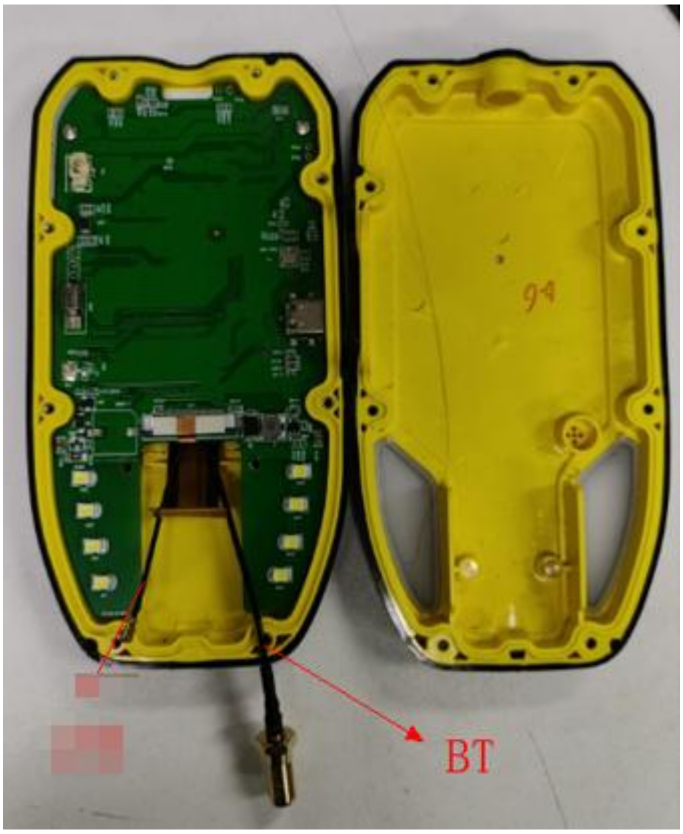
1.1.2 Anechoic Chamber Test Setup

The gain of the antenna was measured in the anechoic chamber.

The chamber provides less than –30 dB reflectivity from 400 MHz through 6 GHz. The chamber size is:7m*4m*3m. The measurement results are calibrated using a leaky wave horn standard. We can measure the antenna gain and efficiency accurately.



2、Antenna Solution

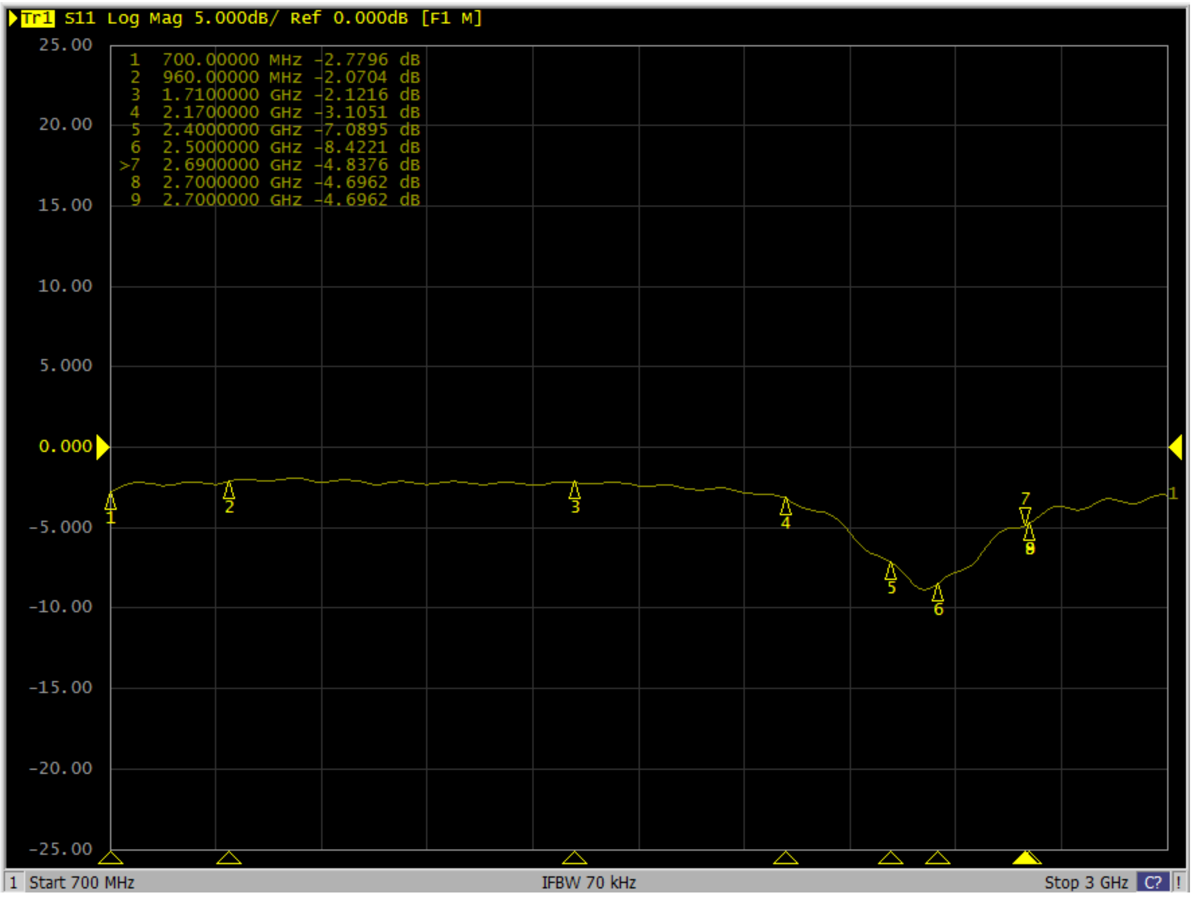


[redacted]

Data Preview

Freq (MHz)	Gain (dBi)	Effi (%)
2400	1.75	41%
2450	2.09	41%
2500	1.21	37%

S11



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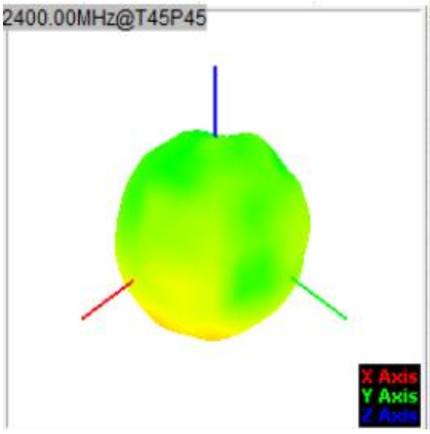
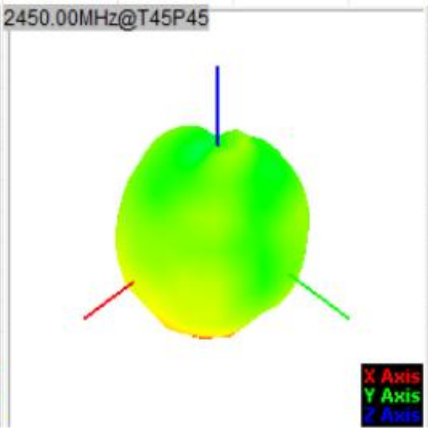
Tr1 S11 Log Mag 5.000dB/ Ref 0.000dB [F1 M]
 1   700.00000 MHz -2.7796 dB
 2   960.00000 MHz -2.0704 dB
 3   1.7100000 GHz -2.1216 dB
 4   2.1700000 GHz -3.1051 dB
 5   2.4000000 GHz -7.0895 dB
 6   2.5000000 GHz -8.4221 dB
>7   2.6900000 GHz -4.8376 dB
 8   2.7000000 GHz -4.6962 dB
 9   2.7000000 GHz -4.6962 dB
```

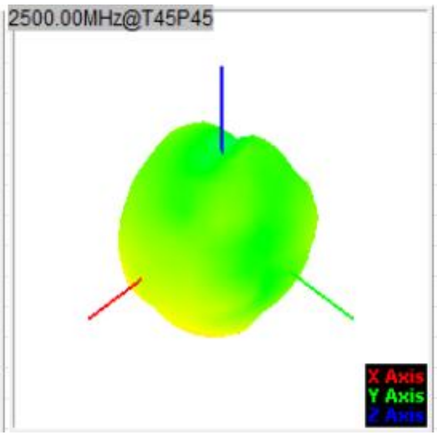
Radiation patterns:3D



2400.00MHz@T45P45



2450.00MHz@T45P45



2500.00MHz@T45P45

Radiation patterns:2D(2400/2450//2500MHz)