



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: 2022.05.18

版本
REV.: A

客 户
CUSTOMER: 时空奇点

客 户 料 号
CUSTOMER P/N:

品 名
PART NAME: 内置2.4G PCB天线 1.13黑色L=150mm with RF CONN for B100 BT

供 方 料 号
SUPPLIER P/N:

送样日期Date: 送样数量Q'TY: Pcs

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

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

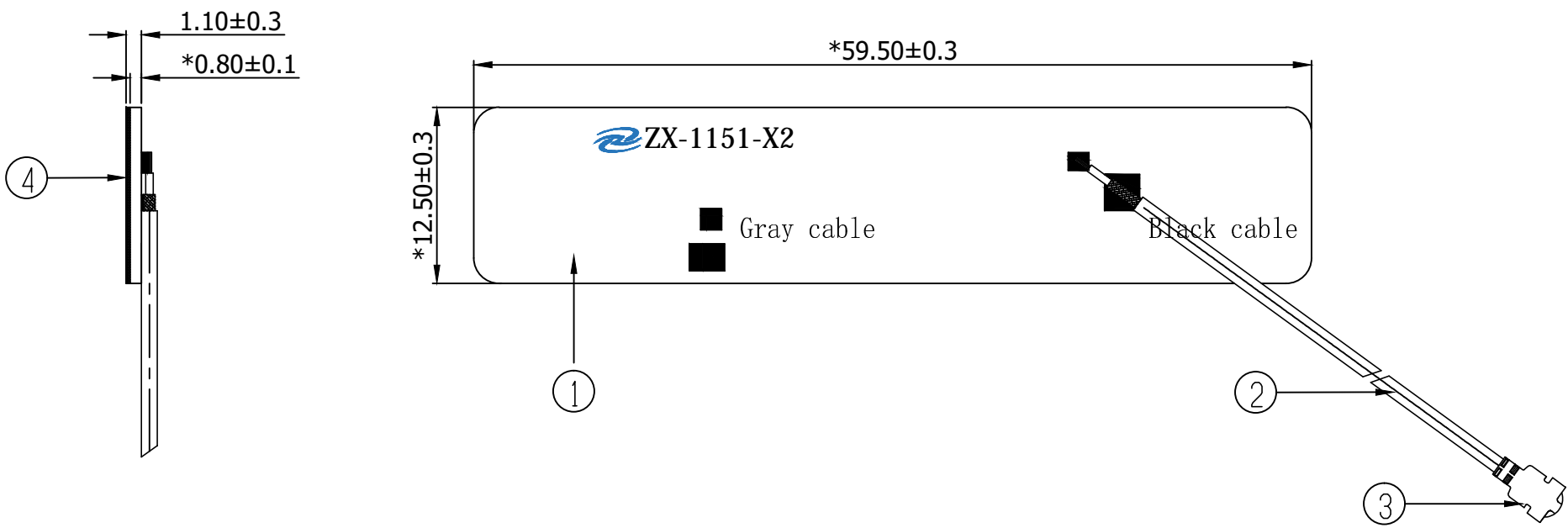
ZX-QT-RD-0011-A1

Add:上海市徐汇区桂箐路69号30栋603室 Tel:021-54266190 Fax:021-54266191

Contents

<i>Item</i>	<i>Description</i>	<i>Page</i>
1.	Cover 1
2.	Content 2
3.	Drawing 3
4.	Antenna Test Report 4~8

REV	DATE	DESCRIPTION
X1	08/01-2022	New Issue



1.ELECTRICAL PROPERTIES:

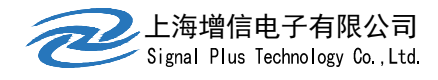
- 1.1 Frequency Range.....2.4~2.5GHz
- 1.2 Impedance.....50 Ohm Nominal
- 1.3 VSWR(单天线测试).....2.0(MAX)@2.82~2.94GHz

2.These Products are in conformity with ROHS 2.0

3.带*为重点尺寸

4	双面胶	双面胶, 3M9888T	1	
3	端子	RF CONN一代端子, 镀金	1	
2	同轴线	1.13 Coaxial cable, Black	1	
1	PCB内置天线	FR4, 覆铜线路板, 表面黑油	1	501-1-1151-X2
NO	DESCRIPTION		Q'TY	REMARK

CUSTOMER'S SINGATURE	XXX.	±2.0	APPROVED	CUSTOMER:		
	XX.	±1.0		PART NO:		
	X.	±0.5	CHECKED	PART NAME: BT-ANT FOR B100		
	.X	±0.3		Z&X P/NO:		
	.XX	±0.2	DRAWING	REV	UNIT	FILE:
				X1	mm	SHEET: 1/1





Antenna Test Report

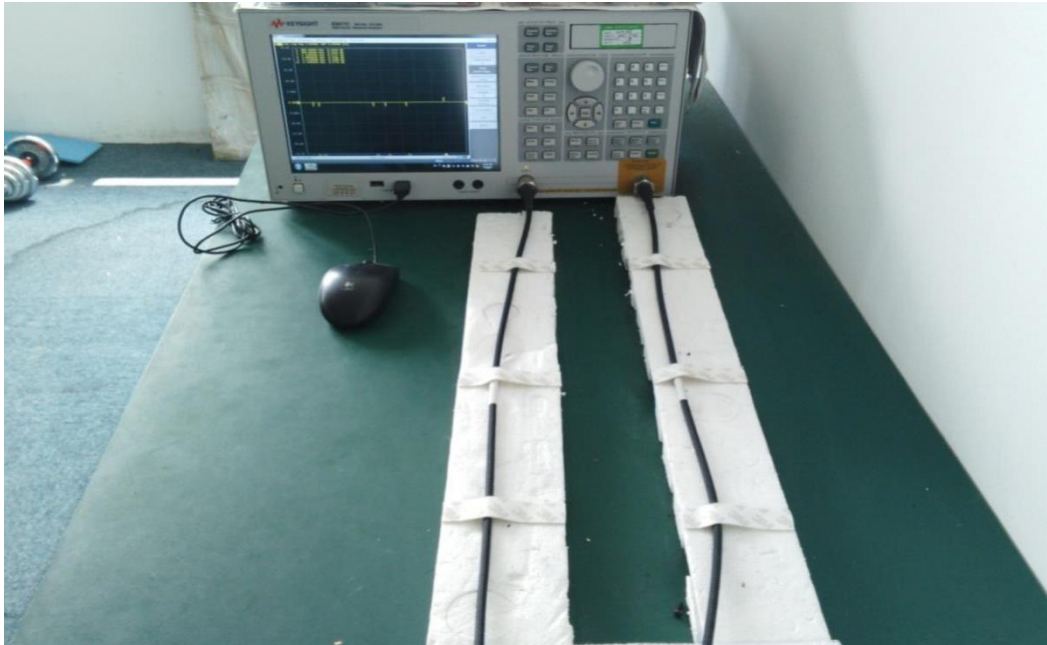
ZX-1151-X2

1. RF Fixture Experiment

1.1 Test Setup

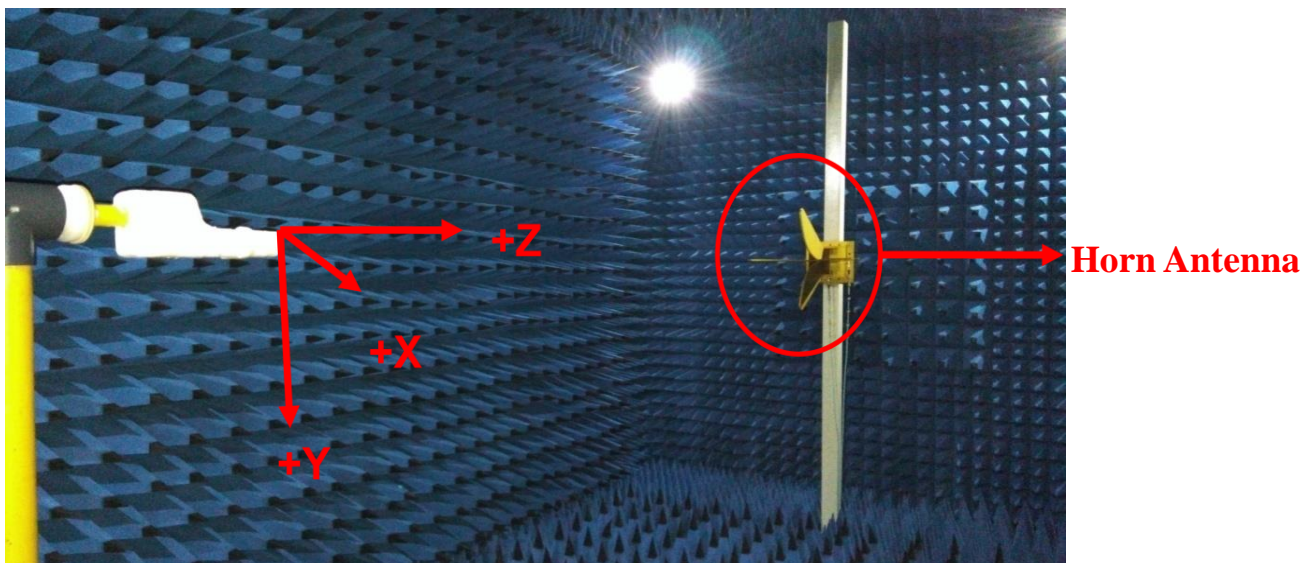
1.1.1 VNA Test Setup

VSWR and Return Loss measurements (S_{11}) were performed using an Keysight E5071C Network Analyzer. The isolation between antennas is also tested. The testing was performed with apparatus in free space.

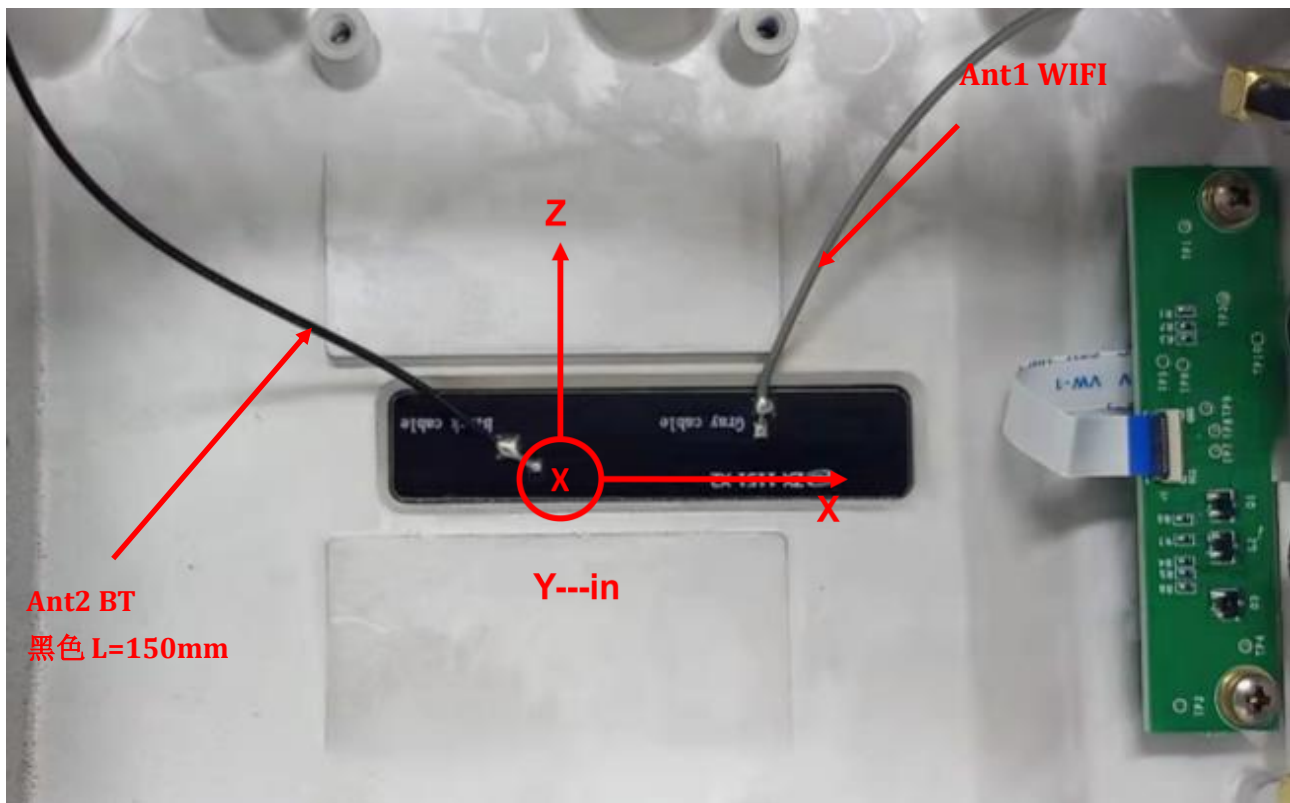


1.1.2 Anechoic Chamber Test Setup

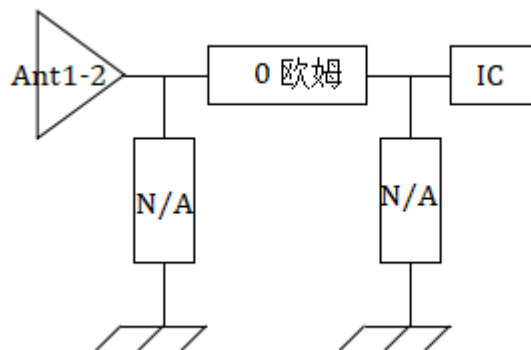
The gain of the antenna was measured in the anechoic chamber. The chamber provides less than -30 dB reflectivity from 400 MHz through 6 GHz. The chamber size is: 7m*4m*3m. The measurement results are calibrated using a leaky wave horn standard. We can measure the antenna gain and efficiency accurately.



2. Antenna Solution



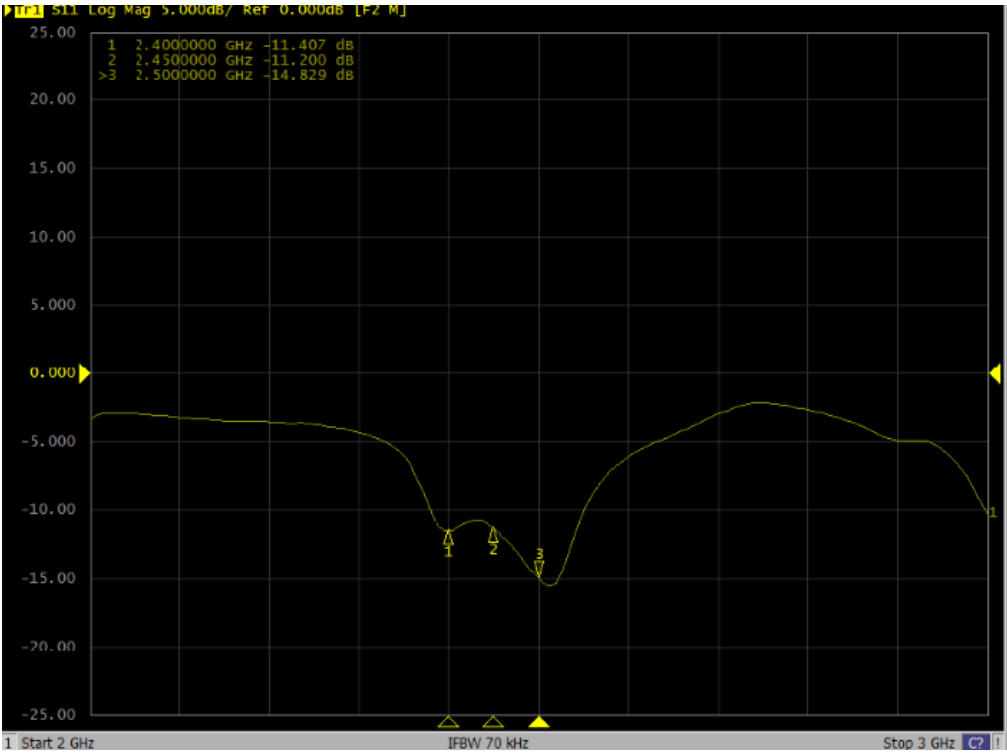
2. RF matching circuit for different antennas



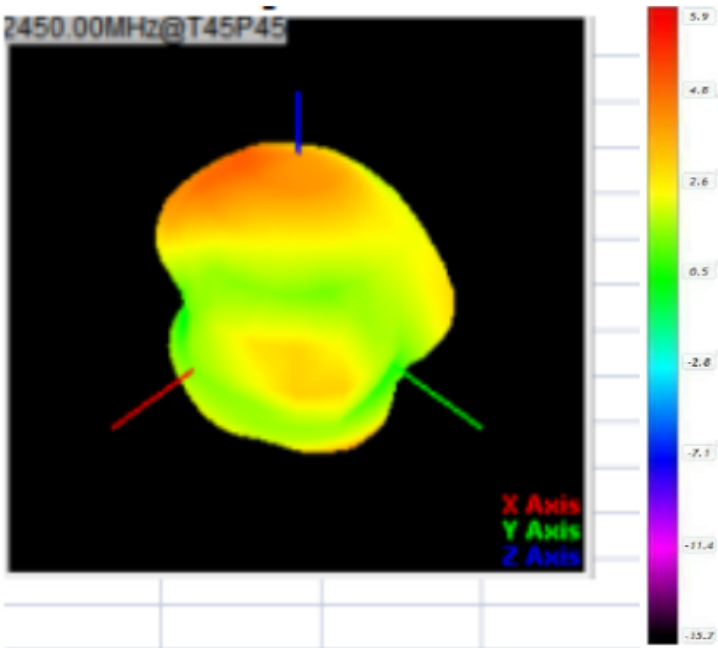
Ant2-BT:

Freq (MHz)	Gain (dBi)	Effi (%)
2400	4.30	47%
2450	4.41	45%
2500	4.48	44%

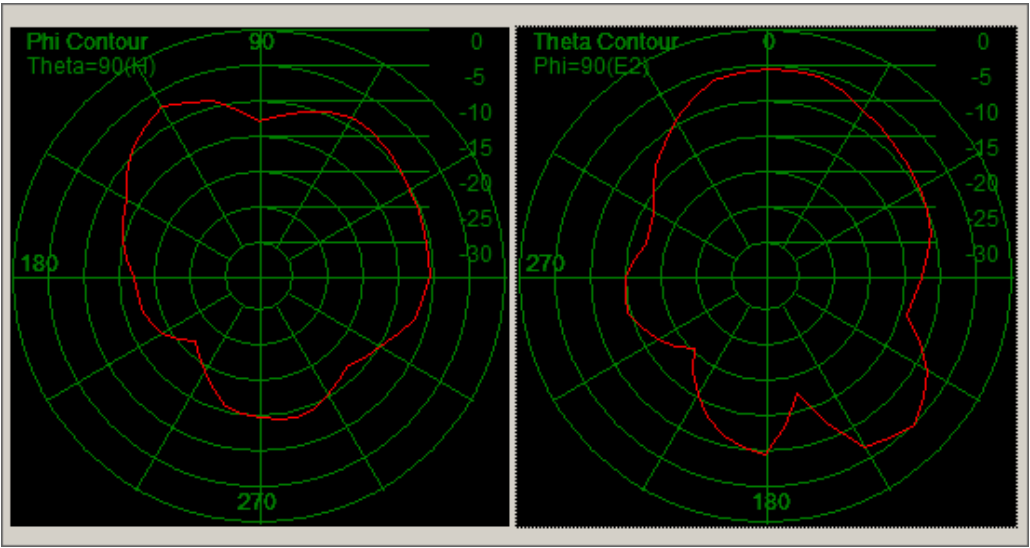
S11(Ant2)



Radiation patterns:3D



Radiation patterns:2D



S21(Ant1-Ant2)

