



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: 2024.04.01

版本
REV.: B

客 户
CUSTOMER: 上海六联智能科技有限公司

客 户 料 号
CUSTOMER P/N:

品 名
PART NAME: 内置 2.4G&5G WiFi FPC天线, 0.81灰色普通线L=170mm with RF CONN(4代)
for DNB20副端口

供 方 料 号
SUPPLIER P/N: 6241F00022

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

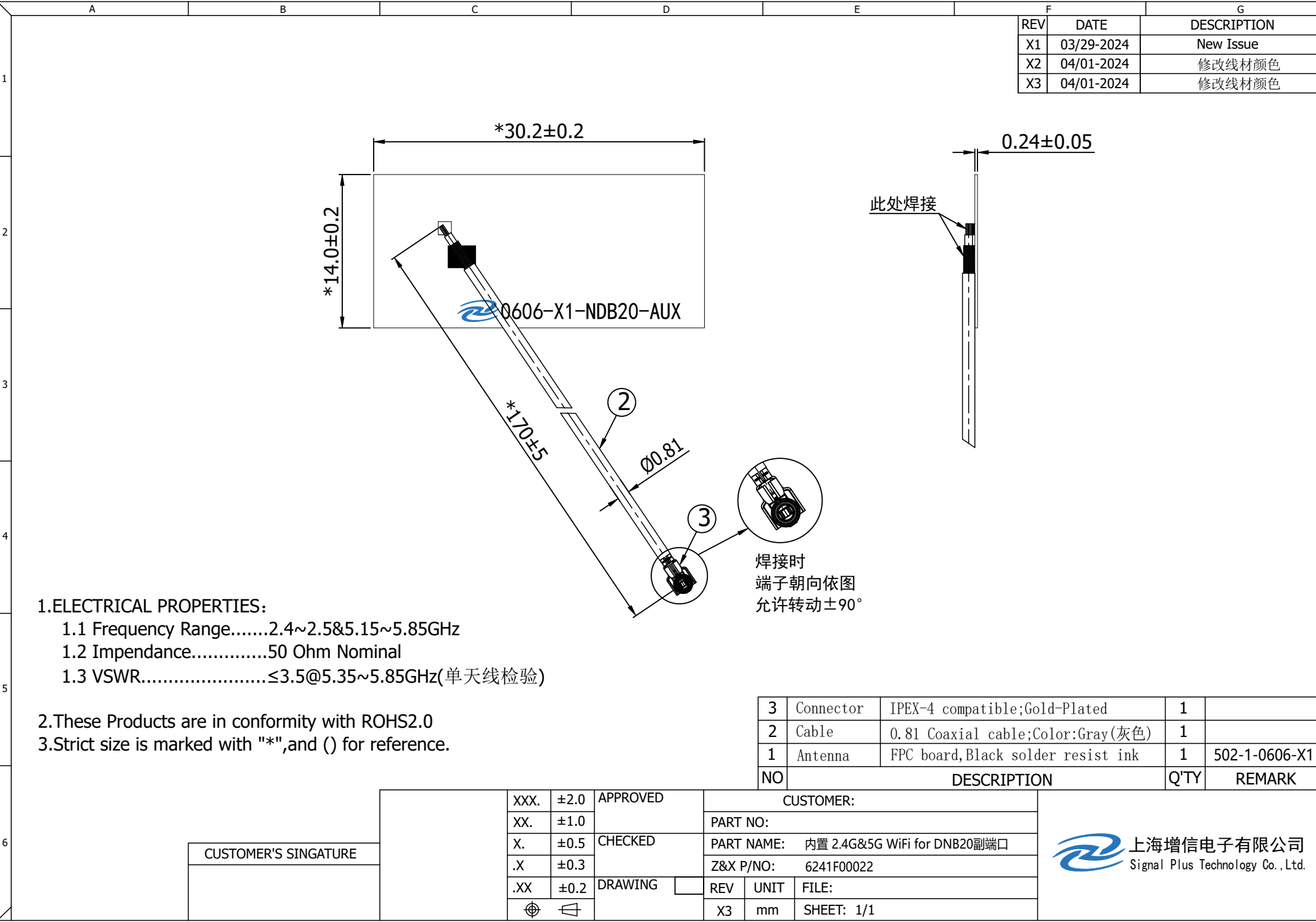
供方确认SUPPLIER SIGNATURE		
核准 Approved by	审核 Checked by	拟制 Prepared by
Andy		Cindy

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

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REV	DATE	DESCRIPTION
X1	03/29-2024	New Issue
X2	04/01-2024	修改线材颜色
X3	04/01-2024	修改线材颜色

- 1.ELECTRICAL PROPERTIES:
- 1.1 Frequency Range.....2.4~2.5&5.15~5.85GHz
 - 1.2 Impedance.....50 Ohm Nominal
 - 1.3 VSWR..... ≤ 3.5 @5.35~5.85GHz(单天线检验)
- 2.These Products are in conformity with ROHS2.0
- 3.Strict size is marked with "*",and () for reference.

3	Connector	IPEX-4 compatible;Gold-Plated	1	
2	Cable	0.81 Coaxial cable;Color:Gray(灰色)	1	
1	Antenna	FPC board,Black solder resist ink	1	502-1-0606-X1
NO	DESCRIPTION		Q'TY	REMARK

CUSTOMER'S SINGATURE	XXX.	± 2.0	APPROVED	CUSTOMER:		
	XX.	± 1.0		PART NO:		
	X.	± 0.5		PART NAME: 内置 2.4G&5G WiFi for DNB20副端口		
	.X	± 0.3	CHECKED	Z&X P/NO: 6241F00022		
	.XX	± 0.2		REV	UNIT	FILE:
				X3	mm	SHEET: 1/1
			DRAWING			



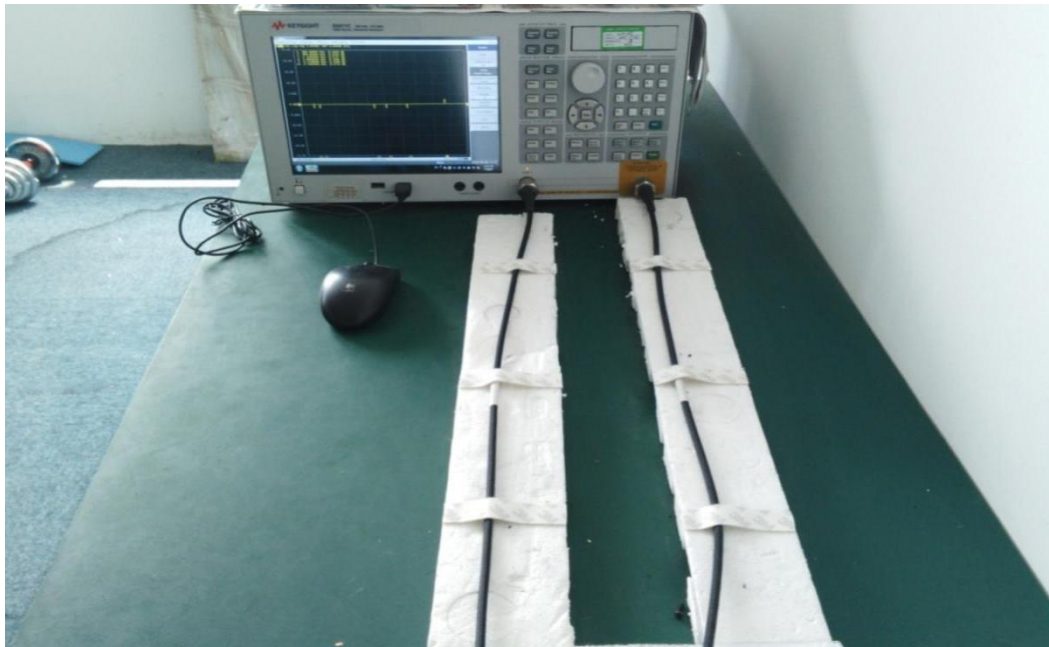
Antenna Test Report

1. RF Fixture Experiment

1.1 Test Setup

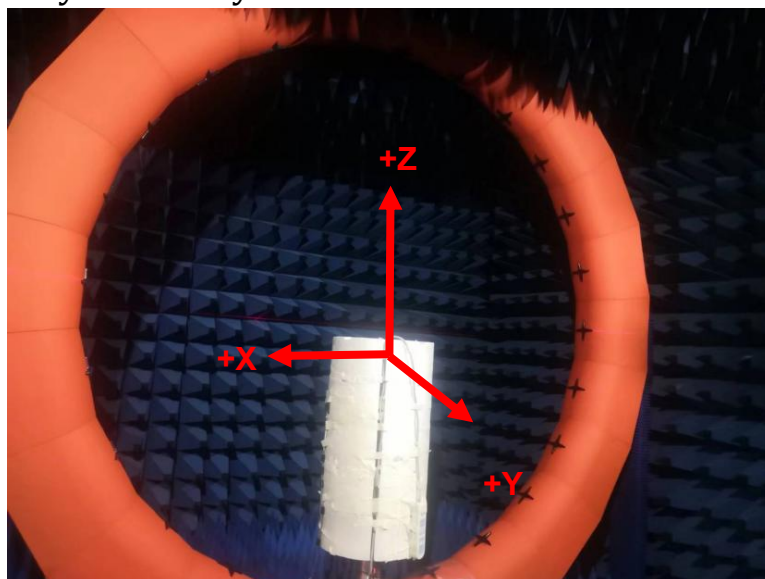
1.1.1 VNA Test Setup

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.

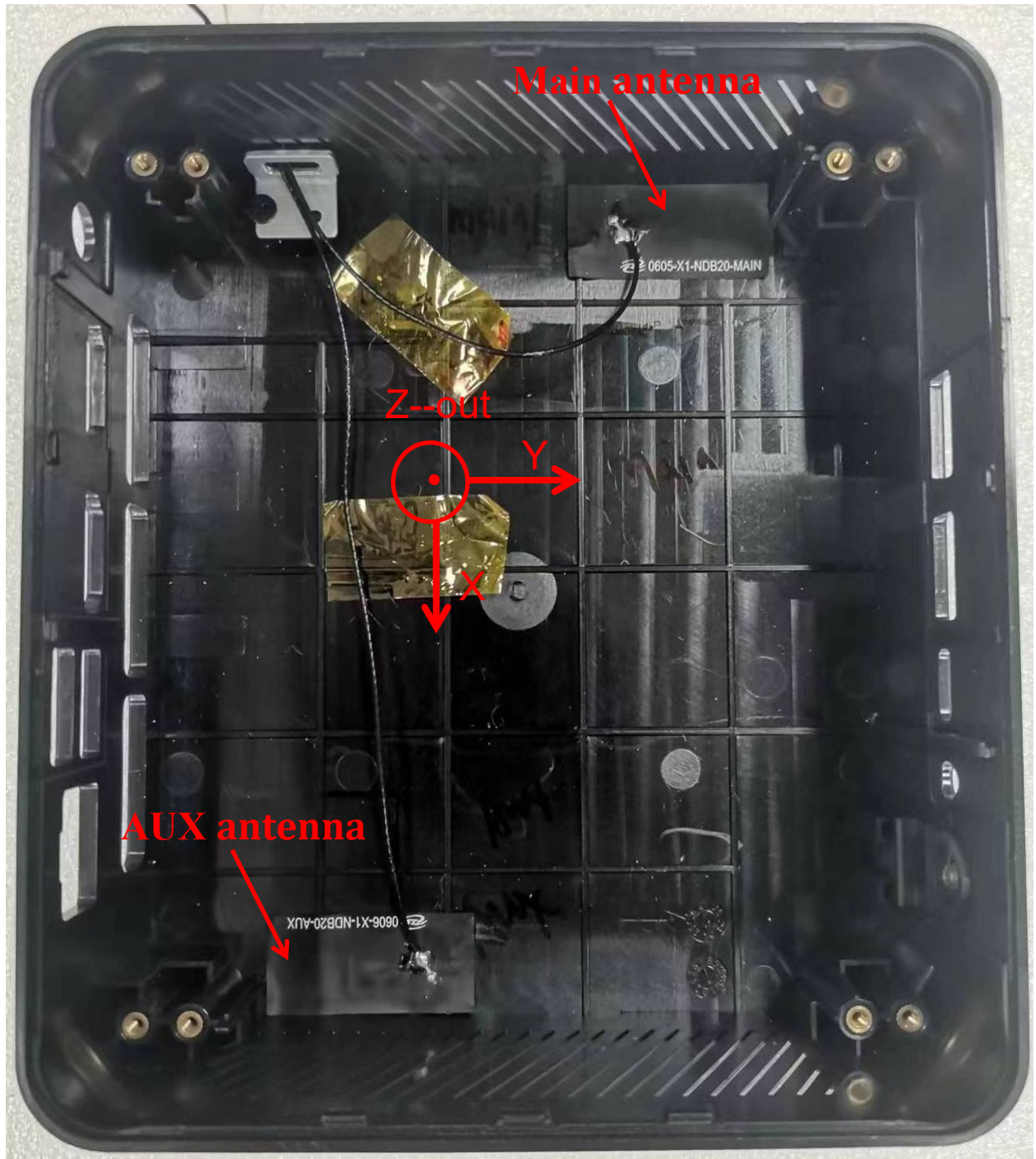


1.1.2 Anechoic Chamber Test Setup

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



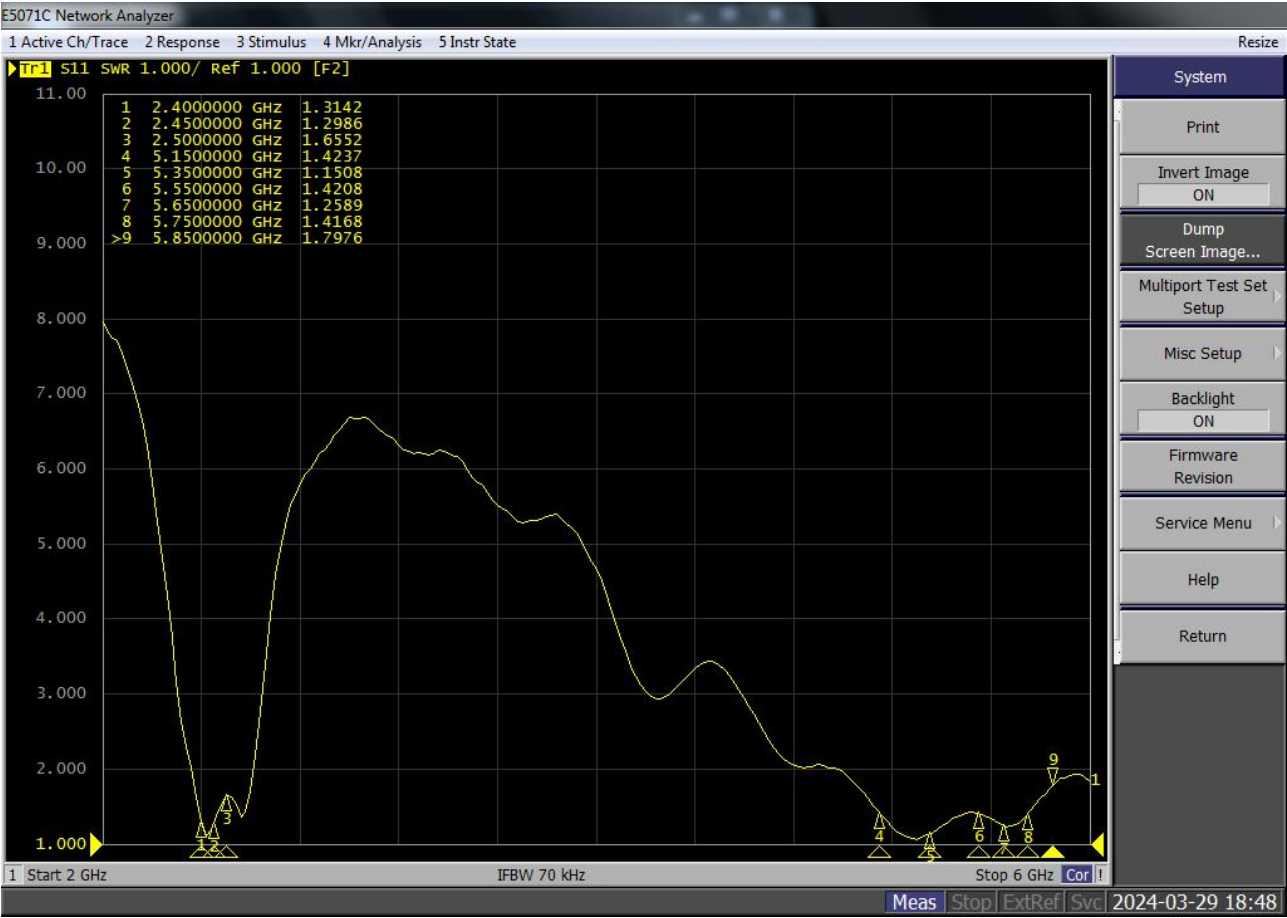
Data Preview

AUX antenna

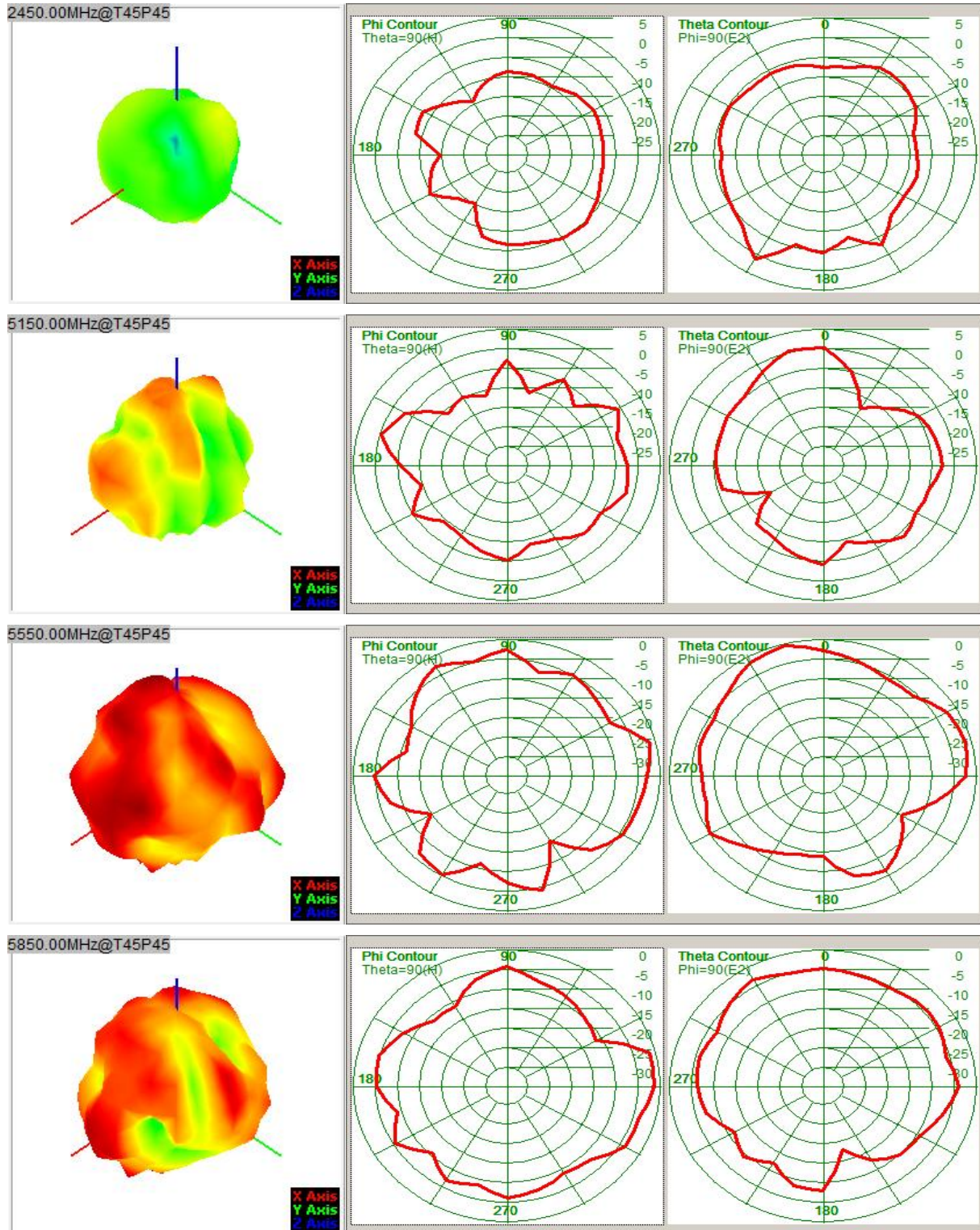
Freq.(MHz)	2400	2450	2500	5150	5350	5550	5750	5850
VSWR	1.31	1.29	1.65	1.42	1.15	1.42	1.41	1.79
Gain(dBi)	-0.38	0.93	1.42	1.47	0.87	0.62	-0.64	-1.00
Eff.%	31.2	30.5	32.2	38.6	36.5	36.4	32.9	29.4

AUX antenna

S11



Radiation patterns:



4. Active data

Mode	Channel	TRP	TIS
5G 11a/54m	36	13.42	-66.01
	64	13.64	-65.21
	165	12.32	-68.65

Mode	channel	TRP	TIS
2.4G 11g/54m	1	12.32	-65.14
	6	12.2	-65.96
	11	12.03	-66.31