

SPECIFICATION FOR APPROVAL

DATE: 2025.06.16

REV.: A

CUSTOMER: 上海六联智能科技有限公司

CUSTOMER P/N: 内置 2.4G&5G WiFi FPC天线, 1.13黑色线 L=150mm with RF CONN(4代) for ACB19D-H01-SF

PART NAME:

SUPPLIER P/N: 6241F00049

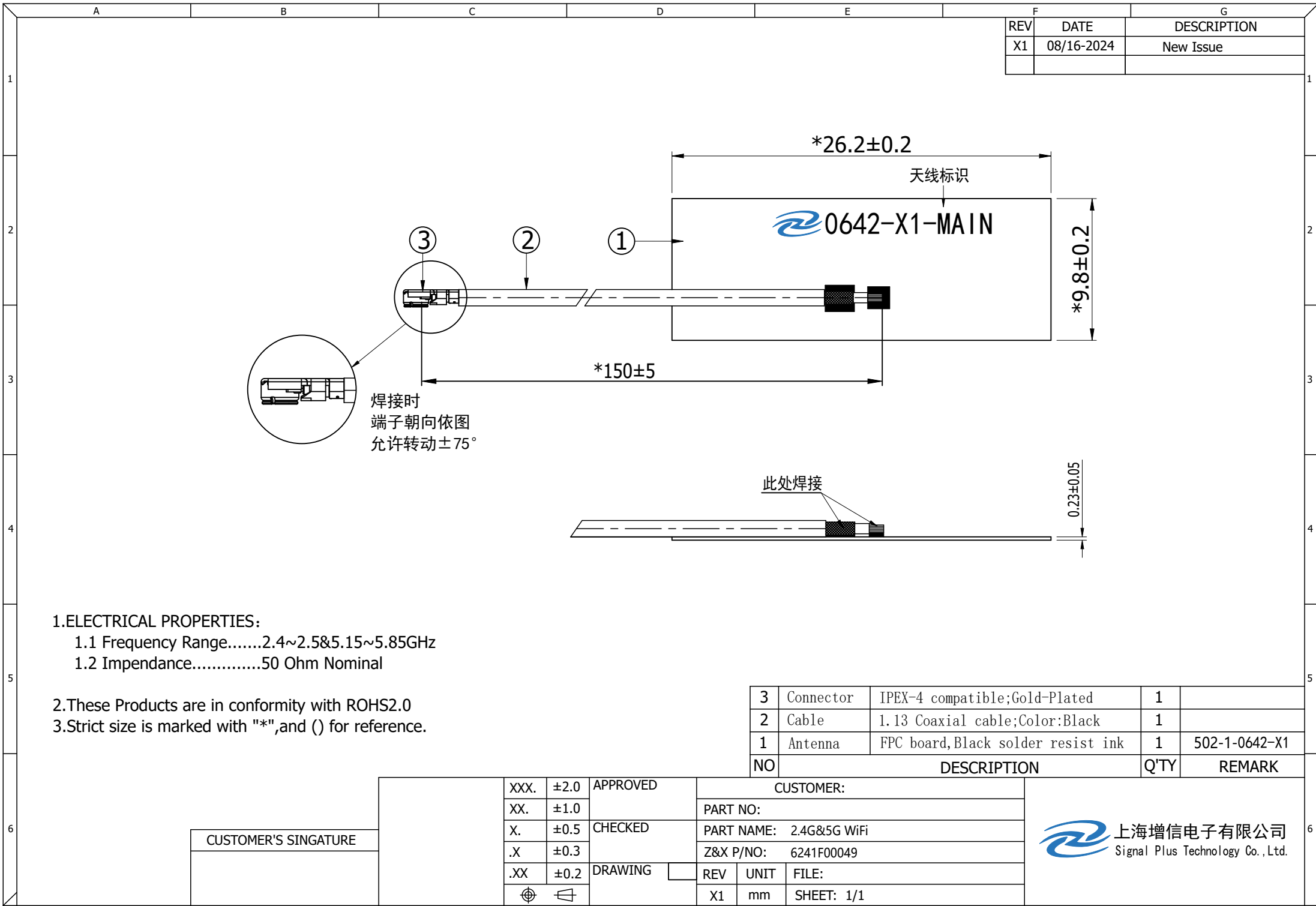
Q'TY: Pcs

Date: CUSTOMER APPROVED BY		
Approved by	Checked by	Confirmed by

SUPPLIER SIGNATURE		
Approved by	Checked by	Prepared by
Andy		Cindy

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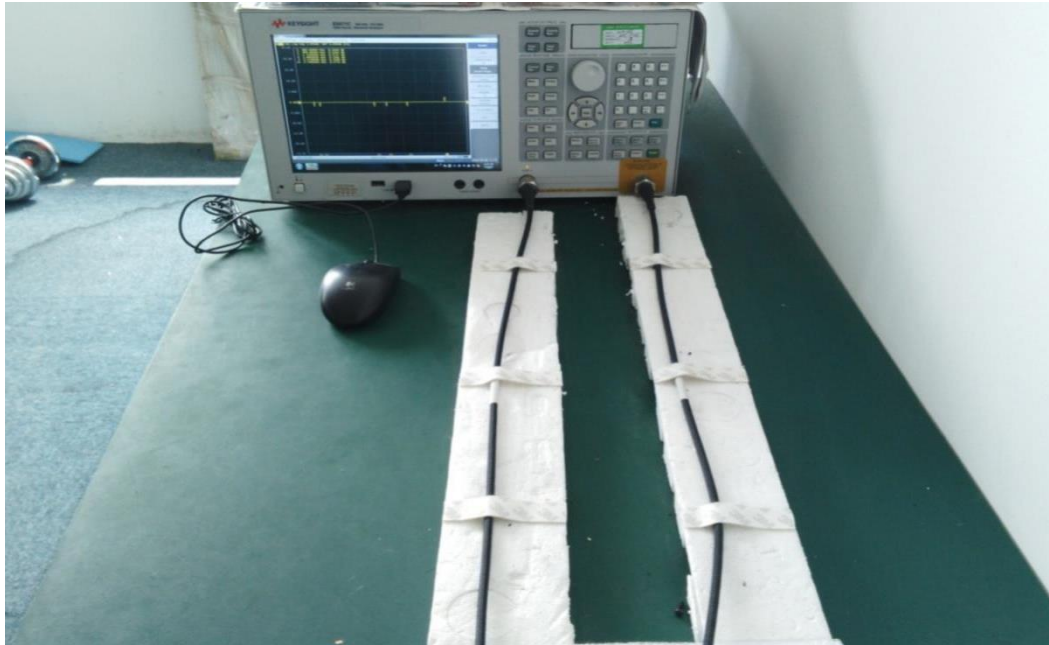
Antenna Test Report

1. RF Fixture Experiment

1.1 Test Setup

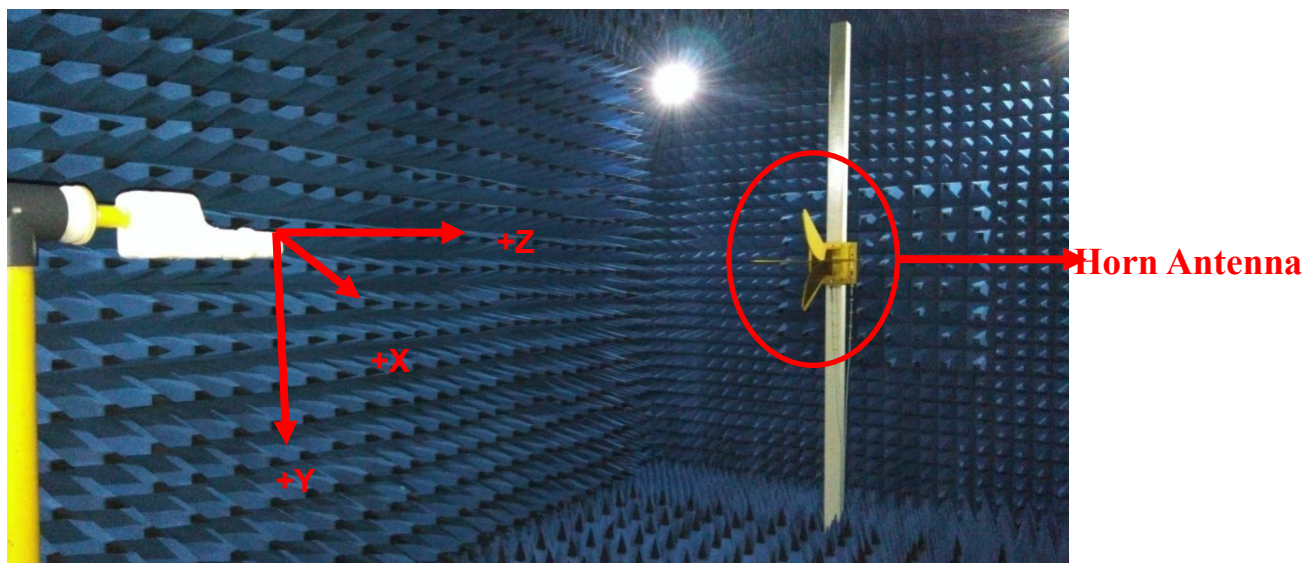
1.1.1 VNA Test Setup

VSWR and Return Loss measurements (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

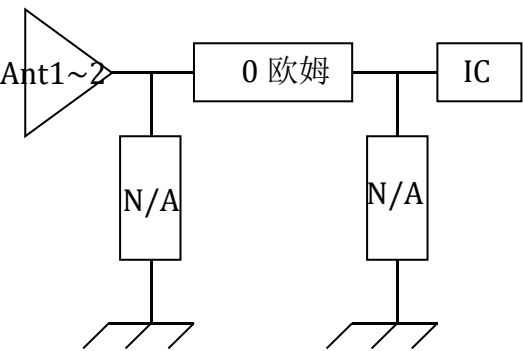
The gain of the antenna was measured in the anechoic chamber. The chamber provides less than -30 dB reflectivity from 400 MHz through 6 GHz. The chamber size is: 7m*4m*3m. The measurement results are calibrated using a leaky wave horn standard. We can measure the antenna gain and efficiency accurately.



2. Antenna Solution



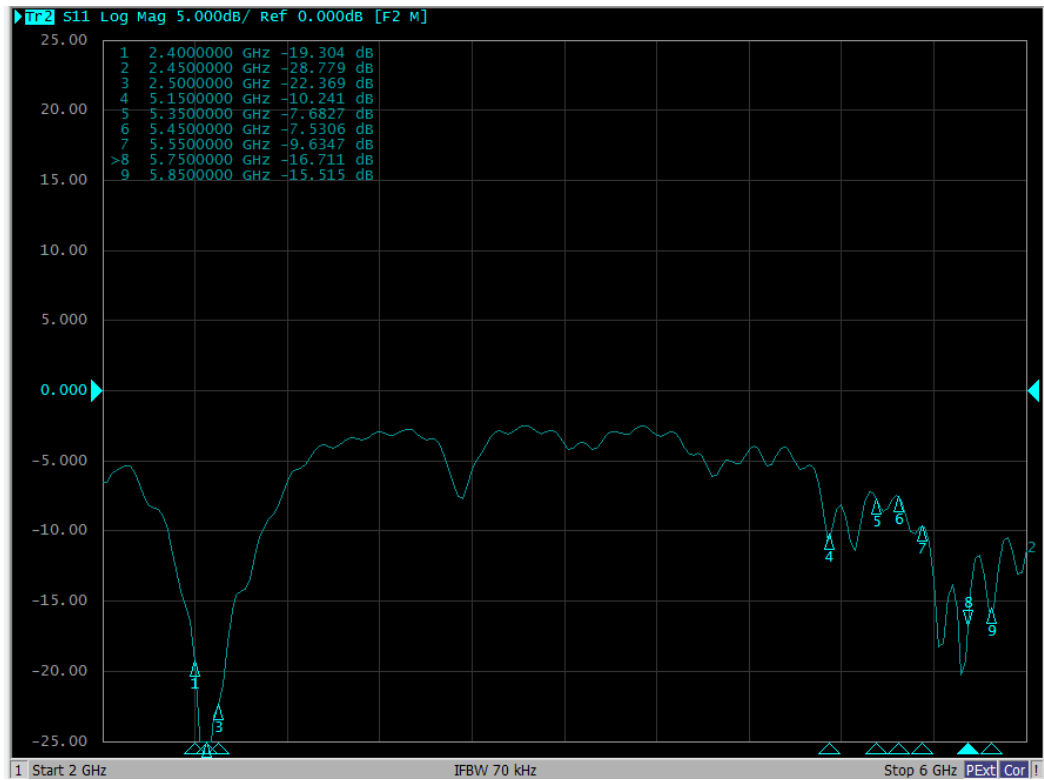
3. RF matching circuit for different antennas



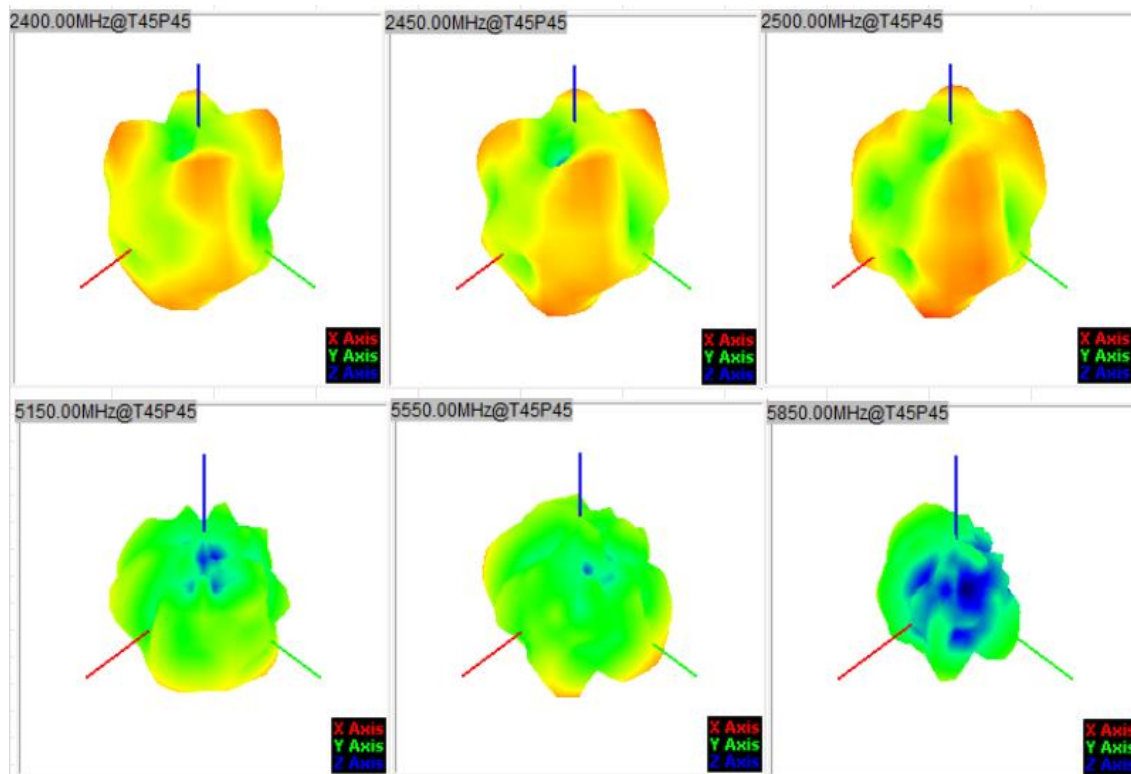
Data Preview

Freq (MHz)	Gain (dBi)	Effi (%)
2400	4.58	46%
2450	3.69	49%
2500	2.83	48%
5150	0.09	33%
5250	0.66	40%
5350	1.48	44%
5450	0.95	40%
5550	2.12	43%
5650	2.87	48%
5750	4.33	50%
5850	5.14	50%

S11

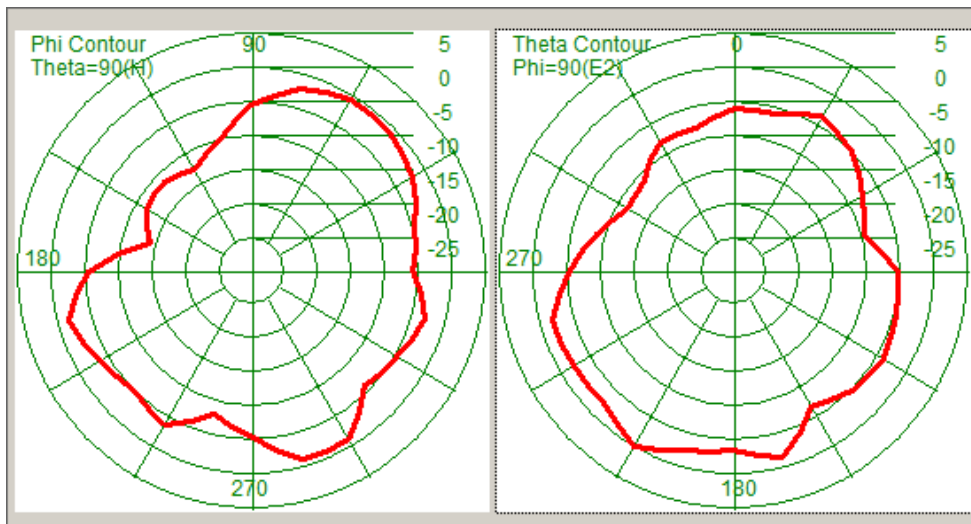


Radiation patterns:3D

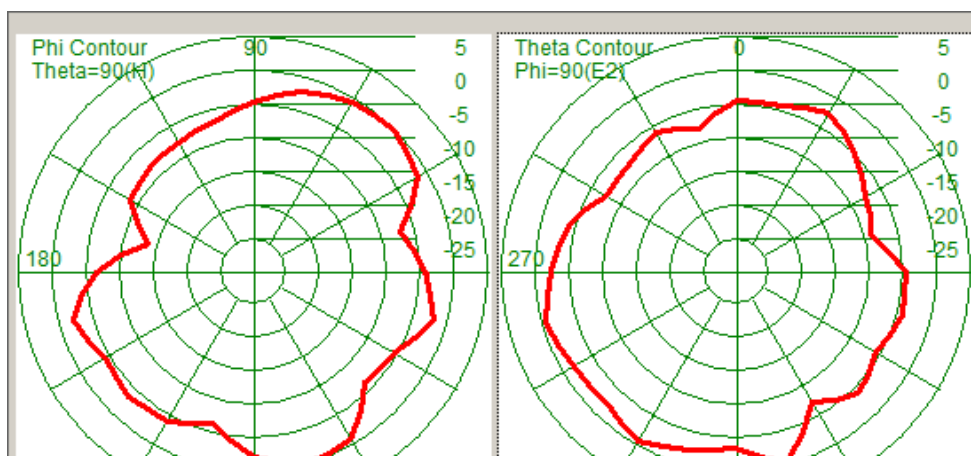


Radiation patterns:2D

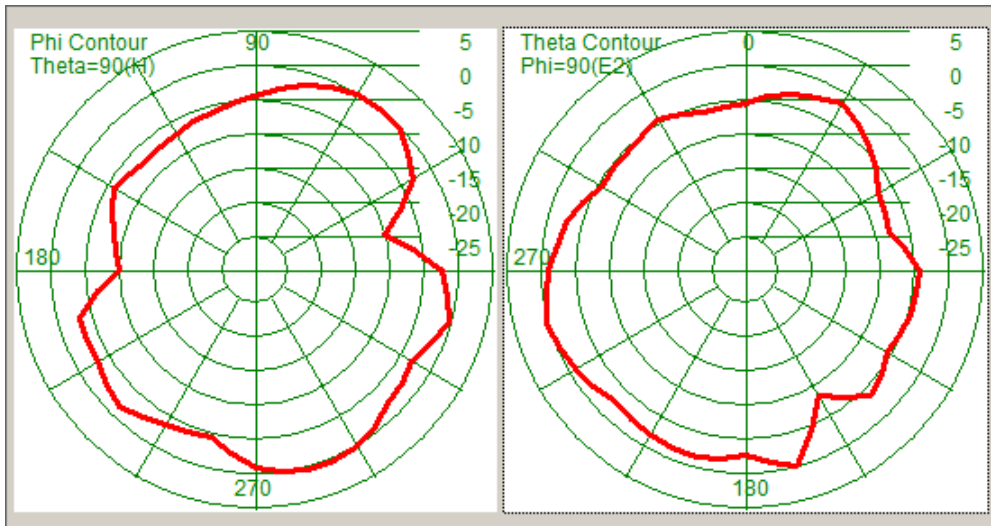
2400



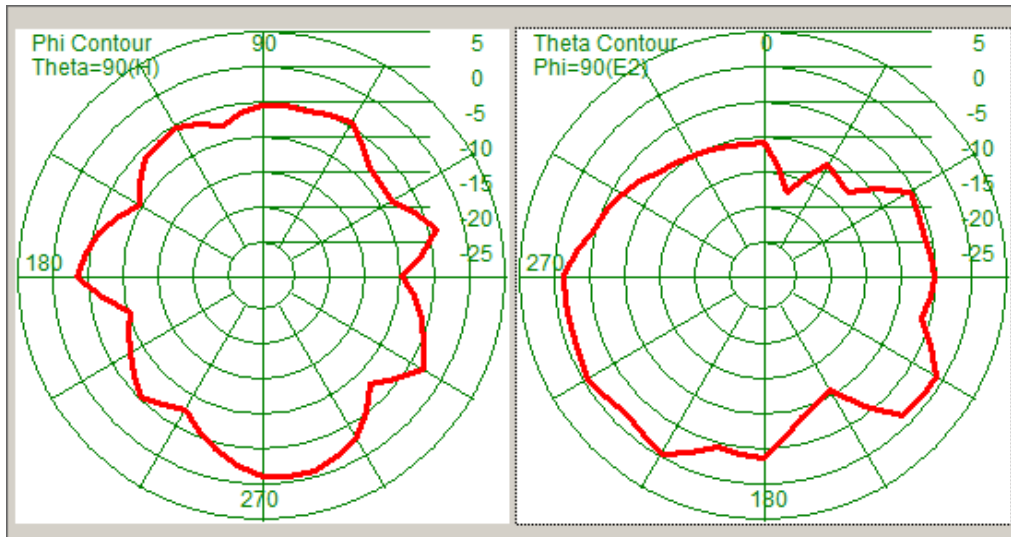
2450



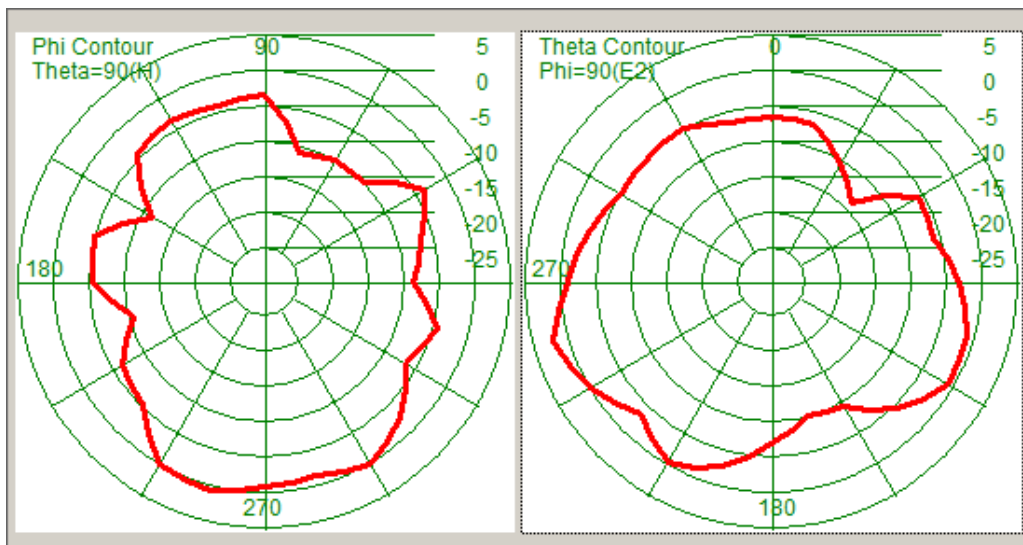
2500



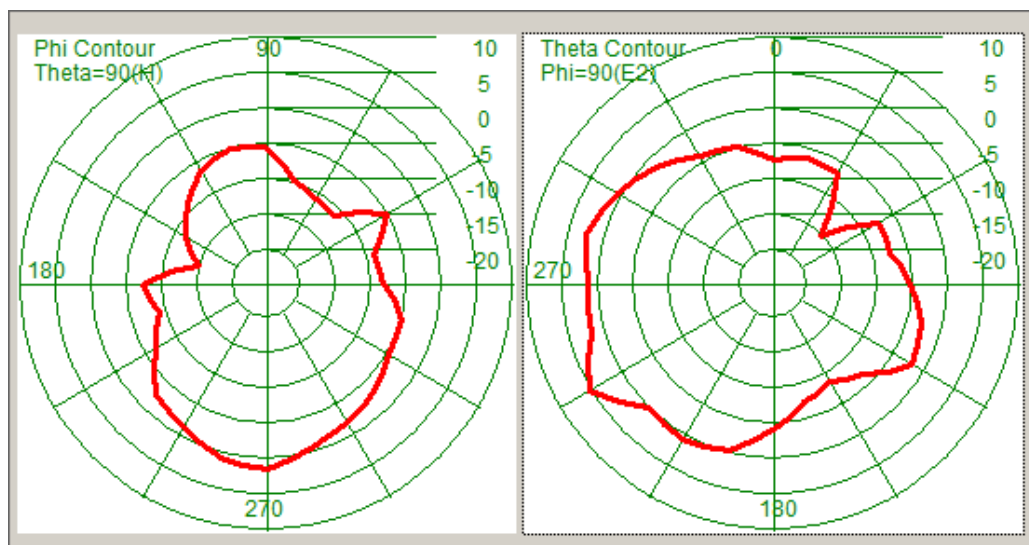
5150



5550



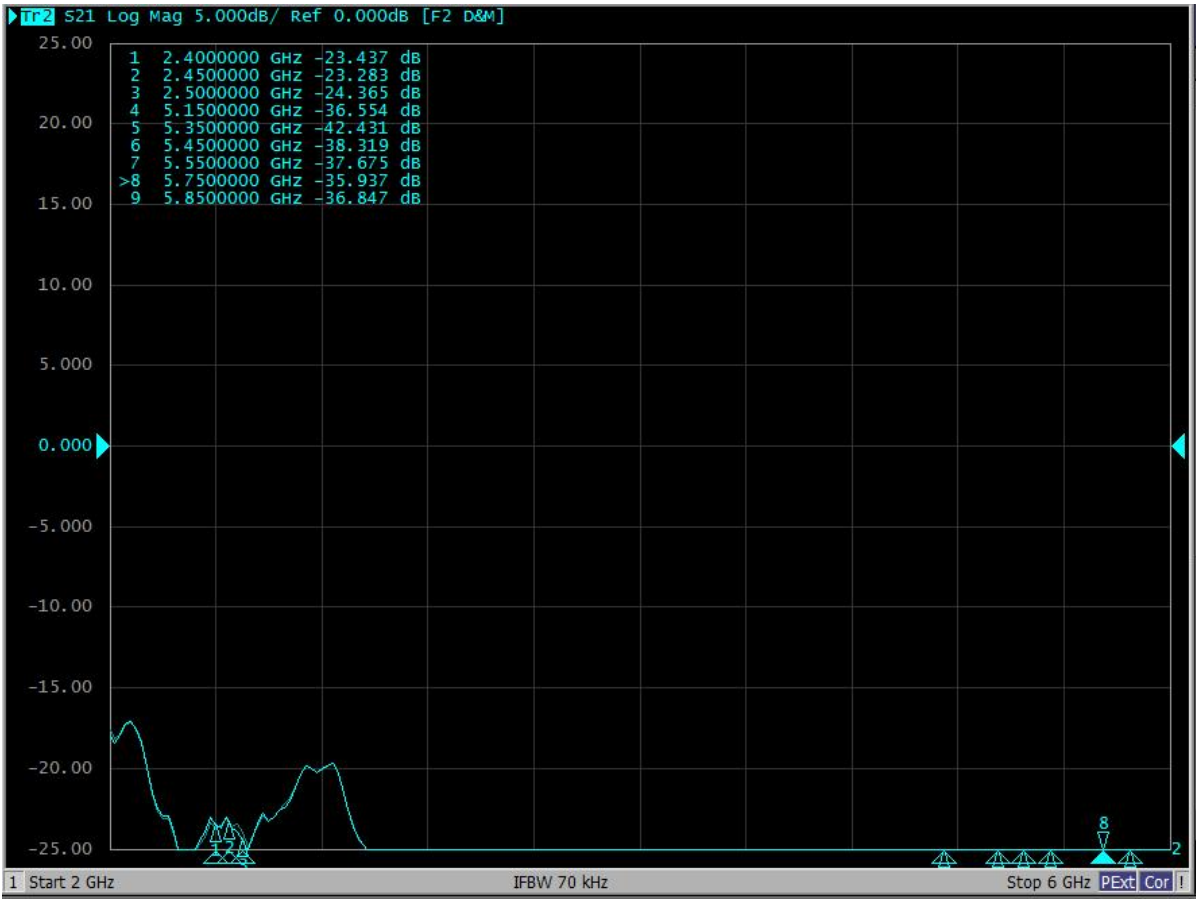
5850

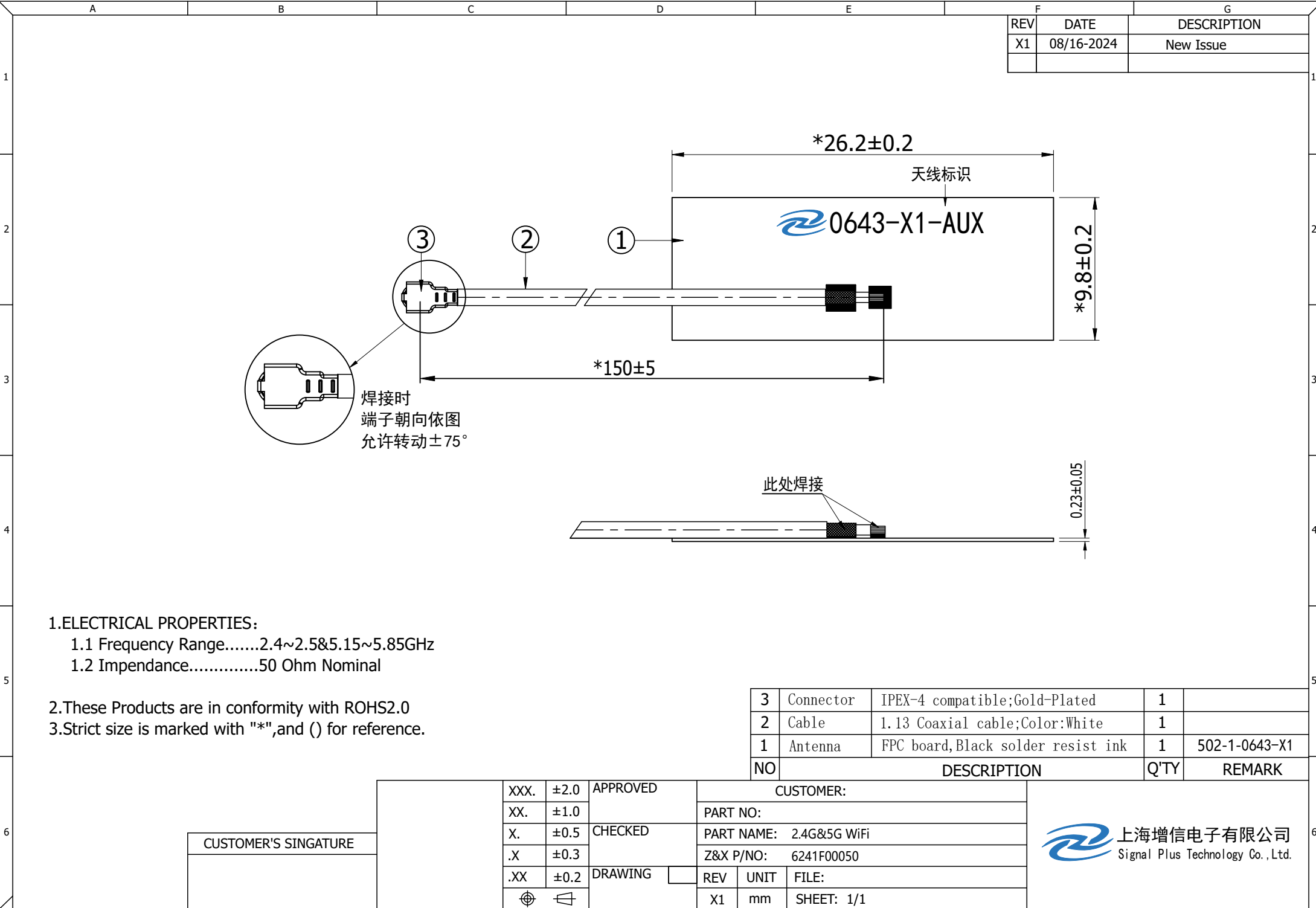


Active date

		TRP	TIS
2G 11B-11M	1	16.66	-71.09
	6	16.35	-73.79
	11	16.71	-72.53
2G 11G-54M	1	12.43	-54.38
	6	16.82	-56.02
	11	13.08	-56.31
2G 11A-54M	36	17.49	-61.83
	149	18.16	-73.44
	165	21.21	-74.94

S21(主天线-副天线)





REV	DATE	DESCRIPTION
X1	08/16-2024	New Issue

- 1.ELECTRICAL PROPERTIES:
- 1.1 Frequency Range.....2.4~2.5&5.15~5.85GHz
 - 1.2 Impedance.....50 Ohm Nominal

- 2.These Products are in conformity with ROHS2.0
- 3.Strict size is marked with "*" ,and () for reference.

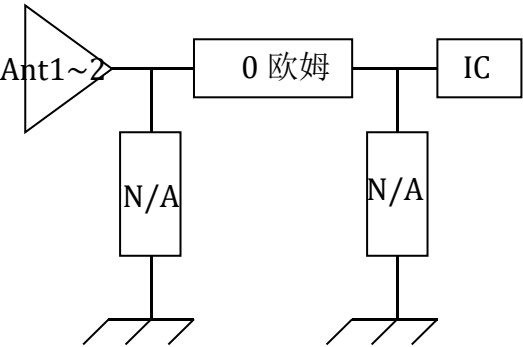
3	Connector	IPEX-4 compatible;Gold-Plated	1	
2	Cable	1.13 Coaxial cable;Color:White	1	
1	Antenna	FPC board,Black solder resist ink	1	502-1-0643-X1
NO	DESCRIPTION		Q'TY	REMARK

CUSTOMER'S SINGATURE	XXX.	± 2.0	APPROVED	CUSTOMER:		
	XX.	± 1.0		PART NO:		
	X.	± 0.5	CHECKED	PART NAME: 2.4G&5G WiFi		
	.X	± 0.3		Z&X P/NO: 6241F00050		
	.XX	± 0.2	DRAWING	REV	UNIT	FILE:
	⊗	⊙		X1	mm	SHEET: 1/1

2. Antenna Solution

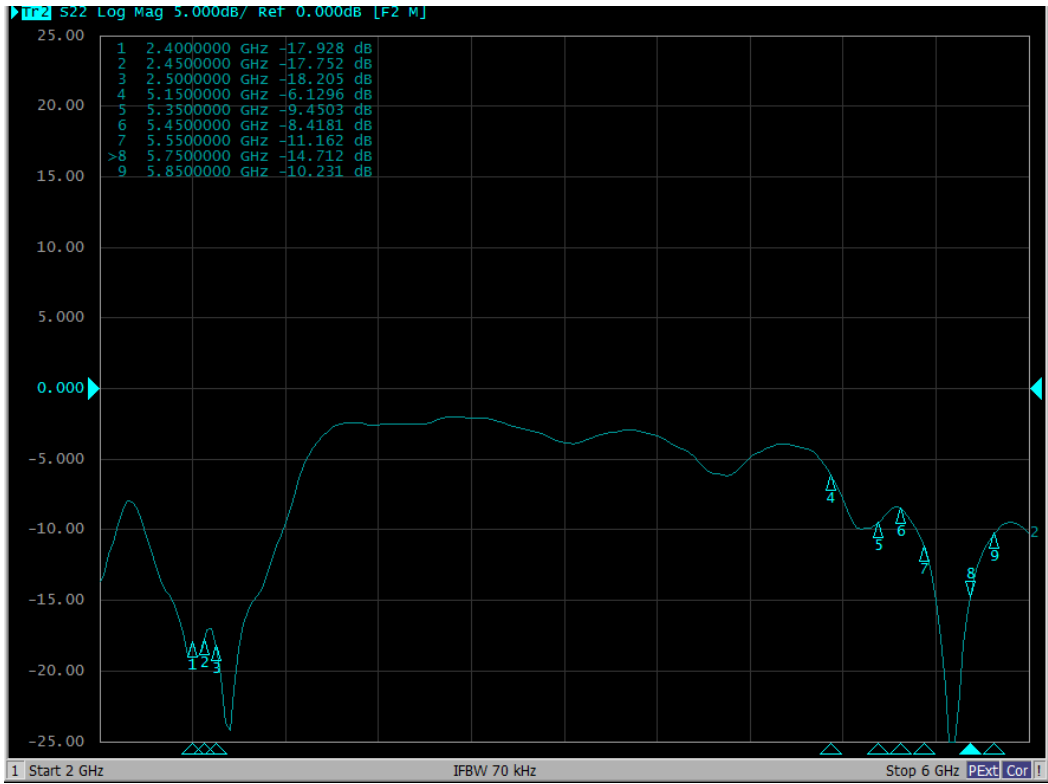


3. RF matching circuit for different antennas

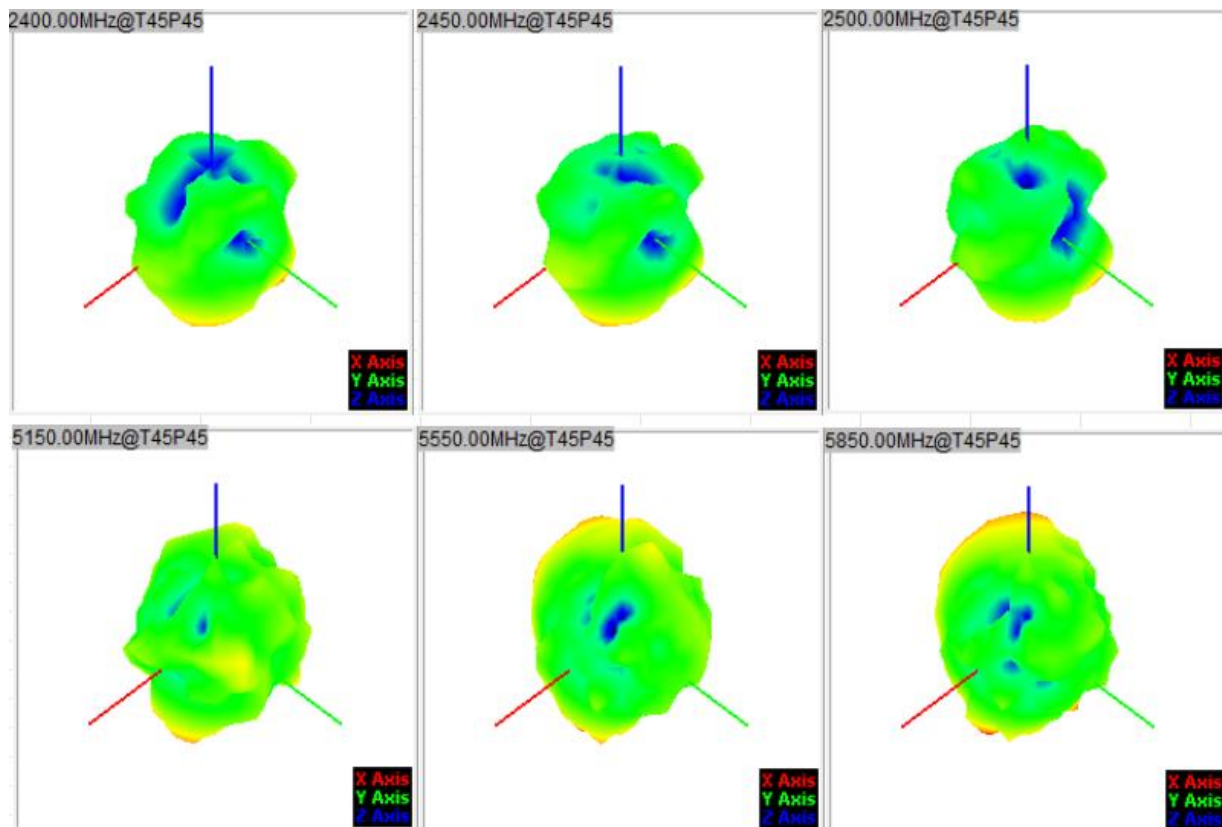


Data Preview

Freq (MHz)	Gain (dBi)	Effi (%)
2400	5.57	51%
2450	5.86	52%
2500	5.48	50%
5150	1.14	39%
5250	1.64	51%
5350	2.82	56%
5450	2.29	50%
5550	3.27	57%
5650	4.08	63%
5750	4.18	62%
5850	4.25	63%

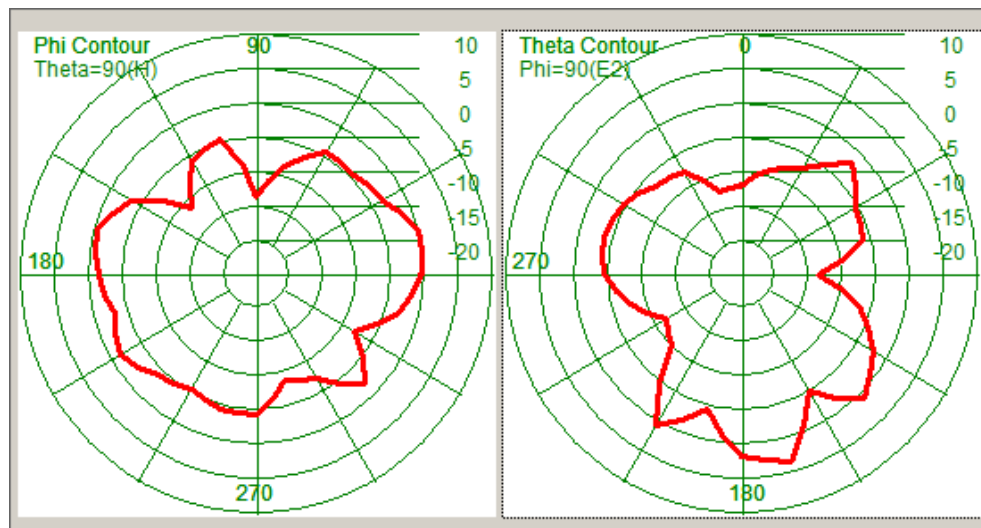


Radiation patterns:3D

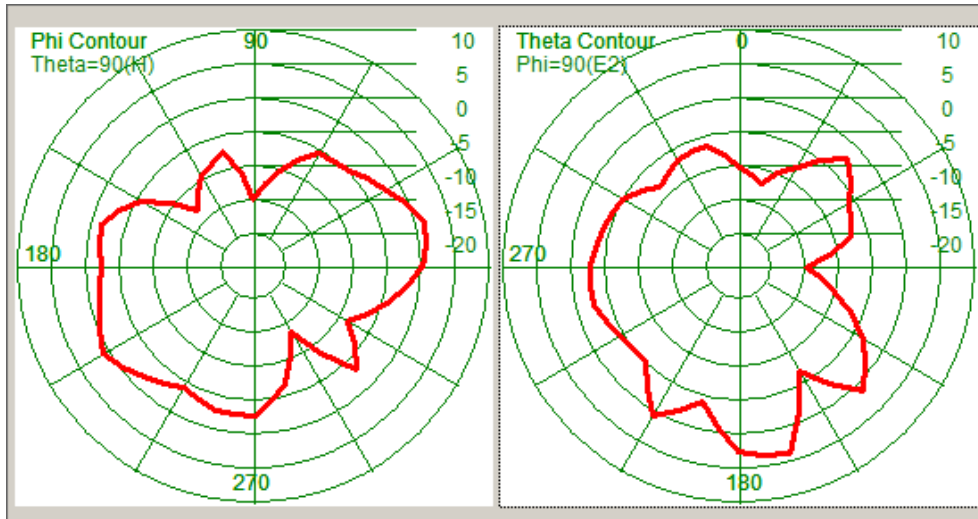


Radiation patterns:2D

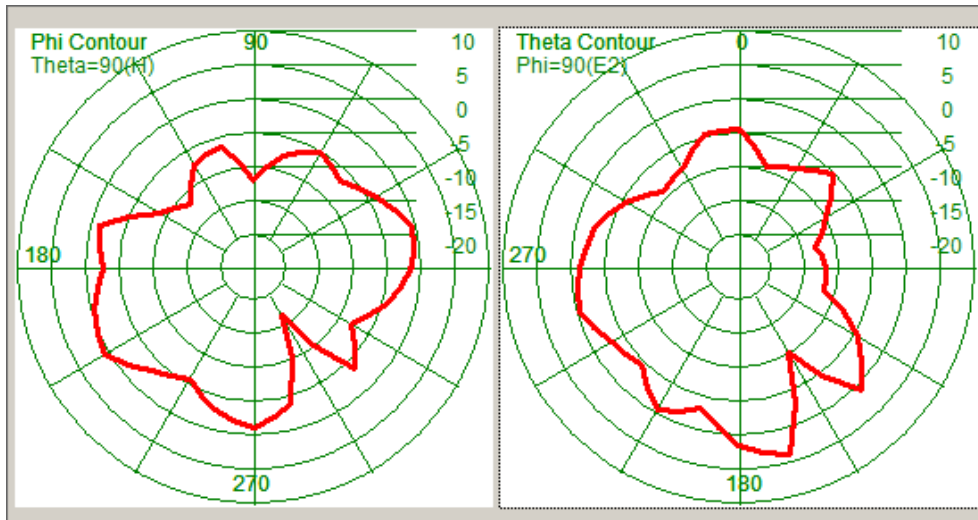
2400



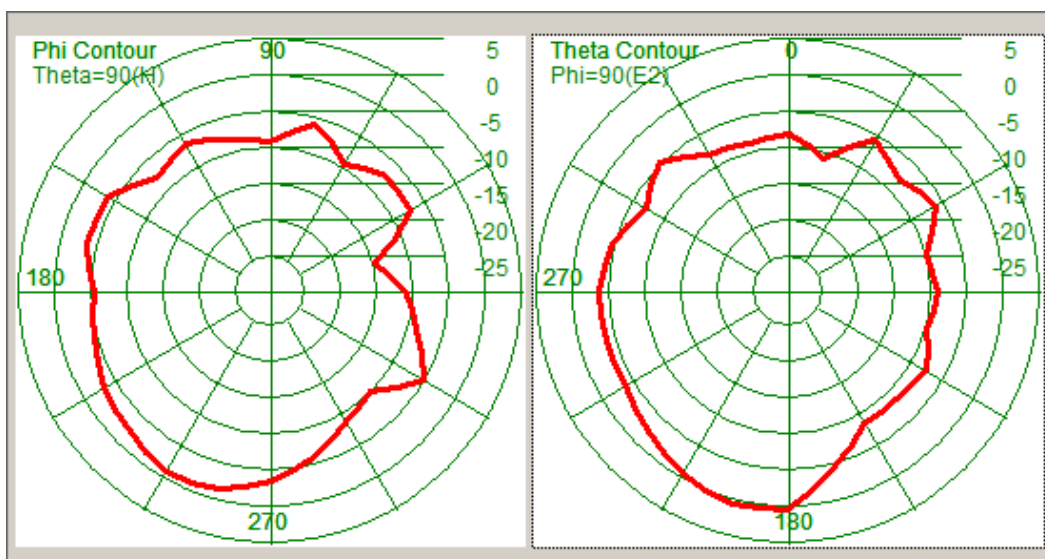
2450



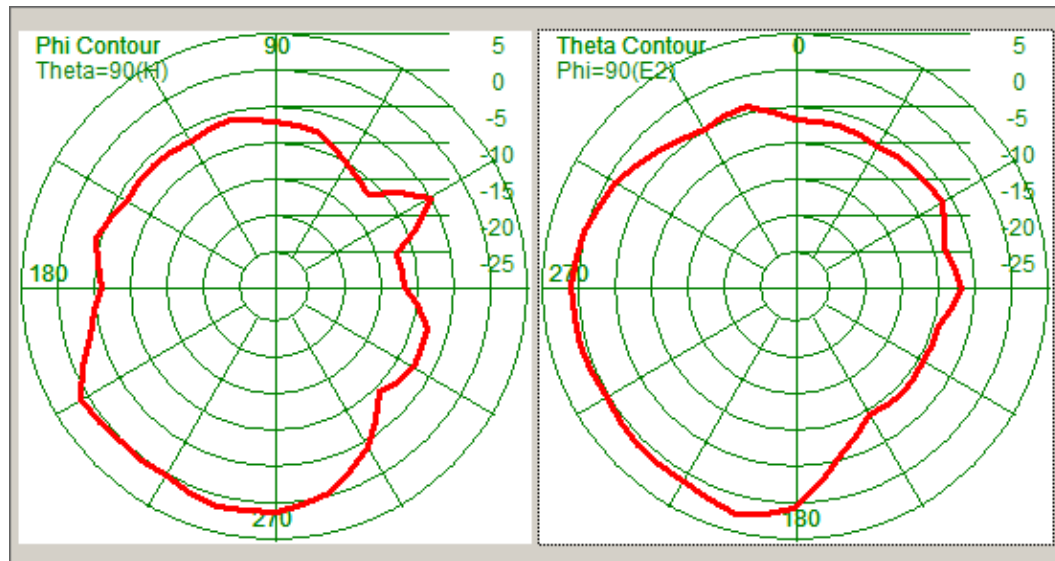
2500



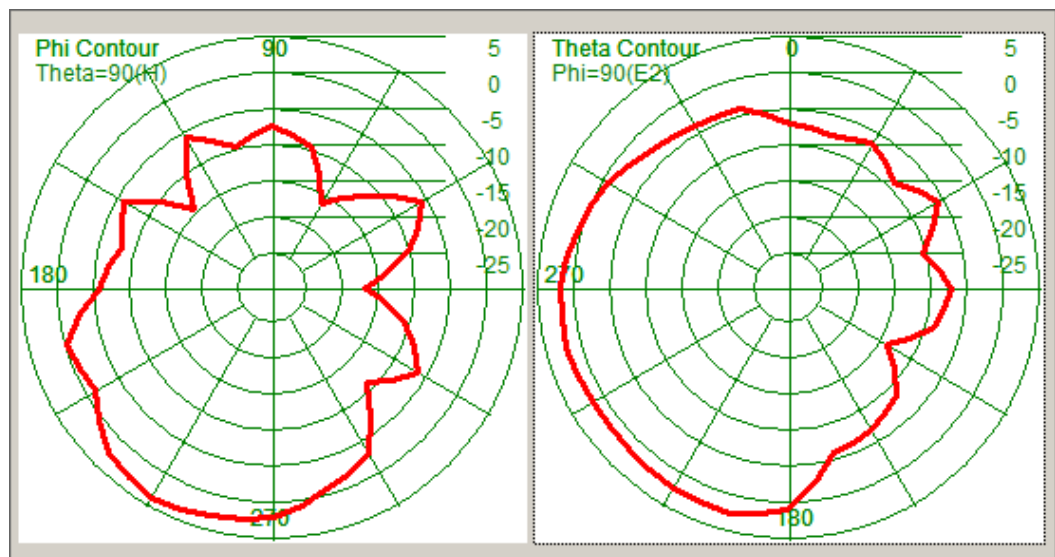
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5550



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