

SPECIFICATION FOR APPROVAL

DATE: 2025.06.16

REV.: A

CUSTOMER: Shanghai Liulian Intelligent Technology Co., Ltd

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

PART NAME: 6241F00049

SUPPLIER P/N:

Q'TY: Pcs

Date: CUSTOMER APPROVED BY		
Approved by	Checked by	Confirmed by

SUPPLIER SIGNATURE		
Approved by	Checked by	Prepared by
Andy		Cindy

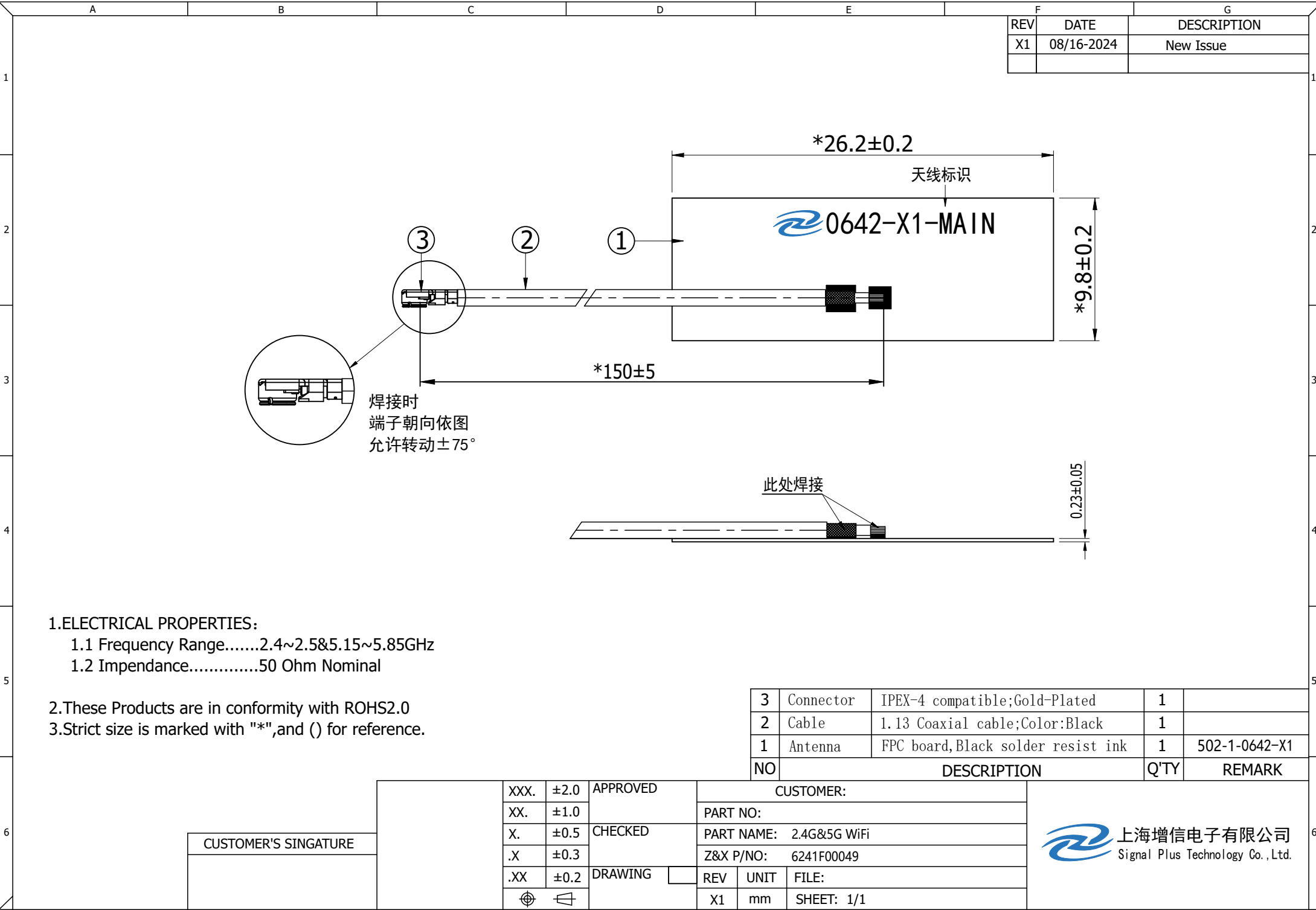
ZX-QT-RD-0011-A1

Add:Room 603, Building 30, No. 69 Guiqing Road, Xuhui District, Shanghai, China

Tel:021-54266190 Fax:021-54266191

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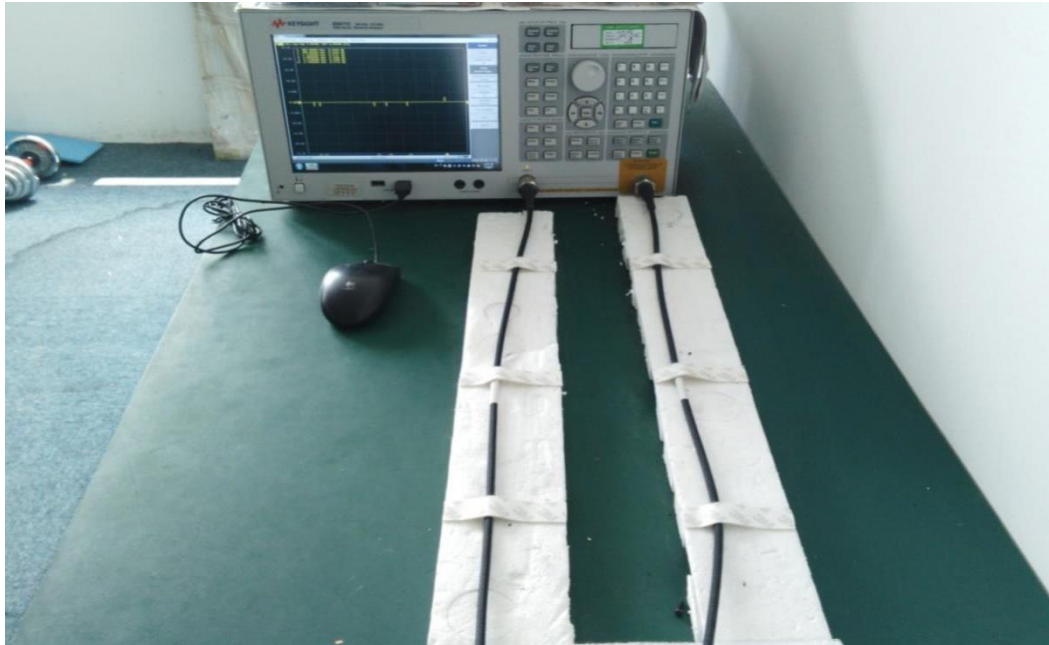
Antenna Test Report

1. RF Fixture Experiment

1.1 Test Setup

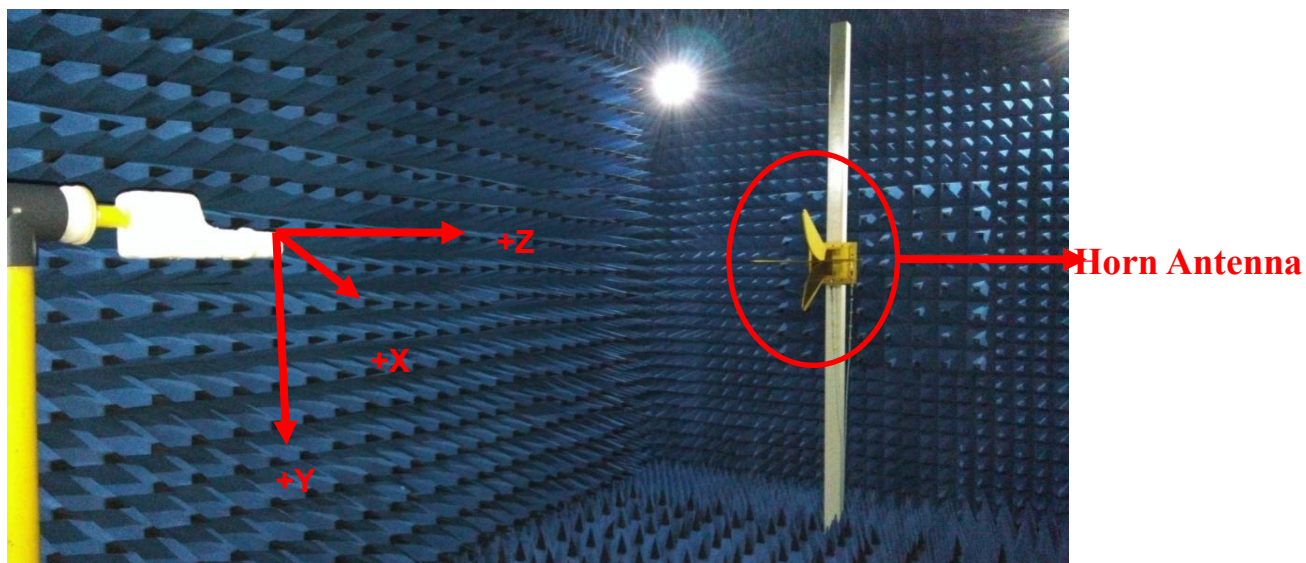
1.1.1 VNA Test Setup

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

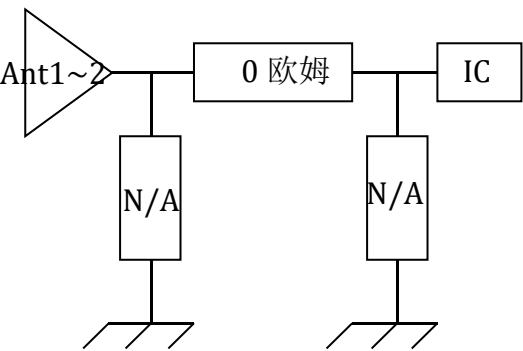
The gain of the antenna was measured in the anechoic chamber. The chamber provides less than -30 dB reflectivity from 400 MHz through 6 GHz. The chamber size is: 7m*4m*3m. The measurement results are calibrated using a leaky wave horn standard. We can measure the antenna gain and efficiency accurately.



2.Antenna Solution



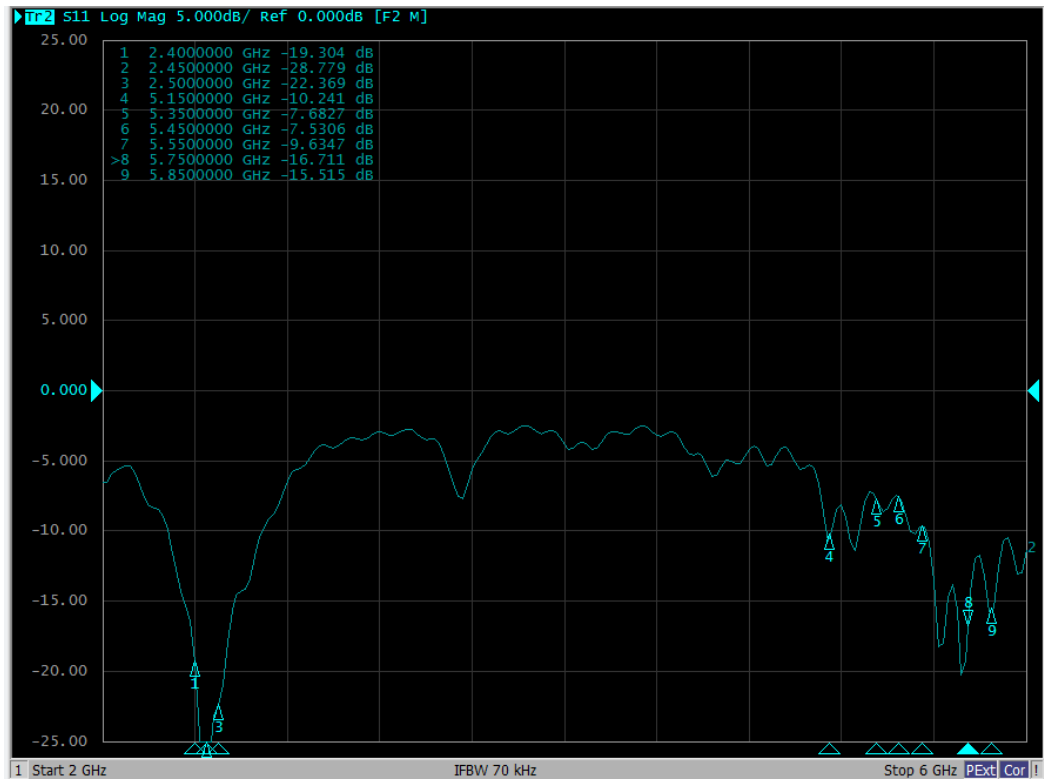
3.RF matching circuit for different antennas



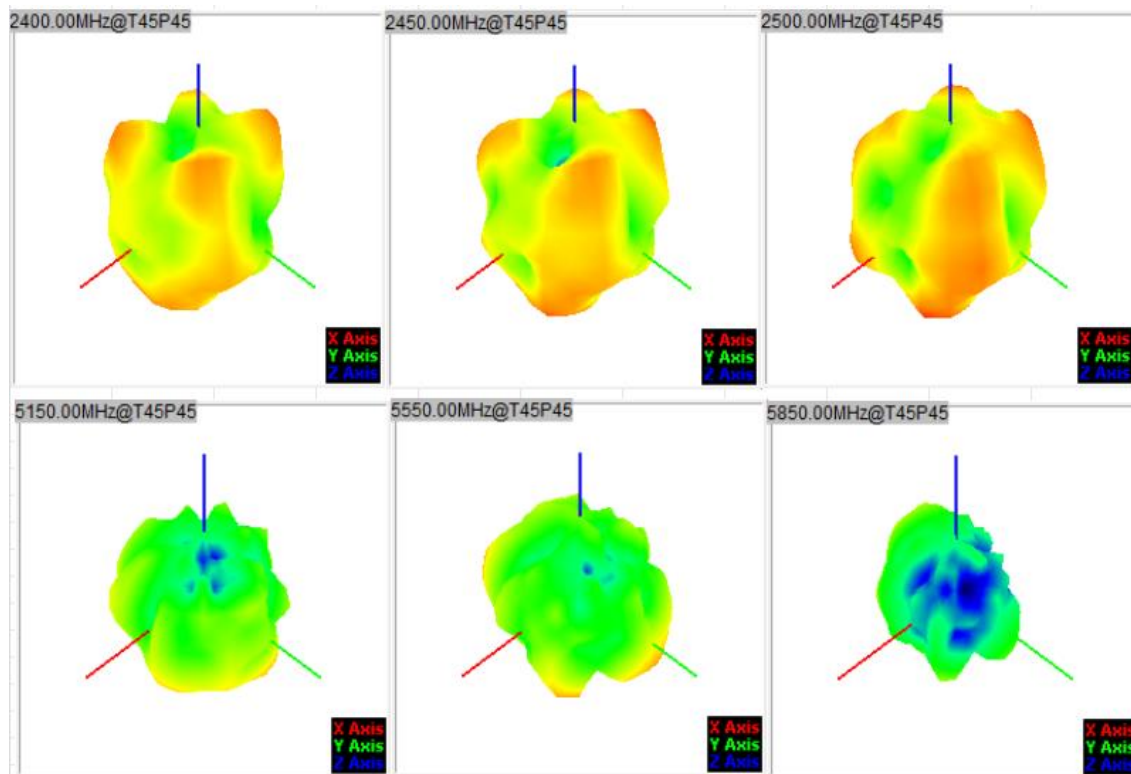
Data Preview

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

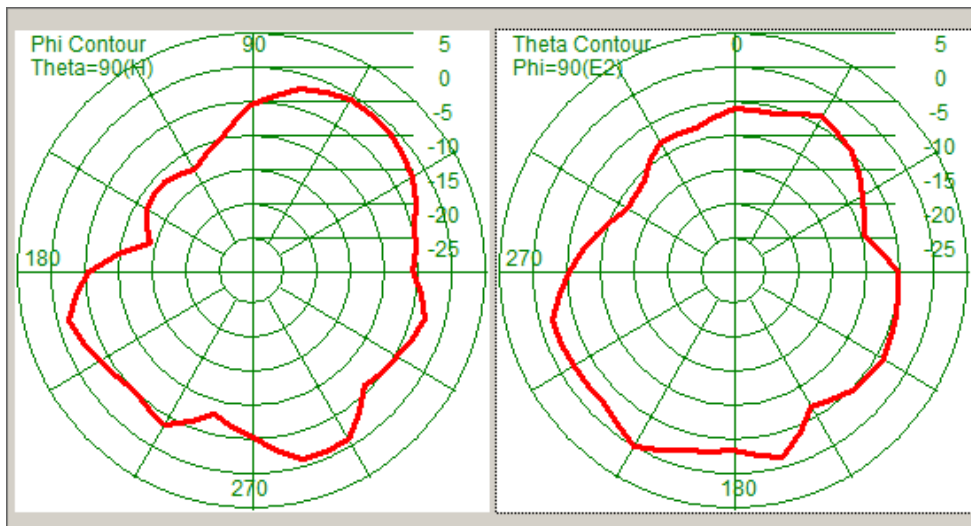


Radiation patterns:3D

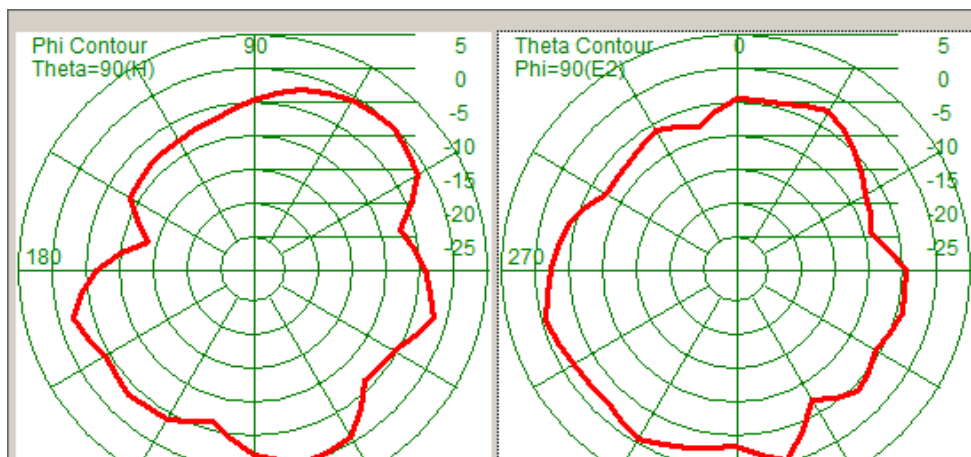


Radiation patterns:2D

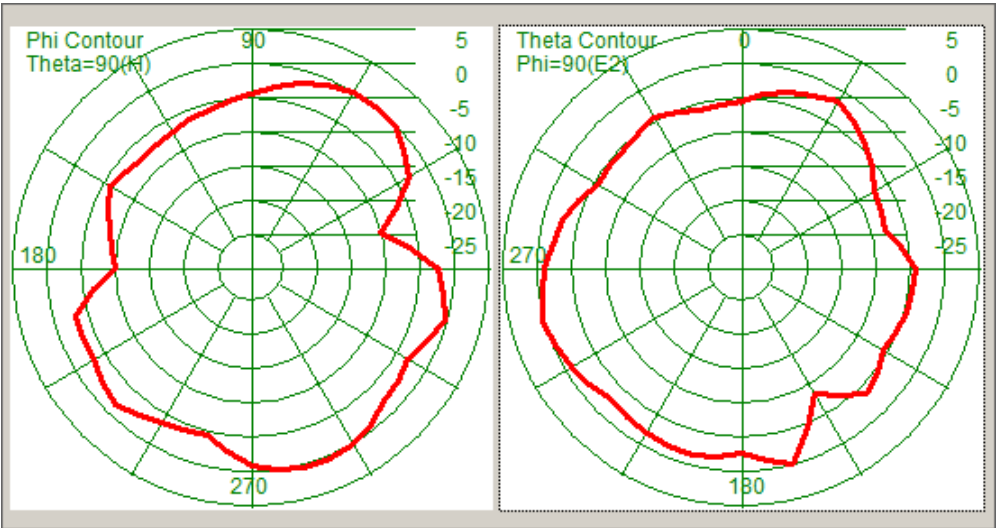
2400



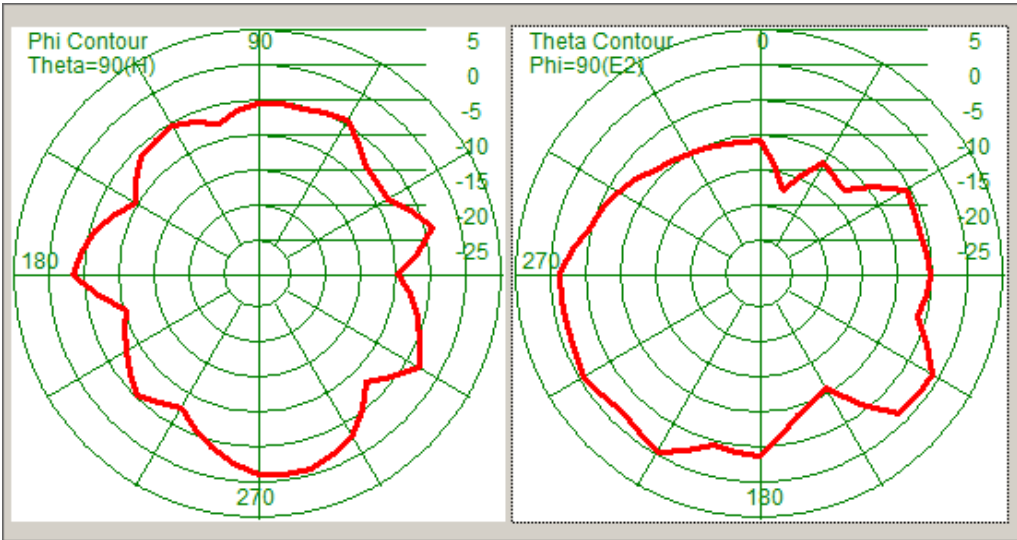
2450



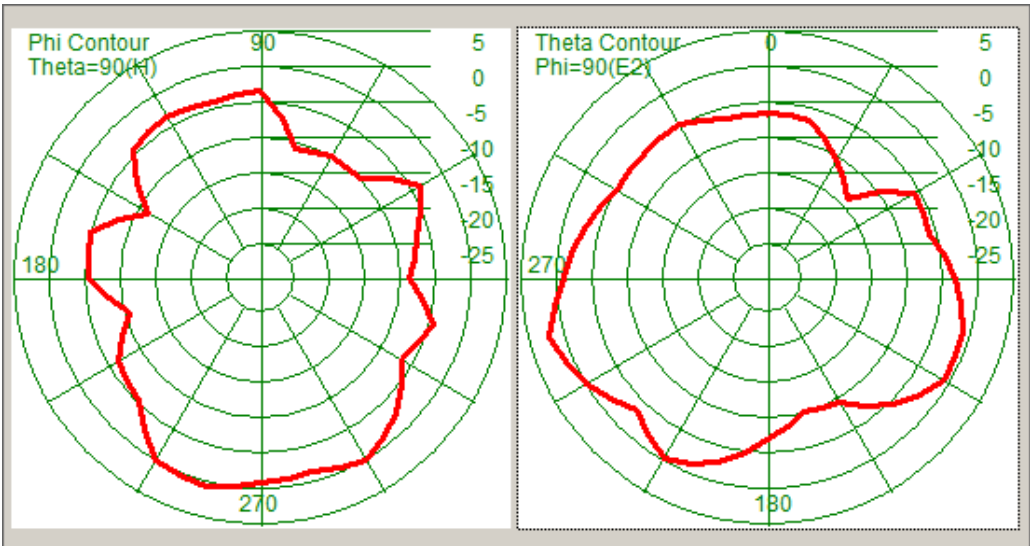
2500



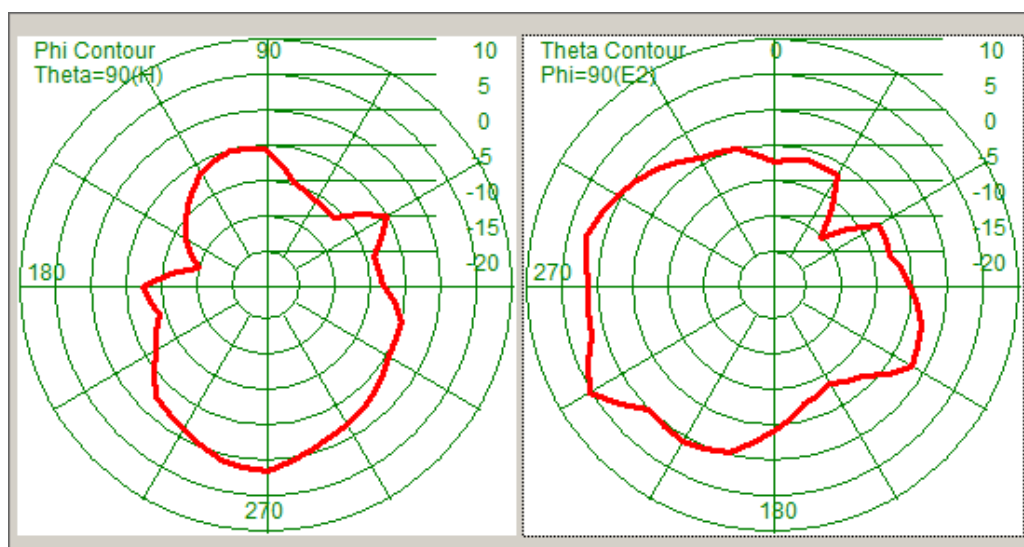
5150



5550



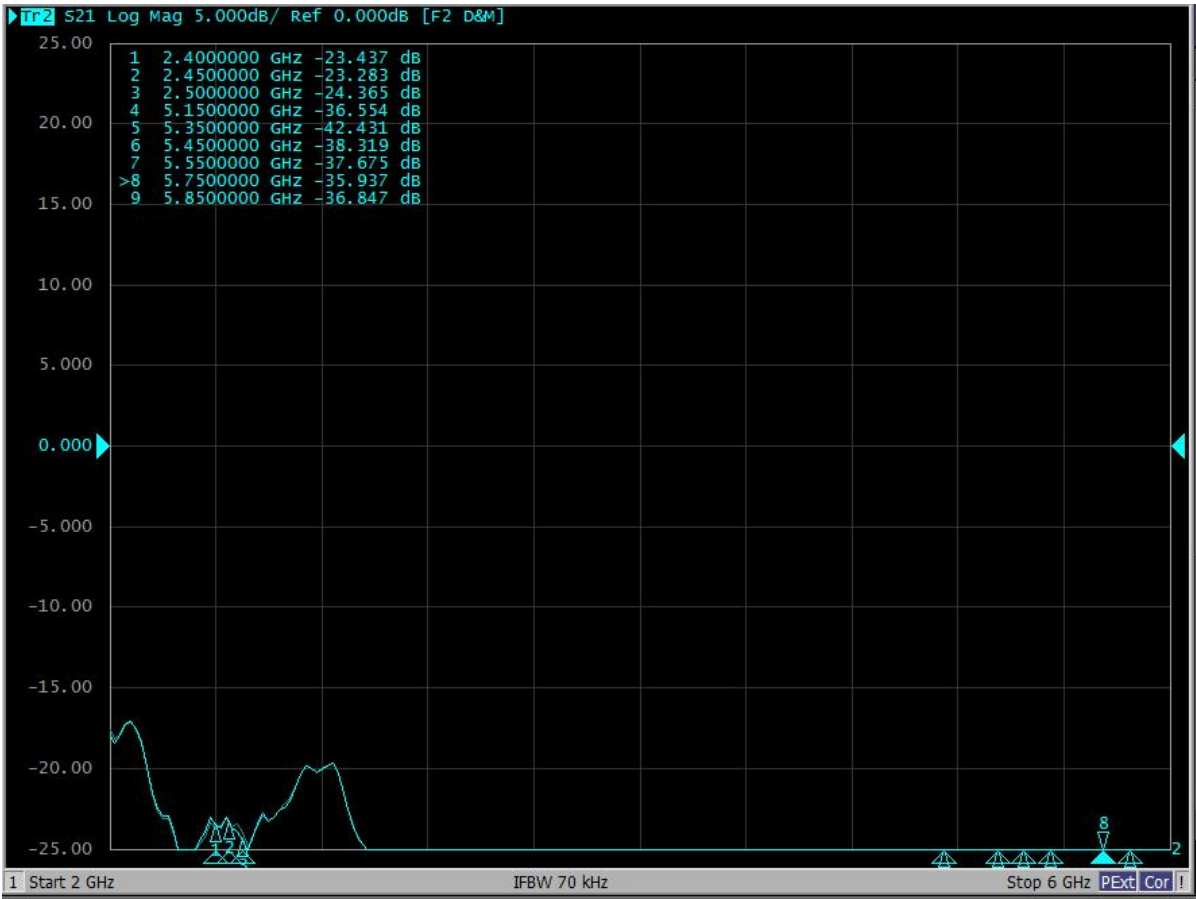
5850

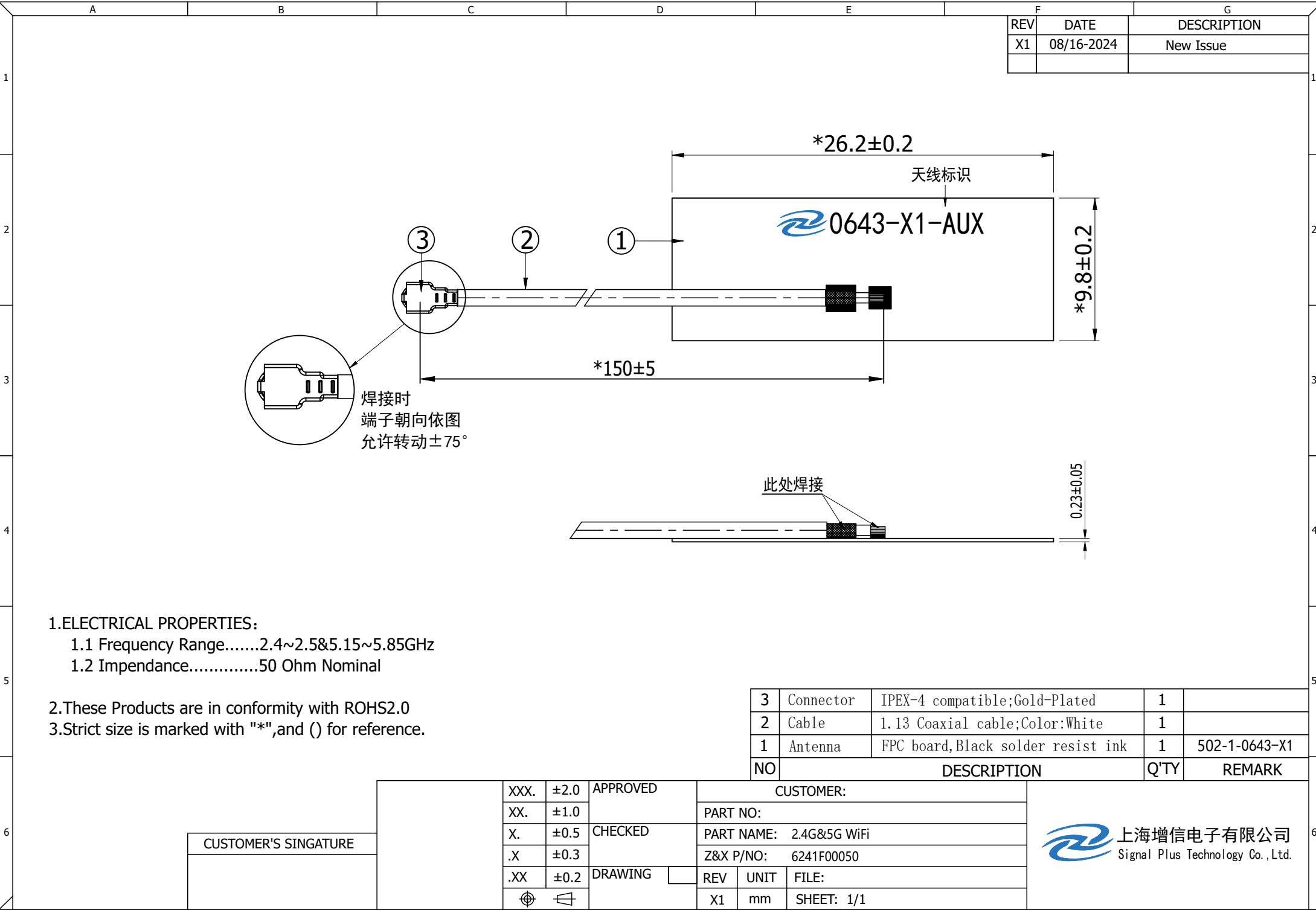


Active date

		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)

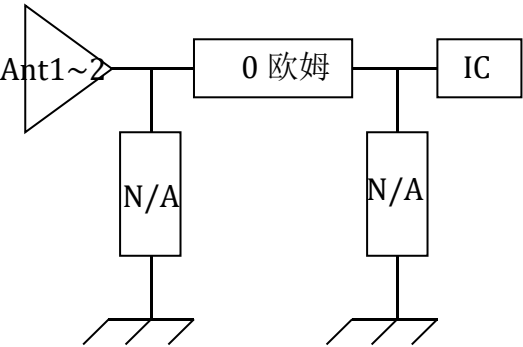




2. Antenna Solution

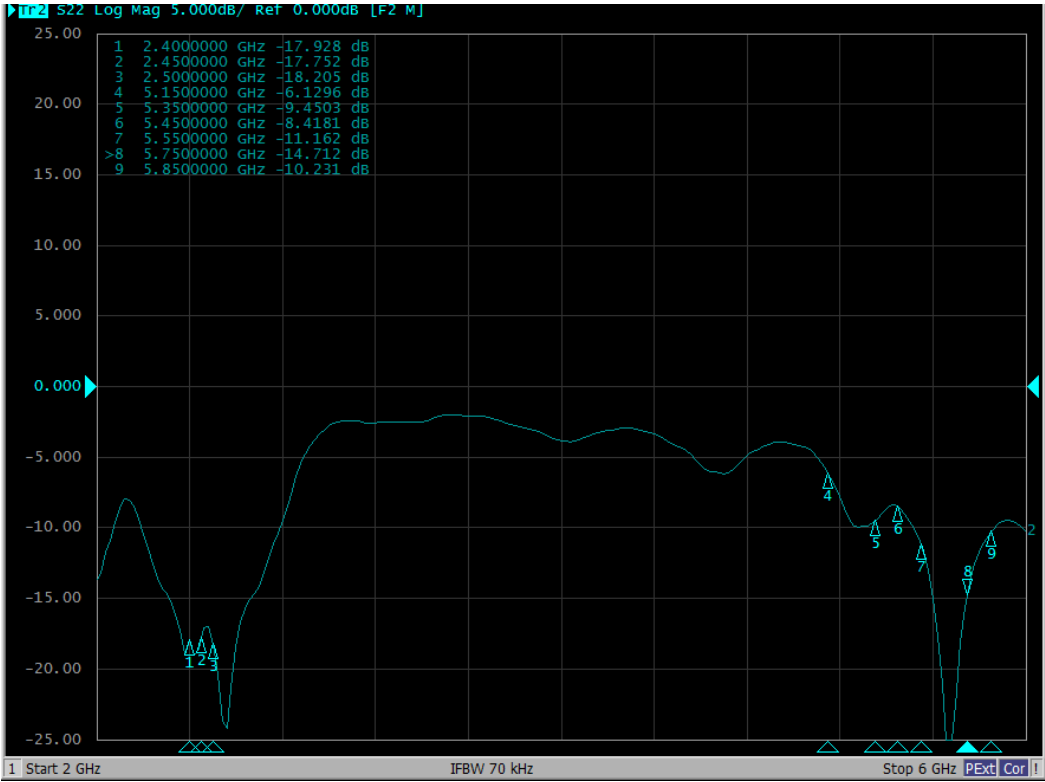


3. RF matching circuit for different antennas

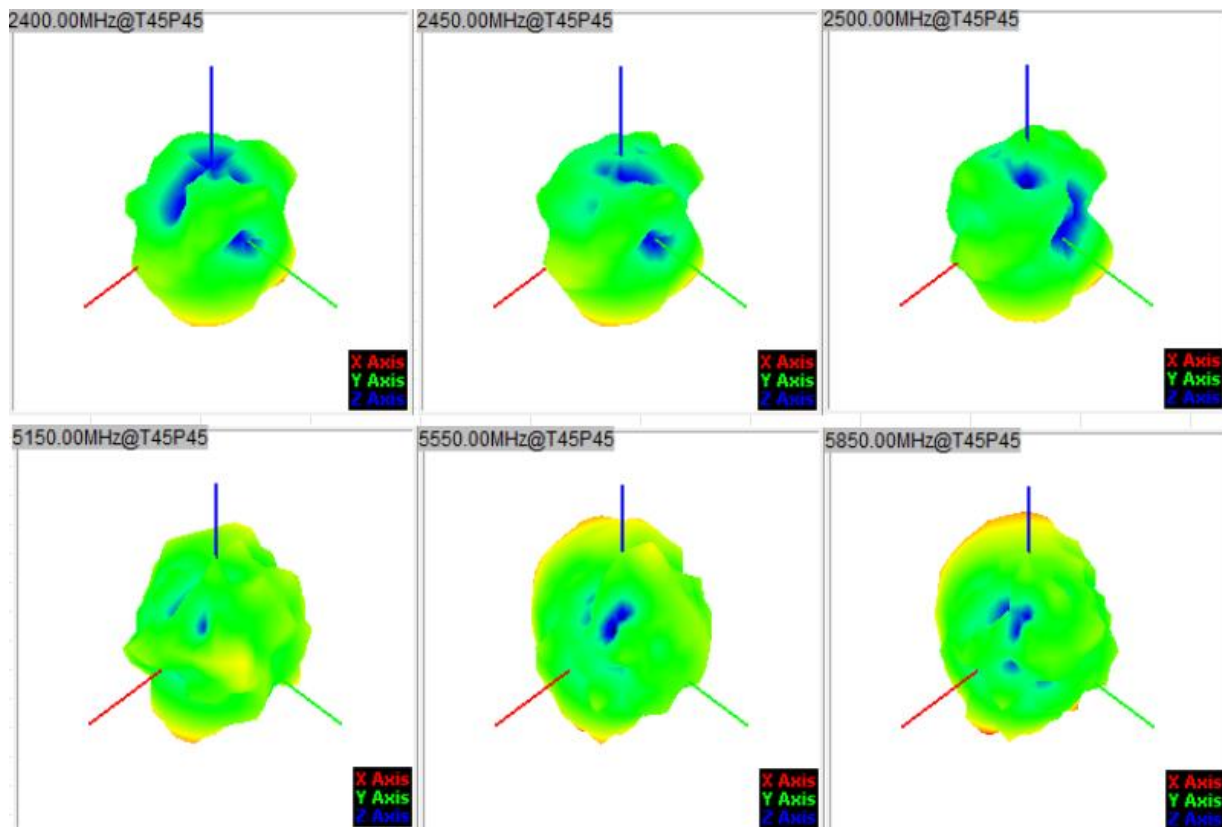


Data Preview

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%

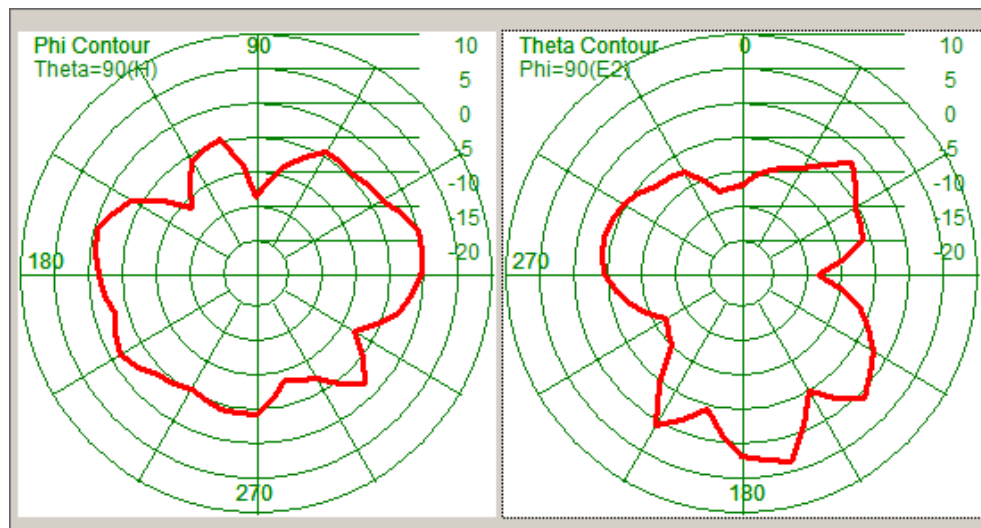


Radiation patterns:3D

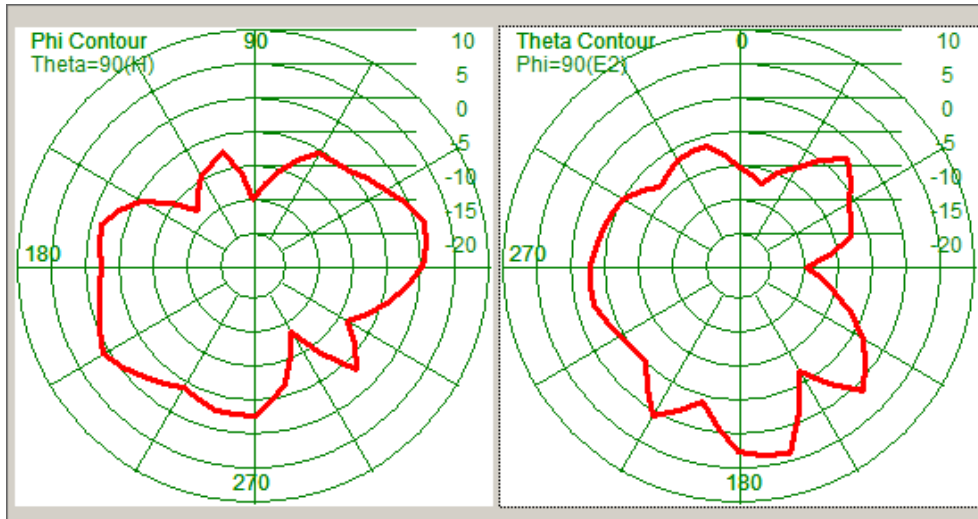


Radiation patterns:2D

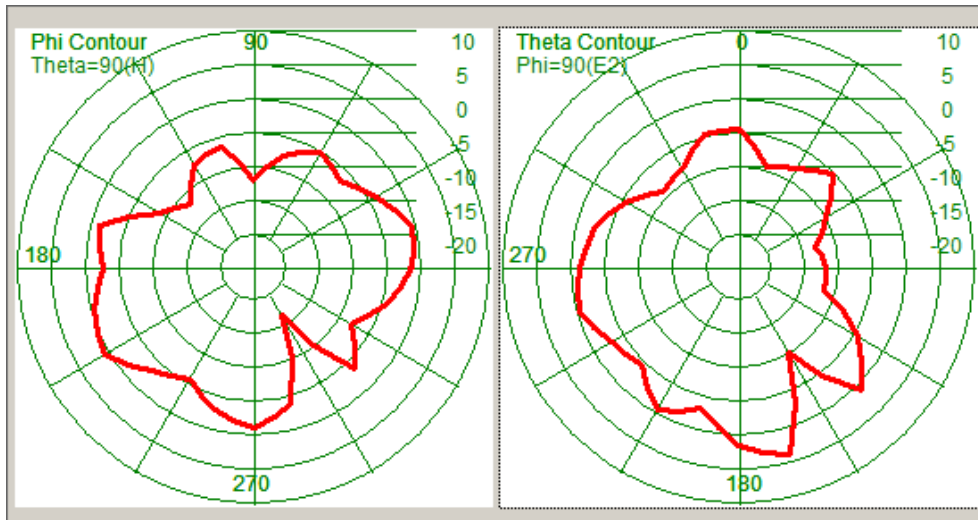
2400



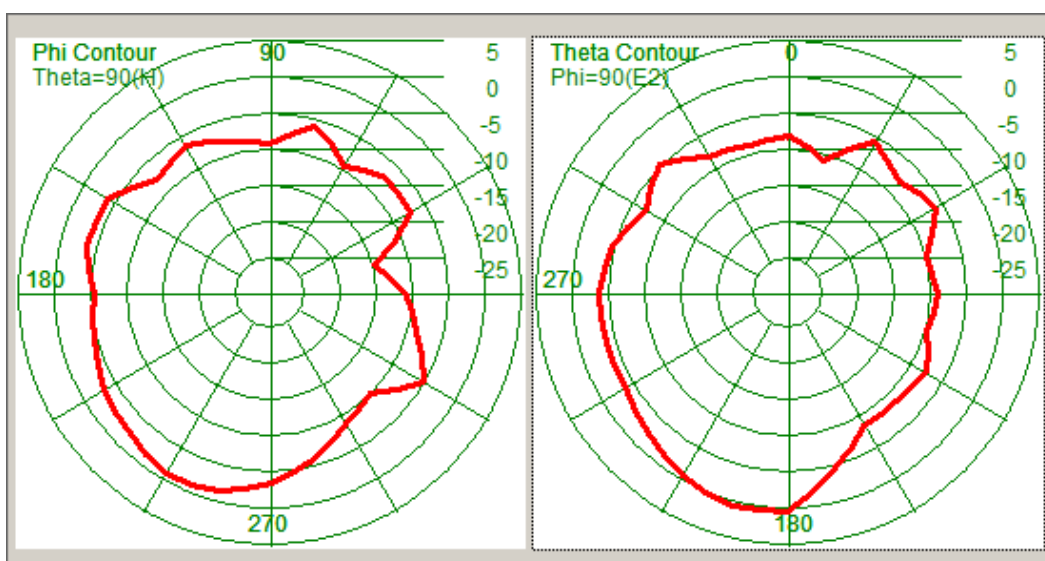
2450



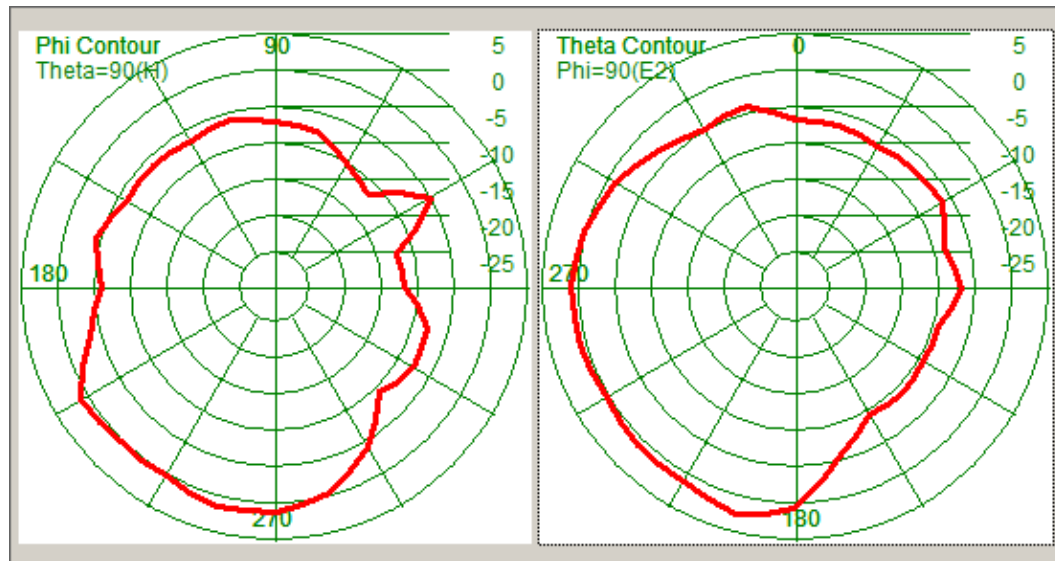
2500



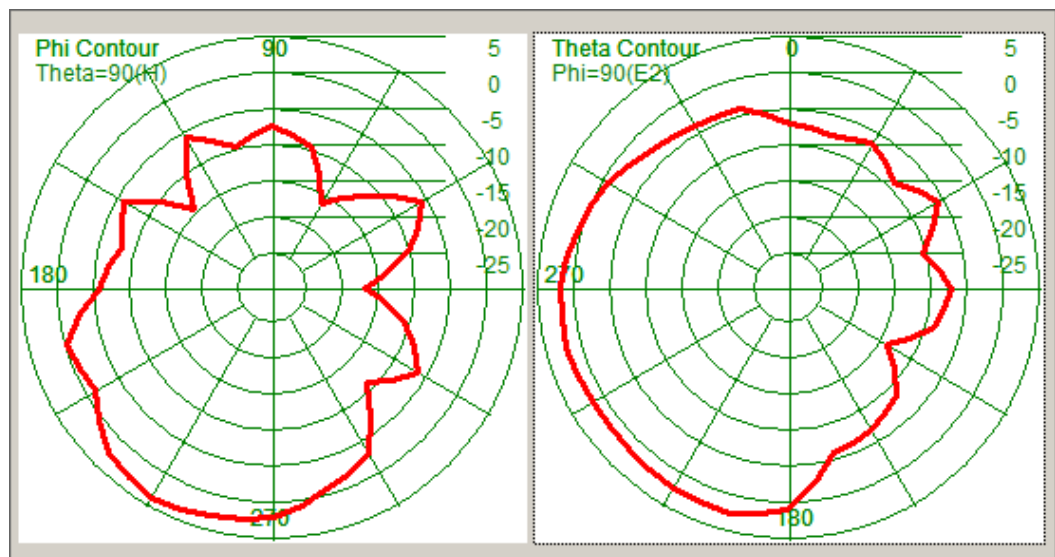
5150



5550



5850



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2G 11A-54M	36	17.49	-61.83
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