

SPECIFICATION FOR APPROVAL

CUSTOMER/PROJECT : _____

CUSTOMER P.N./ : _____

PRODUCT NAME./ : external antennaMODEL NO./ : 18U001C

SPECIFICATION/ : _____

VERSION	DATE	REVISION DESCRIPTION
T:A	2020/7/1	new
T:B	2020/9/24	Antenna update with pin structure

SUPPLIER AUTHORIZED SIGNATURE		
PREPARED	CHECKED	APPROVED
Shaw		

CUSTOMER AUTHORIZED SIGNATURE			
project		quality	

Please return to us one copy of "SPECIFICATION FOR APPROVAL" with your approved signature.

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1 Explanation of terms

dBi	Decibel relative isotropic antenna
Tx	Transmit frequency
Rx	Receive frequency
TRP	Total Radiated Power
TIS	Total Isotropic Sensitivity
VSWR	Voltage Standing Wave Ratio
GSM	Global Service for Mobile communication
DCS	Digital Communication System
CDMA	Code Division Multiple Access
WCDMA	Wideband Code Division Multiple Access

2 Test equipment

Can be increased or decreased according to the actual situation

Vector Network Analyzer

Comprehensive tester

SATIMO 64 bit darkroom

3 Applicable frequency bands

The applicable frequency bands are marked in other colors.

standard	band
WIFI (2. 4G)	2412MHz~2483MHz

4 Basic test items

4.1 Standing Wave Ratio Chart

4.2 Smith Impedance Diagram

4.3 Radiation pattern

4.4 Gain and Efficiency

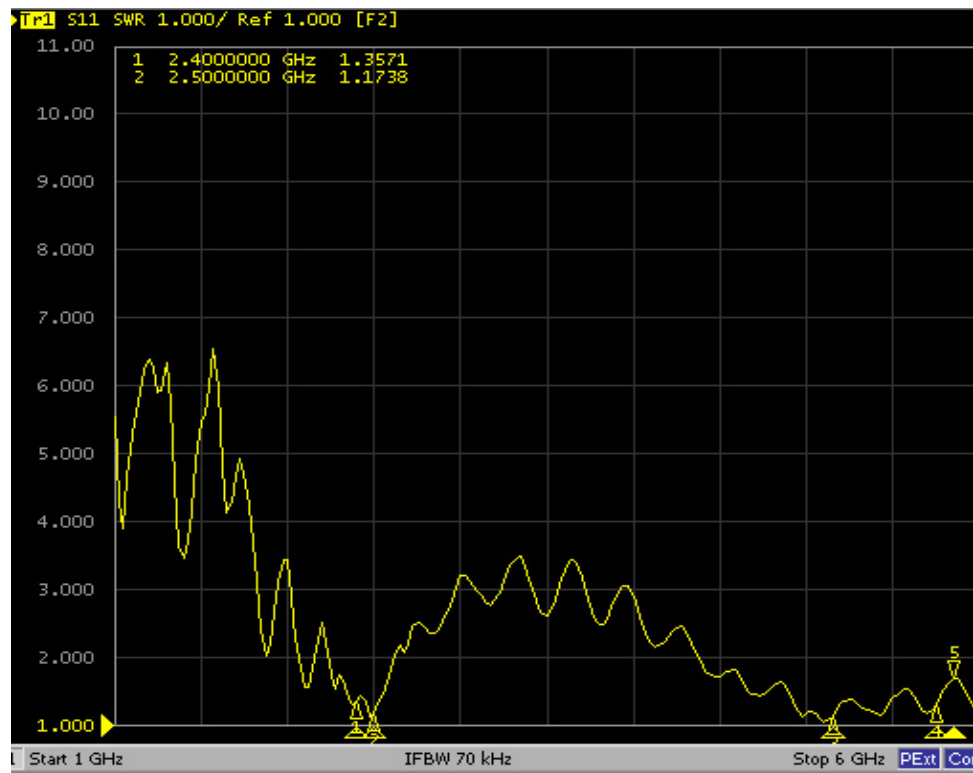
4.5 TRP&TIS test

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5 Test Indicators and Data Charts

5.1 Standing Wave Ratio

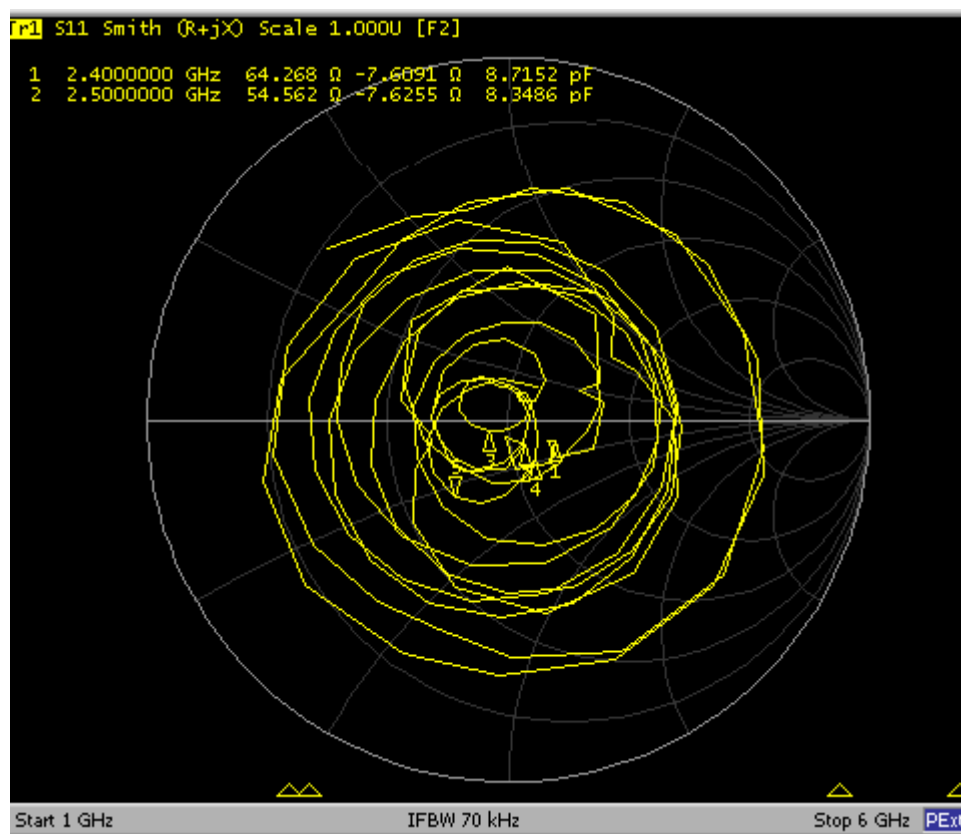
5.1.1 Standing Wave Ratio Chart (Antenna one)



5.1.2 VSWR data

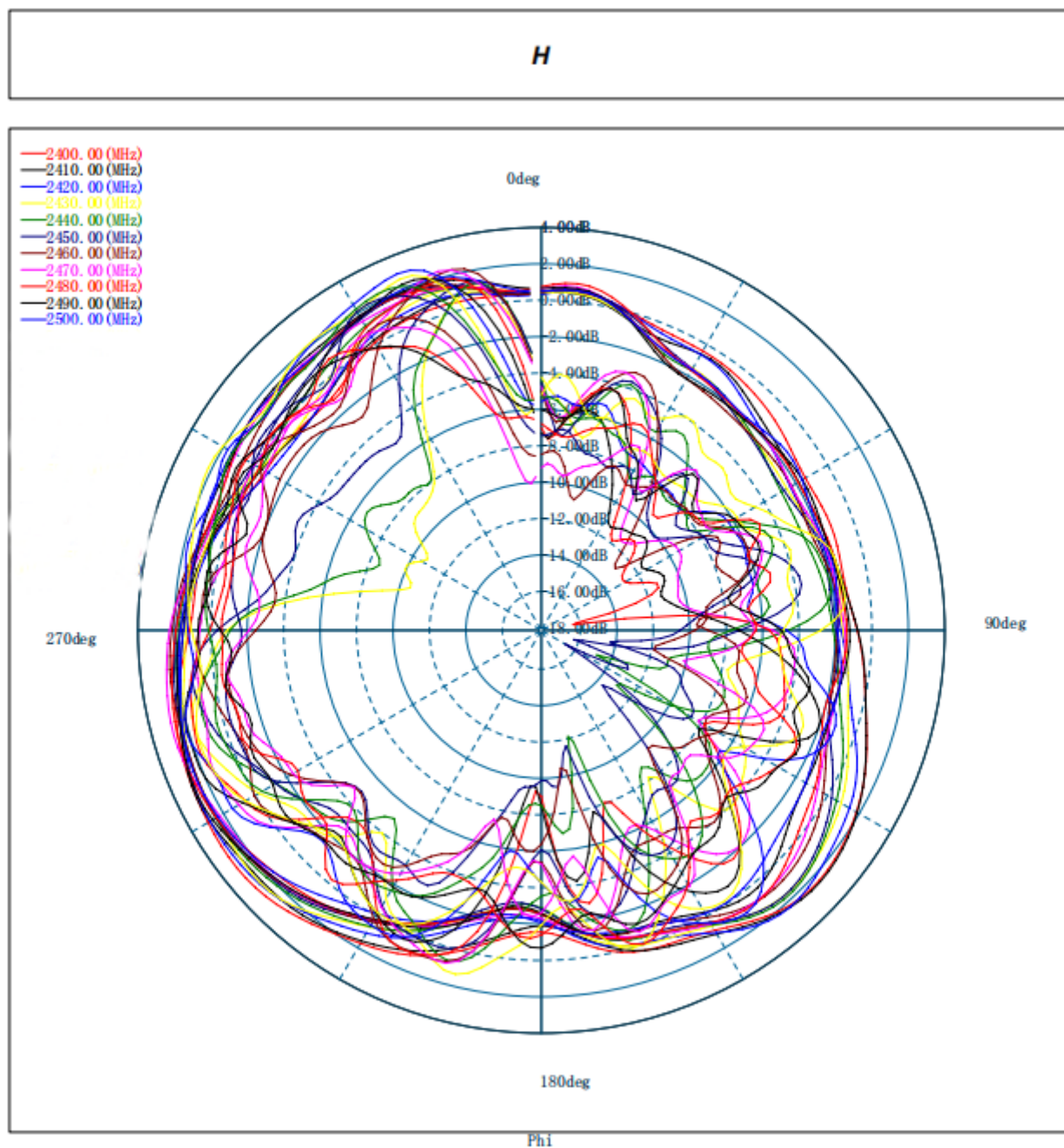
Freq/MHz	2400	2500	5150	5750	5850
VSWR	1.3	1.1	1.1	1.3	1.6

5.2 Smith Impedance Chart

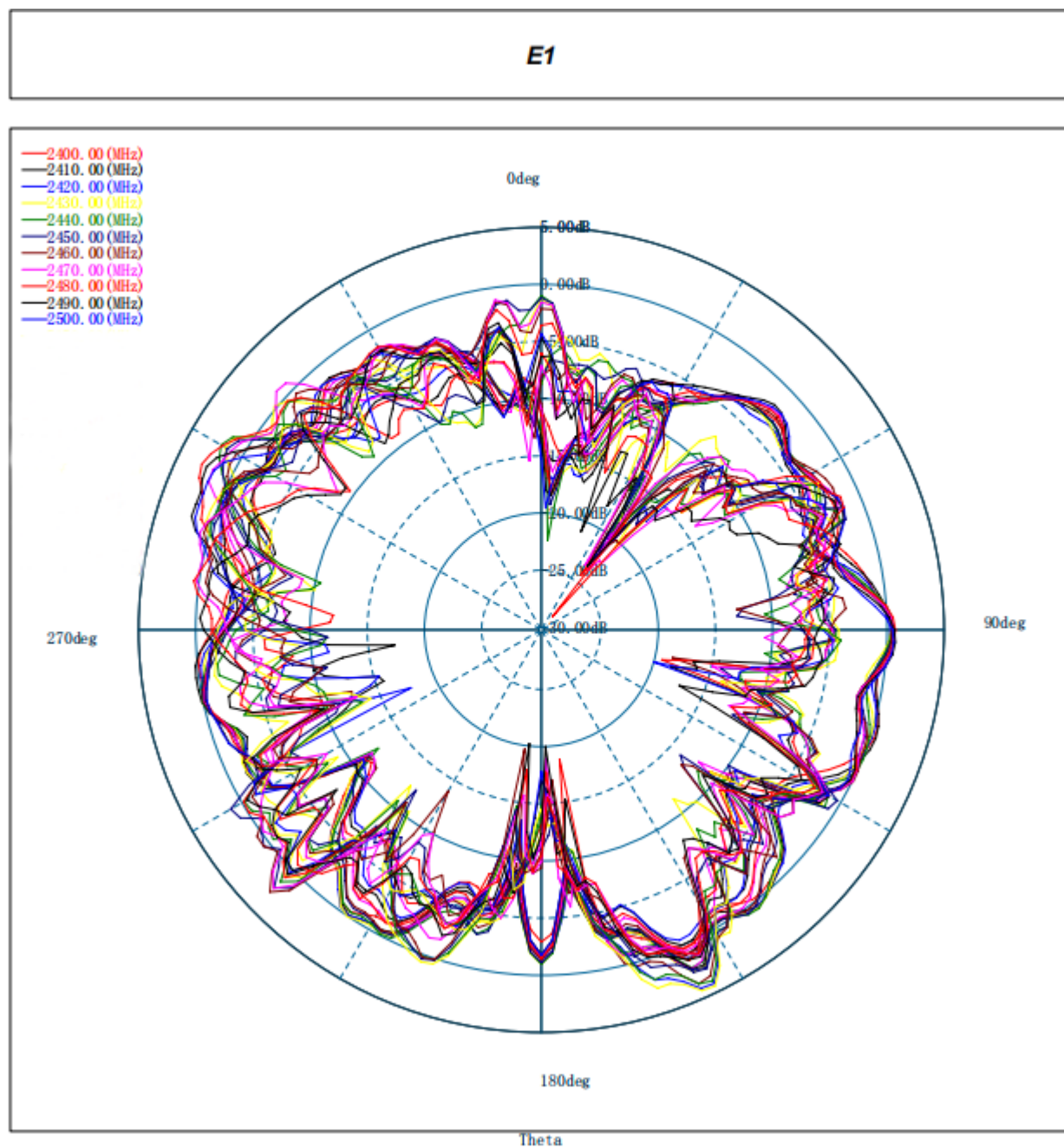


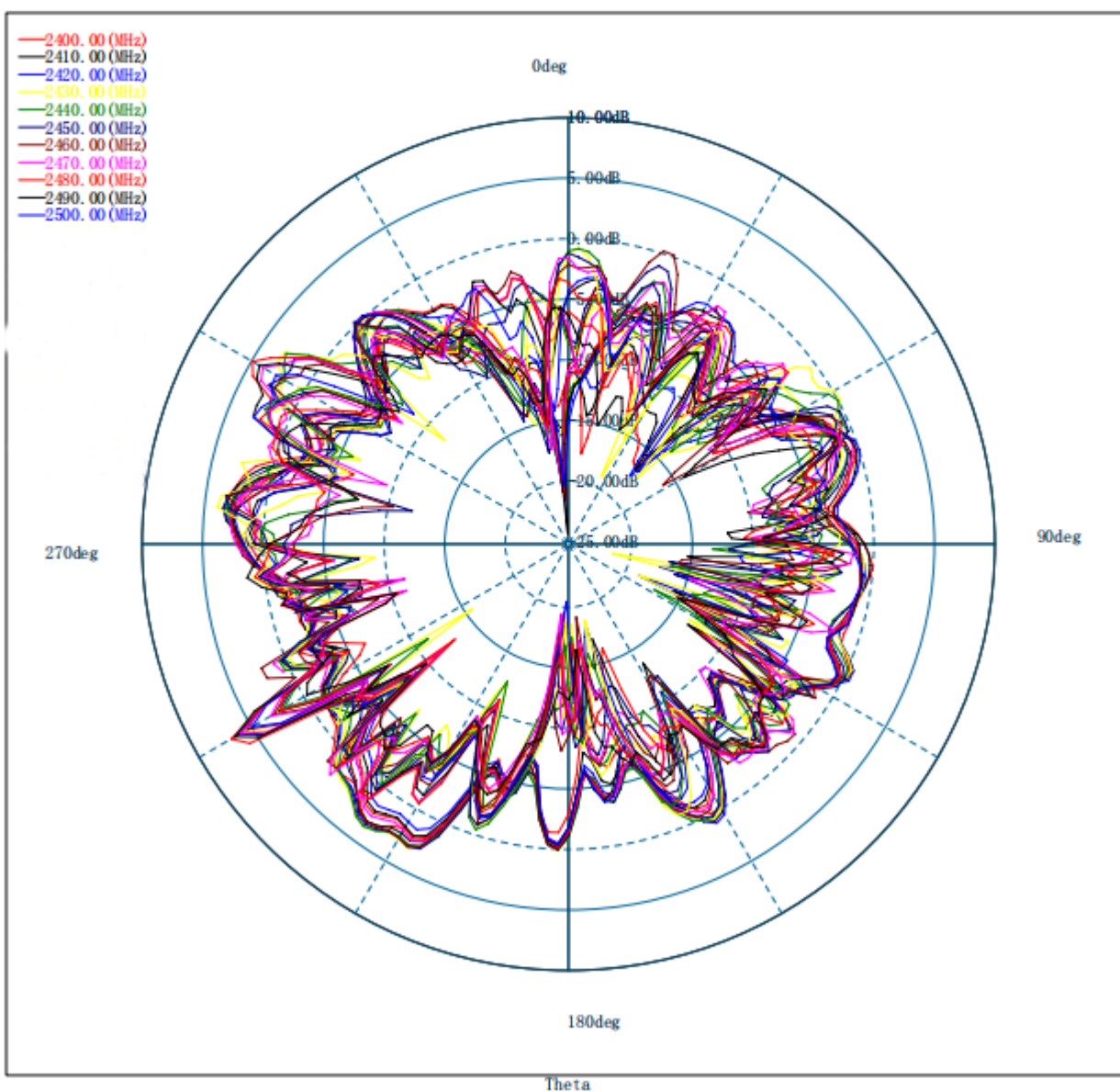
5.3 Radiation pattern

5.3.1 H-plane



5.3.2 E-plane

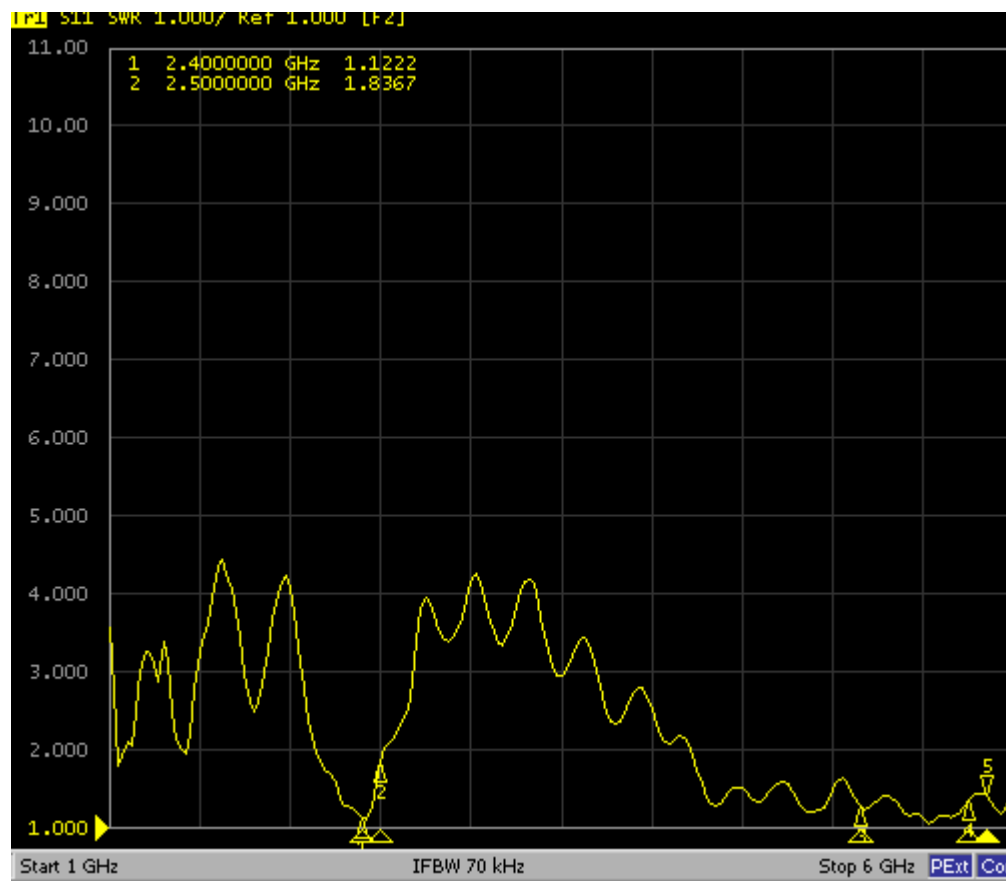


E2

5.4 Gain and Efficiency

Freq (MHZ)	Eff (%)	GAIN
2400	66%	3.27
2410	66%	3.50
2420	66%	3.92
2430	65%	3.86
2440	66%	3.90
2450	66%	3.82
2460	67%	3.43
2470	67%	2.82
2480	66%	2.75
2490	66%	2.91
2500	64%	2.48

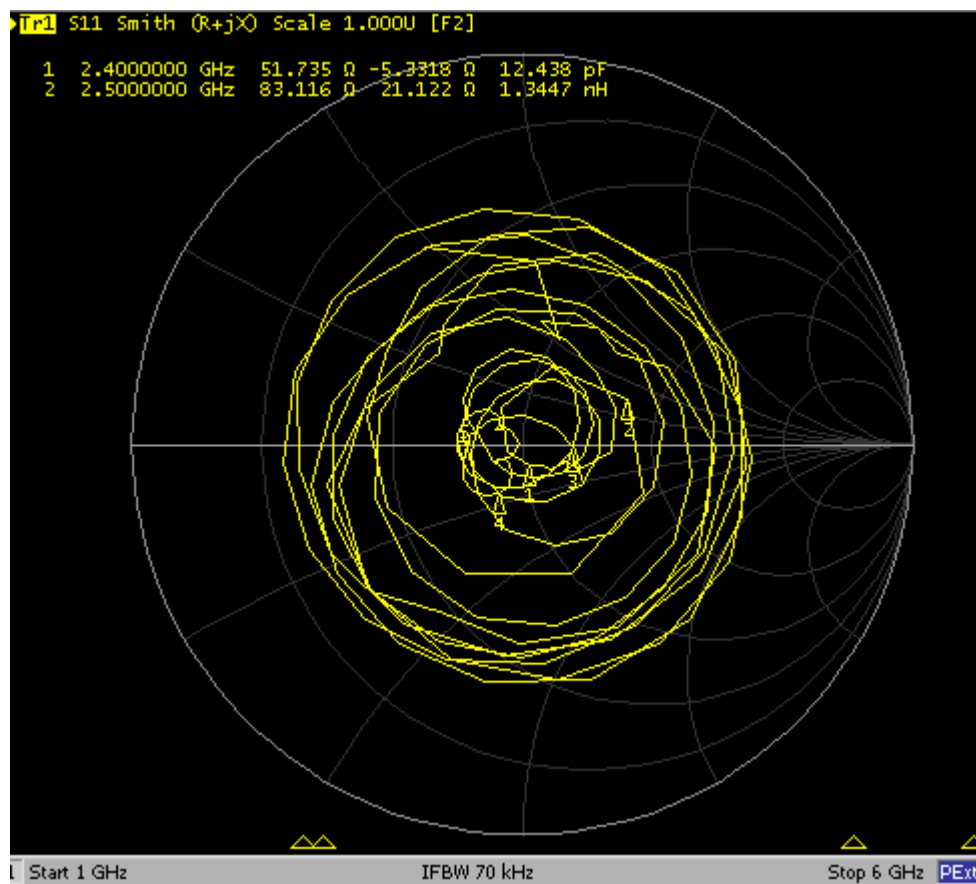
5.4.1 Standing Wave Ratio Chart (Antenna two)



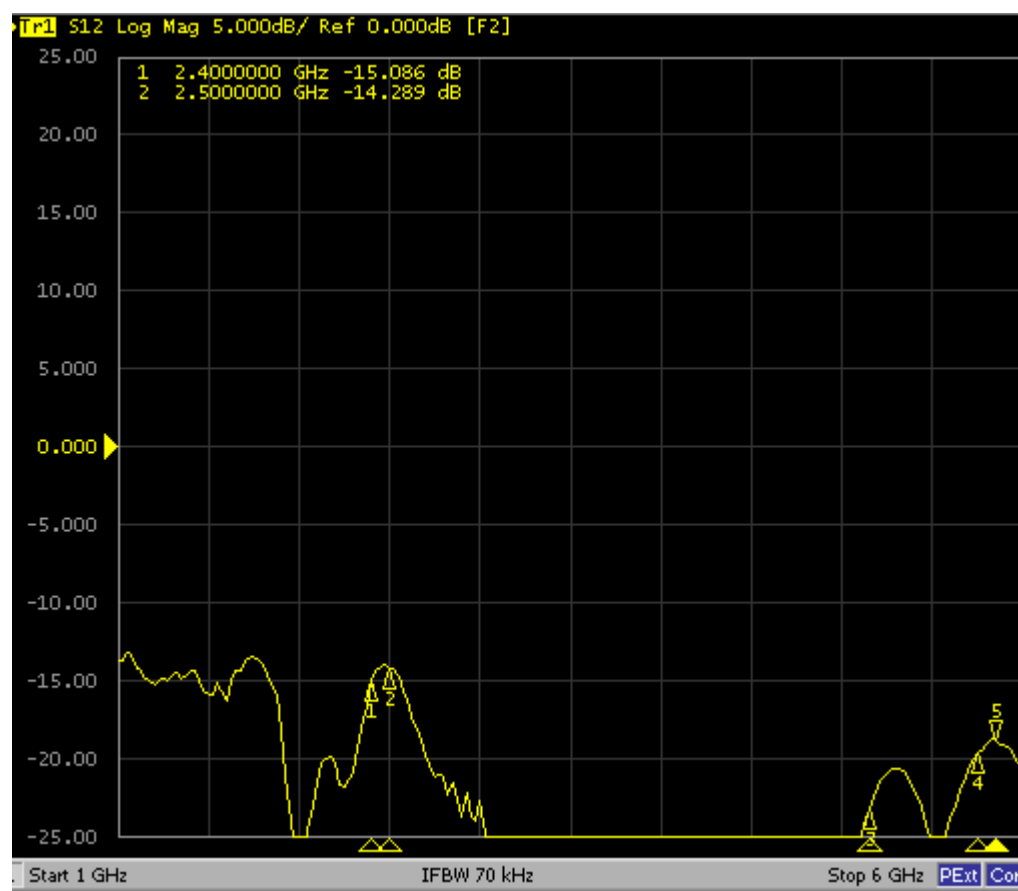
5.4.2 VSWR data

Freq/MHz	2400	2500	5150	5750	5850
VSWR	1.1	1.8	1.2	1.3	1.3

5.5 Smith Impedance Chart

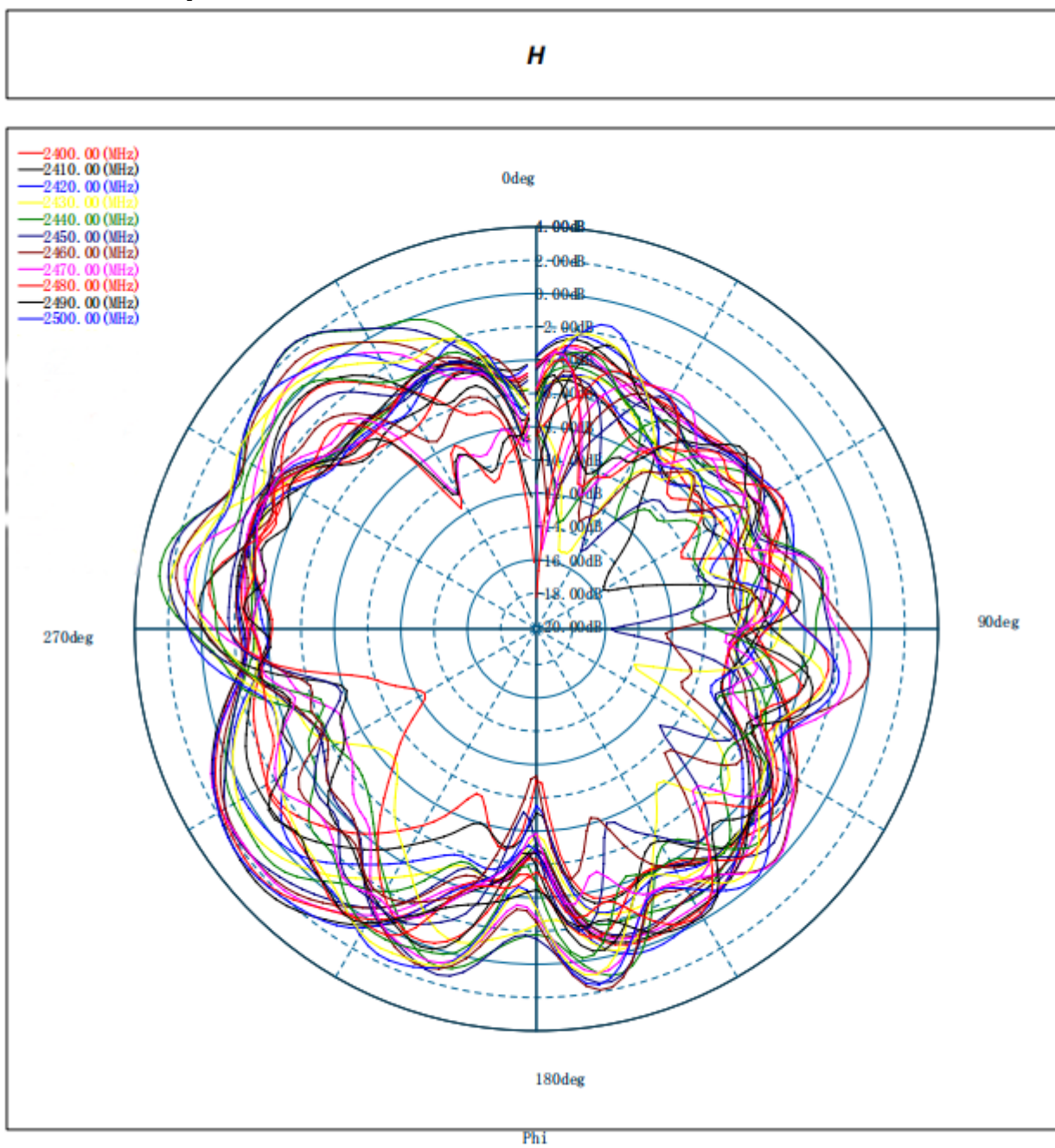


Isolation of Antenna 1 and Antenna 2:

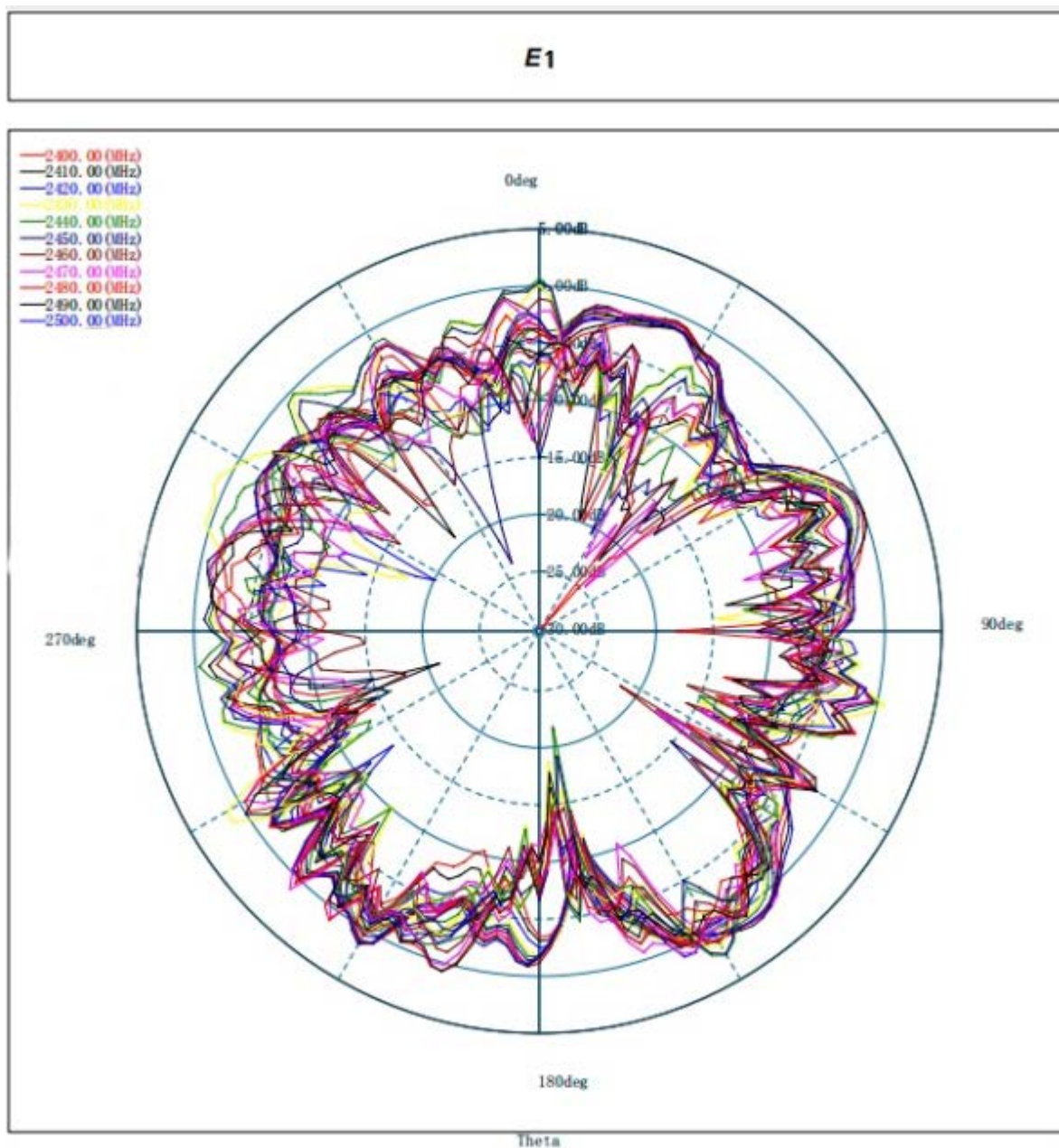


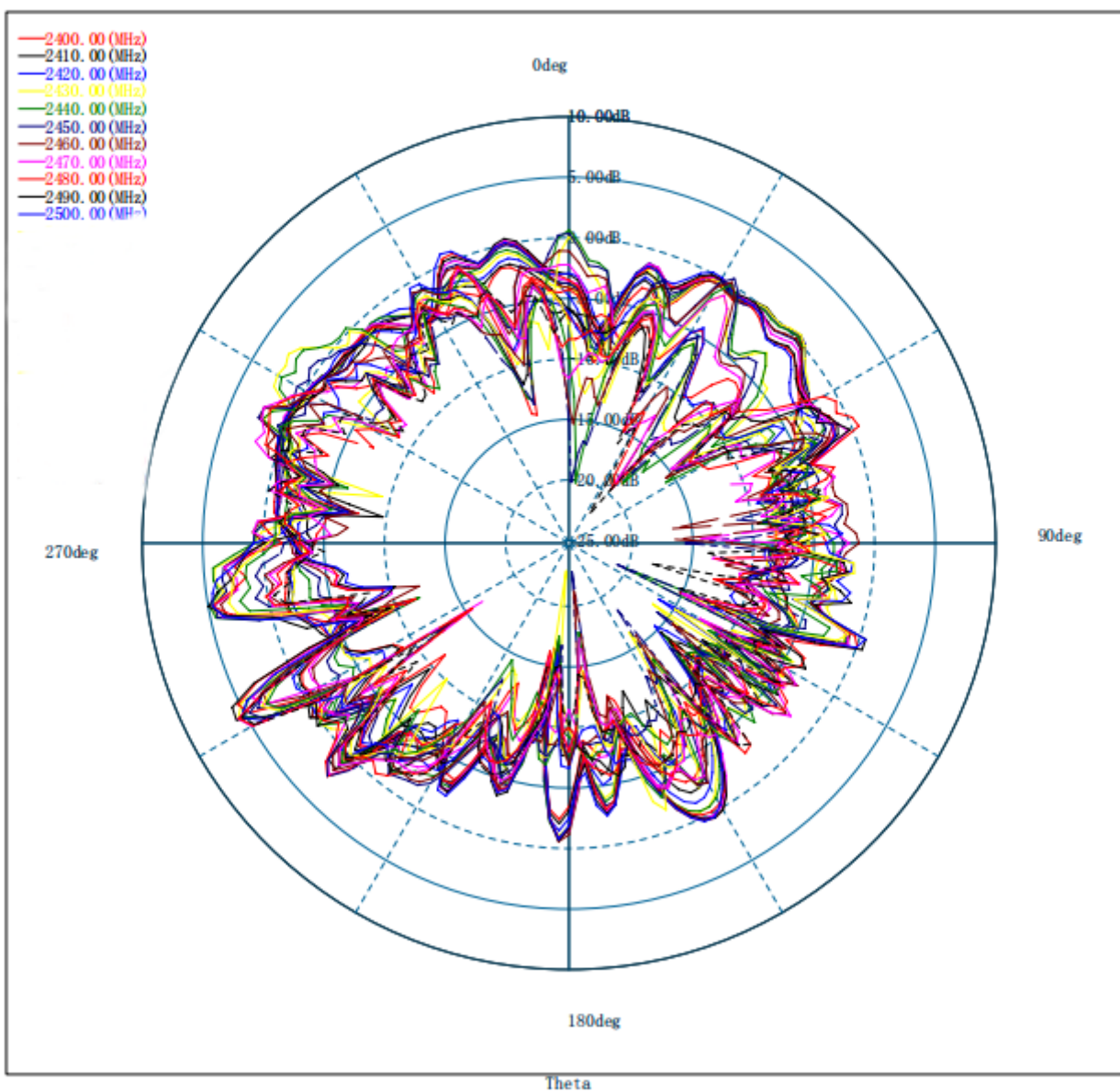
5.6 Radiation pattern

5.6.1 H-plane



5.6.2 E-plane



E2

5.7 Gain and Efficiency

Freq (MHZ)	Eff (%)	GAIN
2400	61%	3.48
2410	63%	3.42
2420	63%	3.50
2430	63%	3.50
2440	64%	3.56
2450	64%	3.57
2460	63%	3.65
2470	63%	3.42
2480	61%	3.36
2490	61%	3.47
2500	59%	3.16

6 Environmental Disposal Recommendations

The environment does not need to be processed

7 Impedance matching requirements

Matching circuit is not modified

L	W	H
90mm±0.2	31mm±0.2	20mm±0.1



9 Antenna Installation Guide

9.1 Antenna Installation Instructions

9.2 Feeder Routing Instructions

10 Other