

Specification for Approval

CONTENTS

Customer:	N/A	Vendor:	N/A
Customer P/N:	N/A	HL P/N:	N/A
Customer Device Name:	N/A	HL Device Name:	N/A
Version:	Initial Release	Approval Date:	2024-12-25

Internal Approval		
Approved By:	Checked By:	Prepared By:
		TIAN XIANG
Customer Approval		

Revision:

Date	Rev	Description of Changes
2018-03-09	A	Initial Release

1、Products Electrical

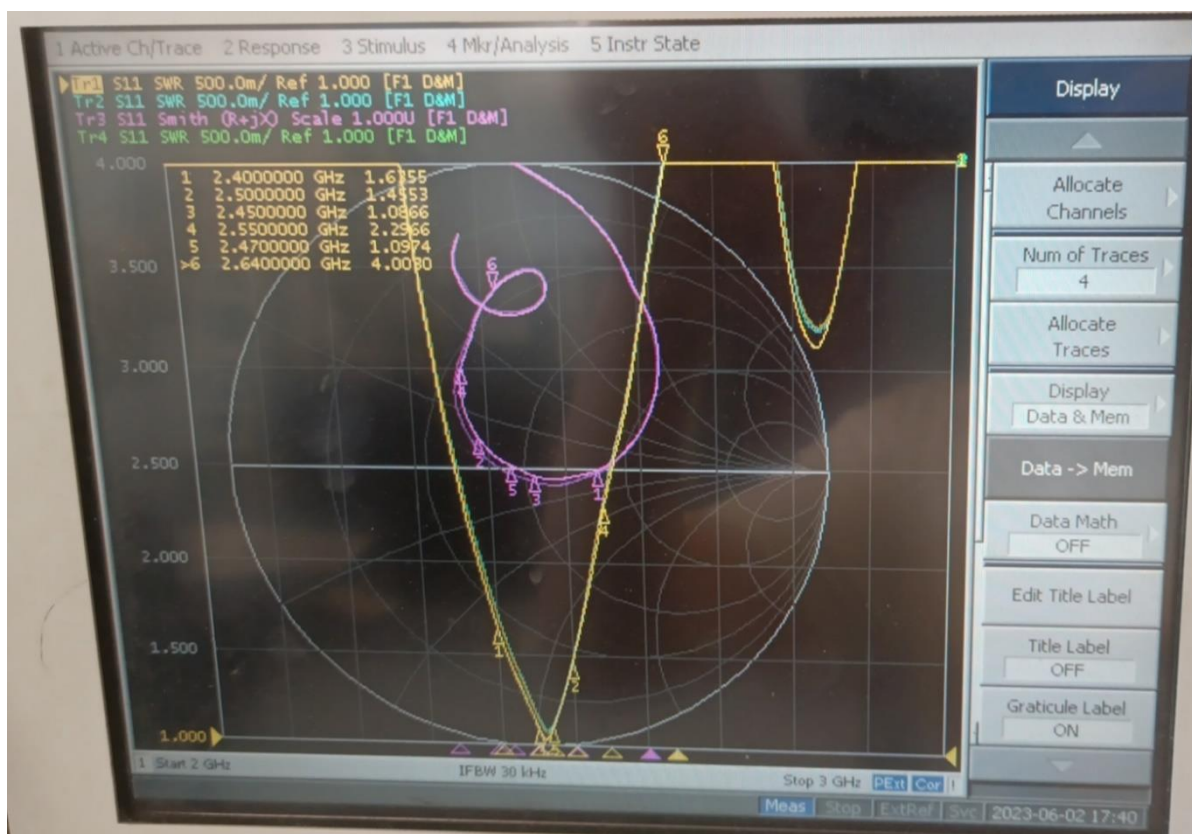
PCB Antenna

1	Antenna Model	PCB IFA Antenna
2	Frequency Range	2400-2500MHz
3	VSWR	<2
4	Broadband	>100MHz
5	Impedance	50 ohm
6	Gain	ANT1<= 2.5dBi;ANT2<=3.8dBi;ANT3<=3.08dBi
7	Polarization	LP

2、Antenna Test Data

2.1 VSWR

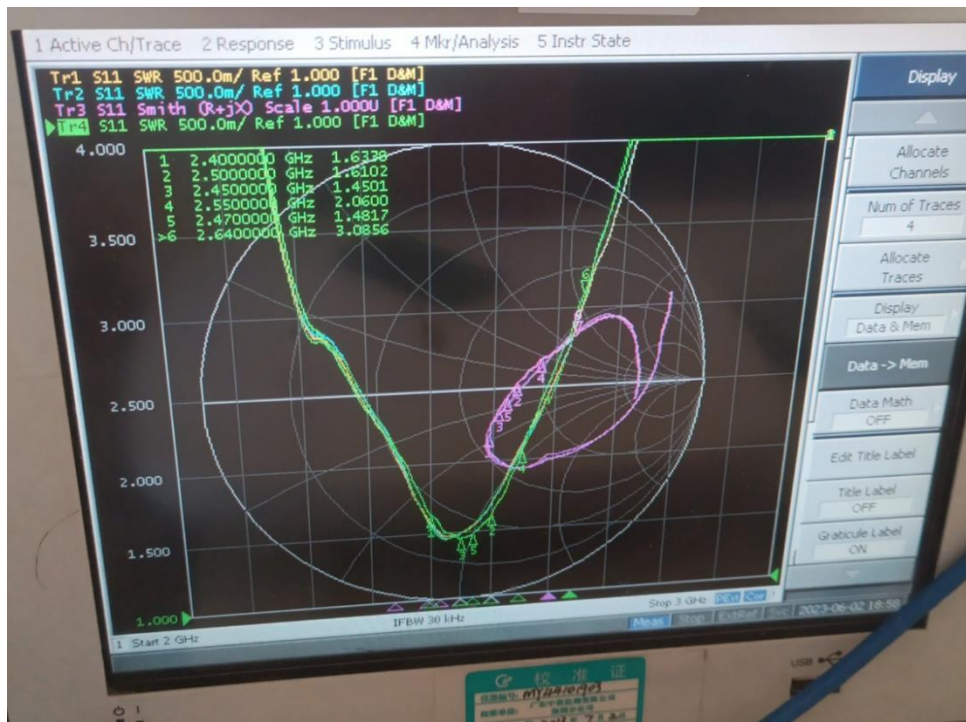
Ant1



Ant2

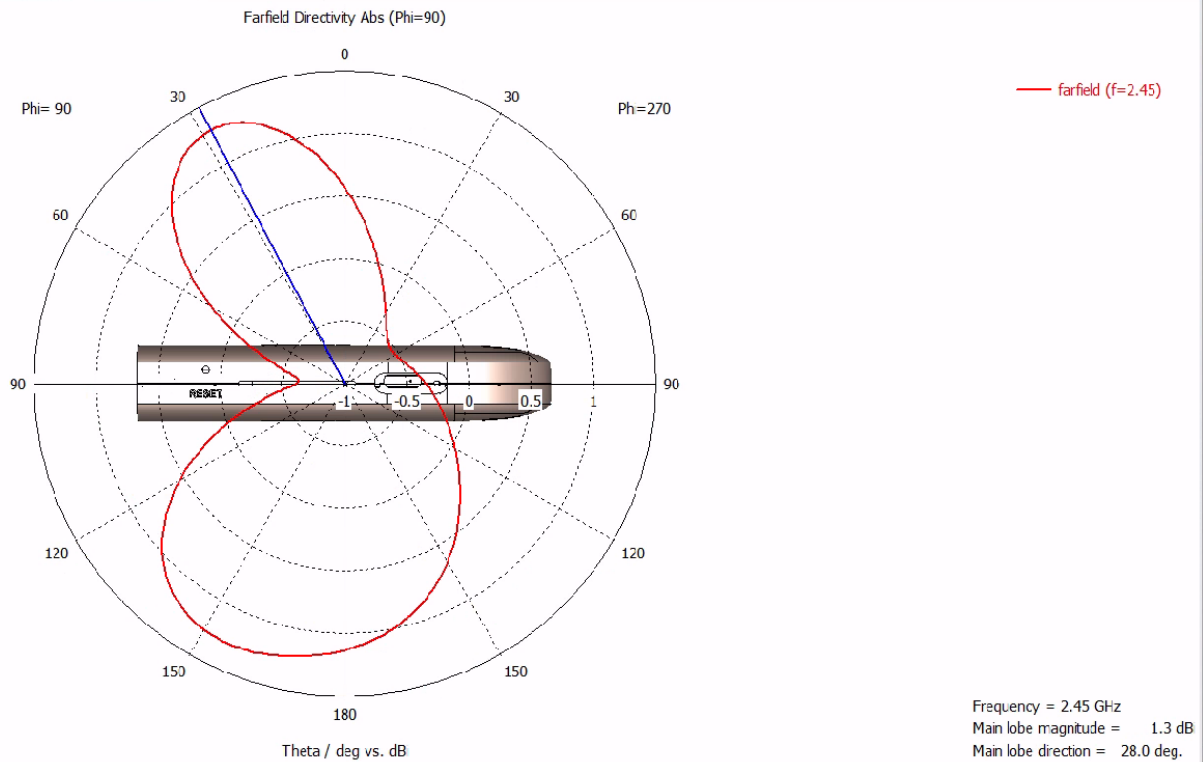
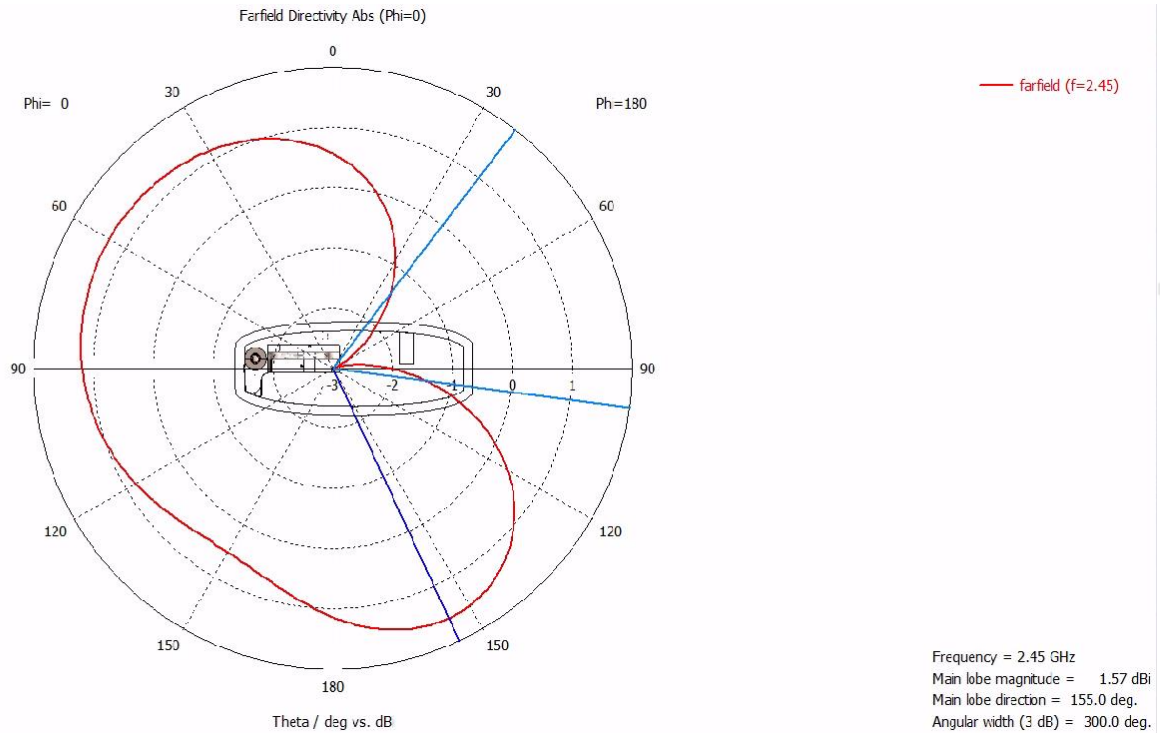


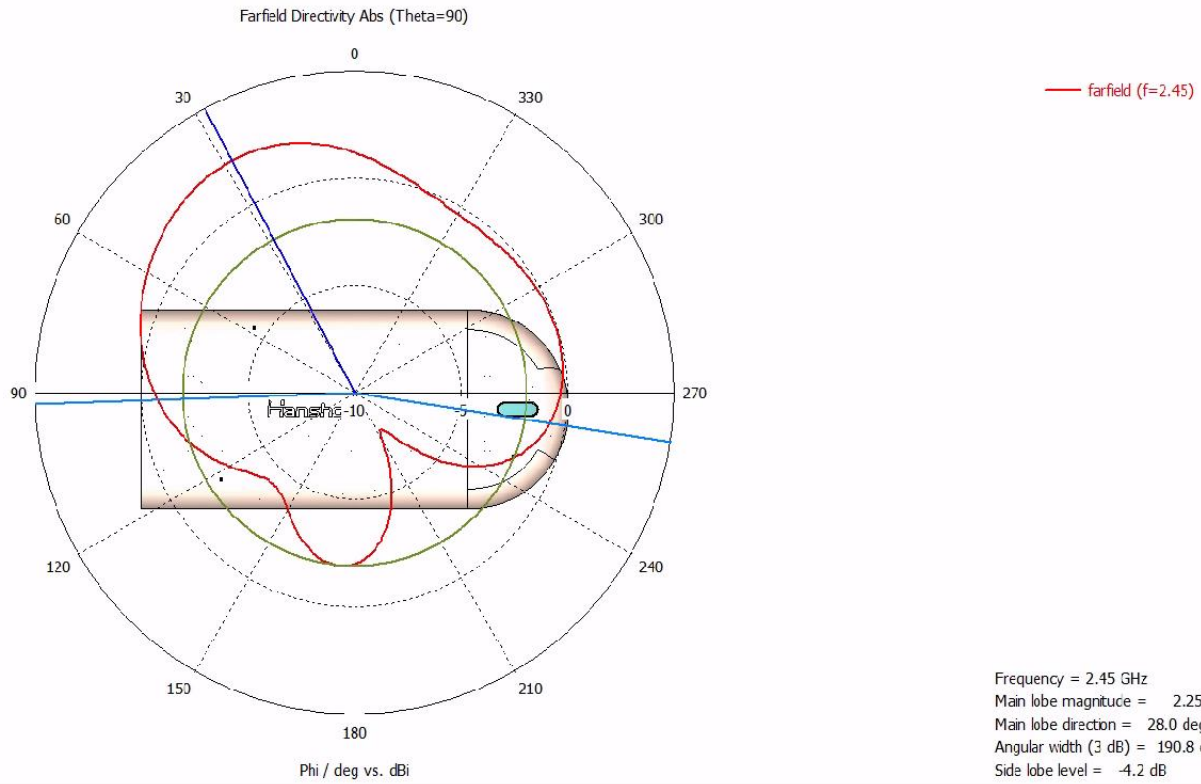
Ant3



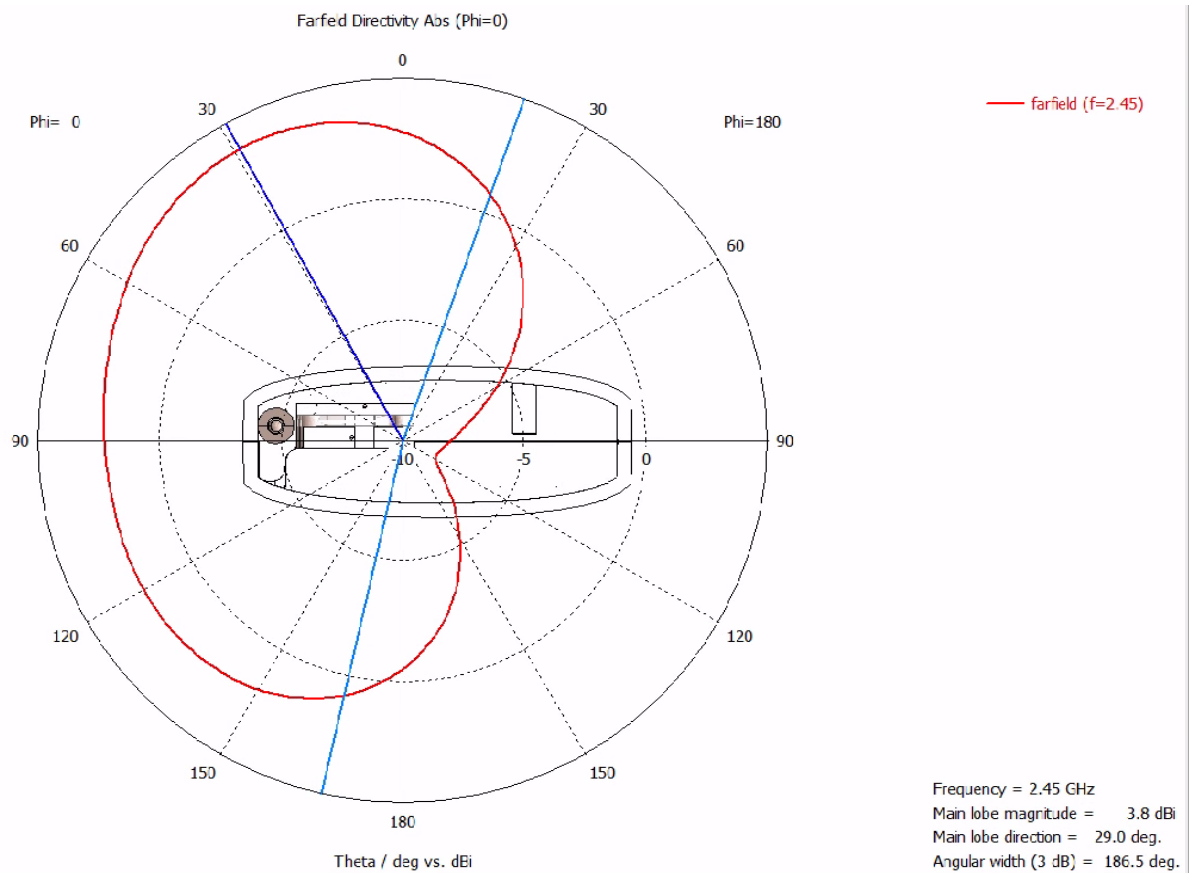
2.2 RADIATION PATTERNS 2450MHz

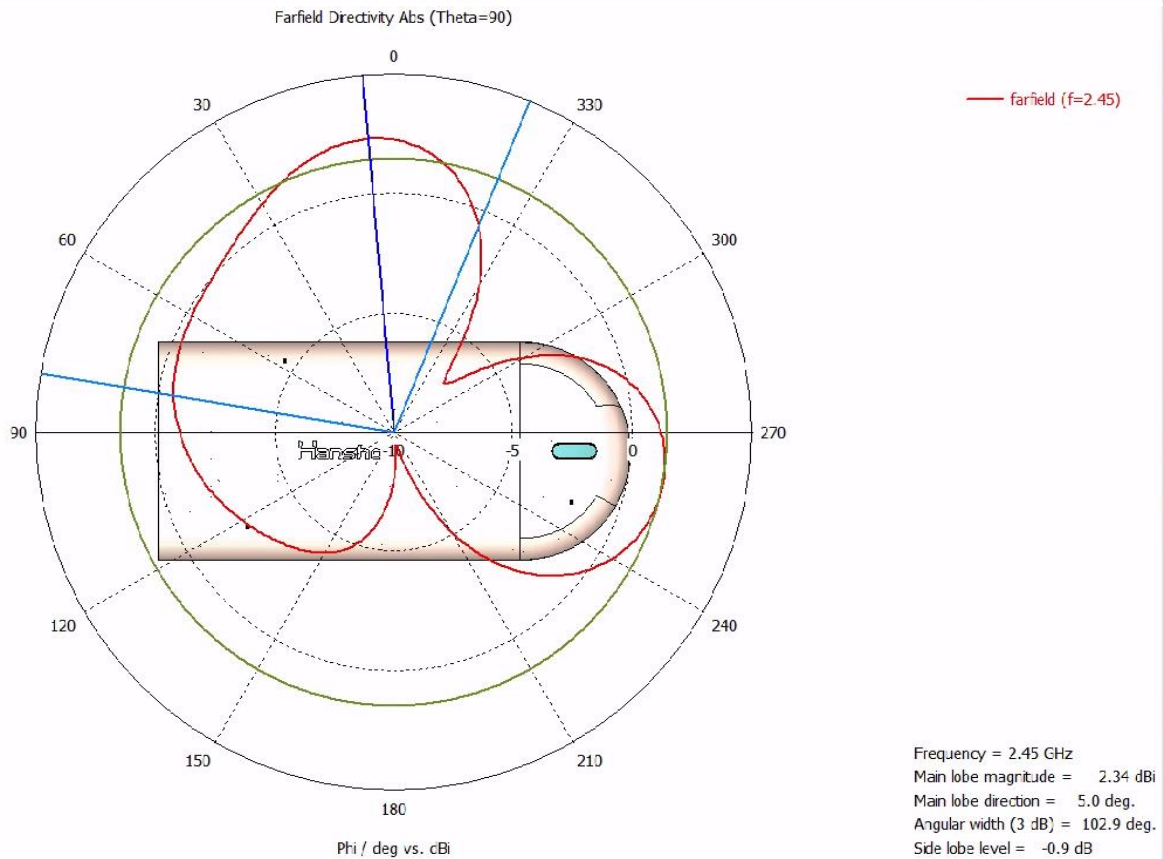
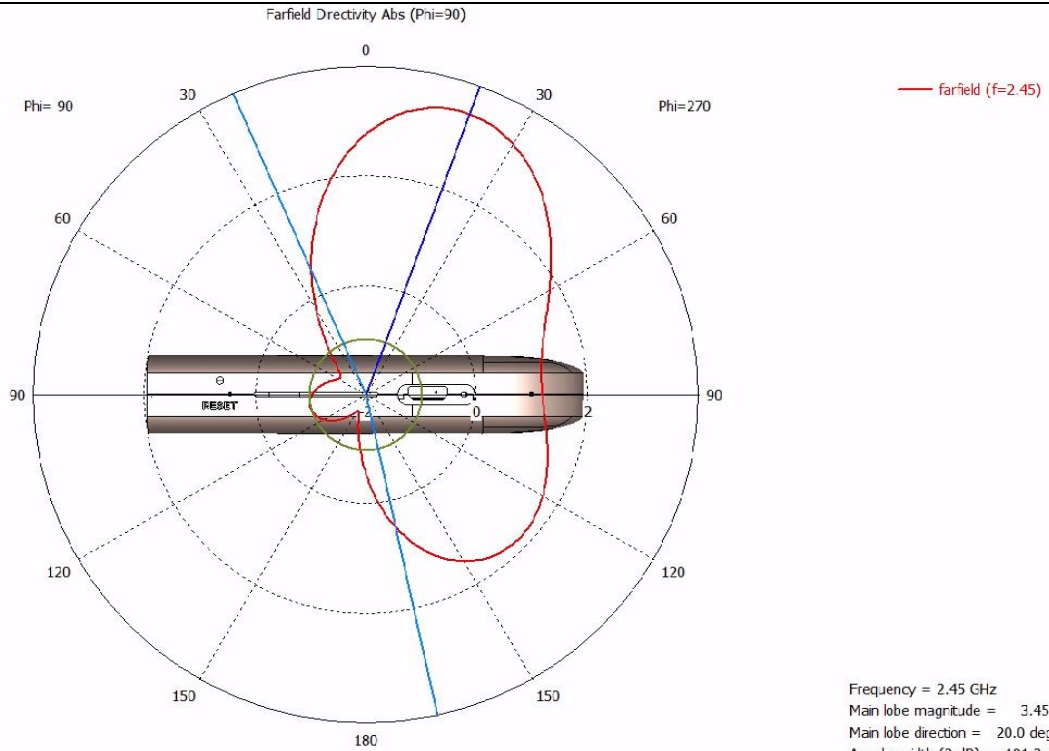
ANT1



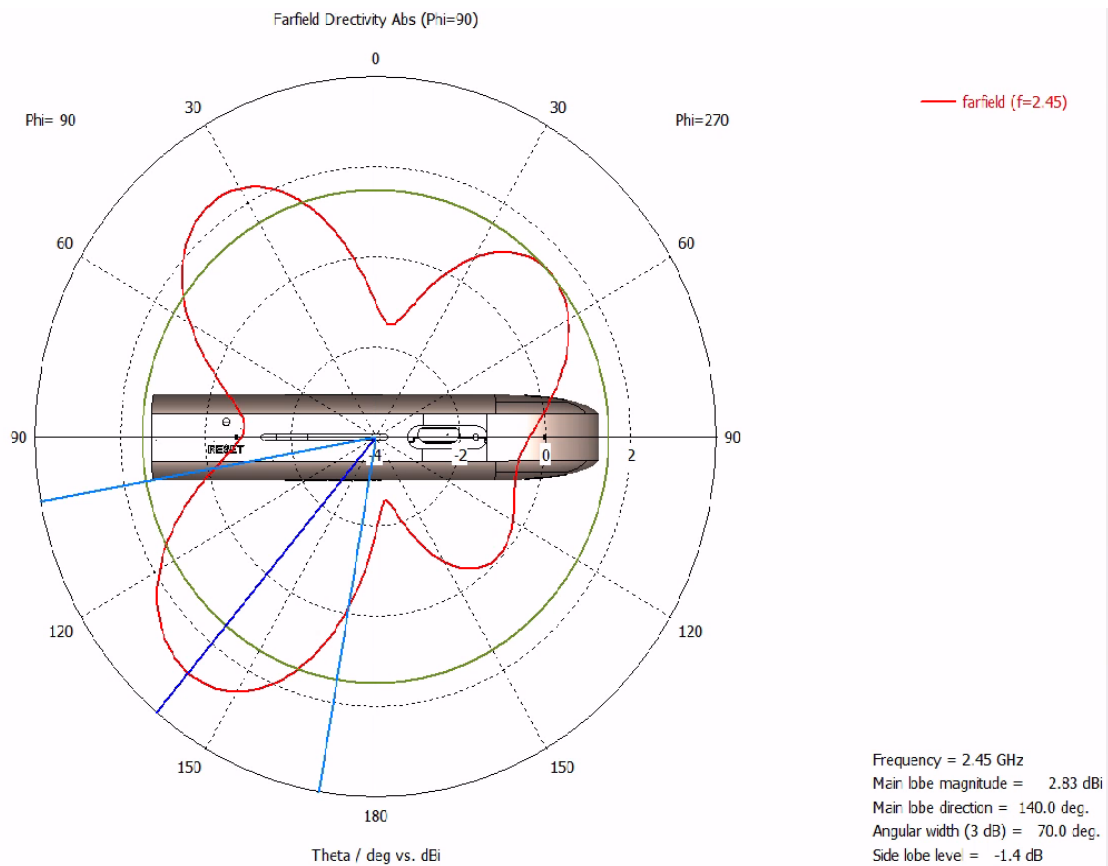
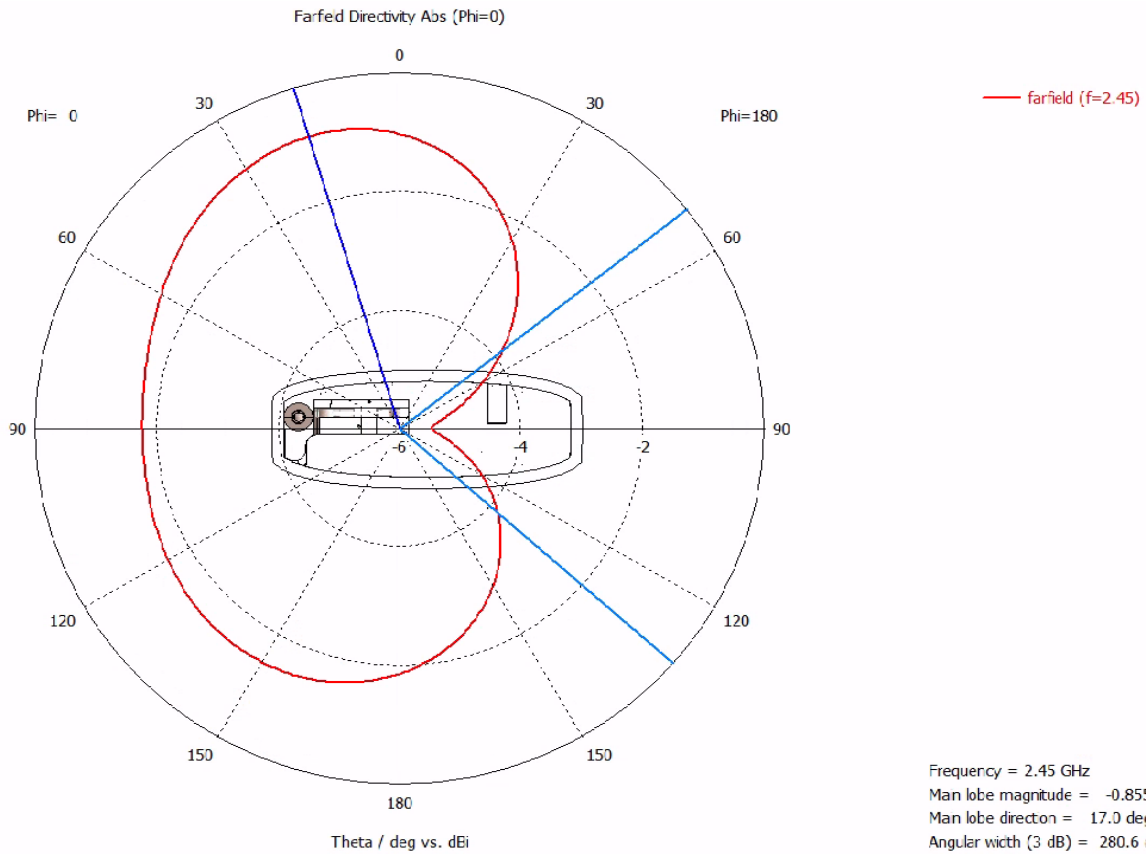


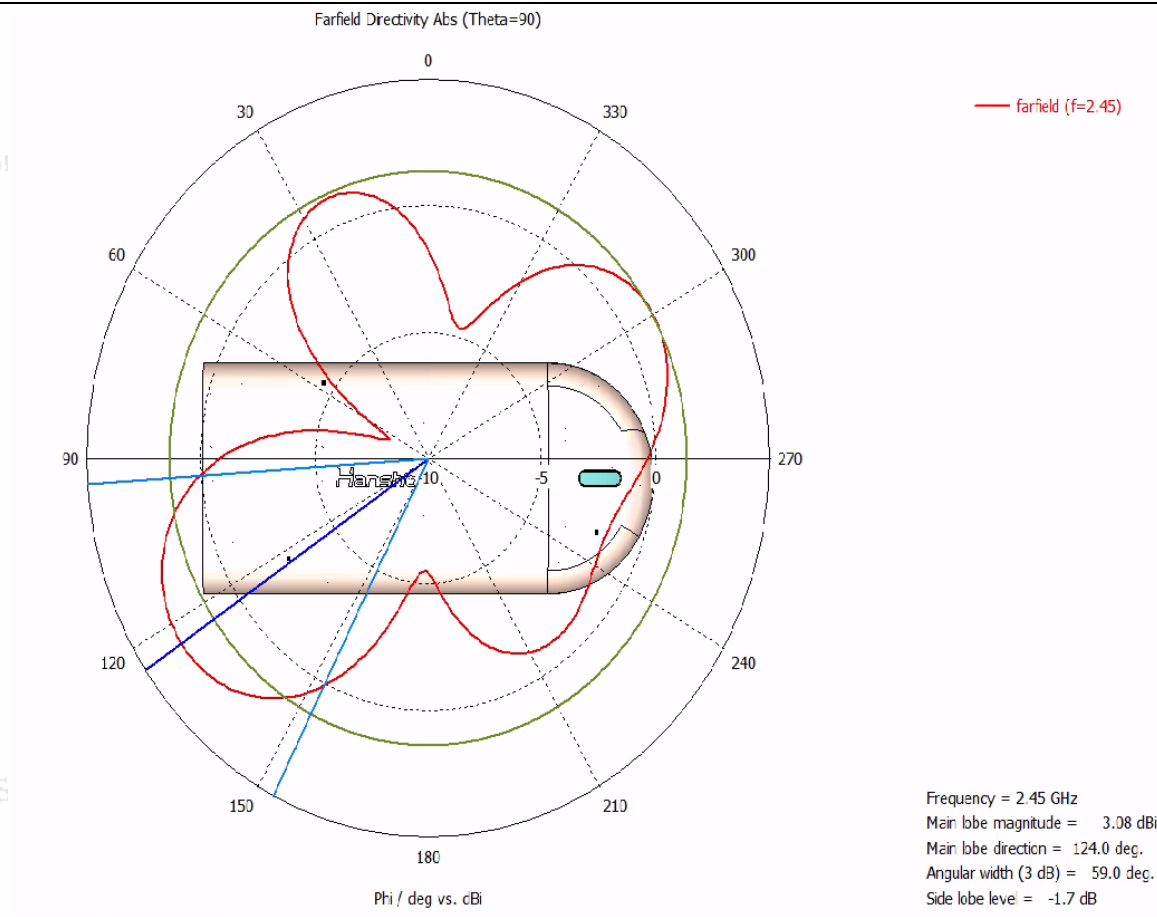
ANT2





ANT3





2.3 GAIN AND EFFICIENCY

ANT1

Frequency (MHz)	Efficiency (%)	Gain (dBi)
2400	26.6	2
2410	24.9	2.1
2420	24.7	2.5
2430	25.6	2.0
2440	25.9	1.9
2450	28.5	2.25
2460	29.0	1.7
2470	26.3	1.8
2480	25.1	2.1
2490	24.7	2.3
2500	25.2	2.4

ANT2

Frequency (MHz)	Efficiency (%)	Gain (dBi)
2400	27.6	2.2
2410	28.9	3.1
2420	28.7	3.5
2430	29.6	3.0
2440	28.9	3.4
2450	28.5	3.8
2460	29.0	3.7
2470	29.3	3.3
2480	29.1	3.1
2490	28.7	3.3

ANT3

Frequency (MHz)	Efficiency (%)	Gain (dBi)
2400	27	2.5
2410	29	2.7
2420	29.7	2.5
2430	30.6	2.7
2440	30.9	2.9
2450	29.5	3.08
2460	30.0	2.8
2470	29.3	2.7
2480	28.4	2.7
2490	28.7	2.4
2500	26.4	2.4

3、PCB ANTENNA (MM)

HS2192 Confidential 2025-06-20

HS2192 Confidential

HS2192 Confidential 2025-06-20

HS2192 (

HS2192 Confidential 2025-06-20

HS2192 Confidential 2025-06-20