SINBON

QX-008-55
Industrial antenna report

2014/04/15

Purpose:

This report is to show the results of the Industrial antenna .

Contents:

1.Overview & Antenna Information
2.Test Results
2.1 Return Loss
2.2 3D Gain table
2.3 2D Radiation Pattern
2.4 3D Radiation Pattern

Revision	Data	Description of changes
A	05 – Dec. - 2013	Using the chamber simulate the Industrial antenna performance .
B	30 – Dec. - 2013	Using the chamber simulate the Industrial antenna performance .
C	31 – Dec. - 2013	Using the chamber simulate the Industrial antenna performance .
D	03 – Jan. - 2014	Using the chamber simulate the Industrial antenna performance .
E	03 – Apr. - 2014	Using the chamber simulate the Industrial antenna performance .
F	22 – Apr. - 2014	Change the Cable and length.

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1. Overview& Antenna Information óv · πллуπpp ăl·YˇLJfŜă мπpú

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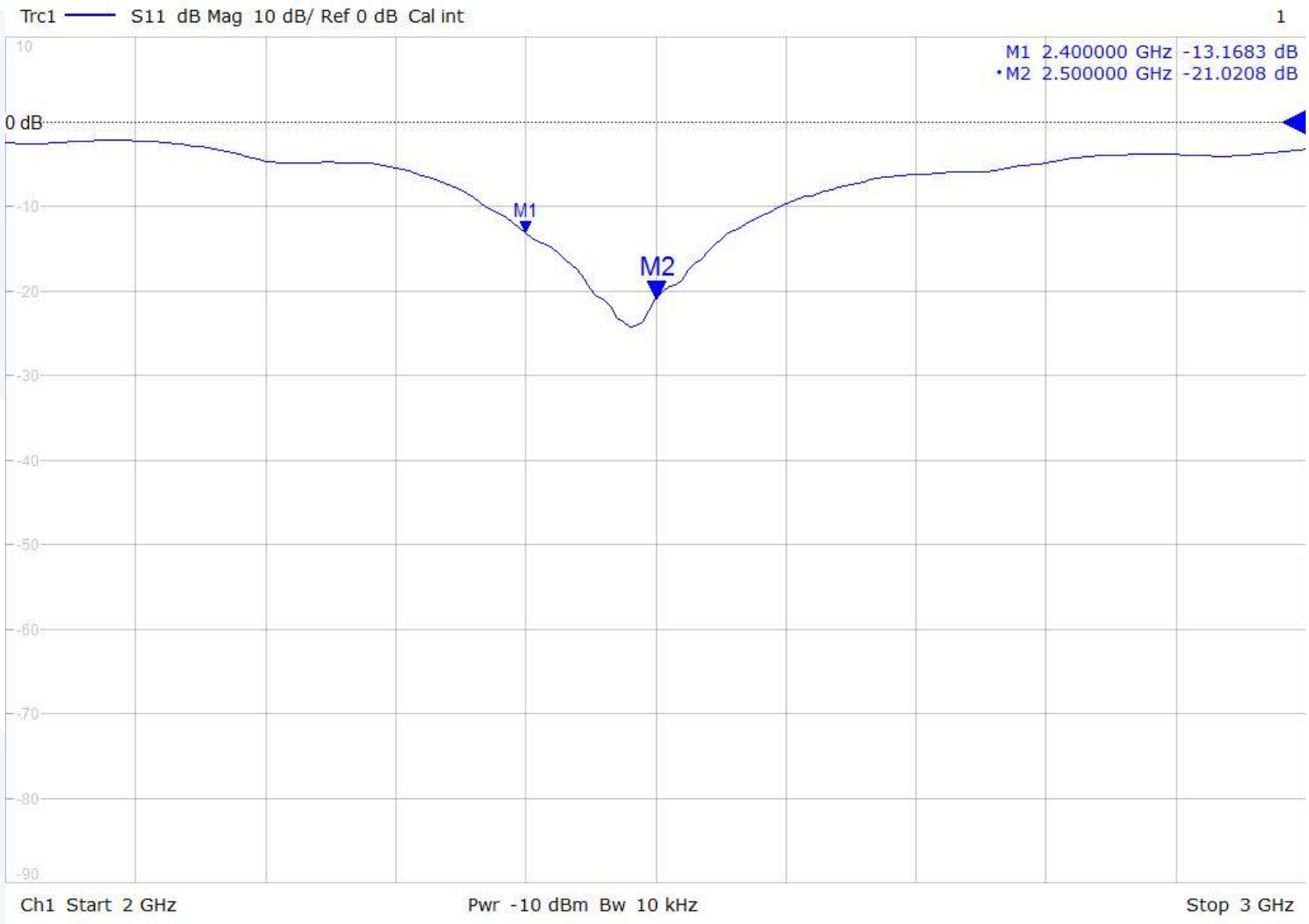
2.Test Results

2.1 Return Loss

Target antenna



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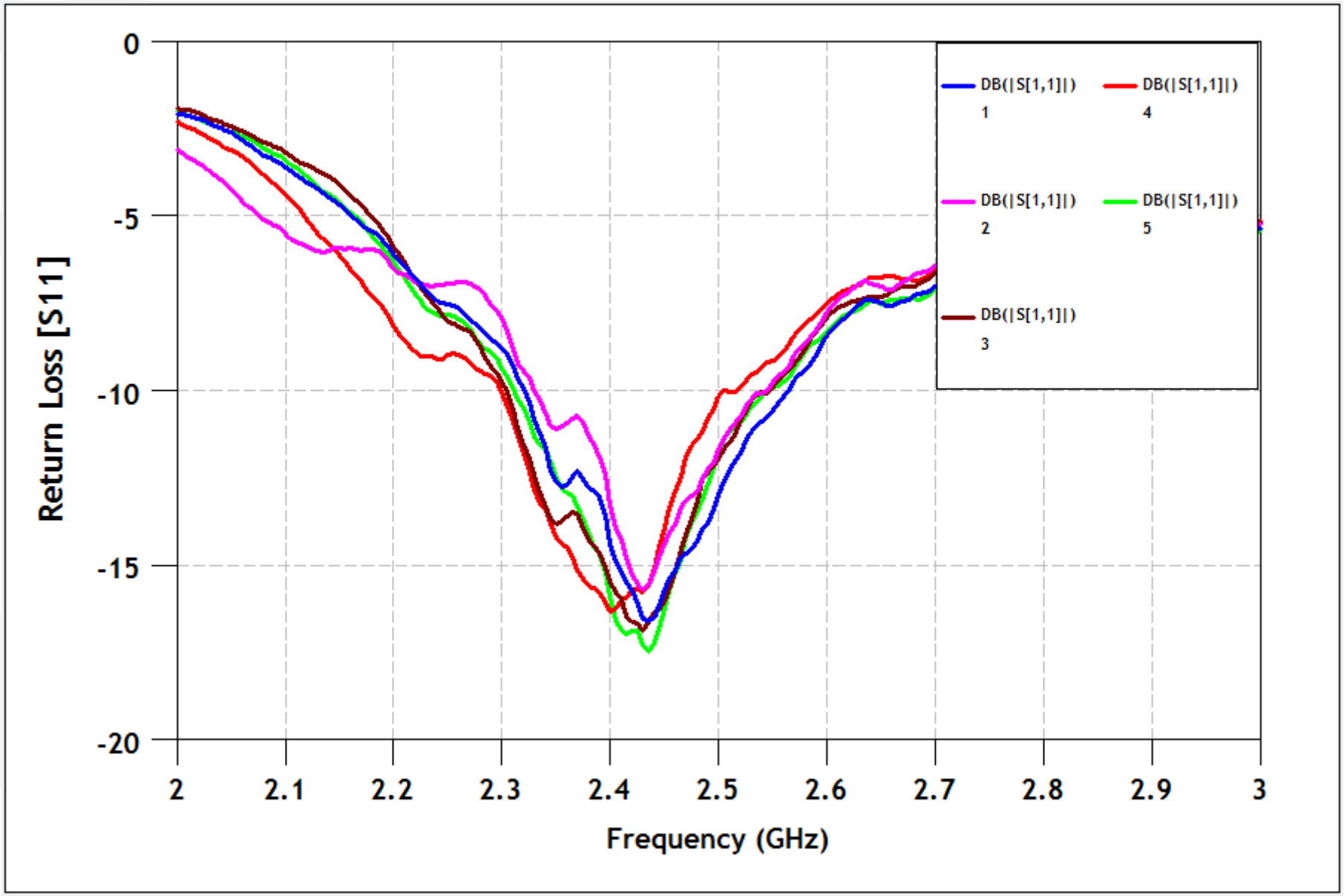
SINBON Design (QX-008-55 samples 1-5)



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2.2 3D Gain table

Target antenna			
Freq.	**Gain (dBi)**		Efficiency (%)
MHz	Peak Gain(dBi)	Average Gain(dBi)	
2400	2.3	-0.7	84.2
2410	2.3	-0.7	84.8
2420	2.3	-0.7	86.0
2430	2.2	-0.7	85.7
2440	2.1	-0.6	86.5
2450	2.1	-0.7	85.9
2460	2.1	-0.7	85.3
2470	2.0	-0.7	84.9
2480	2.0	-0.7	84.9
2490	2.0	-0.7	85.2
2500	2.0	-0.7	84.9

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Freq.	**Gain (dBi)**		Efficiency (%)
MHz	Peak Gain(dBi)	Average Gain(dBi)	
2400	2.8	-1.5	70.3
2410	2.7	-1.5	70.3
2420	2.9	-1.4	71.6
2430	2.9	-1.4	72.7
2440	2.9	-1.4	71.9
2450	2.9	-1.4	71.8
2460	2.9	-1.5	71.1
2470	2.8	-1.5	71.3
2480	2.9	-1.5	71.5
2490	2.9	-1.5	70.3
2500	2.8	-1.5	70.2

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Freq.	**Gain (dBi)**		Efficiency (%)
MHz	Peak Gain(dBi)	Average Gain(dBi)	
2400	2.9	-1.5	70.5
2410	2.8	-1.5	70.6
2420	3.0	-1.4	71.7
2430	3.0	-1.4	72.4
2440	3.0	-1.4	72.3
2450	3.0	-1.4	72.5
2460	2.9	-1.4	72.3
2470	2.9	-1.4	72.2
2480	2.9	-1.4	72.3
2490	2.9	-1.5	70.8
2500	2.8	-1.5	70.4

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Freq.	**Gain (dBi)**		Efficiency (%)
MHz	Peak Gain(dBi)	Average Gain(dBi)	
2400	2.6	-1.4	72.4
2410	2.5	-1.5	71.0
2420	2.6	-1.4	73.2
2430	2.7	-1.3	73.9
2440	2.6	-1.4	73.0
2450	2.7	-1.4	72.7
2460	2.5	-1.4	71.8
2470	2.5	-1.5	71.5
2480	2.5	-1.5	71.6
2490	2.4	-1.5	70.2
2500	2.4	-1.5	70.2

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Freq.	**Gain (dBi)**		Efficiency (%)
MHz	Peak Gain(dBi)	Average Gain(dBi)	
2400	3.1	-1.5	70.6
2410	3.0	-1.5	70.8
2420	3.1	-1.4	71.5
2430	3.2	-1.4	72.2
2440	3.1	-1.4	72.3
2450	3.1	-1.4	72.4
2460	3.0	-1.4	72.4
2470	3.0	-1.4	72.0
2480	3.0	-1.4	72.1
2490	2.9	-1.5	70.9
2500	2.9	-1.5	70.5

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Freq.	**Gain (dBi)**		Efficiency (%)
MHz	Peak Gain(dBi)	Average Gain(dBi)	
2400	2.8	-1.5	70.6
2410	2.7	-1.5	70.7
2420	2.8	-1.5	71.5
2430	2.9	-1.4	72.3
2440	2.8	-1.5	71.5
2450	2.8	-1.5	71.3
2460	2.7	-1.5	70.5
2470	2.7	-1.5	70.3
2480	2.7	-1.5	70.5
2490	2.5	-1.5	70.4
2500	2.5	-1.5	70.2

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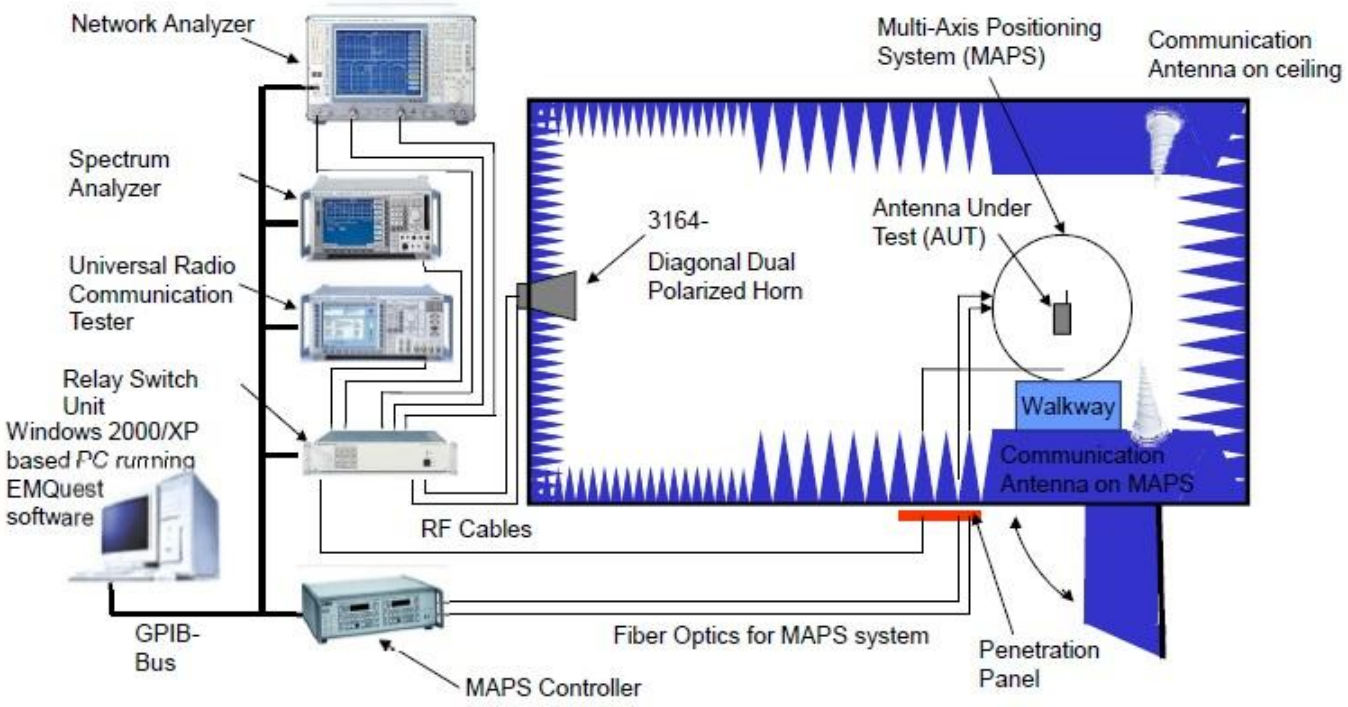
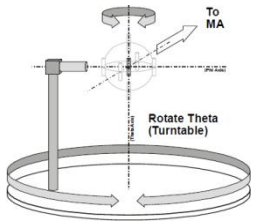
ETS Chamber - AMS-8500

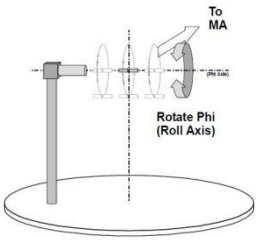
Chamber Size: 7.32m x 3.66m x 3.66m
Test Distance: 4.9 meter
Frequency: 700MHz – 6GHz

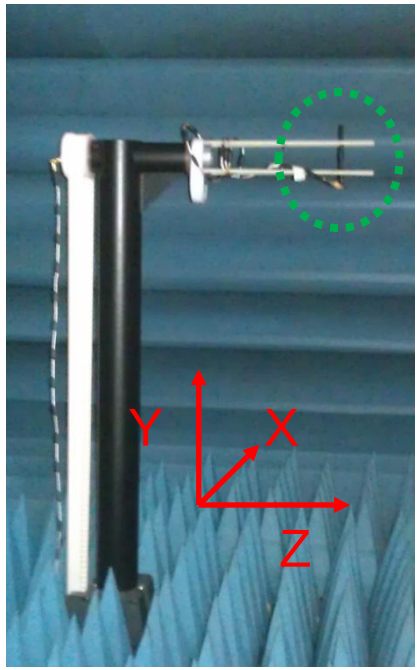


Theta - Axis



Phi - Axis





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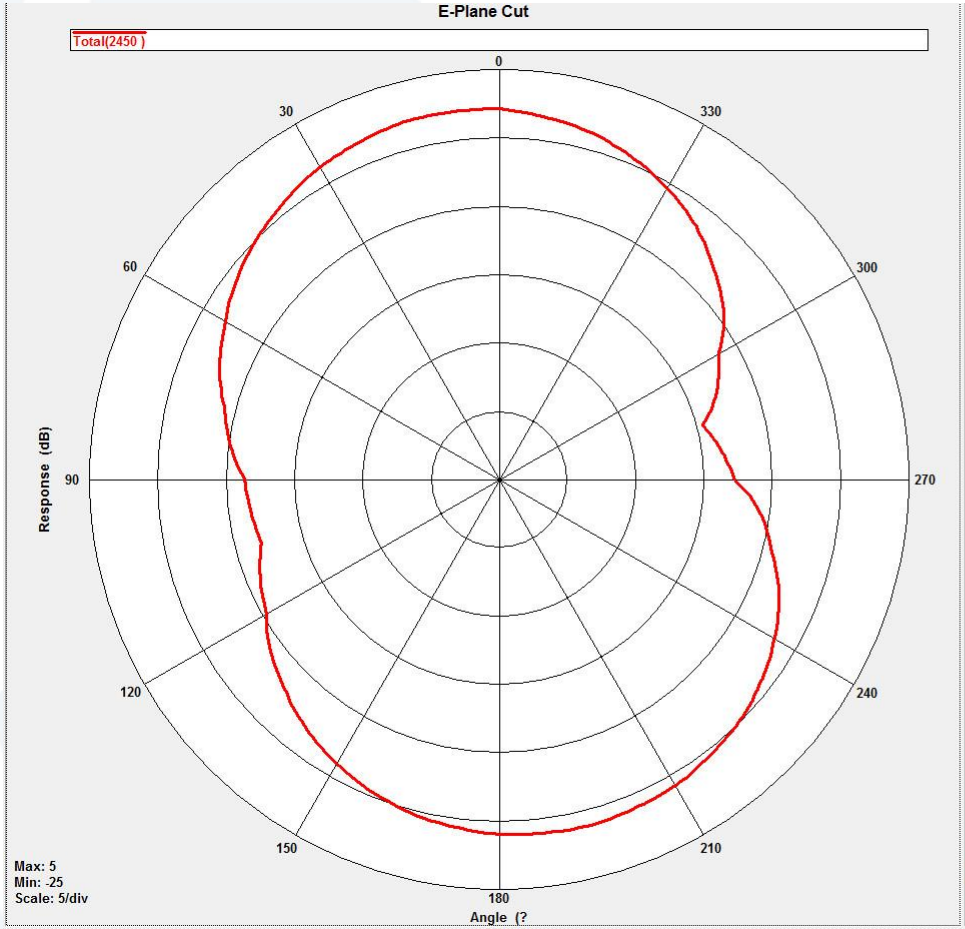
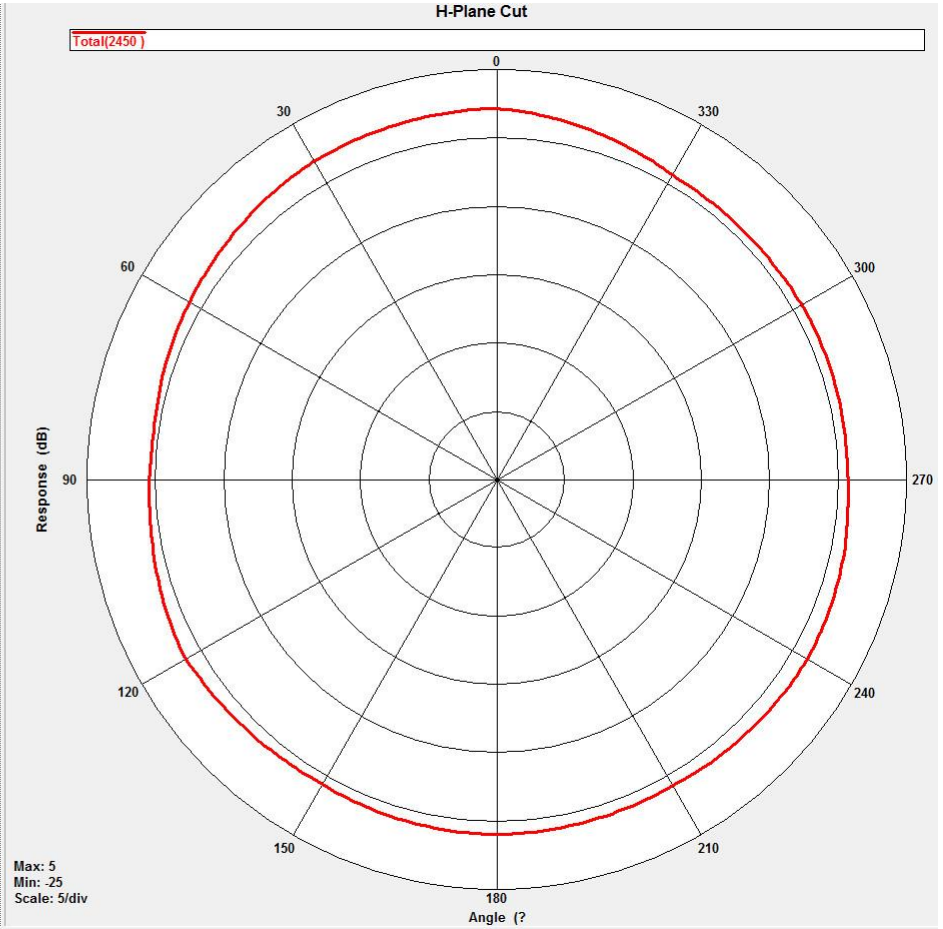
2.3 2D Radiation Pattern

Target antenna





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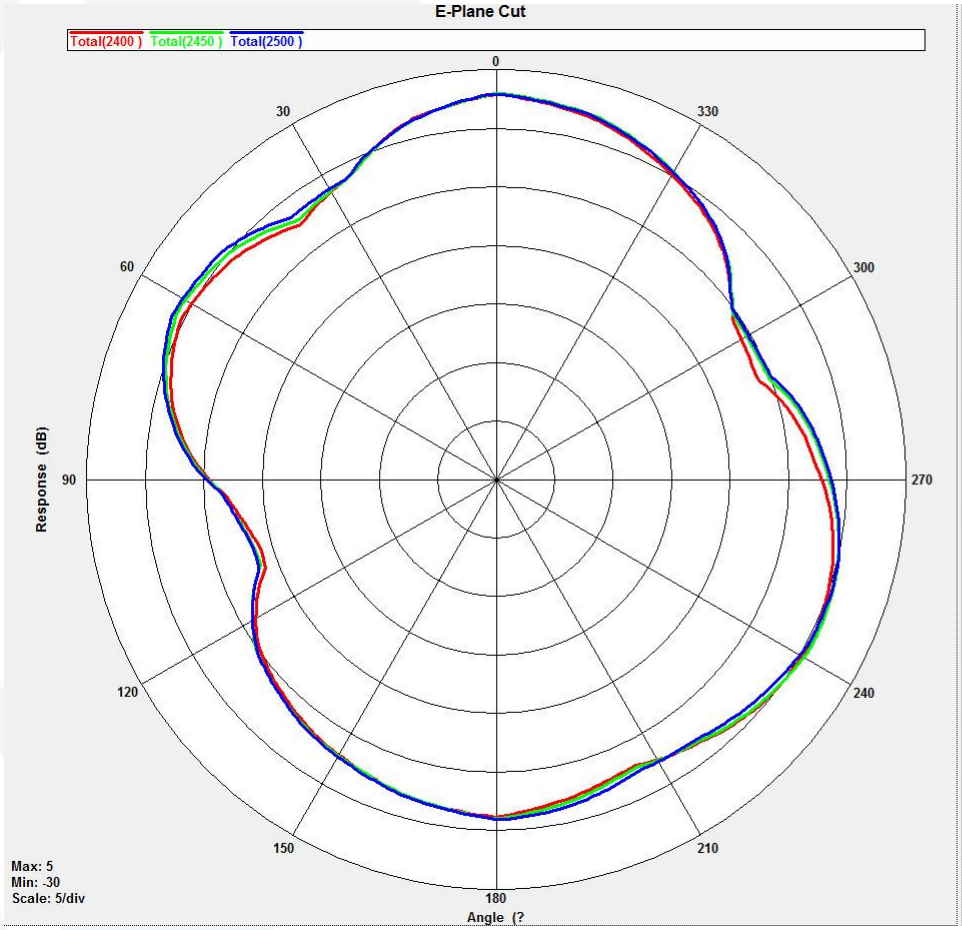
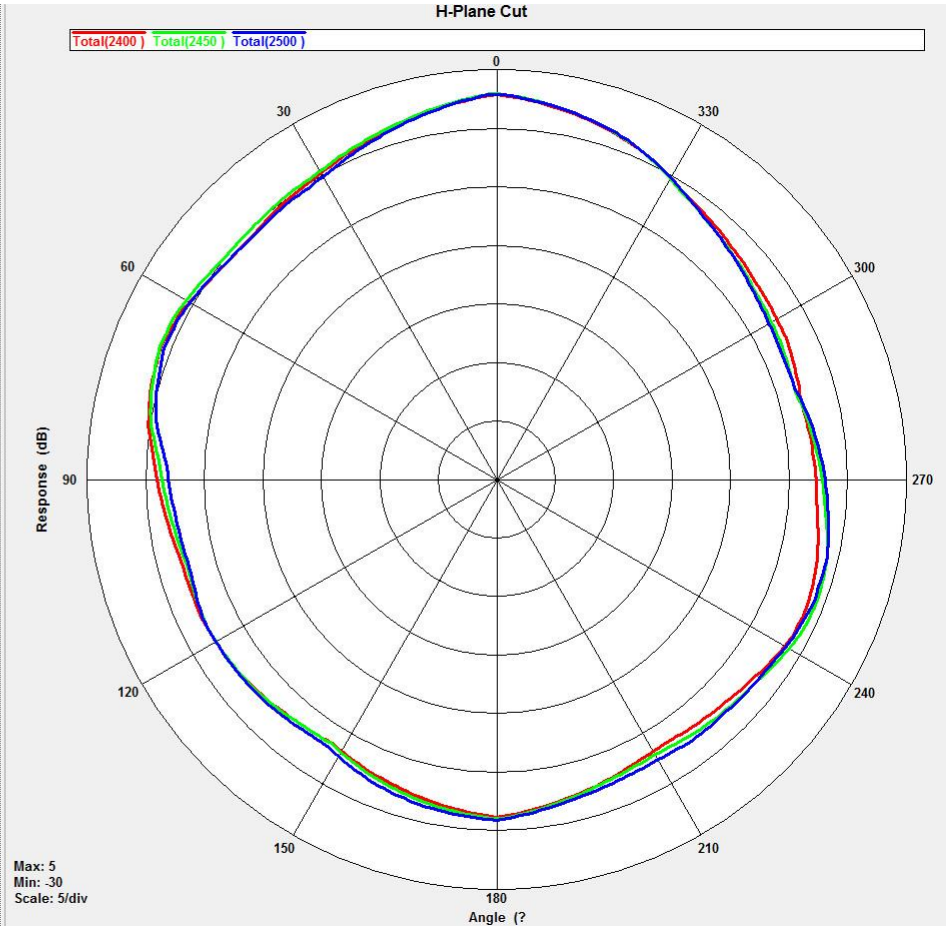
QX-008-55 sample 1





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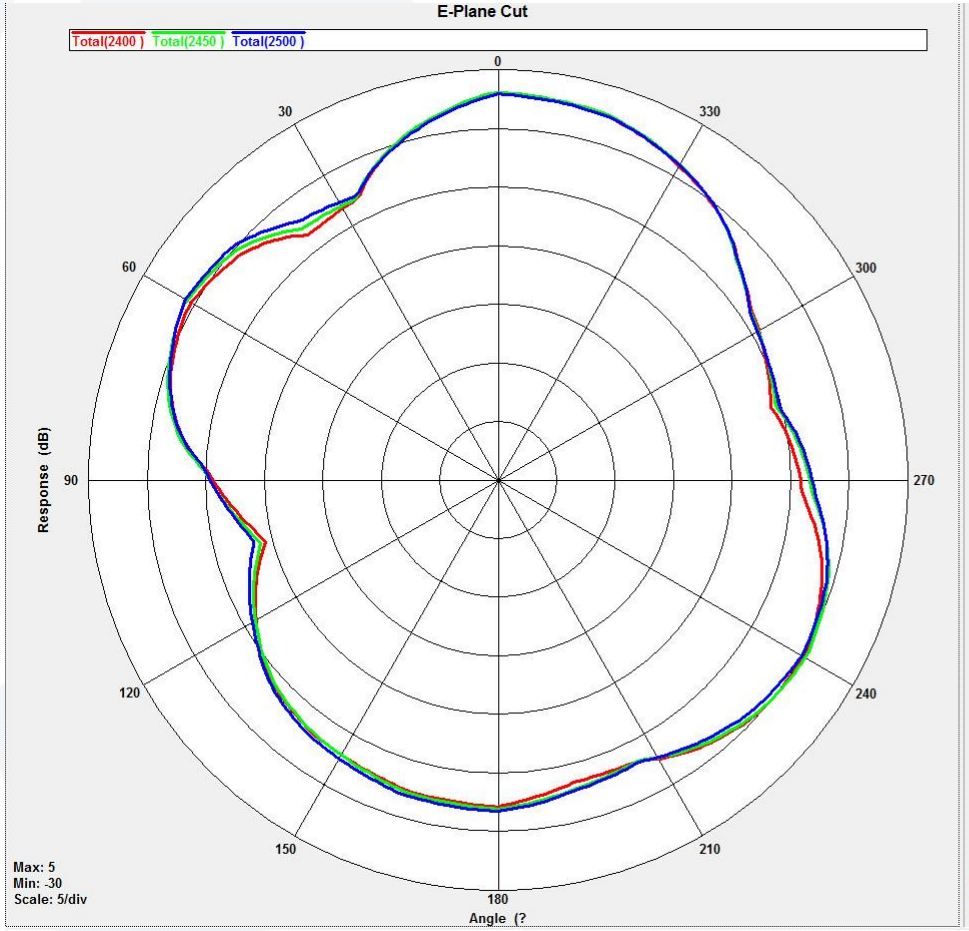
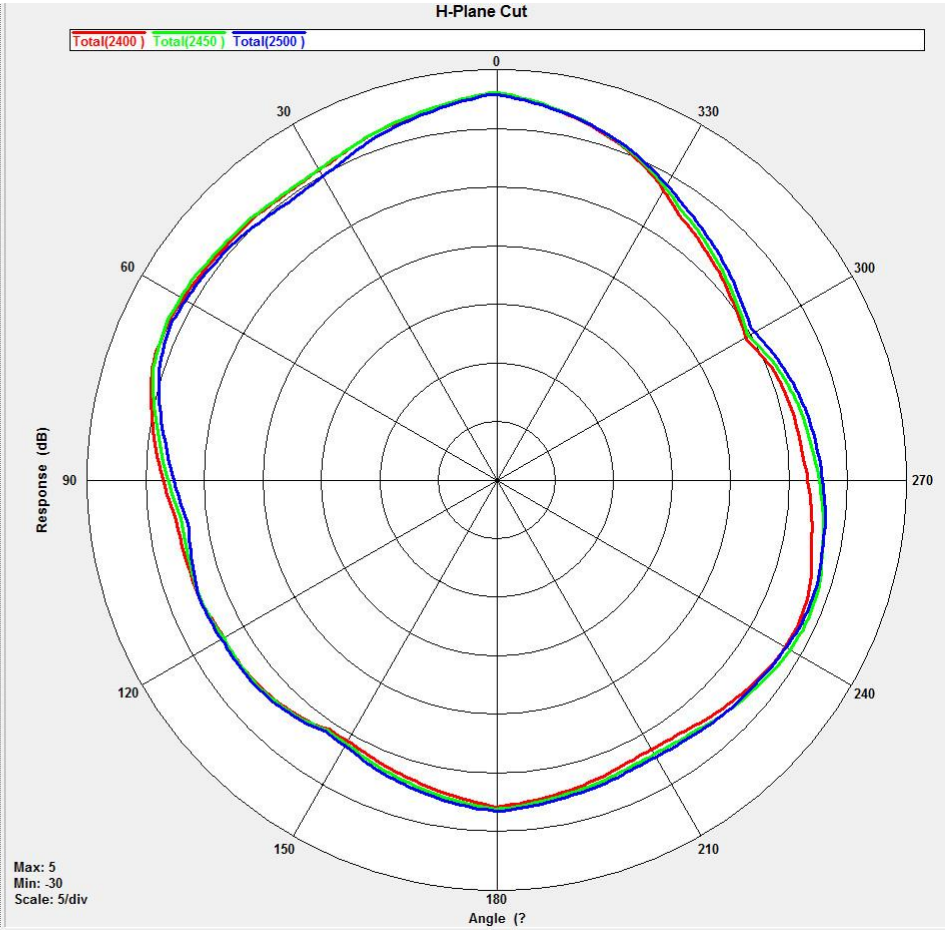
QX-008-55 sample 2





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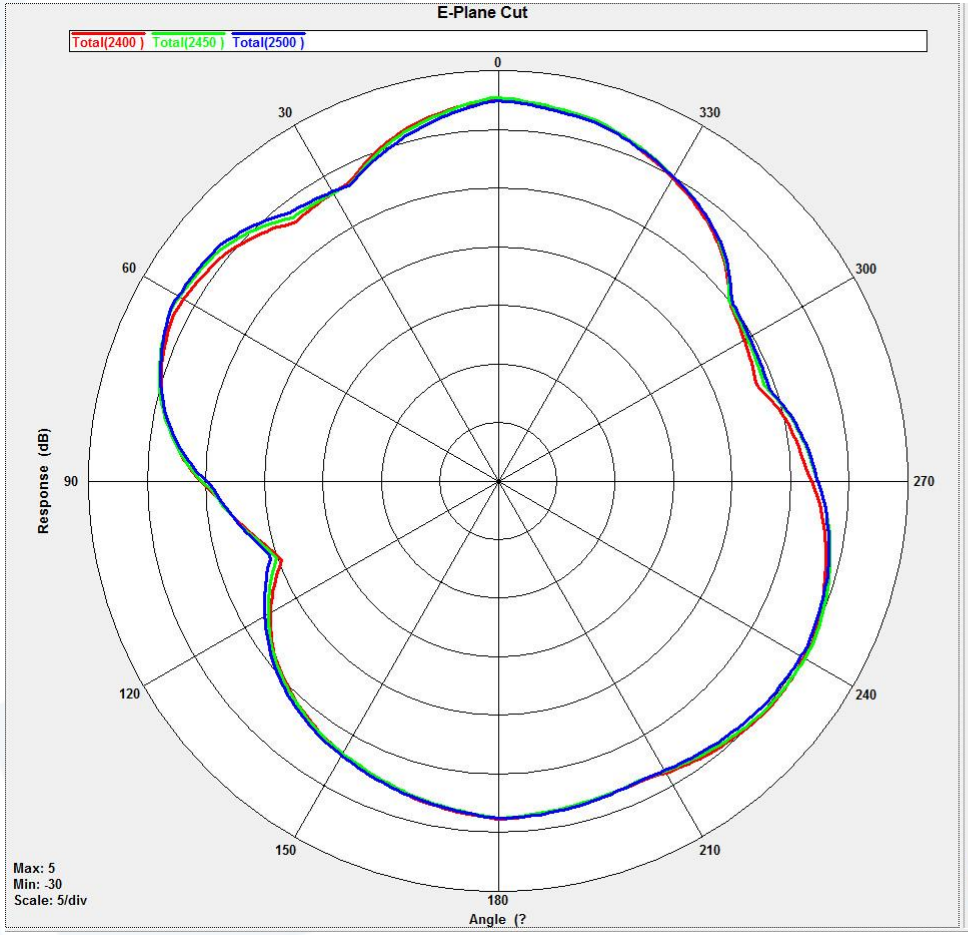
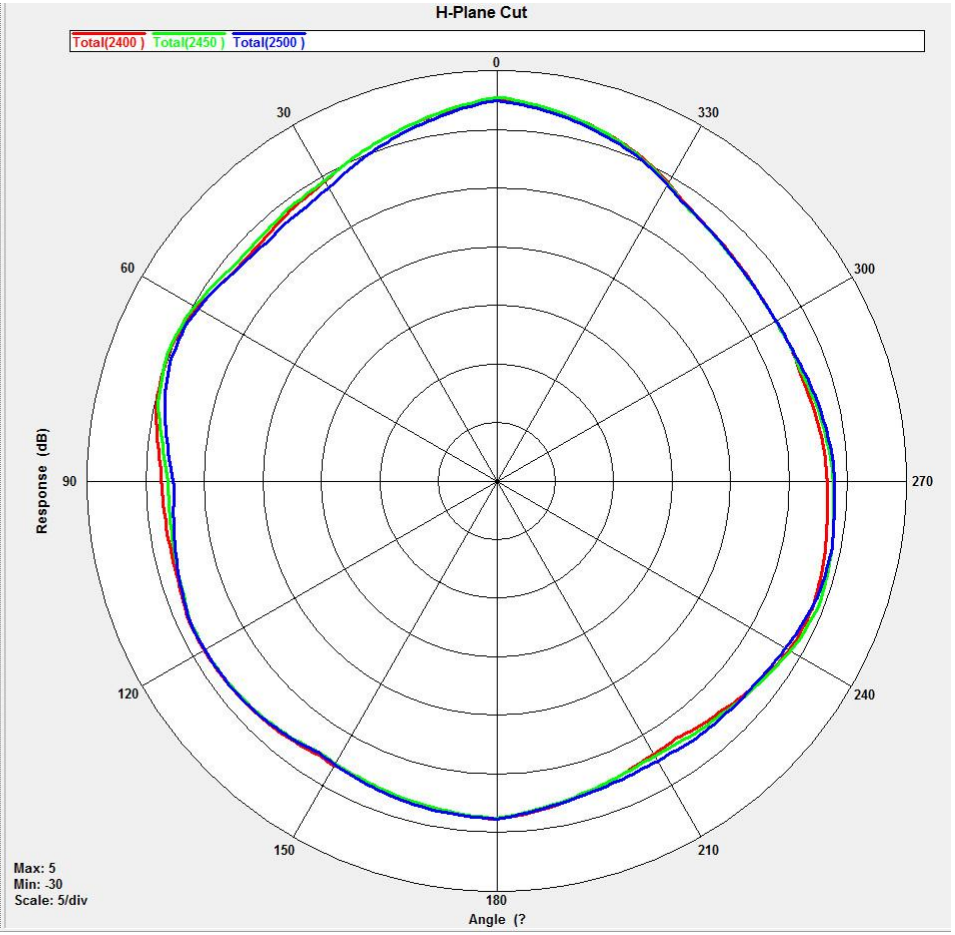
QX-008-55 sample 3





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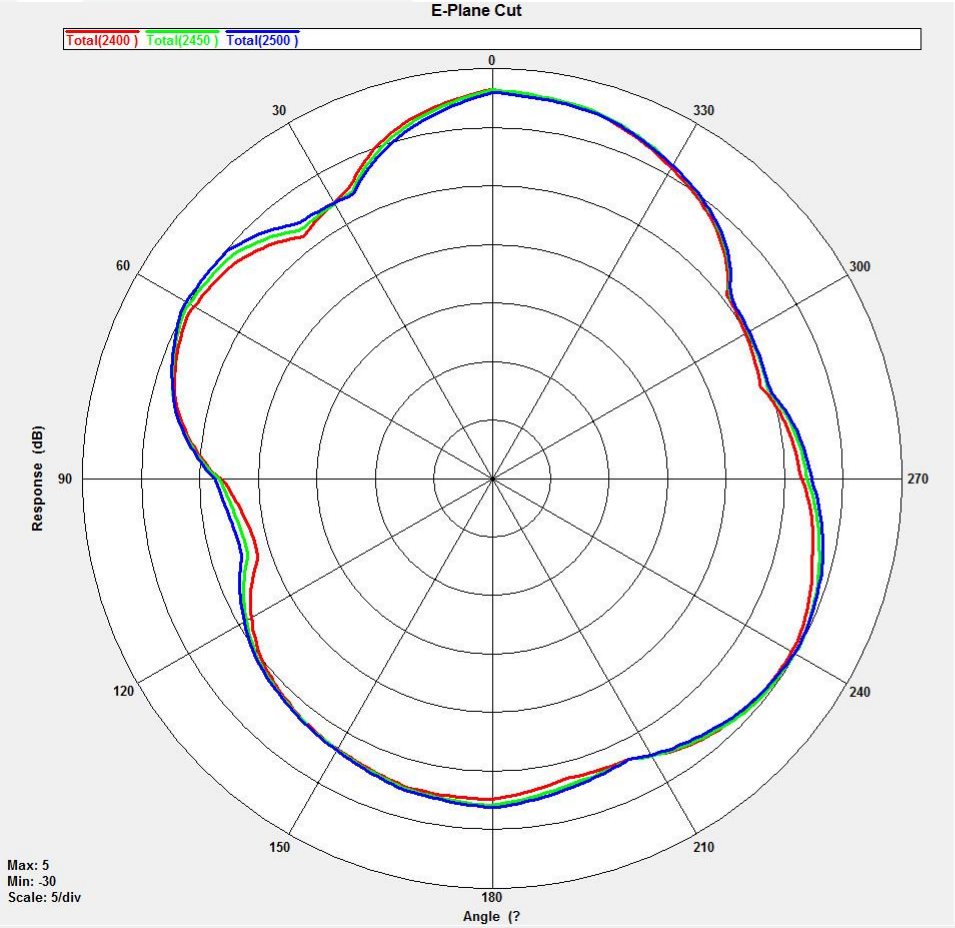
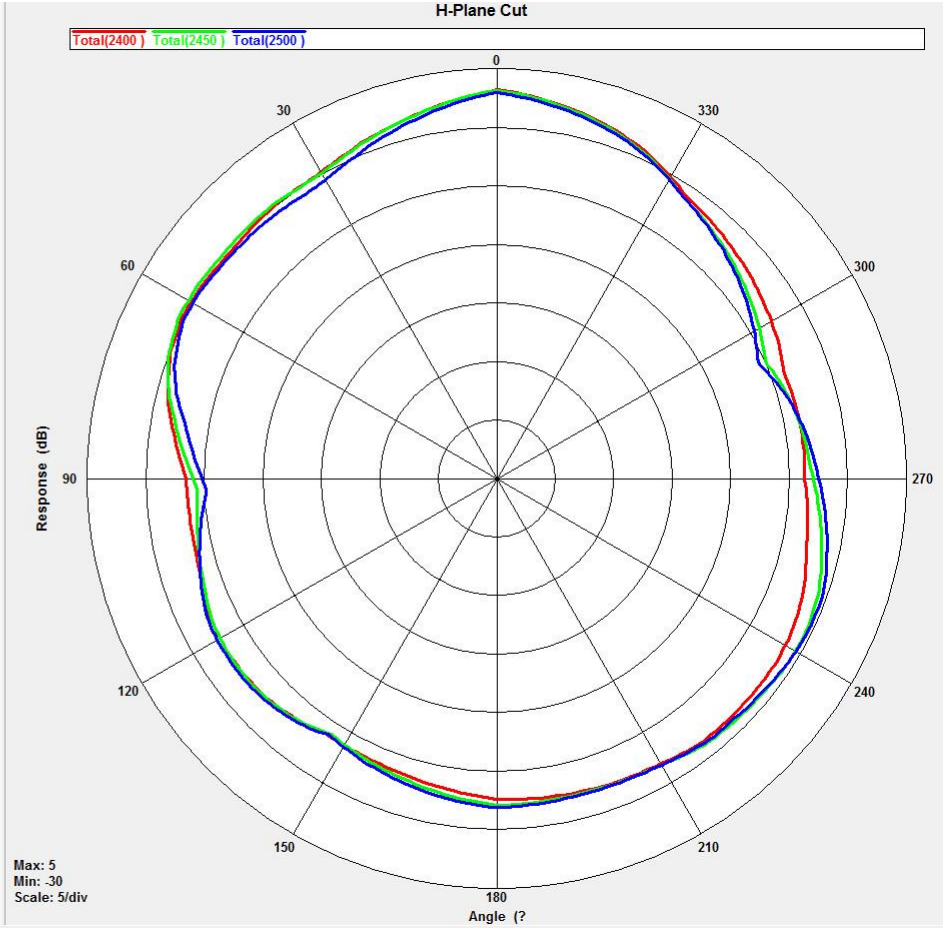
QX-008-55 sample 4





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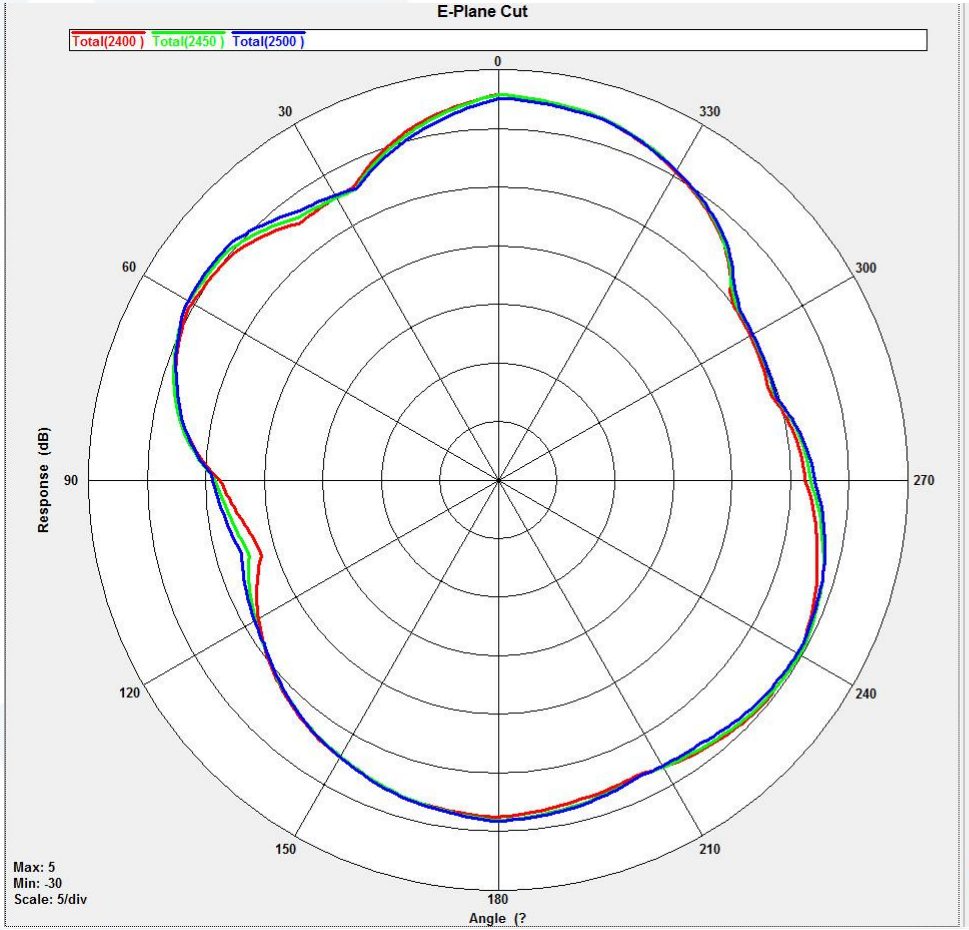
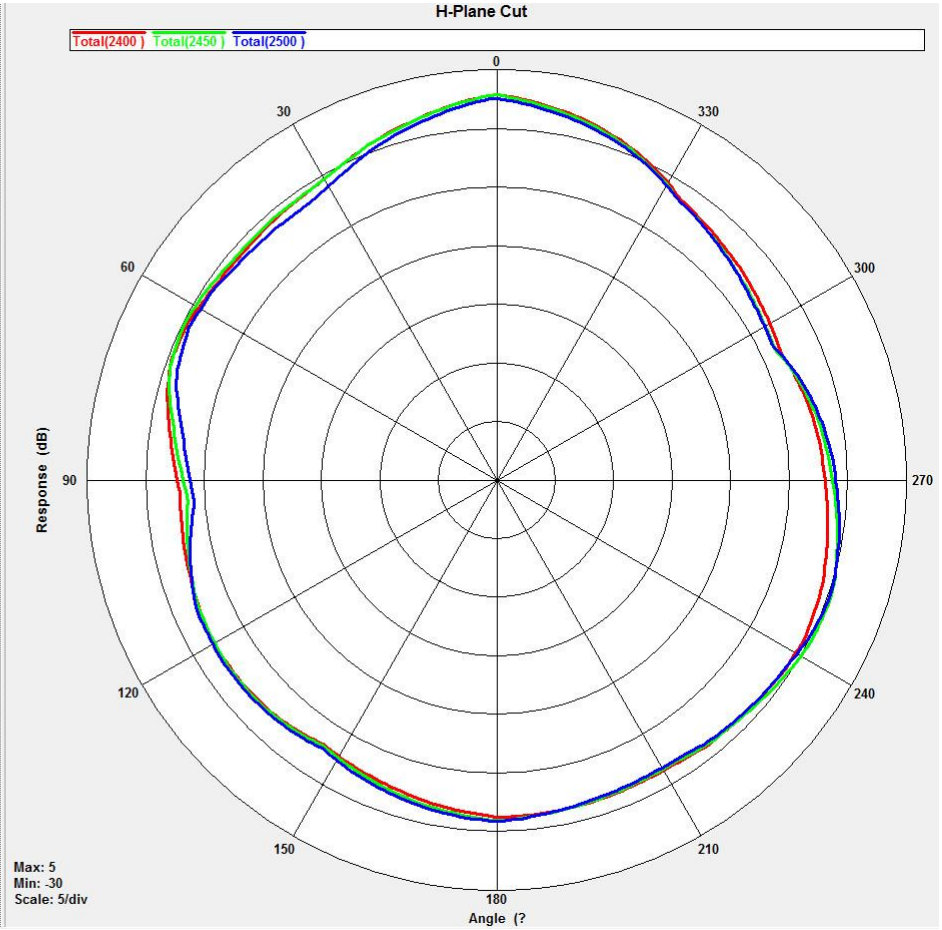
QX-008-55 sample 5





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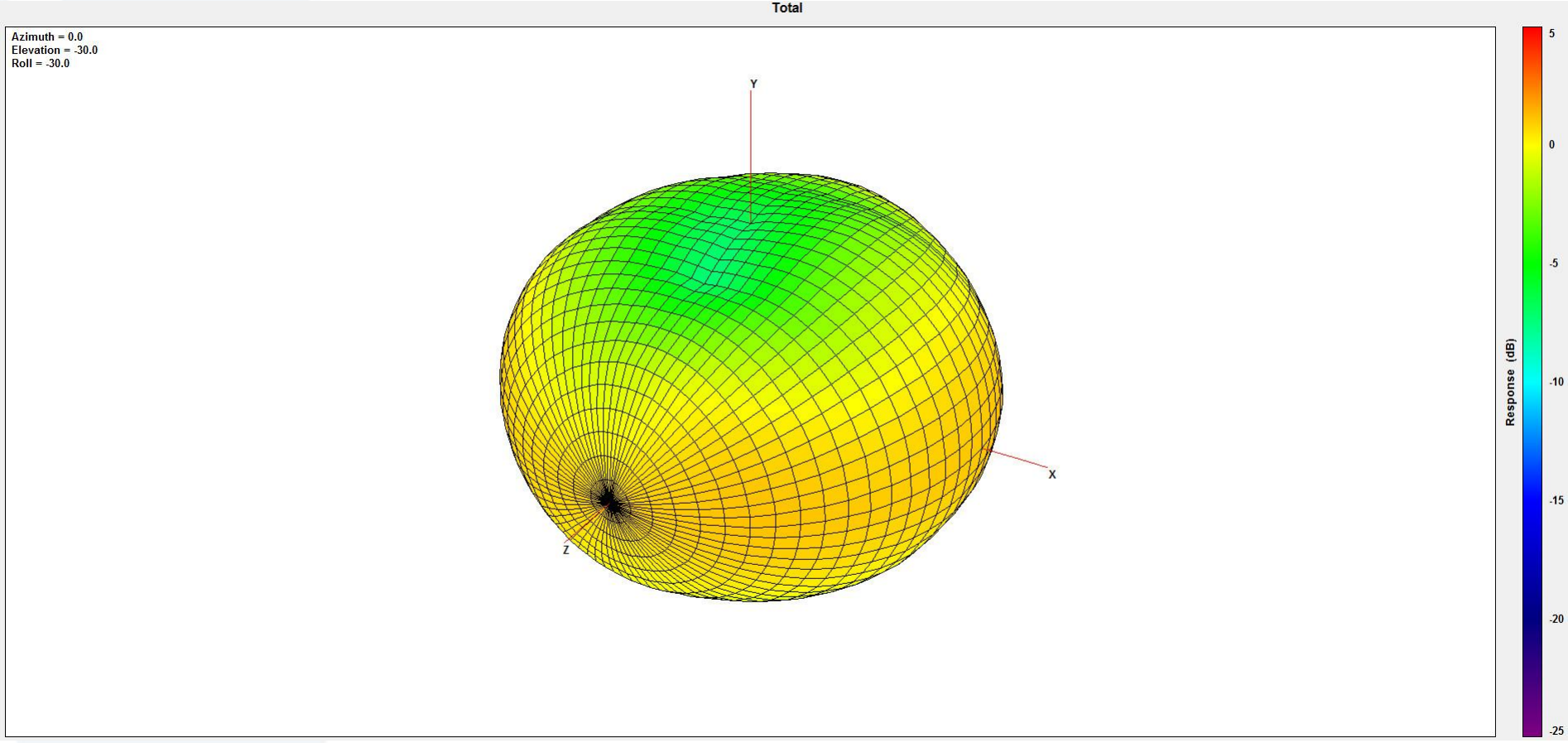
2.4 3D Radiation Pattern

Target antenna



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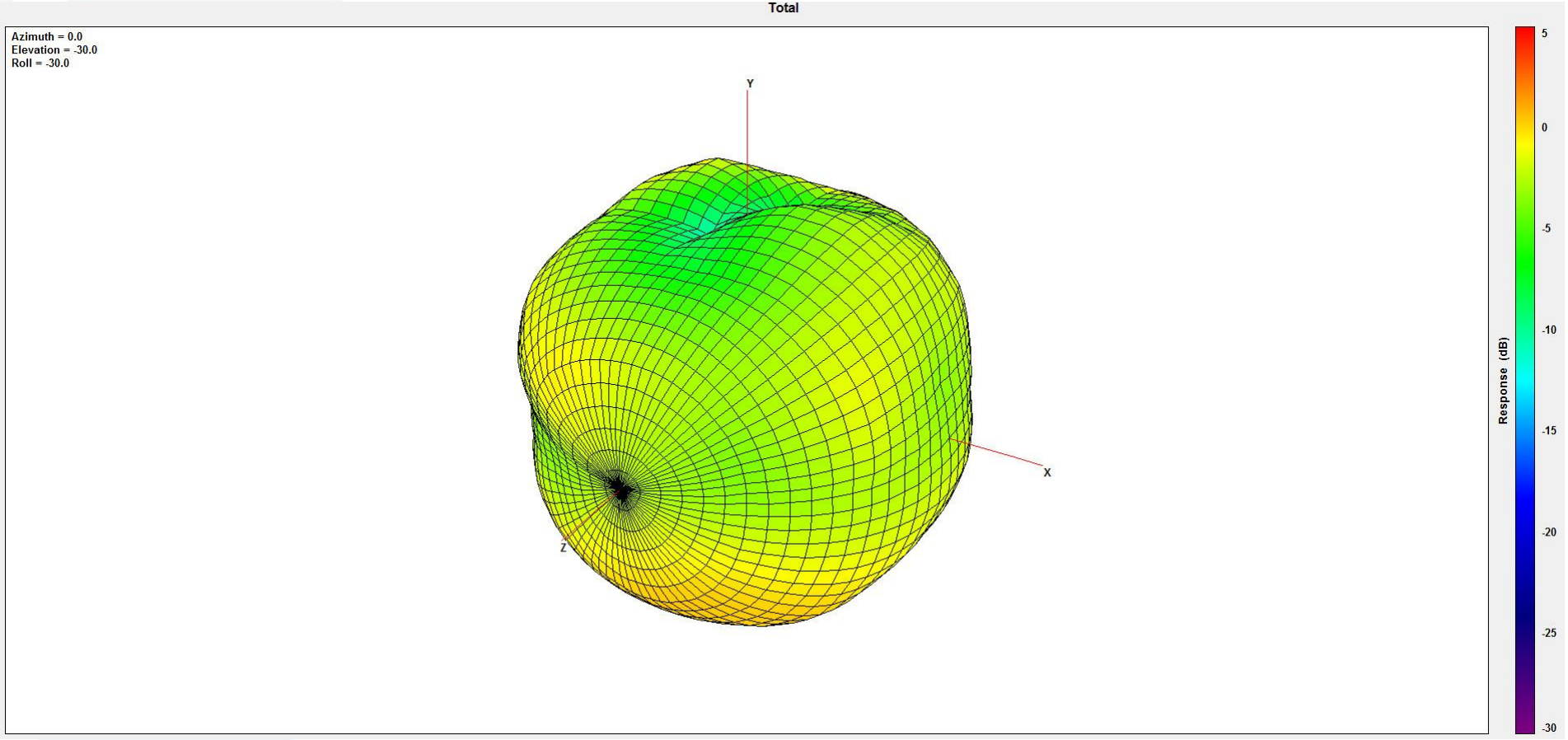
QX-008-55 sample 1



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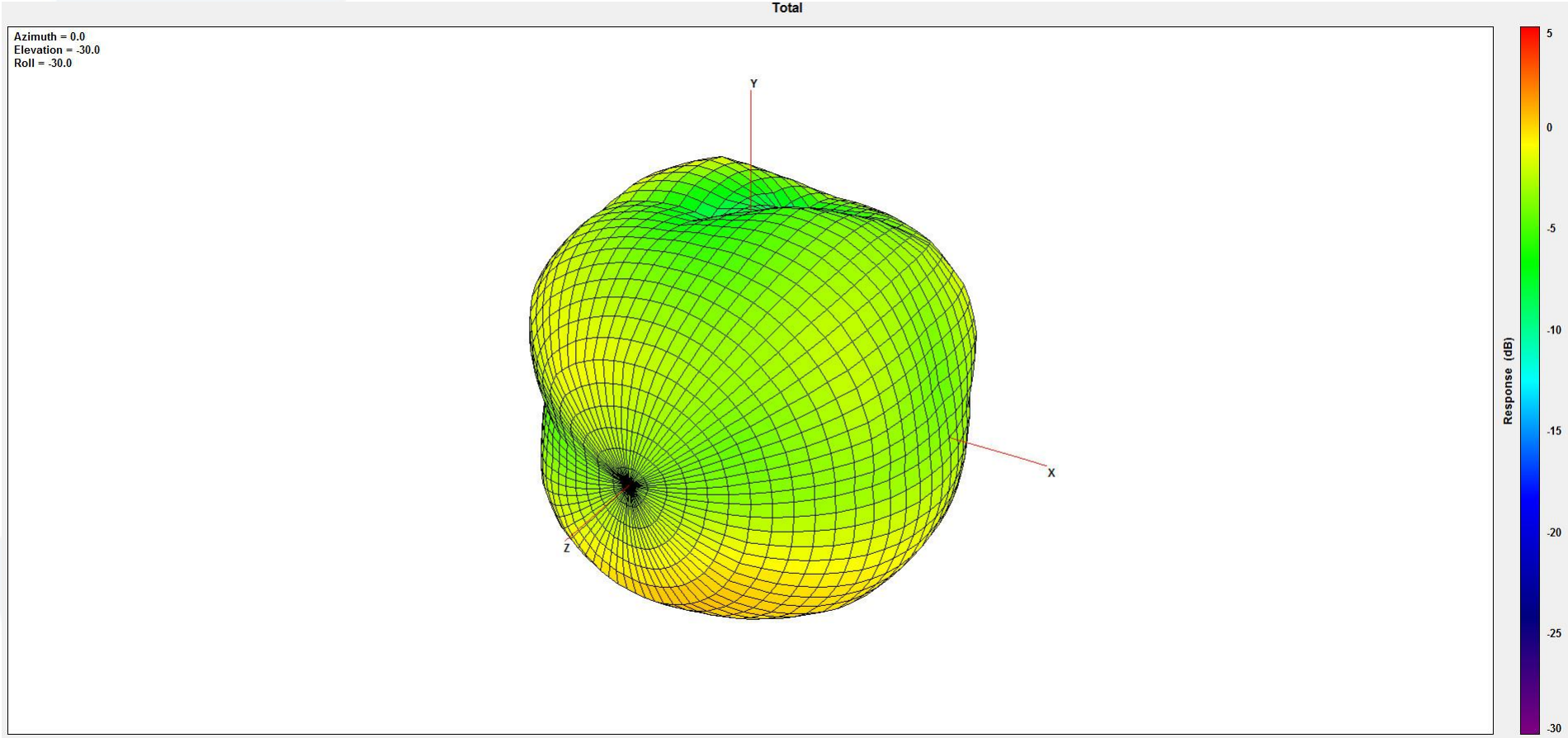
QX-008-55 sample 2



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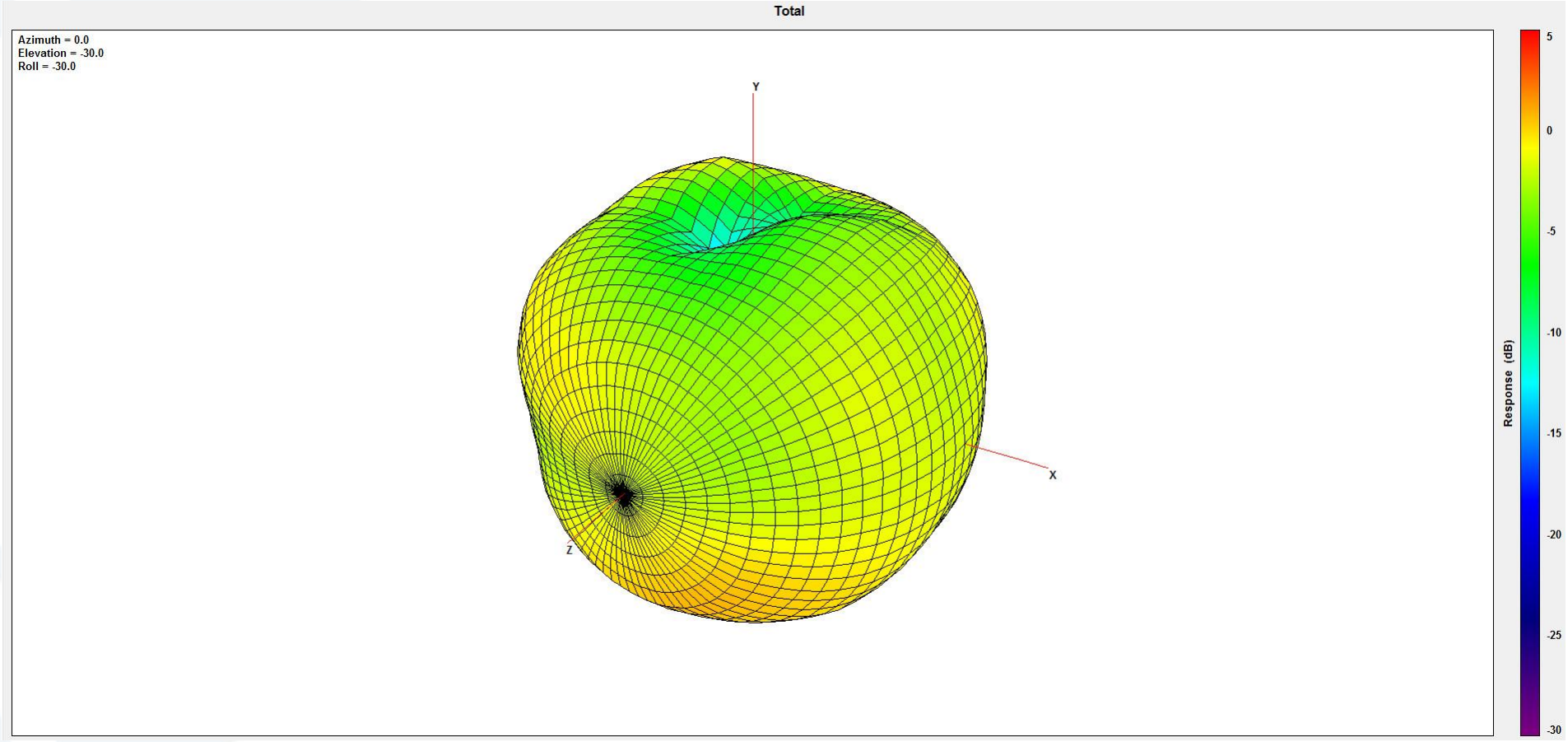
QX-008-55 sample 3



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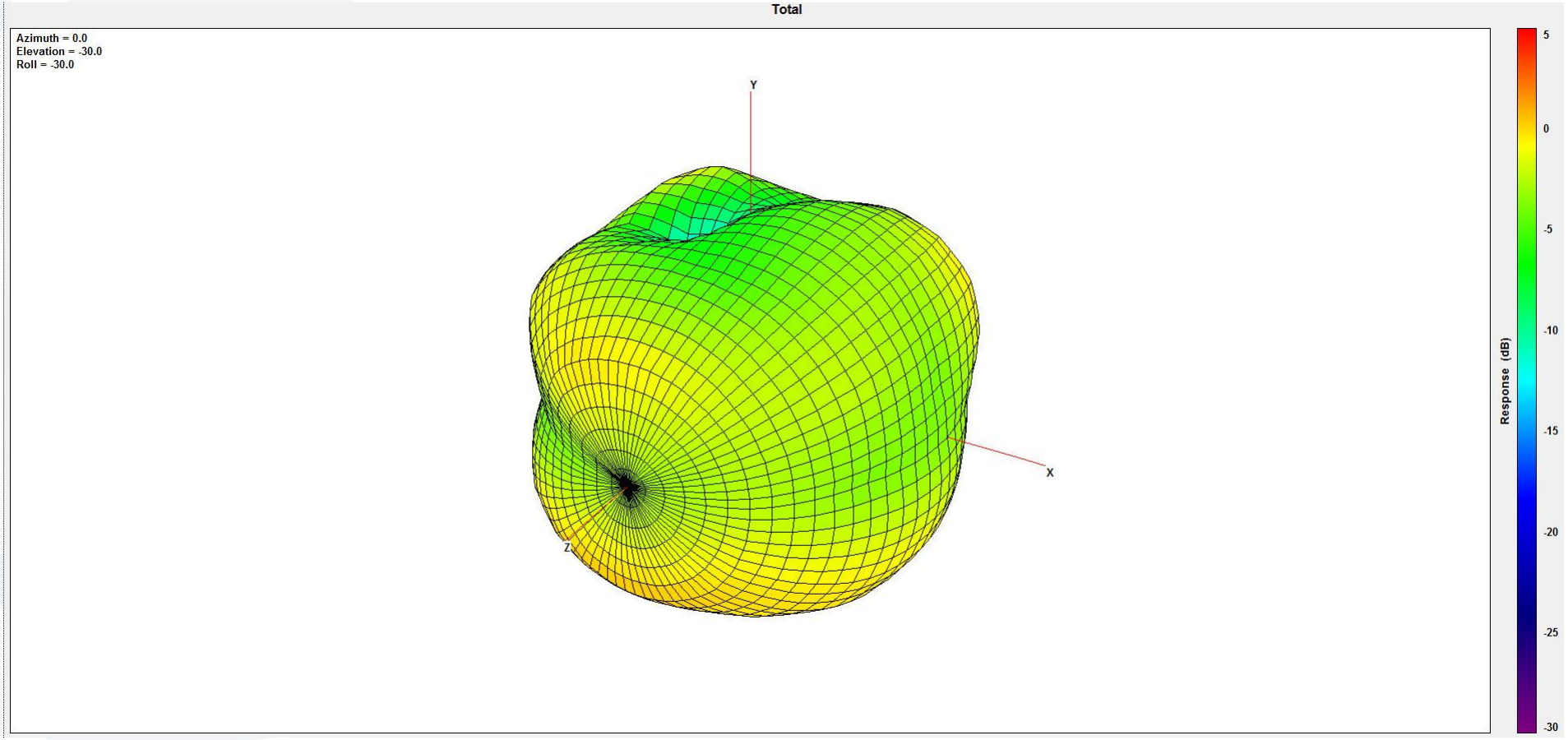
QX-008-55 sample 4



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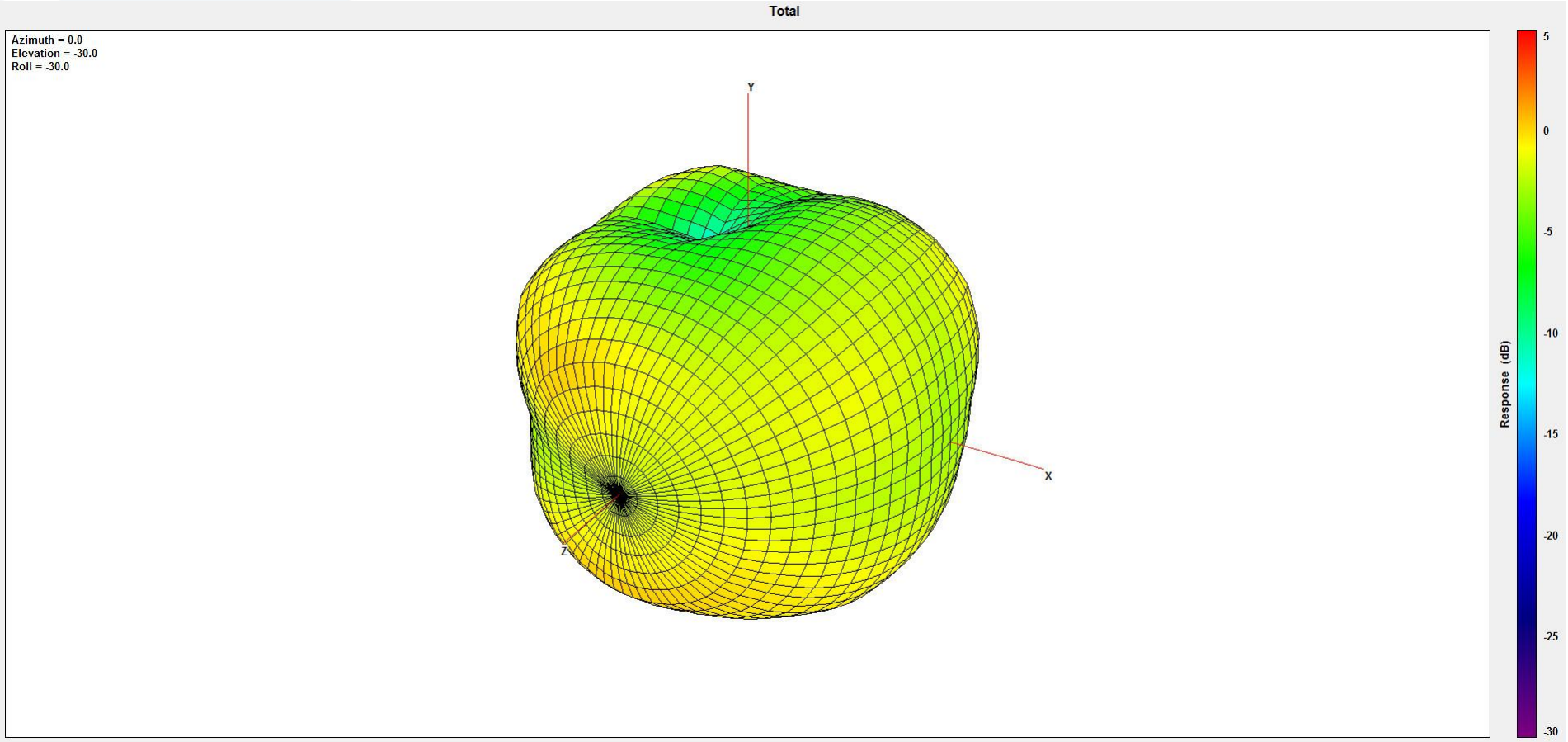
QX-008-55 sample 5



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