TITLE

MOLEX ISM/DSRC MIMO ANTENNA

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PENDING APPROVAL

MOLEX ISM/DSRC MIMO ANTENNA

1.0 SCOPE

This specification describes the antenna application and surrounding. The information in this document is for reference and benchmark purposes only. The user is responsible for validating antenna RF performance based on the user's actual implementation.

Antenna illustrations in this document are generic representations. They are not intended to be an image of any antenna listed in the scope.

2.0 PRODUCT DESCRIPTION

2.1 PRODUCT NAME AND SERIES NUMBER (S)

Product name: Molex ISM/DSRC MIMO Antenna

Series Number: 2140483000

2.2 DESCRIPTION

214048 is ISM/DSRC 2in1 external antenna with adjustable cable and connector, This product is version of adhesive mounting.

2.3 PRODUCT STRUCTURE INFORMATION

Please refer to PS-2140483000 for full information.

2140483000 Molex ISM/DSRC MIMO Antenna 3D VIEW

3.0 APPLICABLE DOCUMENTS

DOCUMENT	NUMBER	DESCRIPTION
Sale Drawing (SD)	SD-2140483000	Mechanical Dimension of the product
Product Specification (PS)	PS-2140483000	Product Specification
Packing Drawing (PK)	PK-2140483000	Product packaging specifications

4.0 ANTENNA PERFORMANCE

4.1 RF TEST CONDITIONS

All measurements are done for antenna with VNA Agilent 5071C and Over-The-Air (OTA) chamber.

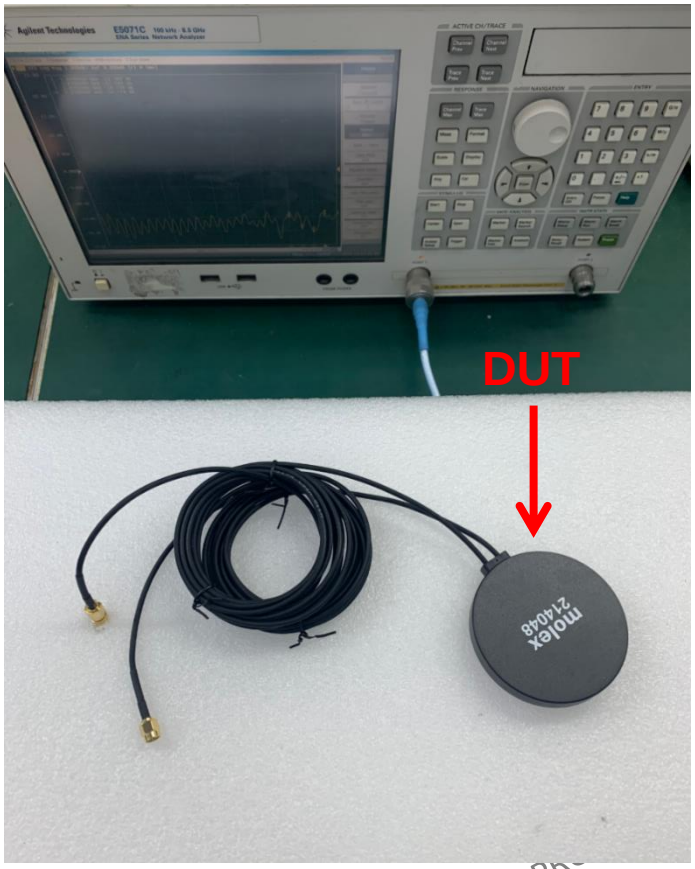

FIGURE4.1.1 ANTENNA TESTED WITH VNA E5071C IN FREE SPACE

FIGURE4.1.2 ANTENNA TESTED IN OTA CHAMBER IN FREE SPACE

4.2 ANTENNA PERFORMANCE

Description	Equipment	Requirement Port 1	Requirement Port 2
Frequency Range	VNA E5071C	5800-6000MHz	5800-6000MHz
Return Loss	VNA E5071C	<-10 dB	
Peak Gain (Max)	OTA Chamber	-1dBi	-1.8dBi
Average Total Efficiency	OTA Chamber	>10%	>10%
Polarization	OTA Chamber	PENDING APPROVAL Linear	
Input Impedance	VNA E5071C	50 ohms	

4.3 RETURN LOSS PLOT

All measurements in this document are done in free space.

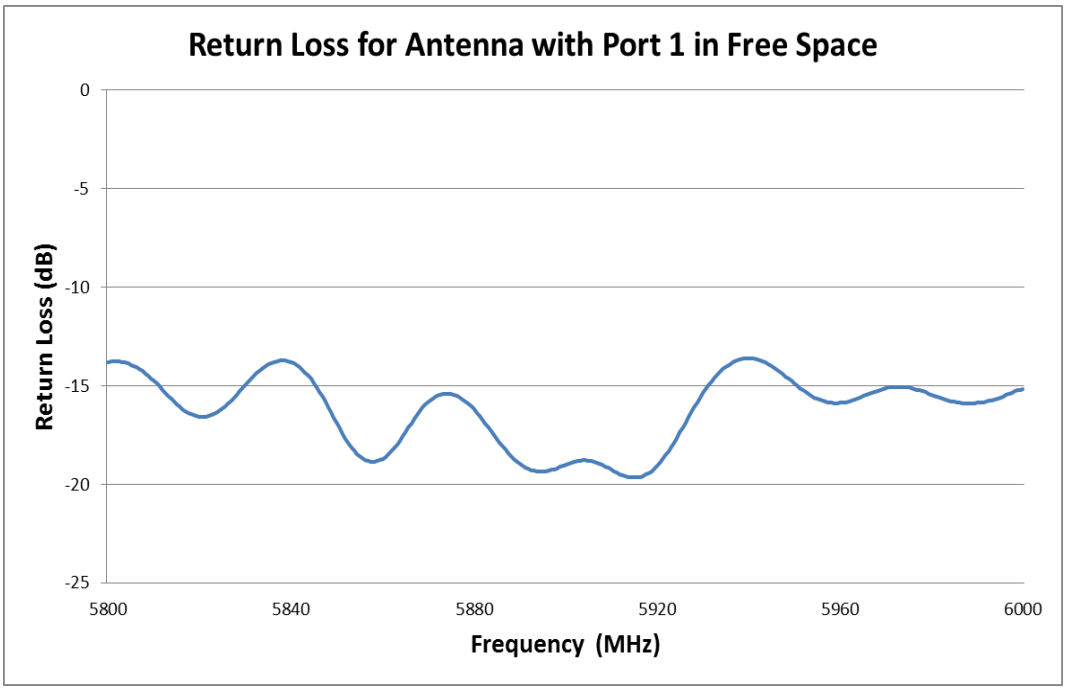

FIGURE 4.3.1 RETURN LOSS OF ANTENNA WITH PORT 1 IN FREE SPACE

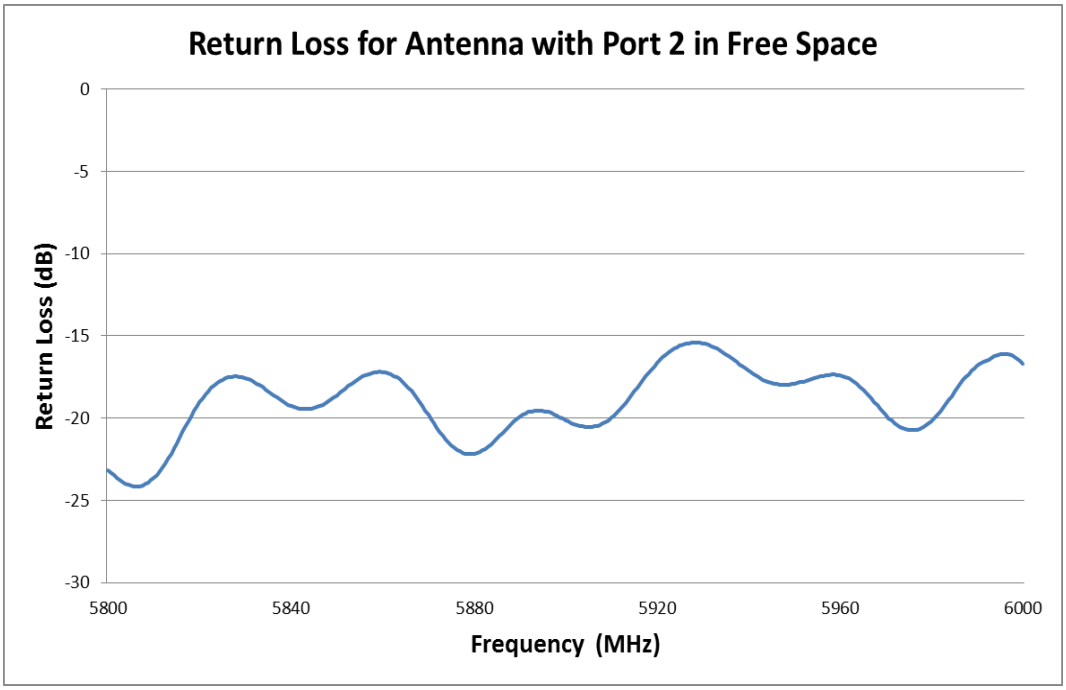

FIGURE 4.3.2 RETURN LOSS OF ANTENNA WITH PORT 2 IN FREE SPACE

4.4 EFFICIENCY PLOT

All measurements in this document are done in free space.

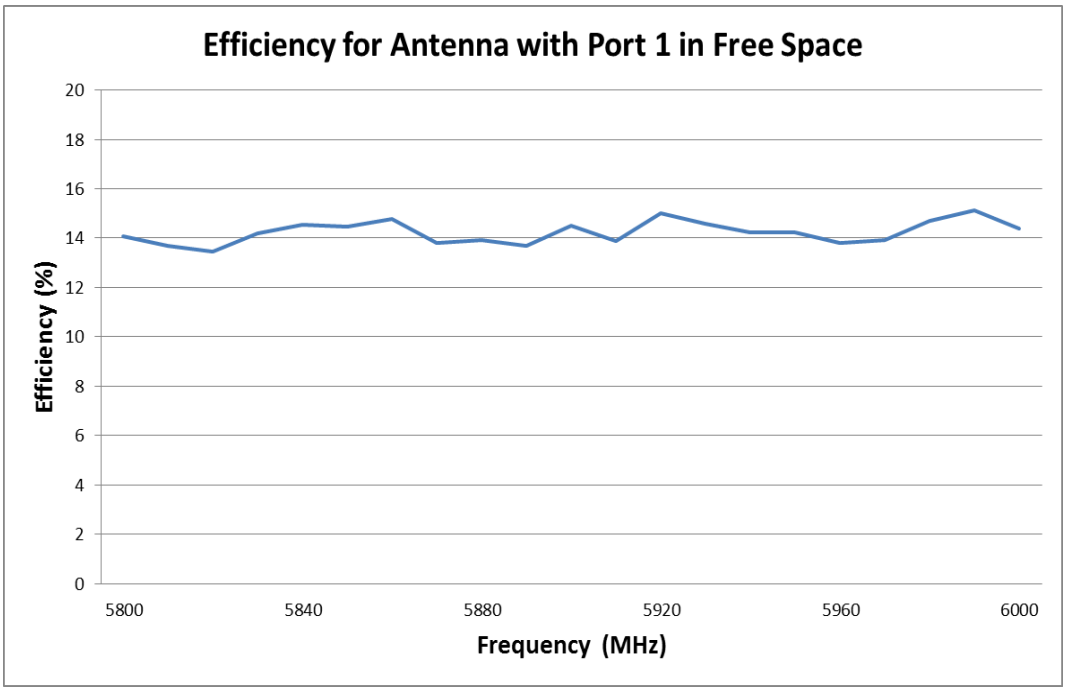

FIGURE 4.4.1 EFFICIENCY OF ANTENNA WITH PORT 1 IN FREE SPACE

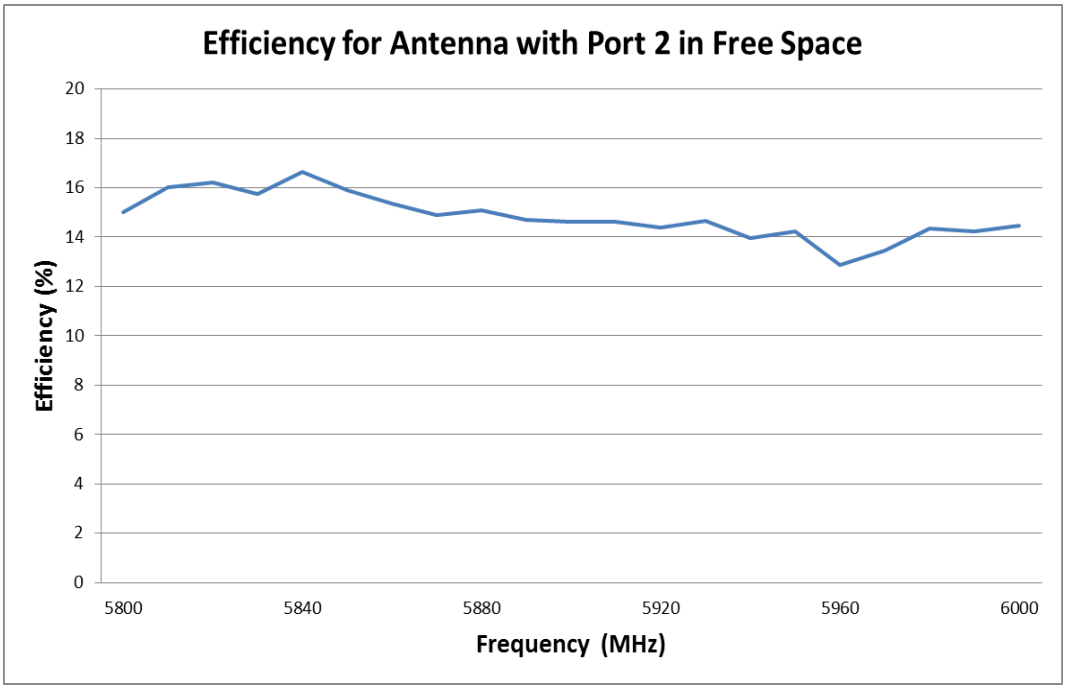

FIGURE 4.4.2 EFFICIENCY OF ANTENNA WITH PORT 2 IN FREE SPACE

4.5 PEAK GAIN PLOT

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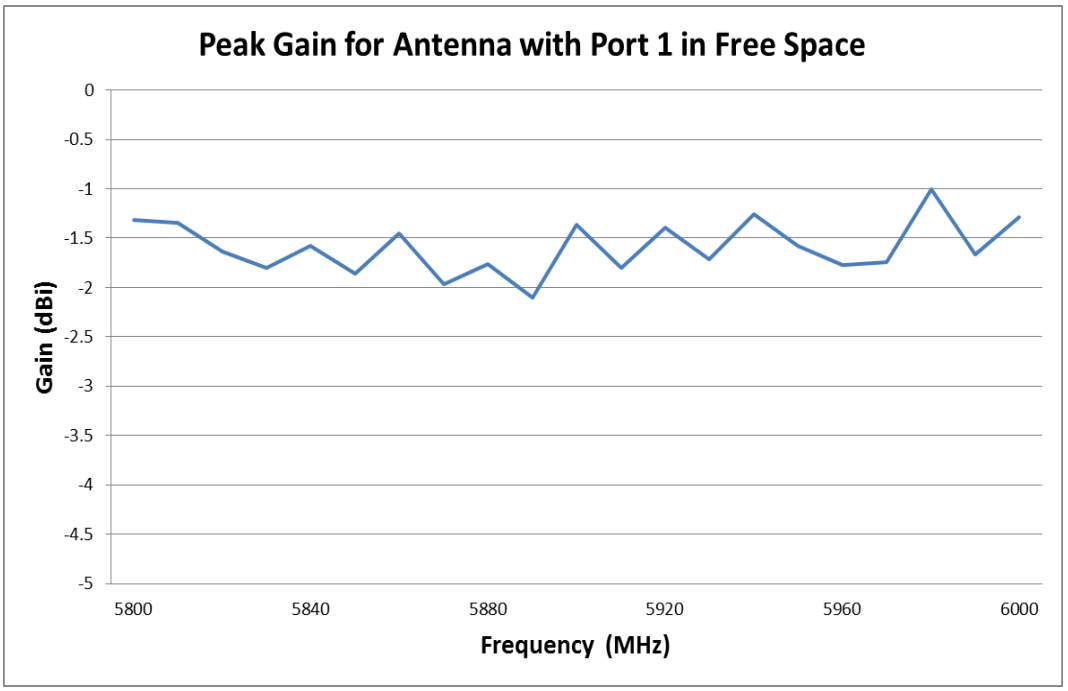

FIGURE 4.5.1 PEAK GAIN OF ANTENNA WITH PORT 1 IN FREE SPACE

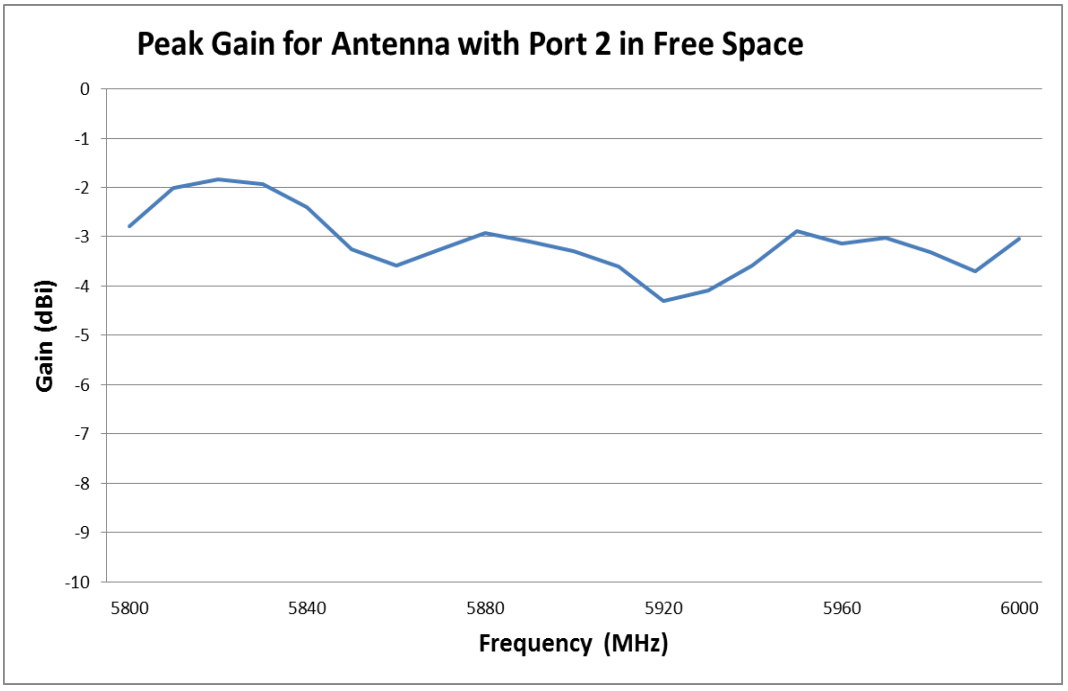

FIGURE 4.5.2 PEAK GAIN OF ANTENNA WITH PORT 2 IN FREE SPACE

4.6 RADIATION PATTERN

All measurements in this document are done in free space.

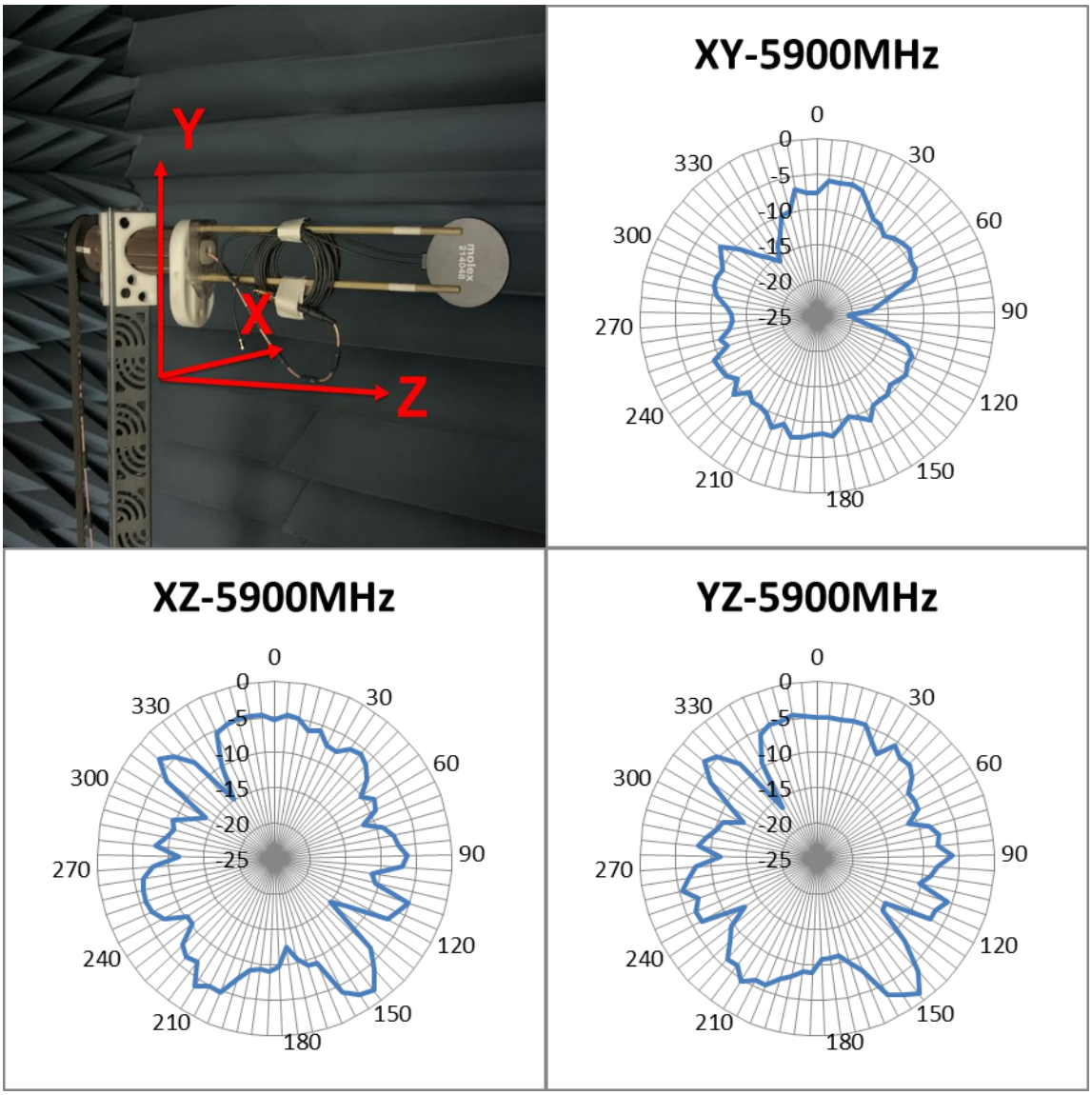

FIGURE 4.6.1 2D RADIATION PATTERN OF ANTENNA WITH PORT 1 AT 5900MHZ IN FREE SPACE

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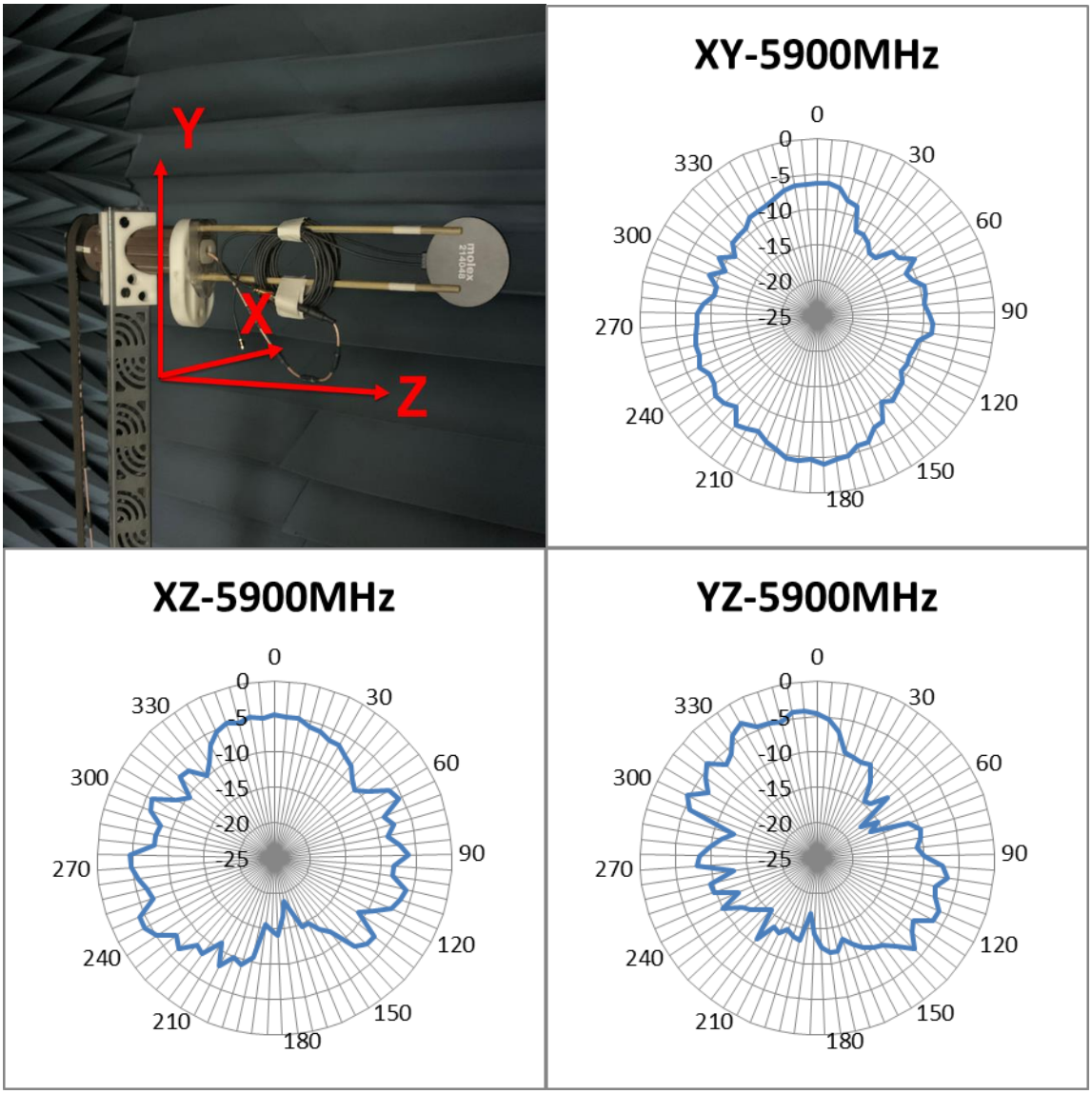

FIGURE 4.6.2 2D RADIATION PATTERN OF ANTENNA WITH PORT 2 AT 5900MHZ IN FREE SPACE

PENDING APPROVAL

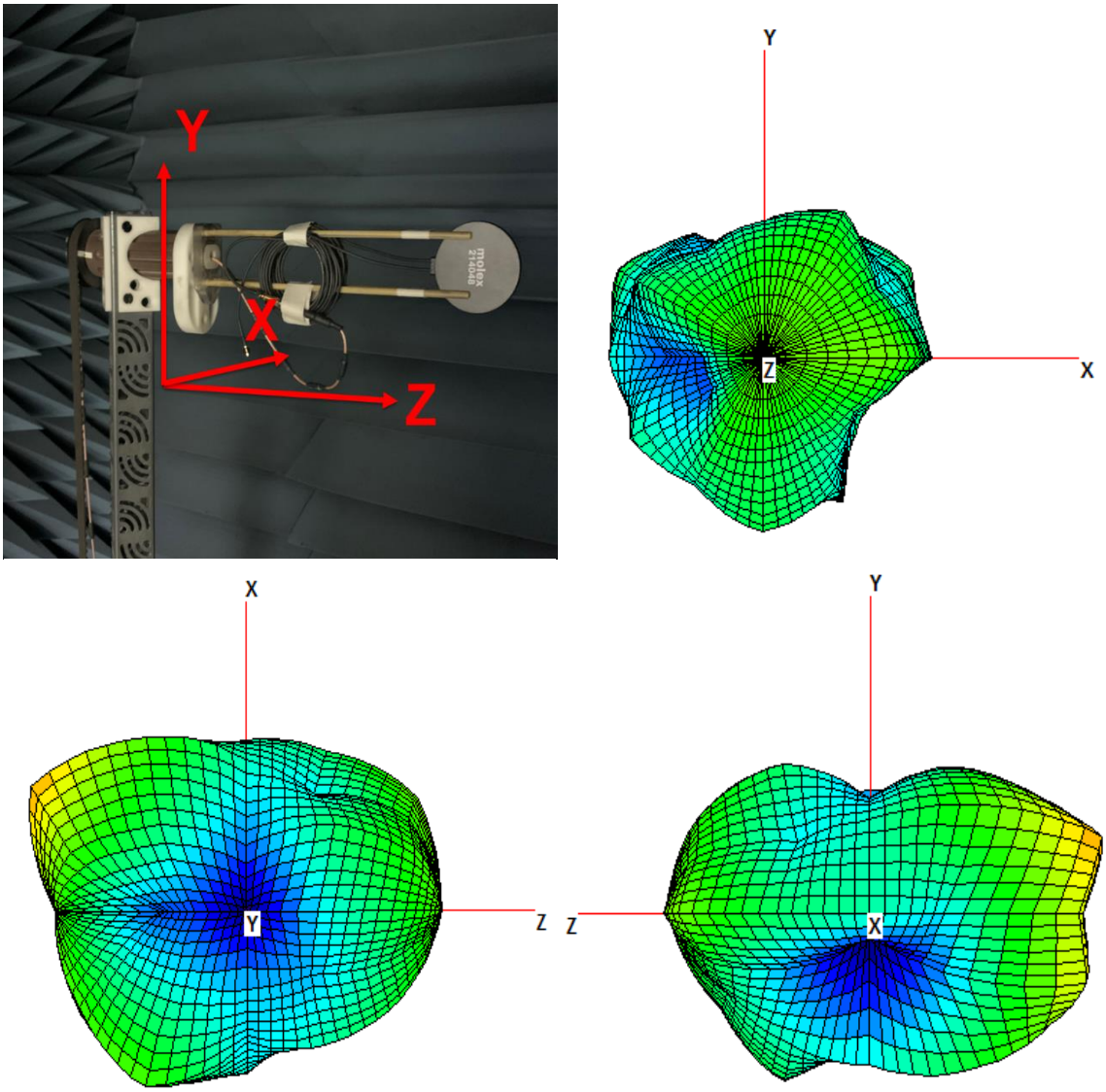

FIGURE 4.6.3 3D RADIATION PATTERN OF ANTENNA WITH PORT 1 AT 5900MHZ IN FREE SPACE

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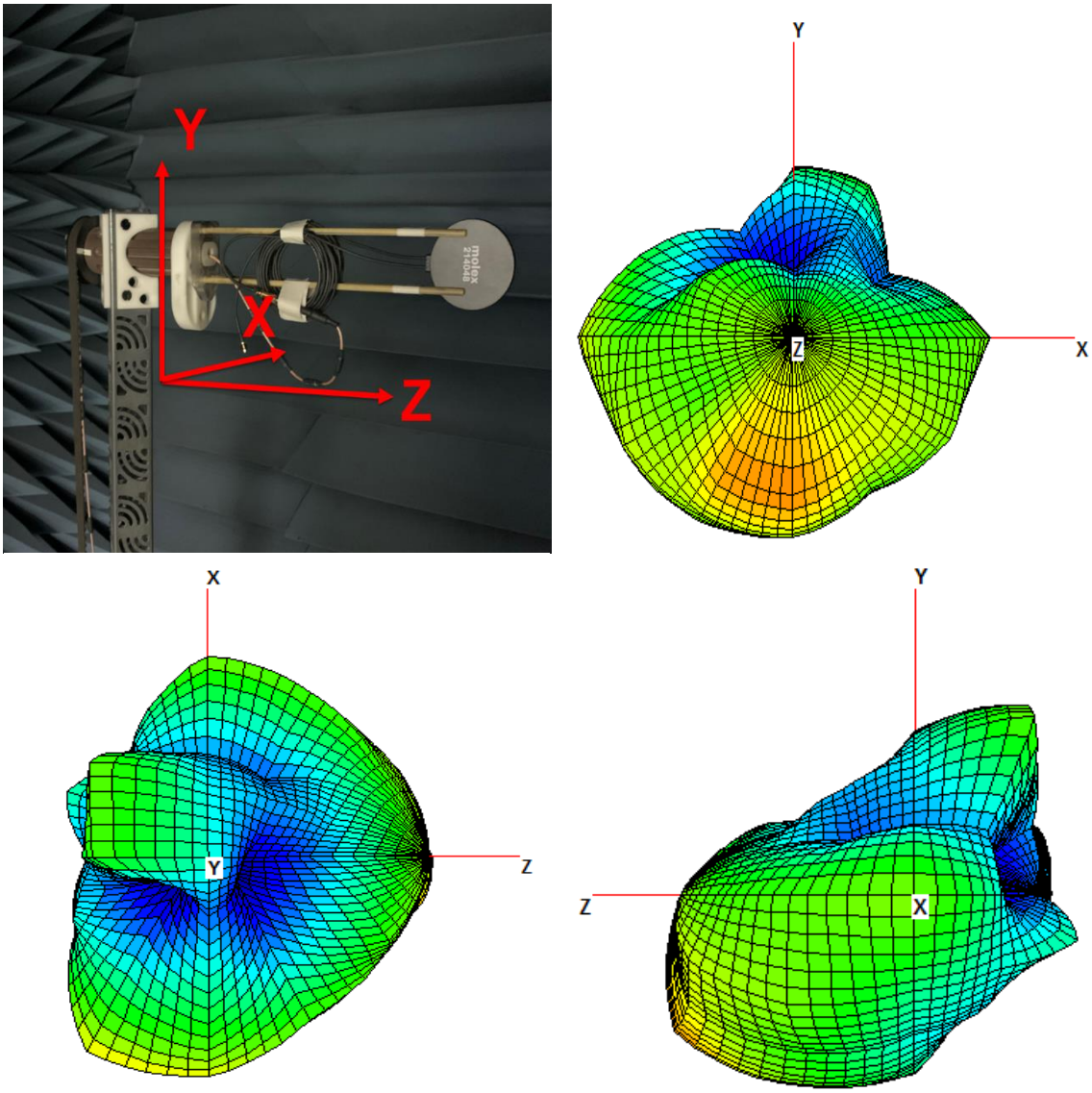

FIGURE 4.6.4 3D RADIATION PATTERN OF ANTENNA WITH PORT 2 AT 5900MHZ IN FREE SPACE

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CHANGE HISTORY			
REV	DATE	DESCRIPTION	PAGES CHANGED
A	2019/11/11	First Release	NA

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