



# TAOGLAS®



## Datasheet

### Triton – TD.10.5113

**Part Number:**  
TD.10.5113

**Description:**

5dBi DSRC 5.9GHz Dipole Terminal Antenna SMA(M) Hinged Connector

**Features:**

5.9GHz DSRC Terminal Mount Dipole Antenna

5850MHz to 5925MHz

5dBi Gain

SMA(M) Hinged Connector

Dimensions: 169\*18\*13mm

RoHS & REACH Compliant

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## 1. Introduction



The Triton TD.10 is a dipole terminal DSRC antenna. This high performance, compact 5 dBi antenna designed to operate between 5850-5925MHz. Primarily designated for vehicle safety applications, DSRC offers high-speed, low-latency wireless communication over short distances.

The TD.10 does not require a ground-plane to connect to and has market-leading efficiency of 70%. Connection is made via the hinged SMA(M) connector which can be oriented straight, 45 degrees, or at a right angle to best fit your needs.

For support on how to integrate and test this antenna within your application, or for sample requests, contact your regional Taoglas Customer Services Team.

## 2. Specifications

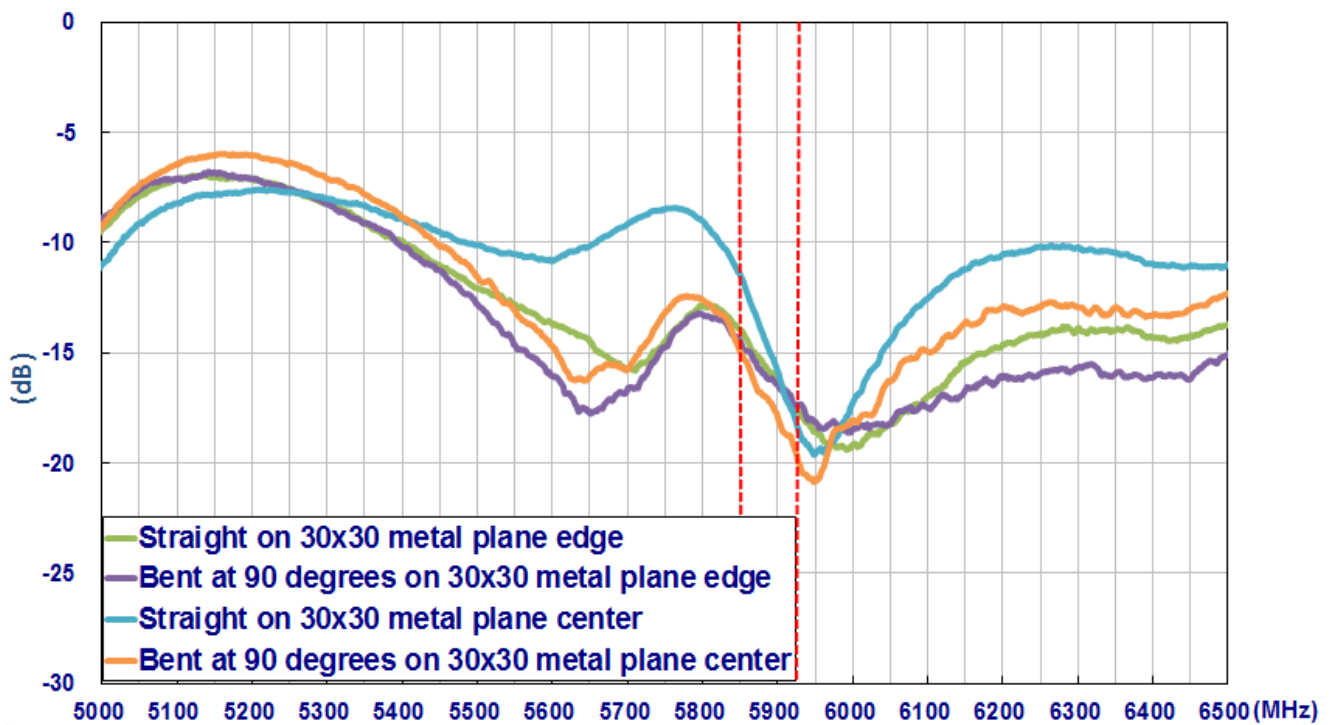
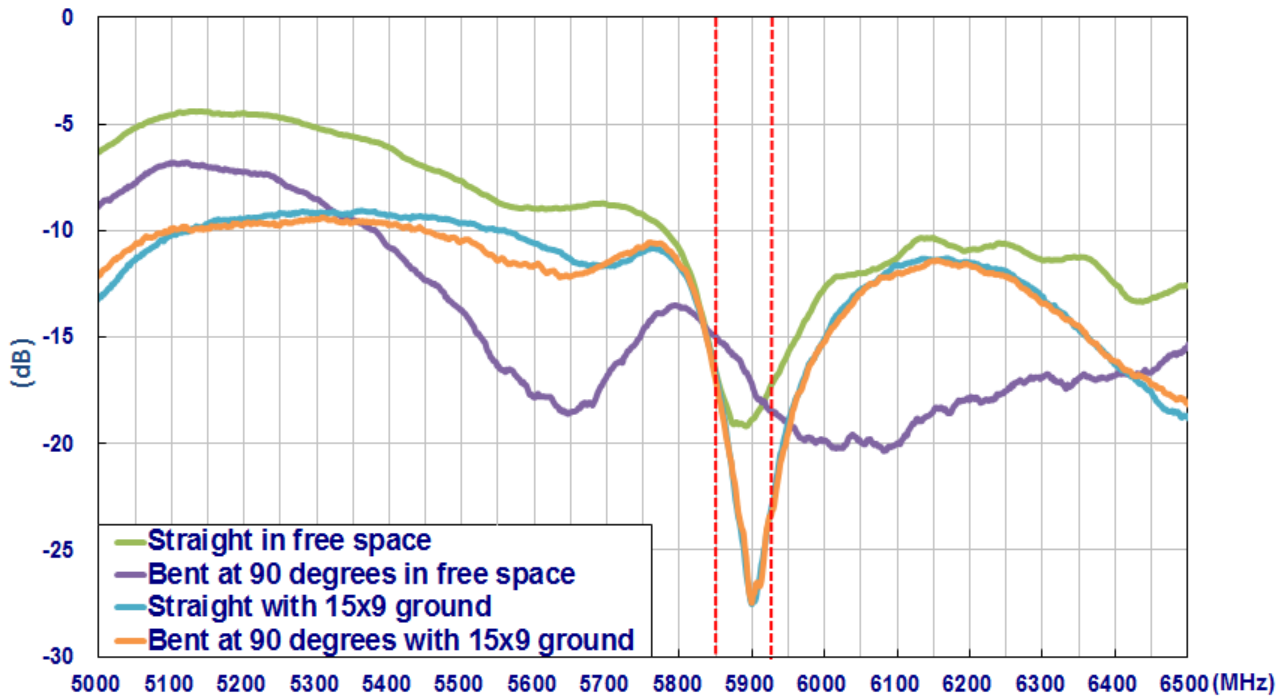
Electrical	
In Free Space	
Frequency	5850~5925MHz
Efficiency (%)	
Straight Pose	73.48
Bent Pose	64.58
Average Gain (dBi)	
Straight Pose	-1.34
Bent Pose	-1.9
Peak Gain (dBi)	
Straight Pose	5.88
Bent Pose	5.67
With 15*9cm Ground Plane	
Frequency	5850~5925MHz
Efficiency (%)	
Straight Pose	49.00
Bent Pose	46.77
Average Gain (dBi)	
Straight Pose	-3.10
Bent Pose	-3.30
Peak Gain (dBi)	
Straight Pose	3.07
Bent Pose	4.01
On 30*30cm Ground Plane Edge	
Frequency	5850~5925MHz
Efficiency (%)	
Straight Pose	58.49
Bent Pose	55.84
Average Gain (dBi)	
Straight Pose	-2.33
Bent Pose	-2.53
Peak Gain (dBi)	
Straight Pose	3.64
Bent Pose	5.39
On 30*30cm Ground Plane Center	
Frequency	5850~5925MHz
Efficiency (%)	
Straight Pose	65.24
Bent Pose	62.49
Average Gain (dBi)	
Straight Pose	-1.86
Bent Pose	-2.04
Peak Gain (dBi)	
Straight Pose	5.19
Bent Pose	10.41
Operation Band	DSRC 5.9GHz
Return Loss	< -10dB
VSWR	< 2:1
Polarization	Linear
Impedance	50 $\Omega$

Mechanical	
Dimensions	Length 169mm, $\Phi$ 18mm
Casing	PC+ABS
Connector	Hinged SMA Male
Weight	21.75 g
Recommended Torque for Mounting	0.9 N·m
Max Torque for Mounting	1.176 N·m

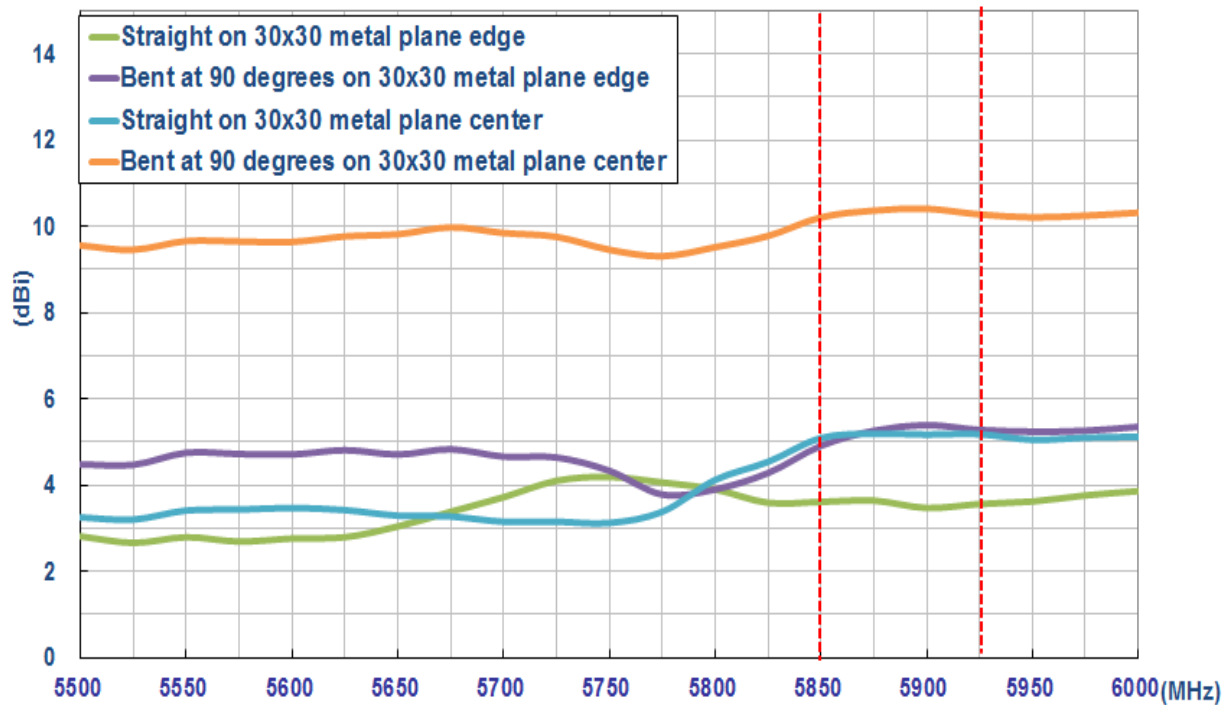
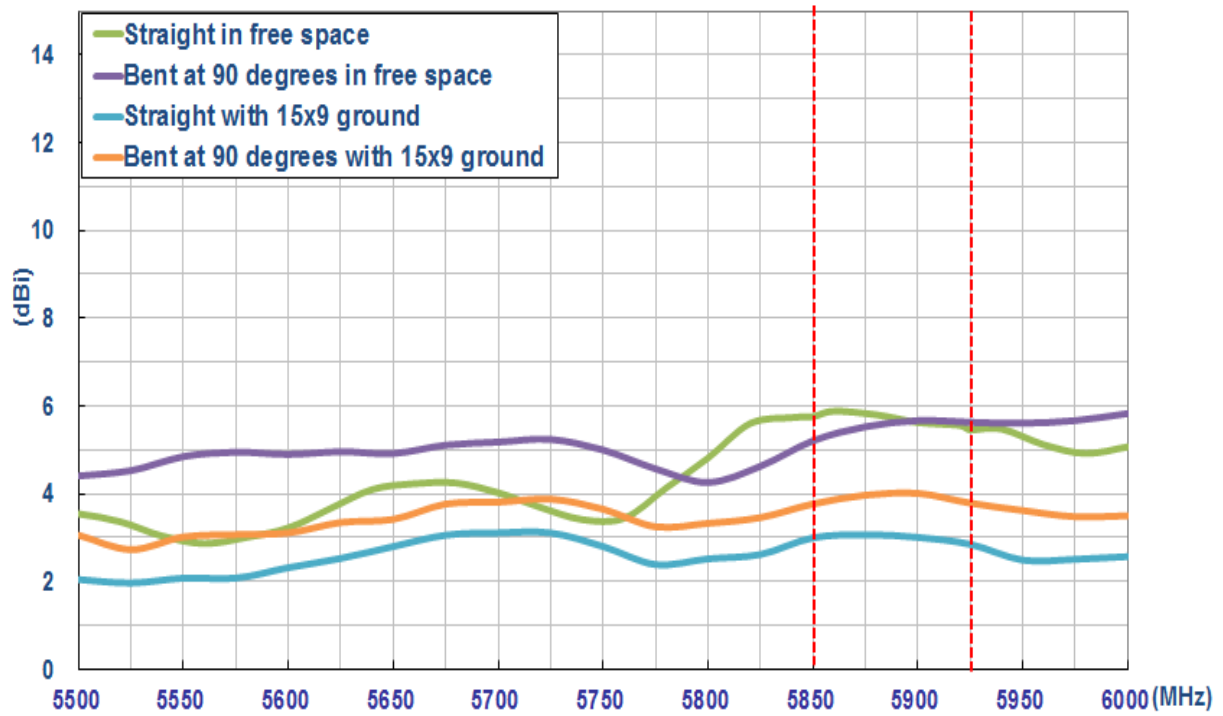
Environmental	
Temperature Range	-40°C to 85°C
Humidity	Non-condensing 65°C 95% RH

### 3. Antenna Characteristics

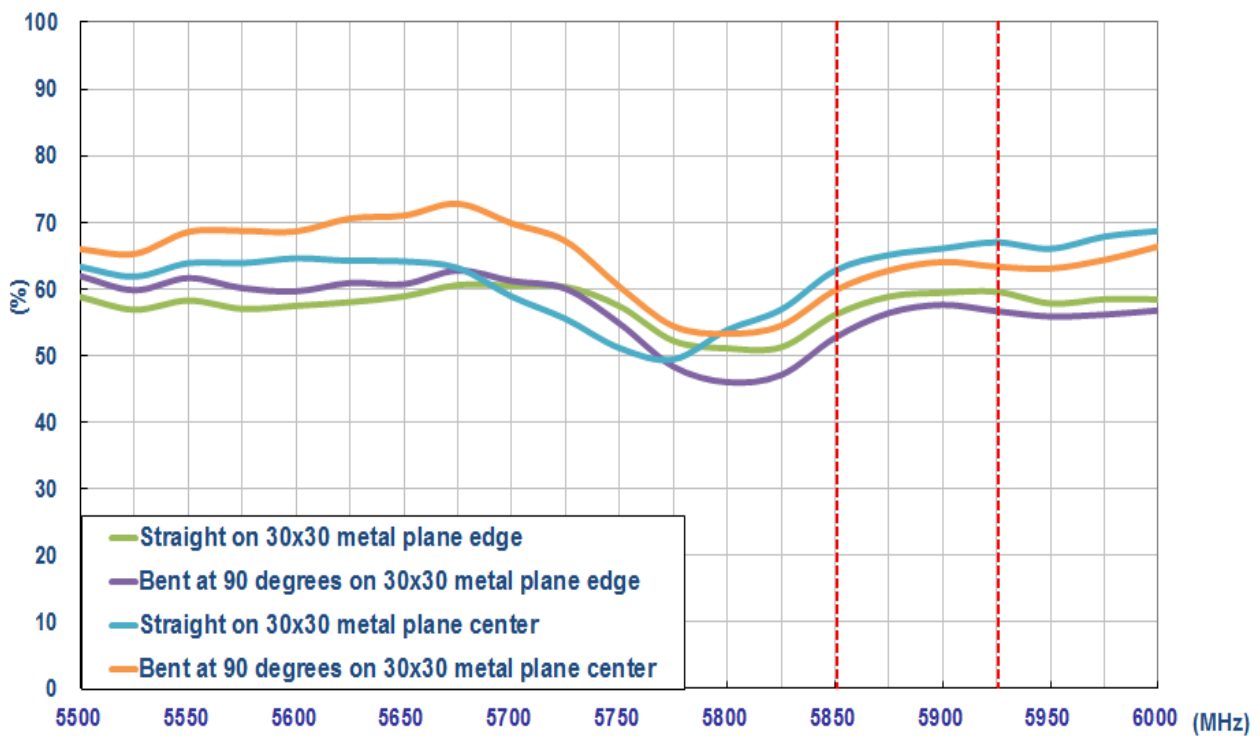
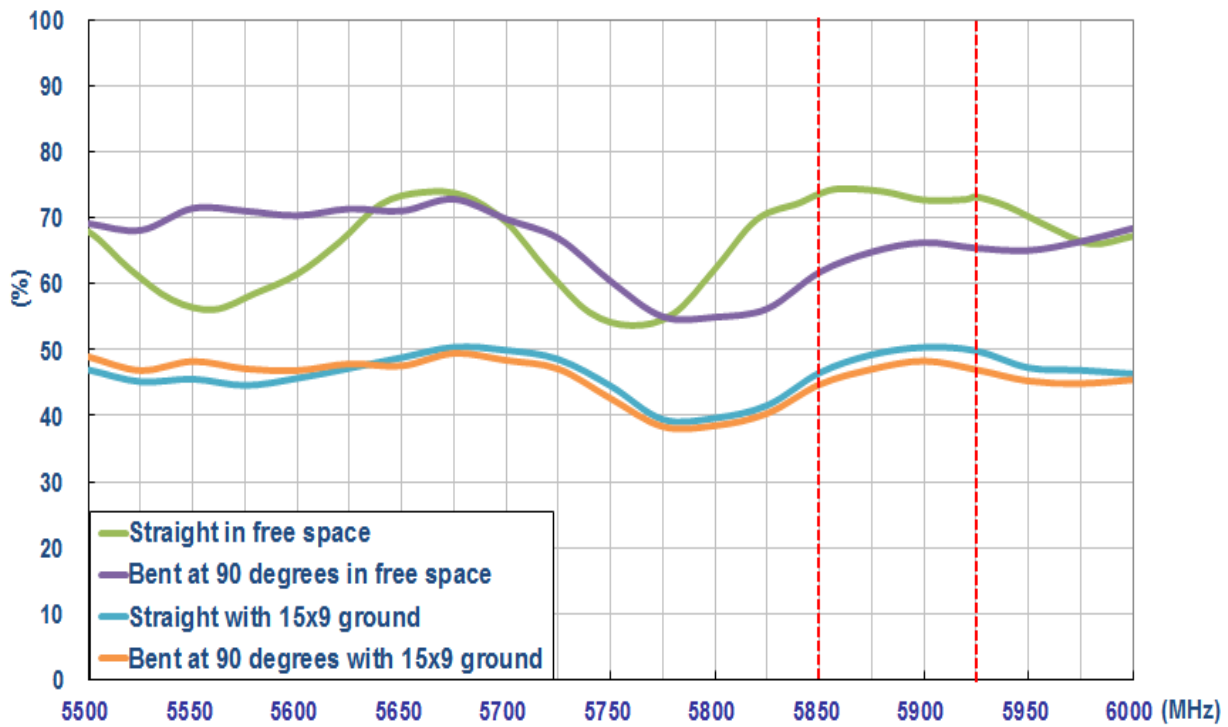
#### 3.1 Return Loss



### 3.2 Peak Gain

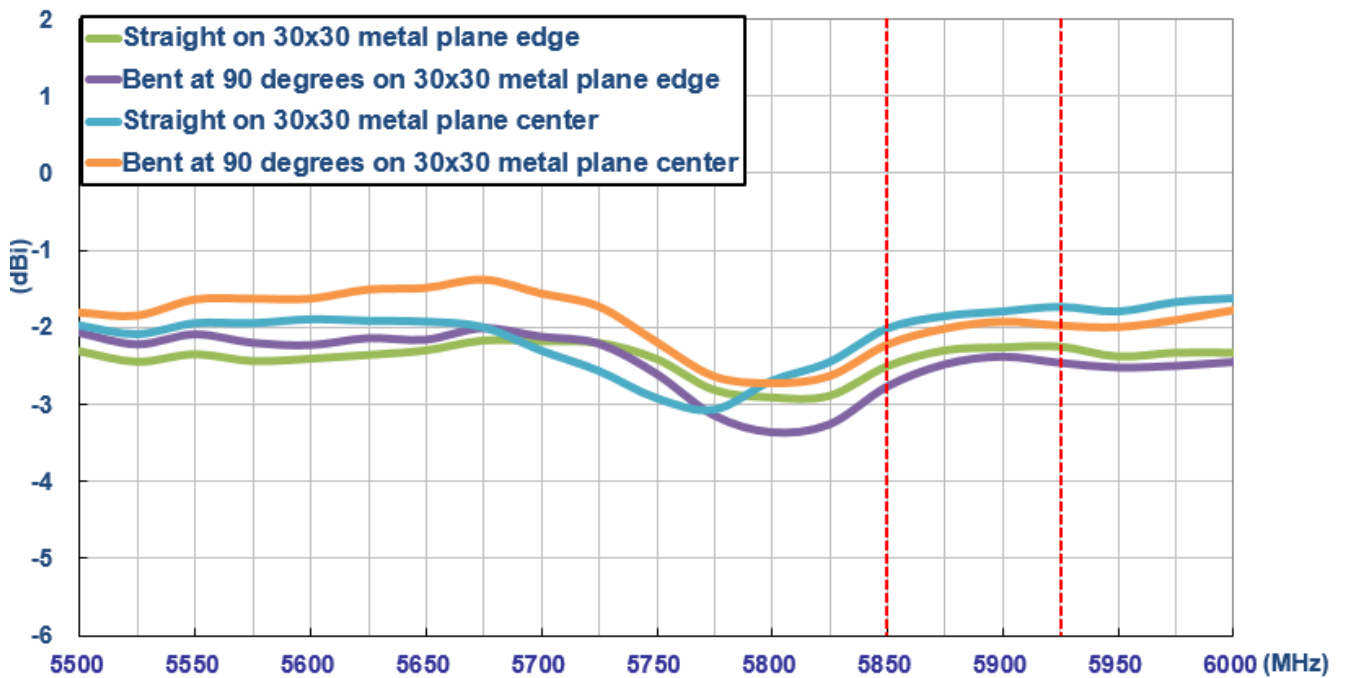
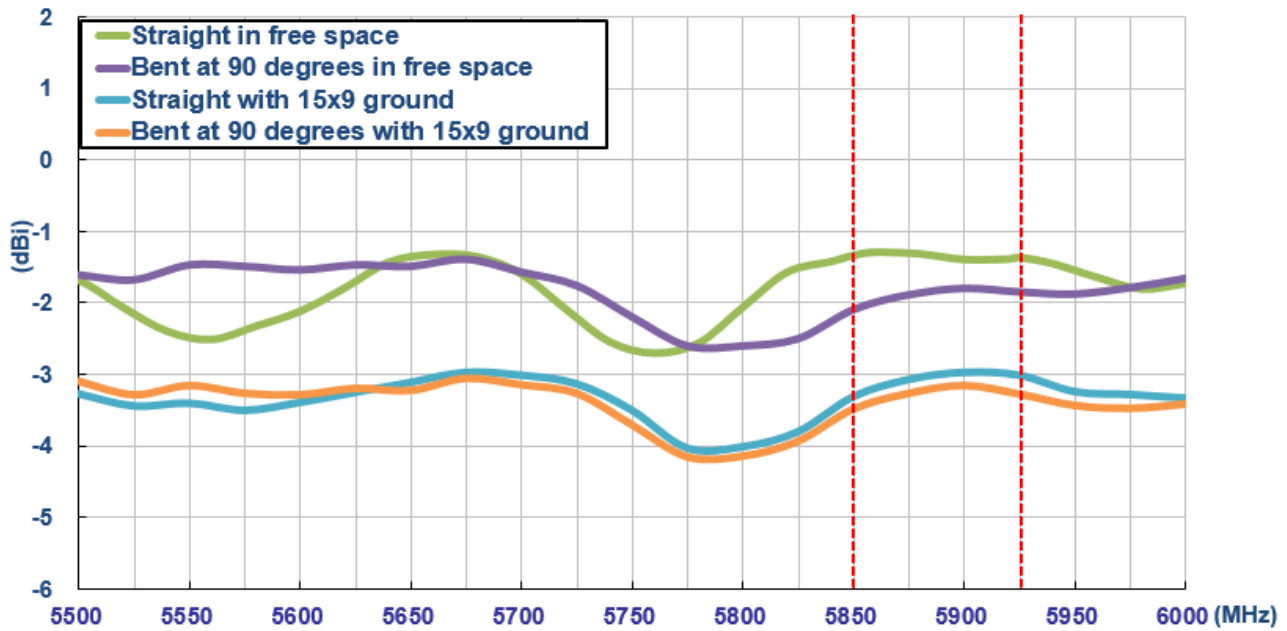


### 3.3 Efficiency



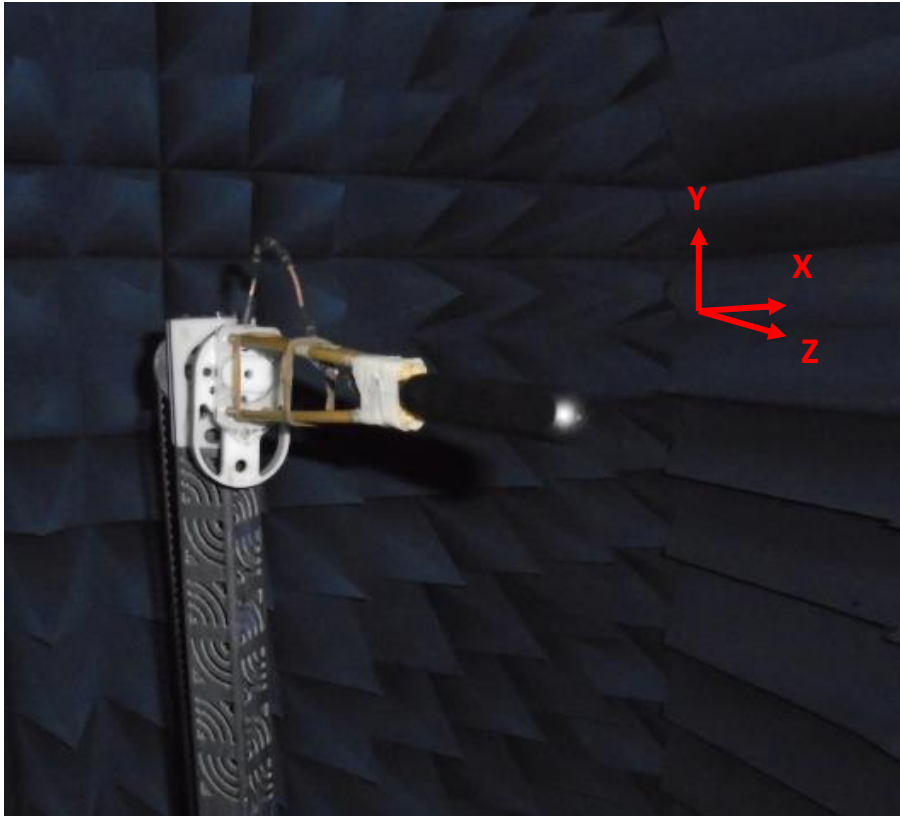


### 3.4 Average Gain



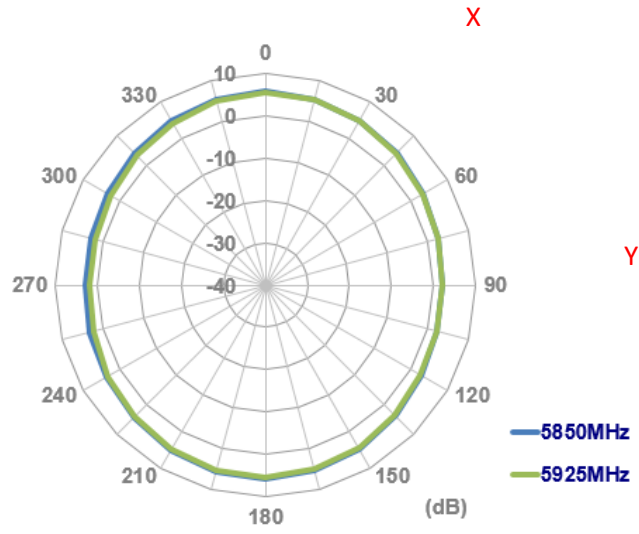
## 4. 2D Radiation Patterns

### 4.1 Test Setup

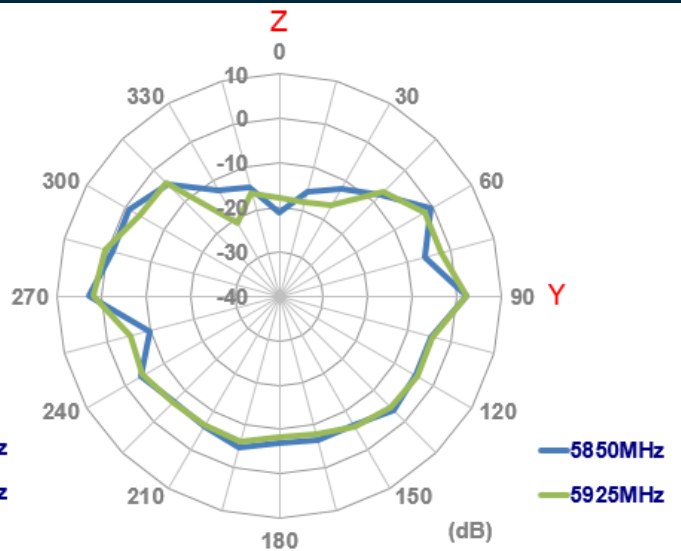
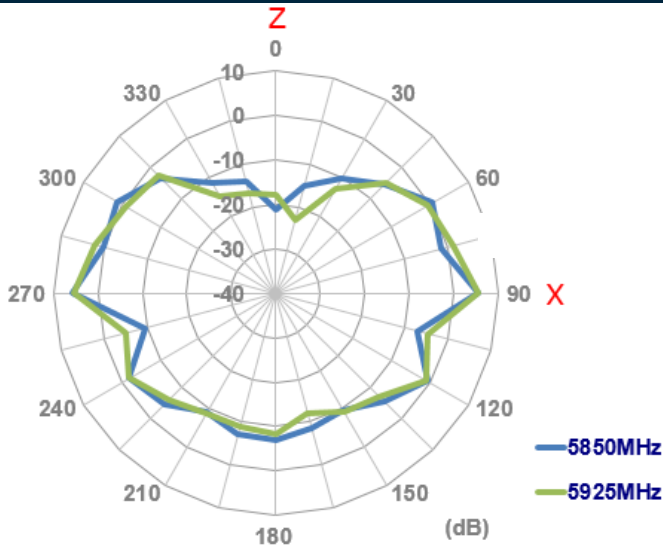


Free space Straight

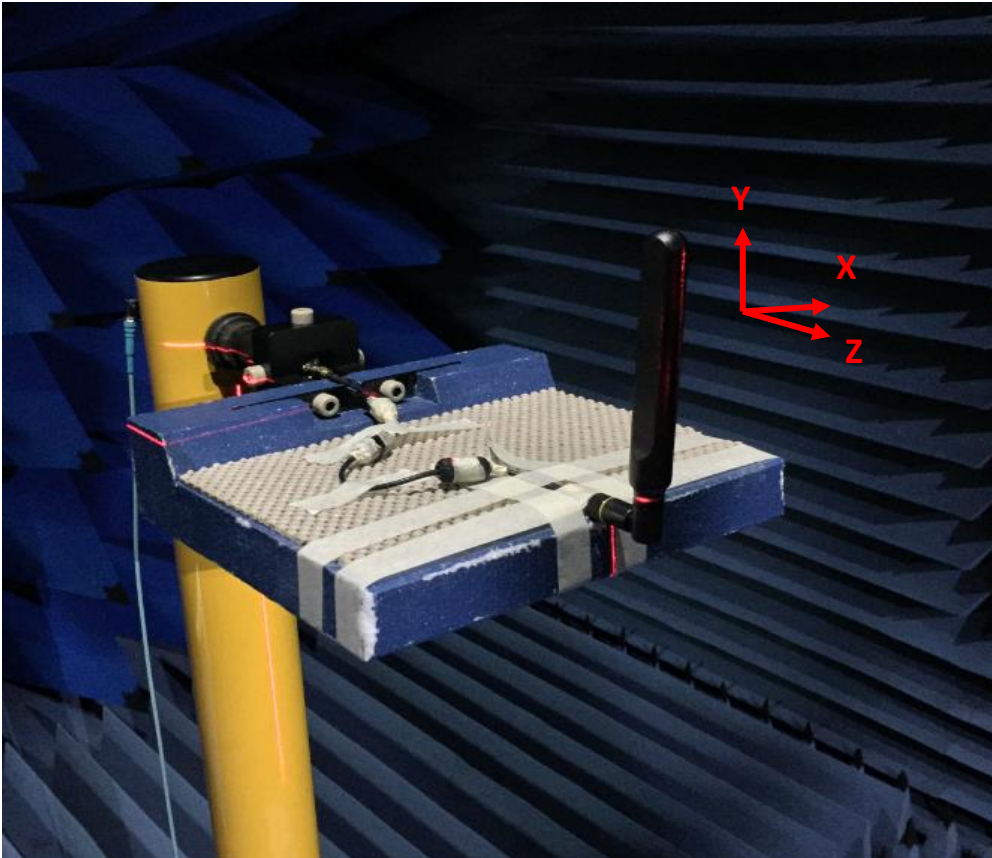
XY Plane



XZ Plane      YZ Plane

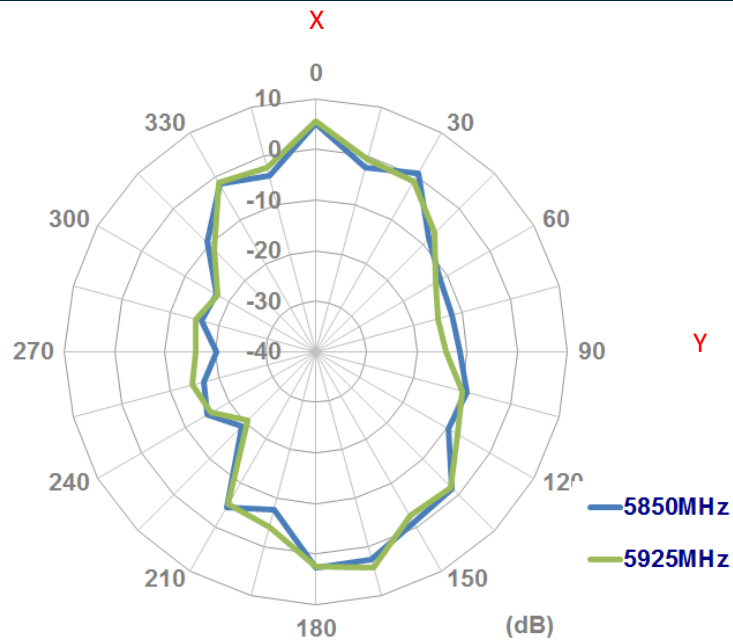


4.2 Test Setup

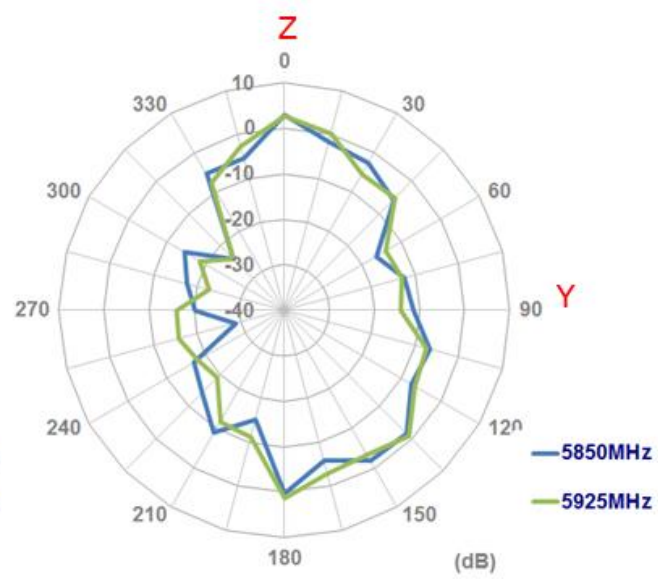
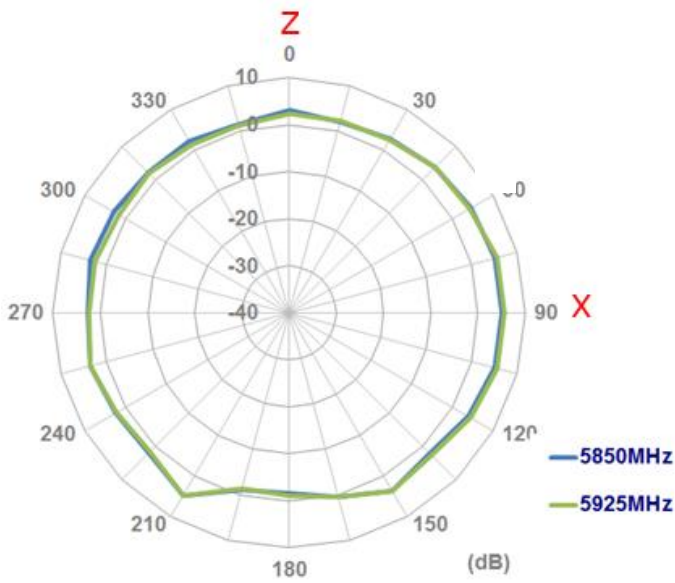


Free space bend

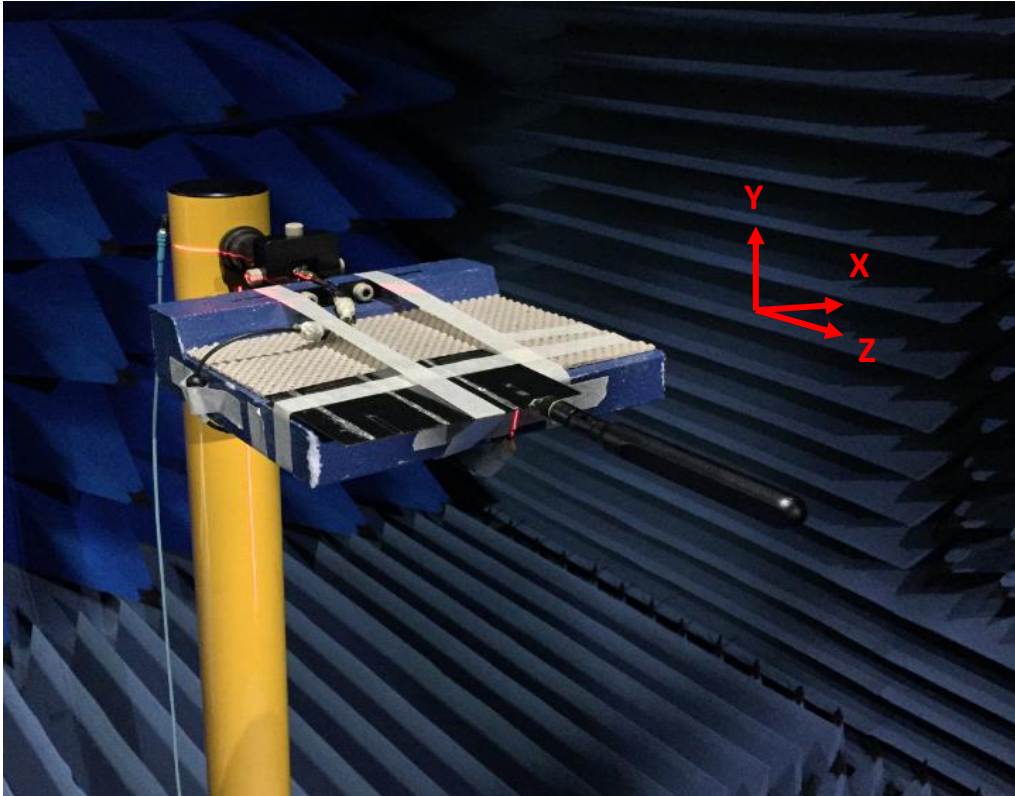
XY Plane



XZ Plane      YZ Plane

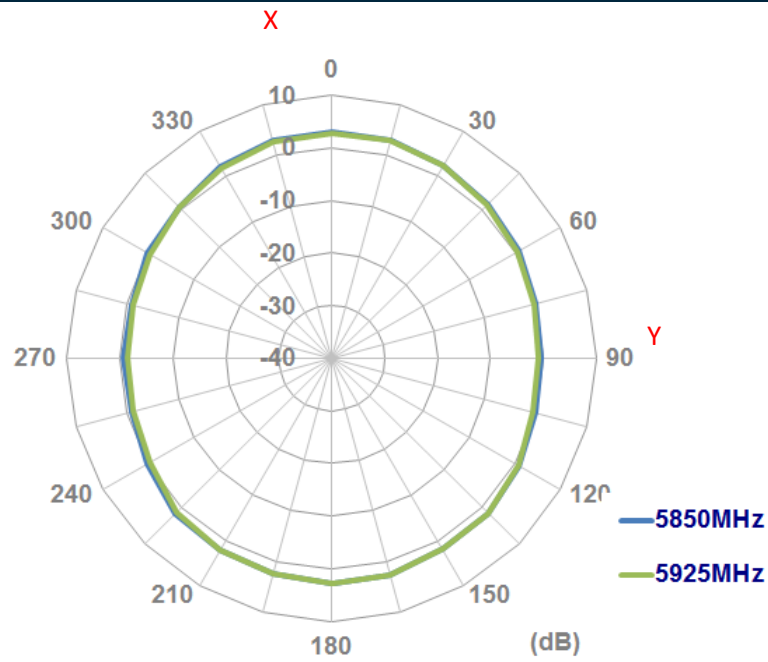


4.3 Test Setup

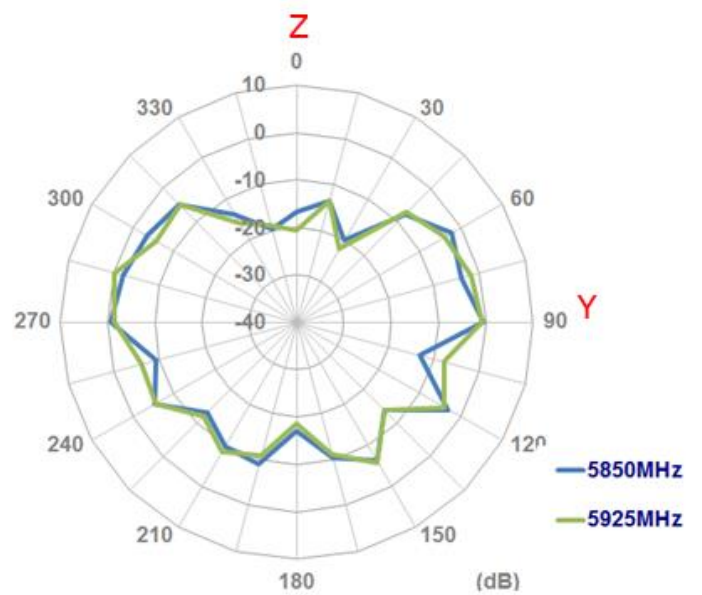
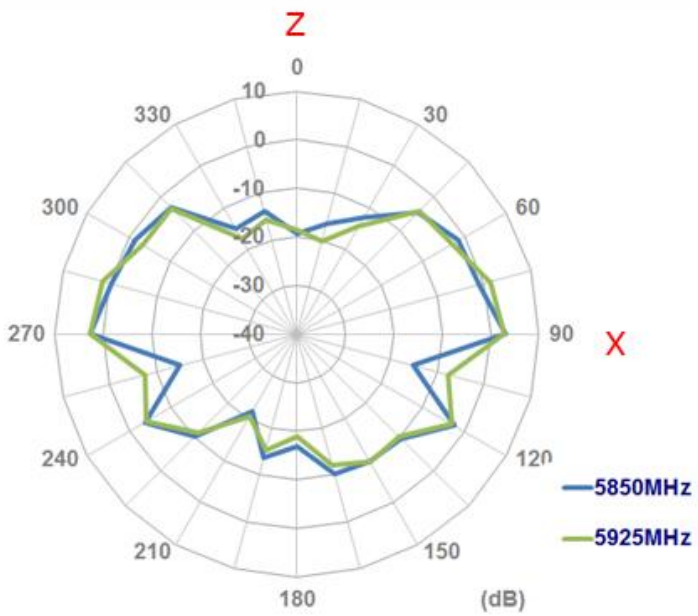


straight with 15\*9cm ground plane

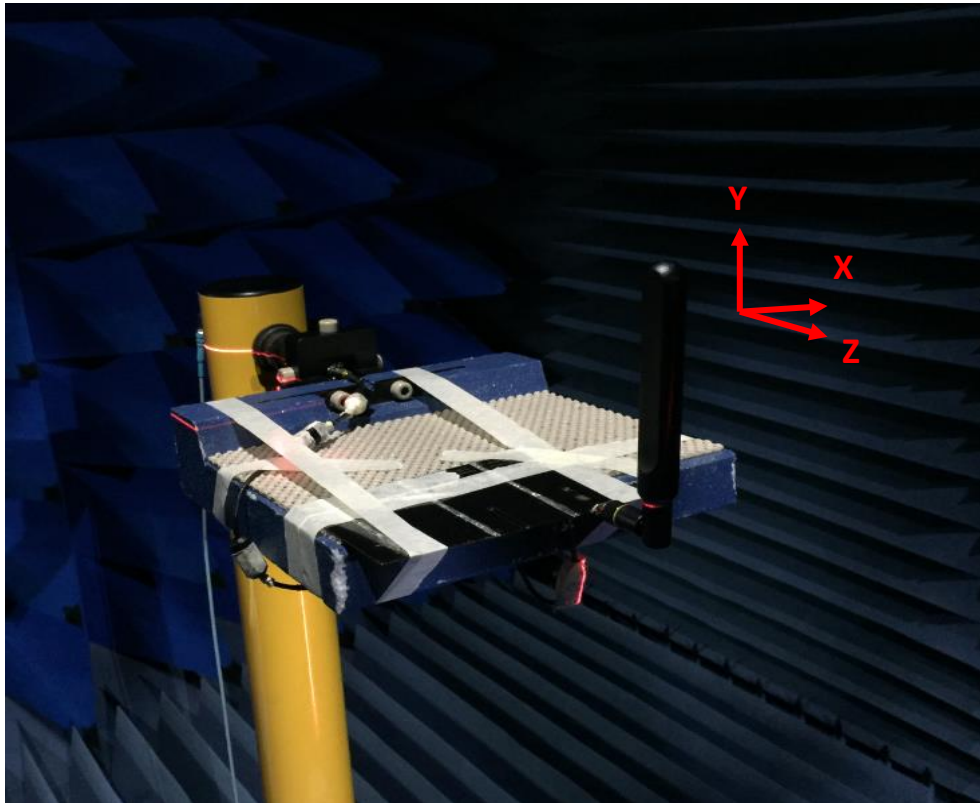
XY Plane



XZ Plane      YZ Plane



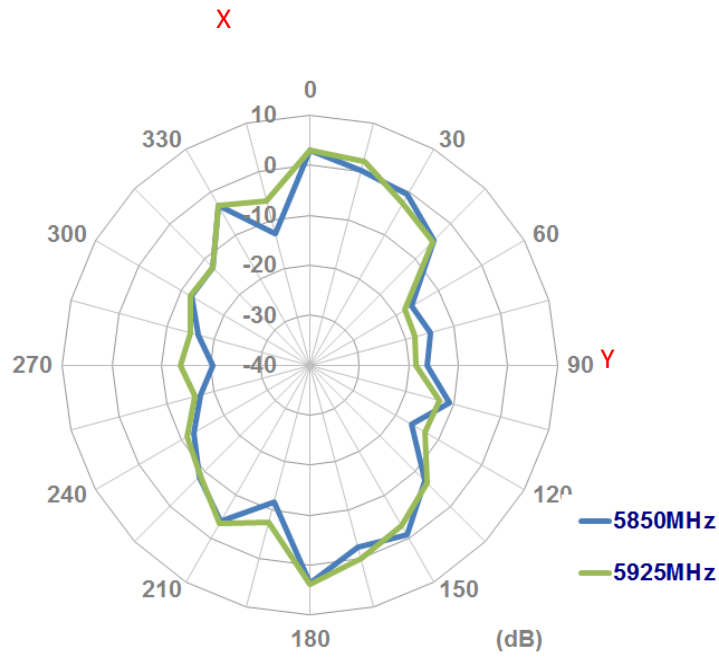
4.4 Test Setup



bent with 15\*9cm ground plane

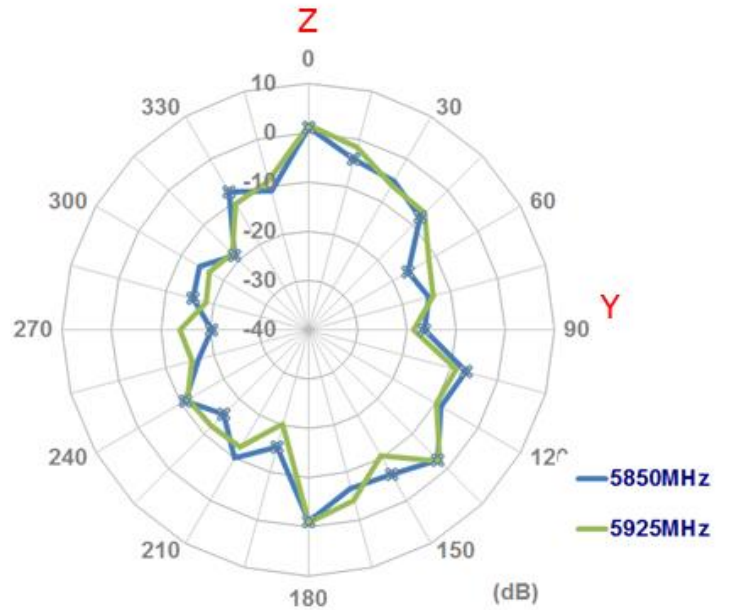
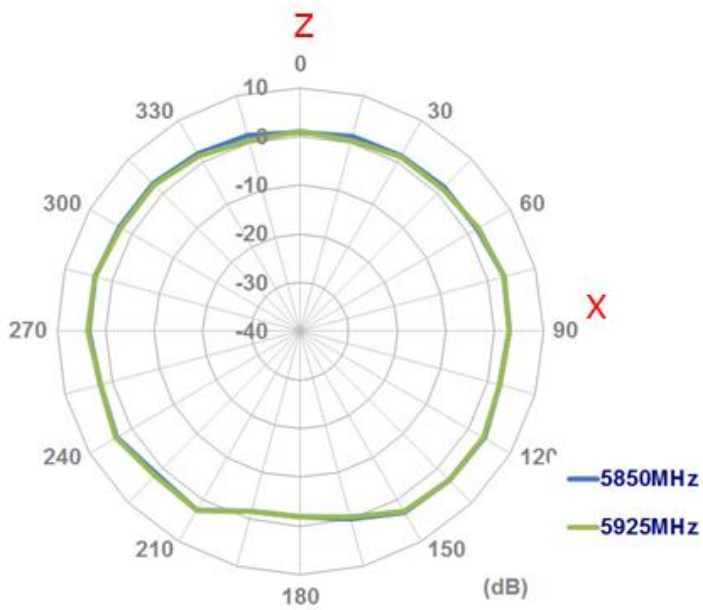


XY Plane

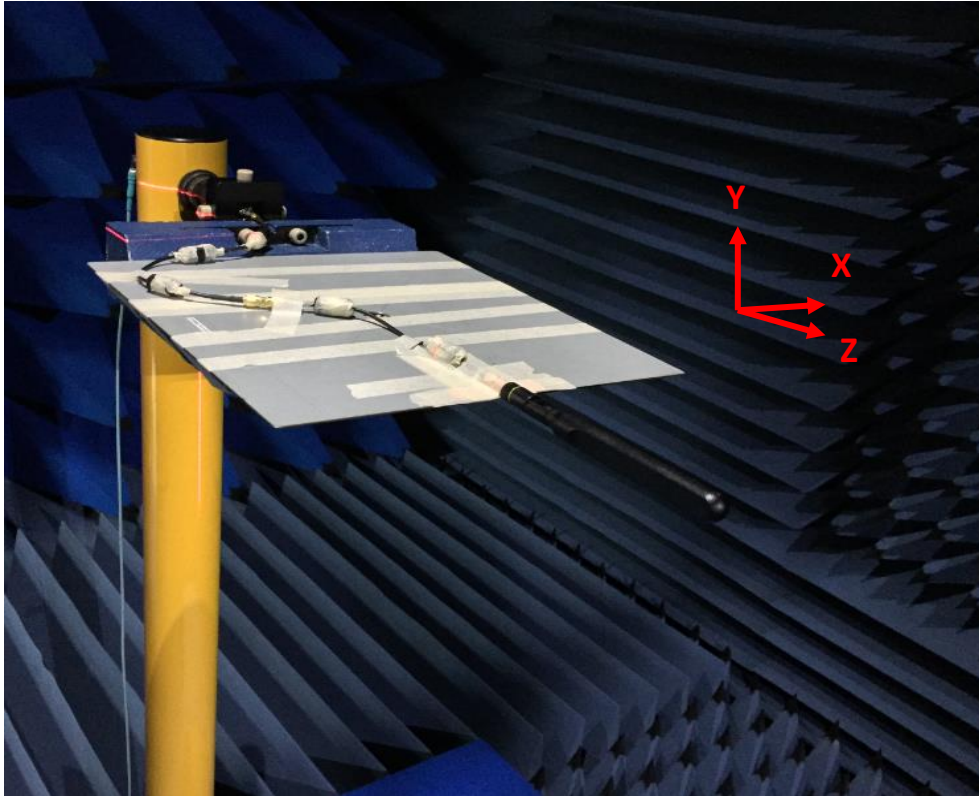


XZ Plane

YZ Plane

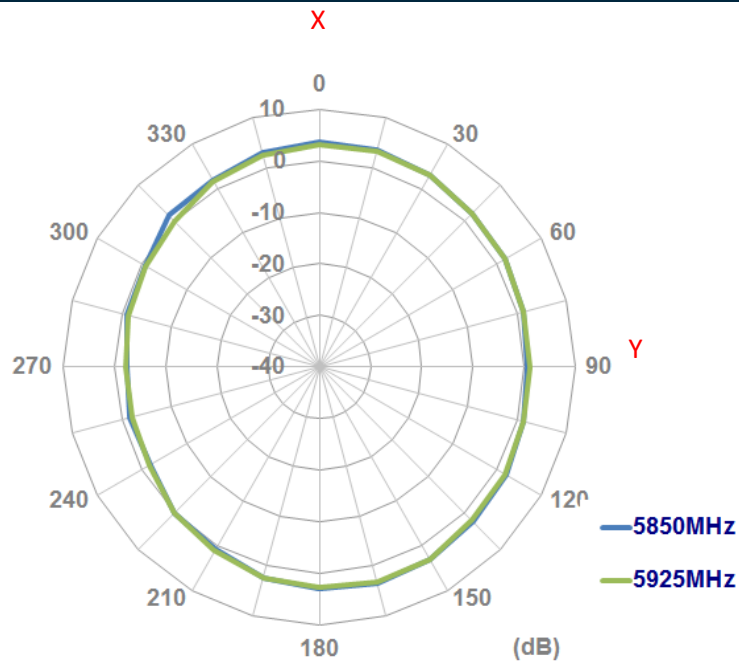


4.5 Test Setup



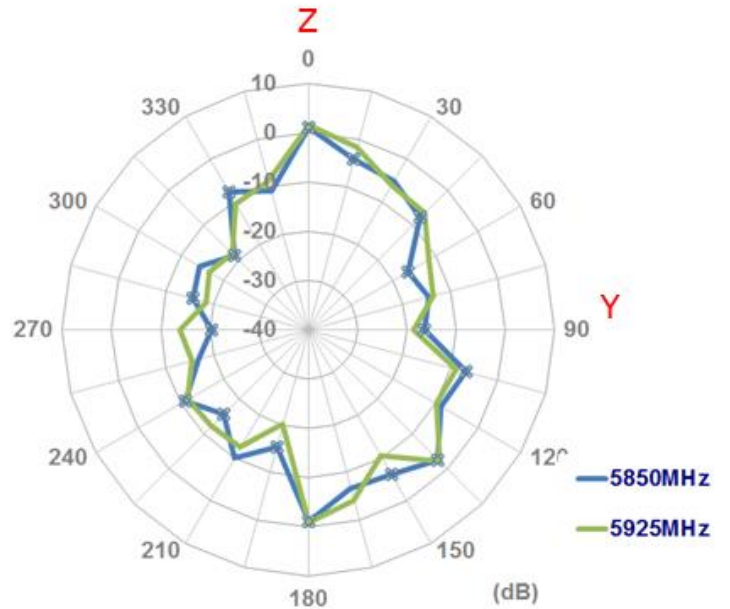
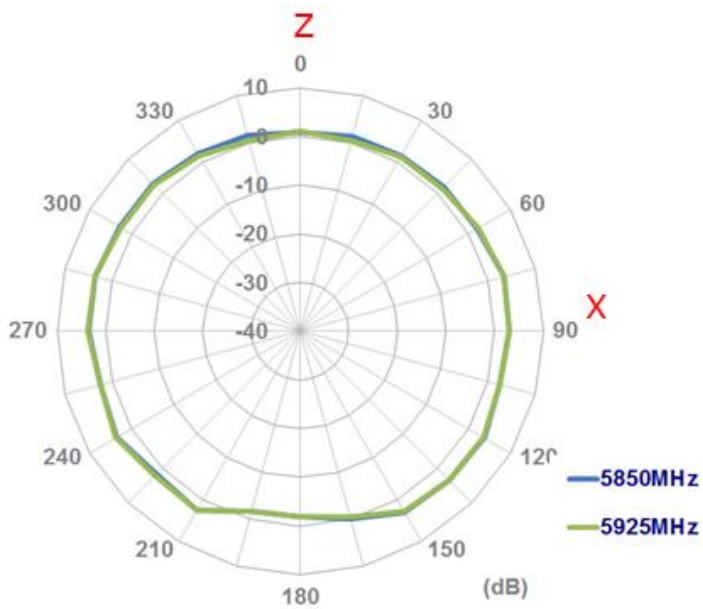
Straight with 30\*30cm Ground Plane edge

XY Plane

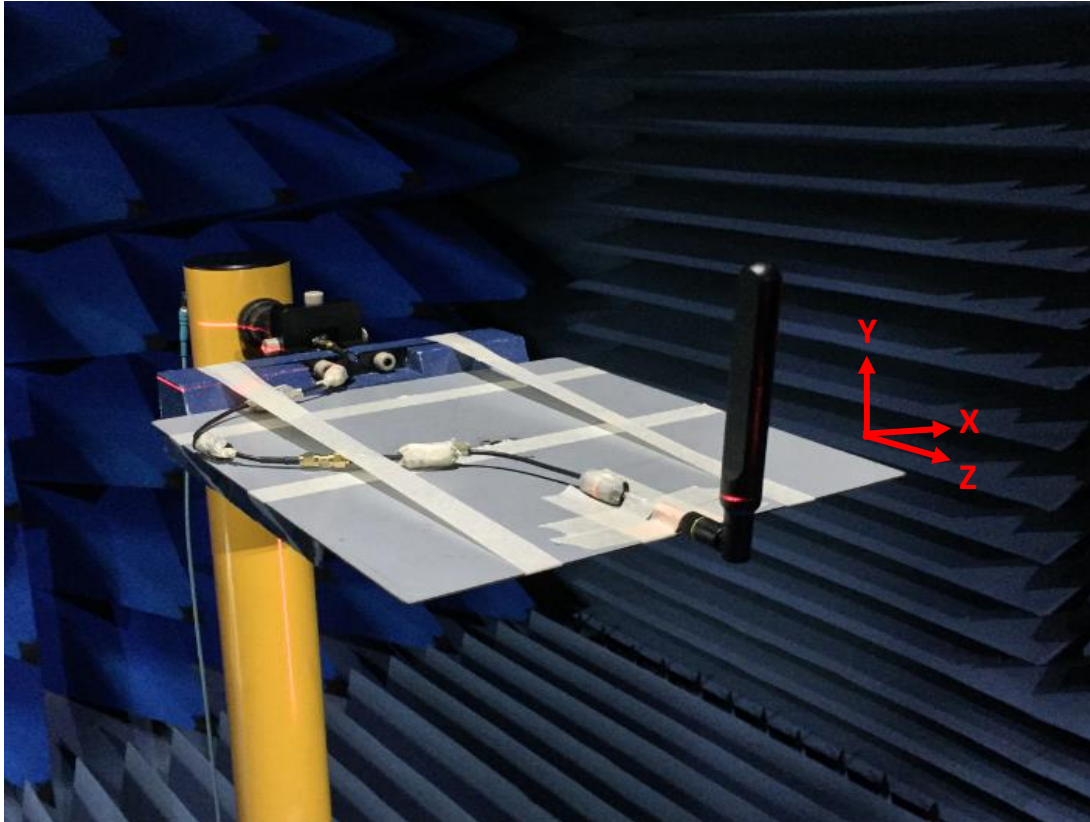


XZ Plane

YZ Plane

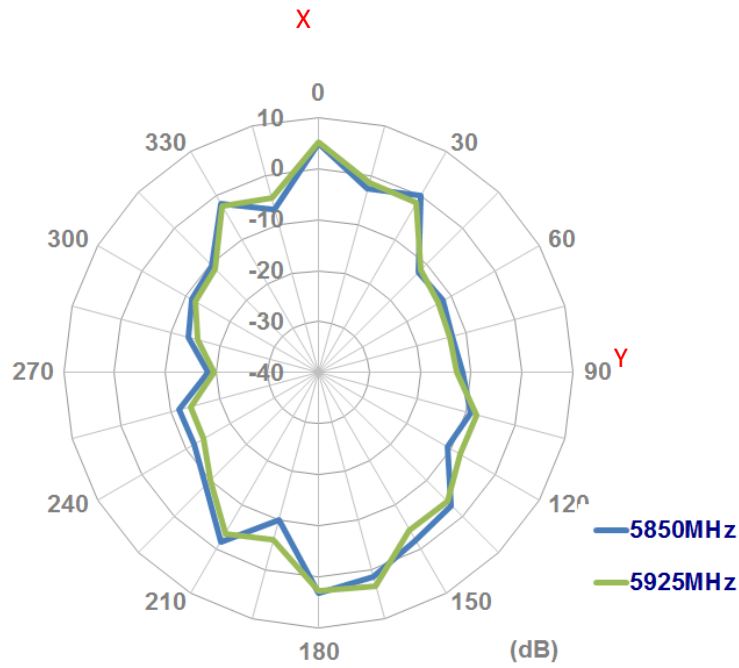


4.6 Test Setup

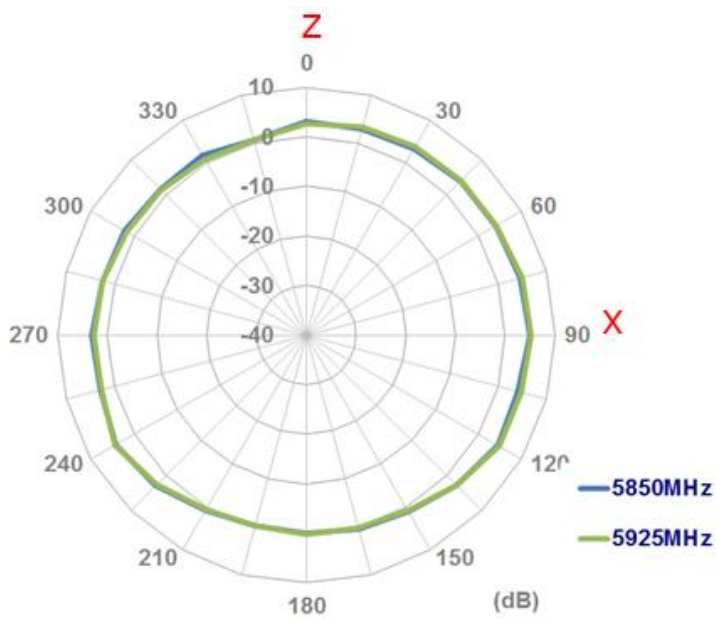


Bent with 30\*30cm Ground Plane edge

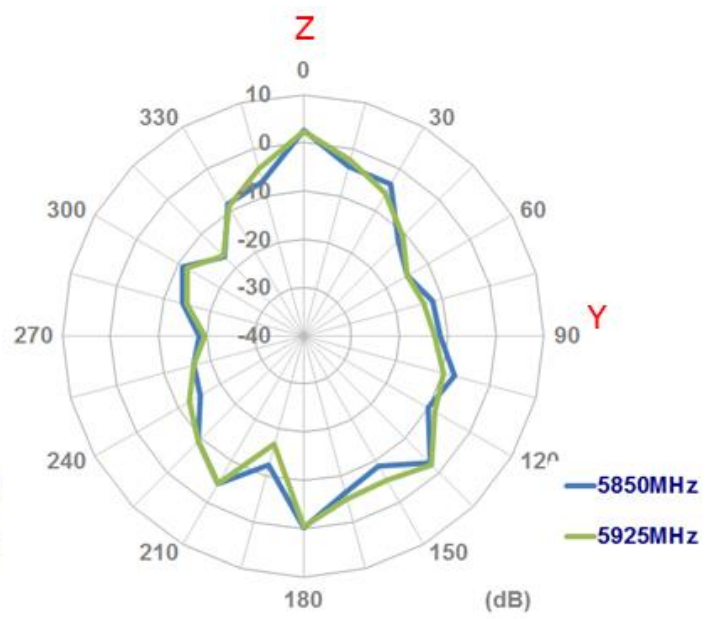
XY Plane



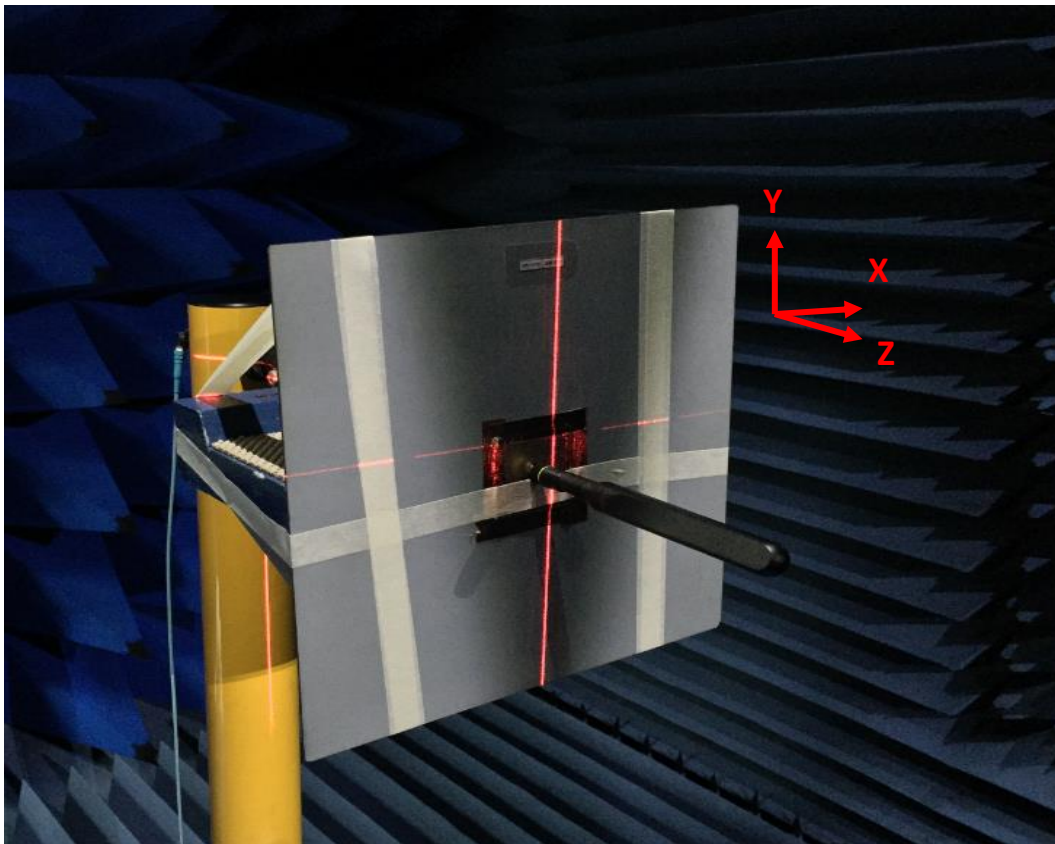
XZ Plane



YZ Plane

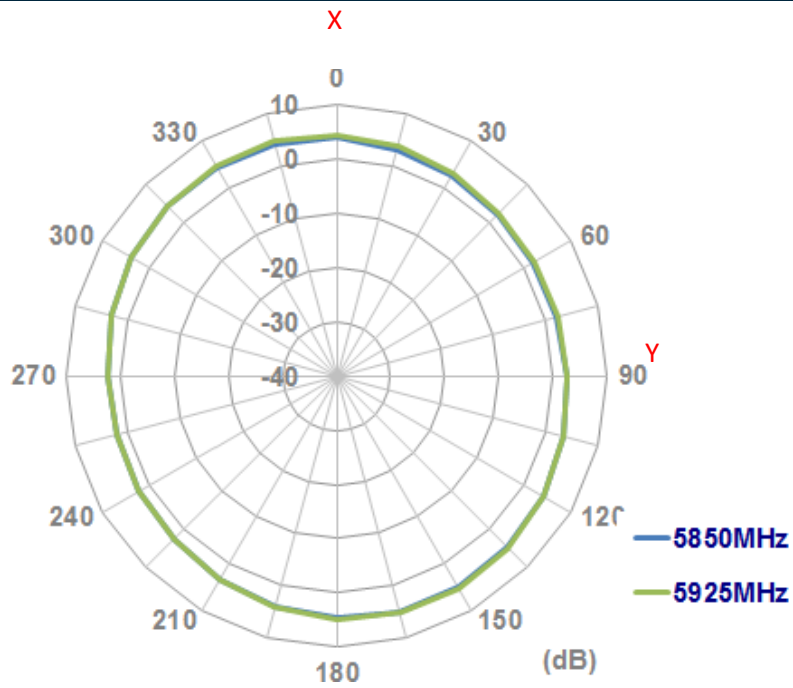


4.7 Test Setup

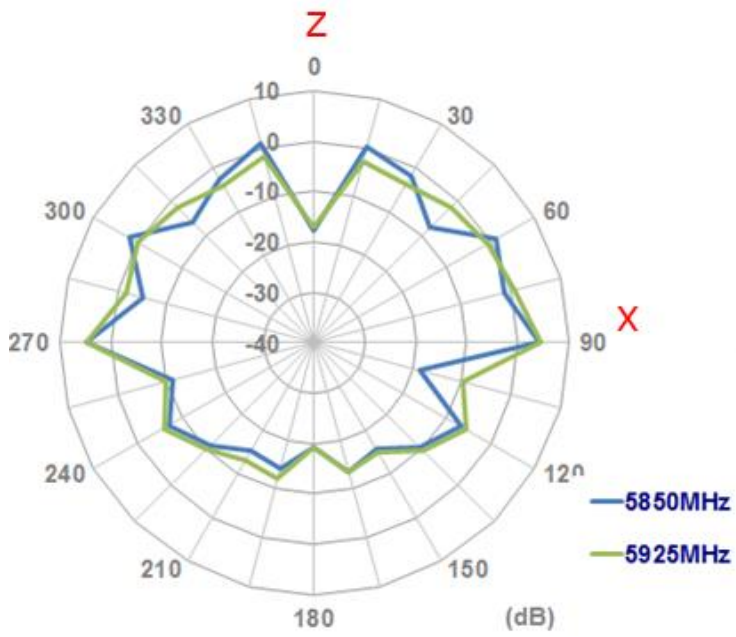


Straight with 30\*30cm Ground Plane Center

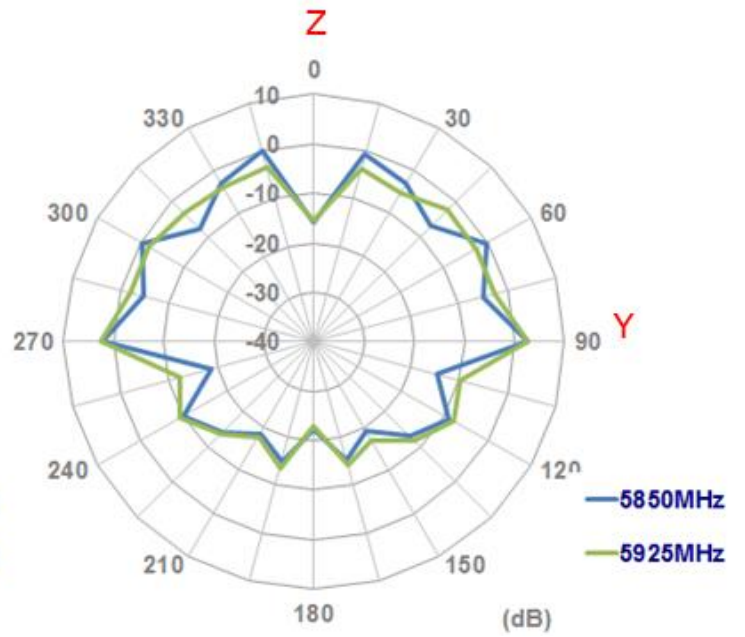
XY Plane



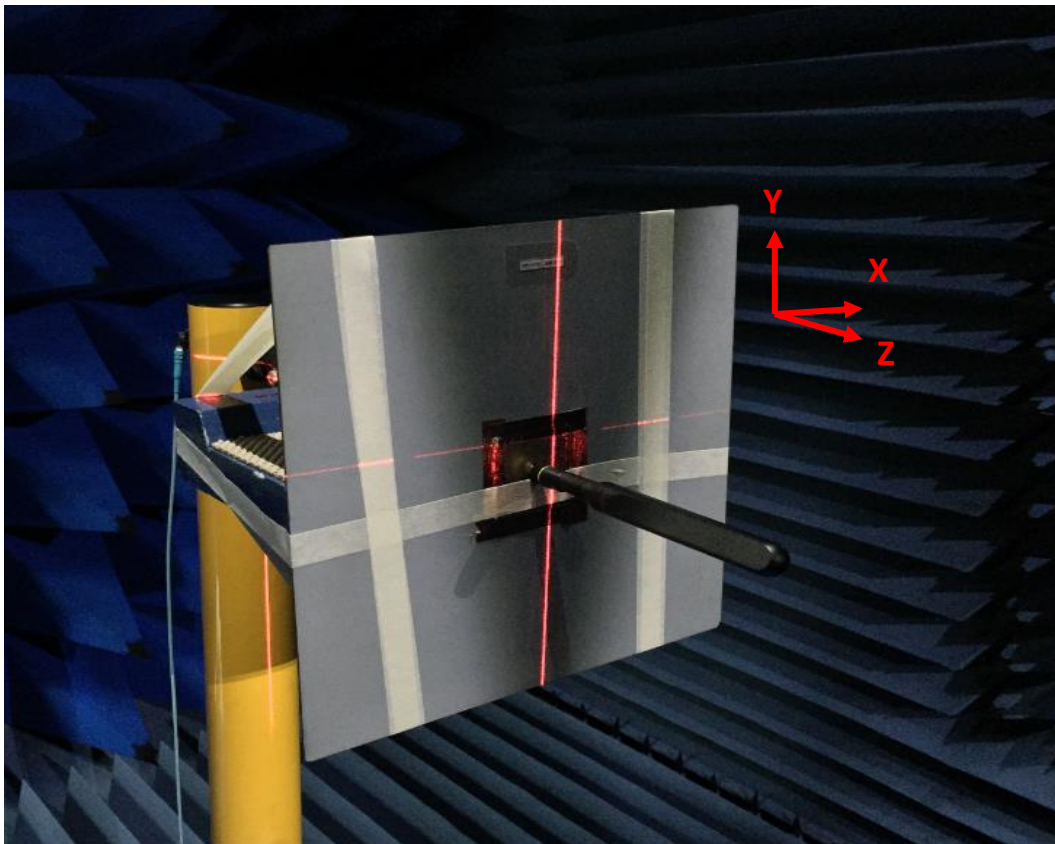
XZ Plane



YZ Plane



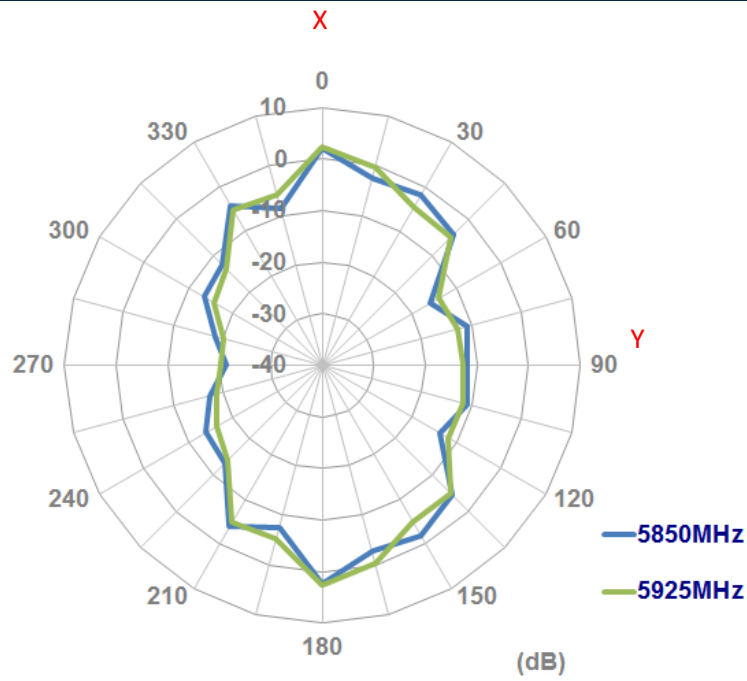
4.8 Test Setup



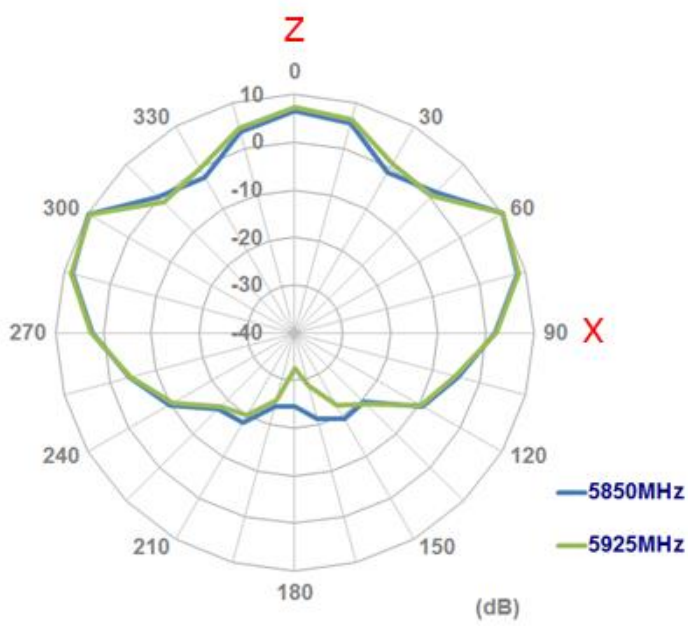
Bent at 90° with 30\*30cm Ground Plane Center



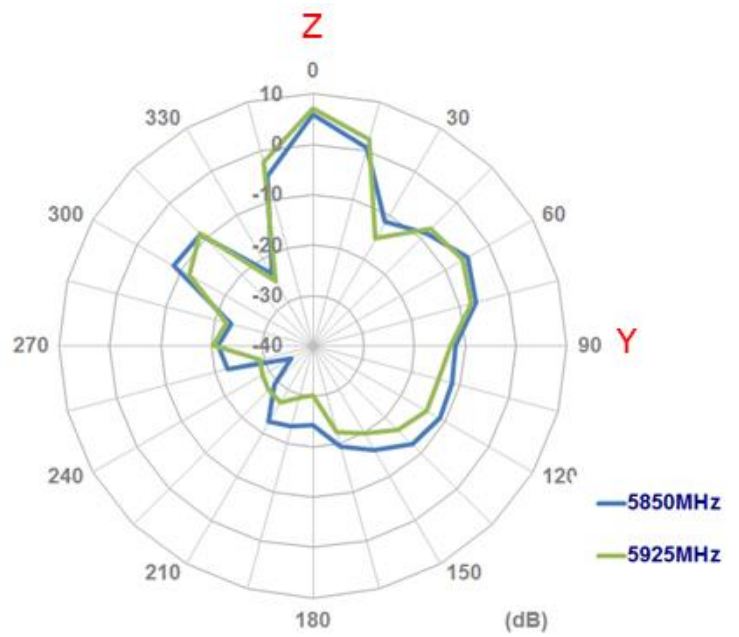
XY Plane



XZ Plane



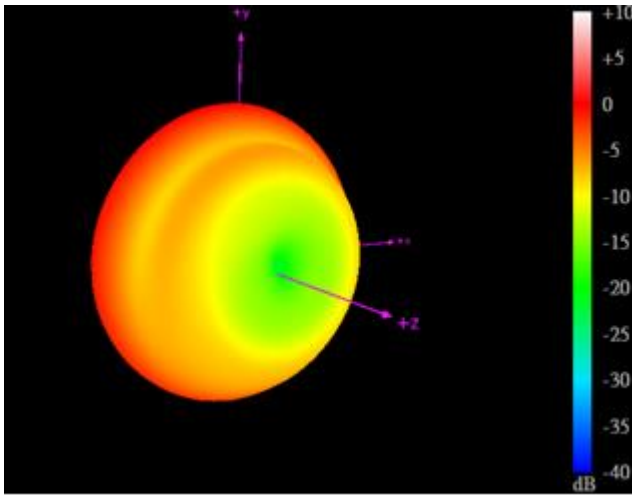
YZ Plane



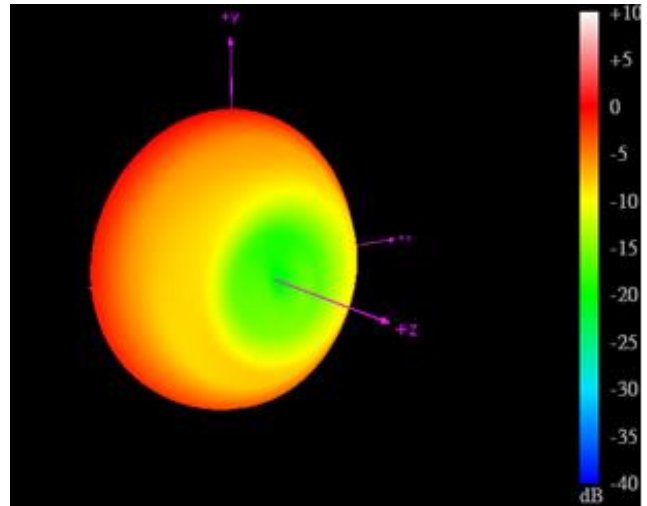
## 5. 3D Radiation Patterns

### 5.1 Free Space

Straight

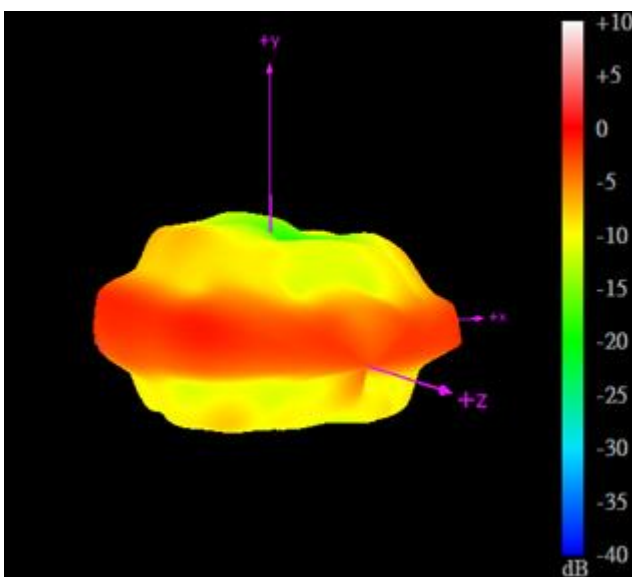


5850MHz

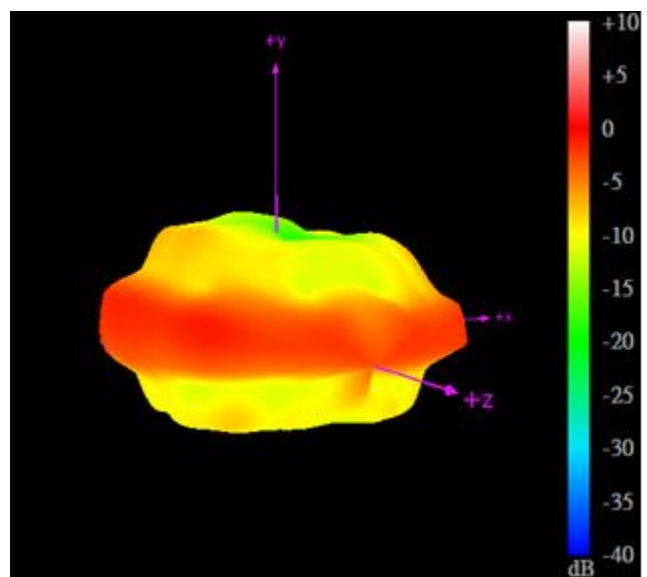


5925MHz

Bent at 90 Degrees



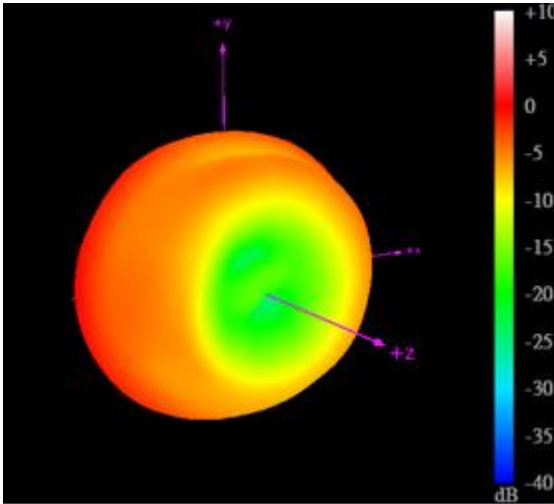
5850MHz



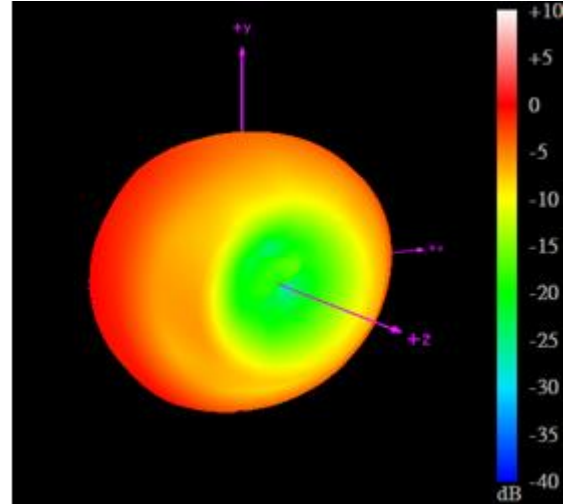
5925MHz

5.2 15\*9cm Ground Plane

Straight

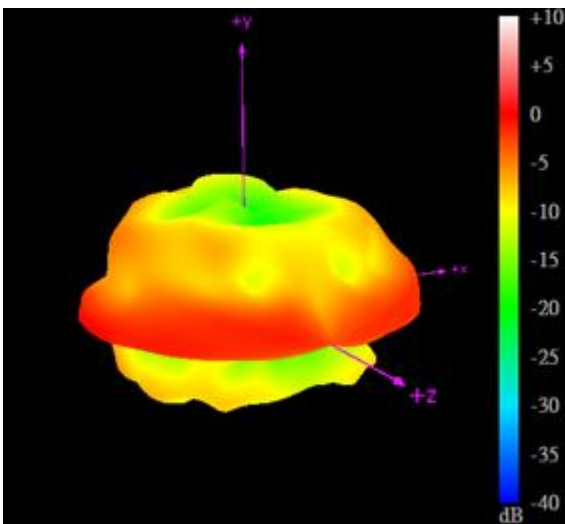


5850MHz

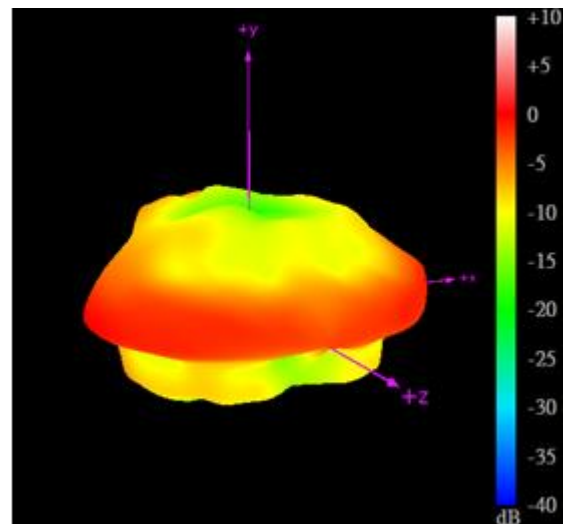


5925MHz

Bent at 90 Degrees



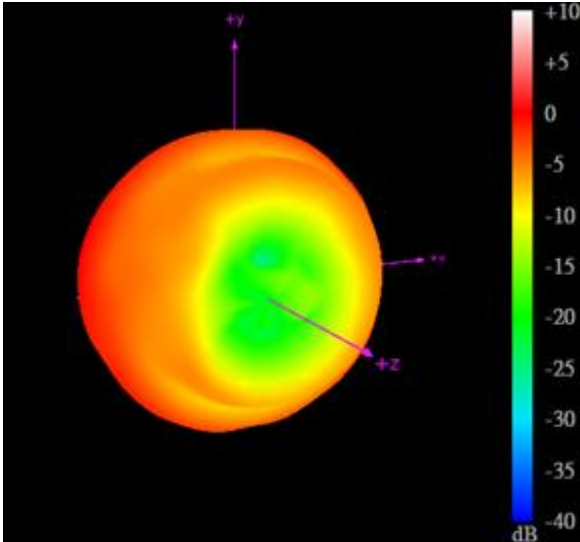
5850MHz



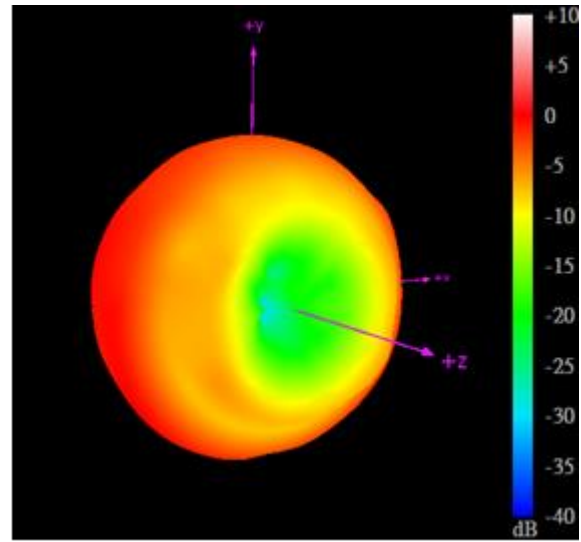
5925MHz

5.3 30\*30cm Ground Plane edge

Straight

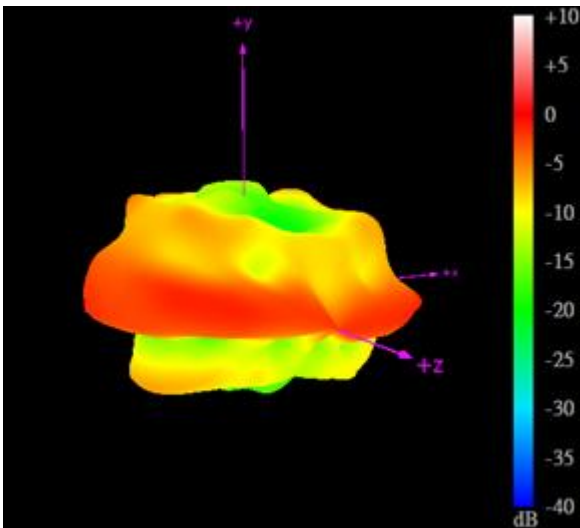


5850MHz

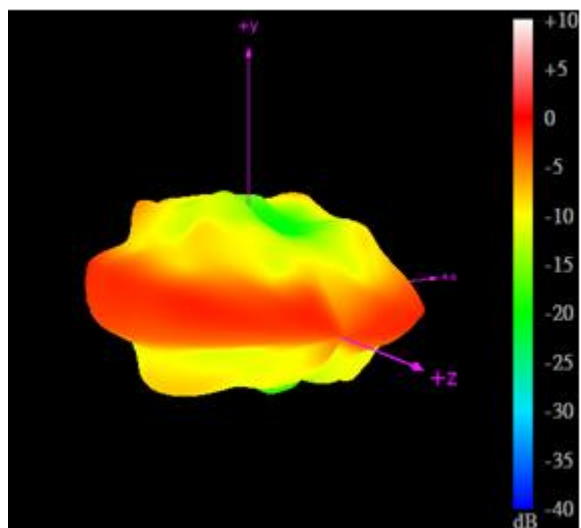


5925MHz

Bent at 90 Degrees



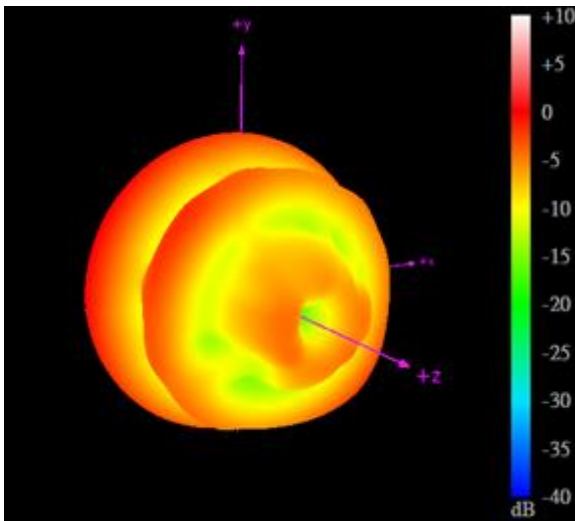
5850MHz



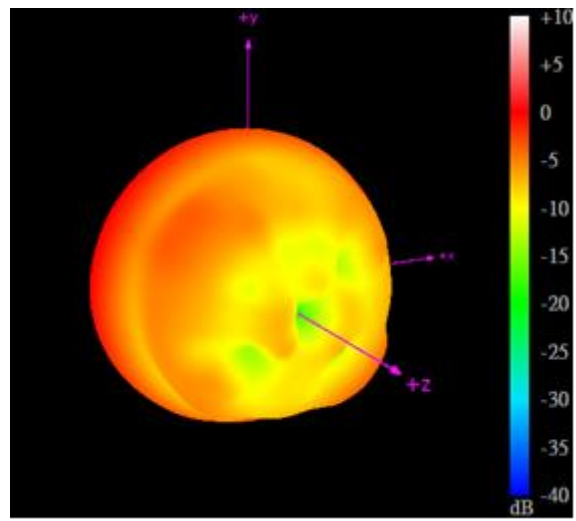
5925MHz

5.4 30\*30cm Ground Plane Center

Straight

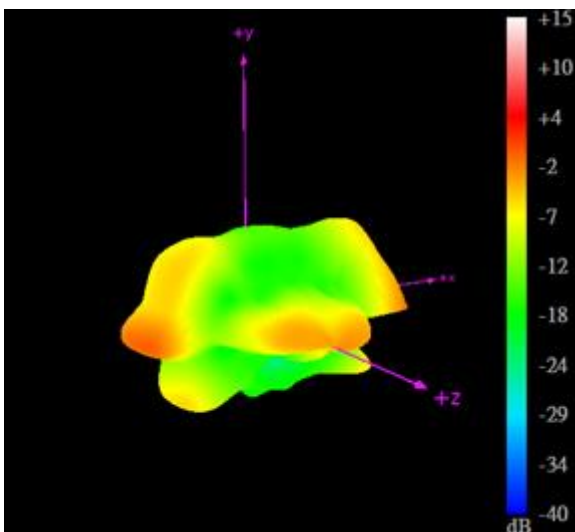


5850MHz

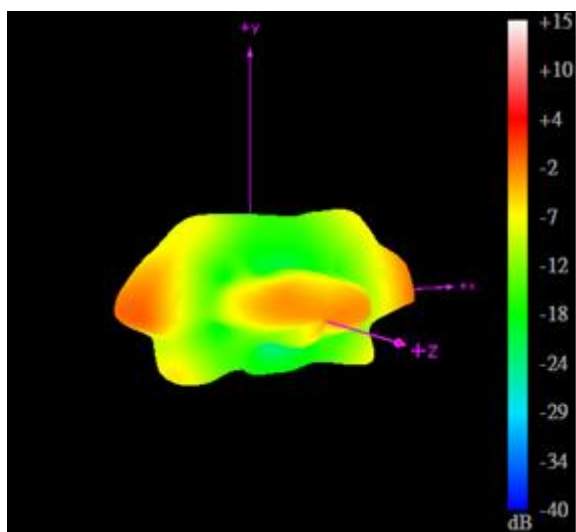


5925MHz

Bent at 90 Degrees

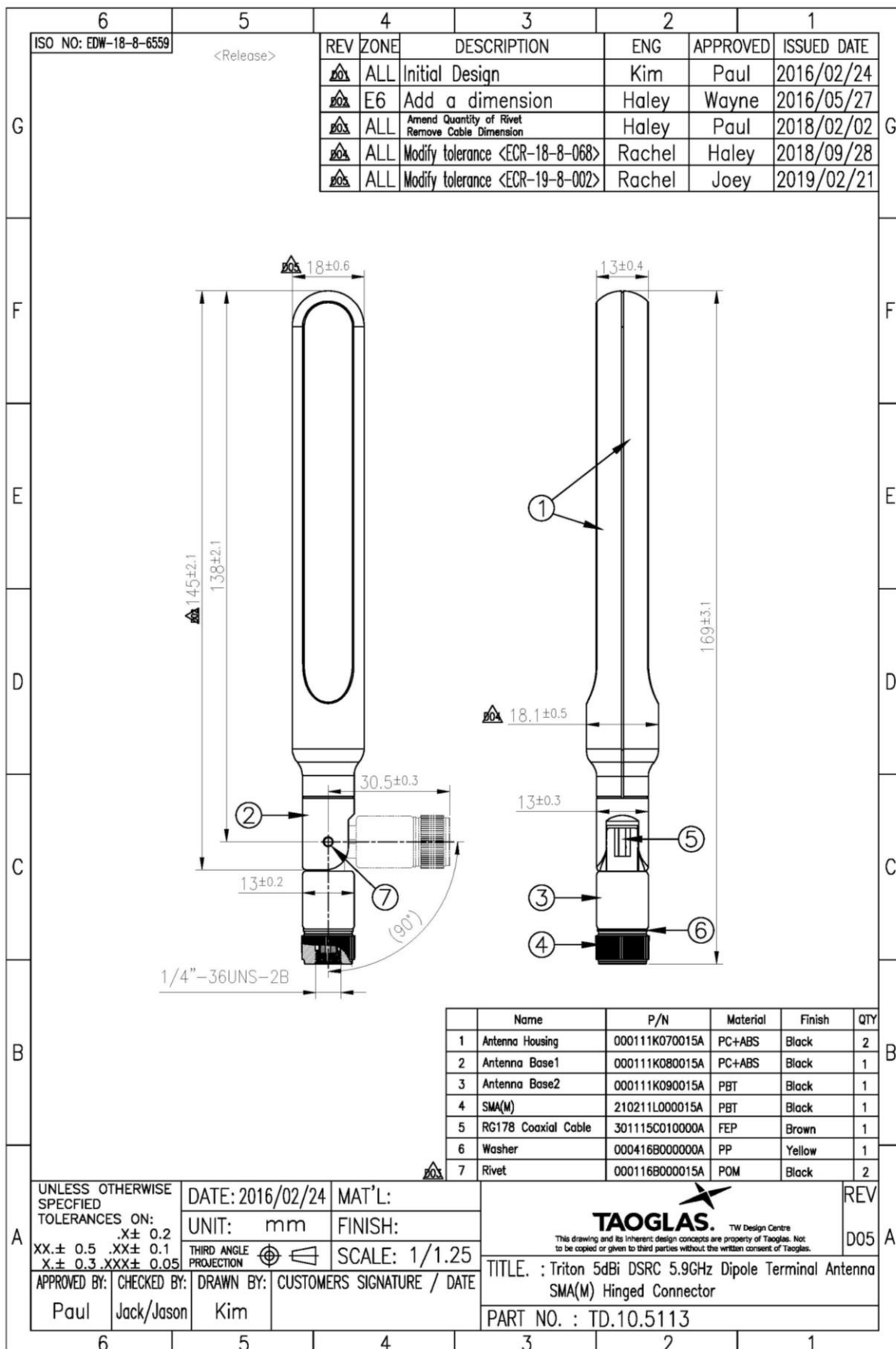


5850MHz



5925MHz

# 6. Mechanical Drawing (Units: mm)

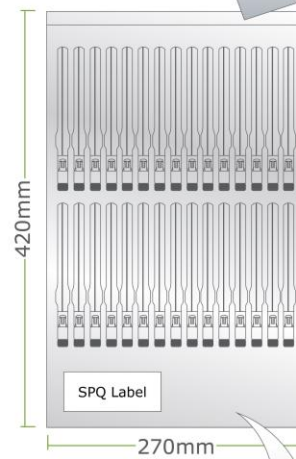


## 7. Packaging

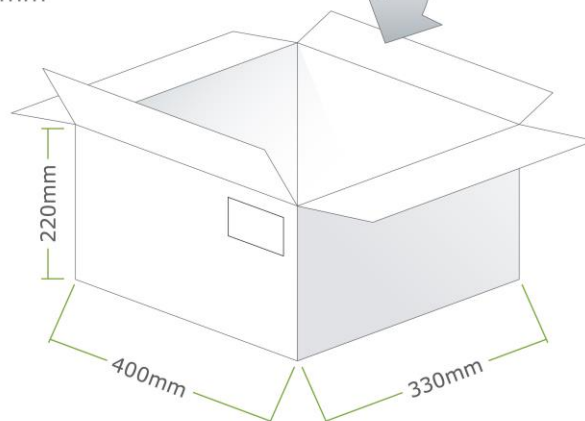
10pc TD.10.5113 per PE Bag  
 Bag Dimensions - 260\*105mm  
 Weight - 0.23Kg



50pc TD.10.5113 per SPQ Bag  
 Bag Dimensions - 270\*420mm  
 Weight - 1.2Kg



300pcs TD.10.5113 per Carton  
 Carton Dimensions - 400\*330\*220mm  
 Weight - 8Kg



Changelog for the datasheet

**SPE-16-8-063 – TD.10.5113**

<b>Revision: E (Current Version)</b>	
Date:	20223-10-16
Changes:	Updated specification
Changes Made by:	Cesar Sousa

**Previous Revisions**

<b>Revision: D</b>	
Date:	2021-12-17
Changes:	Packaging Updated
Changes Made by:	Jack Conroy

<b>Revision: C</b>	
Date:	2019-10-25
Changes:	Updated Terminology
Changes Made by:	Jack Conroy

<b>Revision: B</b>	
Date:	2019-02-27
Changes:	Installation Guide Amended
Changes Made by:	Jack Conroy

<b>Revision: A (Original First Release)</b>	
Date:	2016-09-27
Notes:	
Author:	Your Name Here







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