



# TAOGLAS®



## Datasheet

### Triton – TD.10.5113

**Description:**

5dBi C-V2X 5.9GHz Dipole Terminal Antenna SMA(M) Hinged Connector

**Features:**

5.9GHz C-V2X 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 for C-V2X systems. 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.

C-V2X is the communications medium of choice for active safety V2V/V2X (Vehicle-to-Vehicle and Vehicle-to-Other) systems. Primarily allocated for vehicle safety applications, C-V2X supports high-speed, low-latency, short-range, V2V/V2X wireless communications.

For further optimization to customer-specific device environments and for support to integrate and test this antennas performance in your device, contact your regional Taoglas Customer Services Team.

## 2. Specifications

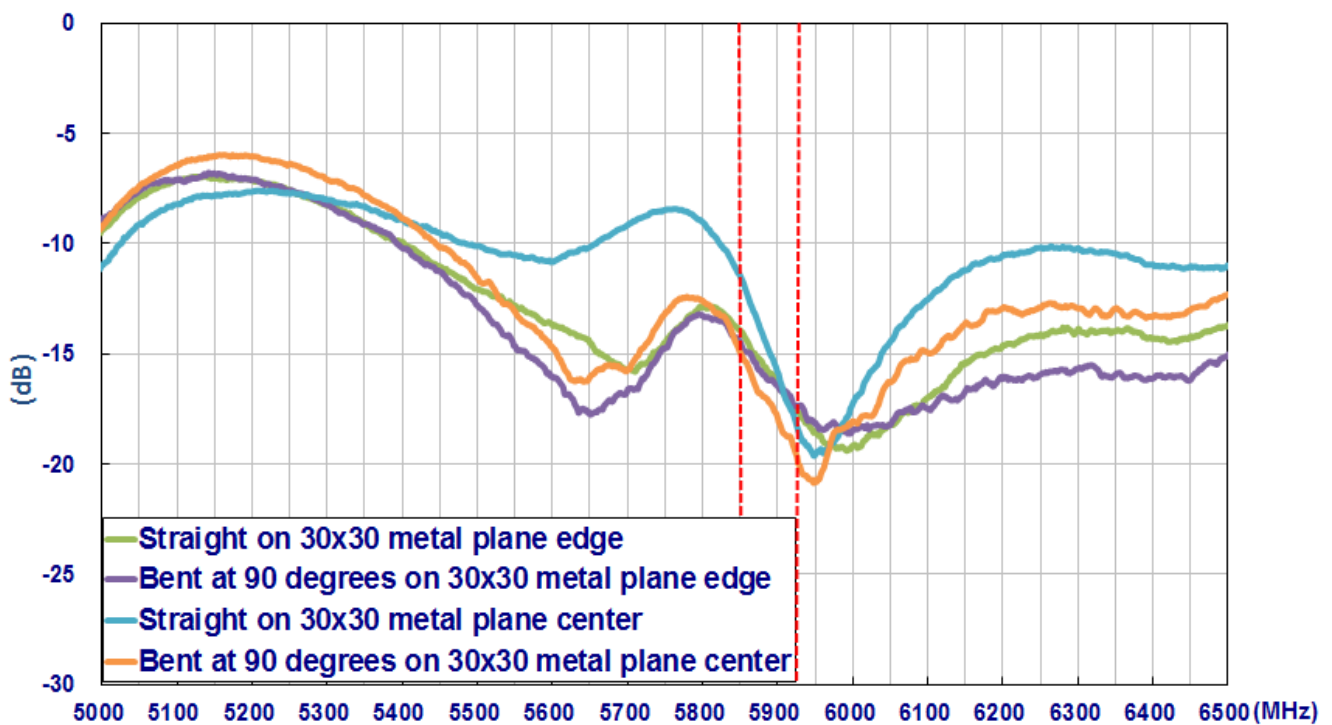
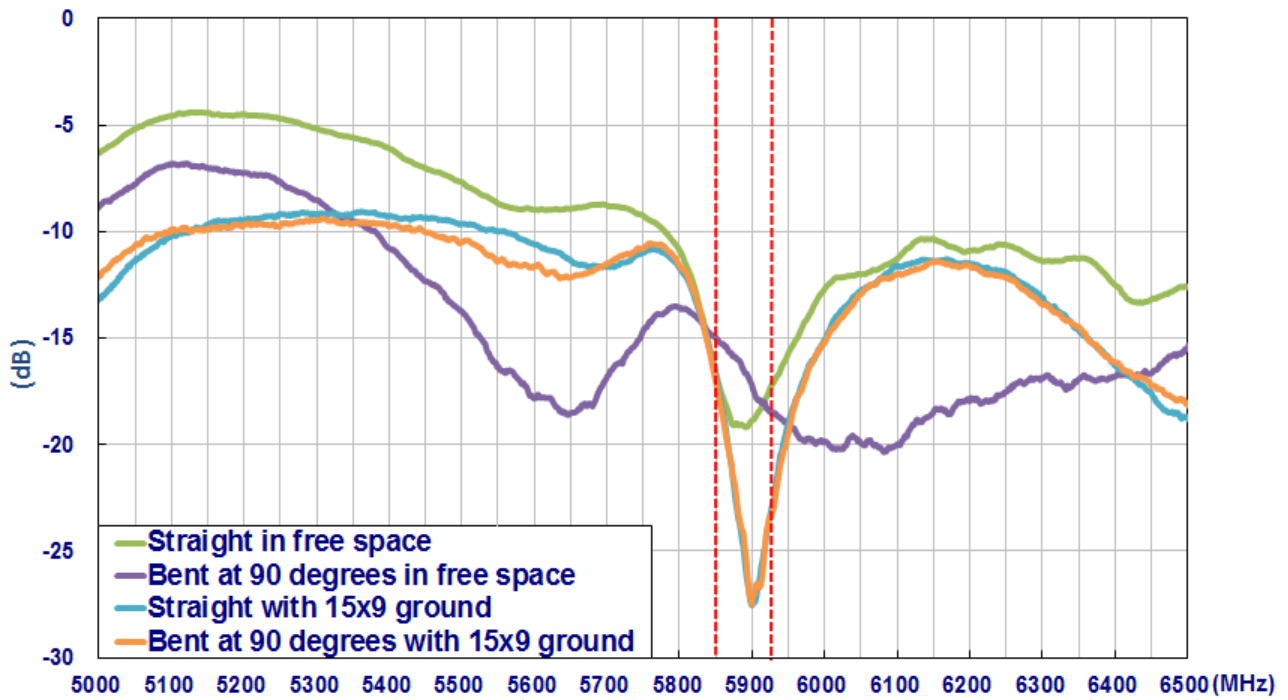
Electrical	
In Free Space	
Frequency	5850~5925MHz
Efficiency (%)	
Straight Pose	73.48
Bent Pose	64.58
Average Gain (dBi)	
Straight Pose	-1.34
Bent Pose	-1.9
Peak Gain (dBi)	
Straight Pose	5.88
Bent Pose	5.67
With 15*9cm Ground Plane	
Frequency	5850~5925MHz
Efficiency (%)	
Straight Pose	49.00
Bent Pose	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

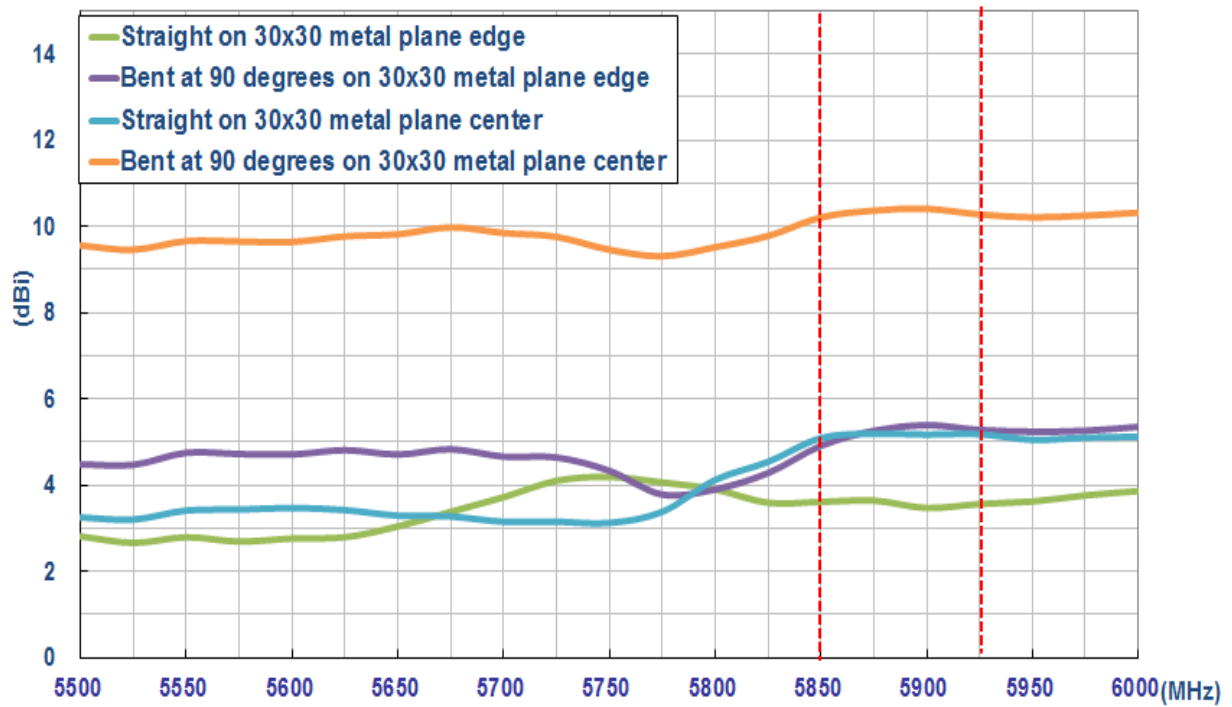
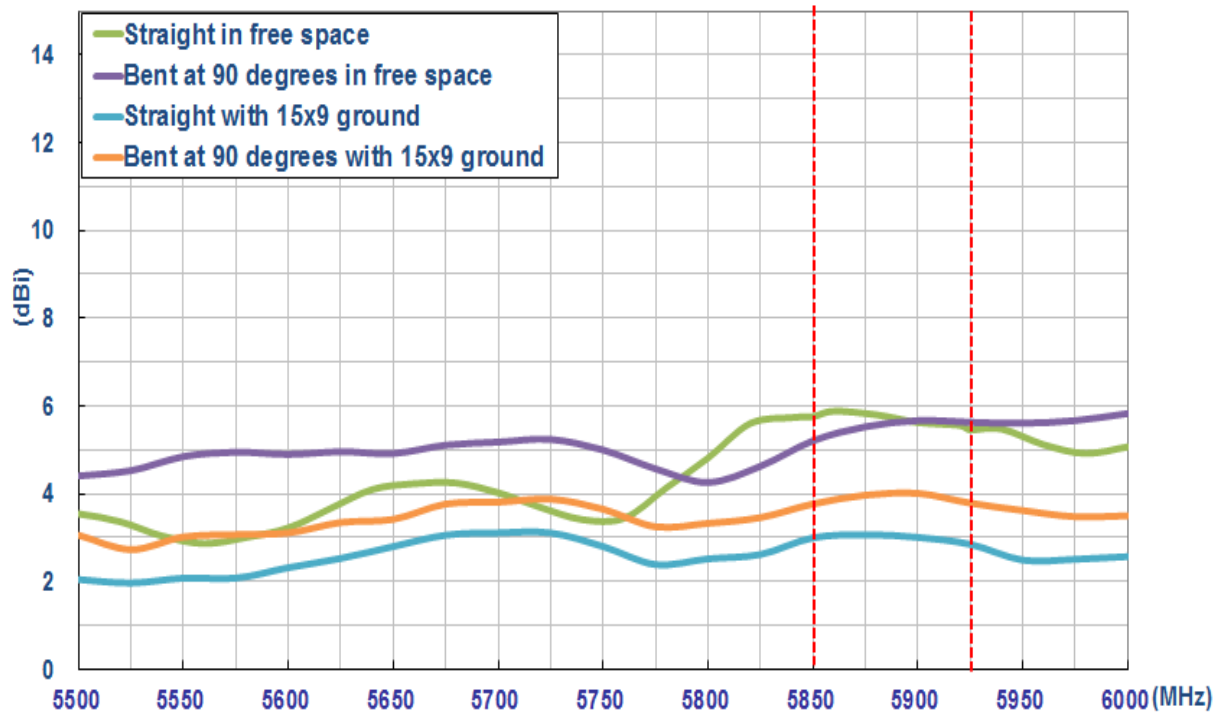
Environmental	
Temperature Range	-40°C to 85°C
Humidity	Non-condensing 65°C 95% RH

### 3. Antenna Characteristics

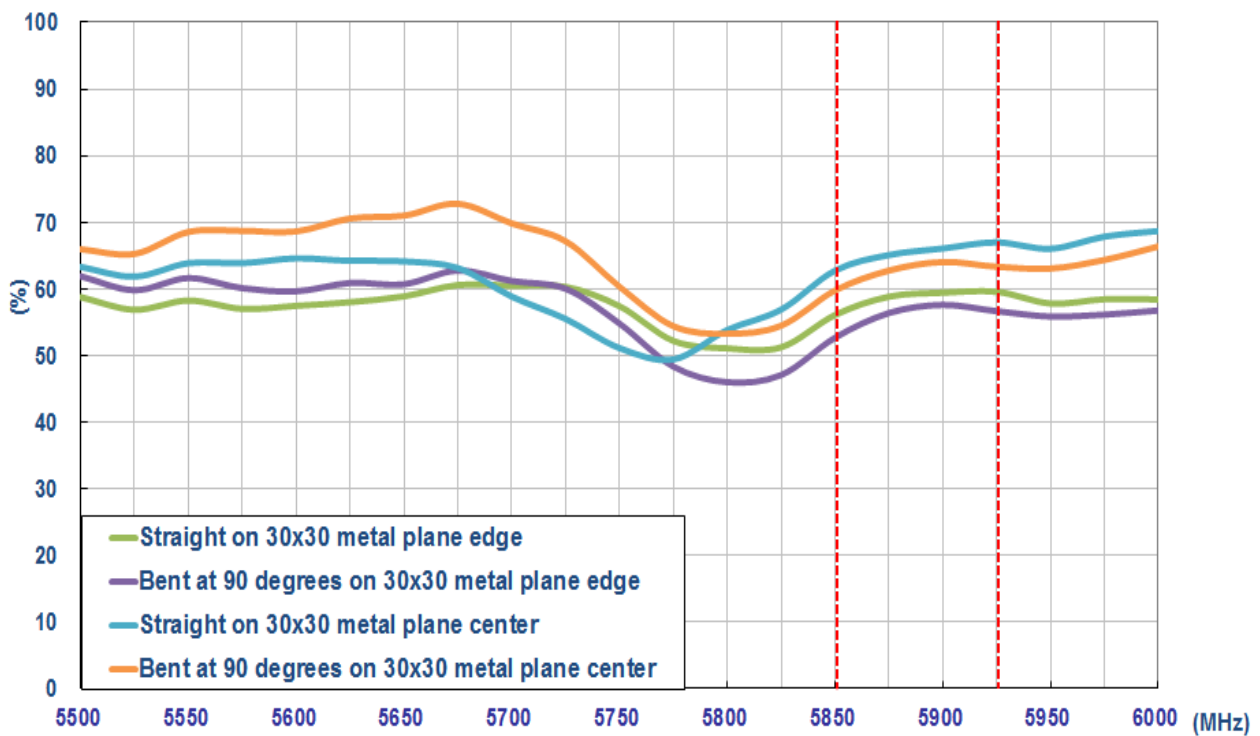
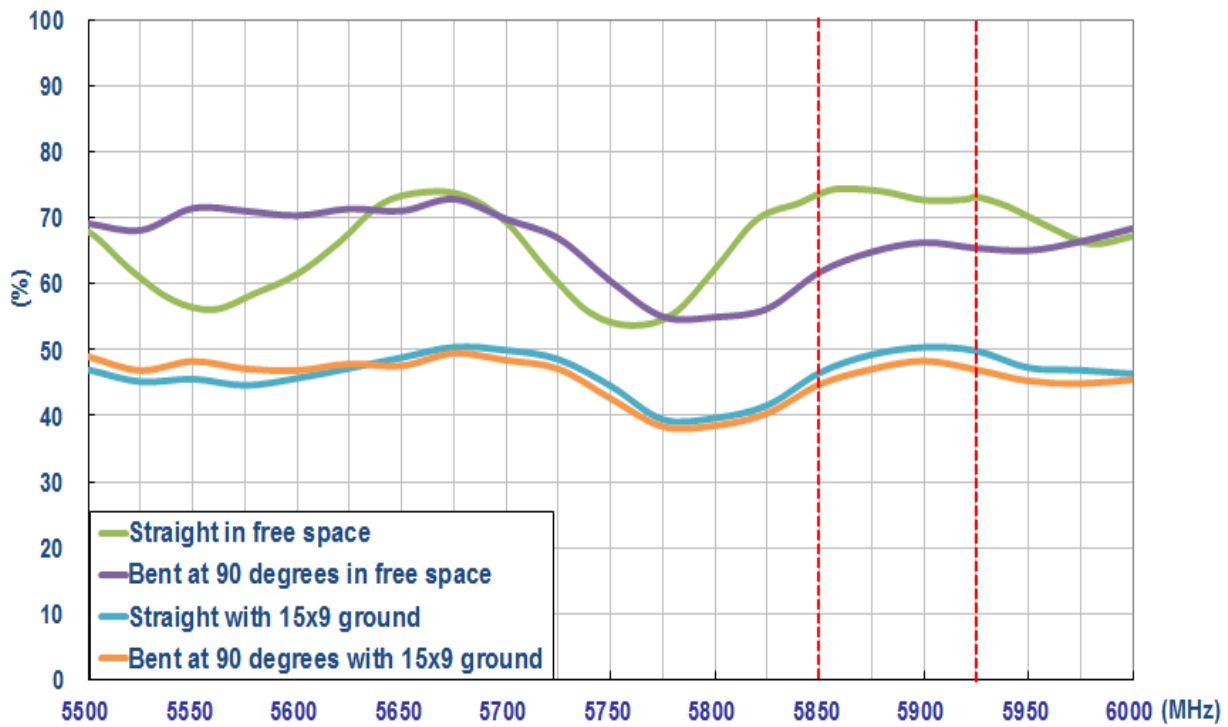
#### 3.1 Return Loss



### 3.2 Peak Gain

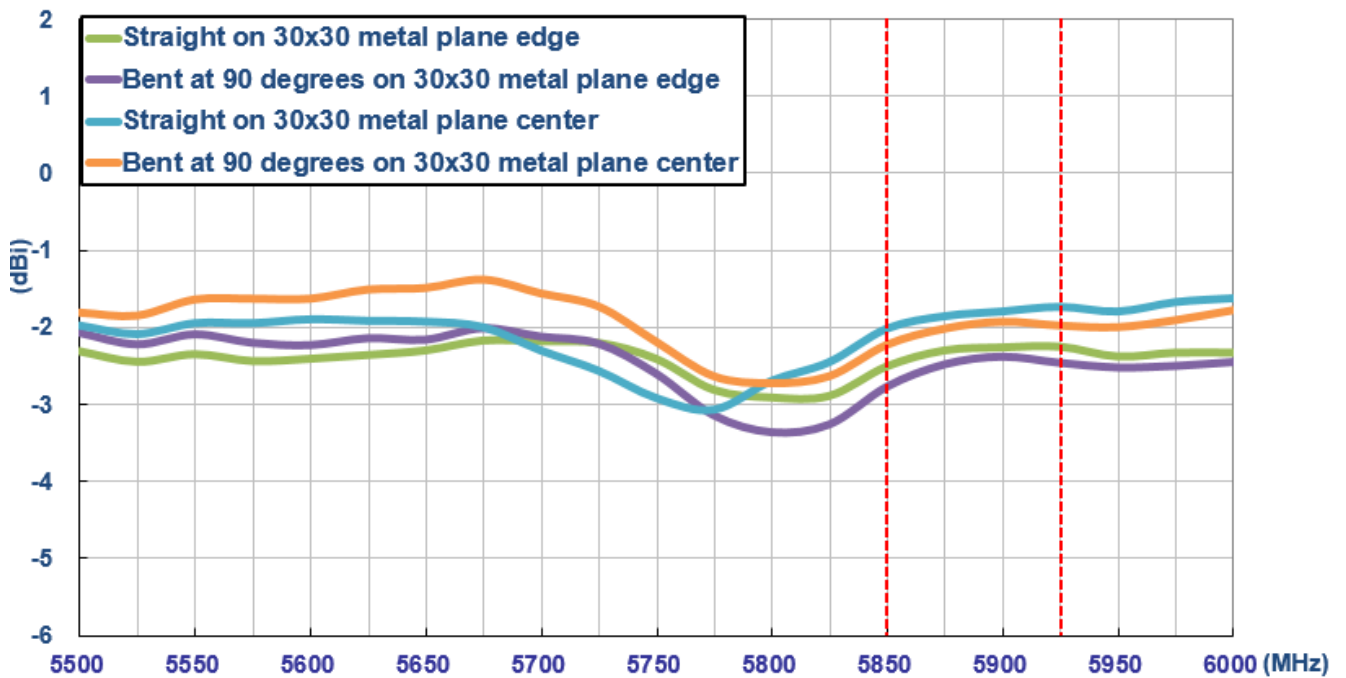
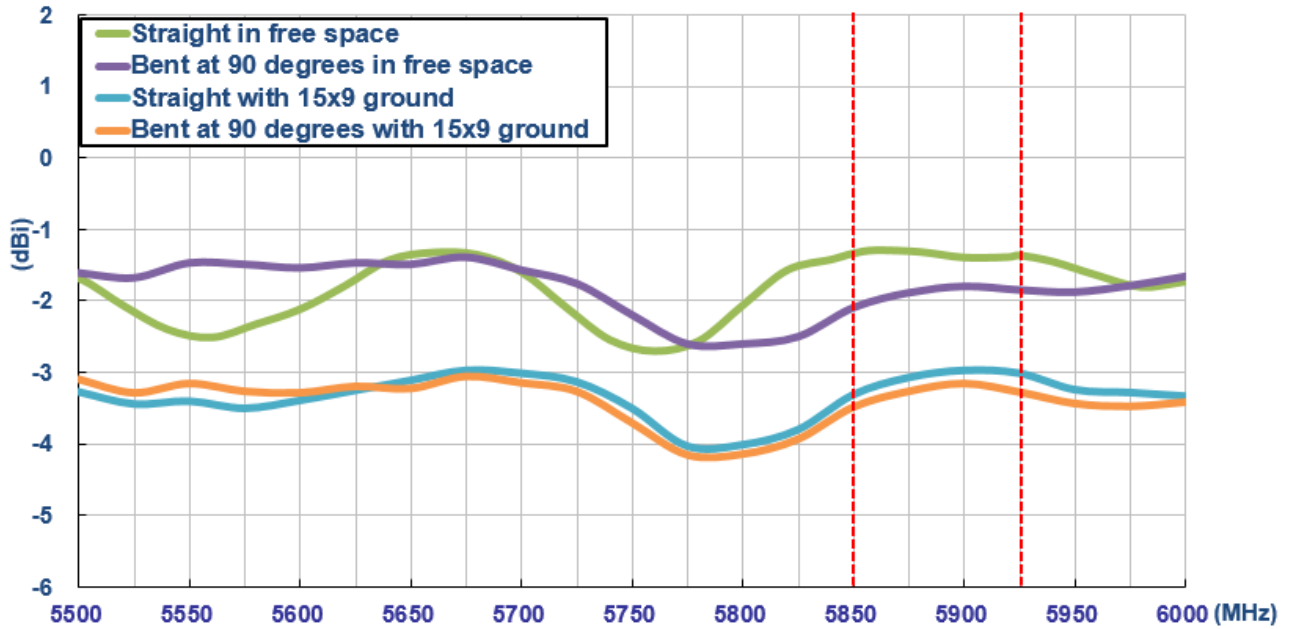


### 3.3 Efficiency



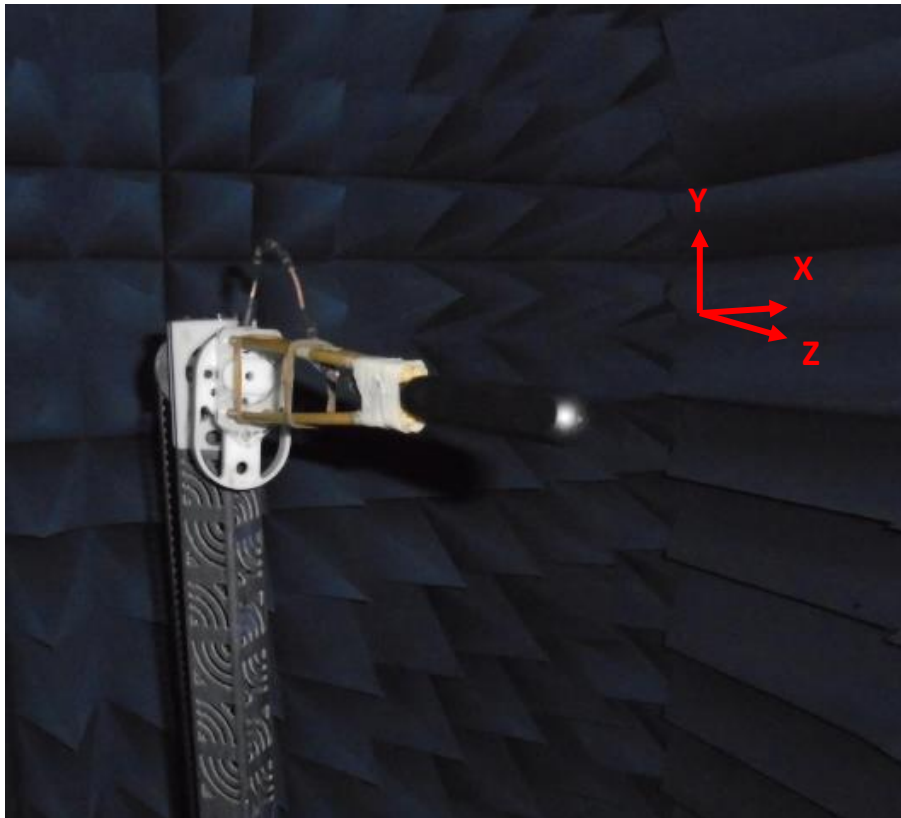


### 3.4 Average Gain



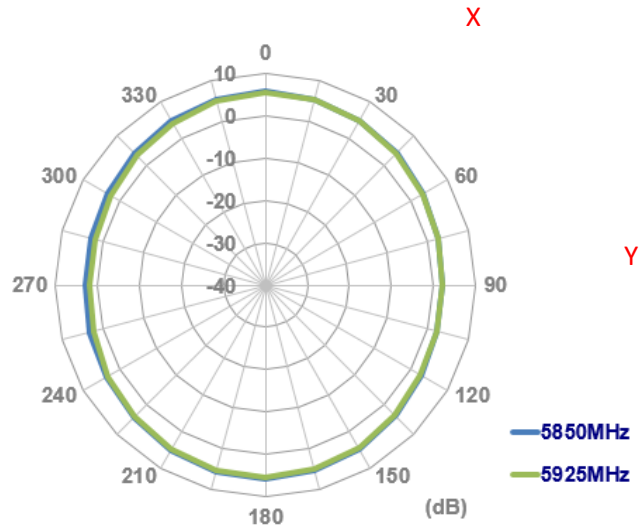
## 4. 2D Radiation Patterns

### 4.1 Test Setup

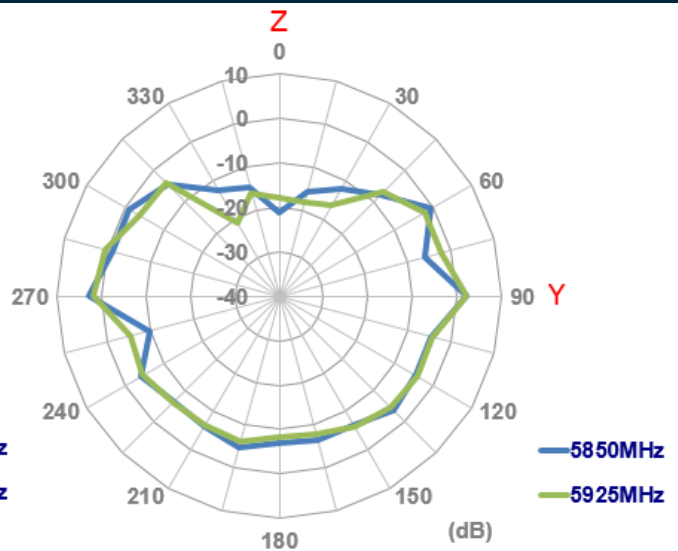
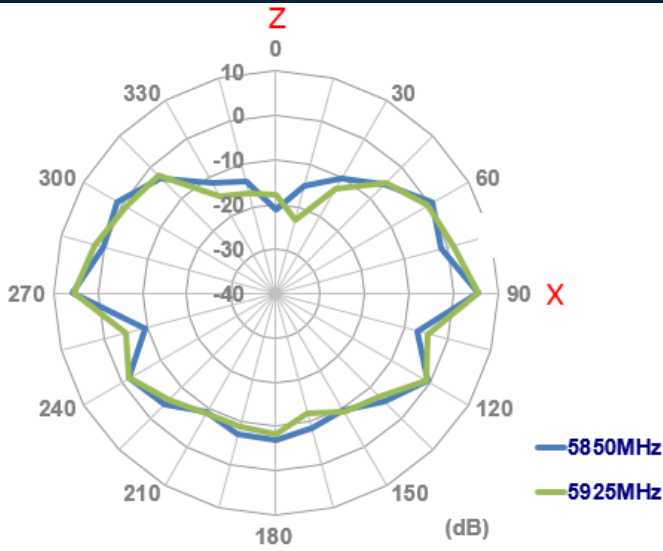


Free space Straight

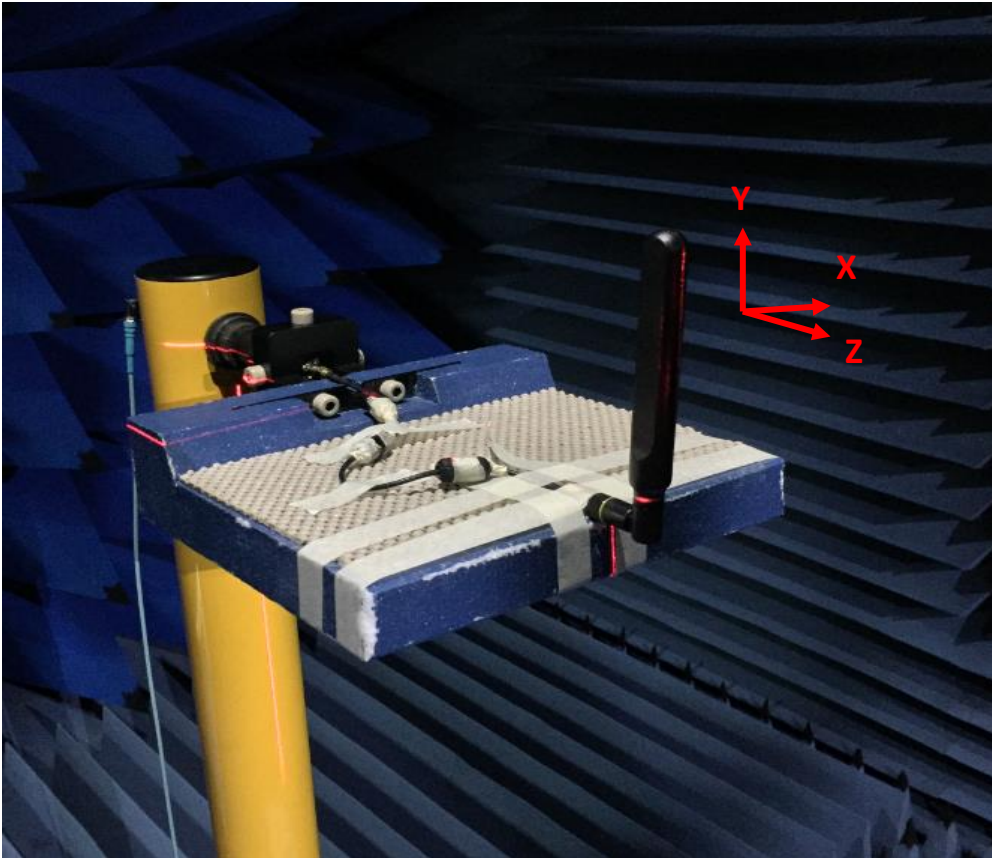
XY Plane



XZ Plane      YZ Plane

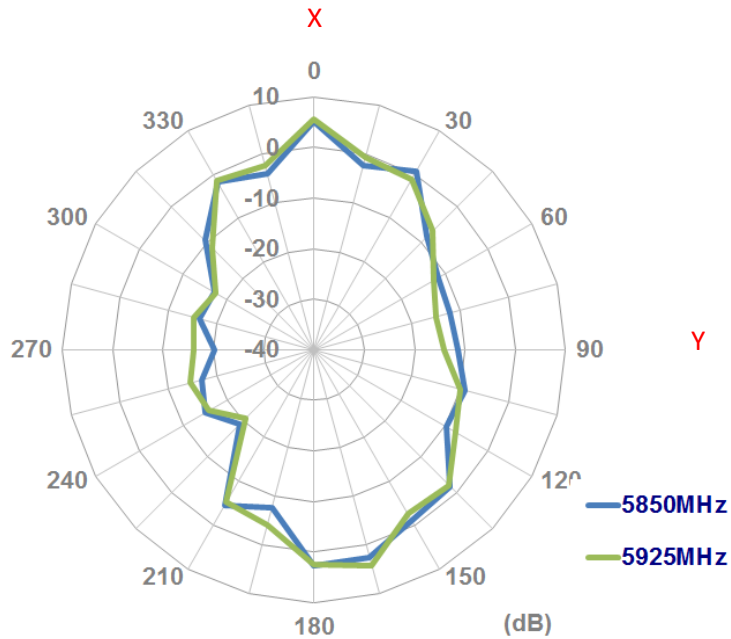


4.2 Test Setup

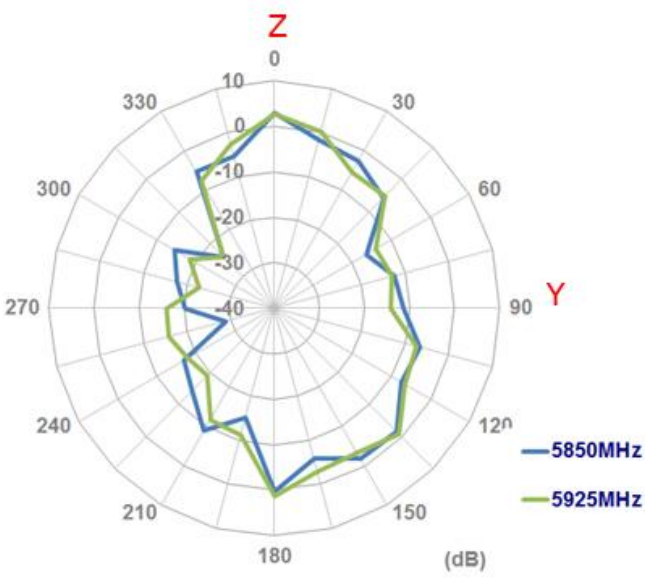
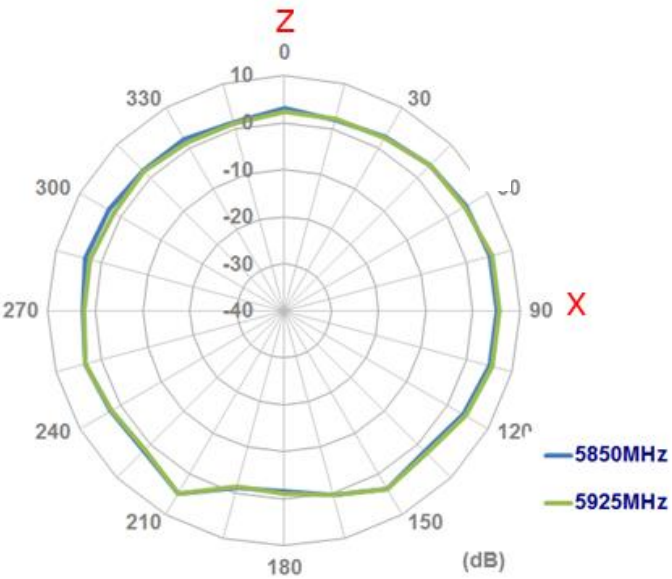


Free space bend

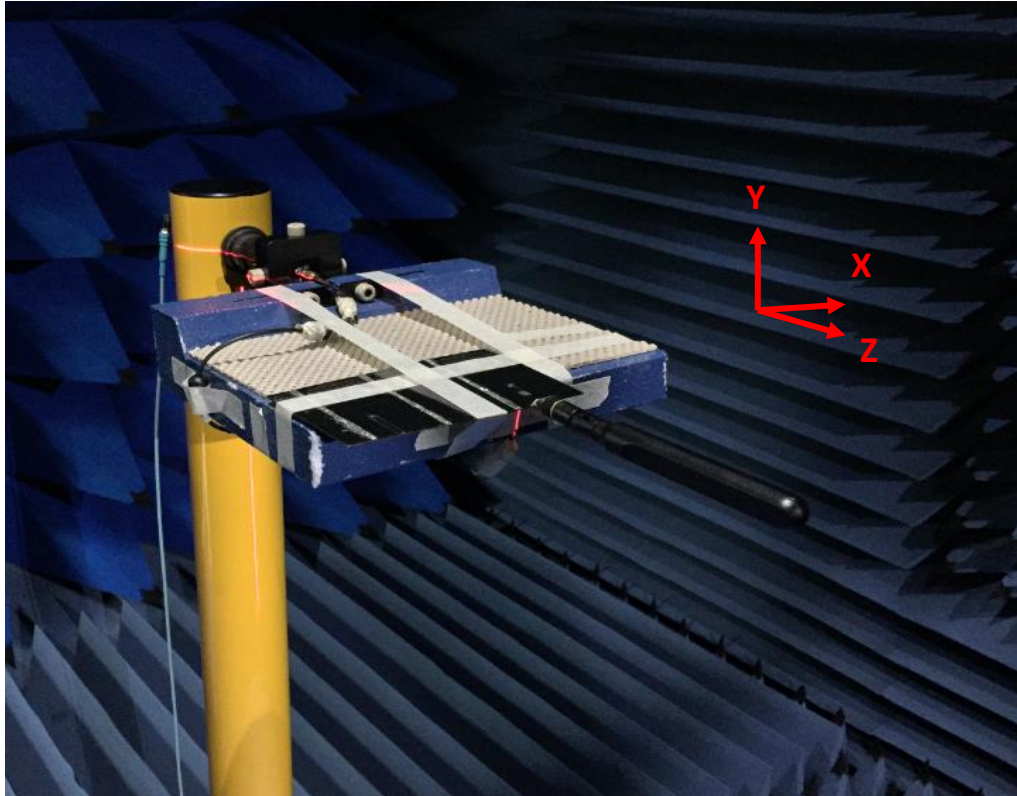
**XY Plane**



**XZ Plane**                      **YZ Plane**

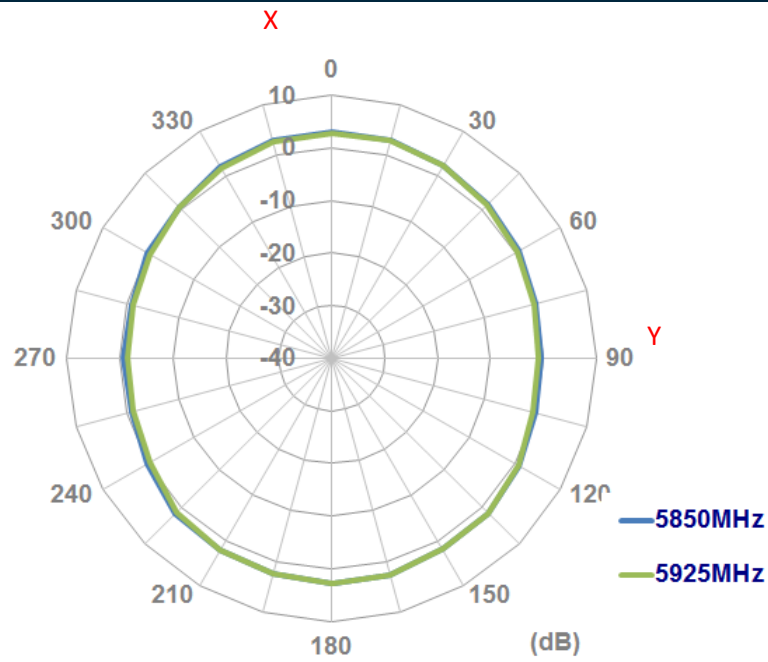


4.3 Test Setup



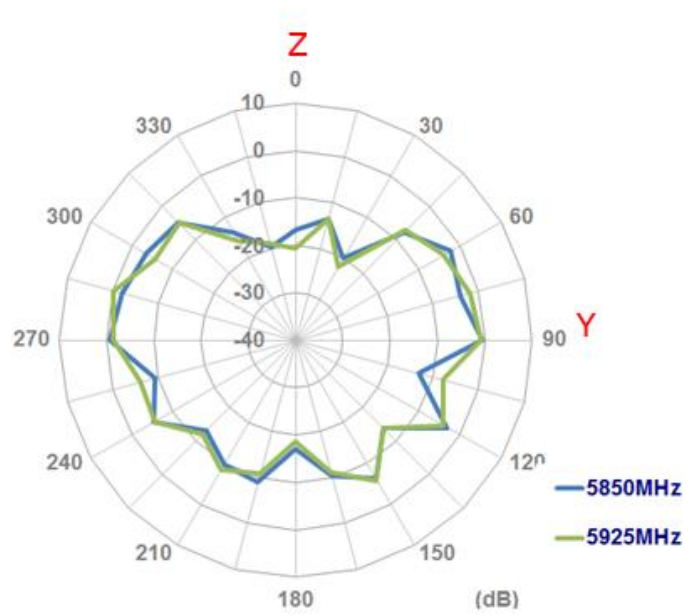
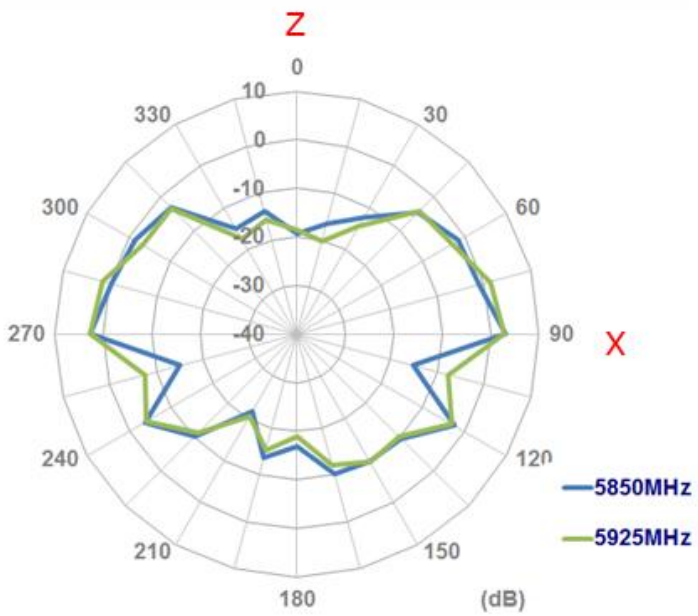
straight with 15\*9cm ground plane

XY Plane

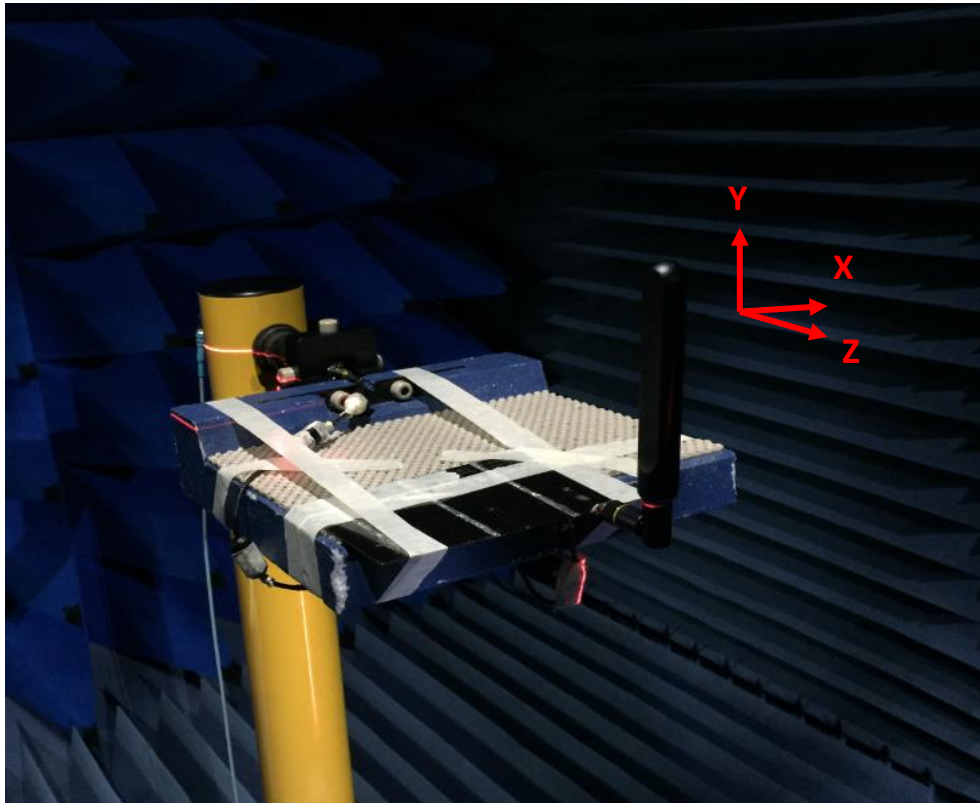


XZ Plane

YZ Plane



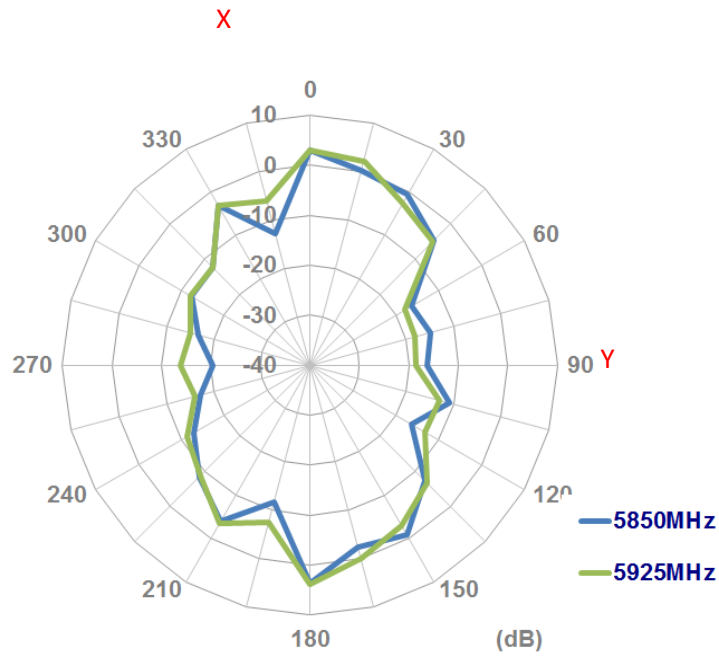
4.4 Test Setup



bent with 15\*9cm ground plane

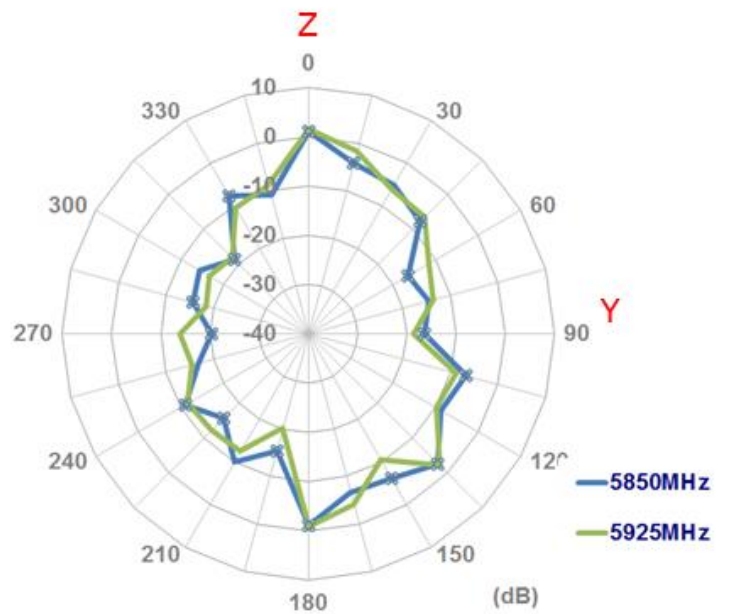
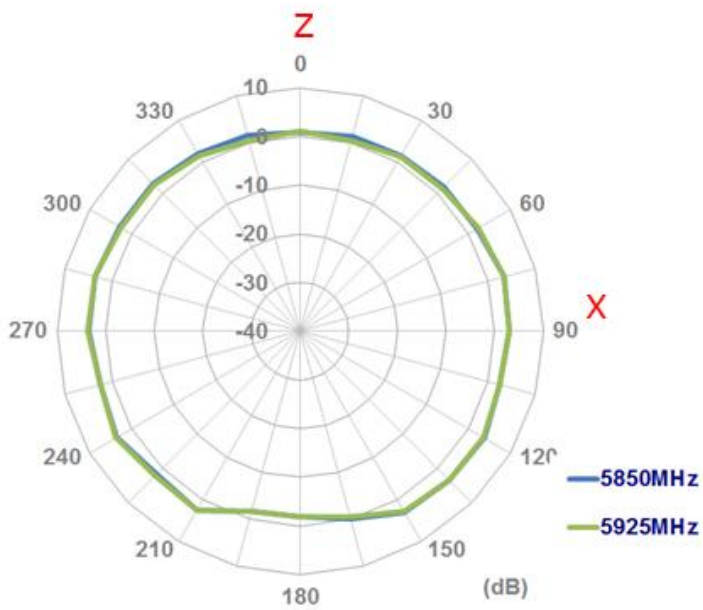


XY Plane

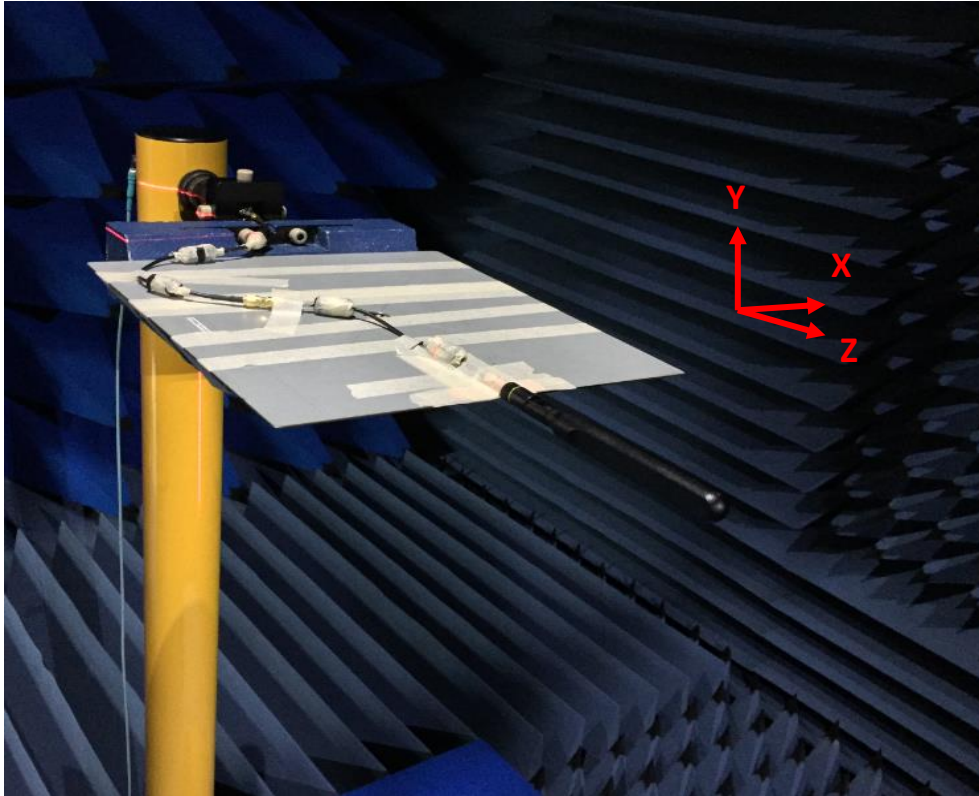


XZ Plane

YZ Plane

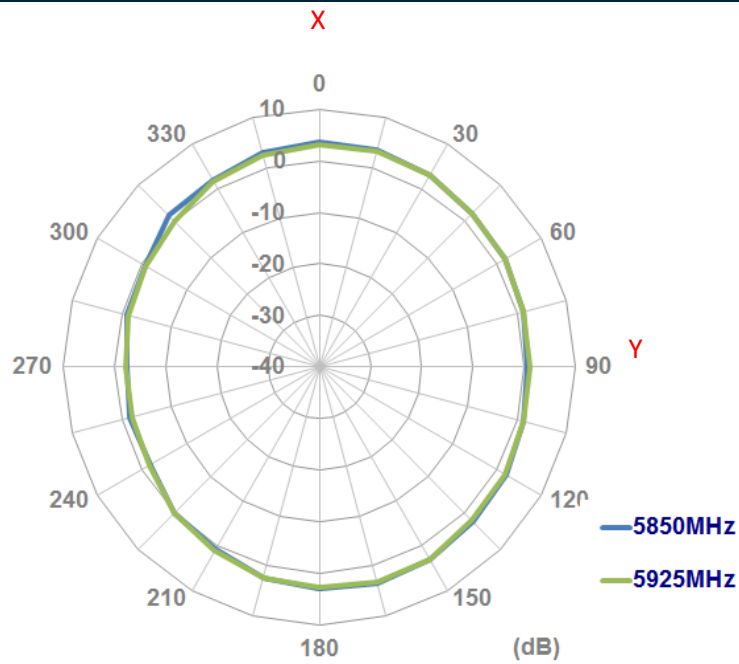


4.4 Test Setup



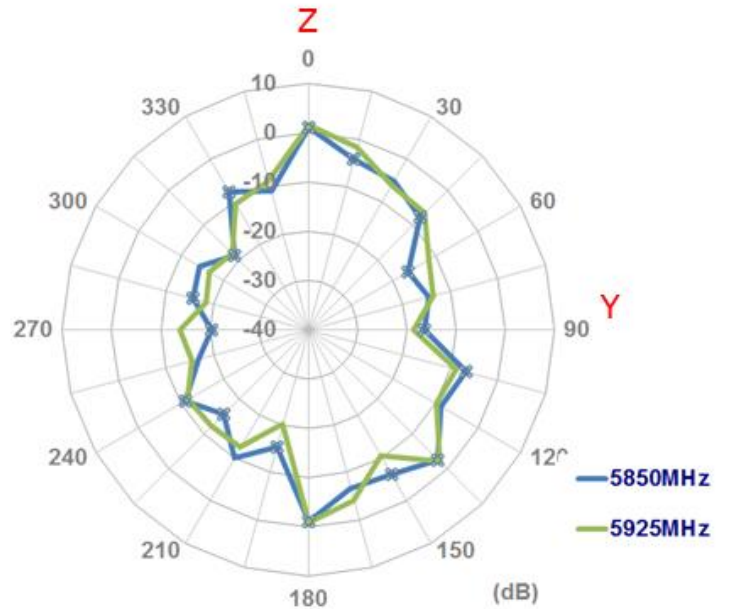
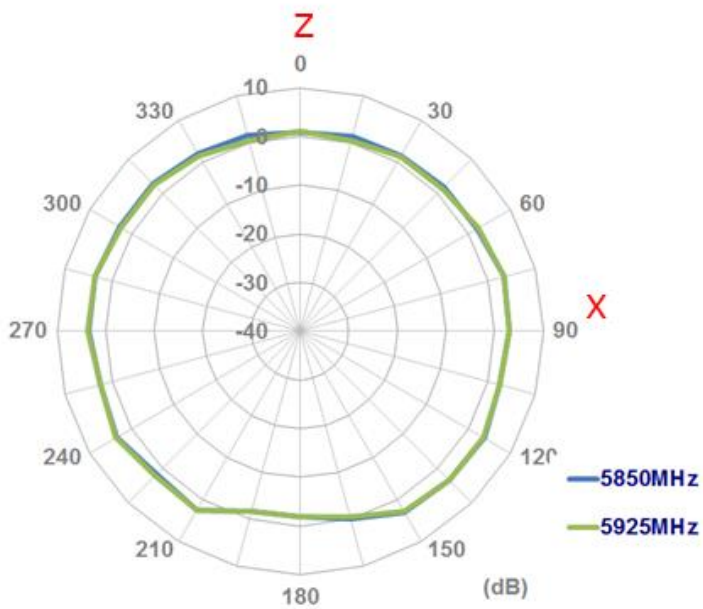
Straight with 30\*30cm Ground Plane edge

XY Plane

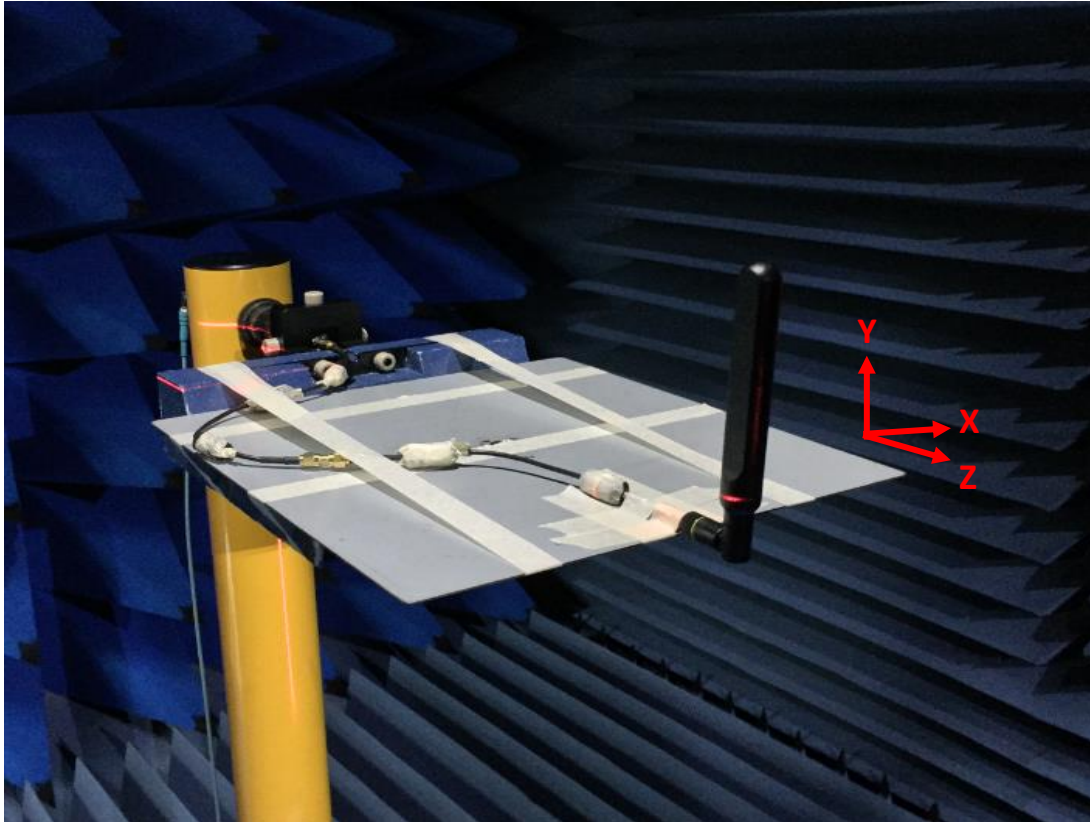


XZ Plane

YZ Plane

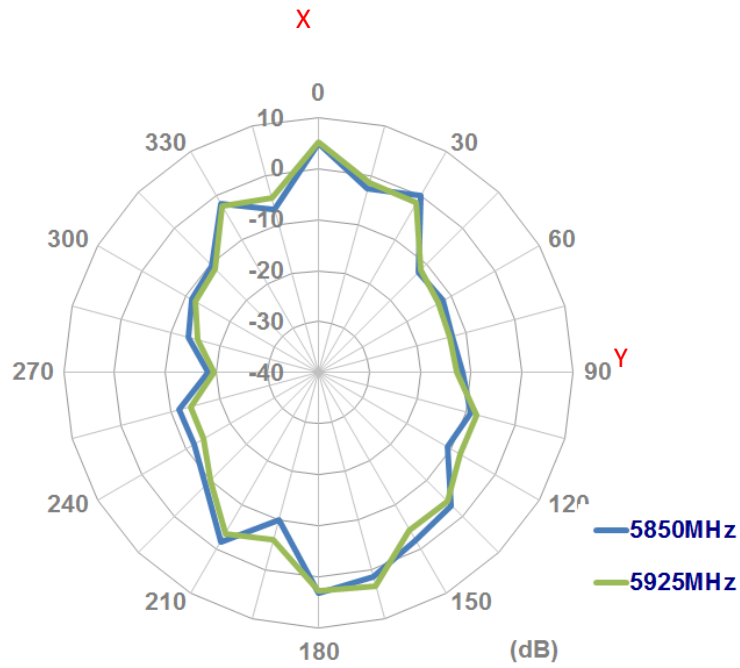


4.5 Test Setup

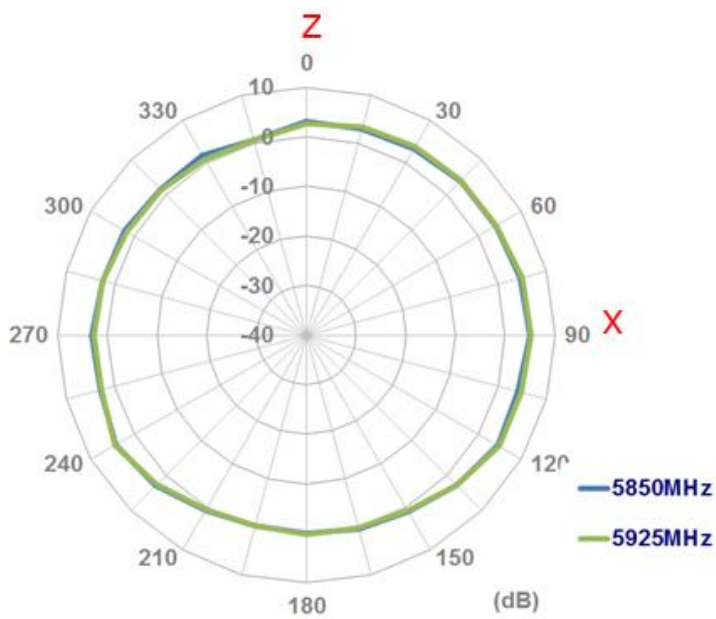


Bent with 30\*30cm Ground Plane edge

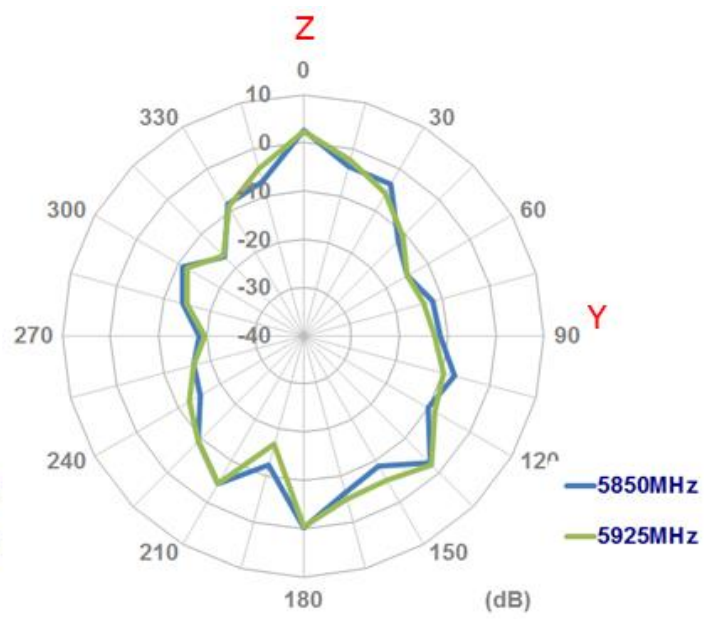
XY Plane



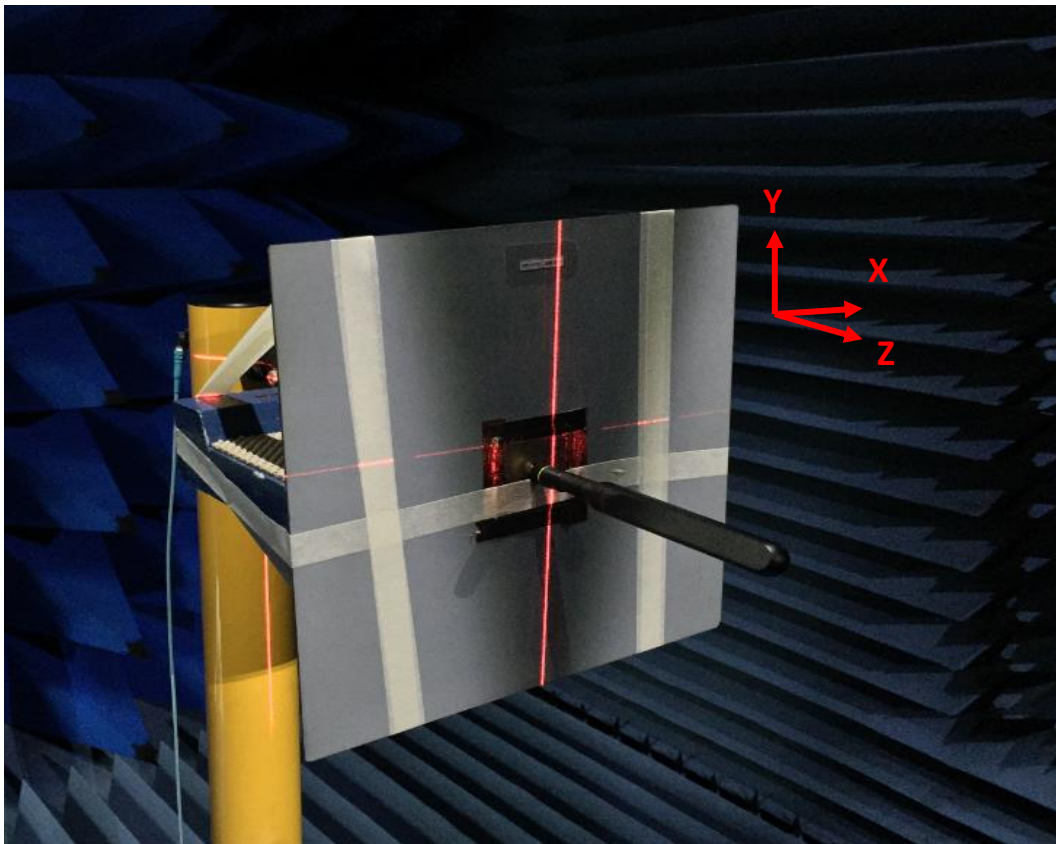
XZ Plane



YZ Plane

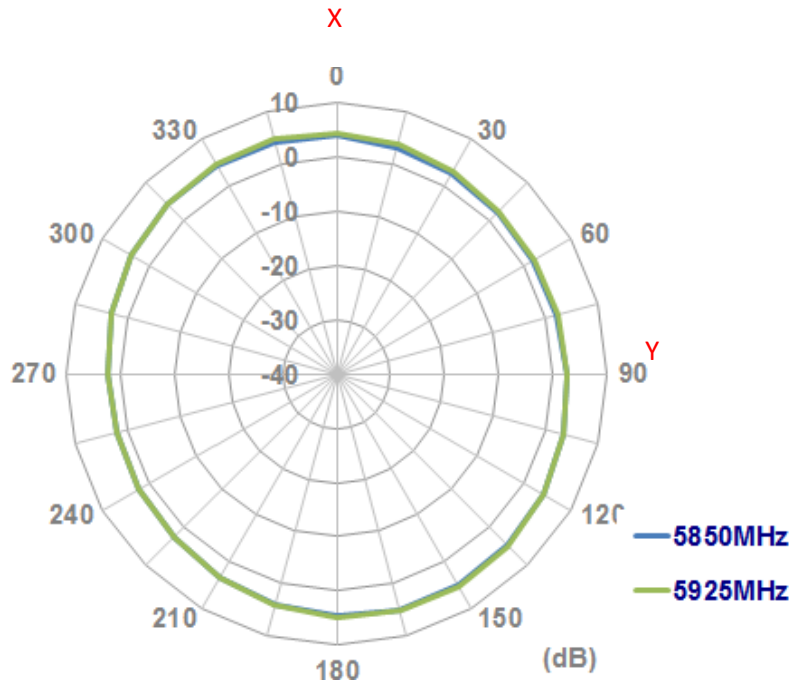


4.6 Test Setup

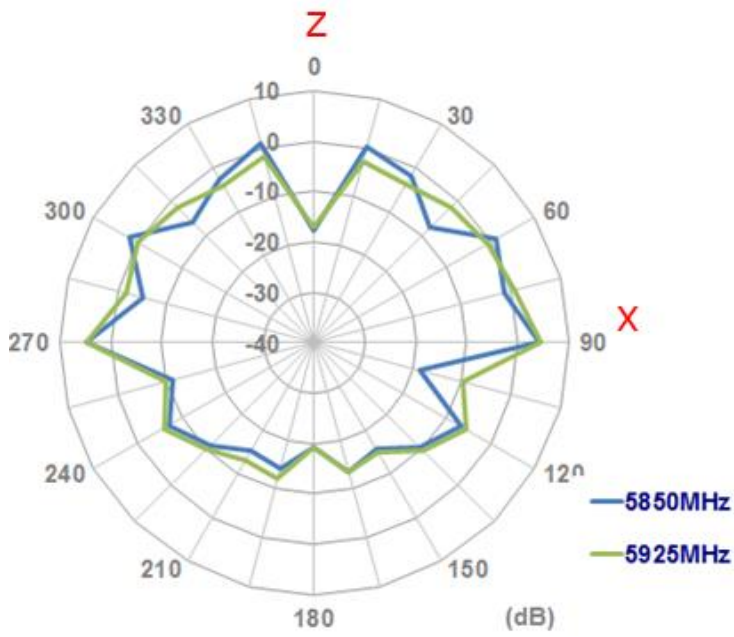


Straight with 30\*30cm Ground Plane Center

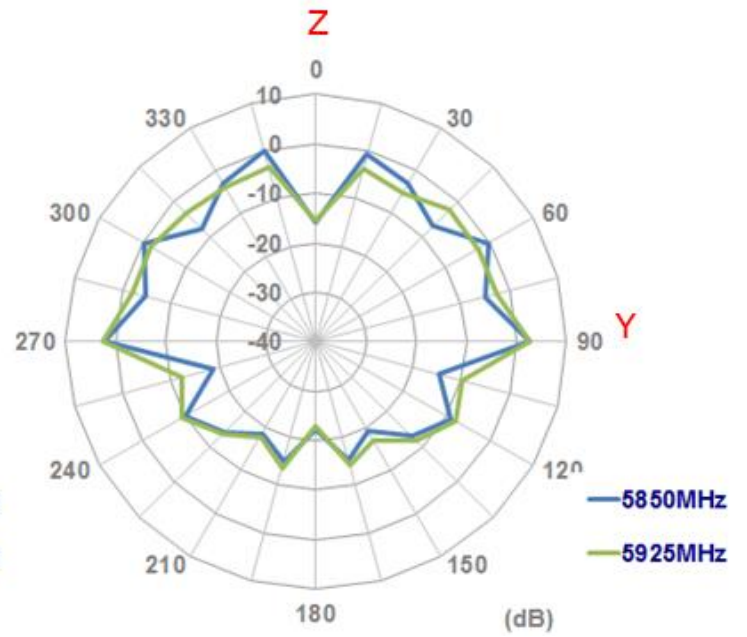
XY Plane



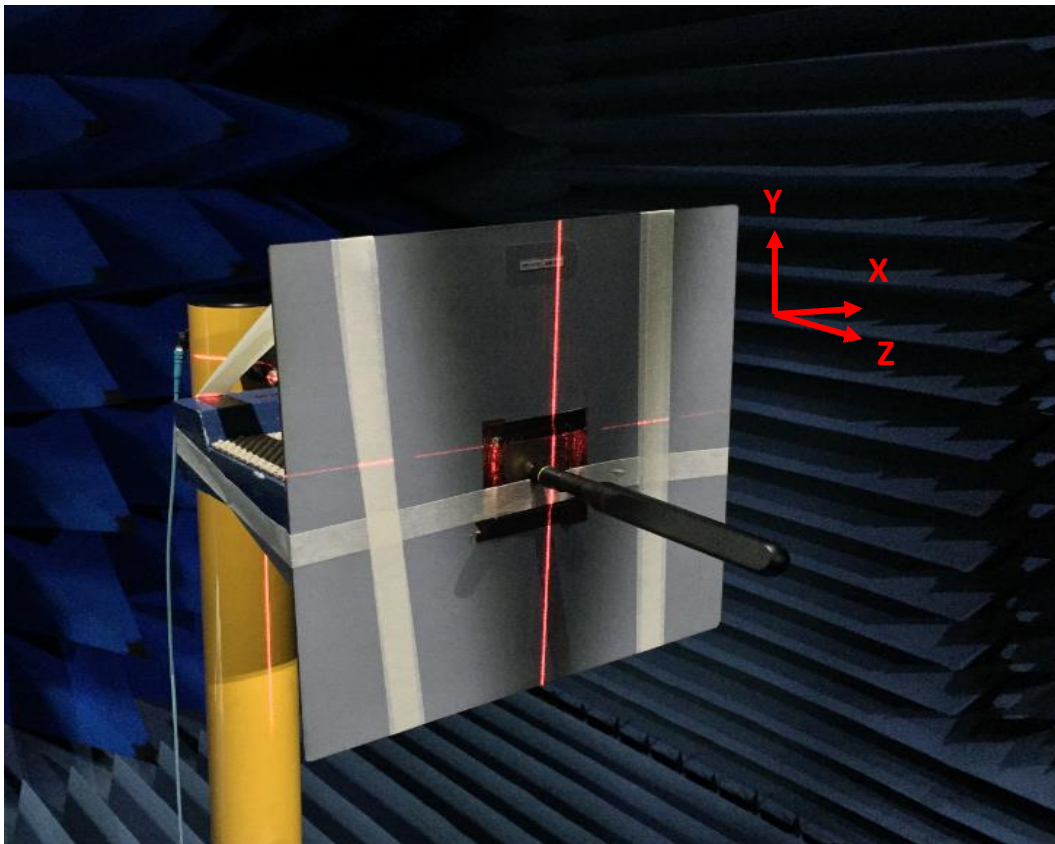
XZ Plane



YZ Plane



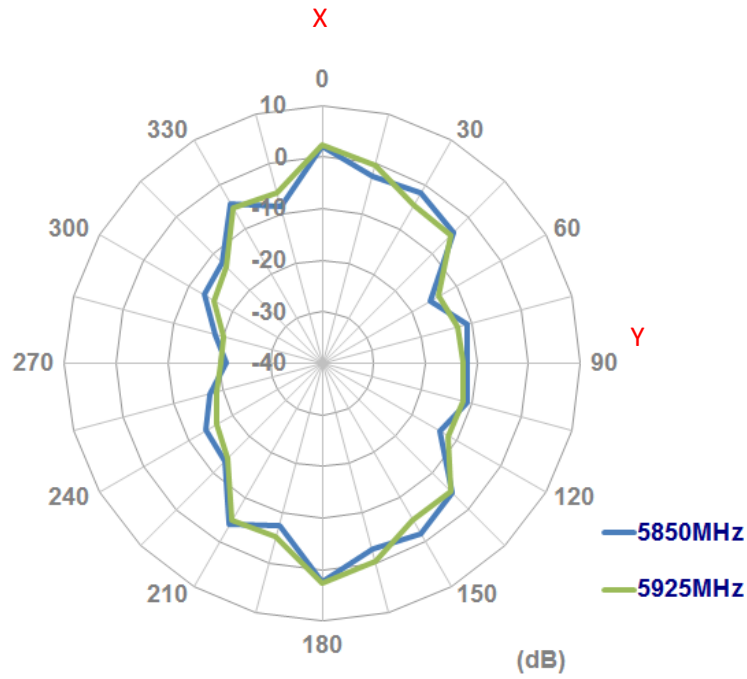
4.7 Test Setup



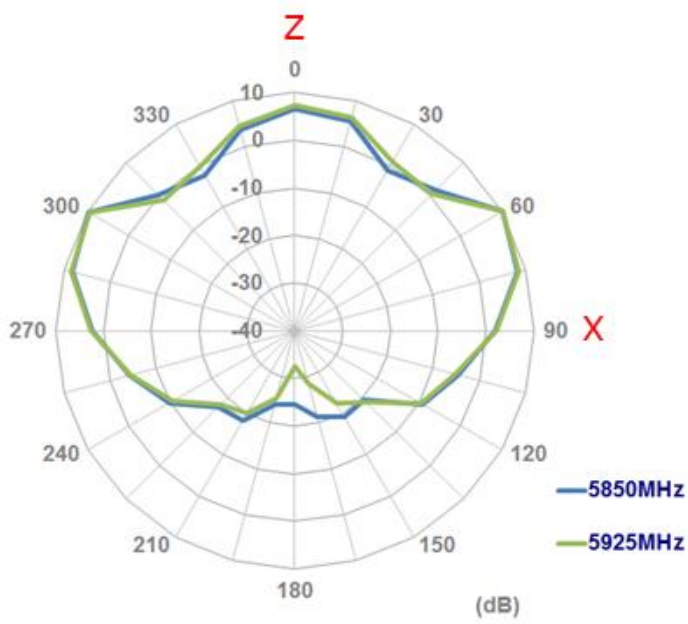
Bent at 90° with 30\*30cm Ground Plane Center



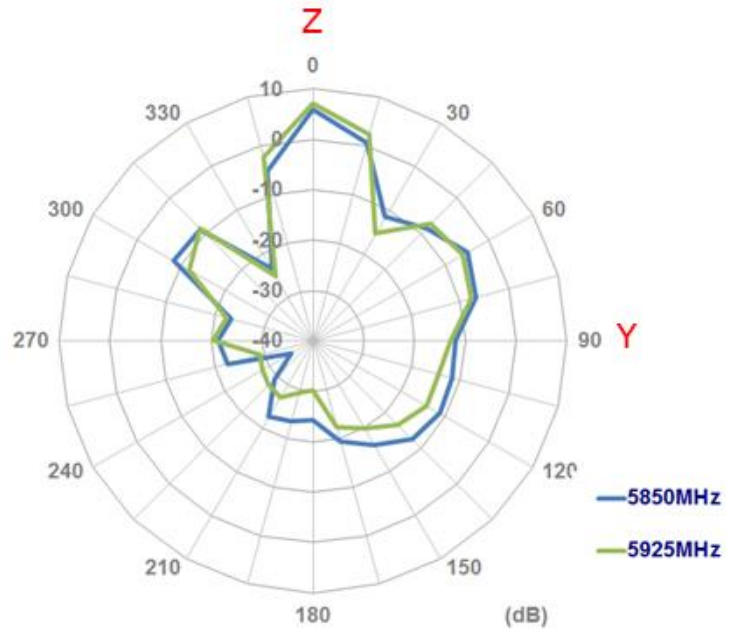
XY Plane



XZ Plane



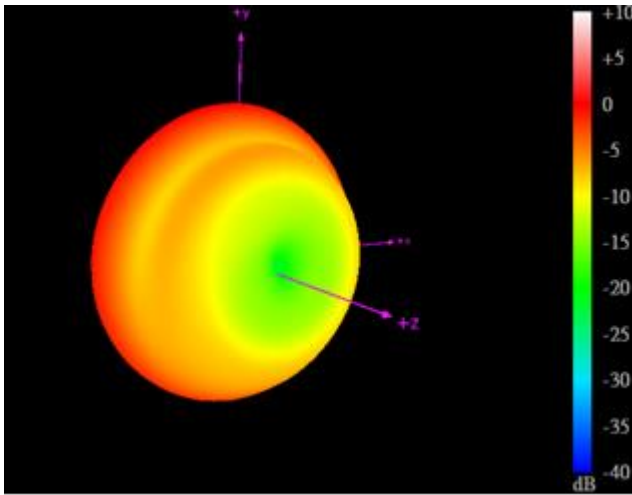
YZ Plane



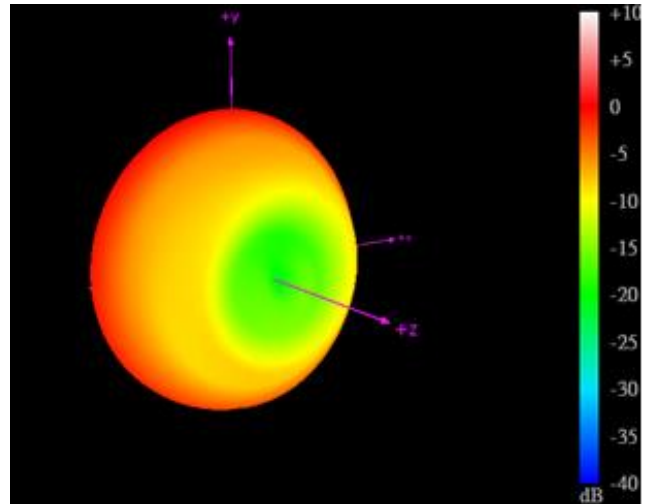
## 5. 3D Radiation Patterns

### 5.1 Free Space

Straight

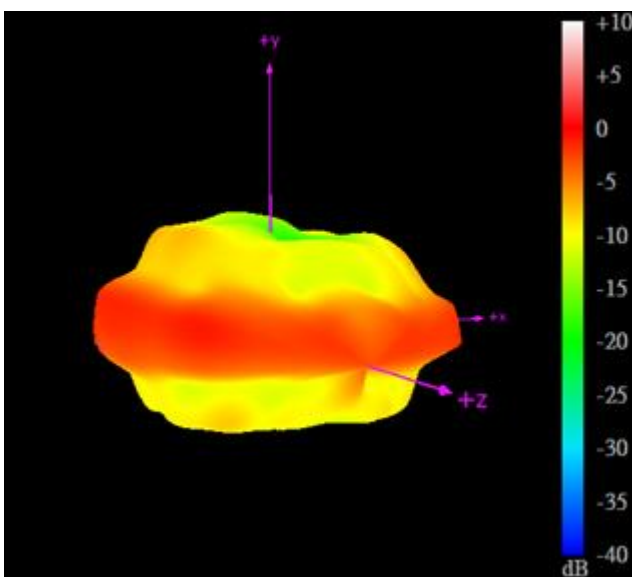


5850MHz

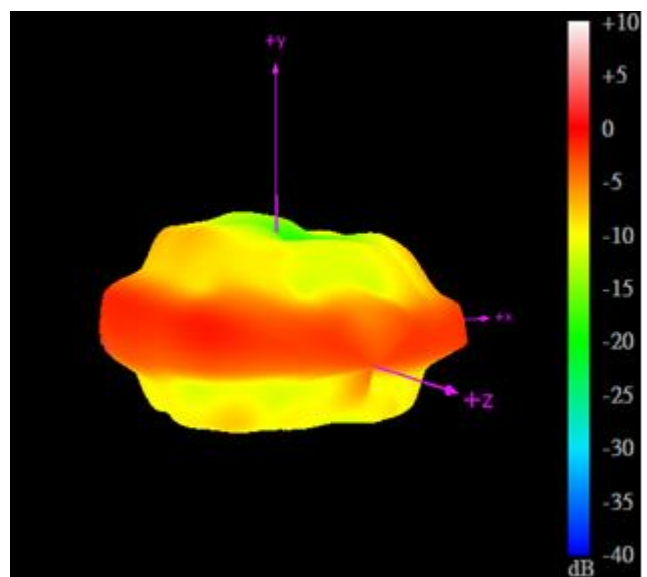


5925MHz

Bent at 90 Degrees



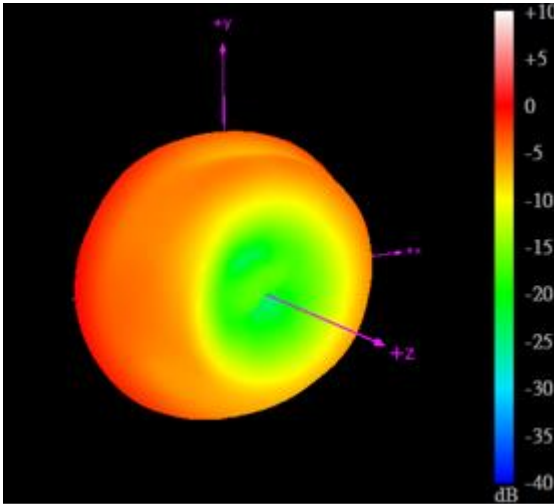
5850MHz



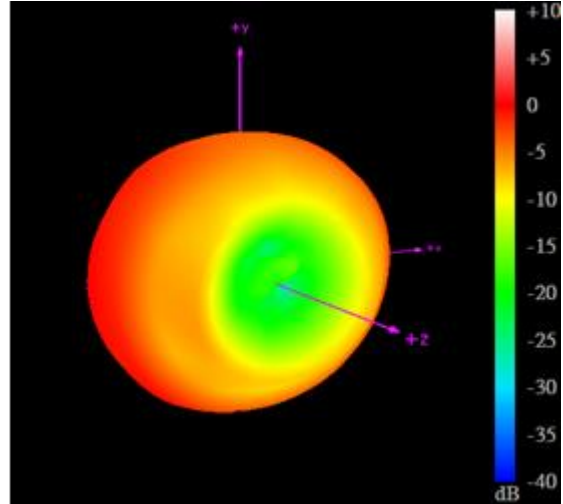
5925MHz

5.2 15\*9cm Ground Plane

Straight

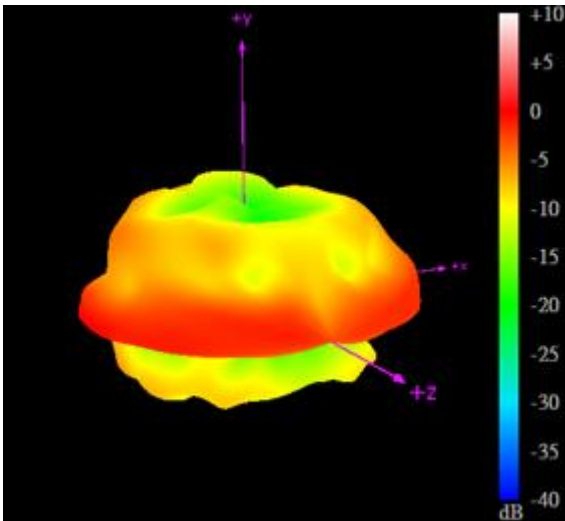


5850MHz

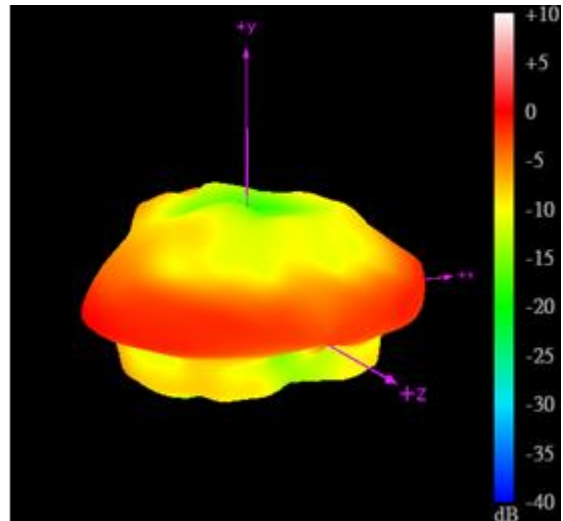


5925MHz

Bent at 90 Degrees



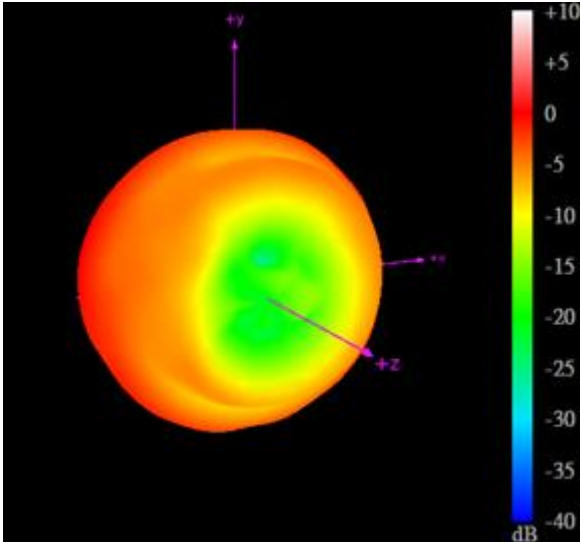
5850MHz



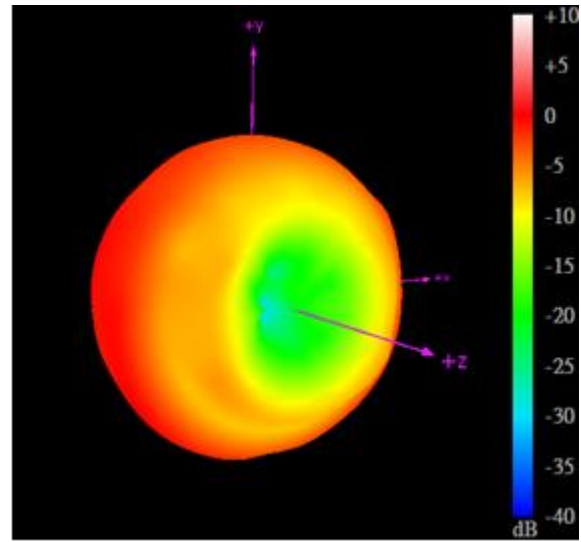
5925MHz

5.3 30\*30cm Ground Plane edge

Straight

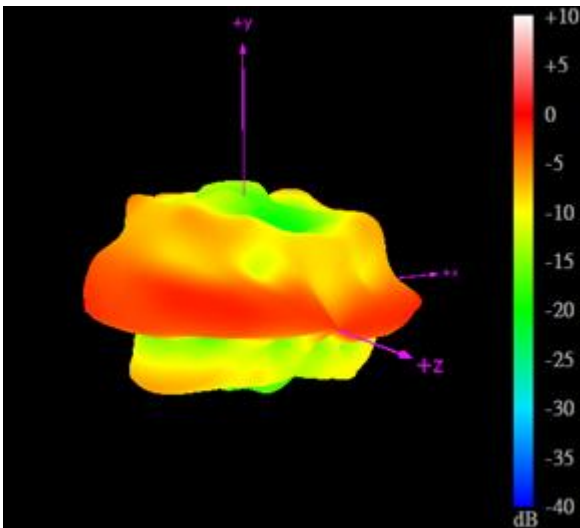


5850MHz

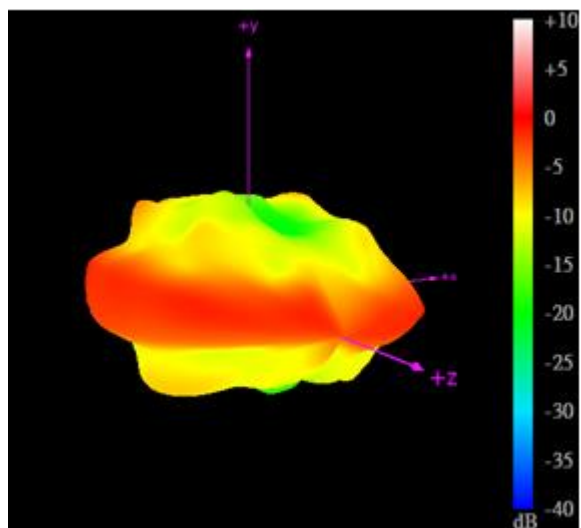


5925MHz

Bent at 90 Degrees



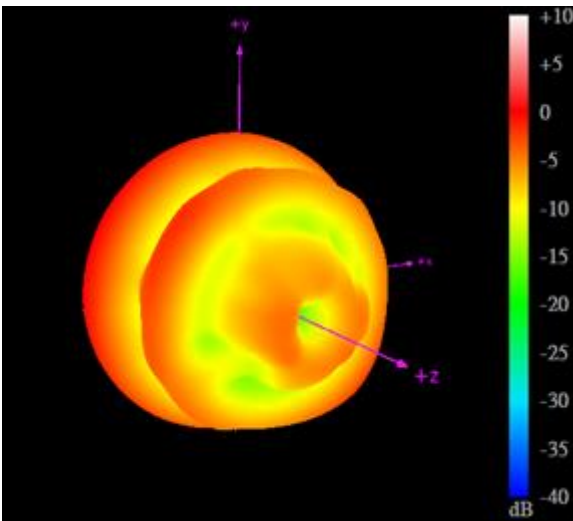
5850MHz



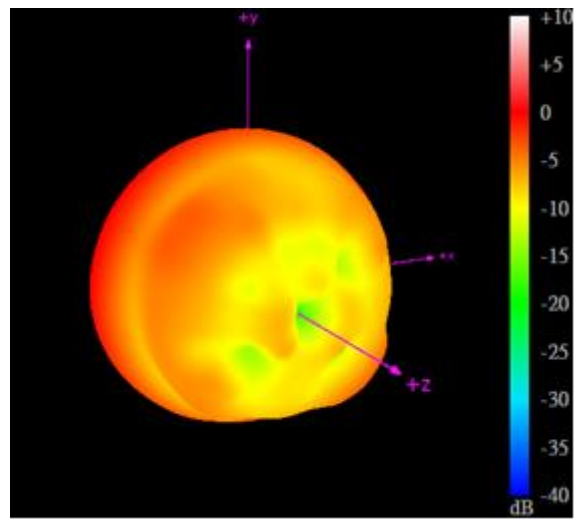
5925MHz

5.4 30\*30cm Ground Plane Center

Straight

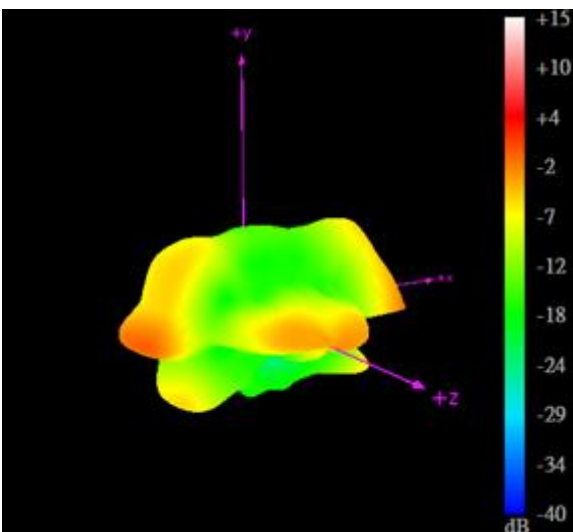


5850MHz

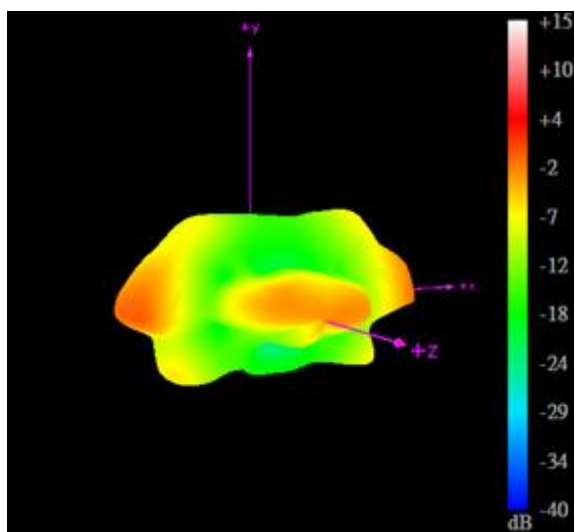


5925MHz

Bent at 90 Degrees

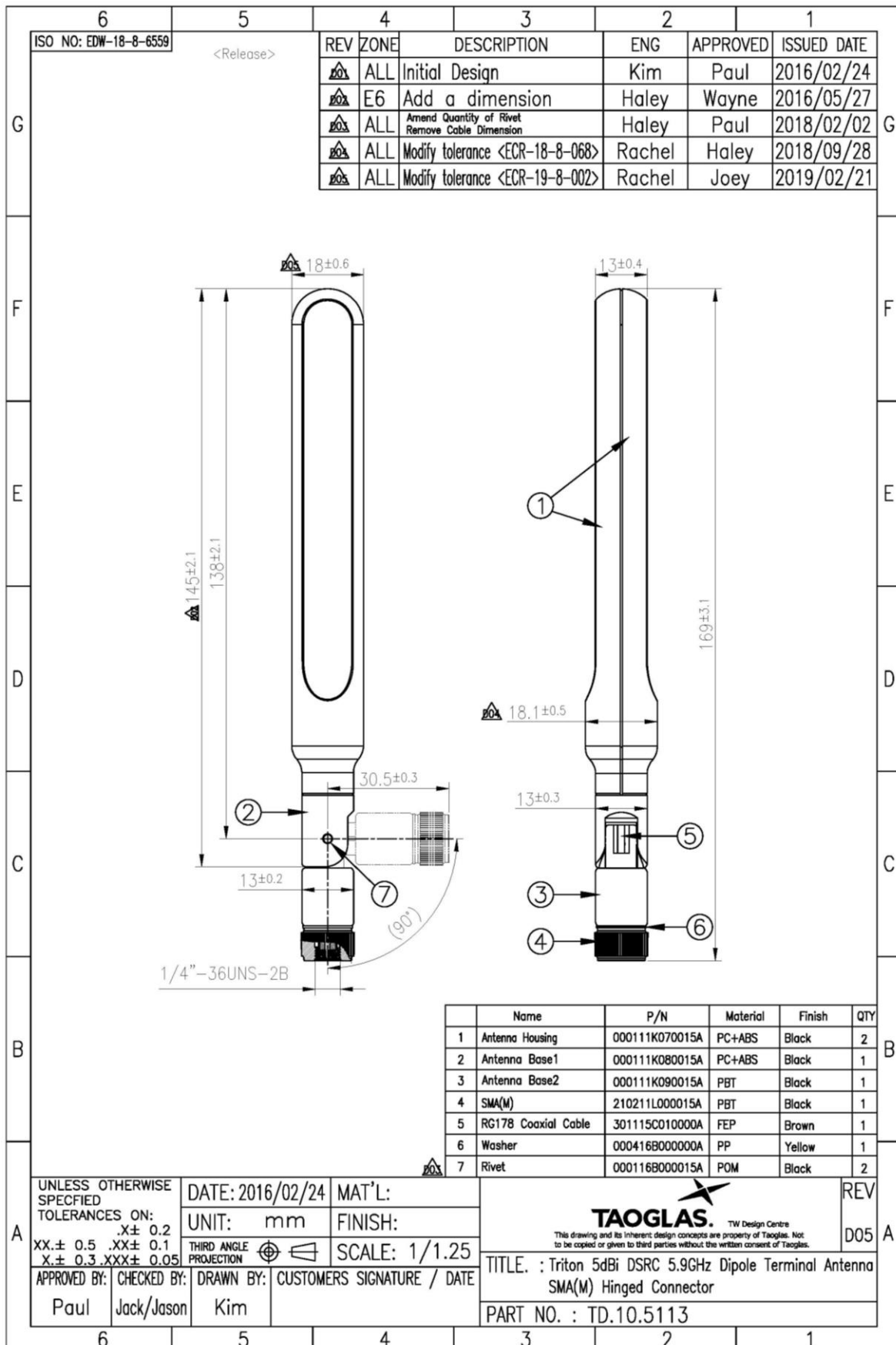


5850MHz



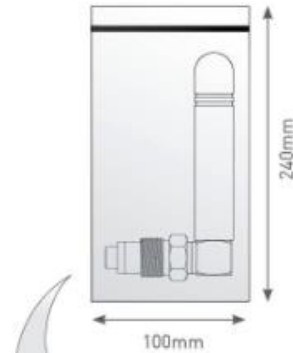
5925MHz

# 6. Mechanical Drawing (Units: mm)

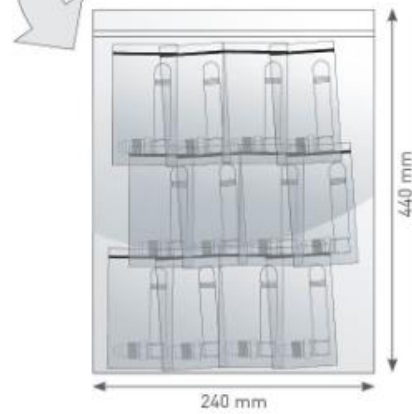


## 7. Packaging

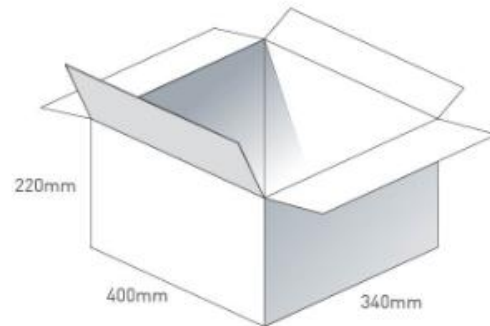
1 pc TD.10.5113 per PE bag  
 PE Bag Dimensions - 240\*100mm  
 Weight - 200g



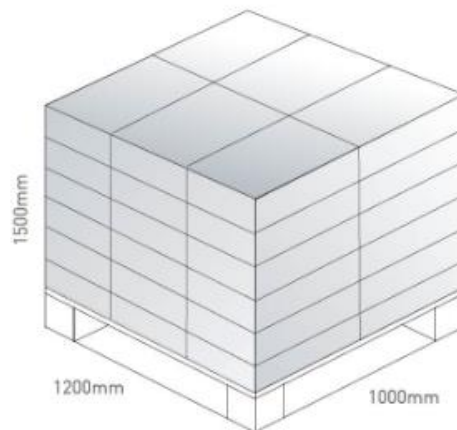
50 pcs TD.10.5113 per Large PE bag  
 PE Bag Dimensions - 440\*240mm  
 Weight - 1.1kg



300 pcs TD.10.5113 per carton  
 Carton Dimensions - 400\*340\*220mm  
 Weight - 7.7kg



Pallet Dimensions 1200\*1000\*1500mm  
 54 Cartons per Pallet  
 6 Cartons per layer  
 9 Layers



Changelog for the datasheet

**SPE-16-8-063 – TD.10.5113**

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

**Previous Revisions**

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






**TAOGLAS**®

[www.taoglas.com](http://www.taoglas.com)



Компания «Океан Электроники» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Поставка оригинальных импортных электронных компонентов напрямую с производств Америки, Европы и Азии, а так же с крупнейших складов мира;
- Широкая линейка поставок активных и пассивных импортных электронных компонентов (более 30 млн. наименований);
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Помощь Конструкторского Отдела и консультации квалифицированных инженеров;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Поставка электронных компонентов под контролем ВП;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- При необходимости вся продукция военного и аэрокосмического назначения проходит испытания и сертификацию в лаборатории (по согласованию с заказчиком);
- Поставка специализированных компонентов военного и аэрокосмического уровня качества (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Actel, Aeroflex, Peregrine, VPT, Syfer, Eurofarad, Texas Instruments, MS Kennedy, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Компания «Океан Электроники» является официальным дистрибьютором и эксклюзивным представителем в России одного из крупнейших производителей разъемов военного и аэрокосмического назначения «JONHON», а так же официальным дистрибьютором и эксклюзивным представителем в России производителя высокотехнологичных и надежных решений для передачи СВЧ сигналов «FORSTAR».



## JONHON

«JONHON» (основан в 1970 г.)

Разъемы специального, военного и аэрокосмического назначения:

(Применяются в военной, авиационной, аэрокосмической, морской, железнодорожной, горно- и нефтедобывающей отраслях промышленности)

«FORSTAR» (основан в 1998 г.)

ВЧ соединители, коаксиальные кабели, кабельные сборки и микроволновые компоненты:

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