

# OTA TEST REPORT

Applicant Shenzhen General Test System Co., Ltd

Product RayZone1800

Issue Date August 21, 2023

Shenzhen Fu Bang Wireless Technology Co., Ltd. tested the above equipment in accordance with the requirements in **ANTI/IEEE Std 149-2008**. The test results show that the equipment tested is capable of demonstrating compliance with the Requirements as documented in this report.

Prepared by: Lunkang Yan

Approved by: Yongtang Liu

**Shenzhen Fu Bang Wireless Technology Co., Ltd.**

*Room 302, Lianjian Industry Park, Huarong Road, Longhua District, Shenzhen, P.R. China*

# 1. Test Laboratory

## 1.1 Notes of the Test report

This report shall not be reproduced in full or partial. The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. Measurement Uncertainties were not taken into account and are published for informational purposes only. This report is written to support regulatory compliance of applicable standards stated above.

## 1.2 Test facility

*GTS1800* Microwave Anechoic Chamber : testing frequency ranges from 600MHz to 6GHz .

## 1.3 Testing Location

Company: Shenzhen Fu Bang Wireless Technology Co., Ltd

Address: Room 302, Lianjian Industry Part, Huarong road, Longhua District,  
Shenzhen, P.R. China

Contact: Lunkang Yan

Telephone: 13760182610

E-mail: 646363118@qq.com

## 1.4 Laboratory Environment

Temperature	Min.= 19℃, Max.=25℃	
Relative humidity	Min.=40%, Max.=72%	
Shield effect	0.6-7GHz	>100dB
Ground resistance	<0.5Ω	

## 2. General Description of Equipment under Test

### 2.1 Applicant and Manufacturer information

<b>Applicant Name</b>	Shenzhen General Test System Co., Ltd
<b>Applicant address</b>	Building C-A7 Suite 805,2190 Liuxian Avenue,Nanshan District,Shenzhen,P.R. China
<b>Manufacturer Name</b>	Shenzhen General Test System Co., Ltd
<b>Manufacturer address</b>	Building C-A7 Suite 805,2190 Liuxian Avenue, Nanshan District, Shenzhen,P.R. China

### 2.2 General information

EUT Description	
Product Name	RayZone1800
Model	GTS-ANT D-H
HW Version	RayZone1800 V1.0
SW Version	MaxSign 100
Antenna Type	PCB Antenna
Antenna Manufacturer	Shenzhen General Test System Co., Ltd
Test Frequency	600MHz-6GHz

### 2.3 Applied Standards

According to the specifications of the manufacturer,it must comply with the requirements of the following standards:

Test Method:**ANSI/IEEE Std 149-2008**

## 3. Test Conditions

### 3.1 Test Configuration

The method is used to measure the antenna 3D GAIN of EUT in OTA qualified anechoic chamber. Equipment Under Test(EUT) geometry centre vertical projection at the centre of platform, the distance from EUT to measurement antenna is 1m.

### 3.2Test Measurement

**Spherical coordinate system**

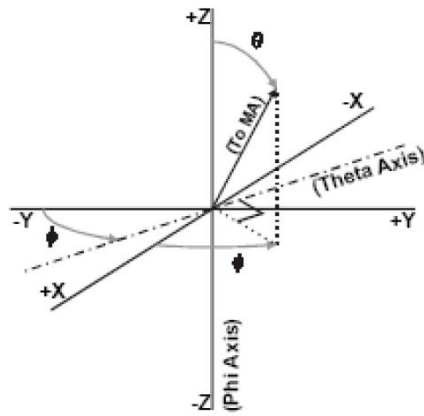
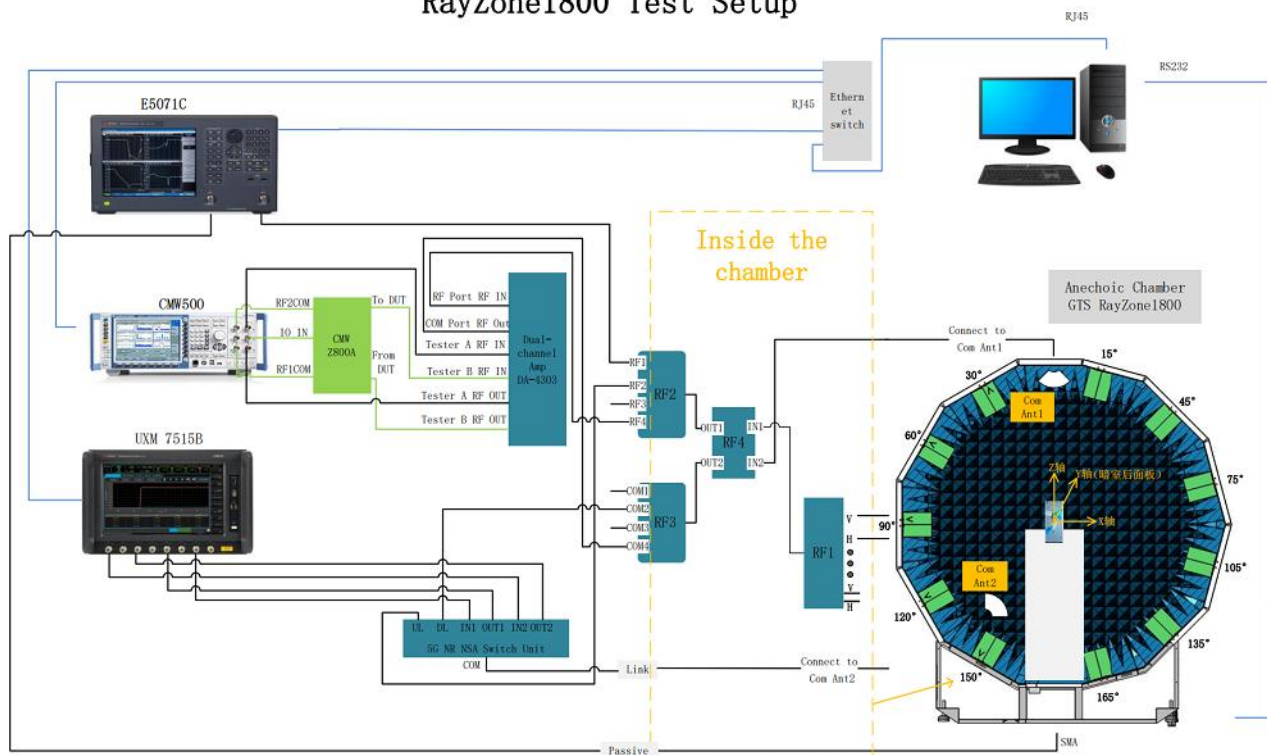


Figure 1 Test coordinate system

Note: Theta is from 0-180degree. Phi is from EUT and record the Date, the step of rotation is 15 degree.

## Test Setup

### RayZone1800 Test Setup



## 4. Test Results

### 4.1 Gain and Efficiency

Shenzhen Fu Bang Wireless Technology Co., Ltd.

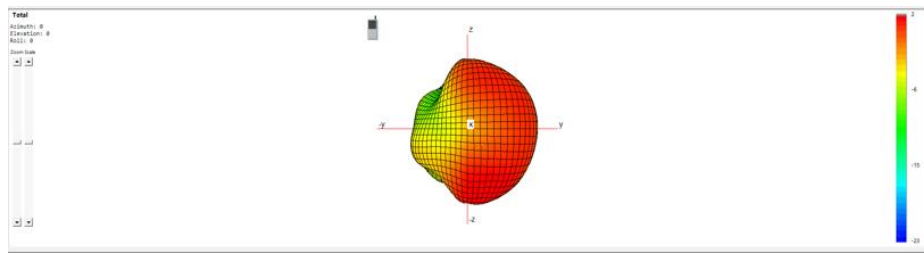
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Model	Test State	Frequency (MHz)	Efficiency (%)	Gain (dBi)	Frequency (MHz)	Efficiency (%)	Gain (dBi)	Note
	Free Space	1550	41.1	1.1	5260	50.6	3.0	
		1560	45.2	1.5	5280	51.1	2.7	
		1570	50.5	1.8	5300	51.4	2.9	
		1580	49.7	1.7	5320	48.8	2.9	
		1590	45.2	1.5	5340	53.0	3.0	
		1600	42.2	1.2	5360	51.9	3.2	
					5380	54.3	3.2	
		2400	47.5	0.9	5400	51.2	3.4	
		2410	47.8	0.8	5420	54.5	3.3	
		2420	48.2	0.8	5440	54.8	3.6	
		2430	49.2	0.9	5460	54.4	3.7	
		2440	50.0	1.1	5480	54.0	3.7	
		2450	50.6	1.2	5500	52.9	3.5	
		2460	50.9	1.3	5520	51.4	3.6	
		2470	50.7	1.3	5540	54.1	3.6	
		2480	51.1	1.5	5560	55.7	4.0	
		2490	51.9	1.5	5580	54.1	3.5	
		2500	51.9	1.5	5600	54.1	3.7	
					5620	52.1	3.4	
					5640	53.3	3.6	
		5100	47.5	2.4	5660	54.8	3.2	
		5120	49.7	2.8	5680	52.6	3.6	
		5140	48.7	2.7	5700	53.1	3.2	
		5160	49.0	2.5	5720	52.8	3.5	
		5180	48.3	2.8	5740	47.8	3.0	
		5200	48.9	2.9	5760	49.4	3.2	
		5220	50.2	2.8	5780	51.6	3.2	
		5240	51.9	3.1	5800	50.8	2.9	

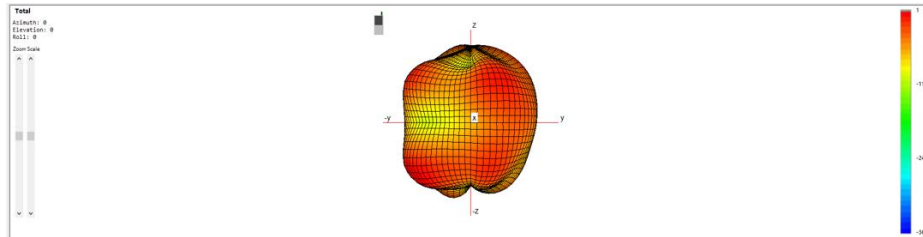
## 5. Equipment List

Type of Equipment	Manufacture	Model Number
Network Analyzer	Key sight	E5071C
Switch control System	GTS	RayZone1800
Software	GTS	MaxSign 100Patten Measurement software

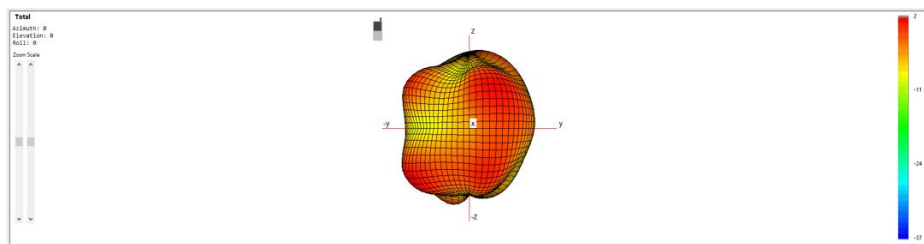
## ANNEX A 3-D Patten Plots



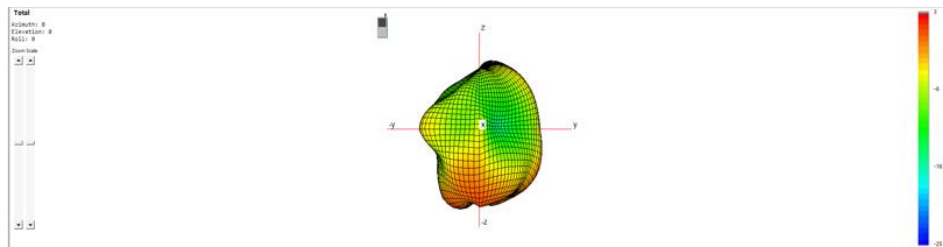
**1575MHz**



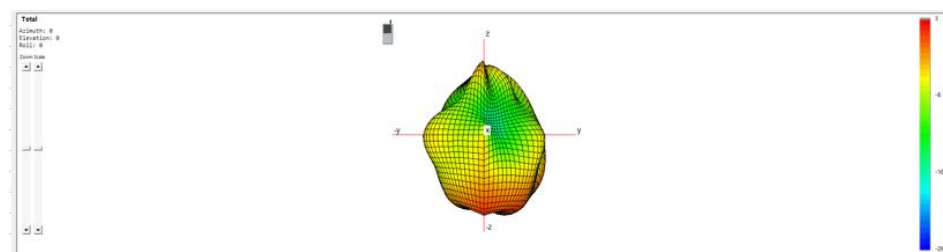
**2400MHz**



**2500MHz**



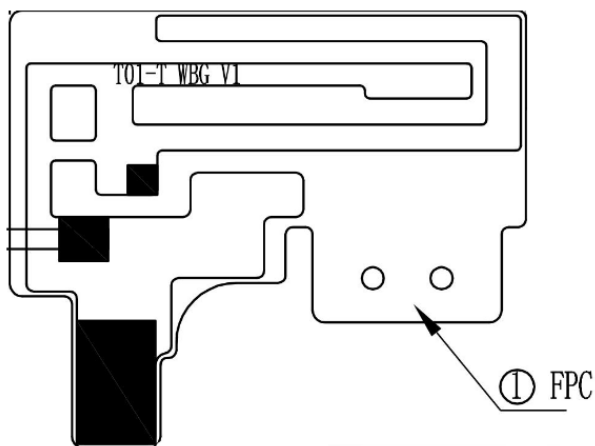
**5100MHz**



**5800MHz**

## ANNEX B: The EUT Appearance and Test Configuration

### B.1 EUT Appearance



## B.2 Test Configuration

