OTA TEST REPORT

Applicant Shenzhen General Test System Co., Ltd

Product RayZone1800

Issue Date November 27, 2022

Shenzhen 3Good Wireless Communication 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.

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Approved by: Wu Zhou

Shenzhen 3Good Wireless Communication Co., Ltd

Room 501-508,jinfulai Building,No.49-1,Dabao Road,Baoan District,Shenzhen

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 699MHz to2670GHz .

1.3 Testing Location

Company: Shenzhen 3Good Wireless Communication Co., Ltd

Address: Room501-508,jinfulaiBuilding,No.49-1,DabaoRoad,BaoanDistrict, Shenzhen

Contact: Hui Xiao

Telephone: 18898599500

E-mail: xiaohui@3good.net.cn

1.4 Laboratory Environment

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

2. General Description of Equipment under Test

2.1 Applicant and Manufacturer information

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

2.2 Device calibration information

Description	Type/Model	Manufacturer	Serial No	Calibration Date	Calibration Due Date
Network analyzer	5071B	Agilent	MY42301114	2022.08.15	2023.08.15
Comprehensive tester	CMW500	R&S	114625	2022.08.15	2023.08.15

2.3 General information

EUT Description	
Product Name	RayZone1800
Model	GTS-ANT D-H
HW Version	RayZone1800 V1.0
SW Version	MaxSign 100
Antenna Type	LDS Antenna
Antenna Manufacturer	Shenzhen 3Good Wireless Communication Co., Ltd
Test Frequency	600MHz-5.8GHz

2.4 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.

3.2 Test Measurement

Spherical coordinate system

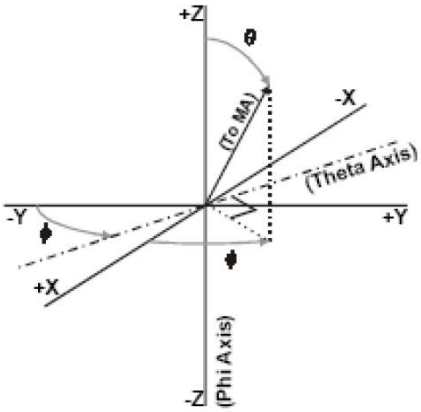
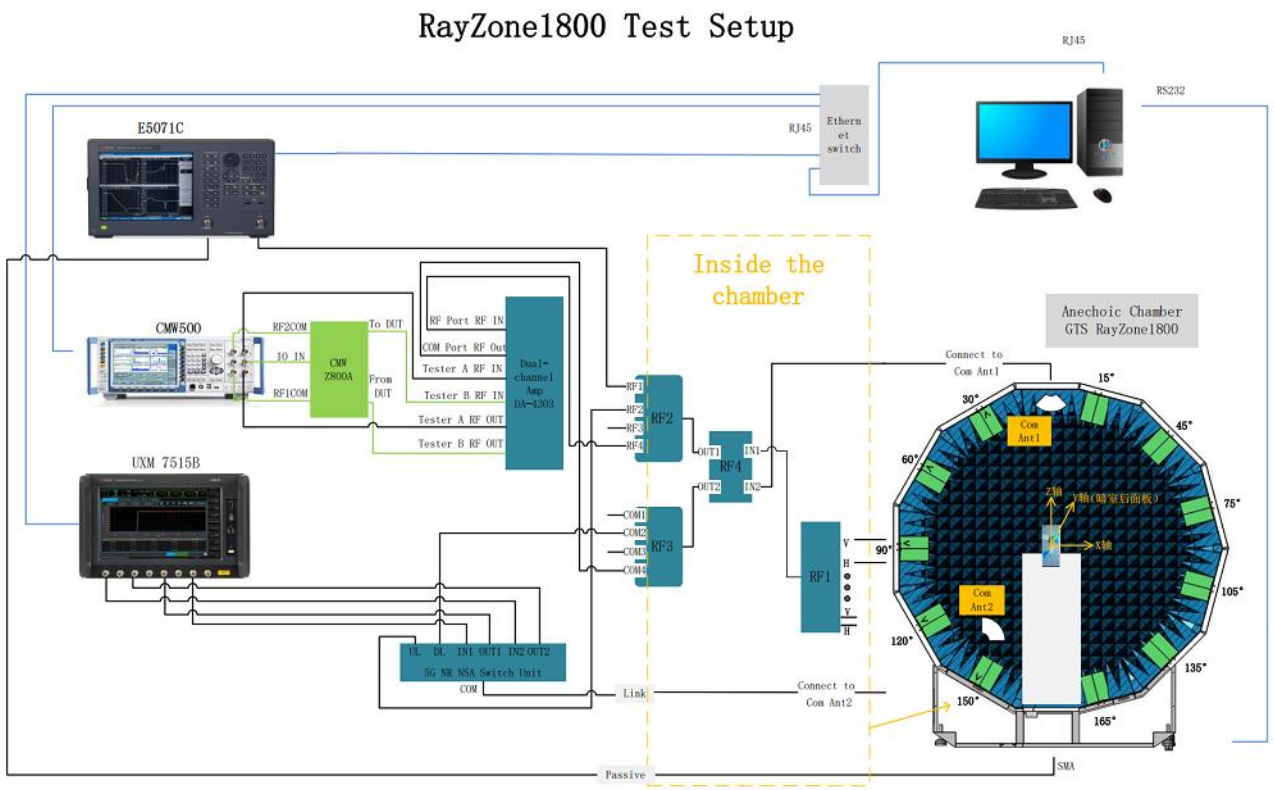


Figure 1 Test coordinate system

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

Test Setup



4. Test Results

4.1 Antenna Max. Peak Gain

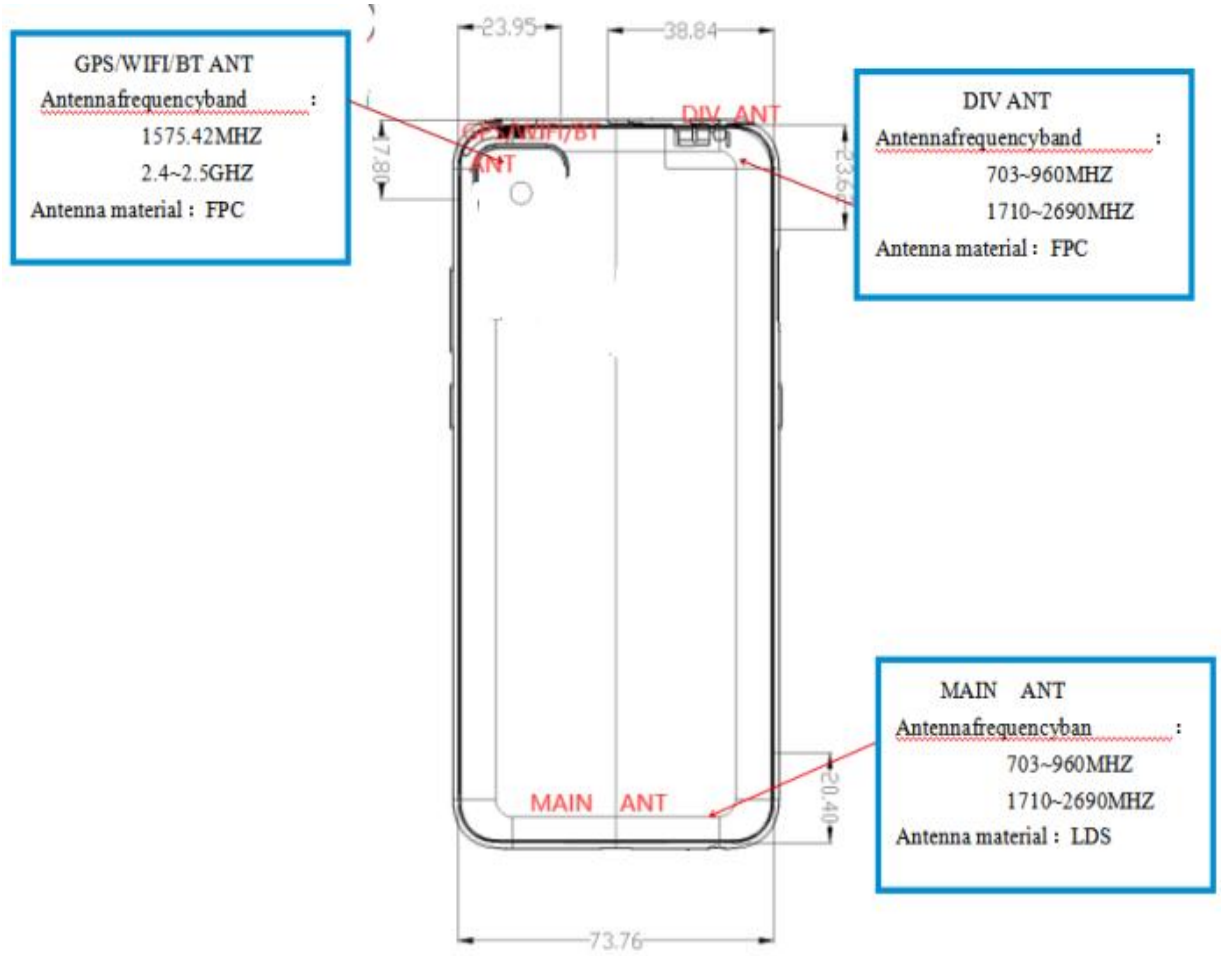
EGSM900:-1.76dBi
GSM850: -1.43dBi
DCS1800: -1.15dBi
PCS1900：-0.63dBi
WCDMA-B1：-0.51dBi
WCDMA-B2：-0.63dBi
WCDMA-B5：-1.43dBi
WCDMA-B4：-1.15dBi
LTE-B1：-0.51dBi
LTE-B2：-0.63dBi
LTE-B4：-1.15dBi
LTE-B5：-1.43dBi
LTE-B7：-0.46dBi
LTE-B12：-1.58dBi
LTE-B26：-1.43dBi
LTE-B28：-1.51dBi
WIFI-2.4/BT：-0.32dBi
WIFI-5G: -0.41dBi

5. Equipment List

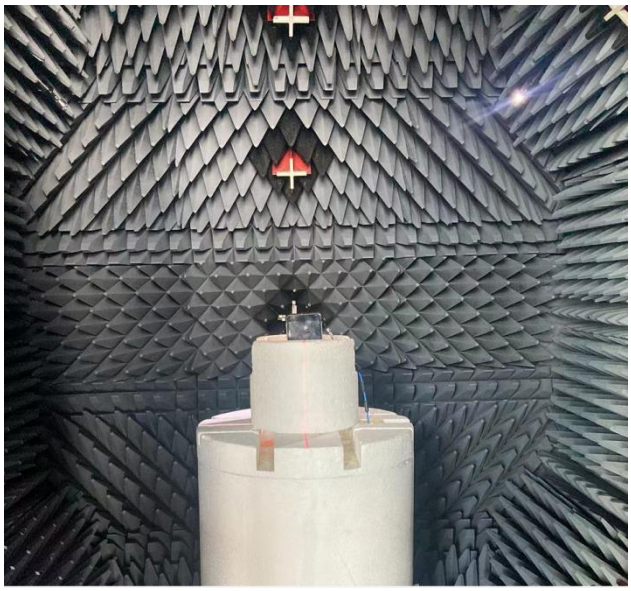
Type of Equipment	Manufacture	Model Number
Network Analyzer	Agilent Technologies	E5071B
Switch control System	GTS	RayZone1800
Software	GTS	MaxSign 100 Patten Measurement software

ANNEX B: The EUT Appearance and Test Configuration

B.1 EUT Appearance



B.2 Test Configuration



6. All of Implementation antenna

Main antenna(Antenna Label:A):
LTE B5/B12/B26/B28/RX&TX ,
WCDMA B5 RX&TX
GSM B5/B8 RX&TX
DIV antenna(Antenna Label:B):
LTE B1/B2/B4/B7 RX&TX
WCDMA B1/B2/B4 RX&TX
GSM B2/B3 RX&TX
WiFi/BT 2.4G、5G& GPS: 1575.42 MHz

7. Antenna type

1.Main antenna:PIFA
2.Div antenna : PIFA+寄生
3.GPS/WIFI/BT ANT:PIFA

test engineer：