

OTA TEST REPORT

©

Applicant Shenzhen General Test System Co., Ltd

Product RayZone1800

Issue Date January 31st, 2023

DOSKING Antenna Test Report 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: Mushao Chen

Approved by: Meidui Chen

DOSKING Antenna Test Report

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: DOSKING Antenna Test Report

Contact: Mushao Chen

Telephone: 13126483572

1.4 Laboratory Environment

Temperature	Min.= 19°C, Max.=25°C	
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

Applicant Name	DOSKING Antenna Test Report
Applicant address	403, West Block, Ganghong Science and Technology Building, Building 2, Private Enterprise Science and Technology Park, University Town, Nanshan District, Shenzhen, 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 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	700MHz-5.8GHz

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.

3.2 Test Measurement

Spherical coordinate system

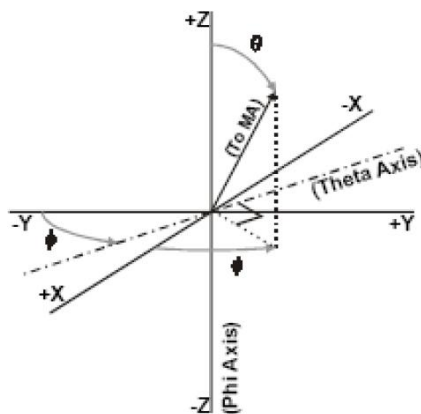
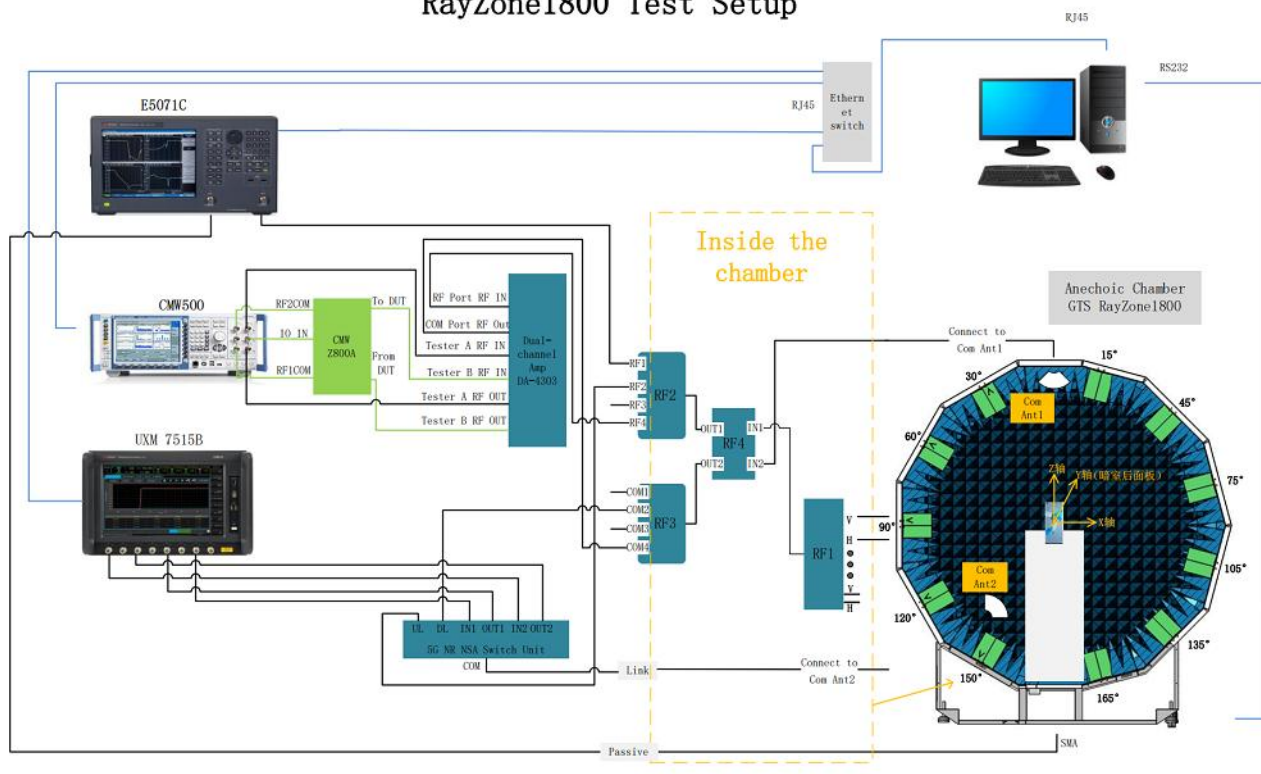


Figure 1 Test coordinate system

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

Test Setup

RayZone1800 Test Setup



4. Test Results

4.1 Gain and Efficiency

Passive Test For		
Freq (MHz)	Effi (%)	Gain (dBi)
700	20.06	-2.2
710	20.13	-2.13
720	21.31	-2.01
730	21.55	-1.99
740	22.57	-1.87
750	23.13	-1.69
760	22.82	-1.73
770	21.58	-2
780	22.29	-1.82

Passive Test For		
Freq (MHz)	Effi (%)	Gain (dBi)
800	25.99	-1.39
810	25.42	-1.53
820	25.85	-1.46
830	24.26	-1.59
840	25.38	-1.56
850	25.28	-1.58
860	26.53	-1.23
870	26.12	-1.31
880	25.01	-1.55

Passive Test For		
Freq (MHz)	Effi (%)	Gain (dBi)
1700	31.6	-0.78
1710	31.35	-0.95
1720	31	-0.98
1730	31.89	-0.69
1740	32.64	-0.74
1750	33.93	-0.49
1760	35.82	-0.16
1770	35.42	-0.22
1780	36.88	-0.09
1790	35.5	-0.2
1800	35.29	-0.25
1810	35.3	-0.24
1820	36.77	-0.11
1830	36.24	-0.14
1840	37.14	0.12
1850	37.91	0.15
1860	37.85	0.13
1870	38.96	0.25
1880	38.42	0.18

Passive Test For		
Freq (MHz)	Effi (%)	Gain (dBi)
1890	35.4	-1.15
1900	34.44	-1.29
1910	32.7	-1.45
1920	33.65	-1.41
1930	34.01	-1.31
1940	34.55	-1.25
1950	34.37	-1.27
1960	35.59	-1.13
1970	33.02	-1.44
1980	34.6	-1.26
1990	36.71	-1.07

Passive Test For		
Freq (MHz)	Effi (%)	Gain (dBi)
2500	37.71	-1.39
2510	37.61	-1.43
2520	38.64	-1.38
2530	39.26	-1.29
2540	37.26	-1.5
2550	34.96	-1.63
2560	35.79	-1.61
2570	35.35	-1.62
2580	31.77	-1.82
2590	38.8	-1.01
2600	39.15	-0.52
2610	40.16	-0.1
2620	34	-1.84
2630	30.85	-1.95
2640	30.8	-1.96
2650	30.77	-1.99
2660	30.95	-1.96
2670	30.05	-2.13
2680	30.69	-2.02
2690	32.26	-1.79
2700	36.33	-1.52

WIFI/BT

Passive Test For		
Freq (MHz)	Effi (%)	Gain (dBi)
2400	35.32	0.58
2410	35.22	0.71
2420	36.64	0.36
2430	36.75	0.49
2440	37.19	1.00
2450	37.23	0.47
2460	37.88	0.33
2470	38.22	0.21
2480	38.04	0.41
2490	38.04	0.33
2500	38.18	0.73

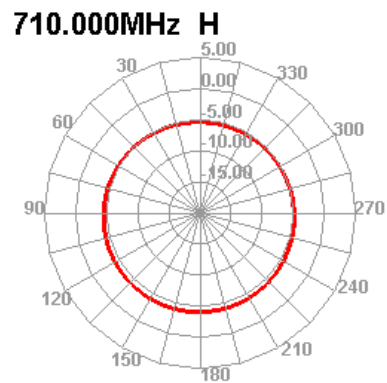
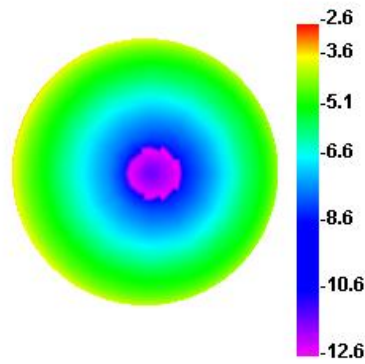
WIFI5.8		
Freq (MHz)	Effi (%)	Gain (dBi)
5150	32.22	-0.13
5200	32.61	-0.05
5250	33.42	0.08
5300	33.08	0.03
5350	33.74	0.11
5400	34.33	0.58
5450	34.99	0.61
5500	35.88	0.80
5550	35.62	0.63
5600	36.76	-0.96
5650	36.79	-0.97
5700	38.21	0.06
5750	38.89	0.26
5800	38.45	0.12
5850	40.36	0.58

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

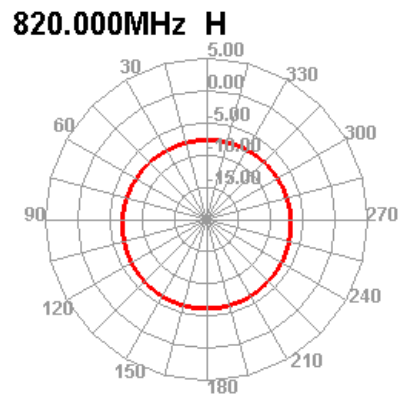
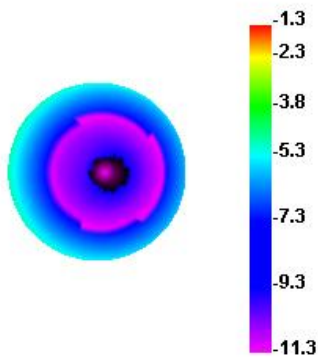
ANNEX A 3-D Patten Plots

710.000MHz



710MHz

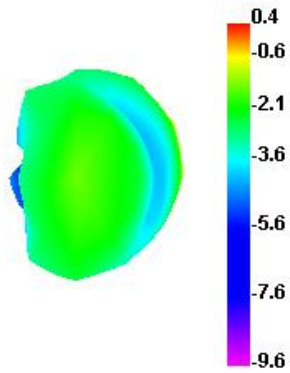
820.000MHz



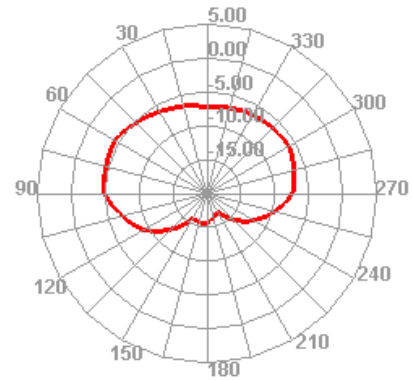
820M

Hz

1700.000MHz

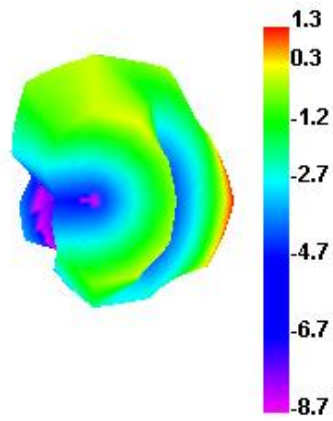


1700.000MHz H

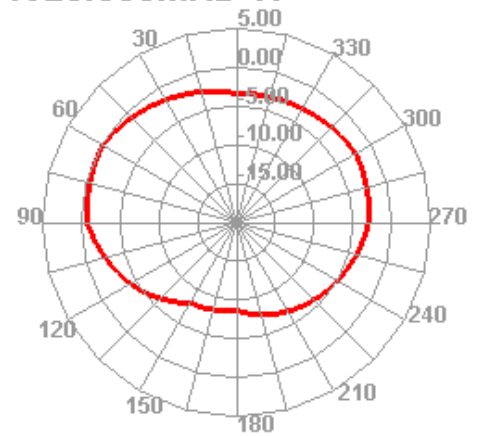


1700MHz

1920.000MHz



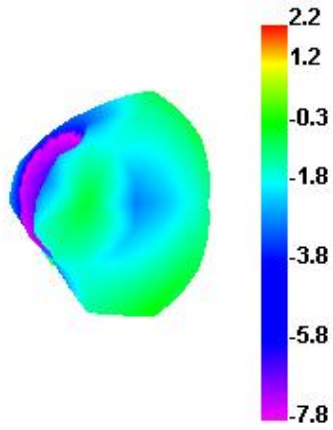
1920.000MHz H



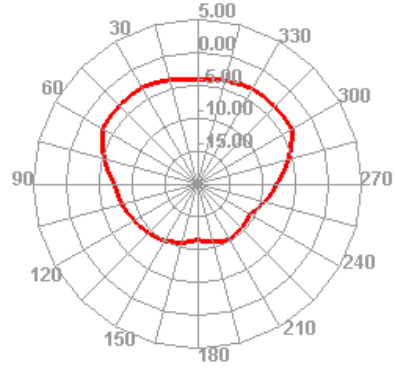
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920MHz

2700.000MHz

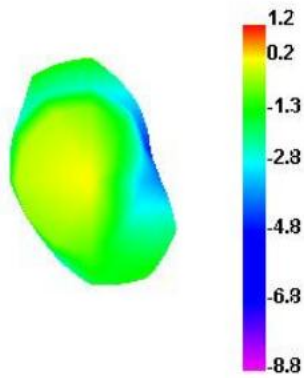


2700.000MHz H

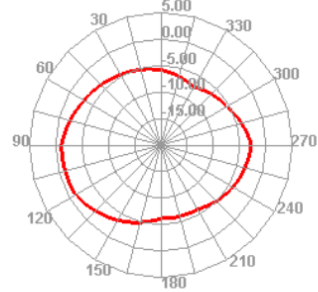


2700MH

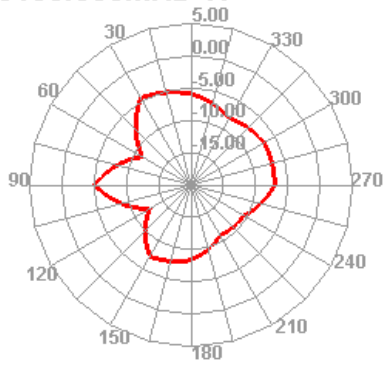
2400.000MHz



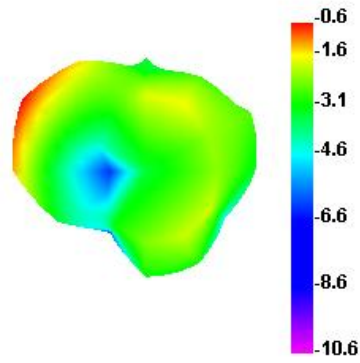
2400.000MHz H



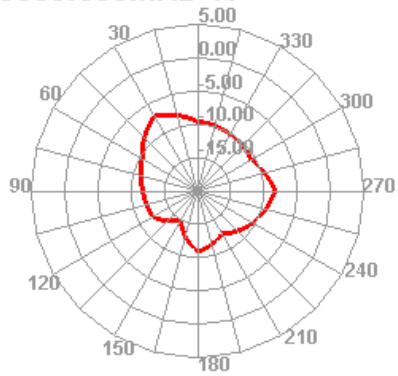
5150.000MHz H



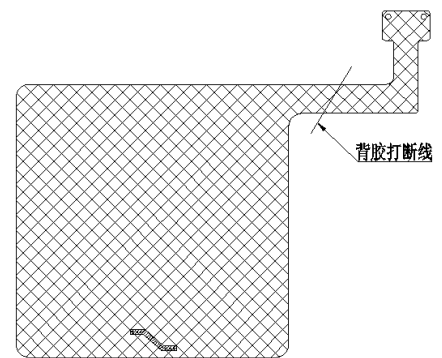
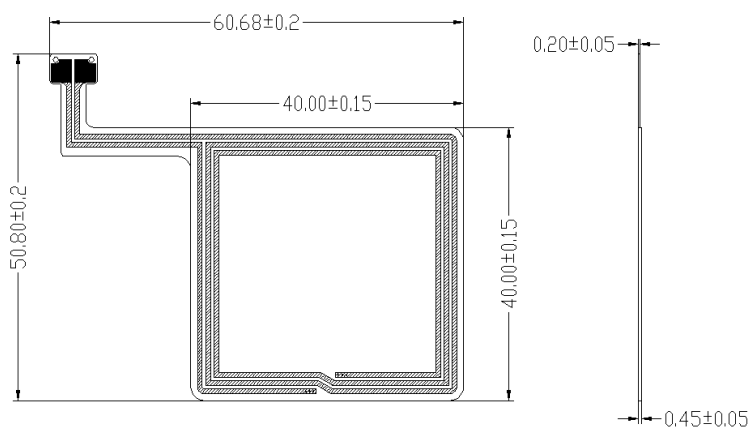
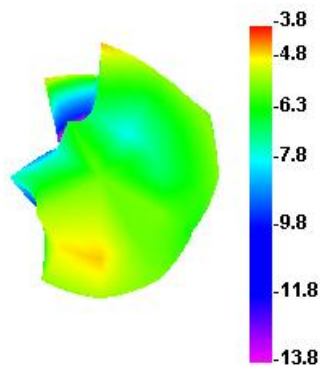
5150.000MHz

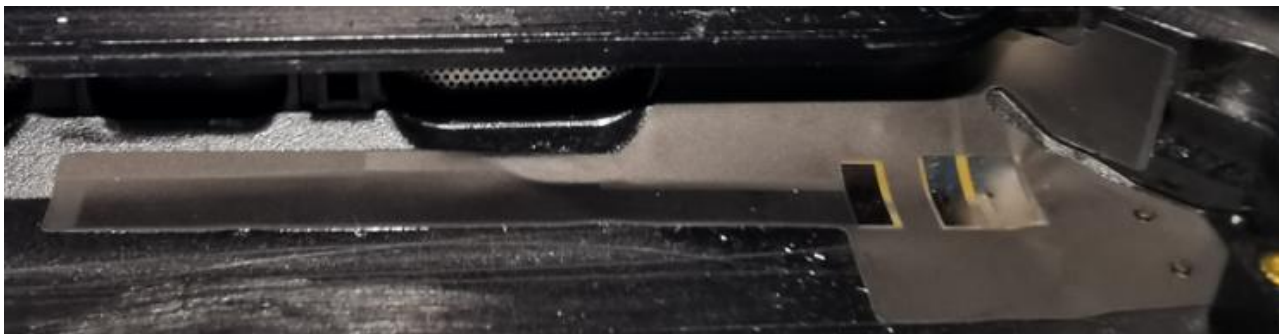


5850.000MHz H



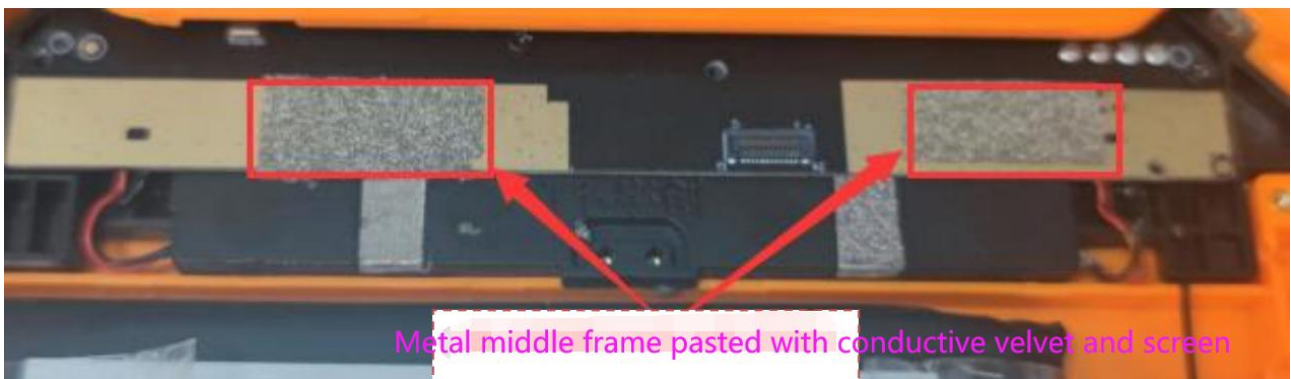
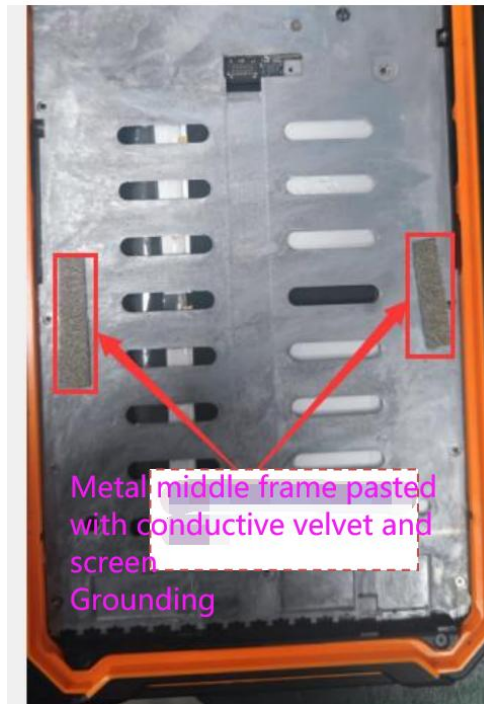
5850.000MHz





ANNEX B: The EUT Appearance and Test Configuration

B.1 EUT Appearance



B.2 Test Configuration

