

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℃, 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

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

OTA Test Report

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	FPC 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

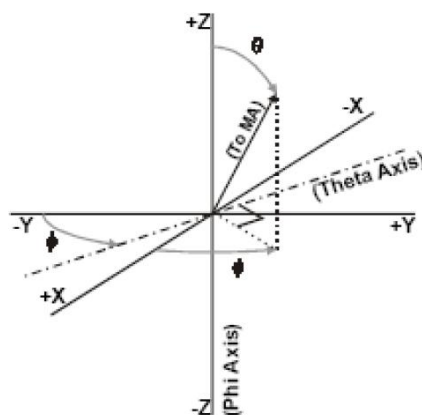
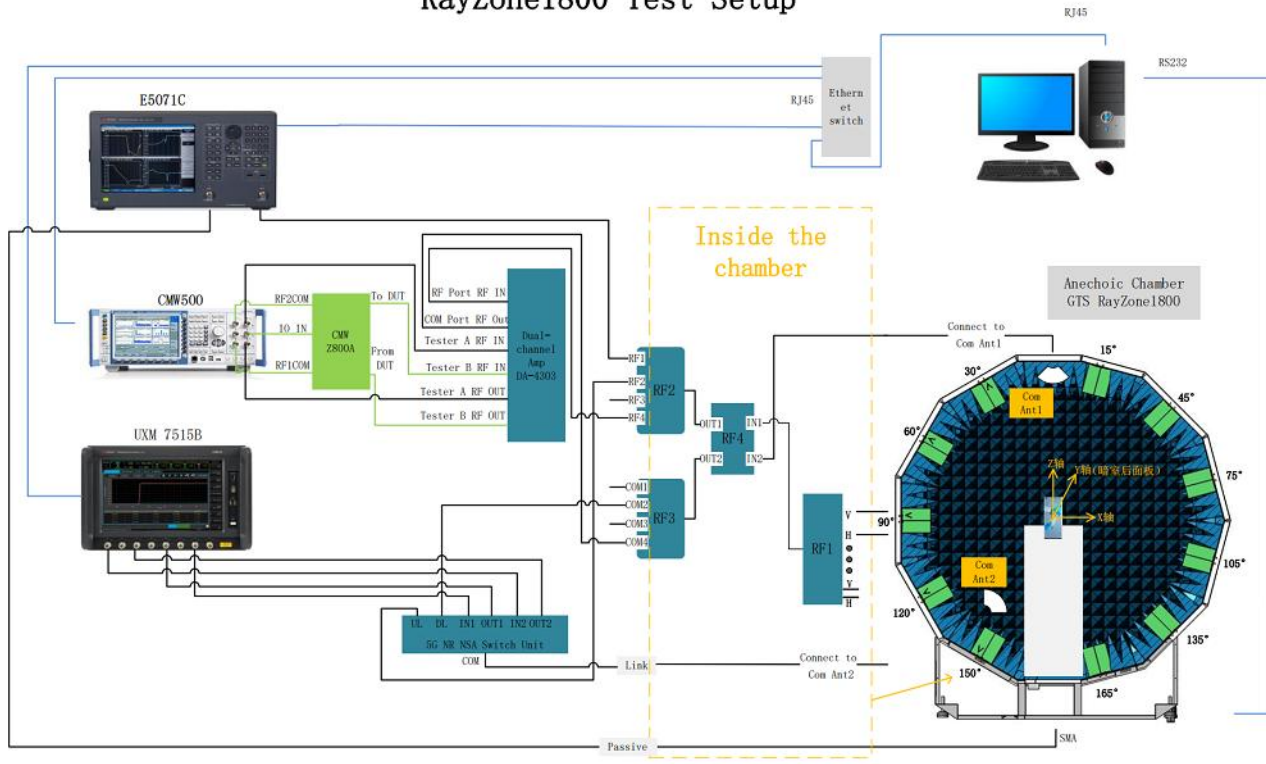


Figure 1 Test coordinate system

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

WIFI/BT

Model	Test State	Frequency (MHz)	Efficiency (%)	Gain (dBi)	Frequency (MHz)	Efficiency (%)	Gain (dBi)	Note
		1166	29.53	-1.11	5150	34.6	0.80	
		1171	31.42	-0.93	5200	33.53	0.53	
		1176	29.45	-1.23	5250	33.55	0.35	
		1181	28.11	-1.45	5300	33.23	0.1	
		1186	27.65	-1.53	5350	34.23	0.01	
		1550	30.31	-1.05	5400	36.91	0.03	
		1560	30.74	-0.79	5450	34.93	-0.36	
		1570	31.59	-0.68	5500	33.52	-1.06	
		1580	38.58	-0.11	5550	34.57	-0.66	
		1590	38.25	-0.19	5600	37.81	-0.12	
		1600	37.52	-0.25	5650	39.61	-0.06	

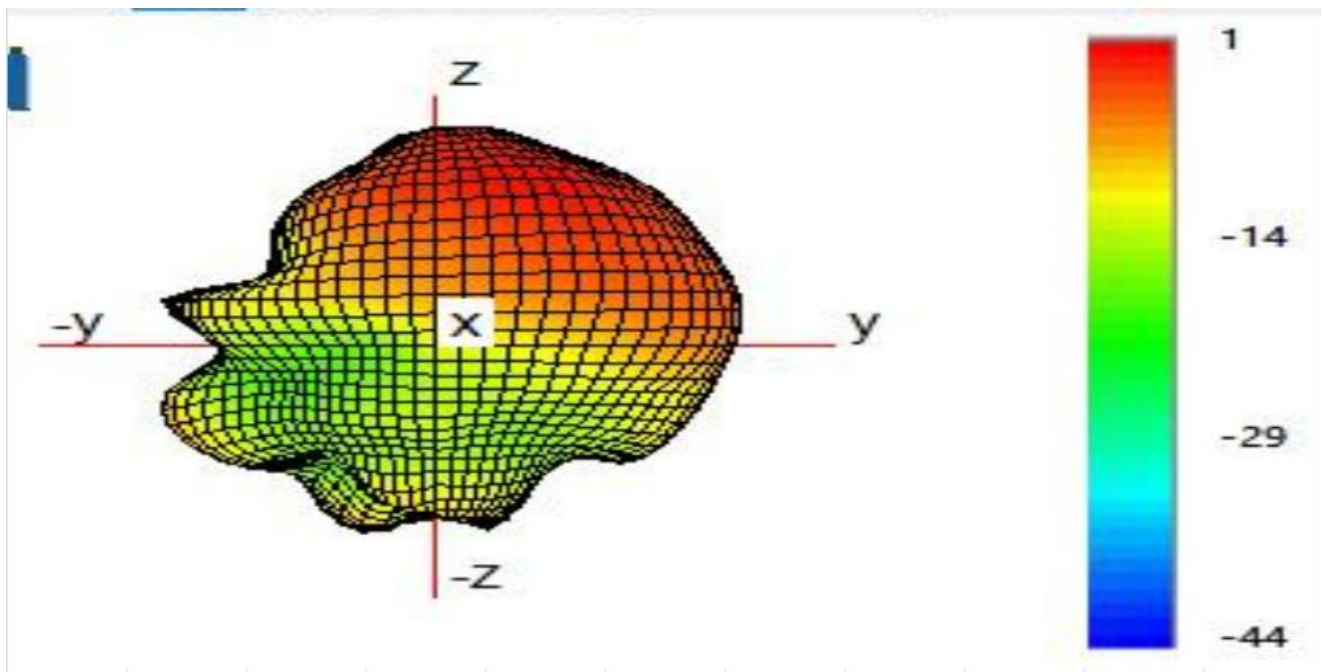
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	Free Space	2400	36.19	0.41	5700	43.99	0.71
		2410	38.78	0.86	5750	48.42	0.80
		2420	36.22	0.56	5800	50.49	0.58
		2430	38.97	0.89	5850	51.58	0.80
		2440	37.58	0.61			
		2450	45.69	1.00			
		2460	47.51	0.94			
		2470	40.35	0.95			
		2480	44.71	0.87			
		2490	47.32	0.93			
		2500	46.75	0.84			
		Note: WIFI and BT share an antenna					

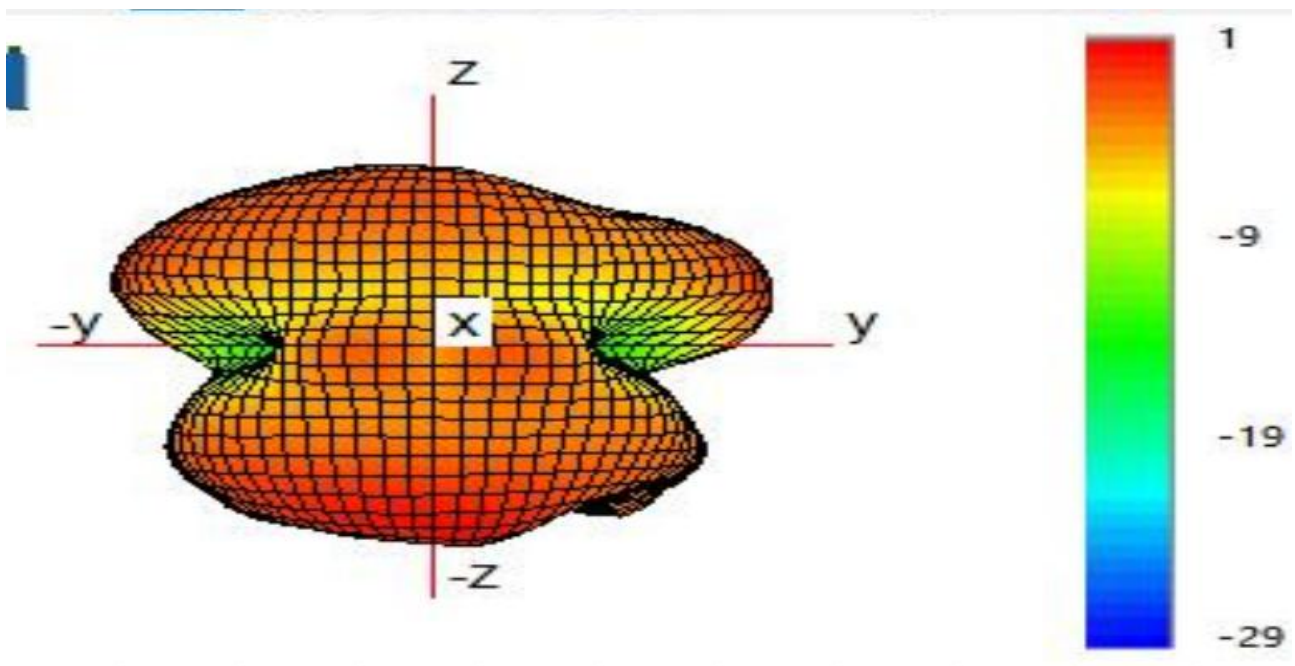
5. Equipment List

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

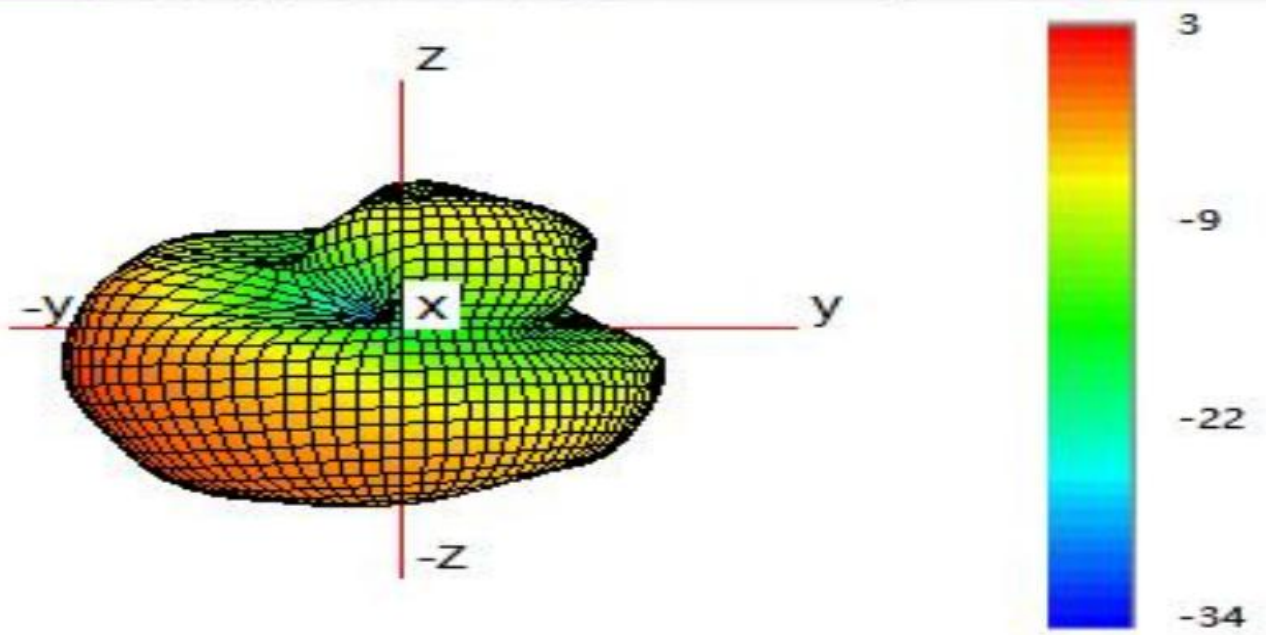
ANNEX A 3-D Patten Plots



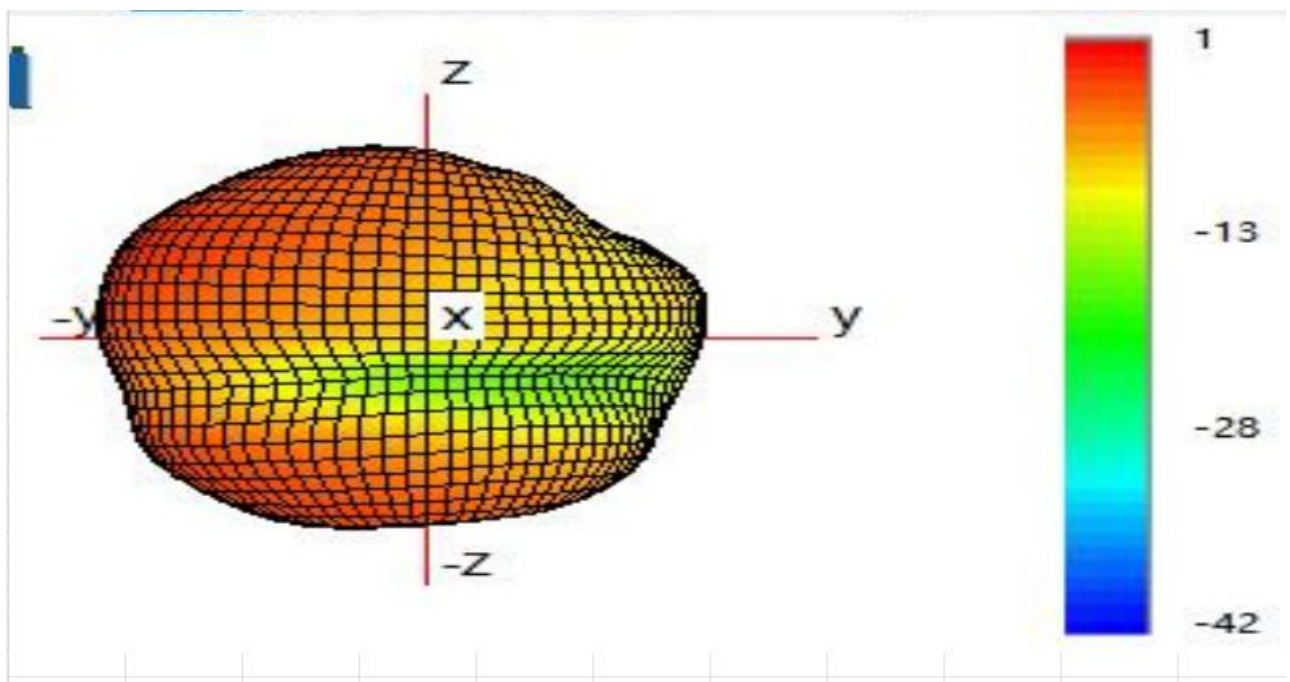
5150MHZ



2410MHZ



1575MHZ

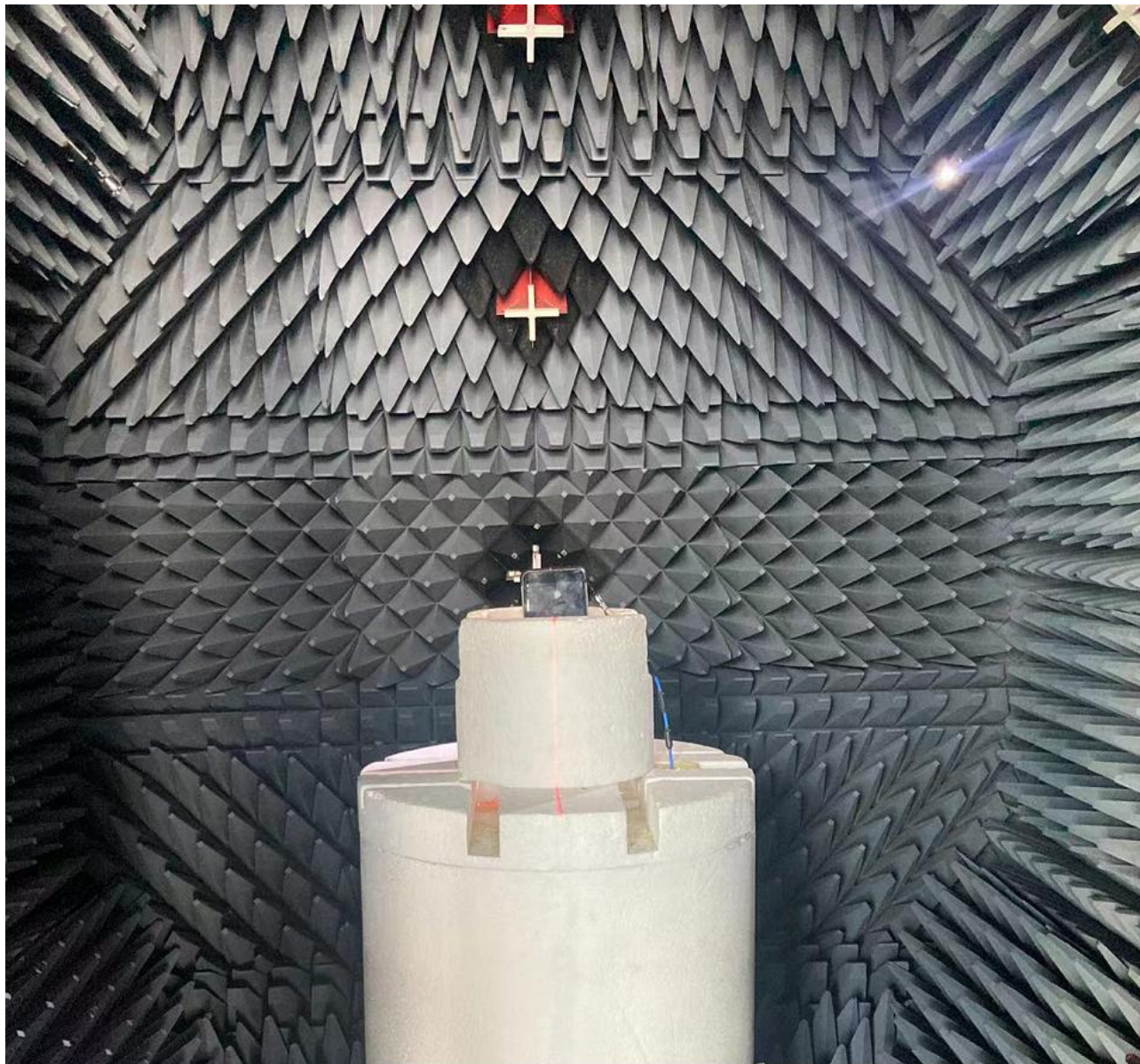


1176MHZ

ANNEX B: The EUT Appearance and Test Configuration

B.1 EUT Appearance

B.2 Test Configuration



料号	颜色	色号	供应颜色号

丝印 (黑色白字)

18.00

38.67

F004-MH/0P01.1-V1.0

高阻纸打新线

注:

1. "*"为重点尺寸, 孔位以适配为准;
2. FPC材料: 电解铜, 半对半;
3. 反面背胶 (3M300LSR);
4. 未标公差尺寸, 模具冲出尺寸公差为 ± 0.2 , 铜箔线条尺寸公差为 ± 0.05 , 标重点的孔公差为 ± 0.08 ;
5. 实心部分为镀金区, 画斜线的为铜箔区, 画交叉线的为背胶区;
6. 表面印油黑色;
7. Pb、Hg、Cr+6、PBBs、PBDEs各项小于500PPM, Cd小于50PPM.

日期

修改内容

版本

备注

深圳市德仕勤科技有限公司

图 号	P004	日期	20240403	页码	1 / 1
项目编号		结构图设计			
零件名称	RFID-CP01.1天线	封装图设计			
零件料号		审 核			
材 质	PI	确 认			
外委处理		单位	mm	比例	1:1

料号	颜色	色号	供应颜色号

丝印 (黑色白字)

23.83

16.86

F004-MH/0P01.1-V1.0

高阻纸打新线

注:

1. "*"为重点尺寸, 孔位以适配为准;
2. FPC材料: 电解铜, 半对半;
3. 反面背胶 (3M300LSR);
4. 未标公差尺寸, 模具冲出尺寸公差为 ± 0.2 , 铜箔线条尺寸公差为 ± 0.05 , 标重点的孔公差为 ± 0.08 ;
5. 实心部分为镀金区, 画斜线的为铜箔区, 画交叉线的为背胶区;
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图 号	P004	日期	20240403	页码	1 / 1
项目编号		结构图设计			
零件名称	CP01.1	封装图设计			
零件料号		审 核			
材 质	PI	确 认			
外委处理		单位	mm	比例	1:1