

SONY

Antenna Specification

PY7-35141E

Sony Corporation

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1 Introduction

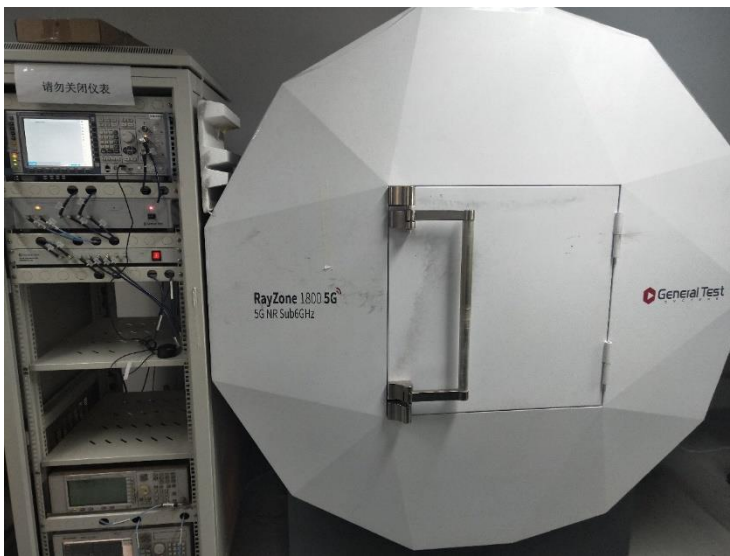
This document describe how to measure the antenna performance of this device PY7-35141E and the characteristics of the antenna i.e.antenna gain, antenna efficiency and radiation pattern.

2 Measurement Environment

2.1 Test Site

Company: Huaqin Technology Co., Ltd.

Address:5F, Block C, Huanpu Industrial Park, No.211 Tiangu Eighth Road, Xi 'an High-tech Zone



2.2 Test Equipment List

Type of Equipment	Manufacturer	Model Number	S/N	Calibration	
				Last Cal.	Due Date
Vector network analyzer	Agilen	E5071C	00144569068472	2022/11	2023/11
CMW500	ROHDE&SCHWARZ	CMW500	110506011561409	2022/11	2023/11
3D near-field microwave darkroom	GTS	Ray Zone 1800	CT10120520A2175	2022/11	2023/11

3 Test Condition

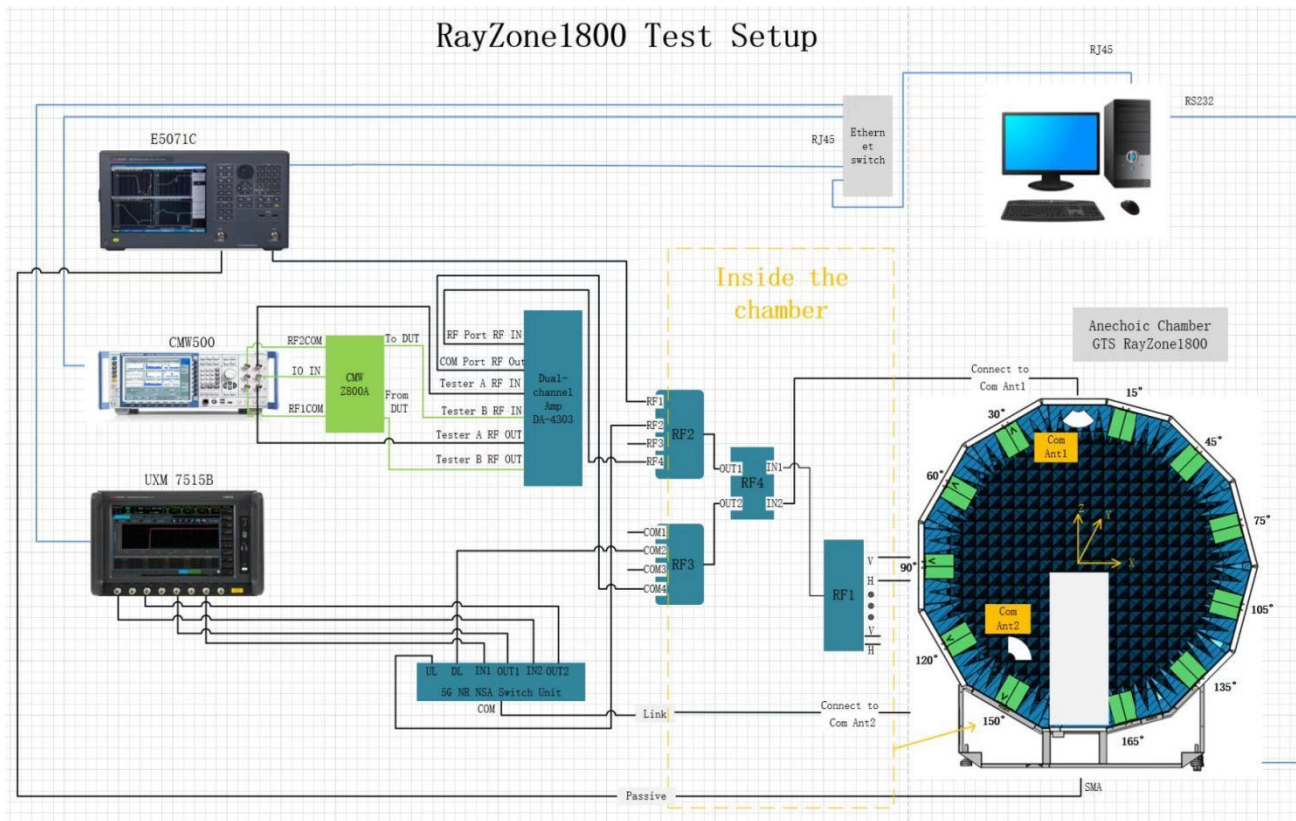
3.1 Test Method (Test Procedure)

1. First turn on the product (at this time, the blue light flashes) and place it in a dark room.
2. Connect the product Bluetooth with the tablet computer, and the product will flash a white light after successful connection.
3. Use the tablet to enter test commands into the product. after receiving the correct return value, wait about 5 seconds, the Bluetooth connection between the tablet computer and the product will be disconnected, and the blinking light of the product will be off.

4. Start the power test.

$$\text{Efficiency} = \text{Peak gain} - \text{Directivity}$$

3.2 Measurement System



3.3 Test Setup Photo



4 Test Results

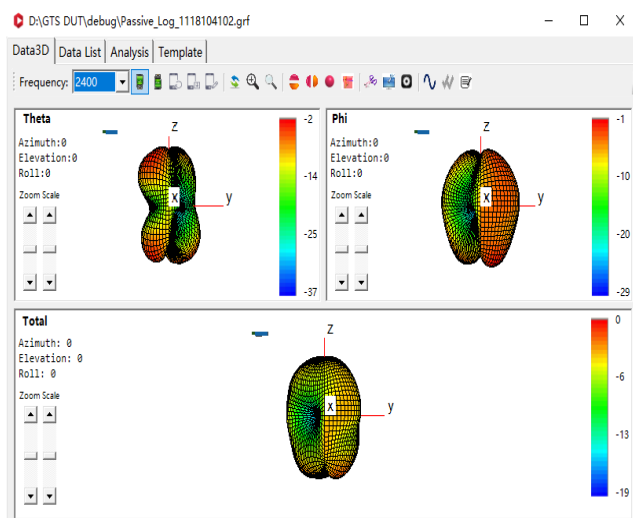
4.1 Gain and Efficiency

Free space				
Frequency (MHz)	AVG Gain	efficiency	Peak Gain	Directivity
2400	-4.56	35	-0.81	3.753041496
2410	-4.44	35.97	-0.68	3.759776527
2420	-4.08	39.07	-0.21	3.87554157
2430	-3.72	42.44	0.46	4.186250617
2440	-3.42	45.52	0.9	4.317728784
2450	-3.4	45.75	1.04	4.433541976
2460	-3.57	43.99	1.09	4.651196826
2470	-3.85	41.17	0.84	4.693580078
2480	-3.85	41.22	0.94	4.789109582
2490	-3.8	41.66	0.95	4.754457781
2500	-3.81	41.63	0.88	4.684048521

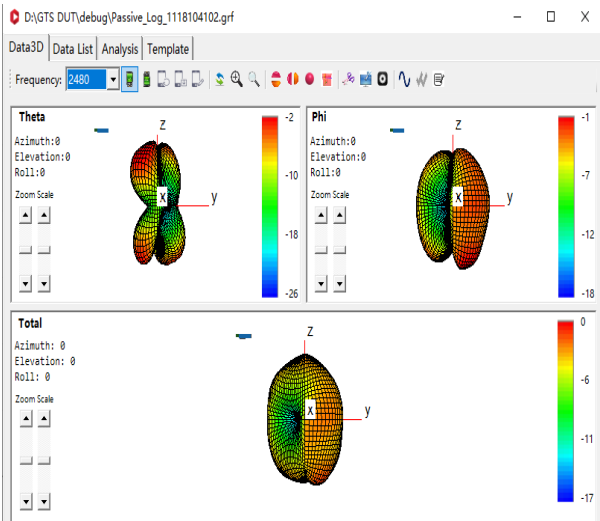
4.2 Radiation Pattern (2D or 3D)

Free space

2402MHz



2480MHz



Arm condition
2402MHz

2480MHz

