



TEST REPORT

Applicant	:	Action Electronics Co.,Ltd.
Address of Applicant	:	2480,TINGKAT PERUSAHAAN ENAM,PRAI FREE TRADE ZONE, 13600, PERAI
Manufacturer	:	ACTION INDUSTRIES (M) SDN.BHD.
Address of Manufacturer	:	2480, TINGKAT PERUSAHAAN ENAM, PRAI FREE TRADE ZONE, 13600, PERAI, PENANG, MALAYSIA
Equipment under Test	:	PCB Antenna Assembly
Model No.	:	440-040625-B
Test Standard(s)	:	GB/T 9410-2008 ANSI/IEEE Std149-2021
Report No.	:	DDT-RE25120817-1E01
Issue Date	:	2025/12/18
Issued By	:	Guangdong Dongdian Testing Service Co., Ltd. Unit 2, Building 1, No. 17, Zongbu 2nd Road, Songshan Lake Park, Dongguan, Guangdong, China, 523808

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Test Report Declare

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Address of Manufacturer	:	2480, TINGKAT PERUSAHAAN ENAM, PRAI FREE TRADE ZONE, 13600, PERAI, PENANG, MALAYSIA
Equipment under Test	:	/
Model No.	:	/

Test Standard Used:

GB/T 9410-2008

ANSI/IEEE Std149-2021

We Declare:

The equipment described above is tested by Guangdong Dongdian Testing Service Co., Ltd. and in the configuration tested the equipment complied with the standards specified above. The test results are contained in this test report and Guangdong Dongdian Testing Service Co., Ltd. is assumed of full responsibility for the accuracy and completeness of these tests.

Report No.:	DDT-RE25120817-1E01		
Date of Receipt:	2025/12/09	Date of Test:	2025/12/09~2025/12/12

Created: Zeng Zhongyao	Reviewed: Zoe Peng	Approved: Damon Hu
		
2025/12/12	2025/12/18	2025/12/18

Note: This report applies to above tested sample only. This report shall not be reproduced in parts without written approval of Guangdong Dongdian Testing Service Co., Ltd.

Revision History

Version	Revision Content	Issue Date	Approved
V0	Initial issue	2025/12/18	Damon Hu

1. General Test Information

1.1. Description of EUT

Product Name	:	PCB Antenna Assembly
Model Number	:	440-040625-B
Antenna Type	:	PCB Antenna
Frequency Range	:	2400-2500MHz

1.2. Test laboratory

Guangdong Dongdian Testing Service Co., Ltd.

Add.: Unit 2, Building 1, No. 17, Zongbu 2nd Road, Songshan Lake Park, Dongguan, Guangdong, China, 523808.

Tel.: +86-0769-38826678, <http://www.dgddt.com>, Email: ddt@dgddt.com.

CNAS Accreditation No. L6451; A2LA Accreditation Number: 3870.01

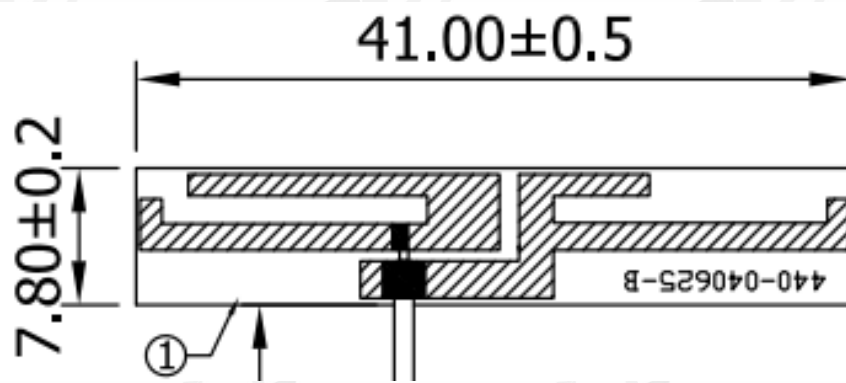
FCC Designation Number: CN1182, Test Firm Registration Number: 540522

Innovation, Science and Economic Development Canada Site Registration Number: 10288A

Conformity Assessment Body identifier: CN0048

VCCI facility registration number: C-20087, T-20088, R-20123, R-20240, G-20118

2. Antenna Parameter



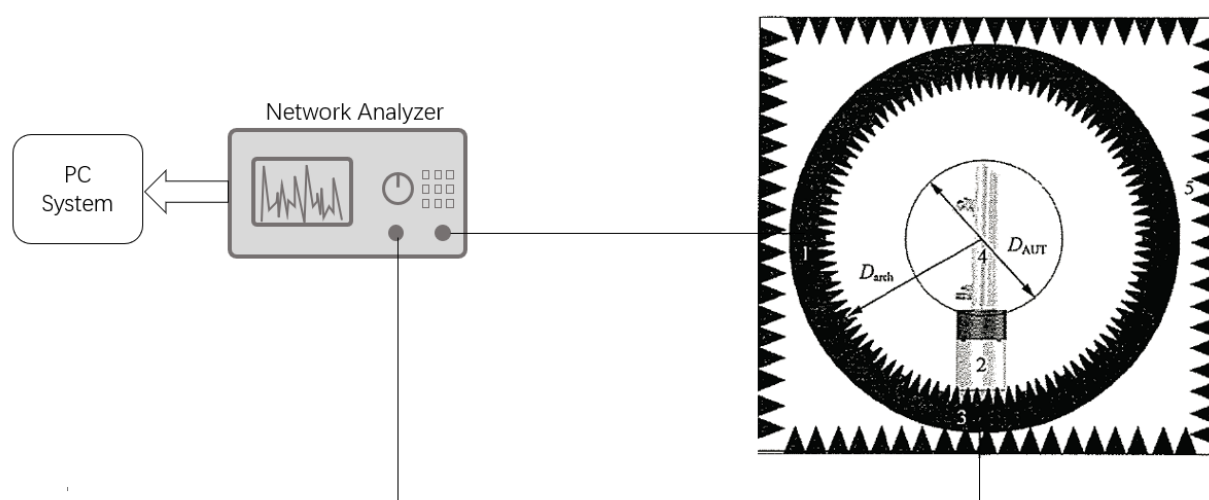
单位：mm

3. Antenna Gain Measurement

3.1. Test equipment

Equipment	Manufacturer	Model No.	Serial No.	Cal Due To
ENA Network Analyzer	Agilent	E5071C	MY46900684	2026/03/28
Software	SHENZHEN XINGHANG	XH.PassiveTest	V2.7.6	N/A
Software	SHENZHEN XINGHANG	XHDP	V2.8.0	N/A

3.2. Block Diagram of Test Setup



3.3. Test procedure

- (1) Set up the antenna to be measured. Set up the antenna and mark the cross reference line at the center of the antenna port surface to be measured.
- (2) Connect the cable connector and adjust the downdip Angle (electrically tuned antenna).
- (3) Open the test software, create the test project, and configure the test port.
- (4) Use test software for automatic testing and save test data of electromagnetic field distribution.
- (5) Change the port, downdip Angle, or test frequency (if necessary), and repeat steps (3) to (4) until all status data to be measured is collected.
- (6) After near and far field exchange, the three-position spherical pattern of the antenna to be tested is obtained, and the Theta and Phi angles of the position where the maximum level of the three-position spherical pattern is located are found. The horizontal plane pattern curve of the antenna to be tested is obtained by cutting according to equal Theta Angle, and the vertical plane pattern of the antenna to be tested is cancelled by cutting according to equal Phi Angle. Then the radiation parameters of the horizontal plane and vertical plane pattern of the antenna to be measured are obtained by using the processing method similar to that of the far field.

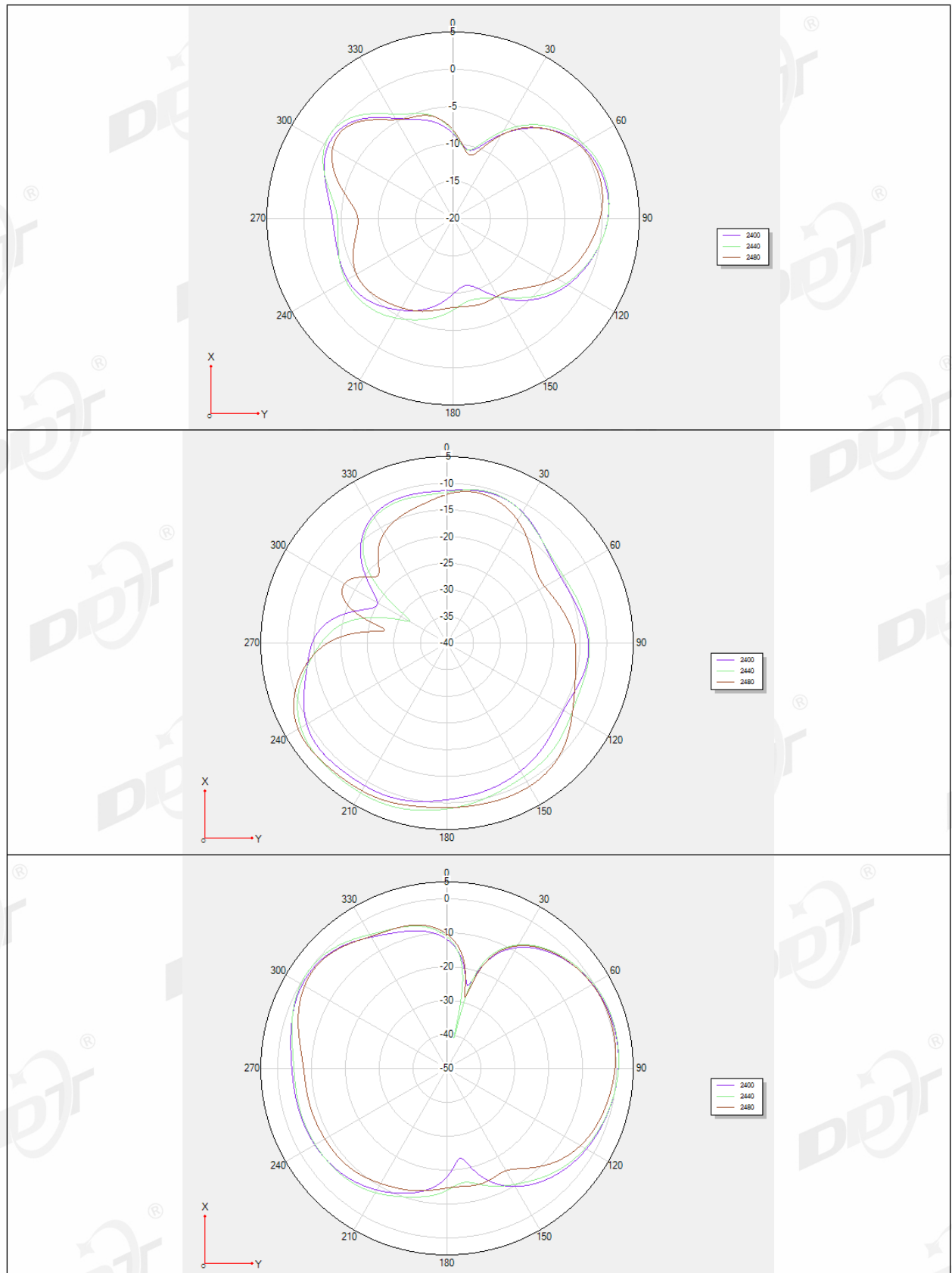
3.4. Test Data

Test Engineer:	Lin Guoyuan	Test Site:	OTA chamber
Ambient Condition:	26.4 °C, 44.7%RH	Test Date:	2025/12/11 - 2025/12/11
Sample Number:	S25090308-008		

Frequency [MHz]	Max Gain [dBi]	Avg Gain [dBi]
2400	1.04	-3.8
2410	1.66	-3.02
2420	1.56	-3.1
2430	2.23	-2.58
2440	1.47	-3.17
2450	1.61	-2.86
2460	1.19	-3.44
2470	1.72	-3.06
2480	1.25	-3.41
2490	1.74	-2.98
2500	1.62	-3.17

3.5. Radiation pattern

2-D Pattern Plots



3-D Pattern Plots

