

Antenna Test Report

I. Basic Information

Item	Description
Product Name	PCB Antenna
Model No.	GF-7021-IPEX 1-130LX
Manufacturer	Dongguan Chuangjie Electronics Co., Ltd.
Address	Room 701, Building 1, No. 29, Baobao Road, Dongkeng Town, Dongguan City, Guangdong Province
Lot No.	G20250303
Specification Approval Sheet No.	NB004-113B-125IX
Antenna Dimensions	47.5 * 7.2 mm
Connector Type	IPEX
Cable Type	O.D. 1.13 mm, Length 55 mm

II. Electrical Performance Parameters

Parameter	Specification
Frequency	2.4 GHz
Impedance	50 Ω
V.S.W.R	$\leq 1.92 : 1$
Return Loss	≤ -10 dB
Radiation Pattern	Omni-directional
Peak Gain	5 dBi
Cable Loss	≤ 3.2 dB/m @ 2450 MHz
Polarization	Linear Vertical
Rated Power	1 W

III. Physical & Environmental Characteristics

Item	Specification
Antenna Material	PCB
Operating Temperature	-10°C ~ +60°C
Storage Temperature	-10°C ~ +70°C

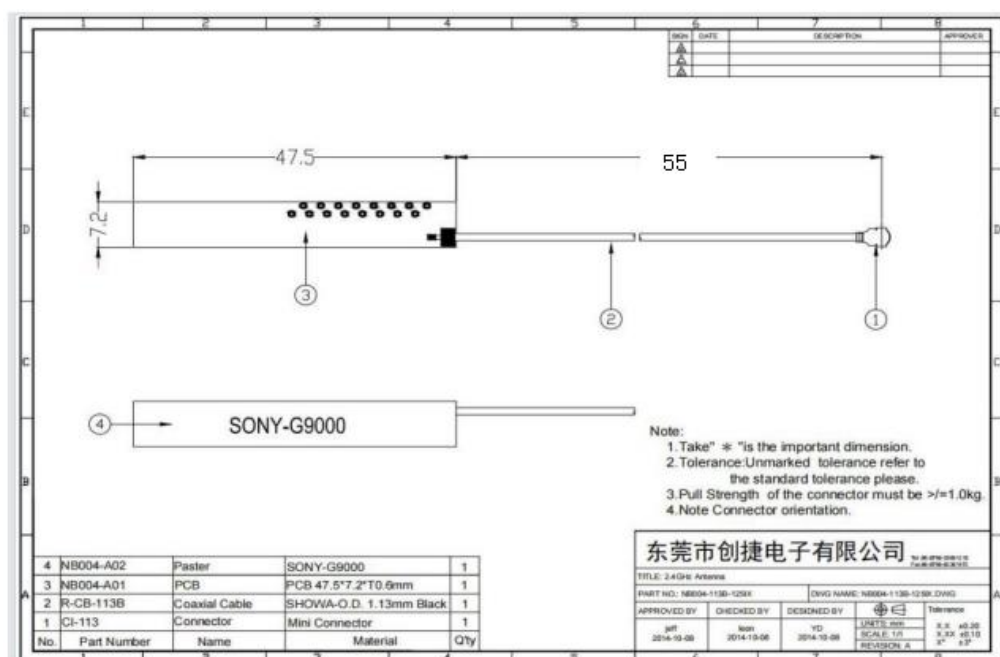
IV. Summary of Factory Test Results

1. Visual Inspection

Sample Size	2000 pcs
Acceptance Criteria	Critical Defect Ac=0, Major Defect Ac=0, Minor Defect Ac=0
Inspection Result	✓No defects found

2. Dimensional Inspection

No.	Specification (mm)	Instrument	Type	Quantity	Result
3	47.5 * 7.2 ± 0.3	Caliper	Sampling	2000	PASS
2	55 ± 0.3	Caliper	Sampling	2000	PASS
1	1.13 ± 0.3	Caliper	Sampling	2000	PASS



3. Functional Test

Instrument	Network Analyzer
Total Tested	50,000 pcs
Passed	50,000 pcs
Failed	0 pcs ✓

V. Reference Test Items

Test Item	Status
Engineering Drawing	Provided
Electrical Test Report	Provided
S-Parameter Test	Provided
Gain Test	Provided (including radiation pattern)

VI. Final Judgment

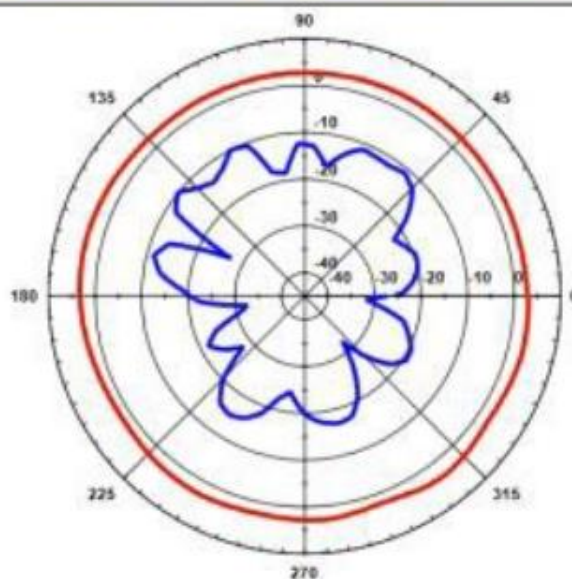
Inspection Item	Result
Appearance	✓Pass
Dimensions	✓Pass
Function	✓Pass
Packaging	✓Pass
Overall Verdict	- PASS

Appendix A: Gain Radiation Pattern

Angle (°)	Relative Gain (dBi)	Angle (°)	Relative Gain (dBi)
0	4.8	180	4.7
45	4.9	225	4.8
90	5.0	270	4.9
135	4.7	315	4.8

【实际增益方向图占位区】

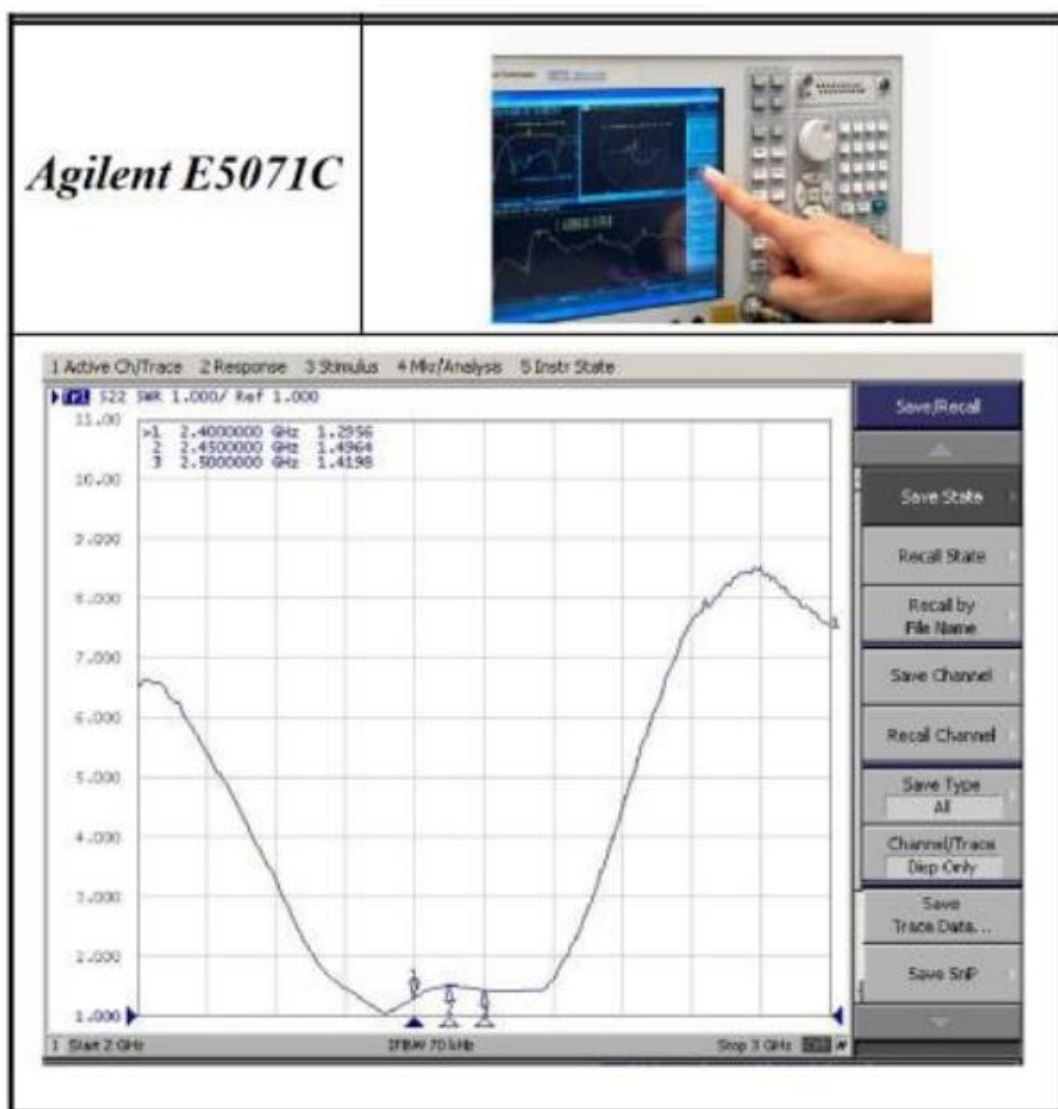
*Antenna
Radiation
Pattern
VS
Gain*



[Figure A-1: Normalized Antenna Radiation Pattern (2.4 GHz)]

Appendix B: S-Parameter Curve (S11 / Return Loss)

Frequency (GHz)	S11 (dB)	VSWR
2.30	-8.5	2.15
2.35	-10.2	1.92
2.40	-12.5	1.62
2.45	-11.8	1.70
2.50	-9.0	2.08



VII. Remarks

- This report is compiled based on the "Specification Approval Sheet NB004-113B-125IX" and the "Factory Inspection Report GF-7021-IPEX 1-130LX".
- It can serve as a reference for product certification, customer submission, or internal quality traceability.
- All tests were performed under standard conditions, conforming to corporate specification TD004-180601, Version A0.
- The gain pattern and S-parameter curves in the appendices are reference placeholders. For actual certification, original measured graphs from a third party or internal testing should be attached.

Prepared by: Quality Department **Reviewed by:**

_____ **Date:** May 22, 2026

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