



Antenna Test Report

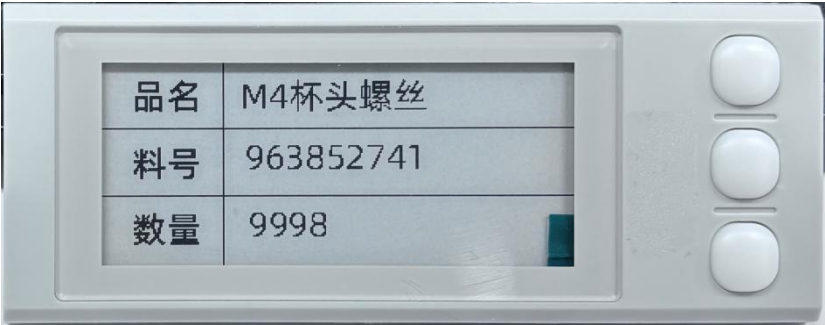
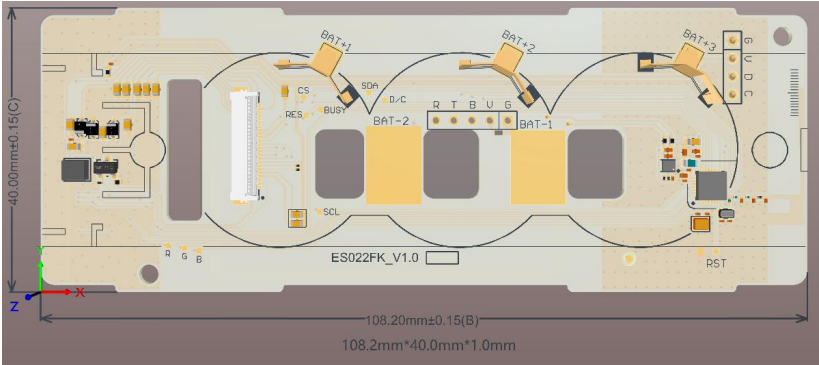
Project No	P24071E3B	PCB Version	ES022FK_V1.0
Tester	ZHUWANLI	Date	2025-07-24
Auditing		Date	
Approval		Date	

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一、Project Information

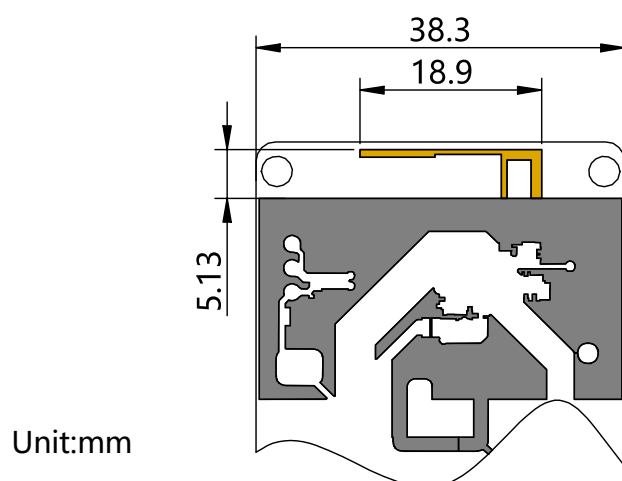
1. Antenna Coding：ANT-BBNCNC25018
- 2.Antenna Type：PIFA
3. Model of the DUT：P24071E3B
- 4 .Test Data ：2025-07-24
- 5 .Product picture：

Product appearance	
PCB board and antenna	

二、Technical Specification

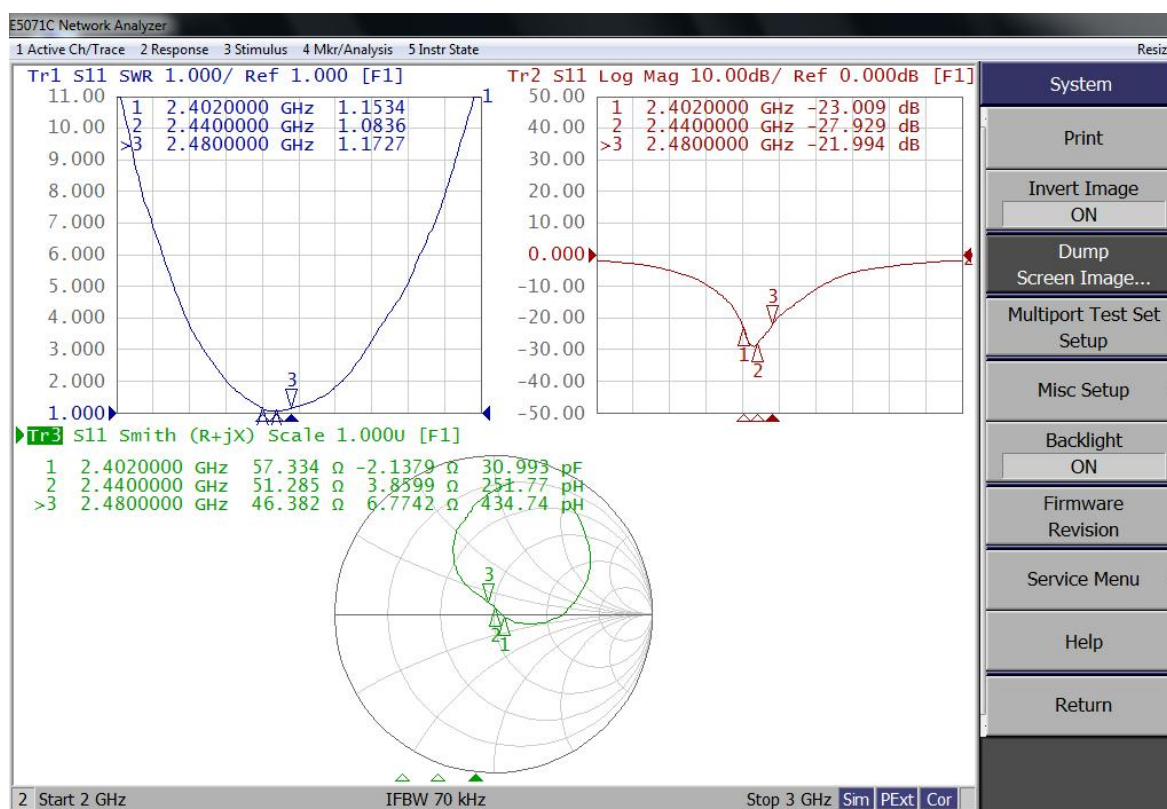
Electrical Specifications	
Frequency Range	2400-2480 MHz
Peak Gain	0.1 dBi
Efficiency	36.99%
Return Loss	≥ 21 dB (MAX)
VSWR	≤ 2.0 (MAX)
Bandwidth (S11 $\leq$ -10dB)	400 MHz
Input Impedance	50 Ω
Radiation direction	Omni
Polarization Type	Linear
Lightning Protection	DC grounding
Power Capacity	1000mW (30dBm)
Mechanical Specifications	
Antenna Size	18.9 x 5.13 mm
Core Radiator	Copper
Substrate material	FR4
Substrate thickness	1.0 mm
Substrate Size (mm)	108.2 x 40 mm
Coaxial wire	Not required
Connect Type	Not required

三、The shape and size of the antenna



四、The result of the test

1 .VSWR & Return loss & Smith



Frequency (MHz)	Return Loss (dB)	VSWR
2402	23	1.15
2440	27.9	1.08
2480	21.9	1.17
Bandwidth (S11≤-9.8dB)	600	

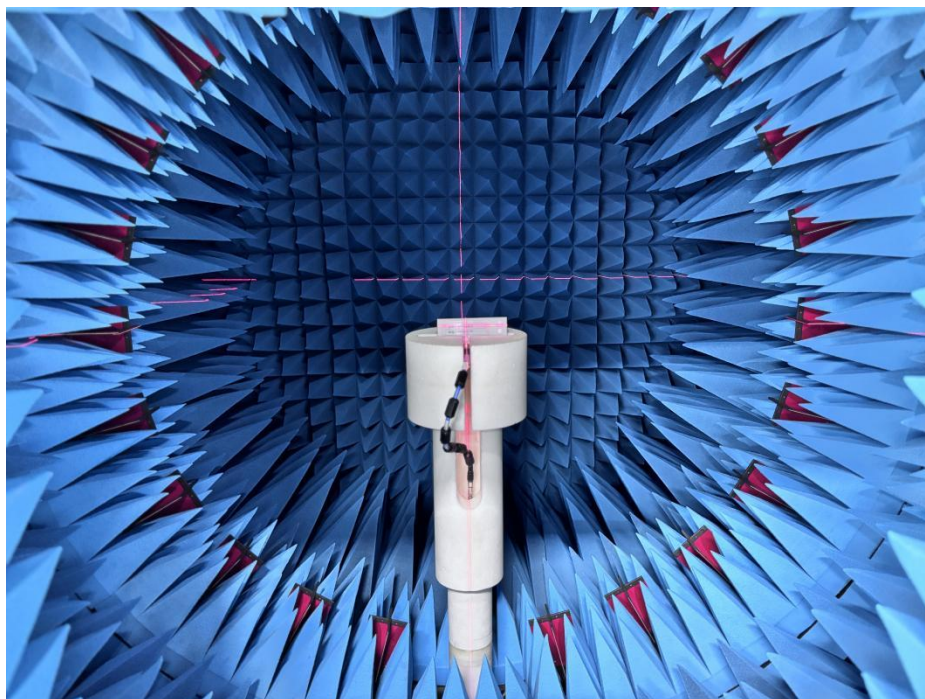
2. Antenna Testing Environment

(1).Test Equipment : SY-24M, Agilent-E5071C

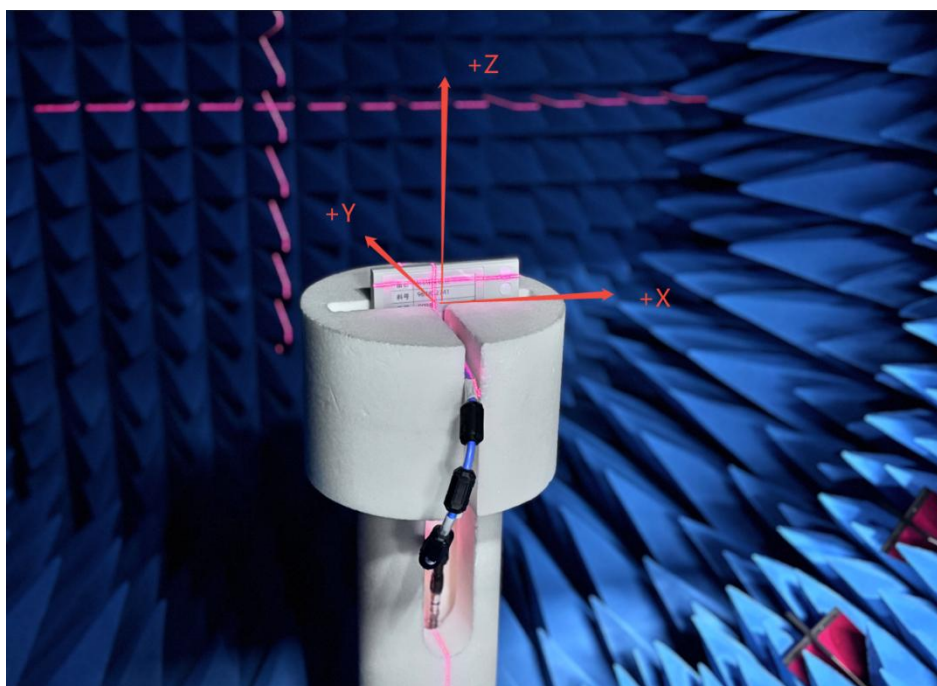
(2).Test Engineer : ZHUWANLI

(3).Test Environment : The microwave unreflected chamber

Inside the microwave anechoic chamber



Product coordinate axis position

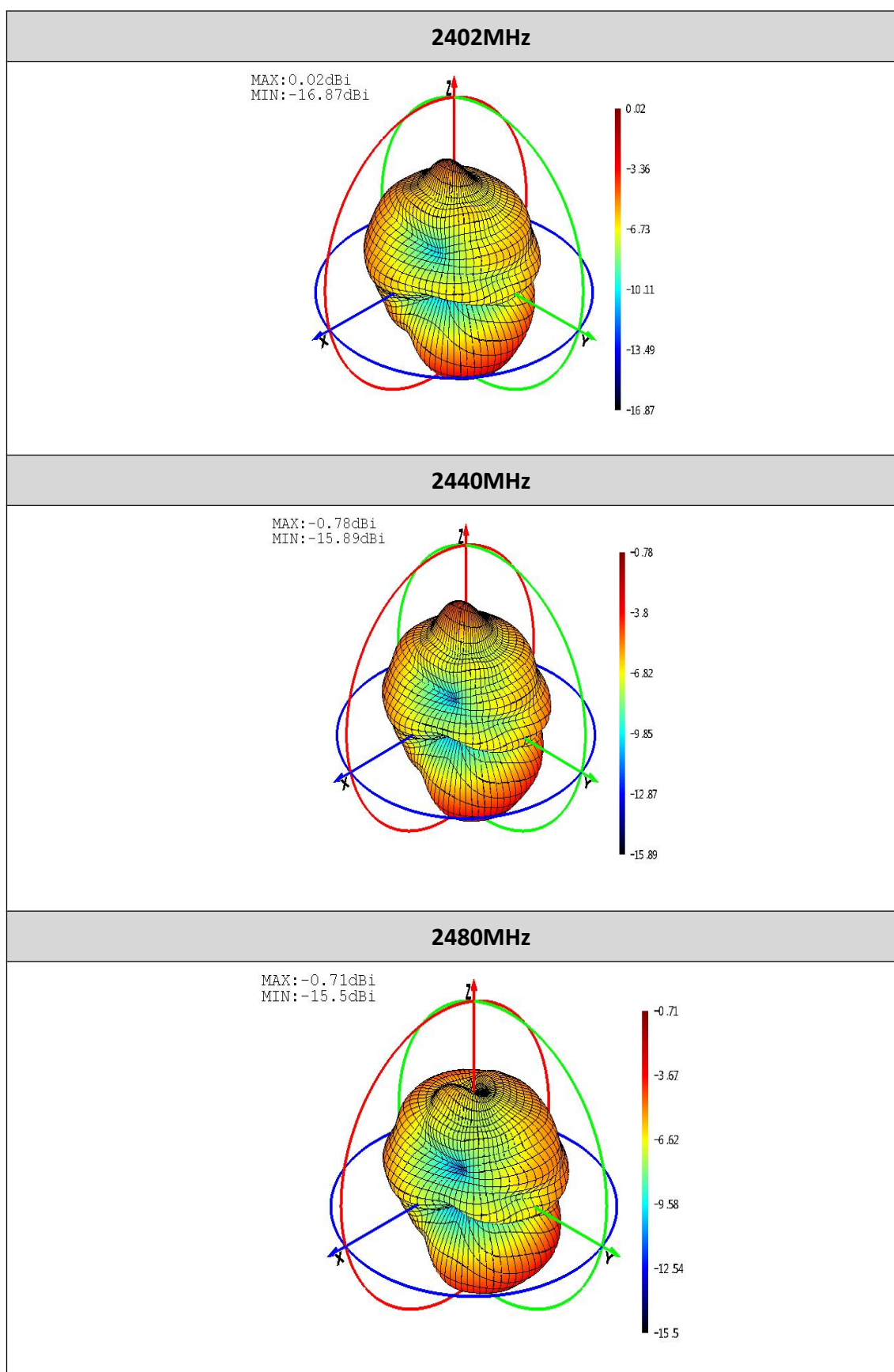


3 .Gain and Efficiency

频率(MHz)	增益(dBi)	效率(%)
2400	0.10	36.99
2402	0.02	36.75
2404	-0.02	36.68
2406	-0.12	36.57
2408	-0.15	36.48
2410	-0.19	36.35
2412	-0.22	36.19
2414	-0.24	36.11
2416	-0.35	36.15
2418	-0.35	36.09
2420	-0.38	35.84
2422	-0.43	35.69
2424	-0.48	35.56
2426	-0.62	35.60
2428	-0.64	35.58
2430	-0.66	35.47
2432	-0.66	35.40
2434	-0.68	35.26
2436	-0.78	35.19
2438	-0.78	35.24
2440	-0.78	35.34
2442	-0.75	35.61
2444	-0.75	35.64
2446	-0.83	35.55
2448	-0.84	35.51
2450	-0.81	35.81
2452	-0.78	35.91
2454	-0.74	36.19
2456	-0.73	36.25
2458	-0.74	36.12
2460	-0.78	35.85
2462	-0.80	35.69
2464	-0.80	35.79
2466	-0.78	36.04
2468	-0.74	36.31
2470	-0.76	36.23
2472	-0.75	36.25
2474	-0.75	36.18
2476	-0.78	36.18
2478	-0.75	36.36
2480	-0.71	36.63

2482	-0.70	36.77
2484	-0.71	36.81
2486	-0.76	36.85
2488	-0.76	36.99
2490	-0.74	37.24
2492	-0.71	37.39
2494	-0.72	37.40
2496	-0.77	37.29
2498	-0.81	37.10
2500	-0.81	37.09

4 .3D Radiation Pattern



5.2D Radiation Pattern

