



Antenna Test Report

Project No	CS25041B	PCB Version	ME25LS02_V1.0
Tester	ZHU WANLI	Date	2025/04/22
Auditing	LI JINBEI	Date	2025/04/22
Approval		Date	

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一、Project Information

1. Antenna Coding: ANT-BBNCNC25009
2. Antenna Type: PCB onboard Antenna
3. Model of the DUT: ME25LS02_V1.0
4. Test Data : 2025.04.22
5. Product picture:

Product
appearance

A photograph of the ME25LS02 module. It consists of a green printed circuit board (PCB) with a black rectangular component mounted on it. The black component has the text "MINEWSEMI ME25LS02 1N15TD-5" and a QR code printed on it. A gold-colored antenna is visible on the left side of the PCB.

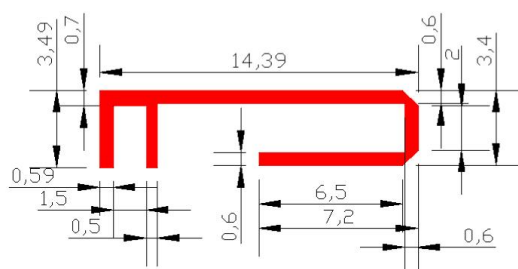
PCB board and
antenna

A photograph of the green PCB board and antenna. The PCB is populated with various electronic components, including a large black chip, a blue chip, and several surface-mount components. A gold-colored antenna is attached to the board. The PCB has a detailed pin header on the right side with labels for each pin, including P0.04, P0.03, P0.02, P0.01, P1.01, P1.02, P1.03, P1.04, P1.05, P1.06, P1.07, P1.08, P1.09, P1.10, P1.11, P1.12, P1.13, P1.14, P1.15, P1.16, P1.17, P1.18, P1.19, P1.20, P1.21, P1.22, P1.23, P1.24, P1.25, P1.26, P1.27, P1.28, P1.29, P1.30, P1.31, P1.32, P1.33, P1.34, P1.35, P1.36, P1.37, P1.38, P1.39, P1.40, P1.41, P1.42, P1.43, P1.44, P1.45, P1.46, P1.47, P1.48, P1.49, P1.50, P1.51, P1.52, P1.53, P1.54, P1.55, P1.56, P1.57, P1.58, P1.59, P1.60, P1.61, P1.62, P1.63, P1.64, P1.65, P1.66, P1.67, P1.68, P1.69, P1.70, P1.71, P1.72, P1.73, P1.74, P1.75, P1.76, P1.77, P1.78, P1.79, P1.80, P1.81, P1.82, P1.83, P1.84, P1.85, P1.86, P1.87, P1.88, P1.89, P1.90, P1.91, P1.92, P1.93, P1.94, P1.95, P1.96, P1.97, P1.98, P1.99, P1.100, P1.101, P1.102, P1.103, P1.104, P1.105, P1.106, P1.107, P1.108, P1.109, P1.110, P1.111, P1.112, P1.113, P1.114, P1.115, P1.116, P1.117, P1.118, P1.119, P1.120, P1.121, P1.122, P1.123, 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二、Technical Specification

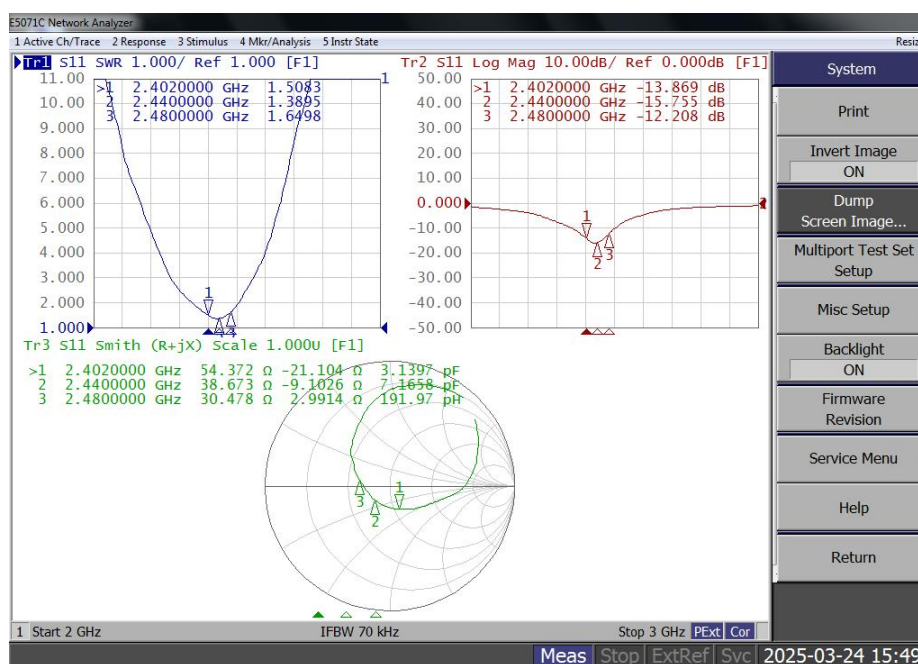
Electrical Specifications	
Frequency Range	2400-2480 MHz
Peak Gain	2.38 dBi
Efficiency	74.12%
Return Loss	≤ -12.20 dB
VSWR	≤ 1.649
Bandwidth (S11 ≤ -10 dB)	140 MHz
Input Impedance	50 Ω
Radiation direction	Omni
Polarization Type	Linear
Lightning Protection	DC grounding
Power Capacity	1000mW (30dBm)
Mechanical Specifications	
Antenna Size	14.4 x3.5mm
Core Radiator	Copper
Substrate material	FR4
Substrate thickness	1.0 mm
Substrate Size (mm)	15mm*6.2mm*1.0mm
Coaxial wire	无
Connect Type	无
Operating Temperature	-40 to +85° C
Storage Temperature	-40 to +85° C

三、The shape and size of the antenna



四、The result of the test

1 .VSWR & Return loss & Smith

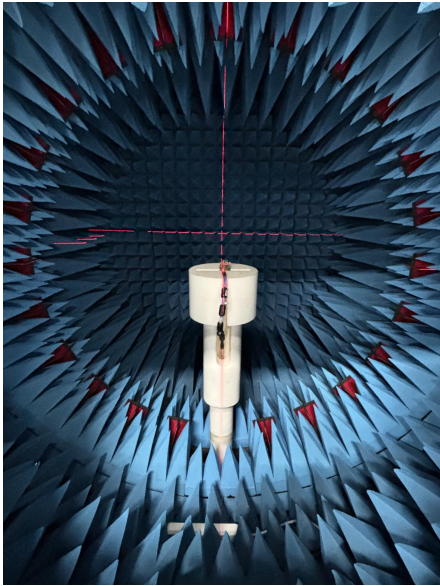
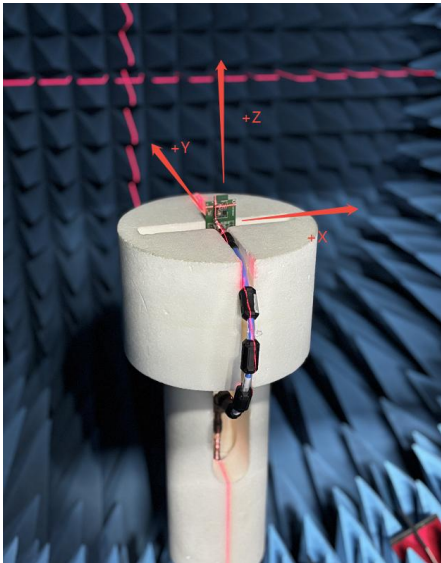


Frequency (MHz)	Return Loss (dB)	VSWR
2402	-13.869	1.508
2440	-15.755	1.389
2480	-12.208	1.649
Bandwidth (S11≤-10dB)	140	

2. Antenna Testing Environment

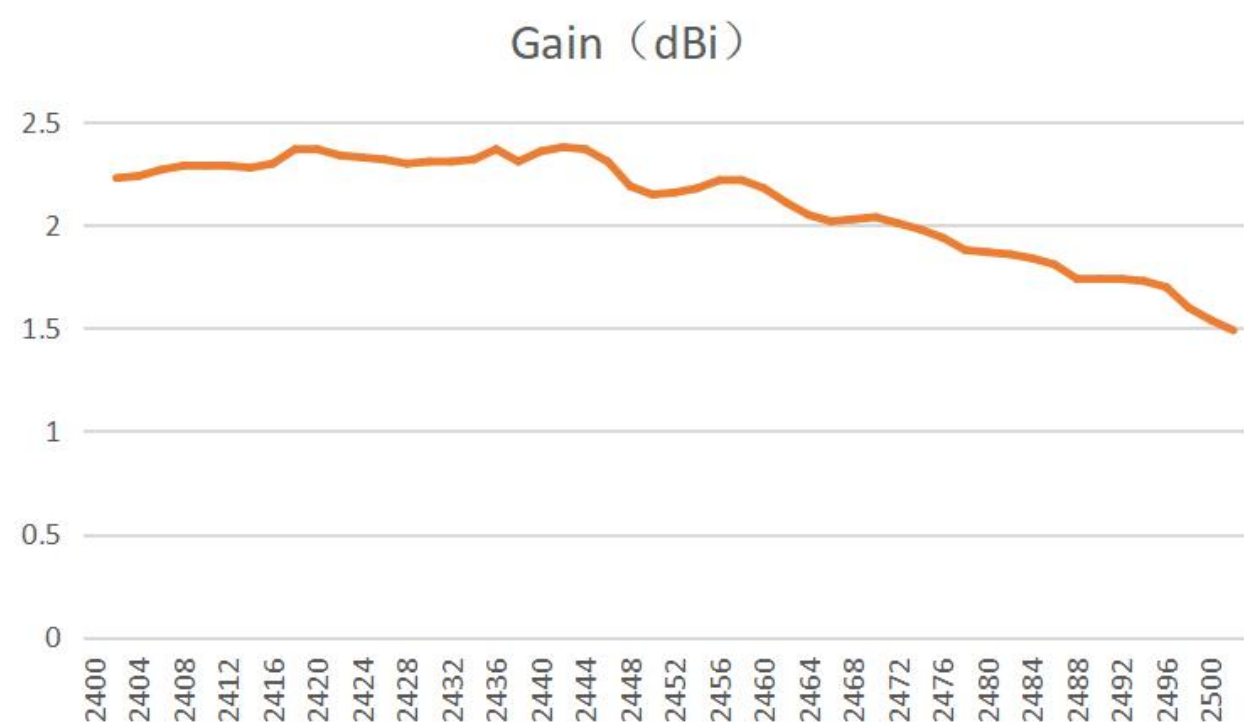
(1).Test Equipment : SATIMO, SY-24M, Agilent-E5071C

(2).Test Environment : The microwave unreflected chamber

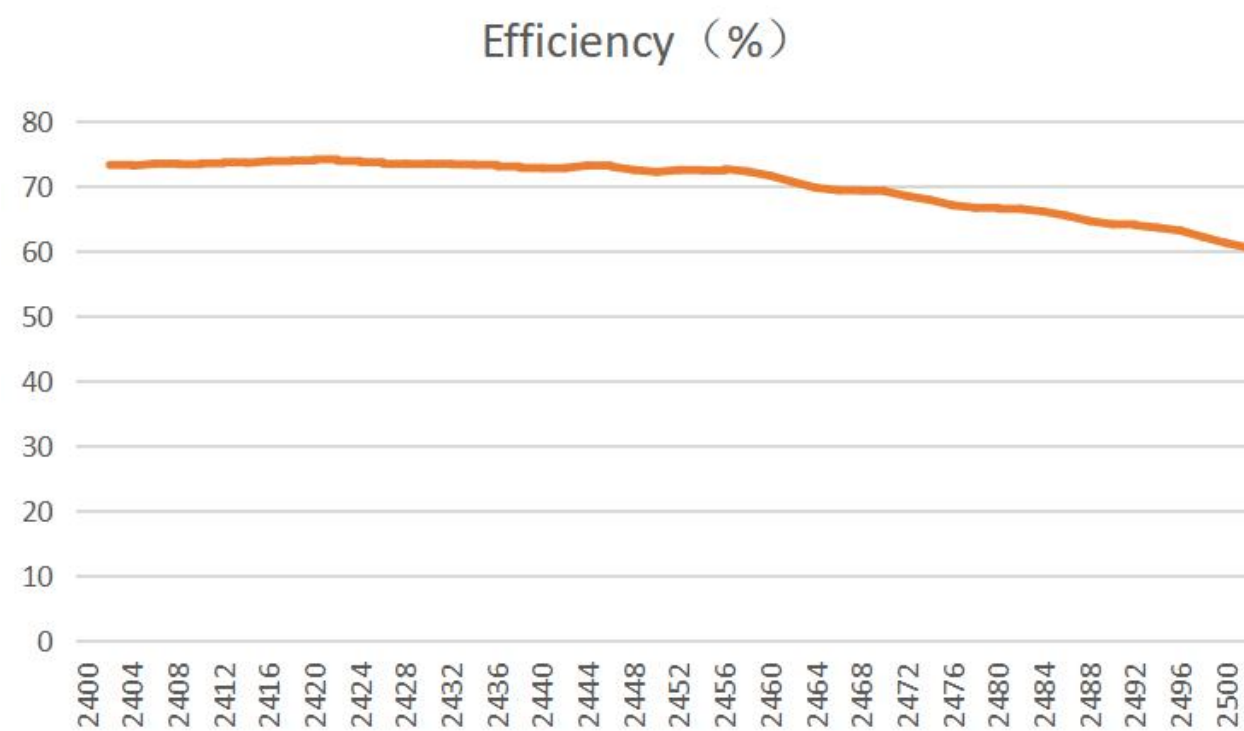
Inside the microwave anechoic chamber	Product coordinate axis position
	

3 .Gain and Efficiency

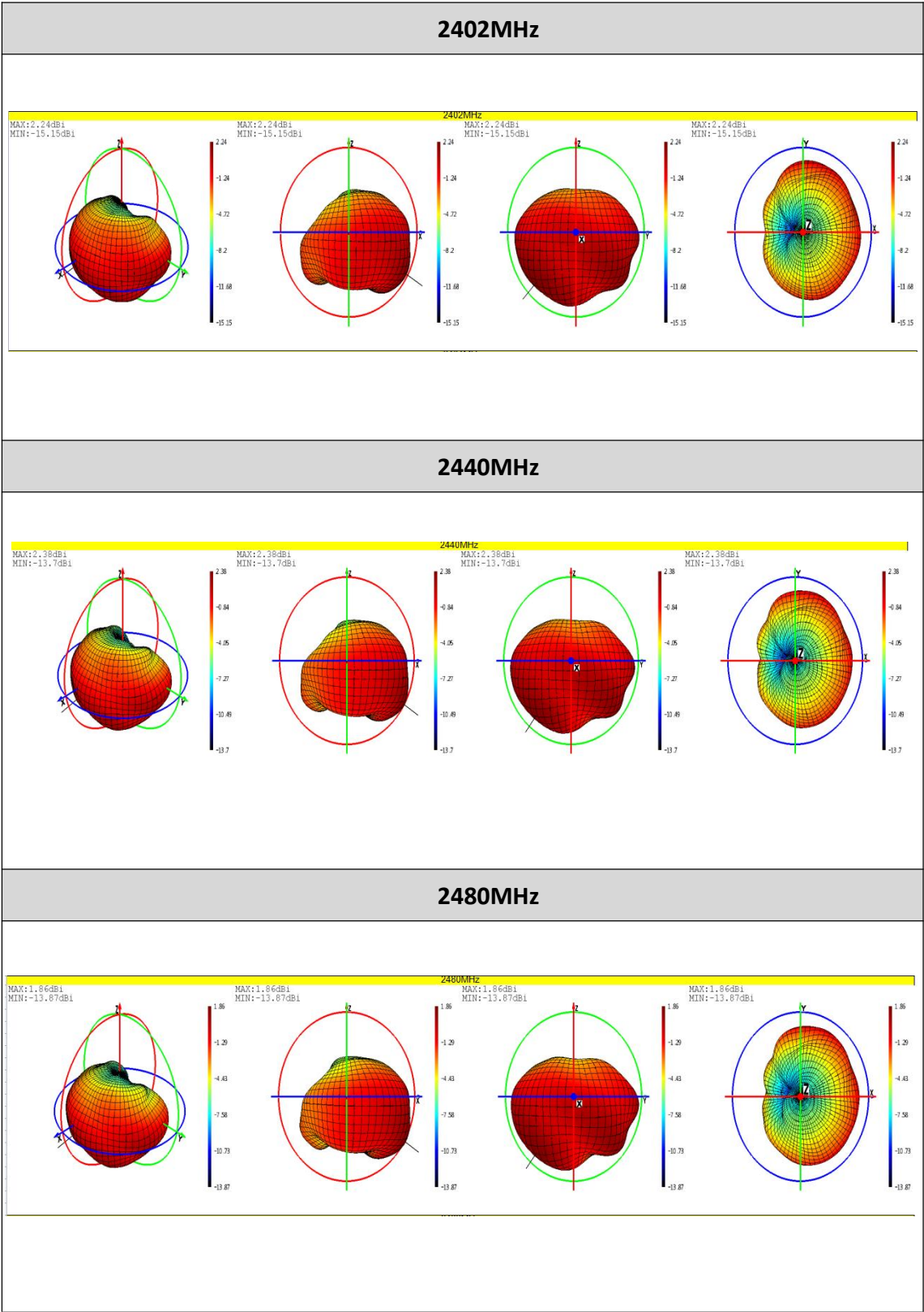
(1).Antenna Efficiency



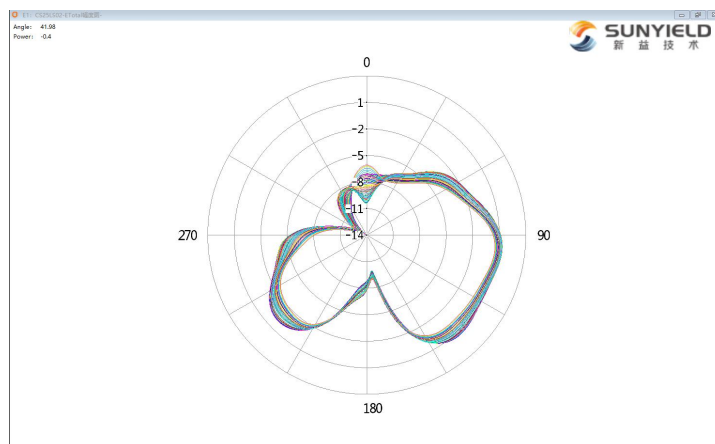
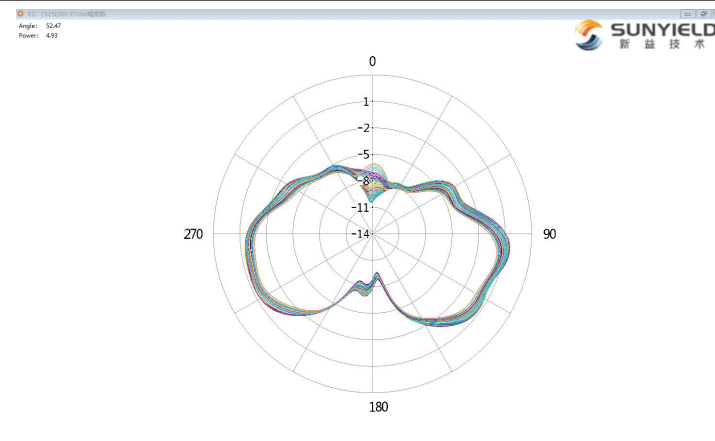
(2).Antenna Gain



4 .3D Radiation Pattern



5.2D Radiation Pattern

E1, XZ-Face, $\phi=0^\circ$; (E1, $\theta=0\sim360^\circ$, $\phi=0^\circ$)E2, YZ-Face, $\phi=90^\circ$; (E2, $\theta=0\sim360^\circ$, $\phi=90^\circ$)H, XY-Face, $\theta=90^\circ$; (H, $\phi=0\sim360^\circ$, $\theta=90^\circ$)