



Mobile Station (MS) / User Equipment (UE) Over the Air (OTA) Antenna Performance Summary Report

REPORT NO.: OTA-RC053-2025 R1

MODEL NO.: ESP-ANT D-H

RECEIVED DATE: 2025.12.29

TESTED DATE: 2025.12.29 ~ 2025.12.29

ISSUED: 2026.01.04

MANUFACTURER: Espressif System(Shanghai) Co.,Ltd

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RELEASE CONTROL RECORD

REPORT NO.	REASON FOR CHANGE	DATE ISSUED
OTA-RC053-2025	Original release	2025.12.30
OTA-RC053-2025 R1	Update Antenna Diagram	2026.01.04

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GENERAL INFORMATION

APPLICANT:	Espressif System(Shanghai) Co.,Ltd
MANUFACTURER:	Espressif System(Shanghai) Co.,Ltd
MODEL NAME.:	ESP-ANT D-H
HARDWARE VERSION:	ESP32-C3-MINI-1 V1.1
SOFTWARE VERSION:	Esp32c3_phy_20210225_no_sleep_and_ampdu
ANTENNA TYPE:	PCB Antenna
STANDARD VERSION:	IEEE Std 149-2021
TEST FREQUENCY:	2402MHz-2502MHz

The above equipment has been tested by **Beijing 7 layers Huarui Communications Technology Co., Ltd.** and found compliance with the requirement of the above standards.

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Yiou Chen / Engineer

APPROVED BY: Li Yunzhuo, DATE: 2026.1.4
Yunzhuo Li / Manager



1. Test Lab Environment Conditions

Temperature	20°C to 30°C
Humidity	30% to 70%

2. Test Equipment List

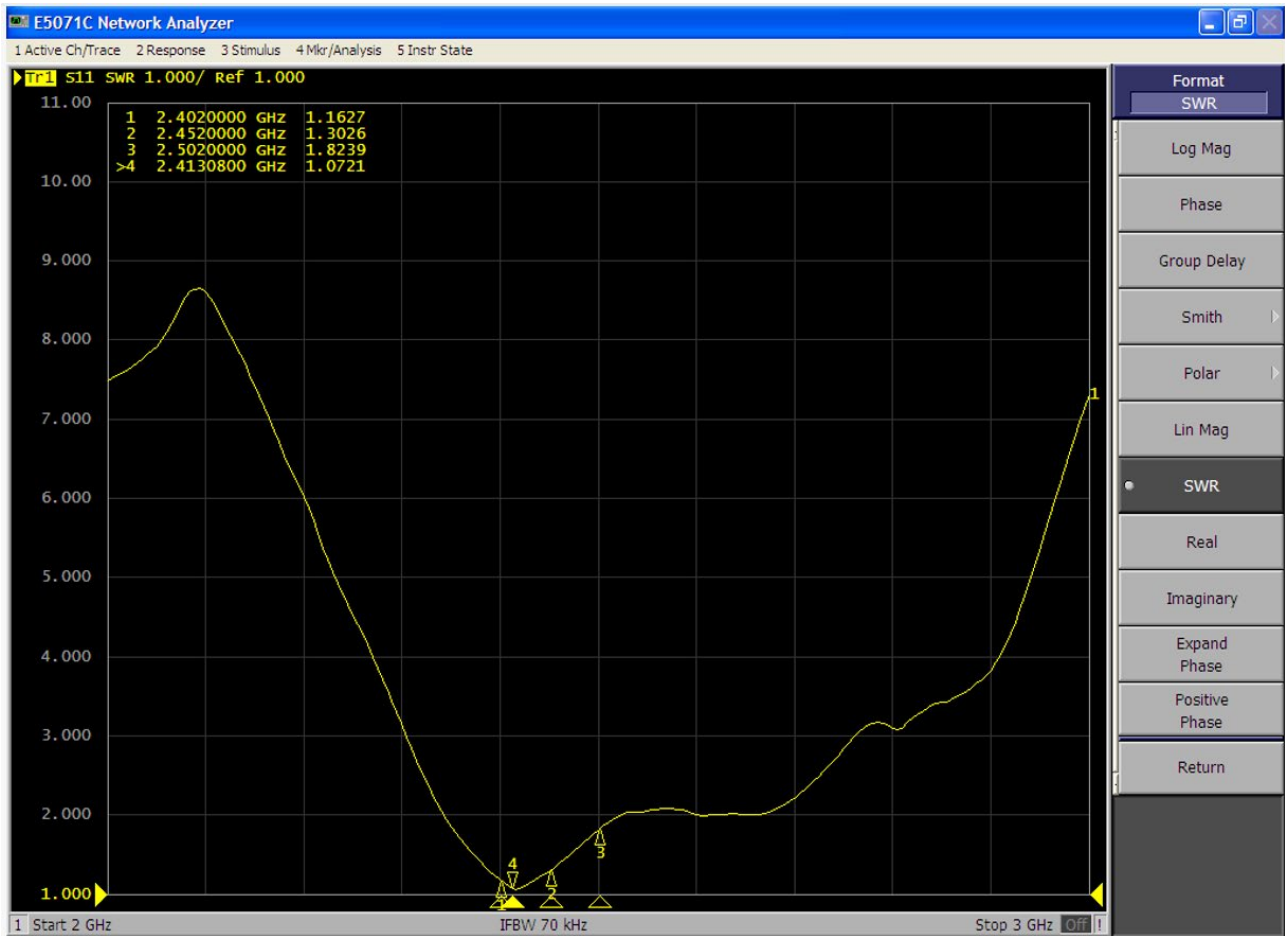
TYPE OF EQUIPMENT	MODEL NUMBER	SERIAL NUMBER	CALIBRATION DUE DATE
Network Analyzer	E5071B	MY42402610	2026.03.13
RF Switch	ETS EMCenter	00220764	N/A
Axis Controller	ETS EMCenter	00220764	N/A
Measurement Antenna	ETS 3164-08	00225372	N/A

3. Characteristics of Antenna

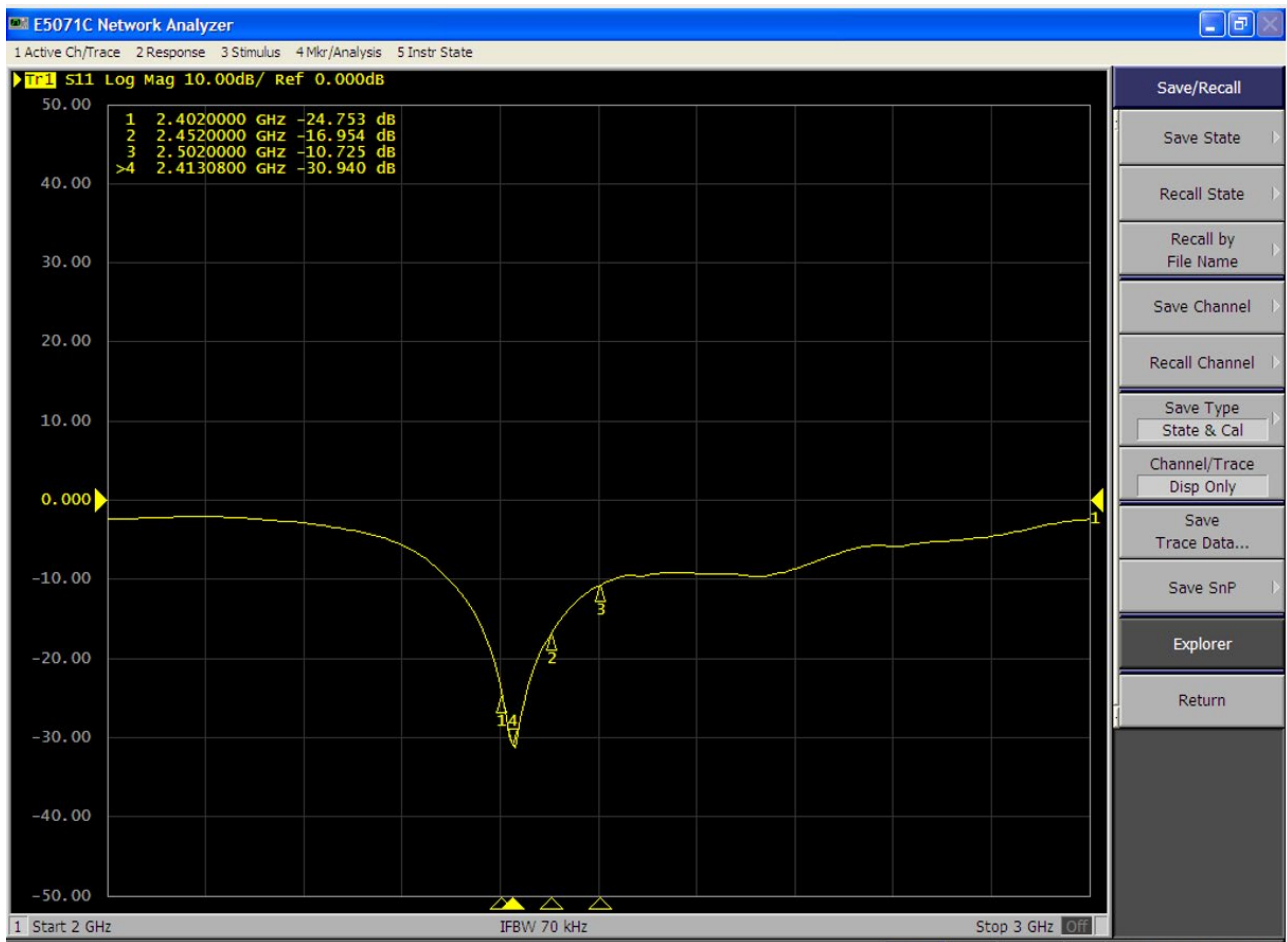
3.1. Gain and Efficiency

Frequency (MHz)	Directivity (dBi)	Efficiency (dB)	Efficiency (%)	Gain (dBi)
2402	3.56	-4.39	36.37	-0.83
2407	3.48	-4.37	36.55	-0.89
2412	3.36	-4.36	36.62	-1.00
2417	3.56	-4.36	36.65	-0.80
2422	3.53	-4.36	36.65	-0.82
2427	3.47	-4.36	36.67	-0.89
2432	3.54	-4.35	36.70	-0.81
2437	3.56	-4.35	36.71	-0.79
2442	3.54	-4.34	36.78	-0.81
2447	3.42	-4.33	36.89	-0.91
2452	3.33	-4.29	37.25	-0.95
2457	3.54	-4.29	37.28	-0.75
2462	3.31	-4.27	37.45	-0.96
2467	3.34	-4.26	37.47	-0.93
2472	3.37	-4.26	37.50	-0.89
2477	3.31	-4.26	37.53	-0.95
2482	3.55	-4.25	37.57	-0.70
2487	3.36	-4.46	35.77	-1.11
2492	3.37	-4.46	35.79	-1.09
2497	3.42	-4.49	35.58	-1.06
2502	3.50	-4.58	34.87	-1.08

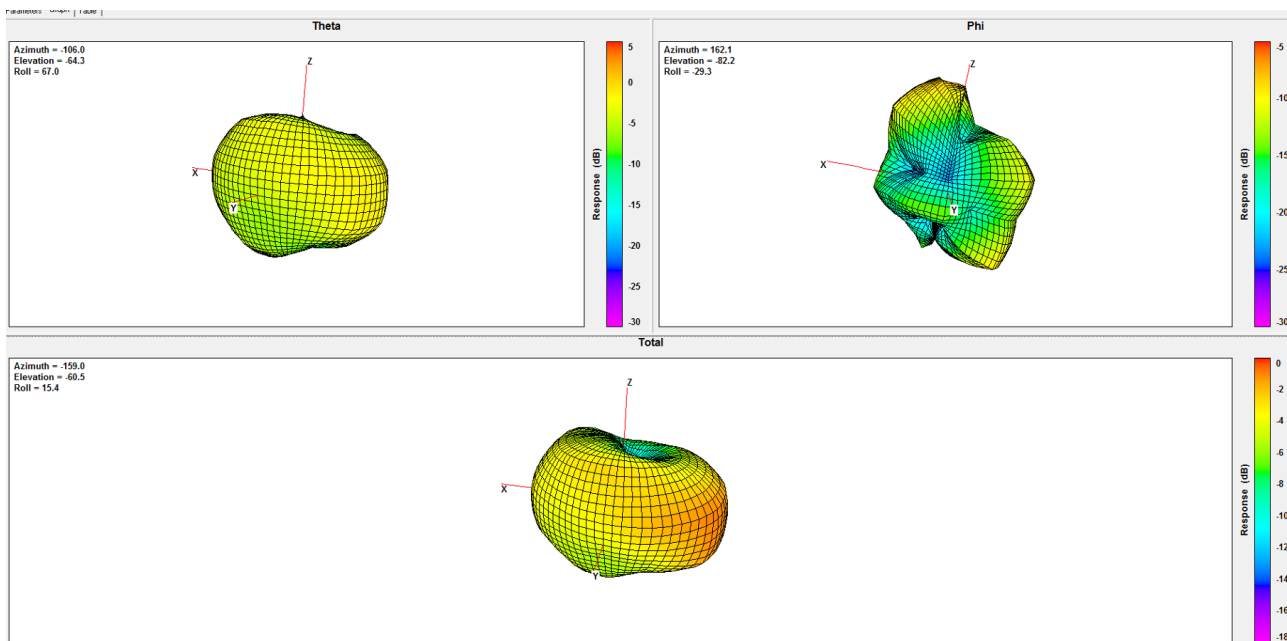
3.2. VSWR

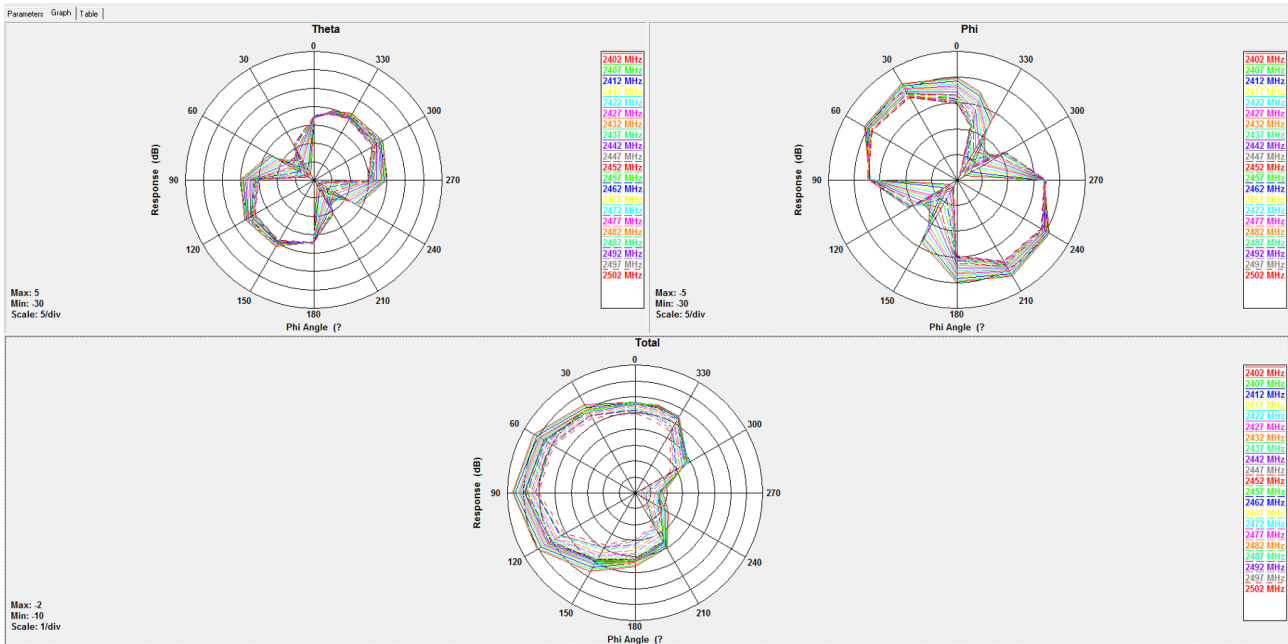


3.3. S11-RenturnLoss



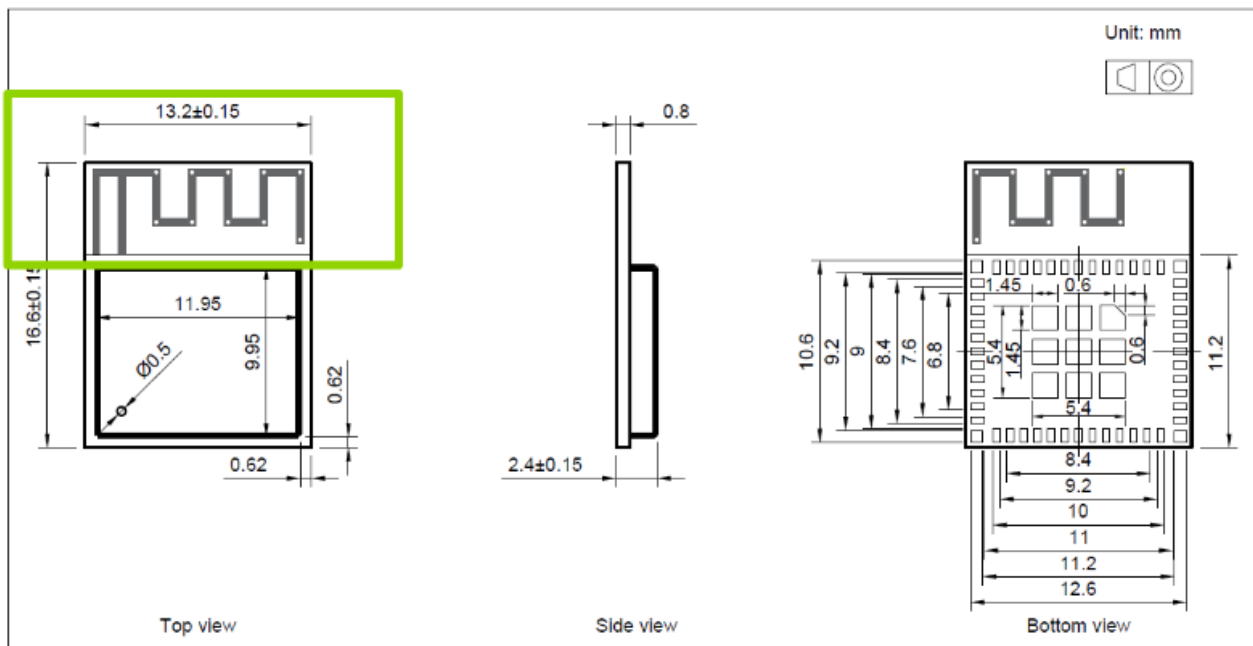
3.4. 3D Pattern Plots





4. EUT Photographs

Antenna Diagram



EUT photographs Please find Appendix A

END