

MPE TEST REPORT

Applicant Shanghai Sunmi Technology Co., Ltd.
FCC ID 2AH25D3N
Product POS System
Brand SUNMI
Model F154B
Report No. EFTA25070076-IE-07-M1V1
Issue Date September 28, 2025

Eurofins TA Technology (Shanghai) Co., Ltd. tested the above equipment in accordance with the requirements in **§2.1091 and FCC 47 CFR Part 1 1.1310**. The test results show that the equipment tested can demonstrate the compliance with the requirements as documented in this report.



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Version	Revision Description	Issue Date
Rev.0	Initial issue of report.	September 22, 2025
Rev.1	Updated data.	September 28, 2025
Note: This revised report (Report No.: EFTA25070076-IE-07-M1V1) supersedes and replaces the previously issued report (Report No.: EFTA25070076-IE-07-M1). Please discard or destroy the previously issued report and dispose of it accordingly.		

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1 Test Laboratory

1.1 Notes of the Test Report

This report shall not be reproduced in full or partial, without the written approval of **Eurofins TA Technology (Shanghai) Co., Ltd.** The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. Measurement Uncertainties were not taken into account and are published for informational purposes only. This report is written to support regulatory compliance of the applicable standards stated above.

1.2 Test Facility

FCC (Designation number: CN1179, Test Firm Registration Number: 446626)

Eurofins TA Technology (Shanghai) Co., Ltd. has been listed on the US Federal Communications Commission list of test facilities recognized to perform measurements.

1.3 Testing Location

Company: Eurofins TA Technology (Shanghai) Co., Ltd.
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1.4 Laboratory Environment

Temperature	Min. = 18°C, Max. = 25°C
Relative humidity	Min. = 20%, Max. = 80%
Ground system resistance	< 0.5 Ω
Ambient noise is checked and found very low and in compliance with requirement of standards. Reflection of surrounding objects is minimized and in compliance with requirement of standards.	

2 Description of Equipment Under Test

Client Information

Applicant	Shanghai Sunmi Technology Co.,Ltd.
Applicant address	Room 505, No.388, Song Hu Road, Yang Pu District, Shanghai, China
Manufacturer	Shanghai Sunmi Technology Co.,Ltd.
Manufacturer address	Room 505, No.388, Song Hu Road, Yang Pu District, Shanghai, China

General Technologies

EUT Description			
Model	F154B		
SN	D406E57RJ0093		
Hardware Version	D3_MB_V1.1		
Software Version	V1.0		
Frequency	Band	TX (MHz)	RX (MHz)
	Wi-Fi 2.4G	2400 ~ 2483.5	2400 ~ 2483.5
	Wi-Fi 5GHz (U-NII-1)	5150 ~ 5250	5150 ~ 5250
	Wi-Fi 5GHz (U-NII-2A)	5250 ~ 5350	5250 ~ 5350
	Wi-Fi 5GHz (U-NII-2C)	5470 ~ 5725	5470 ~ 5725
	Wi-Fi 5GHz (U-NII-3)	5725~5850	5725~5850
	Bluetooth	2400 ~ 2483.5	2400 ~ 2483.5
	Bluetooth LE	2400 ~ 2483.5	2400 ~ 2483.5
	NFC	13.56	13.56
EUT Accessory			
Adapter	Manufacturer: Shenzhen Tianyin Electronics Co.Ltd. Model: TPQ-632A240250DW01 Input: 100-240V ~ 50/60Hz 1.5A Output: 24.0V  2.5A 60.0W		
Date of Testing	August 11, 2025 ~ August 25, 2025		
Date of Sample Received	July 7, 2025		
Note: 1. The EUT is sent from the applicant to Eurofins TA and the information of the EUT is declared by the applicant. 2. All indications of Pass/Fail in this report are opinions expressed by Eurofins TA Technology (Shanghai) Co., Ltd. based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and are published for informational purposes only.			

3 Maximum Tune up and Antenna Gain and Output Power

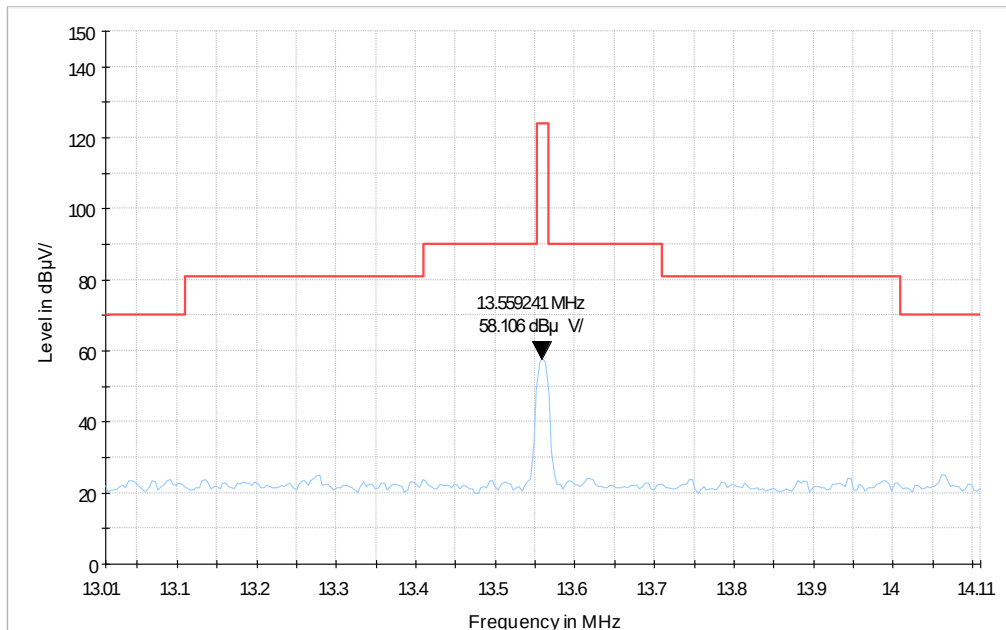
For Wi-Fi and Bluetooth:

The numeric gain (G) of the antenna with a gain specified in dB is determined by
 Numeric gain (G)=10[^] (antenna gain/10)

Band	Maximum Tune up		Antenna Gain (dBi)	Numeric Gain
	(dBm)	(mW)		
Wi-Fi 2.4GHz	19.00	79.43	3.49	2.23
Wi-Fi 5GHz (U-NII-1)	18.00	63.10	4.40	2.75
Wi-Fi 5GHz (U-NII-2A)	18.00	63.10	4.53	2.84
Wi-Fi 5GHz (U-NII-2C)	18.00	63.10	4.67	2.93
Wi-Fi 5GHz (U-NII-3)	18.00	63.10	4.55	2.85
Bluetooth	9.00	7.94	3.49	2.23
Bluetooth LE	9.00	7.94	3.49	2.23

For NFC:

A symbol (dB_{μV/m}) in the test plot below means (dB_{μV/m})



Note: Test data comes from RF report and please refer to the RF report for testing related information.

Carrier Frequency (MHz)	Max.E-field strength (dB _{μV/m})	EIRP (dBm)	Max output power (dBm)
13.559	58.106	-37.094	<<0

$$\text{EIRP [dBm]} = \text{E[dB}_{\mu\text{V/m}}] - 95.2 = -37.094 \text{ dBm}$$

$$\text{Maximum Output Power} = \text{EIRP} - \text{Gain} = -37.094 - \text{Gain} << 0 \text{ dBm}$$

4 MPE Limit

For Wi-Fi and Bluetooth and NFC:

According to section 1.1310 of FCC 47 CFR Part 1, limits for maximum permissible exposure (MPE) are as following.

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
(i) LIMITS FOR OCCUPATIONAL/CONTROLLED EXPOSURE				
0.3-3.0	614	1.63	*(100)	≤6
3.0-30	1842/f	4.89/f	*(900/f ²)	<6
30-300	61.4	0.163	1.0	<6
300-1,500			f/300	<6
1,500-100,000			5	<6
(ii) LIMITS FOR GENERAL POPULATION/UNCONTROLLED EXPOSURE				
0.3-1.34	614	1.63	*(100)	<30
1.34-30	824/f	2.19/f	*(180/f ²)	<30
30-300	27.5	0.073	0.2	<30
300-1,500			f/1500	<30
1,500-100,000			1.0	<30

*f = frequency in MHz. * = Plane-wave equivalent power density.*

Note1. Occupational/controlled limits apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure. Limits for occupational/controlled exposure also apply in situations when an individual is transient through a location where occupational / controlled limits apply provided he or she is made aware of the potential for exposure.

Note2: General population/uncontrolled exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or can not exercise control over their exposure.

The maximum permissible exposure for 3.0~30MHz is $900/f^2$, for 1500~100,000MHz is 1.0. So

Band	The Maximum Permissible Exposure (mW/cm ²)
Wi-Fi 2.4GHz	1.000
Wi-Fi 5GHz	1.000
Bluetooth	1.000
Bluetooth LE	1.000
NFC	4.895

5 RF Exposure Evaluation Result

For Wi-Fi and Bluetooth and NFC:

RF exposure evaluation method is based on KDB 447498 D01, this calculation is based on the conducted power, maximum power and antenna gain with provides the minimum separation distance. The formula shown below is from OET Bulletin 65 Edition 97-01 Per KDB 447498 D01:

$$S = PG / 4\pi R^2$$

Where: S = power density (in appropriate units, e.g. mW/cm²)

P = Time-average maximum tune up procedure (in appropriate units, e.g., mW)

G = the numeric gain of the antenna

R = distance to the center of radiation of the antenna (20 cm = limit for MPE)

Band	Maximum EIRP (dBm)	PG (mW)	Result (mW/cm ²)	Limit Value (mW/cm ²)	The EMF Ratio
Wi-Fi 2.4GHz	22.490	177.419	0.035	1.000	0.035
Wi-Fi 5GHz	22.670	184.927	0.037	1.000	0.037
Bluetooth	12.490	17.742	0.004	1.000	0.004
NFC	0.00000	1.00000	0.00199	4.89500	0.00004
Note: R = 20cm $\pi = 3.1416$ The EMF Ratio = Result ÷ Limit Value					

This device supports simultaneous transmission via Wi-Fi/Bluetooth and NFC; no simultaneous transmission is available for other combinations.

So, the simultaneous transmitting antenna pairs as below:

TER = Wi-Fi 5GHz Antenna MPE Ratio + NFC Antenna MPE Ratio = 0.037 + 0.00004 = 0.03704 < 1

Note: For this device, minimum separation distance is 20cm, even if calculations indicate MPE distance is less.

ANNEX A: The EUT Appearance

The EUT Appearance are submitted separately.

*****END OF REPORT *****