

TEST REPORT

Application No.: SUCR2603000165TL
FCC ID: 2AH25M3WH
Applicant: Shanghai Sunmi Technology Co.,Ltd.
Address of Applicant: Room 505,No.388,Song Hu Road,Yang Pu District,Shanghai,China
Manufacturer: Shanghai Sunmi Technology Co.,Ltd.
Address of Manufacturer: Room 505,No.388,Song Hu Road,Yang Pu District,Shanghai,China
EUT Description: Wireless Data Terminal
Model No.: TF31A
Trade Mark: SUNMI
Standards: FCC 47 CFR Part 2, Subpart J
FCC 47 CFR Part 15, Subpart C
Date of Receipt: 2026-03-04
Date of Test: 2026-03-13
Date of Issue: 2026-03-23

Test Result :	PASS *
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* In the configuration tested, the EUT detailed in this report complied with the standards specified above.

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Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

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Revision Record			
Version	Description	Date	Remark
01	Original	2026-03-23	/

Authorized for issue by:			
Tested By		Hayley Zhang	
		Hayley Zhang/Project Engineer	
Approved By		Cedar cheng	
		Cedar Cheng /Reviewer	

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1 Test Summary

Radio Spectrum Technical Requirement				
Item	Standard	Method	Requirement	Result
Antenna Requirement	47 CFR Part 15, Subpart C 15.247	N/A	47 CFR Part 15, Subpart C 15.203 & 15.247(b)(4)	Pass

Radio Spectrum Matter Part				
Item	Standard	Method	Requirement	Result
Conducted Peak Output Power	47 CFR Part 15, Subpart C 15.247	ANSI C63.10-2020/Cor1-2023 Section 11.9	47 CFR Part 15, Subpart C 15.247(b)(3)	Pass

Remark1:

This test report (Report No.: SUCR250200007206 issue on May 8, 2025) is based on the original test report (Report No.: SZCR231100354202 issue by SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen Branch on December 12, 2023).

Review this report and original report, this report just changing the parts according to the declaration letter from client.

Considering the difference, pre-scan was performed on the sample in this report to find the items which can be influential to the result in the original test report for fully retest.

Therefore in this report the Conducted Emissions at AC Power Line (150kHz-30MHz), Radiated Spurious Emissions Below 1GHz and Radiated Spurious Emissions Above 1GHz were tested and other test data please refer to the previous report with report number SZCR231100354202 issue by SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen Branch on December 12, 2023.

Remark2:

This test report (Report No.: SUCR260300016506 issue on 2026-03-23) is based on the original test report (Report No.: SUCR250200007206 issue on 2025-05-27).

Review this report and original report, this report just changing the parts according to the declaration letter from client.

Considering the difference, pre-scan was performed on the sample in this report to find the items which can be influential to the result in the original test report for fully retest.

Therefore in this report only power is performed, and other test data in this report are refer to the previous report with report number SUCR250200007202 issue on 2025-05-27.

2 General Information

2.1 Details of E.U.T.

Power Supply:	3.87V from battery
Operation Frequency:	903.5MHz-926.5MHz (1MHz Channel Bandwidth) 905MHz-925MHz (2MHz Channel Bandwidth) 906MHz-922MHz (4MHz Channel Bandwidth)
Modulation Type:	OFDM with BPSK/QPSK/16QAM/64QAM
Number of Channels:	24 Channels for 802.11ah(1MHz Channel Bandwidth) 11 Channels for 802.11ah(2MHz Channel Bandwidth) 5 Channels for 802.11ah(4MHz Channel Bandwidth)
Rate:	0.15 to 3.0Mbps for 802.11ah(1MHz Channel Bandwidth) 0.65 to 6.5Mbps for 802.11ah(2MHz Channel Bandwidth) 1.35 to 13.5Mbps for 802.11ah(4MHz Channel Bandwidth)
Antenna Type:	FPC Antenna
Antenna Gain:	-0.03dBi
Remark:	As above information is provided and confirmed by the applicant. SGS is not liable to the accuracy, suitability, reliability or/and integrity of the information.

Channel list for 802.11ah			
Bandwidth (MHz)	Low Channel (MHz)	Middle Channel (MHz)	High Channel (MHz)
1	903.5	915.5	926.5
2	905	915	925
4	906	914	922

Selected test rate for 802.11ah			
Bandwidth (MHz)	Low Channel	Middle Channel	High Channel
1	MCS10	MCS10	MCS10
2	MCS0	MCS0	MCS0
4	MCS0	MCS0	MCS0

2.2 Environment Parameter

Environment Parameter	102 kPa Selected Values During Tests	
Relative Humidity	44 % RH Ambient	
Value	Temperature(°C)	Voltage(V)
NTNV	23	3.87
Note:		
NV:Normal Voltage	NT:Normal Temperature	

2.3 Description of Support Units

The EUT has been tested as an independent unit.

2.4 Measurement Uncertainty

No.	Item	Measurement Uncertainty
1	Conduction Emission	± 2.90dB (150kHz to 30MHz)
2	Radiated Emission	± 3.13dB (9k -30MHz)
		± 4.80dB (30M -1GHz)
		± 4.80dB (1GHz to 18GHz)
		± 4.80dB (Above 18GHz)
Remark: The U_{lab} (lab Uncertainty) is less than $U_{cispr/ETSI}$ (CISPR/ETSI Uncertainty), so the test results – compliance is deemed to occur if no measured disturbance level exceeds the disturbance limit; – non-compliance is deemed to occur if any measured disturbance level exceeds the disturbance limit.		

2.5 Test Location

Company:	SGS-CSTC Standards Technical Services (Suzhou) Co., Ltd.
Address:	South of No. 6 Plant, No. 1, Runsheng Road, Suzhou Industrial Park, Suzhou Area, China (Jiangsu) Pilot Free Trade Zone
Post code:	215000
Test engineer:	King-p Li

2.6 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

- **A2LA (Certificate No. 6336.01)**

SGS-CSTC Standards Technical Services (Suzhou) Co., Ltd. is accredited by the American Association for Laboratory Accreditation (A2LA).

- **FCC (Designation Number: CN1312)**

SGS-CSTC Standards Technical Services (Suzhou) Co., Ltd. has been recognized as an accredited testing laboratory.

Test Firm Registration Number: 717327

- **ISED (CAB Identifier: CN0120)**

SGS-CSTC Standards Technical Services (Suzhou) Co., Ltd. has been recognized by Innovation, Science and Economic Development Canada (ISED) as an accredited testing laboratory.

Company Number: 27594

2.7 Deviation from Standards

None

2.8 Abnormalities from Standard Conditions

None

3 Equipment List

Item	Equipment	Manufacturer	Model	Inventory No	Cal Date	Cal. Due Date
RF Conducted Test						
1	Signal Analyzer	ROHDE&SCHWARZ	FSW43	SUWI-01-02-04	2026/1/14	2027/1/13
2	Signal Analyzer	KEYSIGHT	N9020A	SUWI-01-02-15	2025/11/21	2026/11/20
3	MXG Vector signal genitor	KEYSIGHT	N5182B	SUWI-01-38-01	2026/1/14	2027/1/13
4	Signal Generator	ROHDE&SCHWARZ	SMW200A	SUWI-01-07-08	2026/1/14	2027/1/13
5	Signal Generator	ROHDE&SCHWARZ	SMW100A	SUWI-01-08-01	2026/1/14	2027/1/13
6	MXG Vector Signal Generator	ROHDE&SCHWARZ	SMR20	SUWI-01-33-01	2025/11/21	2026/11/20
7	Wideband Radio Communication Tester	ROHDE&SCHWARZ	CMW500	SUWI-01-16-13	2025/5/8	2026/5/7
8	Wideband Radio Communication Test Station	Anritsu	MT8000A	SUWI-01-34-02	2025/11/21	2026/11/20
9	Wideband Radio Communication Tester	Anritsu	MT8821C	SUWI-01-26-03	2025/11/21	2026/11/20
10	Power meter	Anritsu	ML2495A	SUWI-01-31-01	2025/11/21	2026/11/20
11	Pulse power sensor	Anritsu	MA2411B	SUWI-01-32-01	2025/11/21	2026/11/20
12	DC Power Supply	HYELEC	HY3005B	SUWI-01-18-01	2026/1/14	2027/1/13
13	Temperature and humidity meter	MingGao	TH101B	SUWI-01-01-07	2026/2/11	2027/2/10
14	Temperature Chamber	GIANT FORCE	ICT-017-40-SP-SD	SUWI-01-13-02	2025/5/7	2026/5/6
15	Measurement Software	TST	TST 272 V2.02	SUWI-03-55-03	NCR	NCR
16	RF Control unit	TST	TSCB3023R2	SUWI-02-20-01	NCR	NCR
17	RFCables	Tonscend	NA	SUWI-01-03-01	2026/1/15	2027/1/14

4 Radio Spectrum Technical Requirement

4.1 Antenna Requirement

4.1.1 Test Requirement:

47 CFR Part 15, Subpart C 15.203 & 15.247(b)(4)

4.1.2 Conclusion

Standard Requirement:

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

15.247(b) (4) requirement:

The conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1), (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

EUT Antenna:

The antenna is FPC Antenna and no consideration of replacement. The best case gain of the antenna is -0.03dBi.

Antenna location: Refer to internal photo.

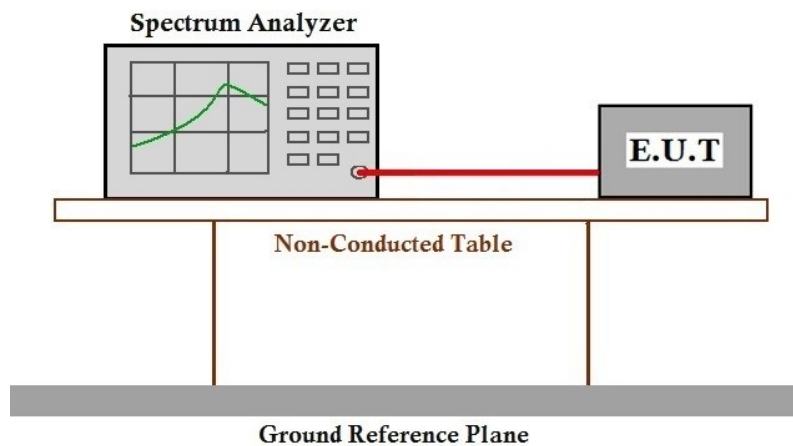
5 Radio Spectrum Matter Test Results

5.1 Conducted Peak Output Power

Test Requirement 47 CFR Part 15, Subpart C 15.247(b)(3)
Test Method: ANSI C63.10-2020/Cor1-2023 Section 11.9
Limit:

Frequency range(MHz)	Output power of the intentional radiator(watt)
902-928	1 for ≥ 50 hopping channels
	0.25 for $25 \leq$ hopping channels < 50
	1 for digital modulation
2400-2483.5	1 for ≥ 75 non-overlapping hopping channels
	0.125 for all other frequency hopping systems
	1 for digital modulation
5725-5850	1 for frequency hopping systems and digital modulation

5.1.1 Test Setup Diagram



5.1.2 Measurement Procedure and Data

Please Refer to Appendix for Details

6 Test Setup Photo

Refer to Appendix_Photos of Test Setup for SUCR2603000165TL

7 EUT Constructional Details (EUT Photos)

Refer to Appendix_External Photos for SUCR2603000165TL and Appendix_Internal Photos for SUCR2603000165TL

8 Appendix

1. Maximum Conducted Output Power

1.1 Power

1.1.1 Test Result

Mode	TX Type	Frequency (MHz)	Maximum Average Conducted Output Power (dBm)		Verdict
			ANT4	Limit	
1M	SISO	903.5	23.04	≤ 30	Pass
		915.5	23.85	≤ 30	Pass
		926.5	23.32	≤ 30	Pass
2M	SISO	905	23.83	≤ 30	Pass
		915	23.23	≤ 30	Pass
		925	23.89	≤ 30	Pass
4M	SISO	906	22.73	≤ 30	Pass
		914	22.43	≤ 30	Pass
		922	22.38	≤ 30	Pass

---End of Report---