





## **TEST REPORT**

REPORT NUMBER: 25B02W000010-011

#### ON

**Type of Equipment:** Handheld Wireless Terminal

**Type of Designation:** T8F1C

Brand Name: SUNMI

Manufacturer: Shanghai Sunmi Technology Co.,Ltd.

**FCC ID:** 2AH25T8F1C

#### **ACCORDING TO**

FCC Part 15, Subpart B, ICES-003 Issue 7

**Chongqing Academy of Information and Communications Technology** 

Month date, year

Aug.14th, 2025 Signature

Director

#### Note:

The test results in this test report relate only to the devices specified in this report. This report shall not be reproduced except in full without the written approval of Chongqing Academy of Information and Communications Technology.





#### **Revision Version**

Report Number	Revision	Date
25B02W000010-011	00	2025-08-14





#### **CONTENTS**

1.	Test Laboratory	4
1.1.	Testing Location	4
1.2.	Testing Environment	4
1.3.	Project data	4
1.4.	Signature	4
2.	Client Information	5
2.1.	Applicant Information	5
2.2.	Manufacturer Information	5
3.	Equipment under Test (EUT) and Ancillary Equipment (AE)	6
3.1.	About EUT	6
3.2.	Internal Identification of EUT used during the test	6
3.3.	Internal Identification of AE used during the test	6
4.	Reference Documents	8
4.1.	Reference Documents for testing	8
5.	Test Equipments Utilized	9
6.	Test Results	10
6.1.	Summary of Test Results	10
7.	Test Results	11
7.1.	Radiated Emission	11
7.2.	Conducted Emission	18
Annex	A EUT Photos	21
Annex	B Deviations from Prescribed Test Methods	22





## 1. Test Laboratory

## 1.1. Testing Location

Name:	Chongqing Academy of Information and Communications Technology
FCC Registration Number:	CN1239
Address:	No.19 EastRoad,Xiantao Big-data Valley,Yubei District, Chongqing,People's Republic of China
Postal Code:	401336
Telephone:	0086-23-88069965
Fax:	0086-23-88608777

## 1.2. Testing Environment

Normal Temperature:	15-35°C
Relative Humidity:	30-60%RH

## 1.3. Project data

Testing Start Date:	2025-06-03
Testing End Date:	2025-06-16

#### 1.4. Signature

李润豪	2025-08-14
Li Runhao (Prepared this test report)	Date
The state of the s	2025-08-14
Xiao Yu (Reviewed this test report)	Date
The it	2025-08-14
Zhou Jin Director of the laboratory	Date

## **Chongqing Academy of Information and Communication Technology**

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(Approved this test report)





#### **Client Information** 2.

#### 2.1. Applicant Information

Company Name:	Shanghai Sunmi Technology Co.,Ltd.	
Address /Post:	Room 505,No.388,Song Hu Road,Yang Pu District,Shanghai,China	
City:	Shanghai	
Country:	China	
Telephone:	8618501703215	
Fax:	N/A	
Email:	fang.lu@sunmi.com	
Contact Person:	Fang Lu	

#### 2.2. Manufacturer Information

Company Name:	Shanghai Sunmi Technology Co.,Ltd.	
Address /Post:	Room 505,No.388,Song Hu Road,Yang Pu District,Shanghai,China	
City:	Shanghai	
Country:	China	
Telephone:	8618501703215	
Fax:	N/A	
Email:	fang.lu@sunmi.com	
Contact Person:	Fang Lu	





## 3. Equipment under Test (EUT) and Ancillary Equipment (AE)

#### 3.1. About EUT

EUT Description	Handheld Wireless Terminal
Model name	T8F1C
Brand name	SUNMI
Power Rating	DC 3.87V from battery, DC 5V & 9V from adapter
Highest frequency range	5825 MHz
Supported Radio Technology and Bands	GSM 850/900/1800/1900 WCDMA Band I/II/IV/V/VI/VIII/XIX LTE Band 1/2/3/4/5/7/8/12/13/14/17/18/19/20/25/26/28/30/34/38/39/ 40/41/66/71 BT 5.2 BR/EDR/BLE WLAN 802.11b,g,n WLAN 802.11a,n,ac GPS/GLONASS/BDS/Galileo NFC RFID

Note: Photographs of EUT are shown in ANNEX B of this test report.

## 3.2. Internal Identification of EUT used during the test

EUT ID	SN or IMEI	HW Version	SW Version	Date of receipt
25B02W000010#S4	862072070057688/ 862072070057696	V00	4.0.0	2025-05-23

<sup>\*</sup>EUT ID: is used to identify the test sample in the lab internally.

#### 3.3. Internal Identification of AE used during the test

AE ID*	Description	Note
C1	USB Cable	SSM-A033A
A1	Adapter	TPA-141A050200UU01

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A2	Adapter	UC13US
A3	Adapter	TPA-10120150UU
B1	Battery	GYPA
Q1	Notebook PC	Thinkpad
Q2	Desktop PC	OptiPlex 790 DT
C2	LAN Cable	N/A
С3	VGA Cable	N/A
C4	RS232 Cable	N/A
Q3	Keyboard	KB212-B
Q4	Mouse	MS111-P
Q5	Monitor	Dell E1709Wc
Q6	Micro SD card	Kingston SDC4/4GB 77
E1	Earphone	N/A

<sup>\*</sup>AE ID: is used to identify the test sample in the lab internally.

AE Information is provided by the customer.





#### **Reference Documents**

## 4.1. Reference Documents for testing

The following documents listed in this section are referred for testing.

Reference	Title
Kelefence	Titie
FCC Part 15, Subpart B	Unintentional Radiators
ANSI C63.4-2014	Method of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz
ICES-003 Issue 7	Information Technology Equipment (Including Digital Apparatus)-Limits and Methods of Measurement





#### **Test Equipments Utilized 5.**

No.	Equipment	Model	SN	HW Version	SW Version	Manufa cture	Cal.Due Date
1	Test Receiver	ESR 3	101382	03	3.48 SP2	R&S	2025-06-28
2	Test Receiver	ESW 26	101382	00	1.50 SP1	R&S	2025-06-28
3	Ultra-wideband Log Periodic Antenna	VULB 9163	9163-586			Schwarzb eck	2026-10-28
4	Double Ridged Guide Antenna	9120D	9120D- 1083			Schwarzb eck	2026-11-08
5	Fully-Anechoic Chamber	FAC5	1			TDK	2027-11-04
6	Semi-Anechoic Chamber	SAC-10	1			TDK	2027-11-05
7	2-Line V-Network	ENV216	102368			R&S	2026-05-23
8	Test Receiver	ESU 40	100350	01	4.43 SP3	R&S	2025-06-28
9	Amplifier1	SCU-08F1	8320027			R&S	
10	Amplifier2	SCU-18F	180093			R&S	

#### Test software

No.	Name	version	SN	Manufacture
1	EMC32	V 9.26.01		R&S
2	EMC32	V10.20.01		R&S
3	EMC32	V10.40.10		R&S





#### 6. Test Results

#### 6.1. Summary of Test Results

FCC Rules	IC Rules	Name of Test	Result
15.109	3.2.2	Radiated Emission	Pass
15.107	3.2.1	AC Conducted Emission	Pass

#### Note:

The T8F1C, manufactured by Shanghai Sunmi Technology Co.,Ltd. is a variant product for testing. This project is a variant project based on the original report 24T04I300217-071 issued by 3in with below changes:

- Added RFID function.
- Modified 2/3/4G Div Antenna and WIFI Antenna. Remove 1 NFC, Add RFID Antenna.
- PCB Changes,
- Removed: 8 Pin in behind.
- Mechanical shell changes.

Type of Service	Model Name	Super capacitor	pogopin	NFC	RFID
Original	T8F1B	Yes	8 Pin in behind &6 pin in bottom	Two-sided	No
Variant	T8F1C	No	6 Pin in bottom	Under screen	Yes

According to the product change description, we tested the worst mode of all test items in the original report as shown in Section 7.1&7.2.





#### 7. Test Results

#### 7.1. Radiated Emission

<b>Specifications:</b>	15.109 / 3.2.2
<b>DUT Serial Number:</b>	IMEI:862072070057688;862072070057696
<b>Date of Tests</b>	2025-06-03
<b>Test conditions:</b>	Ambient Temperature:15°C-35°C
	Relative Humidity:30%-60%RH
	Air pressure: 86-106kPa
<b>Operation Mode</b>	30MHz-18GHz frequency range:
	Mode 1: LTE Band 41 receiver mode+ Back Camera+ A3+ C1+ B1
	Mode 2: Full system+ Data Link mode+ C1-C4+ B1+ Q1-Q6+ E1
Test Results:	Pass

#### Note:

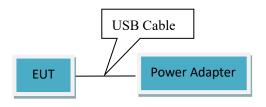
- 1. The worst case of radiated emission for 30MHz-1GHz is Mode 1 and for 1GHz -18GHz is Mode 2.
- 2. Data Link mode means data application transferred mode between EUT, SD Card and PC.

**Limit Level Construction (Except for Class A digital devices):** 

Frequency Range (MHz)	Quasi-Peak (dBμV/m)
30-88	40
88-216	43.5
216-960	46
Above 960	54

Frequency Range (MHz)	Peak (dBuV/m)	Average (dBμV/m)
Above 1000	74	54

#### **EUT Setup:**

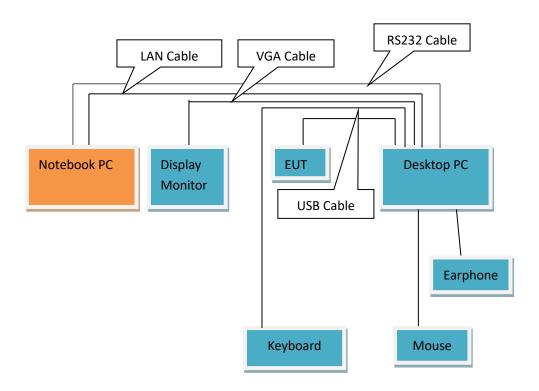


Mode 1

## **Chongqing Academy of Information and Communication Technology**

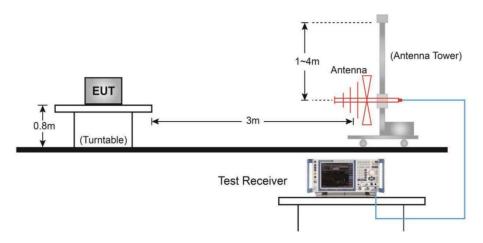
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Mode 2

#### Below 1GHz Test Setup



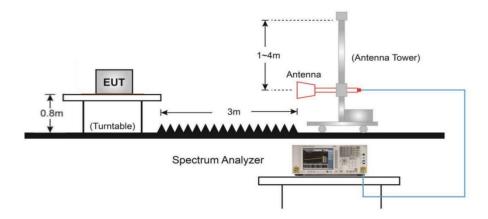
Above 1GHz Test Setup

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#### **Test Method:**

For 30-1000MHz, the EUT was placed on the top of a rotating 0.8m table above the ground at a semi-anechoic chamber. The distance between the EUT and the received antenna was 3 meters. The table was rotated 360 degree and the received antenna mounted on a variable-height antenna tower was varied from 1m to 4m to find the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna were set during the measurement. Tested in accordance with the procedures of ANSI C63.4-2014, section 8.3.

For 1000-18000MHz, the EUT was placed on the top of a rotating 0.8m table above the ground at a fully-anechoic chamber. The distance between the EUT and the received antenna was 3 meters. The table was rotated 360 degrees and the received antenna mounted on a variable-height antenna tower was varied from 1m to 4m to find the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna were set during the measurement. Tested in accordance with the procedures of ANSI C63.4-2014, section 8.3.

#### **Test Result:**

Test mode: ALL modes, Only the worst case test data was reported.

A "reference path loss" is established and Corr is the attenuation of "reference path loss", and including the factor of receive antenna, the gain of the preamplifier, the cable loss.

The measurement results are obtained as described below:

Corr (dB/m) = Cable loss (dB)+ Antenna Factor (dB/m) - Preamplifier gain (dB)

Result  $(dB\mu V/m) = PMea (dB\mu V) + Corr (dB/m)$ 





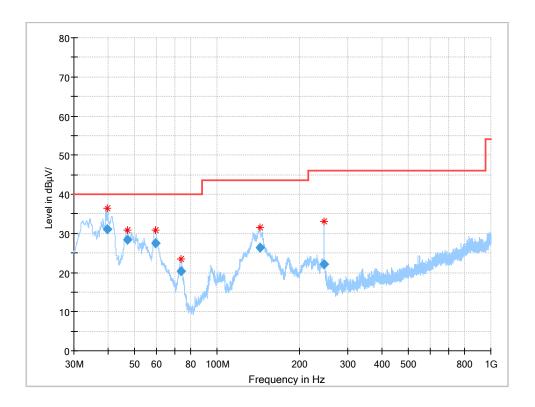
#### **Uncertainty Measurement:**

Item	Uncertainty			
Expanded Uncertainty (30MHz-150MHz)	3.12dB (k=2)	3.38dB (k=2)		
Expanded Officertainty (50MHz-150MHz)	(H)	(V)		
Expanded Uncertainty (150MHz-1000MHz)	2.87dB (k=2)	4.09dB (k=2)		
Expanded Officertainty (130MHz-1000MHz)	(H)	(V)		
Expanded Uncertainty (1GHz-6GHz)	4.84dB (k=2)			
Expanded Uncertainty (6GHz-18GHz)	4.52dE	3 (k=2)		
Expanded Uncertainty (18GHz-26GHz)	8GHz-26GHz) 6.19dB (k=2)			
Expanded Uncertainty (26GHz-40GHz)	6.03dE	3 (k=2)		





#### **Test Data**



#### Final\_Result

RE 30MHz-1GHz\_Mode 1

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
39.639640	30.97	40.00	9.03	100.0	V	58.0	-13.2
46.981160	28.30	40.00	11.70	100.0	V	150.0	-11.3
59.722440	27.42	40.00	12.58	100.0	V	0.0	-12.7
73.833640	20.25	40.00	19.75	100.0	V	286.0	-17.0
143.310640	26.35	43.50	17.15	100.0	V	12.0	-16.3
245.142320	22.12	46.00	23.88	200.0	V	322.0	-10.6

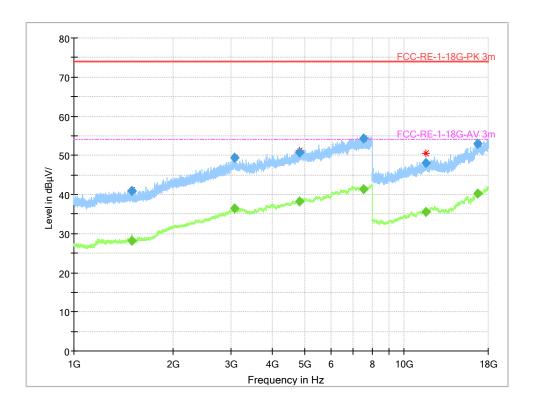
#### Note:

- 1. Both H polarization and V polarization are tested.
- 2. The test uses a limit of FCC Part 15B Class B, which also meets the requirements of the ICES-003 limit.

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## Final\_Result

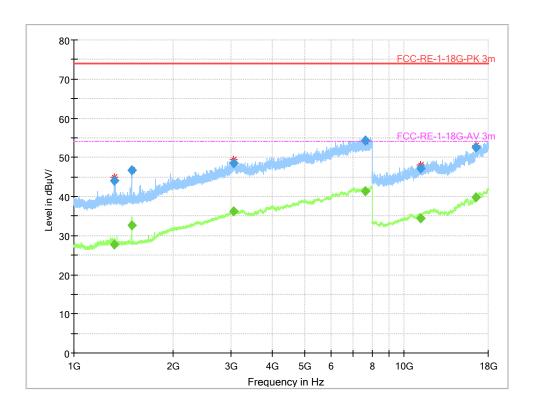
RE 1GHz-18GHz Mode 2 H

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
1498.608750		28.11	54.00	25.89	115.0	Н	253.0	2.3
1498.608750	40.87		74.00	33.13	115.0	Н	253.0	2.3
3072.938750		36.33	54.00	17.67	115.0	Н	38.0	12.5
3072.938750	49.35		74.00	24.65	115.0	Н	38.0	12.5
4825.655000		38.30	54.00	15.70	188.0	Н	0.0	15.3
4825.655000	50.73		74.00	23.27	188.0	Н	0.0	15.3
7533.426250	54.21		74.00	19.79	115.0	Н	95.0	21.1
7533.426250		41.40	54.00	12.60	115.0	Н	95.0	21.1
11685.76625	48.15		74.00	25.85	185.0	Н	48.0	13.8
11685.76625		35.46	54.00	18.54	185.0	Н	48.0	13.8
16751.37500		40.12	54.00	13.88	115.0	Н	0.0	22.1
16751.37500	53.00		74.00	21.00	115.0	Н	0.0	22.1

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## Final\_Result

RE 1GHz-18GHz Mode 2 V

Frequency	MaxPeak	Average	Limit	Margin	Height	Pol	Azimuth	Corr.
(MHz)	(dBµV/m)	$(dB\mu V/m)$	$(dB\mu V/m)$	(dB)	(cm)	FOI	(deg)	(dB)
1328.721250		27.73	54.00	26.27	100.0	V	358.0	2.1
1328.721250	44.10		74.00	29.90	100.0	V	358.0	2.1
1499.131250		32.63	54.00	21.37	100.0	V	206.0	2.3
1499.131250	46.77		74.00	27.23	100.0	V	206.0	2.3
3039.470000	48.41		74.00	25.59	185.0	V	115.0	12.5
3039.470000		36.14	54.00	17.86	185.0	V	115.0	12.5
7657.047500		41.33	54.00	12.67	115.0	V	70.0	21.1
7657.047500	54.26		74.00	19.74	115.0	V	70.0	21.1
11257.346250		34.40	54.00	19.60	115.0	V	243.0	12.2
11257.346250	47.07		74.00	26.93	115.0	V	243.0	12.2
16554.168750		39.80	54.00	14.20	100.0	V	0.0	21.6
16554.168750	52.45		74.00	21.55	100.0	V	0.0	21.6

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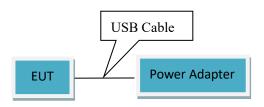
#### 7.2. Conducted Emission

<b>Specifications:</b>	15.107 / 3.2.1					
<b>DUT Serial Number:</b>	IMEI:862072070057688;862072070057696					
Date of Tests	2025-06-03					
Test conditions:	Ambient Temperature:15°C-35°C					
	Relative Humidity:30%-60%RH					
	Air pressure: 86-106kPa					
Operation Mode	Mode 3: LTE Band 2 receiver mode+ Front Camera+ A3+ C1+ B1					
Test Results:	Pass					
Note:						
1. The worst case of AC conducted emission is Mode 3.						

#### **Limit Level Construction:**

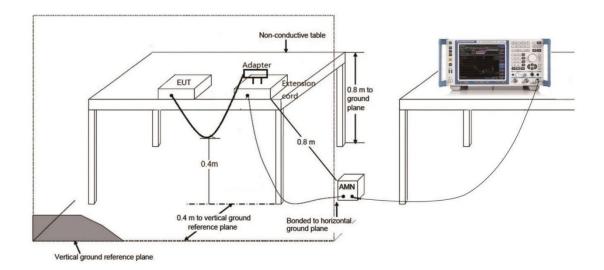
Frequency Range (MHz)	Conducted Limit (dBuV)					
	Quasi-peak	Average				
0.15-0.5	66 to 56*	56 to 46*				
0.5-5	56	46				
5-30	60	50				
*Decreases with the logarithm of the frequency						

#### **EUT Setup:**



Mode 3





#### **Test Method:**

For equipment that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies with the band 150 kHz to 30MHz shall not exceed the limits. Both lines of the power mains connected to the EUT were checked for maximum conducted interference. Tested in accordance with the procedures of ANSI C63.4-2014, section 7.

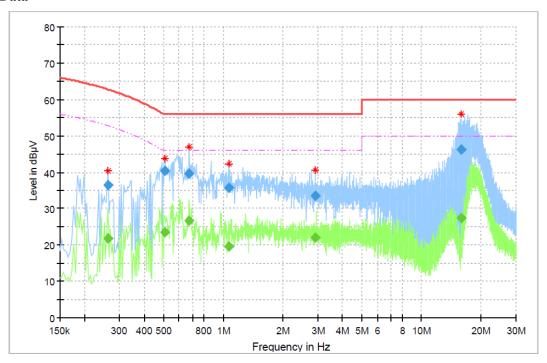
#### **Uncertainty Measurement:**

The measurement uncertainty (150kHz-30MHz) is 1.97 dB (k=2).





#### **Test Data**



CE 150kHz-30MHz Mode 3

#### Final Result

Frequency (MHz)	QuasiPeak (dBµV)	Average (dBμV)	Limit (dBµV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Filter	Corr. (dB)
0.261938	36.45		62.80	26.36	15000.0	9.000	N	ON	10.2
0.261938		21.81	52.80	30.99	15000.0	9.000	N	ON	10.2
0.508200		23.40	46.00	22.60	15000.0	9.000	N	ON	10.1
0.508200	40.31		56.00	15.69	15000.0	9.000	N	ON	10.1
0.672375	39.63		56.00	16.37	15000.0	9.000	N	ON	10.1
0.672375		26.65	46.00	19.35	15000.0	9.000	N	ON	10.1
1.064156	35.63		56.00	20.37	15000.0	9.000	N	ON	9.9
1.064156		19.65	46.00	26.35	15000.0	9.000	N	ON	9.9
2.918588	33.52		56.00	22.48	15000.0	9.000	L1	ON	9.8
2.918588		22.01	46.00	23.99	15000.0	9.000	L1	ON	9.8
15.944381		27.48	50.00	22.52	15000.0	9.000	N	ON	9.8
15.944381	46.31		60.00	13.69	15000.0	9.000	N	ON	9.8

L1 and N is all have been tested, the result of them is synthesized in the above data diagram.

 $Emission \ level \ (quasi-peak \ or \ Average \ peak) \ (dB\mu V) = Raw \ value \ by \ receiver \\ (dB\mu V) + Corr \ (Insertion \ loss+ \ cable \ loss) \ (dB)$ 

The raw value is used to calculate by software which is not shown in the sheet.

Margin (dB) = limit value (dB $\mu$ V) – emission level (dB $\mu$ V).

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#### **Annex A EUT Photos**

See the document "25B02W000010-External Photos".

See the document "25B02W000010-Internal Photos".

Test photo See the document "25B02W000010\_EMC Test Setup Photos".





#### **Annex B Deviations from Prescribed Test Methods**

No deviation from Prescribed Test Methods.

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