





Industrial Internet Innovation Center (Shanghai) Co.,Ltd.

NFC TEST REPORT

PRODUCT	Handheld Wireless Termin	al
BRAND	SUNMI	
MODEL	T8F1B	
APPLICANT	Shanghai Sunmi Technolog	gy Co.,Ltd.
FCC ID	2AH25T8F1B	
IC	22621-T8F1B	
ISSUE DATE	February 14, 2025	
STANDARD(S)	FCC CFR47 Part 2, FCC CF RSS-210 Issue 11, RSS-Gen	R47 Part 15C, ANSI C63.10-2013, Issue 5
Prepared by: Li Liukai	Reviewed by: Qin Yabin	Approved by: Zhang Min
李柳凯	晕运家	北京夏

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Report No: 24T04I300217-072

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1 Summary of Test Report

1.1 Test Standard (s)

No.	Test Standard(s)	Title
1	FCC CFR47 Part 2	Frequency allocations and radio treaty matters; general rules and regulations
2	FCC CFR47 Part 15C	Radio Frequency Devices-Intentional Radiators
3	ANSI C63.10	American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices
4	RSS-210	License-Exempt Radio Apparatus: Category I Equipment
5	RSS-Gen	General Requirements for Compliance of Radio Apparatus

No.	Item(s)	Sub-clause of FCC Standard	Sub-clause of IC Standard	Verdicts for Single Item	Detaied Results
1	20 dB bandwidth	2.1049	RSS Gen 6.7	Pass	See section 6.1
2	Frequency Stability	15.225(e)	RSS 210 B.6.b	Pass	See section 6.2
3	Radiated Emission	15.225 (a) (b) (c) (d) and 15.209	RSS 210 B.6.a (i , ii , iii , iv)	Pass	See section 6.3
4	Conducted Emissions	15.207	RSS Gen 8.8	Pass	See section 6.4
5	Occupied bandwidth	N/A	RSS Gen 6.7	Pass	See section 6.5
6	Antenna Requirement	15.203	RSS GEN 6.8	Pass	See Note 2

1.2 Summary of Test Results

NOTE:

The T8F1B, manufactured by Shanghai Sunmi Technology Co.,Ltd. is a new product for testing. Industrial Internet Innovation Center (Shanghai) Co., Ltd. only performed test cases which identified with Pass/Fail/Inc result in section 1.3.

Industrial Internet Innovation Center (Shanghai) Co., Ltd. has verified that the compliance of the tested device specified in section 4 of this test report is successfully evaluated according to the procedure and test methods as defined in type certification requirement listed in section 1 of this test report. Note 2:

The EUT has an internal loop antenna for NFC (13.56MHz) function, so this EUT complies with the 15.203/ RSS Gen 6.8 antenna requirements, please refer to the internal photos. Note 3:

Both the front and back of the EUT have NFC antenna. After laboratory verification, the test results of the NFC antenna on the back of the EUT are worse, and only the test results of the worst antenna are reflected in the report.



2 General Information of The Laboratory

2.1 Testing Laboratory

Lab Name	Industrial Internet Innovation Center (Shanghai) Co., Ltd.	
Address	Building 4, No. 766, Jingang Road, Pudong, Shanghai, China	
Telephone	021-68866880	
FCC Registration No.	708870	
FCC Designation No.	CN1364	
IC designation No.	10766A	
CAB identifier	CN0067	

2.2 Laboratory Environmental Requirements

Temperature	15℃~35℃
Relative Humidity	25%RH~75%RH
Atmospheric Pressure	86kPa~106kPa
Supply Voltage	120V/60Hz

2.3 Project Information

.3 Project Information		
Project Manager	Gao Hongning	
Test Date	December 12, 2024 to December 13, 2024	



3 General Information of The Customer

3.1 Applicant

Company	Shanghai Sunmi Technology Co.,Ltd.	
Address	Room 505,No.388,Song Hu Road,Yang Pu District,Shanghai,China	
Telephone	8618501703215	

3.2 Manufacturer

Company	Shanghai Sunmi Technology Co.,Ltd.
Address	Room 505,No.388,Song Hu Road,Yang Pu District,Shanghai,China
Telephone	8618501703215

3.3 Factory	
Company	N/A
Address	N/A



4 General Information of The Product

4.1 Product Description for Equipment under Test (EUT)

Product	Handheld Wireless Terminal	
Model	T8F1B	
Date of Receipt	December 04, 2024	
EUT ID*	S13aa	
SN/IMEI	862072070026592/862072070026600	
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 802.11b,g,n WLAN 802.11a,n,ac GPS/GLONASS/BDS/Galileo NFC	
Hardware Version	V00	
Software Version	1.00.00.20241113_186_userdebug	
Operating Frequency	13.56MHz	
Antenna Information	Loop Antenna	
Modulation information	ASK	
Product Class	1	
NOTE1: EUT ID is the intended of NOTE2: Photographs of NOTE3: Samples in the t	ernal identification code of the laboratory. EUT are shown in ANNEX A of this test report. est report are provided by the customer. The test results are only applicable to	

the samples received by the laboratory.

4.2 Description for Auxiliary Equipment (AE)

AE ID*	Description	Model	SN/Remark
CG01	Adapter	TPA-141A050200UU01	SHENZHEN TIANYIN ELECTRONICS CO., LTD. OUTPUT: 5V 2A
CH01	Adapter	UC13US	Jiangsu Chenyang Electron Co., Ltd. OUTPUT: 5V 2A
CI01	Adapter	TPA-10120150UU	SHENZHEN TIANYIN ELECTRONICS CO., LTD. OUTPUT: 9V 2A
UA10	AC Cable	SSM-A033A	Saibao (Jiangxi) Industry Co., LTD



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BA10	Battery	GYPA	HUNAN GAOYUAN BATTERY CO.,LTD. 5000mAh 3.87V	X
AE1	Type-A Card	N/A	N/A	

NOTE: *AE ID is the internal identification code of the laboratory.





5 Test Configuration Information

5.1 Laboratory Environmental Conditions

5.1.1 Permanent Facilities

Semi-anechoic chamber SAC3-1 (9 m*8m*6	5.2m) & SAC3-2 (9.8m*6.7m*6.7m)
Shielding effectiveness	0.014MHz ~1MHz, >60dB; 1MHz~1000MHz, >90dB.
Electrical insulation	> 2MΩ
Ground system resistance	< 4Ω
Normalised site attenuation (NSA)	< ± 4 dB, 3m distance, from 30 to 1000 MHz
Site voltage standing-wave ratio (SVSWR)	Between 0 and 6 dB, from 1GHz to 18GHz
Uniformity of field strength	Between 0 and 6 dB, from 80 to 6000 MHz

Shielded room	
Shielding effectiveness	0.014MHz~1MHz, >60dB; 1MHz~1000MHz, >90dB.
Electrical insulation	> 2 MΩ
Ground system resistance	< 4Ω



5.2 Decision of final test mode

The EUT was tested in conjunction with the accessories in Section 4.2. We tested all of the following test modes and selected the worst mode from the test results and recorded them in the report.

The test configuration modes are as the following:

Test Item	Test setup and operating modes
20 dB bandwidth	Mode 1: TX Mode+ BA10+ AE1
Frequency Stability	Mode 1: TX Mode+ BA10+ AE1
Radiated emission	Mode 1: TX Mode+ BA10+ AE1
Conducted Emissions	Mode 2: TX Mode+ Cl01+ UA10+ BA10+ AE1
Occupied bandwidth	Mode 1: TX Mode+ BA10+ AE1

5.3 EUT System Operation

- 1. Connect the EUT with AE.
- 2. Setup the EUT according to the standard.
- 3. Start testing and monitoring the function.
- 4. TX mode: Enter the NFC card reading mode, place the Type A card on the EUT. The EUT will transmit the NFC command continuously during the test, and will read the information from the Type A Card continuously.

5.4 EUT Connection Diagram of Test System







5.5 Test Equipment Utilized

No.	Name	Model	S/N	SW Version	HW Version	Manuf acturer	Cal. Date	Cal. Interval
1	Test	FSCI	101225	V5.1-24-	00	DQC	2023-12-19	1 year
X	Receiver	ESCI	101255	3	00	RQJ	2024-12-13	1 year
~ `	Test	ECUMO.	100207	00	01	D Q C	2023-12-19	1 year
2	Receiver	ESU40	100307	00	10	RQS	2024-12-13	1 year
3	Trilog Antenna	VULB9163	01345	N/A	N/A	Schwar zbeck	2024-03-29	1 year
4	2-Line V-		101280	NI/A	NI/A	D.9.C	2023-12-19	1 year
4	Network	EINV210	101380	N/A	N/A	RQS	2024-12-13	1 year
5	EMI Test Software	EMC32 V10.35.02	N/A	N/A	N/A	R&S	N/A	N/A
6	Loop Antenna	AL-130R	121083	N/A	N/A	COM- POWE R	2024-08-31	1 year
7	Temperature Box	B-TF-107C	20180410 7	N/A	N/A	Воуі	2024-06-07	1 year

5.6 Measurement Uncertainty

Item (s)	Uncertainty
20 dB bandwidth	±1.9%
Frequency Stability	±1.9%
Electric Field Strength of Fundamental Emissions	4.92 dB
Electric Field Radiated Emissions (Below 30MHz)	4.92 dB
Electric Field Radiated Emissions (Above 30MHz)	5.66 dB
Conducted Emissions	3.52 dB
Occupied bandwidth	±1.9%





6 Test Results

6.1 20dB Bandwidth

- 6.1.1 Measurement Methods
- a. The transmitter output signal was picked up by coil antenna to the spectrum analyzer.
- b. The transmitter output signal was picked up by coil antenna connected to the spectrum analyzer.
- c. The bandwidth of the center frequency was measured with 200Hz RBW, 500Hz VBW and 14kHz span.

6.1.2 EUT Connection Diagram of Test System



Figure 6.1.2-1 20dB Bandwidth Connection Diagram

6.1.3 Test Condition

The measurement of EUT is carried out under the transmit state of NFC and without modulation.

EUT had been not connected to a travel adapter.

During the measurements, the ambient temperature is in the range of 15~25°C.

6.1.4	Test	envir	onmenta	al c	conditions	
		U				

Temperature	21.3°C
Relative Humidity	42.6 %RH
Atmospheric Pressure	101.5 kPa





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6.1.5 Test Results

Carrier frequency (MHz)	20dB Bandwidth (kHz)	Test Results	Conclusion
13.56	1.122	See Annex A.1-1	Pass





6.2 Frequency Stability

6.2.1 Measurement Methods

The transmitter output single was picked up by coil antenna connected to the frequency counter. The center frequency was measured with 30Hz RBW and 1kHz span.

During the test, the EUT was placed in a thermal chamber until thermal balance and lasting appropriate time.

6.2.2 EUT Connection Diagram of Test System



Figure 6.2.2-1 Frequency Stability Connection Diagram

6.2.3 Test Condition

The measurement of EUT is carried out under the transmit state of without modulation, EUT had been not connected to a travel adapter.

Operation Temperature: -20°C 、 -10°C 、 0°C 、 10°C 、 20°C 、 25°C 、 30°C 、 40°C 、 50°C

Operation Voltage: Vmin=114V, Vmax=126V, and Tnom=120V.

6.2.4 Limit/Criterion

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15.225(e): The frequency tolerance of the carrier signal shall be maintained within +/- 0.01% of the operating frequency.

RSS-210 B.6.b: The frequency tolerance of the carrier signal shall be maintained within ± 100 ppm of the operating frequency.

6.2.5 Test environmental conditions

Temperature	21.3℃			
Relative Humidity	42.6 %RH			
Atmospheric Pressure	101.5 kPa			

6.2.6 Test Results

See Annex A.2-1





6.3 Radiated Emission

6.3.1 Electric Field Strength of Fundamental Emissions

6.3.1.1 Method of Measurement

a. The test set-up was made in accordance to the general provisions of ANSI C63.10-2013. The transmitter carrier output levels (E-Field) from the EUT are measured in a semi-anechoic chamber. The EUT is placed on a non-conductive stand of 80cm high, and at a measurement distance of 3m from the receiving antenna. The center of the receiving antenna is 1 meter above the ground. The E-field is measured with a shielded loop antenna connected to a measurement receiver. Detected E-field was maximized by rotating the EUT through 360° and adjusting the receiving antenna polarizations. Both horizontal and vertical polarizations of the antenna were set during the measurement. The maximization processes were repeated with the EUT positioned respectively in its three orthogonal axes. The measurements were performed with the peak detector and if required, the quasi-peak detector.

b. The EUT was placed on the axis of X, Y and Z respectively for testing. Only the worst direction data is represented in the report.

c. The measurement bandwidth:

Frequency (MHz)	RBW / VBW	
12.56-14.56	10 / 30kHz	

6.3.1.2 EUT Connection Diagram of Test System







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6.3.1.3 Test Condition

Frequency Range (MHz)	RBW/VBW	Sweep Time (s)
12.56-14.56	10kHz/30kHz	AUTO

6.3.1.4 Limit/Criterion

Clause 15.225(a) the field strength of any emissions within the band 13.553-13.567 MHz shall not exceed 15,848 microvolts/meter at 30 meters.

Clause 15.225(b) within the bands 13.410-13.553 MHz and 13.567-13.710 MHz, the field strength of any emissions shall not exceed 334 microvolts/meter at 30 meters.

Clause 15.225(c) within the bands 13.110-13.410 MHz and 13.710-14.010 MHz the field strength of any emissions shall not exceed 106 microvolts/meter at 30 meters.

E-field Strength Limit @30m	E-field Strength Limit @3m
(uV/m)	(dBuV/m)
+15,848	124
	00
+334	90
100	
+106	81
	E-field Strength Limit @30m (uV/m) +15,848 +334 +106

Note: Where the limits have been defined at one distance, and a signal level measured at another, the limits have been extrapolated using the following formula:

Extrapolation (dB) = 40log10(Measurement Distance / Specification Distance)

	6.3.1.5	Test environmental conditions
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Temperature	21.3°C
Relative Humidity	42.6 %RH
Atmospheric Pressure	101.5 kPa



6.3.1.6 Test Results

Mode	Frequency (MHz)	Test Results	Verdicts
Mode 1: TX Mode+ BA10+ AE1	13.2-13.9	See Annex A.3-1-1	Pass
NOTE:			
a. Abbreviations used in this clause	: Pass—P; Fail—F; Not app	licable—N/A	
b. The result displayed take into acc	count applicable antenna fa	actors and cable losses	





6.3.2 Electric Field Radiated Emissions (Below 30MHz)

6.3.2.1 Method of Measurement

a. The electric field radiated emissions from the EUT are measured in a semi-anechoic chamber. The EUT is placed on a non-conductive stand of 80cm high, and at a measurement distance of 3m from the receiving antenna. The center of the receiving antenna is 1 meter above the ground. The E-field is measured with a shielded loop antenna connected to a measurement receiver. Detected E-field was maximized by rotating the EUT through 360° and adjusting the receiving antenna polarizations. Both horizontal and vertical polarizations of the antenna were set during the measurement. The maximization processes were repeated with the EUT positioned respectively in its three orthogonal axes. The measurements were performed with the peak detector and if required, the quasi-peak detector.

b. The EUT was placed on the axis of X, Y and Z respectively for testing. Only the worst direction data is represented in the report.

c. The measurement bandwidth:

Frequency (MHz)	RBW / VBW
0.009-30	10 / 30kHz



6.3.2.2 EUT Connection Diagram of Test System

Figure 6.3.2.2-1 Electric Field Radiated Emissions (Below 30MHz) Connection Diagram



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6.3.2.3 Test Condition

Frequency Range (MHz)	RBW/VBW	Sweep Time (s)
0.009-30	10kHz/30kHz	AUTO

6.3.2.4 Limit/Criterion

Frequency Range (MHz)	E-field Strength Limit @30m	E-field Strength Limit @3m
	(mV/m)	(dBuV/m)
0.009-0490	2400/F (kHz)	129-94
0.490-1.705	24000/F (kHz)	74-63
1.705-30	30	70

Note: Where the limits have been defined at one distance, and a signal level measured at another, the

limits have been extrapolated using the following formula:

Extrapolation (dB) = 40log10(Measurement Distance / Specification Distance)

dBuA/m=dBuV/m / 120π

6.3.2.5 Test environmental conditions

Temperature	21.3 °C
Relative Humidity	42.6 %RH
Atmospheric Pressure	101.5 kPa

6.3.2.6 Test Results

Mode	Frequency (MHz)	Test Results	Verdicts
Mode 1: TX Mode+ BA10+ AE1	0.009-30	See Annex A.3-2-1	Pass

NOTE:

a. Abbreviations used in this clause: Pass—P; Fail—F; Not applicable—N/A

b. The result displayed take into account applicable antenna factors and cable losses

c. dBuV/m and dBuA/m can be converted to each other, so the test data of dBuV/m are reflected in the report





6.3.3 Electric Field Radiated Emissions (Above 30MHz)

6.3.3.1 Method of Measurement

a. The electric field radiated emissions from the EUT are measured in a semi-anechoic chamber. The EUT is placed on a non-conductive stand of 80cm high, and at a measurement distance of 3m from the receiving antenna. The center of the receiving antenna is 1 meter above the ground. The E-field is measured with a shielded loop antenna connected to a measurement receiver. Detected E-field was maximized by rotating the EUT through 360° and adjusting the receiving antenna polarizations. Both horizontal and vertical polarizations of the antenna were set during the measurement. The maximization processes were repeated with the EUT positioned respectively in its three orthogonal axes. The measurements were performed with the peak detector and if required, the quasi-peak detector.

b. The EUT was placed on the axis of X, Y and Z respectively for testing. Only the worst direction data is represented in the report.

c. The measurement bandwidth:

Frequency (MHz)	RBW / VBW	
30-1000	120 kHz / 300kHz	

6.3.3.2 EUT Connection Diagram of Test System



Figure 6.3.3.2-1 Electric Field Radiated Emissions (Above 30MHz) Connection Diagram



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6.3.3.3 Test Condition

Frequency Range (MHz)	RBW/VBW	Sweep Time (s)
30-1000	120kHz/300kHz	AUTO

6.3.3.4 Limit/Criterion

Frequency Range (MHz)	Quasi-Peak (dBµV/m)	Peak (dBµV/m)	Average (dBµV/m)
30-88	40	N/A	N/A
88-216	43.5	N/A	N/A
216-960	46	N/A	N/A
Above 960	54	N/A	N/A
Above 1000	N/A	74	54

6.3.3.5 Test environmental conditions

Temperature	21.3°C
Relative Humidity	42.6 %RH
Atmospheric Pressure	101.5 kPa

6.3.3.6 Test Results

Mode	Frequency (MHz)	Test Results	Verdicts
Mode 1: TX Mode+ BA10+ AE1	30-1000	See Annex A.3-3-1	Pass

NOTE:

a. Abbreviations used in this clause: Pass—P; Fail—F; Not applicable—N/A

b. The result displayed take into account applicable antenna factors and cable losses

c. QP detection is used in radiated emissions test, and the Duty Cycle of NFC main frequency signal is 100%.





6.4 Conducted Emissions

6.4.1 Reference

See Clause 6.2 of ANSI C63.10-2013

6.4.2 Measurement Methods

The conducted emissions from the AC port of the EUT are measured in a shielding room. The EUT is connected to a Line Impedance Stabilization Network (LISN). An overview sweep with peak detection was performed. The measurements were performed with a quasi-peak detector and if required, an average detector. Tested in accordance with the procedures of ANSI C63.10-2013

6.4.3 Test Setup

The measurement bandwidth and Test Condition

Frequency Range (MHz)	RBW	Sweep Time (s)	Test Voltage
0.15-30	9 kHz	AUTO	120V/60Hz



Figure 6.4.3-1 Conducted Emissions Connection Diagram



6.4.4 Limits

	Conducted Limit (dBuV)				
Frequency Range (MHz)	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					

6.4.5 Test environmental conditions

Temperature	21.4 °C
Relative Humidity	42.3 %RH
Atmospheric Pressure	100.3 kPa

6.4.6 Measurement Results

Mode	Frequency (MHz)	Test Results	Verdicts
Mode 2: TX Mode+ Cl01+ UA10+ BA10+ AE1	0.009-30	See Annex A.4-1	Pass

NOTE:

a. Emission level (quasi-peak or Average peak) =Raw value by receiver + Corr (Insertion loss+ cable loss)

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

c. Margin=limit value – emission level.

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

e. The frequency over the limits is the NFC main signal frequency.





6.5 Occupied bandwidth

6.5.1 Reference

See Clause 6.7 of RSS-Gen.

6.5.2 Measurement Methods

The occupied bandwidth or the "99% emission bandwidth" is defined as the frequency range between two points, one above and the other below the carrier frequency, within which 99% of the total transmitted power of the fundamental transmitted emission is contained. The occupied bandwidth shall be reported for all equipment in addition to the specified bandwidth required in the applicable RSSs.

The following conditions shall be observed for measuring the occupied bandwidth:

- The transmitter shall be operated at its maximum carrier power measured under normal test conditions.
- The span of the spectrum analyzer shall be set large enough to capture all products of the modulation process, including the emission skirts, around the carrier frequency, but small enough to avoid having other emissions (e.g. on adjacent channels) within the span.
- The detector of the spectrum analyzer shall be set to "Sample". However, a peak, or peak hold, may
 be used in place of the sampling detector since this usually produces a wider bandwidth than the
 actual bandwidth (worst-case measurement). Use of a peak hold (or "Max Hold") may be necessary to
 determine the occupied / x dB bandwidth if the device is not transmitting continuously.
- The resolution bandwidth (RBW) shall be in the range of 1% to 5% of the actual occupied / x dB bandwidth and the video bandwidth (VBW) shall not be smaller than three times the RBW value.
 Video averaging is not permitted.

Note: It may be necessary to repeat the measurement a few times until the RBW and VBW are in compliance with the above requirement.

6.5.3 Measurement Results

See Annex A.5-1



*RBW 300 Hz Marker 1 [T1] 43.09 dBµV ≯VBW 1 kHz 87 dBµV 10 dB 13.559887821 MHz Ref * Att SWT 115 ms [T1] 20.00 dB ndB 1.121794872 kHz BW - 80-Temp 1 [T1 ndB] 23.68 dBuV 023 70 Temp 2 [T1 ndB] 22.67 dBuV)44 60 718 50 40 30 Ţ2 20 10 V Л -10 Center 13.56 MHz 1 kHz/ Span 10 kHz

Annex A: Measurement Data





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Temperature	Y I'M	Frequency Error (MHz)				
Temperature	Voltage	Startup	2Min Later	5Min Later	10Min Later	
- 20 °C		13.559821	13.559765	13.559478	13.559439	
- 10 °C		13.559834	13.559698	13.559529	13.559634	
0°C		13.559815	13.559624	13.559492	13.559800	
10 ℃		13.559846	13.559751	13.559631	13.559578	
20 ℃	120V	13.559769	13.559920	13.560270	13.559569	
30 ℃	N. C. S.	13.559821	13.559946	13.559629	13.559721	
40 ℃		13.559856	13.559899	13.559817	13.559446	
50 ℃		13.559890	13.559639	13.559679	13.559498	
25 ℃	114V	13.559891	9891 13.559567 13.559597		13.559674	
25 ℃	126V	13.559674 13.559683 13		13.559898	13.559579	
Temperature	Voltage	Frequency Error (%)				
- 20 ℃		0.000376	0.000789	0.002906	0.003193	
- 10 °C		0.000280	0.001283	0.002530	0.001755	
0°C		0.000420	0.001829	0.002802	0.000531	
10 ℃	12014	0.000192	0.000892	0.001777	0.002168	
20 ℃	1200	0.000760	0.000354	0.002935	0.002235	
30 ℃	Y and a second	0.000376	0.000546	0.001792	0.001114	
40 ℃		0.000118	0.000199	0.000406	0.003142	
50 ℃		0.000133	0.001718	0.001423	0.002758	
25 ℃	114V	0.000140	0.002249	0.002028	0.001460	
25 ℃	126V	0.001460	0.001394	0.000192	0.002161	
Temperature	Voltage		Frequency	Error (ppm)	B Your .	
- 20 ℃		3.761097	7.890930	29.056321	31.932455	
-10°C	120V	2.802386	12.831980	25.295224	17.551788	

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0 °C	Y HONG	4.203580	18.289258	28.023863	5.309785
10° C		1.917422	8.923388	17.773029	21.681621
20 °C		7.595942	3.539856	29.351310	22.345344
30 °C		3.761097	5.457279	17.920523	11.135798
40° C		1.179952	1.991169	4.056085	31.416226
50°C		1.327446	17.183053	14.233173	27.581381
25℃	114V	1.401193	22.492838	20.280427	14.601908
25 °C	126V	14.601908	13.938185	1.917422	21.607874

A.2-1 Mode 1 Frequency Stability





Figure A.3-1-1 Mode 1 Electric Field Strength of Fundamental Emissions



Figure A.3-2-1 Mode 1 Electric Field Radiated Emissions (Below 30MHz)



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Figure A.3-3-1 Mode 1 Electric Field Radiated Emission	(Above 30MHz)
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Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
31.566640	25.50	40.00	14.50	100.0	V	317.0	-16
35.657864	16.23	40.00	23.77	100.0	v	23.0	-14
40.689896	24.45	40.00	15.55	175.0	V	227.0	-13
66.489091	21.24	40.00	18.76	175.0	V	181.0	-14
176.239971	25.31	43.50	18.19	125.0	Н	172.0	-15
783.864920	23.29	46.00	22.71	225.0	V	-16.0	-1

Note: Horizontal and vertical polarity is all have been tested, the result of them is synthesized in the above data diagram.





Frequency (MHz)	QuasiPeak (dBμV)	Average (dBμV)	Limit (dBµV)	Margin (dB)	Meas. Time (ms)	Bandwid th (kHz)	Line	Filter	Corr. (dB)
0.183581	30.59		64.32	33.73	15000.0	9.000	Ν	ON	10.0
0.183581		12.45	54.32	41.87	15000.0	9.000	Ν	ON	10.0
0.556706	40.80		56.00	15.20	15000.0	9.000	Ν	ON	9.9
0.556706		31.02	46.00	14.98	15000.0	9.000	Ν	ON	9.9
2.534269	26.82		56.00	29.18	15000.0	9.000	Ν	ON	9.9
2.534269		18.19	46.00	27.81	15000.0	9.000	Ν	ON	9.9
4.765556	28.37		56.00	27.63	15000.0	9.000	Ν	ON	9.8
4.765556		19.69	46.00	26.31	15000.0	9.000	Ν	ON	9.8
14.119800	45.67		60.00	14.33	15000.0	9.000	Ν	ON	9.5
14.119800		26.48	50.00	23.52	15000.0	9.000	Ν	ON	9.5
27.085894		10.60	50.00	39.40	15000.0	9.000	Ν	ON	9.5
27.085894	40.76		60.00	19.24	15000.0	9.000	Ν	ON	9.5

Figure A.4-1 Mode 2 Conducted Emissions

Note:

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

2. The frequency over the limits is the NFC main signal frequency.





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Center Freq. (MHz)	f _L (MHz)	f _{H(} MHz)	OBW
13.56	13.5593	13.5605	1.170 kHz



Figure A.5-1 Mode 1 Occupied bandwidth



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Annex B: Revised History

Version	Revised Content
VO	Initial





Annex C: Accreditation Certificate



For the tests to which this accreditation applies, please refer to the laboratory's Electrical Scope of Accreditation.