





# NFC TEST REPORT

No.23T04Z80206-01

for

OnePlus Technology (Shenzhen) Co., Ltd.

**Mobile Phone** 

**CPH2611** 

**FCC ID: 2ABZ2-AA560** 

with

**Hardware Version: 11** 

Software Version: OxygenOS V14.0

Issued Date: 2023-11-20

#### 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 CTTL.

The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the U.S.Government.

#### **Test Laboratory:**

## CTTL-Telecommunication Technology Labs, CAICT

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# **REPORT HISTORY**

Report Number	Revision	Description	Issue Date
23T04Z80206-01	Rev.0	1 <sup>st</sup> edition	2023-11-20

Note: the latest revision of the test report supersedes all previous version.





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## 1. Test Laboratory

## 1.1. Introduction & Accreditation

**Telecommunication Technology Labs, CAICT** is an ISO/IEC 17025:2017 accredited test laboratory under American Association for Laboratory Accreditation (A2LA) with lab code 7049.01, and is also an FCC accredited test laboratory (CN1349), and ISED accredited test laboratory (CAB identifier:CN0066). The detail accreditation scope can be found on A2LA website.

## 1.2. Testing Location

Location: CTTL(huayuan North Road)

Address: No. 52, Huayuan North Road, Haidian District, Beijing,

P. R. China 100191





## 1.3. <u>Testing Environment</u>

Normal Temperature: 15-35°C

Extreme Temperature: -20/+50°C

Normal Relative Humidity: 20-75%

Normal Air Pressure 86Kpa-106Kpa

## 1.4. Project data

Testing Start Date: 2023-10-25 Testing End Date: 2023-11-06

## 1.5. Signature

闽南平

Miao Qinghua

(Prepared this test report)

Zhou Bin

(Reviewed this test report)

Pang Shuai

(Approved this test report)



Address:



## 2. Client Information

## 2.1. Applicant Information

Company Name: OnePlus Technology (Shenzhen) Co., Ltd.

18C02, 18C03, 18C04, and 18C05, Shum Yip Terra Building, Binhe

Avenue North, Futian District, Shenzhen, Guangdong, P.R. China.

Contact: Ariel Cheng

Telephone: (86)75561882366

Email: chenglijun1@oppo.com

## 2.2. Manufacturer Information

Company Name: OnePlus Technology (Shenzhen) Co., Ltd.

Address: 18C02, 18C03, 18C04, and 18C05, Shum Yip Terra Building, Binhe

Avenue North, Futian District, Shenzhen, Guangdong, P.R. China.

Contact: Ariel Cheng

Telephone: (86)75561882366

Email: chenglijun1@oppo.com





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

## 3.1. About EUT

Description Mobile Phone Model Name CPH2611 FCC ID 2ABZ2-AA560 GSM Frequency bands 850/900/1800/1900 WCDMA Frequency bands B1/2/4/5/8 LTE Frequency bands FDD 1/2/3/4/5/7/8/12/13/17/18/19/20/25/26/28/30/66/71 TDD 38/39/40/41/48 NR FR1 Frequency bands NSA n1/n2/n3/n5/n7/n8/n20/n25/n28/n38/n40/n41/n66/n71/n77/n78 Operating temperature 0/+35°C Extreme low voltage 6.6V Normal voltage 7.82V Extreme high voltage 9V

## 3.2. Internal Identification of EUT

EUT ID*	SN or IMEI	HW Version	SW Version
UT14a	869135060029018/	11	Ovugon OS 1/14 0
	869135060029000	11	OxygenOS V14.0
UT34a	869135060029414/	11	OxygenOS V14.0
	869135060029406	11	OxygenOS v 14.0

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

## 3.3. Internal Identification of AE

	AE ID*	Description	SN	Remarks		
	AE1	Battery	1	1		
	AE2	Charger	1	1		
	AE3	USB Cable	1	1		
Α	E1					
	Model		BLPA33			
	Manufact	turer	Sunwoda Electroni	c Co., Ltd.		
	Capacity		2680mAh	2680mAh		
Nominal Voltage		Voltage	/			
Α	E2					
	Model		VCBAHBUH			
	Manufact	turer	Shenzhen Huntkey	Electric Co.,Ltd		
Length of cable		f cable	/			
Α	E3					
	Model		DL129			
	Manufact	turer	Changzhou Duwei	Electronics Co., Ltd.		





Length of cable

\*AE ID: is used to identify the ancillary equipment in the lab internally.

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## 3.4. EUT Set-ups

EUT set-up No.	Combination of EUT and AE	Remarks
Set.NFC01	UT34a + AE1 + AE2 + AE3 + NFC Card	Charge
Set.NFC02	UT34a + AE1+ NFC card	NFC
Set.NFC03	UT14a	

The Transmit State of NFC: the NFC function is on. The EUT will transmit the NFC data and command continuously during the test.

The Transmit state without modulation: The EUT will transmit the CW signal at the operating frequency.





## 4. Reference Documents

## 4.1. <u>Documents supplied by applicant</u>

EUT parameters, referring to Annex A for detailed information, are supplied by the client or manufacturer, which are the bases of testing.

## 4.2. Reference Documents for testing

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

Reference	Title	Version
CFR 47 Part 2	Part 2 — Frequency Allocations and Radio Treaty Matters;	2019
	General Rules and Regulations.	
CFR 47 Part 15	Part 15 — Radio Frequency Devices.	2019
	Subpart C — Intentional Radiators.	
	§ 15.35 Measurement detector functions and bandwidths.	
	§ 15.207 Conducted limits.	
	§ 15.209 Radiated emission limits, general requirements.	
	§ 15.215 Additional provisions to the general radiated	
	emission limitations.	
	§ 15.225 Operation within the band 13.110–14.010 MHz.	
ANSI C63.10	American National Standard of Procedures for Compliance	2013
	Testing of Unlicensed Wireless Devices	





## 5. Test Results

## 5.1. Summary of Test Results

No	Test Cases	Clause in Regulation	Section in This Report	Verdict		
1	Electric Field Strength of	CFR 47 § 15.225(a)		D(Sat NECO2)		
ı	Fundamental Emissions	CFR 47 § 15.225(a)	B.1	P(Set. NFC02)		
2	Electric Field Strength of	CFR 47 § 15.225(b)	D. I	P(Set. NFC02)		
2	Outside the Allocated Bands	CFR 47 § 15.225(c)				
3	Electric Field Radiated	CFR 47 § 15.209	B.2	P(Set. NFC01)		
3	Emissions	CFR 47 § 15.225(d)	B.3	P(Set. NFC01)		
4	Frequency Tolerance	CFR 47 § 15.225(e)	B.4	P(Set. NFC03)		
5	20dB Bandwidth	CFR 47 § 15.215(c)	B.5	P(Set. NFC03)		
6	Conducted Emissions	CFR 47 § 15.207	B.6	P(Set. NFC01)		
The	The measurement is carried out according to ANSI C63.10. See <b>ANNEX B</b> for details.					

#### **Test Conditions:**

For this report, all the test cases listed above were tested under normal Temperature, Voltage, humidity and Air Pressure except the Frequency Tolerance test case. The specific conditions of Frequency Tolerance test case are listed in section B.4.3

### See Table 3 for terms for result verdict:

**Table 1 Terms for result verdict** 

Р	Pass, The EUT complies with the essential requirements in the standard.
NP	Not Perform, The test was not performed by CTTL
NA	Not Applicable, The test was not applicable
F	Fail, The EUT does not comply with the essential requirements in the standard

## 5.2. Statements

The test cases listed in Section 5.1 of this report for the EUT specified in Section 3 were performed by CTTL according to the reference documents in Section 4.

The EUT meets all applicable requirements of the regulations and standards in Section 4.2.





# 6. Test Facilities Utilized

NO.	NAME	TYPE	SERIES NUMBER	PRODUCER	CAL. DUE DATE	CAL. INTERVAL
1.	Spectrum Analyzer	N9030A	MY49432143	Keysight Technologies	2023-12-17	1 Year
2.	Climatic chamber	WK3-340/70	582261175100 10	WEISS	2024-10-12	1 Year
3.	Test Receiver	ESW44	103023	R&S	2024-07-08	1 Year
4.	H-field Antenna	HFH2-Z2	829324/007	R&S	2024-12-23	2 Years
5.	EMI Antenna	VULB 9163	01222	SCHWARZBEC K	2024-02-28	2 Years
6.	Test Receiver	ESCI	100344	R&S	2024-02-21	1 Year
7.	LISN	ENV216	101200	R&S	2024-06-05	1 Year





# 7. Measurement Uncertainty

Item	Uncertainty
Frequency Tolerance	U =74 Hz, k=2
20dB Bandwidth	<i>U</i> =74 Hz, k=2
Radiated Emissions(9kHz-30MHz)	<i>U</i> =4.92 dB, k=2
Radiated Emissions (30MHz-1GHz)	<i>U</i> =4.72 dB, k=2
Radiated Emissions (1GHz-18GHz)	<i>U</i> =4.84 dB, k=2
Conducted emission	<i>U</i> = 3.08 dB, k=2





# **ANNEX A: EUT parameters**

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## **ANNEX B: Detailed Test Results**

## **B.1. Electric Field Strength of Fundamental and Outside the Allocated bands**

#### **B.1.1. Reference**

See Clause 4, Clause 5 of ANSI C63.10-2013 generally.

#### **B.1.2. Measurement Methods**

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 loop antenna is 1.0 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. 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.

The measurement bandwidth is:

**Table B-1:** Measurement bandwidth

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

The E-field measured at 3m is calculated as:

E-field  $(dB\mu V/m) = Rx (dB\mu V) + Cable Loss (dB) + AF@3m (dB/m)$ 

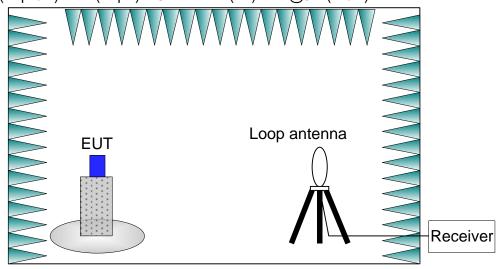


Figure B-1: Measurement Setup

#### **B.1.3. EUT Operating Mode and Test Conditions**

The measurement of EUT is carried out under the transmit state of NFC(See 3.4).

The EUT is powered by a travel adapter.

During the measurements, the ambient temperature of the electromagnetic anechoic chamber is in the range of 15  $\sim$  25  $^{\circ}$ C.





#### B.1.4. Limits

**Table B-2:** Limits

Frequency Range (MHz)	E-field Strength Limit @ 30 m (µV/m)	E-field Strength Limit @ 3 m (dBµV/m)	
13.560 ± 0.007	+15,848	124	
13.410 to 13.553	+334	90	
13.567 to 13.710	+334	90	
13.110 to 13.410	+106	91	
13.710 to 14.010	+100	81	

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:

Extrapolat ion(dB) =  $40\log_{10}$  (Measuremen t Distance/Specification Distance)

#### **B.1.5. Measurement Results**

Measurement results of normal conditions see Figure B-2 for different set-ups of EUT. The results displayed take into account applicable antenna factors and cable losses.

Conclusions: Set.NFC02, PASS.

Full Spectrum

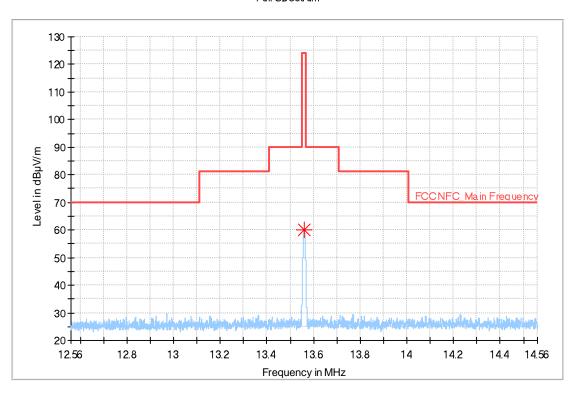


Figure B-2: Measurement results for Electric Field Strength of Fundamental and Outside the Allocated bands

Frequency	MaxPeak	Limit	Margin	Meas. Time	Bandwidth	Pol	Azimuth	Corr.
(MHz)	(dBµV/m)	(dBµV/m)	(dB)	(ms)	(kHz)		(deg)	(dB/m)
13.559750	60.12	124.00	63.88			٧	213.0	17.9





## **B.2. Electric Field Radiated Emissions (< 30MHz)**

#### **B.2.1. Reference**

See Clause 6.4 of ANSI C63.10-2013 specifically. See Clause 4 and Clause 5 of ANSI C63.10-2013 generally.

#### **B.2.2. Measurement Methods**

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 loop antenna is 1.0 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. 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.

The measurement bandwidth is:

Frequency of Emission (MHz)	RBW/VBW
0.009-0.15	100/300 Hz
0.15-30	10/30 kHz

The E-field measured at 3m is calculated as:

E-field  $(dB\mu V/m) = Rx (dB\mu V) + Cable Loss (dB) + AF@3m (dB/m)$ 

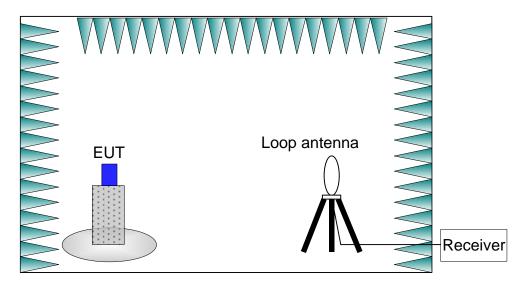


Figure B-3: Measurement Setup

## **B.2.3. EUT Operating Mode and Test Conditions**

The measurement of EUT is carried out under the transmit state of NFC(See 3.4). The EUT is powered by a travel adapter.





During the measurements, the ambient temperature of the electromagnetic anechoic chamber is in the range of  $15 \sim 25$  °C.

#### B.2.4. Limits

Frequency Range (MHz)	E-field Strength Limit @ 30m	E-field Strength Limit @ 3m	
Trequency range (Minz)	(mV/m)	(dBµV/m)	
0.009-0.490	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:

Extrapolat ion(dB) =  $40\log_{10}$  (Measuremen t Distance/Specification Distance)

#### **B.2.5. Measurement Results**

Measurement results of normal conditions see Figure B-4 for different set-ups of EUT. The results displayed take into account applicable antenna factors and cable losses.

Full Spectrum

Conclusions: Set.NFC01, PASS.



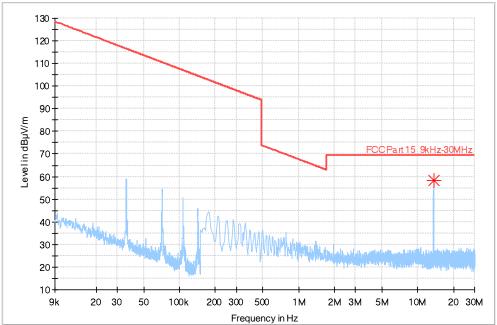


Figure B-4: Measurement results for Electric Field Radiated Emissions (< 30MHz)

Frequency	MaxPeak	Limit	Margin	Meas. Time	Bandwidth	Pol	Azimuth	Corr.
(MHz)	(dBµV/m)	(dBµV/m)	(dB)	(ms)	(kHz)		(deg)	(dB/m)
13.560113	58.16	69.50	11.34			٧	180.0	17.9





## B.3. Electric Field Radiated Emissions (≥30MHz)

#### **B.3.1. Reference**

See Clause 6.5 of ANSI C63.10-2013 specifically. See Clause 4 and Clause 5 of ANSI C63.10-2013 generally.

#### **B.3.2. Measurement Methods**

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 10m from the receiving antenna. The receiving antennas connected to a measurement receiver. In order to search for maximum field strength emitted from the EUT, the receiving antenna can be moved between the height of 1.0 m to 4.0 m. Detected E-field was maximized at each frequency by rotating the EUT through 360° and adjusting the receiving antenna positions for both vertical and horizontal antenna polarizations. 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.

The measurement bandwidth is:

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

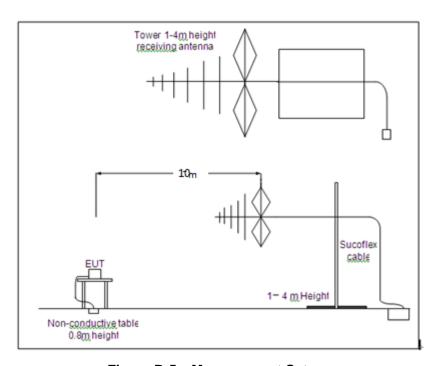


Figure B-5: Measurement Setup

#### **B.3.3. EUT Operating Mode and Test Conditions**

The measurement of EUT is carried out under the transmit state of NFC(See 3.4).

The EUT had been connected to a travel adapter.

During the measurements, the ambient temperature of the electromagnetic anechoic chamber is



in the range of 15  $\sim$  25 °C.

## B.3.4. Limits

Frequency	E-field Strength Limit	E-field Strength Limit	E-field Strength Limit
Range (MHz)	@ 3m	@ 3m	@ 10m
Range (Wiriz)	(mV/m)	(dBµV/m)	(dBµV/m)
30-88	100	40	30
88-216	150	43.5	33.5
216-960	200	46	36
960-1000	500	54	44

## **B.3.5. Measurement Results**

Measurement results of normal conditions see Figure B-6 for different set-ups of EUT. The results displayed take into account applicable antenna factors and cable losses.

Conclusions: Set.NFC01, PASS.

Full Spectrum

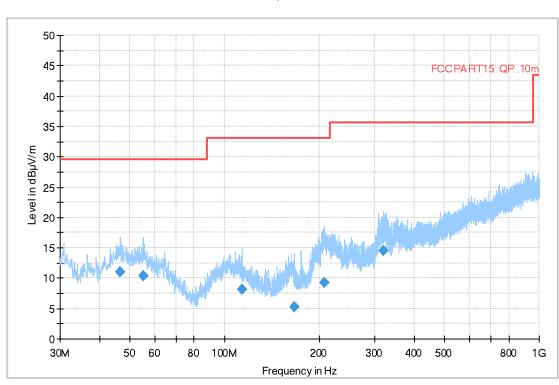


Figure B-6: Measurement results for Electric Field Radiated Emissions (≥30MHz) Final\_Result

Frequency	QuasiPeak	Limit	Margin	Bandwidth	Height	Pol	Azimuth	Corr.
(MHz)	(dBµV/m)	(dBµV/m)	(dB)	(kHz)	(cm)		(deg)	(dB/m)
46.684000	10.96	29.54	18.58	120.000	225.0	V	-45.0	-10.6
55.026000	10.34	29.54	19.20	120.000	275.0	н	45.0	-11.0
113.614000	8.11	33.06	24.95	120.000	108.0	٧	-6.0	-13.2
166.188000	5.25	33.06	27.81	120.000	282.0	V	-14.0	-14.6
207.413000	9.21	33.06	23.85	120.000	125.0	V	98.0	-12.3
319.254000	14.54	35.56	21.02	120.000	118.0	V	84.0	-8.2





## **B.4. Frequency Tolerance**

#### **B.4.1. Reference**

See Clause 6.8 of ANSI C63.10-2013 specifically. See Clause 4 and Clause 5 of ANSI C63.10-2013 generally.

#### **B.4.2. Measurement Methods**

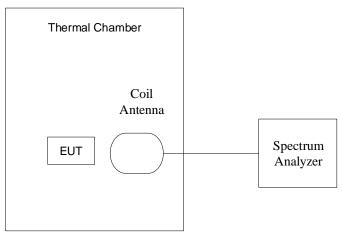


Figure B-7: Measurement Setup

The transmitter output signal was picked up by coil antenna connected to the spectrum analyzer. 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.

#### **B.4.3. EUT Operating Mode and Test Conditions**

The measurement of EUT was carried out under the transmit state of without modulation(See 3.4). EUT had not been connected to a travel adapter. The frequency stability was measured with the different voltage and temperature combinations:

- a) The nominal voltage 7.82V(See 3.1)was used and the temperature was varied from -20°C to +50°C in 10°C increments using an environmental chamber.
- b) The 20 °C was used and the voltages were 6.6V, 7.82V and 8.99V (The extreme low voltage ,the normal voltage defined in section 3.1 and 115% of the normal voltage).

The details were as following:

**Table B-3:** Combinations of Voltage and Temperature

Test items	Voltage	Temperature
Frequency		<b>-20</b> ℃
stability with respect		-10℃
to ambient		0℃
temperature	7.82V	10℃
		20℃
		30℃
		40℃





		50℃
Frequency stability	6.6 V	
when varying supply	7.82V	20℃
voltage	8.99V	

## **B.4.4. Test Layouts**

See B.4.2.

## B.4.5. Limits

The frequency tolerance of the carrier signal shall be maintained within +/- 0.01% of the operating frequency.

## **B.4.6. Measurement Results**

Measurement results see Table B-4 for different test conditions.

Conclusions: Set.NFC03, PASS.

**Table B-4:** Measurement results for Frequency Tolerance

Temperature	Voltago		Frequen	cy (MHz)	
remperature	Voltage	Startup	2 Min Later	5 Min Later	10 Min Later
<b>-20</b> ℃	7.82V	13.559739000	13.559739000	13.559744000	13.559744000
-10℃	7.82V	13.559721000	13.559730000	13.559736000	13.559739000
0℃	7.82V	13.559685000	13.559694000	13.559703000	13.559712000
10℃	7.82V	13.559595000	13.559613000	13.559667000	13.559667000
20℃	7.82V	13.559964000	13.559982000	13.559984000	13.559984000
30℃	7.82V	13.559946000	13.559946000	13.559952000	13.559952000
<b>40</b> ℃	7.82V	13.559946000	13.559928000	13.559928000	13.559916000
<b>50</b> ℃	7.82V	13.559559000	13.559552000	13.559541000	13.559541000
<b>20</b> ℃	6.6V	13.559631000	13.559632000	13.559632000	13.559216000
20℃	8.99V	13.559712000	13.559667000	13.559658000	13.559649000

Tomporeture	Voltago	Frequency Error (%)			
Temperature	Voltage	Startup	2 Min Later	5 Min Later	10 Min Later
<b>-20</b> ℃	7.82V	-0.002	-0.002	-0.002	-0.002
-10°C	7.82V	-0.002	-0.002	-0.002	-0.002
0℃	7.82V	-0.002	-0.002	-0.002	-0.002
10℃	7.82V	-0.003	-0.003	-0.002	-0.002
20℃	7.82V	0.000	0.000	0.000	0.000
30℃	7.82V	0.000	0.000	0.000	0.000
40℃	7.82V	0.000	-0.001	-0.001	-0.001
50℃	7.82V	-0.003	-0.003	-0.003	-0.003
20℃	6.6V	-0.003	-0.003	-0.003	-0.006
20℃	8.99V	-0.002	-0.002	-0.003	-0.003





## **B.4.7. Measurement Uncertainty**

Measurement uncertainty: U = 74 Hz, k=2

## B.5. 20dB Bandwidth

#### **B.5.1. Reference**

See Clause 6.9 of ANSI C63.10-2013 specifically. See Clause 4 and Clause 5 of ANSI C63.10-2013 generally.

## **B.5.2. Measurement Methods**

The transmitter output signal was picked up by coil antenna connected to the spectrum analyzer. The bandwidth of the center frequency was measured with 470Hz RBW, 1.5kHz VBW and 10kHz span.

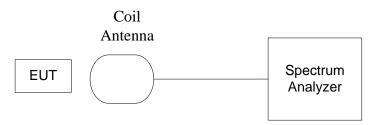


Figure B-8: Measurement Setup

## **B.5.3. EUT Operating Mode and Test Conditions**

The measurement of EUT was carried out under the transmit state of NFC (See 3.4). EUT had not been connected to a travel adapter.

During the measurements, the ambient temperature was in the range of  $15 \sim 25$  °C.

#### **B.5.4. Test Layouts**

See B.5.2.

#### B.5.5. Limits

The 20dB bandwidth shall be less than 80% of the permitted frequency band. For 13.56 MHz NFC, the permitted frequency band is 14kHz, so the limit is 11.2 kHz.

#### **B.5.6. Measurement Results**

Measurement results see Figure B-9.

Conclusions: Set.NFC03, PASS.





Figure B-9: Measurement results for 20dB Bandwidth

## **B.5.7. Measurement Uncertainty**

Measurement uncertainty: *U* =74 Hz, k=2





## **B.6. Conducted emission**

## B.6.1. Reference

See Clause 6.2 of ANSI C63.10-2013 specifically.

See Clause 4 and Clause 5 of ANSI C63.10-2013 generally.

## **B.6.2. 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.

The conducted emission measurements were made with the following detector of the test receiver: Quasi-Peak / Average Detector.

The measurement bandwidth is:

**Table B-5:** Measurement Bandwidth

Frequency of Emission (MHz)	RBW/VBW
0.15-30	9kHz

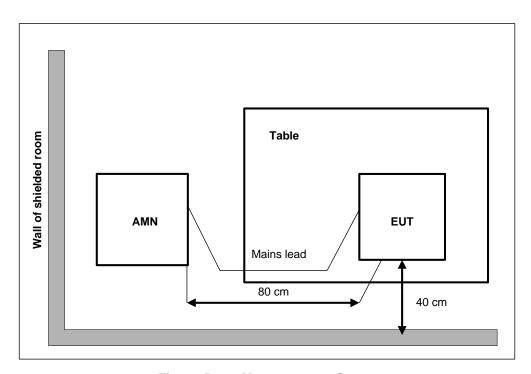


Figure B-10: Measurement Setup

## **B.6.3. EUT Operating Mode and Test Conditions**

The measurement of EUT is carried out under the transmit state of NFC(See 3.4). The EUT is powered by a travel adapter.

During the measurements, the ambient temperature is in the range of 15 ~ 25  $\,^{\circ}$ C.

#### B.6.4. Limits

Frequency range (MHz)	Quasi-peak Limit (dBμV)	Average Limit (dBμV)					
0.15 to 0.5	66 to 56	56 to 46					
0.5 to 5	56	46					
5 to 30	60	50					





## **B.6.5. Measurement Results**

Measurement results see Figure B-11.

Conclusions: Set.NFC01, PASS.

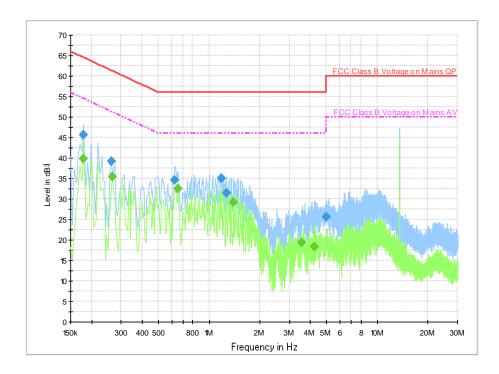


Figure B-11: Measurement results for Conducted Emission

## Final Result 1

Frequency	QuasiPeak	Meas.	Bandwidth	Filter	Line	Corr.	Margin	Limit	Comment
(MHz)	(dBµV)	Time	(kHz)			(dB)	(dB)	(dBµV)	
		(ms)							
0.178000	45.6	2000.0	9.000	On	N	19.7	18.9	64.6	
0.262000	39.1	2000.0	9.000	On	N	19.7	22.3	61.4	
0.626000	34.6	2000.0	9.000	On	N	19.6	21.4	56.0	
1.178000	35.0	2000.0	9.000	On	N	19.6	21.0	56.0	
1.270000	31.4	2000.0	9.000	On	N	19.6	24.6	56.0	
4.950000	25.6	2000.0	9.000	On	L1	19.6	30.4	56.0	

## Final Result 2

Frequency	CAverage	Meas.	Bandwidth	Filter	Line	Corr.	Margin	Limit	Comment
(MHz)	(dBµV)	Time	(kHz)			(dB)	(dB)	(dBµV)	
		(ms)							
0.178000	39.8	2000.0	9.000	On	N	19.7	14.8	54.6	
0.266000	35.5	2000.0	9.000	On	N	19.7	15.7	51.2	
0.654000	32.6	2000.0	9.000	On	N	19.6	13.4	46.0	
1.398000	29.2	2000.0	9.000	On	N	19.6	16.8	46.0	
3.526000	19.4	2000.0	9.000	On	N	19.6	26.6	46.0	
4.226000	18.3	2000.0	9.000	On	N	19.6	27.7	46.0	





# **ANNEX C: Persons involved in this testing**

Test Item	Tester
20dB Bandwidth	Miao Qinghua
Frequency Tolerance	Miao Qinghua
Electric Field Strength of Fundamental and Outside	Zhang Tianli
the Allocated bands	
Electric Field Radiated Emissions (< 30MHz)	Zhang Tianli
Electric Field Radiated Emissions (≥30MHz)	Zhang Tianli
Conducted Emissions	Li Pengfei





## **ANNEX D: Accreditation Certificate**





## **Accredited Laboratory**

A2LA has accredited

## TELECOMMUNICATION TECHNOLOGY LABS, CAICT

Beijing, People's Republic of China

for technical competence in the field of

## **Electrical Testing**

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017

General requirements for the competence of testing and calibration laboratories. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communiqué dated April 2017).



Presented this 26th day of June 2023.

Mr. Trace McInturff, Vice President, Accreditation Services For the Accreditation Council Certificate Number 7049.01 Valid to July 31, 2024

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

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