



# TEST REPORT

## No. I23Z60483-WMD05

for

**OnePlus Technology (Shenzhen) Co., Ltd.**

**Mobile Phone**

**Model Name: CPH2551**

**FCC ID: 2ABZ2-AA541**

with

**Hardware Version: 11**

**Software Version: OxygenOS 13.2**

**Issued Date: 2023-06-29**

**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**

<b>Report Number</b>	<b>Revision</b>	<b>Description</b>	<b>Issue Date</b>
I23Z60483-WMD05	Rev.0	1 <sup>st</sup> edition	2023-06-29

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 NATIONAL VOLUNTARY LABORATORY ACCREDITATION PROGRAM (NVLAP) with lab code 600118-0 and is also an FCC accredited test laboratory (CN5017), and ISED accredited test laboratory (ISED#: 24849). The detail accreditation scope can be found on NVLAP website.

### **1.2. Testing Location**

Location 1: CTTL (huayuan North Road)

Address: No. 52, Huayuan North Road, Haidian District, Beijing,  
P. R. China 100191

### 1.3. Testing Environment

Normal Temperature: 15-35℃  
Relative Humidity: 20-75%

### 1.4. Project Data

Testing Start Date: 2023-06-17  
Testing End Date: 2023-06-17

### 1.5. Signature



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Dong Yuan  
(Prepared this test report)



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Zhou Yu  
(Reviewed this test report)



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Zhao Hui Lin  
Deputy Director of the laboratory  
(Approved this test report)

## **2. Client Information**

### **2.1. Applicant Information**

Company Name: OnePlus Technology (Shenzhen) Co., Ltd.  
Address /Post: 18C02, 18C03, 18C04 and 18C05, Shum Yip Terra Building,  
Binhe Avenue North, Futian District, Shenzhen  
Contact: Ariel Cheng  
Email: ariel.cheng@oneplus.com  
Telephone: (86)76986076999

### **2.2. Manufacturer Information**

Company Name: OnePlus Technology (Shenzhen) Co., Ltd.  
Address /Post: 18C02, 18C03, 18C04 and 18C05, Shum Yip Terra Building,  
Binhe Avenue North, Futian District, Shenzhen  
Contact: Ariel Cheng  
Email: ariel.cheng@oneplus.com  
Telephone: (86)76986076999

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

#### **3.1. About EUT**

Description	Mobile Phone
Model Name	CPH2551
FCC ID	2ABZ2-AA541
Antenna	Embedded
Extreme vol. Limits	3.4VDC to 4.5VDC (nominal: 3.91VDC)
Extreme temp. Tolerance	0°C to +35°C

Note: Components list, please refer to documents of the manufacturer; it is also included in the original test record of CTTL.

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

EUT ID*	IMEI	HW Version	SW Version	Date of receipt
UT32a	868147060030236/ 868147060030228	11	OxygenOS 13.2	2023-04-24

\*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
AE1	Battery
AE2	Battery
AE1	
Model	BLPA01
Manufacturer	Sunwoda Electronic Co., Ltd
Capacitance	3295mAh
AE2	
Model	BLPA03
Manufacturer	Sunwoda Electronic Co., Ltd
Capacitance	1510mAh

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

## **4. Reference Documents**

### **4.1. Documents supplied by applicant**

EUT parameters are supplied by the customer, which are the bases of testing. CAICT is not responsible for the accuracy of customer supplied technical information that may affect the test results (for example, antenna gain and loss of customer supplied cable).

### **4.2. Reference Documents for testing**

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

<b>Reference</b>	<b>Title</b>	<b>Version</b>
FCC Part 96	CITIZENS BROADBAND RADIO SERVICE	10-1-21 Edition
KDB 940660 D01	CERTIFICATION AND TEST PROCEDURES FOR CITIZENS BROADBAND RADIO SERVICE DEVICES AUTHORIZED UNDER PART 96	v03
WINNF-TS-0122	Test and Certification for Citizens Broadband Radio Service (CBRS); Conformance and Performance Test Technical Specification; CBSD/DP as Unit Under Test (UUT)	v1.0.2

Note: WINNF-TS-0122 is not in the scope of ISO 17025 accreditation by NVLAP.



## 5. Summary Of Test Result

### LTE Band 48

Items	Test Name	Clause in FCC rules	Verdict
1	End User Device Additional Requirement (CBSD Protocol)	96.47	P

Terms used in Verdict column

P	Pass. The EUT complies with the essential requirements in the standard.
NP	Not Performed. The test was not performed by CTTL.
NA	Not Applicable. The test was not applicable.
BR	Re-use test data from basic model report.
F	Fail. The EUT does not comply with the essential requirements in the standard.

All the test results are based on normal power.

LTE Band 48 is tested by power class 3.

## 6. Test Equipment Utilized

Description	Type	Series Number	Manufacture	Cal Due Date	Calibration Interval
Signal&Spectrum Analyzer	FSW	104038	R&S	2023-06-20	1 year

## **Annex A: Measurement Results**

### **A.1 Measurement Limit**

End user device additional requirements (CBSD Protocol) are tested per the test procedures listed below. During testing, the EUT is connected to a certified CBSD (Baicells pBS2120 FCC ID: 2AG32PBS212096) as a companion device to show compliance with Part 96.47.

End User Devices may operate only if they can positively receive and decode an authorization signal transmitted by a CBSD, including the frequencies and power limits for their operation.

An End User Device must discontinue operations, change frequencies, or change its operational power level within 10 seconds of receiving instructions from its associated CBSD.

### **A.2 Measurement Method**

The EUT was connected via an RF cable to a certified CBSD and spectrum analyzer.

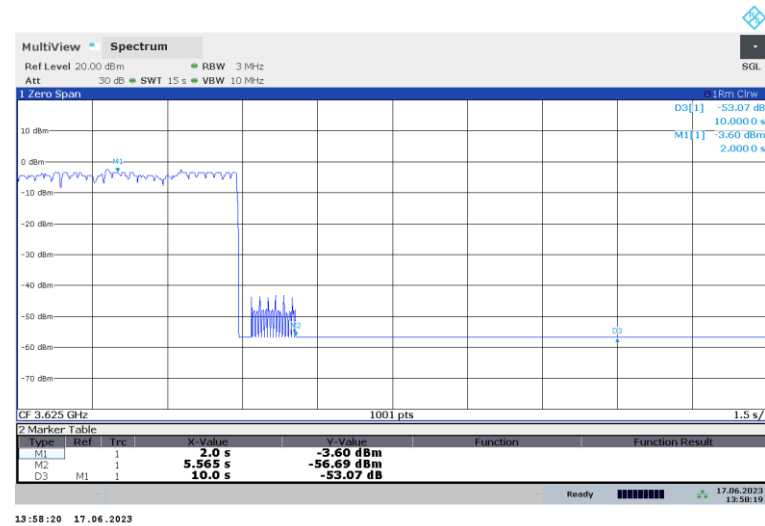
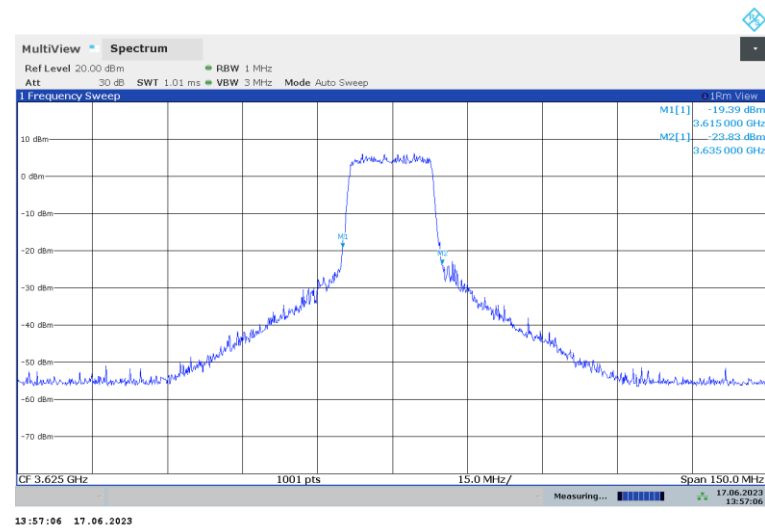
#### **1. Run#1:**

- a. Setup frequency with 3615MHz – 3635MHz.
- b. Check EUT Tx frequency.
- c. Disable AP service and check EUT stop transmission within 10s.

#### **2. Run#2:**

- a. Setup frequency with 3660MHz – 3680MHz.
- b. Check EUT Tx frequency.
- c. Disable AP service and check EUT stop transmission within 10s.

RUN#1:



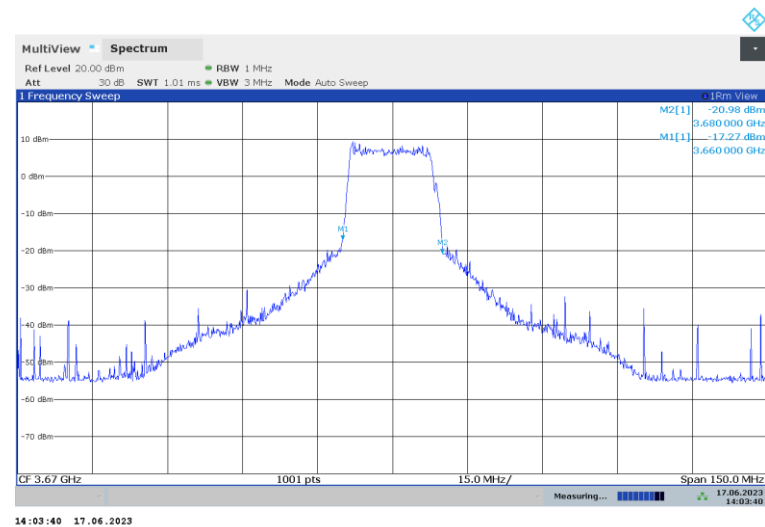
Note:

Marker 1: CBSD sends instructions to discontinue LTE operations.

Marker 2: EUT discontinues operation.

Marker 3: 10 seconds elapsed time from CBSD sending instructions to EUT.

RUN#2:



Note:

Marker 1: CBSD sends instructions to discontinue LTE operations.

Marker 2: EUT discontinues operation.

Marker 3: 10 seconds elapsed time from CBSD sending instructions to EUT

## Annex B: Accreditation Certificate

<p>United States Department of Commerce National Institute of Standards and Technology</p> <div style="display: flex; justify-content: space-around; align-items: center;"><div style="font-size: 2em; font-weight: bold; letter-spacing: 0.5em;">NVLAP<sup>®</sup></div><div style="text-align: center;"></div></div>	
<hr/> <h3>Certificate of Accreditation to ISO/IEC 17025:2017</h3> <hr/>	
<p>NVLAP LAB CODE: 600118-0</p>	
<p><b>Telecommunication Technology Labs, CAICT</b> Beijing China</p>	
<p><i>is accredited by the National Voluntary Laboratory Accreditation Program for specific services, listed on the Scope of Accreditation, for:</i></p>	
<p><b>Electromagnetic Compatibility &amp; Telecommunications</b></p>	
<p><i>This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017. 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 January 2009).</i></p>	
<hr/> <p>2022-10-01 through 2023-09-30 <i>Effective Dates</i></p>	<div style="display: flex; justify-content: space-between; align-items: center;"><div style="text-align: center;"> <small>DEPARTMENT OF COMMERCE UNITED STATES OF AMERICA</small></div><div style="text-align: center;"> <small>For the National Voluntary Laboratory Accreditation Program</small></div></div>

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