

FCC Part 96.47 TEST REPORT

FCC ID : 2ABZ2-EF009
Equipment : Smart Phone
Brand Name : ONEPLUS
Model Name : KB2005
Applicant : OnePlus Technology (Shenzhen) Co., Ltd.
18C02, 18C03, 18C04,18C05, Shum Yip Terra
Building, Binhe Avenue North, Futian District,
Shenzhen,Guangdong,China
Manufacturer : OnePlus Technology (Shenzhen) Co., Ltd.
18C02, 18C03, 18C04,18C05, Shum Yip Terra
Building, Binhe Avenue North, Futian District,
Shenzhen,Guangdong,China
Standard : FCC Part 96.47

The product was received on Jul. 06, 2020. We, SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory, would like to declare that the tested sample has been evaluated in accordance with the test procedures and has been in compliance with the applicable technical standards.

The test results in this variant report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory, the test report shall not be reproduced except in full.



Approved by: Sam Chen

SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory

No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.)



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History of this test report

Report No.	Version	Description	Issued Date
FG072218A	01	Initial issue of report	Aug. 27, 2020

Declaration of Conformity:

The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.

Comments and Explanations:

The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

Reviewed by: Louis Wu**Report Producer: Dara Chiu**

1 General Description

1.1 Product Feature of Equipment Under Test

GSM/CDMA/WCDMA/LTE/5G NR, Bluetooth, Wi-Fi 2.4GHz 802.11b/g/n/ax, Wi-Fi 5GHz 802.11a/n/ac/ax, RFID, GNSS and ANT⁺.

Product Specification subjective to this standard	
Antenna Type	WWAN: PIFA Antenna WLAN: <Ant. 1> PIFA Antenna <Ant. 2> PIFA Antenna Bluetooth: PIFA Antenna GPS / Glonass / BDS / Galileo : IFA Antenna RFID: Loop Antenna ANT ⁺ : IFA Antenna

Remark:

1. This is a variant report. The difference between product of KB2007 and KB2005 as below:
KB2007 operated with single -card and KB2005 is dual-card; the only difference is the sim slot.
2. Since the test result is not affected by the changes, all the test cases were performed on original report which can be referred to Sporton Report Number FG062008A as appendix A.

1.2 Modification of EUT

No modifications are made to the EUT during all test items.



Appendix A. Original Report

Please refer to Sporton report number FG062008A as below.



FCC Part 96.47 TEST REPORT

FCC ID : 2ABZ2-EF009
Equipment : Smart Phone
Brand Name : ONEPLUS
Model Name : KB2007
Applicant : OnePlus Technology (Shenzhen) Co., Ltd.
18C02, 18C03, 18C04, 18C05, Shum Yip Terra
Building, Binhe Avenue North, Futian
District, Shenzhen, Guangdong, China
Manufacturer : OnePlus Technology (Shenzhen) Co., Ltd.
18C02, 18C03, 18C04, 18C05, Shum Yip Terra
Building, Binhe Avenue North, Futian
District, Shenzhen, Guangdong, China
Standard : FCC Part 96.47

The product was received on Jul. 06, 2020 and testing was started from Jul. 15, 2020 and completed on Jul. 15, 2020. We, SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory, would like to declare that the tested sample has been evaluated in accordance with the test procedures and has been in compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory, the test report shall not be reproduced except in full.

Approved by: Sam Chen

SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory
No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.)



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History of this test report

Report No.	Version	Description	Issued Date
FG062008A	01	Initial issue of report	Aug. 18, 2020



Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
3	96.47	End User Device additional requirement	Pass	-

Declaration of Conformity:

The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.

Comments and Explanations:

The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

Reviewed by: Louis Wu

Report Producer: Yimin Ho



1 General Description

1.1 Product Feature of Equipment Under Test

GSM/CDMA/WCDMA/LTE/5G NR, Bluetooth, Wi-Fi 2.4GHz 802.11b/g/n/ax, Wi-Fi 5GHz 802.11a/n/ac/ax, RFID, GNSS and ANT⁺.

Product Specification subjective to this standard	
Antenna Type	WWAN: PIFA Antenna WLAN: <Ant. 1> PIFA Antenna <Ant. 2> PIFA Antenna Bluetooth: PIFA Antenna GPS / Glonass / BDS / Galileo : IFA Antenna RFID: Loop Antenna ANT ⁺ : IFA Antenna

1.2 Modification of EUT

No modifications are made to the EUT during all test items.

1.3 Testing Location

Test Site	SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory
Test Site Location	No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.) TEL: +886-3-327-3456 FAX: +886-3-328-4978
Test Site No.	Sporton Site No.
	DFS02-HY

Note: The test site complies with ANSI C63.4 2014 requirement.

FCC Designation No.: TW1190

1.4 Applicable Standards

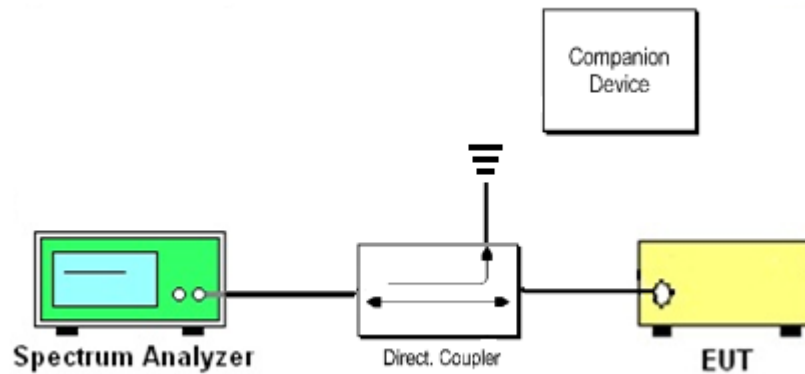
- ♦ FCC Part 96.47
- ♦ FCC KDB 940660 D01 Part 96 CBRS Eqpt v02
- ♦ WINNF-TS-0122-V1.0.1 CBRS CBSD Test Specification

Remark:

1. All test items were verified and recorded according to the standards and without any deviation during the test.
2. The TAF code is not including all the FCC KDB listed without accreditation.

2 Test Configuration of Equipment Under Test

2.1 Connection Diagram of Test System



The companion device is certified CBRS (FCC ID: S9GQ710US02)



3 End User Device additional requirement

3.1 Test Requirement

FCC Part 96.47

(a) 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.

(1) 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.

3.2 Test Procedure

Following procedure can be done by applying WINNF-TS-0122-V1.0.1 CBRS CBSD Test Specification, use the certified Ruckus CBSD (FCC ID: S9GQ710US02) as companion device to show compliance with Part 96.47 requirement for End User Device (EUD):

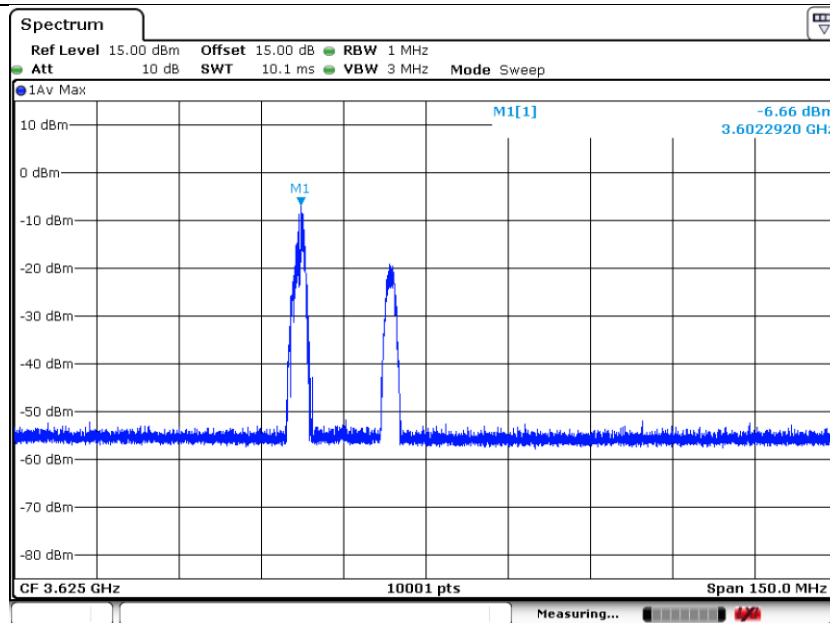
1. Setup with frequency 3600-3620MHz and power level 7dBm/MHz
2. Enable AP service from Ruckus Cloud management
3. Check EUD Tx Frequency and power
4. Disable AP service from Ruckus Cloud management
 - a. Check EUD stops transmission within 10seconds.
5. Setup with 3670-3690MHz & power level 17dBm/MHz
6. Enable AP service from Ruckus Cloud management
7. Check EUD Tx Frequency and power
8. Disable AP service from Ruckus Cloud management
 - a. Check EUD stops transmission within 10seconds.



3.3 Test Result

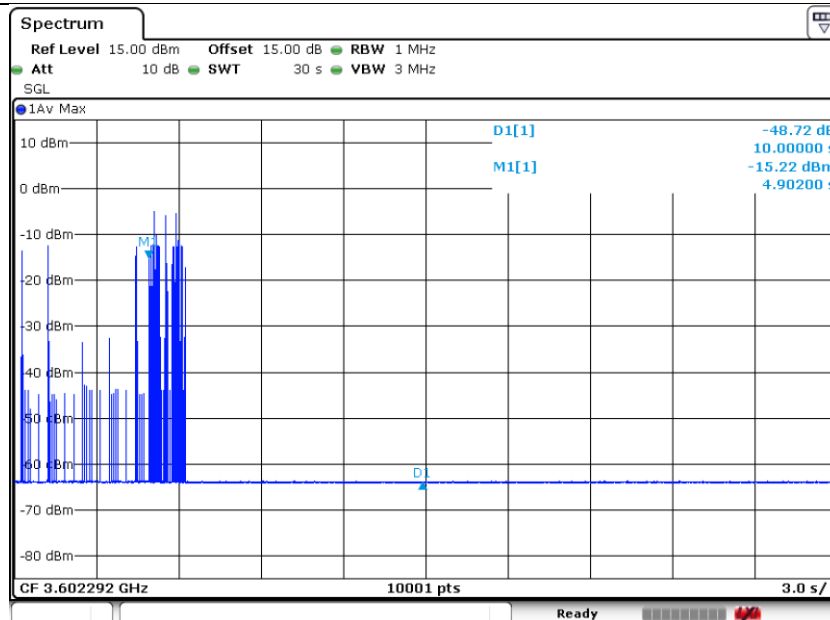
[Step 1] Setup with frequency 3600-3620MHz and power level 7dBm/MHz

[Step 3] Check EUD Tx Frequency and power



Date: 15.JUL.2020 15:30:38

[Step 4.a.] EUD stops transmission within 10 seconds of receiving instructions from its associated CBSD.

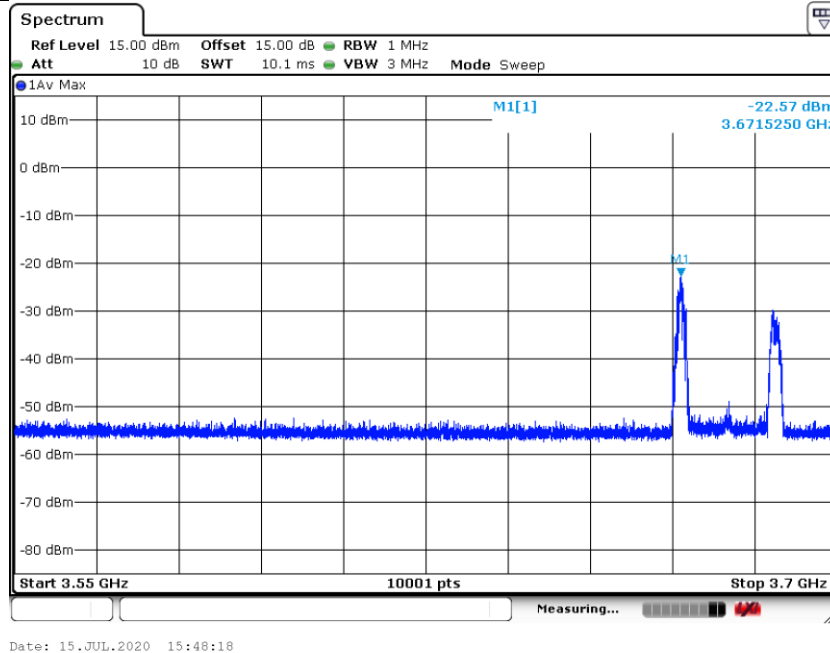


Date: 15.JUL.2020 15:41:40



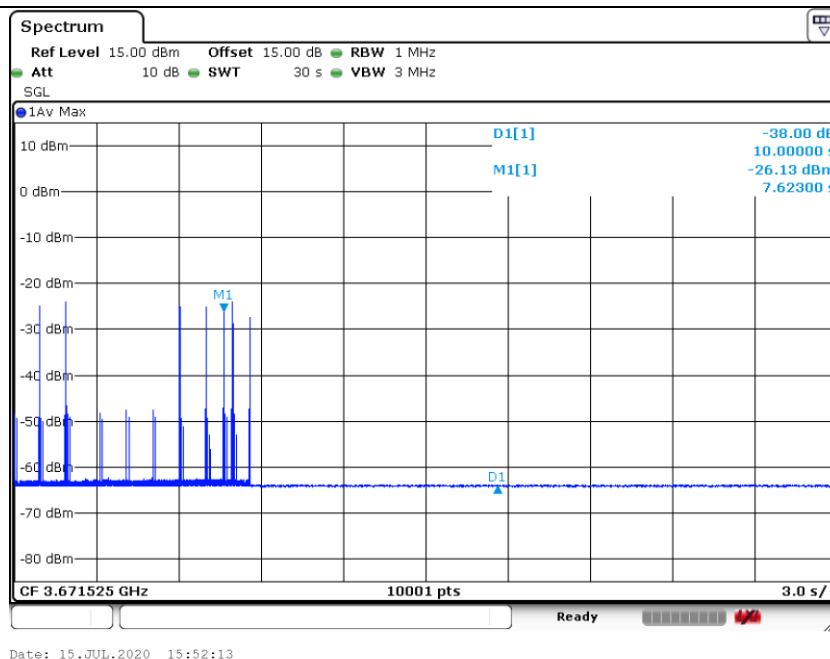
[Step 5] Setup with 3670-3690MHz & power level 17dBm/MHz

[Step 7] Check EUD Tx Frequency and power



[Step 8.a.] After changing the frequency and power level,

The module (EUT) discontinues operations, change frequencies, or change its operational power level within 10 seconds of receiving instructions from its associated CBSD. Test result is PASS.





4 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	Rohde & Schwarz	FSV40	101908	10Hz~40GHz	May 13, 2020	Jul. 15, 2020	May 12, 2021	DFS02-HY