FCC PART 15C
TEST REPORT
No.I22Z62243-IOT05

for

Honor Device Co., Ltd.

Smart Phone

CRT-LX3

With

FCC ID: 2AYGCCRT-LX3

Hardware Version: HL3CRTM

Software Version: 6.1.0.90(C900E21R1P2)

Issued Date: 2022-12-08

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
I22Z62243-IOT05	Rev.0	1st edition	2022-12-08

CONTENTS

1. TEST LATORATORY

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

Conducted testing Location: CTTL(huayuan North Road)

Address: No. 52, Huayuan North Road, Haidian District, Beijing, P. R. China100191

1.3. TestingEnvironment

Normal Temperature: 15-35℃

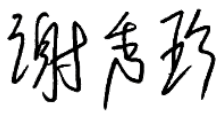
Relative Humidity: 20-75%

1.4. Project date

Testing Start Date: 2022-11-21

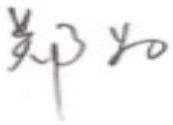
Testing End Date: 2022-12-04

1.5. Signature



Xie Xiuzhen

(Prepared this test report)



Zheng Wei

(Reviewed this test report)

Pang Shuai

(Approved this test report)

2. CLIENT INFORMATION

2.1. Applicant Information

Company Name:	Honor Device Co., Ltd.
Address:	Suite 3401, Unit A, Building 6, Shum Yip Sky Park, No. 8089, Hongli West Road, Xiangmihu Street, Futian District, Shenzhen, P.R.China
City:	Shenzhen
Country:	China

2.2. Manufacturer Information

Company Name:	Honor Device Co., Ltd.
Address:	Suite 3401, Unit A, Building 6, Shum Yip Sky Park, No. 8089, Hongli West Road, Xiangmihu Street, Futian District, Shenzhen, P.R.China
City:	Shenzhen
Country:	China

3. EQUIPMENT UNDER TEST (EUT) AND ANCILLARY EQUIPMENT(AE)

3.1. About EUT

Description	Smart Phone
Model name	CRT-LX3
FCC ID	2AYGCCRT-LX3
WLAN Frequency Band	ISM Band: 5725MHz~5850MHz
Type of modulation	OFDM
Voltage	3.89V

3.2. Internal Identification of EUT used during the test

EUT ID*	IMEI	HW Version	SW Version
EUT1	866902060024734/ 866902060025038	HL3CRTM	6.1.0.90(C900E21R1P2)

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

3.3. General Description

Equipment Under Test (EUT) is a model of Smart Phone with integrated antenna. It consists of normal options: Battery and Charger.

Manual and specifications of the EUT were provided to fulfil the test.

Samples undergoing test were selected by the Client.

4. REFERENCE DOCUMENTS

4.1. Documents supplied by applicant

EUT feature information is supplied by the applicant or manufacturer, which is the basis of testing.

4.2. Reference Documents for testing

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

FCC Part15	FCC CFR 47, Part 15, Subpart C and E: 15.205 Restricted bands of operation; 15.209 Radiated emission limits, general requirements; 15.407 General technical requirements	2021
ANSI C63.10	Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz	2013
UNII: KDB 789033 D02	General U-NII Test Procedures New Rules v02r01	2017-12

5. LABORATORY ENVIRONMENT

Conducted RF performance testing is performed in shielding room.

EMC performance testing is performed in Semi-anechoic chamber.

6. SUMMARY OF TEST RESULTS

6.1. Summary of Test Results

SUMMARY OF MEASUREMENT RESULTS	Sub-clause of Part15C	Sub-clause of IC	Verdict
Maximum Peak Output Power	15.407 (a)	/	**P**
Peak Power Spectral Density	15.407 (a)	/	**P**
Occupied 6dB Bandwidth	15.407 (e)	/	**P**
Frequency Stability	15.407 (g)	/	**P**

Please refer to **ANNEX A** for detail.

Terms used in Verdict column

P	Pass, The EUT complies with the essential requirements in the standard.
NM	Not measured, The test was not measured by CTTL
NA	Not Applicable, The test was not applicable
F	Fail, The EUT does not comply with the essential requirements in the standard

6.2. Statements

CTTL has evaluated the test cases requested by the client/manufacturer as listed in section 6.1 of this report for the EUT specified in section 3 according to the standards or reference documents listed in section 4.1.

This report only deals with the WLAN function among the features described in section 3.

6.3. Test Conditions

For this report, all the test cases are tested under normal temperature and normal voltage, and also under norm humidity, the specific condition is shown as follows:

Temperature	26℃
Voltage	3.89V
Humidity	44%

7. TEST EQUIPMENTS UTILIZED

Conducted test system

No.	Equipment	Model	Serial Number	Manufacturer	Calibration Period	Calibration Due date
1	Vector Signal Analyzer	FSQ40	200089	Rohde & Schwarz	1 year	2023-05-15
2	Vector Signal Analyzer	FSW67	104051	Rohde & Schwarz	1 year	2023-01-02
3	Shielding Room	S81	/	ETS-Lindgren	/	/

8. Measurement Uncertainty

8.1. Transmitter Output Power

Measurement Uncertainty: 0.387dB,k=1.96

8.2. Peak Power Spectral Density

Measurement Uncertainty: 0.705dB,k=1.96

8.3. Occupied 6dB Bandwidth

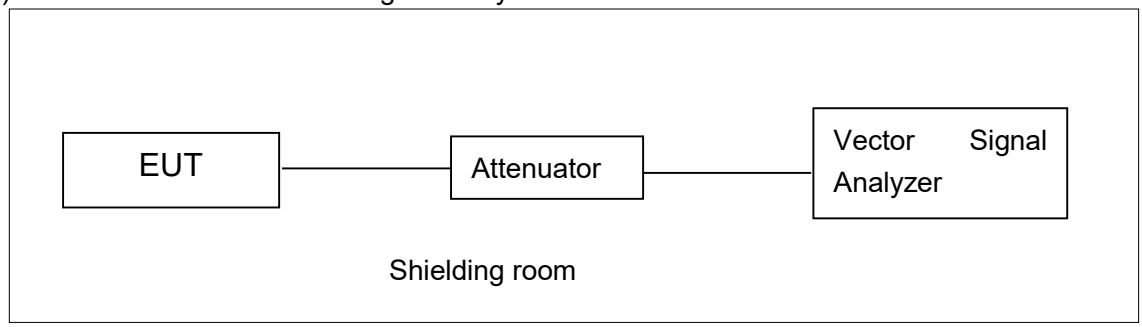
Measurement Uncertainty: 60.80Hz,k=1.96

ANNEX A: MEASUREMENT RESULTS

A.1. Measurement Method

A.1.1. Conducted Measurements

1). Connect the EUT to the test system correctly.
2). Set the EUT to the required work mode.
3). Set the EUT to the required channel.
4). Set the spectrum analyzer to start measurement.
5). Record the values. Vector Signal Analyzer



A.2. Maximum Peak Output Power

Measurement Limit and Method:

Standard	Limit (dBm)
FCC CRF Part 15.407(a)	< 30

A.2.1 Antenna Gain

Antenna gain is -1.2dBi and the value is supplied by the applicant or manufacturer.

A.2.2. Maximum Average Output Power-Conducted

Measurement Results:

802.11a mode

Mode	Data Rate (Mbps)	Test Result (dBm)		
		5745MHz (Ch149)	5785MHz (Ch157)	5825MHz (Ch165)
802.11a	6	15.06	14.50	14.44

The data rate 6Mbps is selected as worst condition, and the following cases are performed with this condition.

802.11n-HT20 mode

Mode	Data Rate (Index)	Test Result (dBm)		
		5745MHz (Ch149)	5785MHz (Ch157)	5825MHz (Ch165)
802.11n (20MHz)	MCS0	14.53	14.30	14.35

The data rate MCS0 is selected as worst condition, and the following cases are performed with this condition.

802.11ac-VHT20 mode

Mode	Data Rate (Index)	Test Result (dBm)		
		5745MHz (Ch149)	5785MHz (Ch157)	5825MHz (Ch165)
802.11ac (20MHz)	MCS0	14.61	14.21	14.00

The data rate MCS0 is selected as worst condition, and the following cases are performed with this condition.

802.11n-HT40 mode

Mode	Data Rate (Index)	Test Result (dBm)	
		5755MHz (Ch151)	5795MHz (Ch159)
802.11n (40MHz)	MCS0	14.59	14.26

The data rate MCS0 is selected as worst condition, and the following cases are performed with this condition.

802.11ac-VHT40 mode

Mode	Data Rate (Index)	Test Result (dBm)	
		5755MHz (Ch151)	5795MHz (Ch159)
802.11ac (40MHz)	MCS0	14.73	14.59

The data rate MCS0 is selected as worst condition, and the following cases are performed with this condition.

802.11ac-VHT80 mode

Mode	Data Rate (Index)	Test Result (dBm)
		5775MHz (Ch155)
802.11ac (80MHz)	MCS0	13.98

The data rate MCS0 is selected as worst condition, and the following cases are performed with this condition.

The duty cycle of all mode are 100%

Conclusion: PASS

A.3. Peak Power Spectral Density

Measurement Limit:

Standard	Limit
FCC 47 CFR Part 15.407(a)	< 30 dBm/500 kHz

The measurement is made according to ANSI C63.10 and KDB789033 D02

Measurement Uncertainty:

Measurement Uncertainty	0.75dB

Measurement Results:

Mode	Channel	Power Spectral Density (dBm/500kHz)	Conclusion
802.11a	149	2.51	P
	157	2.02	P
	165	2.03	P
802.11ac VHT20	149	1.85	P
	157	1.81	P
	165	1.70	P
802.11ac VHT40	151	-1.07	P
	159	-1.38	P
802.11ac VHT80	155	-5.77	P

Conclusion: PASS

A.4. Occupied 6dB Bandwidth

Measurement Limit:

Standard	Limit (kHz)
FCC 47 CFR Part 15.407 (e)	≥ 500

The measurement is made according to KDB789033 D02 .

Measurement Uncertainty:

Measurement Uncertainty	60.80Hz

Measurement Result:

Mode	Channel	Occupied 6dB Bandwidth (MHz)		conclusion
802.11a	149	Fig.1	16.32	P
	157	Fig.2	16.32	P
	165	Fig.3	16.36	P
802.11ac VHT20	149	Fig.4	17.60	P
	157	Fig.5	17.56	P
	165	Fig.6	17.56	P
802.11ac VHT40	151	Fig.7	36.32	P
	159	Fig.8	36.00	P
802.11ac VHT80	155	Fig.9	75.68	P

Conclusion: PASS

Test graphs as below:

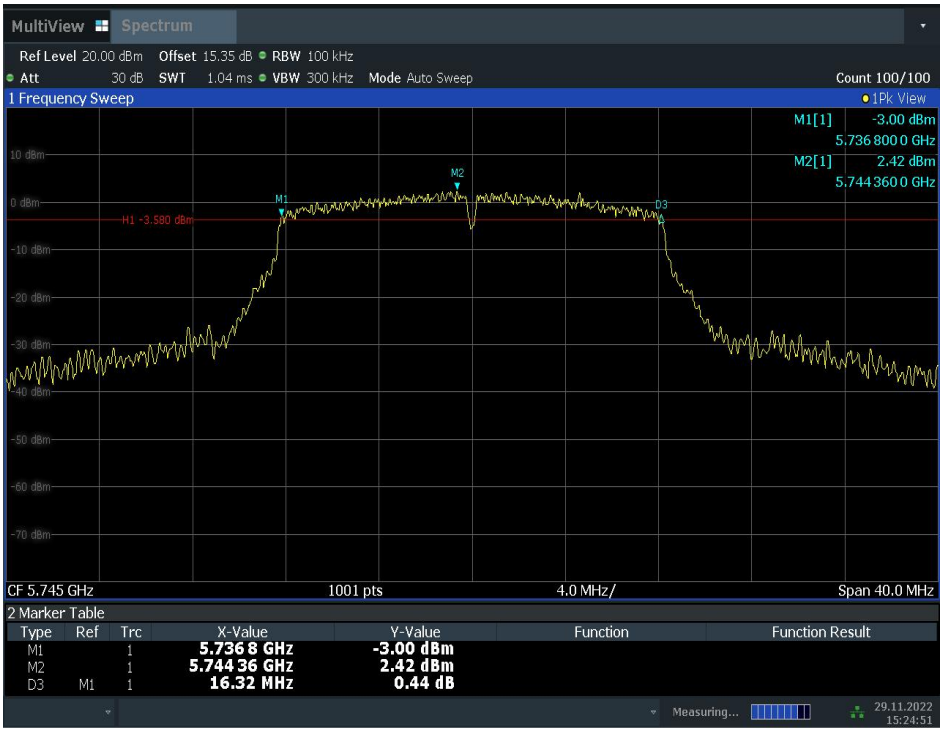


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Fig. 1 Occupied 6dB Bandwidth (802.11a, Ch 149)

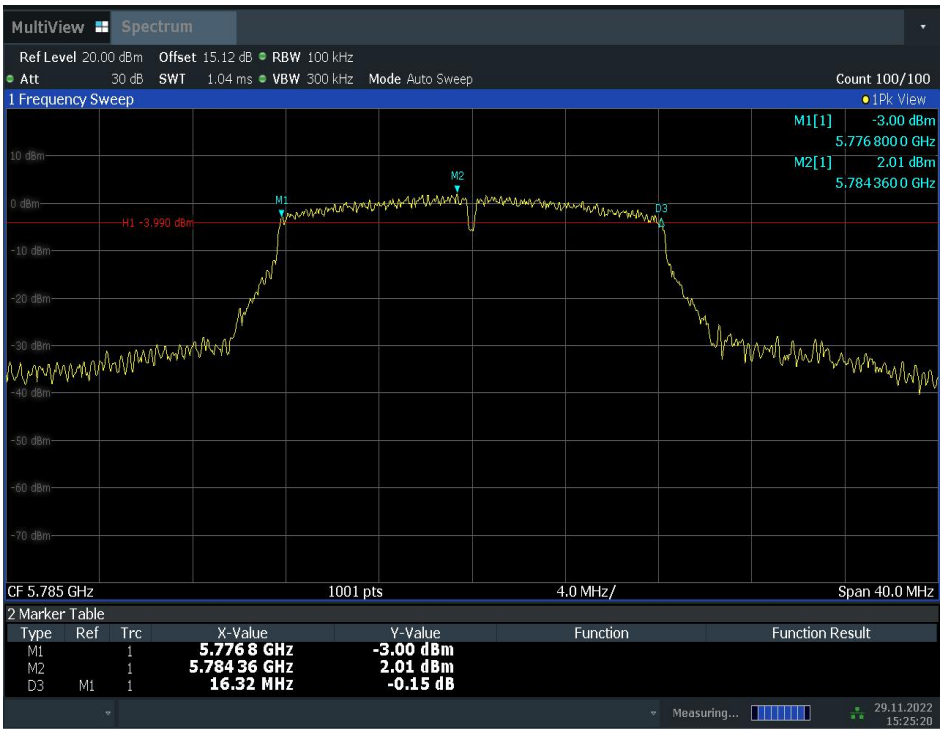

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Fig. 2 Occupied 6dB Bandwidth (802.11a, Ch 157)

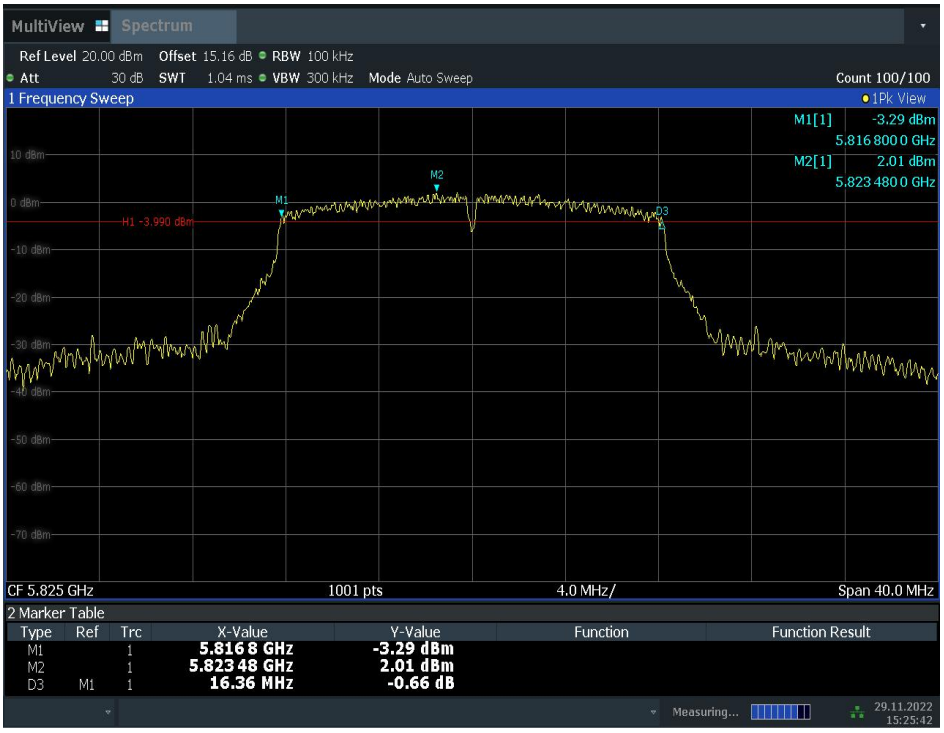

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Fig. 3 Occupied 6dB Bandwidth (802.11a, Ch 165)

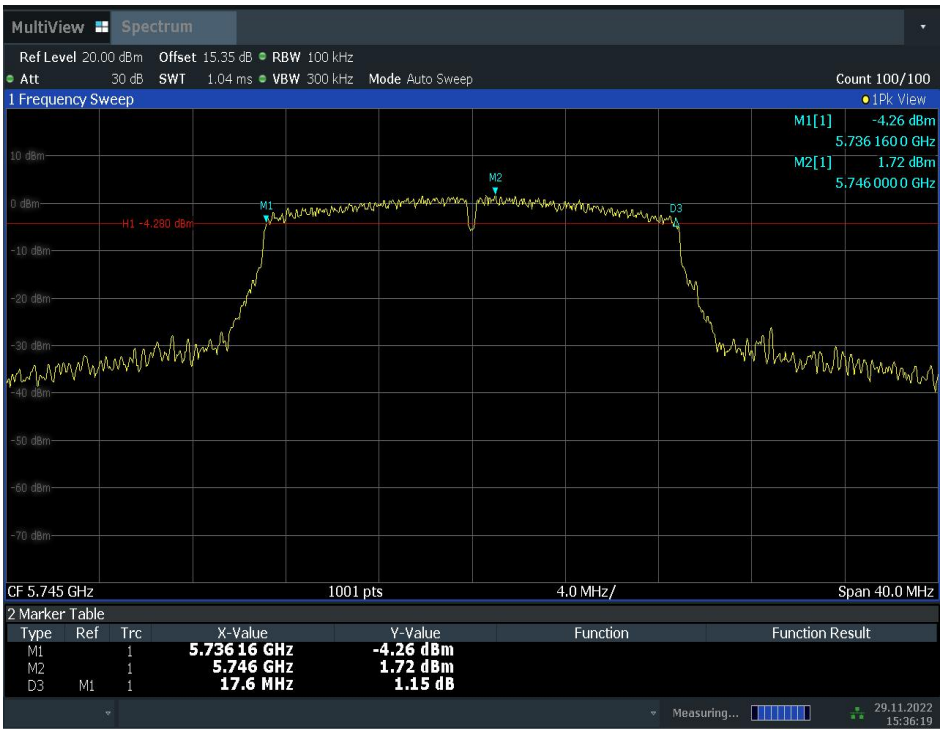

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Fig. 4 Occupied 6dB Bandwidth (802.11ac-VHT20, Ch 149)

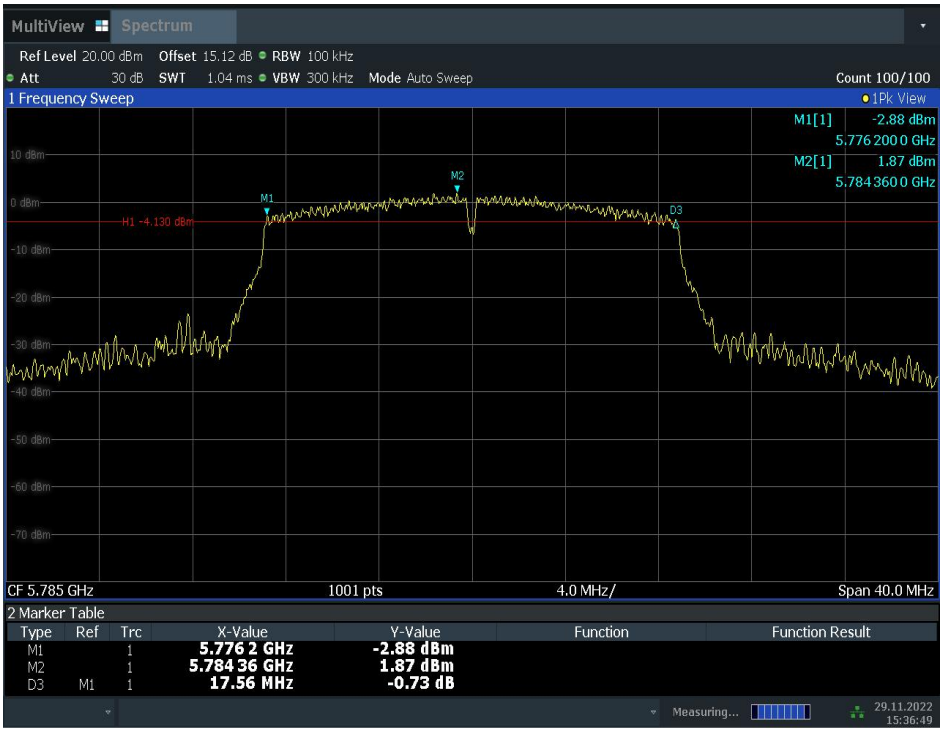

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Fig. 5 Occupied 6dB Bandwidth (802.11ac-VHT20, Ch 157)

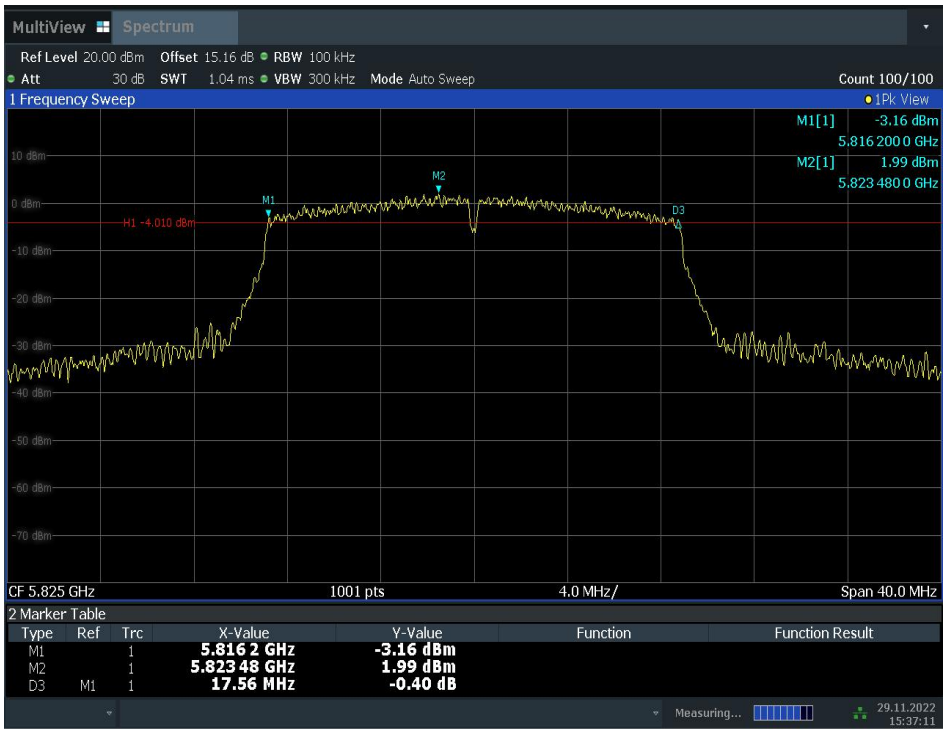

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Fig. 6 Occupied 6dB Bandwidth (802.11ac-VHT20, Ch 165)

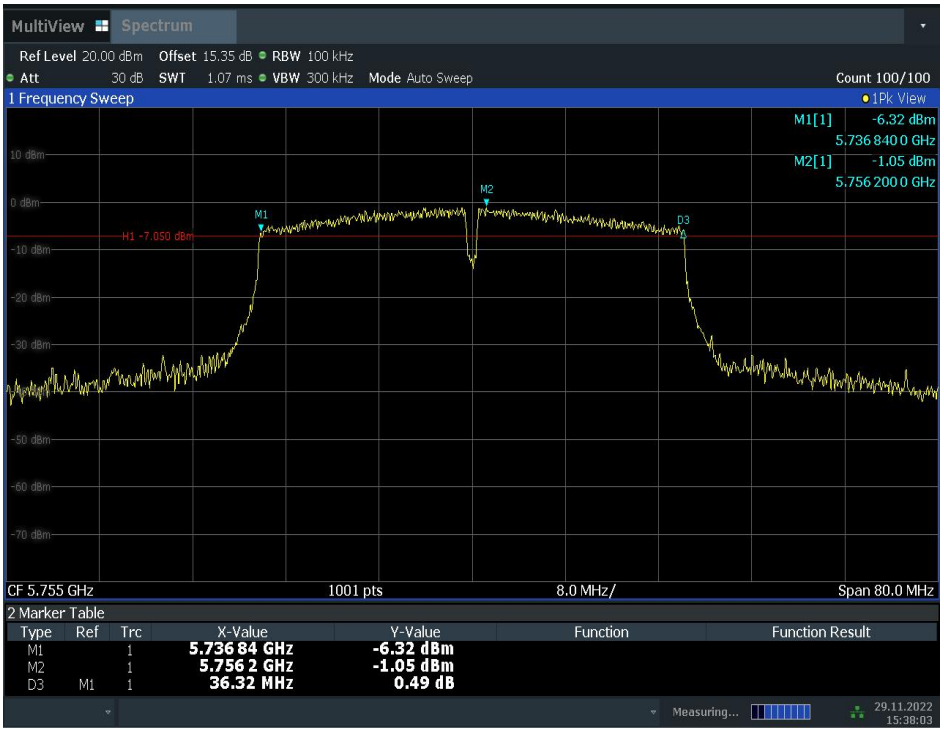

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Fig. 7 Occupied 6dB Bandwidth (802.11ac-VHT40, Ch 151)

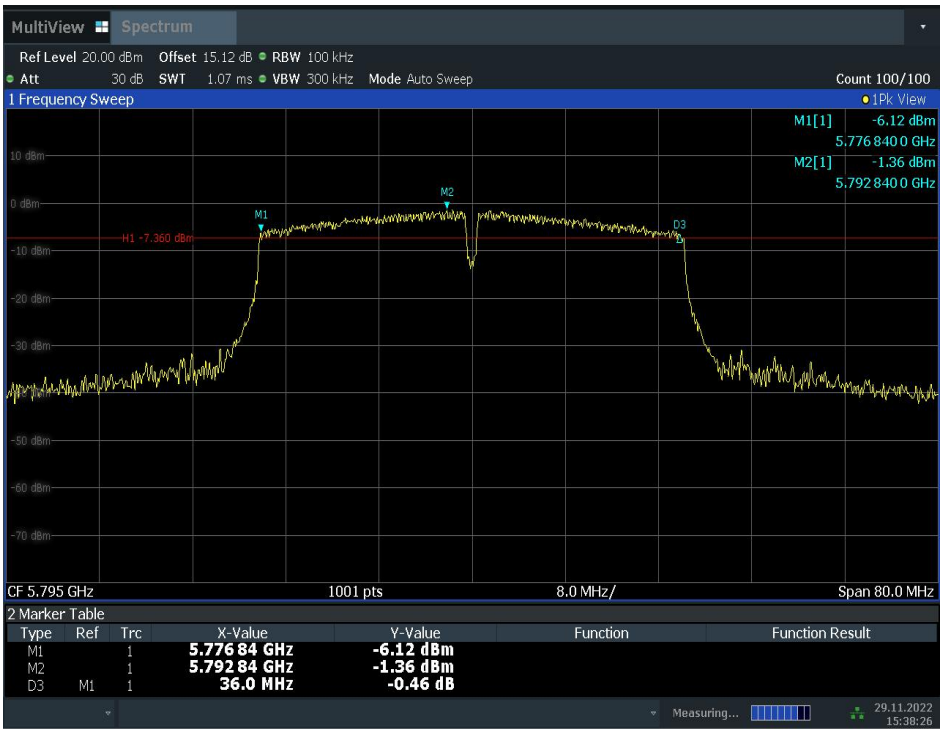

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Fig. 8 Occupied 6dB Bandwidth (802.11ac-VHT40, Ch 159)

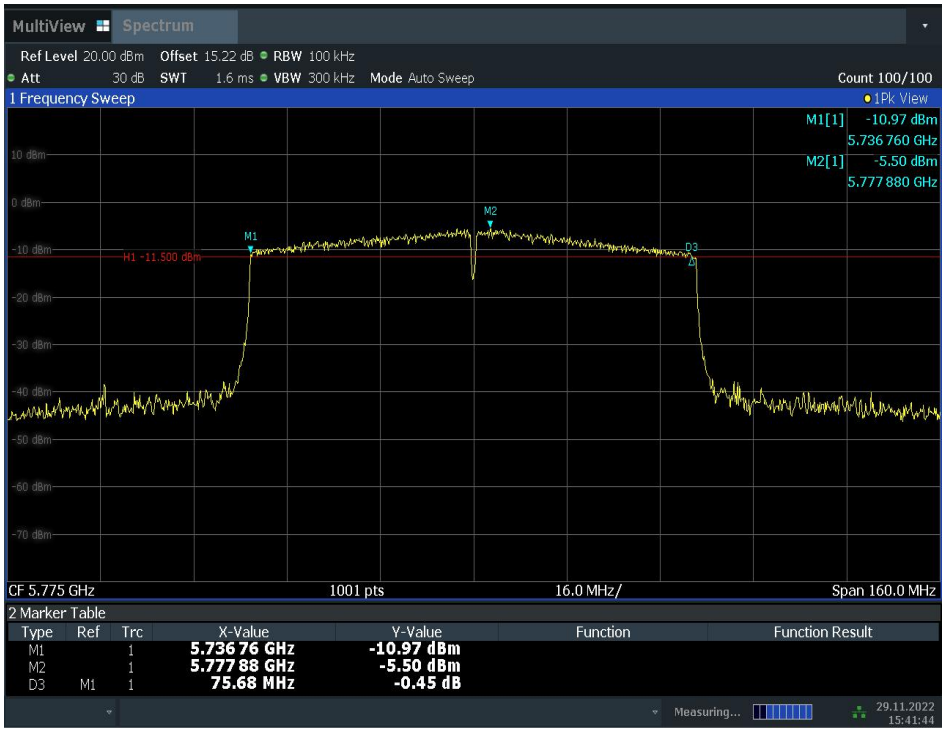

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Fig. 9 Occupied 6dB Bandwidth (802.11ac-VHT80, Ch 155)

A.5. Frequency Stability

Manufacturers ensured the EUT meet the requirement of frequency stability, such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the user's manual.

Test Condition:

T min = -30 °C T nom = 26 °C T max = 50 °C

V nom = 3.6 V V nom = 3.89 V V nom = 4.48 V

Measurement Limit:

Standard	Limit (ppm)
FCC 47 CFR Part 15.407 (g)	20

The measurement is made according to KDB789033 D02 .

Measurement Result:

Mode	Frequency	Test Condition		Result
802.11a	5745	Tnom	Vnom	3.48
		Tmax	Vnom	4.33
		Tmin	Vnom	2.55
		Vmax	Tnom	3.40
		Vmin	Tnom	2.55
	5785	Tnom	Vnom	3.38
		Tmax	Vnom	4.30
		Tmin	Vnom	4.30
		Vmax	Tnom	3.46
		Vmin	Tnom	4.30
	5825	Tnom	Vnom	2.60
		Tmax	Vnom	3.35
		Tmin	Vnom	0.84
		Vmax	Tnom	0.84
		Vmin	Tnom	5.11

ANNEX B: EUT parameters

Disclaimer: The antenna gain and worse case provided by the client may affect the validity of the measurement results in this report, and the client shall bear the impact and consequences arising therefrom.

ANNEX C: Accreditation Certificate

United States Department of Commerce
National Institute of Standards and Technology

NVLAP®

ilac-MRA

Certificate of Accreditation to ISO/IEC 17025:2017

NVLAP LAB CODE: 600118-0

Telecommunication Technology Labs, CAICT
Beijing
China

is accredited by the National Voluntary Laboratory Accreditation Program for specific services, listed on the Scope of Accreditation, for:

Electromagnetic Compatibility & Telecommunications

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 Communique dated January 2009).

2022-10-01 through 2023-09-30
Effective Dates

DEPARTMENT OF COMMERCE · UNITED STATES OF AMERICA

For the National Voluntary Laboratory Accreditation Program

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