



# FCC PART 15C TEST REPORT No.I23Z60957-IOT10

for

**TCL Communication Ltd.**

**Tablet PC**

**8492A**

With

**FCC ID: 2ACCJB207**

**Hardware Version: 05**

**Software Version: KZ12**

**Issued Date: 2023-06-28**

**Note:**

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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.

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## **REPORT HISTORY**

<b>Report Number</b>	<b>Revision</b>	<b>Description</b>	<b>Issue Date</b>
I23Z60957-IOT10	Rev.0	1st edition	2023-06-28

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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**

Conducted testing Location: CTTL(huayuan North Road)

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

Radiated testing Location:

CTTL(huayuan North Road)

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

### **1.3. Testing Environment**

Normal Temperature: 15-35°C

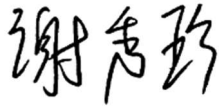
Relative Humidity: 20-75%

### **1.4. Project date**

Testing Start Date: 2023-05-26

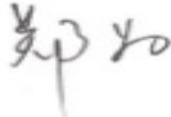
Testing End Date: 2023-06-28

## 1.5. Signature



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Xie Xiuzhen  
( Prepared this test report )



---

Zheng Wei  
(Reviewed this test report)



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Pang Shuai  
(Approved this test report)



## **2. CLIENT INFORMATION**

### **2.1. Applicant Information**

Company Name: TCL Communication Ltd.  
Address: 5/F, Building 22E, 22 Science Park East Avenue, Hong Kong Science Park, Shatin, NT, Hong Kong  
City: Hong Kong  
Postal Code: /  
Country: China  
Telephone: +86 755 3661 1621  
Fax: +86 755 3661 2000-81722

### **2.2. Manufacturer Information**

Company Name: TCL Communication Ltd.  
Address: 5/F, Building 22E, 22 Science Park East Avenue, Hong Kong Science Park, Shatin, NT, Hong Kong  
City: Hong Kong  
Postal Code: /  
Country: China  
Telephone: +86 755 3661 1621  
Fax: +86 755 3661 2000-81722

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

#### EQUIPMENT(AE)

##### 3.1. About EUT

Description	Tablet PC
Model name	8492A
FCC ID	2ACCJB207
WLAN Frequency Band	ISM Band: 5725MHz~5850MHz
Type of modulation	OFDM
Voltage	3.7V

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

EUT ID*	IMEI	HW Version	SW Version
UT03a	B4695F5551182EC	05	KZ12
UT24a	B4695F5641182F5	05	KZ12

\*EUT ID: is used to identify the test sample in the lab internally.  
 UT03a is used for Conduction test, UT24a used for Radiation test.

##### 3.3. Internal Identification of AE used during the test

4. AE ID*	Description	Type	SN
AE1	Battery	/	/
AE2	Charger1	/	/
AE3	Data Cable	/	/

##### AE1

Model	2853B7PL - 2P
Manufacturer	Gaoyuan
Capacity(mAh)	6000mAh

##### AE2

Model	CG10A0502000UU
Manufacturer	JUWEI
Length of cable	/

##### AE3

Model	JWUB1591-J51R
Manufacturer	JUWEI
Length of cable	/

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



#### 4.1. General Description

Equipment Under Test (EUT) is a model of Tablet PC 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.

### 5. REFERENCE DOCUMENTS

#### 5.1. Documents supplied by applicant

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

#### 5.2. 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
KDB 558074 D01	Federal Communications Commission Office of Engineering and Technology Laboratory Division GUIDANCE FOR COMPLIANCE MEASUREMENTS ON DIGITAL TRANSMISSION SYSTEM, FREQUENCY HOPPING SPREAD SPECTRUM SYSTEM, AND HYBRID SYSTEM DEVICES OPERATING UNDER SECTION 15.247 OF THE FCC RULES	2019

### 6. LABORATORY ENVIRONMENT

Conducted RF performance testing is performed in shielding room.

EMC performance testing is performed in Semi-anechoic chamber.

## 7. SUMMARY OF TEST RESULTS

### 7.1. Summary of Test Results

SUMMARY OF MEASUREMENT RESULTS	Sub-clause of Part15C	Sub-clause of IC	Verdict
Maximum Peak Output Power	15.407 (a)	/	<b>P</b>
Peak Power Spectral Density	15.407 (a)	/	<b>P</b>
Occupied 6dB Bandwidth	15.407 (e)	/	<b>P</b>
Band Edges Compliance - Conducted& Radiated	15.407 (b)	/	<b>P</b>
Transmitter Spurious Emission - Conducted	15.407	/	<b>P</b>
Transmitter Spurious Emission - Radiated	15.407, 15.205, 15.209	/	<b>P</b>
AC Powerline Conducted Emission	15.107, 15.207	/	<b>P</b>

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

### 7.2. Statements

CTTL has evaluated the test cases requested by the client/matrix 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.

### 7.3. 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°C
Voltage	3.7V
Humidity	44%

## 8. 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	2024-06-05
2	LISN	ENV216	101200	Rohde & Schwarz	1 year	2023-06-29
3	Test Receiver	ESCI	100344	Rohde & Schwarz	1 year	2024-02-21
4	Shielding Room	S81	/	ETS-Lindgren	/	/

### Radiated emission test system

No.	Equipment	Model	Serial Number	Manufacturer	Calibration Period	Calibration Due date
1	Test Receiver	ESW44	103144	R&S	1 year	2023-10-25
2	EMI Antenna	VULB 9163	01223	SCHWARZBECK	1 year	2023-07-25
3	EMI Antenna	3115	00167250	ETS-Lindgren	1 year	2023-06-20
4	EMI Antenna	3116	2661	ETS-Lindgren	1 year	2024-01-30

※Note: The EMI Antenna with series number of 00167250 did not exceed the CAL.DUE.DATE when used.

## 9. Measurement Uncertainty

### 9.1. Transmitter Output Power

Measurement Uncertainty: 0.387dB,k=1.96

### 9.2. Peak Power Spectral Density

Measurement Uncertainty: 0.705dB,k=1.96

### 9.3. Occupied 6dB Bandwidth

Measurement Uncertainty: 60.80Hz,k=1.96

### 9.4. Band Edges Compliance

Measurement Uncertainty : 0.62dB,k=1.96

### 9.5. Spurious Emissions

#### Conducted (k=1.96)

Frequency Range	Uncertainty(dB)
$30\text{MHz} \leq f \leq 2\text{GHz}$	1.22
$2\text{GHz} \leq f \leq 3.6\text{GHz}$	1.22
$3.6\text{GHz} \leq f \leq 8\text{GHz}$	1.22
$8\text{GHz} \leq f \leq 12.75\text{GHz}$	1.51
$12.75\text{GHz} \leq f \leq 26\text{GHz}$	1.51
$26\text{GHz} \leq f \leq 40\text{GHz}$	1.59

#### Radiated (k=2)

Frequency Range	Uncertainty(dB)
9kHz-30MHz	/
$30\text{MHz} \leq f \leq 1\text{GHz}$	4.72dB
$1\text{GHz} \leq f \leq 18\text{GHz}$	4.84dB
$18\text{GHz} \leq f \leq 40\text{GHz}$	5.12dB

### 9.6. AC Power-line Conducted Emission

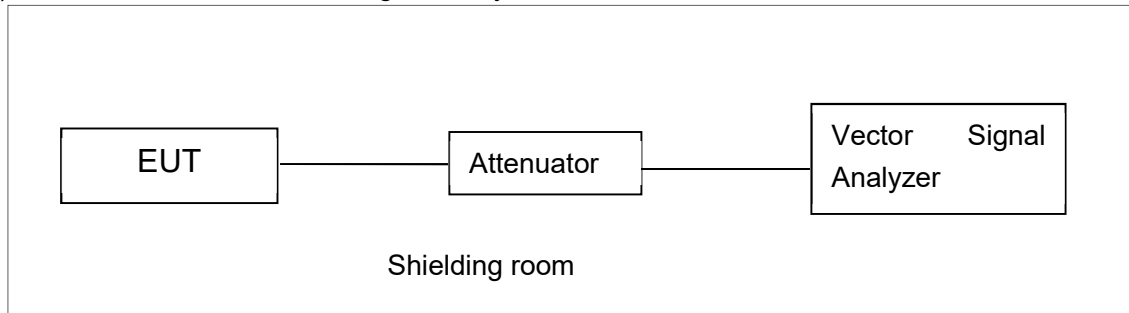
Measurement Uncertainty : 3.08dB, k=2

## 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

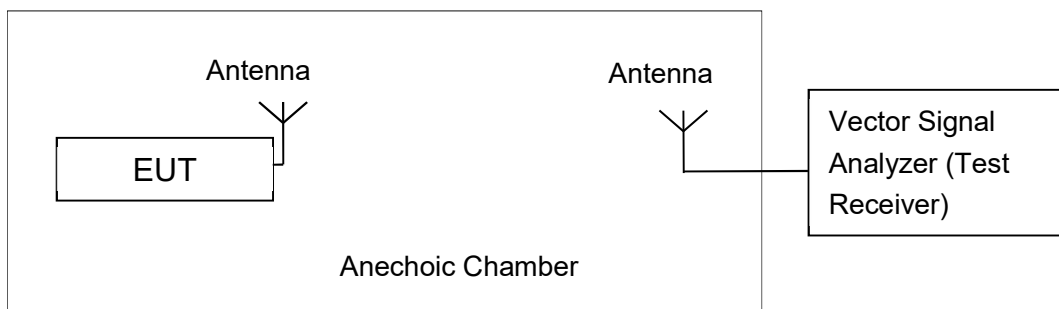


#### A.1.2. Radiated Emission Measurements

In the case of radiated emission, the used settings are as follows,

Sweep frequency from 30 MHz to 1GHz, RBW = 100 kHz, VBW = 300 kHz;

Sweep frequency from 1 GHz to 26GHz, RBW = 1MHz, VBW = 10Hz;



The measurement is made according to ANSI C63.10.

The radiated emission test is performed in semi-anechoic chamber. The distance from the EUT to the reference point of measurement antenna is 3m. The test is carried out on both vertical and horizontal polarization and only maximization result of both polarizations is kept. During the test, the turntable is rotated 360° and the measurement antenna is moved from 1m to 4m to get the maximization result.

## A.2. Maximum Peak Output Power

### Measurement Limit and Method:

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

### A.2.1. 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	18.72	18.77	18.95
	9	/	/	/
	12	/	/	/
	18	/	/	/
	24	/	/	/
	36	/	/	/
	48	/	/	/
	54	/	/	/

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	16.84	16.89	16.76
	MCS1	/	/	/
	MCS2	/	/	/
	MCS3	/	/	/
	MCS4	/	/	/
	MCS5	/	/	/
	MCS6	/	/	/
	MCS7	/	/	/

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

**802.11ac-HT20 mode**

Mode	Data Rate (Index)	Test Result (dBm)		
		5745MHz (Ch149)	5785MHz (Ch157)	5825MHz (Ch165)
802.11ac (20MHz)	MCS0	14.76	14.78	14.68
	MCS1	/	/	/
	MCS2	/	/	/
	MCS3	/	/	/
	MCS4	/	/	/
	MCS5	/	/	/
	MCS6	/	/	/
	MCS7	/	/	/
	MCS8	/	/	/

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	14.64	14.56
	MCS1	/	/
	MCS2	/	/
	MCS3	/	/
	MCS4	/	/
	MCS5	/	/
	MCS6	/	/
	MCS7	/	/

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

**802.11ac-HT40 mode**

Mode	Data Rate (Index)	Test Result (dBm)	
		5755MHz (Ch151)	5795MHz (Ch159)
802.11ac (40MHz)	MCS0	14.57	14.58
	MCS1	/	/
	MCS2	/	/
	MCS3	/	/
	MCS4	/	/
	MCS5	/	/
	MCS6	/	/
	MCS7	/	/

	MCS8	/	/
	MCS9	/	/

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

**802.11ac-HT80 mode**

Mode	Data Rate (Index)	Test Result (dBm)
		5775MHz (Ch155)
802.11ac (80MHz)	MCS0	14.45
	MCS1	/
	MCS2	/
	MCS3	/
	MCS4	/
	MCS5	/
	MCS6	/
	MCS7	/
	MCS8	/
	MCS9	/

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
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#### Measurement Results:

Mode	Channel	Power Spectral Density ( dBm/500kHz )	Conclusion
802.11a	149	5.34	P
	157	4.93	P
	165	5.03	P
802.11n HT20	149	2.81	P
	157	2.73	P
	165	3.36	P
802.11n HT40	151	-2.25	P
	159	-1.83	P
802.11ac HT80	155	-5.49	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:

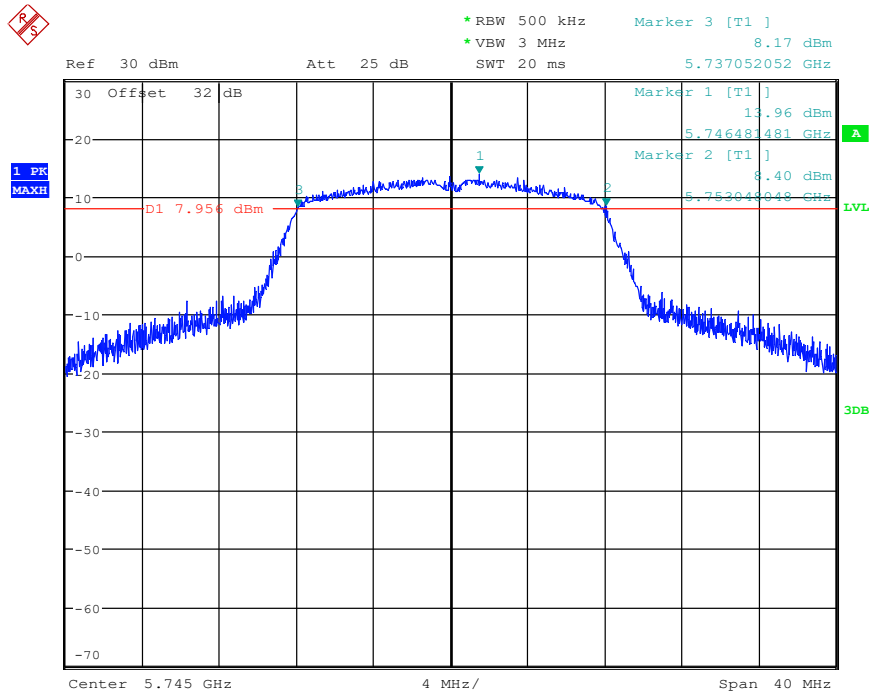
Measurement Uncertainty	60.80Hz
-------------------------	---------

##### Measurement Result:

Mode	Channel	Occupied 6dB Bandwidth ( MHz)		conclusion
		Fig.	Value	
802.11a	149	Fig.1	16.00	P
	157	Fig.2	16.20	P
	165	Fig.3	16.26	P
802.11n HT20	149	Fig.4	16.96	P
	157	Fig.5	17.22	P
	165	Fig.6	17.34	P
802.11n HT40	151	Fig.7	35.56	P
	159	Fig.8	35.44	P
802.11ac HT80	155	Fig.9	75.28	P

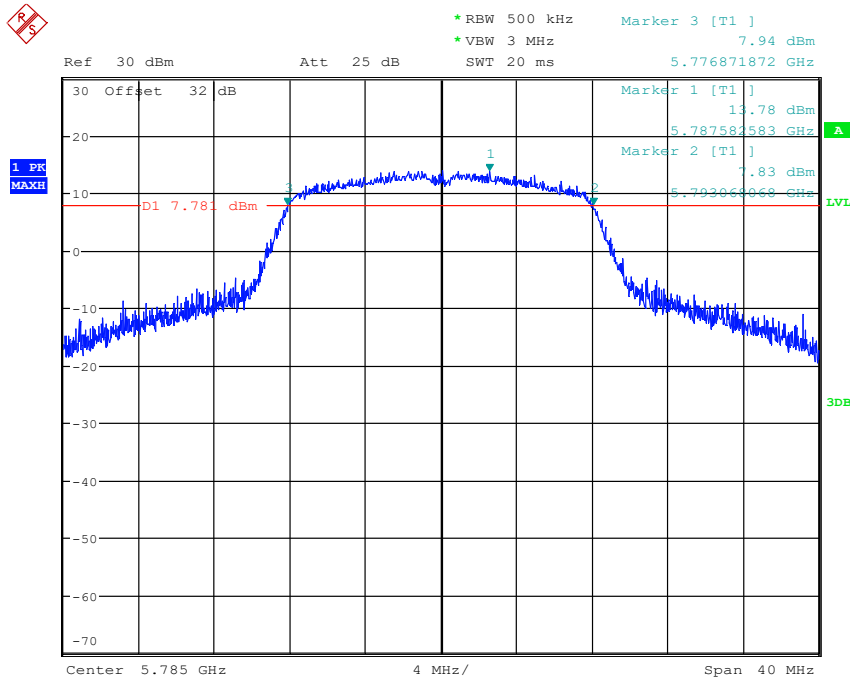
**Conclusion: PASS**

**Test graphs as below:**



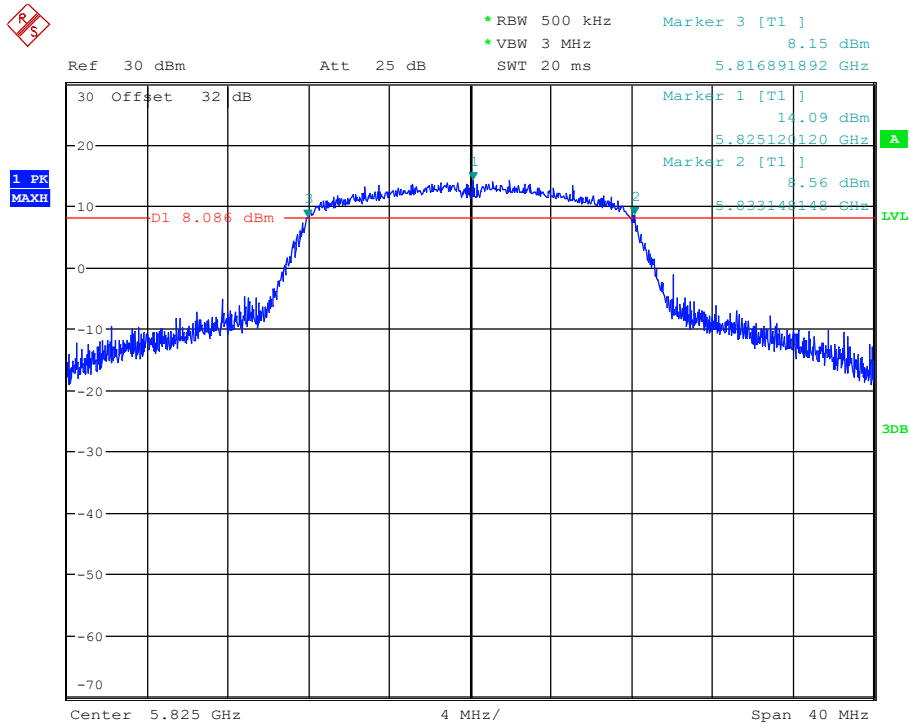
Date: 27.JUN.2023 09:39:28

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



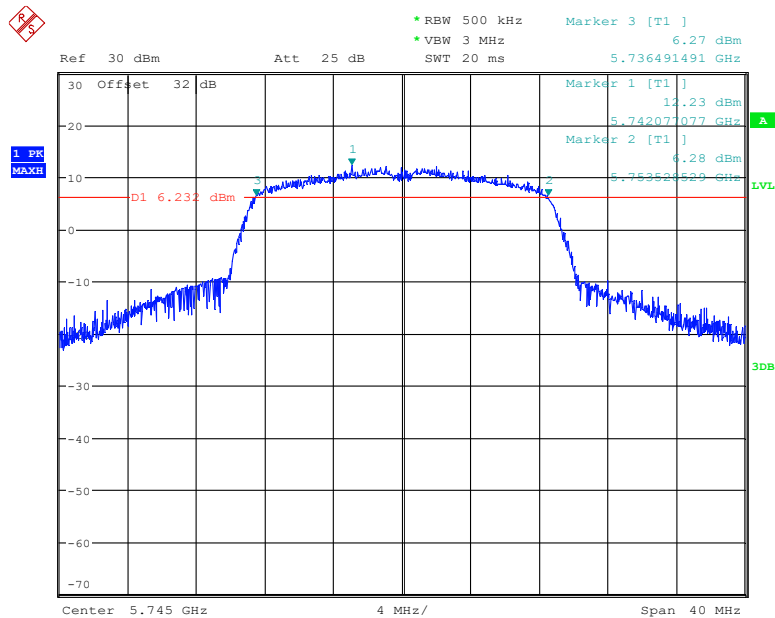
Date: 27.JUN.2023 09:37:17

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



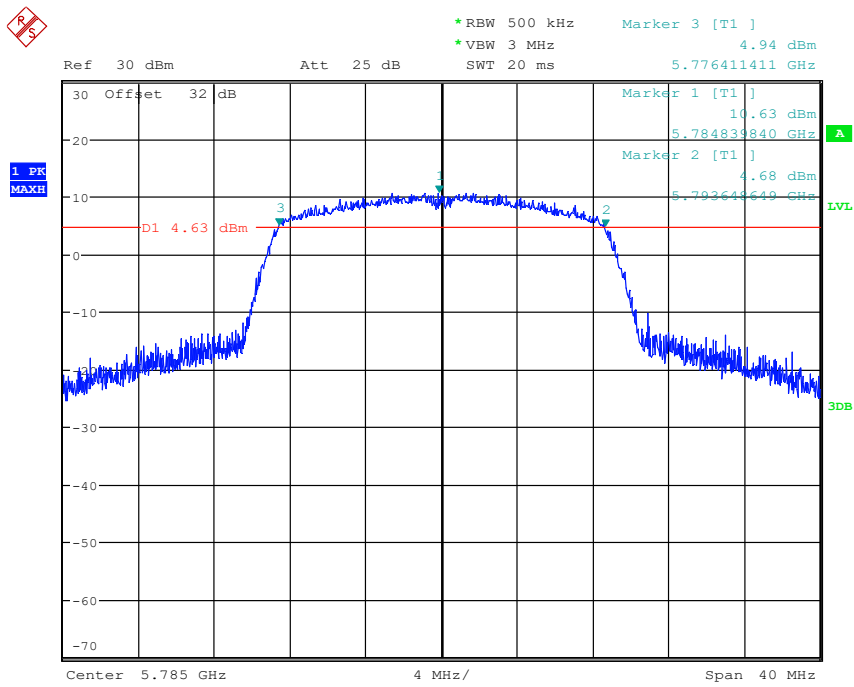
Date: 27.JUN.2023 09:34:42

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



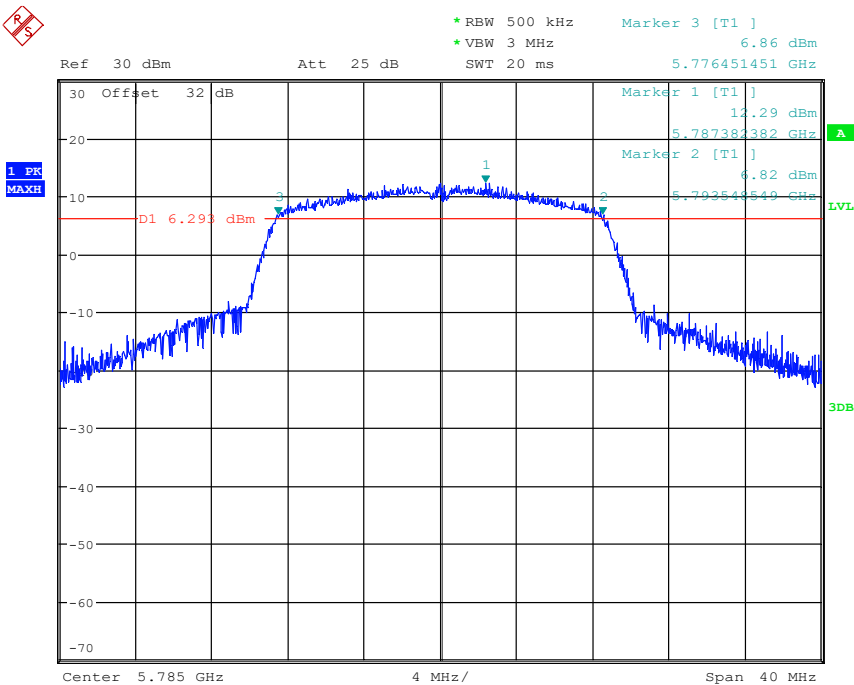
Date: 27.JUN.2023 09:29:00

**Fig. 4 Occupied 6dB Bandwidth (802.11n-HT20, Ch 149)**



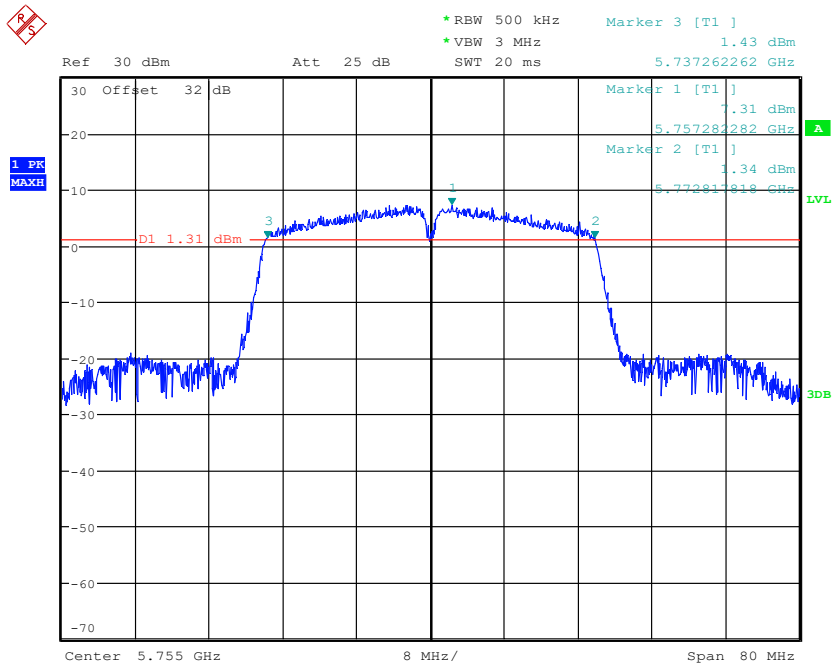
Date: 28.JUN.2023 19:05:40

**Fig. 5 Occupied 6dB Bandwidth (802.11n-HT20, Ch 157)**



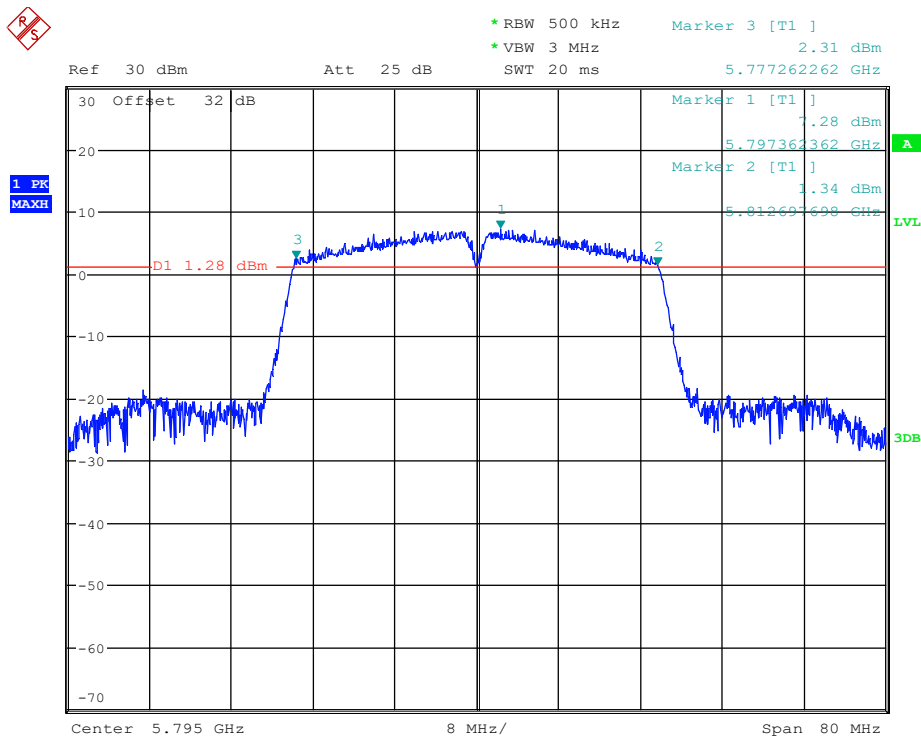
Date: 27.JUN.2023 09:28:29

**Fig. 6 Occupied 6dB Bandwidth (802.11n-HT20, Ch 165)**



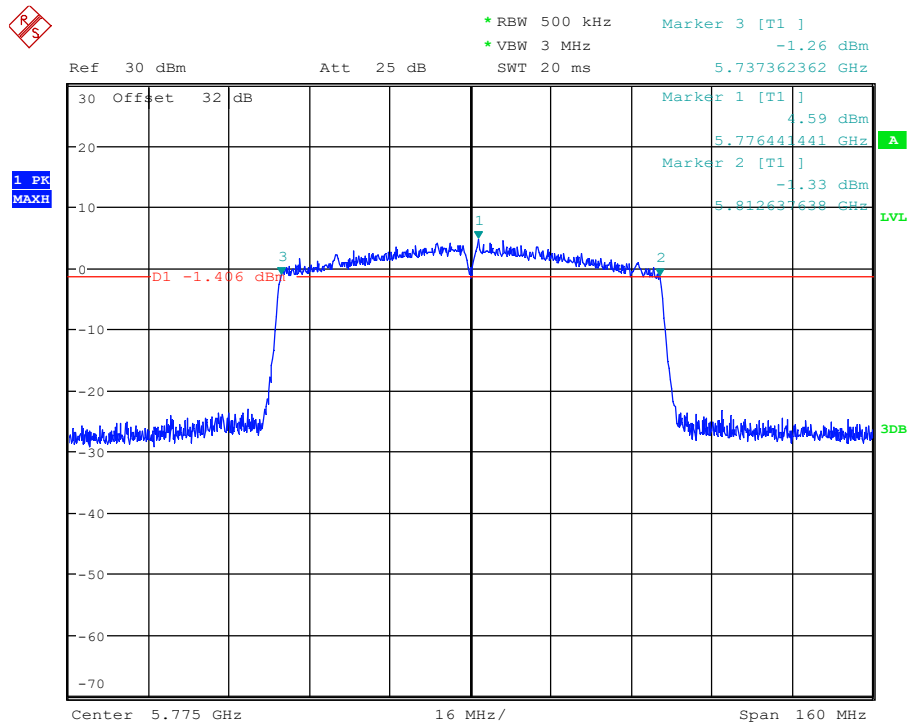
Date: 27.JUN.2023 09:26:10

**Fig. 7 Occupied 6dB Bandwidth (802.11n-HT40, Ch 151)**



Date: 27.JUN.2023 09:26:42

**Fig. 8 Occupied 6dB Bandwidth (802.11n-HT40, Ch 159)**



Date: 27.JUN.2023 09:24:15

**Fig. 9 Occupied 6dB Bandwidth (802.11ac-HT80, Ch 155)**

## A.5. Transmitter Spurious Emission

### A.5.1 Transmitter Spurious Emission – Radiated

#### Measurement Limit:

Standard	Limit (dBm/MHz)	
FCC 47 CFR Part 15.407	at the band edge	27
	at 5 MHz above or below the band edge	15.6
	at 25 MHz above or below the band edge	10
	at 75 MHz or more above or below the band edge	-27
	Note: Increasing linearly from point to point.	

The measurement is made according to KDB 789033

#### Measurement Results:

##### 802.11a mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11a	149	1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
	157	30 MHz ~1 GHz	---	P
		1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
		18 GHz ~ 26.5 GHz	---	P
		26.5 GHz~ 40 GHz	---	P
	165	1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P

##### 802.11n-HT20 mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11n (HT20)	149	1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
	157	30 MHz ~1 GHz	---	P
		1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
		18 GHz ~ 26.5 GHz	---	P
		26.5 GHz~ 40 GHz	---	P
	165	1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P



**802.11n-HT40 mode**

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11n (HT40)	151	30 MHz ~1 GHz	---	P
		1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
		18 GHz ~ 26.5 GHz	---	P
		26.5 GHz~ 40 GHz	---	P
	159	1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P

**802.11ac-HT20 mode**

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11ac (HT20)	149	1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
	157	30 MHz ~1 GHz	---	P
		1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
		18 GHz ~ 26.5 GHz	---	P
		26.5 GHz~ 40 GHz	---	P
		165	1 GHz ~ 3 GHz	---
	3 GHz ~ 7 GHz		---	P
	7 GHz ~ 18 GHz		---	P

**802.11ac-HT40 mode**

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11ac (HT40)	151	30 MHz ~1 GHz	---	P
		1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
		18 GHz ~ 26.5 GHz	---	P
		26.5 GHz~ 40 GHz	---	P
	159	1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P

**802.11ac-HT80 mode**

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11ac (HT80)	155	30 MHz ~1 GHz	---	P
		1 GHz ~ 3 GHz	---	P

		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
		18 GHz ~ 26.5 GHz	---	P
		26.5 GHz~ 40 GHz	---	P

**Conclusion: PASS**

**Note:**

A "reference path loss" is established and the  $A_{Rpl}$  is the attenuation of "reference path loss", and including the gain of receive antenna, the gain of the preamplifier, the cable loss.

$P_{Mea}$  is the field strength recorded from the instrument.

**Average Results:**
**802.11a**

## Channel 149

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17890.000	39.95	-29.59	45.95	23.59	54.00	14.05	V
17963.700	39.92	-29.59	45.95	23.56	54.00	14.08	H
13341.500	36.89	-31.19	40.65	27.43	54.00	17.11	V
14497.000	36.59	-29.56	41.90	24.25	54.00	17.41	H
11864.200	35.60	-32.73	39.15	29.18	54.00	18.40	V
11884.000	35.54	-32.53	39.10	28.97	54.00	18.46	V

## Channel 157

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17894.400	39.79	-29.59	45.95	23.43	54.00	14.21	H
17971.400	39.75	-29.59	45.95	23.39	54.00	14.25	V
13308.500	36.60	-31.40	40.60	27.40	54.00	17.40	V
14499.800	36.59	-29.56	41.90	24.25	54.00	17.41	V
10872.500	35.64	-33.07	38.50	30.21	54.00	18.36	V
11770.700	35.62	-32.71	39.20	29.13	54.00	18.38	V

## Channel 165

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17946.100	39.81	-29.59	45.95	23.45	54.00	14.19	H
17928.000	39.79	-29.59	45.95	23.43	54.00	14.21	H
13271.600	36.61	-31.40	40.60	27.41	54.00	17.39	V
13360.200	36.60	-31.19	40.65	27.14	54.00	17.40	V
11792.700	35.71	-32.09	39.20	28.60	54.00	18.29	V
11820.800	35.67	-32.09	39.20	28.56	54.00	18.33	V

**802.11n-HT20**

## Channel 149

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17942.800	40.25	-29.59	45.95	23.89	54.00	13.75	V
17951.600	39.90	-29.59	45.95	23.54	54.00	14.10	V
13304.600	37.35	-31.40	40.60	28.15	54.00	16.65	V
13296.400	36.78	-31.40	40.60	27.58	54.00	17.22	V
11863.600	35.82	-32.73	39.15	29.40	54.00	18.18	V
11765.200	35.61	-32.71	39.20	29.12	54.00	18.39	V

## Channel 157

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17934.000	39.51	-29.59	45.95	23.15	54.00	14.49	V
17986.200	39.49	-29.59	45.95	23.13	54.00	14.51	V
14493.800	37.06	-29.56	41.90	24.72	54.00	16.94	V
13310.700	36.51	-31.40	40.60	27.31	54.00	17.49	V
11858.100	36.35	-32.73	39.15	29.93	54.00	17.65	V
11899.400	35.64	-32.53	39.10	29.07	54.00	18.36	V

## Channel 165

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17992.800	39.85	-29.59	45.95	23.49	54.00	14.15	H
17953.200	39.69	-29.59	45.95	23.33	54.00	14.31	V
14488.200	36.79	-29.56	41.90	24.45	54.00	17.21	V
13341.000	36.59	-31.19	40.65	27.13	54.00	17.41	V
11770.700	35.81	-32.71	39.20	29.32	54.00	18.19	V
10866.500	35.78	-33.07	38.50	30.35	54.00	18.22	V

**802.11n-HT40**

## Channel 151

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17936.800	39.83	-29.59	45.95	23.47	54.00	14.17	V
17913.100	39.74	-29.59	45.95	23.38	54.00	14.26	H
16062.900	37.07	-29.92	38.10	28.89	54.00	16.93	V
14499.800	36.77	-29.56	41.90	24.43	54.00	17.23	V
11853.800	35.60	-32.73	39.15	29.18	54.00	18.40	V
11747.000	35.51	-32.71	39.20	29.02	54.00	18.49	V

## Channel 159

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17903.800	39.63	-29.59	45.95	23.27	54.00	14.37	V
17965.300	39.55	-29.59	45.95	23.19	54.00	14.45	V
13333.800	36.61	-31.19	40.65	27.15	54.00	17.39	V
13342.600	36.52	-31.19	40.65	27.06	54.00	17.48	V
11779.000	35.97	-32.71	39.20	29.48	54.00	18.03	V
11845.000	35.73	-32.73	39.15	29.31	54.00	18.27	V

**802.11ac-HT20**

## Channel 149

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17924.100	39.83	-29.59	45.95	23.47	54.00	14.17	V
17923.000	39.69	-29.59	45.95	23.33	54.00	14.31	H
13298.600	36.77	-31.40	40.60	27.57	54.00	17.23	V
13294.200	36.66	-31.40	40.60	27.46	54.00	17.34	V
11251.000	35.88	-32.99	38.65	30.22	54.00	18.12	V
11862.500	35.67	-32.73	39.15	29.25	54.00	18.33	V

## Channel 157

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17923.500	39.72	-29.59	45.95	23.36	54.00	14.28	H
17948.300	39.60	-29.59	45.95	23.24	54.00	14.40	H
14489.400	36.67	-29.56	41.90	24.33	54.00	17.33	V
15972.700	36.64	-29.36	38.30	27.70	54.00	17.36	V
11858.100	36.11	-32.73	39.15	29.69	54.00	17.89	V
10874.200	35.86	-33.07	38.50	30.43	54.00	18.14	V

## Channel 165

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17986.800	39.78	-29.59	45.95	23.42	54.00	14.22	H
17934.000	39.59	-29.59	45.95	23.23	54.00	14.41	V
16061.200	36.94	-29.92	38.10	28.76	54.00	17.06	V
14497.000	36.76	-29.56	41.90	24.42	54.00	17.24	H
11920.300	35.70	-32.53	39.10	29.13	54.00	18.30	V
11860.400	35.60	-32.73	39.15	29.18	54.00	18.40	V

**802.11ac-HT40**

## Channel 151

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17952.200	39.52	-29.59	45.95	23.16	54.00	14.48	H
17967.000	39.51	-29.59	45.95	23.15	54.00	14.49	H
16051.400	36.97	-29.92	38.10	28.79	54.00	17.03	V
15981.000	36.81	-29.36	38.30	27.87	54.00	17.19	H
11821.900	35.72	-32.09	39.20	28.61	54.00	18.28	V
11848.800	35.55	-32.73	39.15	29.13	54.00	18.45	V

## Channel 159

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17942.800	40.18	-29.59	45.95	23.82	54.00	13.82	V
17959.300	39.83	-29.59	45.95	23.47	54.00	14.17	V
13317.900	36.53	-31.19	40.65	27.07	54.00	17.47	V
15983.700	36.47	-29.36	38.30	27.53	54.00	17.53	V
11863.100	35.84	-32.73	39.15	29.42	54.00	18.16	V
11789.400	35.83	-32.09	39.20	28.72	54.00	18.17	V

**802.11ac-HT80**

## Channel 155

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17936.800	40.11	-29.59	45.95	23.75	54.00	13.89	V
17937.800	40.09	-29.59	45.95	23.73	54.00	13.91	H
13316.800	36.96	-31.40	40.60	27.76	54.00	17.04	V
13330.000	36.90	-31.19	40.65	27.44	54.00	17.10	V
10858.800	36.35	-33.07	38.50	30.92	54.00	17.65	V
11886.200	35.96	-32.53	39.10	29.39	54.00	18.04	V

**Peak Results:**
**802.11a**

## Channel 149

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17234.400	55.19	-29.33	42.40	42.12	68.30	13.11	V
17232.200	54.84	-29.33	42.40	41.77	68.30	13.46	V
16803.200	50.05	-29.24	39.85	39.44	68.30	18.25	H
16851.600	49.75	-29.50	40.00	39.25	68.30	18.55	V
11321.900	46.31	-32.41	38.70	40.02	74.00	27.69	V
11759.700	46.30	-32.71	39.20	39.81	74.00	27.70	H

## Channel 157

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17363.100	57.36	-28.74	43.40	42.70	68.30	10.94	V
17357.600	55.47	-28.74	43.40	40.81	68.30	12.83	V
16914.800	50.29	-29.28	40.30	39.27	68.30	18.01	V
16847.200	49.67	-29.50	40.00	39.17	68.30	18.63	V
11914.800	46.86	-32.53	39.10	40.29	74.00	27.14	V
10450.700	46.60	-33.87	38.20	42.27	68.30	21.70	V

## Channel 165

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17478.600	54.72	-29.07	44.55	39.24	68.30	13.58	V
17480.200	54.49	-29.07	44.55	39.01	68.30	13.81	V
16952.800	50.02	-29.68	40.60	39.10	68.30	18.28	V
16844.500	49.90	-29.50	40.00	39.40	68.30	18.40	H
11013.400	47.01	-33.10	38.60	41.51	74.00	26.99	V
10742.200	46.79	-33.62	38.40	42.01	74.00	27.21	V



**802.11n-HT20**

## Channel 149

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17235.500	53.95	-29.33	42.40	40.88	68.30	14.35	V
17234.400	53.19	-29.33	42.40	40.12	68.30	15.11	V
16500.200	50.11	-29.90	39.00	41.01	68.30	18.19	V
16770.800	49.94	-29.73	39.70	39.97	68.30	18.36	V
11279.000	46.58	-32.99	38.65	40.92	74.00	27.42	H
11232.800	46.56	-32.42	38.60	40.38	74.00	27.44	V

## Channel 157

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17351.500	54.28	-28.74	43.40	39.62	68.30	14.02	V
17358.200	53.89	-28.74	43.40	39.23	68.30	14.41	V
16861.500	50.15	-29.50	40.00	39.65	68.30	18.15	H
16996.800	50.00	-29.38	40.85	38.53	68.30	18.30	H
11743.200	46.96	-32.71	39.20	40.47	74.00	27.04	V
10467.800	46.78	-33.87	38.20	42.45	68.30	21.52	H

## Channel 165

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17477.000	53.96	-29.07	44.55	38.48	68.30	14.34	V
17476.400	53.86	-29.07	44.55	38.38	68.30	14.44	V
16956.700	50.57	-29.68	40.60	39.65	68.30	17.73	V
16862.000	50.07	-29.50	40.00	39.57	68.30	18.23	V
10857.700	46.70	-33.07	38.50	41.27	74.00	27.30	V
11348.900	46.40	-33.31	38.85	40.86	74.00	27.60	V

**802.11n-HT40**

## Channel 151

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17468.200	52.12	-28.70	44.20	36.62	68.30	16.18	V
17568.800	51.00	-29.39	44.90	35.50	68.30	17.30	V
16885.200	50.07	-29.28	40.30	39.05	68.30	18.23	V
16458.900	49.97	-30.22	38.80	41.39	68.30	18.33	H
11609.500	47.07	-32.72	39.20	40.59	74.00	26.93	V
11264.700	46.27	-32.99	38.65	40.61	74.00	27.73	H

## Channel 159

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17530.800	51.34	-29.39	44.90	35.84	68.30	16.96	V
17940.000	51.11	-29.59	45.95	34.75	74.00	22.89	V
16966.000	50.92	-29.68	40.60	40.00	68.30	17.38	V
16642.600	50.04	-29.84	39.60	40.28	68.30	18.26	V
10855.000	46.89	-33.07	38.50	41.46	74.00	27.11	H
11665.600	46.08	-32.62	39.20	39.50	74.00	27.92	H

**802.11ac-HT20**

## Channel 149

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17249.800	51.39	-29.33	42.40	38.32	68.30	16.91	V
17237.200	50.78	-29.33	42.40	37.71	68.30	17.52	V
16754.200	49.93	-29.73	39.70	39.96	68.30	18.37	H
16816.400	49.82	-29.24	39.85	39.21	68.30	18.48	V
11825.100	46.72	-32.09	39.20	39.61	74.00	27.28	V
11272.400	46.67	-32.99	38.65	41.01	74.00	27.33	V

## Channel 157

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17352.700	52.49	-28.74	43.40	37.83	68.30	15.81	V
17350.500	52.27	-28.74	43.40	37.61	68.30	16.03	V
16583.200	49.64	-29.97	39.20	40.41	68.30	18.66	H
16439.700	49.46	-30.22	38.80	40.88	68.30	18.84	H
11783.400	46.78	-32.09	39.20	39.67	74.00	27.22	V
11383.500	46.66	-33.31	38.85	41.12	74.00	27.34	V

## Channel 165

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17854.800	51.68	-29.59	45.95	35.32	74.00	22.32	V
17469.800	51.54	-28.70	44.20	36.04	68.30	16.76	V
16951.200	49.83	-29.68	40.60	38.91	68.30	18.47	V
16939.000	49.79	-29.68	40.60	38.87	68.30	18.51	V
11849.900	46.94	-32.73	39.15	40.52	74.00	27.06	V
10892.400	46.73	-32.80	38.50	41.03	74.00	27.27	H

**802.11ac-HT40**

## Channel 151

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17360.300	51.20	-28.74	43.40	36.54	68.30	17.10	H
17257.000	51.14	-29.33	42.40	38.07	68.30	17.16	V
16993.000	50.41	-29.38	40.85	38.94	68.30	17.89	V
16986.900	50.37	-29.38	40.85	38.90	68.30	17.93	V
11860.900	46.37	-32.73	39.15	39.95	74.00	27.63	H
11917.500	46.37	-32.53	39.10	39.80	74.00	27.63	V

## Channel 159

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17148.600	51.39	-29.31	41.70	39.00	68.30	16.91	V
17993.400	51.26	-29.59	45.95	34.90	74.00	22.74	V
16955.000	50.59	-29.68	40.60	39.67	68.30	17.71	H
16958.300	50.59	-29.68	40.60	39.67	68.30	17.71	V
11677.800	46.38	-32.62	39.20	39.80	74.00	27.62	V
11885.600	46.15	-32.53	39.10	39.58	74.00	27.85	V

**802.11ac-HT80**

## Channel 155

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17557.200	51.49	-29.39	44.90	35.99	68.30	16.81	V
17562.200	51.19	-29.39	44.90	35.69	68.30	17.11	V
16963.800	50.81	-29.68	40.60	39.89	68.30	17.49	V
16849.400	50.28	-29.50	40.00	39.78	68.30	18.02	V
10748.200	46.77	-32.42	38.45	40.74	74.00	27.23	V
11872.500	46.41	-32.73	39.15	39.99	74.00	27.59	V

## A.6. Band Edges Compliance

### A6.1 Band Edges - Radiated

#### Measurement Limit:

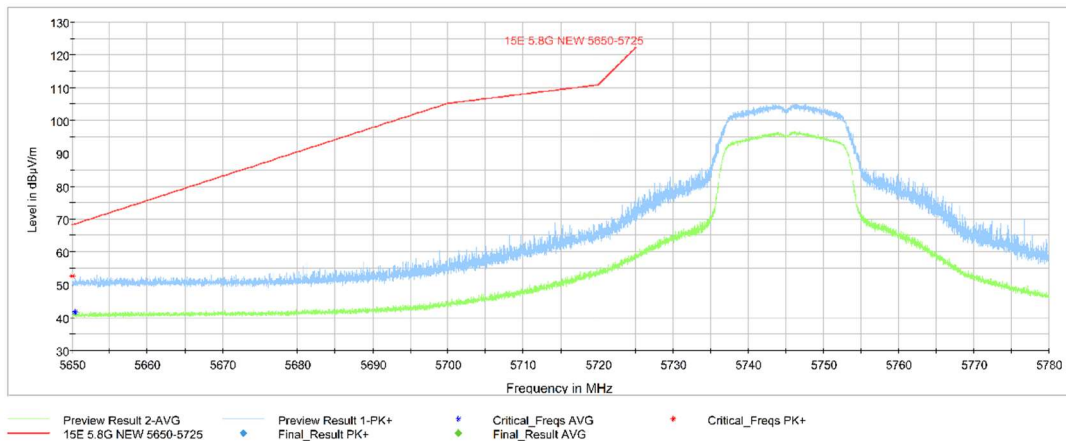
Standard	Limit (dBm/MHz)	
FCC 47 CFR Part 15.407	at the band edge	27
	at 5 MHz above or below the band edge	15.6
	at 25 MHz above or below the band edge	10
	at 75 MHz or more above or below the band edge	-27
	Note: increasing linearly from point to point.	

#### Measurement Result:

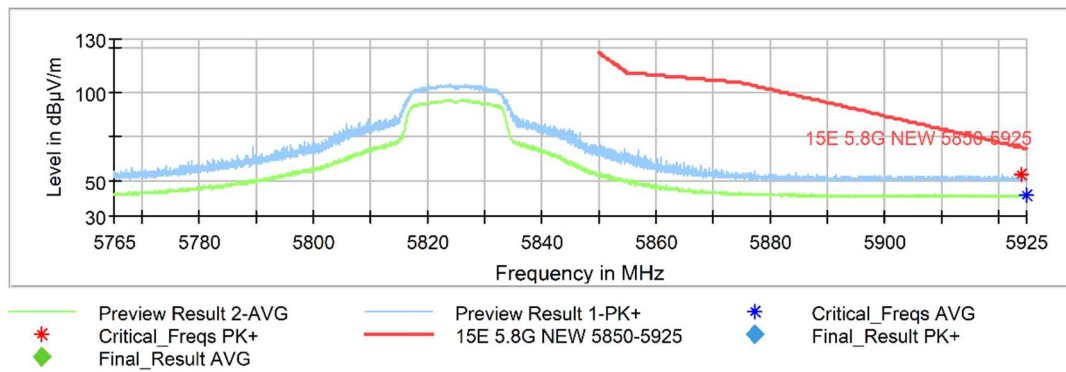
Mode	Channel	Test Results	Conclusion
802.11a	5745 MHz	Fig.10	P
	5825 MHz	Fig.11	P
802.11n HT20	5745 MHz	Fig.12	P
	5825 MHz	Fig.13	P
802.11n HT40	5755 MHz	Fig.14	P
	5795 MHz	Fig.15	P
802.11ac HT20	5745 MHz	Fig.16	P
	5825 MHz	Fig.17	P
802.11ac HT40	5755 MHz	Fig.18	P
	5795 MHz	Fig.19	P
802.11ac HT80	5775 MHz	Fig.20 Fig.21	P

**Conclusion: PASS**

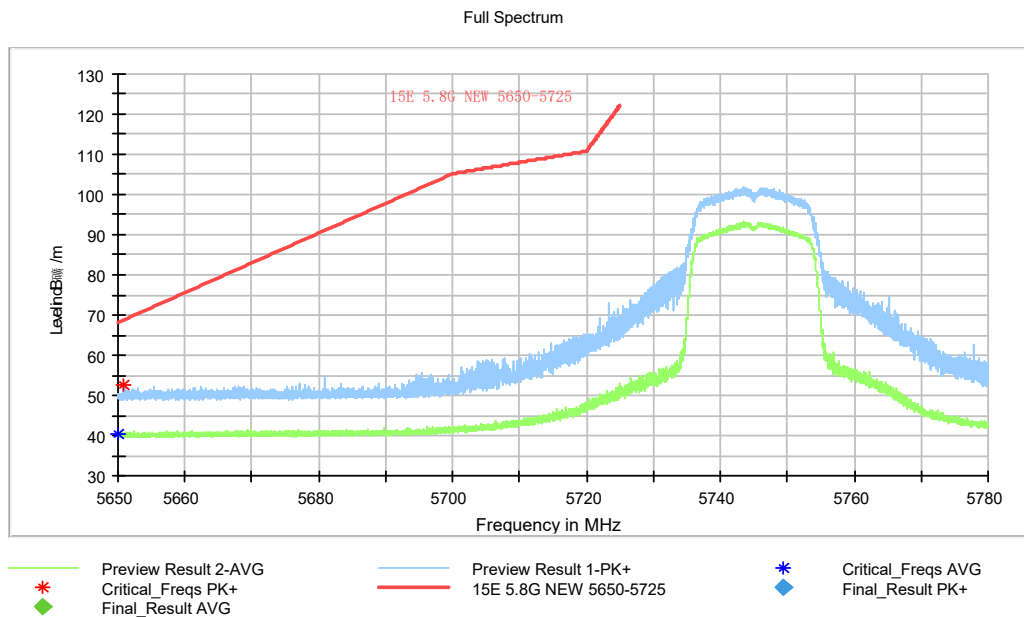
**Test graphs as below:**



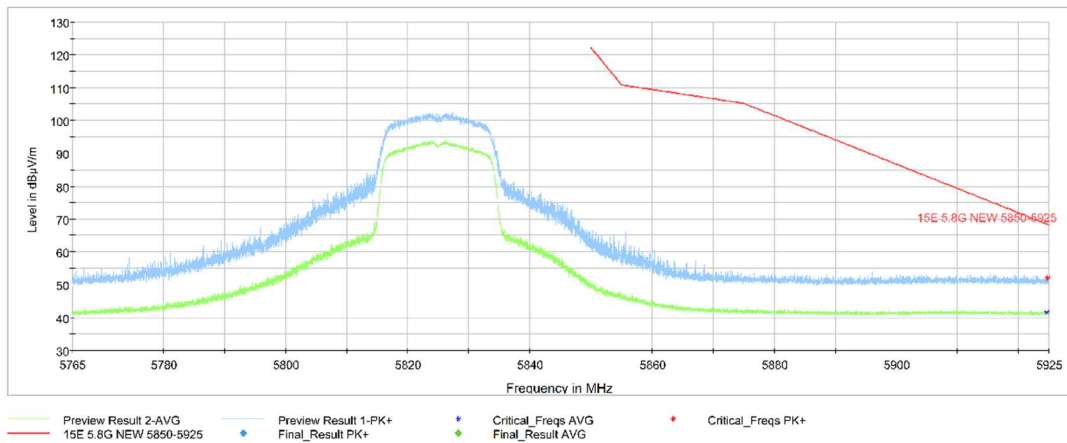
**Fig. 10 Band Edges (802.11a Ch149,5745MHz)**



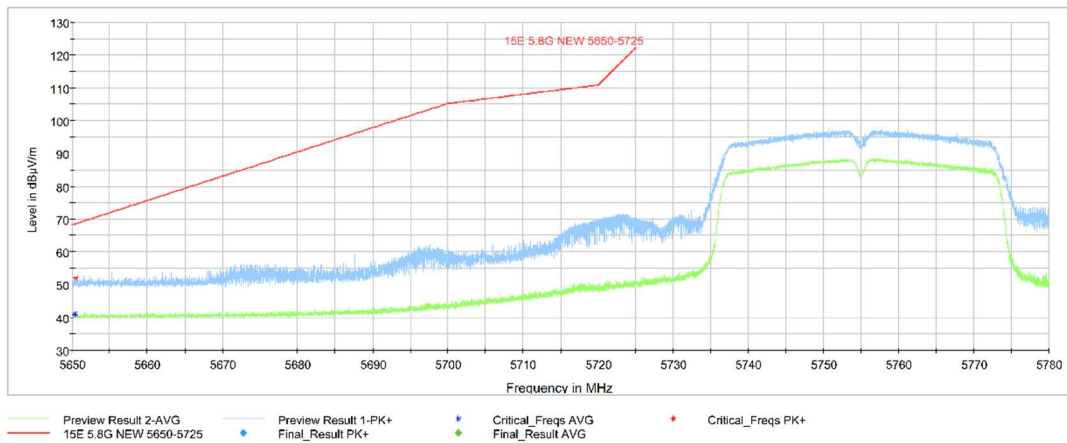
**Fig. 11 Band Edges (802.11a Ch165, 5825MHz)**



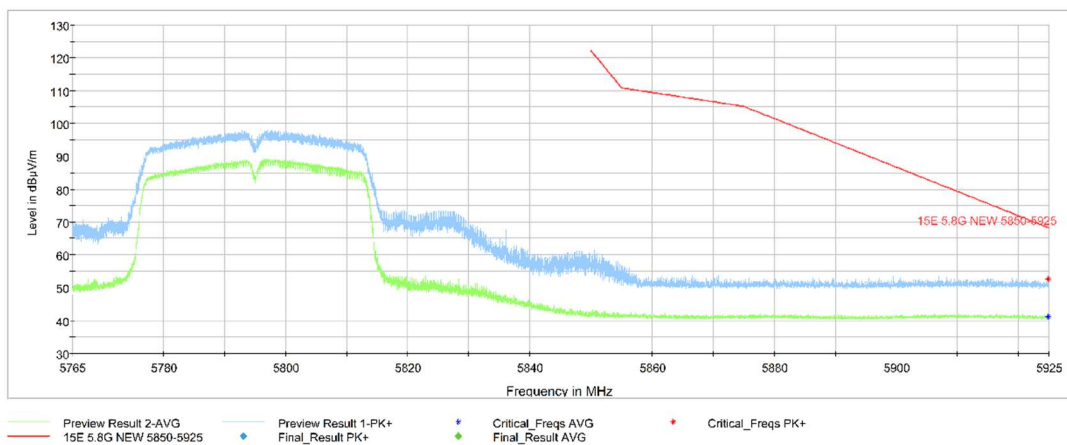
**Fig. 12 Band Edges (802.11n-HT20 Ch149, 5745MHz)**



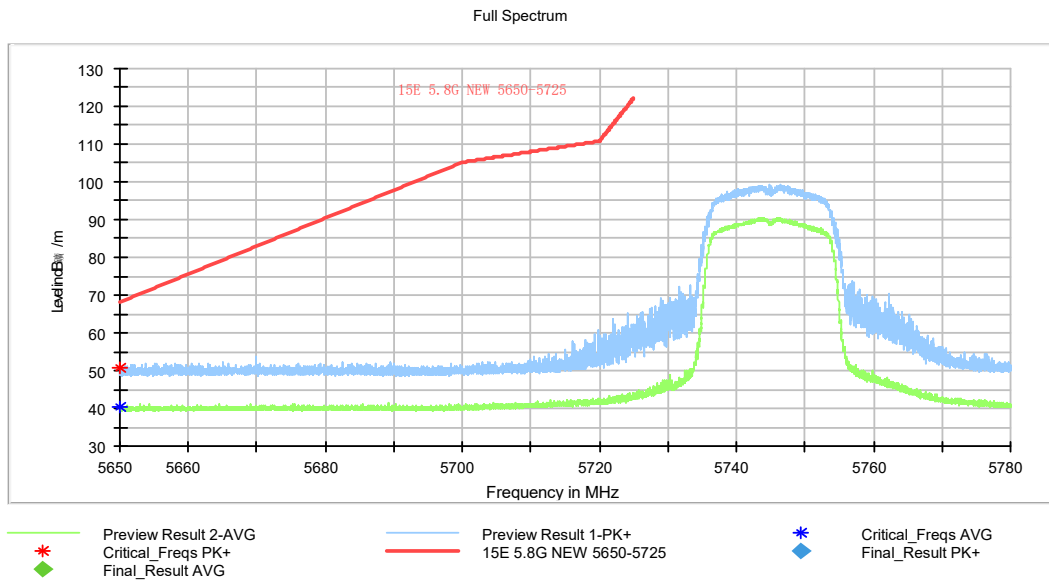
**Fig. 13 Band Edges (802.11n-HT20 Ch165, 5825MHz)**



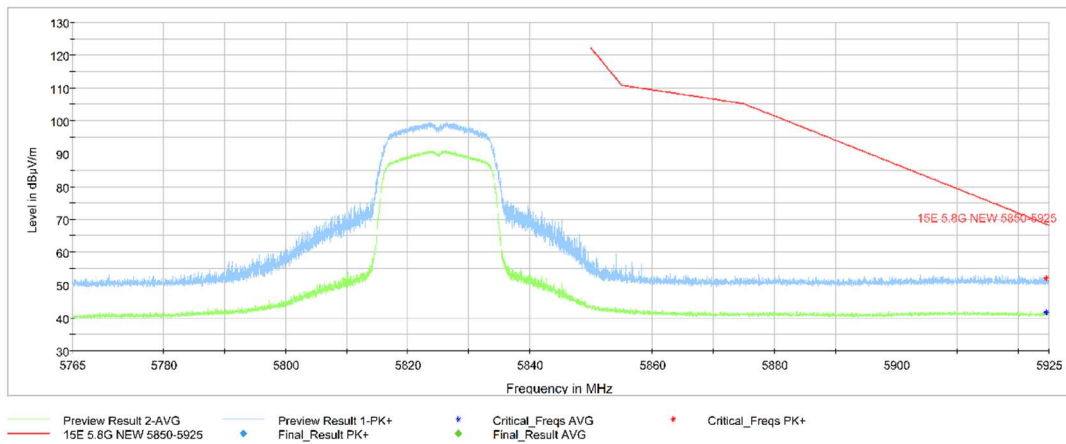
**Fig. 14 Band Edges (802.11n-HT40 Ch151, 5755MHz)**



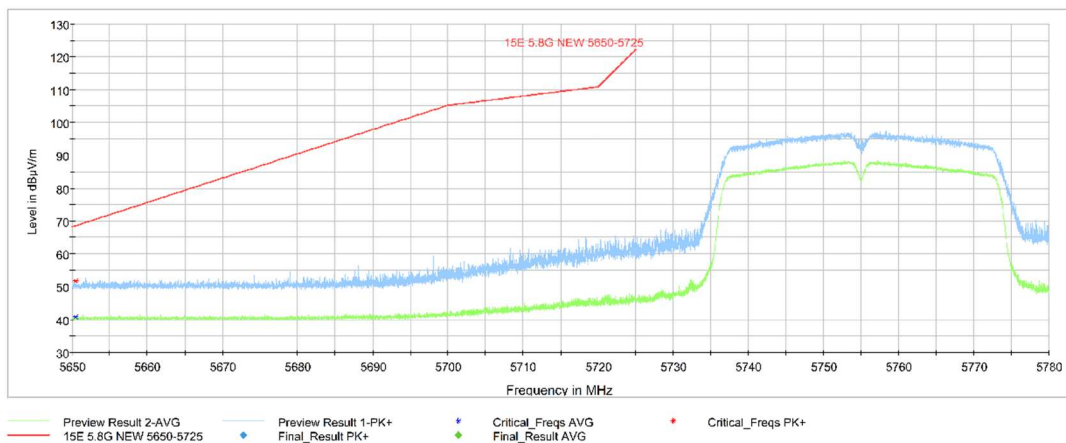
**Fig. 15 Band Edges (802.11n-HT40 Ch159, 5795MHz)**



**Fig. 16 Band Edges (802.11ac-HT20 Ch149, 5745MHz)**

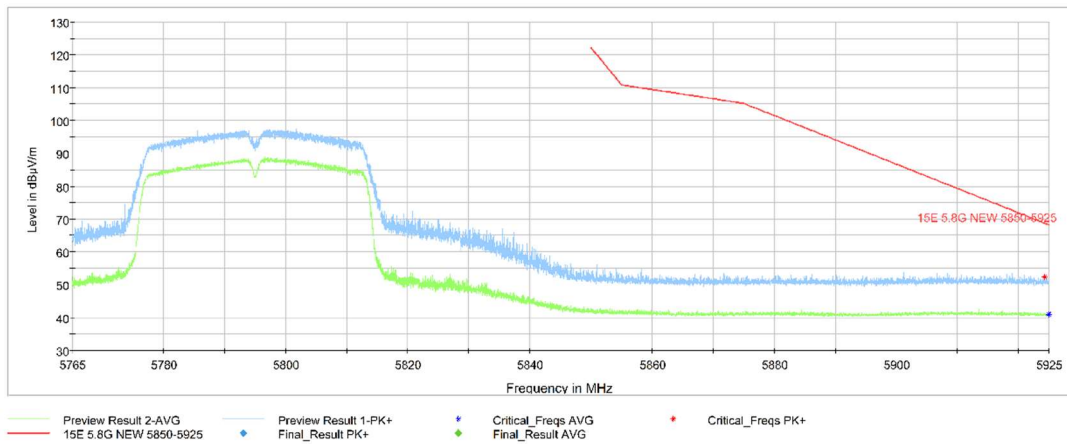


**Fig. 17 Band Edges (802.11ac-HT20 Ch165, 5825MHz)**

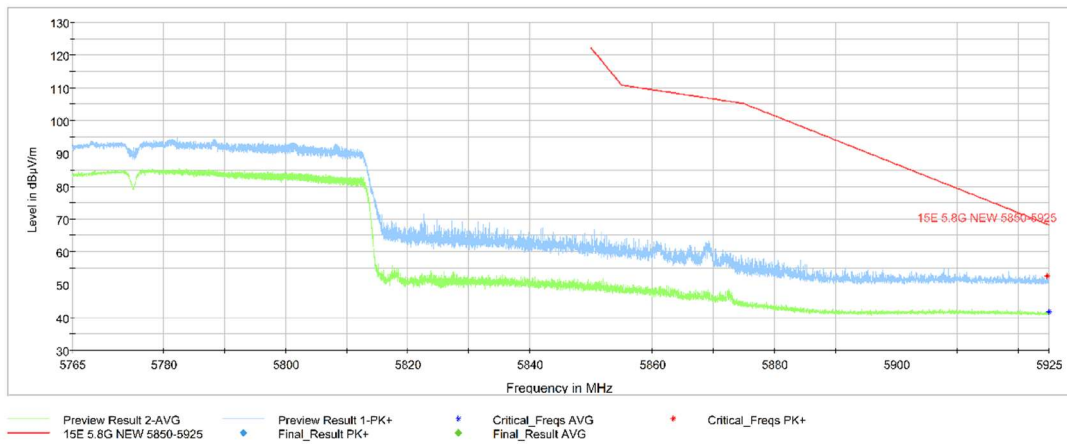


**Fig. 18 Band Edges (802.11ac-HT40 Ch151, 5755MHz)**

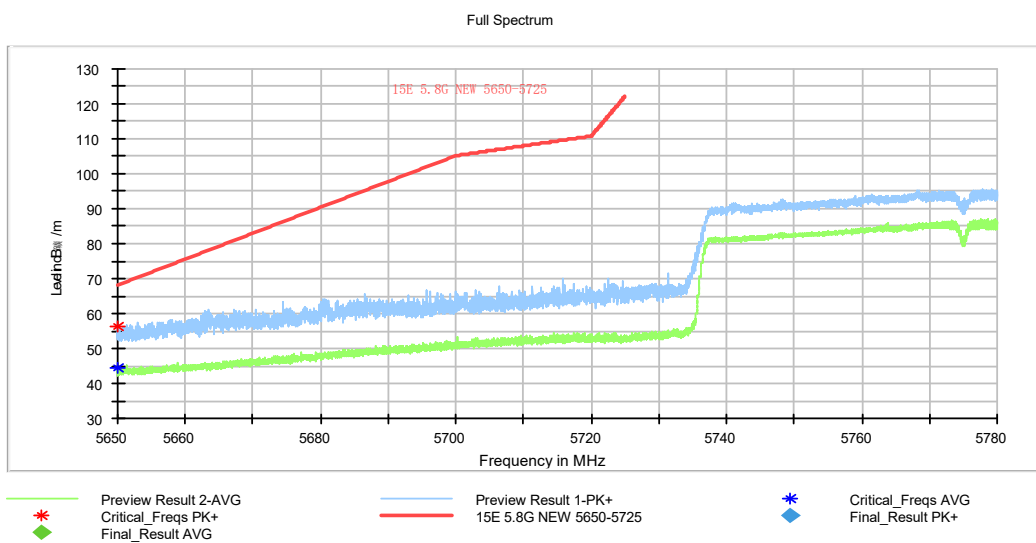




**Fig. 19 Band Edges (802.11ac-HT40 Ch159, 5795MHz)**



**Fig. 20 Band Edges (802.11ac-HT80 Ch155, 5775MHz)**



**Fig. 21 Band Edges (802.11ac-HT80, 5775MHz)**

## A.7. AC Powerline Conducted Emission

### Test Condition:

Voltage (V)	Frequency (Hz)
120	60

### Measurement uncertainty:

Expanded measurement uncertainty for this test item is  $U = 3.08\text{dB}$ ,  $k=2$ .

### Measurement Result and limit:

WLAN (Quasi-peak Limit)

Frequency range (MHz)	Quasi-peak Limit (dB $\mu$ V)	Result (dB $\mu$ V)		Conclusion
		With charger		
		802.11a	Idle	
0.15 to 0.5	66 to 56	Fig.22	Fig.23	P
0.5 to 5	56			
5 to 30	60			

NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.

WLAN (Average Limit)

Frequency range (MHz)	Average Limit (dB $\mu$ V)	Result (dB $\mu$ V)		Conclusion
		With charger		
		802.11a	Idle	
0.15 to 0.5	56 to 46	Fig.22	Fig.23	P
0.5 to 5	46			
5 to 30	50			

NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.

The measurement is made according to ANSI C63.10 .

**Conclusion: PASS**

Test graphs as below:

Traffic:

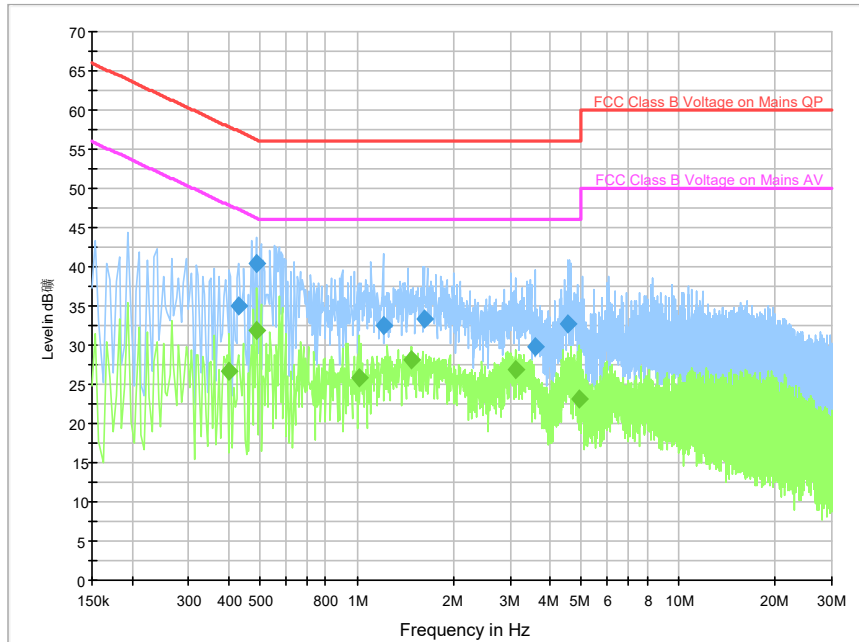


Fig. 22 AC Power line Conducted Emission-802.11a

Note1: The graphic result above is the maximum of the measurements for both phase line and neutral line.

Final Result 1

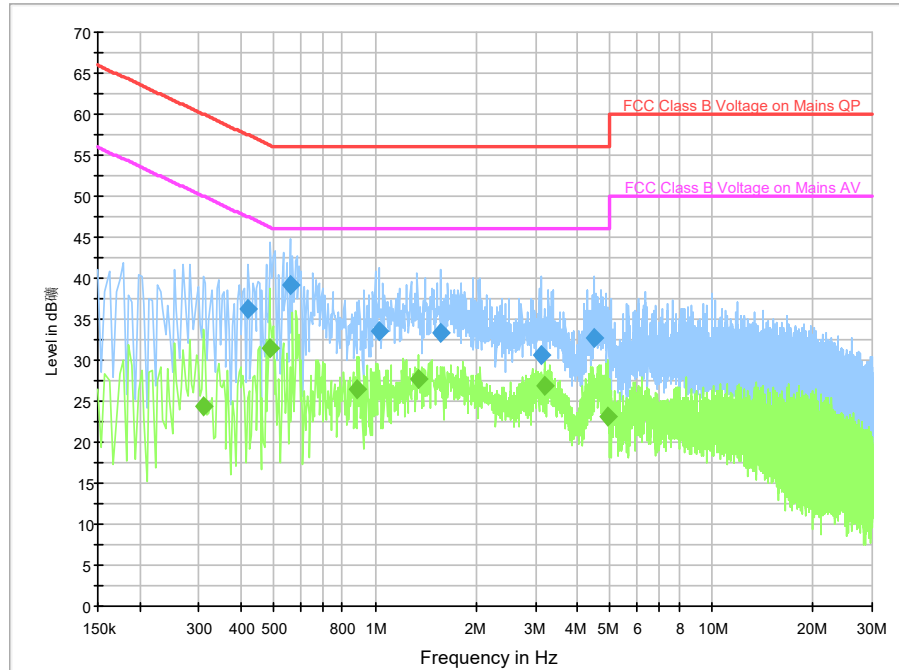
Frequency (MHz)	QuasiPeak (dBµV)	Meas. Time	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)	Comment
0.430000	35.1	2000.	9.000	On	N	19.7	22.2	57.3	
0.486000	40.5	2000.	9.000	On	N	19.7	15.7	56.2	
1.206000	32.5	2000.	9.000	On	N	19.6	23.5	56.0	
1.614000	33.4	2000.	9.000	On	N	19.6	22.6	56.0	
3.586000	29.9	2000.	9.000	On	N	19.6	26.1	56.0	
4.550000	32.7	2000.	9.000	On	N	19.6	23.3	56.0	

Final Result 2

Frequency (MHz)	QuasiPeak (dBµV)	Meas. Time	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)	Comment
0.402000	26.6	2000.	9.000	On	L1	19.7	21.2	47.8	
0.490000	32.0	2000.	9.000	On	L1	19.7	14.2	46.2	
1.014000	25.9	2000.	9.000	On	L1	19.7	20.1	46.0	
1.482000	28.1	2000.	9.000	On	L1	19.7	17.9	46.0	
3.114000	26.9	2000.	9.000	On	L1	19.6	19.1	46.0	
4.890000	23.0	2000.	9.000	On	N	19.6	23.0	46.0	

Note2: The measurement results showed here are worst cases of the combinations of different cables and chargers

Idle:



**Fig. 23 AC Power line Conducted Emission-Idle**

Note1: The graphic result above is the maximum of the measurements for both phase line and neutral line.

**Final Result 1**

Frequency (MHz)	QuasiPeak (dBµV)	Meas. Time	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)	Comment
0.418000	36.2	2000.	9.000	On	N	19.7	21.3	57.5	
0.558000	39.1	2000.	9.000	On	N	19.7	16.9	56.0	
1.030000	33.6	2000.	9.000	On	N	19.6	22.4	56.0	
1.566000	33.4	2000.	9.000	On	N	19.6	22.6	56.0	
3.114000	30.6	2000.	9.000	On	N	19.6	25.4	56.0	
4.494000	32.8	2000.	9.000	On	N	19.6	23.2	56.0	

**Final Result 2**

Frequency (MHz)	QuasiPeak (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)	Comment
0.310000	24.4	2000.0	9.000	On	N	19.7	25.6	50.0	
0.486000	31.4	2000.0	9.000	On	L1	19.7	14.8	46.2	
0.886000	26.4	2000.0	9.000	On	L1	19.7	19.6	46.0	
1.342000	27.7	2000.0	9.000	On	L1	19.6	18.3	46.0	
3.194000	26.9	2000.0	9.000	On	L1	19.6	19.1	46.0	
4.906000	23.2	2000.0	9.000	On	N	19.6	22.8	46.0	

Note2: The measurement results showed here are worst cases of the combinations of different cables and chargers

## 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

<p>United States Department of Commerce National Institute of Standards and Technology</p>  	
<hr/> <p><b>Certificate of Accreditation to ISO/IEC 17025:2017</b></p> <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 Communique dated January 2009).</i></p>	
<hr/> <p>2022-10-01 through 2023-09-30 <i>Effective Dates</i></p>	 <hr/> <p><i>[Signature]</i> For the National Voluntary Laboratory Accreditation Program</p>

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