



# FCC PART 15E TEST REPORT No.24T04Z100644-009

for

**Shenzhen Tinno Mobile Technology Corp.**

**Smart Phone**

**U572AA, U572AC**

**FCC ID:XD6U572AA**

with

**Hardware Version: V1.0**

**Software Version: U572AAV01.04.10**

**Issued Date: 2024-05-28**

**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.

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## **REPORT HISTORY**

<b>Report Number</b>	<b>Revision</b>	<b>Description</b>	<b>Issue Date</b>
24T04Z100644-009	Rev.0	1st edition	2024-05-28

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

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. TestingEnvironment

Normal Temperature: 15-35°C

Relative Humidity: 20-75%

### 1.4. Project date

Testing Start Date: 2024-04-20

Testing End Date: 2024-05-20

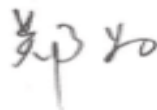
### 1.5. Signature



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Yao Xingyu

(Prepared this test report)



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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: Shenzhen Tinno Mobile Technology Corp.  
27-001, South Side of Tianlong Mobile Headquarters Building,  
Address: Tongfa South Road, Xili Community, Xili Street, Nanshan District, Shenzhen, PRC  
City: Shenzhen  
Postal Code: /  
Country: China  
Telephone: 0755-86095550  
Fax: 0755-86095551

### **2.2. Manufacturer Information**

Company Name: Shenzhen Tinno Mobile Technology Corp.  
27-001, South Side of Tianlong Mobile Headquarters Building,  
Address: Tongfa South Road, Xili Community, Xili Street, Nanshan District, Shenzhen, PRC  
City: Shenzhen  
Postal Code: /  
Country: China  
Telephone: 0755-86095550  
Fax: 0755-86095551

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

#### 3.1. About EUT

Description	Smart Phone
Model name	U572AA, U572AC
FCC ID	XD6U572AA
WLAN Frequency Band	ISM Band: 5725MHz~5850MHz
Type of modulation	OFDM
Nominal Voltage	3.85V
Extreme High Voltage	4.4V
Extreme Low Voltage	3.5V

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

EUT ID*	IMEI	HW Version	SW Version	Date of receipt
UT18a	864975070007818	V1.0	U572AAV01.04.10	2024-05-07
UT27a	864975070007214	V1.0	U572AAV01.04.10	2024-04-25

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

UT18a is used for Conduction test, UT27a is used for Radiation test.

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

AE ID*	Description	Model	Manufacturer	Note
AE1	Battery	TNO496386AG-N1	GUANGDONG FENGHUA NEW ENERGY CO.,LTD	---
AE2-1	Charger	TN-050200U3	Guangdong Electronics Co.,Ltd	Beicom First source
AE2-2	Charger	LM-603U-050200U02UL	Chongqing Electronics Co.,LTD.	Lianmao Second source
AE3-1	USB cable	T365-011B-1	Shenzhen Electronics Co. Ltd.	Yihuaxing First source
AE3-2	USB cable	336275	SUNTOPS ELECTRONICS CO.,LTD	Second source

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

#### 3.4. General Description

Equipment Under Test (EUT) is a model of Mobile 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 CFR 47, Part 15, Subpart C and E:	
FCC Part15	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. Test Results

### 6.1. Summary of Test Results

SUMMARY OF MEASUREMENT RESULTS	Sub-clause of Part15E	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 - 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

### 6.2. Statements

CTTL has evaluated the test cases 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.

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°C
Voltage	3.85V
Humidity	44%

## 7. Test Facilities Utilized

### Conducted test system

No.	Equipment	Model	Serial Number	Manufacturer	Calibration Period	Calibration Due date
1	Vector Signal Analyzer	FSW67	104051	Rohde & Schwarz	1 year	2025-04-01
2	Test Receiver	ESCI	100344	R&S	1 year	2025-04-01
3	LISN	ENV216	101200	R&S	1 year	2025-05-16
4	Attenuator	10dB/2W	/	Rosenberger	/	/
5	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	2024-11-26
2	Test Receiver	ESW44	103023	R&S	1 year	2024-06-08
3	EMI Antenna	VULB 9163	01222	SCHWARZBE CK	2 years	2025-01-28
4	EMI Antenna	3115	6914	ETS-Lindgren	2 years	2025-05-07
5	EMI Antenna	3116	2663	ETS-Lindgren	2 years	2024-11-22

### Test software information(HL)

Test Item	Software	Manufacturer
Conducted emission	EMC32 V8.53.0	R&S
Radiated emission	EMC32 V11.50.00	R&S

## 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. 6dB Emission Bandwidth

Measurement Uncertainty: 60.80Hz,k=1.96

### 8.4. Band Edges Compliance

Measurement Uncertainty : 0.62dB,k=1.96

### 8.5. 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	4.92
$30\text{MHz} \leq f \leq 1\text{GHz}$	4.72
$1\text{GHz} \leq f \leq 18\text{GHz}$	4.84
$18\text{GHz} \leq f \leq 40\text{GHz}$	5.12

### 8.6. AC Power-line Conducted Emission

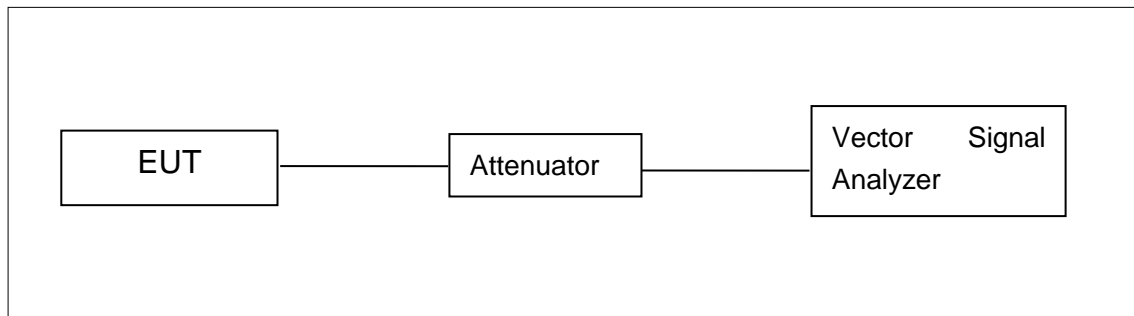
Measurement Uncertainty : 3.08dB,k=2

## **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

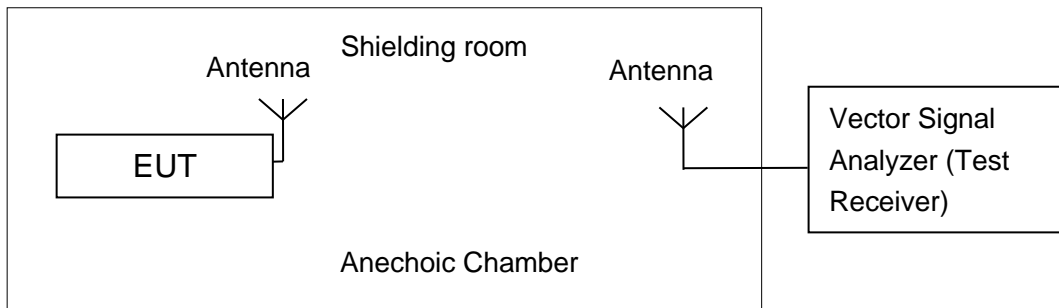


#### **A.1.2. Radiated Emission Measurements**

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 = 3MHz;



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:**

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

Set span to encompass the EBW (or, alternatively, the entire 99% occupied bandwidth) of the signal.

Set RBW = 1 MHz.

Set VBW ≥ 3 MHz.

Number of points in sweep ≥ 2 × span / RBW.

Sweep time = auto.

Detector = power averaging (rms)

Trace average at least 100 traces in power averaging (rms) mode; however, the number of traces to be averaged shall be increased above 100 as needed to ensure that the average accurately represents the true average over the on and off periods of the transmitter.

Compute power by integrating the spectrum across the EBW (or, alternatively, the entire 99% occupied bandwidth) of the signal using the instrument's band power measurement function with band limits set equal to the EBW (or occupied bandwidth) band edges. If the instrument does not have a band power function, sum the spectrum levels (in power units) at 1 MHz intervals extending across the EBW (or, alternatively, the entire 99% occupied bandwidth) of the signal. Add 10 log (1/x), where x is the duty cycle

### **A.2.1 Antenna Gain**

Antenna gain is 0.5dBi and the value is supplied by the applicant or manufacturer.

### **A.2.2. Maximum Average Output Power-Conducted**

**EUT ID: UT18a**

#### **Measurement Results:**

##### **802.11a mode**

<b>Mode</b>	<b>Data Rate (Mbps)</b>	<b>Test Result (dBm)</b>		
		<b>5745MHz (Ch149)</b>	<b>5785MHz (Ch157)</b>	<b>5825MHz (Ch165)</b>
802.11a	6	18.12	18.09	18.21

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

##### **802.11n-HT20 mode**

<b>Mode</b>	<b>Data Rate (Index)</b>	<b>Test Result (dBm)</b>		
		<b>5745MHz (Ch149)</b>	<b>5785MHz (Ch157)</b>	<b>5825MHz (Ch165)</b>
802.11n (20MHz)	MCS0	18.19	17.98	17.89

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	18.15	17.88	17.83

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	17.59	17.62

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	17.53	17.65

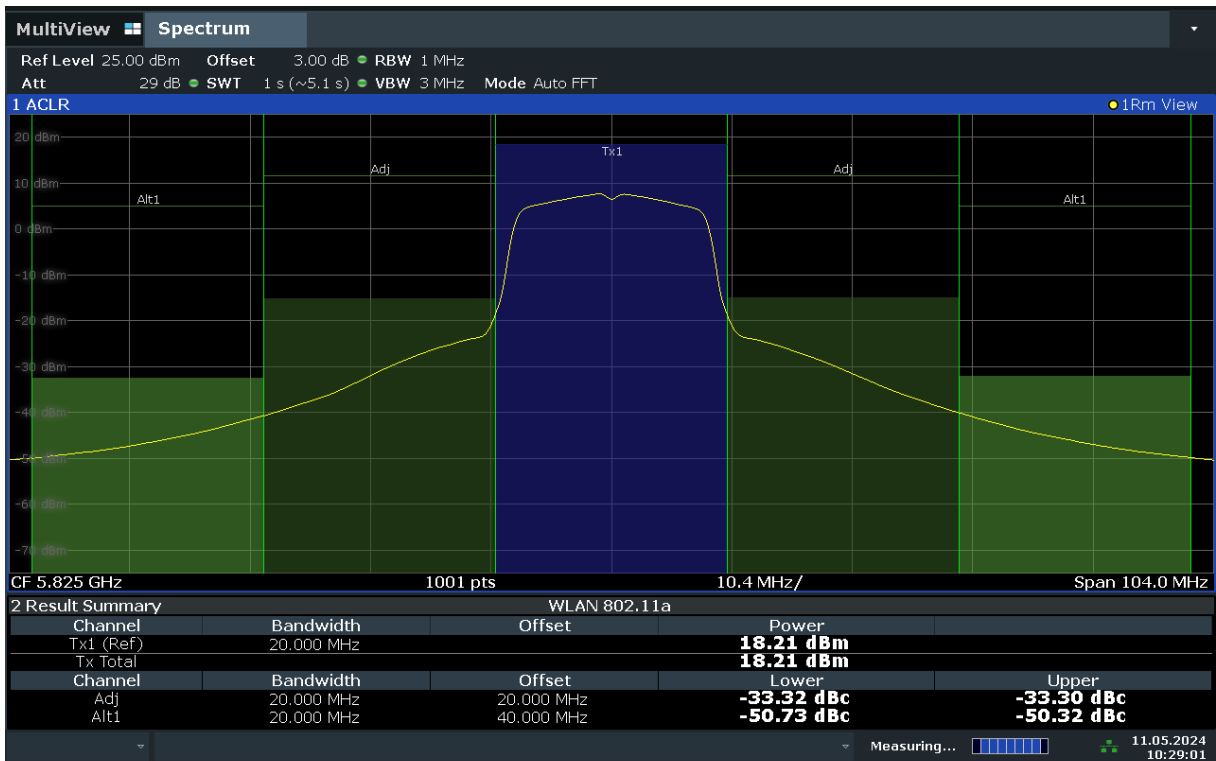
The data rate MCS0 is selected as worst condition, and the following cases are performed with this condition.

**802.11ac-HT80 mode**

Mode	Data Rate (Index)	Test Result (dBm)
		5775MHz (Ch155)
802.11ac (80MHz)	MCS0	17.98

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

The duty cycle of all mode are 100%



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**Maximum output Power: 11a CH165**

**Conclusion: PASS**

### A.3. Peak Power Spectral Density

#### Measurement Limit:

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

Set span to encompass the EBW (or, alternatively, the entire 99% occupied bandwidth) of the signal.

Set RBW = 500 kHz.

Set VBW ≥ 3 MHz.

Number of points in sweep ≥ 2 × span / RBW.

Sweep time = auto.

Detector = power averaging (rms)

Trace average at least 100 traces in power averaging (rms) mode; however, the number of traces to be averaged shall be increased above 100 as needed to ensure that the average accurately represents the true average over the on and off periods of the transmitter. Use the peak search function on the instrument to find the peak of the spectrum and record its value. Add 10 log (1/x), where x is the duty cycle.

#### Measurement Uncertainty:

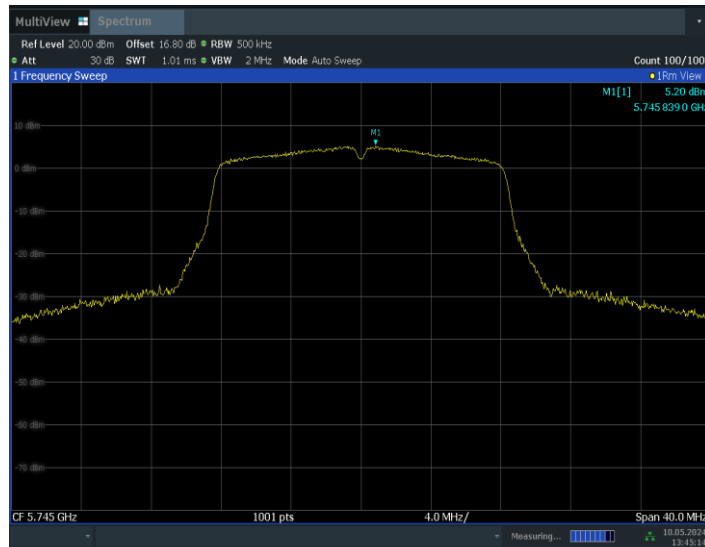
Measurement Uncertainty	0.75dB
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EUT ID: UT18a

#### Measurement Results:

Mode	Channel	Power Spectral Density ( dBm/500kHz )	Conclusion
802.11a	149	5.20	P
	157	5.01	P
	165	5.00	P
802.11n HT20	149	4.95	P
	157	4.82	P
	165	4.87	P
802.11ac HT40	151	1.50	P
	159	1.29	P
802.11ac HT80	155	-1.53	P





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**Peak Power Spectral Density:11a CH149**

**Conclusion: PASS**

#### **A.4. 6dB Emission Bandwidth**

##### **Measurement Limit:**

<b>Standard</b>	<b>Limit (kHz)</b>
FCC 47 CFR Part 15.407 (e)	≥ 500

Set RBW = 100 kHz.

Set the video bandwidth (VBW) ≥ 3 × RBW.

Detector = Peak.

Trace mode = max hold.

Sweep = auto couple.

Allow the trace to stabilize.

Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

##### **Measurement Uncertainty:**

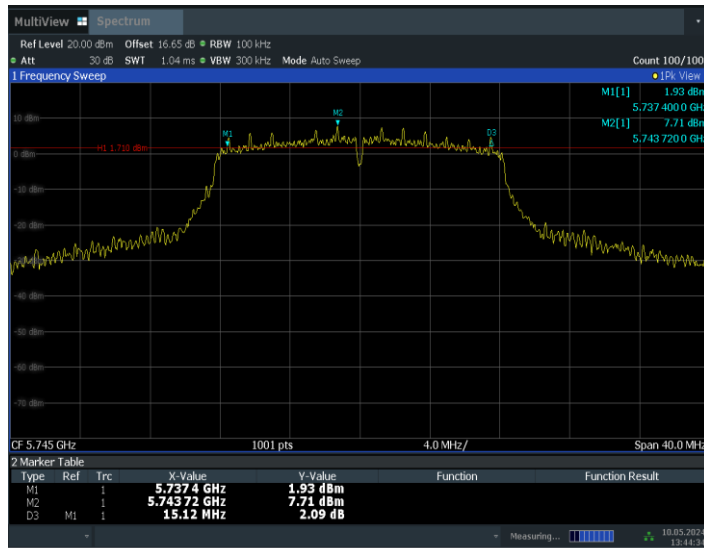
Measurement Uncertainty	60.80Hz
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**EUT ID: UT18a**

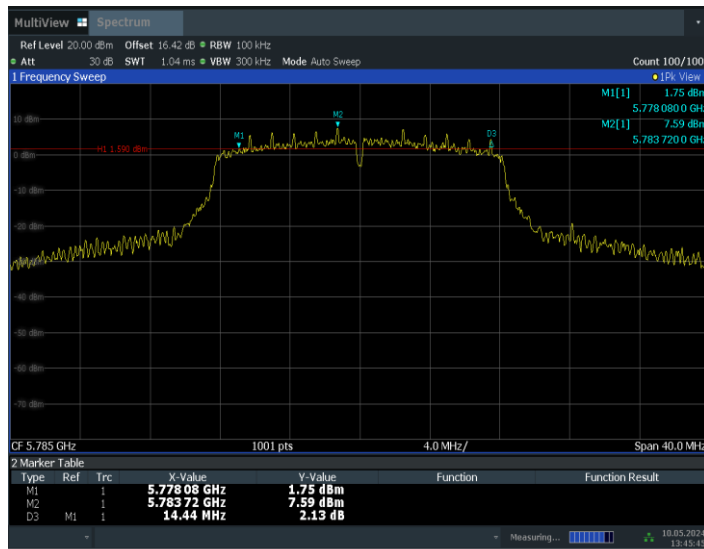
##### **Measurement Result:**

<b>Mode</b>	<b>Channel</b>	<b>6dB Emission Bandwidth ( MHz)</b>		<b>conclusion</b>
802.11a	149	Fig.1	15.12	P
	157	Fig.2	14.44	P
	165	Fig.3	15.12	P
802.11n HT20	149	Fig.4	15.12	P
	157	Fig.5	15.12	P
	165	Fig.6	15.12	P
802.11ac (VHT40)	151	Fig.7	36.32	P
	159	Fig.8	36.32	P
802.11ac (VHT80)	155	Fig.9	76.32	P

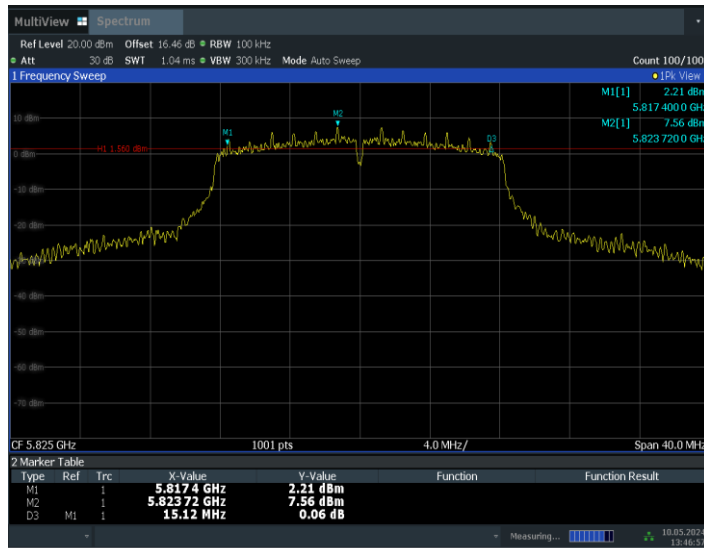
**Test graphs as below:**



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

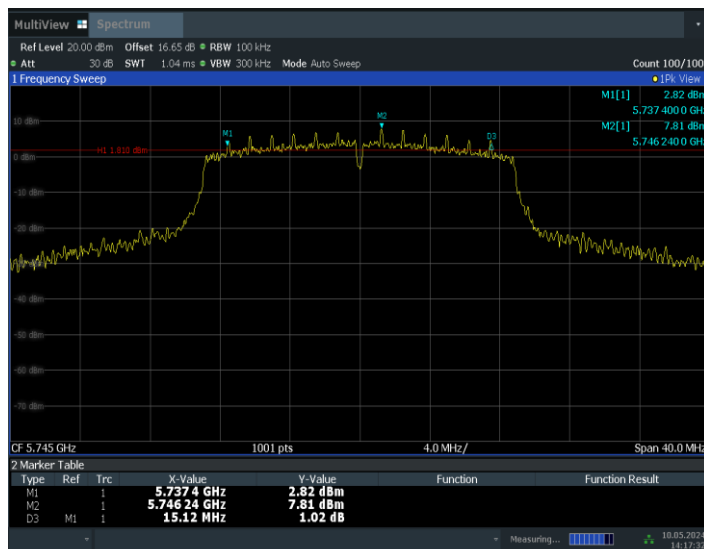


**Fig. 2 6dB Emission Bandwidth (802.11a, Ch 157)**



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



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

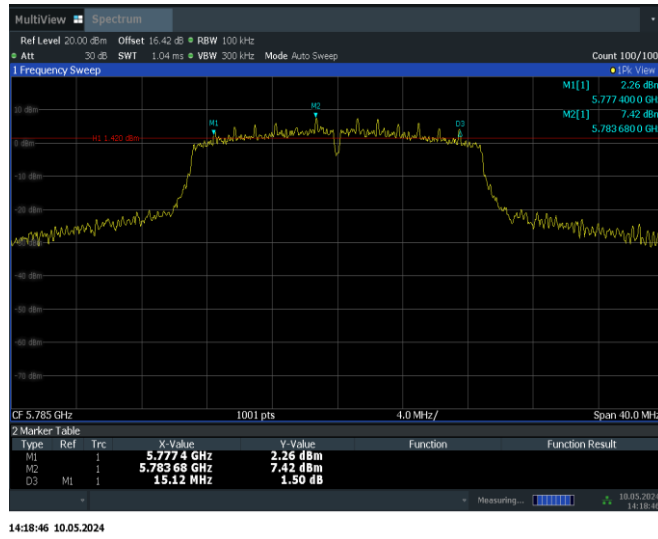


Fig. 5 6dB Emission Bandwidth (802.11n-HT20, Ch 157)

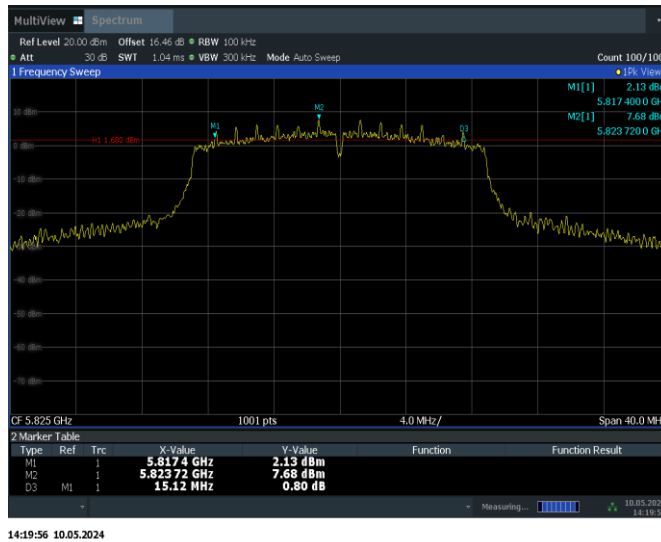


Fig. 6 6dB Emission Bandwidth (802.11n-HT20, Ch 165)

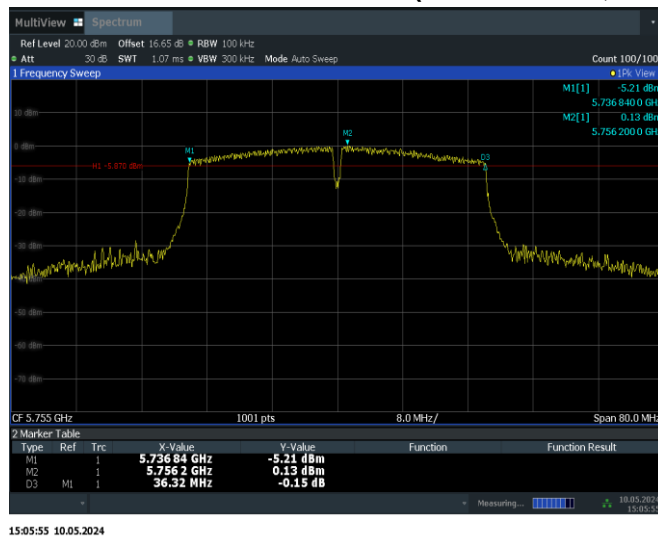
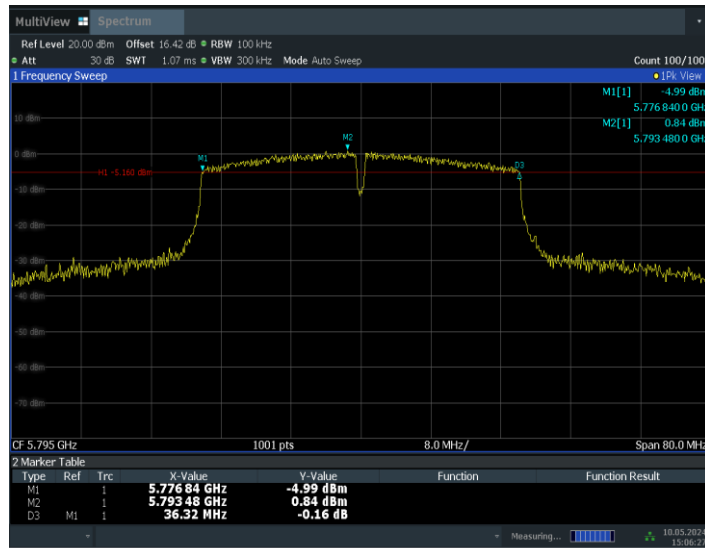
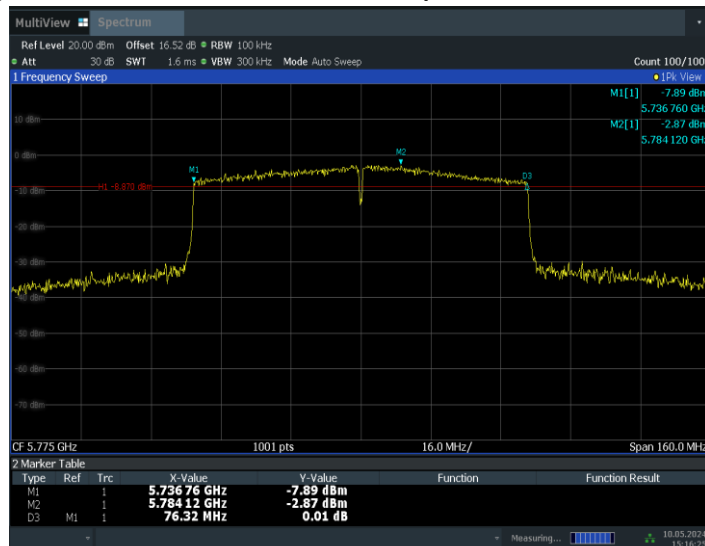


Fig. 7 6dB Emission Bandwidth (802.11ac-VHT40, Ch 151)



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



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

**Conclusion: PASS**

## **A.5. Transmitter Spurious Emission**

### **A.5.1 Transmitter Spurious Emission - Radiated**

#### **Measurement Limit:**

Standard	Frequency (MHz)	Limit (dBm/MHz)
FCC 47 CFR Part 15.407	5725MHz~5850MHz	< -27

The measurement is made according to ANSI C63.10 .

In addition, radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified in § 15.209(a) (see § 15.205(c)).

#### **Limit in restricted band:**

Frequency of emission (MHz)	Field strength (uV/m)	Field strength (dBµV/m)	Measurement distance(m)
30-88	100	40.0	3
88-216	150	43.5	3
216-960	200	46.0	3
Above 960	500	54.0	3

#### **Measurement Results:**

##### **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.

**Conclusion: PASS**

**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)
17991.800	43.61	-29.59	45.95	27.25	54.00	10.39	H
17990.700	43.56	-29.59	45.95	27.20	54.00	10.44	V
14479.500	36.60	-29.56	41.90	24.26	54.00	17.40	V
14475.600	36.46	-29.56	41.90	24.12	54.00	17.54	H
11859.800	33.20	-32.73	39.15	26.78	54.00	20.80	H
11883.500	33.16	-32.53	39.10	26.59	54.00	20.84	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)
17996.700	43.81	-29.59	45.95	27.45	54.00	10.19	V
17996.200	43.70	-29.59	45.95	27.34	54.00	10.30	V
14494.900	37.15	-29.56	41.90	24.81	54.00	16.85	H
14483.900	36.50	-29.56	41.90	24.16	54.00	17.50	V
11798.800	33.41	-32.09	39.20	26.30	54.00	20.59	V
11883.500	33.40	-32.53	39.10	26.83	54.00	20.60	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)
17975.800	43.96	-29.59	45.95	27.60	54.00	10.04	V
17983.000	43.86	-29.59	45.95	27.50	54.00	10.14	H
14489.400	36.64	-29.56	41.90	24.30	54.00	17.36	V
14490.500	36.52	-29.56	41.90	24.18	54.00	17.48	V
11903.200	33.81	-32.53	39.10	27.24	54.00	20.19	V
11849.900	33.60	-32.73	39.15	27.18	54.00	20.40	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)
17958.200	43.70	-29.59	45.95	27.34	54.00	10.30	H
17985.200	43.69	-29.59	45.95	27.33	54.00	10.31	H
14494.900	36.41	-29.56	41.90	24.07	54.00	17.59	H
14486.600	36.34	-29.56	41.90	24.00	54.00	17.66	V
11820.200	33.22	-32.09	39.20	26.11	54.00	20.78	V
11799.300	33.19	-32.09	39.20	26.08	54.00	20.81	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)
17996.700	43.79	-29.59	45.95	27.43	54.00	10.21	H
17994.500	43.78	-29.59	45.95	27.42	54.00	10.22	V
14489.900	36.71	-29.56	41.90	24.37	54.00	17.29	V
14499.800	36.51	-29.56	41.90	24.17	54.00	17.49	V
11806.500	33.55	-32.09	39.20	26.44	54.00	20.45	V
11890.600	33.54	-32.53	39.10	26.97	54.00	20.46	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)
17990.700	44.13	-29.59	45.95	27.77	54.00	9.87	H
17966.500	43.85	-29.59	45.95	27.49	54.00	10.15	V
14480.000	36.94	-29.56	41.90	24.60	54.00	17.06	V
14499.800	36.73	-29.56	41.90	24.39	54.00	17.27	H
11848.200	33.68	-32.73	39.15	27.26	54.00	20.32	V
11892.800	33.66	-32.53	39.10	27.09	54.00	20.34	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)
17982.400	44.18	-29.59	45.95	27.82	54.00	9.82	H
17997.800	44.11	-29.59	45.95	27.75	54.00	9.89	V
14481.100	37.05	-29.56	41.90	24.71	54.00	16.95	H
14481.600	37.03	-29.56	41.90	24.69	54.00	16.97	H
11887.900	34.00	-32.53	39.10	27.43	54.00	20.00	H
11878.500	33.85	-32.73	39.15	27.43	54.00	20.15	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)
17995.000	44.16	-29.59	45.95	27.80	54.00	9.84	V
17973.600	43.88	-29.59	45.95	27.52	54.00	10.12	H
14495.400	37.02	-29.56	41.90	24.68	54.00	16.98	H
14488.200	36.81	-29.56	41.90	24.47	54.00	17.19	V
11895.500	34.08	-32.53	39.10	27.51	54.00	19.92	H
11853.200	33.95	-32.73	39.15	27.53	54.00	20.05	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)
17970.300	43.66	-29.59	45.95	27.30	54.00	10.34	V
17990.700	43.63	-29.59	45.95	27.27	54.00	10.37	H
14497.600	36.40	-29.56	41.90	24.06	54.00	17.60	V
14484.400	36.25	-29.56	41.90	23.91	54.00	17.75	V
11872.500	33.47	-32.73	39.15	27.05	54.00	20.53	V
11895.000	33.45	-32.53	39.10	26.88	54.00	20.55	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)
17972.500	44.33	-29.59	45.95	27.97	54.00	9.67	V
17990.100	43.99	-29.59	45.95	27.63	54.00	10.01	H
14476.700	36.98	-29.56	41.90	24.64	54.00	17.02	V
14486.600	36.82	-29.56	41.90	24.48	54.00	17.18	V
11825.100	33.57	-32.09	39.20	26.46	54.00	20.43	V
11799.900	33.40	-32.09	39.20	26.29	54.00	20.60	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)
17971.400	43.97	-29.59	45.95	27.61	54.00	10.03	H
17991.200	43.97	-29.59	45.95	27.61	54.00	10.03	H
14485.500	36.83	-29.56	41.90	24.49	54.00	17.17	V
14490.500	36.61	-29.56	41.90	24.27	54.00	17.39	V
11896.600	33.53	-32.53	39.10	26.96	54.00	20.47	V
11891.100	33.45	-32.53	39.10	26.88	54.00	20.55	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)
17951.600	43.86	-29.59	45.95	27.50	54.00	10.14	H
17998.900	43.79	-29.59	45.95	27.43	54.00	10.21	H
14495.400	37.36	-29.56	41.90	25.02	54.00	16.64	H
14490.500	37.08	-29.56	41.90	24.74	54.00	16.92	V
11779.000	33.89	-32.71	39.20	27.40	54.00	20.11	H
11900.500	33.89	-32.53	39.10	27.32	54.00	20.11	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)
17969.200	43.55	-29.59	45.95	27.19	54.00	10.45	V
17997.800	43.53	-29.59	45.95	27.17	54.00	10.47	H
14492.600	36.90	-29.56	41.90	24.56	54.00	17.10	H
14482.200	36.48	-29.56	41.90	24.14	54.00	17.52	V
11907.100	34.02	-32.53	39.10	27.45	54.00	19.98	H
11920.900	33.63	-32.53	39.10	27.06	54.00	20.37	H

**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)
17994.000	43.80	-29.59	45.95	27.44	54.00	10.20	V
17974.200	43.74	-29.59	45.95	27.38	54.00	10.26	H
14487.700	36.68	-29.56	41.90	24.34	54.00	17.32	H
14489.900	36.33	-29.56	41.90	23.99	54.00	17.67	H
11897.200	33.51	-32.53	39.10	26.94	54.00	20.49	H
11837.800	33.49	-32.73	39.15	27.07	54.00	20.51	H

**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)
17955.500	55.30	-29.59	45.95	38.94	74.00	18.70	V
17996.200	54.36	-29.59	45.95	38.00	74.00	19.64	V
13707.200	48.90	-30.98	41.00	38.88	68.30	19.40	V
14567.500	48.66	-29.14	41.90	35.90	68.30	19.64	H
11835.000	44.42	-32.73	39.15	38.00	74.00	29.58	V
11871.900	44.13	-32.73	39.15	37.71	74.00	29.87	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)
17355.400	55.52	-28.74	43.40	40.86	68.30	12.78	V
17982.400	55.04	-29.59	45.95	38.68	74.00	18.96	H
13685.200	48.87	-30.98	41.00	38.85	68.30	19.43	V
14613.100	48.43	-30.67	41.70	37.40	68.30	19.87	V
11871.900	44.43	-32.73	39.15	38.01	74.00	29.57	H
11870.800	44.42	-32.73	39.15	38.00	74.00	29.58	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)
17973.600	54.86	-29.59	45.95	38.50	74.00	19.14	V
17975.800	54.70	-29.59	45.95	38.34	74.00	19.30	V
14703.900	48.69	-30.13	41.35	37.47	68.30	19.61	V
14572.400	48.54	-29.14	41.90	35.78	68.30	19.76	V
11869.700	44.58	-32.73	39.15	38.16	74.00	29.42	V
11787.200	44.38	-32.09	39.20	37.27	74.00	29.62	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)
17927.400	54.06	-29.59	45.95	37.70	74.00	19.94	V
17916.400	53.96	-29.59	45.95	37.60	74.00	20.04	H
14608.100	48.60	-30.67	41.70	37.57	68.30	19.70	V
14713.800	48.47	-30.13	41.35	37.25	68.30	19.83	V
11931.300	44.69	-32.42	39.05	38.06	74.00	29.31	V
11837.200	44.03	-32.73	39.15	37.61	74.00	29.97	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)
17995.600	55.19	-29.59	45.95	38.83	74.00	18.81	H
17951.600	54.64	-29.59	45.95	38.28	74.00	19.36	H
14687.400	48.63	-30.04	41.50	37.17	68.30	19.67	V
14578.500	48.46	-29.14	41.90	35.70	68.30	19.84	V
11893.900	44.84	-32.53	39.10	38.27	74.00	29.16	V
11754.800	44.32	-32.71	39.20	37.83	74.00	29.68	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)
17959.800	55.36	-29.59	45.95	39.00	74.00	18.64	V
17978.000	54.88	-29.59	45.95	38.52	74.00	19.12	H
14557.000	49.07	-29.14	41.90	36.31	68.30	19.23	H
14109.300	48.97	-30.93	41.70	38.19	68.30	19.33	V
11873.500	44.44	-32.73	39.15	38.02	74.00	29.56	V
11237.800	44.22	-32.99	38.65	38.56	74.00	29.78	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)
17968.700	54.81	-29.59	45.95	38.45	74.00	19.19	H
17942.200	54.72	-29.59	45.95	38.36	74.00	19.28	V
13707.800	49.46	-30.98	41.00	39.44	68.30	18.84	V
14151.100	49.00	-30.93	41.70	38.22	68.30	19.30	V
11879.000	45.70	-32.73	39.15	39.28	74.00	28.30	V
11904.400	45.23	-32.53	39.10	38.66	74.00	28.77	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)
17962.600	54.79	-29.59	45.95	38.43	74.00	19.21	H
17980.200	54.53	-29.59	45.95	38.17	74.00	19.47	V
14580.600	48.88	-29.14	41.90	36.12	68.30	19.42	V
14597.100	48.79	-29.14	41.90	36.03	68.30	19.51	V
11799.300	44.73	-32.09	39.20	37.62	74.00	29.27	V
11887.900	44.62	-32.53	39.10	38.05	74.00	29.38	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)
17968.700	55.20	-29.59	45.95	38.84	74.00	18.80	H
17229.500	54.35	-29.33	42.40	41.28	68.30	13.95	V
14298.500	48.97	-30.12	41.80	37.29	68.30	19.33	V
14202.200	48.76	-30.42	41.70	37.48	68.30	19.54	H
11885.600	44.34	-32.53	39.10	37.77	74.00	29.66	V
11588.100	44.20	-32.72	39.20	37.72	74.00	29.80	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)
17959.800	55.69	-29.59	45.95	39.33	74.00	18.31	V
17916.400	54.69	-29.59	45.95	38.33	74.00	19.31	H
14190.700	48.80	-30.42	41.70	37.52	68.30	19.50	V
14587.800	48.36	-29.14	41.90	35.60	68.30	19.94	H
11860.900	44.90	-32.73	39.15	38.48	74.00	29.10	V
11900.500	44.49	-32.53	39.10	37.92	74.00	29.51	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)
17982.400	54.44	-29.59	45.95	38.08	74.00	19.56	V
17983.000	54.43	-29.59	45.95	38.07	74.00	19.57	H
13782.600	48.54	-30.98	41.20	38.32	68.30	19.76	H
14189.000	48.48	-30.42	41.70	37.20	68.30	19.82	H
11808.100	44.76	-32.09	39.20	37.65	74.00	29.24	H
11891.700	44.49	-32.53	39.10	37.92	74.00	29.51	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)
17969.800	55.01	-29.59	45.95	38.65	74.00	18.99	V
17926.300	54.50	-29.59	45.95	38.14	74.00	19.50	V
14553.100	49.17	-30.55	41.90	37.82	68.30	19.13	H
14698.900	48.96	-30.04	41.50	37.50	68.30	19.34	V
11853.200	45.33	-32.73	39.15	38.91	74.00	28.67	V
11901.600	45.25	-32.53	39.10	38.68	74.00	28.75	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)
17993.400	54.26	-29.59	45.95	37.90	74.00	19.74	V
17972.500	54.18	-29.59	45.95	37.82	74.00	19.82	H
14187.400	48.88	-30.42	41.70	37.60	68.30	19.42	H
14560.300	48.86	-29.14	41.90	36.10	68.30	19.44	H
11878.000	44.73	-32.73	39.15	38.31	74.00	29.27	V
11882.900	44.72	-32.53	39.10	38.15	74.00	29.28	H

**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)
17942.200	54.36	-29.59	45.95	38.00	74.00	19.64	V
17996.200	54.31	-29.59	45.95	37.95	74.00	19.69	V
14590.000	49.14	-29.14	41.90	36.38	68.30	19.16	H
14191.200	48.74	-30.42	41.70	37.46	68.30	19.56	H
11683.800	44.89	-32.70	39.20	38.39	74.00	29.11	V
11856.000	44.74	-32.73	39.15	38.32	74.00	29.26	V

## **A.6. Band Edges Compliance**

### **A6.1 Band Edges - Radiated**

#### **Measurement Limit:**

<b>Standard</b>	<b>Limit (dBm/MHz)</b>	
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 D02

In addition, radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified in § 15.209(a) (see § 15.205(c)).

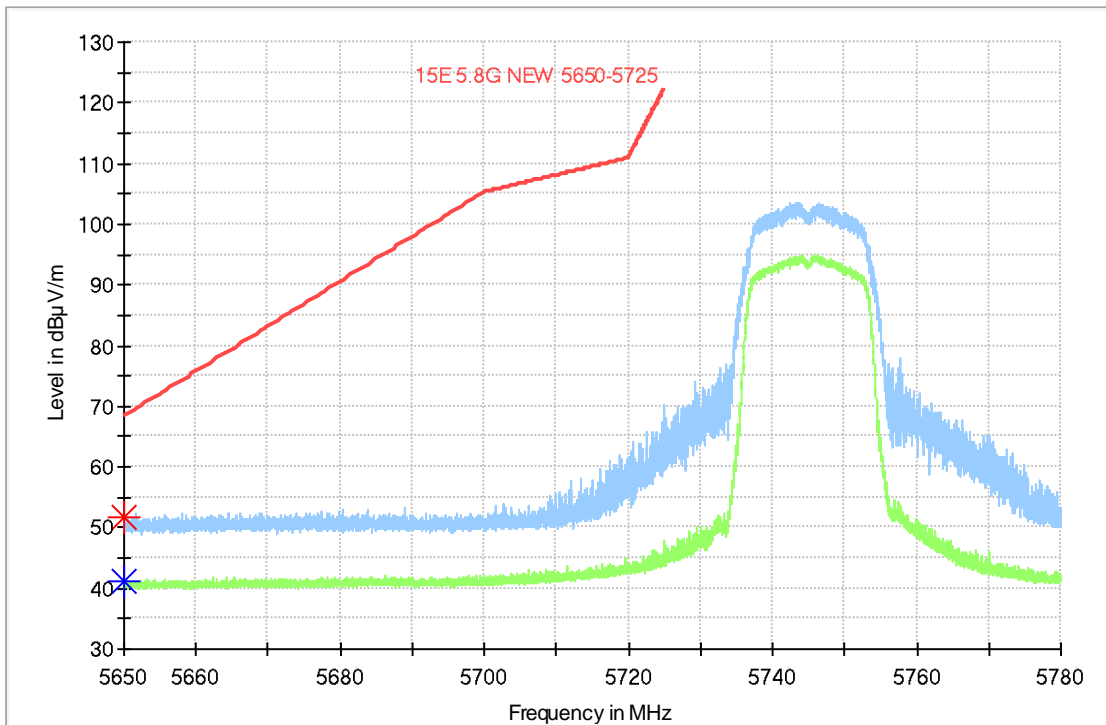
#### **Measurement Result:**

<b>Mode</b>	<b>Channel</b>	<b>Test Results</b>	<b>Conclusion</b>
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**

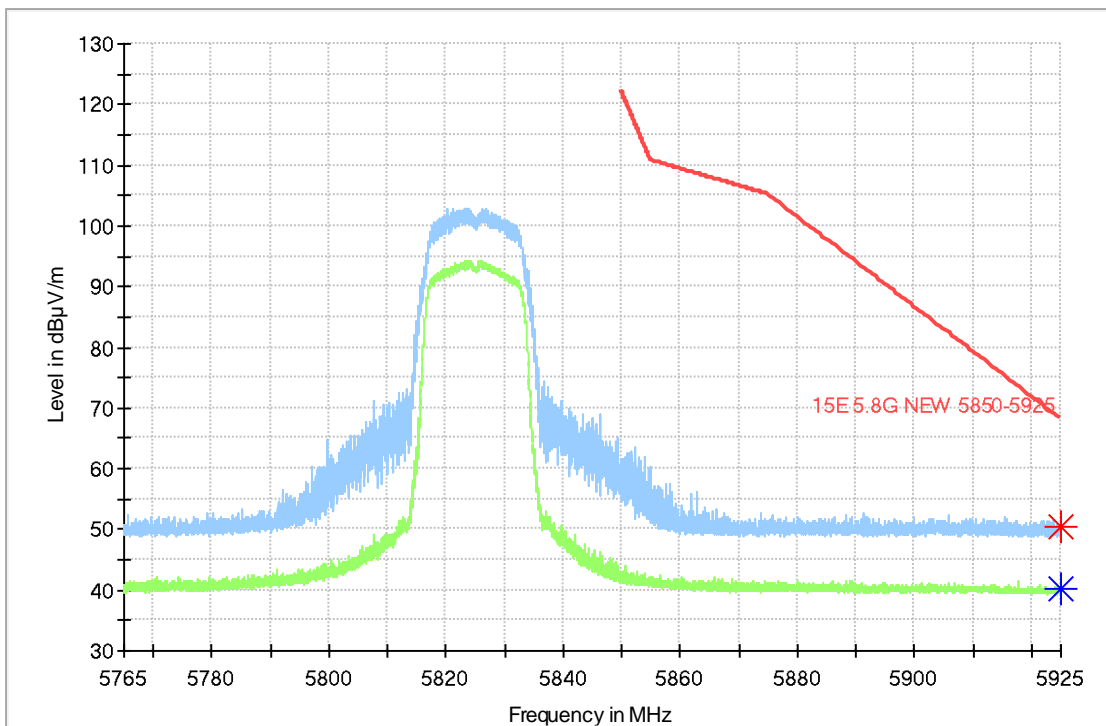
**Test graphs as below:**

Full Spectrum



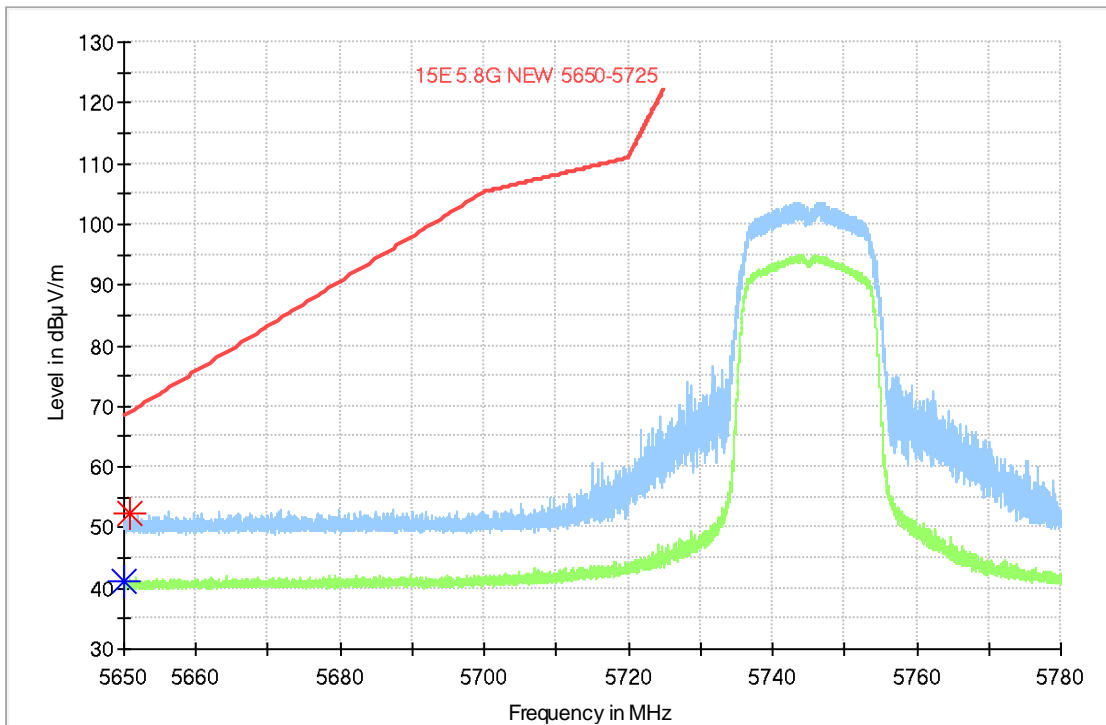
**Fig. 10 Band Edges (802.11a Ch149,5745MHz)**

Full Spectrum



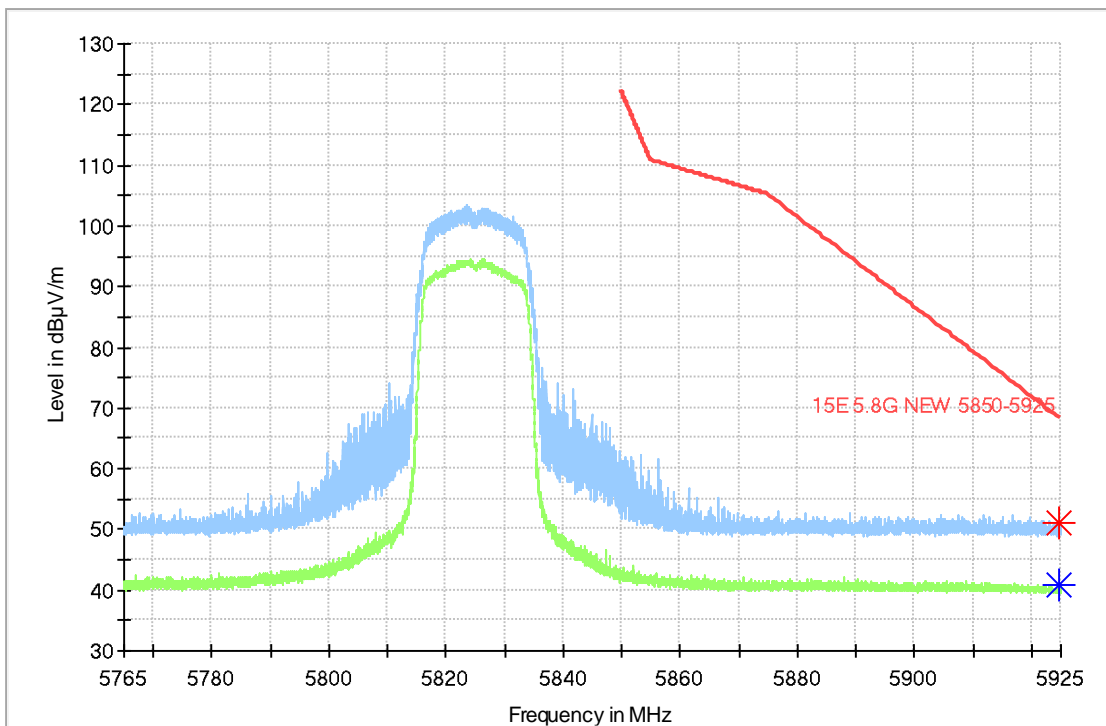
**Fig. 11 Band Edges (802.11a Ch165, 5825MHz)**

Full Spectrum



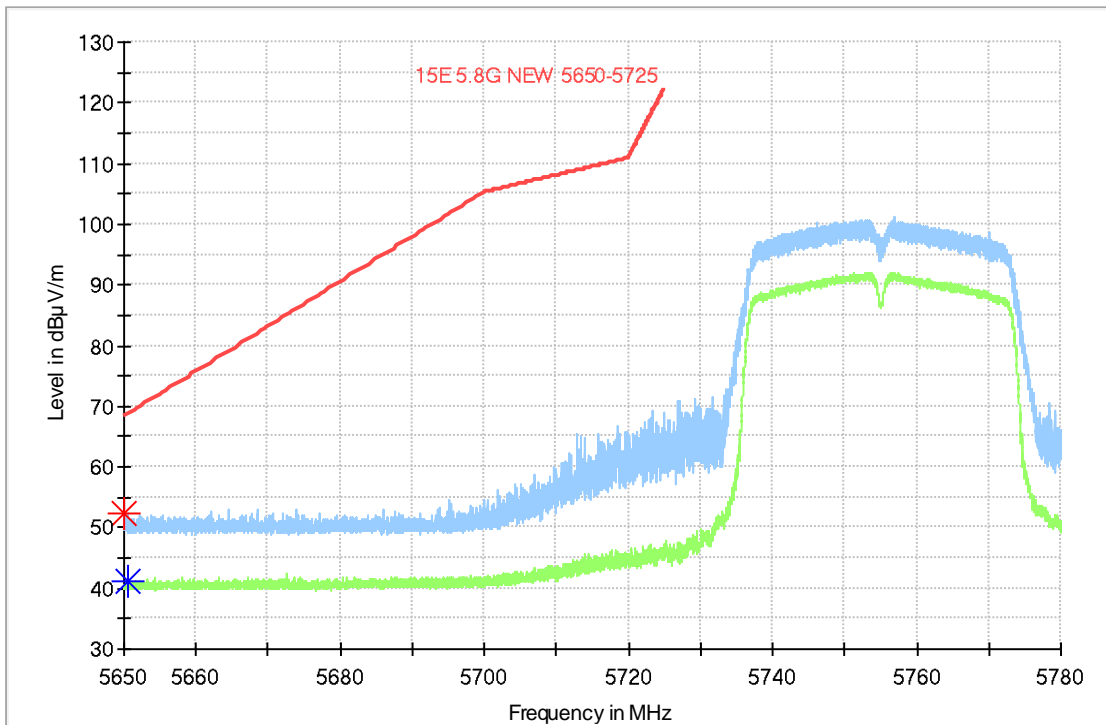
**Fig. 12 Band Edges (802.11n-HT20 Ch149, 5745MHz)**

Full Spectrum



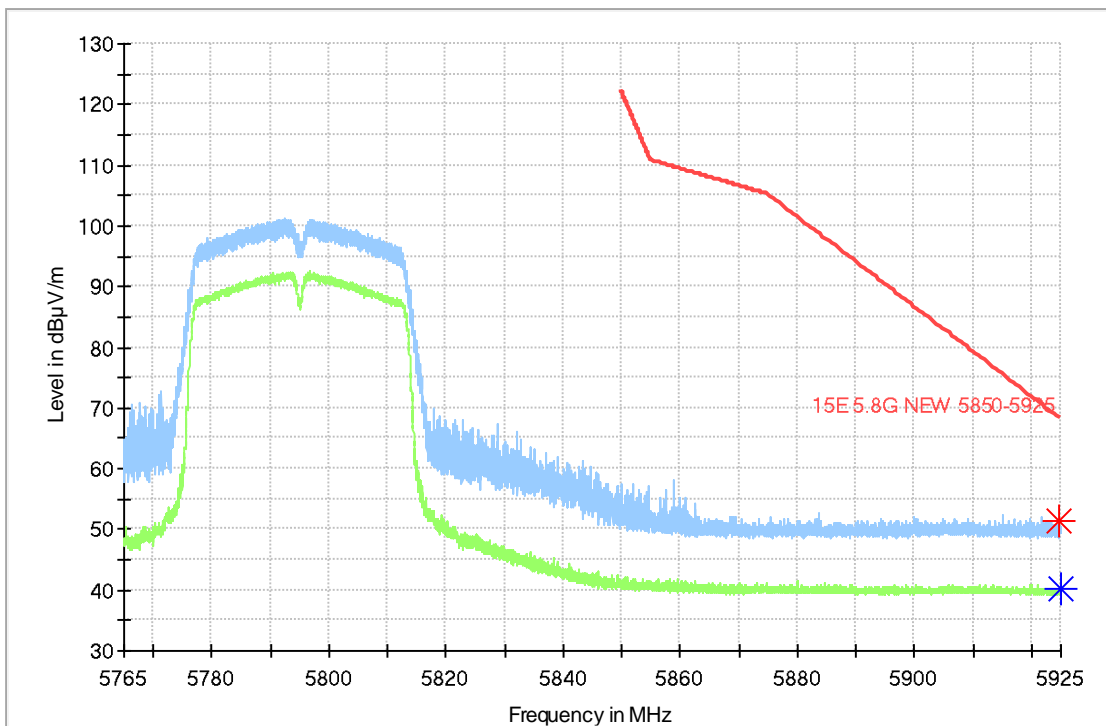
**Fig. 13 Band Edges (802.11n-HT20 Ch165, 5825MHz)**

Full Spectrum



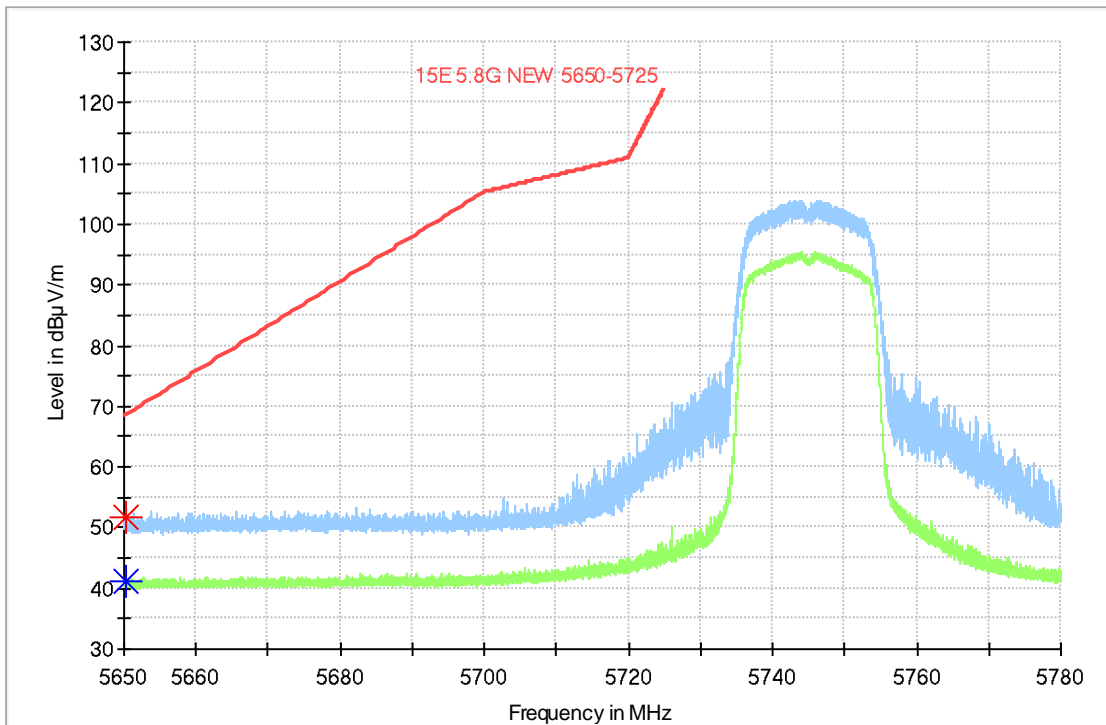
**Fig. 14 Band Edges (802.11n-HT40 Ch151, 5755MHz)**

Full Spectrum



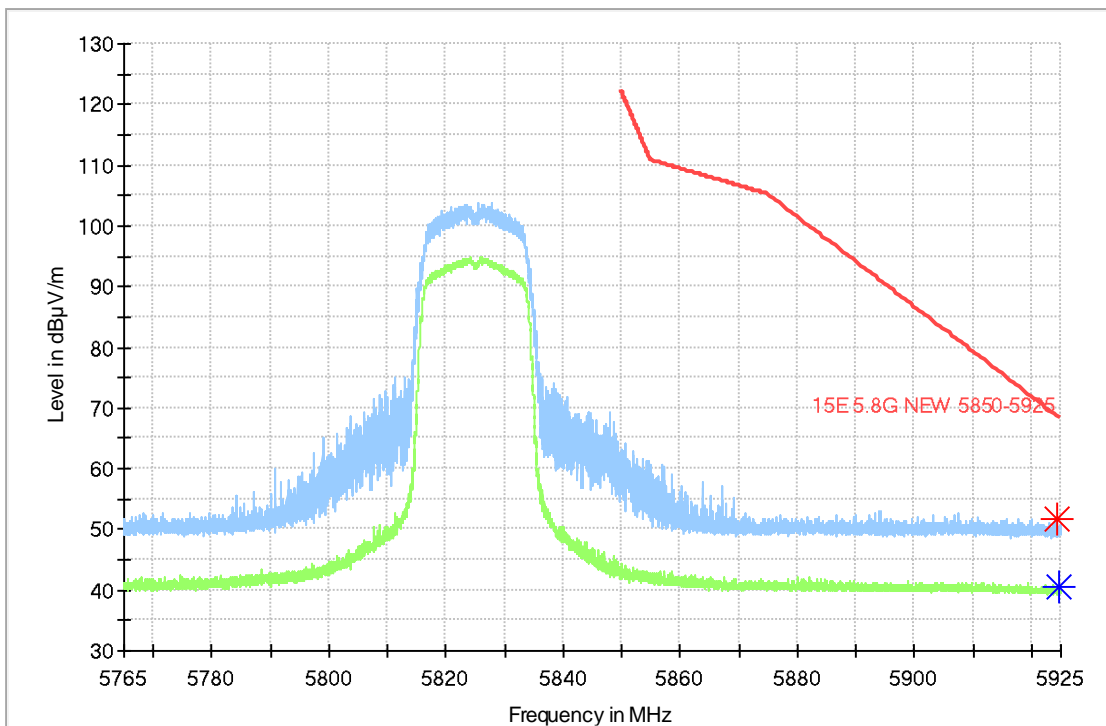
**Fig. 15 Band Edges (802.11n-HT40 Ch159, 5795MHz)**

Full Spectrum



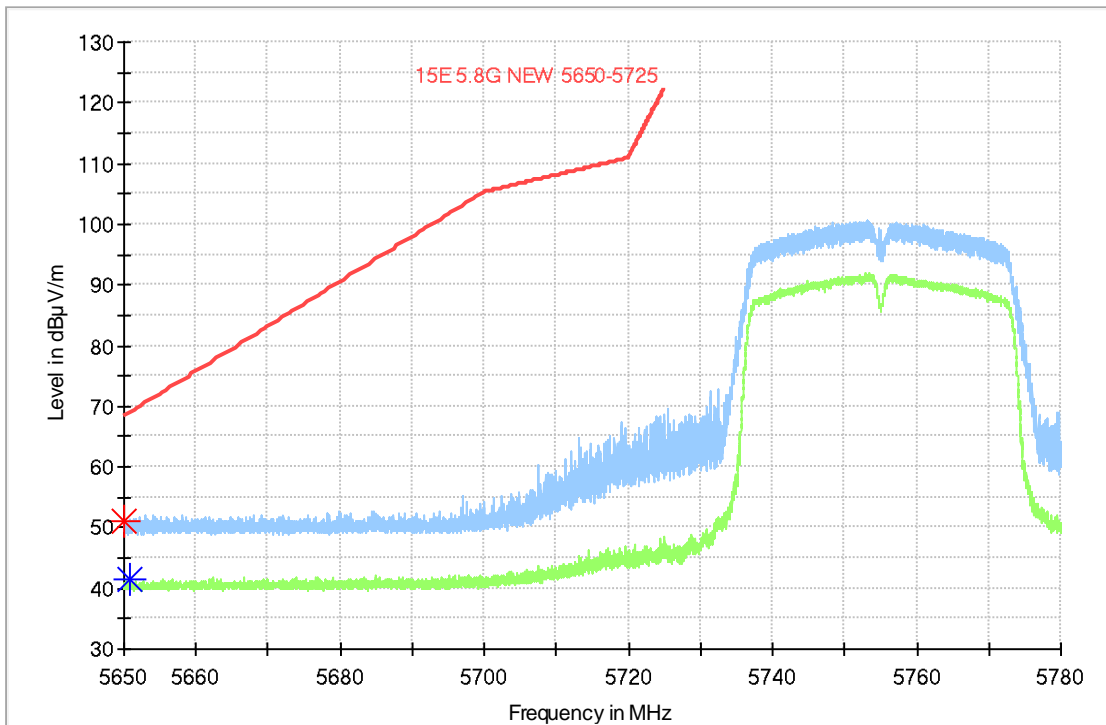
**Fig. 16 Band Edges (802.11ac-HT20 Ch149, 5745MHz)**

Full Spectrum



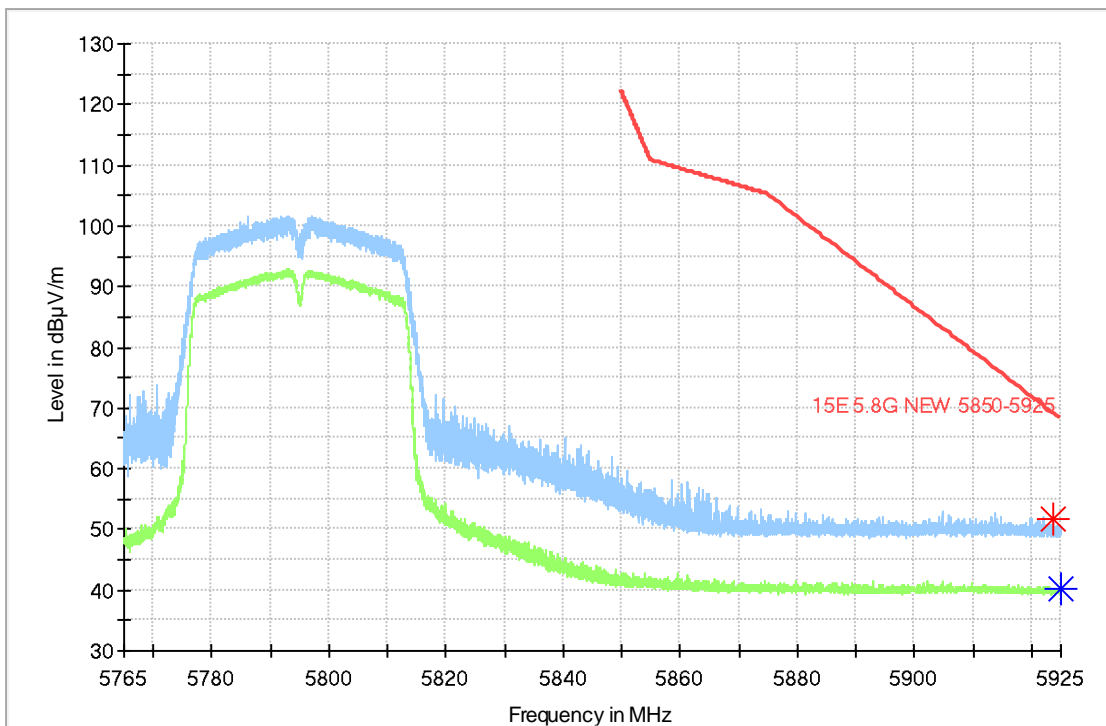
**Fig. 17 Band Edges (802.11ac-HT20 Ch165, 5825MHz)**

Full Spectrum



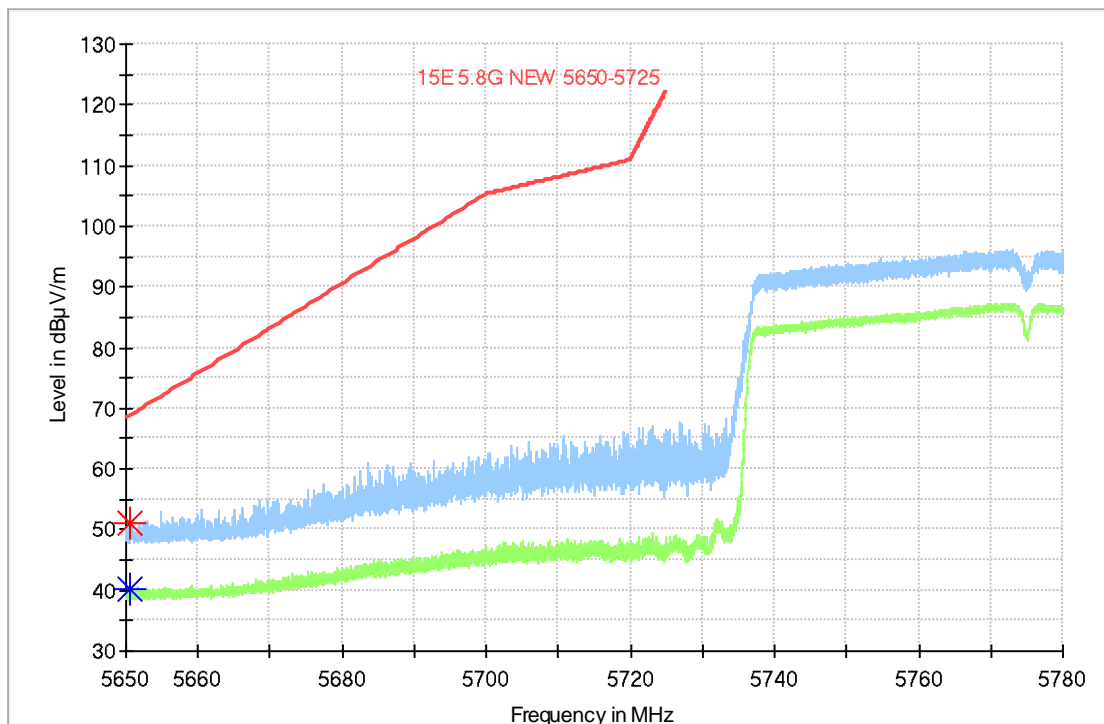
**Fig. 18 Band Edges (802.11ac-HT40 Ch151, 5755MHz)**

Full Spectrum



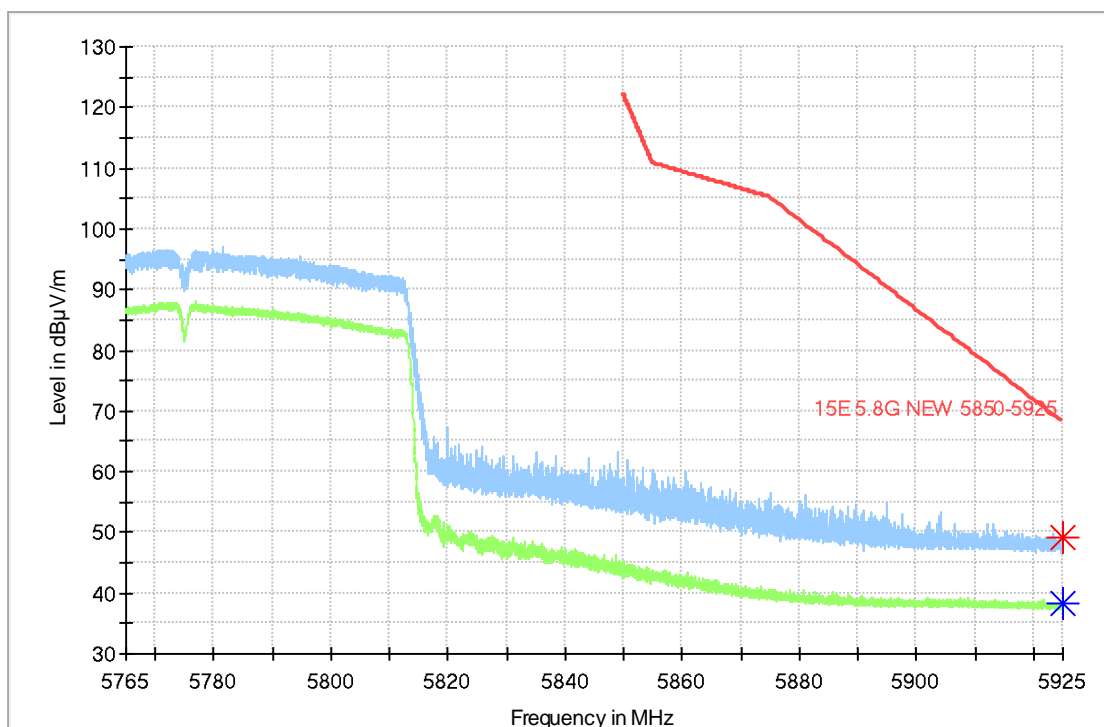
**Fig. 19 Band Edges (802.11ac-HT40 Ch159, 5795MHz)**

Full Spectrum



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

Full Spectrum



**Fig. 21 Band Edges (802.11ac-HT80, CH155, 5775MHz)**



## **A.7. AC Powerline Conducted Emission**

### **Method of Measurement: See ANSI C63.10-2013-clause 6.2**

- 1 The one EUT cable configuration and arrangement and mode of operation that produced the emission with the highest amplitude relative to the limit is selected for the final measurement, while applying the appropriate modulating signal to the EUT.
- 2 If the EUT is relocated from an exploratory test site to a final test site, the highest emissions shall be remaximized at the final test location before final ac power-line conducted emission measurements are performed.
- 3 The final test on all current-carrying conductors of all of the power cords to the equipment that comprises the EUT (but not the cords associated with other non-EUT equipment in the system) is then performed for the full frequency range for which the EUT is being tested for compliance without further variation of the EUT arrangement, cable positions, or EUT mode of operation.
- 4 If the EUT is comprised of equipment units that have their own separate ac power connections, e.g., floor-standing equipment with independent power cords for each shelf that are able to connect directly to the ac power network, each current-carrying conductor of one unit is measured while the other units are connected to a second (or more) LISN(s). All units shall be separately measured. If a power strip is provided by the manufacturer, to supply all of the units making up the EUT, only the conductors in the power cord of the power strip shall be measured.
- 5 If the EUT uses a detachable antenna, these measurements shall be made with a suitable dummy load connected to the antenna output terminals; otherwise, the tests shall be made with the antenna connected and, if adjustable, fully extended. When measuring the ac conducted emissions from a device that operates between 150 kHz and 30 MHz a non-detachable antenna may be replaced with a dummy load for the measurements within the fundamental emission band of the transmitter, but only for those measurements.<sup>36</sup> Record the six highest EUT emissions relative to the limit of each of the current-carrying conductors of the power cords of the equipment that comprises the EUT over the frequency range specified by the procuring or regulatory agency. Diagram or photograph the test setup that was used. See Clause 8 for full reporting requirements.

### **Test Condition:**

<b>Voltage (V)</b>	<b>Frequency (Hz)</b>
110	60

**Measurement Result and limit:**

## WLAN (Quasi-peak Limit)

Frequency range (MHz)	Quasi-peak Limit (dB $\mu$ V)	Result (dB $\mu$ V)		Conclusion
		With charger (First source)		
		802.11a	Idle	
0.15 to 0.5	66 to 56	Fig.22	Fig.23	<b>P</b>
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 (First source)		
		802.11a	Idle	
0.15 to 0.5	56 to 46	Fig.22	Fig.23	<b>P</b>
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.

## WLAN (Quasi-peak Limit)

Frequency range (MHz)	Quasi-peak Limit (dB $\mu$ V)	Result (dB $\mu$ V)		Conclusion
		With charger (Second source)		
		802.11a	Idle	
0.15 to 0.5	67 to 56	Fig.24	/	<b>P</b>
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.

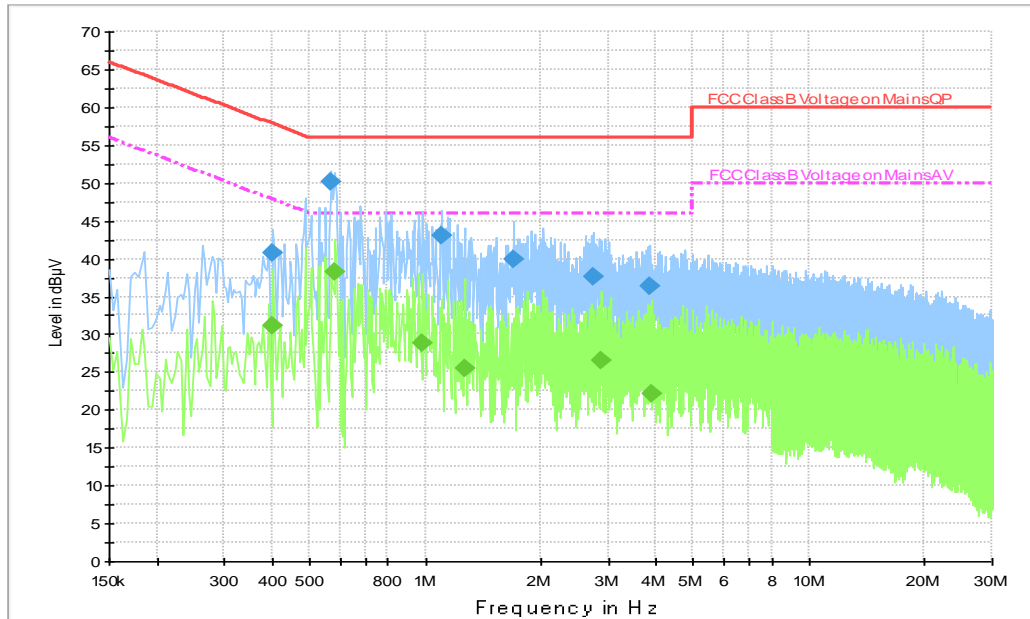
## WLAN (Average Limit)

Frequency range (MHz)	Average Limit (dB $\mu$ V)	Result (dB $\mu$ V)		Conclusion
		With charger (Second source)		
		802.11a	Idle	
0.15 to 0.5	56 to 46	Fig.24	/	<b>P</b>
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.

**Conclusion: PASS**

**Test graphs as below:**



**Fig. 22 AC Powerline Conducted Emission-802.11a(First source)**

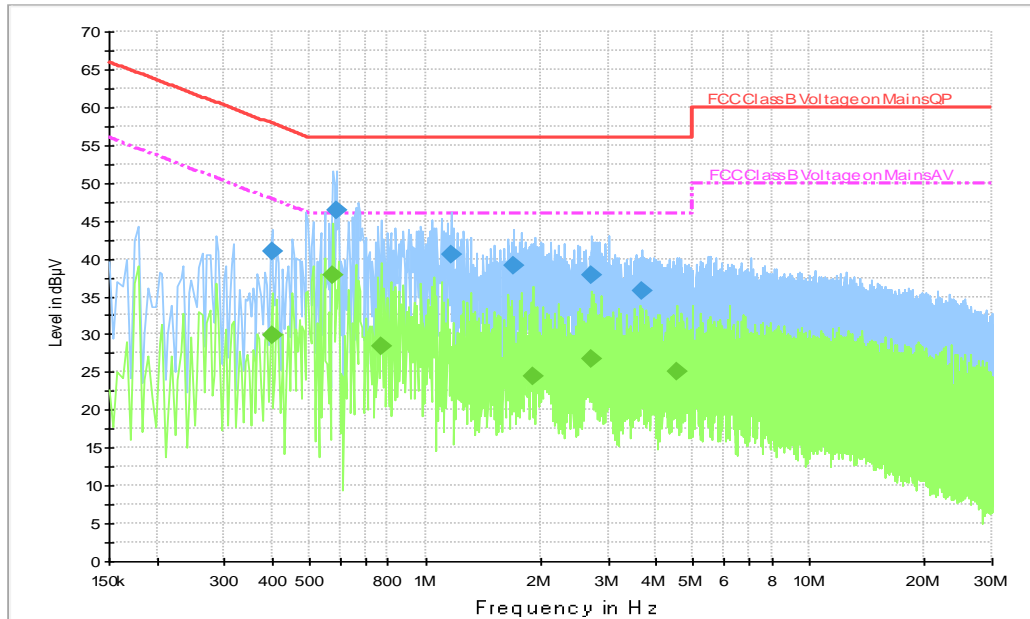
Note: The graphic result above is the maximum of the measurements for both phase line and neutral line.

**Final Result 1**

Frequency (MHz)	QuasiPeak (dBµV)	Meas. Time	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.402000	40.7	2000.0	9.000	On	L1	20.0	17.1	57.8
0.570000	50.2	2000.0	9.000	On	L1	20.0	5.8	56.0
1.102000	43.0	2000.0	9.000	On	N	19.7	13.0	56.0
1.698000	40.0	2000.0	9.000	On	L1	19.8	16.0	56.0
2.742000	37.6	2000.0	9.000	On	L1	19.8	18.4	56.0
3.854000	36.3	2000.0	9.000	On	L1	19.8	19.7	56.0

**Final Result 2**

Frequency (MHz)	CAverage (dBµV)	Meas. Time	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.402000	31.1	2000.0	9.000	On	L1	20.0	16.7	47.8
0.582000	38.3	2000.0	9.000	On	L1	20.0	7.7	46.0
0.982000	28.9	2000.0	9.000	On	L1	19.9	17.1	46.0
1.266000	25.5	2000.0	9.000	On	N	19.7	20.5	46.0
2.890000	26.5	2000.0	9.000	On	L1	19.8	19.5	46.0
3.898000	22.1	2000.0	9.000	On	N	19.6	23.9	46.0



**Fig. 23 AC Powerline Conducted Emission-Idle(First source)**

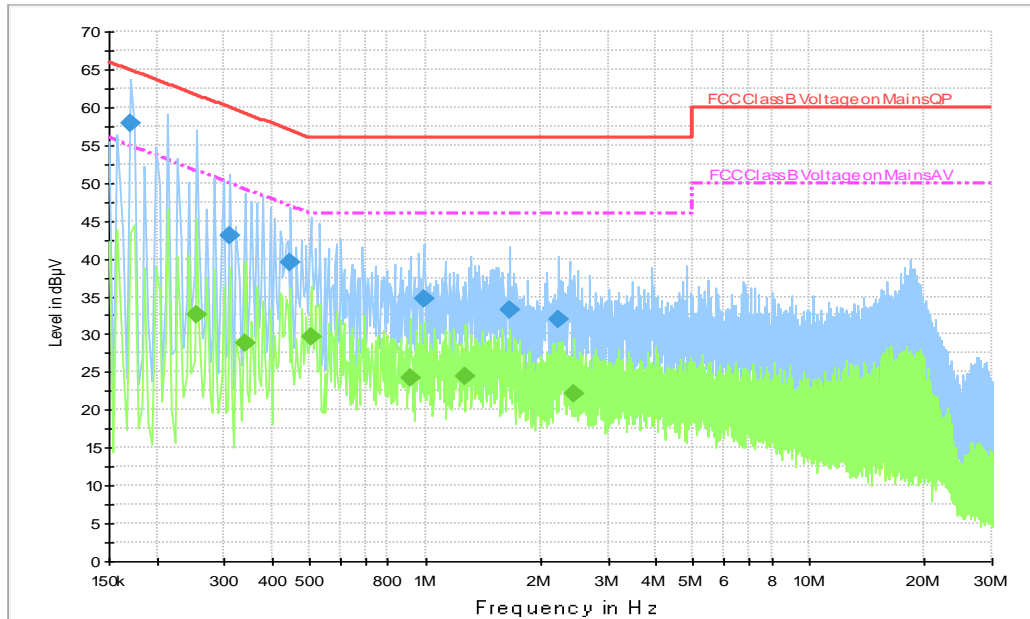
Note: The graphic result above is the maximum of the measurements for both phase line and neutral line.

**Final Result 1**

Frequency (MHz)	QuasiPeak (dBµV)	Meas. Time	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.398000	41.0	2000.0	9.000	On	L1	20.0	16.9	57.9
0.586000	46.4	2000.0	9.000	On	L1	20.0	9.6	56.0
1.166000	40.5	2000.0	9.000	On	L1	19.9	15.5	56.0
1.702000	39.1	2000.0	9.000	On	L1	19.8	16.9	56.0
2.726000	37.7	2000.0	9.000	On	L1	19.8	18.3	56.0
3.678000	35.7	2000.0	9.000	On	N	19.6	20.3	56.0

**Final Result 2**

Frequency (MHz)	CAverage (dBµV)	Meas. Time	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.398000	29.8	2000.0	9.000	On	L1	20.0	18.1	47.9
0.574000	37.8	2000.0	9.000	On	L1	20.0	8.2	46.0
0.766000	28.5	2000.0	9.000	On	N	19.8	17.5	46.0
1.906000	24.5	2000.0	9.000	On	N	19.6	21.5	46.0
2.726000	26.7	2000.0	9.000	On	L1	19.8	19.3	46.0
4.518000	25.0	2000.0	9.000	On	L1	19.8	21.0	46.0



**Fig. 24 AC Powerline Conducted Emission-802.11a(Second source)**

Note: 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)
0.170000	57.9	2000.0	9.000	On	L1	19.9	7.0	65.0
0.310000	43.1	2000.0	9.000	On	L1	19.9	16.8	60.0
0.446000	39.4	2000.0	9.000	On	L1	20.0	17.5	56.9
0.990000	34.6	2000.0	9.000	On	N	19.7	21.4	56.0
1.662000	33.3	2000.0	9.000	On	N	19.7	22.7	56.0
2.226000	32.1	2000.0	9.000	On	N	19.6	23.9	56.0

**Final Result 2**

Frequency (MHz)	CAverage (dBµV)	Meas. Time	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.254000	32.6	2000.0	9.000	On	L1	19.9	19.0	51.6
0.338000	28.8	2000.0	9.000	On	L1	19.9	20.5	49.3
0.502000	29.7	2000.0	9.000	On	L1	20.0	16.3	46.0
0.914000	24.3	2000.0	9.000	On	L1	19.9	21.7	46.0
1.274000	24.5	2000.0	9.000	On	L1	19.9	21.5	46.0
2.454000	22.2	2000.0	9.000	On	L1	19.8	23.8	46.0

### A.8. Antenna Requirement

The antenna of the device is permanently attached. There are no provisions for connection to an external antenna.

The unit complies with the requirement of FCC Part 15.203.

### 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



The accreditation certificate features a decorative orange and blue wavy border on the left. At the top center, it displays the logos for ILAC-MRA and A2LA. Below these logos, the text reads "Accredited Laboratory" in a large, bold, blue font. Underneath, it states "A2LA has accredited" in a smaller font, followed by "TELECOMMUNICATION TECHNOLOGY LABS, CAICT" in a large, bold, blue font, and "Beijing, People's Republic of China" in a smaller font. The certificate specifies accreditation for "Electrical Testing" in the field of technical competence. A paragraph explains that the laboratory is accredited according to ISO/IEC 17025:2017. A gold seal on the left side of the certificate reads "CORPORATE SEAL 1978" and "A2LA". On the right side, there is a signature of Mr. Trace McInturf, Vice President of Accreditation Services, with his name and title printed below. The certificate number is 7049.01, valid until July 31, 2024. At the bottom, a note refers to the laboratory's Electrical Scope of Accreditation.

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