

MEASUREMENT REPORT

FCC PART 15.407 / WLAN 802.11a/n/ac

FCC ID: HD5-CT40PL0N

Applicant: Honeywell International Inc
Honeywell Safety and Productivity Solutions

Application Type: Class Permissive II change

Product: Mobile Computer

Model No.: CT40P-L0N

Brand Name: Honeywell

FCC Classification: Unlicensed National Information Infrastructure (NII)

FCC Rule Part(s): Part15 Subpart E (Section 15.407)

Test Procedure(s): ANSI C63.10-2013, KDB 789033 D02v02r01

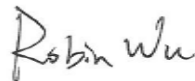
Test Date: June 23 ~ 24, 2021

Reviewed By:



Jame Yuan

Approved By:



Robin Wu



The test results relate only to the samples tested.

This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in KDB 789033 D02v02r01. Test results reported herein relate only to the item(s) tested.

The test report shall not be reproduced except in full without the written approval of MRT Technology (Suzhou) Co., Ltd.

Revision History

Report No.	Version	Description	Issue Date	Note
2106RSU027-U2	Rev. 01	Initial Report	07-01-2021	Valid

This is to request for Class II permissive change for FCC ID: HD5-CT40PL0N.

This application is based on:

1. Change Wi-Fi PA from Qovro QM48858 to Murata LMFE3NFB-J38, two chipsets are identical, meet pin-for-pin requirement, the unique difference is chipset model different.
2. There is not any change in design, circuitry or construction for this device.
3. We assessed some test items (Output power & Radiated Spurious Emission & Radiated Bandedge).

CONTENTS

Description	Page
1. General Information.....	5
1.1. Applicant.....	5
1.2. Manufacturer	5
1.3. Testing Facility	5
2. PRODUCT INFORMATION	6
2.1. Equipment Description.....	6
2.2. Radio Specification	6
2.3. Working Frequencies.....	7
2.4. Description of Available Antennas	7
2.5. Test Mode	8
2.6. Test Configuration and Software.....	8
2.7. EMI Suppression Device(s)/Modifications	8
2.8. Test Environment Condition.....	8
3. TEST EQUIPMENT CALIBRATION DATE	9
4. MEASUREMENT UNCERTAINTY	12
5. TEST RESULT	13
5.1. Summary	13
5.2. Output Power Measurement	14
5.2.1. Test Limit	14
5.2.2. Test Procedure Used	14
5.2.3. Test Setting.....	14
5.2.4. Test Setup	15
5.2.5. Test Result.....	16
5.3. Radiated Spurious Emission Measurement	20
5.3.1. Test Limit	20
5.3.2. Test Procedure Used	20
5.3.3. Test Setting.....	20
5.3.4. Test Setup	21
5.3.5. Test Result.....	22
5.4. Radiated Restricted Band Edge Measurement	26
5.4.1. Test Limit	26
5.4.2. Test Procedure Used	27
5.4.3. Test Setting.....	28
5.4.4. Test Setup	29

5.4.5. Test Result.....	30
6. CONCLUSION.....	42
Appendix A - Test Setup Photograph	43
Appendix B - EUT Photograph.....	44

1. General Information

1.1. Applicant

Honeywell International Inc
Honeywell Safety and Productivity Solutions
9680 Old Baires Road, Fort Mill, SC 29707 United States

1.2. Manufacturer

Honeywell International Inc
Honeywell Safety and Productivity Solutions
9680 Old Bailes Road, Fort Mill, SC 29707 United States

1.3. Testing Facility

☒	Test Site – MRT Suzhou Laboratory
	Laboratory Location (Suzhou – Wuzhong) D8 Building, No.2 Tian’edang Rd., Wuzhong Economic Development Zone, Suzhou, China
	Laboratory Location (Suzhou – SIP) 4b Building, Liando U Valley, No.200 Xingpu Rd., Shengpu Town, Suzhou Industrial Park, China
	Laboratory Accreditations
	A2LA: 3628.01 FCC: CN1166 VCCI: R-20025, G-20034, C-20020, T-20020
	CNAS: L10551 ISED: CN0001
☐	Test Site – MRT Shenzhen Laboratory
	Laboratory Location (Shenzhen) 1G, Building A, Junxiangda Building, Zhongshanyuan Road West, Nanshan District, Shenzhen, China
	Laboratory Accreditations
	A2LA: 3628.02 FCC: CN1284
CNAS: L10551 ISED: CN0105	
☐	Test Site – MRT Taiwan Laboratory
	Laboratory Location (Taiwan) No. 38, Fuxing 2 nd Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.)
	Laboratory Accreditations
	TAF: L3261-190725 FCC: 291082, TW3261
CNAS: L3261 ISED: TW3261	

2. PRODUCT INFORMATION

2.1. Equipment Description

Product Name	Mobile Computer
Model No.	CT40P-L0N
Serial No.	Conducted Sample: 21152B38D3
	Radiated Sample: 21152B38D4
Wi-Fi Specification	802.11a/b/g/n/ac
Bluetooth 1# Version	v5.0 dual mode
Bluetooth 2# Version	v5.1 single mode, LE only
NFC Working Frequency	13.56MHz
Accessories	
USB Adapter	Model No.: ADS-12B-06 05010E Input Power: 100 - 240V ~ 50/60Hz, Max. 0.3A Output Power: 5VDC 2.0A
Rechargeable Li-ion Battery	Model No.: CT50-BTSC Capacitance: 4020mAh/15.5Wh Rated Voltage: 3.85V

Note: The information of EUT was provided by the manufacturer, and the accuracy of the information shall be the responsibility of the manufacturer.

2.2. Radio Specification

Frequency Range	For 802.11a/n-HT20/ac-VHT20: 5180~5240MHz, 5260~5320MHz, 5500~5720MHz, 5745~5825MHz For 802.11n-HT40/ac-VHT40: 5190~5230MHz, 5270~5310MHz, 5510~5710MHz, 5755~5795MHz For 802.11ac-VHT80: 5210MHz, 5290MHz, 5530MHz, 5610MHz, 5690MHz, 5775MHz
Type of Modulation	802.11a/n/ac: OFDM
Data Rate	802.11a: 6/9/12/18/24/36/48/54Mbps 802.11n: up to 150Mbps 802.11ac: up to 866.6Mbps

Note: For other features of this EUT, test report will be issued separately.

2.3. Working Frequencies

802.11a /n-HT20 / ac-VHT20

Channel	Frequency	Channel	Frequency	Channel	Frequency
36	5180 MHz	40	5200 MHz	44	5220 MHz
48	5240 MHz	52	5260 MHz	56	5280 MHz
60	5300 MHz	64	5320 MHz	100	5500 MHz
104	5520 MHz	108	5540 MHz	112	5560 MHz
116	5580 MHz	120	5600 MHz	124	5620 MHz
128	5640 MHz	132	5660 MHz	136	5680 MHz
140	5700 MHz	144	5720 MHz	149	5745 MHz
153	5765 MHz	157	5785 MHz	161	5805 MHz
165	5825 MHz	--	--	--	--

802.11ac-VHT40/ n-HT40

Channel	Frequency	Channel	Frequency	Channel	Frequency
38	5190 MHz	46	5230 MHz	54	5270 MHz
62	5310 MHz	102	5510 MHz	110	5550 MHz
118	5590 MHz	126	5630 MHz	134	5670 MHz
142	5710 MHz	151	5755 MHz	159	5795 MHz

802.11ac-VHT80

Channel	Frequency	Channel	Frequency	Channel	Frequency
42	5210 MHz	58	5290 MHz	106	5530 MHz
122	5610 MHz	138	5690 MHz	155	5775 MHz

2.4. Description of Available Antennas

Antenna Type	Frequency Band(GHz)	Antenna Gain (dBi)		Directional Gain (dBi)	
		Ant 0	Ant 1	For Power	For PSD
FPC Antenna	2.4~2.5	0.60	2.20	2.20	5.21
	5.1~5.725	1.30	1.80	1.80	4.81
	5.725~5.85	3.35	2.48	3.35	6.36

Note 1: SISO mode is only for Ant 0 port.

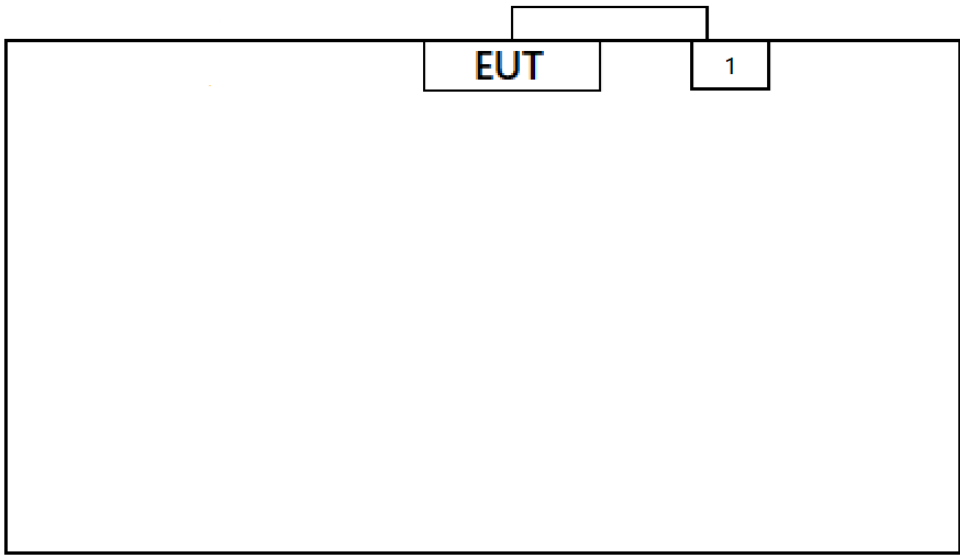
Note 2: The EUT supports Cyclic Delay Diversity (CDD) mode, and CDD signals are correlated.

2.5. Test Mode

Test Mode	Mode 1: Transmit by 802.11a (6Mbps)
	Mode 2: Transmit by 802.11n-HT20 (MCS0)
	Mode 3: Transmit by 802.11n-HT40 (MCS0)
	Mode 4: Transmit by 802.11ac-VHT20 (MCS0)
	Mode 5: Transmit by 802.11ac-VHT40 (MCS0)
	Mode 6: Transmit by 802.11ac-VHT80 (MCS0)

2.6. Test Configuration and Software

The device was tested per the guidance ANSI C63.10-2013 that was used to reference the appropriate EUT setup for radiated spurious emissions and AC line conducted emission testing.

			
Product		Manufacturer	Model No.
1	Notebook	Lenovo	E431

Note 1: The test utility software used during testing was “QRCT”, and the version was 3.0.268.0.

Note 2: Detail power setting refer to operation description.

2.7. EMI Suppression Device(s)/Modifications

No EMI suppression device(s) were added and/or no modifications were made during testing.

2.8. Test Environment Condition

Ambient Temperature	15 ~ 35 °C
Relative Humidity	20 ~ 75 %RH

3. TEST EQUIPMENT CALIBRATION DATE

Radiated Emission (WZ-AC1)

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
EMI Test Receiver	R&S	ESR7	MRTSUE06001	1 year	2022/01/04
Loop Antenna	Schwarzbeck	FMZB 1519	MRTSUE06025	1 year	2021/11/08
Bilog Period Antenna	Schwarzbeck	VULB 9168	MRTSUE06172	1 year	2021/08/08
Horn Antenna	Schwarzbeck	BBHA 9120D	MRTSUE06023	1 year	2021/09/27
Horn Antenna	Schwarzbeck	BBHA9170	MRTSUE06597	1 year	2021/12/14
Microwave System Amplifier	Agilent	83017A	MRTSUE06076	1 year	2021/11/14
Preamplifier	Schwarzbeck	BBV 9721	MRTSUE06121	1 year	2022/06/10
Thermal Hygrometer	testo	608-H1	MRTSUE06403	1 year	2021/07/26
Anechoic Chamber	TDK	Chamber-AC1	MRTSUE06212	1 year	2022/04/29

Radiated Emission (WZ-AC2)

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
MXE EMI Receiver	Keysight	N9038A	MRTSUE06125	1 year	2021/07/02
Loop Antenna	Schwarzbeck	FMZB 1519	MRTSUE06025	1 year	2021/11/08
Bilog Period Antenna	Schwarzbeck	VULB 9162	MRTSUE06022	1 year	2022/05/24
Broad-Band Horn Antenna	Schwarzbeck	BBHA 9120D	MRTSUE06171	1 year	2021/10/25
Horn Antenna	Schwarzbeck	BBHA9170	MRTSUE06597	1 year	2021/12/14
Broadband Coaxial Preamplifier	Schwarzbeck	BBV 9718	MRTSUE06176	1 year	2021/11/14
Thermal Hygrometer	Minggao	ETH529	MRTSUE06170	1 year	2021/12/08
Anechoic Chamber	RIKEN	Chamber-AC2	MRTSUE06213	1 year	2022/04/29

Radiated Emission (SIP-AC1)

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
EMI Test Receiver	R&S	ESR3	MRTSUE06612	1 year	2021/07/02
EXA Signal Analyzer	Keysight	N9010B	MRTSUE06559	1 year	2021/07/23
Loop Antenna	Schwarzbeck	FMZB 1519 B	MRTSUE06937	1 year	2022/03/09
Bilog Period Antenna	Schwarzbeck	VULB9168	MRTSUE06645	1 year	2021/08/30
Double Ridged Horn Antenna	R&S	HF907	MRTSUE06610	1 year	2021/08/30
Preamplifier	EMCI	EMC051845SE	MRTSUE06600	1 year	2021/11/09
Thermal Hygrometer	testo	608-H1	MRTSUE06620	1 year	2021/12/03
Anechoic Chamber	RIKEN	SIP-AC1	MRTSUE06554	1 year	2021/12/24

Radiated Emission (SIP-AC2)

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
EMI Test Receiver	R&S	ESR3	MRTSUE06613	1 year	2021/07/02
MXA Signal Analyzer	Keysight	N9020B	MRTSUE06604	1 year	2021/09/26
Loop Antenna	Schwarzbeck	FMZB 1519 B	MRTSUE06937	1 year	2022/03/09
Bilog Period Antenna	Schwarzbeck	VULB9168	MRTSUE06646	1 year	2021/08/30
Horn Antenna	Schwarzbeck	BBHA9120D	MRTSUE06648	1 year	2021/11/26
Horn Antenna	Schwarzbeck	BBHA9170	MRTSUE06599	1 year	2021/11/26
Preamplifier	EMCI	EMC051845SE	MRTSUE06644	1 year	2021/11/09
Preamplifier	EMCI	EMC184045SE	MRTSUE06602	1 year	2021/10/12
Thermal Hygrometer	testo	608-H1	MRTSUE06624	1 year	2021/12/03
Anechoic Chamber	RIKEN	SIP-AC2	MRTSUE06781	1 year	2021/12/24

Radiated Emission (SIP-AC3)

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
Preamplifier	Schwarzbeck	BBV 9721	MRTSUE06121	1 year	2022/06/10
EMI Test Receiver	R&S	ESR3	MRTSUE06612	1 year	2021/07/02
EXA Signal Analyzer	Keysight	N9010B	MRTSUE06559	1 year	2021/07/23
Loop Antenna	Schwarzbeck	FMZB 1519	MRTSUE06025	1 year	2021/11/08
Bilog Period Antenna	Schwarzbeck	VULB9168	MRTSUE06646	1 year	2021/08/30
Double Ridged Horn Antenna	R&S	HF907	MRTSUE06611	1 year	2021/09/13
Horn Antenna	Schwarzbeck	BBHA9170	MRTSUE06598	1 year	2021/11/26
Preamplifier	EMCI	EMC012645SE	MRTSUE06642	1 year	2022/01/14
Thermal Hygrometer	testo	608-H1	MRTSUE06622	1 year	2021/12/03
Anechoic Chamber	RIKEN	SIP-AC3	MRTSUE06782	1 year	2021/12/24

Conducted Test Equipment (WZ-SR5)

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
EXA Signal Analyzer	Agilent	N9020A	MRTSUE06106	1 year	2022/04/13
EXA Signal Analyzer	Keysight	N9010B	MRTSUE06607	1 year	2022/01/06
Power Meter	Agilent	U2021XA	MRTSUE06030	1 year	2021/10/22
USB wideband power sensor	Keysight	U2021XA	MRTSUE06446	1 year	2022/06/08
USB wideband power sensor	Keysight	U2021XA	MRTSUE06447	1 year	2022/06/08
Bluetooth Test Set	Anritsu	MT8852B-042	MRTSUE06389	1 year	2022/06/08
Modulation Analyzer	HP	HP8901A	MRTSUE06098	1 year	2021/09/26
DC Power Supply	GWINSTEK	DPS-3303C	MRTSUE06064	N/A	N/A
Temperature & Humidity Chamber	BAOYT	BYH-150CL	MRTSUE06051	1 year	2021/10/22
Thermal Hygrometer	testo	608-H1	MRTSUE06401	1 year	2021/07/26

Conducted Test Equipment (SIP-TR1)

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
EXA Signal Analyzer	KEYSIGHT	N9010B	MRTSUE06603	1 year	2021/11/23
PXA Signal Analyzer	Keysight	N9030B	MRTSUE06395	1 year	2021/08/30
USB wideband power sensor	Agilent	U2021XA	MRTSUE06595	1 year	2021/09/26
USB wideband power sensor	Agilent	U2021XA	MRTSUE06596	1 year	2021/09/26
Temperature Chamber	BAOYT	BYG-408CS	MRTSUE06847	1 year	2022/02/23
Thermal Hygrometer	testo	608-H1	MRTSUE11022	1 year	2021/11/25

Software	Version	Function
EMI Software	V3	EMI Test Software

4. MEASUREMENT UNCERTAINTY

Where relevant, the following test uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of $k = 2$.

Radiated Disturbance
Measurement Uncertainty for a Level of Confidence of 95% ($U=2U_c(y)$): Horizontal: 30MHz~300MHz: 5.04dB 300MHz~1GHz: 4.95dB 1GHz~40GHz: 6.40dB Vertical: 30MHz~300MHz: 5.24dB 300MHz~1GHz: 6.03dB 1GHz~40GHz: 6.40dB
Output Power
Measuring Uncertainty for a Level of Confidence of 95% ($U=2U_c(y)$): 1.13dB

5. TEST RESULT

5.1. Summary

FCC Section(s)	Test Description	Test Limit	Test Condition	Test Result	Reference
15.407(a)(1)(iv), (2), (3)	Maximum Conducted Output Power	U-NII-1: $\leq 250\text{mW}$ U-NII-2: $\leq 250\text{mW}$ or 11dBm $+10\log_{10}B$ U-NII-3: $\leq 1\text{W}$	Conducted	Pass	Section 5.2
15.407(b)(1), (2), (3), (4)(i)	Undesirable Emissions	$\leq -27\text{dBm/MHz}$ EIRP Detail see section 6.9	Radiated	Pass	Section 5.3 Section 5.4
15.205, 15.209 15.407(b)(7), (8), (9)	General Field Strength (Restricted Bands and Radiated Emission)	Emissions in restricted bands must meet the radiated limits detailed in 15.209		Pass	

Notes:

- The analyzer plots shown in this section were all taken with a correction table loaded into the analyzer. The correction table was used to account for the losses of the cables and attenuators used as part of the system to connect the EUT to the analyzer at all frequencies of interest.
- All modes of operation and data rates were investigated. For radiated emission test, every axis (X, Y, Z) was also verified. The test results shown in the following sections represent the worst case emissions.

5.2. Output Power Measurement

5.2.1. Test Limit

For client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi.

For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or $11 \text{ dBm} + 10 \log B$, where B is the 26 dB emission bandwidth in megahertz.

For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W (30dBm).

If transmitting antennas of directional gain greater than 6dBi are used, the maximum conducted output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

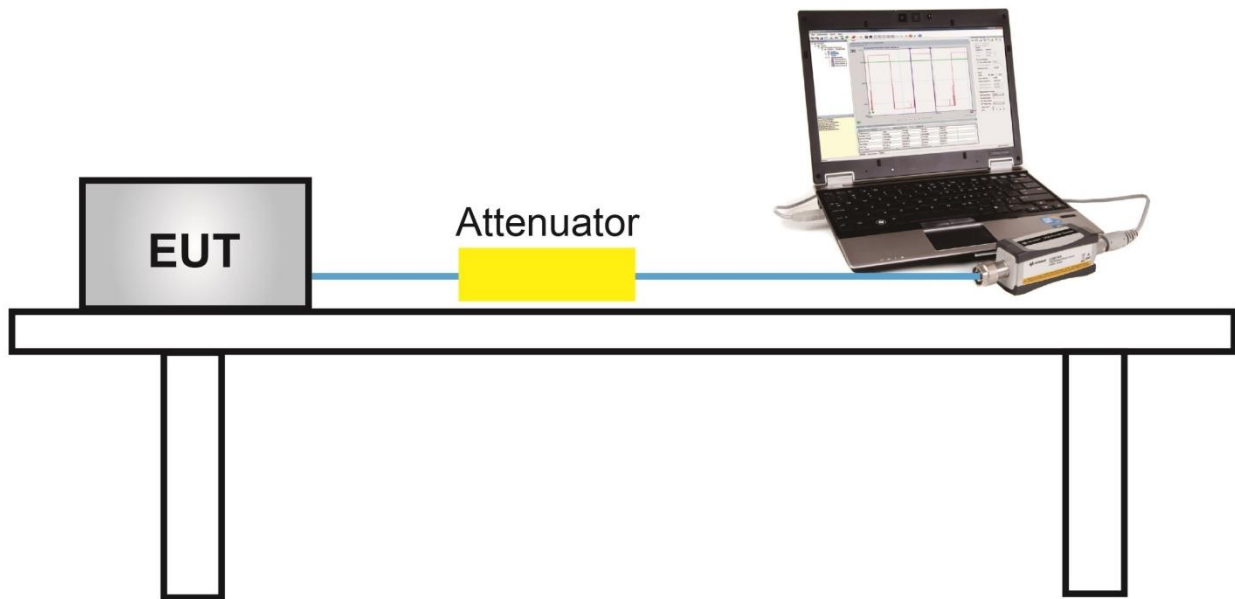
5.2.2. Test Procedure Used

KDB 789033D02v02r01- Section E)3)b) Method PM-G

5.2.3. Test Setting

Average power measurements were performed only when the EUT was transmitting at its maximum power control level using a broadband power meter with a pulse sensor. The power meter implemented triggering and gating capabilities which were set up such that power measurements were recorded only during the ON time of the transmitter.

5.2.4. Test Setup



5.2.5. Test Result

Test Engineer	Yuri Li	Test Site	WZ-SR5
Test Mode	SISO	Test Date	2021/06/23

Test Mode	Data Rate/ MCS	Channel No.	Freq. (MHz)	Average Power (dBm)	Average Power Limit (dBm)	Result
11a	6Mbps	36	5180	13.90	≤ 23.98	Pass
11a	6Mbps	44	5220	13.97	≤ 23.98	Pass
11a	6Mbps	48	5240	13.85	≤ 23.98	Pass
11a	6Mbps	52	5260	13.28	≤ 23.98	Pass
11a	6Mbps	60	5300	13.23	≤ 23.98	Pass
11a	6Mbps	64	5320	13.35	≤ 23.98	Pass
11a	6Mbps	100	5500	13.24	≤ 23.98	Pass
11a	6Mbps	116	5580	13.41	≤ 23.98	Pass
11a	6Mbps	140	5700	13.52	≤ 23.98	Pass
11a	6Mbps	144	5720	13.57	≤ 23.80	Pass
11a	6Mbps	149	5745	13.54	≤ 30.00	Pass
11a	6Mbps	157	5785	13.33	≤ 30.00	Pass
11a	6Mbps	165	5825	13.81	≤ 30.00	Pass
11ac-VHT20	MCS0	36	5180	13.40	≤ 23.98	Pass
11ac-VHT20	MCS0	44	5220	13.43	≤ 23.98	Pass
11ac-VHT20	MCS0	48	5240	13.23	≤ 23.98	Pass
11ac-VHT20	MCS0	52	5260	13.29	≤ 23.98	Pass
11ac-VHT20	MCS0	60	5300	13.42	≤ 23.98	Pass
11ac-VHT20	MCS0	64	5320	13.21	≤ 23.98	Pass
11ac-VHT20	MCS0	100	5500	13.05	≤ 23.98	Pass
11ac-VHT20	MCS0	116	5580	13.07	≤ 23.98	Pass
11ac-VHT20	MCS0	140	5700	13.11	≤ 23.98	Pass
11ac-VHT20	MCS0	144	5720	13.17	≤ 23.80	Pass
11ac-VHT20	MCS0	149	5745	13.29	≤ 30.00	Pass
11ac-VHT20	MCS0	157	5785	13.25	≤ 30.00	Pass
11ac-VHT20	MCS0	165	5825	13.22	≤ 30.00	Pass

Test Mode	Data Rate/ MCS	Channel No.	Freq. (MHz)	Average Power (dBm)	Average Power Limit(dBm)	Result
11ac-VHT40	MCS0	38	5190	12.55	≤ 23.98	Pass
11ac-VHT40	MCS0	46	5230	12.51	≤ 23.98	Pass
11ac-VHT40	MCS0	54	5270	12.62	≤ 23.98	Pass
11ac-VHT40	MCS0	62	5310	12.57	≤ 23.98	Pass
11ac-VHT40	MCS0	102	5510	12.63	≤ 23.98	Pass
11ac-VHT40	MCS0	110	5550	12.57	≤ 23.98	Pass
11ac-VHT40	MCS0	134	5670	12.58	≤ 23.98	Pass
11ac-VHT40	MCS0	142	5710	12.73	≤ 23.98	Pass
11ac-VHT40	MCS0	151	5755	12.77	≤ 23.98	Pass
11ac-VHT40	MCS0	159	5795	12.52	≤ 30.00	Pass
11ac-VHT80	MCS0	42	5210	9.88	≤ 23.98	Pass
11ac-VHT80	MCS0	58	5290	9.51	≤ 23.98	Pass
11ac-VHT80	MCS0	106	5530	9.54	≤ 23.98	Pass
11ac-VHT80	MCS0	122	5610	10.17	≤ 23.98	Pass
11ac-VHT80	MCS0	138	5690	9.56	≤ 23.98	Pass
11ac-VHT80	MCS0	155	5775	9.51	≤ 30.00	Pass

Note: Max Conducted Output Power Limit for Channel 144 (5720MHz), $11+10*\log(5\text{MHz} + \text{BW}_{26\text{dB}}/2)$
= 23.80dBm < 23.98dBm

Test Engineer	Yuri Li	Test Site	WZ-SR5
Test Mode	MIMO	Test Date	2021/06/23

Test Mode	Data Rate/ MCS	Channel No.	Freq. (MHz)	Ant 0 Average Power (dBm)	Ant 1 Average Power (dBm)	Total Average Power (dBm)	Average Power Limit (dBm)	Result
11ac-VHT20	MCS0	36	5180	9.79	10.23	13.03	≤ 23.98	Pass
11ac-VHT20	MCS0	44	5220	9.73	10.41	13.09	≤ 23.98	Pass
11ac-VHT20	MCS0	48	5240	10.72	11.49	14.13	≤ 23.98	Pass
11ac-VHT20	MCS0	52	5260	10.64	11.45	14.07	≤ 23.98	Pass
11ac-VHT20	MCS0	60	5300	10.51	11.41	13.99	≤ 23.98	Pass
11ac-VHT20	MCS0	64	5320	10.36	11.53	13.99	≤ 23.98	Pass
11ac-VHT20	MCS0	100	5500	10.33	11.46	13.94	≤ 23.98	Pass
11ac-VHT20	MCS0	116	5580	10.12	11.43	13.83	≤ 23.98	Pass
11ac-VHT20	MCS0	140	5700	10.23	11.82	14.11	≤ 23.98	Pass
11ac-VHT20	MCS0	144	5720	10.02	11.79	14.00	≤ 23.25	Pass
11ac-VHT20	MCS0	149	5745	10.15	11.65	13.97	≤ 30.00	Pass
11ac-VHT20	MCS0	157	5785	10.05	11.57	13.89	≤ 30.00	Pass
11ac-VHT20	MCS0	165	5825	10.07	11.41	13.80	≤ 30.00	Pass
11ac-VHT40	MCS0	38	5190	7.16	8.36	10.81	≤ 23.98	Pass
11ac-VHT40	MCS0	46	5230	7.07	8.45	10.82	≤ 23.98	Pass
11ac-VHT40	MCS0	54	5270	7.22	8.12	10.70	≤ 23.98	Pass
11ac-VHT40	MCS0	62	5310	8.16	9.62	11.96	≤ 23.98	Pass
11ac-VHT40	MCS0	102	5510	8.18	9.53	11.92	≤ 23.98	Pass
11ac-VHT40	MCS0	110	5550	7.82	9.45	11.72	≤ 23.98	Pass
11ac-VHT40	MCS0	134	5670	7.89	9.92	12.03	≤ 23.98	Pass
11ac-VHT40	MCS0	142	5710	8.05	9.90	12.08	≤ 23.98	Pass
11ac-VHT40	MCS0	151	5755	8.26	9.64	12.01	≤ 23.98	Pass
11ac-VHT40	MCS0	159	5795	8.32	9.53	11.98	≤ 30.00	Pass
11ac-VHT80	MCS0	42	5210	5.54	6.62	9.12	≤ 23.98	Pass
11ac-VHT80	MCS0	58	5290	5.46	6.60	9.08	≤ 23.98	Pass
11ac-VHT80	MCS0	106	5530	5.38	6.52	9.00	≤ 23.98	Pass
11ac-VHT80	MCS0	122	5610	5.19	6.57	8.94	≤ 23.98	Pass
11ac-VHT80	MCS0	138	5690	5.51	6.87	9.25	≤ 23.98	Pass
11ac-VHT80	MCS0	155	5775	5.12	6.89	9.10	≤ 30.00	Pass

Note 1: Total Average Power (dBm) = $10 \cdot \log\{10^{(\text{ANT 0 Average Power} / 10)} + 10^{(\text{ANT 1 Average Power} / 10)}\}$ (dBm).

Note 2: Max Conducted Output Power Limit for Channel 5720MHz, $11 + 10 \cdot \log(5\text{MHz} + \text{BW}_{26\text{dB}}/2) = 23.25\text{dBm} < 23.98\text{dBm}$

5.3. Radiated Spurious Emission Measurement

5.3.1. Test Limit

All out of band emissions appearing in a restricted band as specified in Section 15.205 of the Title 47 CFR must not exceed the limits shown in Table per Section 15.209.

FCC Part 15 Subpart C Paragraph 15.209		
Frequency (MHz)	Field Strength ($\mu\text{V/m}$)	Measured Distance (m)
0.009 - 0.490	2400/F (kHz)	300
0.490 - 1.705	24000/F (kHz)	30
1.705 - 30	30	30
30 - 88	100	3
88 - 216	150	3
216 - 960	200	3
Above 960	500	3

5.3.2. Test Procedure Used

KDB 789033 D02v02r01- Section G

5.3.3. Test Setting

Peak Measurements above 1GHz

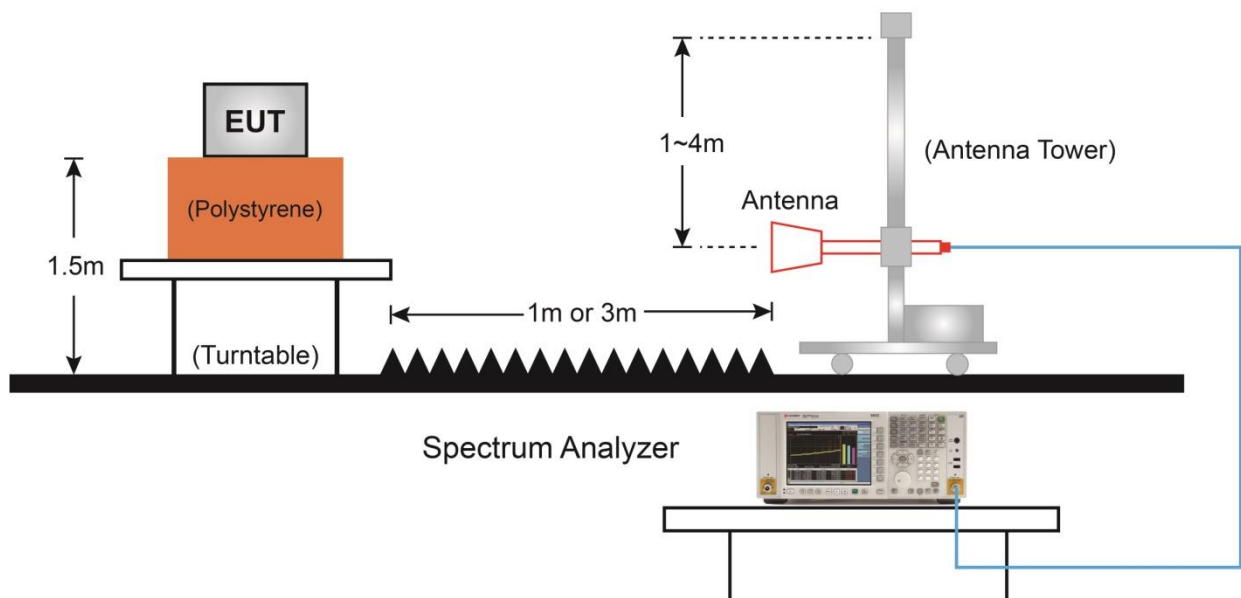
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW = 3MHz
4. Detector = peak
5. Sweep time = auto couple
6. Trace mode = max hold
7. Trace was allowed to stabilize

Average Measurements above 1GHz (Method VB)

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW; If the EUT is configured to transmit with duty cycle $\geq 98\%$, set VBW = 10Hz
If the EUT duty cycle is $< 98\%$, set VBW $\geq 1/T$. T is the minimum transmission duration
4. Detector = Peak
5. Sweep time = auto
6. Trace mode = max hold
7. Trace was allowed to stabilize

5.3.4. Test Setup

Above 1GHz Test Setup:



5.3.5. Test Result

Test Site	WZ-AC2	Test Engineer	Lucas Wang
Test Mode	802.11ac-VHT80 SISO	Test Date	2021/06/24
Test Channel	42		
Remark	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	7553.5	35.5	12.1	47.6	74.0	-26.4	Peak	Horizontal
	8276.0	33.7	11.9	45.6	74.0	-28.4	Peak	Horizontal
*	8692.5	32.4	13.8	46.2	68.2	-22.0	Peak	Horizontal
*	10035.5	33.3	15.4	48.7	68.2	-19.5	Peak	Horizontal
	7502.5	33.1	12.3	45.4	74.0	-28.6	Peak	Vertical
	8310.0	32.5	12.0	44.5	74.0	-29.5	Peak	Vertical
*	8811.5	32.5	14.1	46.6	68.2	-21.6	Peak	Vertical
*	10035.5	33.3	15.4	48.7	68.2	-19.5	Peak	Vertical

Note 1: “*” is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dBμV/m can be determined by adding a “conversion” factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the limit for out of band spurious emissions.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Test Site	WZ-AC2	Test Engineer	Lucas Wang
Test Mode	802.11ac-VHT40 SISO	Test Date	2021/06/24
Test Channel	62		
Remark	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	7664.0	34.9	12.1	47.0	74.0	-27.0	Peak	Horizontal
	8165.5	34.0	12.6	46.6	74.0	-27.4	Peak	Horizontal
*	8760.5	33.5	14.2	47.7	68.2	-20.5	Peak	Horizontal
*	10418.0	33.6	16.7	50.3	68.2	-17.9	Peak	Horizontal
	7494.0	33.6	12.3	45.9	74.0	-28.1	Peak	Vertical
	8199.5	32.8	12.3	45.1	74.0	-28.9	Peak	Vertical
*	8811.5	32.7	14.1	46.8	68.2	-21.4	Peak	Vertical
*	10137.5	35.2	15.4	50.6	68.2	-17.6	Peak	Vertical

Note 1: “*” is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dBμV/m can be determined by adding a “conversion” factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the limit for out of band spurious emissions.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Test Site	WZ-AC2	Test Engineer	Lucas Wang
Test Mode	802.11ac-VHT80 SISO	Test Date	2021/06/24
Test Channel	122		
Remark	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	7468.5	32.6	12.1	44.7	74.0	-29.3	Peak	Horizontal
	8310.0	31.8	12.0	43.8	74.0	-30.2	Peak	Horizontal
*	8769.0	31.8	14.2	46.0	68.2	-22.2	Peak	Horizontal
*	10350.0	31.6	16.6	48.2	68.2	-20.0	Peak	Horizontal
	7570.5	32.7	12.3	45.0	74.0	-29.0	Peak	Vertical
	8276.0	33.4	11.9	45.3	74.0	-28.7	Peak	Vertical
*	8854.0	31.6	14.2	45.8	68.2	-22.4	Peak	Vertical
*	10401.0	33.6	16.8	50.4	68.2	-17.8	Peak	Vertical

Note 1: “*” is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dBμV/m can be determined by adding a “conversion” factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the limit for out of band spurious emissions.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Test Site	WZ-AC2	Test Engineer	Lucas Wang
Test Mode	802.11ac-VHT20 SISO	Test Date	2021/06/24
Test Channel	165		
Remark	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	7485.5	34.2	12.3	46.5	74.0	-27.5	Peak	Horizontal
	8310.0	32.9	12.0	44.9	74.0	-29.1	Peak	Horizontal
*	8692.5	32.1	13.8	45.9	68.2	-22.3	Peak	Horizontal
*	10367.0	34.2	16.5	50.7	68.2	-17.5	Peak	Horizontal
	7536.5	33.8	12.1	45.9	74.0	-28.1	Peak	Vertical
	8199.5	34.0	12.3	46.3	74.0	-27.7	Peak	Vertical
*	8735.0	31.5	13.8	45.3	68.2	-22.9	Peak	Vertical
*	9712.5	35.0	14.9	49.9	68.2	-18.3	Peak	Vertical

Note 1: “*” is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dBμV/m can be determined by adding a “conversion” factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the limit for out of band spurious emissions.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

5.4. Radiated Restricted Band Edge Measurement

5.4.1. Test Limit

For 15.205 Requirement:

Radiated emissions which fall in the restricted bands, as defined in Section 15.205(a) of FCC part 15, must also comply with the radiated emission limits specified in Section 15.209(a).

Frequency (MHz)	Frequency (MHz)	Frequency (MHz)	Frequency (GHz)
0.090 - 0.110	16.42-16.423	399.9 - 410	4.5-5.15
¹ 0.495 - 0.505	16.69475-16.69525	608 - 614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960 - 1240	7.25-7.75
4.125-4.128	25.5 -25.67	1300 - 1427	8.025 - 8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660 - 1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123 - 138	2200 - 2300	14.47-14.5
8.291-8.294	149.9-150.05	2310–2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5 - 2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690 - 2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260 - 3267	23.6-24.0
12.29-12.293	167.72-173.2	3332 - 3339	31.2-31.8
12.51975-12.52025	240 - 285	3345.8 - 3358	36.43-36.5
12.57675-12.57725	322-335.4	3600 - 4400	(²)
13.36-13.41	--	--	--

For 15.407(b) Requirement:

For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.

For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.

For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.

For transmitters operating in the 5.725-5.85 GHz band: All emissions within the frequency range

from the band edge to 10 MHz above or below the band edge shall not exceed an e.i.r.p. of -17 dBm/MHz; for frequencies 10 MHz or greater above or below the band edge, emissions shall not exceed an e.i.r.p. of -27 dBm/MHz.

Refer to KDB 789033 D02v02r01 G)2)c), as specified in § 15.407(b), emissions above 1000 MHz that are outside of the restricted bands are subject to a maximum emission limit of -27 dBm/MHz (or -17 dBm/MHz as specified in § 15.407(b)(4)). However, an out-of-band emission that complies with both the peak and average limits of § 15.209 is not required to satisfy the -27 dBm/MHz or -17 dBm/MHz maximum emission limit.

All out of band emissions appearing in a restricted band as specified in Section 15.205 of the Title 47CFR must not exceed the limits shown in Table per Section 15.209.

FCC Part 15 Subpart C Paragraph 15.209		
Frequency (MHz)	Field Strength (μ V/m)	Measured Distance (m)
0.009 - 0.490	2400/F (kHz)	300
0.490 - 1.705	24000/F (kHz)	30
1.705 - 30	30	30
30 - 88	100	3
88 - 216	150	3
216 - 960	200	3
Above 960	500	3

5.4.2.Test Procedure Used

KDB 789033 D02v02r01- Section G

5.4.3. Test Setting

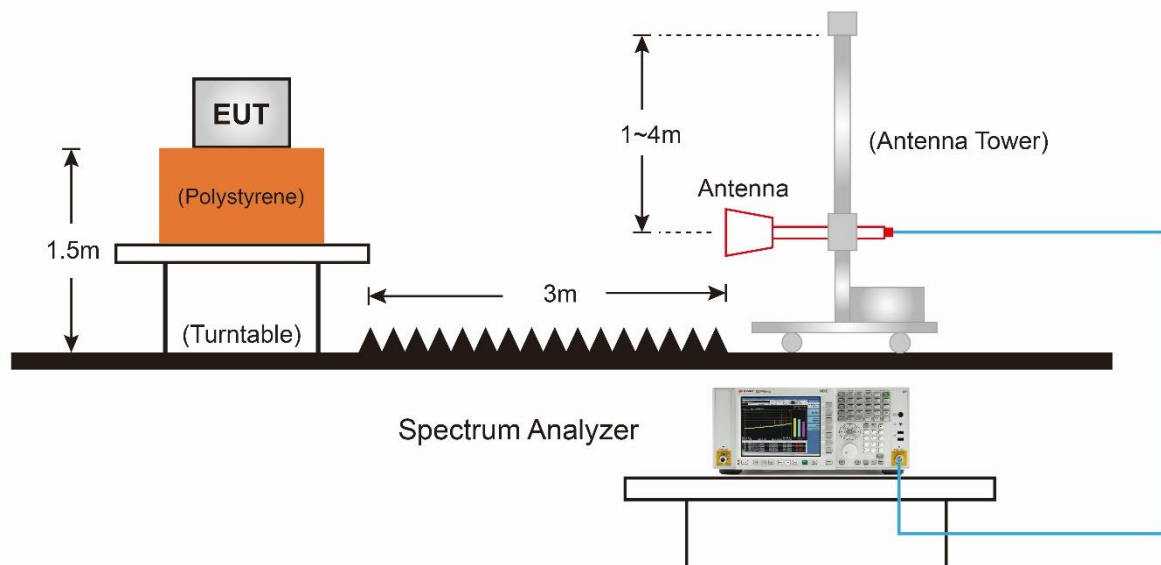
Peak Measurements above 1GHz

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW = 3MHz
4. Detector = Peak
5. Sweep time = Auto couple
6. Trace mode = Max hold
7. Trace was allowed to stabilize

Average Measurements above 1GHz (Method VB)

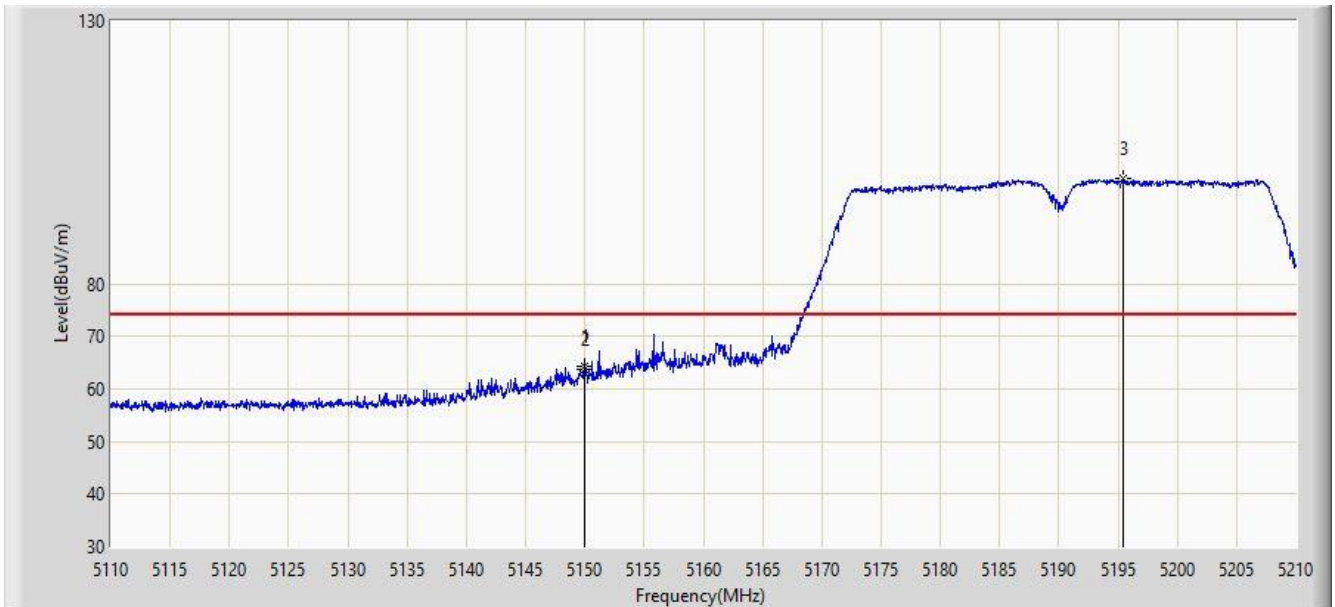
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW; if the EUT is configured to transmit with duty cycle $\geq 98\%$, set VBW = 10Hz
4. If the EUT duty cycle is $< 98\%$, set VBW $\geq 1/T$. T is the minimum transmission duration
5. Detector = Peak
6. Sweep time = Auto
7. Trace mode = Max hold
8. Trace was allowed to stabilize

5.4.4. Test Setup



5.4.5. Test Result

Site: WZ-AC2	Time: 2021/06/24 - 22:25
Limit: FCC_Part15.209_RE(3m)	Engineer: Lucas Wang
Probe: WZ-AC2_BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Mobile Computer	Power: By Battery
Test Mode: Transmit by 802.11ac-VHT40 at Channel 5190MHz SISO	

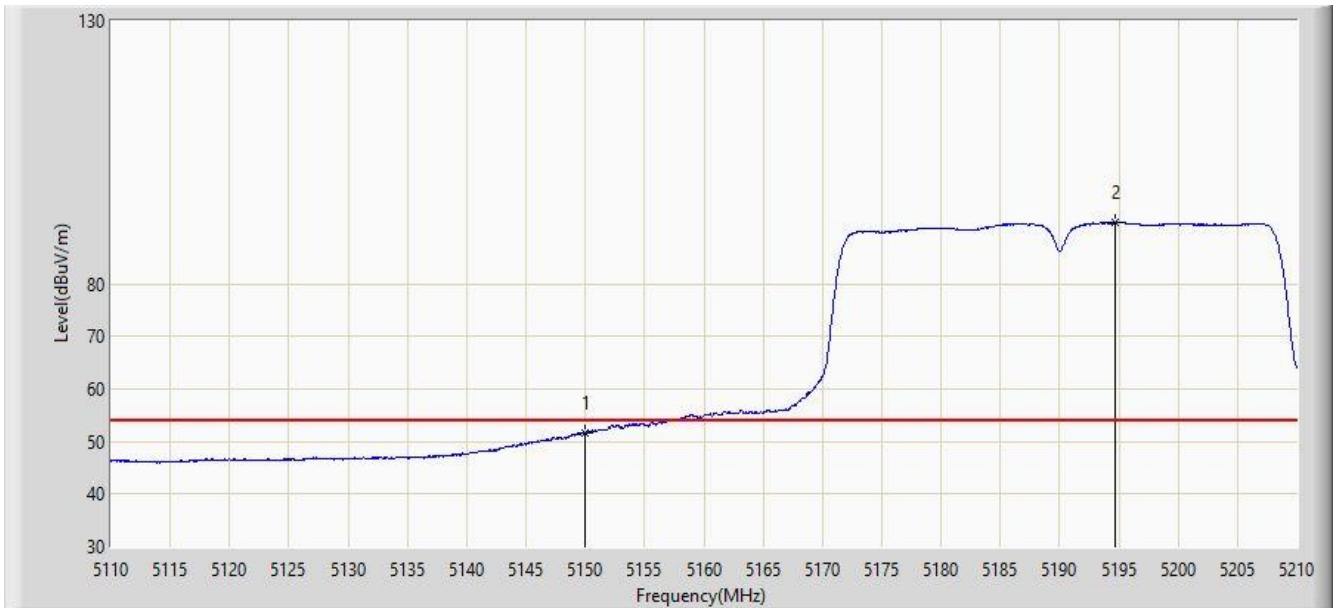


No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		5149.950	64.178	59.338	-9.822	74.000	4.840	PK
2		5150.000	63.704	58.865	-10.296	74.000	4.840	PK
3	*	5195.450	100.079	95.597	N/A	N/A	4.481	PK

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Site: WZ-AC2	Time: 2021/06/24 - 22:26
Limit: FCC_Part15.209_RE(3m)	Engineer: Lucas Wang
Probe: WZ-AC2_BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Mobile Computer	Power: By Battery
Test Mode: Transmit by 802.11ac-VHT40 at Channel 5190MHz SISO	

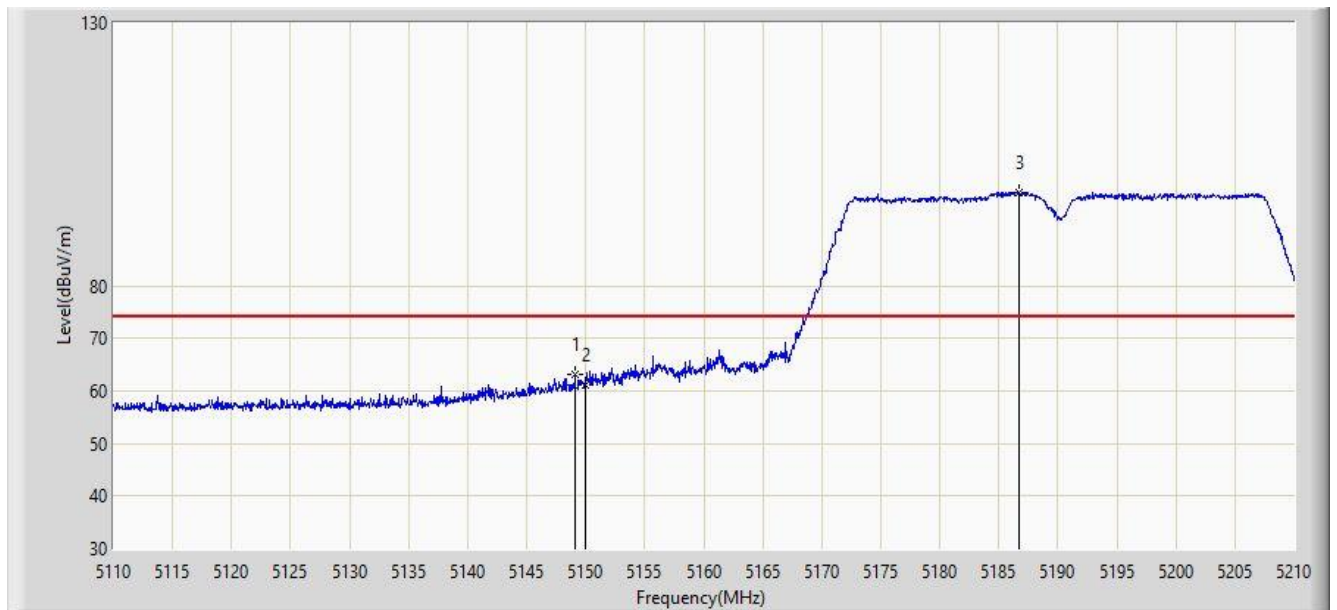


No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		5150.000	51.683	46.844	-2.317	54.000	4.840	AV
2	*	5194.650	91.752	87.270	N/A	N/A	4.482	AV

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Site: WZ-AC2	Time: 2021/06/24 - 22:24
Limit: FCC_Part15.209_RE(3m)	Engineer: Lucas Wang
Probe: WZ-AC2_BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Mobile Computer	Power: By Battery
Test Mode: Transmit by 802.11ac-VHT40 at Channel 5190MHz SISO	

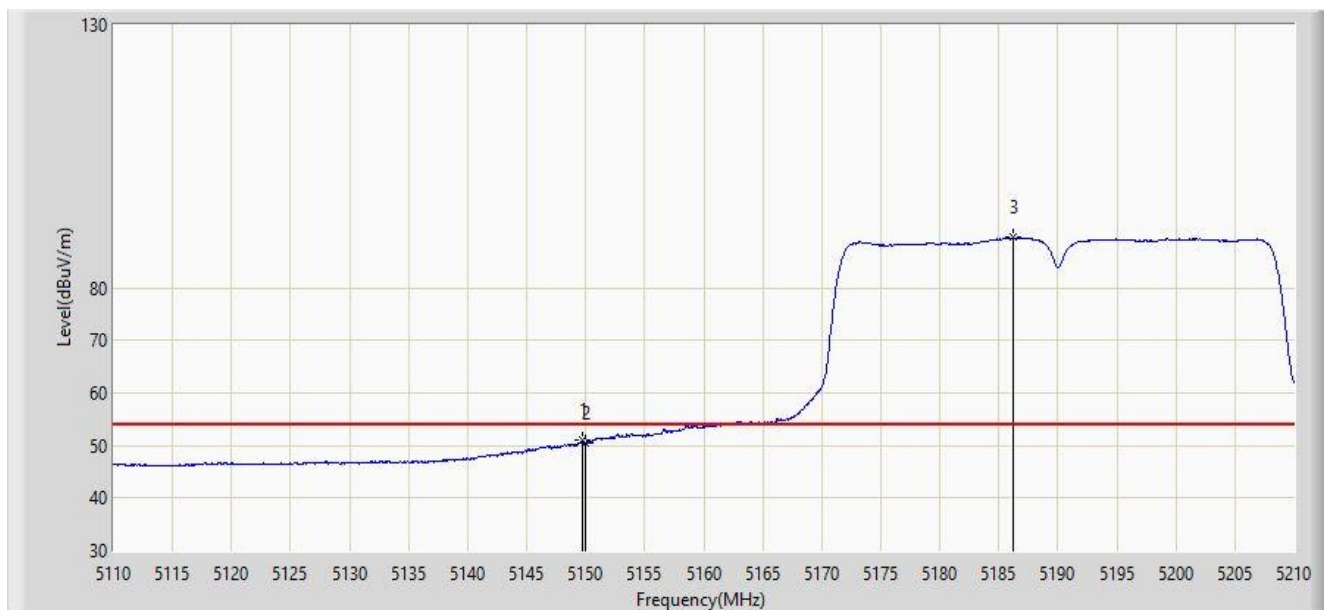


No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		5149.100	63.269	58.417	-10.731	74.000	4.852	PK
2		5150.000	61.120	56.281	-12.880	74.000	4.840	PK
3	*	5186.750	97.705	93.219	N/A	N/A	4.486	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Site: WZ-AC2	Time: 2021/06/24 - 22:18
Limit: FCC_Part15.209_RE(3m)	Engineer: Lucas Wang
Probe: WZ-AC2_BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Mobile Computer	Power: By Battery
Test Mode: Transmit by 802.11ac-VHT40 at Channel 5190MHz SISO	

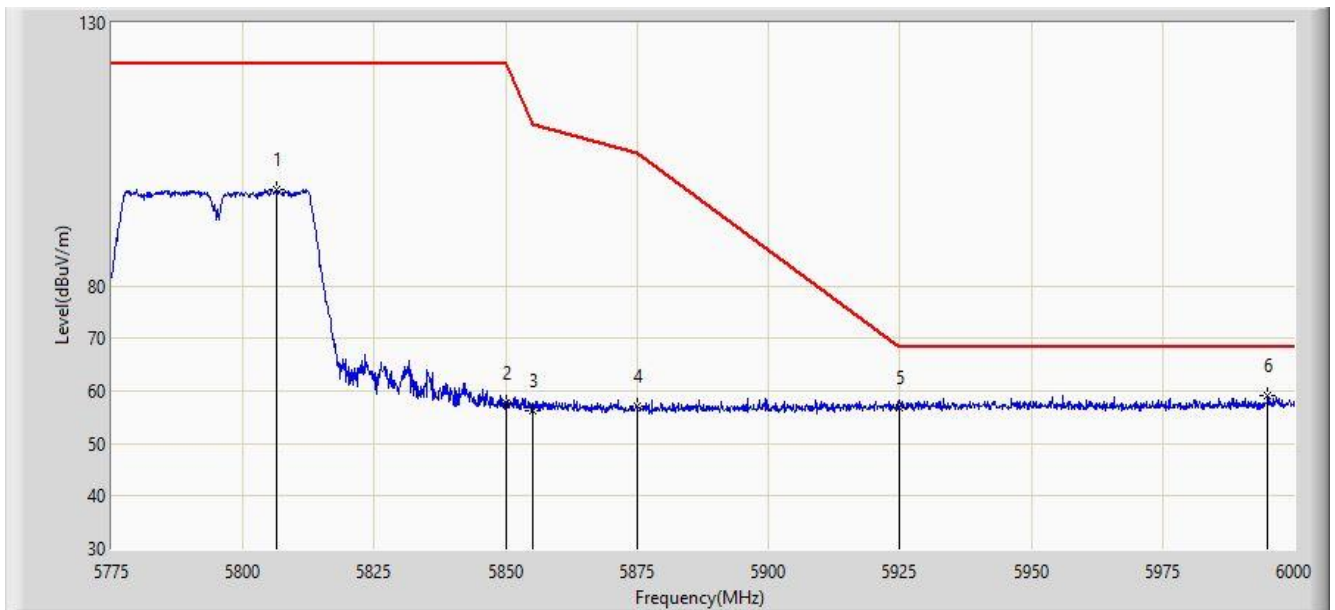


No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		5149.700	50.923	46.079	-3.077	54.000	4.844	AV
2		5150.000	50.431	45.592	-3.569	54.000	4.840	AV
3	*	5186.200	89.528	85.040	N/A	N/A	4.487	AV

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Site: WZ-AC2	Time: 2021/06/24 - 22:27
Limit: FCC_Part15.407_Band Edge(3m)	Engineer: Lucas Wang
Probe: WZ-AC2_BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Mobile Computer	Power: By Battery
Test Mode: Transmit by 802.11ac-VHT40 at Channel 5795MHz SISO	

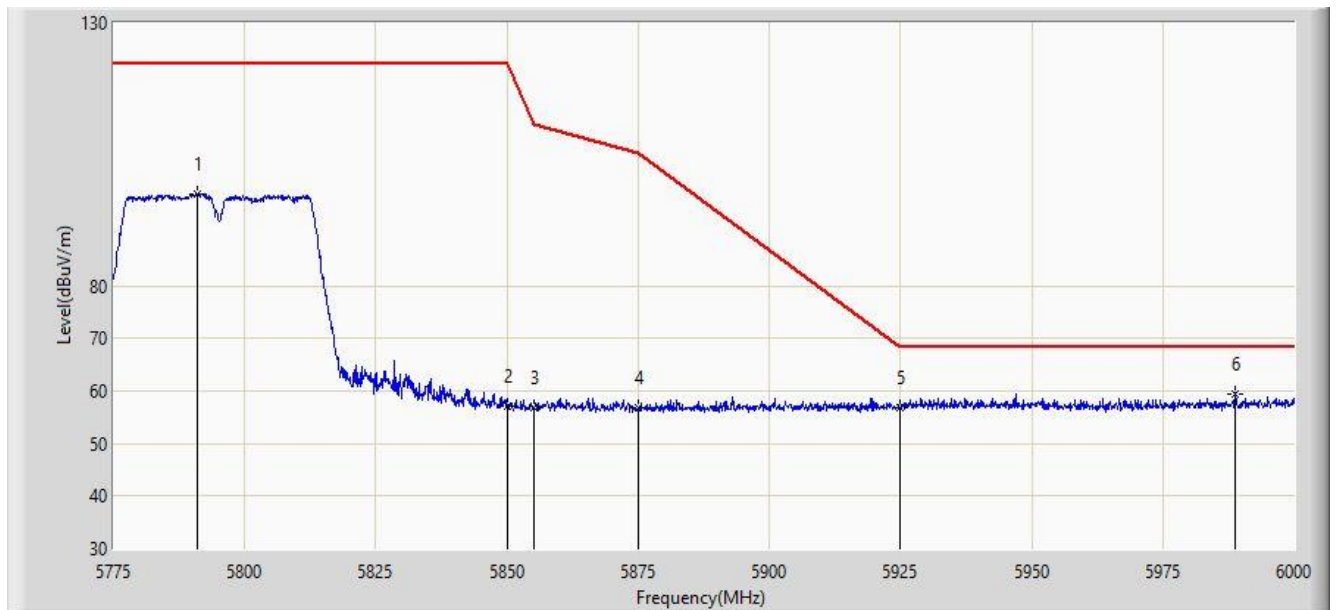


No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		5806.388	98.299	92.100	N/A	N/A	6.198	PK
2		5850.000	57.541	51.179	-64.659	122.200	6.362	PK
3		5855.000	56.146	49.750	-54.654	110.800	6.397	PK
4		5875.000	57.014	50.632	-48.186	105.200	6.382	PK
5		5925.000	56.794	50.171	-11.406	68.200	6.623	PK
6	*	5995.050	59.244	52.297	-8.956	68.200	6.948	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Site: WZ-AC2	Time: 2021/06/24 - 22:29
Limit: FCC_Part15.407_Band Edge(3m)	Engineer: Lucas Wang
Probe: WZ-AC2_BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Mobile Computer	Power: By Battery
Test Mode: Transmit by 802.11ac-VHT40 at Channel 5795MHz SISO	

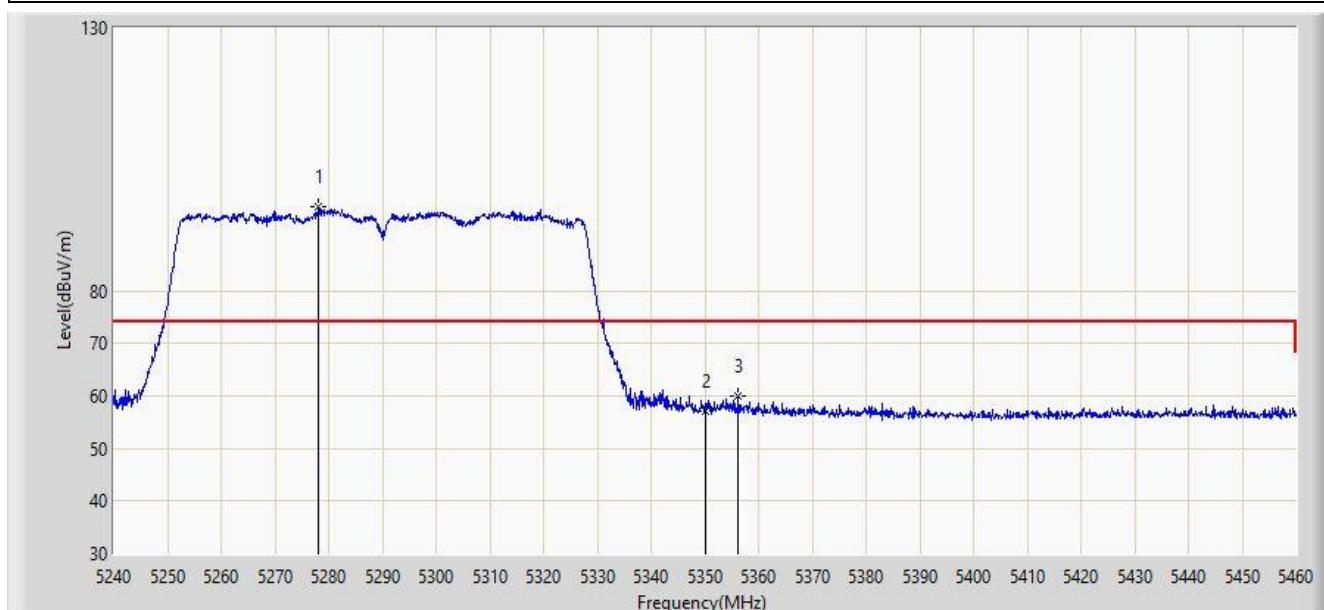


No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		5790.862	97.557	91.425	N/A	N/A	6.132	PK
2		5850.000	56.968	50.606	-65.232	122.200	6.362	PK
3		5855.000	56.670	50.274	-54.130	110.800	6.397	PK
4		5875.000	56.669	50.287	-48.531	105.200	6.382	PK
5		5925.000	56.923	50.300	-11.277	68.200	6.623	PK
6	*	5988.750	59.456	52.638	-8.744	68.200	6.818	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Site: WZ-AC2	Time: 2021/06/24 - 22:37
Limit: FCC_Part15.209_RE(3m)	Engineer: Lucas Wang
Probe: WZ-AC2_BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Mobile Computer	Power: By Battery
Test Mode: Transmit by 802.11ac-VHT80 at Channel 5290MHz MIMO	

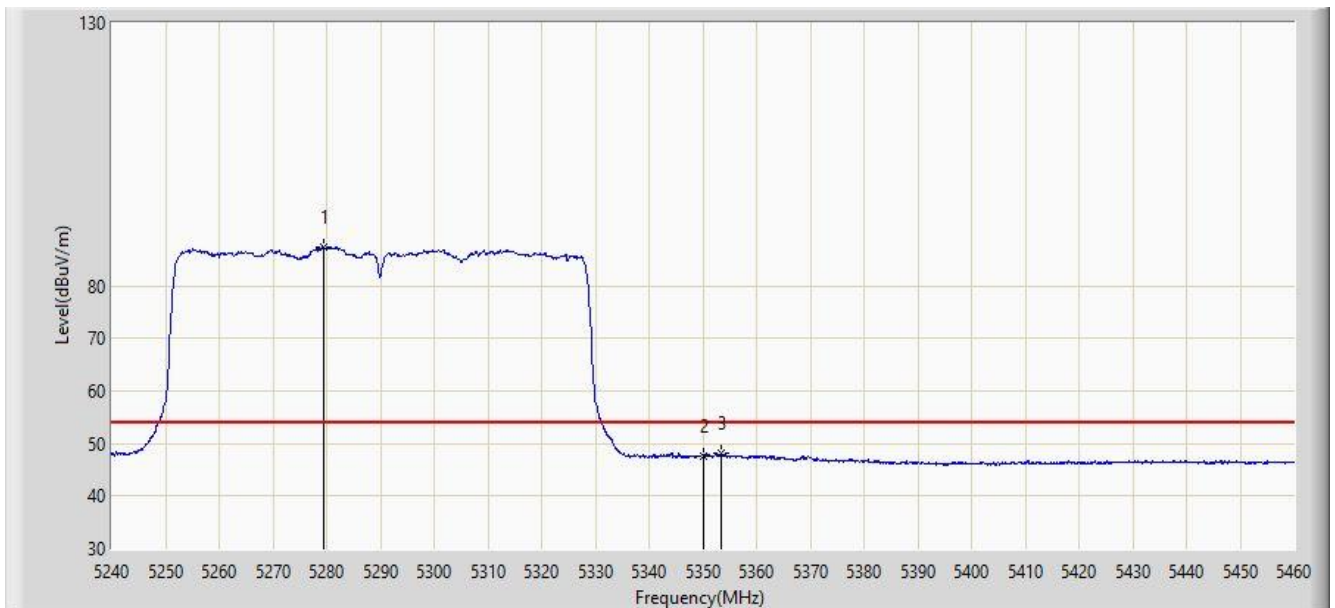


No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	5278.060	95.947	91.530	N/A	N/A	4.417	PK
2		5350.000	57.213	52.568	-16.787	74.000	4.645	PK
3		5356.270	59.862	55.160	-14.138	74.000	4.702	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Site: WZ-AC2	Time: 2021/06/24 - 22:31
Limit: FCC_Part15.209_RE(3m)	Engineer: Lucas Wang
Probe: WZ-AC2_BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Mobile Computer	Power: By Battery
Test Mode: Transmit by 802.11ac-VHT80 at Channel 5290MHz MIMO	

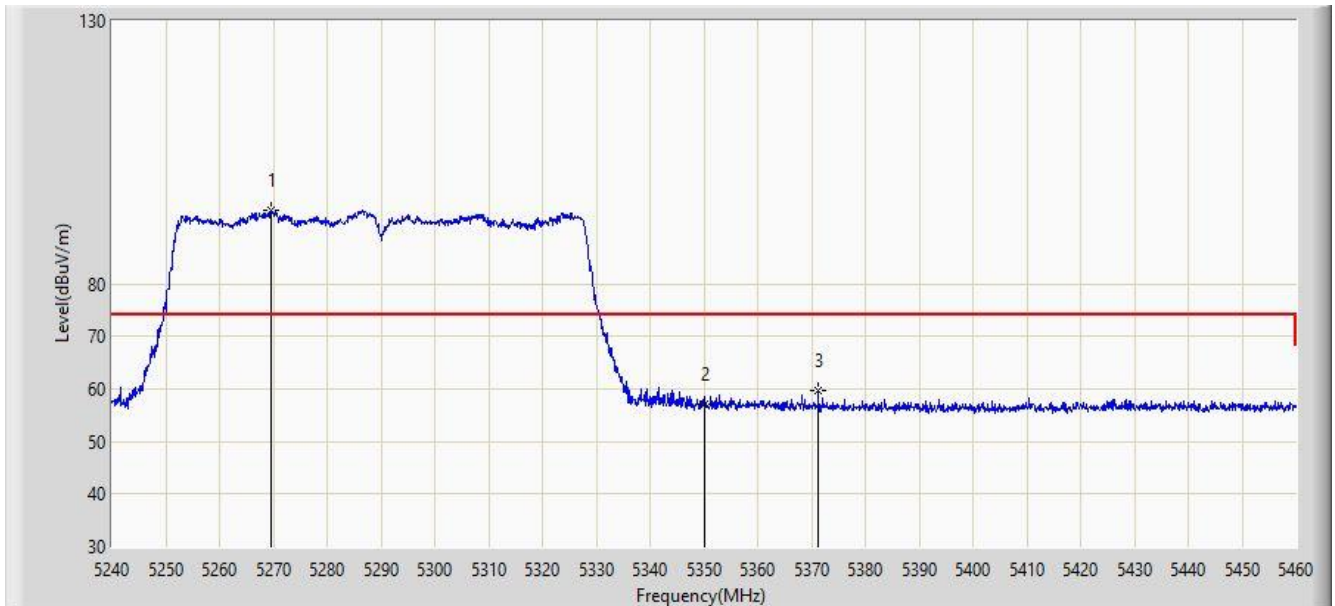


No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	5279.380	87.275	82.851	N/A	N/A	4.424	AV
2		5350.000	47.520	42.875	-6.480	54.000	4.645	AV
3		5353.410	48.236	43.555	-5.764	54.000	4.682	AV

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Site: WZ-AC2	Time: 2021/06/24 - 22:36
Limit: FCC_Part15.209_RE(3m)	Engineer: Lucas Wang
Probe: WZ-AC2_BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Mobile Computer	Power: By Battery
Test Mode: Transmit by 802.11ac-VHT80 at Channel 5290MHz MIMO	

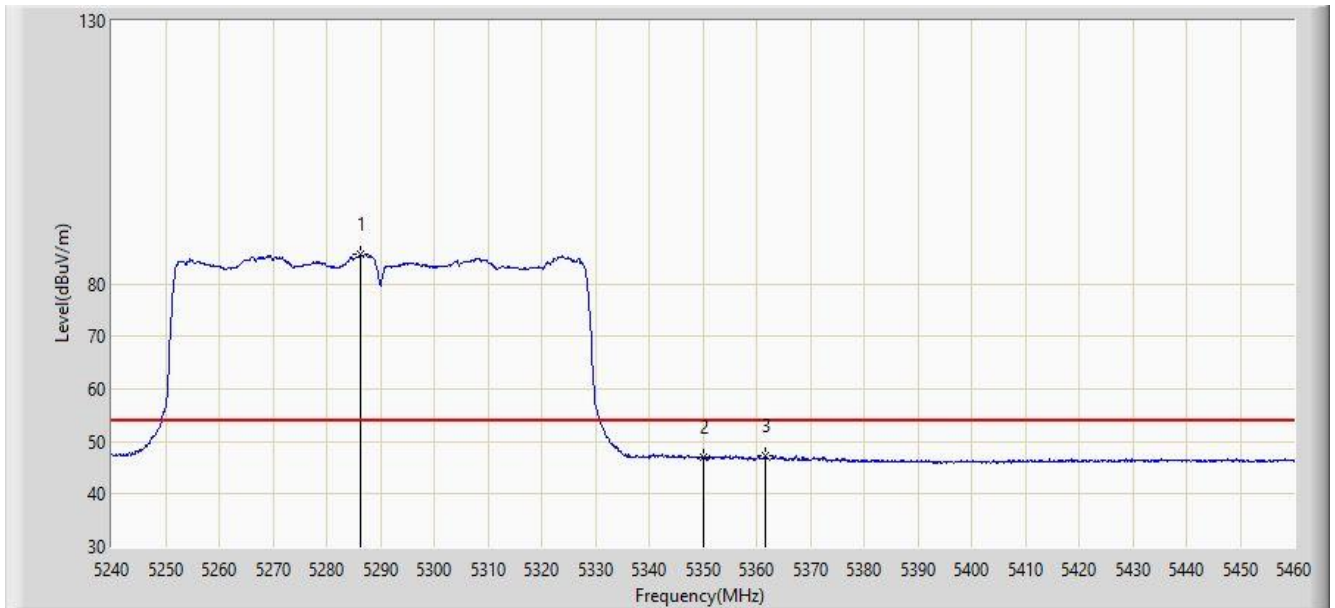


No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	5269.590	93.996	89.690	N/A	N/A	4.306	PK
2		5350.000	57.006	52.361	-16.994	74.000	4.645	PK
3		5371.230	59.564	54.759	-14.436	74.000	4.805	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Site: WZ-AC2	Time: 2021/06/24 - 22:34
Limit: FCC_Part15.209_RE(3m)	Engineer: Lucas Wang
Probe: WZ-AC2_BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Mobile Computer	Power: By Battery
Test Mode: Transmit by 802.11ac-VHT80 at Channel 5290MHz MIMO	

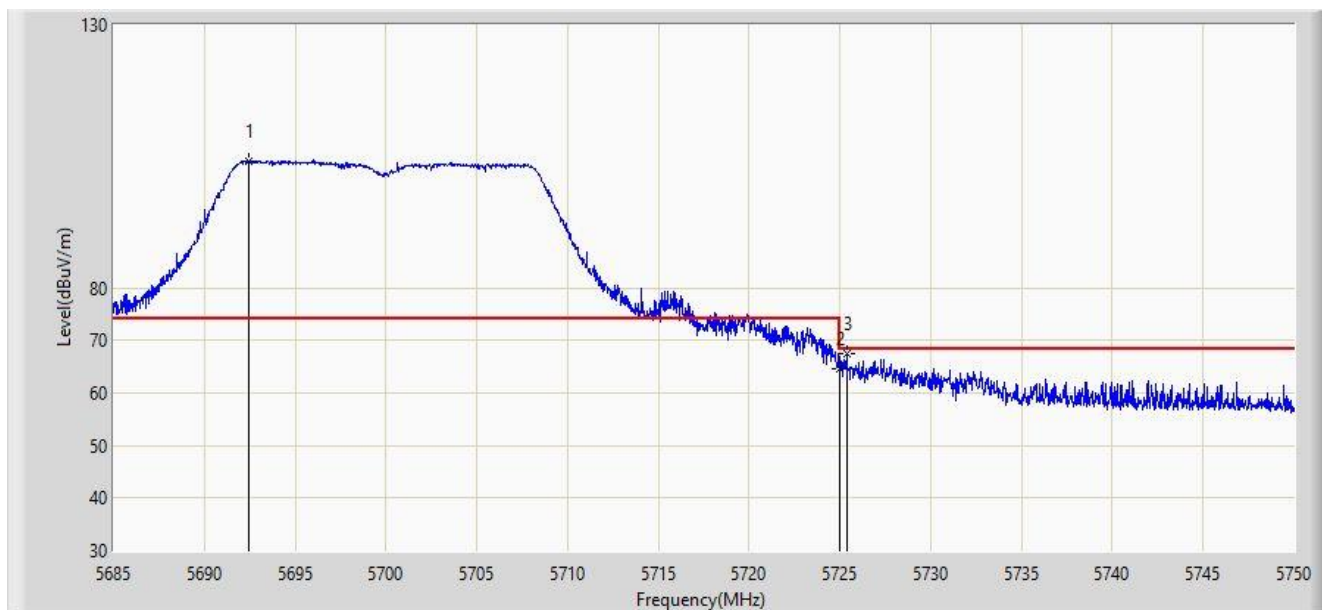


No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	5286.310	85.589	81.142	N/A	N/A	4.447	AV
2		5350.000	47.039	42.394	-6.961	54.000	4.645	AV
3		5361.660	47.368	42.627	-6.632	54.000	4.742	AV

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Site: WZ-AC2	Time: 2021/06/24 - 22:42
Limit: FCC_Part15.209_RE(3m)	Engineer: Lucas Wang
Probe: WZ-AC2_BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Mobile Computer	Power: By Battery
Test Mode: Transmit by 802.11ac-VHT20 at Channel 5700MHz SISO	

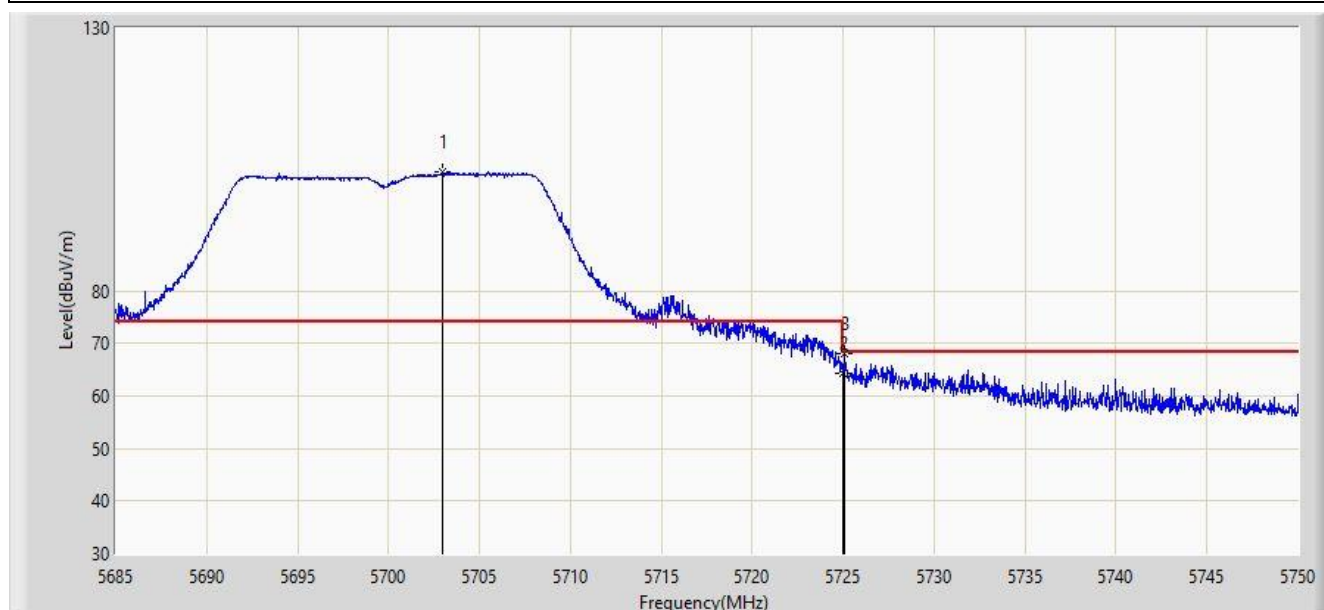


No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	5692.410	104.113	98.690	N/A	N/A	5.424	PK
2		5725.000	64.479	58.589	-3.721	68.200	5.891	PK
3		5725.365	67.607	61.708	-0.593	68.200	5.899	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Site: WZ-AC2	Time: 2021/06/24 - 22:47
Limit: FCC_Part15.209_RE(3m)	Engineer: Lucas Wang
Probe: WZ-AC2_BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Mobile Computer	Power: By Battery
Test Mode: Transmit by 802.11ac-VHT20 at Channel 5700MHz SISO	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	5702.940	102.550	97.072	N/A	N/A	5.477	PK
2		5725.000	64.382	58.492	-3.818	68.200	5.891	PK
3		5725.040	67.990	62.099	-0.210	68.200	5.891	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

6. CONCLUSION

The data collected relate only the item(s) tested and show that the device is in compliance with Part 15E of the FCC rules.

The End

Appendix A - Test Setup Photograph

Refer to “2106RSU027-UT” file.

Appendix B - EUT Photograph

Refer to “2106RSU027-UE” file.