FCC Test Report

Report No.:	RF191230C15-1
FCC ID:	RX3-WBU053LGA
Test Model:	WBU053-LGA
Received Date:	Dec. 30, 2019
Test Date:	Feb. 07 ~ Feb. 14, 2020
Issued Date:	Feb. 21, 2020
Applicant:	Hon Hai Precision Industry Co., Ltd.
Address:	No.151, Sec. 1, Nankan Rd., Lujhu Dist., Taoyuan County 33859, Taiwan (R.O.C.)
Issued By:	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch Lin Kou Laboratories
Lab Address:	No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan
Test Location (1):	No.19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City 33383, Taiwan
Test Location (2):	B2F., No.215, Sec. 3, Beixin Rd., Xindian Dist., New Taipei City 231, Taiwan
FCC Registration / Designation Number:	788550 / TW0003 427177 / TW0011

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Release Control Record

Issue No.	Description	Date Issued
RF191230C15-1	Original Release	Feb. 21, 2020

1 Certificate of Conformity

Product:	Wireless Module
Brand:	Foxconn
Test Model:	WBU053-LGA
Sample Status:	Engineering Sample
Applicant:	Hon Hai Precision Industry Co., Ltd.
Test Date:	Feb. 07 ~ Feb. 14, 2020
Standards:	47 CFR FCC Part 15, Subpart E (Section 15.407) ANSI C63.10:2013

The above equipment has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's RF characteristics under the conditions specified in this report.

Prepared by : Lena Wang , **Date:** Feb. 21, 2020

Lena Wang / Specialist

Approved by : , **Date:** Feb. 21, 2020

Dylan Chiou / Senior Project Engineer

2 Summary of Test Results

47 CFR FCC Part 15, Subpart E (Section 15.407)			
FCC Clause	**Test Item**	**Result**	**Remarks**
15.407(b)(6)	AC Power Conducted Emissions	N/A	Without AC power port of the EUT
15.407(b) (1/2/3/4(i/ii)/6)	Radiated Emissions & Band Edge Measurement	Pass	Meet the requirement of limit. Minimum passing margin is -3.15 dB at 5350 MHz.
15.407(a)(1/2/3)	Max Average Transmit Power	Pass	Meet the requirement of limit.
---	Occupied Bandwidth Measurement	-	Reference only
15.407(a)(1/2/3)	Peak Power Spectral Density	Pass	Meet the requirement of limit.
15.407(e)	6 dB Bandwidth	Pass	Meet the requirement of limit. (U-NII-3 Band only)
15.407(g)	Frequency Stability	Pass	Meet the requirement of limit.
15.203	Antenna Requirement	Pass	Antenna connector is i-pex(MHF) not a standard connector.

Note:

1. For 5725-5850 band compliance with rule RSS-247 6.2.4.2, the OOBE test plots were recorded in Annex A.=>for IC RSS-247_5G report.
   (For U-NII-3 band compliance with rule part 15.407(b)(4)(i), the OOBE test plots were recorded in Annex A.)=>for FCC Part 15.407 report.
2. For 5150-5250, 5250-5350, 5470-5600 band compliance with rule RSS-247 of the band-edge items, the test plots were recorded in Annex B. Test Procedures refer to report 4.1.4.
3. For 5150-5250 band compliance with rule RSS-247 6.2.1.2, the 26dBc test plots were recorded in Annex C. Test Procedures refer to ANSI C63.10-2013 clause 12.7.4.4.2.
4. Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty

2.1 Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

Measurement	Frequency	Expanded Uncertainty (k=2) (±)
Conducted Emissions at mains ports	150 kHz ~ 30 MHz	2.79 dB
Radiated Emissions up to 1 GHz	9 kHz ~ 30 MHz	3.04 dB
	30 MHz ~ 200 MHz	2.0153 dB
	200 MHz ~ 1000 MHz	2.0224 dB
Radiated Emissions above 1 GHz	1 GHz ~ 18 GHz	1.0121 dB
	18 GHz ~ 40 GHz	1.1508 dB

2.2 Modification Record

There were no modifications required for compliance.

3 General Information

3.1 General Description of EUT

Product	Wireless Module
Brand	Foxconn
Test Model	WBU053-LGA
Status of EUT	Engineering Sample
Power Supply Rating	3.0 ~3.6 Vdc
Modulation Type	64QAM, 16QAM, QPSK, BPSK
Modulation Technology	OFDM
Transfer Rate	802.11a: 54.0/ 48.0/ 36.0/ 24.0/ 18.0/ 12.0/ 9.0/ 6.0 Mbps 802.11n: up to 300.0 Mbps
Operating Frequency	5180 ~ 5240 MHz, 5260 ~ 5320 MHz, 5500 ~ 5720 MHz, 5745 ~ 5825 MHz
Number of Channel	5180 ~ 5240 MHz: 4 for 802.11a, 802.11n (HT20) 2 for 802.11n (HT40) 5260 ~ 5320 MHz: 4 for 802.11a, 802.11n (HT20) 2 for 802.11n (HT40) 5500 ~ 5720 MHz: 12 for 802.11a, 802.11n (HT20) 6 for 802.11n (HT40) 5745 ~ 5825 MHz: 5 for 802.11a, 802.11n (HT20) 2 for 802.11n (HT40)
Output Power	28.214 mW for 5180 ~ 5240 MHz 26.267 mW for 5260 ~ 5320 MHz 29.596 mW for 5500 ~ 5720 MHz 30.873 mW for 5745 ~ 5825 MHz
Antenna Type	Refer to note as below
Antenna Connector	N/A
Accessory Device	Refer to Note as below
Data Cable Supplied	Refer to Note as below

Note:

1. The EUT incorporates a MIMO function. Physically, the EUT provides two completed transmitters and two receivers.

Modulation Mode	Tx Function
802.11a	2TX
802.11n (HT20)	2TX
802.11n (HT40)	2TX

2. The antenna information is listed as below.

WLAN Antenna							
Ant. Type	Parts Number	Antenna Gain (dBi)					
		2400 MHz	2450 MHz	2500 MHz	5150 MHz	5500 MHz	5850 MHz
PIFA	790128B00-600-G	-0.58	1.12	1.78	-1.30	0.07	-0.78
	790128C00-600-G	1.48	3.16	2.05	1.11	2.56	1.56
	79012AL00-600-G	1.19	1.63	1.97	2.56	-0.37	-0.11
* For 2.4G and 5G Band 2, 3, 4 : during testing to set Chain 0 and Chain 1 are Part # 790128C00-600-G.							
* For 5G Band 1 : during testing to set Chain 0 is Part # 790128C00-600-G and Chain 1 is Part # 79012AL00-600-G.							
* Only the antenna which has the maximum gain were chosen as a representative for the final test.							

3. The above EUT information is declared by manufacturer and for more detailed features description, please refers to the manufacturer's specifications or user's manual.

3.2 Description of Test Modes

For 5180 ~ 5240 MHz

4 channels are provided for 802.11a, 802.11n (HT20):

Channel	Frequency (MHz)	Channel	Frequency (MHz)
36	5180	44	5220
40	5200	48	5240

2 channels are provided for 802.11n (HT40):

Channel	Frequency (MHz)	Channel	Frequency (MHz)
38	5190	46	5230

For 5260 ~ 5320 MHz

4 channels are provided for 802.11a, 802.11n (HT20):

Channel	Frequency (MHz)	Channel	Frequency (MHz)
52	5260	60	5300
56	5280	64	5320

2 channels are provided for 802.11n (HT40):

Channel	Frequency (MHz)	Channel	Frequency (MHz)
54	5270	62	5310

For 5500 ~ 5720 MHz

12 channels are provided for 802.11a, 802.11n (HT20):

Channel	Frequency (MHz)	Channel	Frequency (MHz)
100	5500	124	5620
104	5520	128	5640
108	5540	132	5660
112	5560	136	5680
116	5580	140	5700
120	5600	144	5720

6 channels are provided for 802.11n (HT40):

Channel	Frequency (MHz)	Channel	Frequency (MHz)
102	5510	126	5630
110	5550	134	5670
118	5590	142	5710

For 5745 ~ 5825 MHz:

5 channels are provided for 802.11a, 802.11n (HT20):

Channel	Frequency (MHz)	Channel	Frequency (MHz)
149	5745	161	5805
153	5765	165	5825
157	5785		

2 channels are provided for 802.11n (HT40):

Channel	Frequency (MHz)	Channel	Frequency (MHz)
151	5755	159	5795

3.2.1 Test Mode Applicability and Tested Channel Detail

EUT Configure Mode	Applicable To				Description
	RE≥1G	RE<1G	PLC	APCM	
-	√	√	-	√	-

Where **RE≥1G:** Radiated Emission above 1 GHz **RE<1G:** Radiated Emission below 1 GHz
PLC: Power Line Conducted Emission **APCM:** Antenna Port Conducted Measurement

Note:
1. The EUT had been pre-tested on the positioned of each 3 axis. The worst case was found when positioned on **X-plane**.
2. "-" means no effect.

Radiated Emission Test (Above 1 GHz):

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

☒ Following channel(s) was (were) selected for the final test as listed below.

EUT Configure Mode	Frequency Band (MHz)	Mode	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
-	5180-5240	802.11a	36 to 48	36, 40, 48	OFDM	BPSK	6.0
-		802.11n (HT20)	36 to 48	36, 40, 48	OFDM	BPSK	6.5
-		802.11n (HT40)	38 to 46	38, 46	OFDM	BPSK	13.5
-	5260-5320	802.11a	52 to 64	52, 60, 64	OFDM	BPSK	6.0
-		802.11n (HT20)	52 to 64	52, 60, 64	OFDM	BPSK	6.5
-		802.11n (HT40)	54 to 62	54, 62	OFDM	BPSK	13.5
-	5500-5720	802.11a	100 to 144	100, 116, 140, 144	OFDM	BPSK	6.0
-		802.11n (HT20)	100 to 144	100, 116, 140, 144	OFDM	BPSK	6.5
-		802.11n (HT40)	102 to 142	102, 110, 134, 142	OFDM	BPSK	13.5
-	5745-5825	802.11a	149 to 165	149, 157, 165	OFDM	BPSK	6.0
-		802.11n (HT20)	149 to 165	149, 157, 165	OFDM	BPSK	6.5
-		802.11n (HT40)	151 to 159	151, 159	OFDM	BPSK	13.5

Radiated Emission Test (Below 1 GHz):

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

☒ Following channel(s) was (were) selected for the final test as listed below.

EUT Configure Mode	Frequency Band (MHz)	Mode	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
-	5260-5320	802.11n (HT40)	54 to 62	62	OFDM	BPSK	13.5

Antenna Port Conducted Measurement:

☒ This item includes all test value of each mode, but only includes spectrum plot of worst value of each mode.

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

☒ Following channel(s) was (were) selected for the final test as listed below.

EUT Configure Mode	Frequency Band (MHz)	Mode	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
-	5180-5240	802.11a	36 to 48	36, 40, 48	OFDM	BPSK	6.0
-		802.11n (HT20)	36 to 48	36, 40, 48	OFDM	BPSK	6.5
-		802.11n (HT40)	38 to 46	38, 46	OFDM	BPSK	13.5
-	5260-5320	802.11a	52 to 64	52, 60, 64	OFDM	BPSK	6.0
-		802.11n (HT20)	52 to 64	52, 60, 64	OFDM	BPSK	6.5
-		802.11n (HT40)	54 to 62	54, 62	OFDM	BPSK	13.5
-	5500-5720	802.11a	100 to 144	100, 116, 140, 144	OFDM	BPSK	6.0
-		802.11n (HT20)	100 to 144	100, 116, 140, 144	OFDM	BPSK	6.5
-		802.11n (HT40)	102 to 142	102, 110, 134, 142	OFDM	BPSK	13.5
-	5745-5825	802.11a	149 to 165	149, 157, 165	OFDM	BPSK	6.0
-		802.11n (HT20)	149 to 165	149, 157, 165	OFDM	BPSK	6.5
-		802.11n (HT40)	151 to 159	151, 159	OFDM	BPSK	13.5

Test Condition:

Applicable To	Environmental Conditions	Input Power	Tested by
RE≥1G	25 deg. C, 65 % RH	120 Vac, 60 Hz	Charles Hsiao, Karl Lee
RE<1G	25 deg. C, 65 % RH	120 Vac, 60 Hz	Harry Hsueh
APCM	25 deg. C, 65 % RH	3.3 Vdc	Gavin Wu

3.3 Duty Cycle of Test Signal

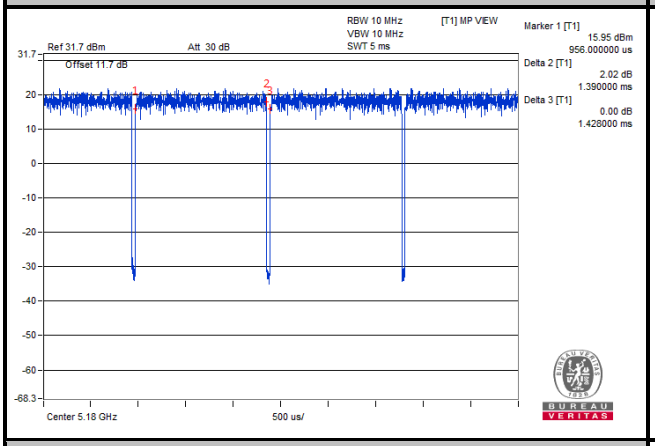
Duty cycle of test signal is < 98 %, duty factor is required.

802.11a: Duty cycle = 1.39/1.428 = 0.973, Duty factor = 10 * log(1/0.973) = 0.12

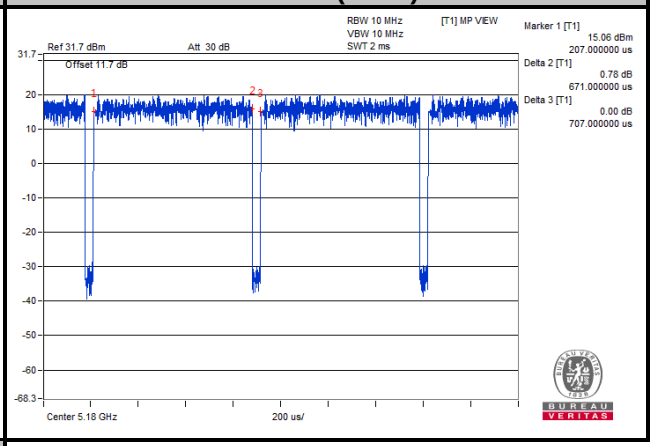
802.11n (HT20): Duty cycle = 0.671/0.707 = 0.949, Duty factor = 10 * log(1/0.949) = 0.23

802.11n (HT40): Duty cycle = 0.347/0.383 = 0.906, Duty factor = 10 * log(1/0.906) = 0.43

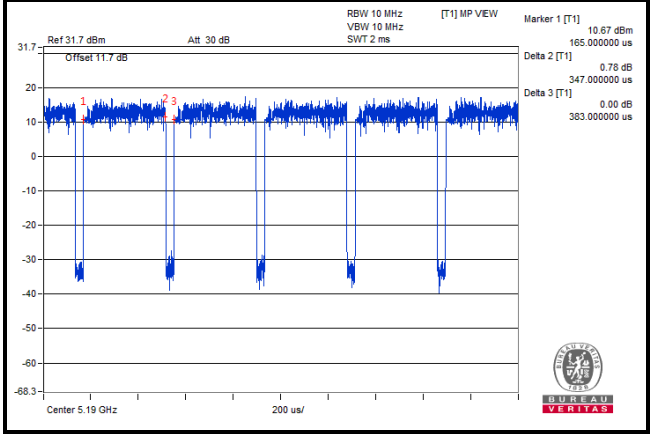
802.11a



802.11n (HT20)



802.11n (HT40)



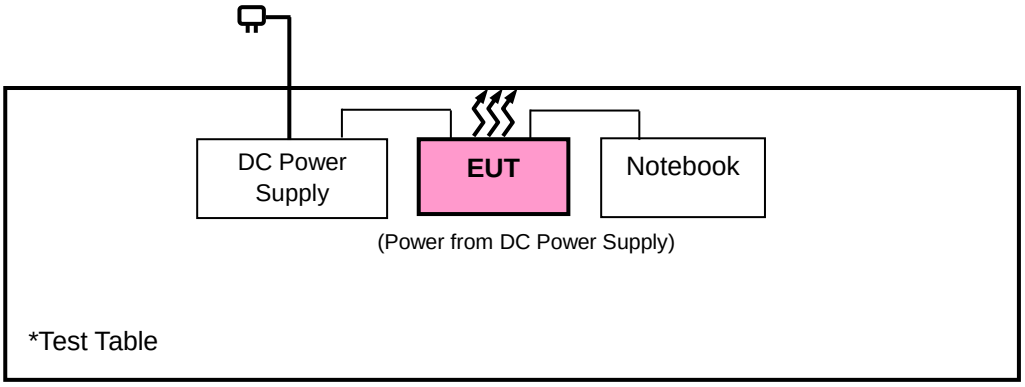
3.4 Description of Support Units

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

No.	Product	Brand	Model No.	Serial No.	FCC ID
1.	DC Power Supply	Topward	3303D	803136	N/A
2.	Notebook	DELL	E6420	D3T96R1	N/A

Note:
1. All power cords of the above support units are non-shielded (1.8m).
2. Items 2 acted as communication partners to transfer data.

3.4.1 Configuration of System under Test



3.5 General Description of Applied Standards and References

The EUT is a RF Product. According to the specifications of the manufacturer, it must comply with the requirements of the following standards and references:

Test Standard:

FCC Part 15, Subpart E (15.407)
ANSI C63.10-2013

All test items have been performed and recorded as per the above standards.

References Test Guidance:

KDB 789033 D02 General UNII Test Procedures New Rules v02r01
KDB 662911 D01 Multiple Transmitter Output v02r01

All test items have been performed as a reference to the above KDB test guidance.

4 Test Types and Results

4.1 Radiated Emission and Bandedge Measurement

4.1.1 Limits of Radiated Emission and Bandedge Measurement

Radiated emissions which fall in the restricted bands must comply with the radiated emission limits specified as below table.

Frequencies (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009 ~ 0.490	2400/F (kHz)	300
0.490 ~ 1.705	24000/F (kHz)	30
1.705 ~ 30.0	30	30
30 ~ 88	100	3
88 ~ 216	150	3
216 ~ 960	200	3
Above 960	500	3

Note:

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).
3. For frequencies above 1000 MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20 dB under any condition of modulation.

4.1.2 Limits of Unwanted Emission Out of the Restricted Bands

<table>
<tr><th colspan="3">Applicable To</th><th colspan="2">Limit</th></tr>
<tr><td colspan="3" rowspan="2">789033 D02 General UNII Test Procedures New Rules v02r01</td><td colspan="2">Field Strength at 3 m</td></tr>
<tr><td>PK: 74 (dBµV/m)</td><td>AV: 54 (dBµV/m)</td></tr>
<tr><th>Frequency Band</th><th colspan="2">Applicable To</th><th>EIRP Limit</th><th>Equivalent Field Strength at 3 m</th></tr>
<tr><td>5150~5250 MHz</td><td colspan="2">15.407(b)(1)</td><td rowspan="3">PK: -27 (dBm/MHz)</td><td rowspan="3">PK: 68.2 (dBµV/m)</td></tr>
<tr><td>5250~5350 MHz</td><td colspan="2">15.407(b)(2)</td></tr>
<tr><td>5470~5725 MHz</td><td colspan="2">15.407(b)(3)</td></tr>
<tr><td rowspan="2">5725~5850 MHz</td><td>☒</td><td>15.407(b)(4)(i)</td><td>PK:-27 (dBm/MHz) *1
PK:10 (dBm/MHz) *2
PK:15.6 (dBm/MHz) *3
PK:27 (dBm/MHz) *4</td><td>PK: 68.2 (dBµV/m) *1
PK:105.2 (dBµV/m) *2
PK: 110.8 (dBµV/m) *3
PK:122.2 (dBµV/m) *4</td></tr>
<tr><td>☐</td><td>15.407(b)(4)(ii)</td><td colspan="2">Emission limits in section 15.247(d)</td></tr>
<tr><td colspan="5">*1 beyond 75 MHz or more above of the band edge.
*2 below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above.
*3 below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above.
*4 from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.</td></tr>
</table>

Note:

The following formula is used to convert the equipment isotropic radiated power (eirp) to field strength:

$$E = \frac{1000000\sqrt{30P}}{3}$$ µV/m, where P is the eirp (Watts).

4.1.3 Test Instruments

Description & Manufacturer	Model No.	Serial No.	Date of Calibration	Due Date of Calibration
Test Receiver Agilent Technologies	N9038A	MY52260177	Aug. 26, 2019	Aug. 25, 2020
Spectrum Analyzer ROHDE & SCHWARZ	FSU43	101261	Apr. 15, 2019	Apr. 14, 2020
HORN Antenna ETS-Lindgren	3117	00143293	Nov. 24, 2019	Nov. 23, 2020
BILOG Antenna SCHWARZBECK	VULB 9168	9168-616	Nov. 12, 2019	Nov. 11, 2020
HORN Antenna SCHWARZBECK	BBHA 9170	9170-480	Nov. 24, 2019	Nov. 23, 2020
Fixed Attenuator Mini-Circuits	MDCS18N-10	MDCS18N-10-01	Apr. 15, 2019	Apr. 14, 2020
Loop Antenna	EM-6879	269	Sep. 16, 2019	Sep. 15, 2020
Preamplifier Agilent	310N	187226	Jun. 18, 2019	Jun. 17, 2020
Preamplifier Agilent	83017A	MY39501357	Jun. 18, 2019	Jun. 17, 2020
Power Meter Anritsu	ML2495A	1012010	Sep. 04, 2019	Sep. 03, 2020
Power Sensor Anritsu	MA2411B	1315050	Sep. 04, 2019	Sep. 03, 2020
RF signal cable ETS-LINDGREN	5D-FB	Cable-CH1-01(RFC-SMS-100-SMS-120+RFC-SMS-100-SMS-400)	Jun. 18, 2019	Jun. 17, 2020
RF signal cable ETS-LINDGREN	8D-FB	Cable-CH1-02(RFC-SMS-100-SMS-24)	Jun. 18, 2019	Jun. 17, 2020
Preamplifier Agilent	310N	187226	Jun. 18, 2019	Jun. 17, 2020
Software BV ADT	E3 8.130425b	NA	NA	NA
Antenna Tower MF	NA	NA	NA	NA
Turn Table MF	NA	NA	NA	NA
Antenna Tower &Turn Table Controller MF	MF-7802	NA	NA	NA
DC Power Supply Topward	3303D	803136	NA	NA
Temperature & Humidity Chamber	GTH-120-40-CP-AR	MAA1306-019	Sep. 06, 2019	Sep. 05, 2020
Digital Multimeter Fluke	87-III	70360742	Jun. 27, 2019	Jun. 26, 2020

Note: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in HsinTien Chamber 1.

4.1.4 Test Procedures

For Radiated Emission below 30 MHz

a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter chamber room. The table was rotated 360 degrees to determine the position of the highest radiation.
b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
c. Parallel, perpendicular, and ground-parallel orientations of the antenna are set to make the measurement.
d. For each suspected emission, the EUT was arranged to its worst case and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
e. The test-receiver system was set to Quasi-Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

Note:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 9 kHz at frequency below 30 MHz.

For Radiated Emission above 30 MHz

a. The EUT was placed on the top of a rotating table 0.8 meters (for 30 MHz ~ 1 GHz) / 1.5 meters (for above 1 GHz) above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
c. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
e. The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.
f. The test-receiver system was set to peak and average detected function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz. If the peak reading value also meets average limit, measurement with the average detector is unnecessary.

Note:

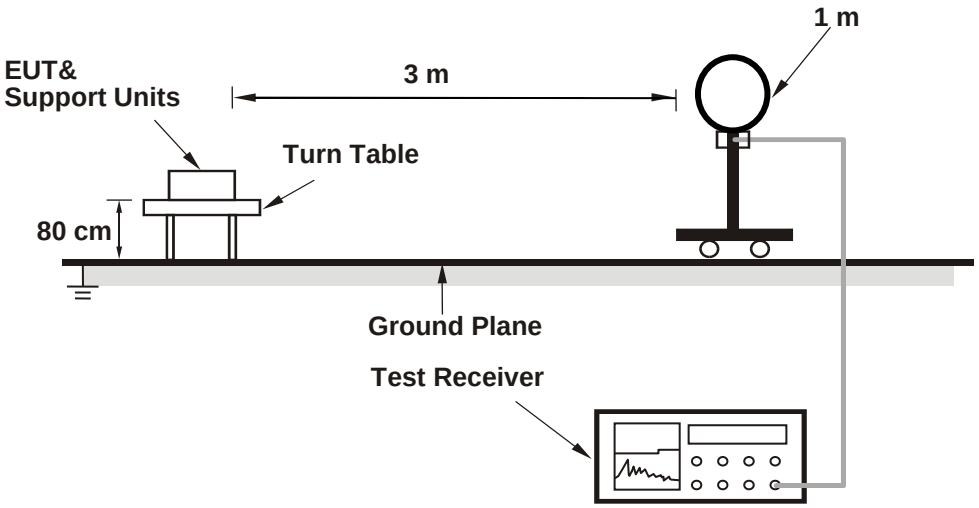
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120 kHz for Quasi-peak detection (QP) or Peak detection (PK) at frequency below 1 GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1 GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is ≥ 1/T (Duty cycle < 98 %) or 10 Hz (Duty cycle ≥ 98 %) for Average detection (AV) at frequency above 1 GHz. (11a: RBW = 1 MHz, VBW = 1 kHz ; 11n (HT20): RBW = 1 MHz, VBW = 3 kHz ; 11n (HT40): RBW = 1 MHz, VBW = 3 kHz)
4. All modes of operation were investigated and the worst-case emissions are reported.

4.1.5 Deviation from Test Standard

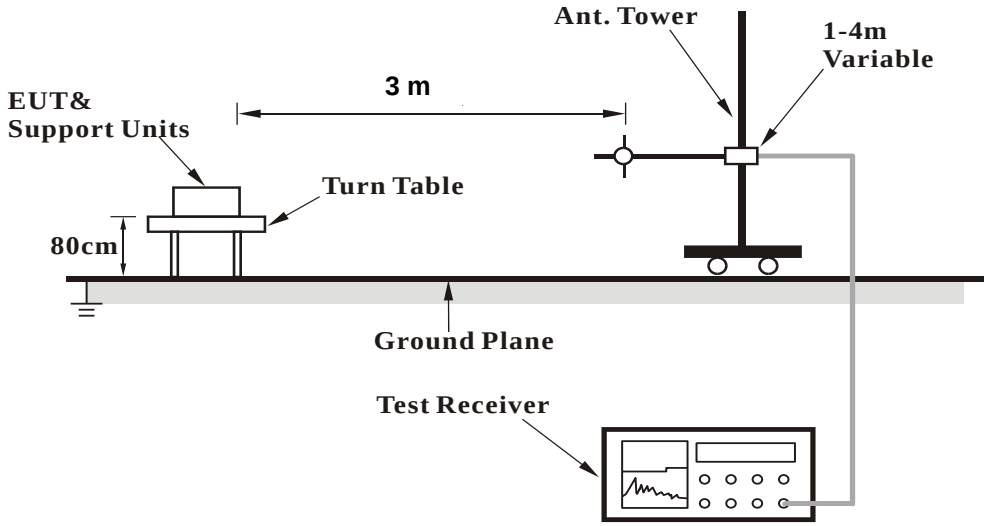
No deviation.

4.1.6 Test Setup

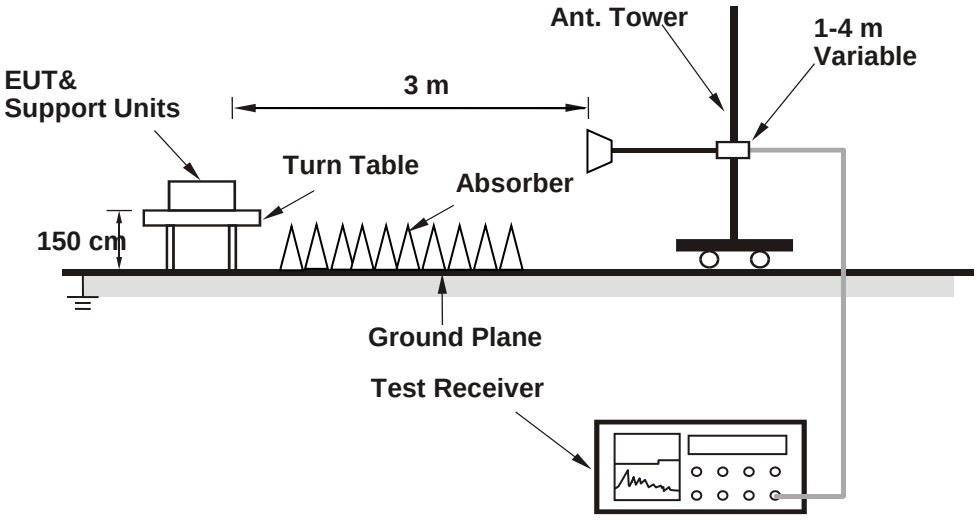
<Radiated Emission below 30 MHz>



<Radiated Emission 30 MHz to 1 GHz>



<Radiated Emission above 1 GHz>



For the actual test configuration, please refer to the attached file (Test Setup Photo).

4.1.7 EUT Operating Conditions

a. Placed the EUT on a testing table.
b. Use the software to control the EUT under transmission condition continuously at specific channel frequency.

4.1.8 Test Results

Above 1 GHz Data：

802.11a

EUT Test Condition		Measurement Detail	
Channel	Channel 36	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5150	42.86	32.81	10.05	54	-11.14	223	270	Average
5150	52.74	42.69	10.05	74	-21.26	223	270	Peak
5180	94.02	83.9	10.12			223	270	Average
5180	99.03	88.91	10.12			223	270	Peak
*10360	53.93	37.91	16.02	68.2	-14.27	138	253	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5150	42.59	32.54	10.05	54	-11.41	108	278	Average
5150	52	41.95	10.05	74	-22	108	278	Peak
5180	93.06	82.94	10.12			108	278	Average
5180	98.28	88.16	10.12			108	278	Peak
*10360	53.59	37.57	16.02	68.2	-14.61	124	76	Peak

Remarks:

1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5180 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 40	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5150	42.62	32.57	10.05	54	-11.38	223	270	Average
5150	52.14	42.09	10.05	74	-21.86	223	270	Peak
5200	93.26	83.1	10.16			223	270	Average
5200	99.22	89.06	10.16			223	270	Peak
5350	42.45	32.22	10.23	54	-11.55	223	270	Average
5350	52.16	41.93	10.23	74	-21.84	223	270	Peak
*10400	53.37	37.19	16.18	68.2	-14.83	183	247	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5150	42.68	32.63	10.05	54	-11.32	108	273	Average
5150	52.59	42.54	10.05	74	-21.41	108	273	Peak
5200	91.67	81.51	10.16			108	273	Average
5200	98.34	88.18	10.16			108	273	Peak
5350	42.5	32.27	10.23	54	-11.5	108	273	Average
5350	52.5	42.27	10.23	74	-21.5	108	273	Peak
*10400	54.28	38.1	16.18	68.2	-13.92	137	54	Peak

Remarks:

1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5200 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 48	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5240	93.11	82.97	10.14			223	270	Average
5240	98.91	88.77	10.14			223	270	Peak
5350	42.58	32.35	10.23	54	-11.42	223	270	Average
5350	52.14	41.91	10.23	74	-21.86	223	270	Peak
*10480	53.33	37.43	15.9	68.2	-14.87	185	207	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5240	92.79	82.65	10.14			108	273	Average
5240	97.84	87.7	10.14			108	273	Peak
5350	42.44	32.21	10.23	54	-11.56	108	273	Average
5350	52.06	41.83	10.23	74	-21.94	108	273	Peak
*10480	52.82	36.92	15.9	68.2	-15.38	174	116	Peak

Remarks:

1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5240 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 52	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Charles Hsiao

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5150	41.45	31.4	10.05	54	-12.55	221	270	Average
5150	52.7	42.65	10.05	74	-21.3	221	270	Peak
5260	94.55	84.43	10.12			221	270	Average
5260	101.64	91.52	10.12			221	270	Peak
*10520	54.95	39.07	15.88	68.2	-13.25	157	117	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5150	41.43	31.38	10.05	54	-12.57	108	276	Average
5150	52.04	41.99	10.05	74	-21.96	108	276	Peak
5260	93.66	83.54	10.12			108	276	Average
5260	100.8	90.68	10.12			108	276	Peak
*10520	55.7	39.82	15.88	68.2	-12.5	168	111	Peak

Remarks:

1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5260 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 60	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Charles Hsiao

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5150	42.48	32.43	10.05	54	-11.52	221	270	Average
5150	51.78	41.73	10.05	74	-22.22	221	270	Peak
5300	96.4	86.34	10.06			221	270	Average
5300	101.02	90.96	10.06			221	270	Peak
5350	42.5	32.27	10.23	54	-11.5	221	270	Average
5350	53.2	42.97	10.23	74	-20.8	221	270	Peak
10600	47.18	31.42	15.76	54	-6.82	174	44	Average
10600	53.93	38.17	15.76	74	-20.07	174	44	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5150	42.31	32.26	10.05	54	-11.69	108	276	Average
5150	52.04	41.99	10.05	74	-21.96	108	276	Peak
5300	95.5	85.44	10.06			108	276	Average
5300	100.83	90.77	10.06			108	276	Peak
5350	42.54	32.31	10.23	54	-11.46	108	276	Average
5350	52.13	41.9	10.23	74	-21.87	108	276	Peak
10600	47.21	31.45	15.76	54	-6.79	119	65	Average
10600	53.53	37.77	15.76	74	-20.47	119	65	Peak

Remarks:

1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5300 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 64	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Charles Hsiao

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5320	96.15	86.06	10.09			221	270	Average
5320	101.4	91.31	10.09			221	270	Peak
5350	42.66	32.43	10.23	54	-11.34	221	270	Average
5350	52.36	42.13	10.23	74	-21.64	221	270	Peak
10640	47.34	31.35	15.99	54	-6.66	189	255	Average
10640	53.36	37.37	15.99	74	-20.64	189	255	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5320	95.62	85.53	10.09			108	276	Average
5320	100.97	90.88	10.09			108	276	Peak
5350	42.5	32.27	10.23	54	-11.5	108	276	Average
5350	52.2	41.97	10.23	74	-21.8	108	276	Peak
10640	47.43	31.44	15.99	54	-6.57	135	310	Average
10640	53.81	37.82	15.99	74	-20.19	135	310	Peak

Remarks:

1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5320 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 100	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Charles Hsiao

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5460	41.68	31.17	10.51	54	-12.32	190	11	Average
5460	53.49	42.98	10.51	74	-20.51	190	11	Peak
*5470	51.22	40.69	10.53	68.2	-16.98	190	11	Peak
5500	94.41	83.81	10.6			190	11	Average
5500	101.42	90.82	10.6			190	11	Peak
11000	47.57	31.44	16.13	54	-6.43	185	55	Average
11000	54.41	38.28	16.13	74	-19.59	185	55	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5460	43.27	32.76	10.51	54	-10.73	190	350	Average
5460	52.38	41.87	10.51	74	-21.62	190	350	Peak
*5470	51.28	40.75	10.53	68.2	-16.92	190	350	Peak
5500	98.58	87.98	10.6			190	350	Average
5500	105.23	94.63	10.6			190	350	Peak
11000	47.5	31.37	16.13	54	-6.5	164	233	Average
11000	54.77	38.64	16.13	74	-19.23	164	233	Peak

Remarks:

1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5500 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 116	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Charles Hsiao

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5460	41.59	31.08	10.51	54	-12.41	190	10	Average
5460	52.17	41.66	10.51	74	-21.83	190	10	Peak
*5470	51.24	40.71	10.53	68.2	-16.96	190	10	Peak
5580	95.45	84.74	10.71			190	10	Average
5580	102.64	91.93	10.71			190	10	Peak
*5725	51.88	40.96	10.92	68.2	-16.32	190	10	Peak
11160	47.77	31.41	16.36	54	-6.23	140	198	Average
11160	57.34	40.98	16.36	74	-16.66	140	198	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5460	41.81	31.3	10.51	54	-12.19	190	350	Average
5460	52.36	41.85	10.51	74	-21.64	190	350	Peak
*5470	50.98	40.45	10.53	68.2	-17.22	190	350	Peak
5580	99.63	88.92	10.71			190	350	Average
5580	106.27	95.56	10.71			190	350	Peak
*5725	50.98	40.06	10.92	68.2	-17.22	190	350	Peak
11160	47.92	31.56	16.36	54	-6.08	141	213	Average
11160	57.56	41.2	16.36	74	-16.44	141	213	Peak

Remarks:

1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5580 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 140	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Charles Hsiao

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5700	95.88	84.93	10.95			190	10	Average
5700	102.79	91.84	10.95			190	10	Peak
*5725	55.94	45.02	10.92	68.2	-12.26	190	10	Peak
11400	47.78	31.59	16.19	54	-6.22	164	332	Average
11400	57.53	41.34	16.19	74	-16.47	164	332	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5700	98.58	87.63	10.95			190	350	Average
5700	105.37	94.42	10.95			190	350	Peak
*5725	61.2	50.28	10.92	68.2	-7	190	350	Peak
11400	47.74	31.55	16.19	54	-6.26	181	154	Average
11400	56.38	40.19	16.19	74	-17.62	181	154	Peak

Remarks:

1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5700 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 144	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Charles Hsiao

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5460	41.44	30.93	10.51	54	-12.56	190	10	Average
5460	52.19	41.68	10.51	74	-21.81	190	10	Peak
*5470	49.55	39.02	10.53	68.2	-18.65	190	10	Peak
5720	94.59	83.67	10.92			190	10	Average
5720	101.37	90.45	10.92			190	10	Peak
11440	48.42	32.13	16.29	54	-5.58	161	145	Average
11440	56.8	40.51	16.29	74	-17.2	161	145	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5460	41.67	31.16	10.51	54	-12.33	190	350	Average
5460	52.71	42.2	10.51	74	-21.29	190	350	Peak
*5470	51.05	40.52	10.53	68.2	-17.15	190	350	Peak
5720	98.56	87.64	10.92			190	350	Average
5720	105.14	94.22	10.92			190	350	Peak
11440	47.53	31.24	16.29	54	-6.47	126	135	Average
11440	55.89	39.6	16.29	74	-18.11	126	135	Peak

Remarks:

1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5720 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 149	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Charles Hsiao

<Spurious Emission>

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5745	97.44	86.56	10.88			200	276	Average
5745	104.6	93.72	10.88			200	276	Peak
11490	47.72	31.25	16.47	54	-6.28	142	175	Average
11490	56.3	39.83	16.47	74	-17.7	142	175	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5745	98.58	87.7	10.88			190	350	Average
5745	105.35	94.47	10.88			190	350	Peak
11490	47.7	31.23	16.47	54	-6.3	142	165	Average
11490	55.51	39.04	16.47	74	-18.49	142	165	Peak

<Out of Band Emission (OOBE)>

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
*5561.425	52.71	42.03	10.68	68.2	-15.49	200	276	Peak
5656.45	52.18	41.31	10.87	72.97	-20.79	200	276	Peak
5921.05	51.99	40.9	11.09	71.12	-19.13	200	276	Peak
*6021.325	51.48	40.13	11.35	68.2	-16.72	200	276	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
*5584.525	51.95	41.22	10.73	68.2	-16.25	190	350	Peak
5653.3	50.18	39.31	10.87	70.64	-20.46	190	350	Peak
5920.525	49.85	38.76	11.09	71.51	-21.66	190	350	Peak
*6014.5	52.42	41.07	11.35	68.2	-15.78	190	350	Peak

Remarks:

1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5745 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 157	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Charles Hsiao

<Spurious Emission>

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5785	97.49	86.68	10.81			200	276	Average
5785	104.54	93.73	10.81			200	276	Peak
11570	47.72	31.23	16.49	54	-6.28	104	210	Average
11570	55.16	38.67	16.49	74	-18.84	104	210	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5785	98.56	87.75	10.81			190	350	Average
5785	105.4	94.59	10.81			190	350	Peak
11570	46.72	30.23	16.49	54	-7.28	169	135	Average
11570	54.66	38.17	16.49	74	-19.34	169	135	Peak

<Out of Band Emission (OOBE)>

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
*5599.75	52.46	41.7	10.76	68.2	-15.74	200	276	Peak
5656.45	52.07	41.2	10.87	72.97	-20.9	200	276	Peak
5915.275	52.96	41.87	11.09	75.4	-22.44	200	276	Peak
*5951.5	52.78	41.59	11.19	68.2	-15.42	200	276	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
*5633.875	51.9	41.07	10.83	68.2	-16.3	190	350	Peak
5653.3	49	38.13	10.87	70.64	-21.64	190	350	Peak
5923.675	49.32	38.21	11.11	69.18	-19.86	190	350	Peak
*6004	52.88	41.55	11.33	68.2	-15.32	190	350	Peak

Remarks:

1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5785 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 165	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Charles Hsiao

<Spurious Emission>

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5825	97.45	86.57	10.88			200	276	Average
5825	104.42	93.54	10.88			200	276	Peak
11650	47.91	31.13	16.78	54	-6.09	146	195	Average
11650	54.65	37.87	16.78	74	-19.35	146	195	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5825	98.44	87.56	10.88			190	350	Average
5825	105.48	94.6	10.88			190	350	Peak
11650	46.91	30.13	16.78	54	-7.09	124	154	Average
11650	53.91	37.13	16.78	74	-20.09	124	154	Peak

<Out of Band Emission (OOBE)>

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
*5639.125	52.22	41.39	10.83	68.2	-15.98	200	276	Peak
5654.35	51.04	40.17	10.87	71.42	-20.38	200	276	Peak
5923.675	50.83	39.72	11.11	69.18	-18.35	200	276	Peak
*5978.275	52.23	40.97	11.26	68.2	-15.97	200	276	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
*5527.825	52.39	41.76	10.63	68.2	-15.81	190	350	Peak
5653.825	52.17	41.3	10.87	71.03	-18.86	190	350	Peak
5921.05	50.07	38.98	11.09	71.12	-21.05	190	350	Peak
*5928.4	52.56	41.45	11.11	68.2	-15.64	190	350	Peak

Remarks:

1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5825 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

802.11n (HT20)

EUT Test Condition		Measurement Detail	
Channel	Channel 36	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Charles Hsiao

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5150	41.94	31.89	10.05	54	-12.06	223	270	Average
5150	52.89	42.84	10.05	74	-21.11	223	270	Peak
5180	91.44	81.32	10.12			223	270	Average
5180	98.08	87.96	10.12			223	270	Peak
*10360	55.16	39.14	16.02	68.2	-13.04	112	24	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5150	41.82	31.77	10.05	54	-12.18	108	360	Average
5150	52.45	42.4	10.05	74	-21.55	108	360	Peak
5180	92.55	82.43	10.12			108	360	Average
5180	99.52	89.4	10.12			108	360	Peak
*10360	54.53	38.51	16.02	68.2	-13.67	174	355	Peak

Remarks:

1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5180 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 40	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Charles Hsiao

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5150	41.7	31.65	10.05	54	-12.3	223	270	Average
5150	53.21	43.16	10.05	74	-20.79	223	270	Peak
5200	91.44	81.28	10.16			223	270	Average
5200	98.53	88.37	10.16			223	270	Peak
5350	41.68	31.45	10.23	54	-12.32	223	270	Average
5350	52.67	42.44	10.23	74	-21.33	223	270	Peak
*10400	54.27	38.09	16.18	68.2	-13.93	134	4	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5150	41.63	31.58	10.05	54	-12.37	108	360	Average
5150	52.97	42.92	10.05	74	-21.03	108	360	Peak
5200	92.19	82.03	10.16			108	360	Average
5200	99.08	88.92	10.16			108	360	Peak
5350	41.44	31.21	10.23	54	-12.56	108	360	Average
5350	52.37	42.14	10.23	74	-21.63	108	360	Peak
*10400	54.13	37.95	16.18	68.2	-14.07	117	35	Peak

Remarks:

1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5200 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 48	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Charles Hsiao

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5240	90.56	80.42	10.14			223	270	Average
5240	97.44	87.3	10.14			223	270	Peak
5350	41.53	31.3	10.23	54	-12.47	223	270	Average
5350	52.56	42.33	10.23	74	-21.44	223	270	Peak
*10480	54.15	38.25	15.9	68.2	-14.05	178	88	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5240	91.55	81.41	10.14			108	360	Average
5240	98.54	88.4	10.14			108	360	Peak
5350	41.46	31.23	10.23	54	-12.54	108	360	Average
5350	52.19	41.96	10.23	74	-21.81	108	360	Peak
*10480	54.12	38.22	15.9	68.2	-14.08	113	349	Peak

Remarks:

1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5240 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 52	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Charles Hsiao

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5150	41.39	31.34	10.05	54	-12.61	221	270	Average
5150	52.34	42.29	10.05	74	-21.66	221	270	Peak
5260	93.64	83.52	10.12			221	270	Average
5260	100.1	89.98	10.12			221	270	Peak
*10520	54.02	38.14	15.88	68.2	-14.18	152	222	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5150	41.36	31.31	10.05	54	-12.64	108	276	Average
5150	52.29	42.24	10.05	74	-21.71	108	276	Peak
5260	92.56	82.44	10.12			108	276	Average
5260	99.73	89.61	10.12			108	276	Peak
*10520	53.58	37.7	15.88	68.2	-14.62	134	213	Peak

Remarks:

1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5260 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 60	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Charles Hsiao

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5150	41.47	31.42	10.05	54	-12.53	221	270	Average
5150	52.55	42.5	10.05	74	-21.45	221	270	Peak
5300	93.64	83.58	10.06			221	270	Average
5300	100.72	90.66	10.06			221	270	Peak
5350	41.57	31.34	10.23	54	-12.43	221	270	Average
5350	51.98	41.75	10.23	74	-22.02	221	270	Peak
10600	47.37	31.61	15.76	54	-6.63	165	266	Average
10600	53.91	38.15	15.76	74	-20.09	165	266	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5150	41.5	31.45	10.05	54	-12.5	108	276	Average
5150	52.79	42.74	10.05	74	-21.21	108	276	Peak
5300	92.33	82.27	10.06			108	276	Average
5300	99.28	89.22	10.06			108	276	Peak
5350	41.49	31.26	10.23	54	-12.51	108	276	Average
5350	52.57	42.34	10.23	74	-21.43	108	276	Peak
10600	47.27	31.51	15.76	54	-6.73	182	5	Average
10600	52.74	36.98	15.76	74	-21.26	182	5	Peak

Remarks:

1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5300 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 64	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Charles Hsiao

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5320	92.11	82.02	10.09			221	270	Average
5320	99.34	89.25	10.09			221	270	Peak
5350	41.58	31.35	10.23	54	-12.42	221	270	Average
5350	52.45	42.22	10.23	74	-21.55	221	270	Peak
10640	47.33	31.34	15.99	54	-6.67	140	22	Average
10640	53.45	37.46	15.99	74	-20.55	140	22	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5320	91.47	81.38	10.09			108	276	Average
5320	98.89	88.8	10.09			108	276	Peak
5350	41.62	31.39	10.23	54	-12.38	108	276	Average
5350	52.88	42.65	10.23	74	-21.12	108	276	Peak
10640	47.55	31.56	15.99	54	-6.45	156	288	Average
10640	53.21	37.22	15.99	74	-20.79	156	288	Peak

Remarks:

1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5320 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 100	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Charles Hsiao

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5460	41.75	31.24	10.51	54	-12.25	190	10	Average
5460	52.61	42.1	10.51	74	-21.39	190	10	Peak
*5470	50.52	39.99	10.53	68.2	-17.68	190	10	Peak
5500	91.74	81.14	10.6			190	10	Average
5500	98.89	88.29	10.6			190	10	Peak
11000	47.37	31.24	16.13	54	-6.63	185	299	Average
11000	54.5	38.37	16.13	74	-19.5	185	299	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5460	42.28	31.77	10.51	54	-11.72	190	350	Average
5460	52.83	42.32	10.51	74	-21.17	190	350	Peak
*5470	51.44	40.91	10.53	68.2	-16.76	190	350	Peak
5500	95.56	84.96	10.6			190	350	Average
5500	102.24	91.64	10.6			190	350	Peak
11000	47.61	31.48	16.13	54	-6.39	135	326	Average
11000	54.76	38.63	16.13	74	-19.24	135	326	Peak

Remarks:

1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5500 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 116	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Charles Hsiao

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5460	41.7	31.19	10.51	54	-12.3	190	10	Average
5460	52.52	42.01	10.51	74	-21.48	190	10	Peak
*5470	51.09	40.56	10.53	68.2	-17.11	190	10	Peak
5580	92.41	81.7	10.71			190	10	Average
5580	99.27	88.56	10.71			190	10	Peak
*5725	51.59	40.67	10.92	68.2	-16.61	190	10	Peak
11160	47.79	31.43	16.36	54	-6.21	114	14	Average
11160	56.98	40.62	16.36	74	-17.02	114	14	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5460	41.94	31.43	10.51	54	-12.06	190	350	Average
5460	52.33	41.82	10.51	74	-21.67	190	350	Peak
*5470	50.8	40.27	10.53	68.2	-17.4	190	350	Peak
5580	96.59	85.88	10.71			190	350	Average
5580	103.84	93.13	10.71			190	350	Peak
*5725	51.58	40.66	10.92	68.2	-16.62	190	350	Peak
11160	47.84	31.48	16.36	54	-6.16	103	324	Average
11160	57.24	40.88	16.36	74	-16.76	103	324	Peak

Remarks:

1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5580 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 140	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Charles Hsiao

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5700	92.41	81.46	10.95			190	10	Average
5700	99.57	88.62	10.95			190	10	Peak
*5725	51.68	40.76	10.92	68.2	-16.52	190	10	Peak
11400	47.65	31.46	16.19	54	-6.35	164	44	Average
11400	56.77	40.58	16.19	74	-17.23	164	44	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5700	96.56	85.61	10.95			190	350	Average
5700	103.19	92.24	10.95			190	350	Peak
*5725	58.12	47.2	10.92	68.2	-10.08	190	350	Peak
11400	47.67	31.48	16.19	54	-6.33	155	209	Average
11400	55.63	39.44	16.19	74	-18.37	155	209	Peak

Remarks:

1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5700 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 144	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Charles Hsiao

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5460	41.62	31.11	10.51	54	-12.38	190	10	Average
5460	52.48	41.97	10.51	74	-21.52	190	10	Peak
*5470	50.48	39.95	10.53	68.2	-17.72	190	10	Peak
5720	93.58	82.66	10.92			190	10	Average
5720	100.33	89.41	10.92			190	10	Peak
11440	46.53	30.24	16.29	54	-7.47	146	165	Average
11440	53.89	37.6	16.29	74	-20.11	146	165	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5460	41.51	31	10.51	54	-12.49	190	350	Average
5460	52.15	41.64	10.51	74	-21.85	190	350	Peak
*5470	50.71	40.18	10.53	68.2	-17.49	190	350	Peak
5720	97.79	86.87	10.92			190	350	Average
5720	104.36	93.44	10.92			190	350	Peak
11440	47.55	31.26	16.29	54	-6.45	148	157	Average
11440	55.34	39.05	16.29	74	-18.66	148	157	Peak

Remarks:

1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5720 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 149	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Charles Hsiao

<Spurious Emission>

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5745	96.44	85.56	10.88			200	276	Average
5745	103.6	92.72	10.88			200	276	Peak
11490	47.68	31.21	16.47	54	-6.32	143	165	Average
11490	54.86	38.39	16.47	74	-19.14	143	165	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5745	97.64	86.76	10.88			190	350	Average
5745	104.93	94.05	10.88			190	350	Peak
11490	47.59	31.12	16.47	54	-6.41	104	125	Average
11490	54.71	38.24	16.47	74	-19.29	104	125	Peak

<Out of Band Emission (OOBE)>

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
*5553.55	53.29	42.63	10.66	68.2	-14.91	200	276	Peak
5654.35	50.25	39.38	10.87	71.42	-21.17	200	276	Peak
5918.95	52.03	40.94	11.09	72.68	-20.65	200	276	Peak
*5967.25	52.47	41.24	11.23	68.2	-15.73	200	276	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
*5645.95	52.89	42.04	10.85	68.2	-15.31	190	350	Peak
5659.075	52.47	41.6	10.87	74.92	-22.45	190	350	Peak
5917.375	52.32	41.23	11.09	73.84	-21.52	190	350	Peak
*6010.3	51.95	40.6	11.35	68.2	-16.25	190	350	Peak

Remarks:

1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5745 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 157	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Charles Hsiao

<Spurious Emission>

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5785	96.95	86.14	10.81			200	276	Average
5785	103.09	92.28	10.81			200	276	Peak
11570	47.7	31.21	16.49	54	-6.3	169	154	Average
11570	54.95	38.46	16.49	74	-19.05	169	154	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5785	97.74	86.93	10.81			190	350	Average
5785	104.73	93.92	10.81			190	350	Peak
11570	46.72	30.23	16.49	54	-7.28	102	132	Average
11570	54.27	37.78	16.49	74	-19.73	102	132	Peak

<Out of Band Emission (OOBE)>

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
*5629.675	51.9	41.09	10.81	68.2	-16.3	200	276	Peak
5654.35	50.25	39.38	10.87	71.42	-21.17	200	276	Peak
5921.575	49.64	38.53	11.11	70.73	-21.09	200	276	Peak
*5998.75	52.01	40.68	11.33	68.2	-16.19	200	276	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
*5533.6	52.94	42.3	10.64	68.2	-15.26	190	350	Peak
5652.25	48.67	37.8	10.87	69.86	-21.19	190	350	Peak
5921.575	51.91	40.8	11.11	70.73	-18.82	190	350	Peak
*5929.45	52.16	41.05	11.11	68.2	-16.04	190	350	Peak

Remarks:

1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5785 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 165	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Charles Hsiao

<Spurious Emission>

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5825	96.55	85.67	10.88			200	276	Average
5825	103.58	92.7	10.88			200	276	Peak
11650	46.91	30.13	16.78	54	-7.09	169	154	Average
11650	53.74	36.96	16.78	74	-20.26	169	154	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5825	97.78	86.9	10.88			190	350	Average
5825	104.84	93.96	10.88			190	350	Peak
11650	46.91	30.13	16.78	54	-7.09	169	165	Average
11650	53.81	37.03	16.78	74	-20.19	169	165	Peak

<Out of Band Emission (OOBE)>

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
*5612.35	52.25	41.48	10.77	68.2	-15.95	200	276	Peak
5653.3	49.05	38.18	10.87	70.64	-21.59	200	276	Peak
5922.625	48.37	37.26	11.11	69.96	-21.59	200	276	Peak
*5985.1	52.32	41.06	11.26	68.2	-15.88	200	276	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
*5603.425	52.04	41.29	10.75	68.2	-16.16	190	350	Peak
5654.35	51.02	40.15	10.87	71.42	-20.4	190	350	Peak
5922.625	52.04	40.93	11.11	69.96	-17.92	190	350	Peak
*5948.875	52.47	41.29	11.18	68.2	-15.73	190	350	Peak

Remarks:

1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5825 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

802.11n (HT40)

EUT Test Condition		Measurement Detail	
Channel	Channel 38	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Charles Hsiao

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5150	43.69	33.64	10.05	54	-10.31	223	270	Average
5150	53.8	43.75	10.05	74	-20.2	223	270	Peak
5190	89.74	79.62	10.12			223	270	Average
5190	96.31	86.19	10.12			223	270	Peak
5350	42.06	31.83	10.23	54	-11.94	223	270	Average
5350	51.96	41.73	10.23	74	-22.04	223	270	Peak
*10380	55.58	39.48	16.1	68.2	-12.62	113	266	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5150	44.88	34.83	10.05	54	-9.12	104	359	Average
5150	54.45	44.4	10.05	74	-19.55	104	359	Peak
5190	90.65	80.53	10.12			104	359	Average
5190	97.49	87.37	10.12			104	359	Peak
5350	42.12	31.89	10.23	54	-11.88	104	359	Average
5350	52.23	42	10.23	74	-21.77	104	359	Peak
*10380	54.48	38.38	16.1	68.2	-13.72	154	225	Peak

Remarks:

1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5190 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 46	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Charles Hsiao

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5150	42.11	32.06	10.05	54	-11.89	223	270	Average
5150	52.32	42.27	10.05	74	-21.68	223	270	Peak
5230	89.56	79.42	10.14			223	270	Average
5230	96.11	85.97	10.14			223	270	Peak
5350	42.03	31.8	10.23	54	-11.97	223	270	Average
5350	51.98	41.75	10.23	74	-22.02	223	270	Peak
*10460	53.8	37.8	16	68.2	-14.4	135	2	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5150	42.16	32.11	10.05	54	-11.84	108	360	Average
5150	51.86	41.81	10.05	74	-22.14	108	360	Peak
5230	90.4	80.26	10.14			108	360	Average
5230	97.6	87.46	10.14			108	360	Peak
5350	42.22	31.99	10.23	54	-11.78	108	360	Average
5350	51.7	41.47	10.23	74	-22.3	108	360	Peak
*10460	53.63	37.63	16	68.2	-14.57	118	245	Peak

Remarks:

1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5230 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 54	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Charles Hsiao

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5150	41.96	31.91	10.05	54	-12.04	221	270	Average
5150	51.87	41.82	10.05	74	-22.13	221	270	Peak
5270	90.59	80.47	10.12			221	270	Average
5270	97.84	87.72	10.12			221	270	Peak
5350	41.85	31.62	10.23	54	-12.15	221	270	Average
5350	52.59	42.36	10.23	74	-21.41	221	270	Peak
*10540	55.25	39.42	15.83	68.2	-12.95	165	205	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5150	42.2	32.15	10.05	54	-11.8	108	276	Average
5150	51.9	41.85	10.05	74	-22.1	108	276	Peak
5270	89.55	79.43	10.12			108	276	Average
5270	96.43	86.31	10.12			108	276	Peak
5350	41.93	31.7	10.23	54	-12.07	108	276	Average
5350	53.06	42.83	10.23	74	-20.94	108	276	Peak
10540	54.03	38.2	15.83	68.2	-14.17	148	244	Peak

Remarks:

1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5270 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 62	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Charles Hsiao

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5150	41.89	31.84	10.05	54	-12.11	221	270	Average
5150	52.15	42.1	10.05	74	-21.85	221	270	Peak
5310	90.55	80.46	10.09			221	270	Average
5310	97.37	87.28	10.09			221	270	Peak
5350	**50.85**	**40.62**	**10.23**	**54**	**-3.15**	**219**	**138**	**Average**
5350	60.64	50.41	10.23	74	-13.36	219	138	Peak
10620	47.43	31.55	15.88	54	-6.57	164	229	Average
10620	53.61	37.73	15.88	74	-20.39	164	229	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5150	41.88	31.83	10.05	54	-12.12	108	276	Average
5150	52.06	42.01	10.05	74	-21.94	108	276	Peak
5310	89.55	79.46	10.09			108	276	Average
5310	96.86	86.77	10.09			108	276	Peak
5350	49.5	39.27	10.23	54	-4.5	108	276	Average
5350	57.89	47.66	10.23	74	-16.11	108	276	Peak
10620	47.55	31.67	15.88	54	-6.45	154	222	Average
10620	53.49	37.61	15.88	74	-20.51	154	222	Peak

Remarks:

1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5310 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 102	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Charles Hsiao

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5460	42.02	31.51	10.51	54	-11.98	190	10	Average
5460	52.24	41.73	10.51	74	-21.76	190	10	Peak
*5470	54.49	43.96	10.53	68.2	-13.71	190	10	Peak
5510	90.55	79.95	10.6			190	10	Average
5510	97.1	86.5	10.6			190	10	Peak
*5725	51.06	40.14	10.92	68.2	-17.14	190	10	Peak
11020	47.8	31.64	16.16	54	-6.2	186	188	Average
11020	53.97	37.81	16.16	74	-20.03	186	188	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5460	43.76	33.25	10.51	54	-10.24	190	350	Average
5460	52.35	41.84	10.51	74	-21.65	190	350	Peak
*5470	59.88	49.35	10.53	68.2	-8.32	190	350	Peak
5510	94.55	83.95	10.6			190	350	Average
5510	101.83	91.23	10.6			190	350	Peak
*5725	52.91	41.99	10.92	68.2	-15.29	190	350	Peak
11020	47.91	31.75	16.16	54	-6.09	191	349	Average
11020	55.35	39.19	16.16	74	-18.65	191	349	Peak

Remarks:

1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5510 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 110	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Charles Hsiao

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5460	42.16	31.65	10.51	54	-11.84	190	10	Average
5460	53.78	43.27	10.51	74	-20.22	190	10	Peak
*5470	51.51	40.98	10.53	68.2	-16.69	190	10	Peak
5550	90.65	79.97	10.68			190	10	Average
5550	97.71	87.03	10.68			190	10	Peak
*5725	52.9	41.98	10.92	68.2	-15.3	190	10	Peak
11100	47.88	31.61	16.27	54	-6.12	157	1	Average
11100	54.51	38.24	16.27	74	-19.49	157	1	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5460	42.39	31.88	10.51	54	-11.61	190	350	Average
5460	51.83	41.32	10.51	74	-22.17	190	350	Peak
*5470	50.34	39.81	10.53	68.2	-17.86	190	350	Peak
5550	94.55	83.87	10.68			190	350	Average
5550	101.06	90.38	10.68			190	350	Peak
*5725	51.1	40.18	10.92	68.2	-17.1	190	350	Peak
11100	47.96	31.69	16.27	54	-6.04	124	274	Average
11100	53.81	37.54	16.27	74	-20.19	124	274	Peak

Remarks:

1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5550 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 134	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Charles Hsiao

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5460	41.94	31.43	10.51	54	-12.06	190	10	Average
5460	52.39	41.88	10.51	74	-21.61	190	10	Peak
*5470	50.17	39.64	10.53	68.2	-18.03	190	10	Peak
5670	89.85	78.95	10.9			190	10	Average
5670	96.42	85.52	10.9			190	10	Peak
*5725	51.31	40.39	10.92	68.2	-16.89	190	10	Peak
11340	47.85	31.43	16.42	54	-6.15	188	256	Average
11340	55.76	39.34	16.42	74	-18.24	188	256	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5460	42.18	31.67	10.51	54	-11.82	190	350	Average
5460	52.59	42.08	10.51	74	-21.41	190	350	Peak
*5470	50.82	40.29	10.53	68.2	-17.38	190	350	Peak
5670	93.65	82.75	10.9			190	350	Average
5670	100.45	89.55	10.9			190	350	Peak
*5725	52.88	41.96	10.92	68.2	-15.32	190	350	Peak
11340	47.88	31.46	16.42	54	-6.12	185	166	Average
11340	56.57	40.15	16.42	74	-17.43	185	166	Peak

Remarks:

1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5670 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 142	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Charles Hsiao

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5460	41.67	31.16	10.51	54	-12.33	190	10	Average
5460	52.51	42	10.51	74	-21.49	190	10	Peak
*5470	50.16	39.63	10.53	68.2	-18.04	190	10	Peak
5710	89.88	78.97	10.91			190	10	Average
5710	96.66	85.75	10.91			190	10	Peak
11420	46.51	30.25	16.26	54	-7.49	165	195	Average
11420	55.15	38.89	16.26	74	-18.85	165	195	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5460	41.53	31.02	10.51	54	-12.47	190	350	Average
5460	52.6	42.09	10.51	74	-21.4	190	350	Peak
*5470	50.93	40.4	10.53	68.2	-17.27	190	350	Peak
5710	93.55	82.64	10.91			190	350	Average
5710	100.8	89.89	10.91			190	350	Peak
11420	46.49	30.23	16.26	54	-7.51	166	124	Average
11420	54.15	37.89	16.26	74	-19.85	166	124	Peak

Remarks:

1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5710 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 151	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Charles Hsiao

<Spurious Emission>

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5755	92.41	81.51	10.9			200	276	Average
5755	99.54	88.64	10.9			200	276	Peak
11510	46.76	30.25	16.51	54	-7.24	105	187	Average
11510	54.31	37.8	16.51	74	-19.69	105	187	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5755	93.55	82.65	10.9			190	350	Average
5755	100.68	89.78	10.9			190	350	Peak
11510	46.63	30.12	16.51	54	-7.37	169	114	Average
11510	54.58	38.07	16.51	74	-19.42	169	114	Peak

<Out of Band Emission (OOBE)>

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
*5585.575	52.06	41.33	10.73	68.2	-16.14	200	276	Peak
5652.25	50.3	39.43	10.87	69.86	-19.56	200	276	Peak
5922.1	49.02	37.91	11.11	70.35	-21.33	200	276	Peak
*6007.15	52.05	40.7	11.35	68.2	-16.15	200	276	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
*5544.625	52.64	41.98	10.66	68.2	-15.56	190	350	Peak
5653.825	51.65	40.78	10.87	71.03	-19.38	190	350	Peak
5921.05	50.28	39.19	11.09	71.12	-20.84	190	350	Peak
*5938.9	52.5	41.32	11.18	68.2	-15.7	190	350	Peak

Remarks:

1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5755 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 159	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Charles Hsiao

<Spurious Emission>

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5795	92.64	81.82	10.82			200	276	Average
5795	99.09	88.27	10.82			200	276	Peak
11590	46.75	30.24	16.51	54	-7.25	165	198	Average
11590	53.7	37.19	16.51	74	-20.3	165	198	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5795	93.69	82.87	10.82			190	350	Average
5795	100.61	89.79	10.82			190	350	Peak
11590	46.75	30.24	16.51	54	-7.25	178	154	Average
11590	53.52	37.01	16.51	74	-20.48	178	154	Peak

<Out of Band Emission (OOBE)>

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
*5565.1	52.71	42.01	10.7	68.2	-15.49	200	276	Peak
5652.25	49.66	38.79	10.87	69.86	-20.2	200	276	Peak
5922.625	48.73	37.62	11.11	69.96	-21.23	200	276	Peak
*5980.375	52.01	40.75	11.26	68.2	-16.19	200	276	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
*5638.6	52.43	41.6	10.83	68.2	-15.77	190	350	Peak
5656.45	51.93	41.06	10.87	72.97	-21.04	190	350	Peak
5923.675	52.43	41.32	11.11	69.18	-16.75	190	350	Peak
*5943.1	51.82	40.64	11.18	68.2	-16.38	190	350	Peak

Remarks:

1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5795 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

9 kHz ~ 30 MHz Data:

The amplitude of spurious emissions attenuated more than 20 dB below the permissible value is not required to be report.

30 MHz ~ 1 GHz Worst-Case Data:

802.11n (HT40)

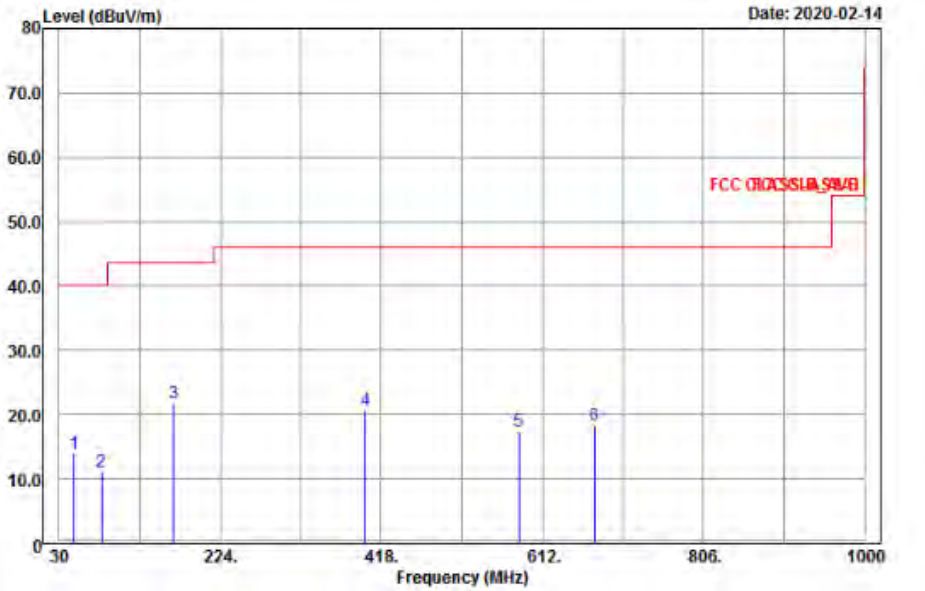
EUT Test Condition		Measurement Detail	
Channel	Channel 62	**Frequency Range**	30 MHz ~ 1 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Quasi-peak (QP)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Harry Hsueh

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
48.09	14.05	29.19	-15.14	40	-25.95	156	132	Peak
80.76	11.22	32.58	-21.36	40	-28.78	198	168	Peak
167.97	21.83	42.21	-20.38	43.5	-21.67	155	188	Peak
399.4	20.65	34.59	-13.94	46	-25.35	104	187	Peak
583.5	17.4	28.3	-10.9	46	-28.6	105	189	Peak
675.2	18.39	27.96	-9.57	46	-27.61	103	124	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
57	24.28	40	-15.72	40	-15.72	165	198	Peak
93.45	30.89	49.2	-18.31	43.5	-12.61	104	158	Peak
152.31	27.26	48.16	-20.9	43.5	-16.24	122	168	Peak
379.1	17.97	32.24	-14.27	46	-28.03	123	135	Peak
605.9	18.32	28.82	-10.5	46	-27.68	142	157	Peak
682.2	18.93	28.41	-9.48	46	-27.07	125	187	Peak

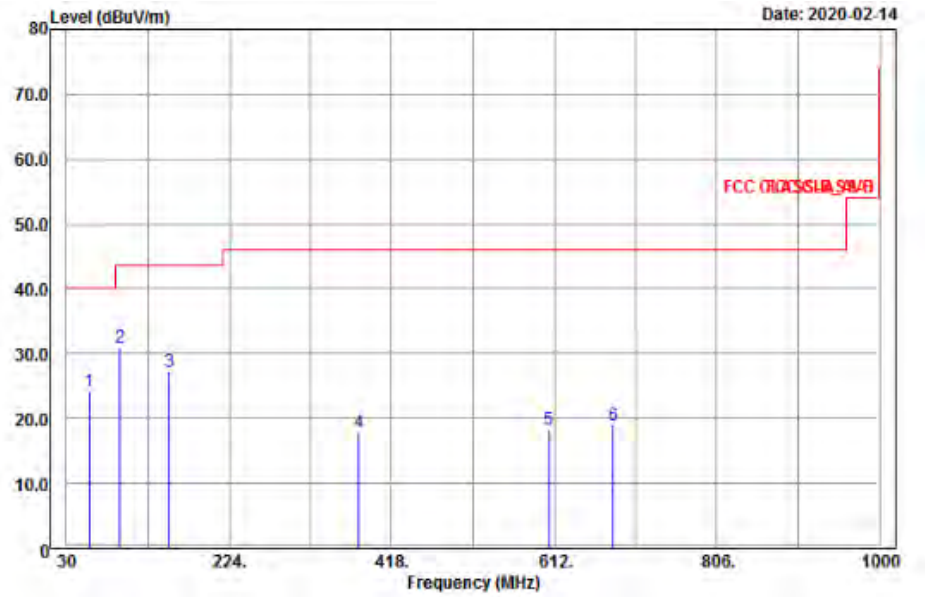
Remarks:

1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. The emission levels of other frequencies were very low against the limit

Horizontal



Vertical



4.2 Transmit Power Measurement

4.2.1 Limits of Transmit Power Measurement

Operation Band	EUT Category		Limit
U-NII-1		Outdoor Access Point	1 Watt (30 dBm) (Max. e.i.r.p ≦ 125 mW (21 dBm) at any elevation angle above 30 degrees as measured from the horizon)
		Fixed point-to-point Access Point	1 Watt (30 dBm)
		Indoor Access Point	1 Watt (30 dBm)
	√	Mobile and Portable client device	250 mW (24 dBm)
U-NII-2A	√		250 mW (24 dBm) or 11 dBm + 10 log B*
U-NII-2C	√		250 mW (24 dBm) or 11 dBm + 10 log B*
U-NII-3	√		1 Watt (30 dBm)

*B is the 26 dB emission bandwidth in megahertz

Per KDB 662911 Method of conducted output power measurement on IEEE 802.11 devices,

Array Gain = 0 dB (i.e., no array gain) for $N_{ANT} \leq 4$;

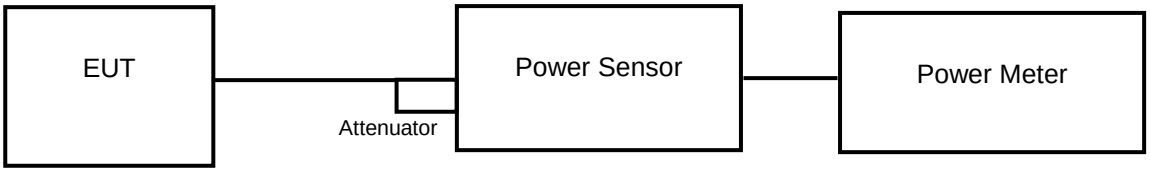
Array Gain = 0 dB (i.e., no array gain) for channel widths ≥ 40 MHz for any N_{ANT};

Array Gain = 5 log(N_{ANT}/N_{SS}) dB or 3 dB, whichever is less for 20 MHz channel widths with $N_{ANT} \geq 5$.

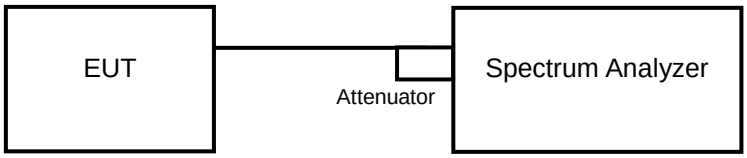
For power measurements on all other devices: Array Gain = 10 log(N_{ANT}/N_{SS}) dB.

4.2.2 Test Setup

<Power Output Measurement>



<26 dB Bandwidth>



4.2.3 Test Instruments

Refer to section 4.1.3 to get information of above instrument.

4.2.4 Test Procedure

Average Power Measurement

<802.11a, 802.11n (HT20), 802.11n (HT40)>

Method PM is used to perform output power measurement, trigger and gating function of wide band power meter is enabled to measure max output power of TX on burst. Duty factor is not added to measured value.

26 dB Bandwidth

a. Set RBW = approximately 1 % of the emission bandwidth.
b. Set the VBW > RBW.
c. Detector = Peak.
d. Trace mode = max hold.
e. Measure the maximum width of the emission that is 26 dB down from the peak of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1 %.

4.2.5 Deviation from Test Standard

No deviation.

4.2.6 EUT Operating Conditions

The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

4.2.7 Test Results

Power Output:

802.11a

Channel	Frequency (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
36	5180	9.90	9.08	17.863	12.52	24	Pass
40	5200	9.94	9.31	18.394	12.65	24	Pass
48	5240	9.81	8.41	16.506	12.18	24	Pass
52	5260	9.86	8.50	16.762	12.24	24	Pass
60	5300	9.73	8.08	15.824	11.99	24	Pass
64	5320	9.89	8.76	17.266	12.37	24	Pass
100	5500	9.83	9.25	18.03	12.56	24	Pass
116	5580	9.85	9.41	18.391	12.65	24	Pass
140	5700	9.96	9.41	18.638	12.70	24	Pass
144	5720 (U-NII-2C)	8.86	8.39	14.593	11.64	22.80	Pass
144	5720 (U-NII-3)	2.42	1.99	3.327	5.22	30	Pass
149	5745	9.89	9.77	19.234	12.84	30	Pass
157	5785	9.93	9.56	18.876	12.76	30	Pass
165	5825	9.92	9.64	19.021	12.79	30	Pass

Note:

For U-NII-2A, U-NII-2C Band:

Chain 0

1. 11 dBm + 10log (20.24) = 24.06dBm > 24 dBm.
2. 11 dBm + 10log (20.27) = 24.06dBm > 24 dBm.
3. 11 dBm + 10log (20.32) = 24.07dBm > 24 dBm.
4. 11 dBm + 10log (20.28) = 24.07dBm > 24 dBm.
5. 11 dBm + 10log (20.28) = 24.07dBm > 24 dBm.
6. 11 dBm + 10log (20.19) = 24.05dBm > 24 dBm.
7. 11 dBm + 10log (15.16) = 22.80dBm < 24 dBm.

Chain 1

1. 11 dBm + 10log (19.88) = 23.98dBm < 24 dBm.
2. 11 dBm + 10log (19.83) = 23.97dBm < 24 dBm.
3. 11 dBm + 10log (19.90) = 23.98dBm < 24 dBm.
4. 11 dBm + 10log (19.88) = 23.98dBm < 24 dBm.
5. 11 dBm + 10log (19.94) = 23.99dBm < 24 dBm.
6. 11 dBm + 10log (20.24) = 24.06dBm > 24 dBm.
7. 11 dBm + 10log (15.33) = 22.85dBm < 24 dBm.

802.11n (HT20)

Channel	Frequency (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
36	5180	9.81	9.22	17.928	12.54	24	Pass
40	5200	9.93	9.17	18.1	12.58	24	Pass
48	5240	9.71	9.01	17.316	12.38	24	Pass
52	5260	9.88	8.03	16.08	12.06	24	Pass
60	5300	9.94	8.62	17.141	12.34	24	Pass
64	5320	9.96	8.76	17.424	12.41	24	Pass
100	5500	9.78	9.22	17.862	12.52	24	Pass
116	5580	9.89	9.56	18.786	12.74	24	Pass
140	5700	9.94	9.25	18.277	12.62	24	Pass
144	5720 (U-NII-2C)	9.99	8.94	19.938	13.00	22.81	Pass
144	5720 (U-NII-3)	2.19	3.628	5.60	2.95	30	Pass
149	5745	9.88	9.76	19.189	12.83	30	Pass
157	5785	9.92	9.73	19.214	12.84	30	Pass
165	5825	9.90	9.60	18.892	12.76	30	Pass

Note:

For U-NII-2A, U-NII-2C Band:

Chain 0

1. 11 dBm + 10log (20.35) = 24.08dBm > 24 dBm.
2. 11 dBm + 10log (20.44) = 24.10dBm > 24 dBm.
3. 11 dBm + 10log (20.37) = 24.09dBm > 24 dBm.
4. 11 dBm + 10log (20.45) = 24.10dBm > 24 dBm.
5. 11 dBm + 10log (20.40) = 24.09dBm > 24 dBm.
6. 11 dBm + 10log (20.39) = 24.09dBm > 24 dBm.
7. 11 dBm + 10log (15.20) = 22.81dBm < 24 dBm.

Chain 1

1. 11 dBm + 10log (20.27) = 24.06dBm < 24 dBm.
2. 11 dBm + 10log (20.38) = 24.09dBm < 24 dBm.
3. 11 dBm + 10log (20.22) = 24.05dBm < 24 dBm.
4. 11 dBm + 10log (20.32) = 24.07dBm < 24 dBm.
5. 11 dBm + 10log (20.30) = 24.07dBm > 24 dBm.
6. 11 dBm + 10log (20.28) = 24.07dBm > 24 dBm.
7. 11 dBm + 10log (15.34) = 22.85dBm < 24 dBm.

802.11n (HT40)

Channel	Frequency (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
38	5190	11.77	11.20	28.214	14.50	24	Pass
46	5230	11.83	10.77	27.181	14.34	24	Pass
54	5270	11.85	10.06	25.45	14.06	24	Pass
62	5310	11.89	10.34	26.267	14.19	24	Pass
102	5510	11.81	10.40	26.136	14.17	24	Pass
110	5550	11.92	11.37	29.269	14.66	24	Pass
134	5670	11.83	11.57	29.596	14.71	24	Pass
142	5710 (U-NII-2C)	6.87	6.34	9.169	9.62	24	Pass
142	5710 (U-NII-3)	-3.36	-5.88	0.7195	-1.43	30	Pass
151	5755	11.95	11.82	30.873	14.90	30	Pass
159	5795	11.91	11.76	30.521	14.85	30	Pass

Note:

For U-NII-2A, U-NII-2C Band:

Chain 0

1. 11 dBm + 10log (41.98) = 27.23dBm > 24 dBm.
2. 11 dBm + 10log (41.87) = 27.21dBm > 24 dBm.
3. 11 dBm + 10log (41.81) = 27.21dBm > 24 dBm.
4. 11 dBm + 10log (41.91) = 27.22dBm > 24 dBm.
5. 11 dBm + 10log (41.82) = 27.21dBm > 24 dBm.
6. 11 dBm + 10log (36.01) = 26.56dBm > 24 dBm.

Chain 1

1. 11 dBm + 10log (41.51) = 27.18dBm > 24 dBm.
2. 11 dBm + 10log (41.53) = 27.18dBm > 24 dBm.
3. 11 dBm + 10log (41.47) = 27.17dBm > 24 dBm.
4. 11 dBm + 10log (41.53) = 27.18dBm > 24 dBm.
5. 11 dBm + 10log (41.50) = 27.18dBm > 24 dBm.
6. 11 dBm + 10log (35.77) = 26.53dBm > 24 dBm.

26 dB Bandwidth:

802.11a

Channel	Frequency (MHz)	26 dBc Bandwidth (MHz)	
		Chain 0	Chain 1
36	5180	20.53	19.97
40	5200	20.43	19.96
48	5240	22.49	20.00
52	5260	20.24	19.88
60	5300	20.27	19.83
64	5320	20.32	19.90
100	5500	20.28	19.88
116	5580	20.28	19.94
140	5700	20.19	20.24
144	5720 (U-NII-2C)	15.16	15.33
144	5720 (U-NII-3)	5.12	5.06

802.11n (HT20)

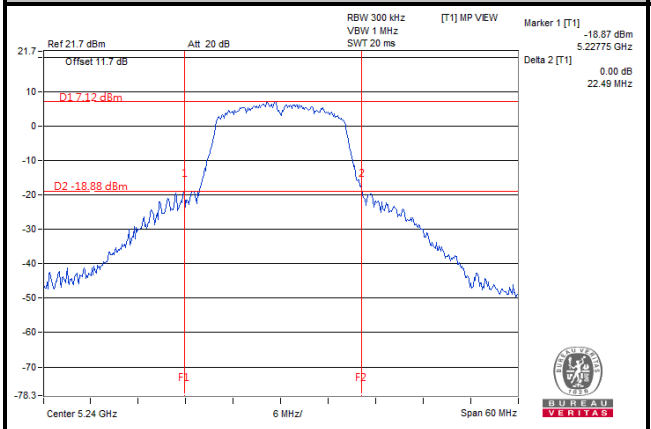
Channel	Frequency (MHz)	26 dBc Bandwidth (MHz)	
		Chain 0	Chain 1
36	5180	20.91	20.17
40	5200	21.44	20.45
48	5240	21.93	20.12
52	5260	20.35	20.27
60	5300	20.44	20.38
64	5320	20.37	20.22
100	5500	20.45	20.32
116	5580	20.40	20.30
140	5700	20.39	20.28
144	5720 (U-NII-2C)	15.20	15.34
144	5720 (U-NII-3)	5.14	5.10

802.11n (HT40)

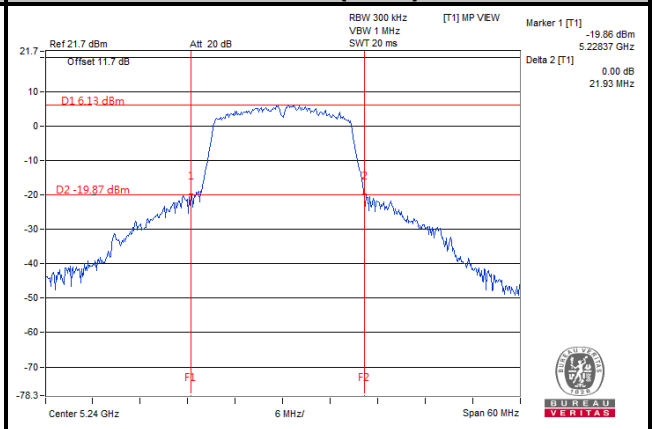
Channel	Frequency (MHz)	26 dBc Bandwidth (MHz)	
		Chain 0	Chain 1
38	5190	41.97	41.53
46	5230	41.88	41.62
54	5270	41.98	41.51
62	5310	41.87	41.53
102	5510	41.81	41.47
110	5550	41.91	41.53
134	5670	41.82	41.50
142	5710 (U-NII-2C)	36.01	35.77
142	5710 (U-NII-3)	5.86	5.64

Spectrum Plot of Worst Value

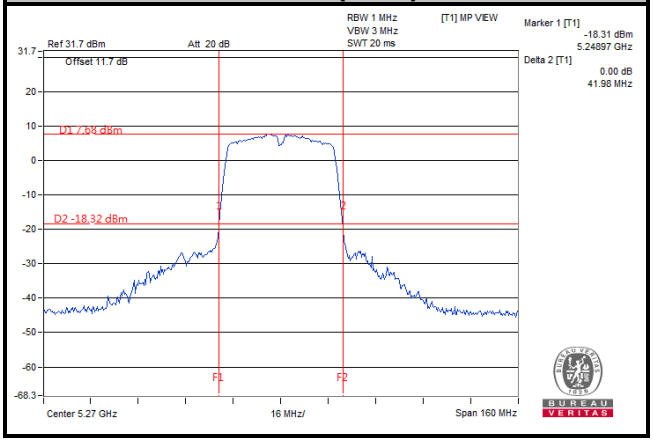
802.11a



802.11n (HT20)

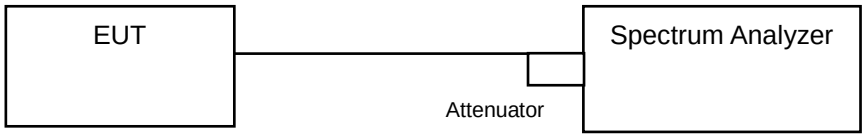


802.11n (HT40)



4.3 Occupied Bandwidth Measurement

4.3.1 Test Setup



4.3.2 Test Instruments

Refer to section 4.1.3 to get information of above instrument.

4.3.3 Test Procedure

The transmitter output was connected to the spectrum analyzer through an attenuator. The bandwidth of the fundamental frequency was measured by spectrum analyzer with resolution bandwidth in the range of 1 % to 5 % of the anticipated emission bandwidth, and a video bandwidth at least 3x the resolution bandwidth and set the detector to SAMPLE. The width of a frequency band such that, below the lower and above the upper frequency limits, the mean powers emitted are each equal to a specified percentage 0.5 % of the total mean power of a given emission.

4.3.4 Test Results

802.11a

Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
36	5180	16.68	16.44
40	5200	16.56	16.44
48	5240	16.68	16.44
52	5260	16.80	16.56
60	5300	16.68	16.56
64	5320	16.80	16.56
100	5500	16.80	16.56
116	5580	16.68	16.56
140	5700	16.80	16.56
144	5720 (U-NII-2C)	13.40	13.28
144	5720 (U-NII-3)	3.04	3.04
149	5745	16.74	16.56
157	5785	16.74	16.50
165	5825	16.74	16.50

802.11n (HT20)

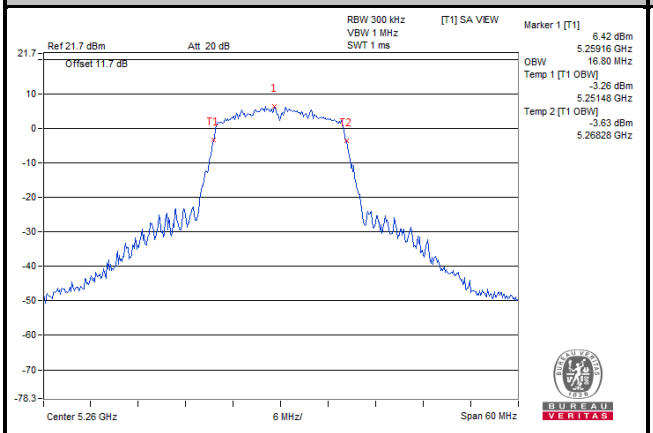
Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
36	5180	17.64	17.64
40	5200	17.76	17.52
48	5240	17.76	17.52
52	5260	17.52	17.64
60	5300	17.64	17.52
64	5320	17.64	17.64
100	5500	17.64	17.52
116	5580	17.52	17.52
140	5700	17.64	17.64
144	5720 (U-NII-2C)	13.88	13.88
144	5720 (U-NII-3)	3.64	3.64
149	5745	17.58	17.64
157	5785	17.64	17.64
165	5825	17.58	17.64

802.11n (HT40)

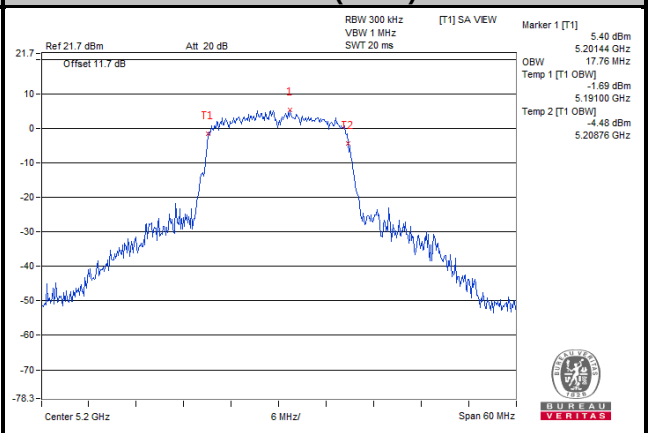
Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
38	5190	36.48	36.48
46	5230	36.48	36.60
54	5270	36.60	36.36
62	5310	36.36	36.48
102	5510	36.48	36.36
110	5550	36.48	36.36
134	5670	36.36	36.48
142	5710 (U-NII-2C)	33.36	33.48
142	5710 (U-NII-3)	3.12	3.00
151	5755	36.48	36.60
159	5795	36.48	36.48

Spectrum Plot of Worst Value

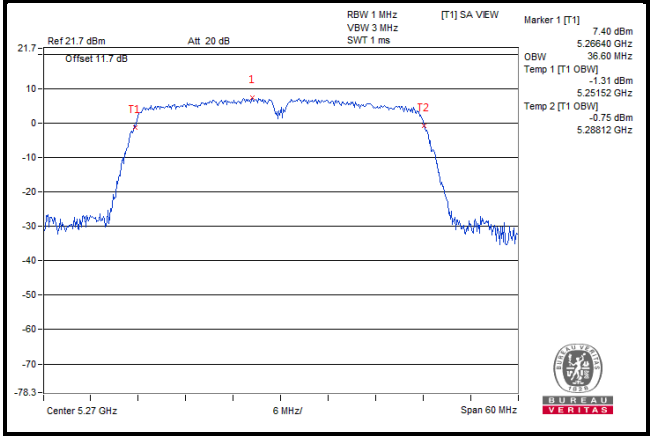
802.11a



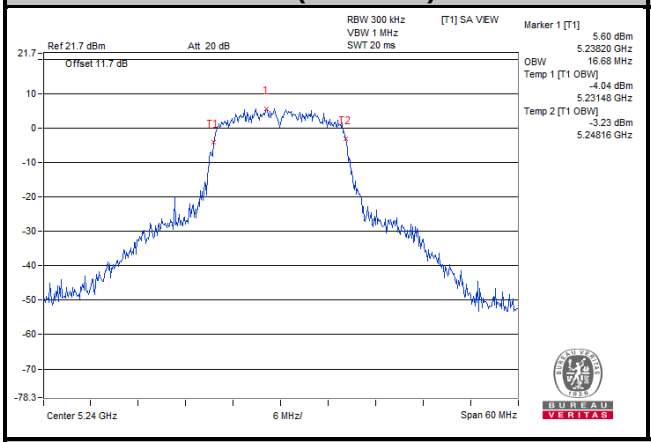
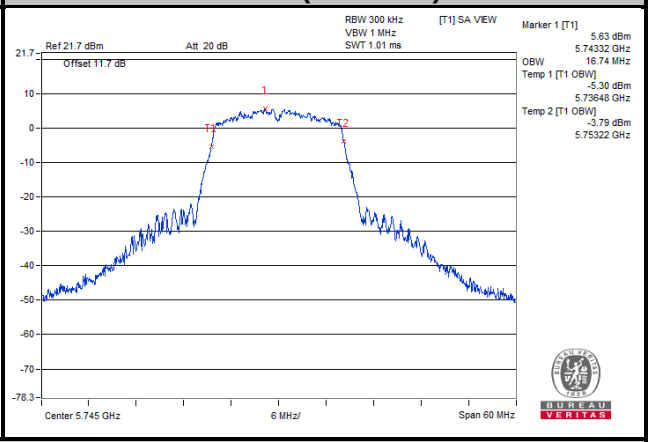
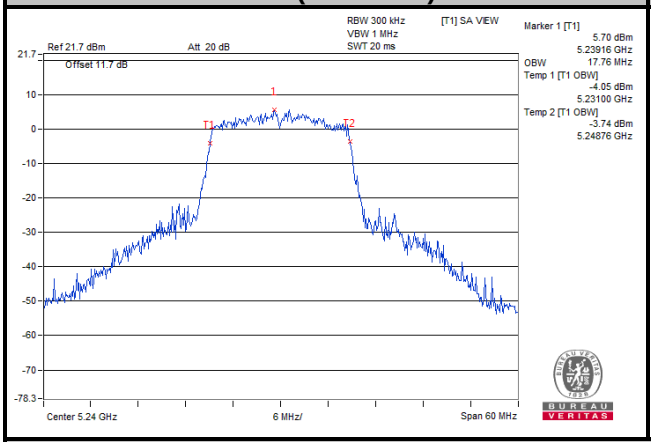
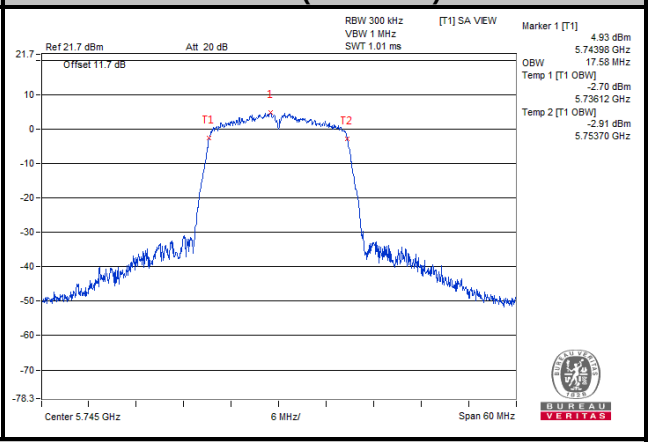
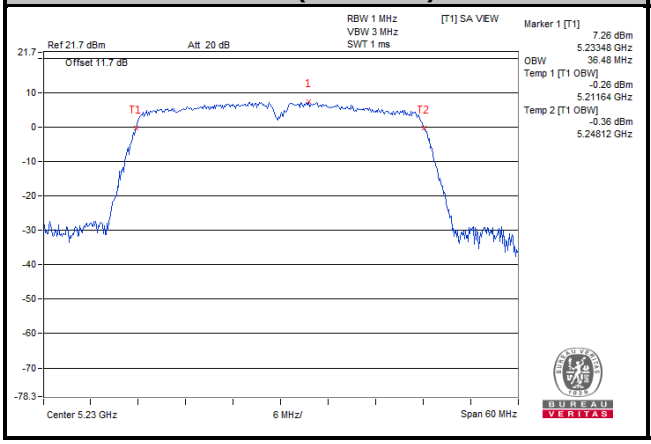
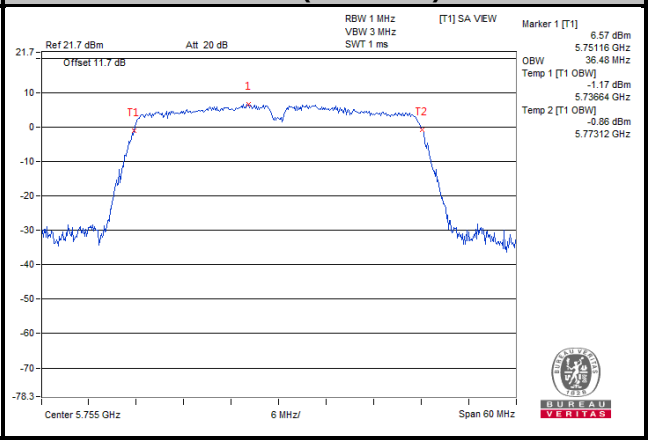
802.11n (HT20)



802.11n (HT40)



Chain 0

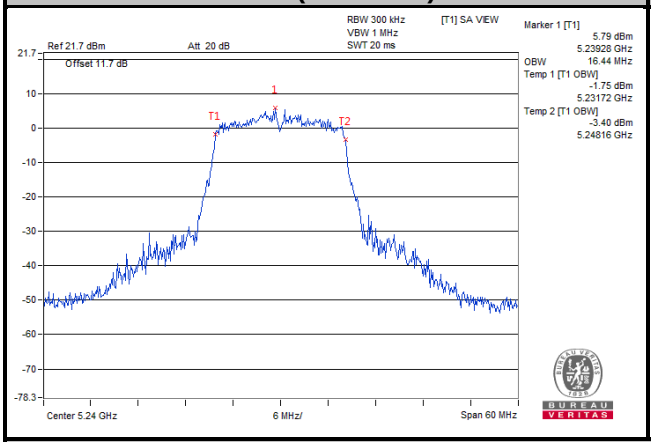
Spectrum Plot for Nearby DFS Band	
802.11a	
Ch 48 (5240 MHz)	Ch 149 (5745 MHz)
	
802.11n (HT20)	
Ch 48 (5240 MHz)	Ch 149 (5745 MHz)
	
802.11n (HT40)	
Ch 46 (5230 MHz)	Ch 151 (5755 MHz)
	

Chain 1

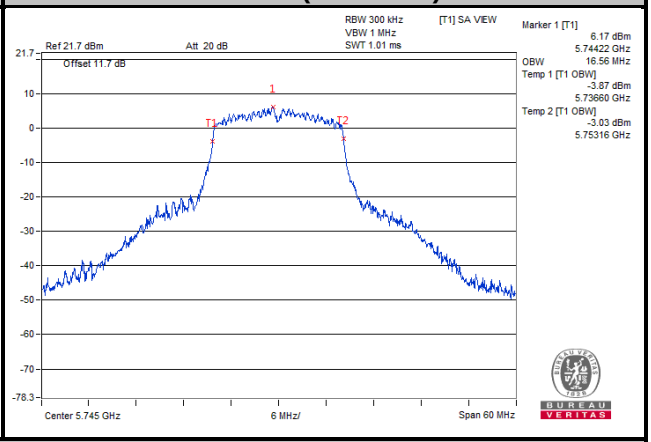
Spectrum Plot for Nearby DFS Band

802.11a

Ch 48 (5240 MHz)

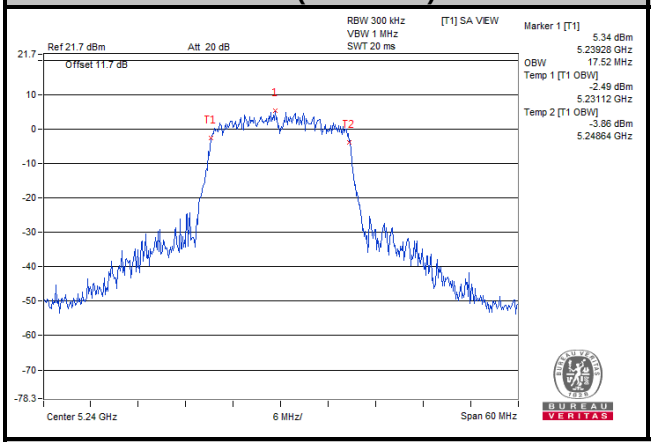


Ch 149 (5745 MHz)

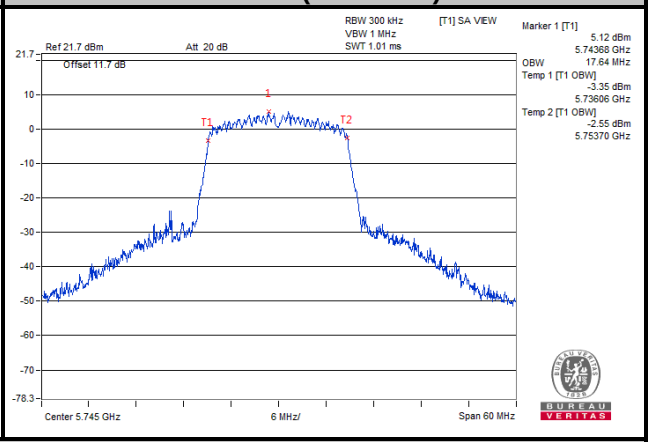


802.11n (HT20)

Ch 48 (5240 MHz)

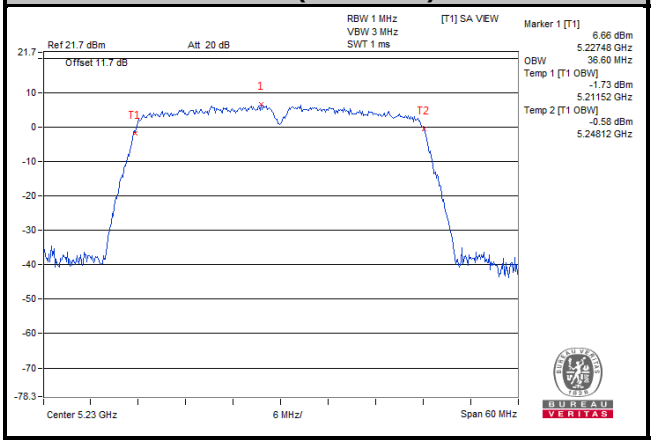


Ch 149 (5745 MHz)

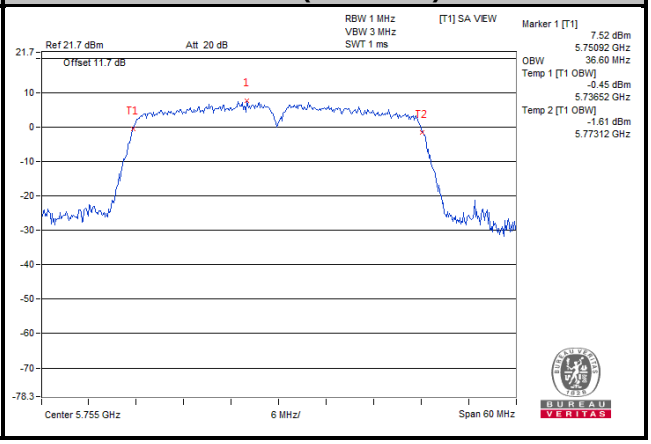


802.11n (HT40)

Ch 46 (5230 MHz)



Ch 151 (5755 MHz)

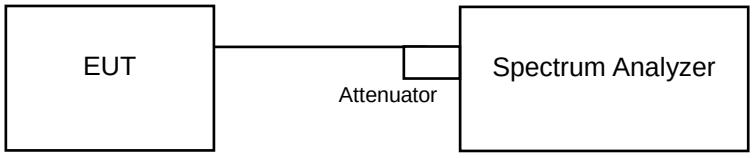


4.4 Peak Power Spectral Density Measurement

4.4.1 Limits of Peak Power Spectral Density Measurement

Operation Band	EUT Category		Limit
U-NII-1		Outdoor Access Point	17 dBm/MHz
		Fixed point-to-point Access Point	
		Indoor Access Point	
	√	Mobile and Portable client device	11 dBm/MHz
U-NII-2A	√		11 dBm/MHz
U-NII-2C	√		11 dBm/MHz
U-NII-3	√		30 dBm/500 kHz

4.4.2 Test Setup



4.4.3 Test Instruments

Refer to section 4.1.3 to get information of above instrument.

4.4.4 Test Procedures

For U-NII-1, U-NII-2A, U-NII-2C band:

Using method SA-2

1. Set span to encompass the entire emission bandwidth (EBW) of the signal.
2. Set RBW = 1 MHz, Set VBW ≥ 3 RBW, Detector = RMS
3. Sweep time = auto, trigger set to “free run”.
4. Trace average at least 100 traces in power averaging mode.
5. Record the max value and add 10 log (1/duty cycle)

※For U-NII-3:

1. Set span to encompass the entire emission bandwidth (EBW) of the signal.
2. Set RBW = 300 kHz, Set VBW ≥ 1 RBW, Detector = RMS
3. Use the peak marker function to determine the maximum power level in any 300 kHz band segment within the fundamental EBW.
4. Scale the observed power level to an equivalent value in 500 kHz by adjusting (reducing) the measured power by a bandwidth correction factor (BWCF) where BWCF = 10log(500 kHz / 300 kHz).
5. Sweep time = auto, trigger set to “free run”.
6. Trace average at least 100 traces in power averaging mode.
7. Record the max value and add 10 log (1/duty cycle)

4.4.5 Deviation from Test Standard

No deviation.

4.4.6 EUT Operating Conditions

The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

4.4.7 Test Results

For U-NII-1, U-NII-2A, U-NII-2C Band

802.11a

Channel	Frequency (MHz)	PSD (dBm/MHz)		Duty Factor (dB)	Total PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1				
36	5180	1.61	0.69	0.12	4.30	11	Pass
40	5200	1.71	0.28	0.12	4.18	11	Pass
48	5240	1.89	0.39	0.12	4.33	11	Pass
52	5260	4.14	3.03	0.12	6.75	11	Pass
60	5300	3.92	3.00	0.12	6.61	11	Pass
64	5320	3.75	3.08	0.12	6.56	11	Pass
100	5500	3.95	2.81	0.12	6.54	11	Pass
116	5580	4.06	2.95	0.12	6.67	11	Pass
140	5700	3.99	3.39	0.12	6.83	11	Pass
144	5720 (U-NII-2C)	3.92	3.18	0.12	6.69	11	Pass

Note:

1. Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. **For U-NII-1 Band:**
   Directional gain = $10\log[(10^{G1/20} + 10^{G2/20} + \ldots. + 10^{GN/20})^2 / N_{ANT}] = 4.87$ dBi < 6 dBi, so the limit no need to be reduced.
   For U-NII-2A, U-NII-2C Band:
   Directional gain = $10\log[(10^{G1/20} + 10^{G2/20} + \ldots. + 10^{GN/20})^2 / N_{ANT}] = 4.87$ dBi < 6 dBi, so the limit no need to be reduced.
   U-NII-2C Band:
   Directional gain = $10\log[(10^{G1/20} + 10^{G2/20} + \ldots. + 10^{GN/20})^2 / N_{ANT}] = 5.57$ dBi < 6 dBi, so the limit no need to be reduced.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11n (HT20)

Channel	Frequency (MHz)	PSD (dBm/MHz)		Duty Factor (dB)	Total PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1				
36	5180	1.14	0.45	0.23	4.05	11	Pass
40	5200	1.32	0.52	0.23	4.18	11	Pass
48	5240	1.39	0.43	0.23	4.17	11	Pass
52	5260	2.64	1.48	0.23	5.34	11	Pass
60	5300	2.45	1.43	0.23	5.21	11	Pass
64	5320	2.48	1.48	0.23	5.25	11	Pass
100	5500	2.46	1.47	0.23	5.23	11	Pass
116	5580	2.54	1.67	0.23	5.36	11	Pass
140	5700	2.68	1.45	0.23	5.35	11	Pass
144	5720 (U-NII-2C)	3.14	2.31	0.23	5.98	11	Pass

Note:

1. Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. **For U-NII-1 Band:**
   Directional gain = $10\log[(10^{G1/20} + 10^{G2/20} + \ldots. + 10^{GN/20})^2 / N_{ANT}] = 4.87$ dBi < 6 dBi, so the limit no need to be reduced.
   For U-NII-2A, U-NII-2C Band:
   Directional gain = $10\log[(10^{G1/20} + 10^{G2/20} + \ldots. + 10^{GN/20})^2 / N_{ANT}] = 4.87$ dBi < 6 dBi, so the limit no need to be reduced.
   U-NII-2C Band:
   Directional gain = $10\log[(10^{G1/20} + 10^{G2/20} + \ldots. + 10^{GN/20})^2 / N_{ANT}] = 5.57$ dBi < 6 dBi, so the limit no need to be reduced.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11n (HT40)

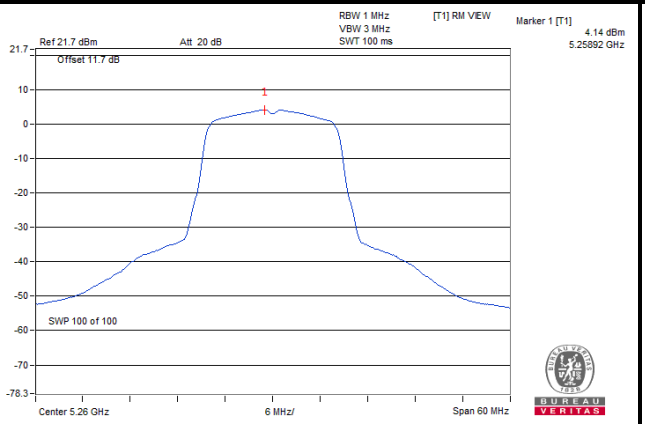
Channel	Frequency (MHz)	PSD (dBm/MHz)		Duty Factor (dB)	Total PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1				
38	5190	-1.13	-2.22	0.43	1.80	11	Pass
46	5230	-1.08	-2.61	0.43	1.66	11	Pass
54	5270	-1.24	-2.74	0.43	1.51	11	Pass
62	5310	-1.41	-2.89	0.43	1.35	11	Pass
102	5510	-1.37	-1.82	0.43	1.85	11	Pass
110	5550	-1.45	-1.73	0.43	1.85	11	Pass
134	5670	-1.33	-1.10	0.43	2.23	11	Pass
142	5710 (U-NII-2C)	-1.70	-2.36	0.43	1.42	11	Pass

Note:

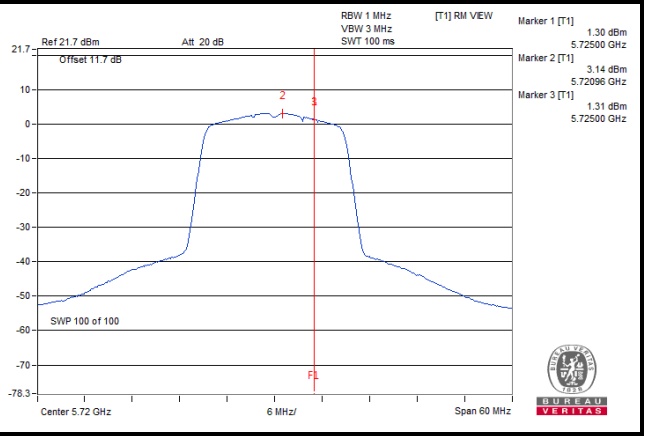
1. Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. **For U-NII-1 Band:**
   Directional gain = $10\log[(10^{G1/20} + 10^{G2/20} + \ldots. + 10^{GN/20})^2 / N_{ANT}] = 4.87$ dBi < 6 dBi, so the limit no need to be reduced.
   For U-NII-2A, U-NII-2C Band:
   Directional gain = $10\log[(10^{G1/20} + 10^{G2/20} + \ldots. + 10^{GN/20})^2 / N_{ANT}] = 4.87$ dBi < 6 dBi, so the limit no need to be reduced.
   U-NII-2C Band:
   Directional gain = $10\log[(10^{G1/20} + 10^{G2/20} + \ldots. + 10^{GN/20})^2 / N_{ANT}] = 5.57$ dBi < 6 dBi, so the limit no need to be reduced.
3. Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value

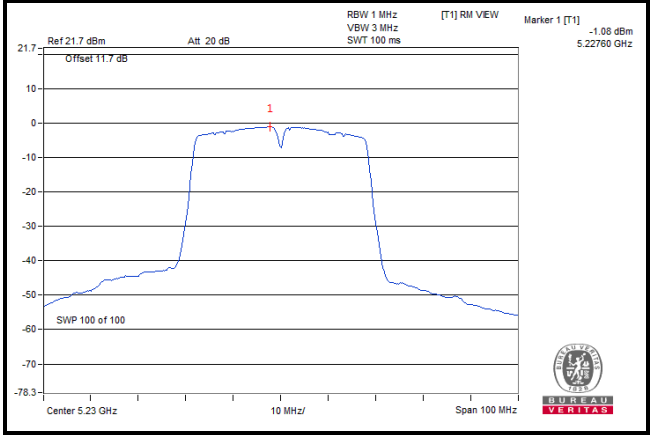
802.11a



802.11n (HT20)



802.11n (HT40)



For U-NII-3 Band

802.11a

TX Chain	Channel	Frequency (MHz)	PSD w/o Duty Factor		10 log (N=2) dB	Duty Factor (dB)	Total PSD with Duty Factor (dBm/500 kHz)	Limit (dBm/500 kHz)	Pass / Fail
			(dBm/300 kHz)	(dBm/500 kHz)					
0	144	5720 (U-NII-3)	-3.23	-1.01	3.01	0.12	2.12	30	Pass
	149	5745	-1.38	0.84	3.01	0.12	3.97	30	Pass
	157	5785	-1.41	0.81	3.01	0.12	3.94	30	Pass
	165	5825	-1.42	0.80	3.01	0.12	3.93	30	Pass
1	144	5720 (U-NII-3)	-4.13	-1.91	3.01	0.12	1.22	30	Pass
	149	5745	-1.57	0.65	3.01	0.12	3.78	30	Pass
	157	5785	-1.49	0.73	3.01	0.12	3.86	30	Pass
	165	5825	-1.57	0.65	3.01	0.12	3.78	30	Pass

Note:

1. Method E) 2) c) of power density measurement of KDB 662911 is using for calculating total power density.
2. Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + ... + 10^{GN/20})^2 / N_{ANT}$]= 4.57 < 6 dBi, so the limit does not need to reduced.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11n (HT20)

TX Chain	Channel	Frequency (MHz)	PSD		10 log (N=2) dB	Duty Factor (dB)	Total PSD with Duty Factor (dBm/500 kHz)	Limit (dBm/500 kHz)	Pass / Fail
			(dBm/300 kHz)	(dBm/500 kHz)					
0	144	5720 (U-NII-3)	-3.99	-1.77	3.01	0.23	1.47	30	Pass
	149	5745	-2.72	-0.50	3.01	0.23	2.74	30	Pass
	157	5785	-2.89	-0.67	3.01	0.23	2.57	30	Pass
	165	5825	-2.75	-0.53	3.01	0.23	2.71	30	Pass
1	144	5720 (U-NII-3)	-4.68	-2.46	3.01	0.23	0.78	30	Pass
	149	5745	-3.04	-0.82	3.01	0.23	2.42	30	Pass
	157	5785	-3.05	-0.83	3.01	0.23	2.41	30	Pass
	165	5825	-3.29	-1.07	3.01	0.23	2.17	30	Pass

Note:

1. Method E) 2) c) of power density measurement of KDB 662911 is using for calculating total power density.
2. Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + ... + 10^{GN/20})^2 / N_{ANT}$]= 4.57 < 6 dBi, so the limit does not need to reduced.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11n (HT40)

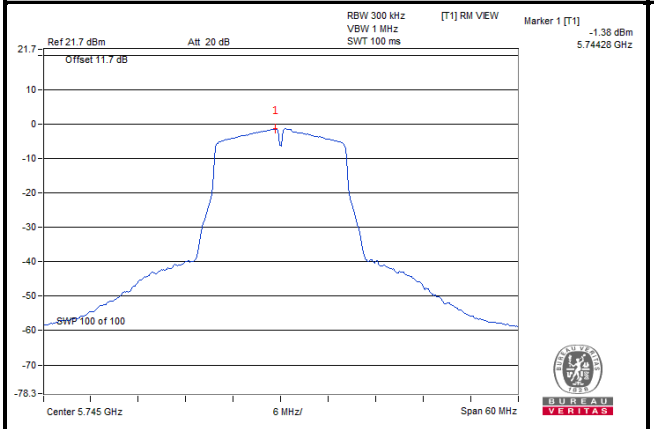
TX Chain	Channel	Frequency (MHz)	PSD		10 log (N=2) dB	Duty Factor (dB)	Total PSD with Duty Factor (dBm/500 kHz)	Limit (dBm/500 kHz)	Pass / Fail
			(dBm/300 kHz)	(dBm/500 kHz)					
0	142	5710 (U-NII-3)	-9.02	-6.80	3.01	0.43	-3.36	30	Pass
	151	5755	-6.92	-4.70	3.01	0.43	-1.26	30	Pass
	159	5795	-6.83	-4.61	3.01	0.43	-1.17	30	Pass
1	142	5710 (U-NII-3)	-9.83	-7.61	3.01	0.43	-4.17	30	Pass
	151	5755	-6.98	-4.76	3.01	0.43	-1.32	30	Pass
	159	5795	-6.96	-4.74	3.01	0.43	-1.30	30	Pass

Note:

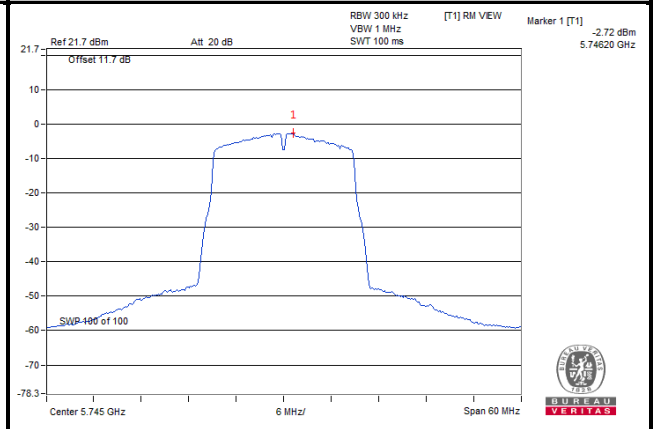
1. Method E) 2) c) of power density measurement of KDB 662911 is using for calculating total power density.
2. Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + ... + 10^{GN/20})^2 / N_{ANT}$]= 4.57 < 6 dBi, so the limit does not need to reduced.
3. Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value

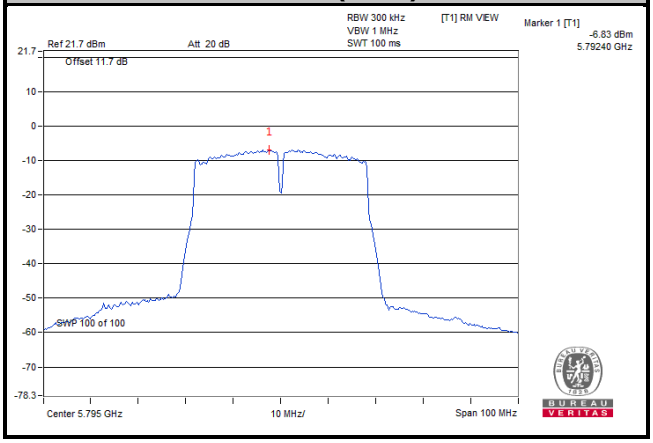
802.11a



802.11n (HT20)



802.11n (HT40)

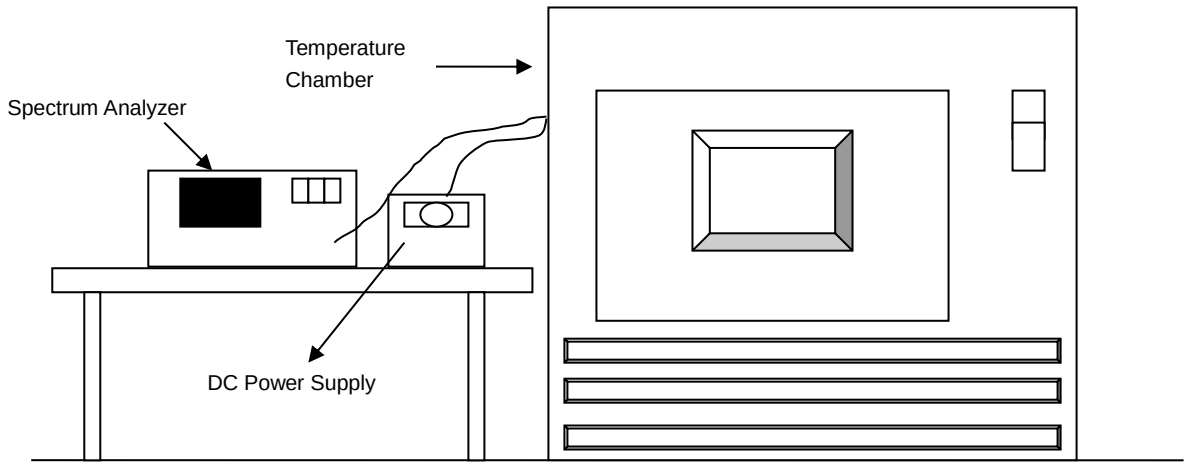


4.5 Frequency Stability

4.5.1 Limit of Frequency Stability Measurement

The frequency of the carrier signal shall be maintained within band of operation.

4.5.2 Test Setup



4.5.3 Test Instruments

Refer to section 4.1.3 to get information of above instrument.

4.5.4 Test Procedure

a. The EUT was placed inside the environmental test chamber and powered by nominal DC voltage.
b. Turn the EUT on and couple its output to a spectrum analyzer.
c. Turn the EUT off and set the chamber to the highest temperature specified.
d. Allow sufficient time (approximately 30 min) for the temperature of the chamber to stabilize, turn the EUT on and measure the operating frequency after 2, 5, and 10 Minutes.
e. Repeat step (d) with the temperature chamber set to the next desired temperature until measurements down to the lowest specified temperature have been completed.
f. The test chamber was allowed to stabilize at +20 degree C for a minimum of 30 Minutes. The supply voltage was then adjusted on the EUT from 85% to 115% and the frequency record.

4.5.5 Deviation from Test Standard

No deviation.

4.5.6 EUT Operating Condition

Set the EUT transmit at un-modulation mode to test frequency stability.

4.5.7 Test Results

Frequency Stability Versus Temp.									
Operating Frequency: 5180 MHz									
Temp. (℃)	Power Supply (Vdc)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result
60	3.3	5180.0191	PASS	5180.0222	PASS	5180.0225	PASS	5180.0223	PASS
50	3.3	5179.9962	PASS	5179.9969	PASS	5179.9962	PASS	5179.9987	PASS
40	3.3	5179.992	PASS	5179.9913	PASS	5179.9897	PASS	5179.9914	PASS
30	3.3	5179.9797	PASS	5179.9789	PASS	5179.9783	PASS	5179.9807	PASS
20	3.3	5179.9746	PASS	5179.976	PASS	5179.974	PASS	5179.9721	PASS
10	3.3	5180.0106	PASS	5180.0101	PASS	5180.01	PASS	5180.0097	PASS
0	3.3	5179.99	PASS	5179.9873	PASS	5179.9886	PASS	5179.9904	PASS

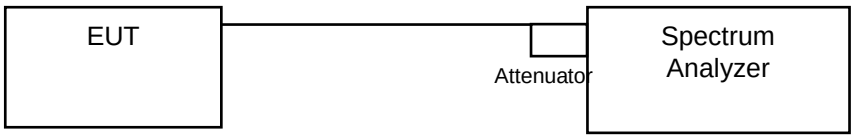
Frequency Stability Versus Voltage									
Operating Frequency: 5180 MHz									
Temp. (℃)	Power Supply (Vdc)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result
20	3.795	5179.9753	PASS	5179.9769	PASS	5179.9744	PASS	5179.9727	PASS
	3.3	5179.9746	PASS	5179.976	PASS	5179.974	PASS	5179.9721	PASS
	2.805	5179.9738	PASS	5179.9762	PASS	5179.9749	PASS	5179.9723	PASS

4.6 6 dB Bandwidth Measurement

4.6.1 Limits of 6 dB Bandwidth Measurement

The minimum of 6 dB Bandwidth Measurement is 0.5 MHz.

4.6.2 Test Setup



4.6.3 Test Instruments

Refer to section 4.1.3 to get information of above instrument.

4.6.4 Test Procedure

MEASUREMENT PROCEDURE REF

a. Set resolution bandwidth (RBW) = 100 kHz
b. Set the video bandwidth (VBW) ≥ 3 x RBW, Detector = Peak.
c. Trace mode = max hold.
d. Sweep = auto couple.
e. Measure the maximum width of the emission that is constrained by the frequencies associated with the two amplitude points (upper and lower) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission

4.6.5 Deviation from Test Standard

No deviation.

4.6.6 EUT Operating Condition

The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

4.6.7 Test Results

802.11a

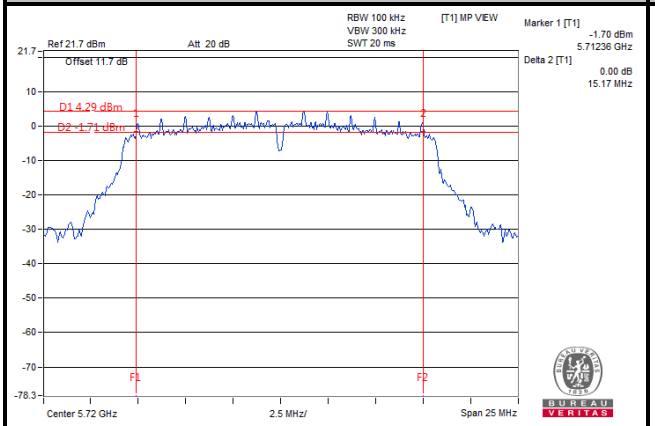
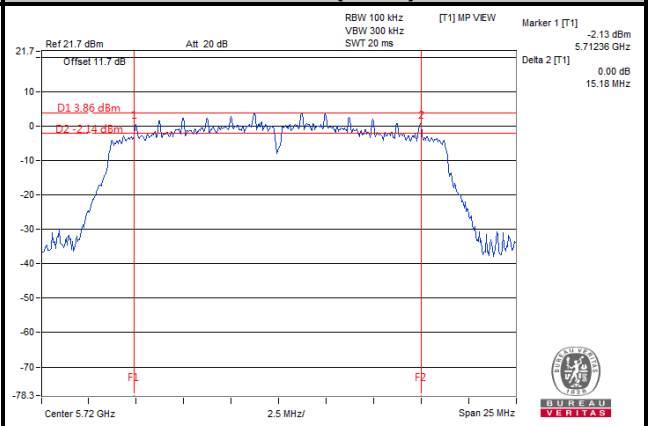
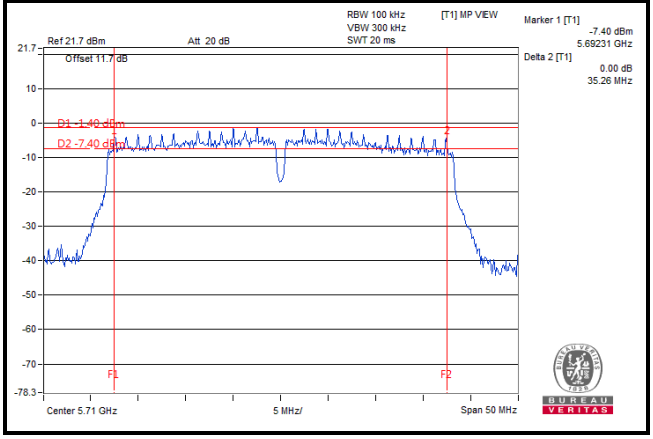
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
144	5720 (U-NII-3)	2.53	2.53	0.5	Pass
149	5745	15.15	15.14	0.5	Pass
157	5785	15.15	15.14	0.5	Pass
165	5825	15.15	15.14	0.5	Pass

802.11n (HT20)

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
144	5720 (U-NII-3)	2.54	3.10	0.5	Pass
149	5745	15.14	15.70	0.5	Pass
157	5785	15.15	15.15	0.5	Pass
165	5825	15.14	15.14	0.5	Pass

802.11n (HT40)

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
142	5710 (U-NII-3)	2.61	2.57	0.5	Pass
151	5755	35.29	35.26	0.5	Pass
159	5795	35.30	35.26	0.5	Pass

Spectrum Plot of Worst Value	
802.11a	802.11n (HT20)
	
802.11n (HT40)	
	

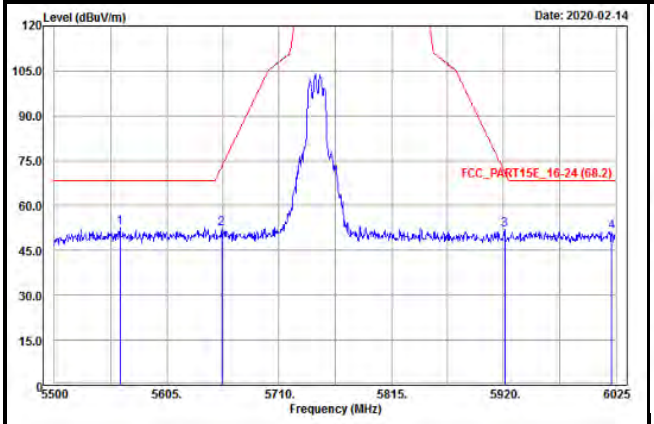
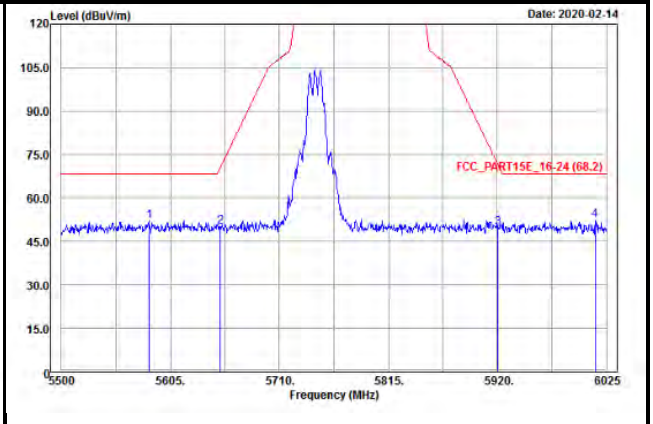
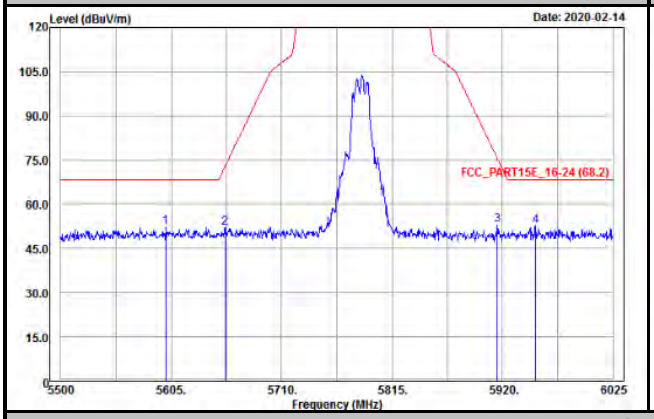
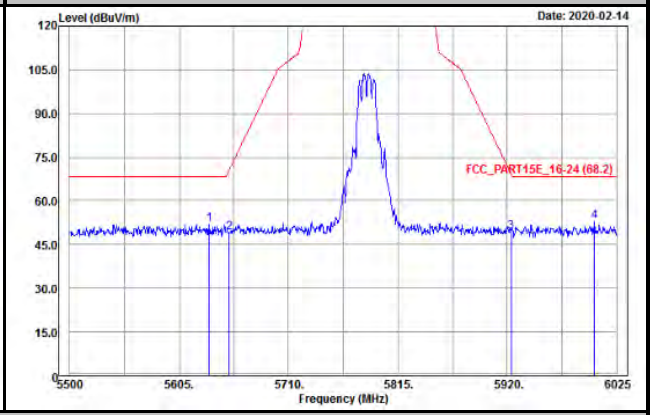
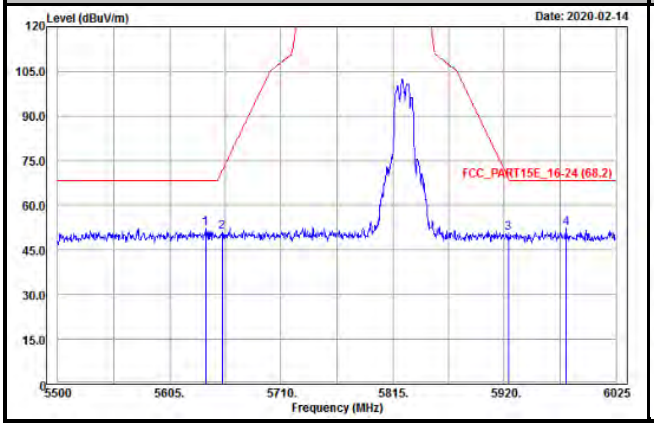
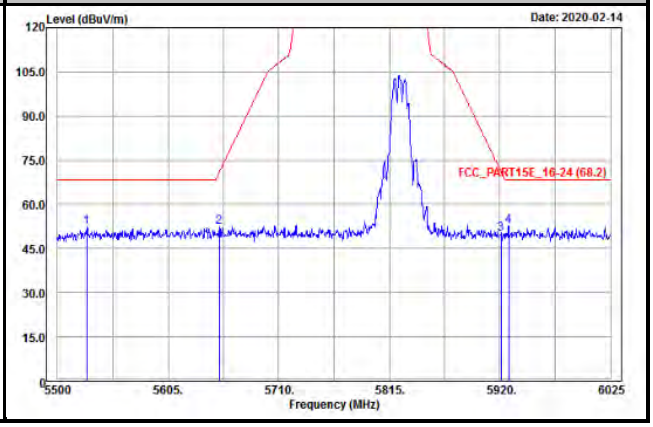
Note:
For Ch144 (UNII-3 Band): The 6 dB bandwidth above 5725 MHz = Marker 1 + Delta 2 – 5725 MHz
For Ch142 (UNII-3 Band): The 6 dB bandwidth above 5725 MHz = Marker 1 + Delta 2 – 5725 MHz

5 Pictures of Test Arrangements

Please refer to the attached file (Test Setup Photo).

Annex A- Radiated Out of Band Emission (OOBE) Measurement (For U-NII-3 band)

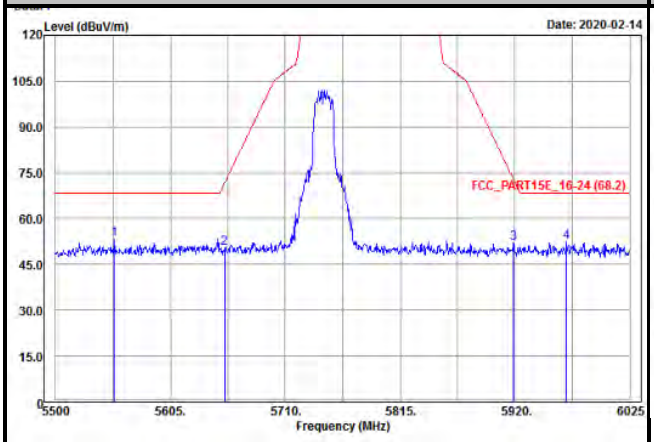
802.11a

Ch 149	
Horizontal	Vertical
	
Ch 157	
Horizontal	Vertical
	
Ch 165	
Horizontal	Vertical
	

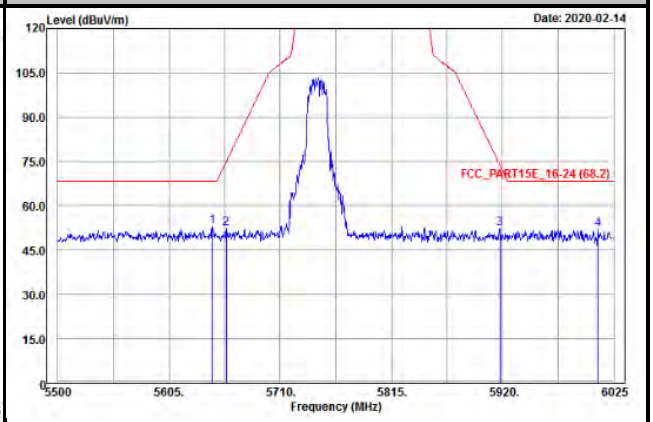
802.11n (HT20)

Ch 149

Horizontal

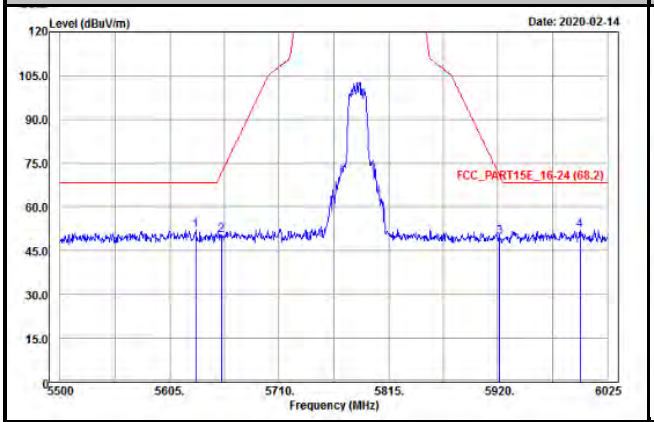


Vertical

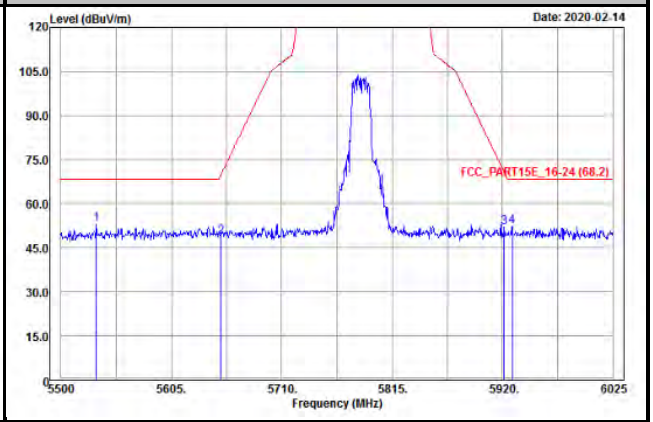


Ch 157

Horizontal

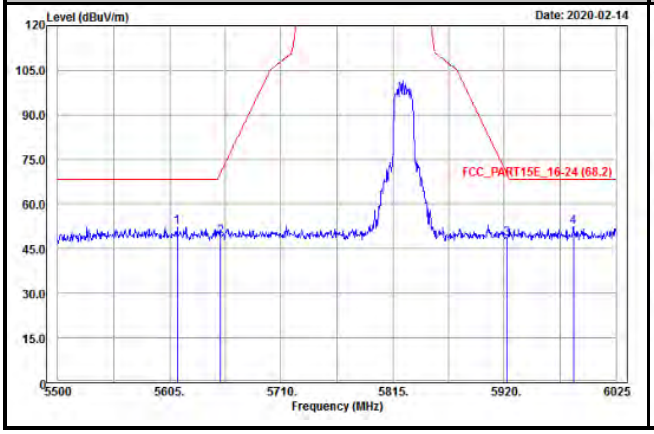


Vertical

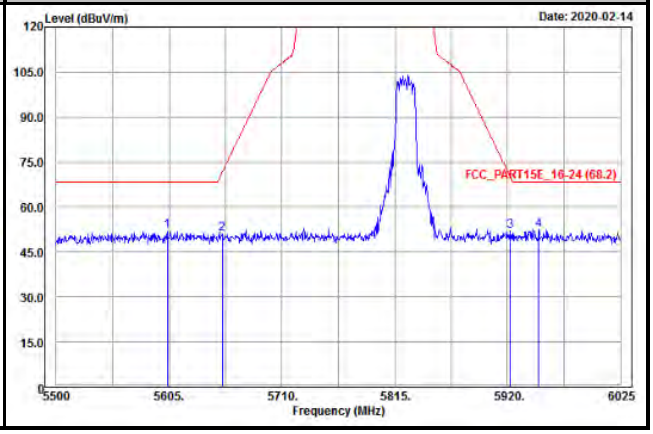


Ch 165

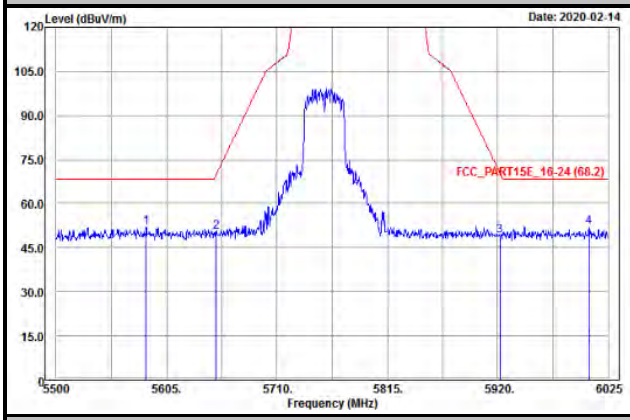
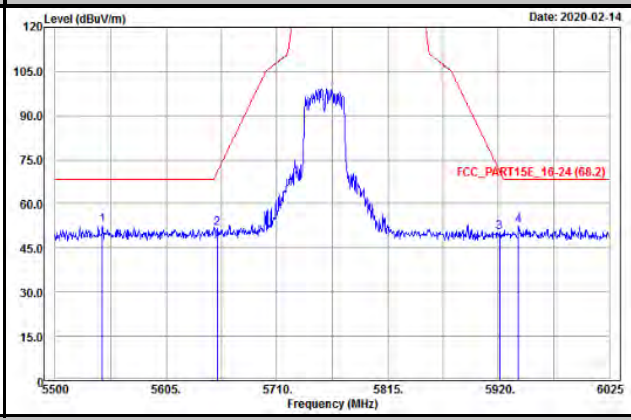
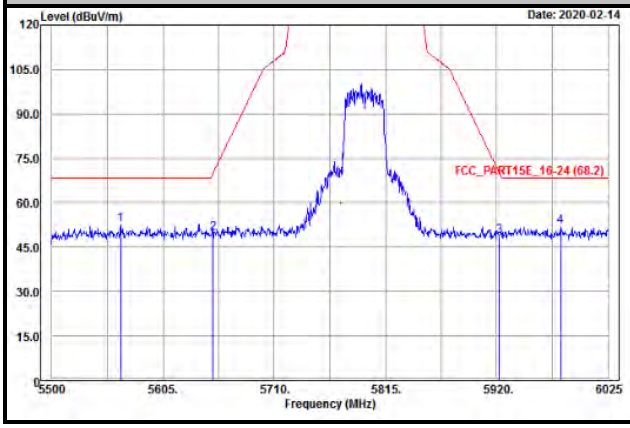
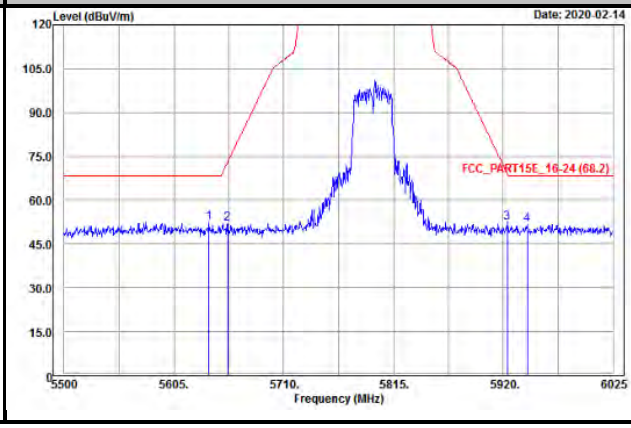
Horizontal



Vertical

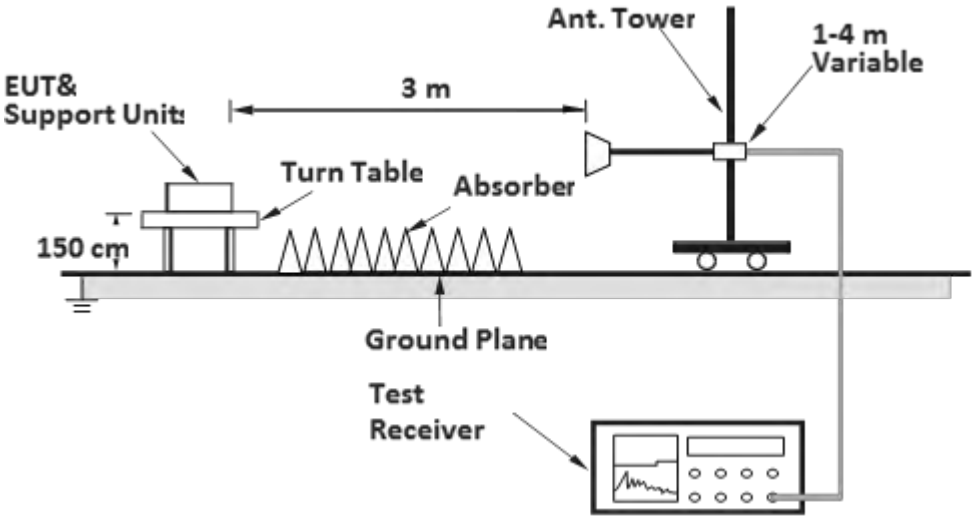


802.11n (HT40)

Ch 151	
Horizontal	Vertical
	
Ch 159	
Horizontal	Vertical
	

Annex B- Band-edge measurement

<Radiated Emission above 1 GHz>



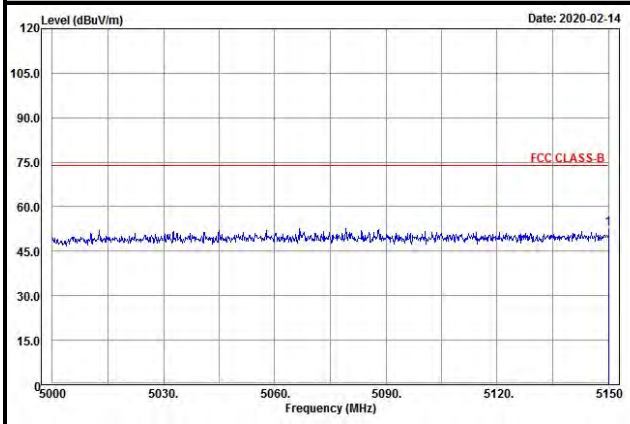
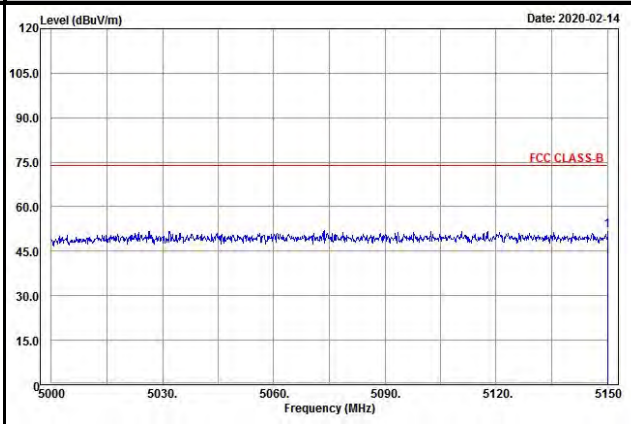
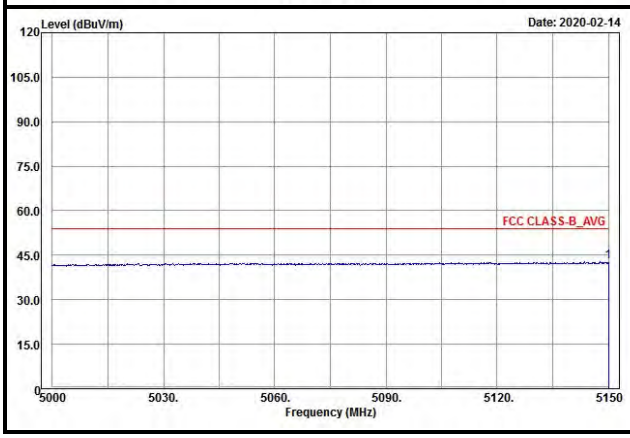
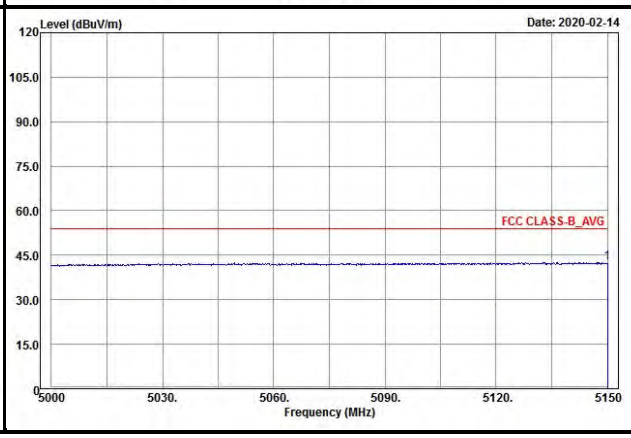
For the actual test configuration, please refer to the attached file (Test Setup Photo).

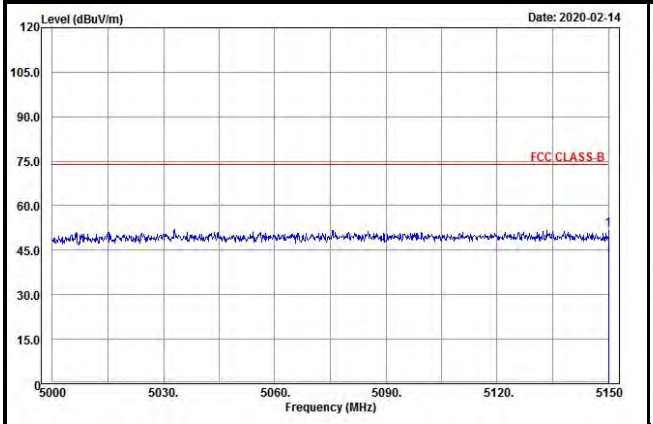
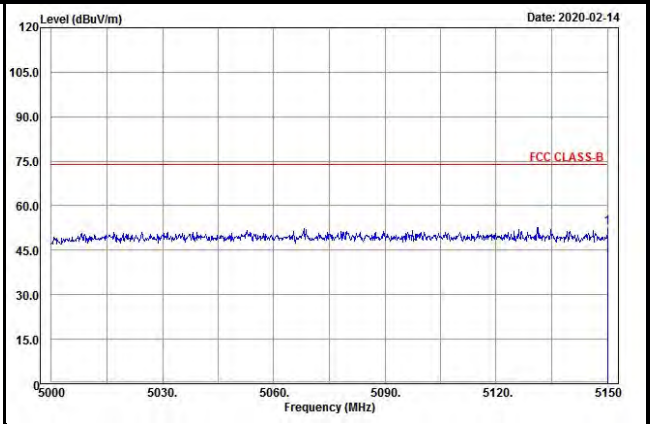
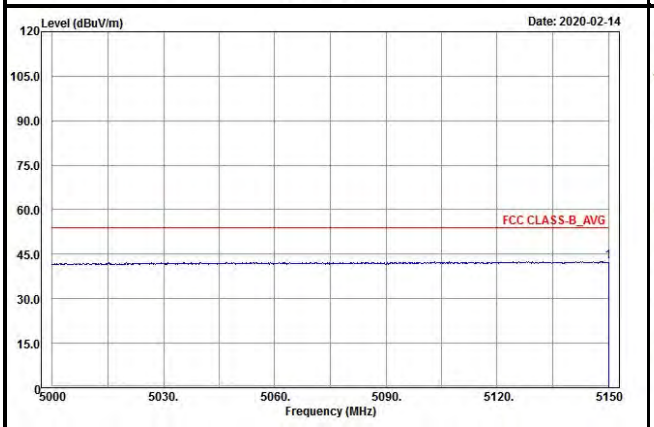
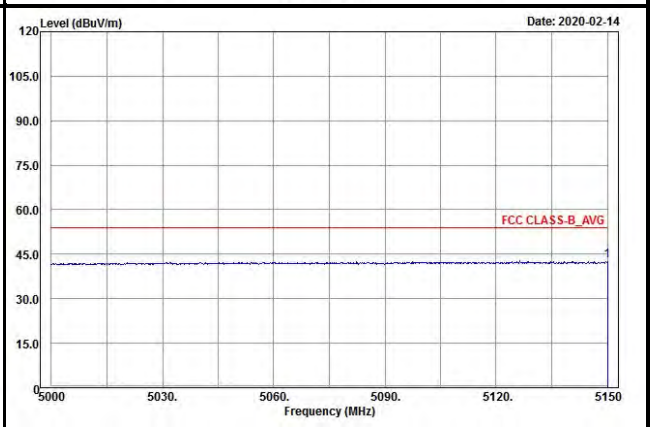
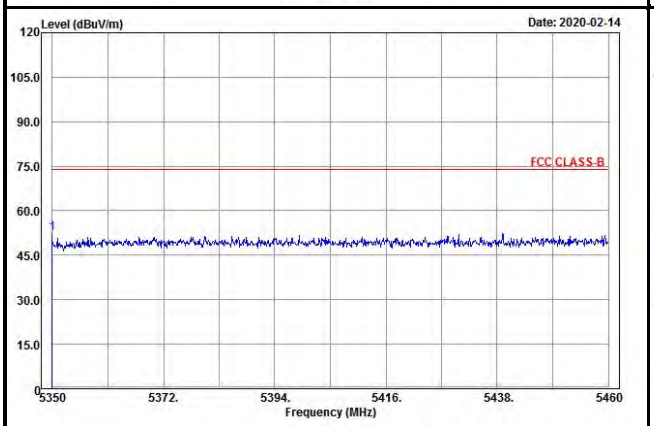
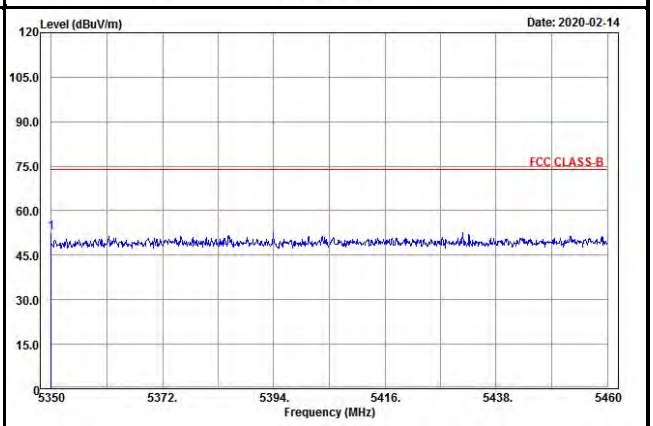
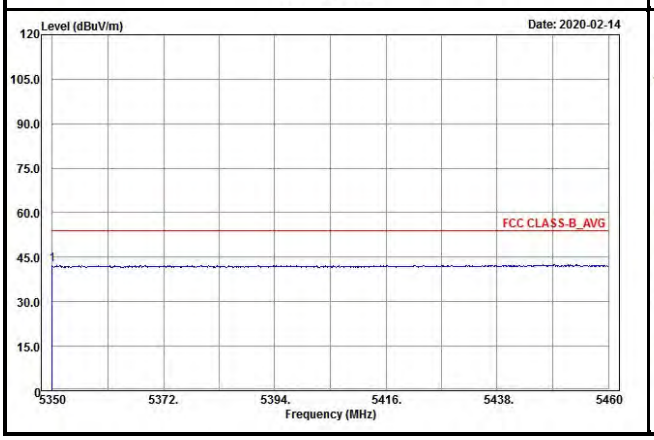
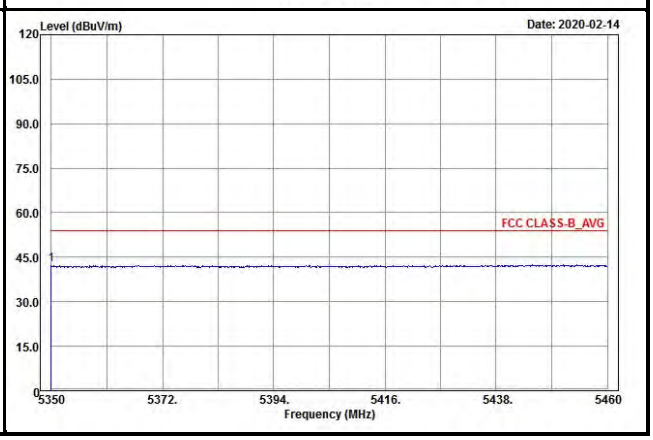
EUT Operating Conditions

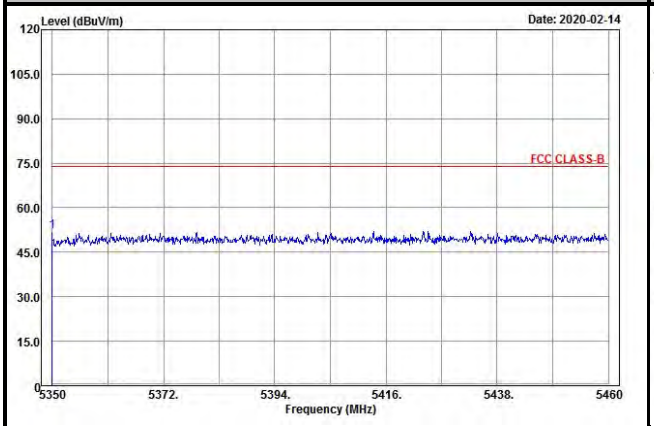
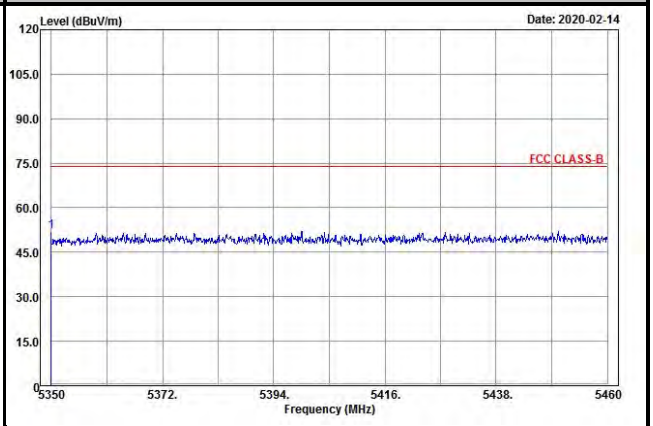
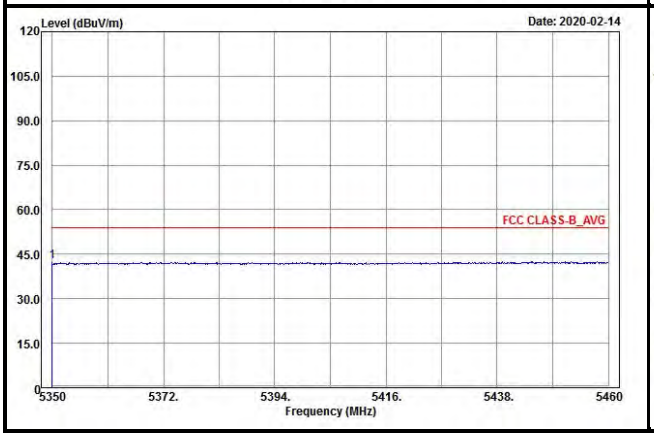
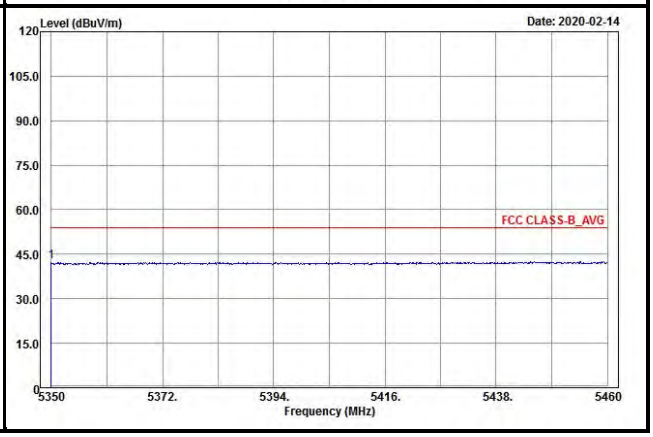
a. Placed the EUT on a testing table.

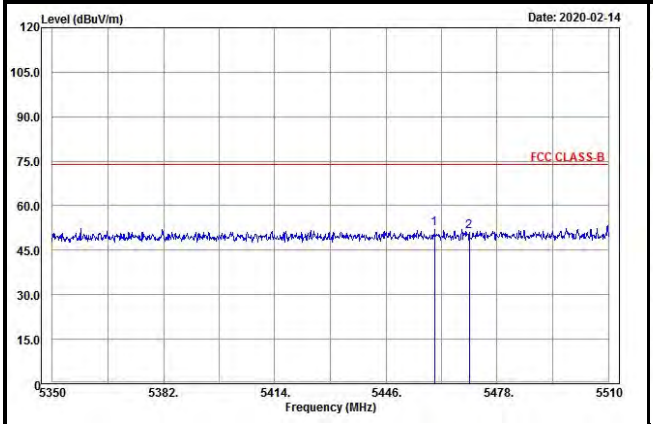
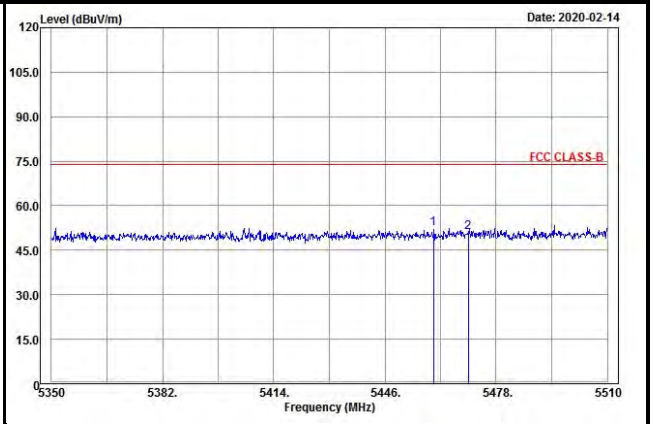
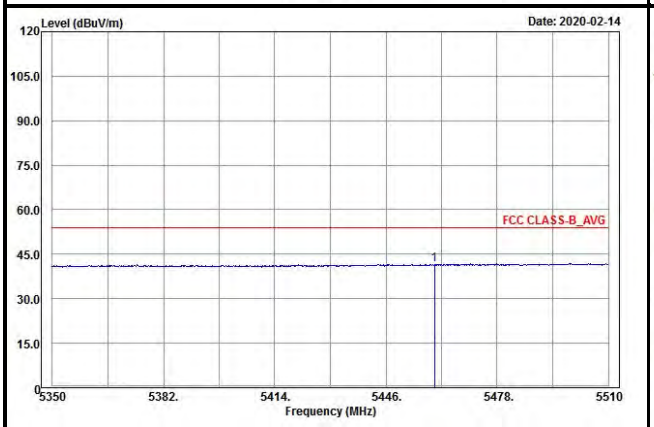
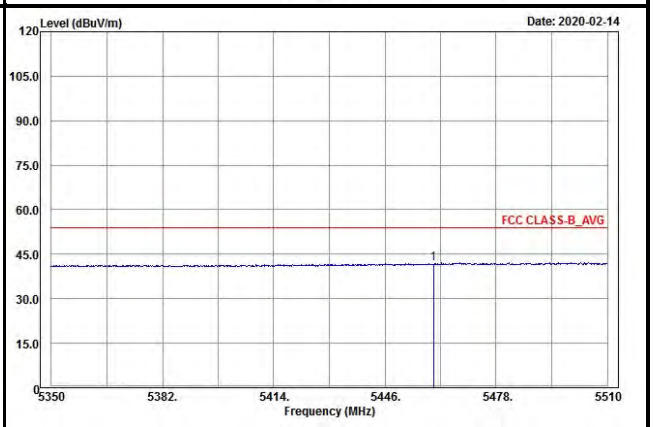
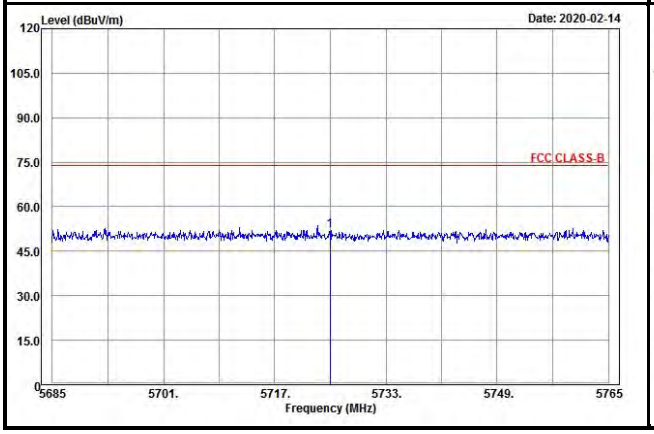
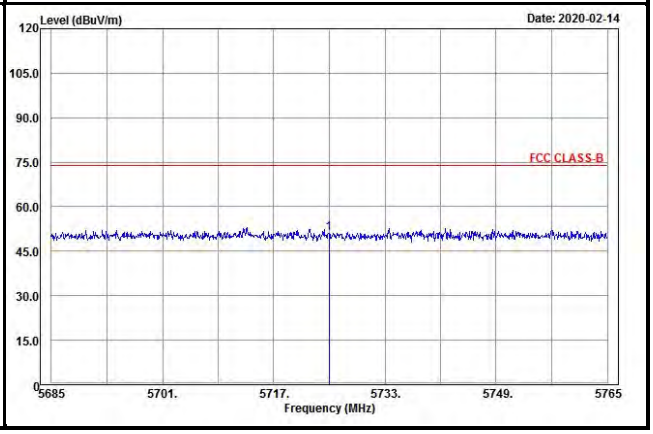
b. Use the software to control the EUT under transmission condition continuously at specific channel frequency.

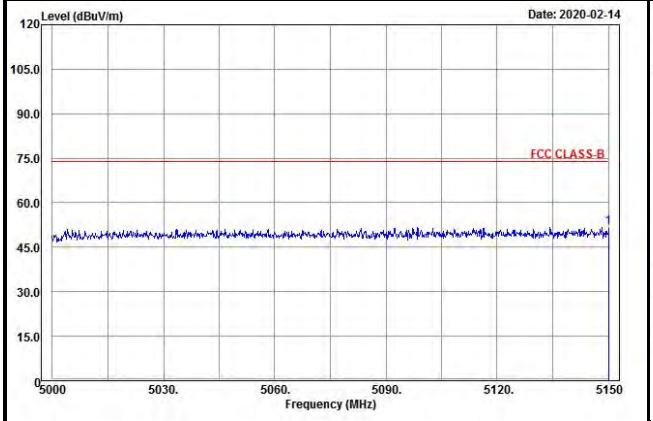
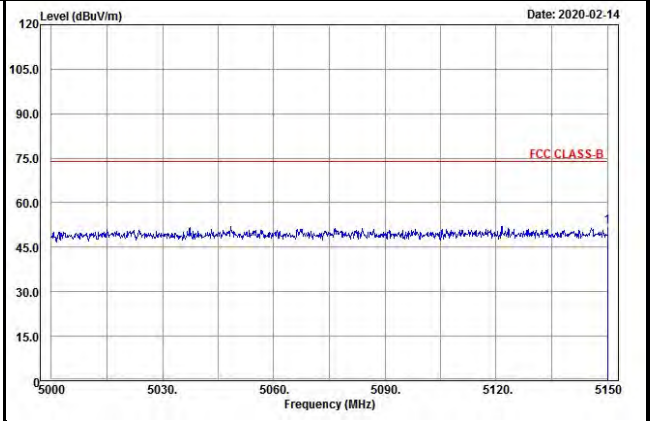
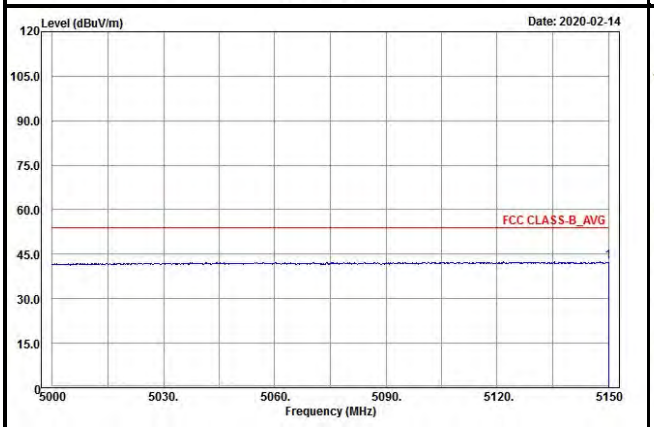
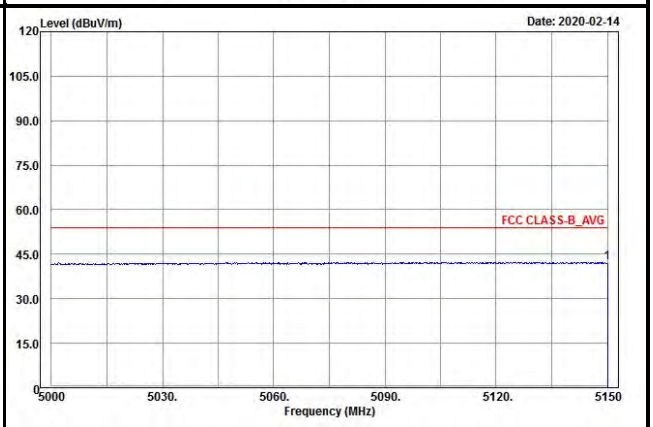
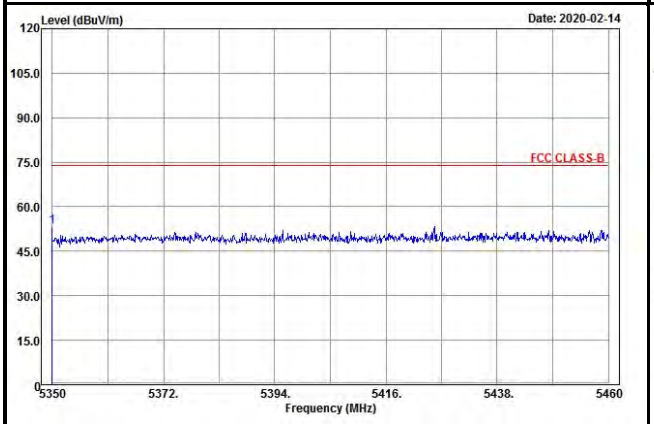
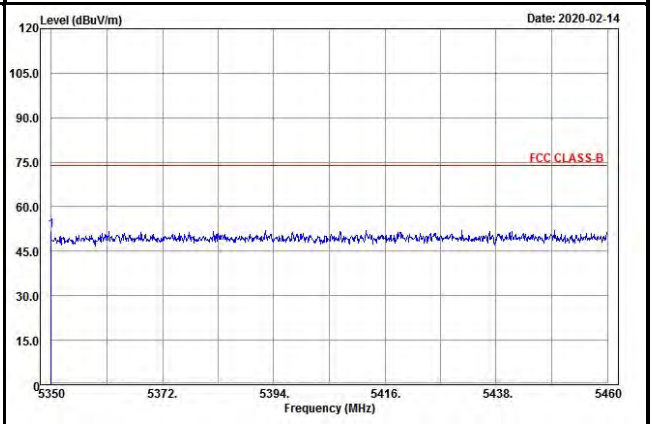
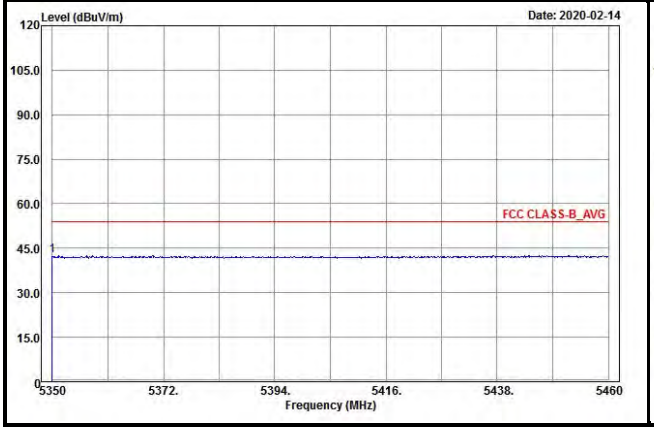
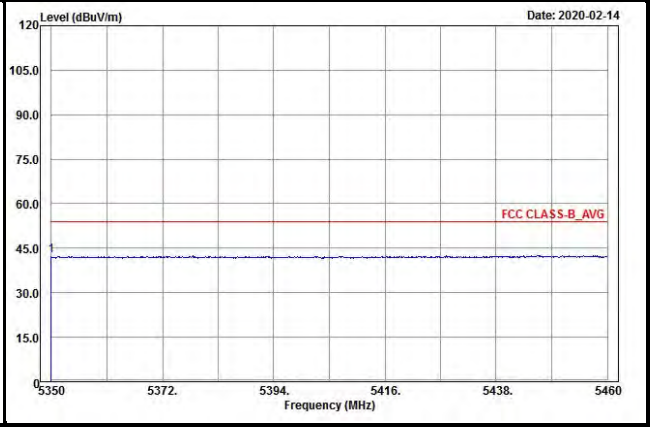
802.11a

Ch 36	
Horizontal	**Vertical**
	
	

Ch 40	
Horizontal	**Vertical**
	
	
	
	

Ch 48	
Horizontal	**Vertical**
	
	

Ch 52	
Horizontal	**Vertical**
	
	
	

Ch 60	
Horizontal	**Vertical**
	
	
	
	

Ch 64	
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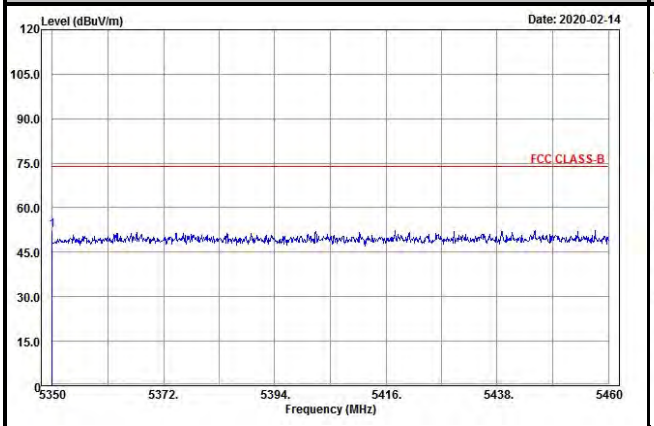	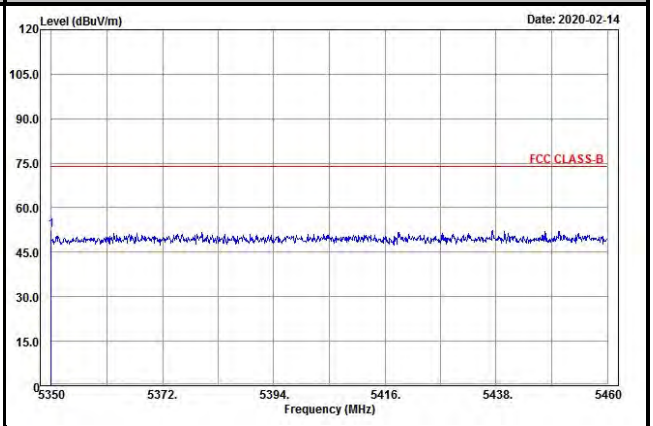
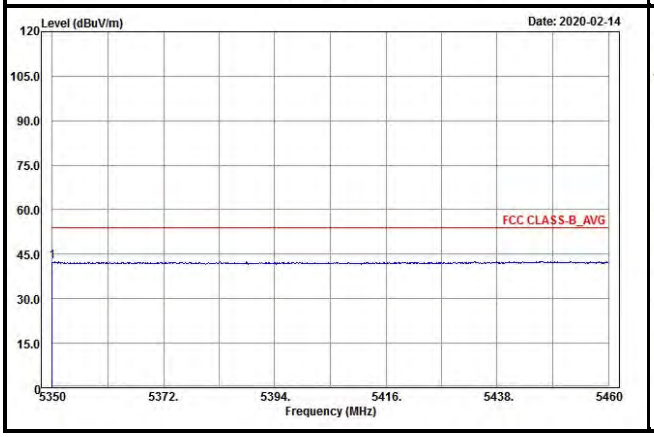	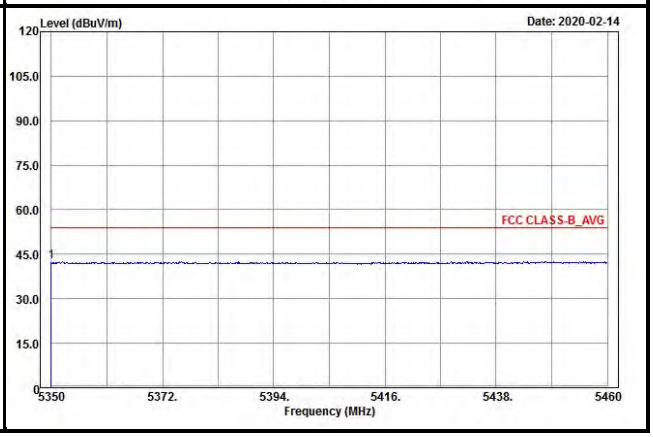

Ch 100	
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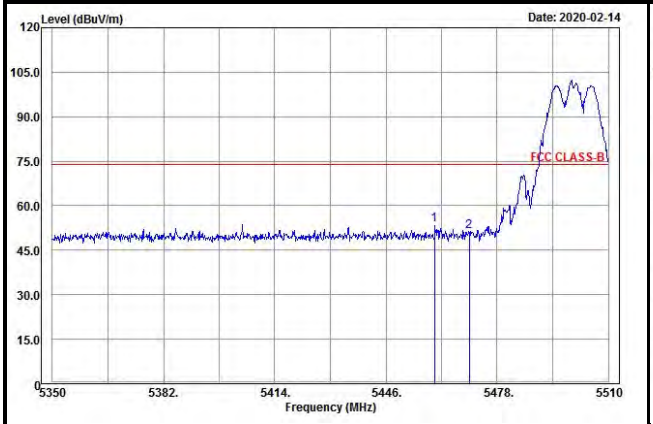	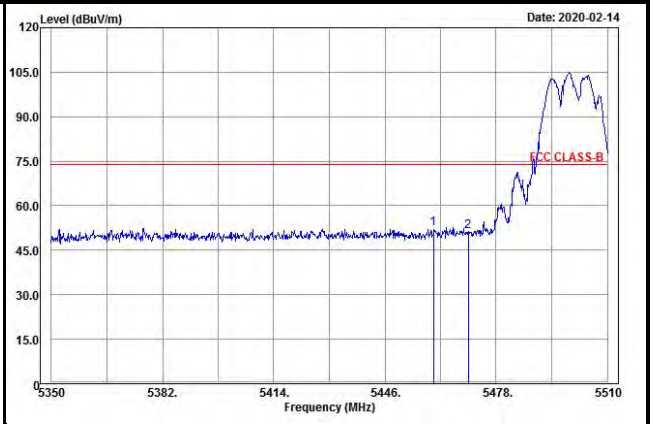
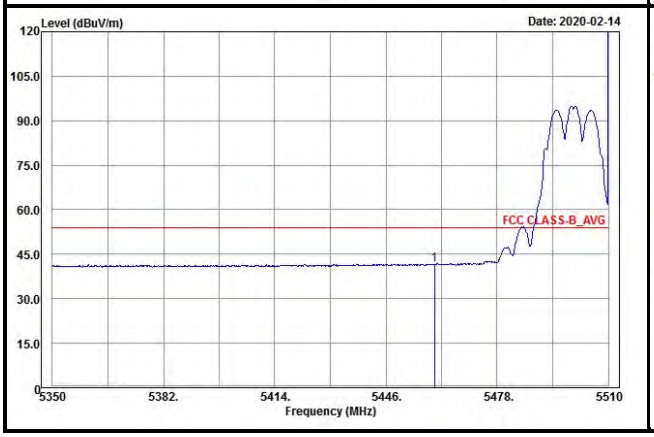	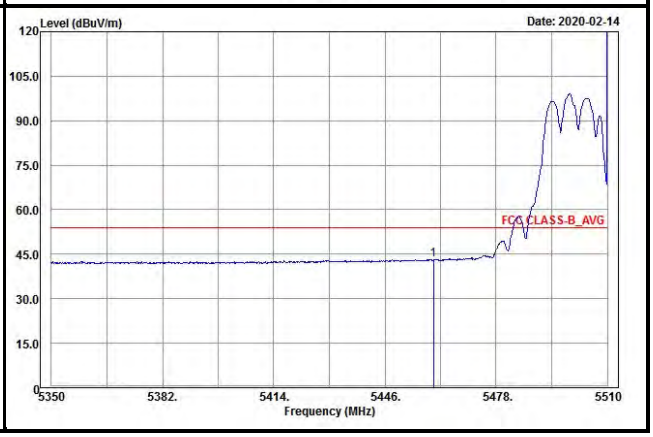

Ch 116	
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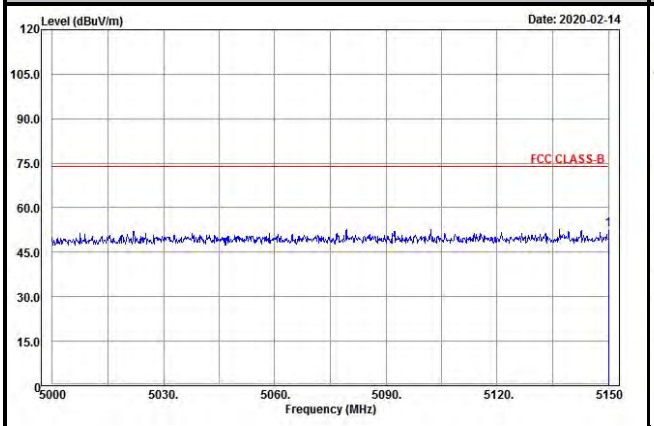	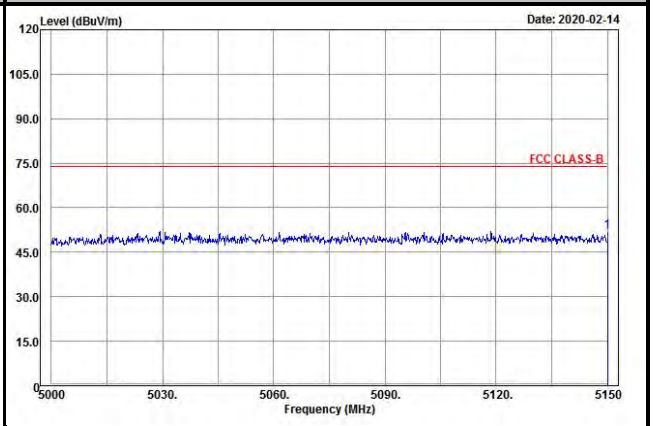
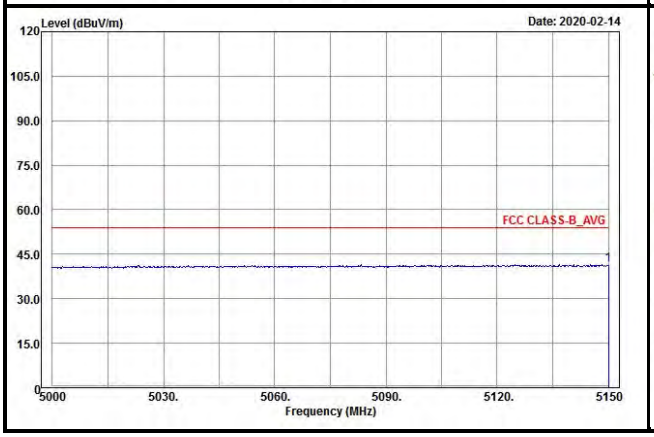	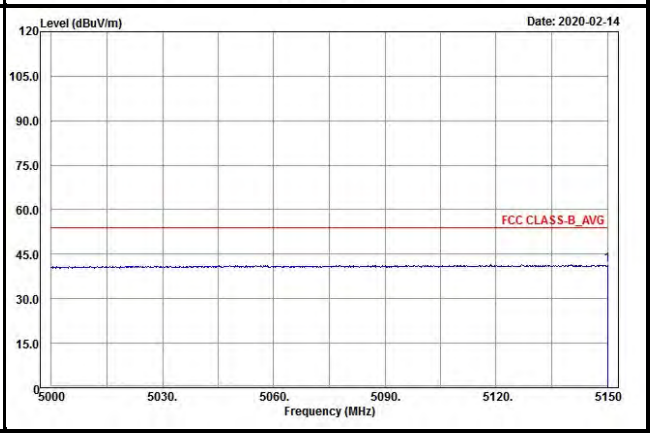

Ch 140	
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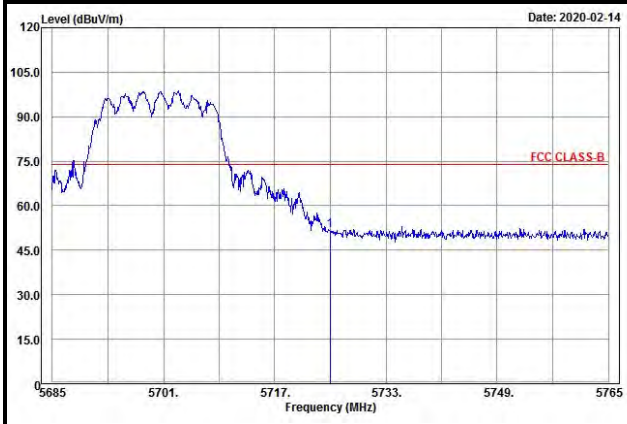	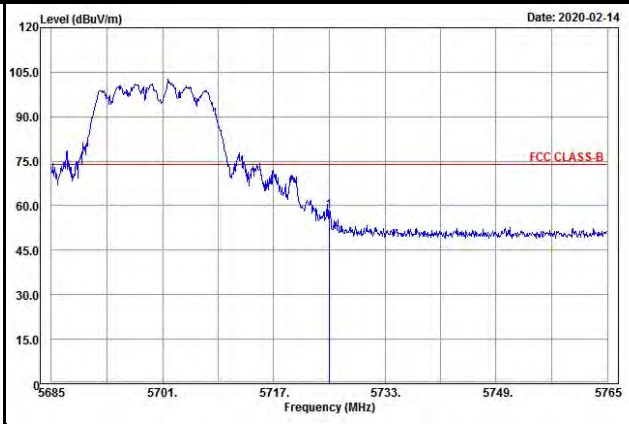
Ch 144	
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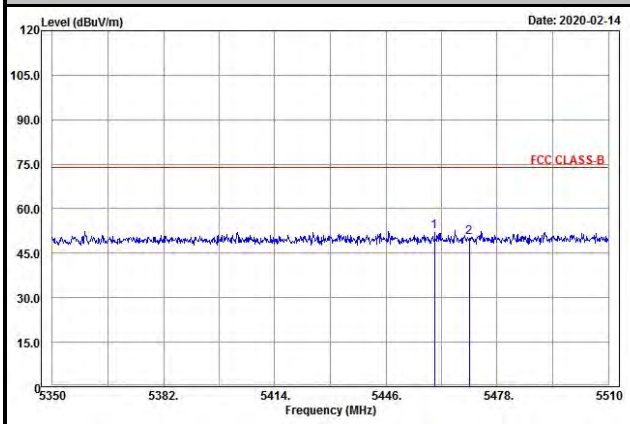	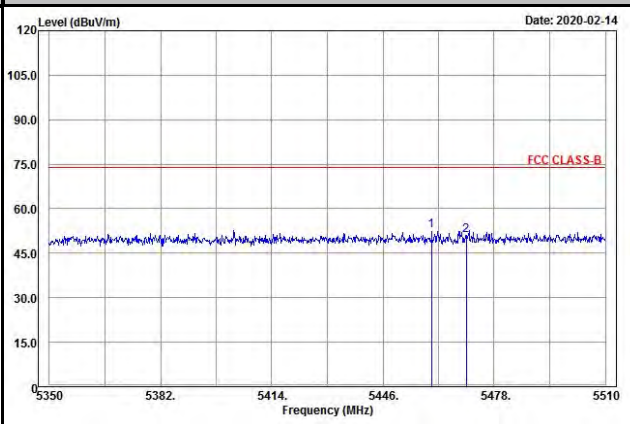
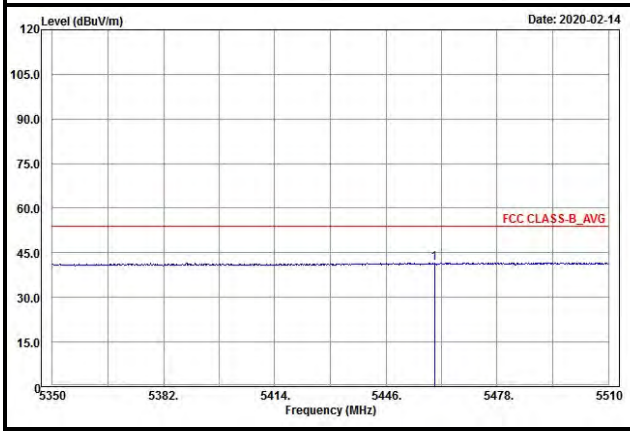	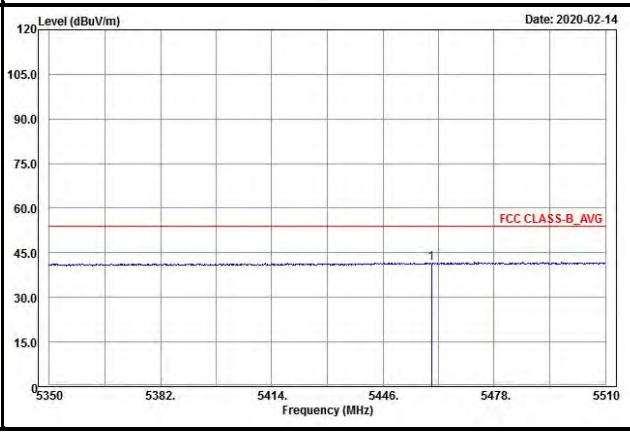

802.11n (HT20)

Ch 36	
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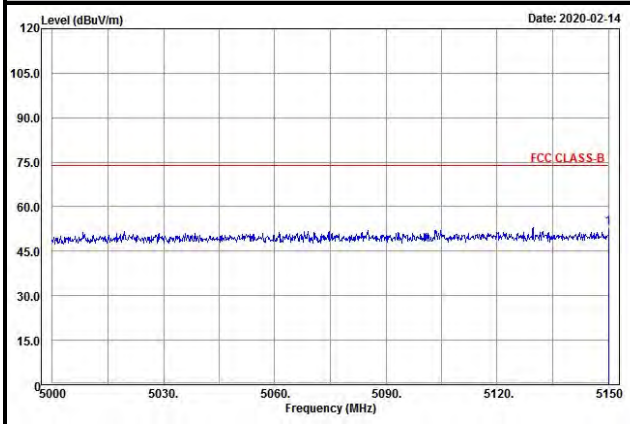	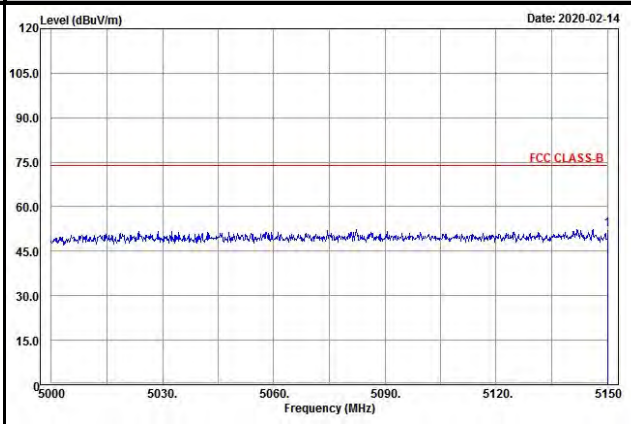
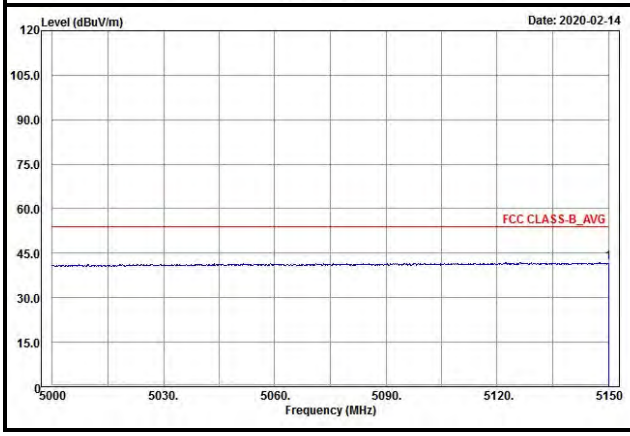	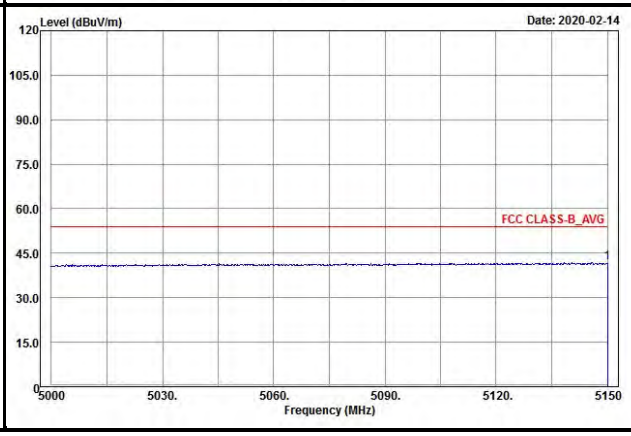

Ch 40	
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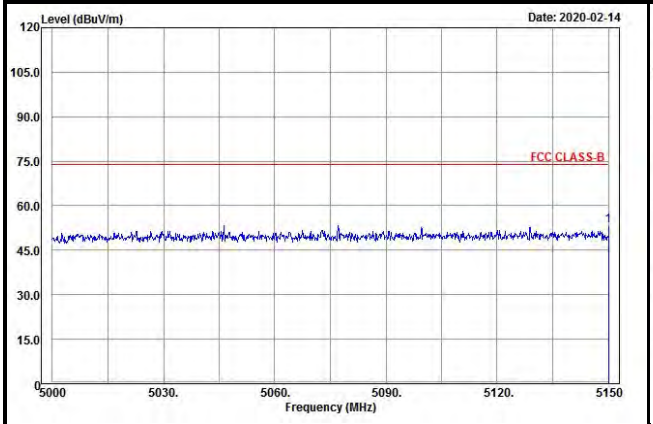	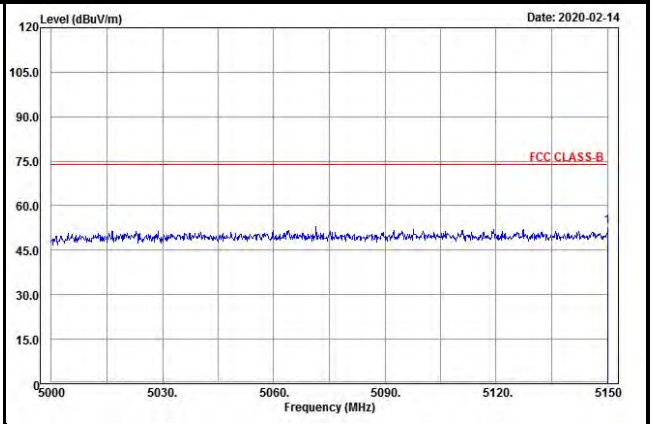
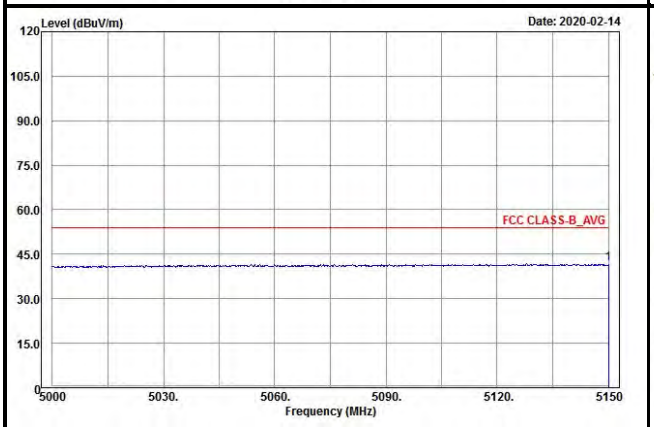	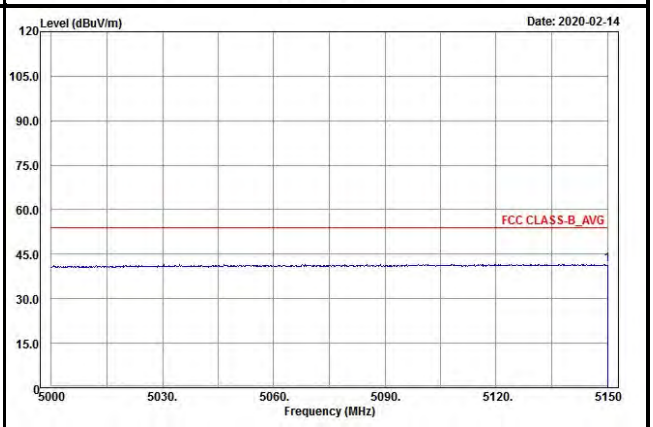
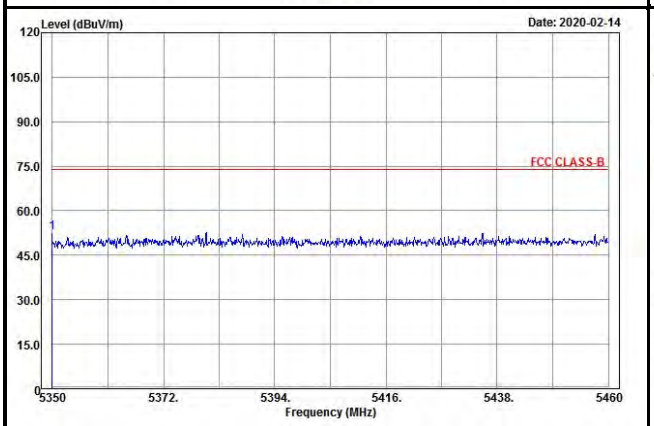	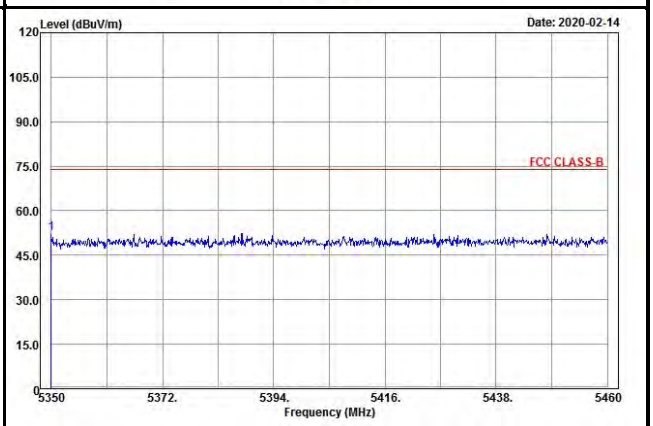
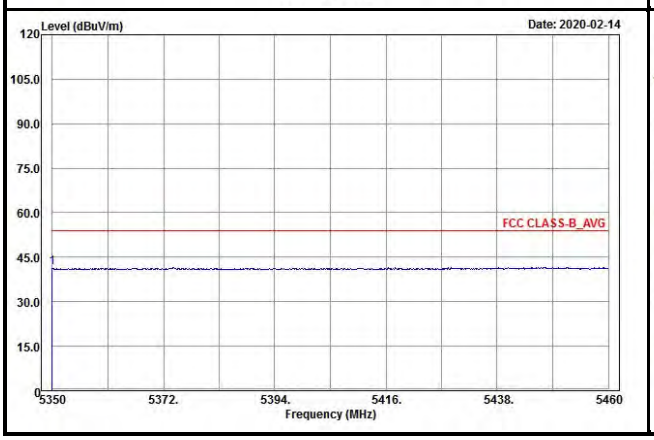	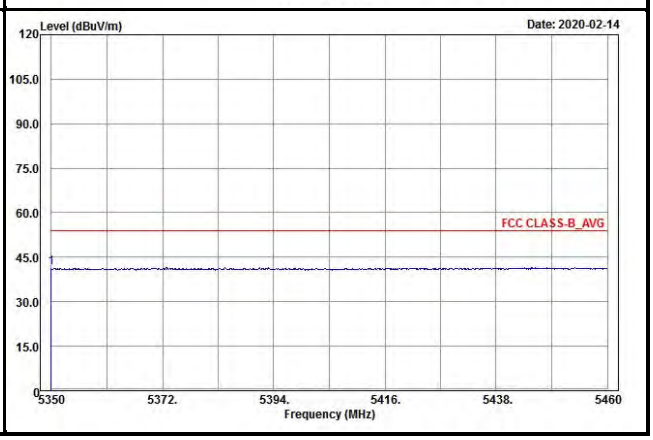

Ch 48	
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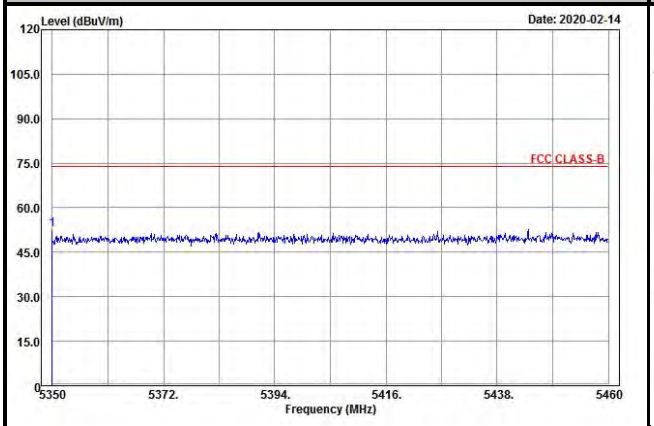	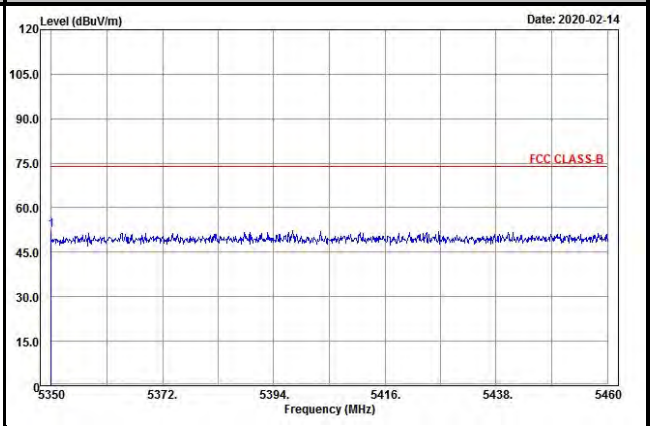
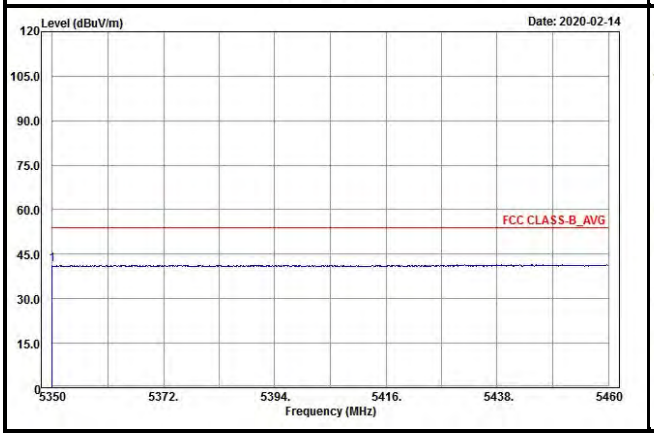	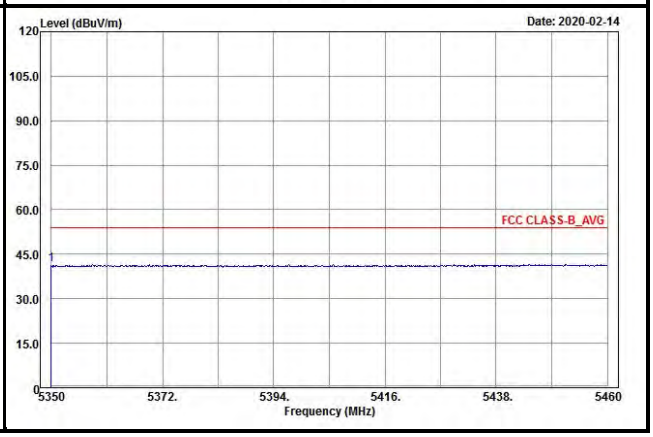

Ch 52	
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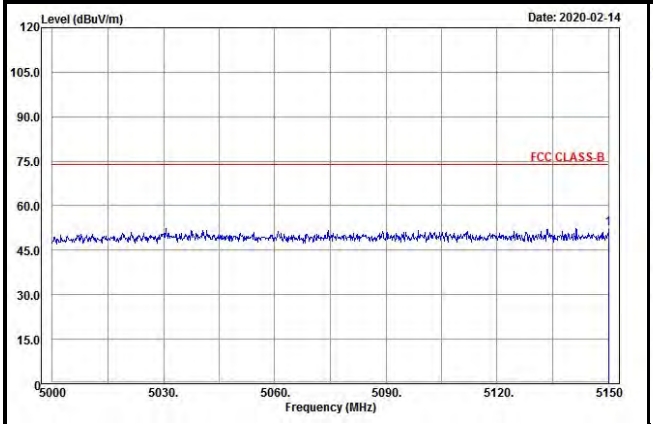	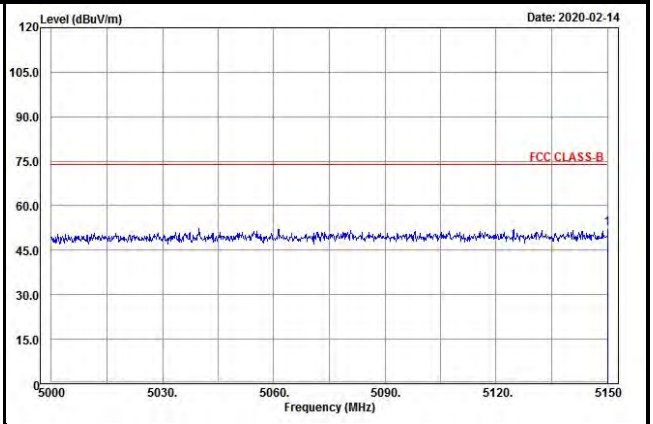
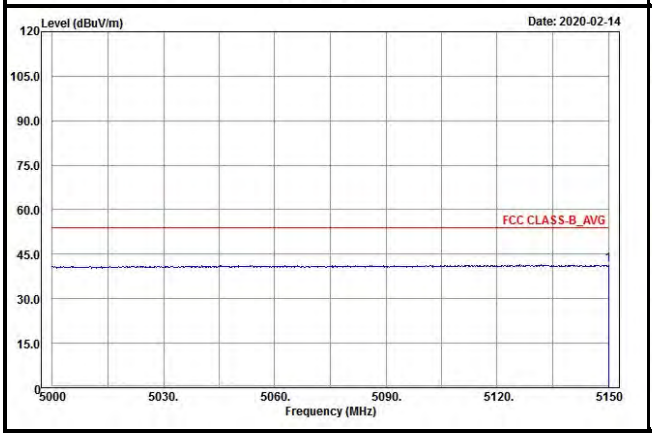	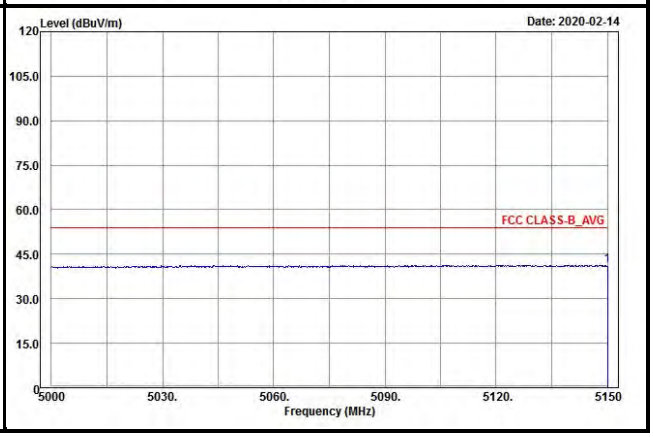

Ch 60	
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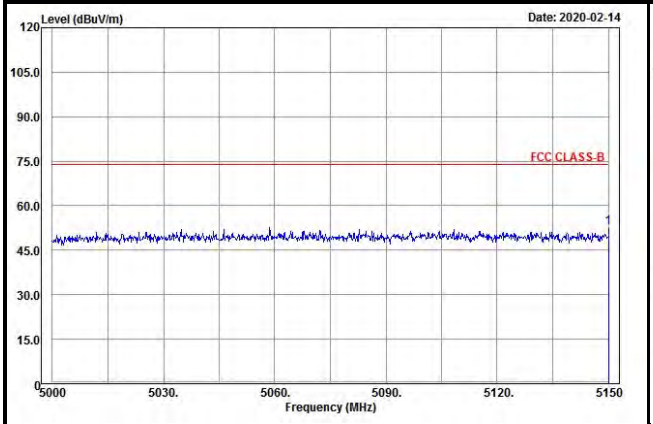	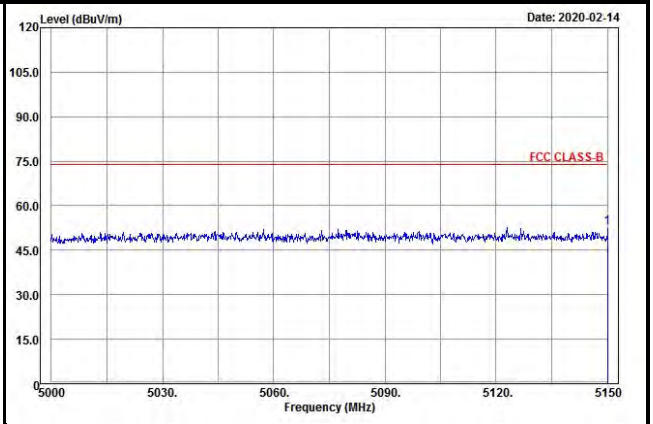
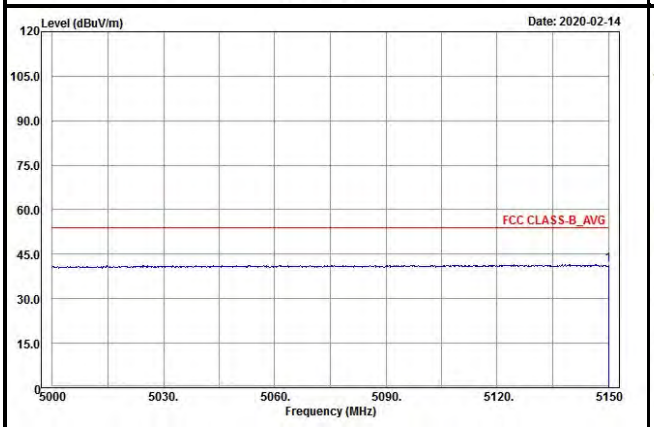	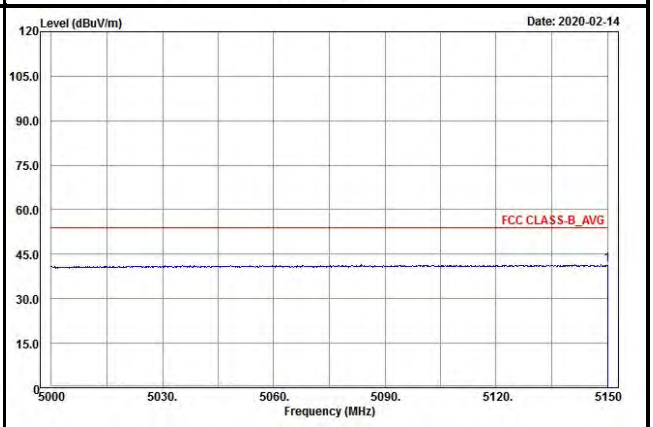
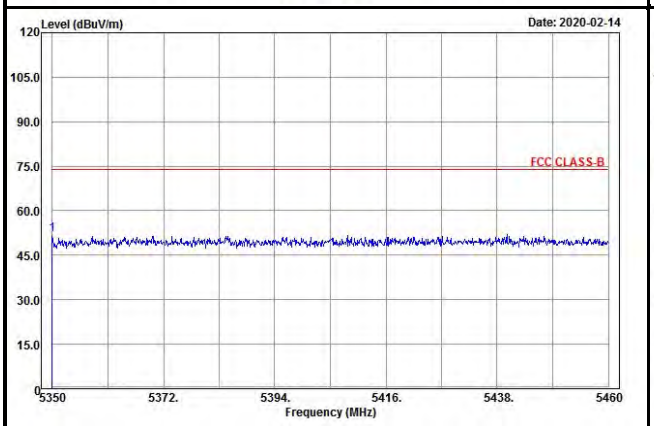	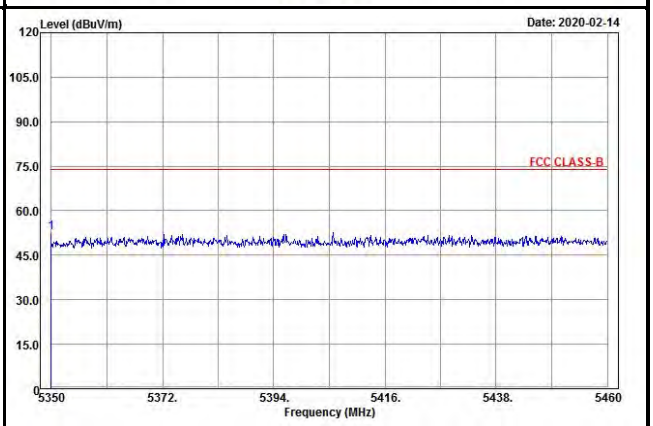
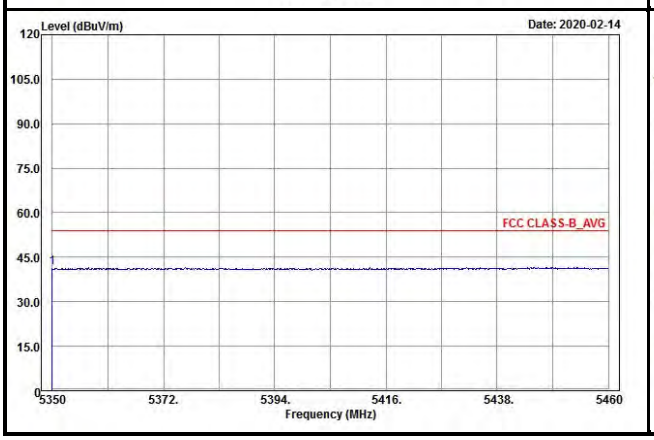	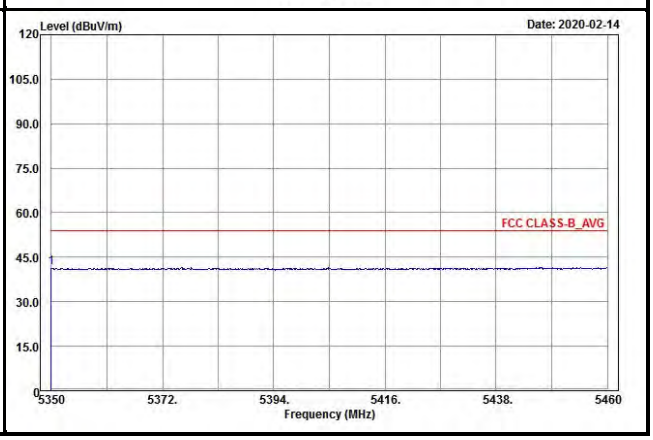

Ch 64	
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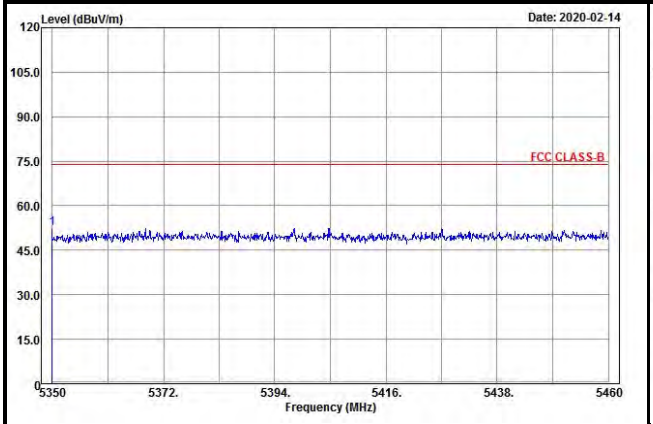	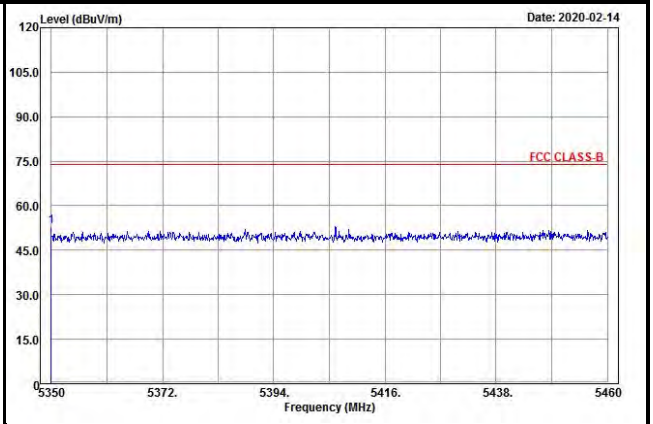
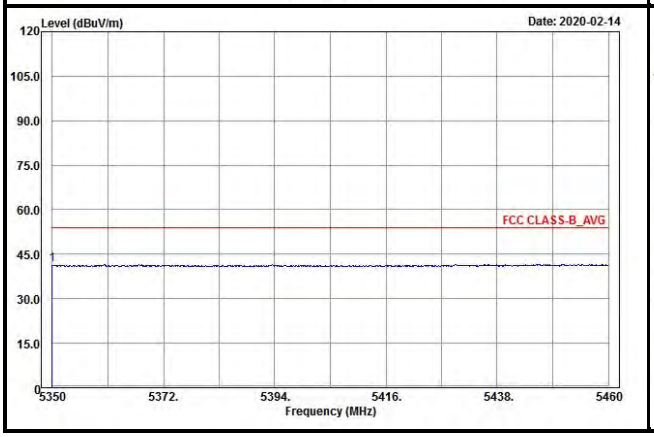	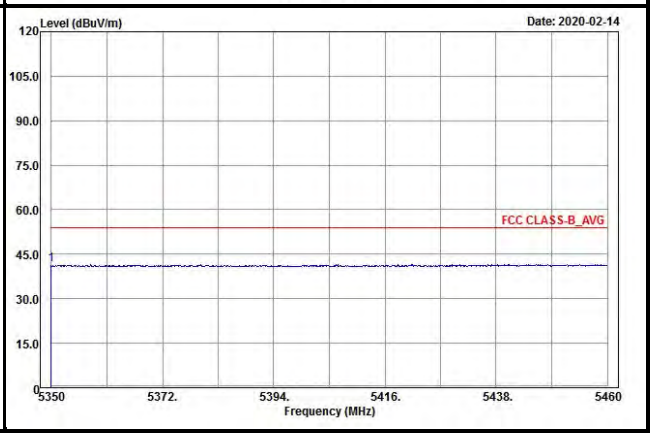

Ch 100	
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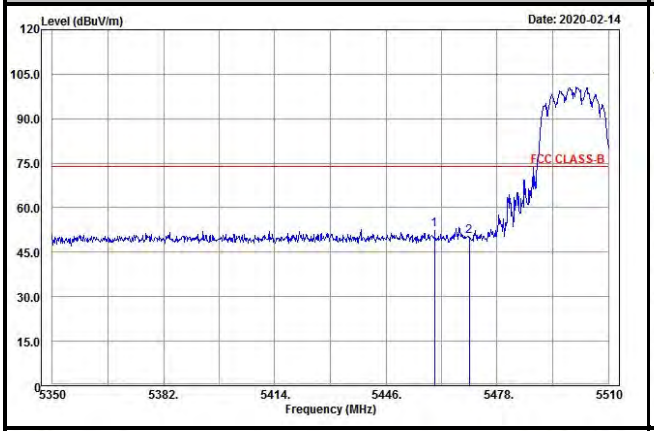	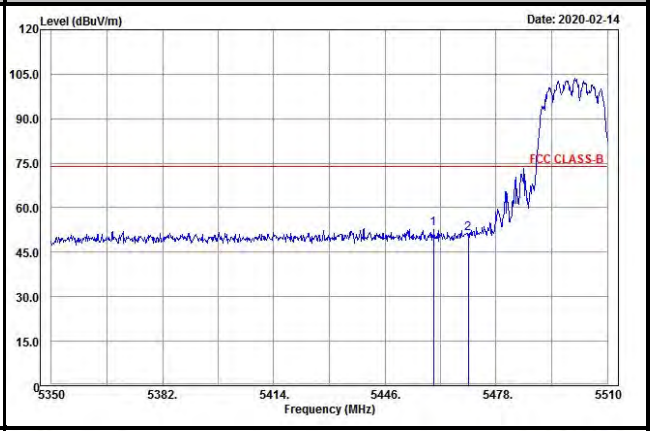
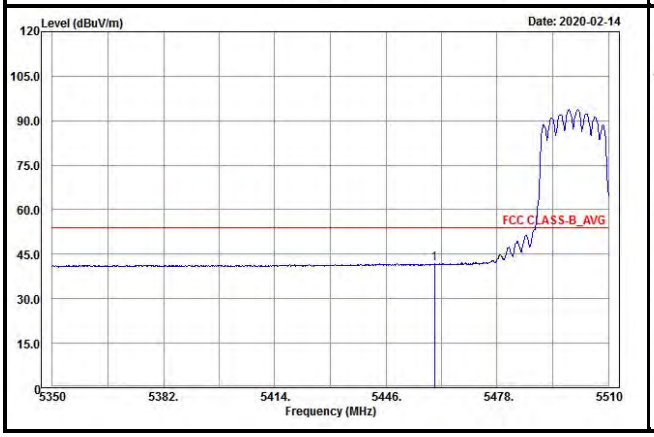	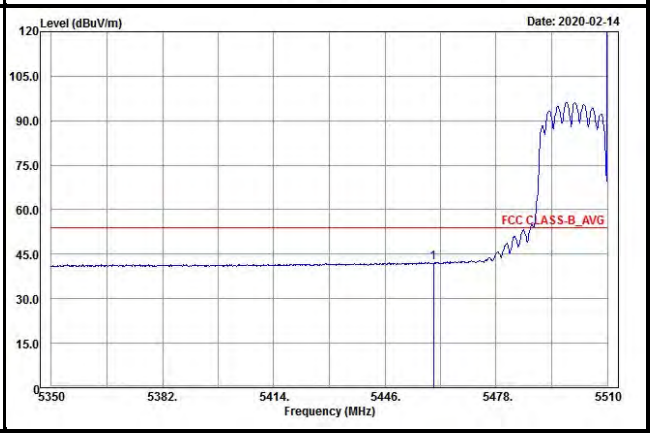

Ch 116	
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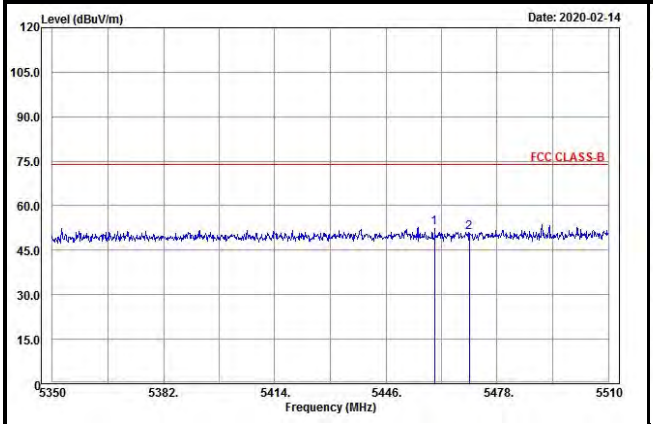	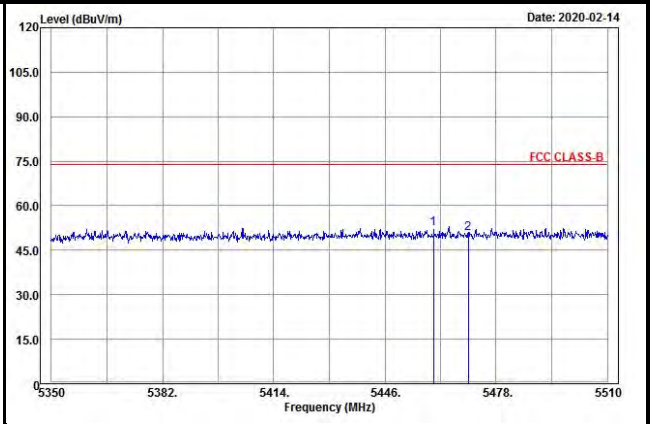
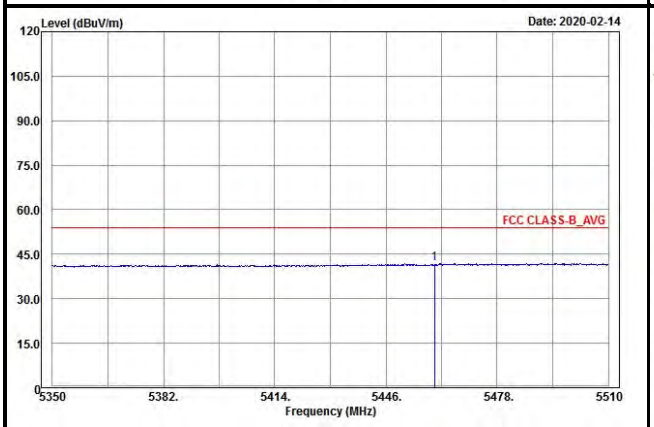	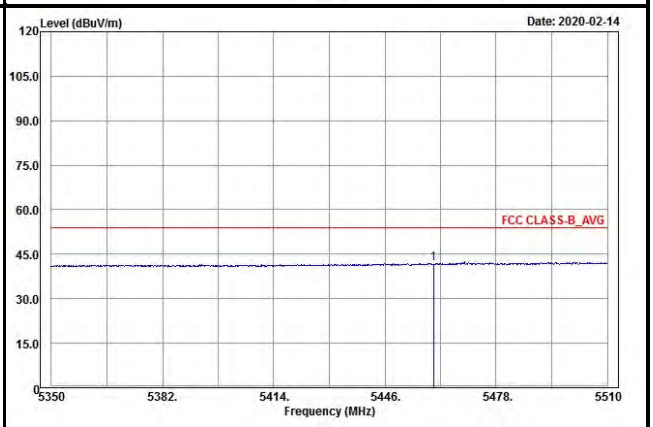
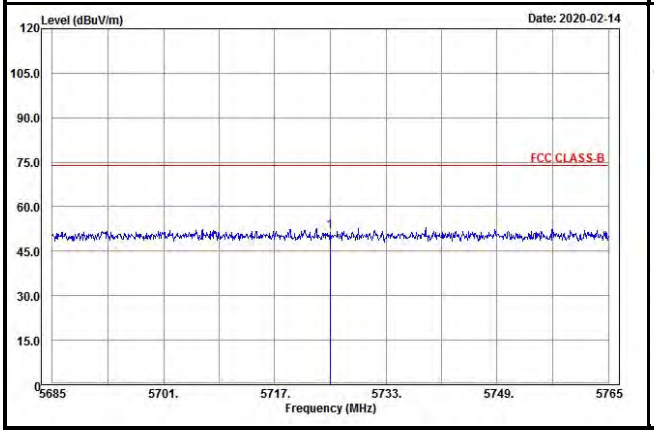	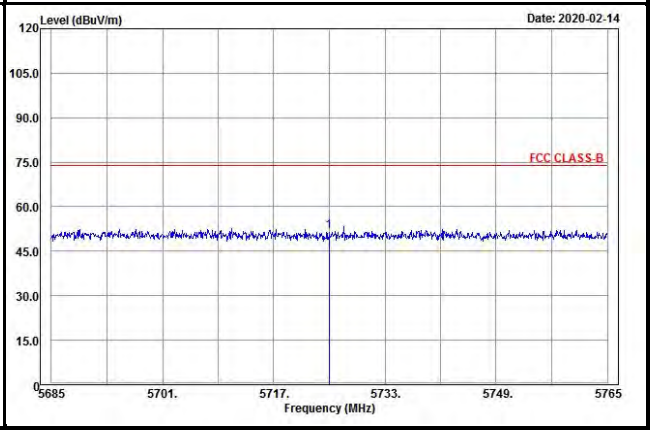

Ch 140	
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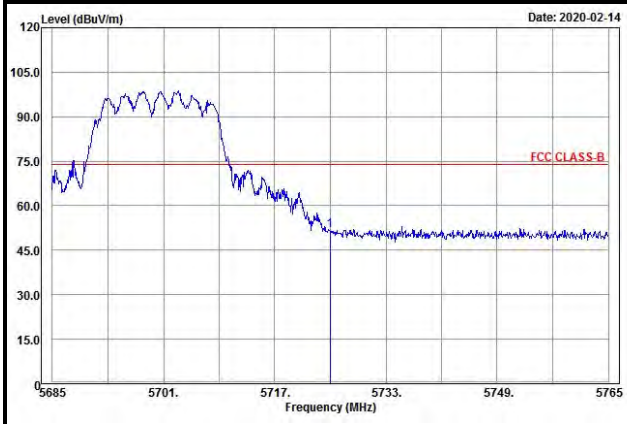
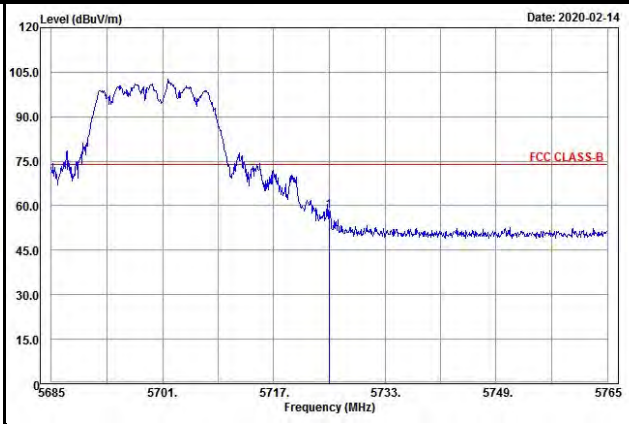
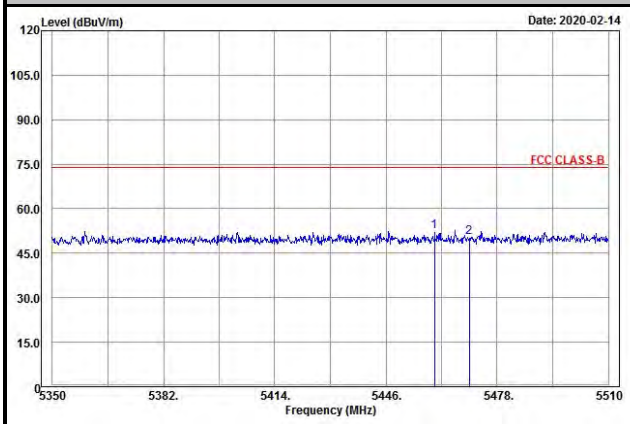
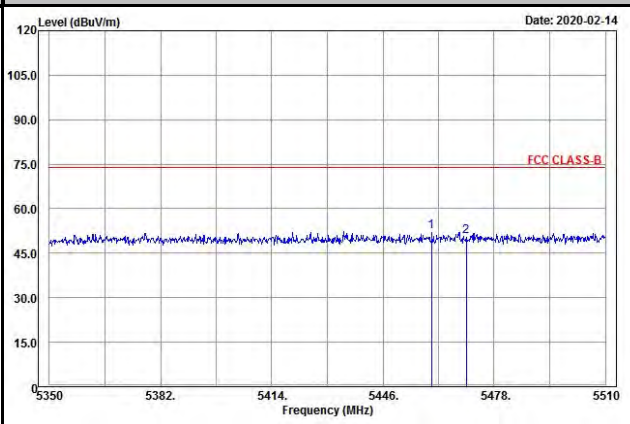
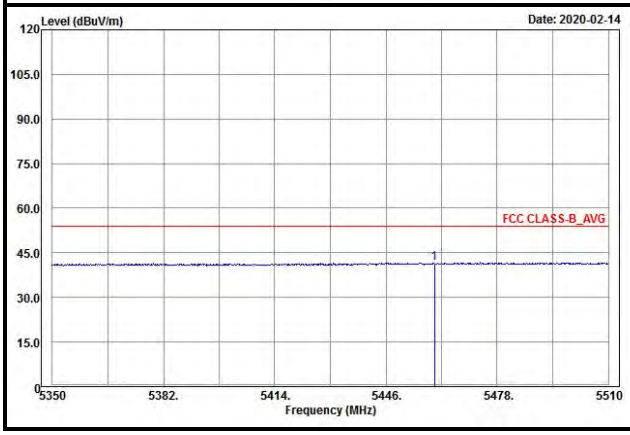
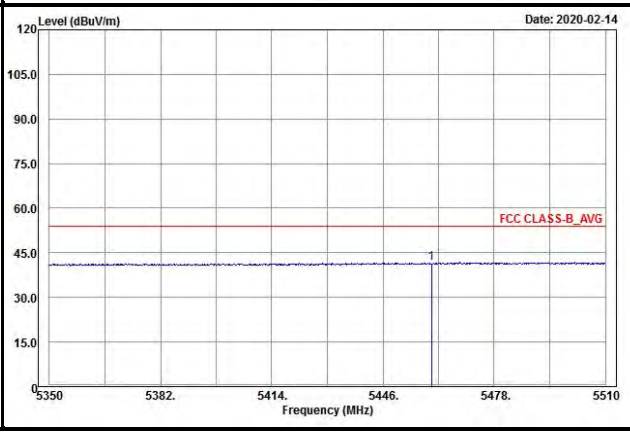
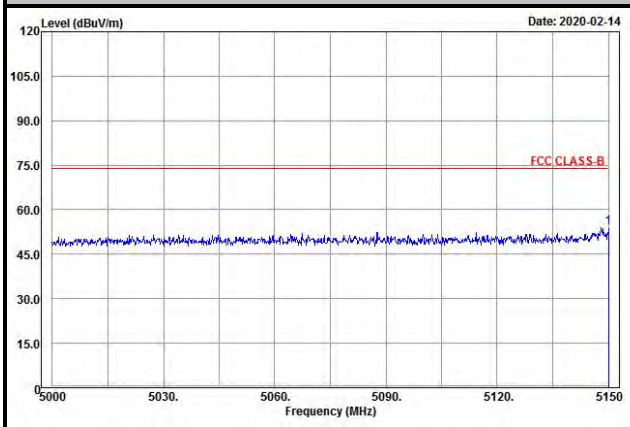
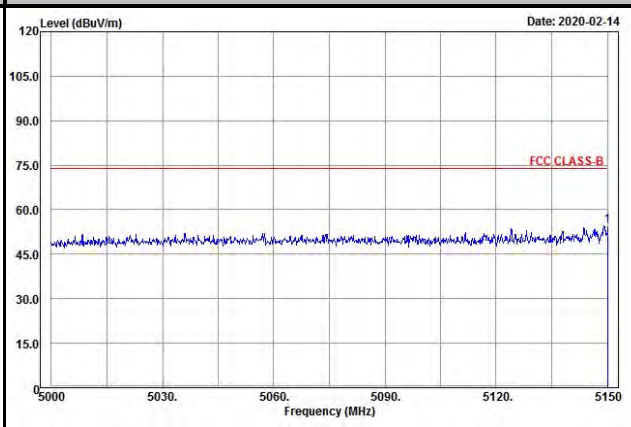
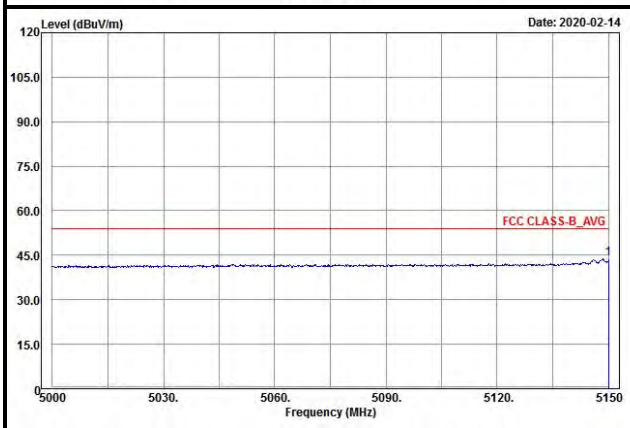
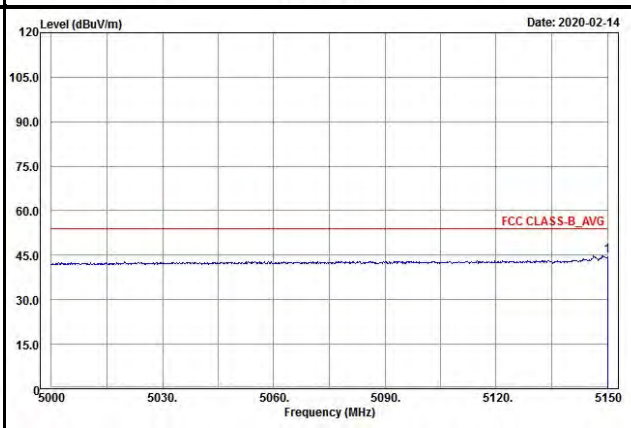
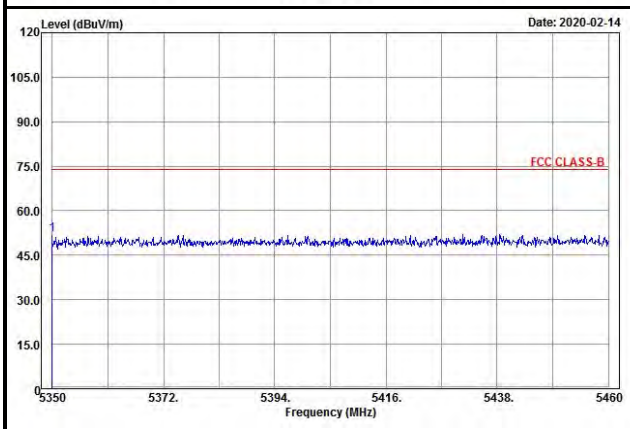
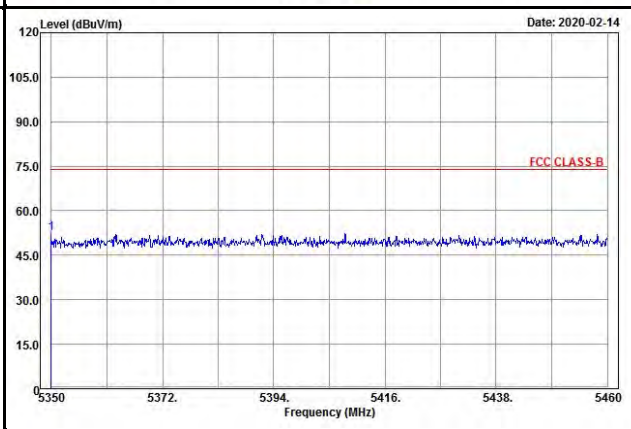
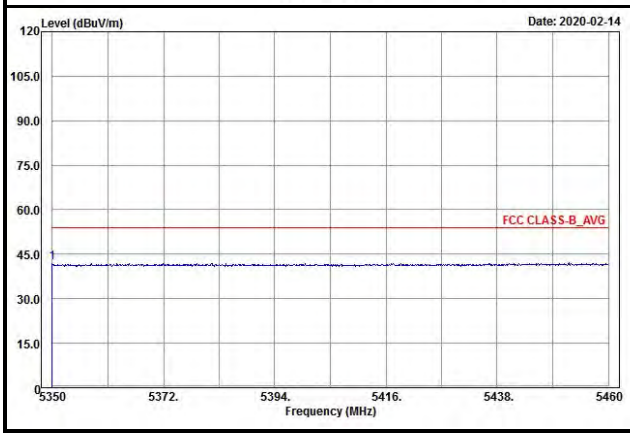
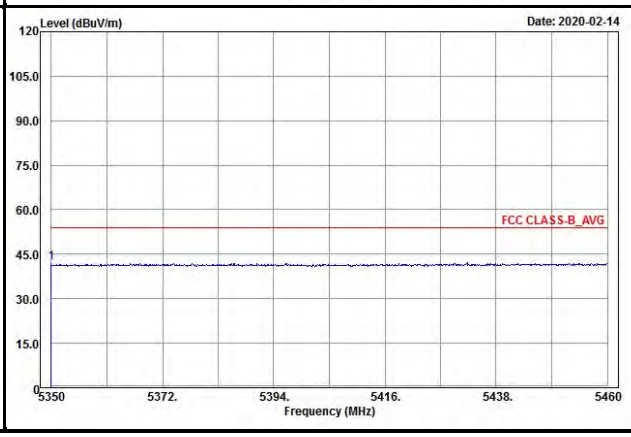
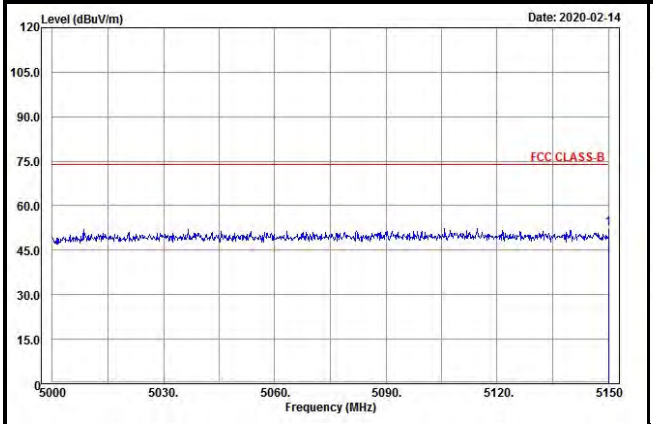
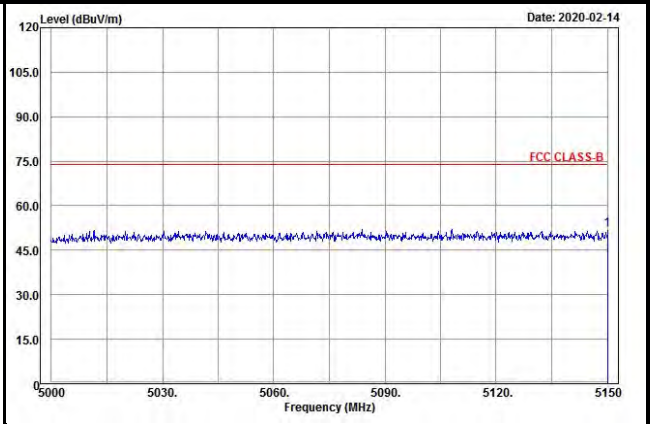
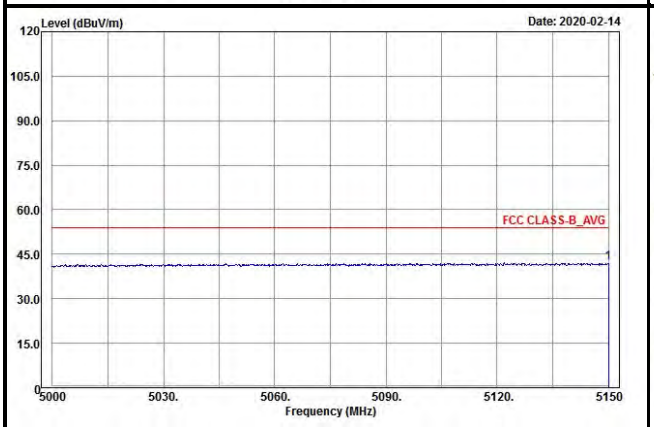
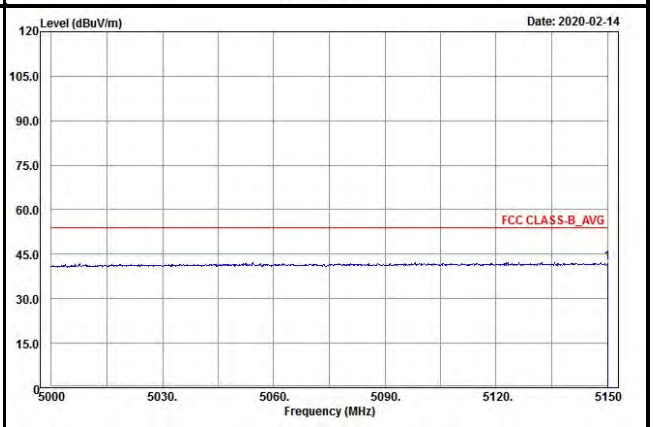
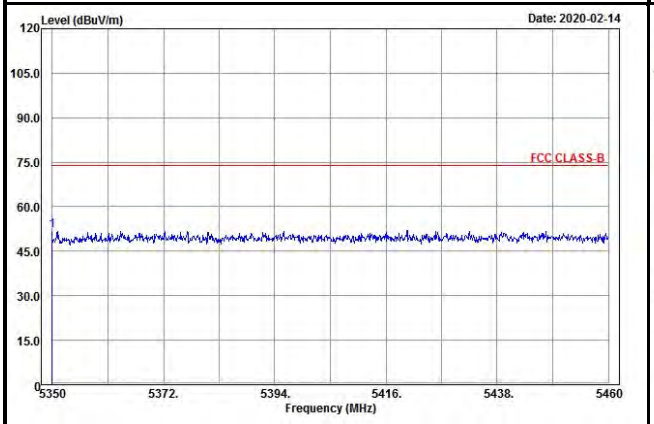
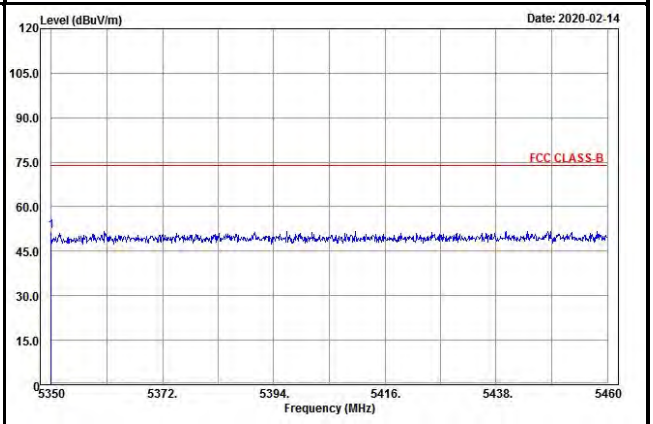
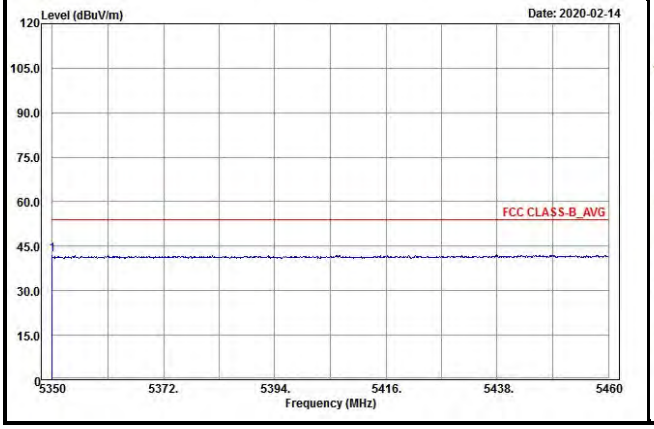
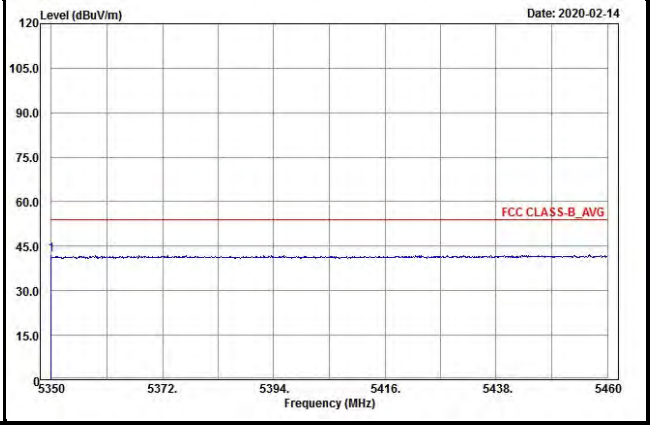
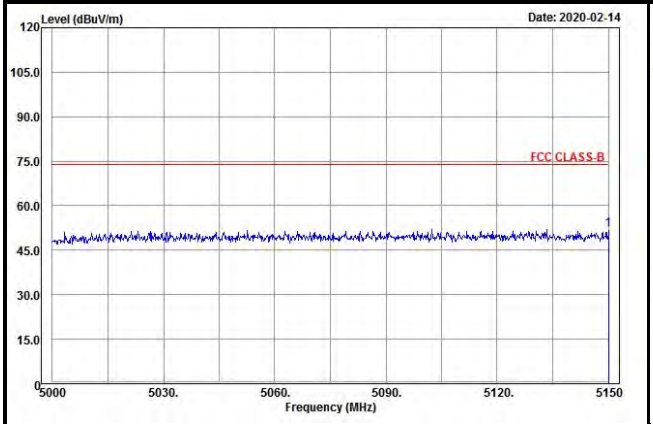
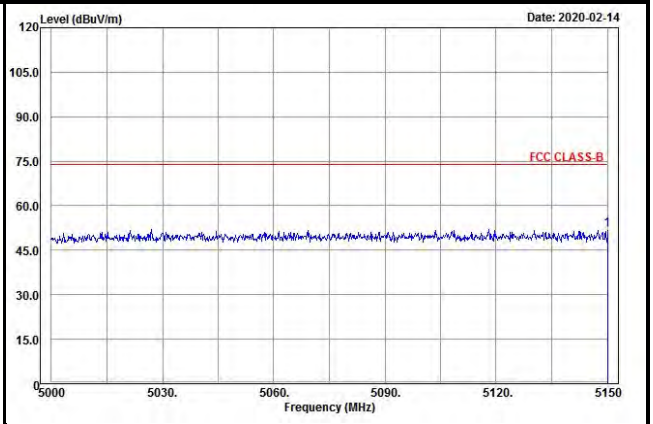
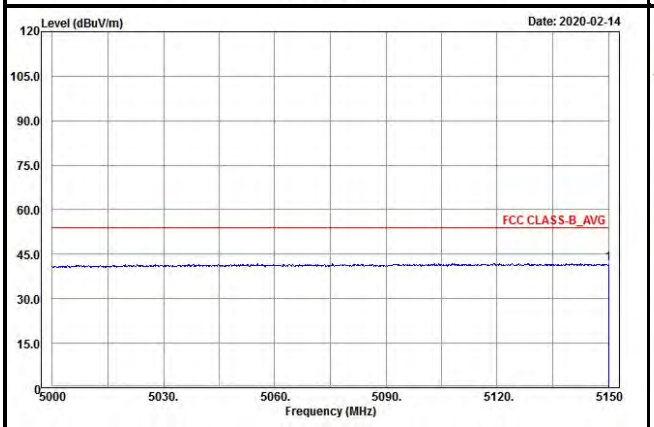
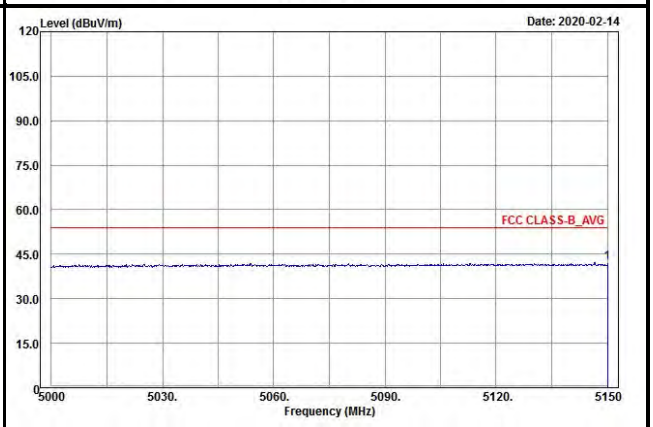
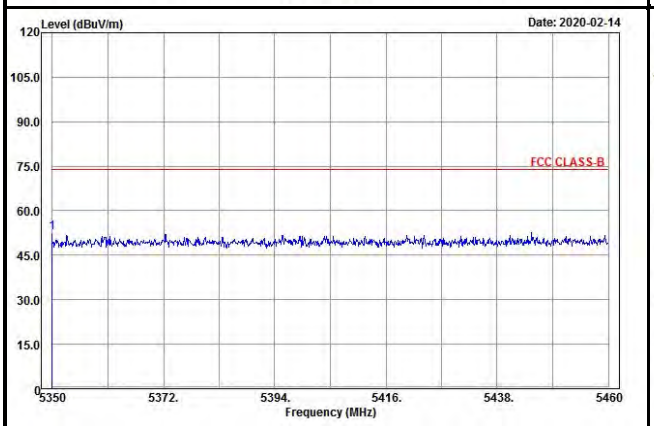
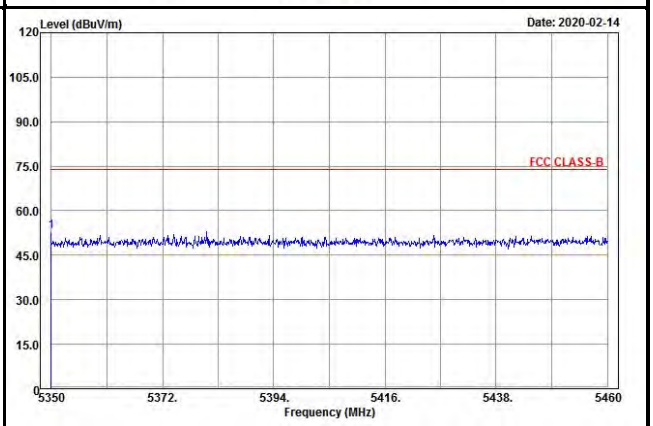
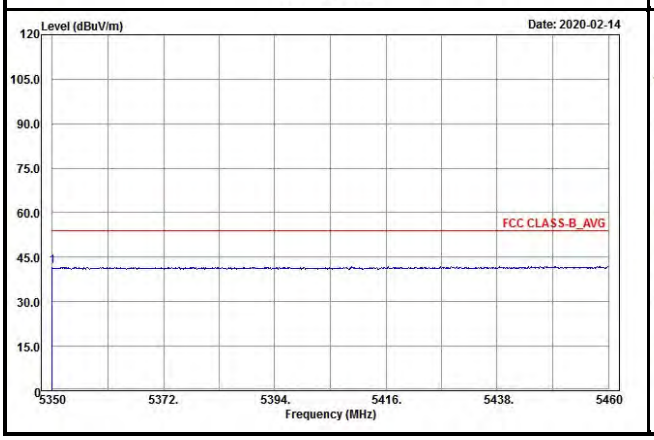
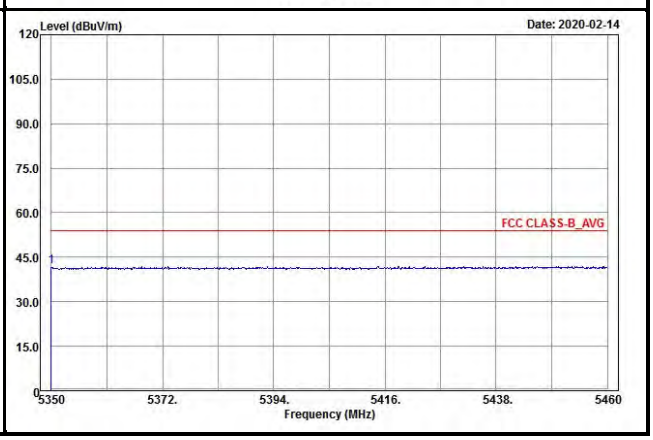
	
Ch 144	
Horizontal	Vertical
	
	

802.11n (HT40)

Ch 38	
Horizontal	**Vertical**
	
	
	
	

Ch 46	
Horizontal	Vertical
	
	
	
	

Ch 54	
Horizontal	**Vertical**
	
	
	
	

Ch 62	
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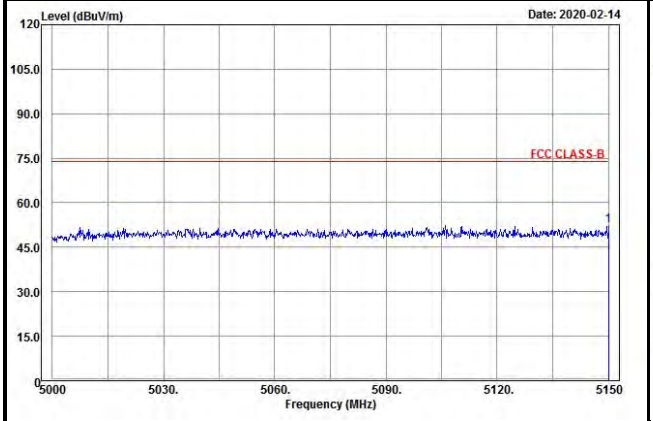
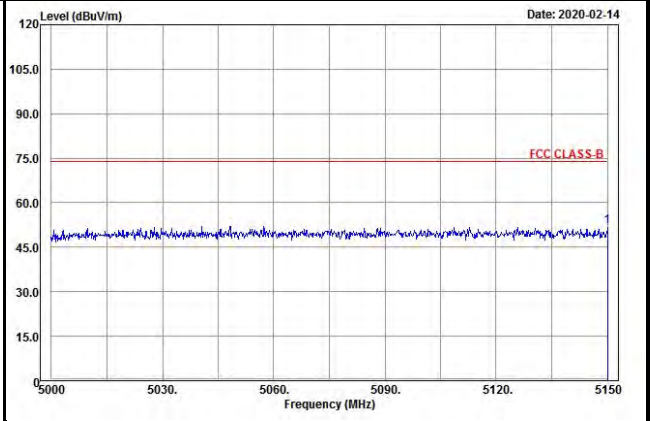
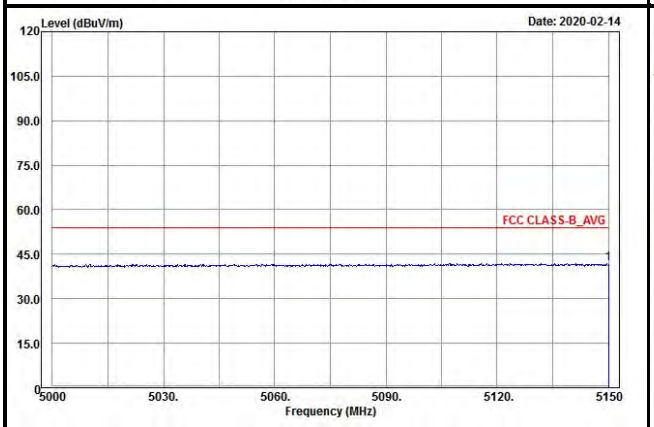
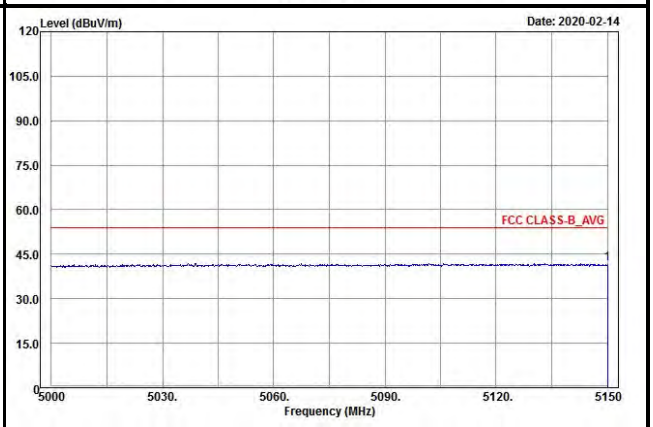
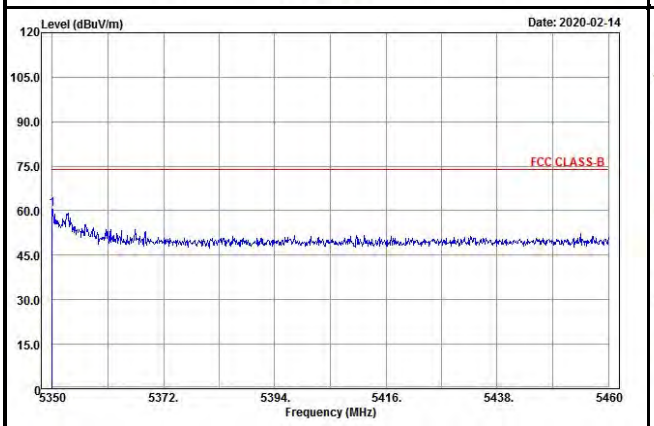
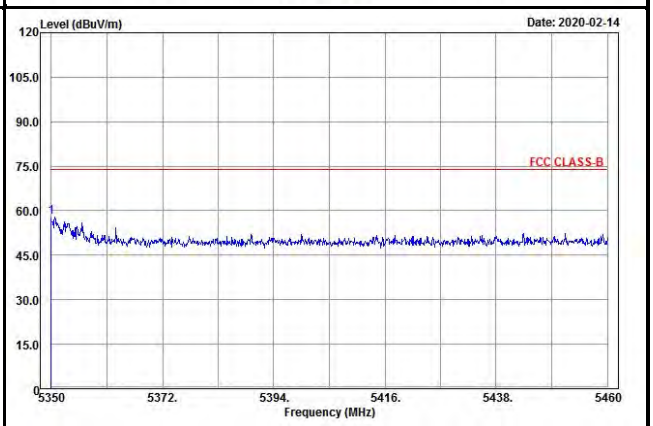
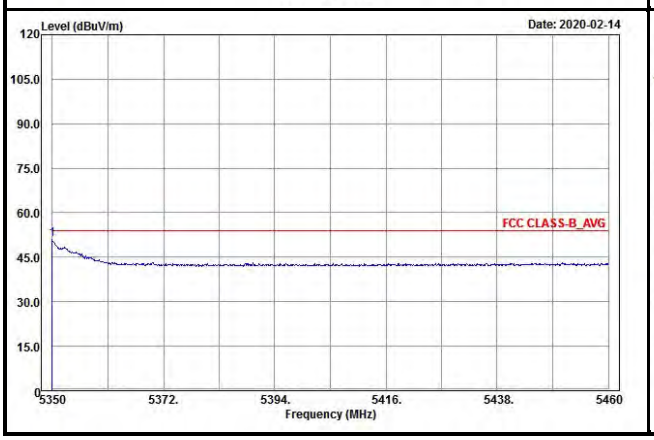
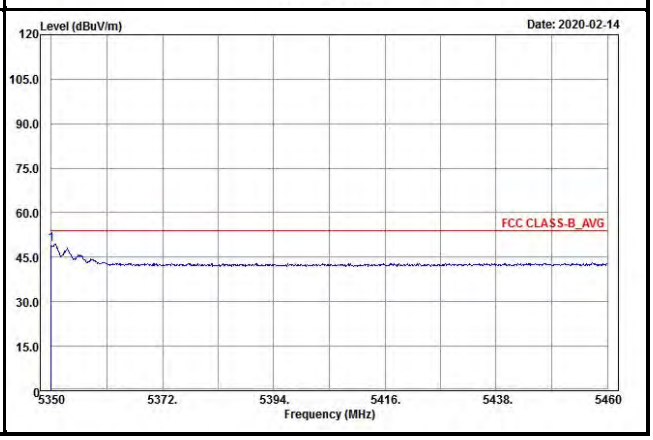
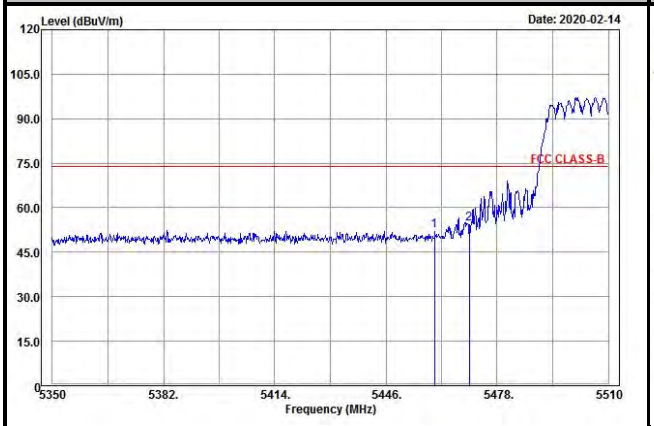
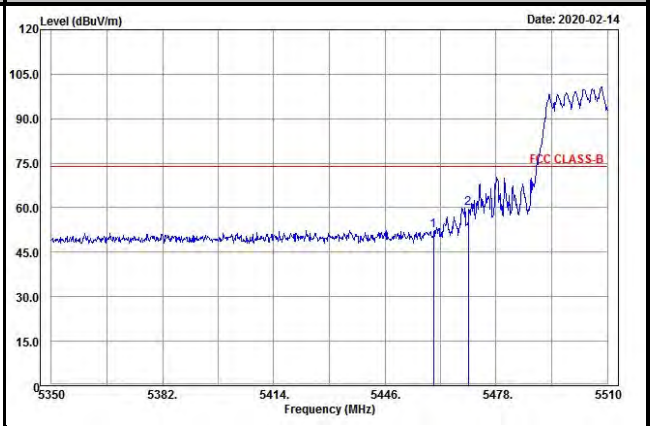
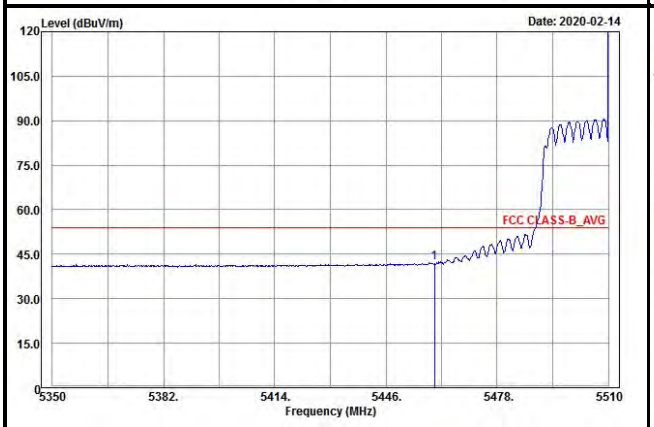
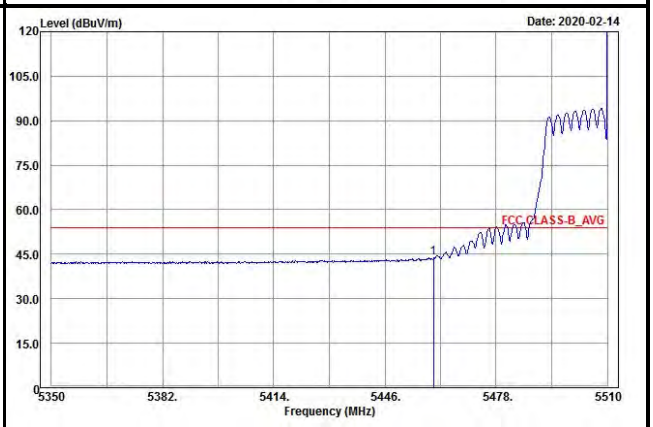
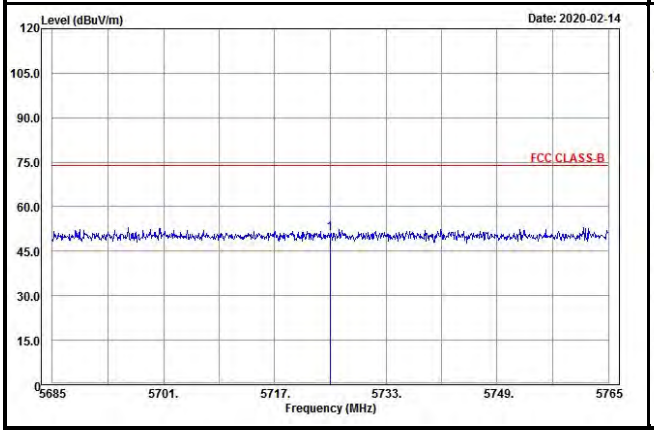
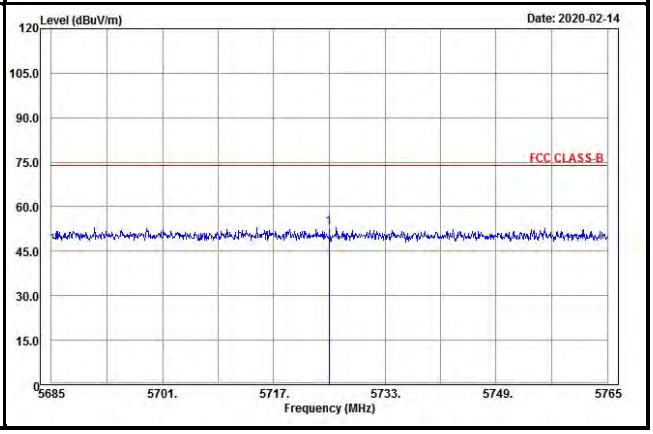
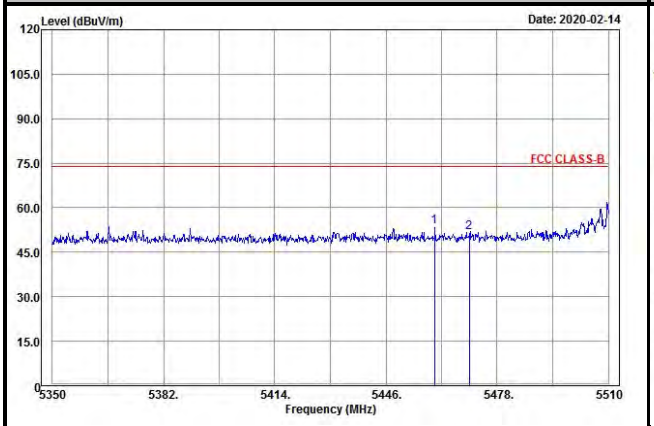
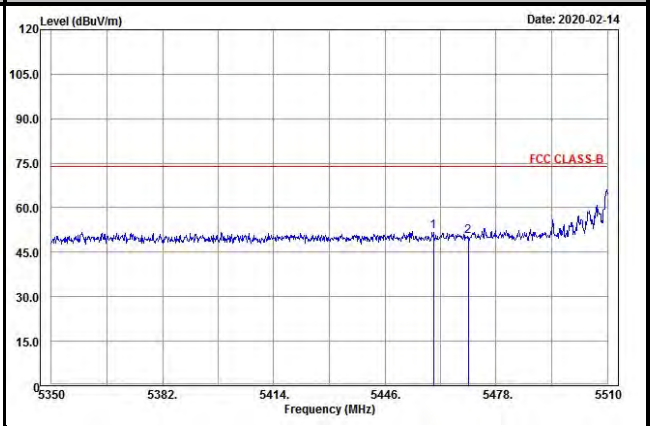
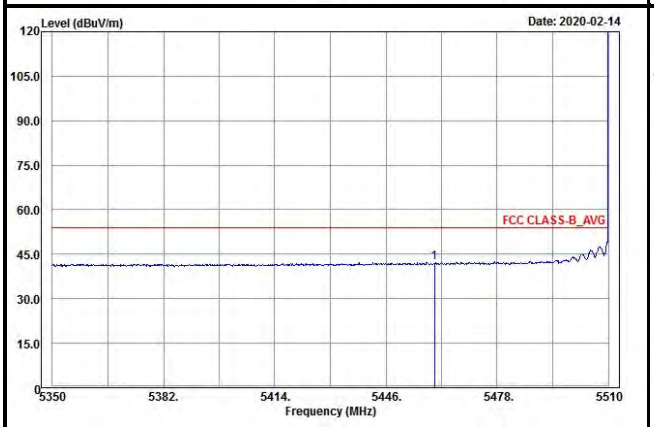
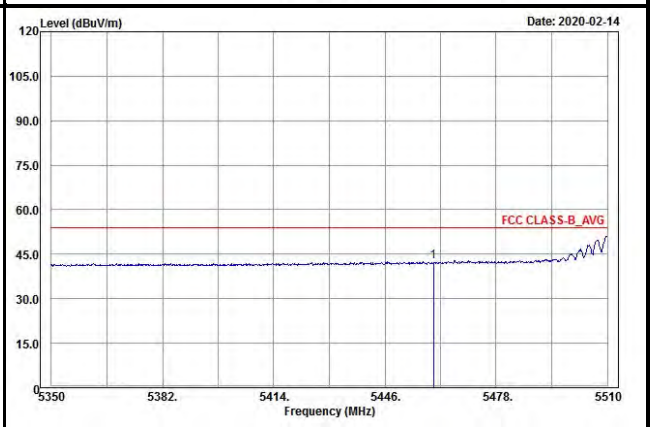
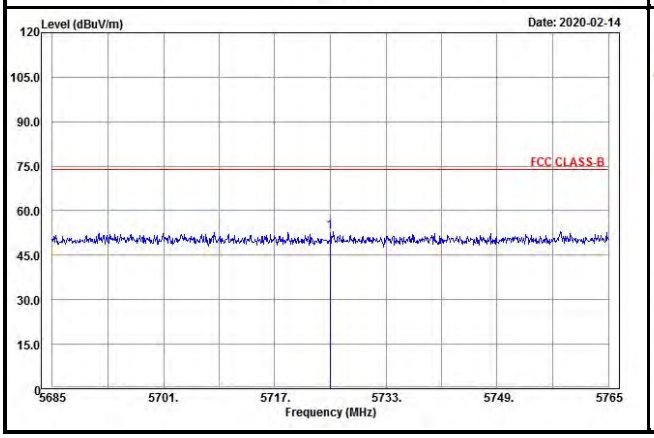
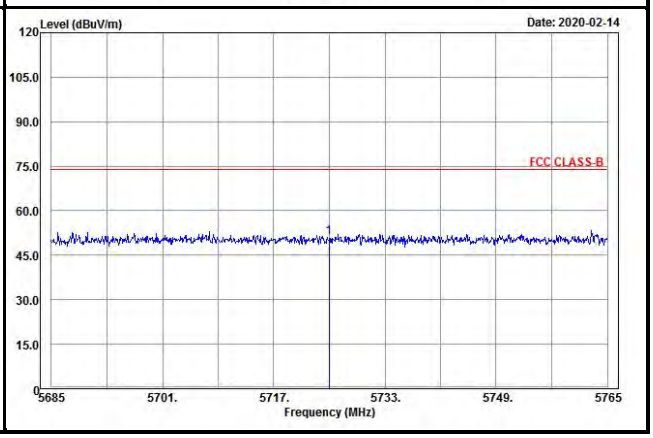
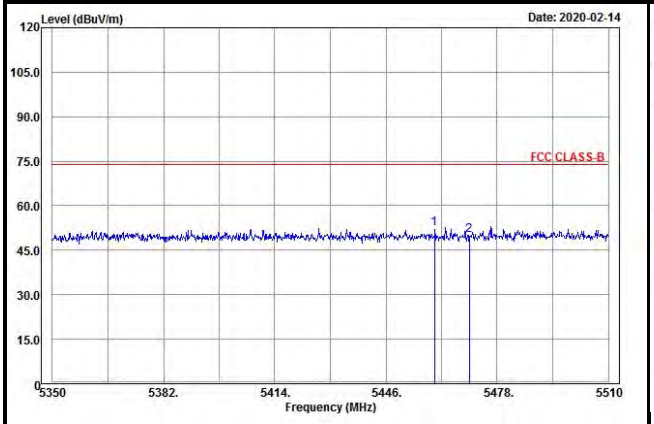
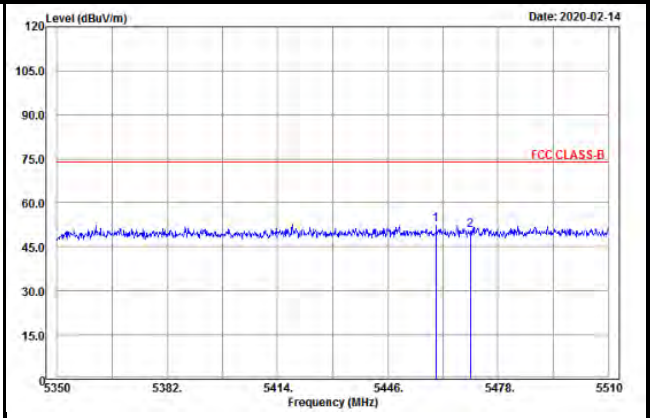
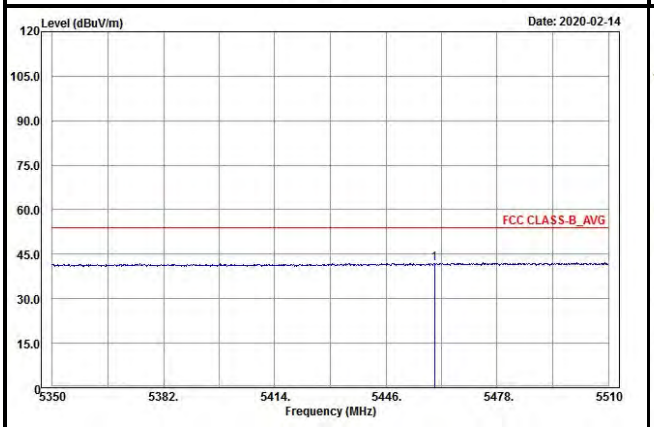
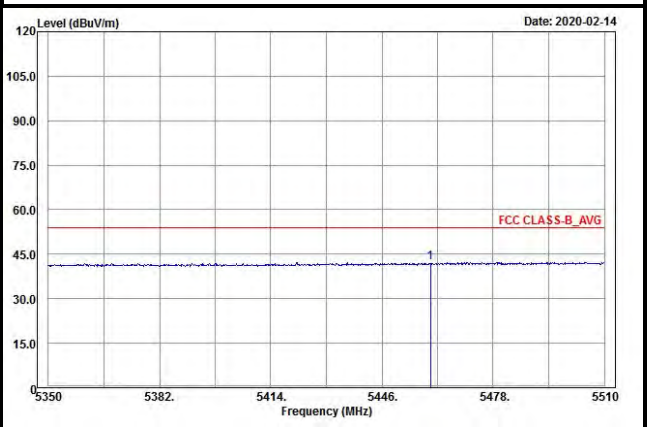
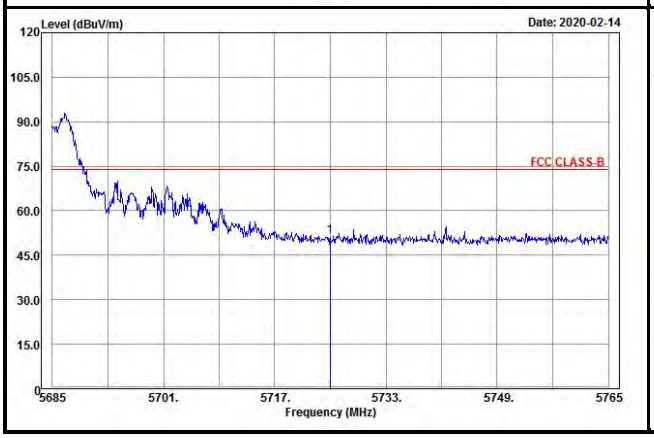
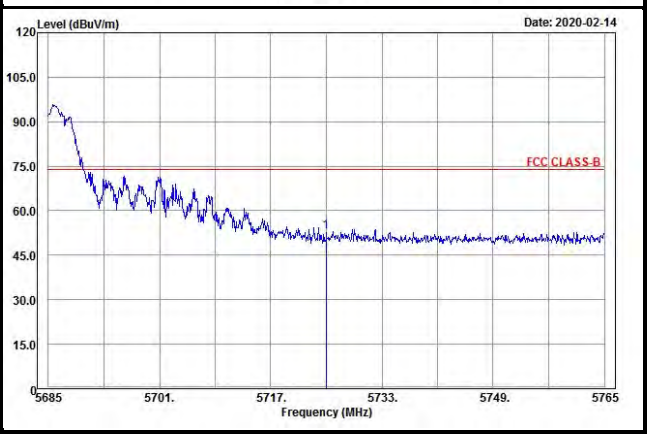
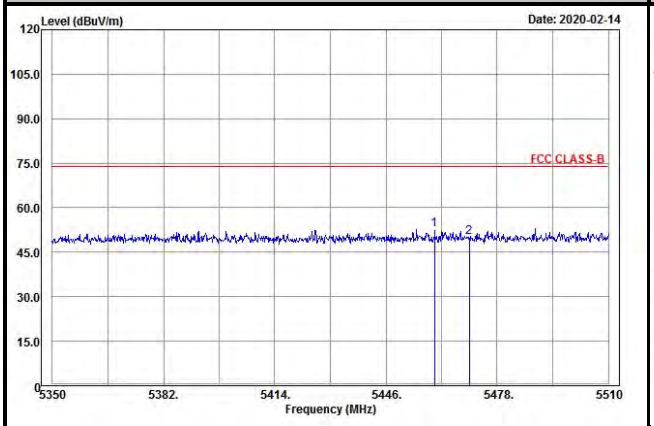
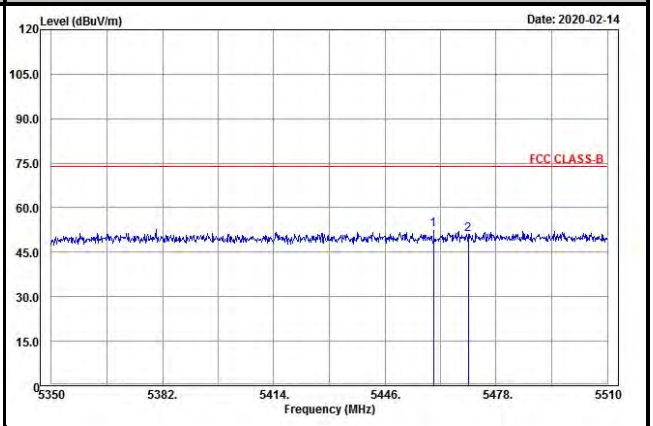
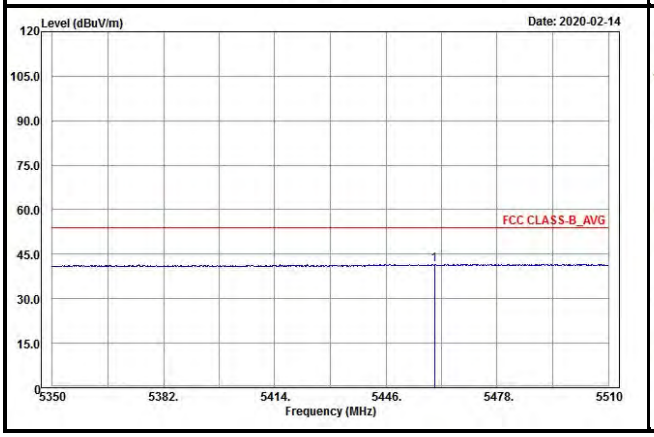
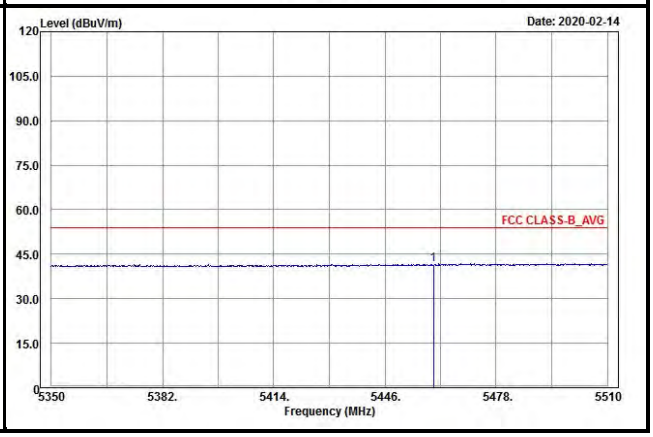
	
	
	
	

Ch 102	
Horizontal	**Vertical**
	
	
	

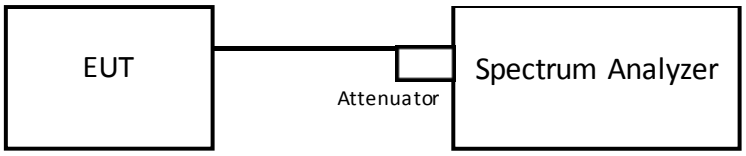
Ch 110	
Horizontal	**Vertical**
	
	
	

Ch 134	
Horizontal	**Vertical**
	
	
	

Ch 142	
Horizontal	**Vertical**
	
	

Annex C-Conducted Emissions in 5250-5350 MHz Band marker-delta ≥ 26 dBc

<26 dBc Bandwidth>



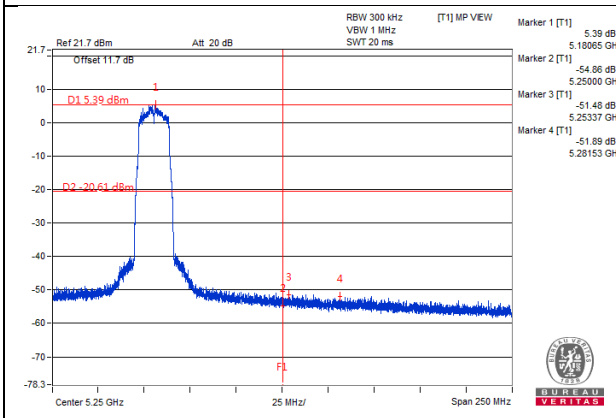
EUT Operating Conditions

The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

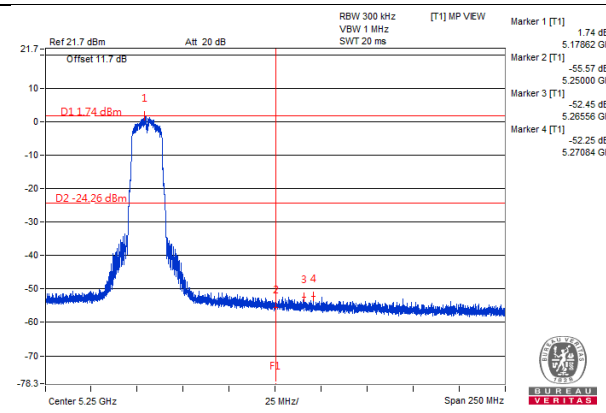
802.11a:

CH 36 5180 MHz

Chain 0



Chain 1

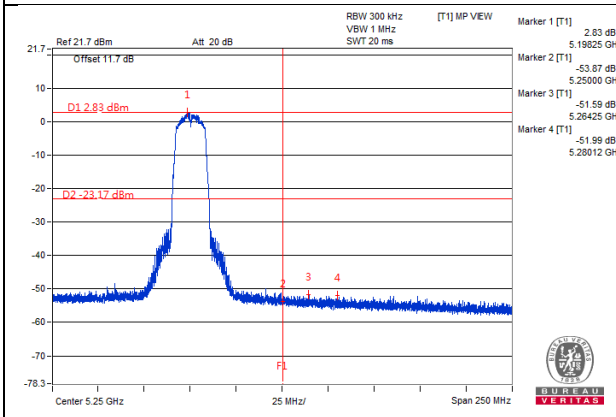


Note:

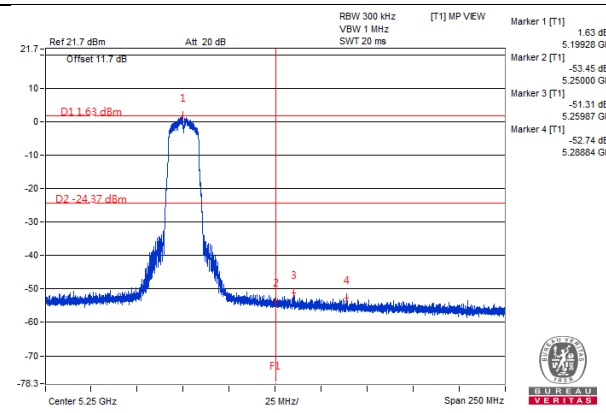
a. No unwanted emissions that fall into the band 5250-5350 MHz.
b. Fundamental Emissions of 99% OBW are not fall into the band 5250-5350 MHz, therefore DFS is not required, please refer to report page 69/70 for detail test plots.

CH 40 5200 MHz

Chain 0

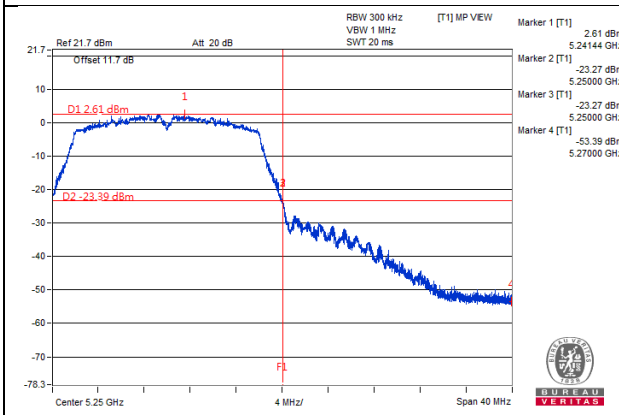
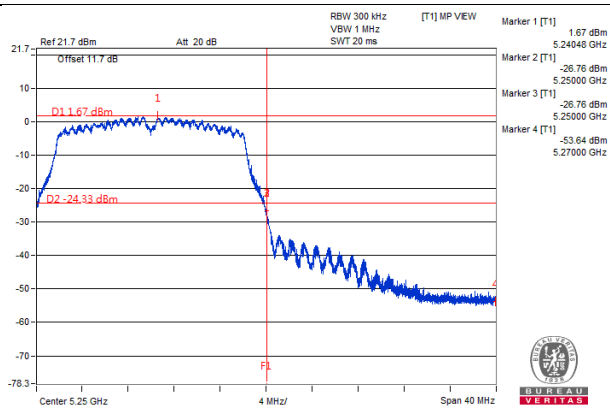


Chain 1



Note:

a. No unwanted emissions that fall into the band 5250-5350 MHz.
b. Fundamental Emissions of 99% OBW are not fall into the band 5250-5350 MHz, therefore DFS is not required, please refer to report page 69/70 for detail test plots.

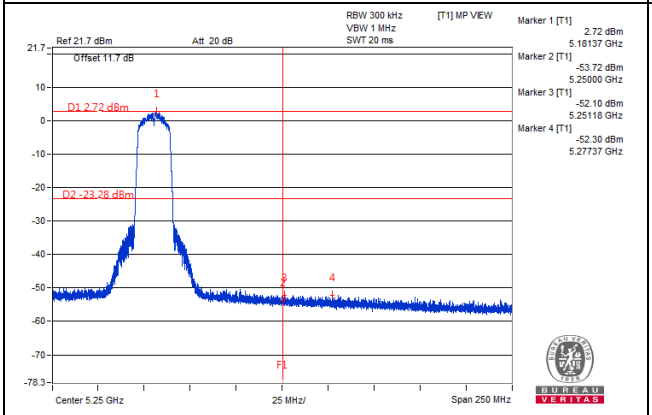
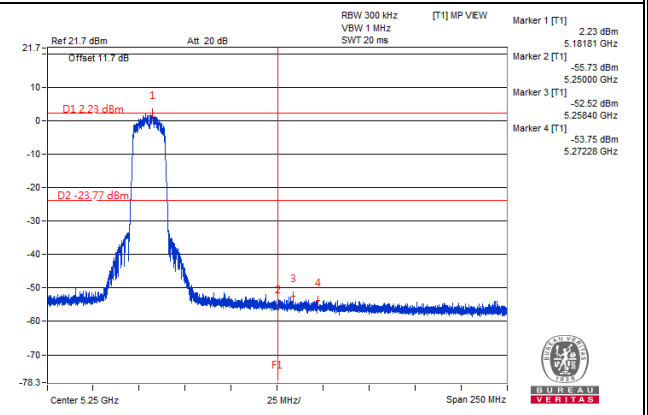
CH 48 5240 MHz	
Chain 0	Chain 1
	

Note:

a. No unwanted emissions that fall into the band 5250-5350 MHz.

b. Fundamental Emissions of 99% OBW are not fall into the band 5250-5350 MHz, therefore DFS is not required, please refer to report page 69/70 for detail test plots.

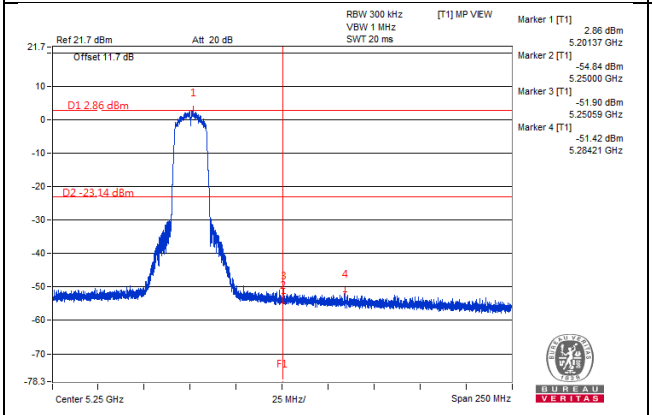
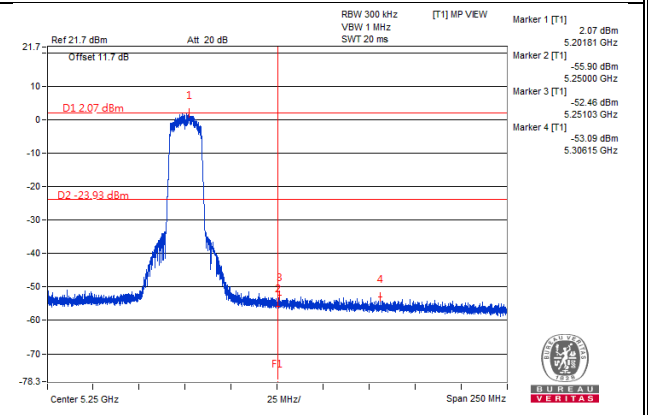
802.11n (HT20):

CH 36 5180 MHz	
Chain 0	Chain 1
	

Note:

a. No unwanted emissions that fall into the band 5250-5350 MHz.

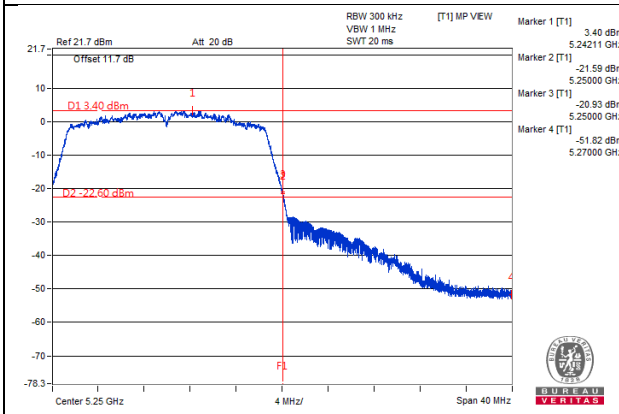
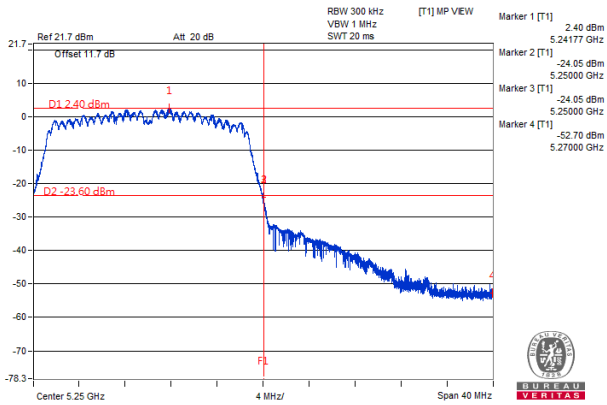
b. Fundamental Emissions of 99% OBW are not fall into the band 5250-5350 MHz, therefore DFS is not required, please refer to report page 69/70 for detail test plots.

CH 40 5200 MHz	
Chain 0	Chain 1
	

Note:

a. No unwanted emissions that fall into the band 5250-5350 MHz.

b. Fundamental Emissions of 99% OBW are not fall into the band 5250-5350 MHz, therefore DFS is not required, please refer to report page 69/70 for detail test plots.

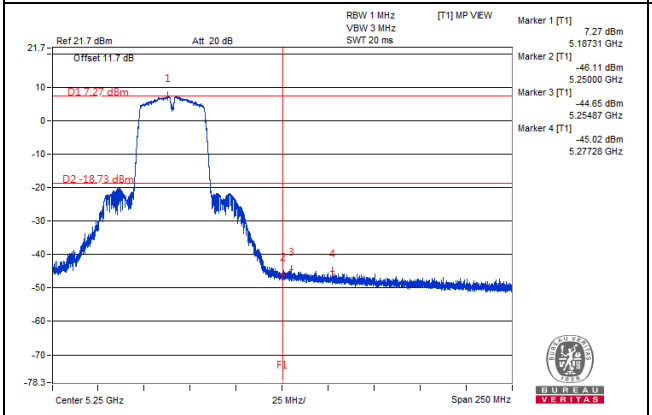
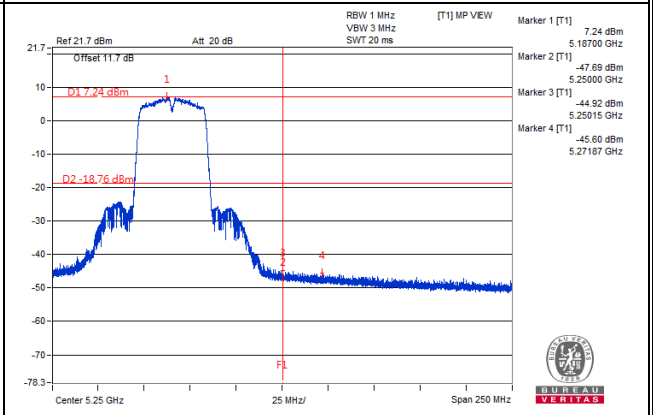
CH 48 5240 MHz	
Chain 0	Chain 1
	

Note:

a. No unwanted emissions that fall into the band 5250-5350 MHz.

b. Fundamental Emissions of 99% OBW are not fall into the band 5250-5350 MHz, therefore DFS is not required, please refer to report page 69/70 for detail test plots.

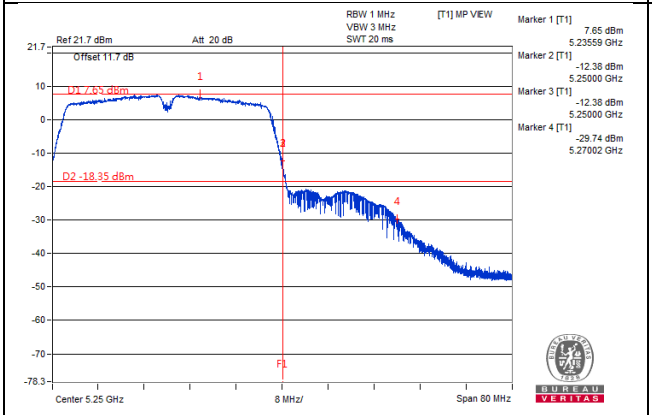
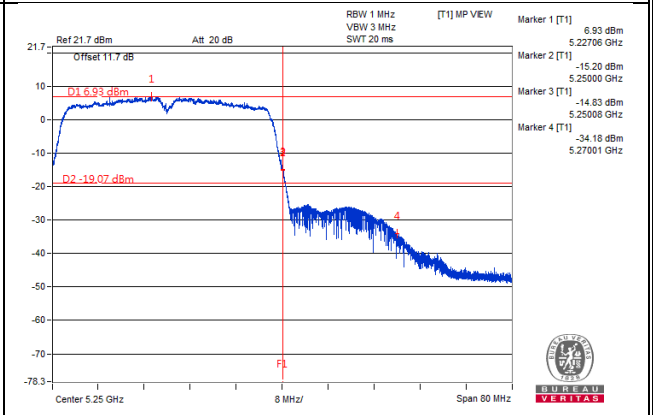
802.11n (HT40):

CH 38 5190 MHz	
Chain 0	Chain 1
	

Note:

a. No unwanted emissions that fall into the band 5250-5350 MHz.

b. Fundamental Emissions of 99% OBW are not fall into the band 5250-5350 MHz, therefore DFS is not required, please refer to report page 69/70 for detail test plots.

CH 46 5230 MHz	
Chain 0	Chain 1
	

Note:

a. No unwanted emissions that fall into the band 5250-5350 MHz.

b. Fundamental Emissions of 99% OBW are not fall into the band 5250-5350 MHz, therefore DFS is not required, please refer to report page 69/70 for detail test plots.

Appendix – Information of the Testing Laboratories

We, Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch, were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are FCC recognized accredited test firms and accredited according to ISO/IEC 17025.

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Fax: 886-3-3270892

Email: service.adt@tw.bureauveritas.com
Web Site: www.bureauveritas-adt.com

The address and road map of all our labs can be found in our web site also.

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