

FCC Test Report

Report No.: RFBCBB-WTW-P20120637-4

FCC ID: NM82QA4100

Test Model: 2QA4100

Received Date: Dec. 18, 2020

Test Date: Dec. 28, 2020 ~ May 12, 2021

Issued Date: May 13, 2021

Applicant: HTC Corporation

Address: No. 88, Sec. 3, Zhongxing Rd. Xindian Dist., New Taipei City 231, Taiwan

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: No.19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City
33383, Taiwan

**FCC Registration /
Designation Number:**
788550 / TW0003



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Release Control Record

Issue No.	Description	Date Issued
RFBCBB-WTW-P20120637-4	Original Release	May 13, 2021

1 Certificate of Conformity

Product: Headset

Brand: VIVE

Test Model: 2QA4100

Sample Status: Identical Prototype

Applicant: HTC Corporation

Test Date: Dec. 28, 2020 ~ May 12, 2021

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 : Gina Liu, **Date:** May 13, 2021

Gina Liu / Specialist

Approved by : Dylan Chiou, **Date:** May 13, 2021

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	Pass	Meet the requirement of limit. Minimum passing margin is -20.51 dB at 0.15000 MHz.
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 -4.4 dB at 63.95 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	No antenna connector is used.

Note:

- For U-NII-3 band compliance with rule part 15.407(b)(4)(i), the OOB test plots were recorded in Annex A.
- For U-NII-1, U-NII-2A, U-NII-2C band compliance with rule 15.407(b) of the band-edge items, the test plots were recorded in Annex B. Test Procedures refer to report 4.1.3.
- 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	3.59 dB
	200 MHz ~ 1000 MHz	3.60 dB
Radiated Emissions above 1 GHz	1 GHz ~ 18 GHz	2.29 dB
	18 GHz ~ 40 GHz	2.29 dB

2.2 Modification Record

There were no modifications required for compliance.

3 General Information

3.1 General Description of EUT

Product	Headset
Brand	VIVE
Test Model	2QA4100
Status of EUT	Identical Prototype
Power Supply Rating	11.0 Vdc
Modulation Type	256QAM, 64QAM, 16QAM, QPSK, BPSK for OFDM 1024QAM, 256QAM, 64QAM, 16QAM, QPSK, BPSK for OFDMA
Modulation Technology	OFDM, OFDMA
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 802.11ac: up to 866.7 Mbps 802.11ax: up to 1201 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), 802.11ac (VHT20), 802.11ax (HE20) 2 for 802.11n (HT40), 802.11ac (VHT40), 802.11ax (HE40) 1 for 802.11ac (VHT80), 802.11ax (HE80) 5260 ~ 5320 MHz: 4 for 802.11a, 802.11n (HT20), 802.11ac (VHT20), 802.11ax (HE20) 2 for 802.11n (HT40), 802.11ac (VHT40), 802.11ax (HE40) 1 for 802.11ac (VHT80), 802.11ax (HE80) 5500 ~ 5720 MHz: 12 for 802.11a, 802.11n (HT20), 802.11ac (VHT20), 802.11ax (HE20) 6 for 802.11n (HT40), 802.11ac (VHT40), 802.11ax (HE40) 3 for 802.11ac (VHT80), 802.11ax (HE80) 5745 ~ 5825 MHz: 5 for 802.11a, 802.11n (HT20), 802.11ac (VHT20), 802.11ax (HE20) 2 for 802.11n (HT40), 802.11ac (VHT40), 802.11ax (HE40) 1 for 802.11ac (VHT80), 802.11ax (HE80)
Output Power	Full RU 55.671 mW for 5180 ~ 5240 MHz 56.242 mW for 5260 ~ 5320 MHz 55.413 mW for 5500 ~ 5720 MHz 54.166 mW for 5745 ~ 5825 MHz Partial RU 33.431 mW for 5180 ~ 5240 MHz 33.704 mW for 5260 ~ 5320 MHz 33.89 mW for 5500 ~ 5720 MHz 33.275 mW for 5745 ~ 5825 MHz
Antenna Type	Dipole antenna with 2 dBi gain (5180 ~ 5240 MHz) Dipole antenna with 2 dBi gain (5260 ~ 5320 MHz) Dipole antenna with 2 dBi gain (5500 ~ 5720 MHz)

	Dipole antenna with 2 dBi gain (5745 ~ 5825 MHz)
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
802.11ac (VHT20)	2TX
802.11ac (VHT40)	2TX
802.11ac (VHT80)	2TX
802.11ax (HE20)	2TX
802.11ax (HE40)	2TX
802.11ax (HE80)	2TX

* The modulation and bandwidth are similar for 802.11n mode for HT20 / HT40 and 802.11ac mode for VHT20 / VHT40 and 802.11ax mode for HE20 / HE40, therefore investigated worst case to representative mode in test report. (Final test mode refer section 3.2.1)

2. The EUT accessories list refers to EUT Photo.pdf.
3. We had pre-tested all modes at 240V/60Hz and 120V/60Hz, test mode at 120V/60Hz was the worst case and only this mode was presented in the report.
4. We had pre-tested all modes for Full RU and Partial RU, Full RU is the worst case for final tests and only conducted power test for Partial RU was presented in the report.
5. The above Antenna information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications, the laboratory shall not be held responsible.
6. 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), 802.11ac (VHT20), 802.11ax (HE20):

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

2 channels are provided for 802.11n (HT40), 802.11ac (VHT40), 802.11ax (HE40):

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

1 channel is provided for 802.11ac (VHT80), 802.11ax (HE80):

Channel	Frequency (MHz)
42	5210

For 5260 ~ 5320 MHz

4 channels are provided for 802.11a, 802.11n (HT20), 802.11ac (VHT20), 802.11ax (HE20):

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

2 channels are provided for 802.11n (HT40), 802.11ac (VHT40), 802.11ax (HE40):

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

1 channel is provided for 802.11ac (VHT80), 802.11ax (HE80):

Channel	Frequency (MHz)
58	5290

For 5500 ~ 5720 MHz

12 channels are provided for 802.11a, 802.11n (HT20), 802.11ac (VHT20), 802.11ax (HE20):

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), 802.11ac (VHT40), 802.11ax (HE40):

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

3 channels are provided for 802.11ac (VHT80), 802.11ax (HE80):

Channel	Frequency (MHz)	Channel	Frequency (MHz)
106	5530	138	5690
122	5610		

For 5745 ~ 5825 MHz:

5 channels are provided for 802.11a, 802.11n (HT20), 802.11ac (VHT20), 802.11ax (HE20):

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

2 channels are provided for 802.11n (HT40), 802.11ac (VHT40), 802.11ax (HE40):

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

1 channel is provided for 802.11ac (VHT80), 802.11ax (HE80):

Channel	Frequency (MHz)
155	5775

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

PLC: Power Line Conducted Emission

RE<1G: Radiated Emission below 1 GHz

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 **Z-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
-		802.11ax (HE20)	36 to 48	36, 40, 48	OFDMA	BPSK	MCS0
-		802.11ax (HE40)	38 to 46	38, 46	OFDMA	BPSK	MCS0
-		802.11ax (HE80)	42	42	OFDMA	BPSK	MCS0
-	5260-5320	802.11a	52 to 64	52, 60, 64	OFDM	BPSK	6.0
-		802.11ax (HE20)	52 to 64	52, 60, 64	OFDMA	BPSK	MCS0
-		802.11ax (HE40)	54 to 62	54, 62	OFDMA	BPSK	MCS0
-		802.11ax (HE80)	58	58	OFDMA	BPSK	MCS0
-	5500-5720	802.11a	100 to 144	100, 116, 140, 144	OFDM	BPSK	6.0
-		802.11ax (HE20)	100 to 144	100, 116, 140, 144	OFDMA	BPSK	MCS0
-		802.11ax (HE40)	102 to 142	102, 110, 134, 142	OFDMA	BPSK	MCS0
-		802.11ax (HE80)	106 to 138	106, 122, 138	OFDMA	BPSK	MCS0
-	5745-5825	802.11a	149 to 165	149, 157, 165	OFDM	BPSK	6.0
-		802.11ax (HE20)	149 to 165	149, 157, 165	OFDMA	BPSK	MCS0
-		802.11ax (HE40)	151 to 159	151, 159	OFDMA	BPSK	MCS0
-		802.11ax (HE80)	155	155	OFDMA	BPSK	MCS0

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)
-	5500-5720	802.11ax (HE80)	106 to 138	106	OFDMA	BPSK	MCS0

Power Line Conducted Emission Test:

- 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)
-	5500-5720	802.11ax (HE80)	106 to 138	106	OFDMA	BPSK	MCS0

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
-		802.11ax (HE20)	36 to 48	36, 40, 48	OFDMA	BPSK	MCS0
-		802.11ax (HE40)	38 to 46	38, 46	OFDMA	BPSK	MCS0
-		802.11ax (HE80)	42	42	OFDMA	BPSK	MCS0
-	5260-5320	802.11a	52 to 64	52, 60, 64	OFDM	BPSK	6.0
-		802.11ax (HE20)	52 to 64	52, 60, 64	OFDMA	BPSK	MCS0
-		802.11ax (HE40)	54 to 62	54, 62	OFDMA	BPSK	MCS0
-		802.11ax (HE80)	58	58	OFDMA	BPSK	MCS0
-	5500-5720	802.11a	100 to 144	100, 116, 140, 144	OFDM	BPSK	6.0
-		802.11ax (HE20)	100 to 144	100, 116, 140, 144	OFDMA	BPSK	MCS0
-		802.11ax (HE40)	102 to 142	102, 110, 134, 142	OFDMA	BPSK	MCS0
-		802.11ax (HE80)	106 to 138	106, 122, 138	OFDMA	BPSK	MCS0
-	5745-5825	802.11a	149 to 165	149, 157, 165	OFDM	BPSK	6.0
-		802.11ax (HE20)	149 to 165	149, 157, 165	OFDMA	BPSK	MCS0
-		802.11ax (HE40)	151 to 159	151, 159	OFDMA	BPSK	MCS0
-		802.11ax (HE80)	155	155	OFDMA	BPSK	MCS0
-	Partial RU	802.11ax (HE20)	36 to 149	36, 40, 48, 52, 60, 64, 100, 116, 140, 144, 149, 157, 165	OFDMA	BPSK	MCS0
-		802.11ax (HE40)	38 to 159	38, 46, 54, 62, 102, 110, 134, 142, 151, 159	OFDMA	BPSK	MCS0
-		802.11ax (HE80)	42 to 155	42, 58, 106, 122, 138, 155	OFDMA	BPSK	MCS0

Test Condition:

Applicable To	Environmental Conditions	Input Power	Tested by
RE\geq1G	25 deg. C, 65 % RH	120 Vac, 60 Hz	Han Wu
RE<1G	25 deg. C, 65 % RH	120 Vac, 60 Hz	Rex Wang
PLC	25 deg. C, 65 % RH	120 Vac, 60 Hz	Rex Wang
APCM	25 deg. C, 65 % RH	11 Vdc	Chris Lin, Jisyoung Wang

3.3 Duty Cycle of Test Signal

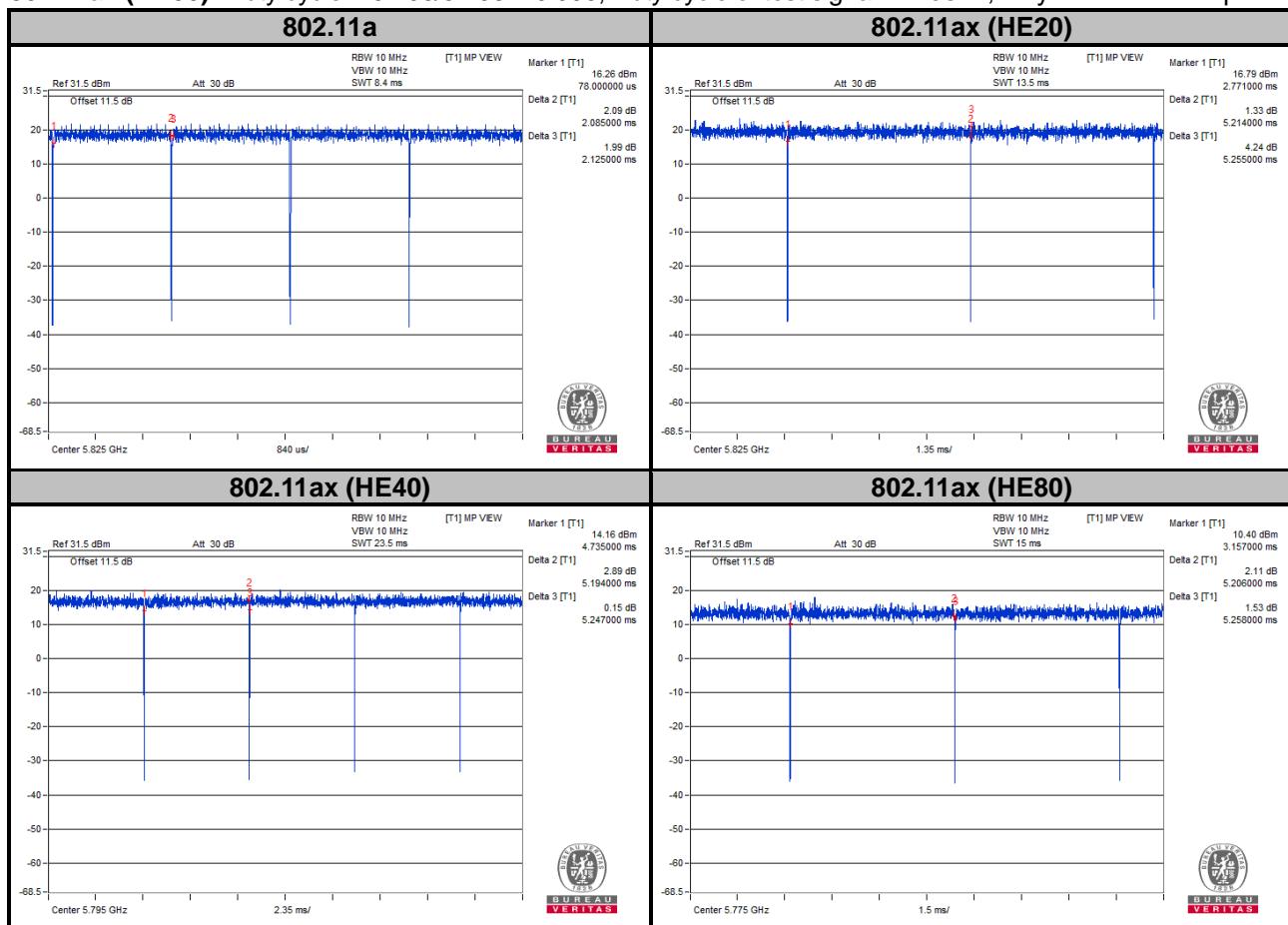
MODULATION TYPE: BPSK

802.11a: Duty cycle = $2.085/2.125 = 0.981$, Duty cycle of test signal is $\geq 98\%$, duty factor is not required.

802.11ax (HE20): Duty cycle = $5.214/5.255 = 0.992$, Duty cycle of test signal is $\geq 98\%$, duty factor is not required.

802.11ax (HE40): Duty cycle = $5.194/5.247 = 0.990$, Duty cycle of test signal is $\geq 98\%$, duty factor is not required.

802.11ax (HE80): Duty cycle = $5.206/5.258 = 0.990$, Duty cycle of test signal is $\geq 98\%$, duty factor is not required.



3.4 Description of Support Units

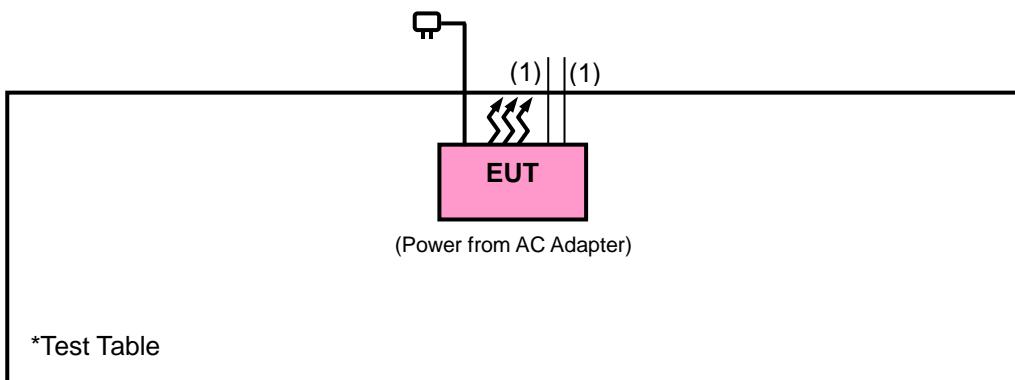
The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

ID	Cable Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	Type C Cable	2	1.15	Y	0	Provided by client

Note:

1. All power cords of the above support units are non-shielded (1.8m).

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 (dB_BV/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.

Limits of Unwanted Emission Out of the Restricted Bands

Applicable To		Limit	
789033 D02 General UNII Test Procedures New Rules v02r01		Field Strength at 3 m	
		PK: 74 (dB μ V/m)	AV: 54 (dB μ V/m)
Frequency Band	Applicable To	EIRP Limit	Equivalent Field Strength at 3 m
5150~5250 MHz	15.407(b)(1)	PK: -27 (dBm/MHz)	PK: 68.2 (dB μ V/m)
5250~5350 MHz	15.407(b)(2)		
5470~5725 MHz	15.407(b)(3)		
5725~5850 MHz	<input checked="" type="checkbox"/> 15.407(b)(4)(i)	PK:-27 (dBm/MHz) ^{*1} PK:10 (dBm/MHz) ^{*2} PK:15.6 (dBm/MHz) ^{*3} PK:27 (dBm/MHz) ^{*4}	PK: 68.2 (dB μ V/m) ^{*1} PK:105.2 (dB μ V/m) ^{*2} PK: 110.8 (dB μ V/m) ^{*3} PK:122.2 (dB μ V/m) ^{*4}
	<input type="checkbox"/> 15.407(b)(4)(ii)	Emission limits in section 15.247(d)	

*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.

Note:

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

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

4.1.2 Test Instruments

Description & Manufacturer	Model No.	Serial No.	Date of Calibration	Due Date of Calibration
Test Receiver KEYSIGHT	N9038A	MY55420137	Apr. 16, 2020	Apr. 15, 2021
			Apr. 09, 2021	Apr. 08, 2022
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100039	Jun. 12, 2020	Jun. 11, 2021
BILOG Antenna SCHWARZBECK	VULB9168	9168-160	Nov. 06, 2020	Nov. 05, 2021
HORN Antenna SCHWARZBECK	BBHA 9120 D	9120D-1169	Nov. 22, 2020	Nov. 21, 2021
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA9170241	Nov. 22, 2020	Nov. 21, 2021
Preamplifier Agilent (Below 1GHz)	8447D	2944A10638	Jun. 08, 2020	Jun. 07, 2021
Preamplifier Agilent (Above 1GHz)	8449B	3008A02367	Feb. 18, 2020	Feb. 17, 2021
			Feb. 17, 2021	Feb. 16, 2022
RF signal cable HUBER+SUHNER&EMCI	SUCOFLEX 104 & EMC104-SM-SM80 00	CABLE-CH9-02 (248780+171006)	Jan. 18, 2020	Jan. 17, 2021
			Jan. 16, 2021	Jan. 15, 2022
RF signal cable HUBER+SUHNER	SUCOFLEX 104	CABLE-CH9-(2507 95/4)	Jan. 18, 2020	Jan. 17, 2021
			Jan. 16, 2021	Jan. 15, 2022
RF signal cable Woken	8D-FB	Cable-CH9-01	Jun. 08, 2020	Jun. 07, 2021
Software BV ADT	ADT_Radiated_ V7.6.15.9.5	NA	NA	NA
Antenna Tower EMCO	2070/2080	512.835.4684	NA	NA
Turn Table EMCO	2087-2.03	NA	NA	NA
Antenna Tower & Turn BV ADT	AT100	AT93021705	NA	NA
Turn Table BV ADT	TT100	TT93021705	NA	NA
Turn Table Controller BV ADT	SC100	SC93021705	NA	NA
Pre-amplifier (18GHz-40GHz) EMC	EMC184045B	980175	Sep. 04, 2020	Sep. 03, 2021
Boresight Antenna Fixture	FBA-01	FBA-SIP01	NA	NA
USB Wideband Power Sensor KEYSIGHT	U2021XA	MY55050005/MY55 190004/MY551900 07/MY55210005	Jul. 13, 2020	Jul. 12, 2021

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 HwaYa Chamber 9.

4.1.3 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:

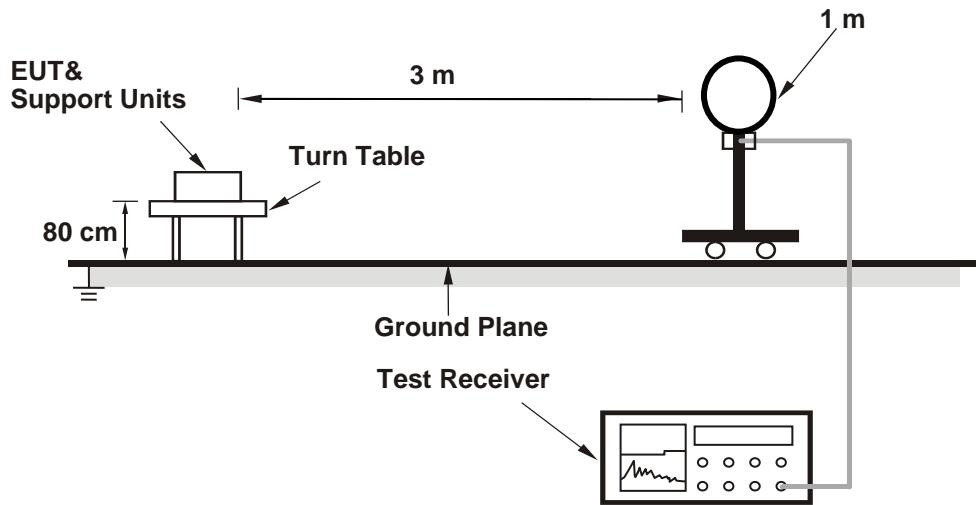
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120 kHz for Quasi-peak detection (QP) or Peak detection (PK) at frequency below 1 GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1 GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is $\geq 1/T$ (Duty cycle < 98 %) or 10 Hz (Duty cycle $\geq 98 \%$) for Average detection (AV) at frequency above 1 GHz.
(11a: RBW = 1 MHz, VBW = 10 Hz ; 11ax (HE20): RBW = 1 MHz, VBW = 10 Hz ;
11ax (HE40): RBW = 1 MHz, VBW = 10 Hz ; 11ax (HE80): RBW = 1 MHz, VBW = 10 Hz)
4. All modes of operation were investigated and the worst-case emissions are reported.

4.1.4 Deviation from Test Standard

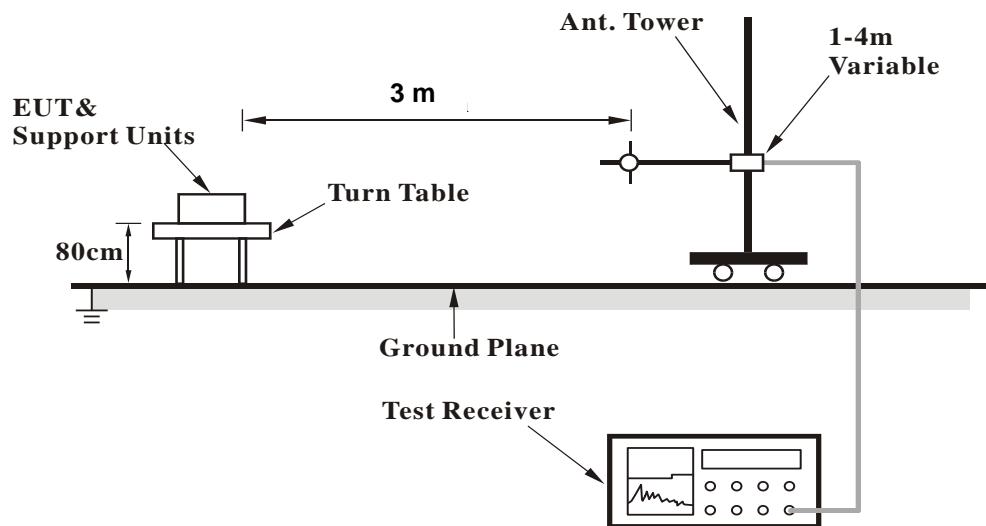
No deviation.

4.1.5 Test Setup

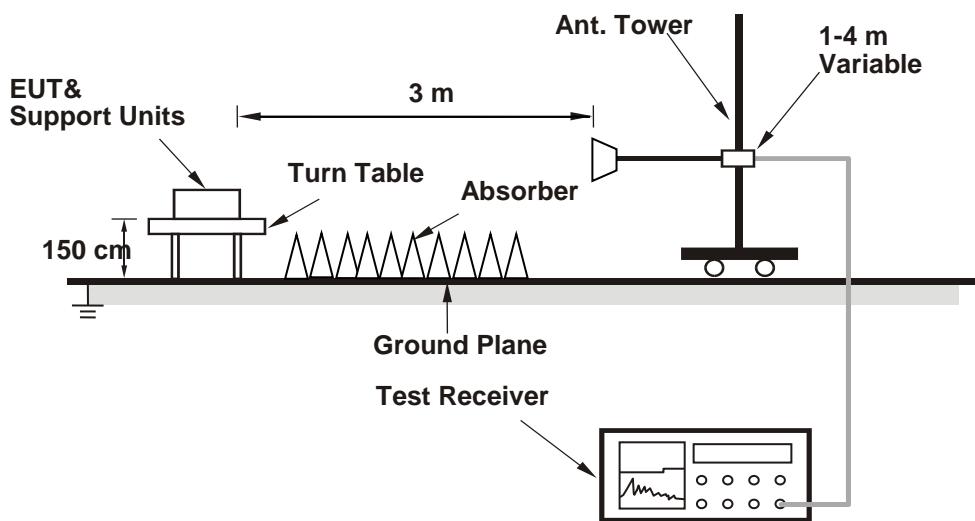
<Radiated Emission below 30 MHz>



<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).

4.1.6 EUT Operating Conditions

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

4.1.7 Test Results

Above 1 GHz Data :

RF Mode	TX 802.11a	Channel	CH 36 : 5180 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	50.2 PK	74.0	-23.8	1.02 H	238	48.0	2.2
2	5150.00	38.4 AV	54.0	-15.6	1.02 H	238	36.2	2.2
3	*5180.00	99.5 PK			1.02 H	238	63.1	36.4
4	*5180.00	89.1 AV			1.02 H	238	52.7	36.4
5	#10360.00	56.2 PK	68.2	-12.0	1.00 H	188	41.0	15.2
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	50.9 PK	74.0	-23.1	1.55 V	89	48.7	2.2
2	5150.00	38.4 AV	54.0	-15.6	1.55 V	89	36.2	2.2
3	*5180.00	106.0 PK			1.55 V	89	69.6	36.4
4	*5180.00	95.6 AV			1.55 V	89	59.2	36.4
5	#10360.00	54.5 PK	68.2	-13.7	1.88 V	260	39.3	15.2

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11a	Channel	CH 40 : 5200 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5200.00	99.6 PK			1.72 H	240	63.2	36.4
2	*5200.00	88.8 AV			1.72 H	240	52.4	36.4
3	#10400.00	55.3 PK	68.2	-12.9	1.03 H	189	40.1	15.2
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5200.00	104.8 PK			1.28 V	222	68.4	36.4
2	*5200.00	95.3 AV			1.28 V	222	58.9	36.4
3	#10400.00	54.8 PK	68.2	-13.4	1.87 V	258	39.6	15.2

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11a	Channel	CH 48 : 5240 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5240.00	99.5 PK			1.74 H	239	63.2	36.3
2	*5240.00	88.3 AV			1.74 H	239	52.0	36.3
3	5350.00	48.2 PK	74.0	-25.8	1.74 H	239	46.2	2.0
4	5350.00	36.4 AV	54.0	-17.6	1.74 H	239	34.4	2.0
5	#10480.00	54.9 PK	68.2	-13.3	1.01 H	191	39.8	15.1
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5240.00	105.5 PK			1.15 V	218	69.2	36.3
2	*5240.00	95.6 AV			1.15 V	218	59.3	36.3
3	5350.00	51.0 PK	74.0	-23.0	1.15 V	218	49.0	2.0
4	5350.00	39.9 AV	54.0	-14.1	1.15 V	218	37.9	2.0
5	#10480.00	54.6 PK	68.2	-13.6	1.86 V	260	39.5	15.1

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11a	Channel	CH 52 : 5260 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	49.9 PK	74.0	-24.1	3.72 H	237	47.7	2.2
2	5150.00	38.2 AV	54.0	-15.8	3.72 H	237	36.0	2.2
3	*5260.00	99.5 PK			3.72 H	237	63.3	36.2
4	*5260.00	88.8 AV			3.72 H	237	52.6	36.2
5	#10520.00	55.2 PK	68.2	-13.0	2.24 H	51	40.0	15.2
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	51.5 PK	74.0	-22.5	1.22 V	223	49.3	2.2
2	5150.00	40.4 AV	54.0	-13.6	1.22 V	223	38.2	2.2
3	*5260.00	105.4 PK			1.22 V	223	69.2	36.2
4	*5260.00	94.9 AV			1.22 V	223	58.7	36.2
5	#10520.00	54.8 PK	68.2	-13.4	1.43 V	158	39.6	15.2

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11a	Channel	CH 60 : 5300 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5300.00	100.2 PK			3.51 H	306	64.2	36.0
2	*5300.00	90.3 AV			3.51 H	306	54.3	36.0
3	10600.00	54.3 PK	74.0	-19.7	2.29 H	57	38.6	15.7
4	10600.00	41.8 AV	54.0	-12.2	2.29 H	57	26.1	15.7
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5300.00	103.7 PK			1.36 V	218	67.7	36.0
2	*5300.00	93.8 AV			1.36 V	218	57.8	36.0
3	10600.00	55.3 PK	74.0	-18.7	1.44 V	160	39.6	15.7
4	10600.00	41.5 AV	54.0	-12.5	1.44 V	160	25.8	15.7

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.

RF Mode	TX 802.11a	Channel	CH 64 : 5320 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5320.00	101.2 PK			3.55 H	294	65.0	36.2
2	*5320.00	90.3 AV			3.55 H	294	54.1	36.2
3	5350.00	48.6 PK	74.0	-25.4	3.55 H	294	46.6	2.0
4	5350.00	36.4 AV	54.0	-17.6	3.55 H	294	34.4	2.0
5	10640.00	54.4 PK	74.0	-19.6	2.23 H	52	38.6	15.8
6	10640.00	41.6 AV	54.0	-12.4	2.23 H	52	25.8	15.8
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5320.00	104.1 PK			1.38 V	218	67.9	36.2
2	*5320.00	93.7 AV			1.38 V	218	57.5	36.2
3	5350.00	49.6 PK	74.0	-24.4	1.38 V	218	47.6	2.0
4	5350.00	37.4 AV	54.0	-16.6	1.38 V	218	35.4	2.0
5	10640.00	55.4 PK	74.0	-18.6	1.44 V	161	39.6	15.8
6	10640.00	41.7 AV	54.0	-12.3	1.44 V	161	25.9	15.8

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.

RF Mode	TX 802.11a	Channel	CH 100 : 5500 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	50.7 PK	74.0	-23.3	1.00 H	149	47.9	2.8
2	5460.00	38.9 AV	54.0	-15.1	1.00 H	149	36.1	2.8
3	#5470.00	49.6 PK	68.2	-18.6	1.00 H	149	46.8	2.8
4	*5500.00	97.4 PK			1.00 H	149	60.4	37.0
5	*5500.00	86.9 AV			1.00 H	149	49.9	37.0
6	11000.00	57.0 PK	74.0	-17.0	1.05 H	293	40.0	17.0
7	11000.00	44.3 AV	54.0	-9.7	1.05 H	293	27.3	17.0

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	49.5 PK	74.0	-24.5	2.79 V	232	46.7	2.8
2	5460.00	38.4 AV	54.0	-15.6	2.79 V	232	35.6	2.8
3	#5470.00	49.7 PK	68.2	-18.5	2.79 V	232	46.9	2.8
4	*5500.00	105.7 PK			2.79 V	232	68.7	37.0
5	*5500.00	95.7 AV			2.79 V	232	58.7	37.0
6	11000.00	55.3 PK	74.0	-18.7	1.41 V	348	38.3	17.0
7	11000.00	42.5 AV	54.0	-11.5	1.41 V	348	25.5	17.0

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11a	Channel	CH 116 : 5580 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5580.00	97.2 PK			1.00 H	148	60.2	37.0
2	*5580.00	86.0 AV			1.00 H	148	49.0	37.0
3	11160.00	54.9 PK	74.0	-19.1	1.05 H	295	38.9	16.0
4	11160.00	43.3 AV	54.0	-10.7	1.05 H	295	27.3	16.0
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5580.00	106.9 PK			2.82 V	232	69.9	37.0
2	*5580.00	96.8 AV			2.82 V	232	59.8	37.0
3	11160.00	54.4 PK	74.0	-19.6	1.44 V	346	38.4	16.0
4	11160.00	41.6 AV	54.0	-12.4	1.44 V	346	25.6	16.0

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.

RF Mode	TX 802.11a	Channel	CH 140 : 5700 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5700.00	97.6 PK			1.01 H	159	60.4	37.2
2	*5700.00	88.0 AV			1.01 H	159	50.8	37.2
3	#5725.00	51.0 PK	68.2	-17.2	1.01 H	159	48.0	3.0
4	11400.00	56.2 PK	74.0	-17.8	1.06 H	289	39.9	16.3
5	11400.00	43.4 AV	54.0	-10.6	1.06 H	289	27.1	16.3
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5700.00	106.9 PK			3.00 V	242	69.7	37.2
2	*5700.00	96.0 AV			3.00 V	242	58.8	37.2
3	#5725.00	50.9 PK	68.2	-17.3	3.00 V	242	47.9	3.0
4	11400.00	54.6 PK	74.0	-19.4	1.40 V	345	38.3	16.3
5	11400.00	41.7 AV	54.0	-12.3	1.40 V	345	25.4	16.3

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11a	Channel	CH 144 : 5720 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5720.00	98.1 PK			1.00 H	160	60.8	37.3
2	*5720.00	88.5 AV			1.00 H	160	51.2	37.3
3	#5850.00	48.9 PK	68.2	-19.3	1.00 H	160	45.4	3.5
4	11400.00	56.5 PK	74.0	-17.5	1.04 H	294	40.2	16.3
5	11400.00	43.3 AV	54.0	-10.7	1.04 H	294	27.0	16.3
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5720.00	105.8 PK			3.07 V	227	68.5	37.3
2	*5720.00	95.6 AV			3.07 V	227	58.3	37.3
3	#5850.00	49.8 PK	68.2	-18.4	3.07 V	227	46.3	3.5
4	11440.00	54.6 PK	74.0	-19.4	1.40 V	345	38.6	16.0
5	11440.00	41.8 AV	54.0	-12.2	1.40 V	345	25.8	16.0

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11a	Channel	CH 149 : 5745 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5620.00	49.8 PK	68.2	-18.4	1.48 H	182	47.1	2.7
2	*5745.00	98.1 PK			1.48 H	182	60.8	37.3
3	*5745.00	87.5 AV			1.48 H	182	50.2	37.3
4	#5940.00	50.3 PK	68.2	-17.9	1.48 H	182	46.8	3.5
5	11490.00	56.1 PK	74.0	-17.9	1.11 H	302	40.3	15.8
6	11490.00	42.6 AV	54.0	-11.4	1.11 H	302	26.8	15.8
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5629.60	50.4 PK	68.2	-17.8	2.27 V	237	47.7	2.7
2	*5745.00	107.0 PK			2.27 V	237	69.7	37.3
3	*5745.00	96.5 AV			2.27 V	237	59.2	37.3
4	#5932.80	50.6 PK	68.2	-17.6	2.27 V	237	47.2	3.4
5	11490.00	56.0 PK	74.0	-18.0	1.36 V	351	40.2	15.8
6	11490.00	42.5 AV	54.0	-11.5	1.36 V	351	26.7	15.8

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11a	Channel	CH 157 : 5785 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5615.20	51.1 PK	68.2	-17.1	1.36 H	183	48.4	2.7
2	*5785.00	97.5 PK			1.36 H	183	60.0	37.5
3	*5785.00	86.9 AV			1.36 H	183	49.4	37.5
4	#5928.00	51.7 PK	68.2	-16.5	1.36 H	183	48.3	3.4
5	11570.00	55.2 PK	74.0	-18.8	1.01 H	297	39.8	15.4
6	11570.00	42.2 AV	54.0	-11.8	1.01 H	297	26.8	15.4
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5635.20	51.0 PK	68.2	-17.2	2.30 V	237	48.3	2.7
2	*5785.00	106.8 PK			2.30 V	237	69.3	37.5
3	*5785.00	96.1 AV			2.30 V	237	58.6	37.5
4	#5979.20	50.6 PK	68.2	-17.6	2.30 V	237	47.2	3.4
5	11570.00	55.6 PK	74.0	-18.4	1.40 V	346	40.2	15.4
6	11570.00	41.9 AV	54.0	-12.1	1.40 V	346	26.5	15.4

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11a	Channel	CH 165 : 5825 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5620.00	50.9 PK	68.2	-17.3	1.31 H	185	48.2	2.7
2	*5825.00	97.4 PK			1.31 H	185	59.8	37.6
3	*5825.00	86.5 AV			1.31 H	185	48.9	37.6
4	#5948.80	50.7 PK	68.2	-17.5	1.31 H	185	47.2	3.5
5	11650.00	55.5 PK	74.0	-18.5	1.14 H	302	40.0	15.5
6	11650.00	41.9 AV	54.0	-12.1	1.14 H	302	26.4	15.5
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5640.80	50.6 PK	68.2	-17.6	2.30 V	242	47.8	2.8
2	*5825.00	106.5 PK			2.30 V	242	68.9	37.6
3	*5825.00	95.6 AV			2.30 V	242	58.0	37.6
4	#5944.00	50.5 PK	68.2	-17.7	2.30 V	242	47.0	3.5
5	11650.00	55.7 PK	74.0	-18.3	1.35 V	354	40.2	15.5
6	11650.00	42.2 AV	54.0	-11.8	1.35 V	354	26.7	15.5

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11ax (HE20)	Channel	CH 36 : 5180 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	49.1 PK	74.0	-24.9	1.66 H	242	46.9	2.2
2	5150.00	37.1 AV	54.0	-16.9	1.66 H	242	34.9	2.2
3	*5180.00	100.2 PK			1.66 H	242	63.8	36.4
4	*5180.00	89.3 AV			1.66 H	242	52.9	36.4
5	#10360.00	55.6 PK	68.2	-12.6	1.02 H	188	40.4	15.2
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	52.3 PK	74.0	-21.7	1.10 V	218	50.1	2.2
2	5150.00	40.0 AV	54.0	-14.0	1.10 V	218	37.8	2.2
3	*5180.00	104.6 PK			1.10 V	218	68.2	36.4
4	*5180.00	94.6 AV			1.10 V	218	58.2	36.4
5	#10360.00	54.9 PK	68.2	-13.3	1.77 V	264	39.7	15.2

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11ax (HE20)	Channel	CH 40 : 5200 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5200.00	99.3 PK			1.71 H	247	62.9	36.4
2	*5200.00	88.5 AV			1.71 H	247	52.1	36.4
3	#10400.00	55.0 PK	68.2	-13.2	1.00 H	183	39.8	15.2
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5200.00	105.1 PK			1.12 V	217	68.7	36.4
2	*5200.00	94.8 AV			1.12 V	217	58.4	36.4
3	#10400.00	55.0 PK	68.2	-13.2	1.92 V	254	39.8	15.2

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11ax (HE20)	Channel	CH 48 : 5240 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5240.00	99.2 PK			1.11 H	236	62.9	36.3
2	*5240.00	88.6 AV			1.11 H	236	52.3	36.3
3	5350.00	48.6 PK	74.0	-25.4	1.11 H	236	46.6	2.0
4	5350.00	36.4 AV	54.0	-17.6	1.11 H	236	34.4	2.0
5	#10480.00	55.4 PK	68.2	-12.8	1.04 H	185	40.3	15.1
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5240.00	105.7 PK			1.14 V	218	69.4	36.3
2	*5240.00	95.4 AV			1.14 V	218	59.1	36.3
3	5350.00	52.8 PK	74.0	-21.2	1.14 V	218	50.8	2.0
4	5350.00	39.8 AV	54.0	-14.2	1.14 V	218	37.8	2.0
5	#10480.00	55.0 PK	68.2	-13.2	1.85 V	259	39.9	15.1

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11ax (HE20)	Channel	CH 52 : 5260 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	49.5 PK	74.0	-24.5	3.57 H	296	47.3	2.2
2	5150.00	37.7 AV	54.0	-16.3	3.57 H	296	35.5	2.2
3	*5260.00	101.1 PK			3.57 H	296	64.9	36.2
4	*5260.00	90.1 AV			3.57 H	296	53.9	36.2
5	#10520.00	53.6 PK	68.2	-14.6	2.30 H	49	38.4	15.2
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	51.0 PK	74.0	-23.0	1.36 V	223	48.8	2.2
2	5150.00	39.6 AV	54.0	-14.4	1.36 V	223	37.4	2.2
3	*5260.00	104.4 PK			1.36 V	223	68.2	36.2
4	*5260.00	94.0 AV			1.36 V	223	57.8	36.2
5	#10520.00	55.0 PK	68.2	-13.2	1.44 V	157	39.8	15.2

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11ax (HE20)	Channel	CH 60 : 5300 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5300.00	99.6 PK			3.38 H	308	63.6	36.0
2	*5300.00	89.5 AV			3.38 H	308	53.5	36.0
3	10600.00	55.2 PK	74.0	-18.8	2.28 H	54	39.5	15.7
4	10600.00	41.6 AV	54.0	-12.4	2.28 H	54	25.9	15.7

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5300.00	103.1 PK			1.37 V	226	67.1	36.0
2	*5300.00	93.0 AV			1.37 V	226	57.0	36.0
3	10600.00	56.3 PK	74.0	-17.7	1.42 V	157	40.6	15.7
4	10600.00	42.1 AV	54.0	-11.9	1.42 V	157	26.4	15.7

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.

RF Mode	TX 802.11ax (HE20)	Channel	CH 64 : 5320 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5320.00	99.0 PK			3.55 H	309	62.8	36.2
2	*5320.00	88.8 AV			3.55 H	309	52.6	36.2
3	5350.00	49.3 PK	74.0	-24.7	3.55 H	309	47.3	2.0
4	5350.00	36.5 AV	54.0	-17.5	3.55 H	309	34.5	2.0
5	10640.00	55.5 PK	74.0	-18.5	2.31 H	56	39.7	15.8
6	10640.00	41.5 AV	54.0	-12.5	2.31 H	56	25.7	15.8
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5320.00	104.2 PK			1.29 V	225	68.0	36.2
2	*5320.00	93.8 AV			1.29 V	225	57.6	36.2
3	5350.00	50.0 PK	74.0	-24.0	1.29 V	225	48.0	2.0
4	5350.00	37.4 AV	54.0	-16.6	1.29 V	225	35.4	2.0
5	10640.00	56.0 PK	74.0	-18.0	1.40 V	158	40.2	15.8
6	10640.00	41.6 AV	54.0	-12.4	1.40 V	158	25.8	15.8

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.

RF Mode	TX 802.11ax (HE20)	Channel	CH 100 : 5500 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	49.9 PK	74.0	-24.1	1.41 H	185	47.1	2.8
2	5460.00	38.9 AV	54.0	-15.1	1.41 H	185	36.1	2.8
3	#5470.00	50.7 PK	68.2	-17.5	1.41 H	185	47.9	2.8
4	*5500.00	101.2 PK			1.41 H	185	64.2	37.0
5	*5500.00	87.4 AV			1.41 H	185	50.4	37.0
6	11000.00	56.5 PK	74.0	-17.5	1.10 H	300	39.5	17.0
7	11000.00	43.4 AV	54.0	-10.6	1.10 H	300	26.4	17.0

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	50.2 PK	74.0	-23.8	2.83 V	233	47.4	2.8
2	5460.00	38.3 AV	54.0	-15.7	2.83 V	233	35.5	2.8
3	#5470.00	50.5 PK	68.2	-17.7	2.83 V	233	47.7	2.8
4	*5500.00	109.7 PK			2.83 V	233	72.7	37.0
5	*5500.00	96.5 AV			2.83 V	233	59.5	37.0
6	11000.00	57.4 PK	74.0	-16.6	1.38 V	348	40.4	17.0
7	11000.00	43.4 AV	54.0	-10.6	1.38 V	348	26.4	17.0

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11ax (HE20)	Channel	CH 116 : 5580 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5580.00	102.1 PK			1.32 H	188	65.1	37.0
2	*5580.00	88.7 AV			1.32 H	188	51.7	37.0
3	11160.00	55.9 PK	74.0	-18.1	1.05 H	301	39.9	16.0
4	11160.00	42.6 AV	54.0	-11.4	1.05 H	301	26.6	16.0
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5580.00	111.4 PK			2.87 V	233	74.4	37.0
2	*5580.00	97.9 AV			2.87 V	233	60.9	37.0
3	11160.00	56.4 PK	74.0	-17.6	1.42 V	342	40.4	16.0
4	11160.00	42.5 AV	54.0	-11.5	1.42 V	342	26.5	16.0

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.

RF Mode	TX 802.11ax (HE20)	Channel	CH 140 : 5700 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5700.00	100.3 PK			1.48 H	184	63.1	37.2
2	*5700.00	86.7 AV			1.48 H	184	49.5	37.2
3	#5725.00	50.9 PK	68.2	-17.3	1.48 H	184	47.9	3.0
4	11400.00	56.0 PK	74.0	-18.0	1.13 H	288	39.7	16.3
5	11400.00	42.9 AV	54.0	-11.1	1.13 H	288	26.6	16.3
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5700.00	109.6 PK			2.87 V	229	72.4	37.2
2	*5700.00	95.9 AV			2.87 V	229	58.7	37.2
3	#5725.00	50.7 PK	68.2	-17.5	2.87 V	229	47.7	3.0
4	11400.00	56.8 PK	74.0	-17.2	1.42 V	343	40.5	16.3
5	11400.00	42.8 AV	54.0	-11.2	1.42 V	343	26.5	16.3

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11ax (HE20)	Channel	CH 144 : 5720 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5720.00	101.4 PK			1.50 H	187	64.1	37.3
2	*5720.00	87.9 AV			1.50 H	187	50.6	37.3
3	#5850.00	51.2 PK	68.2	-17.0	1.50 H	187	47.7	3.5
4	11440.00	56.0 PK	74.0	-18.0	1.01 H	299	40.0	16.0
5	11440.00	42.4 AV	54.0	-11.6	1.01 H	299	26.4	16.0
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5720.00	110.6 PK			2.90 V	231	73.3	37.3
2	*5720.00	97.1 AV			2.90 V	231	59.8	37.3
3	#5850.00	50.9 PK	68.2	-17.3	2.90 V	231	47.4	3.5
4	11440.00	55.9 PK	74.0	-18.1	1.45 V	354	39.9	16.0
5	11440.00	42.6 AV	54.0	-11.4	1.45 V	354	26.6	16.0

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11ax (HE20)	Channel	CH 149 : 5745 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5648.80	50.2 PK	68.2	-18.0	1.32 H	183	47.4	2.8
2	*5745.00	99.5 PK			1.32 H	183	62.2	37.3
3	*5745.00	86.7 AV			1.32 H	183	49.4	37.3
4	#5992.00	50.1 PK	68.2	-18.1	1.32 H	183	46.7	3.4
5	11490.00	55.6 PK	74.0	-18.4	1.06 H	296	39.8	15.8
6	11490.00	42.4 AV	54.0	-11.6	1.06 H	296	26.6	15.8
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5610.40	50.5 PK	68.2	-17.7	2.55 V	235	47.8	2.7
2	*5745.00	108.8 PK			2.55 V	235	71.5	37.3
3	*5745.00	95.9 AV			2.55 V	235	58.6	37.3
4	#5953.60	51.0 PK	68.2	-17.2	2.55 V	235	47.5	3.5
5	11490.00	55.9 PK	74.0	-18.1	1.36 V	349	40.1	15.8
6	11490.00	42.3 AV	54.0	-11.7	1.36 V	349	26.5	15.8

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11ax (HE20)	Channel	CH 157 : 5785 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5628.80	50.7 PK	68.2	-17.5	1.44 H	181	48.0	2.7
2	*5785.00	100.0 PK			1.44 H	181	62.5	37.5
3	*5785.00	87.3 AV			1.44 H	181	49.8	37.5
4	#5982.40	51.6 PK	68.2	-16.6	1.44 H	181	48.2	3.4
5	11570.00	55.2 PK	74.0	-18.8	1.06 H	301	39.8	15.4
6	11570.00	41.9 AV	54.0	-12.1	1.06 H	301	26.5	15.4
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5636.80	51.1 PK	68.2	-17.1	2.35 V	237	48.4	2.7
2	*5785.00	109.3 PK			2.35 V	237	71.8	37.5
3	*5785.00	96.5 AV			2.35 V	237	59.0	37.5
4	#5948.00	50.7 PK	68.2	-17.5	2.35 V	237	47.2	3.5
5	11570.00	55.2 PK	74.0	-18.8	1.48 V	351	39.8	15.4
6	11570.00	42.2 AV	54.0	-11.8	1.48 V	351	26.8	15.4

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11ax (HE20)	Channel	CH 165 : 5825 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5600.80	50.2 PK	68.2	-18.0	1.36 H	183	47.5	2.7
2	*5825.00	98.8 PK			1.36 H	183	61.2	37.6
3	*5825.00	86.4 AV			1.36 H	183	48.8	37.6
4	#5951.20	50.4 PK	68.2	-17.8	1.36 H	183	46.9	3.5
5	11650.00	55.4 PK	74.0	-18.6	1.01 H	299	39.9	15.5
6	11650.00	41.9 AV	54.0	-12.1	1.01 H	299	26.4	15.5
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5632.80	50.0 PK	68.2	-18.2	2.30 V	240	47.3	2.7
2	*5825.00	108.1 PK			2.30 V	240	70.5	37.6
3	*5825.00	95.6 AV			2.30 V	240	58.0	37.6
4	#5928.80	50.8 PK	68.2	-17.4	2.30 V	240	47.4	3.4
5	11650.00	55.9 PK	74.0	-18.1	1.46 V	352	40.4	15.5
6	11650.00	42.3 AV	54.0	-11.7	1.46 V	352	26.8	15.5

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11ax (HE40)	Channel	CH 38 : 5190 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	49.2 PK	74.0	-24.8	1.40 H	230	47.0	2.2
2	5150.00	37.7 AV	54.0	-16.3	1.40 H	230	35.5	2.2
3	*5190.00	95.6 PK			1.40 H	230	59.2	36.4
4	*5190.00	85.9 AV			1.40 H	230	49.5	36.4
5	#10380.00	54.8 PK	68.2	-13.4	1.02 H	189	39.6	15.2
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	51.8 PK	74.0	-22.2	1.14 V	220	49.6	2.2
2	5150.00	40.1 AV	54.0	-13.9	1.14 V	220	37.9	2.2
3	*5190.00	102.0 PK			1.14 V	220	65.6	36.4
4	*5190.00	91.9 AV			1.14 V	220	55.5	36.4
5	#10380.00	54.8 PK	68.2	-13.4	1.92 V	262	39.6	15.2

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11ax (HE40)	Channel	CH 46 : 5230 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5230.00	96.4 PK			1.41 H	233	60.1	36.3
2	*5230.00	86.1 AV			1.41 H	233	49.8	36.3
3	5350.00	48.6 PK	74.0	-25.4	1.41 H	233	46.6	2.0
4	5350.00	36.6 AV	54.0	-17.4	1.41 H	233	34.6	2.0
5	#10460.00	54.7 PK	68.2	-13.5	1.05 H	192	39.6	15.1
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5230.00	102.3 PK			1.16 V	219	66.0	36.3
2	*5230.00	92.3 AV			1.16 V	219	56.0	36.3
3	5350.00	50.8 PK	74.0	-23.2	1.16 V	219	48.8	2.0
4	5350.00	40.1 AV	54.0	-13.9	1.16 V	219	38.1	2.0
5	#10460.00	54.9 PK	68.2	-13.3	1.85 V	266	39.8	15.1

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11ax (HE40)	Channel	CH 54 : 5270 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5270.00	92.8 PK			3.91 H	241	56.6	36.2
2	*5270.00	83.7 AV			3.91 H	241	47.5	36.2
3	5350.00	48.4 PK	74.0	-25.6	3.91 H	241	46.4	2.0
4	5350.00	36.3 AV	54.0	-17.7	3.91 H	241	34.3	2.0
5	#10540.00	53.7 PK	68.2	-14.5	2.31 H	48	38.3	15.4
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5270.00	100.6 PK			1.31 V	224	64.4	36.2
2	*5270.00	91.2 AV			1.31 V	224	55.0	36.2
3	5350.00	51.4 PK	74.0	-22.6	1.32 V	224	49.4	2.0
4	5350.00	39.8 AV	54.0	-14.2	1.32 V	224	37.8	2.0
5	#10540.00	55.0 PK	68.2	-13.2	1.42 V	158	39.6	15.4

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11ax (HE40)	Channel	CH 62 : 5310 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5310.00	94.5 PK			3.99 H	237	58.4	36.1
2	*5310.00	84.8 AV			3.99 H	237	48.7	36.1
3	5350.00	48.8 PK	74.0	-25.2	3.99 H	237	46.8	2.0
4	5350.00	36.5 AV	54.0	-17.5	3.99 H	237	34.5	2.0
5	10620.00	54.1 PK	74.0	-19.9	2.44 H	55	38.4	15.7
6	10620.00	41.4 AV	54.0	-12.6	2.44 H	55	25.7	15.7
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5310.00	101.0 PK			1.33 V	225	64.9	36.1
2	*5310.00	91.0 AV			1.33 V	225	54.9	36.1
3	5350.00	51.3 PK	74.0	-22.7	1.33 V	225	49.3	2.0
4	5350.00	40.1 AV	54.0	-13.9	1.33 V	225	38.1	2.0
5	10620.00	54.0 PK	74.0	-20.0	1.50 V	158	38.3	15.7
6	10620.00	41.5 AV	54.0	-12.5	1.50 V	158	25.8	15.7

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.

RF Mode	TX 802.11ax (HE40)	Channel	CH 102 : 5510 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	49.7 PK	74.0	-24.3	1.51 H	185	46.9	2.8
2	5460.00	38.0 AV	54.0	-16.0	1.51 H	185	35.2	2.8
3	#5470.00	50.8 PK	68.2	-17.4	1.51 H	185	48.0	2.8
4	*5510.00	97.0 PK			1.51 H	185	60.0	37.0
5	*5510.00	85.0 AV			1.51 H	185	48.0	37.0
6	11020.00	56.5 PK	74.0	-17.5	1.11 H	296	39.6	16.9
7	11020.00	43.3 AV	54.0	-10.7	1.11 H	296	26.4	16.9

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	53.1 PK	74.0	-20.9	2.91 V	233	50.3	2.8
2	5460.00	41.1 AV	54.0	-12.9	2.91 V	233	38.3	2.8
3	#5470.00	56.0 PK	68.2	-12.2	2.91 V	233	53.2	2.8
4	*5510.00	106.1 PK			2.91 V	233	69.1	37.0
5	*5510.00	94.0 AV			2.91 V	233	57.0	37.0
6	11020.00	57.1 PK	74.0	-16.9	1.44 V	348	40.2	16.9
7	11020.00	43.5 AV	54.0	-10.5	1.44 V	348	26.6	16.9

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11ax (HE40)	Channel	CH 110 : 5550 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5550.00	97.4 PK			1.48 H	183	60.4	37.0
2	*5550.00	85.7 AV			1.48 H	183	48.7	37.0
3	11100.00	56.5 PK	74.0	-17.5	1.08 H	290	40.4	16.1
4	11100.00	42.8 AV	54.0	-11.2	1.08 H	290	26.7	16.1
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5550.00	106.5 PK			2.90 V	233	69.5	37.0
2	*5550.00	94.8 AV			2.90 V	233	57.8	37.0
3	11100.00	56.2 PK	74.0	-17.8	1.45 V	346	40.1	16.1
4	11100.00	42.8 AV	54.0	-11.2	1.45 V	346	26.7	16.1

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.

RF Mode	TX 802.11ax (HE40)	Channel	CH 134 : 5670 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5670.00	98.3 PK			1.39 H	182	61.2	37.1
2	*5670.00	85.6 AV			1.39 H	182	48.5	37.1
3	#5725.00	50.5 PK	68.2	-17.7	1.39 H	182	47.5	3.0
4	11340.00	56.8 PK	74.0	-17.2	1.00 H	291	40.3	16.5
5	11340.00	43.2 AV	54.0	-10.8	1.00 H	291	26.7	16.5
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5670.00	107.2 PK			2.89 V	232	70.1	37.1
2	*5670.00	94.6 AV			2.89 V	232	57.5	37.1
3	#5725.00	52.2 PK	68.2	-16.0	2.89 V	232	49.2	3.0
4	11340.00	56.4 PK	74.0	-17.6	1.35 V	349	39.9	16.5
5	11340.00	43.2 AV	54.0	-10.8	1.35 V	349	26.7	16.5

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11ax (HE40)	Channel	CH 142 : 5710 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5710.00	96.9 PK			1.41 H	183	59.7	37.2
2	*5710.00	84.4 AV			1.41 H	183	47.2	37.2
3	#5850.00	51.1 PK	68.2	-17.1	1.41 H	183	47.6	3.5
4	11420.00	56.7 PK	74.0	-17.3	1.11 H	302	40.5	16.2
5	11420.00	43.0 AV	54.0	-11.0	1.11 H	302	26.8	16.2
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5710.00	106.0 PK			2.89 V	232	68.8	37.2
2	*5710.00	93.5 AV			2.89 V	232	56.3	37.2
3	#5850.00	50.9 PK	68.2	-17.3	2.89 V	232	47.4	3.5
4	11420.00	56.2 PK	74.0	-17.8	1.50 V	353	40.0	16.2
5	11420.00	42.8 AV	54.0	-11.2	1.50 V	353	26.6	16.2

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11ax (HE40)	Channel	CH 151 : 5755 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5623.20	51.8 PK	68.2	-16.4	1.46 H	185	49.1	2.7
2	*5755.00	96.1 PK			1.46 H	185	58.8	37.3
3	*5755.00	84.1 AV			1.46 H	185	46.8	37.3
4	#5947.20	50.0 PK	68.2	-18.2	1.46 H	185	46.5	3.5
5	11510.00	55.8 PK	74.0	-18.2	1.03 H	295	40.2	15.6
6	11510.00	42.1 AV	54.0	-11.9	1.03 H	295	26.5	15.6
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5623.20	50.7 PK	68.2	-17.5	2.63 V	230	48.0	2.7
2	*5755.00	105.2 PK			2.63 V	230	67.9	37.3
3	*5755.00	93.2 AV			2.63 V	230	55.9	37.3
4	#5984.80	49.6 PK	68.2	-18.6	2.63 V	230	46.2	3.4
5	11510.00	55.8 PK	74.0	-18.2	1.48 V	353	40.2	15.6
6	11510.00	42.4 AV	54.0	-11.6	1.48 V	353	26.8	15.6

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11ax (HE40)	Channel	CH 159 : 5795 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5601.60	50.7 PK	68.2	-17.5	1.32 H	183	48.0	2.7
2	*5795.00	96.0 PK			1.32 H	183	58.4	37.6
3	*5795.00	83.3 AV			1.32 H	183	45.7	37.6
4	#5989.60	51.1 PK	68.2	-17.1	1.32 H	183	47.7	3.4
5	11590.00	55.6 PK	74.0	-18.4	1.13 H	294	40.2	15.4
6	11590.00	41.9 AV	54.0	-12.1	1.13 H	294	26.5	15.4
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5639.20	50.6 PK	68.2	-17.6	2.69 V	231	47.9	2.7
2	*5795.00	105.1 PK			2.69 V	231	67.5	37.6
3	*5795.00	92.4 AV			2.69 V	231	54.8	37.6
4	#5928.80	51.0 PK	68.2	-17.2	2.69 V	231	47.6	3.4
5	11590.00	55.7 PK	74.0	-18.3	1.36 V	346	40.3	15.4
6	11590.00	41.9 AV	54.0	-12.1	1.36 V	346	26.5	15.4

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11ax (HE80)	Channel	CH 42 : 5210 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	49.8 PK	74.0	-24.2	1.43 H	239	47.6	2.2
2	5150.00	39.1 AV	54.0	-14.9	1.43 H	239	36.9	2.2
3	*5210.00	91.4 PK			1.43 H	239	55.0	36.4
4	*5210.00	82.2 AV			1.43 H	239	45.8	36.4
5	5350.00	48.5 PK	74.0	-25.5	1.43 H	239	46.5	2.0
6	5350.00	38.2 AV	54.0	-15.8	1.43 H	239	36.2	2.0
7	#10420.00	55.1 PK	68.2	-13.1	1.00 H	182	39.9	15.2

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	52.5 PK	74.0	-21.5	1.18 V	217	50.3	2.2
2	5150.00	42.5 AV	54.0	-11.5	1.18 V	217	40.3	2.2
3	*5210.00	98.9 PK			1.18 V	217	62.5	36.4
4	*5210.00	89.3 AV			1.18 V	217	52.9	36.4
5	5350.00	49.2 PK	74.0	-24.8	1.18 V	217	47.2	2.0
6	5350.00	37.9 AV	54.0	-16.1	1.18 V	217	35.9	2.0
7	#10420.00	55.4 PK	68.2	-12.8	1.93 V	261	40.2	15.2

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11ax (HE80)	Channel	CH 58 : 5290 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5290.00	90.4 PK			4.00 H	241	54.3	36.1
2	*5290.00	81.3 AV			4.00 H	241	45.2	36.1
3	5350.00	49.3 PK	74.0	-24.7	4.00 H	241	47.3	2.0
4	5350.00	36.5 AV	54.0	-17.5	4.00 H	241	34.5	2.0
5	#10580.00	54.2 PK	68.2	-14.0	2.27 H	49	38.6	15.6
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5290.00	96.8 PK			1.41 V	220	60.7	36.1
2	*5290.00	87.8 AV			1.41 V	220	51.7	36.1
3	5350.00	49.8 PK	74.0	-24.2	1.41 V	220	47.8	2.0
4	5350.00	38.8 AV	54.0	-15.2	1.41 V	220	36.8	2.0
5	#10580.00	54.2 PK	68.2	-14.0	1.51 V	162	38.6	15.6

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11ax (HE80)	Channel	CH 106 : 5530 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	50.3 PK	74.0	-23.7	1.44 H	188	47.5	2.8
2	5460.00	39.7 AV	54.0	-14.3	1.44 H	188	36.9	2.8
3	#5470.00	51.3 PK	68.2	-16.9	1.44 H	188	48.5	2.8
4	*5530.00	94.7 PK			1.44 H	188	57.7	37.0
5	*5530.00	81.2 AV			1.44 H	188	44.2	37.0
6	11060.00	57.0 PK	74.0	-17.0	1.11 H	296	40.4	16.6
7	11060.00	43.1 AV	54.0	-10.9	1.11 H	296	26.5	16.6

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	57.3 PK	74.0	-16.7	2.90 V	232	54.5	2.8
2	5460.00	44.6 AV	54.0	-9.4	2.90 V	232	41.8	2.8
3	#5470.00	58.9 PK	68.2	-9.3	2.90 V	232	56.1	2.8
4	*5530.00	104.0 PK			2.90 V	232	67.0	37.0
5	*5530.00	90.4 AV			2.90 V	232	53.4	37.0
6	11060.00	56.3 PK	74.0	-17.7	1.46 V	339	39.7	16.6
7	11060.00	43.4 AV	54.0	-10.6	1.46 V	339	26.8	16.6

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11ax (HE80)	Channel	CH 122 : 5610 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5610.00	95.1 PK			1.38 H	186	58.1	37.0
2	*5610.00	82.0 AV			1.38 H	186	45.0	37.0
3	#5725.00	51.2 PK	68.2	-17.0	1.38 H	186	48.2	3.0
4	11220.00	56.0 PK	74.0	-18.0	1.12 H	295	40.1	15.9
5	11220.00	42.5 AV	54.0	-11.5	1.12 H	295	26.6	15.9
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5610.00	104.2 PK			2.50 V	233	67.2	37.0
2	*5610.00	91.1 AV			2.50 V	233	54.1	37.0
3	#5725.00	50.9 PK	68.2	-17.3	2.50 V	233	47.9	3.0
4	11220.00	55.6 PK	74.0	-18.4	1.46 V	348	39.7	15.9
5	11220.00	42.3 AV	54.0	-11.7	1.46 V	348	26.4	15.9

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11ax (HE80)	Channel	CH 138 : 5690 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5690.00	94.3 PK			1.44 H	185	57.1	37.2
2	*5690.00	81.8 AV			1.44 H	185	44.6	37.2
3	#5850.00	50.4 PK	68.2	-17.8	1.44 H	185	46.9	3.5
4	11380.00	56.2 PK	74.0	-17.8	1.01 H	292	39.7	16.5
5	11380.00	43.3 AV	54.0	-10.7	1.01 H	292	26.8	16.5
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5690.00	103.6 PK			2.59 V	239	66.4	37.2
2	*5690.00	91.0 AV			2.59 V	239	53.8	37.2
3	#5850.00	51.8 PK	68.2	-16.4	2.59 V	239	48.3	3.5
4	11380.00	56.5 PK	74.0	-17.5	1.44 V	342	40.0	16.5
5	11380.00	43.2 AV	54.0	-10.8	1.44 V	342	26.7	16.5

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11ax (HE80)	Channel	CH 155 : 5775 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5603.20	50.9 PK	68.2	-17.3	1.46 H	181	48.2	2.7
2	*5775.00	95.0 PK			1.46 H	181	57.5	37.5
3	*5775.00	81.5 AV			1.46 H	181	44.0	37.5
4	#5996.00	50.4 PK	68.2	-17.8	1.46 H	181	47.0	3.4
5	11550.00	55.5 PK	74.0	-18.5	1.13 H	286	39.9	15.6
6	11550.00	42.4 AV	54.0	-11.6	1.13 H	286	26.8	15.6
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5609.60	50.3 PK	68.2	-17.9	2.79 V	230	47.6	2.7
2	*5775.00	104.1 PK			2.79 V	230	66.6	37.5
3	*5775.00	90.6 AV			2.79 V	230	53.1	37.5
4	#5926.40	50.6 PK	68.2	-17.6	2.79 V	230	47.2	3.4
5	11550.00	55.3 PK	74.0	-18.7	1.33 V	345	39.7	15.6
6	11550.00	42.3 AV	54.0	-11.7	1.33 V	345	26.7	15.6

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

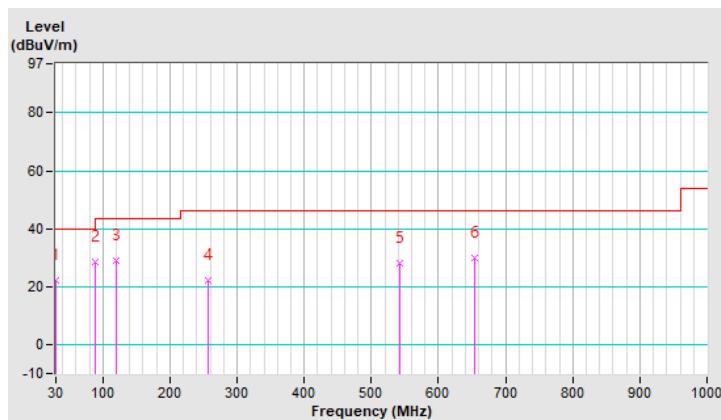
30 MHz ~ 1 GHz Worst-Case Data:

RF Mode	TX 802.11ax (HE80)	Channel	CH 106 : 5530 MHz
Frequency Range	30MHz ~ 1GHz	Detector Function	Quasi-Peak (QP)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	30.97	22.4 QP	40.0	-17.6	1.00 H	53	33.0	-10.6
2	88.20	28.6 QP	43.5	-14.9	2.00 H	274	42.9	-14.3
3	120.21	28.8 QP	43.5	-14.7	1.00 H	16	39.6	-10.8
4	256.01	22.1 QP	46.0	-23.9	1.25 H	159	30.5	-8.4
5	543.13	28.1 QP	46.0	-17.9	1.00 H	128	30.0	-1.9
6	653.71	29.7 QP	46.0	-16.3	1.50 H	312	29.4	0.3

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30MHz~1000MHz.
5. The emission levels were very low against the limit of frequency range 9kHz~30MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.

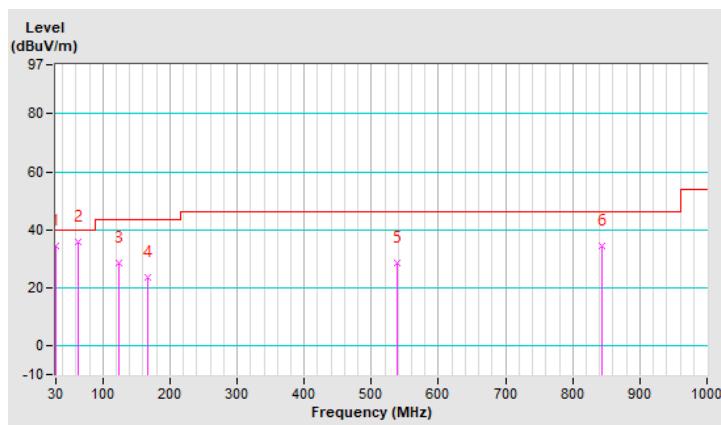


RF Mode	TX 802.11ax (HE80)	Channel	CH 106 : 5530 MHz
Frequency Range	30MHz ~ 1GHz	Detector Function	Quasi-Peak (QP)

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	30.00	34.5 QP	40.0	-5.5	1.25 V	312	44.8	-10.3
2	63.95	35.6 QP	40.0	-4.4	1.00 V	139	45.5	-9.9
3	124.09	28.6 QP	43.5	-14.9	2.00 V	133	39.0	-10.4
4	167.74	23.5 QP	43.5	-20.0	1.00 V	48	32.0	-8.5
5	539.25	28.5 QP	46.0	-17.5	1.50 V	73	30.5	-2.0
6	843.83	34.5 QP	46.0	-11.5	1.00 V	21	30.7	3.8

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30MHz~1000MHz.
5. The emission levels were very low against the limit of frequency range 9kHz~30MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.



4.2 Conducted Emission Measurement

4.2.1 Limits of Conducted Emission Measurement

Frequency (MHz)	Conducted Limit (dBuV)	
	Quasi-Peak	Average
0.15 - 0.5	66 - 56	56 - 46
0.50 - 5.0	56	46
5.0 - 30.0	60	50

Note: 1. The lower limit shall apply at the transition frequencies.
 2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50 MHz.

4.2.2 Test Instruments

Description & Manufacturer	Model No.	Serial No.	Date of Calibration	Due Date of Calibration
Test Receiver ROHDE & SCHWARZ	ESR3	102783	Jan. 06, 2021	Jan. 05, 2022
RF signal cable (with 10dB PAD) Woken	5D-FB	Cable-cond2-01	Sep. 04, 2020	Sep. 03, 2021
V-LISN SCHWARZBECK (EUT)	NNBL 8226-2	8226-142	Jul. 31, 2020	Jul. 30, 2021
LISN/AMN ROHDE & SCHWARZ (Peripheral)	ESH3-Z5	100312	Aug. 18, 2020	Aug. 17, 2021
Software ADT	BV ADT_Cond_V7.3.7.4	NA	NA	NA

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 HwaYa Shielded Room 2 (Conduction 2).
 3. The VCCI Site Registration No. is C-12047.

4.2.3 Test Procedures

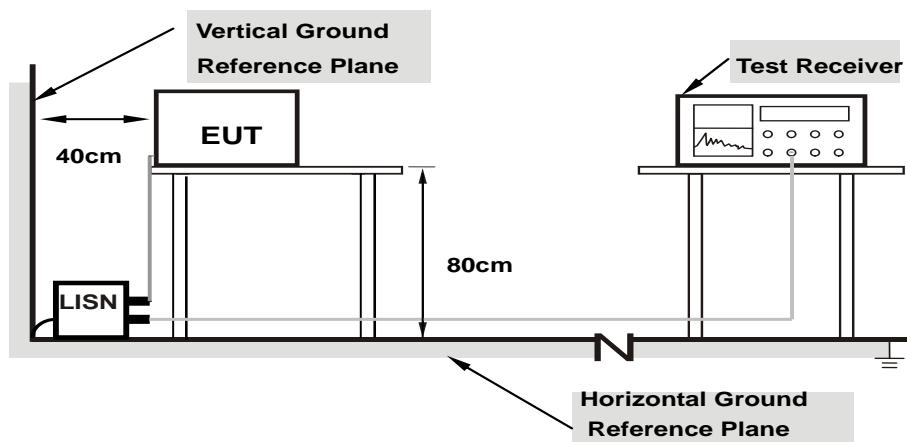
- The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.
- Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
- The frequency range from 150 kHz to 30 MHz was searched. Emission levels under (Limit -20 dB) was not recorded.

Note: All modes of operation were investigated and the worst-case emissions are reported.

4.2.4 Deviation from Test Standard

No deviation.

4.2.5 Test Setup



Note:

- Support units were connected to second LISN.
- Both of LISNs (AMN) are 80 cm from EUT and at least 80 cm from other units and other metal planes

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

4.2.6 EUT Operating Conditions

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

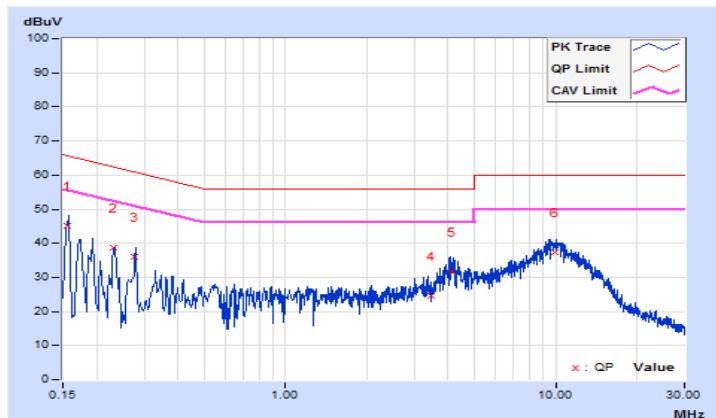
4.2.7 Test Results

Frequency Range	150kHz ~ 30MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	120Vac, 60Hz	Environmental Conditions	25°C, 75%RH
Tested by	Rex Wang	Test Date	2021/1/27

No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15522	9.71	35.28	18.54	44.99	28.25	65.72	55.72	-20.73	-27.47
2	0.22985	9.75	29.08	16.08	38.83	25.83	62.46	52.46	-23.63	-26.63
3	0.27494	9.76	26.32	11.84	36.08	21.60	60.97	50.97	-24.89	-29.37
4	3.47400	9.99	14.70	5.61	24.69	15.60	56.00	46.00	-31.31	-30.40
5	4.11000	10.01	21.78	11.35	31.79	21.36	56.00	46.00	-24.21	-24.64
6	9.89000	10.14	27.38	18.86	37.52	29.00	60.00	50.00	-22.48	-21.00

Remarks:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level – Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value

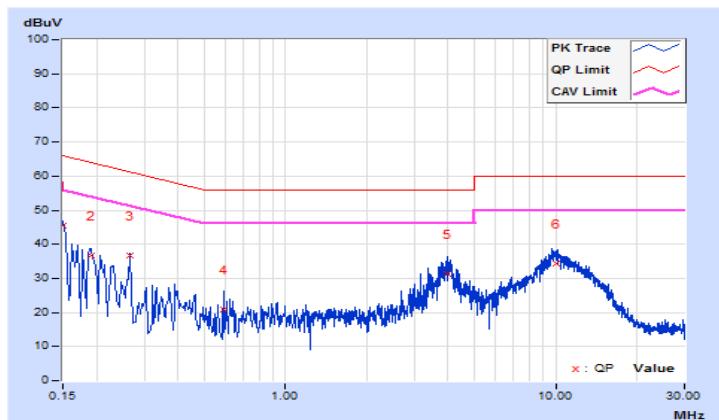


Frequency Range	150kHz ~ 30MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	120Vac, 60Hz	Environmental Conditions	23°C, 67%RH
Tested by	Rex Wang	Test Date	2021/1/27

Phase Of Power : Neutral (N)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15000	9.70	35.79	20.18	45.49	29.88	66.00	56.00	-20.51	-26.12
2	0.19000	9.73	26.97	15.43	36.70	25.16	64.04	54.04	-27.34	-28.88
3	0.26429	9.74	26.91	15.30	36.65	25.04	61.30	51.30	-24.65	-26.26
4	0.58872	9.78	11.01	0.91	20.79	10.69	56.00	46.00	-35.21	-35.31
5	3.95400	10.01	21.34	8.80	31.35	18.81	56.00	46.00	-24.65	-27.19
6	9.99800	10.15	24.20	16.36	34.35	26.51	60.00	50.00	-25.65	-23.49

Remarks:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level – Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value



4.3 Transmit Power Measurement

4.3.1 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 \leq 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 $N_{ANT} \leq 4$;

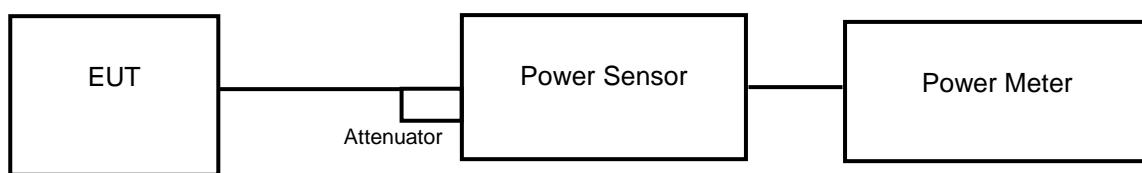
Array Gain = 0 dB (i.e., no array gain) for channel widths ≥ 40 MHz for any N_{ANT} ;

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

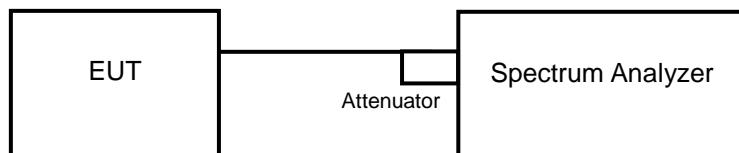
For power measurements on all other devices: Array Gain = $10 \log(N_{ANT}/N_{SS})$ dB.

4.3.2 Test Setup

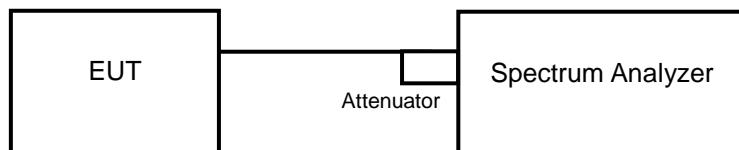
<Power Output Measurement>



or



<26 dB Bandwidth>



4.3.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.3.4 Test Procedure

Average Power Measurement

<802.11a, 802.11ax (HE20), 802.11ax (HE40)>

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.

<802.11ax (HE80)>

- a. Set span to encompass the entire 26 dB EBW (or, alternatively, the entire 99 % occupied bandwidth) of the signal.
- b. Set sweep trigger to “free run”.
- c. Set RBW = 1 MHz.
- d. Set VBW \geq 3 MHz
- e. Number of points in sweep \geq 2 Span / RBW.
- f. Sweep time \leq (number of points in sweep) * T
- g. Using emission bandwidth to determine the frequency span for integration the channel bandwidth.
- h. Detector = RMS.
- i. Trace mode = max hold.
- j. Allow max hold to run for at least 60 seconds, or longer as needed to allow the trace to stabilize.
- k. Compute power by integrating the spectrum across the EBW (or, alternatively, the entire 99% occupied bandwidth) of the signal using the instrument's band power measurement function with band limits set equal to the EBW (or occupied bandwidth) band edges. If the instrument does not have a band power function, sum the spectrum levels (in power units) at 1 MHz intervals extending across the EBW (or, alternatively, the entire 99% occupied bandwidth) of the spectrum

26 dB Bandwidth

- a. Set RBW = approximately 1 % of the emission bandwidth.
- b. Set the VBW \geq 3 x 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 %.

4.3.5 Deviation from Test Standard

No deviation.

4.3.6 EUT Operating Conditions

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

4.3.7 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	12.87	14.71	48.944	16.90	24	Pass
40	5200	12.92	14.63	48.629	16.87	24	Pass
48	5240	12.63	14.95	49.584	16.95	24	Pass
52	5260	13.39	14.88	52.588	17.21	23.83	Pass
60	5300	13.47	14.86	52.853	17.23	23.81	Pass
64	5320	14.05	14.81	55.679	17.46	23.86	Pass
100	5500	13.47	14.95	53.494	17.28	23.81	Pass
116	5580	13.56	14.97	54.104	17.33	23.78	Pass
140	5700	13.40	14.81	52.147	17.17	23.78	Pass
144	5720 (U-NII-2C)	13.09	13.68	43.705	16.41	22.59	Pass
144	5720 (U-NII-3)	6.29	7.29	9.614	9.83	30	Pass
149	5745	13.52	14.66	51.732	17.14	30	Pass
157	5785	13.54	14.84	53.073	17.25	30	Pass
165	5825	12.65	14.61	47.315	16.75	30	Pass

Note:

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

Chain 0

1. $11 \text{ dBm} + 10\log(19.38) = 23.87 \text{ dBm} < 24 \text{ dBm}$.
2. $11 \text{ dBm} + 10\log(19.32) = 23.86 \text{ dBm} < 24 \text{ dBm}$.
3. $11 \text{ dBm} + 10\log(19.35) = 23.87 \text{ dBm} < 24 \text{ dBm}$.
4. $11 \text{ dBm} + 10\log(19.34) = 23.86 \text{ dBm} < 24 \text{ dBm}$.
5. $11 \text{ dBm} + 10\log(19.34) = 23.86 \text{ dBm} < 24 \text{ dBm}$.
6. $11 \text{ dBm} + 10\log(19.28) = 23.85 \text{ dBm} < 24 \text{ dBm}$.
7. $11 \text{ dBm} + 10\log(14.73) = 22.68 \text{ dBm} < 24 \text{ dBm}$.

Chain 1

1. $11 \text{ dBm} + 10\log(19.21) = 23.83 \text{ dBm} < 24 \text{ dBm}$.
2. $11 \text{ dBm} + 10\log(19.1) = 23.81 \text{ dBm} < 24 \text{ dBm}$.
3. $11 \text{ dBm} + 10\log(19.32) = 23.86 \text{ dBm} < 24 \text{ dBm}$.
4. $11 \text{ dBm} + 10\log(19.12) = 23.81 \text{ dBm} < 24 \text{ dBm}$.
5. $11 \text{ dBm} + 10\log(19.01) = 23.78 \text{ dBm} < 24 \text{ dBm}$.
6. $11 \text{ dBm} + 10\log(18.99) = 23.78 \text{ dBm} < 24 \text{ dBm}$.
7. $11 \text{ dBm} + 10\log(14.44) = 22.59 \text{ dBm} < 24 \text{ dBm}$.

802.11ax (HE20)

Channel	Frequency (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
36	5180	12.92	14.91	50.563	17.04	24	Pass
40	5200	12.64	14.95	49.626	16.96	24	Pass
48	5240	12.98	14.97	51.266	17.10	24	Pass
52	5260	12.54	14.97	49.352	16.93	24	Pass
60	5300	13.16	14.94	51.89	17.15	24	Pass
64	5320	14.05	14.89	56.242	17.50	24	Pass
100	5500	13.15	14.98	52.131	17.17	24	Pass
116	5580	12.97	14.97	51.22	17.09	24	Pass
140	5700	13.12	14.86	51.131	17.09	24	Pass
144	5720 (U-NII-2C)	13.68	13.49	45.67	16.60	23.19	Pass
144	5720 (U-NII-3)	7.91	7.68	12.042	10.81	30	Pass
149	5745	13.26	14.82	51.523	17.12	30	Pass
157	5785	13.77	14.81	54.092	17.33	30	Pass
165	5825	12.97	14.98	51.293	17.10	30	Pass

Note:

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

Chain 0

1. $11 \text{ dBm} + 10\log(21.02) = 24.22 \text{ dBm} > 24 \text{ dBm.}$
2. $11 \text{ dBm} + 10\log(21.06) = 24.23 \text{ dBm} > 24 \text{ dBm.}$
3. $11 \text{ dBm} + 10\log(20.60) = 24.13 \text{ dBm} > 24 \text{ dBm.}$
4. $11 \text{ dBm} + 10\log(21.08) = 24.23 \text{ dBm} > 24 \text{ dBm.}$
5. $11 \text{ dBm} + 10\log(21.06) = 24.23 \text{ dBm} > 24 \text{ dBm.}$
6. $11 \text{ dBm} + 10\log(20.76) = 24.17 \text{ dBm} > 24 \text{ dBm.}$
7. $11 \text{ dBm} + 10\log(16.59) = 23.19 \text{ dBm} < 24 \text{ dBm.}$

Chain 1

1. $11 \text{ dBm} + 10\log(21.11) = 24.24 \text{ dBm} > 24 \text{ dBm.}$
2. $11 \text{ dBm} + 10\log(21.06) = 24.23 \text{ dBm} > 24 \text{ dBm.}$
3. $11 \text{ dBm} + 10\log(20.61) = 24.14 \text{ dBm} > 24 \text{ dBm.}$
4. $11 \text{ dBm} + 10\log(21.09) = 24.24 \text{ dBm} > 24 \text{ dBm.}$
5. $11 \text{ dBm} + 10\log(21.02) = 24.22 \text{ dBm} > 24 \text{ dBm.}$
6. $11 \text{ dBm} + 10\log(20.71) = 24.16 \text{ dBm} > 24 \text{ dBm.}$
7. $11 \text{ dBm} + 10\log(16.57) = 23.19 \text{ dBm} < 24 \text{ dBm.}$

802.11ax (HE40)

Channel	Frequency (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
38	5190	13.61	14.94	54.15	17.34	24	Pass
46	5230	13.74	14.96	54.992	17.40	24	Pass
54	5270	12.61	14.97	49.644	16.96	24	Pass
62	5310	13.90	14.91	55.521	17.44	24	Pass
102	5510	13.22	14.92	52.035	17.16	24	Pass
110	5550	13.12	14.95	51.772	17.14	24	Pass
134	5670	13.66	14.98	54.705	17.38	24	Pass
142	5710 (U-NII-2C)	14.45	13.94	52.635	17.21	24	Pass
142	5710 (U-NII-3)	3.78	3.37	4.561	6.59	30	Pass
151	5755	13.45	14.86	52.751	17.22	30	Pass
159	5795	13.64	14.92	54.166	17.34	30	Pass

Note:

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

Chain 0

1. $11 \text{ dBm} + 10\log(41.55) = 27.19 \text{ dBm} > 24 \text{ dBm.}$
2. $11 \text{ dBm} + 10\log(41.90) = 27.22 \text{ dBm} > 24 \text{ dBm.}$
3. $11 \text{ dBm} + 10\log(41.66) = 27.20 \text{ dBm} > 24 \text{ dBm.}$
4. $11 \text{ dBm} + 10\log(41.62) = 27.19 \text{ dBm} > 24 \text{ dBm.}$
5. $11 \text{ dBm} + 10\log(41.67) = 27.20 \text{ dBm} > 24 \text{ dBm.}$
6. $11 \text{ dBm} + 10\log(35.87) = 26.55 \text{ dBm} > 24 \text{ dBm.}$

Chain 1

1. $11 \text{ dBm} + 10\log(41.60) = 27.18 \text{ dBm} > 24 \text{ dBm.}$
2. $11 \text{ dBm} + 10\log(41.76) = 27.20 \text{ dBm} > 24 \text{ dBm.}$
3. $11 \text{ dBm} + 10\log(41.78) = 27.19 \text{ dBm} > 24 \text{ dBm.}$
4. $11 \text{ dBm} + 10\log(41.60) = 27.19 \text{ dBm} > 24 \text{ dBm.}$
5. $11 \text{ dBm} + 10\log(41.78) = 27.19 \text{ dBm} > 24 \text{ dBm.}$
6. $11 \text{ dBm} + 10\log(35.80) = 26.53 \text{ dBm} > 24 \text{ dBm.}$

802.11ax (HE80)

Channel	Frequency (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
42	5210	13.85	14.97	55.671	17.46	24	Pass
58	5290	12.86	14.96	50.653	17.05	24	Pass
106	5530	12.98	14.74	49.646	16.96	24	Pass
122	5610	12.77	14.80	49.123	16.91	24	Pass
138	5690 (U-NII-2C)	14.51	14.34	55.413	17.44	24	Pass
138	5690 (U-NII-3)	0.04	0.11	2.035	3.09	30	Pass
155	5775	13.59	14.92	53.902	17.32	30	Pass

Note:

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

Chain 0

1. 11 dBm + 10log (83.29) = 30.20 dBm > 24 dBm.
2. 11 dBm + 10log (83.01) = 30.19 dBm > 24 dBm.
3. 11 dBm + 10log (83.00) = 30.19 dBm > 24 dBm.
4. 11 dBm + 10log (76.34) = 29.82 dBm > 24 dBm.

Chain 1

1. 11 dBm + 10log (83.21) = 30.20 dBm > 24 dBm.
2. 11 dBm + 10log (83.04) = 30.19 dBm > 24 dBm.
3. 11 dBm + 10log (83.30) = 30.21 dBm > 24 dBm.
4. 11 dBm + 10log (76.39) = 29.83 dBm > 24 dBm.

26 dB Bandwidth:
802.11a

Channel	Frequency (MHz)	26 dBc Bandwidth (MHz)	
		Chain 0	Chain 1
36	5180	19.25	19.09
40	5200	19.39	19.16
48	5240	19.30	19.24
52	5260	19.38	19.21
60	5300	19.32	19.10
64	5320	19.35	19.32
100	5500	19.34	19.12
116	5580	19.34	19.01
140	5700	19.28	18.99
144	5720 (U-NII-2C)	14.73	14.44
144	5720 (U-NII-3)	4.49	4.39

802.11ax (HE20)

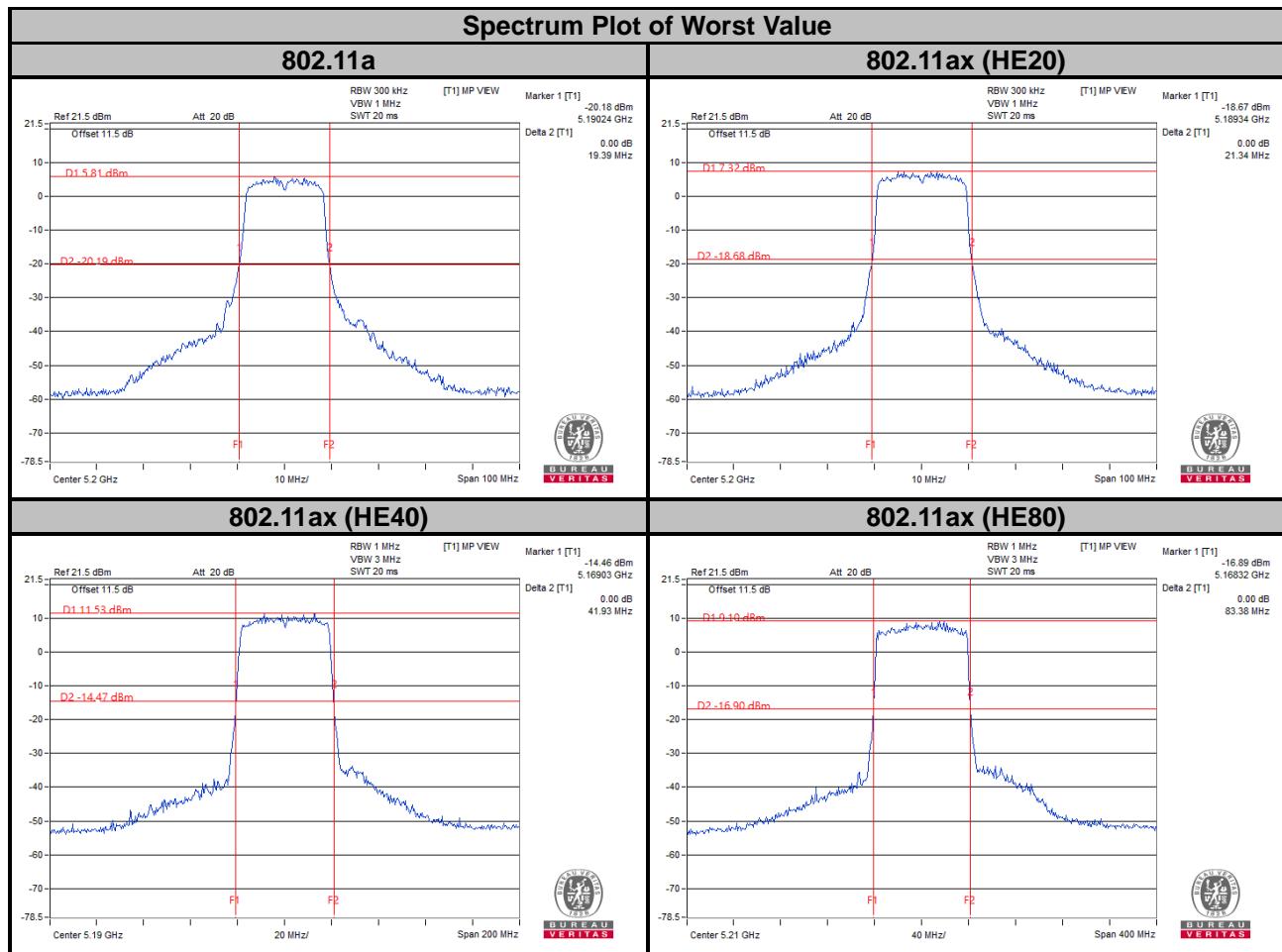
Channel	Frequency (MHz)	26 dBc Bandwidth (MHz)	
		Chain 0	Chain 1
36	5180	21.16	21.20
40	5200	21.23	21.34
48	5240	21.03	21.34
52	5260	21.13	21.28
60	5300	21.16	21.14
64	5320	21.23	21.20
100	5500	21.32	21.27
116	5580	21.17	21.28
140	5700	21.16	21.27
144	5720 (U-NII-2C)	15.48	15.59
144	5720 (U-NII-3)	5.40	5.48

802.11ax (HE40)

Channel	Frequency (MHz)	26 dBc Bandwidth (MHz)	
		Chain 0	Chain 1
38	5190	41.93	41.83
46	5230	41.75	41.77
54	5270	41.55	41.60
62	5310	41.90	41.76
102	5510	41.66	41.78
110	5550	41.62	41.60
134	5670	41.67	41.78
142	5710 (U-NII-2C)	35.87	35.80
142	5710 (U-NII-3)	5.75	5.81

802.11ax (HE80)

Channel	Frequency (MHz)	26 dBc Bandwidth (MHz)	
		Chain 0	Chain 1
42	5210	83.38	83.07
58	5290	83.29	83.21
106	5530	83.01	83.04
122	5610	83.00	83.30
138	5690 (U-NII-2C)	76.34	76.39



Partial RU
802.11ax (HE20)_RU 26 / 0

Channel	Frequency (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
36	5180	4.38	4.58	5.612	7.49	24	Pass
40	5200	4.58	4.61	5.761	7.60	24	Pass
48	5240	4.57	4.62	5.762	7.61	24	Pass
52	5260	4.55	4.68	5.789	7.63	24	Pass
60	5300	4.54	4.55	5.695	7.55	24	Pass
64	5320	4.40	4.49	5.566	7.46	24	Pass
100	5500	4.51	4.58	5.696	7.56	24	Pass
116	5580	4.48	4.62	5.703	7.56	24	Pass
140	5700	4.50	4.55	5.669	7.54	24	Pass
144	5720	4.37	4.43	5.509	7.41	23.19	Pass
149	5745	4.71	4.85	6.013	7.79	30	Pass
157	5785	4.68	4.83	5.979	7.77	30	Pass
165	5825	4.70	4.79	5.964	7.76	30	Pass

Note:
For U-NII-2A, U-NII-2C Band:
Chain 0

1. 11 dBm + 10log (21.02) = 24.22 dBm > 24 dBm.
2. 11 dBm + 10log (21.06) = 24.23 dBm > 24 dBm.
3. 11 dBm + 10log (20.60) = 24.13 dBm > 24 dBm.
4. 11 dBm + 10log (21.08) = 24.23 dBm > 24 dBm.
5. 11 dBm + 10log (21.06) = 24.23 dBm > 24 dBm.
6. 11 dBm + 10log (20.76) = 24.17 dBm > 24 dBm.
7. 11 dBm + 10log (16.59) = 23.19 dBm < 24 dBm.

Chain 1

1. 11 dBm + 10log (21.11) = 24.24 dBm > 24 dBm.
2. 11 dBm + 10log (21.06) = 24.23 dBm > 24 dBm.
3. 11 dBm + 10log (20.61) = 24.14 dBm > 24 dBm.
4. 11 dBm + 10log (21.09) = 24.24 dBm > 24 dBm.
5. 11 dBm + 10log (21.02) = 24.22 dBm > 24 dBm.
6. 11 dBm + 10log (20.71) = 24.16 dBm > 24 dBm.
7. 11 dBm + 10log (16.57) = 23.19 dBm < 24 dBm.

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Channel	Frequency (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
36	5180	7.75	7.89	12.108	10.83	24	Pass
40	5200	7.70	7.75	11.845	10.74	24	Pass
48	5240	7.62	7.71	11.683	10.68	24	Pass
52	5260	7.63	7.69	11.669	10.67	24	Pass
60	5300	7.56	7.62	11.483	10.60	24	Pass
64	5320	7.75	7.83	12.024	10.80	24	Pass
100	5500	7.72	7.81	11.955	10.78	24	Pass
116	5580	7.70	7.88	12.026	10.80	24	Pass
140	5700	7.83	7.92	12.262	10.89	24	Pass
144	5720	7.79	7.86	12.121	10.84	23.20	Pass
149	5745	7.70	7.75	11.845	10.74	30	Pass
157	5785	7.65	7.70	11.709	10.69	30	Pass
165	5825	7.75	7.69	11.832	10.73	30	Pass

Note:

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

Chain 0

1. 11 dBm + 10log (21.65) = 24.35 dBm > 24 dBm.
2. 11 dBm + 10log (21.63) = 24.35 dBm > 24 dBm.
3. 11 dBm + 10log (21.21) = 24.26 dBm > 24 dBm.
4. 11 dBm + 10log (21.84) = 24.39 dBm > 24 dBm.
5. 11 dBm + 10log (21.76) = 24.37 dBm > 24 dBm.
6. 11 dBm + 10log (21.03) = 24.22 dBm > 24 dBm.
7. 11 dBm + 10log (16.62) = 23.20 dBm < 24 dBm.

Chain 1

1. 11 dBm + 10log (21.76) = 24.37 dBm > 24 dBm.
2. 11 dBm + 10log (21.66) = 24.35 dBm > 24 dBm.
3. 11 dBm + 10log (20.79) = 24.17 dBm > 24 dBm.
4. 11 dBm + 10log (21.77) = 24.37 dBm > 24 dBm.
5. 11 dBm + 10log (21.61) = 24.34 dBm > 24 dBm.
6. 11 dBm + 10log (21.03) = 24.22 dBm > 24 dBm.
7. 11 dBm + 10log (16.72) = 23.23 dBm < 24 dBm.

802.11ax (HE20)_RU 106 / 53

Channel	Frequency (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
36	5180	11.11	11.23	26.186	14.18	24	Pass
40	5200	11.05	11.18	25.857	14.13	24	Pass
48	5240	11.03	11.16	25.738	14.11	24	Pass
52	5260	11.12	11.28	26.37	14.21	24	Pass
60	5300	11.10	11.20	26.065	14.16	24	Pass
64	5320	11.04	11.17	25.798	14.12	24	Pass
100	5500	11.06	11.23	26.038	14.16	24	Pass
116	5580	11.13	11.27	26.369	14.21	24	Pass
140	5700	11.05	11.22	25.978	14.15	24	Pass
144	5720	11.02	11.10	25.53	14.07	23.12	Pass
149	5745	11.28	11.48	27.488	14.39	30	Pass
157	5785	11.35	11.42	27.513	14.40	30	Pass
165	5825	11.15	11.50	27.157	14.34	30	Pass

Note:

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

Chain 0

1. 11 dBm + 10log (21.58) = 24.34 dBm > 24 dBm.
2. 11 dBm + 10log (21.68) = 24.36 dBm > 24 dBm.
3. 11 dBm + 10log (21.39) = 24.30 dBm > 24 dBm.
4. 11 dBm + 10log (21.46) = 24.31 dBm > 24 dBm.
5. 11 dBm + 10log (21.97) = 24.41 dBm > 24 dBm.
6. 11 dBm + 10log (21.82) = 24.38 dBm > 24 dBm.
7. 11 dBm + 10log (16.35) = 23.13 dBm < 24 dBm.

Chain 1

1. 11 dBm + 10log (21.56) = 24.33 dBm > 24 dBm.
2. 11 dBm + 10log (21.62) = 24.34 dBm > 24 dBm.
3. 11 dBm + 10log (21.19) = 24.26 dBm > 24 dBm.
4. 11 dBm + 10log (21.48) = 24.32 dBm > 24 dBm.
5. 11 dBm + 10log (21.41) = 24.30 dBm > 24 dBm.
6. 11 dBm + 10log (21.53) = 24.33 dBm > 24 dBm.
7. 11 dBm + 10log (16.33) = 23.12 dBm < 24 dBm.

802.11ax (HE40)_RU 26 / 0

Channel	Frequency (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
38	5190	2.34	2.51	3.496	5.44	24	Pass
46	5230	2.36	2.48	3.492	5.43	24	Pass
54	5270	2.24	2.32	3.381	5.29	24	Pass
62	5310	2.15	2.29	3.335	5.23	24	Pass
102	5510	2.32	2.55	3.505	5.45	24	Pass
110	5550	2.31	2.43	3.452	5.38	24	Pass
134	5670	2.35	2.48	3.488	5.43	24	Pass
142	5710	2.18	2.37	3.378	5.29	24	Pass
151	5755	2.12	2.62	3.457	5.39	30	Pass
159	5795	2.30	2.45	3.456	5.39	30	Pass

Note:

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

Chain 0

1. $11 \text{ dBm} + 10\log(42.58) = 27.29 \text{ dBm} > 24 \text{ dBm}$.
2. $11 \text{ dBm} + 10\log(41.74) = 27.20 \text{ dBm} > 24 \text{ dBm}$.
3. $11 \text{ dBm} + 10\log(41.49) = 27.17 \text{ dBm} > 24 \text{ dBm}$.
4. $11 \text{ dBm} + 10\log(42.35) = 27.26 \text{ dBm} > 24 \text{ dBm}$.
5. $11 \text{ dBm} + 10\log(42.22) = 27.25 \text{ dBm} > 24 \text{ dBm}$.
6. $11 \text{ dBm} + 10\log(38.02) = 26.80 \text{ dBm} > 24 \text{ dBm}$.

Chain 1

1. $11 \text{ dBm} + 10\log(42.51) = 27.28 \text{ dBm} > 24 \text{ dBm}$.
2. $11 \text{ dBm} + 10\log(42.51) = 27.28 \text{ dBm} > 24 \text{ dBm}$.
3. $11 \text{ dBm} + 10\log(42.36) = 27.26 \text{ dBm} > 24 \text{ dBm}$.
4. $11 \text{ dBm} + 10\log(42.25) = 27.25 \text{ dBm} > 24 \text{ dBm}$.
5. $11 \text{ dBm} + 10\log(42.47) = 27.28 \text{ dBm} > 24 \text{ dBm}$.
6. $11 \text{ dBm} + 10\log(37.99) = 26.79 \text{ dBm} > 24 \text{ dBm}$.

802.11ax (HE40)_RU 52 / 37

Channel	Frequency (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
38	5190	5.58	5.75	7.372	8.68	24	Pass
46	5230	5.62	5.70	7.363	8.67	24	Pass
54	5270	5.58	5.65	7.287	8.63	24	Pass
62	5310	5.51	5.59	7.179	8.56	24	Pass
102	5510	5.48	5.53	7.105	8.52	24	Pass
110	5550	5.52	5.76	7.332	8.65	24	Pass
134	5670	5.43	5.70	7.207	8.58	24	Pass
142	5710	5.33	5.65	7.085	8.50	24	Pass
151	5755	5.52	5.73	7.306	8.64	30	Pass
159	5795	5.40	5.68	7.166	8.55	30	Pass

Note:

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

Chain 0

1. $11 \text{ dBm} + 10\log(38.61) = 26.86 \text{ dBm} > 24 \text{ dBm.}$
2. $11 \text{ dBm} + 10\log(38.08) = 26.80 \text{ dBm} > 24 \text{ dBm.}$
3. $11 \text{ dBm} + 10\log(38.26) = 26.82 \text{ dBm} > 24 \text{ dBm.}$
4. $11 \text{ dBm} + 10\log(38.26) = 26.82 \text{ dBm} > 24 \text{ dBm.}$
5. $11 \text{ dBm} + 10\log(38.26) = 26.82 \text{ dBm} > 24 \text{ dBm.}$
6. $11 \text{ dBm} + 10\log(35.52) = 26.50 \text{ dBm} > 24 \text{ dBm.}$

Chain 1

1. $11 \text{ dBm} + 10\log(38.08) = 26.80 \text{ dBm} > 24 \text{ dBm.}$
2. $11 \text{ dBm} + 10\log(38.26) = 26.82 \text{ dBm} > 24 \text{ dBm.}$
3. $11 \text{ dBm} + 10\log(38.44) = 26.84 \text{ dBm} > 24 \text{ dBm.}$
4. $11 \text{ dBm} + 10\log(38.44) = 26.84 \text{ dBm} > 24 \text{ dBm.}$
5. $11 \text{ dBm} + 10\log(38.08) = 26.80 \text{ dBm} > 24 \text{ dBm.}$
6. $11 \text{ dBm} + 10\log(35.52) = 26.50 \text{ dBm} > 24 \text{ dBm.}$

802.11ax (HE40)_RU 106 / 53

Channel	Frequency (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
38	5190	9.01	9.21	16.298	12.12	24	Pass
46	5230	8.97	9.10	16.017	12.05	24	Pass
54	5270	9.02	9.26	16.413	12.15	24	Pass
62	5310	8.99	9.13	16.11	12.07	24	Pass
102	5510	9.03	9.15	16.221	12.10	24	Pass
110	5550	9.02	9.19	16.278	12.12	24	Pass
134	5670	9.04	9.17	16.277	12.12	24	Pass
142	5710	8.98	9.12	16.073	12.06	24	Pass
151	5755	9.01	9.23	16.337	12.13	30	Pass
159	5795	8.92	9.10	15.927	12.02	30	Pass

Note:

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

Chain 0

1. $11 \text{ dBm} + 10\log(42.51) = 27.28 \text{ dBm} > 24 \text{ dBm}$.
2. $11 \text{ dBm} + 10\log(43.38) = 27.37 \text{ dBm} > 24 \text{ dBm}$.
3. $11 \text{ dBm} + 10\log(42.17) = 27.25 \text{ dBm} > 24 \text{ dBm}$.
4. $11 \text{ dBm} + 10\log(42.31) = 27.26 \text{ dBm} > 24 \text{ dBm}$.
5. $11 \text{ dBm} + 10\log(42.99) = 27.33 \text{ dBm} > 24 \text{ dBm}$.
6. $11 \text{ dBm} + 10\log(37.71) = 26.76 \text{ dBm} > 24 \text{ dBm}$.

Chain 1

1. $11 \text{ dBm} + 10\log(43.55) = 27.38 \text{ dBm} > 24 \text{ dBm}$.
2. $11 \text{ dBm} + 10\log(43.09) = 27.34 \text{ dBm} > 24 \text{ dBm}$.
3. $11 \text{ dBm} + 10\log(42.48) = 27.28 \text{ dBm} > 24 \text{ dBm}$.
4. $11 \text{ dBm} + 10\log(42.49) = 27.28 \text{ dBm} > 24 \text{ dBm}$.
5. $11 \text{ dBm} + 10\log(42.63) = 27.29 \text{ dBm} > 24 \text{ dBm}$.
6. $11 \text{ dBm} + 10\log(37.61) = 26.75 \text{ dBm} > 24 \text{ dBm}$.

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Channel	Frequency (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
38	5190	12.13	12.33	33.431	15.24	24	Pass
46	5230	12.10	12.30	33.201	15.21	24	Pass
54	5270	12.15	12.38	33.704	15.28	24	Pass
62	5310	12.08	12.29	33.087	15.20	24	Pass
102	5510	12.23	12.35	33.89	15.30	24	Pass
110	5550	12.08	12.24	32.893	15.17	24	Pass
134	5670	12.13	12.39	33.669	15.27	24	Pass
142	5710	12.11	12.34	33.395	15.24	24	Pass
151	5755	12.12	12.30	33.275	15.22	30	Pass
159	5795	12.05	12.28	32.937	15.18	30	Pass

Note:

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

Chain 0

1. $11 \text{ dBm} + 10\log(42.59) = 27.29 \text{ dBm} > 24 \text{ dBm}$.
2. $11 \text{ dBm} + 10\log(43.17) = 27.35 \text{ dBm} > 24 \text{ dBm}$.
3. $11 \text{ dBm} + 10\log(43.69) = 27.40 \text{ dBm} > 24 \text{ dBm}$.
4. $11 \text{ dBm} + 10\log(42.85) = 27.31 \text{ dBm} > 24 \text{ dBm}$.
5. $11 \text{ dBm} + 10\log(43.03) = 27.33 \text{ dBm} > 24 \text{ dBm}$.
6. $11 \text{ dBm} + 10\log(37.56) = 26.74 \text{ dBm} > 24 \text{ dBm}$.

Chain 1

1. $11 \text{ dBm} + 10\log(43.54) = 27.38 \text{ dBm} > 24 \text{ dBm}$.
2. $11 \text{ dBm} + 10\log(42.70) = 27.30 \text{ dBm} > 24 \text{ dBm}$.
3. $11 \text{ dBm} + 10\log(42.84) = 27.31 \text{ dBm} > 24 \text{ dBm}$.
4. $11 \text{ dBm} + 10\log(43.15) = 27.34 \text{ dBm} > 24 \text{ dBm}$.
5. $11 \text{ dBm} + 10\log(42.48) = 27.28 \text{ dBm} > 24 \text{ dBm}$.
6. $11 \text{ dBm} + 10\log(37.51) = 26.74 \text{ dBm} > 24 \text{ dBm}$.

802.11ax (HE80)_RU 26 / 0

Channel	Frequency (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
42	5210	-1.02	-0.94	1.5961	2.03	24	Pass
58	5290	-1.05	-0.91	1.5962	2.03	24	Pass
106	5530	-1.11	-0.89	1.5892	2.01	24	Pass
122	5610	-1.06	-0.87	1.6019	2.05	24	Pass
138	5690	-1.10	-0.96	1.5779	1.98	24	Pass
155	5775	-1.13	-0.99	1.5671	1.95	30	Pass

Note:

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

Chain 0

1. 11 dBm + 10log (89.79) = 30.53 dBm > 24 dBm.
2. 11 dBm + 10log (90.66) = 30.57 dBm > 24 dBm.
3. 11 dBm + 10log (88.96) = 30.49 dBm > 24 dBm.
4. 11 dBm + 10log (78.87) = 29.96 dBm > 24 dBm.

Chain 1

1. 11 dBm + 10log (89.44) = 30.51 dBm > 24 dBm.
2. 11 dBm + 10log (89.76) = 30.53 dBm > 24 dBm.
3. 11 dBm + 10log (88.72) = 30.48 dBm > 24 dBm.
4. 11 dBm + 10log (78.93) = 29.97 dBm > 24 dBm.

802.11ax (HE80)_RU 52 / 37

Channel	Frequency (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
42	5210	2.88	2.96	3.918	5.93	24	Pass
58	5290	2.85	2.90	3.877	5.88	24	Pass
106	5530	2.80	2.89	3.851	5.86	24	Pass
122	5610	2.87	2.94	3.904	5.92	24	Pass
138	5690	2.83	2.91	3.873	5.88	24	Pass
155	5775	2.80	2.86	3.837	5.84	30	Pass

Note:

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

Chain 0

1. 11 dBm + 10log (90.01) = 30.54 dBm > 24 dBm.
2. 11 dBm + 10log (89.90) = 30.53 dBm > 24 dBm.
3. 11 dBm + 10log (88.01) = 30.44 dBm > 24 dBm.
4. 11 dBm + 10log (78.89) = 29.97 dBm > 24 dBm.

Chain 1

1. 11 dBm + 10log (90.52) = 30.56 dBm > 24 dBm.
2. 11 dBm + 10log (89.93) = 30.53 dBm > 24 dBm.
3. 11 dBm + 10log (86.90) = 30.39 dBm > 24 dBm.
4. 11 dBm + 10log (78.83) = 29.96 dBm > 24 dBm.

802.11ax (HE80)_RU 106 / 53

Channel	Frequency (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
42	5210	5.82	5.98	7.782	8.91	24	Pass
58	5290	5.83	5.96	7.773	8.91	24	Pass
106	5530	5.86	5.90	7.745	8.89	24	Pass
122	5610	5.84	5.89	7.719	8.88	24	Pass
138	5690	5.80	5.93	7.719	8.88	24	Pass
155	5775	5.82	5.94	7.746	8.89	30	Pass

Note:

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

Chain 0

1. $11 \text{ dBm} + 10\log(90.07) = 30.54 \text{ dBm} > 24 \text{ dBm}$.
2. $11 \text{ dBm} + 10\log(89.61) = 30.52 \text{ dBm} > 24 \text{ dBm}$.
3. $11 \text{ dBm} + 10\log(88.30) = 30.45 \text{ dBm} > 24 \text{ dBm}$.
4. $11 \text{ dBm} + 10\log(78.94) = 29.97 \text{ dBm} > 24 \text{ dBm}$.

Chain 1

1. $11 \text{ dBm} + 10\log(93.83) = 30.72 \text{ dBm} > 24 \text{ dBm}$.
2. $11 \text{ dBm} + 10\log(90.28) = 30.55 \text{ dBm} > 24 \text{ dBm}$.
3. $11 \text{ dBm} + 10\log(87.59) = 30.42 \text{ dBm} > 24 \text{ dBm}$.
4. $11 \text{ dBm} + 10\log(78.78) = 29.96 \text{ dBm} > 24 \text{ dBm}$.

802.11ax (HE80)_RU 242 / 61

Channel	Frequency (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
42	5210	9.11	9.16	16.388	12.15	24	Pass
58	5290	9.03	9.13	16.183	12.09	24	Pass
106	5530	8.98	9.08	15.998	12.04	24	Pass
122	5610	8.98	9.08	15.998	12.04	24	Pass
138	5690	9.15	9.23	16.598	12.20	24	Pass
155	5775	9.01	9.35	16.572	12.19	30	Pass

Note:

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

Chain 0

1. $11 \text{ dBm} + 10\log(92.91) = 30.68 \text{ dBm} > 24 \text{ dBm}$.
2. $11 \text{ dBm} + 10\log(92.73) = 30.67 \text{ dBm} > 24 \text{ dBm}$.
3. $11 \text{ dBm} + 10\log(89.47) = 30.51 \text{ dBm} > 24 \text{ dBm}$.
4. $11 \text{ dBm} + 10\log(79.81) = 30.02 \text{ dBm} > 24 \text{ dBm}$.

Chain 1

1. $11 \text{ dBm} + 10\log(92.60) = 30.66 \text{ dBm} > 24 \text{ dBm}$.
2. $11 \text{ dBm} + 10\log(93.50) = 30.70 \text{ dBm} > 24 \text{ dBm}$.
3. $11 \text{ dBm} + 10\log(89.99) = 30.54 \text{ dBm} > 24 \text{ dBm}$.
4. $11 \text{ dBm} + 10\log(79.62) = 30.01 \text{ dBm} > 24 \text{ dBm}$.

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Channel	Frequency (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
42	5210	12.12	12.21	32.927	15.18	24	Pass
58	5290	12.03	12.15	32.365	15.10	24	Pass
106	5530	12.11	12.26	33.082	15.20	24	Pass
122	5610	12.03	12.18	32.478	15.12	24	Pass
138	5690	12.06	12.21	32.704	15.15	24	Pass
155	5775	12.02	12.11	32.178	15.08	30	Pass

Note:

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

Chain 0

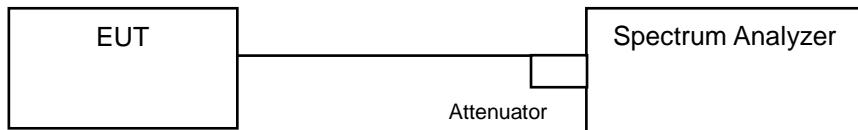
1. $11 \text{ dBm} + 10\log(95.04) = 30.77 \text{ dBm} > 24 \text{ dBm}$.
2. $11 \text{ dBm} + 10\log(91.82) = 30.62 \text{ dBm} > 24 \text{ dBm}$.
3. $11 \text{ dBm} + 10\log(90.90) = 30.58 \text{ dBm} > 24 \text{ dBm}$.
4. $11 \text{ dBm} + 10\log(78.51) = 29.94 \text{ dBm} > 24 \text{ dBm}$.

Chain 1

1. $11 \text{ dBm} + 10\log(92.95) = 30.68 \text{ dBm} > 24 \text{ dBm}$.
2. $11 \text{ dBm} + 10\log(91.75) = 30.62 \text{ dBm} > 24 \text{ dBm}$.
3. $11 \text{ dBm} + 10\log(90.26) = 30.55 \text{ dBm} > 24 \text{ dBm}$.
4. $11 \text{ dBm} + 10\log(78.55) = 29.95 \text{ dBm} > 24 \text{ dBm}$.

4.4 Occupied Bandwidth Measurement

4.4.1 Test Setup



4.4.2 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.4.3 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.

4.4.4 Test Results

802.11a

Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
36	5180	16.44	16.44
40	5200	16.44	16.44
48	5240	16.44	16.44
52	5260	16.44	16.44
60	5300	16.44	16.44
64	5320	16.44	16.44
100	5500	16.44	16.44
116	5580	16.44	16.44
140	5700	16.44	16.44
144	5720 (U-NII-2C)	13.28	13.28
144	5720 (U-NII-3)	3.16	3.16
149	5745	16.44	16.44
157	5785	16.44	16.44
165	5825	16.44	16.32

802.11ax (HE20)

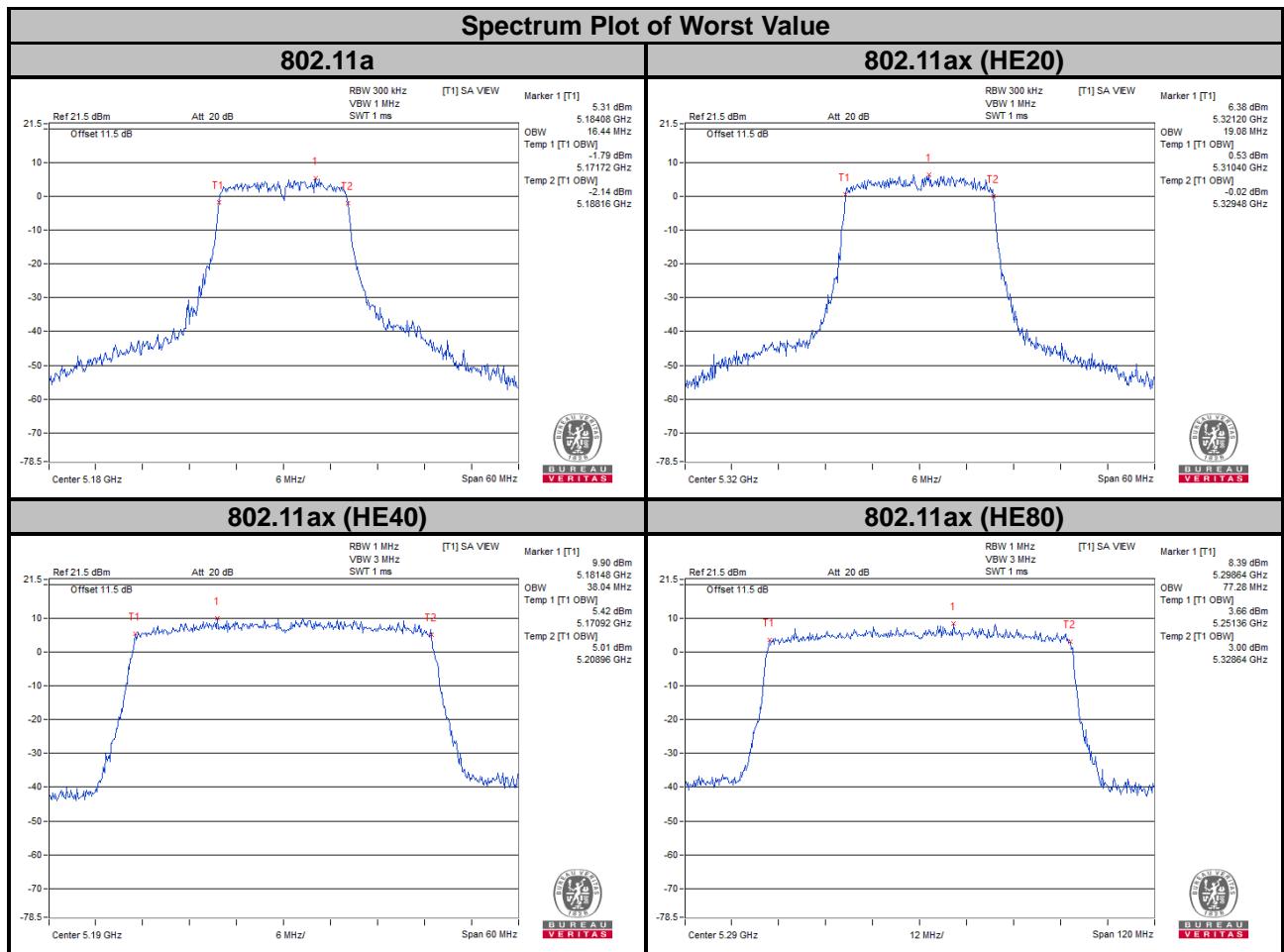
Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
36	5180	18.84	18.96
40	5200	18.84	18.96
48	5240	18.96	18.84
52	5260	18.96	18.96
60	5300	18.84	18.84
64	5320	19.08	18.96
100	5500	18.84	18.96
116	5580	18.96	18.84
140	5700	18.96	18.84
144	5720 (U-NII-2C)	14.60	14.60
144	5720 (U-NII-3)	4.36	4.36
149	5745	18.84	18.96
157	5785	18.96	18.84
165	5825	18.96	18.96

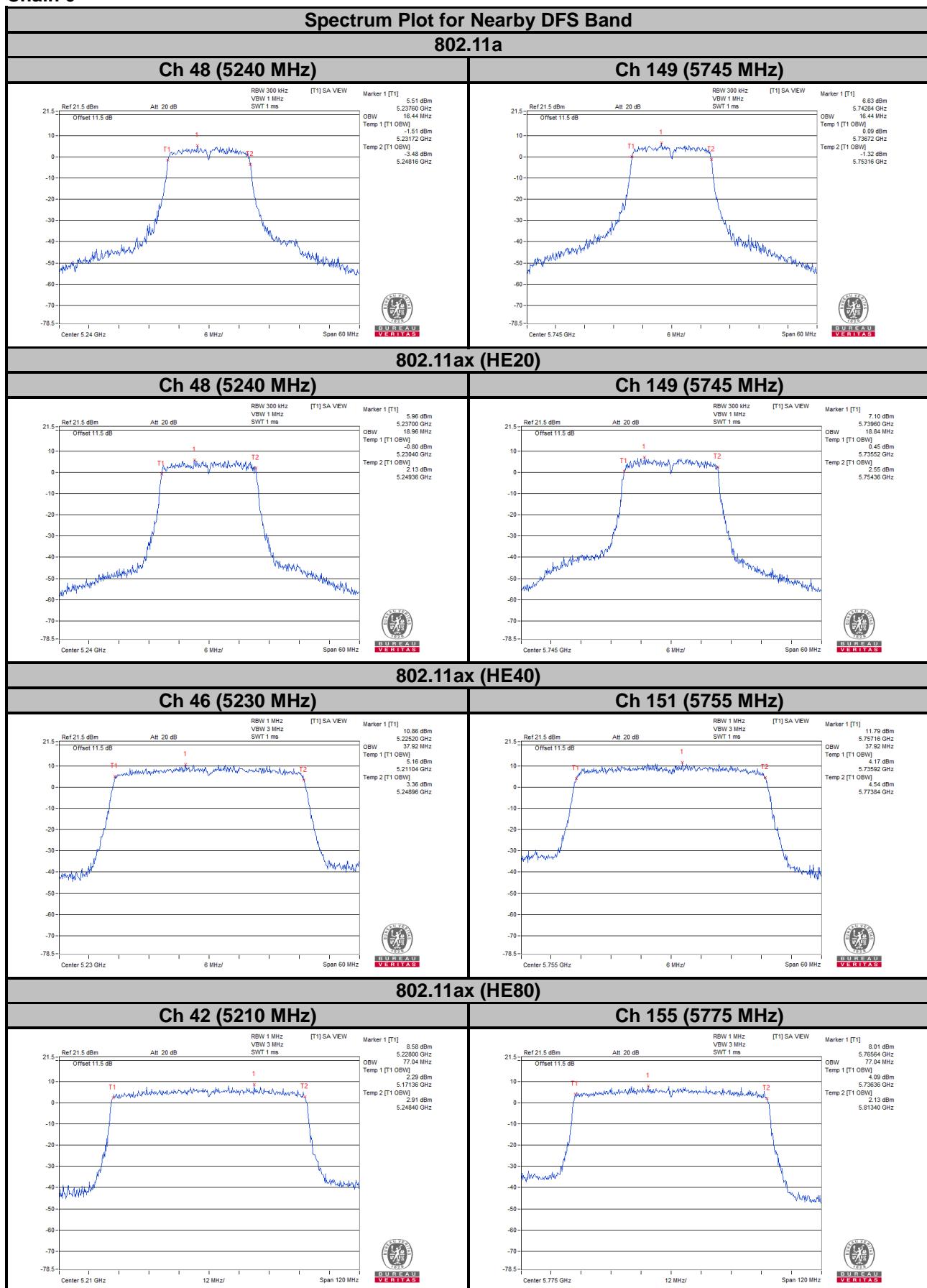
802.11ax (HE40)

Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
38	5190	38.04	37.80
46	5230	37.92	37.92
54	5270	37.92	37.80
62	5310	37.92	37.92
102	5510	37.92	37.92
110	5550	37.92	37.92
134	5670	37.92	37.92
142	5710 (U-NII-2C)	34.08	34.08
142	5710 (U-NII-3)	3.84	3.84
151	5755	37.92	37.92
159	5795	37.80	37.80

802.11ax (HE80)

Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
42	5210	77.04	77.28
58	5290	77.28	77.28
106	5530	77.04	77.28
122	5610	77.28	77.28
138	5690 (U-NII-2C)	73.64	73.88
138	5690 (U-NII-3)	3.40	3.40
155	5775	77.04	77.04

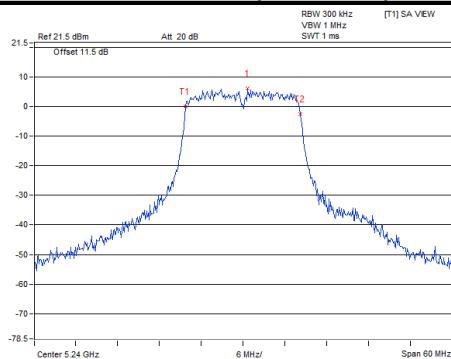


Chain 0

Chain 1

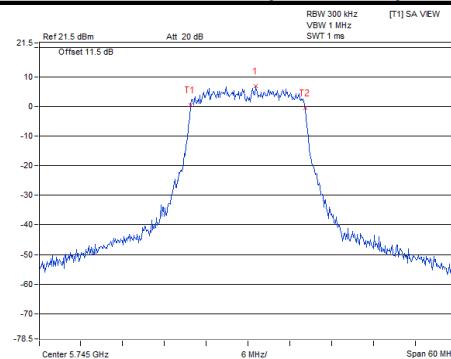
Spectrum Plot for Nearby DFS Band

802.11a

Ch 48 (5240 MHz)

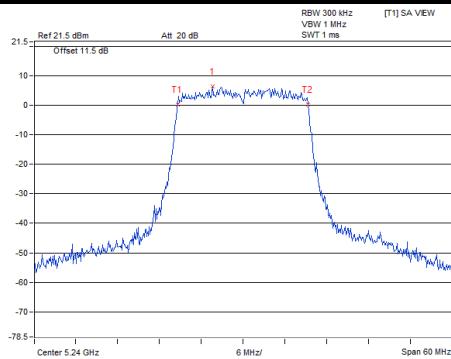


Ch 149 (5745 MHz)

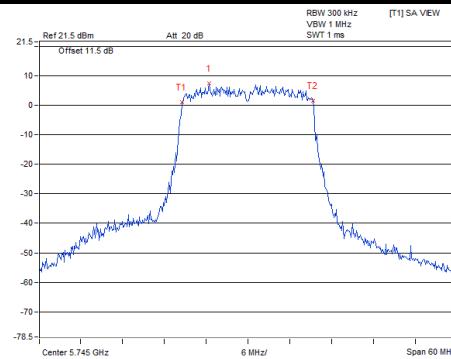


802.11ax (HE20)

Ch 48 (5240 MHz)

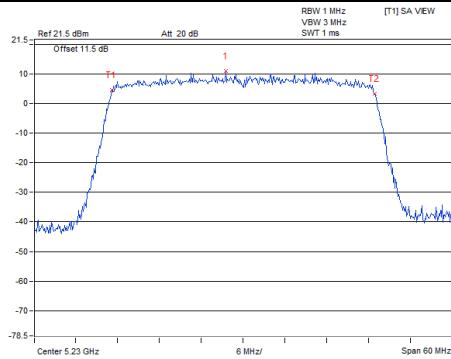


Ch 149 (5745 MHz)

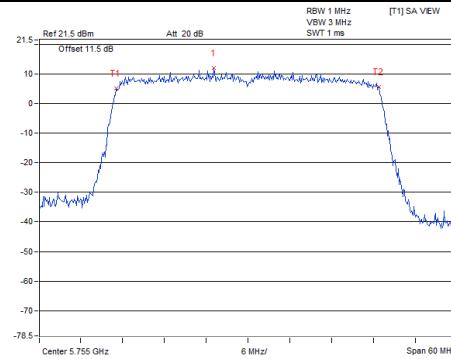


802.11ax (HE40)

Ch 46 (5230 MHz)

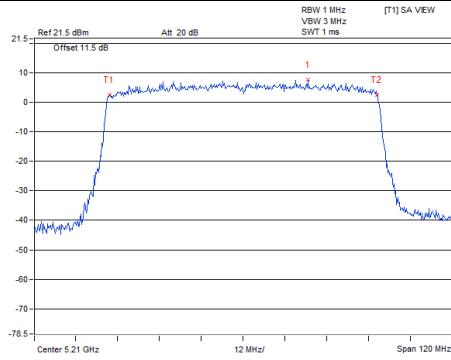


Ch 151 (5755 MHz)

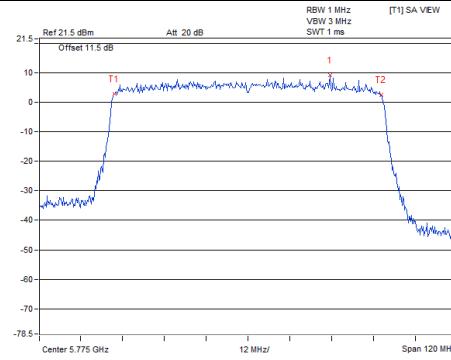


802.11ax (HE80)

Ch 42 (5210 MHz)



Ch 155 (5775 MHz)

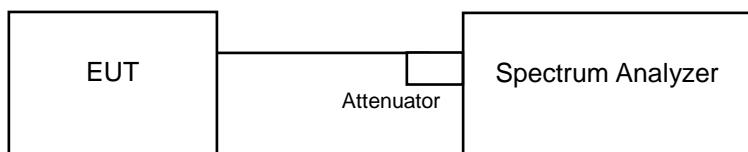


4.5 Peak Power Spectral Density Measurement

4.5.1 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	

4.5.2 Test Setup



4.5.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.5.4 Test Procedures

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

Using method SA-1 Duty cycle >98%

1. Set span to encompass the entire emission bandwidth (EBW) of the signal.
2. Set RBW = 1 MHz, Set VBW \geq 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

※ For U-NII-3: without duty cycle & Duty cycle >98 %

1. Set span to encompass the entire emission bandwidth (EBW) of the signal.
2. Set RBW = 300 kHz, Set VBW \geq 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 = $10\log(500 \text{ kHz} / 300 \text{ kHz})$.
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

4.5.5 Deviation from Test Standard

No deviation.

4.5.6 EUT Operating Conditions

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

4.5.7 Test Results

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

802.11a

Channel	Frequency (MHz)	PSD (dBm/MHz)		Total Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1			
36	5180	1.21	2.05	4.66	11	Pass
40	5200	0.90	2.13	4.57	11	Pass
48	5240	0.82	2.04	4.48	11	Pass
52	5260	1.47	2.45	5.00	11	Pass
60	5300	1.10	2.48	4.85	11	Pass
64	5320	2.07	2.34	5.22	11	Pass
100	5500	1.30	2.90	5.18	11	Pass
116	5580	1.66	3.02	5.40	11	Pass
140	5700	1.86	2.35	5.12	11	Pass
144	5720 (U-NII-2C)	2.02	2.39	5.22	11	Pass

Note:

- 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 = $2 \text{ dBi} + 10\log(2) = 5.01 \text{ dBi} < 6 \text{ dBi}$, so the limit no need to be reduced.

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

Directional gain = $2 \text{ dBi} + 10\log(2) = 5.01 \text{ dBi} < 6 \text{ dBi}$, so the limit no need to be reduced.

802.11ax (HE20)

Channel	Frequency (MHz)	PSD (dBm/MHz)		Total Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1			
36	5180	1.41	1.35	4.39	11	Pass
40	5200	1.39	0.87	4.15	11	Pass
48	5240	0.93	1.12	4.04	11	Pass
52	5260	1.45	1.61	4.54	11	Pass
60	5300	1.66	1.66	4.67	11	Pass
64	5320	1.53	1.49	4.52	11	Pass
100	5500	2.18	1.66	4.94	11	Pass
116	5580	2.14	1.83	5.00	11	Pass
140	5700	2.17	2.00	5.10	11	Pass
144	5720 (U-NII-2C)	2.19	2.08	5.15	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 = 2 dBi + 10log(2) = 5.01 dBi < 6 dBi, so the limit no need to be reduced.

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

Directional gain = 2 dBi + 10log(2) = 5.01 dBi < 6 dBi, so the limit no need to be reduced.

802.11ax (HE40)

Channel	Frequency (MHz)	PSD (dBm/MHz)		Total Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1			
38	5190	-1.97	-2.08	0.99	11	Pass
46	5230	-1.59	-1.82	1.31	11	Pass
54	5270	-1.13	-1.72	1.60	11	Pass
62	5310	-0.96	-2.65	1.29	11	Pass
102	5510	-0.66	-0.75	2.31	11	Pass
110	5550	-0.66	-0.79	2.29	11	Pass
134	5670	-0.95	-0.61	2.23	11	Pass
142	5710 (U-NII-2C)	-0.41	-1.03	2.30	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 = $2 \text{ dBi} + 10\log(2) = 5.01 \text{ dBi} < 6 \text{ dBi}$, so the limit no need to be reduced.

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

Directional gain = $2 \text{ dBi} + 10\log(2) = 5.01 \text{ dBi} < 6 \text{ dBi}$, so the limit no need to be reduced.

802.11ax (HE80):

Channel	Frequency (MHz)	PSD (dBm/MHz)		Total Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1			
42	5210	-4.35	-4.34	-1.33	11	Pass
58	5290	-4.18	-4.11	-1.13	11	Pass
106	5530	-3.96	-4.42	-1.17	11	Pass
122	5610	-4.18	-4.08	-1.12	11	Pass
138	5690 (U-NII-2C)	-3.95	-4.02	-0.97	11	Pass

Note:

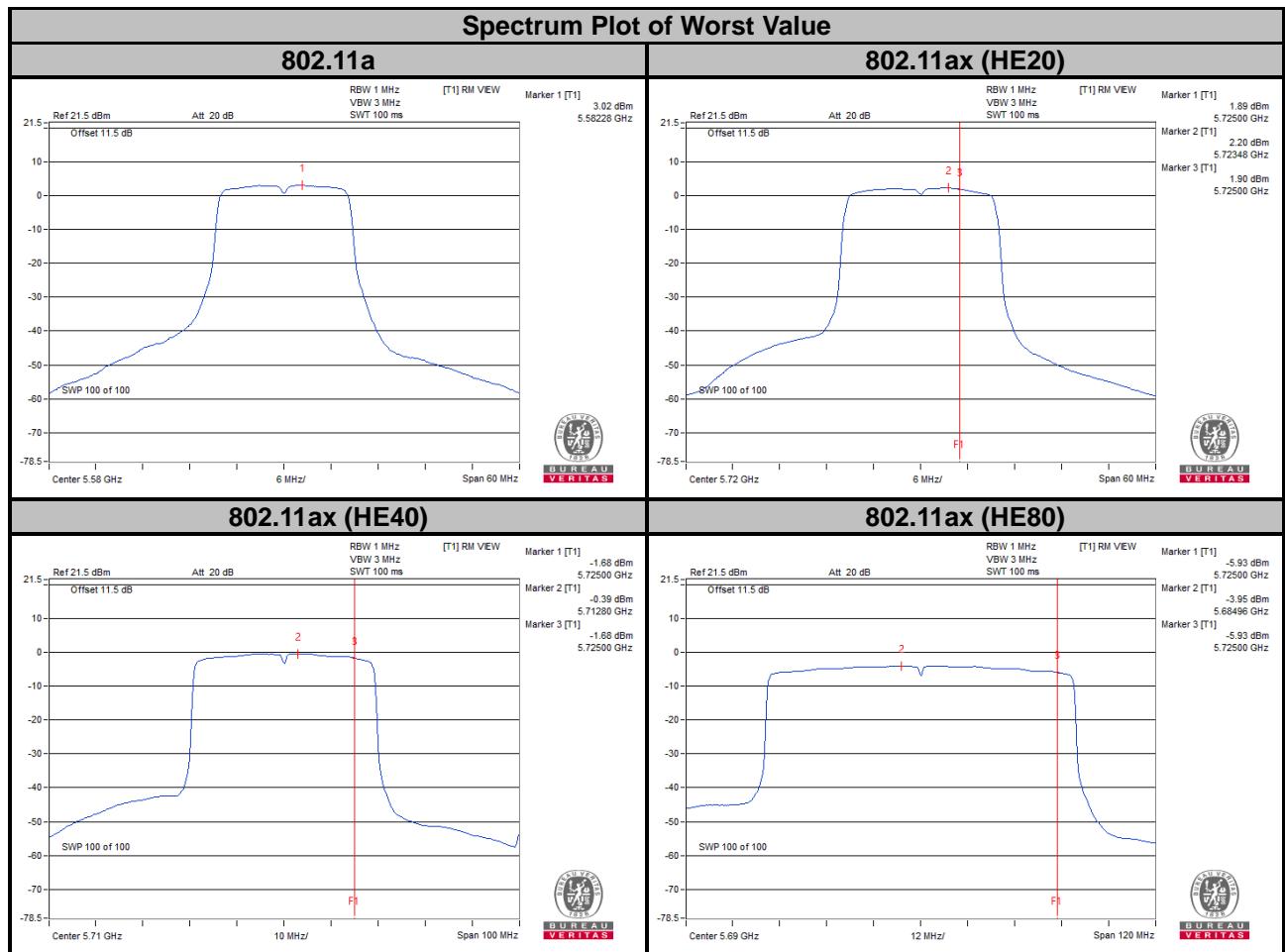
1. Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density.
 Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.

2. For U-NII-1 Band:

Directional gain = $2 \text{ dBi} + 10\log(2) = 5.01 \text{ dBi} < 6 \text{ dBi}$, so the limit no need to be reduced.

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

Directional gain = $2 \text{ dBi} + 10\log(2) = 5.01 \text{ dBi} < 6 \text{ dBi}$, so the limit no need to be reduced.



For U-NII-3 Band
802.11a

TX Chain	Channel	Freq. (MHz)	PSD		10 log (N=2) dB	Total PSD (dBm/500 kHz)	Limit (dBm/500 kHz)	Pass / Fail
			(dBm/300 kHz)	(dBm/500 kHz)				
0	144	5720 (U-NII-3)	-7.15	-4.93	3.01	-1.92	30	Pass
	149	5745	-5.79	-3.57	3.01	-0.56	30	Pass
	157	5785	-5.69	-3.47	3.01	-0.46	30	Pass
	165	5825	-6.12	-3.9	3.01	-0.89	30	Pass
1	144	5720 (U-NII-3)	-6.25	-4.03	3.01	-1.02	30	Pass
	149	5745	-5.58	-3.36	3.01	-0.35	30	Pass
	157	5785	-5.9	-3.68	3.01	-0.67	30	Pass
	165	5825	-5.8	-3.58	3.01	-0.57	30	Pass

Note:

1. Method 2) c) of power density measurement of KDB 662911 is using for calculating total power density.
2. Directional gain = $2 \text{ dBi} + 10\log(2) = 5.01 \text{ dBi} < 6 \text{ dBi}$, so the limit no need to be reduced.

802.11ax (HE20)

TX Chain	Channel	Freq. (MHz)	PSD		10 log (N=2) dB	Total PSD (dBm/500 kHz)	Limit (dBm/500 kHz)	Pass / Fail
			(dBm/300 kHz)	(dBm/500 kHz)				
0	144	5720 (U-NII-3)	-7.24	-5.02	3.01	-2.01	30	Pass
	149	5745	-7.09	-4.87	3.01	-1.86	30	Pass
	157	5785	-6.91	-4.69	3.01	-1.68	30	Pass
	165	5825	-6.96	-4.74	3.01	-1.73	30	Pass
1	144	5720 (U-NII-3)	-7.26	-5.04	3.01	-2.03	30	Pass
	149	5745	-7.16	-4.94	3.01	-1.93	30	Pass
	157	5785	-7.25	-5.03	3.01	-2.02	30	Pass
	165	5825	-7.3	-5.08	3.01	-2.07	30	Pass

Note:

1. Method 2) c) of power density measurement of KDB 662911 is using for calculating total power density.
2. Directional gain = $2 \text{ dBi} + 10\log(2) = 5.01 \text{ dBi} < 6 \text{ dBi}$, so the limit no need to be reduced.

802.11ax (HE40)

TX Chain	Channel	Freq. (MHz)	PSD		10 log (N=2) dB	Total PSD (dBm/500 kHz)	Limit (dBm/500 kHz)	Pass / Fail
			(dBm/300 kHz)	(dBm/500 kHz)				
0	142	5710 (U-NII-3)	-11.17	-8.95	3.01	-5.94	30	Pass
	151	5755	-10.4	-8.18	3.01	-5.17	30	Pass
	159	5795	-10.44	-8.22	3.01	-5.21	30	Pass
1	142	5710 (U-NII-3)	-11.84	-9.62	3.01	-6.61	30	Pass
	151	5755	-10.44	-8.22	3.01	-5.21	30	Pass
	159	5795	-10.69	-8.47	3.01	-5.46	30	Pass

Note:

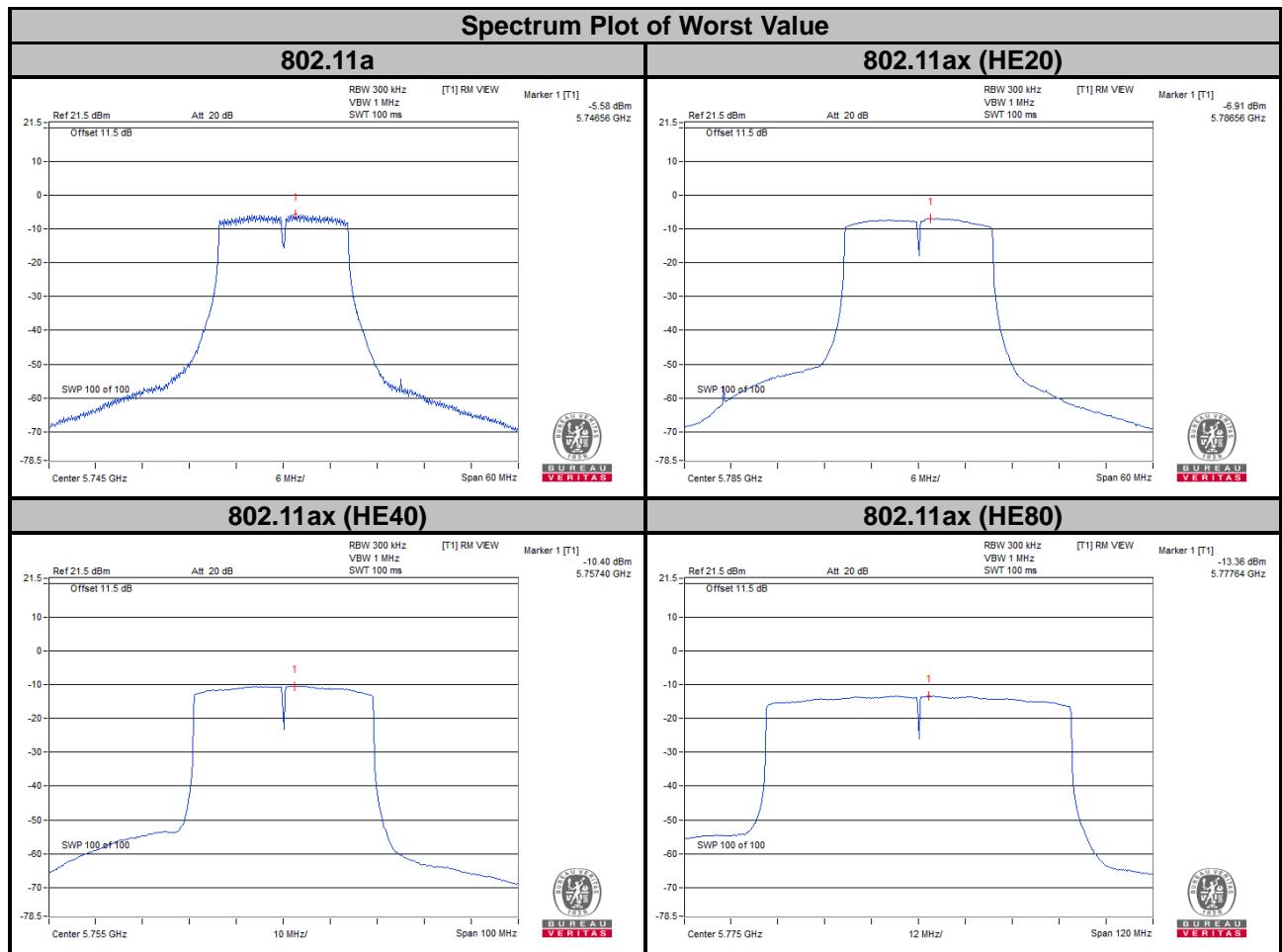
1. Method 2) c) of power density measurement of KDB 662911 is using for calculating total power density.
2. Directional gain = 2 dBi + 10log(2) = 5.01 dBi < 6 dBi, so the limit no need to be reduced.

802.11ax (HE80)

TX Chain	Channel	Freq. (MHz)	PSD		10 log (N=2) dB	Total PSD (dBm/500 kHz)	Limit (dBm/500 kHz)	Pass / Fail
			(dBm/300 kHz)	(dBm/500 kHz)				
0	138	5690 (U-NII-3)	-15.34	-13.12	3.01	-10.11	30	Pass
	155	5775	-13.49	-11.27	3.01	-8.26	30	Pass
1	138	5690 (U-NII-3)	-15.46	-13.24	3.01	-10.23	30	Pass
	155	5775	-13.36	-11.14	3.01	-8.13	30	Pass

Note:

1. Method 2) c) of power density measurement of KDB 662911 is using for calculating total power density.
2. Directional gain = 2 dBi + 10log(2) = 5.01 dBi < 6 dBi, so the limit no need to be reduced.

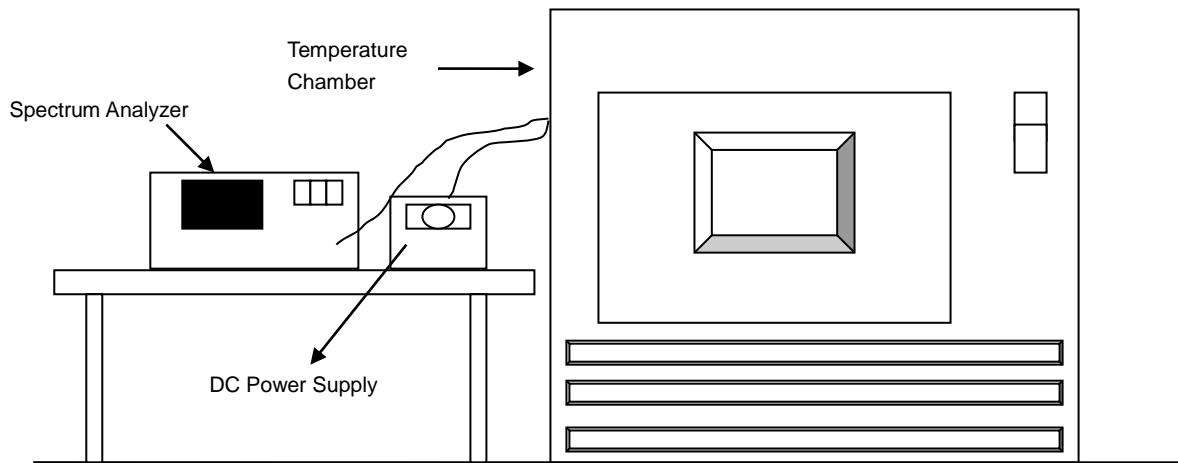


4.6 Frequency Stability

4.6.1 Limit of Frequency Stability Measurement

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

4.6.2 Test Setup



4.6.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.6.4 Test Procedure

- The EUT was placed inside the environmental test chamber and powered by nominal DC voltage.
- Turn the EUT on and couple its output to a spectrum analyzer.
- Turn the EUT off and set the chamber to the highest temperature specified.
- 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.
- Repeat step (d) with the temperature chamber set to the next desired temperature until measurements down to the lowest specified temperature have been completed.
- 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.

4.6.5 Deviation from Test Standard

No deviation.

4.6.6 EUT Operating Condition

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

4.6.7 Test Results

Frequency Stability Versus Temp.									
Operating Frequency: 5180 MHz									
Temp. (°C)	Power Supply (Vdc)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Frequency Drift (ppm)						
55	12	5180	PASS	5179.9978	PASS	5179.9966	PASS	5179.9955	PASS
50	12	5179.9951	PASS	5179.9955	PASS	5179.9954	PASS	5179.9968	PASS
40	12	5179.9966	PASS	5179.9978	PASS	5179.9966	PASS	5179.994	PASS
30	12	5180.0034	PASS	5180.0046	PASS	5180.0056	PASS	5180.0016	PASS
20	12	5180.0177	PASS	5180.0152	PASS	5180.0181	PASS	5180.0167	PASS
10	12	5179.9801	PASS	5179.9769	PASS	5179.9794	PASS	5179.9773	PASS
0	12	5180.0018	PASS	5180.0022	PASS	5180.0054	PASS	5180.0039	PASS
-10	12	5179.9831	PASS	5179.9812	PASS	5179.9847	PASS	5179.9835	PASS

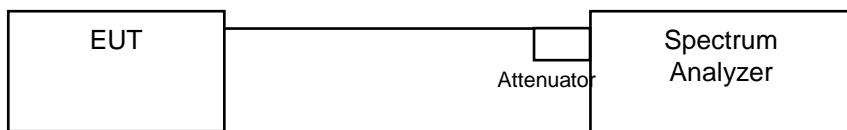
Frequency Stability Versus Voltage									
Operating Frequency: 5180 MHz									
Temp. (°C)	Power Supply (Vdc)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Frequency Drift (ppm)						
20	13.8	5180.0181	PASS	5180.0148	PASS	5180.0184	PASS	5180.0167	PASS
	12	5180.0177	PASS	5180.0152	PASS	5180.0181	PASS	5180.0167	PASS
	10.2	5180.0173	PASS	5180.015	PASS	5180.0176	PASS	5180.0158	PASS

4.7 6 dB Bandwidth Measurement

4.7.1 Limits of 6 dB Bandwidth Measurement

The minimum of 6 dB Bandwidth Measurement is 0.5 MHz.

4.7.2 Test Setup



4.7.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.7.4 Test Procedure

MEASUREMENT PROCEDURE REF

- a. Set resolution bandwidth (RBW) = 100 kHz
- b. Set the video bandwidth (VBW) $\geq 3 \times$ 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

4.7.5 Deviation from Test Standard

No deviation.

4.7.6 EUT Operating Condition

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

4.7.7 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)	3.16	3.16	0.5	Pass
149	5745	16.37	16.37	0.5	Pass
157	5785	16.34	16.38	0.5	Pass
165	5825	16.34	16.36	0.5	Pass

802.11ax (HE20)

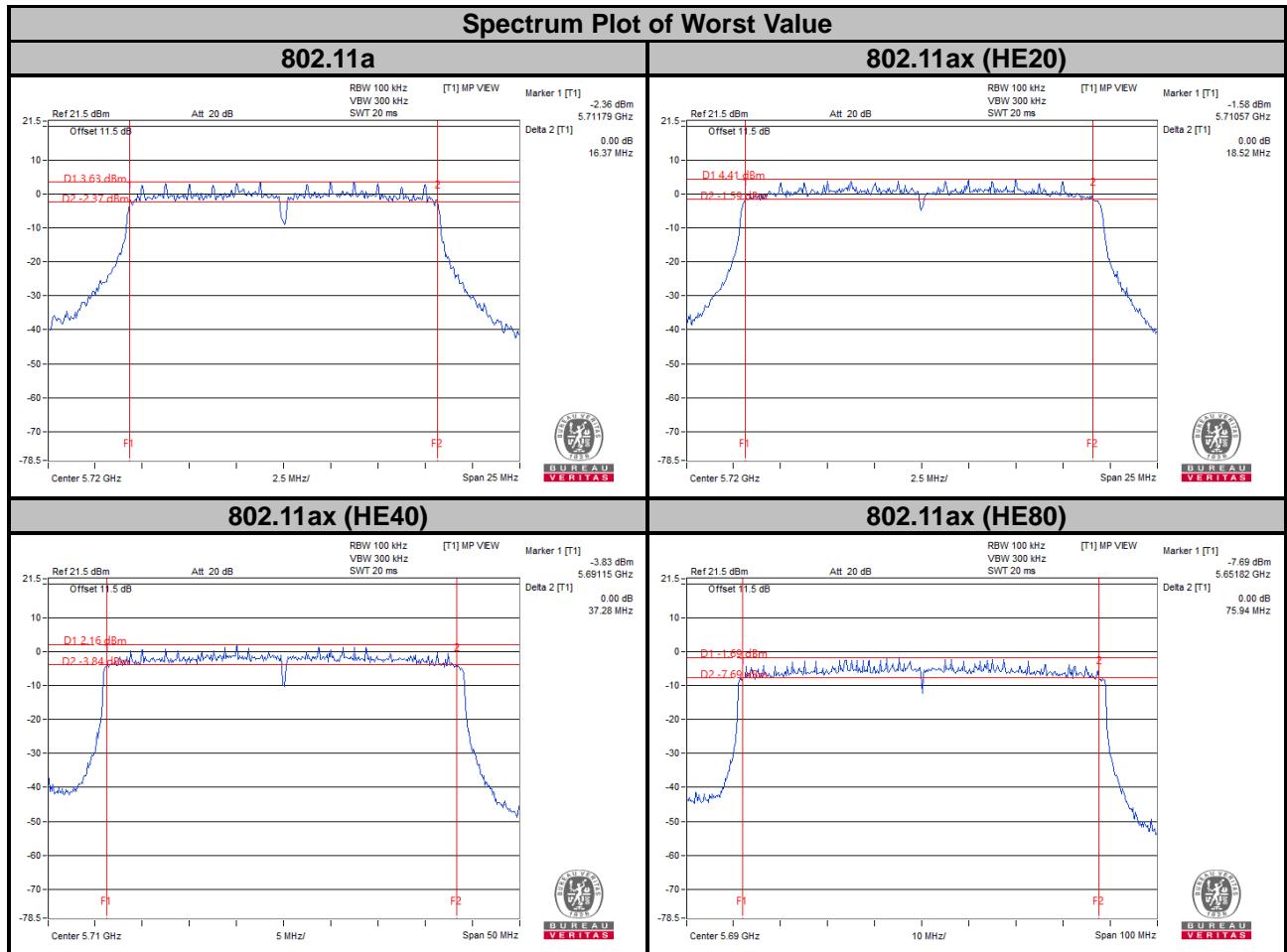
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
144	5720 (U-NII-3)	4.18	4.09	0.5	Pass
149	5745	18.63	18.72	0.5	Pass
157	5785	18.70	18.60	0.5	Pass
165	5825	18.83	18.64	0.5	Pass

802.11ax (HE40)

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
142	5710 (U-NII-3)	3.43	3.72	0.5	Pass
151	5755	37.39	37.31	0.5	Pass
159	5795	37.26	36.81	0.5	Pass

802.11ax (HE80)

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
138	5690 (U-NII-3)	3.45	2.76	0.5	Pass
155	5775	77.13	76.92	0.5	Pass



Note:

For Ch138 (UNII-3 Band): The 6 dB bandwidth above 5725 MHz = Marker 1 + Delta 2 – 5725 MHz

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

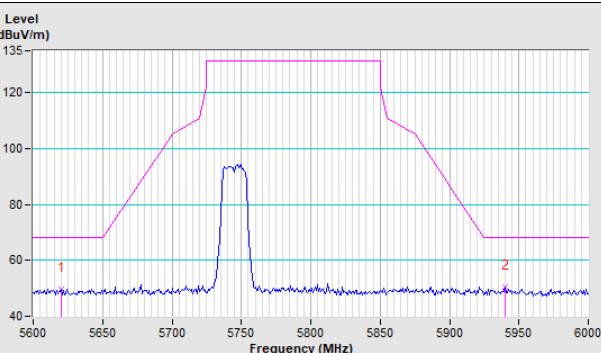
5 Pictures of Test Arrangements

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

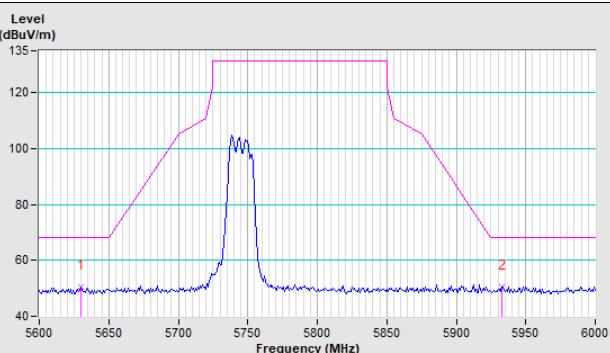
Annex A- Radiated Out of Band Emission (OOBE) Measurement (For U-NII-3 band)

802.11a CH 149 : 5745 MHz

Horizontal

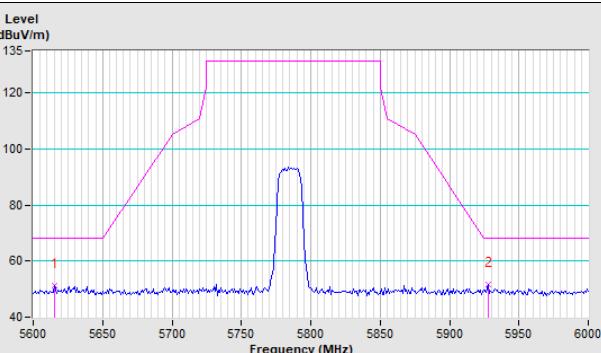


Vertical

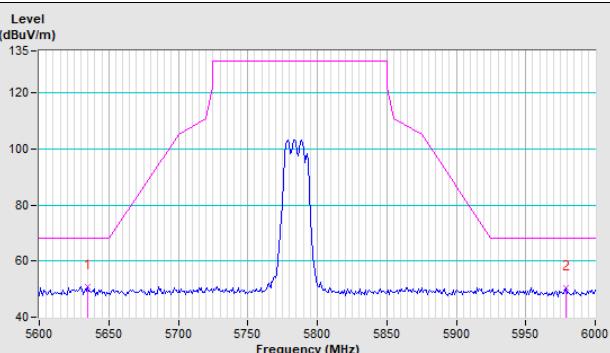


802.11a CH 157 : 5785 MHz

Horizontal

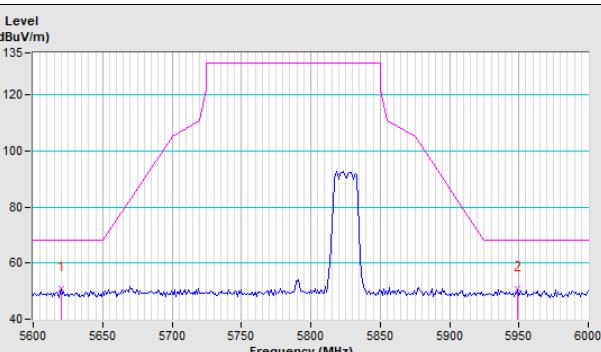


Vertical

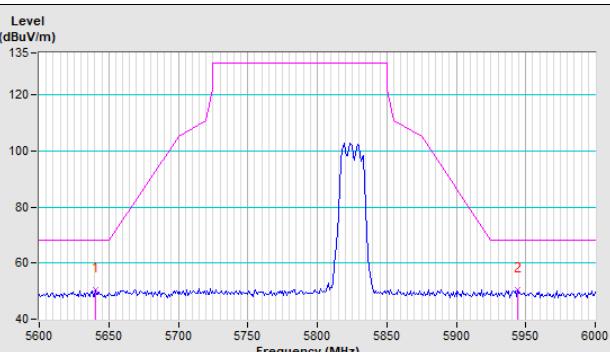


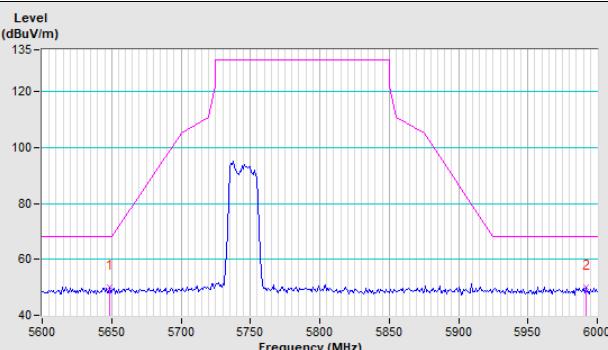
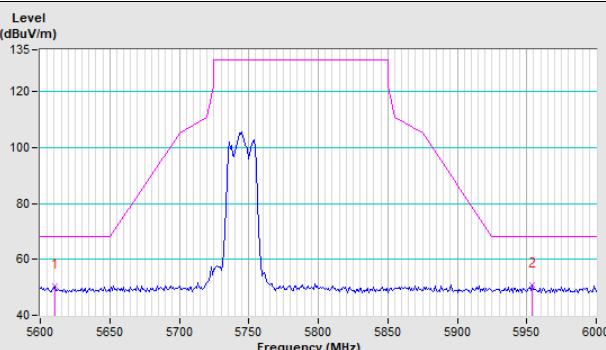
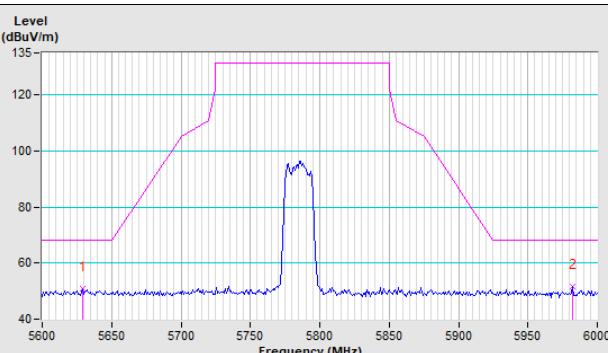
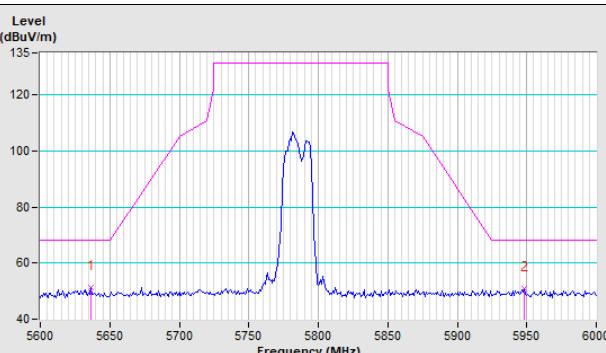
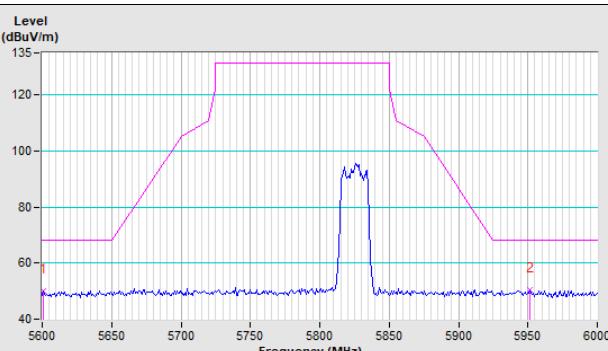
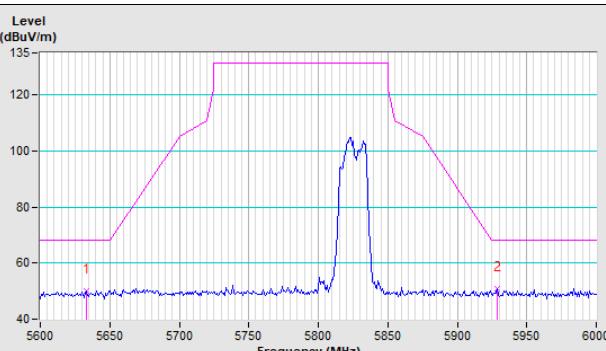
802.11a CH 165 : 5825 MHz

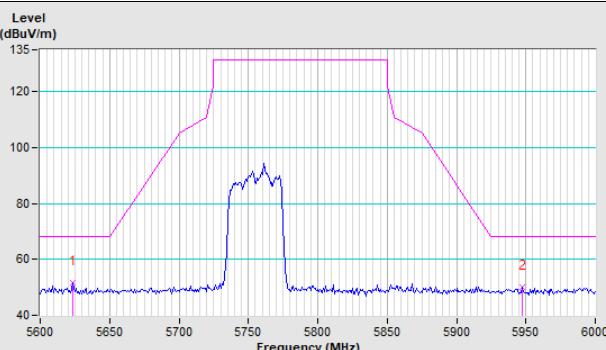
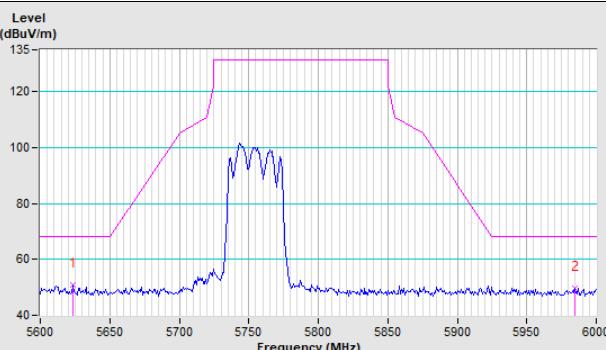
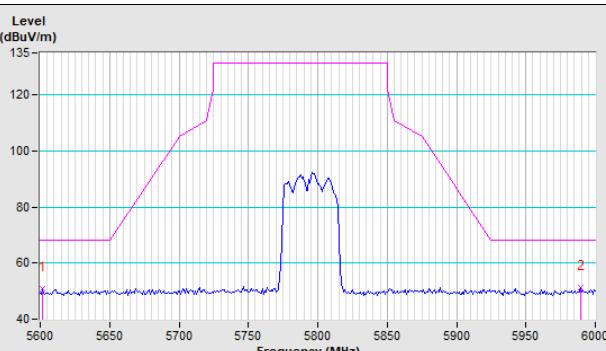
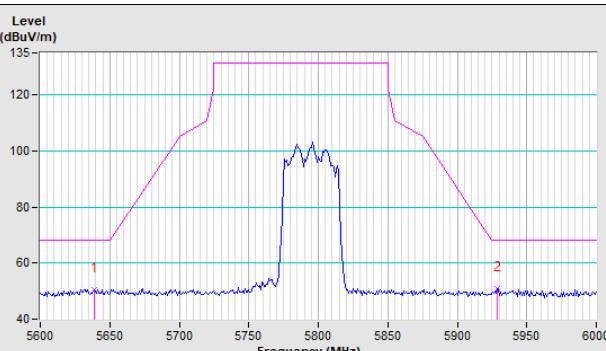
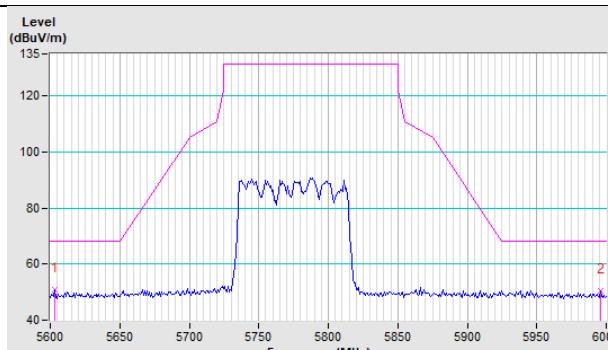
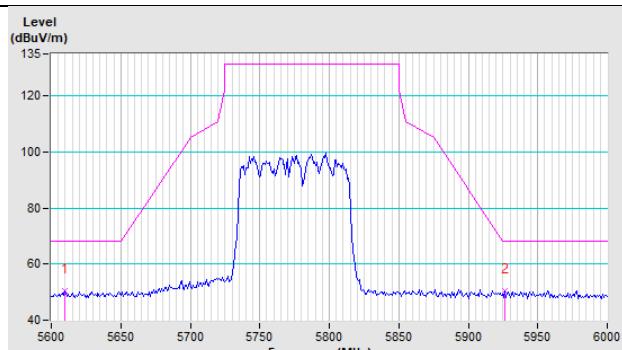
Horizontal



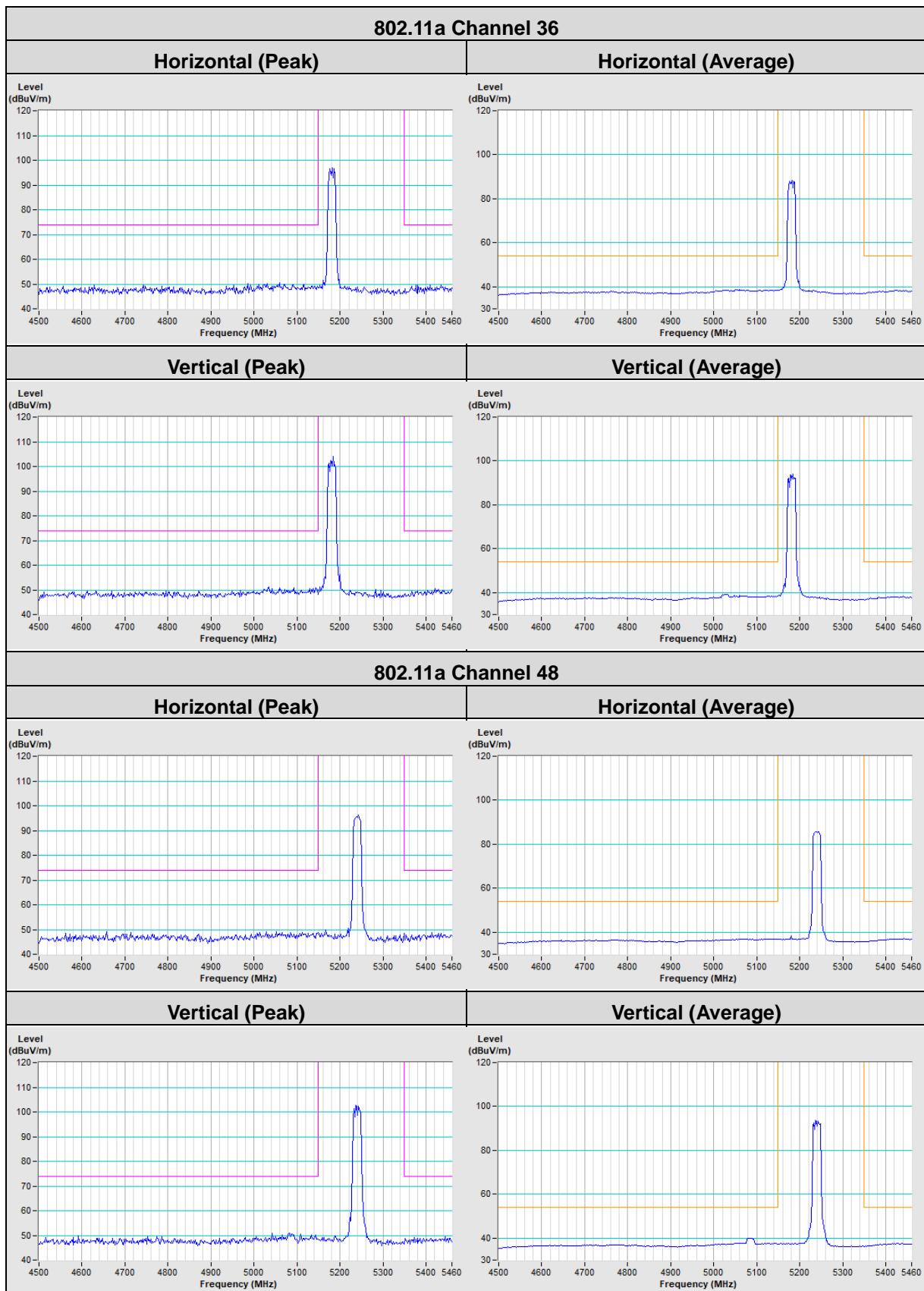
Vertical

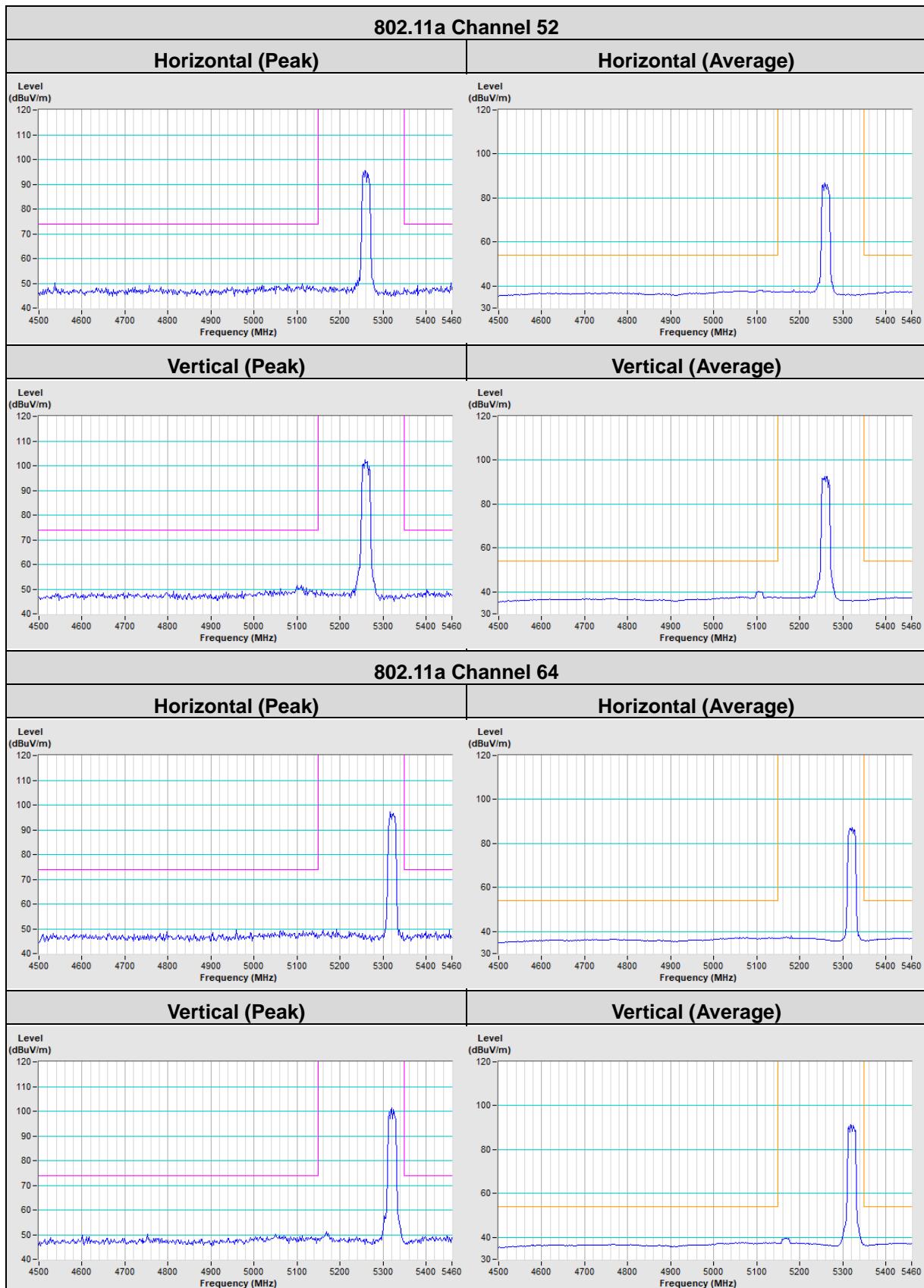


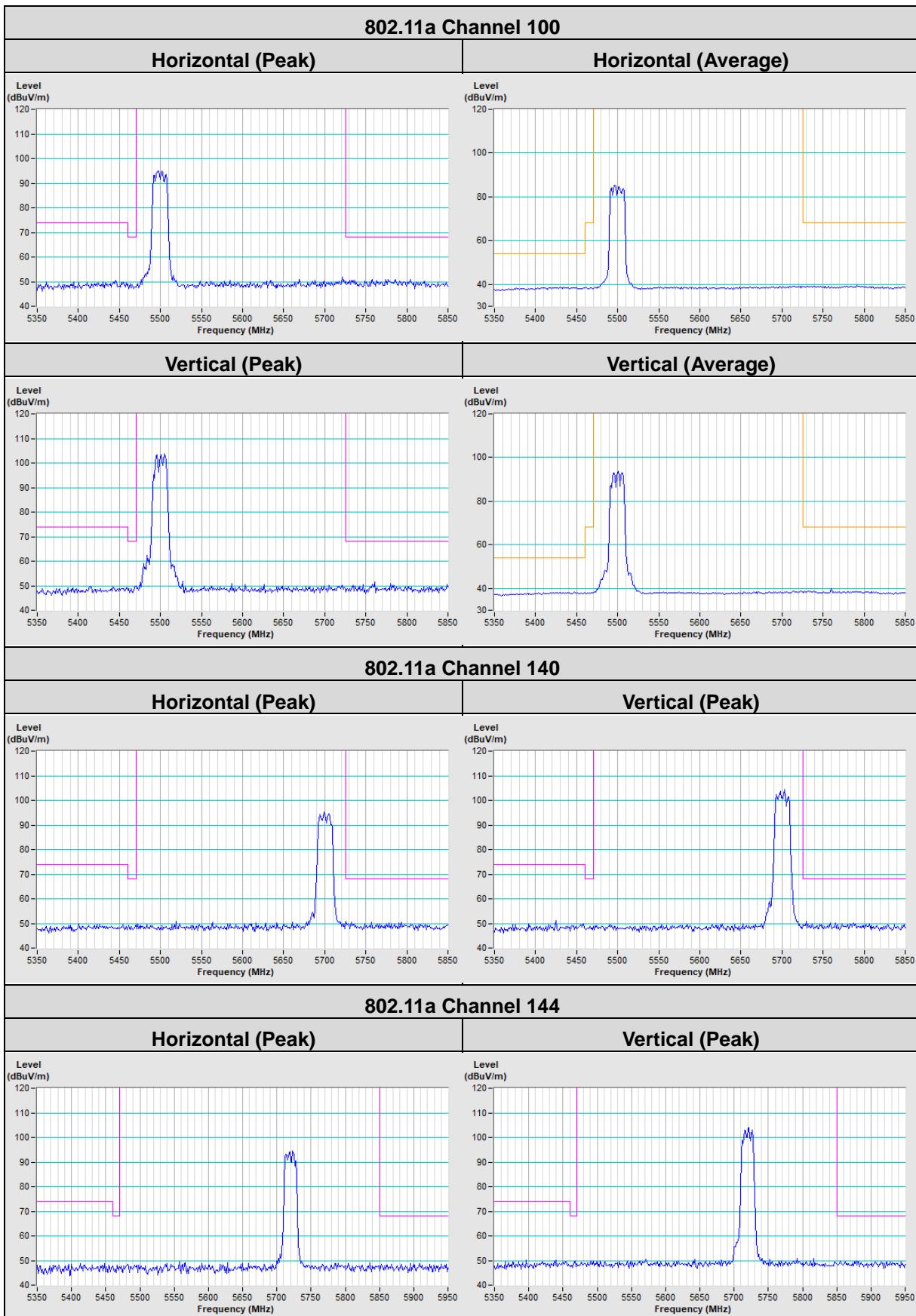
802.11ax (HE20) CH 149 : 5745 MHz
Horizontal

Vertical

802.11ax (HE20) CH 157 : 5785 MHz
Horizontal

Vertical

802.11ax (HE20) CH 165 : 5825 MHz
Horizontal

Vertical


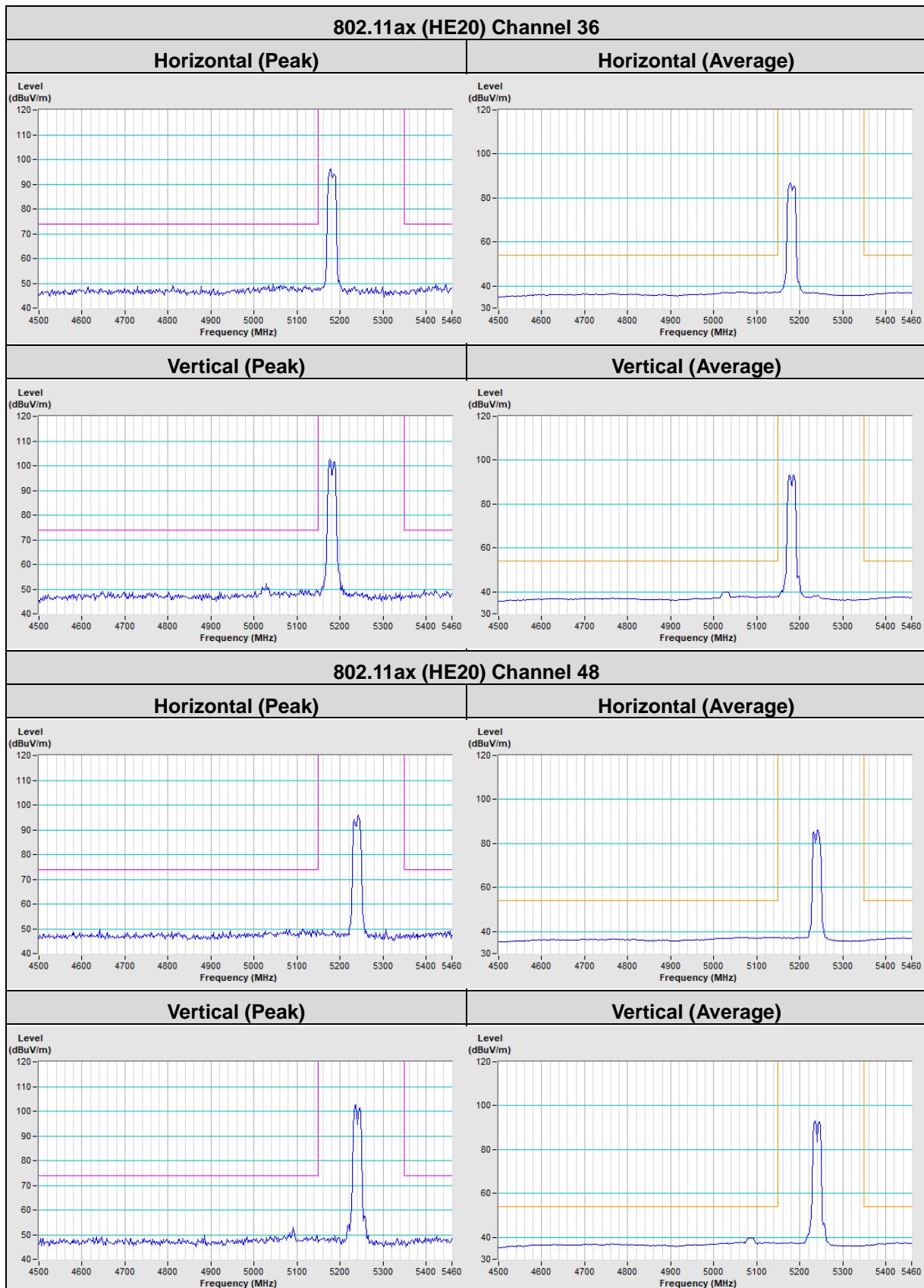
802.11ax (HE40) CH 151 : 5755 MHz
Horizontal

Vertical

802.11ax (HE40) CH 159 : 5795 MHz
Horizontal

Vertical

802.11ax (HE80) CH 155 : 5775 MHz
Horizontal

Vertical


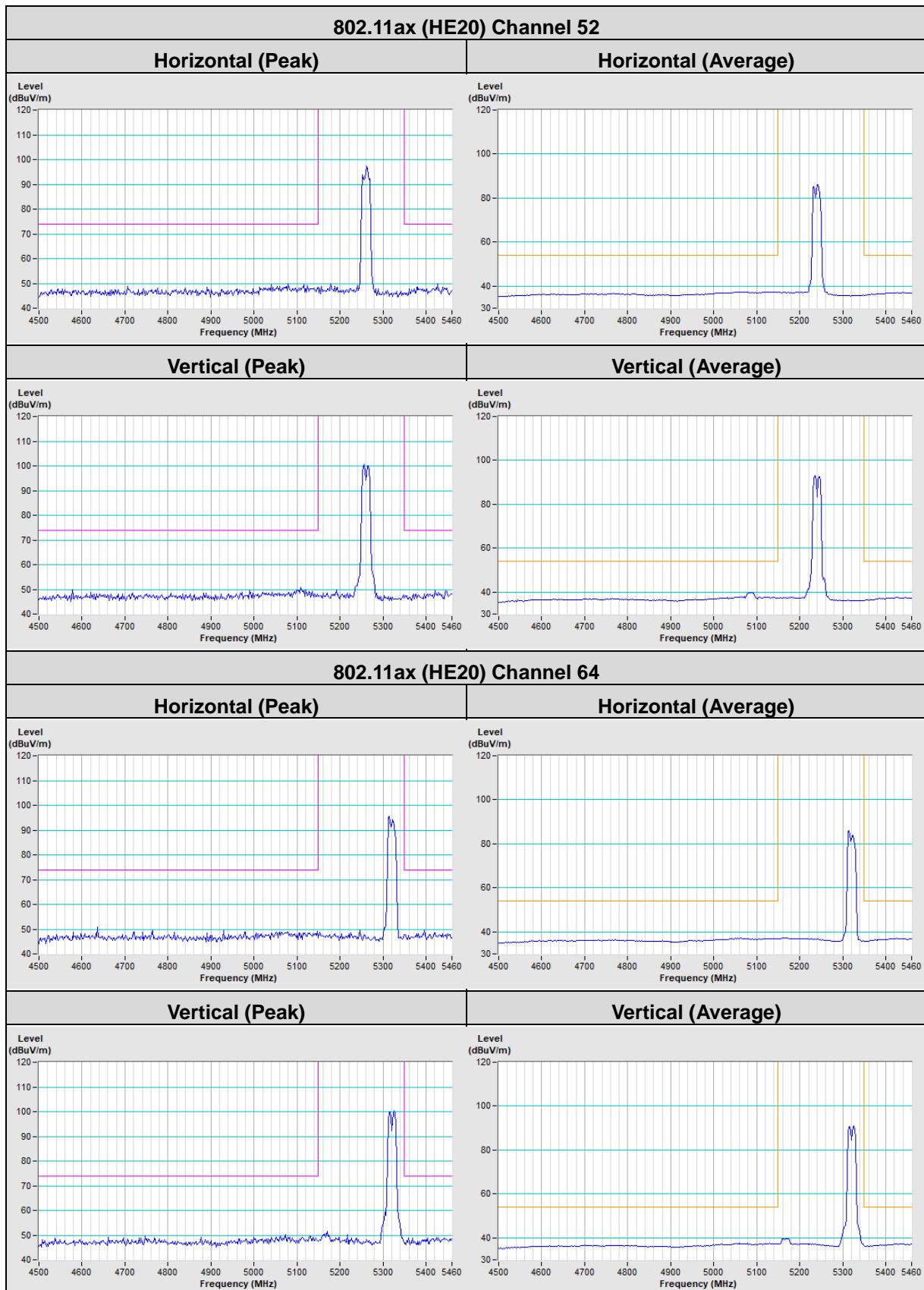
Annex B- Band Edge Measurement

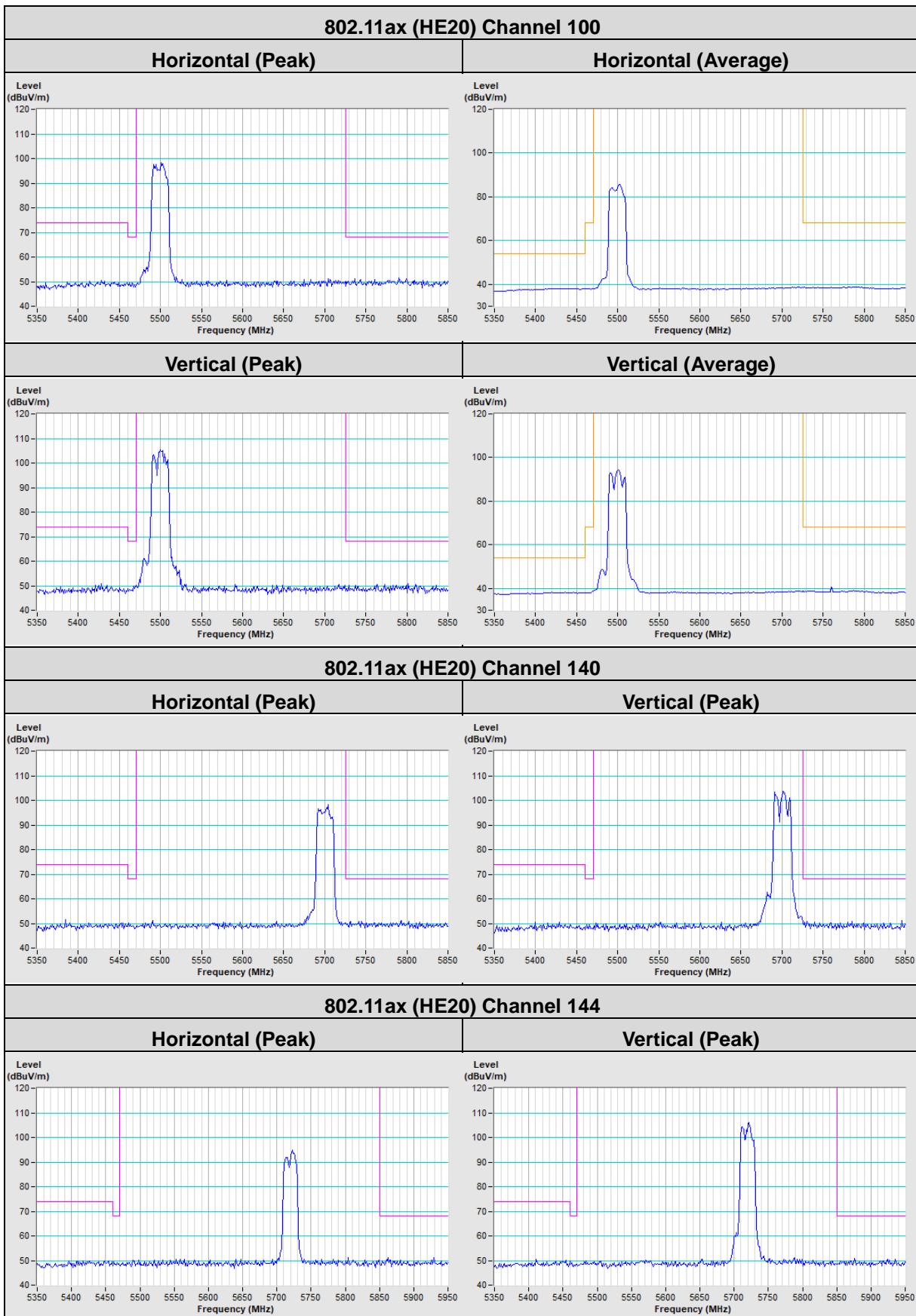


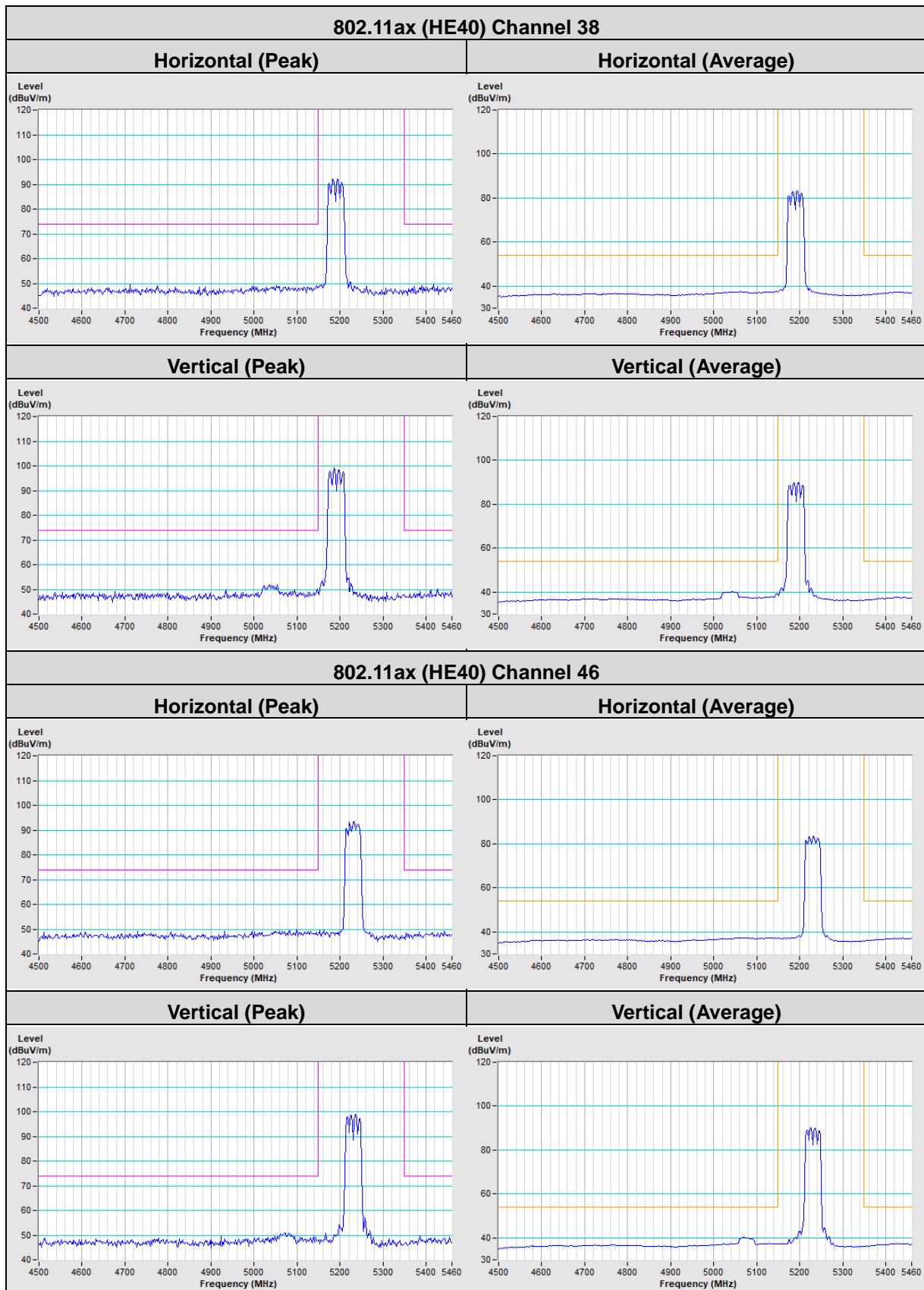


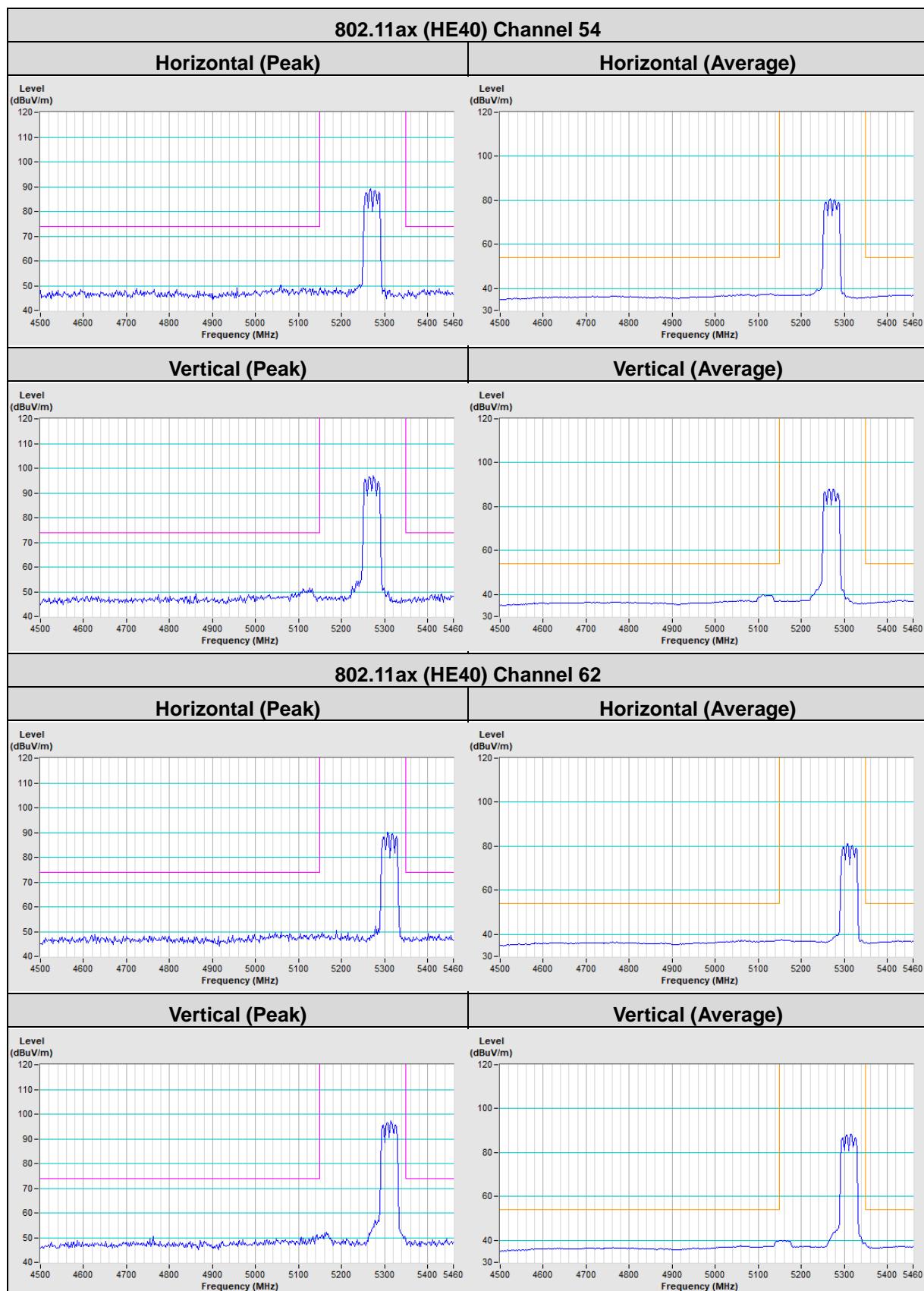


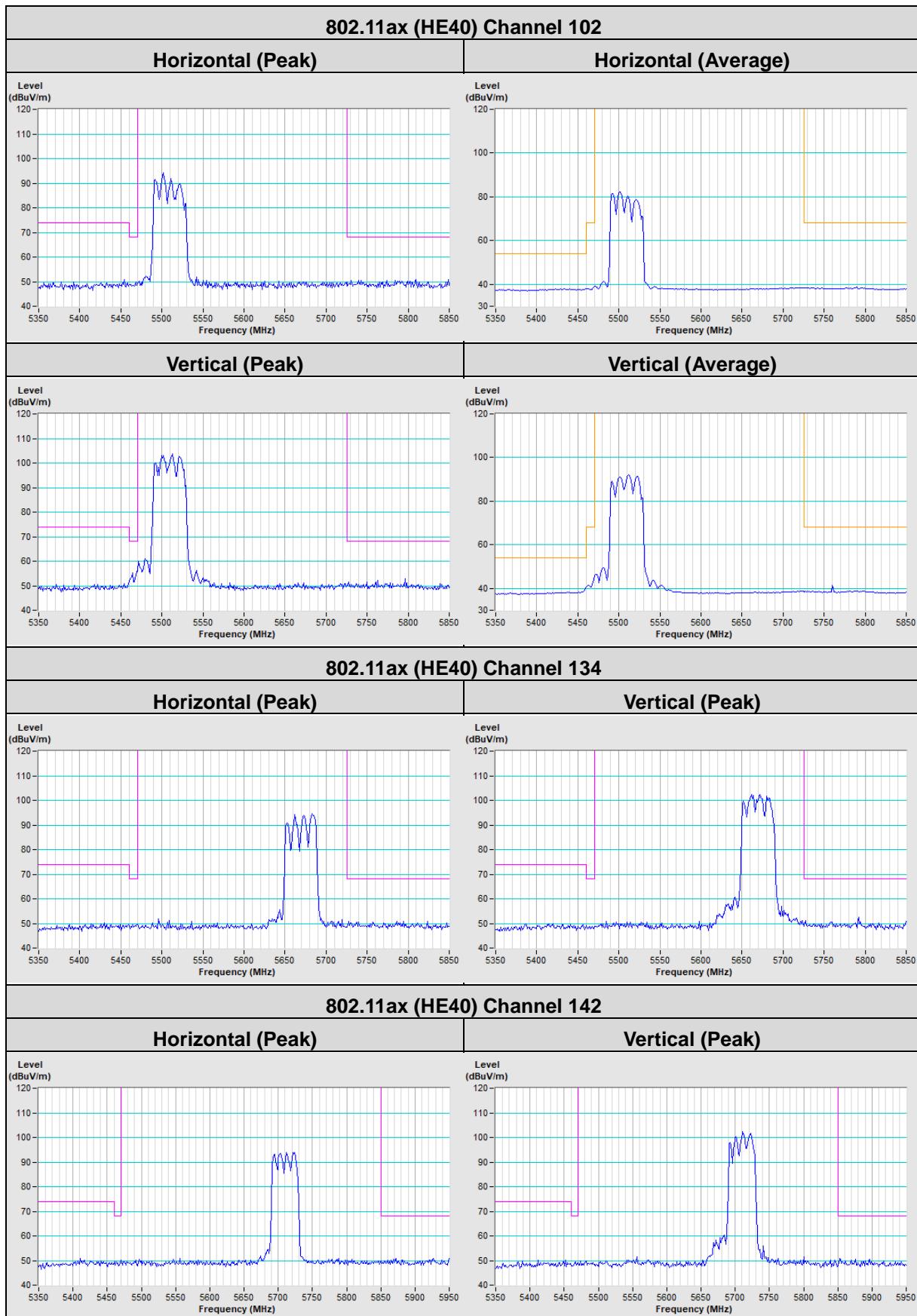


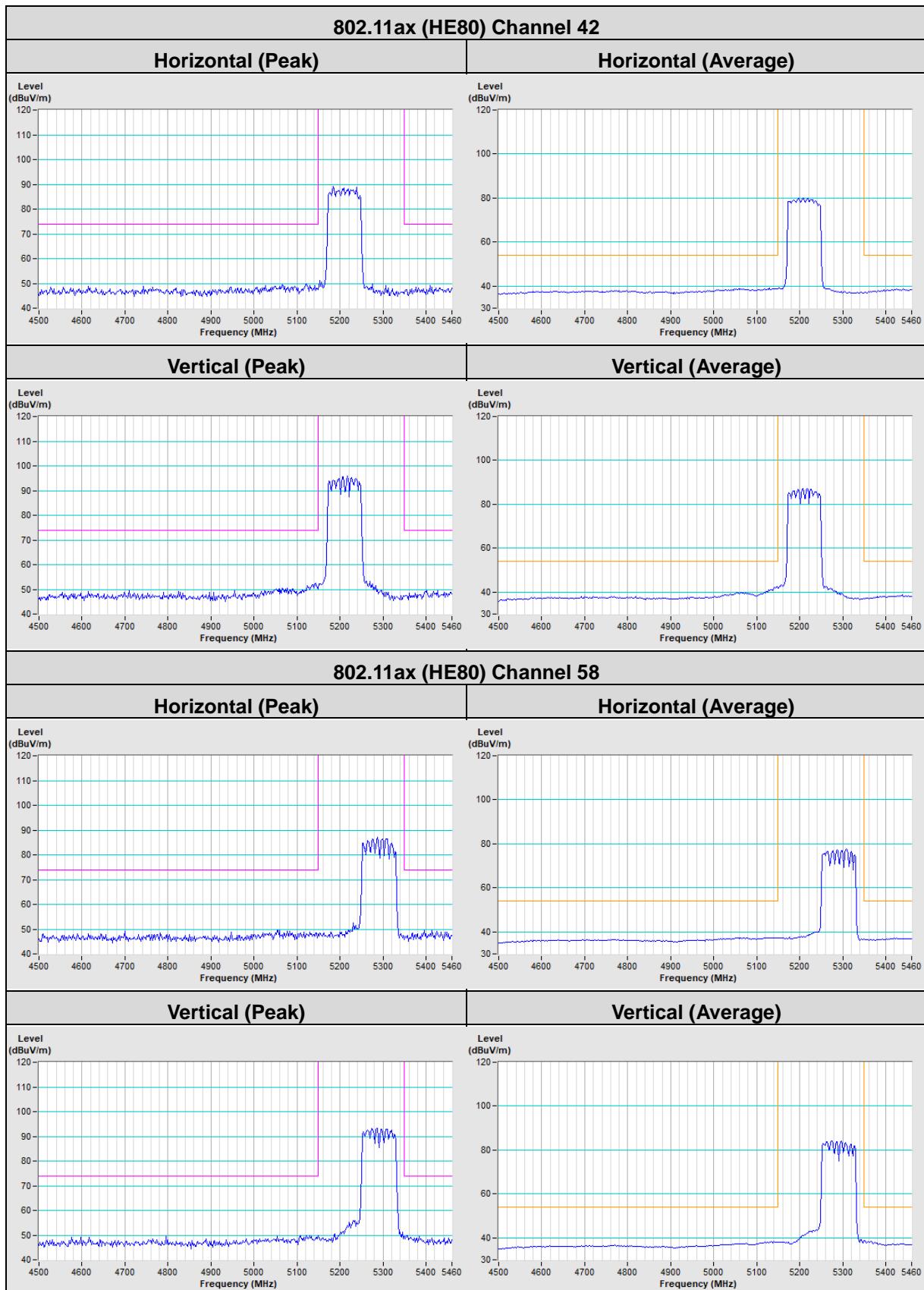


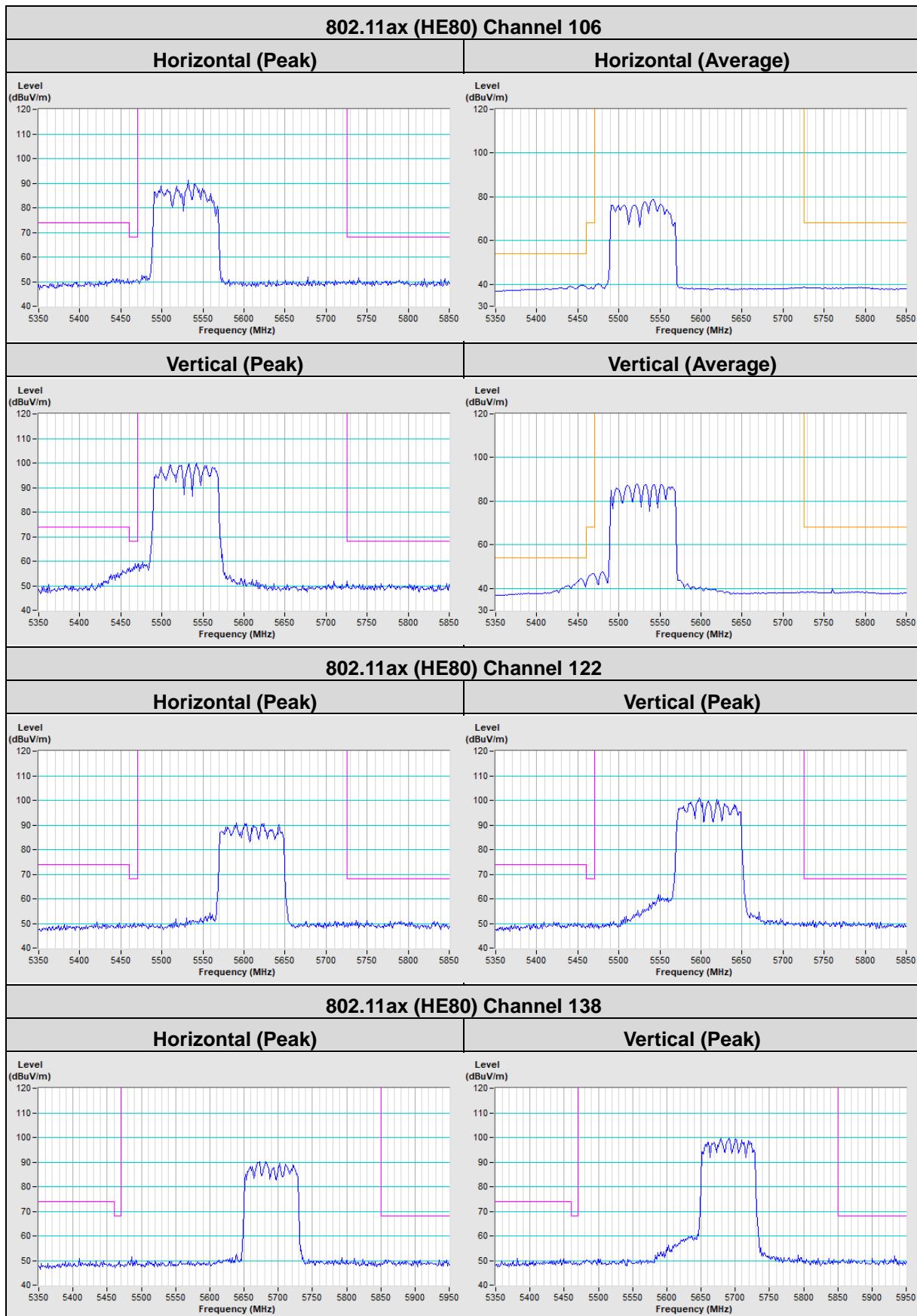












Appendix – Information of the Testing Laboratories

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.

If you have any comments, please feel free to contact us at the following:

Lin Kou EMC/RF Lab

Tel: 886-2-26052180

Fax: 886-2-26051924

Hsin Chu EMC/RF/Telecom Lab

Tel: 886-3-6668565

Fax: 886-3-6668323

Hwa Ya EMC/RF/Safety Lab

Tel: 886-3-3183232

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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