

FCC Test Report

Report No.: RF201118C03-1

FCC ID: B32V2104G

Test Model: V210 4G

Received Date: Nov. 18, 2020

Test Date: Nov. 28 ~ Dec. 28, 2020

Issued Date: Jan. 06, 2021

Applicant: Verifone, Inc.

Address: 1400 West Stanford Ranch Road Suite 200 Rocklin CA 95765 USA

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 / 788550 / TW0003
Designation Number:



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Release Control Record

Issue No.	Description	Date Issued
RF201118C03-1	Original release.	Jan. 06, 2021

1 Certificate of Conformity

Product: Point of Sale Terminal

Brand: Verifone

Test Model: V210 4G

Sample Status: Identical Prototype

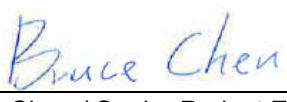
Applicant: Verifone, Inc.

Test Date: Nov. 28 ~ Dec. 28, 2020

Standards: 47 CFR FCC Part 15, Subpart E (Section 15.407)
ANSI C63.10:2013

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

Prepared by : , **Date:** Jan. 06, 2021
Polly Chien / Specialist

Approved by : , **Date:** Jan. 06, 2021
Bruce Chen / 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 -16.07dB at 0.60356MHz.
15.407(b) (1/2/3/4(i/ii)/6)	Radiated Emissions & Band Edge Measurement	Pass	Meet the requirement of limit. Minimum passing margin is -3.8dB at 5150.00MHz.
15.407(a)(1/2/3)	Max Average Transmit Power	Pass	Meet the requirement of limit.
---	Occupied Bandwidth Measurement	Pass	Meet the requirement of limit.
15.407(a)(1/2/3)	Peak Power Spectral Density	Pass	Meet the requirement of limit.
15.407(e)	6dB 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:

- Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.
- 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 and 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.

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	150kHz ~ 30MHz	2.94 dB
Radiated Emissions up to 1 GHz	9kHz ~ 30MHz	3.04 dB
	30MHz ~ 200MHz	3.59 dB
	200MHz ~ 1000MHz	3.60 dB
Radiated Emissions above 1 GHz	1GHz ~ 18GHz	2.29 dB
	18GHz ~ 40GHz	2.29 dB

2.2 Modification Record

There were no modifications required for compliance.

3 General Information

3.1 General Description of EUT

Product	Point of Sale Terminal
Brand	Verifone
Test Model	V210 4G
Sample Status	Identical Prototype
Power Supply Rating	3.7 Vdc (Battery) 5 Vdc (Adapter)
Modulation Type	256QAM, 64QAM, 16QAM, QPSK, BPSK
Modulation Technology	OFDM
Transfer Rate	802.11a: 54/48/36/24/18/12/9/6Mbps 802.11n: up to 150Mbps
Operating Frequency	5180~5240MHz, 5260~5320MHz, 5500~5700MHz, 5745~5825MHz
Number of Channel	5180~5240MHz: 802.11a, 802.11n (HT20), 802.11ac (VHT20): 4 802.11n (HT40), 802.11ac (VHT40): 2 802.11ac (VHT80): 1 5260~5320MHz: 802.11a, 802.11n (HT20), 802.11ac (VHT20): 4 802.11n (HT40), 802.11ac (VHT40): 2 802.11ac (VHT80): 1 5500~5700MHz: 802.11a, 802.11n (HT20), 802.11ac (VHT20): 11 802.11n (HT40), 802.11ac (VHT40): 5 802.11ac (VHT80): 2 5745~5825MHz: 802.11a, 802.11n (HT20), 802.11ac (VHT20): 5 802.11n (HT40), 802.11ac (VHT40): 2 802.11ac (VHT80): 1
Output Power	5180~5240MHz: 24.774mW 5260~5320MHz: 24.717mW 5500~5700MHz: 25.763mW 5745~5825MHz: 23.878mW
Antenna Type	Refer to note
Antenna Connector	Refer to note
Accessory Device	Refer to note
Cable Supplied	Refer to note

Note:

1. The EUT provides 1 completed transmitter and 1 receiver.

Modulation Mode	TX Function
802.11a	1TX
802.11n (HT20)	1TX
802.11n (HT40)	1TX
802.11ac (VHT20)	1TX
802.11ac (VHT40)	1TX
802.11ac (VHT80)	1TX

* The modulation and bandwidth are similar for 802.11n mode for HT20/HT40 and 802.11ac mode for VHT20/VHT40. After pre-testing, 802.11ac (VHT20/VHT40) power is lower than 802.11n (HT20/HT40), therefore 802.11n (HT20/HT40) is the worst case to representative mode in test report. (Final test mode refer section 3.2.1)

2. The EUT's accessories list refers to EUT Photo.pdf.

3. The following antennas were provided to the EUT.

Ant. Type		PIFA	
Connector Type		NA	
Antenna Gain(dBi)			
2.4G/BT	5150~5350MHz	5470~5720MHz	5725~5850MHz
-0.2	2.7	3.4	3.2

*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.

3.2 Description of Test Modes

5180~5240MHz:

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

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

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

Channel	Frequency	Channel	Frequency
38	5190 MHz	46	5230 MHz

1 channel is provided for 802.11ac (VHT80):

Channel	Frequency
42	5210MHz

5260~5320MHz:

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

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

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

Channel	Frequency	Channel	Frequency
54	5270 MHz	62	5310 MHz

1 channel is provided for 802.11ac (VHT80):

Channel	Frequency
58	5290MHz

5500~5700MHz:

11 channels are provided for 802.11a, 802.11n (HT20), 802.11ac (VHT20):

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

5 channels are provided for 802.11n (HT40), 802.11ac (VHT40):

Channel	Frequency	Channel	Frequency
102	5510 MHz	126	5630 MHz
110	5550 MHz	134	5670 MHz
118	5590 MHz		

2 channels are provided for 802.11ac (VHT80):

Channel	Frequency	Channel	Frequency
106	5530 MHz	122	5610 MHz

5745~5825MHz:

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

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

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

Channel	Frequency	Channel	Frequency
151	5755MHz	159	5795MHz

1 channel is provided for 802.11ac (VHT80):

Channel	Frequency
155	5775MHz

3.2.1 Test Mode Applicability and Tested Channel Detail

EUT Configure Mode	Applicable to				Description
	RE $\geq$ 1G	RE<1G	PLC	APCM	
-	√	√	√	√	-

Where RE $\geq$ 1G: Radiated Emission above 1GHz & Bandedge Measurement
RE<1G: Radiated Emission below 1GHz

PLC: Power Line Conducted Emission

APCM: Antenna Port Conducted Measurement

Note: The EUT had been pre-tested on the positioned of each 3 axis. The worst case was found when positioned on **Z-plane**.

Radiated Emission Test (Above 1GHz):

- ☒ 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	Mode	Frequency Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Data Rate (Mbps)
-	802.11a	5180-5240	36 to 48	36, 40, 48	OFDM	6.0
	802.11n (HT20)		36 to 48	36, 40, 48	OFDM	6.5
	802.11n (HT40)		38 to 46	38, 46	OFDM	13.5
	802.11ac (VHT80)		42	42	OFDM	29.3
-	802.11a	5260-5320	52 to 64	52, 60, 64	OFDM	6.0
	802.11n (HT20)		52 to 64	52, 60, 64	OFDM	6.5
	802.11n (HT40)		54 to 62	54, 62	OFDM	13.5
	802.11ac (VHT80)		58	58	OFDM	29.3
-	802.11a	5500-5700	100 to 140	100, 116, 140	OFDM	6.0
	802.11n (HT20)		100 to 140	100, 116, 140	OFDM	6.5
	802.11n (HT40)		102 to 134	102, 110, 134	OFDM	13.5
	802.11ac (VHT80)		106 to 122	106, 122	OFDM	29.3
-	802.11a	5745-5825	149 to 165	149, 157, 165	OFDM	6.0
	802.11n (HT20)		149 to 165	149, 157, 165	OFDM	6.5
	802.11n (HT40)		151 to 159	151, 159	OFDM	13.5
	802.11ac (VHT80)		155	155	OFDM	29.3

Radiated Emission Test (Below 1GHz):

- ☒ 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	Mode	Frequency Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Data Rate (Mbps)
-	802.11a	5180-5240	36 to 48	40	OFDM	6.0
		5260-5320	52 to 64		OFDM	6.0
		5500-5700	100 to 144		OFDM	6.0
		5745-5825	149 to 165		OFDM	6.0

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	Mode	Frequency Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Data Rate (Mbps)
-	802.11a	5180-5240	36 to 48	40	OFDM	6.0
		5260-5320	52 to 64		OFDM	6.0
		5500-5700	100 to 144		OFDM	6.0
		5745-5825	149 to 165		OFDM	6.0

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	Mode	Frequency Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Data Rate (Mbps)
-	802.11a	5180-5240	36 to 48	36, 40, 48	OFDM	6.0
	802.11n (HT20)		36 to 48	36, 40, 48	OFDM	6.5
	802.11n (HT40)		38 to 46	38, 46	OFDM	13.5
	802.11ac (VHT80)		42	42	OFDM	29.3
-	802.11a	5260-5320	52 to 64	52, 60, 64	OFDM	6.0
	802.11n (HT20)		52 to 64	52, 60, 64	OFDM	6.5
	802.11n (HT40)		54 to 62	54, 62	OFDM	13.5
	802.11ac (VHT80)		58	58	OFDM	29.3
-	802.11a	5500-5700	100 to 140	100, 116, 140	OFDM	6.0
	802.11n (HT20)		100 to 140	100, 116, 140	OFDM	6.5
	802.11n (HT40)		102 to 134	102, 110, 134	OFDM	13.5
	802.11ac (VHT80)		106 to 122	106, 122	OFDM	29.3
-	802.11a	5745-5825	149 to 165	149, 157, 165	OFDM	6.0
	802.11n (HT20)		149 to 165	149, 157, 165	OFDM	6.5
	802.11n (HT40)		151 to 159	151, 159	OFDM	13.5
	802.11ac (VHT80)		155	155	OFDM	29.3

Test Condition:

Applicable to	Environmental Conditions	Input Power	Tested by
RE $\geq$ 1G	22deg. C, 68%RH	120Vac, 60Hz	Greg Lin
RE<1G	22deg. C, 68%RH	120Vac, 60Hz	Greg Lin
PLC	25deg. C, 75%RH	120Vac, 60Hz	Greg Lin
APCM	25deg. C, 60%RH	120Vac, 60Hz	Gavin Wu

3.3 Duty Cycle of Test Signal

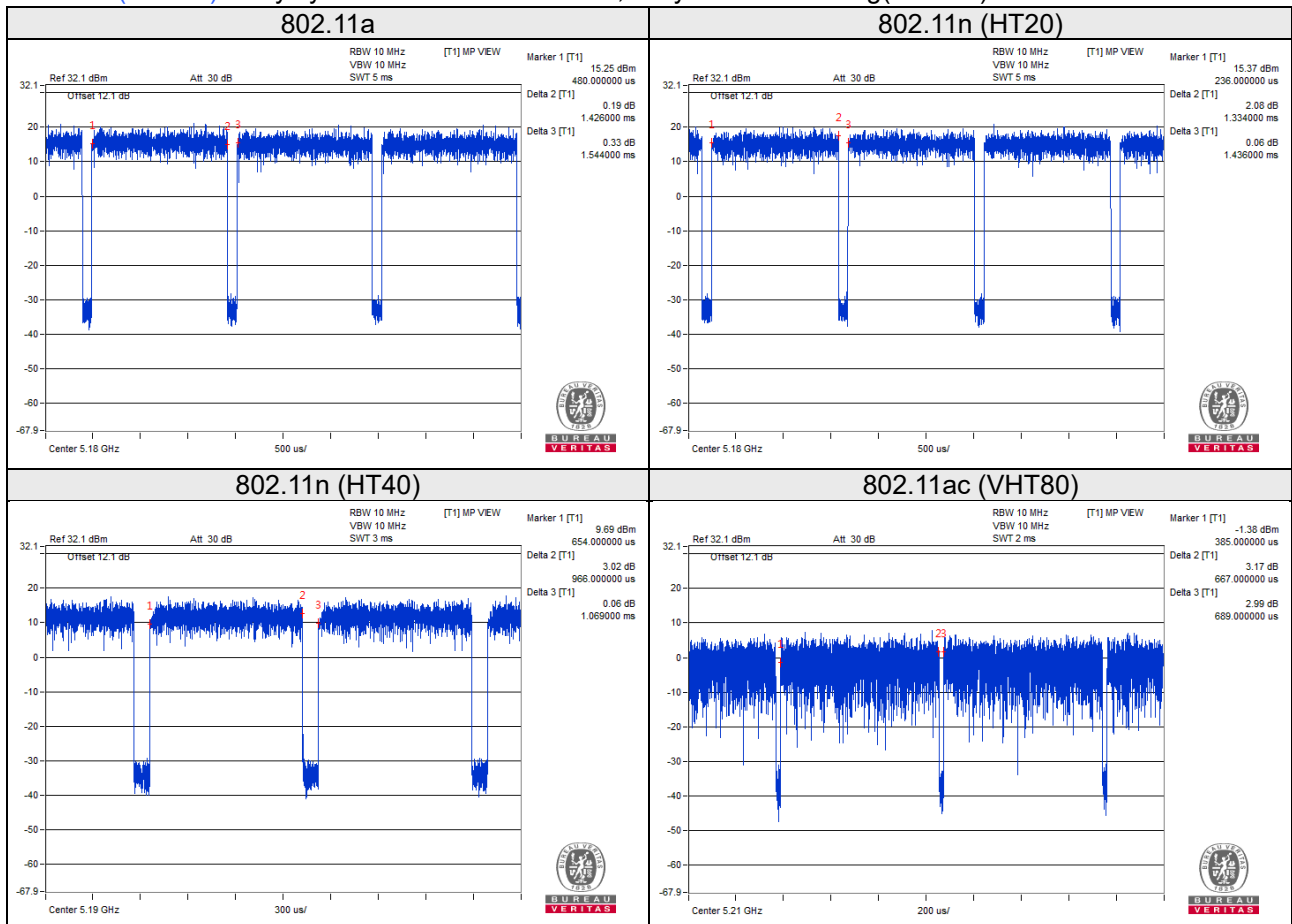
Duty cycle of test signal is < 98 %, duty factor is required

802.11a: Duty cycle = $1.426/1.544 = 0.924$, Duty factor = $10 * \log(1/0.924) = 0.35$

802.11n (HT20): Duty cycle = $1.334/1.436 = 0.929$, Duty factor = $10 * \log(1/0.929) = 0.32$

802.11n (HT40): Duty cycle = $0.966/1.069 = 0.904$, Duty factor = $10 * \log(1/0.904) = 0.44$

802.11ac (VHT80): Duty cycle = $0.667/0.689 = 0.968$, Duty factor = $10 * \log(1/0.968) = 0.14$

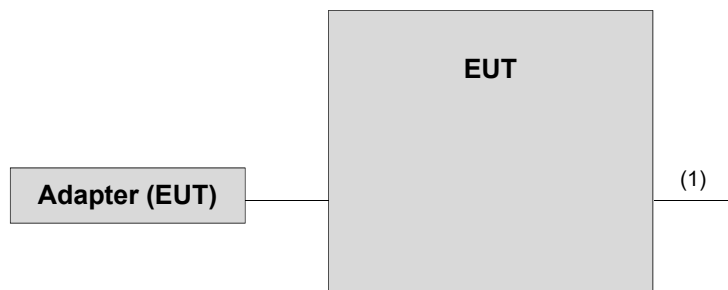


3.4 Description of Support Units

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	1	1	Y	0	-

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 Procedure New Rules v02r01

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

4 Test Types and Results

4.1 Radiated Emission and Bandedge Measurement

4.1.1 Limits of Radiated Emission and Bandedge Measurement

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

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

NOTE:

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).
3. For frequencies above 1000MHz, 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 20dB under any condition of modulation.

Limits of unwanted emission out of the restricted bands

Applicable To			Limit	
789033 D02 General UNII Test Procedure New Rules v02r01			Field Strength at 3m	
			PK: 74 (dBµV/m)	AV: 54 (dBµV/m)
Frequency Band	Applicable To		EIRP Limit	Equivalent Field Strength at 3m
5150~5250 MHz	15.407(b)(1)		PK: -27 (dBm/MHz)	PK: 68.2(dBµV/m)
5250~5350 MHz	15.407(b)(2)			
5470~5725 MHz	15.407(b)(3)			
5725~5850 MHz	☒	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(dBµV/m) ^{*1} PK: 105.2 (dBµV/m) ^{*2} PK: 110.8(dBµV/m) ^{*3} PK: 122.2 (dBµV/m) ^{*4}
	☐	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:

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

4.1.2 Test Instruments

Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
Test Receiver KEYSIGHT	N9038A	MY55420137	Apr. 16, 2020	Apr. 15, 2021
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
Loop Antenna TESEQ	HLA 6121	45745	Jul. 06, 2020	Jul. 05, 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
RF signal cable HUBER+SUHNER&EMCI	SUCOFLEX 104 & EMC104-SM-SM8000	CABLE-CH9-02 (248780+171006)	Jan. 18, 2020	Jan. 17, 2021
RF signal cable HUBER+SUHNER	SUCOFLEX 104	CABLE-CH9-(250795/4)	Jan. 18, 2020	Jan. 17, 2021
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
Boresight Antenna Fixture	FBA-01	FBA-SIP01	NA	NA
USB Wideband Power Sensor KEYSIGHT	U2021XA	MY55050005/MY55190 004/MY55190007/MY55 210005	Jul. 13, 2020	Jul. 12, 2021
Pre-amplifier (18GHz- 40GHz) EMC	EMC184045B	980175	Sep. 04, 2020	Sep. 03, 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 30MHz

- 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 9kHz at frequency below 30MHz.

For Radiated emission above 30MHz

- a. The EUT was placed on the top of a rotating table 0.8 meters (for 30MHz ~ 1GHz) / 1.5 meters (for above 1GHz) 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 detect 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:

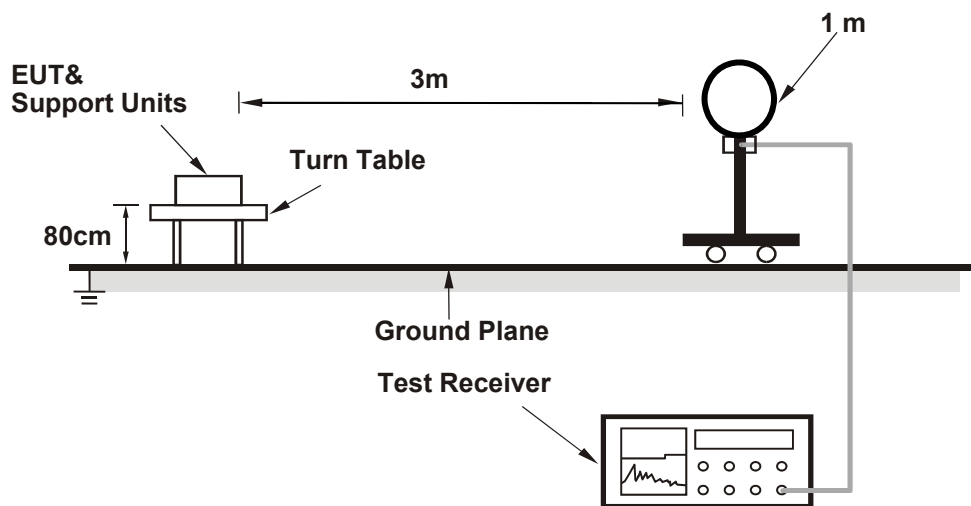
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is $\geq 1/T$ (Duty cycle $< 98\%$) or 10Hz (Duty cycle $\geq 98\%$) for Average detection (AV) at frequency above 1GHz.
(802.11a: RBW = 1MHz, VBW = 1kHz; 802.11n (HT20): RBW = 1MHz, VBW = 1kHz;
802.11n (HT40): RBW = 1MHz, VBW = 3kHz; 11ac (VHT80): RBW = 1MHz, VBW = 3kHz)
4. All modes of operation were investigated and the worst-case emissions are reported.

4.1.4 Deviation from Test Standard

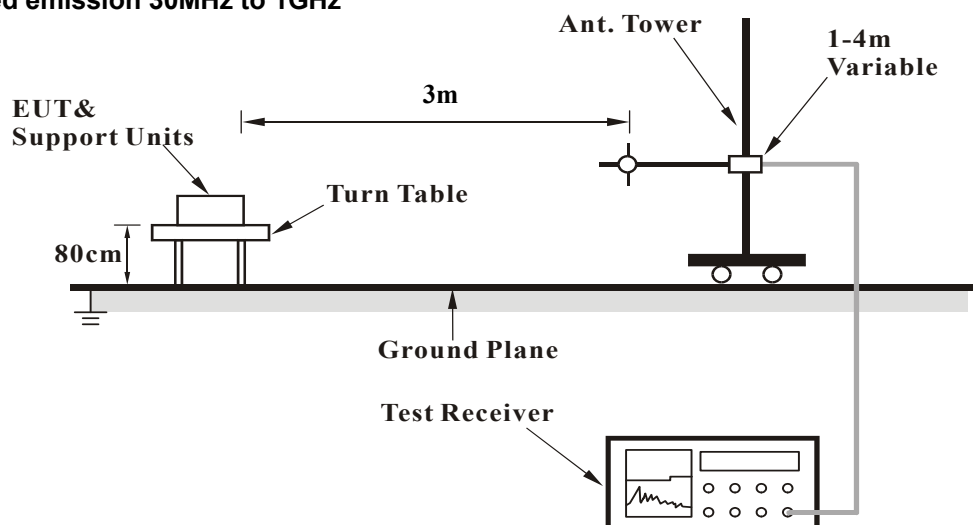
No deviation.

4.1.5 Test Set Up

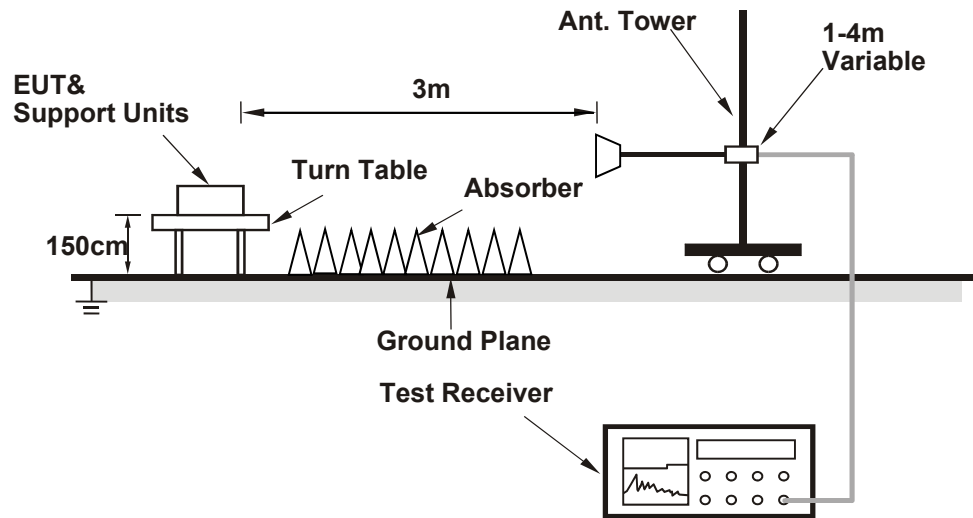
For Radiated emission below 30MHz



For Radiated emission 30MHz to 1GHz



For Radiated emission above 1GHz



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

4.1.6 EUT Operating Conditions

- Placed the EUT on the testing table.
- Set the EUT under transmission condition continuously at specific channel frequency.

4.1.7 Test Results

Above 1GHz data:

802.11a

CHANNEL	TX Channel 36	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		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	56.9 PK	74.0	-17.1	1.08 H	193	54.7	2.2
2	5150.00	40.8 AV	54.0	-13.2	1.08 H	193	38.6	2.2
3	*5180.00	99.7 PK			1.08 H	193	63.3	36.4
4	*5180.00	89.9 AV			1.08 H	193	53.5	36.4
5	#10360.00	55.0 PK	68.2	-13.2	1.57 H	303	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	5150.00	61.7 PK	74.0	-12.3	1.84 V	155	59.5	2.2
2	5150.00	43.0 AV	54.0	-11.0	1.84 V	155	40.8	2.2
3	*5180.00	105.8 PK			1.82 V	157	69.4	36.4
4	*5180.00	96.1 AV			1.84 V	155	59.7	36.4
5	#10360.00	55.7 PK	68.2	-12.5	2.24 V	333	40.5	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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 40	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		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	100.3 PK			1.13 H	202	63.9	36.4
2	*5200.00	90.5 AV			1.13 H	202	54.1	36.4
3	#10400.00	55.1 PK	68.2	-13.1	1.53 H	297	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	*5200.00	106.5 PK			1.79 V	157	70.1	36.4
2	*5200.00	96.6 AV			1.79 V	157	60.2	36.4
3	#10400.00	55.9 PK	68.2	-12.3	2.29 V	327	40.7	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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 48	DETECTOR	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz	FUNCTION	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	100.2 PK			1.14 H	187	63.9	36.3
2	*5240.00	90.4 AV			1.14 H	187	54.1	36.3
3	5350.00	51.6 PK	74.0	-22.4	1.14 H	187	49.6	2.0
4	5350.00	40.7 AV	54.0	-13.3	1.14 H	187	38.7	2.0
5	#10480.00	54.8 PK	68.2	-13.4	1.52 H	295	39.7	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	106.0 PK			1.80 V	155	69.7	36.3
2	*5240.00	96.4 AV			1.80 V	155	60.1	36.3
3	5350.00	52.3 PK	74.0	-21.7	1.80 V	155	50.3	2.0
4	5350.00	41.8 AV	54.0	-12.2	1.80 V	155	39.8	2.0
5	#10480.00	55.7 PK	68.2	-12.5	2.18 V	326	40.6	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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 52	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		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	51.8 PK	74.0	-22.2	1.14 H	196	49.6	2.2
2	5150.00	41.5 AV	54.0	-12.5	1.14 H	196	39.3	2.2
3	*5260.00	98.9 PK			1.14 H	196	62.7	36.2
4	*5260.00	89.0 AV			1.14 H	196	52.8	36.2
5	#10520.00	55.6 PK	68.2	-12.6	1.67 H	302	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	52.5 PK	74.0	-21.5	2.06 V	165	50.3	2.2
2	5150.00	42.0 AV	54.0	-12.0	2.06 V	165	39.8	2.2
3	*5260.00	104.6 PK			2.06 V	165	68.4	36.2
4	*5260.00	94.8 AV			2.06 V	165	58.6	36.2
5	#10520.00	55.8 PK	68.2	-12.4	2.27 V	336	40.6	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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 60	DETECTOR	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz	FUNCTION	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	99.8 PK			1.06 H	187	63.8	36.0
2	*5300.00	89.9 AV			1.06 H	187	53.9	36.0
3	10600.00	56.0 PK	74.0	-18.0	1.56 H	303	40.3	15.7
4	10600.00	42.5 AV	54.0	-11.5	1.56 H	303	26.8	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	105.5 PK			1.99 V	167	69.5	36.0
2	*5300.00	95.7 AV			1.99 V	167	59.7	36.0
3	10600.00	56.4 PK	74.0	-17.6	2.28 V	329	40.7	15.7
4	10600.00	43.1 AV	54.0	-10.9	2.28 V	329	27.4	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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 64	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		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	98.5 PK			1.17 H	198	62.3	36.2
2	*5320.00	88.6 AV			1.17 H	198	52.4	36.2
3	5350.00	54.4 PK	74.0	-19.6	1.17 H	198	52.4	2.0
4	5350.00	39.6 AV	54.0	-14.4	1.17 H	198	37.6	2.0
5	10640.00	56.1 PK	74.0	-17.9	1.53 H	307	40.3	15.8
6	10640.00	42.5 AV	54.0	-11.5	1.53 H	307	26.7	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	104.3 PK			2.02 V	158	68.1	36.2
2	*5320.00	94.4 AV			2.02 V	158	58.2	36.2
3	5350.00	56.3 PK	74.0	-17.7	2.02 V	158	54.3	2.0
4	5350.00	41.5 AV	54.0	-12.5	2.02 V	158	39.5	2.0
5	10640.00	56.4 PK	74.0	-17.6	2.27 V	331	40.6	15.8
6	10640.00	43.2 AV	54.0	-10.8	2.27 V	331	27.4	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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 100	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		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	54.1 PK	74.0	-19.9	1.16 H	204	51.3	2.8
2	5460.00	41.5 AV	54.0	-12.5	1.16 H	204	38.7	2.8
3	#5470.00	56.5 PK	68.2	-11.7	1.16 H	204	53.7	2.8
4	*5500.00	97.5 PK			1.16 H	204	60.5	37.0
5	*5500.00	87.7 AV			1.16 H	204	50.7	37.0
6	11000.00	57.2 PK	74.0	-16.8	1.58 H	314	40.2	17.0
7	11000.00	43.8 AV	54.0	-10.2	1.58 H	314	26.8	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	56.0 PK	74.0	-18.0	1.94 V	158	53.2	2.8
2	5460.00	42.2 AV	54.0	-11.8	1.94 V	158	39.4	2.8
3	#5470.00	58.5 PK	68.2	-9.7	1.94 V	158	55.7	2.8
4	*5500.00	103.2 PK			1.94 V	158	66.2	37.0
5	*5500.00	93.4 AV			1.94 V	158	56.4	37.0
6	11000.00	57.8 PK	74.0	-16.2	2.37 V	323	40.8	17.0
7	11000.00	44.5 AV	54.0	-9.5	2.37 V	323	27.5	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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 116	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		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	98.1 PK			1.03 H	194	61.1	37.0
2	*5580.00	88.4 AV			1.03 H	194	51.4	37.0
3	11160.00	56.3 PK	74.0	-17.7	1.43 H	294	40.3	16.0
4	11160.00	43.1 AV	54.0	-10.9	1.43 H	294	27.1	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	104.1 PK			1.96 V	157	67.1	37.0
2	*5580.00	94.3 AV			1.96 V	157	57.3	37.0
3	11160.00	56.7 PK	74.0	-17.3	2.29 V	331	40.7	16.0
4	11160.00	43.4 AV	54.0	-10.6	2.29 V	331	27.4	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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 140	DETECTOR	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz	FUNCTION	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	99.1 PK			1.15 H	192	61.9	37.2
2	*5700.00	89.3 AV			1.15 H	192	52.1	37.2
3	#5725.00	55.5 PK	68.2	-12.7	1.15 H	192	52.5	3.0
4	11400.00	56.6 PK	74.0	-17.4	1.62 H	293	40.3	16.3
5	11400.00	43.1 AV	54.0	-10.9	1.62 H	293	26.8	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	103.7 PK			2.01 V	156	66.5	37.2
2	*5700.00	94.0 AV			2.01 V	156	56.8	37.2
3	#5725.00	60.1 PK	68.2	-8.1	2.01 V	156	57.1	3.0
4	11400.00	56.8 PK	74.0	-17.2	2.01 V	156	40.5	16.3
5	11400.00	43.6 AV	54.0	-10.4	2.01 V	156	27.3	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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 149	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		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	#5643.20	52.0 PK	68.2	-16.2	1.18 H	194	49.2	2.8
2	*5745.00	97.9 PK			1.18 H	194	60.6	37.3
3	*5745.00	88.1 AV			1.18 H	194	50.8	37.3
4	#5966.40	52.6 PK	68.2	-15.6	1.18 H	194	49.2	3.4
5	11490.00	56.1 PK	74.0	-17.9	1.58 H	294	40.3	15.8
6	11490.00	42.9 AV	54.0	-11.1	1.58 H	294	27.1	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	#5616.00	52.8 PK	68.2	-15.4	1.88 V	156	50.1	2.7
2	*5745.00	103.7 PK			1.88 V	156	66.4	37.3
3	*5745.00	93.9 AV			1.88 V	156	56.6	37.3
4	#5928.00	53.3 PK	68.2	-14.9	1.88 V	156	49.9	3.4
5	11490.00	56.4 PK	74.0	-17.6	2.31 V	338	40.6	15.8
6	11490.00	43.2 AV	54.0	-10.8	2.31 V	338	27.4	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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 157	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		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	#5609.60	51.0 PK	68.2	-17.2	1.21 H	195	48.3	2.7
2	*5785.00	98.2 PK			1.21 H	195	60.7	37.5
3	*5785.00	88.2 AV			1.21 H	195	50.7	37.5
4	#5940.00	50.8 PK	68.2	-17.4	1.21 H	195	47.3	3.5
5	11570.00	55.6 PK	74.0	-18.4	1.48 H	309	40.2	15.4
6	11570.00	42.3 AV	54.0	-11.7	1.48 H	309	26.9	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	#5622.40	52.2 PK	68.2	-16.0	2.02 V	155	49.5	2.7
2	*5785.00	104.3 PK			2.02 V	155	66.8	37.5
3	*5785.00	94.4 AV			2.02 V	155	56.9	37.5
4	#5979.20	52.3 PK	68.2	-15.9	2.02 V	155	48.9	3.4
5	11570.00	56.0 PK	74.0	-18.0	2.28 V	347	40.6	15.4
6	11570.00	42.8 AV	54.0	-11.2	2.28 V	347	27.4	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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 165	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		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	#5648.00	52.5 PK	68.2	-15.7	1.04 H	195	49.7	2.8
2	*5825.00	97.8 PK			1.04 H	195	60.2	37.6
3	*5825.00	88.0 AV			1.04 H	195	50.4	37.6
4	#5926.40	51.9 PK	68.2	-16.3	1.04 H	195	48.5	3.4
5	11650.00	55.8 PK	74.0	-18.2	1.69 H	307	40.3	15.5
6	11650.00	42.4 AV	54.0	-11.6	1.69 H	307	26.9	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	#5604.80	51.3 PK	68.2	-16.9	2.24 V	156	48.6	2.7
2	*5825.00	103.8 PK			2.24 V	156	66.2	37.6
3	*5825.00	94.0 AV			2.24 V	156	56.4	37.6
4	#5978.40	51.2 PK	68.2	-17.0	2.24 V	156	47.8	3.4
5	11650.00	56.1 PK	74.0	-17.9	2.28 V	317	40.6	15.5
6	11650.00	42.7 AV	54.0	-11.3	2.28 V	317	27.2	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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

802.11n (HT20)

CHANNEL	TX Channel 36	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		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	56.8 PK	74.0	-17.2	1.06 H	189	54.6	2.2
2	5150.00	41.6 AV	54.0	-12.4	1.06 H	189	39.4	2.2
3	*5180.00	99.2 PK			1.06 H	189	62.8	36.4
4	*5180.00	88.7 AV			1.06 H	189	52.3	36.4
5	#10360.00	54.7 PK	68.2	-13.5	1.54 H	306	39.5	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	59.5 PK	74.0	-14.5	1.81 V	156	57.3	2.2
2	5150.00	43.4 AV	54.0	-10.6	1.81 V	156	41.2	2.2
3	*5180.00	105.4 PK			1.81 V	156	69.0	36.4
4	*5180.00	94.9 AV			1.81 V	156	58.5	36.4
5	#10360.00	55.7 PK	68.2	-12.5	2.23 V	342	40.5	15.2

Remarks:

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

CHANNEL	TX Channel 40	DETECTOR	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz	FUNCTION	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	100.1 PK			1.07 H	206	63.7	36.4
2	*5200.00	89.7 AV			1.07 H	206	53.3	36.4
3	#10400.00	54.6 PK	68.2	-13.6	1.62 H	301	39.4	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	*5200.00	106.2 PK			1.86 V	157	69.8	36.4
2	*5200.00	95.7 AV			1.86 V	157	59.3	36.4
3	#10400.00	55.5 PK	68.2	-12.7	2.36 V	348	40.3	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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 48	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		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			1.07 H	189	63.2	36.3
2	*5240.00	89.0 AV			1.07 H	189	52.7	36.3
3	5350.00	51.4 PK	74.0	-22.6	1.07 H	189	49.4	2.0
4	5350.00	40.6 AV	54.0	-13.4	1.07 H	189	38.6	2.0
5	#10480.00	54.5 PK	68.2	-13.7	1.53 H	302	39.4	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	105.6 PK			1.81 V	156	69.3	36.3
2	*5240.00	95.2 AV			1.81 V	156	58.9	36.3
3	5350.00	52.2 PK	74.0	-21.8	1.81 V	156	50.2	2.0
4	5350.00	41.8 AV	54.0	-12.2	1.81 V	156	39.8	2.0
5	#10480.00	55.5 PK	68.2	-12.7	2.28 V	327	40.4	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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 52	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		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	51.5 PK	74.0	-22.5	1.24 H	179	49.3	2.2
2	5150.00	39.0 AV	54.0	-15.0	1.24 H	179	36.8	2.2
3	*5260.00	98.8 PK			1.24 H	179	62.6	36.2
4	*5260.00	88.6 AV			1.24 H	179	52.4	36.2
5	#10520.00	55.5 PK	68.2	-12.7	1.52 H	289	40.3	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	2.03 V	165	50.1	2.2
2	5150.00	39.9 AV	54.0	-14.1	2.03 V	165	37.7	2.2
3	*5260.00	104.6 PK			2.03 V	165	68.4	36.2
4	*5260.00	94.4 AV			2.03 V	165	58.2	36.2
5	#10520.00	55.7 PK	68.2	-12.5	2.21 V	327	40.5	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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 60	DETECTOR	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz	FUNCTION	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	99.3 PK			1.17 H	185	63.3	36.0
2	*5300.00	89.1 AV			1.17 H	185	53.1	36.0
3	10600.00	55.9 PK	74.0	-18.1	1.48 H	294	40.2	15.7
4	10600.00	42.5 AV	54.0	-11.5	1.48 H	294	26.8	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	105.2 PK			2.01 V	162	69.2	36.0
2	*5300.00	94.9 AV			2.01 V	162	58.9	36.0
3	10600.00	56.1 PK	74.0	-17.9	2.32 V	347	40.4	15.7
4	10600.00	43.0 AV	54.0	-11.0	2.32 V	347	27.3	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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 64	DETECTOR	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz	FUNCTION	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	98.0 PK			1.08 H	192	61.8	36.2
2	*5320.00	87.8 AV			1.08 H	192	51.6	36.2
3	5350.00	54.2 PK	74.0	-19.8	1.08 H	192	52.2	2.0
4	5350.00	38.8 AV	54.0	-15.2	1.08 H	192	36.8	2.0
5	10640.00	55.6 PK	74.0	-18.4	1.42 H	295	39.8	15.8
6	10640.00	42.4 AV	54.0	-11.6	1.42 H	295	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	*5320.00	103.7 PK			2.00 V	158	67.5	36.2
2	*5320.00	93.5 AV			2.00 V	158	57.3	36.2
3	5350.00	59.3 PK	74.0	-14.7	2.00 V	158	57.3	2.0
4	5350.00	41.8 AV	54.0	-12.2	2.00 V	158	39.8	2.0
5	10640.00	56.3 PK	74.0	-17.7	2.17 V	346	40.5	15.8
6	10640.00	43.2 AV	54.0	-10.8	2.17 V	346	27.4	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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 100	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		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	52.5 PK	74.0	-21.5	1.17 H	186	49.7	2.8
2	5460.00	41.2 AV	54.0	-12.8	1.17 H	186	38.4	2.8
3	#5470.00	55.5 PK	68.2	-12.7	1.17 H	186	52.7	2.8
4	*5500.00	97.6 PK			1.17 H	186	60.6	37.0
5	*5500.00	86.7 AV			1.17 H	186	49.7	37.0
6	11000.00	57.1 PK	74.0	-16.9	1.52 H	316	40.1	17.0
7	11000.00	43.7 AV	54.0	-10.3	1.52 H	316	26.7	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	53.6 PK	74.0	-20.4	1.96 V	159	50.8	2.8
2	5460.00	42.3 AV	54.0	-11.7	1.96 V	159	39.5	2.8
3	#5470.00	58.2 PK	68.2	-10.0	1.96 V	159	55.4	2.8
4	*5500.00	103.7 PK			1.96 V	159	66.7	37.0
5	*5500.00	92.4 AV			1.96 V	159	55.4	37.0
6	11000.00	57.4 PK	74.0	-16.6	2.21 V	336	40.4	17.0
7	11000.00	44.1 AV	54.0	-9.9	2.21 V	336	27.1	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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 116	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		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	99.2 PK			1.13 H	204	62.2	37.0
2	*5580.00	87.9 AV			1.13 H	204	50.9	37.0
3	11160.00	56.2 PK	74.0	-17.8	1.58 H	301	40.2	16.0
4	11160.00	42.8 AV	54.0	-11.2	1.58 H	301	26.8	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	104.6 PK			2.03 V	157	67.6	37.0
2	*5580.00	93.7 AV			2.03 V	157	56.7	37.0
3	11160.00	56.6 PK	74.0	-17.4	2.37 V	346	40.6	16.0
4	11160.00	43.3 AV	54.0	-10.7	2.37 V	346	27.3	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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 140	DETECTOR	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz	FUNCTION	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	98.3 PK			1.19 H	205	61.1	37.2
2	*5700.00	87.8 AV			1.19 H	205	50.6	37.2
3	#5725.00	53.8 PK	68.2	-14.4	1.19 H	205	50.8	3.0
4	11400.00	56.6 PK	74.0	-17.4	1.62 H	297	40.3	16.3
5	11400.00	43.1 AV	54.0	-10.9	1.62 H	297	26.8	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	103.7 PK			1.99 V	156	66.5	37.2
2	*5700.00	93.4 AV			1.99 V	156	56.2	37.2
3	#5725.00	56.8 PK	68.2	-11.4	1.99 V	156	53.8	3.0
4	11400.00	56.8 PK	74.0	-17.2	2.19 V	337	40.5	16.3
5	11400.00	43.6 AV	54.0	-10.4	2.19 V	337	27.3	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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 149	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		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	51.3 PK	68.2	-16.9	1.15 H	200	48.6	2.7
2	*5745.00	97.8 PK			1.15 H	200	60.5	37.3
3	*5745.00	87.7 AV			1.15 H	200	50.4	37.3
4	#5992.00	51.9 PK	68.2	-16.3	1.15 H	200	48.5	3.4
5	11490.00	56.0 PK	74.0	-18.0	1.58 H	317	40.2	15.8
6	11490.00	42.5 AV	54.0	-11.5	1.58 H	317	26.7	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	#5622.40	51.1 PK	68.2	-17.1	2.06 V	153	48.4	2.7
2	*5745.00	103.9 PK			2.06 V	153	66.6	37.3
3	*5745.00	93.7 AV			2.06 V	153	56.4	37.3
4	#5952.80	51.1 PK	68.2	-17.1	2.06 V	153	47.6	3.5
5	11490.00	56.2 PK	74.0	-17.8	2.36 V	347	40.4	15.8
6	11490.00	42.9 AV	54.0	-11.1	2.36 V	347	27.1	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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 157	DETECTOR	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz	FUNCTION	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	#5639.20	52.9 PK	68.2	-15.3	1.16 H	199	50.2	2.7
2	*5785.00	98.2 PK			1.16 H	199	60.7	37.5
3	*5785.00	88.3 AV			1.16 H	199	50.8	37.5
4	#5947.20	52.2 PK	68.2	-16.0	1.16 H	199	48.7	3.5
5	11570.00	55.6 PK	74.0	-18.4	1.44 H	290	40.2	15.4
6	11570.00	42.1 AV	54.0	-11.9	1.44 H	290	26.7	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	#5623.20	51.8 PK	68.2	-16.4	2.12 V	161	49.1	2.7
2	*5785.00	104.4 PK			2.12 V	161	66.9	37.5
3	*5785.00	94.2 AV			2.12 V	161	56.7	37.5
4	#5976.80	51.2 PK	68.2	-17.0	2.12 V	161	47.8	3.4
5	11570.00	56.0 PK	74.0	-18.0	2.18 V	326	40.6	15.4
6	11570.00	42.7 AV	54.0	-11.3	2.18 V	326	27.3	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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 165	DETECTOR	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz	FUNCTION	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	#5617.60	51.9 PK	68.2	-16.3	1.14 H	209	49.2	2.7
2	*5825.00	97.8 PK			1.14 H	209	60.2	37.6
3	*5825.00	87.7 AV			1.14 H	209	50.1	37.6
4	#5970.40	52.3 PK	68.2	-15.9	1.14 H	209	48.9	3.4
5	11650.00	55.8 PK	74.0	-18.2	1.48 H	305	40.3	15.5
6	11650.00	42.3 AV	54.0	-11.7	1.48 H	305	26.8	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	#5643.20	52.9 PK	68.2	-15.3	2.14 V	164	50.1	2.8
2	*5825.00	103.7 PK			2.14 V	164	66.1	37.6
3	*5825.00	93.4 AV			2.14 V	164	55.8	37.6
4	#5925.60	51.9 PK	68.2	-16.3	2.14 V	164	48.5	3.4
5	11650.00	56.0 PK	74.0	-18.0	2.17 V	328	40.5	15.5
6	11650.00	42.7 AV	54.0	-11.3	2.17 V	328	27.2	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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

802.11n (HT40)

CHANNEL	TX Channel 38	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		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	57.9 PK	74.0	-16.1	1.03 H	197	55.7	2.2
2	5150.00	44.6 AV	54.0	-9.4	1.03 H	197	42.4	2.2
3	*5190.00	96.2 PK			1.03 H	197	59.8	36.4
4	*5190.00	85.8 AV			1.03 H	197	49.4	36.4
5	#10380.00	54.5 PK	68.2	-13.7	1.43 H	295	39.3	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	60.6 PK	74.0	-13.4	1.82 V	156	58.4	2.2
2	5150.00	48.2 AV	54.0	-5.8	1.82 V	156	46.0	2.2
3	*5190.00	101.9 PK			1.82 V	156	65.5	36.4
4	*5190.00	91.8 AV			1.82 V	156	55.4	36.4
5	#10380.00	55.4 PK	68.2	-12.8	2.35 V	347	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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 46	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		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	96.2 PK			1.13 H	187	59.9	36.3
2	*5230.00	85.9 AV			1.13 H	187	49.6	36.3
3	5350.00	51.6 PK	74.0	-22.4	1.13 H	187	49.6	2.0
4	5350.00	40.7 AV	54.0	-13.3	1.13 H	187	38.7	2.0
5	#10460.00	54.5 PK	68.2	-13.7	1.43 H	307	39.4	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	102.0 PK			1.54 V	156	65.7	36.3
2	*5230.00	91.8 AV			1.54 V	156	55.5	36.3
3	5350.00	52.6 PK	74.0	-21.4	1.54 V	156	50.6	2.0
4	5350.00	41.3 AV	54.0	-12.7	1.54 V	156	39.3	2.0
5	#10460.00	55.2 PK	68.2	-13.0	2.39 V	337	40.1	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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 54	DETECTOR	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz	FUNCTION	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	51.8 PK	74.0	-22.2	1.13 H	183	49.6	2.2
2	5150.00	40.0 AV	54.0	-14.0	1.13 H	183	37.8	2.2
3	*5270.00	96.0 PK			1.13 H	183	59.8	36.2
4	*5270.00	85.8 AV			1.13 H	183	49.6	36.2
5	#10540.00	55.0 PK	68.2	-13.2	1.52 H	301	39.6	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	5150.00	52.4 PK	74.0	-21.6	2.01 V	160	50.2	2.2
2	5150.00	40.5 AV	54.0	-13.5	2.01 V	160	38.3	2.2
3	*5270.00	101.5 PK			2.01 V	160	65.3	36.2
4	*5270.00	91.4 AV			2.01 V	160	55.2	36.2
5	#10540.00	55.6 PK	68.2	-12.6	2.33 V	326	40.2	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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 62	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		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	95.3 PK			1.03 H	197	59.2	36.1
2	*5310.00	85.1 AV			1.03 H	197	49.0	36.1
3	5350.00	58.6 PK	74.0	-15.4	1.03 H	197	56.6	2.0
4	5350.00	41.6 AV	54.0	-12.4	1.03 H	197	39.6	2.0
5	10620.00	55.3 PK	74.0	-18.7	1.64 H	307	39.6	15.7
6	10620.00	42.0 AV	54.0	-12.0	1.64 H	307	26.3	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			2.12 V	165	64.9	36.1
2	*5310.00	90.8 AV			2.12 V	165	54.7	36.1
3	5350.00	63.9 PK	74.0	-10.1	2.12 V	165	61.9	2.0
4	5350.00	44.2 AV	54.0	-9.8	2.12 V	165	42.2	2.0
5	10620.00	55.9 PK	74.0	-18.1	2.27 V	331	40.2	15.7
6	10620.00	42.6 AV	54.0	-11.4	2.27 V	331	26.9	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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 102	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		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	53.6 PK	74.0	-20.4	1.07 H	198	50.8	2.8
2	5460.00	41.2 AV	54.0	-12.8	1.07 H	198	38.4	2.8
3	#5470.00	57.1 PK	68.2	-11.1	1.07 H	198	54.3	2.8
4	*5510.00	94.8 PK			1.07 H	198	57.8	37.0
5	*5510.00	84.2 AV			1.07 H	198	47.2	37.0
6	11020.00	56.6 PK	74.0	-17.4	1.61 H	318	39.7	16.9
7	11020.00	43.2 AV	54.0	-10.8	1.61 H	318	26.3	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	54.9 PK	74.0	-19.1	1.90 V	160	52.1	2.8
2	5460.00	42.6 AV	54.0	-11.4	1.90 V	160	39.8	2.8
3	#5470.00	59.9 PK	68.2	-8.3	1.90 V	160	57.1	2.8
4	*5510.00	99.6 PK			1.90 V	160	62.6	37.0
5	*5510.00	89.8 AV			1.90 V	160	52.8	37.0
6	11020.00	57.1 PK	74.0	-16.9	2.39 V	345	40.2	16.9
7	11020.00	43.7 AV	54.0	-10.3	2.39 V	345	26.8	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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 110	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		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	95.1 PK			1.26 H	208	58.1	37.0
2	*5550.00	84.9 AV			1.26 H	208	47.9	37.0
3	11100.00	55.7 PK	74.0	-18.3	1.66 H	292	39.6	16.1
4	11100.00	42.5 AV	54.0	-11.5	1.66 H	292	26.4	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	100.7 PK			1.96 V	161	63.7	37.0
2	*5550.00	90.6 AV			1.96 V	161	53.6	37.0
3	11100.00	56.4 PK	74.0	-17.6	2.17 V	336	40.3	16.1
4	11100.00	43.2 AV	54.0	-10.8	2.17 V	336	27.1	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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 134	DETECTOR	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz	FUNCTION	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	94.9 PK			1.24 H	207	57.8	37.1
2	*5670.00	84.9 AV			1.24 H	207	47.8	37.1
3	#5725.00	53.5 PK	68.2	-14.7	1.24 H	207	50.5	3.0
4	11340.00	56.1 PK	74.0	-17.9	1.38 H	289	39.6	16.5
5	11340.00	42.9 AV	54.0	-11.1	1.38 H	289	26.4	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	100.4 PK			2.12 V	157	63.3	37.1
2	*5670.00	90.6 AV			2.12 V	157	53.5	37.1
3	#5725.00	56.8 PK	68.2	-11.4	2.12 V	157	53.8	3.0
4	11340.00	56.7 PK	74.0	-17.3	2.18 V	339	40.2	16.5
5	11340.00	43.4 AV	54.0	-10.6	2.18 V	339	26.9	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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 151	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		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	#5631.20	52.6 PK	68.2	-15.6	1.11 H	205	49.9	2.7
2	*5755.00	95.6 PK			1.11 H	205	58.3	37.3
3	*5755.00	85.5 AV			1.11 H	205	48.2	37.3
4	#5954.40	51.6 PK	68.2	-16.6	1.11 H	205	48.1	3.5
5	11510.00	55.3 PK	74.0	-18.7	1.46 H	301	39.7	15.6
6	11510.00	41.9 AV	54.0	-12.1	1.46 H	301	26.3	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	#5640.00	51.5 PK	68.2	-16.7	2.02 V	155	48.8	2.7
2	*5755.00	101.1 PK			2.02 V	155	63.8	37.3
3	*5755.00	91.2 AV			2.02 V	155	53.9	37.3
4	#5930.40	52.5 PK	68.2	-15.7	2.02 V	155	49.1	3.4
5	11510.00	55.9 PK	74.0	-18.1	2.19 V	324	40.3	15.6
6	11510.00	42.3 AV	54.0	-11.7	2.19 V	324	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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 159	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		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	#5610.40	51.3 PK	68.2	-16.9	1.03 H	198	48.6	2.7
2	*5795.00	95.7 PK			1.03 H	198	58.1	37.6
3	*5795.00	85.3 AV			1.03 H	198	47.7	37.6
4	#5928.80	52.2 PK	68.2	-16.0	1.03 H	198	48.8	3.4
5	11590.00	55.0 PK	74.0	-19.0	1.63 H	287	39.6	15.4
6	11590.00	41.7 AV	54.0	-12.3	1.63 H	287	26.3	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	#5608.00	51.2 PK	68.2	-17.0	2.03 V	155	48.5	2.7
2	*5795.00	100.8 PK			2.03 V	155	63.2	37.6
3	*5795.00	91.0 AV			2.03 V	155	53.4	37.6
4	#5998.40	51.7 PK	68.2	-16.5	2.03 V	155	48.3	3.4
5	11590.00	55.5 PK	74.0	-18.5	2.29 V	323	40.1	15.4
6	11590.00	42.2 AV	54.0	-11.8	2.29 V	323	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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

802.11ac (VHT80)

CHANNEL	TX Channel 42	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		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	55.3 PK	74.0	-18.7	1.12 H	203	53.1	2.2
2	5150.00	43.0 AV	54.0	-11.0	1.12 H	203	40.8	2.2
3	*5210.00	93.1 PK			1.12 H	203	56.7	36.4
4	*5210.00	83.0 AV			1.12 H	203	46.6	36.4
5	5350.00	51.7 PK	74.0	-22.3	1.12 H	203	49.7	2.0
6	5350.00	41.6 AV	54.0	-12.4	1.12 H	203	39.6	2.0
7	#10420.00	54.8 PK	68.2	-13.4	1.57 H	308	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	63.3 PK	74.0	-10.7	2.04 V	165	61.1	2.2
2	5150.00	50.2 AV	54.0	-3.8	2.04 V	165	48.0	2.2
3	*5210.00	99.0 PK			2.04 V	165	62.6	36.4
4	*5210.00	88.8 AV			2.04 V	165	52.4	36.4
5	5350.00	52.8 PK	74.0	-21.2	2.04 V	165	50.8	2.0
6	5350.00	41.6 AV	54.0	-12.4	2.04 V	165	39.6	2.0
7	#10420.00	55.4 PK	68.2	-12.8	2.37 V	326	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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 58	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		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	92.2 PK			1.15 H	197	56.1	36.1
2	*5290.00	81.9 AV			1.15 H	197	45.8	36.1
3	5350.00	59.6 PK	74.0	-14.4	1.15 H	197	57.6	2.0
4	5350.00	43.1 AV	54.0	-10.9	1.15 H	197	41.1	2.0
5	#10580.00	55.2 PK	68.2	-13.0	1.48 H	309	39.6	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	97.9 PK			2.15 V	166	61.8	36.1
2	*5290.00	87.6 AV			2.15 V	166	51.5	36.1
3	5350.00	62.3 PK	74.0	-11.7	2.15 V	166	60.3	2.0
4	5350.00	46.2 AV	54.0	-7.8	2.15 V	166	44.2	2.0
5	#10580.00	55.9 PK	68.2	-12.3	2.26 V	326	40.3	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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 106	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		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	56.5 PK	74.0	-17.5	1.07 H	185	53.7	2.8
2	5460.00	43.9 AV	54.0	-10.1	1.07 H	185	41.1	2.8
3	#5470.00	58.5 PK	68.2	-9.7	1.07 H	185	55.7	2.8
4	*5530.00	91.2 PK			1.07 H	185	54.2	37.0
5	*5530.00	81.2 AV			1.07 H	185	44.2	37.0
6	#5725.00	52.8 PK	68.2	-15.4	1.07 H	185	49.8	3.0
7	11060.00	55.9 PK	74.0	-18.1	1.51 H	289	39.3	16.6
8	11060.00	42.8 AV	54.0	-11.2	1.51 H	289	26.2	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	58.3 PK	74.0	-15.7	2.07 V	159	55.5	2.8
2	5460.00	46.3 AV	54.0	-7.7	2.07 V	159	43.5	2.8
3	#5470.00	60.3 PK	68.2	-7.9	2.07 V	159	57.5	2.8
4	*5530.00	96.7 PK			2.07 V	160	59.7	37.0
5	*5530.00	86.7 AV			2.07 V	160	49.7	37.0
6	#5725.00	53.5 PK	68.2	-14.7	2.07 V	159	50.5	3.0
7	11060.00	56.0 PK	74.0	-18.0	2.28 V	319	39.4	16.6
8	11060.00	43.1 AV	54.0	-10.9	2.28 V	319	26.5	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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 122	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		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	53.1 PK	74.0	-20.9	1.18 H	201	50.3	2.8
2	5460.00	41.4 AV	54.0	-12.6	1.18 H	201	38.6	2.8
3	#5470.00	53.5 PK	68.2	-14.7	1.18 H	201	50.7	2.8
4	*5610.00	91.8 PK			1.18 H	201	54.8	37.0
5	*5610.00	81.9 AV			1.18 H	201	44.9	37.0
6	#5725.00	53.9 PK	68.2	-14.3	1.18 H	201	50.9	3.0
7	11220.00	55.3 PK	74.0	-18.7	1.58 H	287	39.4	15.9
8	11220.00	42.1 AV	54.0	-11.9	1.58 H	287	26.2	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	5460.00	53.8 PK	74.0	-20.2	1.92 V	155	51.0	2.8
2	5460.00	42.2 AV	54.0	-11.8	1.92 V	155	39.4	2.8
3	#5470.00	54.0 PK	68.2	-14.2	1.92 V	155	51.2	2.8
4	*5610.00	97.5 PK			1.92 V	155	60.5	37.0
5	*5610.00	87.5 AV			1.92 V	155	50.5	37.0
6	#5725.00	54.5 PK	68.2	-13.7	1.92 V	155	51.5	3.0
7	11220.00	55.8 PK	74.0	-18.2	2.18 V	326	39.9	15.9
8	11220.00	42.5 AV	54.0	-11.5	2.18 V	326	26.6	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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 155	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		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	52.4 PK	68.2	-15.8	1.17 H	203	49.7	2.7
2	*5775.00	92.7 PK			1.17 H	203	55.2	37.5
3	*5775.00	82.6 AV			1.17 H	203	45.1	37.5
4	#5937.60	52.0 PK	68.2	-16.2	1.17 H	203	48.5	3.5
5	11550.00	55.0 PK	74.0	-19.0	1.68 H	301	39.4	15.6
6	11550.00	41.7 AV	54.0	-12.3	1.68 H	301	26.1	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	#5646.40	52.7 PK	68.2	-15.5	2.12 V	161	49.9	2.8
2	*5775.00	98.2 PK			2.12 V	161	60.7	37.5
3	*5775.00	88.2 AV			2.12 V	161	50.7	37.5
4	#5943.20	52.1 PK	68.2	-16.1	2.12 V	161	48.6	3.5
5	11550.00	55.4 PK	74.0	-18.6	2.27 V	321	39.8	15.6
6	11550.00	42.0 AV	54.0	-12.0	2.27 V	321	26.4	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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

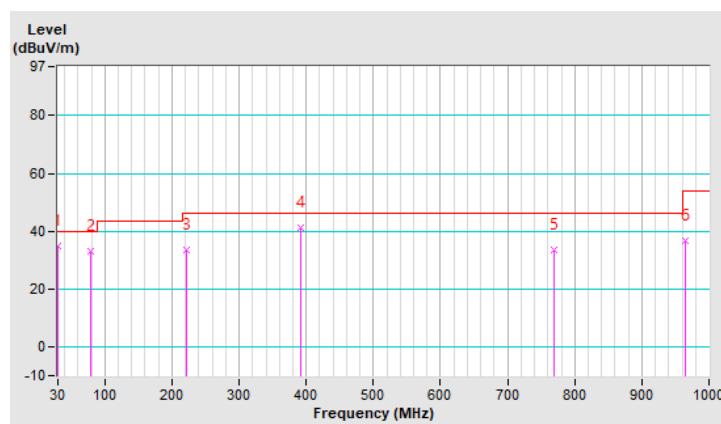
Below 1GHz Worst-Case Data: 802.11a

CHANNEL	TX Channel 40	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTI ON FACTOR (dB/m)
1	30.00	34.9 QP	40.0	-5.1	1.00 H	4	45.2	-10.3
2	78.50	33.2 QP	40.0	-6.8	1.25 H	329	46.1	-12.9
3	222.06	33.5 QP	46.0	-12.5	1.25 H	121	44.4	-10.9
4	390.84	41.3 QP	46.0	-4.7	1.50 H	312	46.2	-4.9
5	769.14	33.7 QP	46.0	-12.3	1.00 H	140	30.9	2.8
6	965.08	36.6 QP	54.0	-17.4	1.00 H	310	30.5	6.1

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. The other emission levels were very low against the limit of frequency range 30MHz~1000MHz.
4. Margin value = Emission Level – Limit value
5. The emission levels were very low against the limit of frequency range 9kHz~30MHz: the amplitude of spurious emissions attenuated more than 20dB below the permissible value to be report.

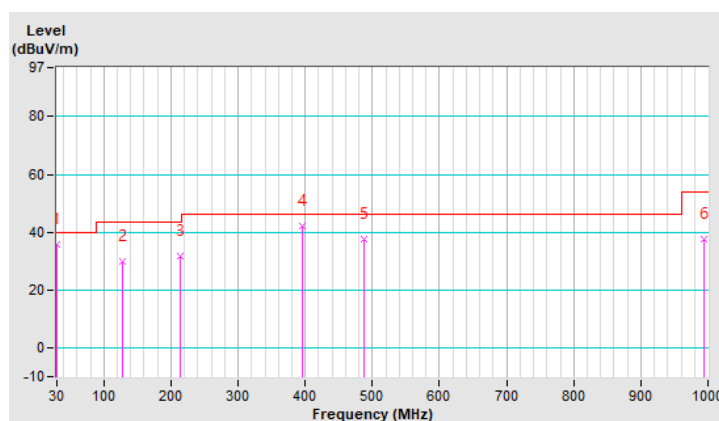


CHANNEL	TX Channel 40	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz		

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (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	35.6 QP	40.0	-4.4	1.25 V	330	45.9	-10.3
2	127.00	29.8 QP	43.5	-13.7	1.00 V	18	40.0	-10.2
3	214.30	31.6 QP	43.5	-11.9	1.00 V	192	42.5	-10.9
4	396.66	42.0 QP	46.0	-4.0	1.50 V	280	46.7	-4.7
5	487.84	37.7 QP	46.0	-8.3	1.00 V	267	40.6	-2.9
6	994.18	37.6 QP	54.0	-16.4	1.25 V	247	31.4	6.2

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. The other emission levels were very low against the limit of frequency range 30MHz~1000MHz.
4. Margin value = Emission Level – Limit value
5. The emission levels were very low against the limit of frequency range 9kHz~30MHz: the amplitude of spurious emissions attenuated more than 20dB 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 0.50MHz.

4.2.2 Test Instruments

Tested date: Dec. 03, 2020

Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
Test Receiver ROHDE & SCHWARZ	ESCI	100613	Dec. 11, 2019	Dec. 10, 2020
RF signal cable Woken	5D-FB	Cable-cond1-01	Sep. 04, 2020	Sep. 03, 2021
LISN ROHDE & SCHWARZ (EUT)	ENV216	101826	Feb. 20, 2020	Feb. 19, 2021
LISN ROHDE & SCHWARZ (Peripheral)	ESH3-Z5	100311	Aug. 28, 2020	Aug. 27, 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 1 (Conduction 1).

3. The VCCI Site Registration No. is C-12040.

4.2.3 Test Procedures

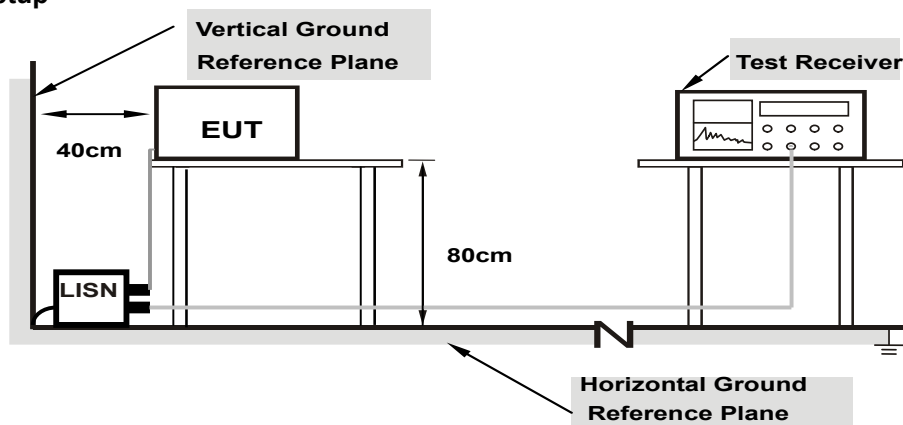
- The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance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

NOTE: The resolution bandwidth and video bandwidth of test receiver is 9kHz for quasi-peak detection (QP) and average detection (AV) at frequency 0.15MHz-30MHz.

4.2.4 Deviation from Test Standard

No deviation.

4.2.5 Test Setup



Note: 1.Support units were connected to second LISN.

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

4.2.6 EUT Operating Conditions

Same as 4.1.6.

4.2.7 Test Results

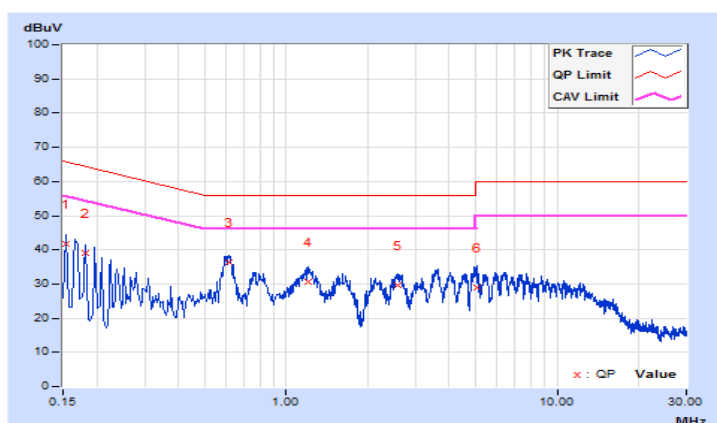
Worst-Case Data: 802.11a

Phase	Line (L)	Detector Function	Quasi-Peak (QP) / Average (AV)
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No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15391	9.65	32.08	16.56	41.73	26.21	65.79	55.79	-24.06	-29.58
2	0.18122	9.66	29.27	13.77	38.93	23.43	64.43	54.43	-25.50	-31.00
3	0.61529	9.66	26.71	17.79	36.37	27.45	56.00	46.00	-19.63	-18.55
4	1.19788	9.68	20.82	14.68	30.50	24.36	56.00	46.00	-25.50	-21.64
5	2.58593	9.71	19.84	14.38	29.55	24.09	56.00	46.00	-26.45	-21.91
6	5.07660	9.75	19.34	13.26	29.09	23.01	60.00	50.00	-30.91	-26.99

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.

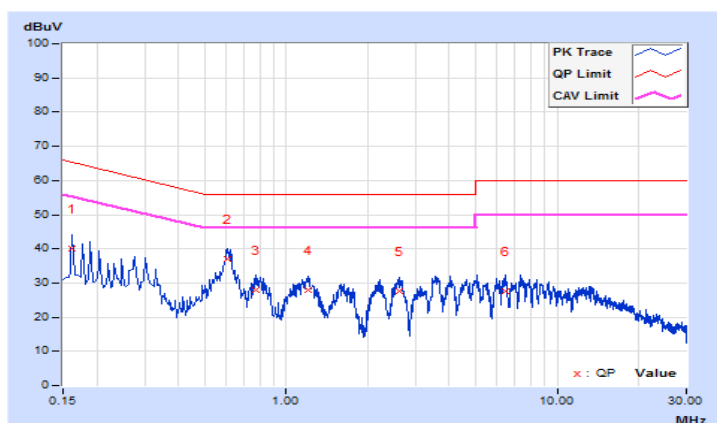


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)
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No	Freq.	Corr. Factor	Reading Value		Emission Level		Limit		Margin	
	[MHz]		[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.16173	9.68	30.25	17.44	39.93	27.12	65.37	55.37	-25.44	-28.25
2	0.60356	9.68	27.34	20.25	37.02	29.93	56.00	46.00	-18.98	-16.07
3	0.76778	9.69	18.35	12.10	28.04	21.79	56.00	46.00	-27.96	-24.21
4	1.20570	9.70	18.22	11.48	27.92	21.18	56.00	46.00	-28.08	-24.82
5	2.60939	9.74	17.81	12.22	27.55	21.96	56.00	46.00	-28.45	-24.04
6	6.42555	9.79	17.93	12.40	27.72	22.19	60.00	50.00	-32.28	-27.81

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 $\leq$ 125mW(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	250mW (24 dBm)
U-NII-2A	√		250mW (24 dBm) or 11 dBm+10 log B*
U-NII-2C	√		250mW (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} ;

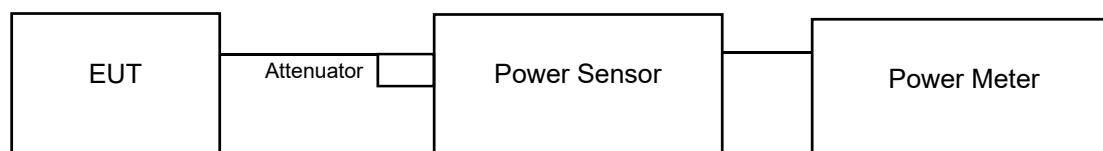
Array Gain = $5 \log(N_{ANT}/N_{SS})$ dB or 3 dB, whichever is less for 20-MHz channel widths with $N_{ANT} \geq 5$.

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

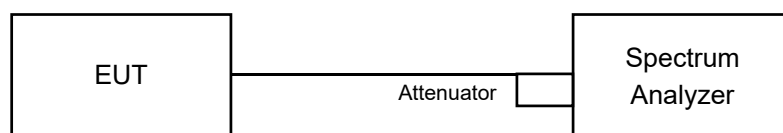
4.3.2 Test Setup

For Power Output

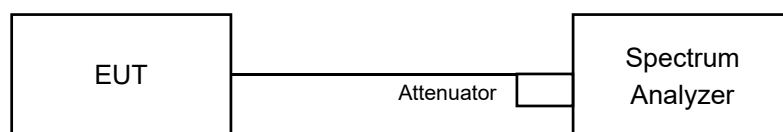
802.11a, 802.11n (HT20), 802.11n (HT40)



802.11ac (VHT80)



For 26dB and Occupied Bandwidth



4.3.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.3.4 Test Procedure

For Average Power Measurement

For 802.11a, 802.11n (HT20), 802.11n (HT40)

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

For 802.11ac (VHT80)

- Set span to encompass the entire 26 dB EBW (or, alternatively, the entire 99% occupied bandwidth) of the signal.
- Set sweep trigger to "free run".
- Set RBW = 1 MHz
- Set VBW $\geq$ 3 MHz
- Number of points in sweep $\geq$ 2 Span / RBW
- Sweep time $\leq$ (number of points in sweep) * T
- Using emission bandwidth to determine the frequency span for integration the channel bandwidth.
- Detector = RMS
- Trace mode = max hold
- Allow max hold to run for at least 60 seconds, or longer as needed to allow the trace to stabilize.
- 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.

For 26dB Bandwidth

- Set RBW = approximately 1% of the emission bandwidth.
- Set the VBW > RBW.
- Detector = Peak.
- Trace mode = max hold.
- 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%.

For Occupied Bandwidth

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 Sampling. The width of a frequency band such that, below the lower and above the upper frequency limits, the mean powers emitted are each equal to a specified percentage 0.5 %of the total mean power of a given emission.

4.3.5 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 Result

Power Output:

802.11a

Chan.	Freq. (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
36	5180	24.660	13.92	24	Pass
40	5200	24.155	13.83	24	Pass
48	5240	24.266	13.85	24	Pass
52	5260	23.823	13.77	24	Pass
60	5300	24.660	13.92	24	Pass
64	5320	24.717	13.93	24	Pass
100	5500	25.763	14.11	24	Pass
116	5580	24.266	13.85	24	Pass
140	5700	24.322	13.86	24	Pass
149	5745	24.378	13.87	30	Pass
157	5785	24.266	13.85	30	Pass
165	5825	24.099	13.82	30	Pass

Note:

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

1. $11\text{dBm} + 10\log(21.74) = 24.37 > 24\text{dBm}$
2. $11\text{dBm} + 10\log(21.57) = 24.33 > 24\text{dBm}$
3. $11\text{dBm} + 10\log(21.51) = 24.32 > 24\text{dBm}$
4. $11\text{dBm} + 10\log(21.66) = 24.35 > 24\text{dBm}$
5. $11\text{dBm} + 10\log(21.75) = 24.37 > 24\text{dBm}$
6. $11\text{dBm} + 10\log(21.71) = 24.36 > 24\text{dBm}$

802.11n (HT20)

Chan.	Freq. (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
36	5180	24.774	13.94	24	Pass
40	5200	23.335	13.68	24	Pass
48	5240	22.909	13.60	24	Pass
52	5260	22.131	13.45	24	Pass
60	5300	22.646	13.55	24	Pass
64	5320	22.803	13.58	24	Pass
100	5500	23.014	13.62	24	Pass
116	5580	22.909	13.60	24	Pass
140	5700	23.067	13.63	24	Pass
149	5745	22.751	13.57	30	Pass
157	5785	23.174	13.65	30	Pass
165	5825	22.646	13.55	30	Pass

Note:

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

1. $11\text{dBm} + 10\log(21.94) = 24.41 > 24\text{dBm}$
2. $11\text{dBm} + 10\log(22.22) = 24.46 > 24\text{dBm}$
3. $11\text{dBm} + 10\log(21.76) = 24.37 > 24\text{dBm}$
4. $11\text{dBm} + 10\log(21.71) = 24.36 > 24\text{dBm}$
5. $11\text{dBm} + 10\log(21.89) = 24.40 > 24\text{dBm}$
6. $11\text{dBm} + 10\log(21.67) = 24.35 > 24\text{dBm}$

802.11n (HT40)

Chan.	Freq. (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
38	5190	23.714	13.75	24	Pass
46	5230	23.281	13.67	24	Pass
54	5270	23.55	13.72	24	Pass
62	5310	22.491	13.52	24	Pass
102	5510	23.768	13.76	24	Pass
110	5550	22.491	13.52	24	Pass
134	5670	22.646	13.55	24	Pass
151	5755	23.878	13.78	30	Pass
159	5795	23.014	13.62	30	Pass

Note:

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

1. $11\text{dBm} + 10\log(41.37) = 27.16 > 24\text{dBm}$
2. $11\text{dBm} + 10\log(41.25) = 27.15 > 24\text{dBm}$
3. $11\text{dBm} + 10\log(41.38) = 27.16 > 24\text{dBm}$
4. $11\text{dBm} + 10\log(41.56) = 27.18 > 24\text{dBm}$
5. $11\text{dBm} + 10\log(41.65) = 27.19 > 24\text{dBm}$

802.11ac (VHT80)

Chan.	Freq. (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
42	5210	17.620	12.46	24	Pass
58	5290	19.454	12.89	24	Pass
106	5530	18.493	12.67	24	Pass
122	5610	18.030	12.56	24	Pass
155	5775	18.923	12.77	30	Pass

Note:

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

1. $11\text{dBm} + 10\log(81.71) = 30.12 > 24\text{dBm}$
2. $11\text{dBm} + 10\log(82.24) = 30.15 > 24\text{dBm}$
3. $11\text{dBm} + 10\log(82.15) = 30.14 > 24\text{dBm}$

26dB Bandwidth:

802.11a

Channel	Frequency (MHz)	26dBc Bandwidth (MHz)
36	5180	21.62
40	5200	21.62
48	5240	21.82
52	5260	21.74
60	5300	21.57
64	5320	21.51
100	5500	21.66
116	5580	21.75
140	5700	21.71

802.11n (HT20)

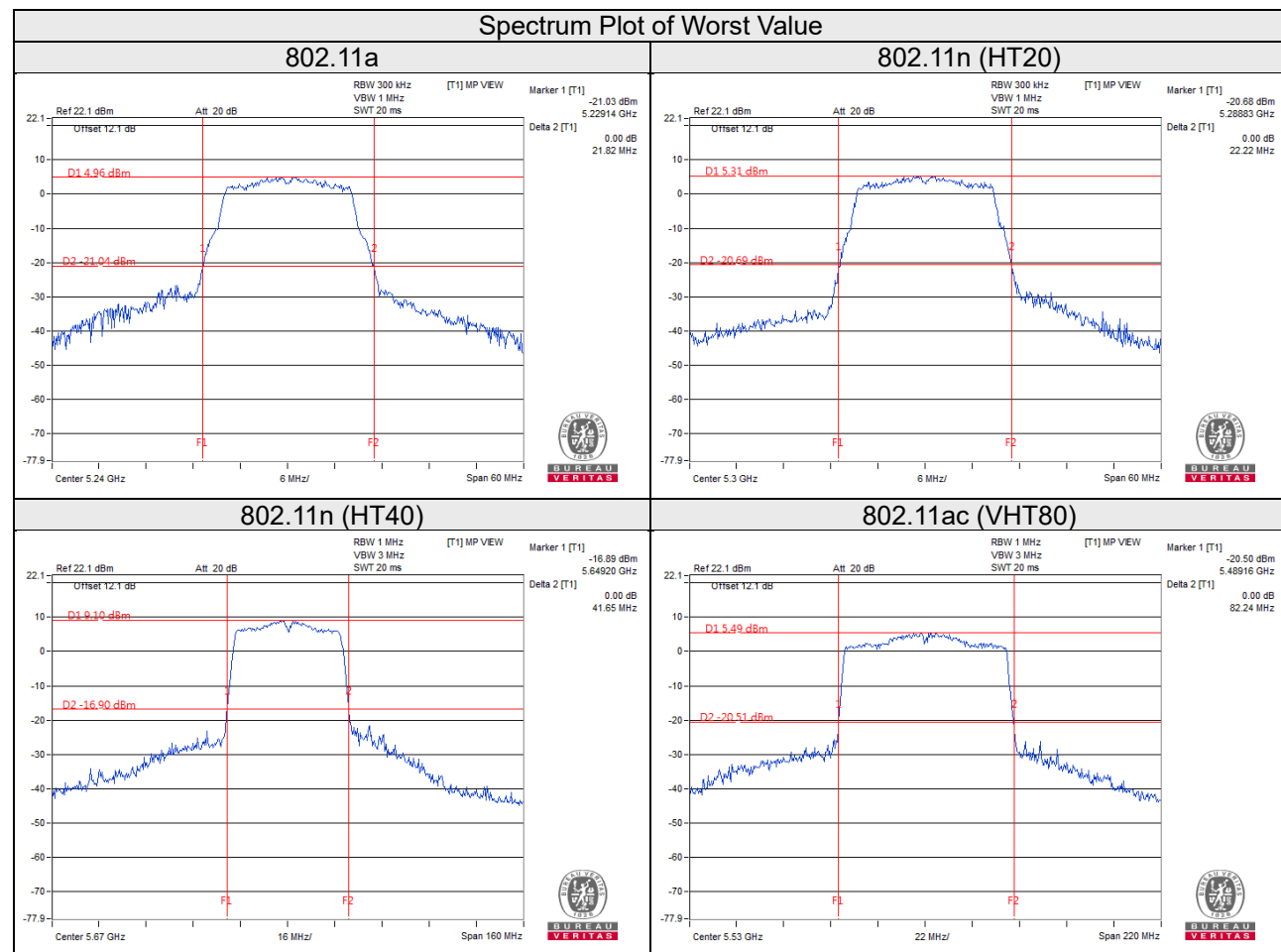
Channel	Frequency (MHz)	26dBc Bandwidth (MHz)
36	5180	21.80
40	5200	21.69
48	5240	21.75
52	5260	21.94
60	5300	22.22
64	5320	21.76
100	5500	21.71
116	5580	21.89
140	5700	21.67

802.11n (HT40)

Channel	Frequency (MHz)	26dBc Bandwidth (MHz)
38	5190	41.39
46	5230	41.22
54	5270	41.37
62	5310	41.25
102	5510	41.38
110	5550	41.56
134	5670	41.65

802.11ac (VHT80)

Channel	Frequency (MHz)	26dBc Bandwidth (MHz)
42	5210	81.88
58	5290	81.71
106	5530	82.24
122	5610	82.15



EUT Maximum Conducted Power

802.11a

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	24.717	13.93
5470~5725	25.763	14.11

Note: Manufacturer provides Transmit Power Control description to meet this requirement.

802.11n (HT20)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	22.803	13.58
5470~5725	23.067	13.63

Note: Manufacturer provides Transmit Power Control description to meet this requirement.

802.11n (HT40)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	23.550	13.72
5470~5725	23.768	13.76

Note: Manufacturer provides Transmit Power Control description to meet this requirement.

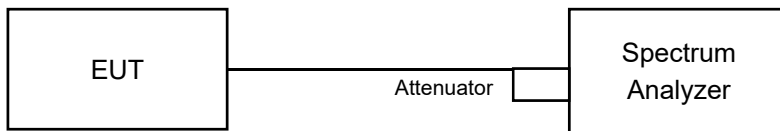
802.11ac (VHT80)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	19.454	12.89
5470~5725	18.493	12.67

Note: Manufacturer provides Transmit Power Control description to meet this requirement.

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 sampling. 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 Result

802.11a

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
36	5180	16.92
40	5200	16.92
48	5240	16.92
52	5260	16.92
60	5300	16.80
64	5320	16.80
100	5500	16.80
116	5580	16.80
140	5700	16.92
149	5745	16.92
157	5785	16.92
165	5825	17.04

802.11n (HT20)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
36	5180	17.88
40	5200	17.88
48	5240	17.88
52	5260	18.00
60	5300	17.88
64	5320	18.00
100	5500	17.88
116	5580	17.88
140	5700	17.88
149	5745	17.98
157	5785	17.79
165	5825	17.98

802.11n (HT40)

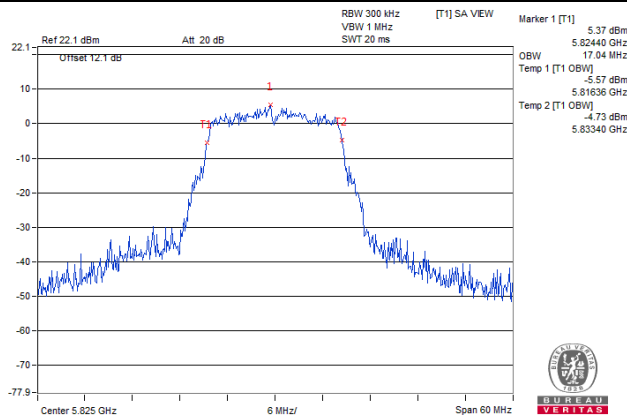
Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
38	5190	36.72
46	5230	36.24
54	5270	36.48
62	5310	36.48
102	5510	36.48
110	5550	36.72
134	5670	36.48
151	5755	36.48
159	5795	36.48

802.11ac (VHT80)

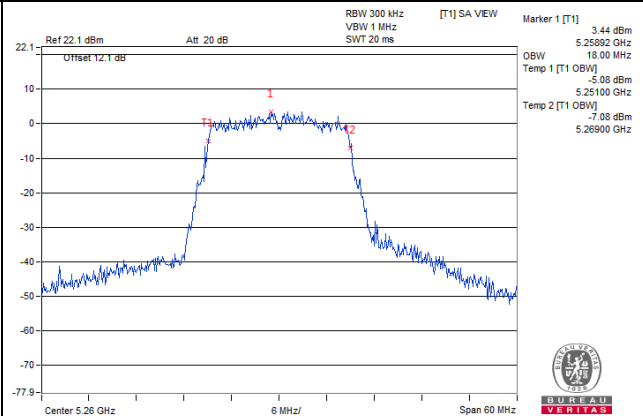
Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
42	5210	75.84
58	5290	75.36
106	5530	75.36
122	5610	75.36
155	5775	75.77

Spectrum Plot of Worst Value

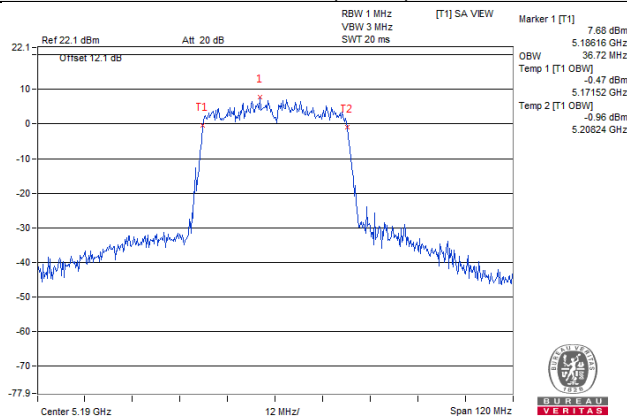
802.11a



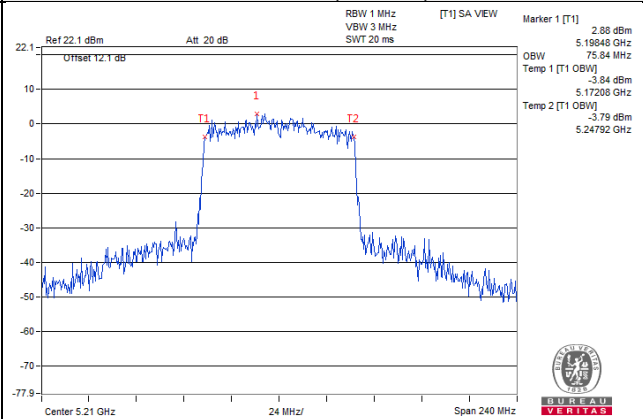
802.11n (HT20)



802.11n (HT40)

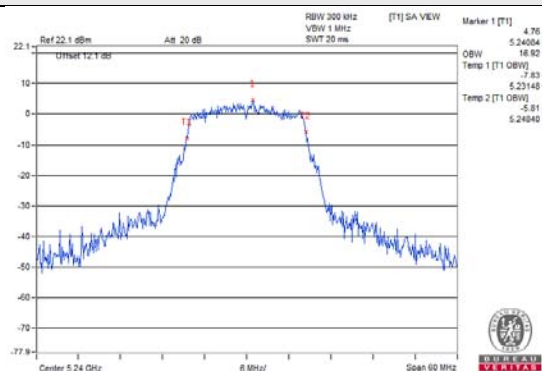


802.11ac (VHT80)

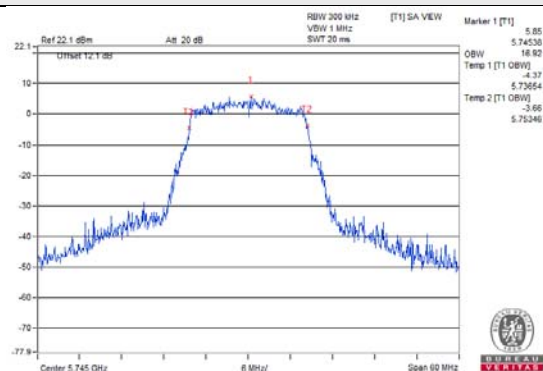


Spectrum Plot for near By DFS Band

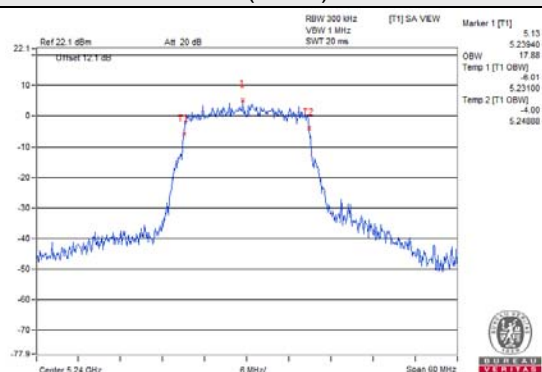
802.11a / CH 48



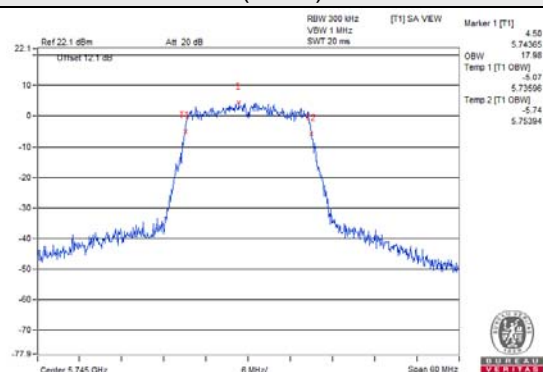
802.11a / CH 149



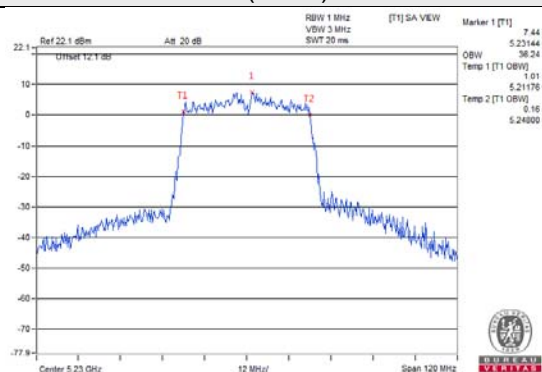
802.11n (HT20) / CH 48



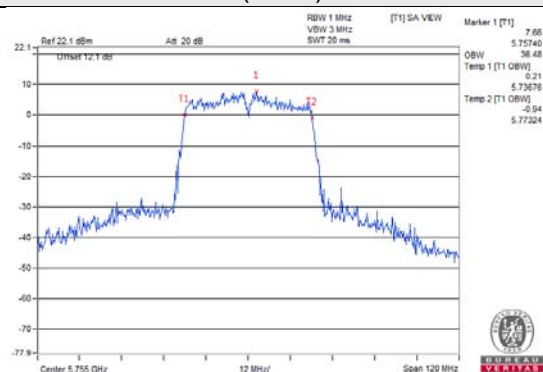
802.11n (HT20) / CH 149



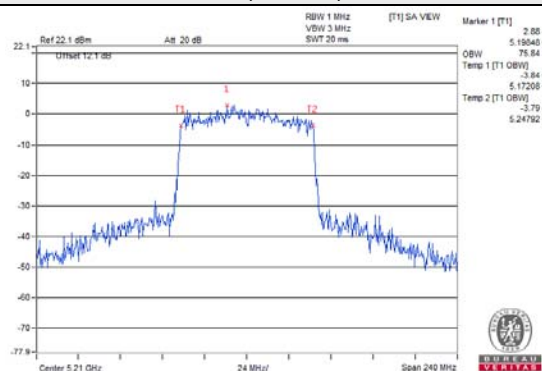
802.11n (HT40) / CH 46



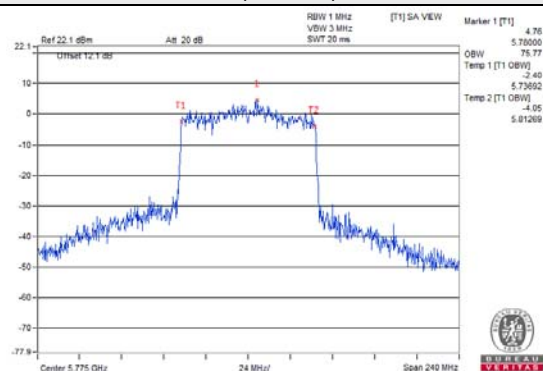
802.11n (HT40) / CH 151



802.11ac (VHT80) / CH 42



802.11ac (VHT80) / CH 155

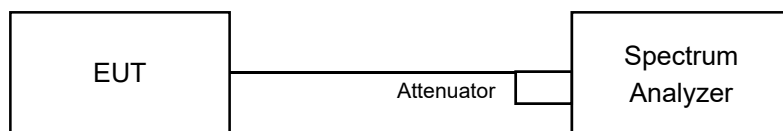


4.5 Peak Power Spectral Density Measurement

4.5.1 Limits of Peak Power Spectral Density Measurement

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

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:

Duty cycle of test signal is < 98%

Using method SA-2

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

For U-NII-3 band:

Duty cycle <98%

- 1) Set span to encompass the entire emission bandwidth (EBW) of the signal.
- 2) Set RBW = 300 kHz, Set VBW ≥ 1 MHz, 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 (raising) 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 and add 10 log (1/duty cycle)

4.5.5 Deviation from Test Standard

No deviation.

4.5.6 EUT Operating Conditions

Same as 4.3.6.

4.5.7 Test Results

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

802.11a

Chan.	Freq. (MHz)	PSD W/O Duty Factor (dBm/MHz)	Duty Factor (dB)	PSD With Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
36	5180	0.46	0.35	0.81	11	Pass
40	5200	0.50	0.35	0.85	11	Pass
48	5240	0.61	0.35	0.96	11	Pass
52	5260	0.57	0.35	0.92	11	Pass
60	5300	0.74	0.35	1.09	11	Pass
64	5320	0.82	0.35	1.17	11	Pass
100	5500	0.87	0.35	1.22	11	Pass
116	5580	0.98	0.35	1.33	11	Pass
140	5700	0.86	0.35	1.21	11	Pass

Note: Refer to section 3.3 for duty cycle spectrum plot.

802.11n (HT20)

Chan.	Freq. (MHz)	PSD W/O Duty Factor (dBm/MHz)	Duty Factor (dB)	PSD With Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
36	5180	0.43	0.32	0.75	11	Pass
40	5200	0.44	0.32	0.76	11	Pass
48	5240	0.40	0.32	0.72	11	Pass
52	5260	0.21	0.32	0.53	11	Pass
60	5300	0.60	0.32	0.92	11	Pass
64	5320	0.42	0.32	0.74	11	Pass
100	5500	0.77	0.32	1.09	11	Pass
116	5580	0.78	0.32	1.10	11	Pass
140	5700	0.80	0.32	1.12	11	Pass

Note: Refer to section 3.3 for duty cycle spectrum plot.

802.11n (HT40)

Chan.	Freq. (MHz)	PSD W/O Duty Factor (dBm/MHz)	Duty Factor (dB)	PSD With Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
38	5190	-2.88	0.44	-2.44	11	Pass
46	5230	-2.89	0.44	-2.45	11	Pass
54	5270	-3.23	0.44	-2.79	11	Pass
62	5310	-2.80	0.44	-2.36	11	Pass
102	5510	-2.86	0.44	-2.42	11	Pass
110	5550	-2.58	0.44	-2.14	11	Pass
134	5670	-2.49	0.44	-2.05	11	Pass

Note: Refer to section 3.3 for duty cycle spectrum plot.

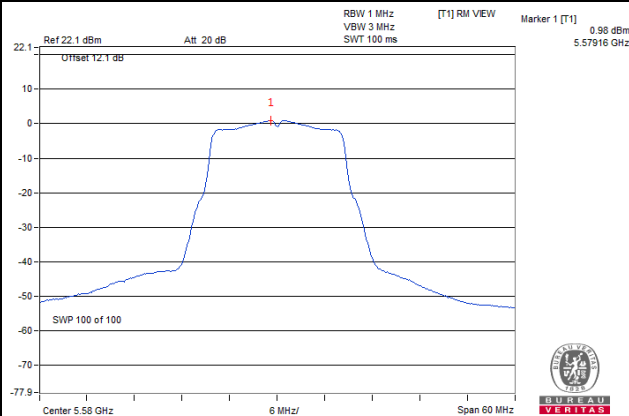
802.11ac (VHT80)

Chan.	Freq. (MHz)	PSD W/O Duty Factor (dBm/MHz)	Duty Factor (dB)	PSD With Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
42	5210	-6.00	0.14	-5.86	11	Pass
58	5290	-5.60	0.14	-5.46	11	Pass
106	5530	-6.11	0.14	-5.97	11	Pass
122	5610	-5.84	0.14	-5.70	11	Pass

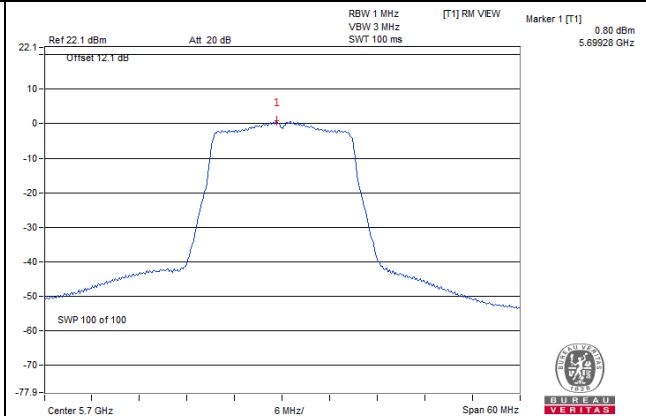
Note: Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value

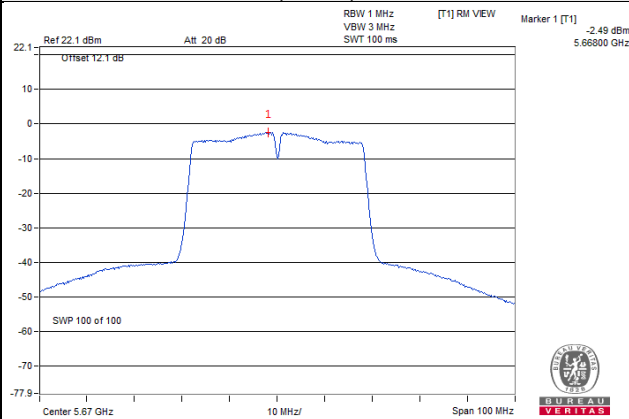
802.11a / CH 116



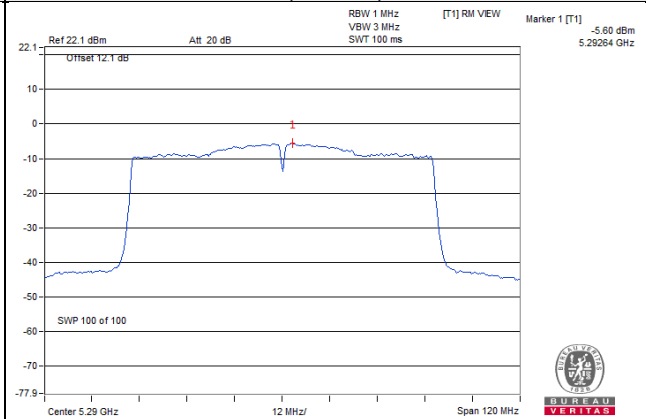
802.11n (HT20) / CH 140



802.11n (HT40) / CH 134



802.11ac (VHT80) / CH 58



For U-NII-3 band:

802.11a

Chan.	Freq. (MHz)	PSD W/O Duty Factor		Duty Factor (dB)	Total PSD With Duty Factor (dBm/500kHz)	Limit (dBm/500kHz)	Pass / Fail
		(dBm/300kHz)	(dBm/500kHz)				
149	5745	-7.67	-5.45	0.35	-5.10	30	Pass
157	5785	-7.51	-5.29	0.35	-4.94	30	Pass
165	5825	-8.08	-5.86	0.35	-5.51	30	Pass

Note: Refer to section 3.3 for duty cycle spectrum plot.

802.11n (HT20)

Chan.	Freq. (MHz)	PSD W/O Duty Factor		Duty Factor (dB)	Total PSD With Duty Factor (dBm/500kHz)	Limit (dBm/500kHz)	Pass / Fail
		(dBm/300kHz)	(dBm/500kHz)				
149	5745	-7.52	-5.30	0.32	-4.98	30	Pass
157	5785	-7.91	-5.69	0.32	-5.37	30	Pass
165	5825	-8.02	-5.80	0.32	-5.48	30	Pass

Note: Refer to section 3.3 for duty cycle spectrum plot.

802.11n (HT40)

Chan.	Freq. (MHz)	PSD W/O Duty Factor		Duty Factor (dB)	Total PSD With Duty Factor (dBm/500kHz)	Limit (dBm/500kHz)	Pass / Fail
		(dBm/300kHz)	(dBm/500kHz)				
151	5755	-12.32	-10.10	0.44	-9.66	30	Pass
159	5795	-12.49	-10.27	0.44	-9.83	30	Pass

Note: Refer to section 3.3 for duty cycle spectrum plot.

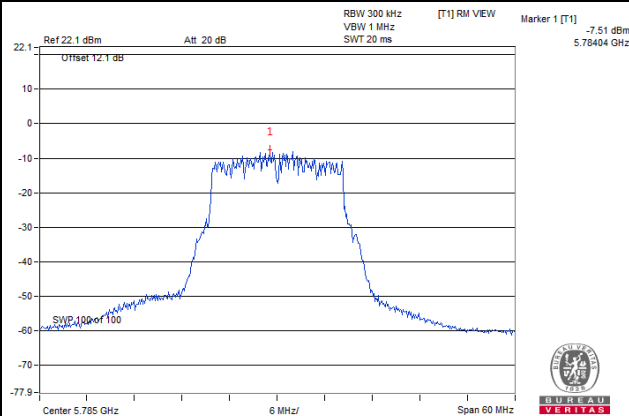
802.11ac (VHT80)

Chan.	Freq. (MHz)	PSD W/O Duty Factor		Duty Factor (dB)	Total PSD With Duty Factor (dBm/500kHz)	Limit (dBm/500kHz)	Pass / Fail
		(dBm/300kHz)	(dBm/500kHz)				
155	5775	-14.3	-12.08	0.14	-11.94	30	Pass

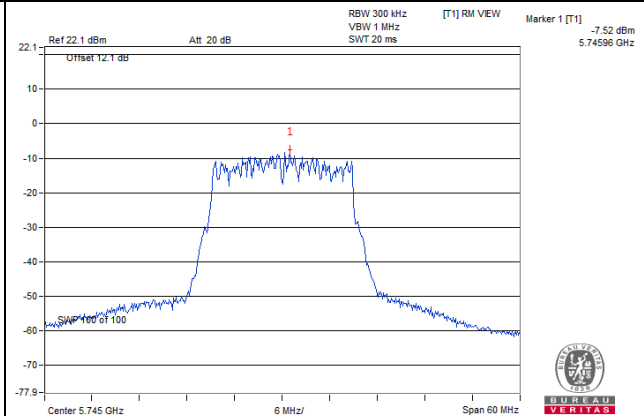
Note: Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value

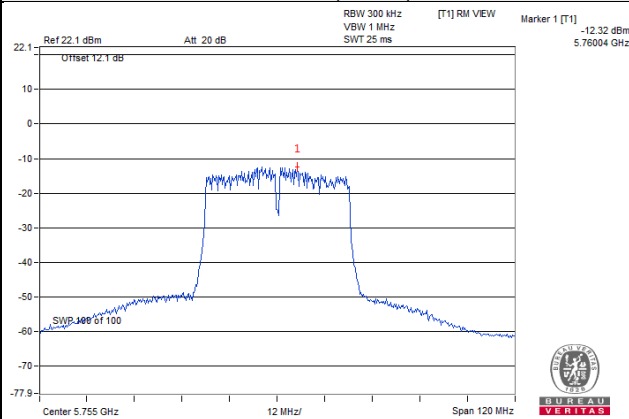
802.11a



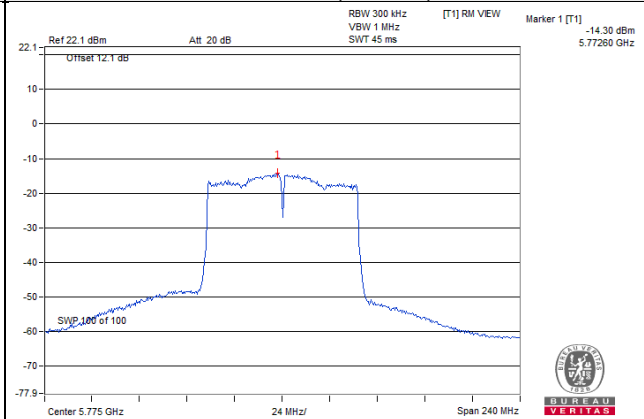
802.11n (HT20)



802.11n (HT40)



802.11ac (VHT80)

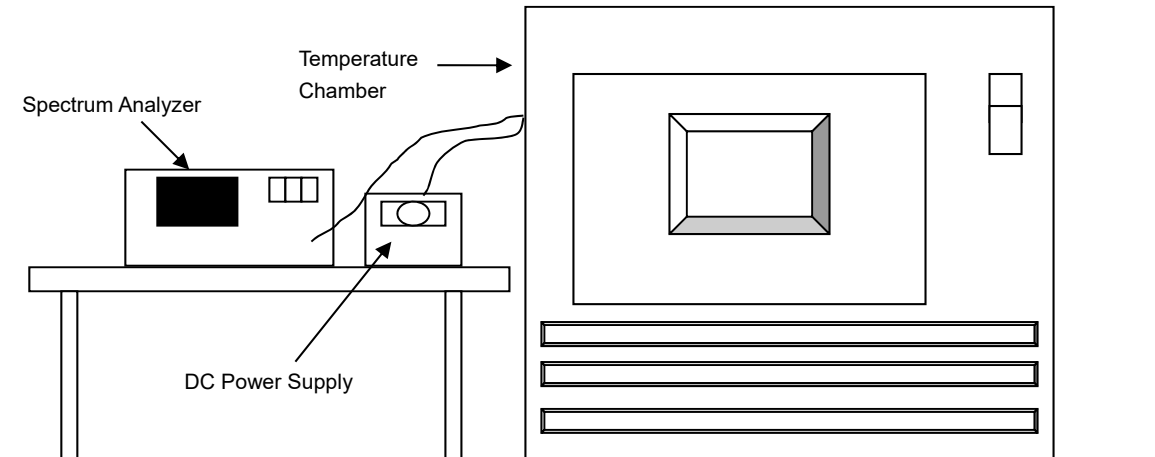


4.6 Frequency Stability

4.6.1 Limits 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

Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100039	Jun. 12, 2020	Jun. 11, 2021
Standard Temperature And Humidity Chamber TERCHY	MHU-225AU	920842	May 27, 2020	May 26, 2021
Digital Multimeter Fluke	87-III	70360742	Jun. 23, 2020	Jun. 22, 2021
DC Power Supply Topward	6306A	727263	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.

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: 5180MHz									
Temp. (°C)	Power Supply (Vdc)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result
40	3.7	5180.0121	PASS	5180.0134	PASS	5180.0117	PASS	5180.0138	PASS
30	3.7	5180.0158	PASS	5180.0156	PASS	5180.0193	PASS	5180.0192	PASS
20	3.7	5180.0097	PASS	5180.0098	PASS	5180.0113	PASS	5180.0130	PASS
10	3.7	5180.0044	PASS	5180.0051	PASS	5180.0044	PASS	5180.0048	PASS
0	3.7	5179.9951	PASS	5179.9937	PASS	5179.9925	PASS	5179.9952	PASS
-10	3.7	5180.0110	PASS	5180.0123	PASS	5180.0136	PASS	5180.0095	PASS

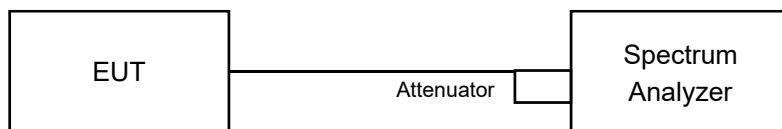
Frequency Stability Versus Voltage									
Operating Frequency: 5180MHz									
Temp. (°C)	Power Supply (Vdc)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result
20	4.26	5180.0106	PASS	5180.0090	PASS	5180.0104	PASS	5180.0139	PASS
	3.70	5180.0097	PASS	5180.0098	PASS	5180.0113	PASS	5180.0130	PASS
	3.15	5180.0105	PASS	5180.0091	PASS	5180.0123	PASS	5180.0136	PASS

4.7 6dB Bandwidth Measurement

4.7.1 Limits of 6dB Bandwidth Measurement

The minimum of 6dB Bandwidth Measurement is 0.5MHz.

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

- Set resolution bandwidth (RBW) = 100kHz
- Set the video bandwidth (VBW) $\geq 3 \times$ RBW, Detector = Peak.
- Trace mode = max hold.
- Sweep = auto couple.
- 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)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
149	5745	16.36	0.5	Pass
157	5785	16.34	0.5	Pass
165	5825	16.36	0.5	Pass

802.11n (HT20)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
149	5745	17.52	0.5	Pass
157	5785	17.58	0.5	Pass
165	5825	17.57	0.5	Pass

802.11n (HT40)

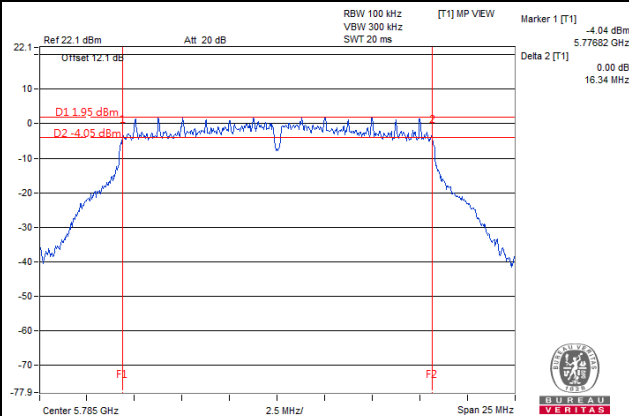
Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
151	5755	35.78	0.5	Pass
159	5795	36.00	0.5	Pass

802.11ac (VHT80)

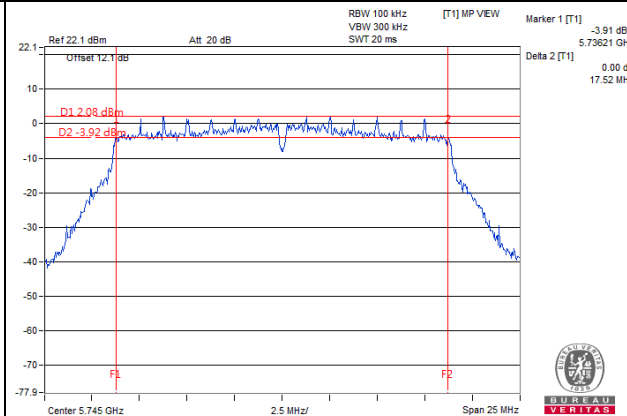
Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
155	5775	75.73	0.5	Pass

Spectrum Plot of Worst Value

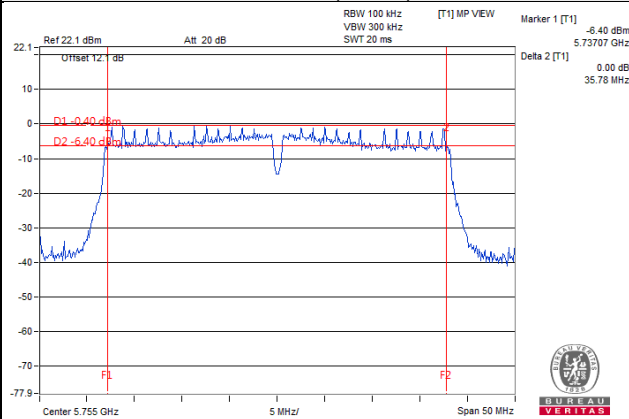
802.11a



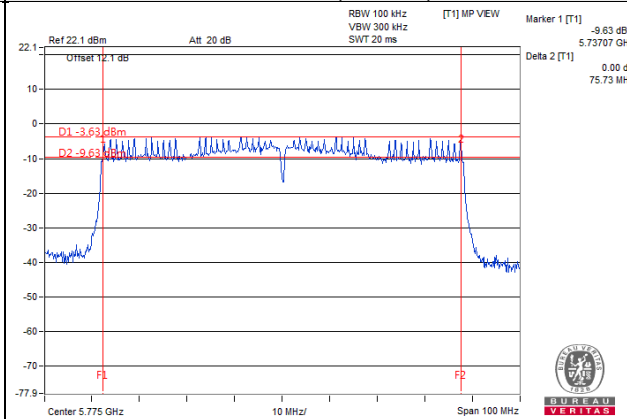
802.11n (HT20)



802.11n (HT40)



802.11ac (VHT80)

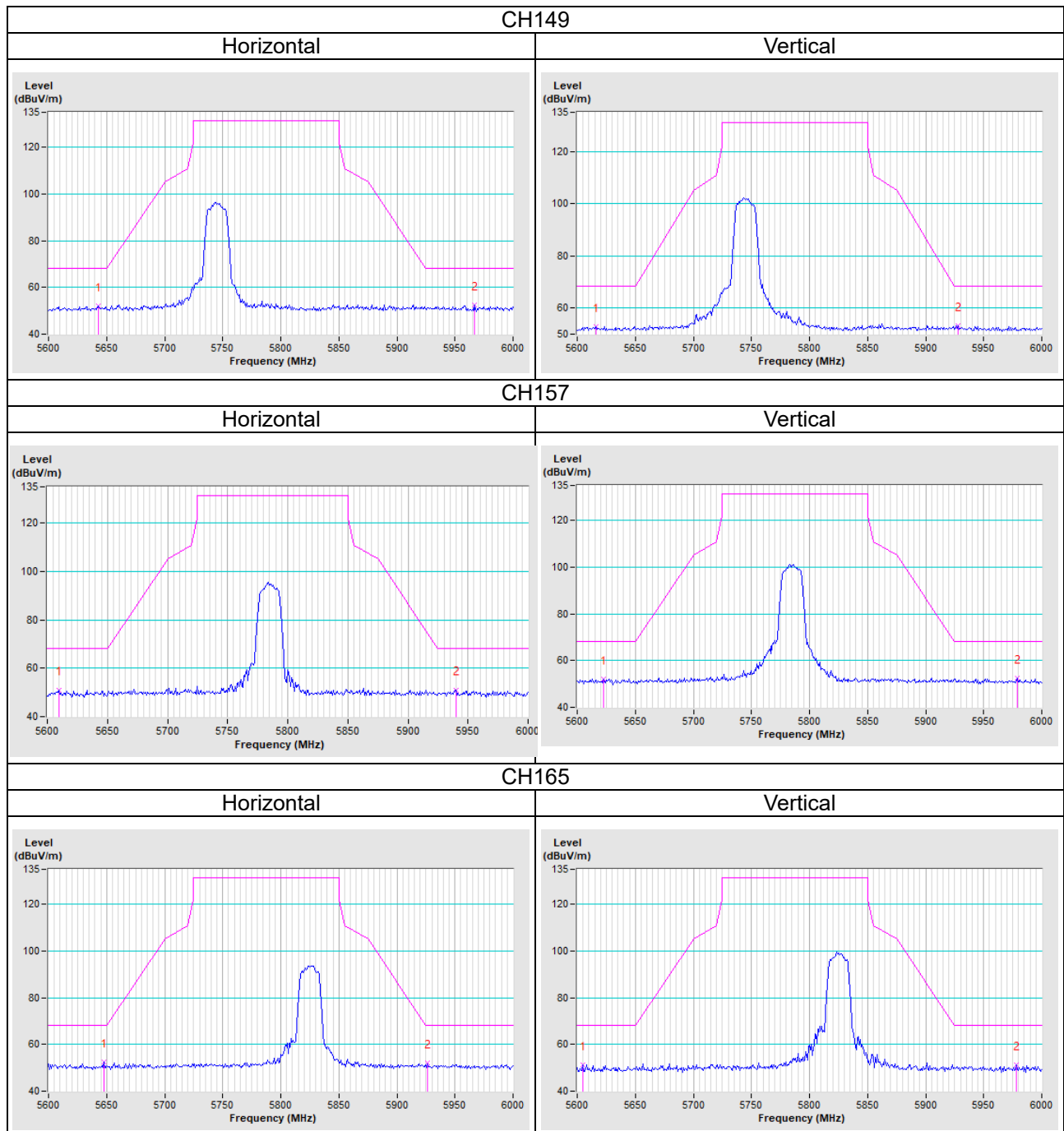


5 Pictures of Test Arrangements

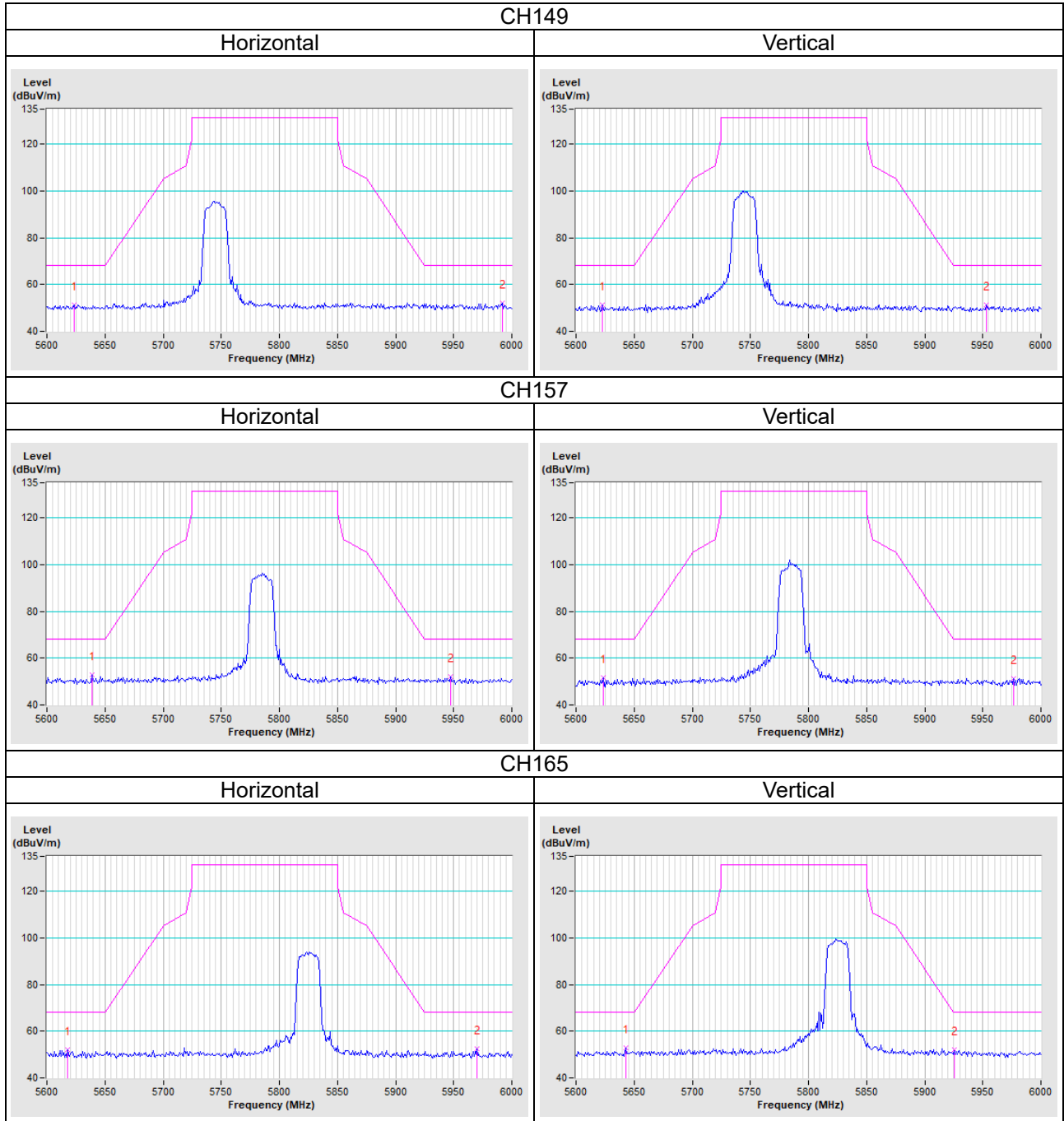
Please refer to the attached file (Test Setup Photo).

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

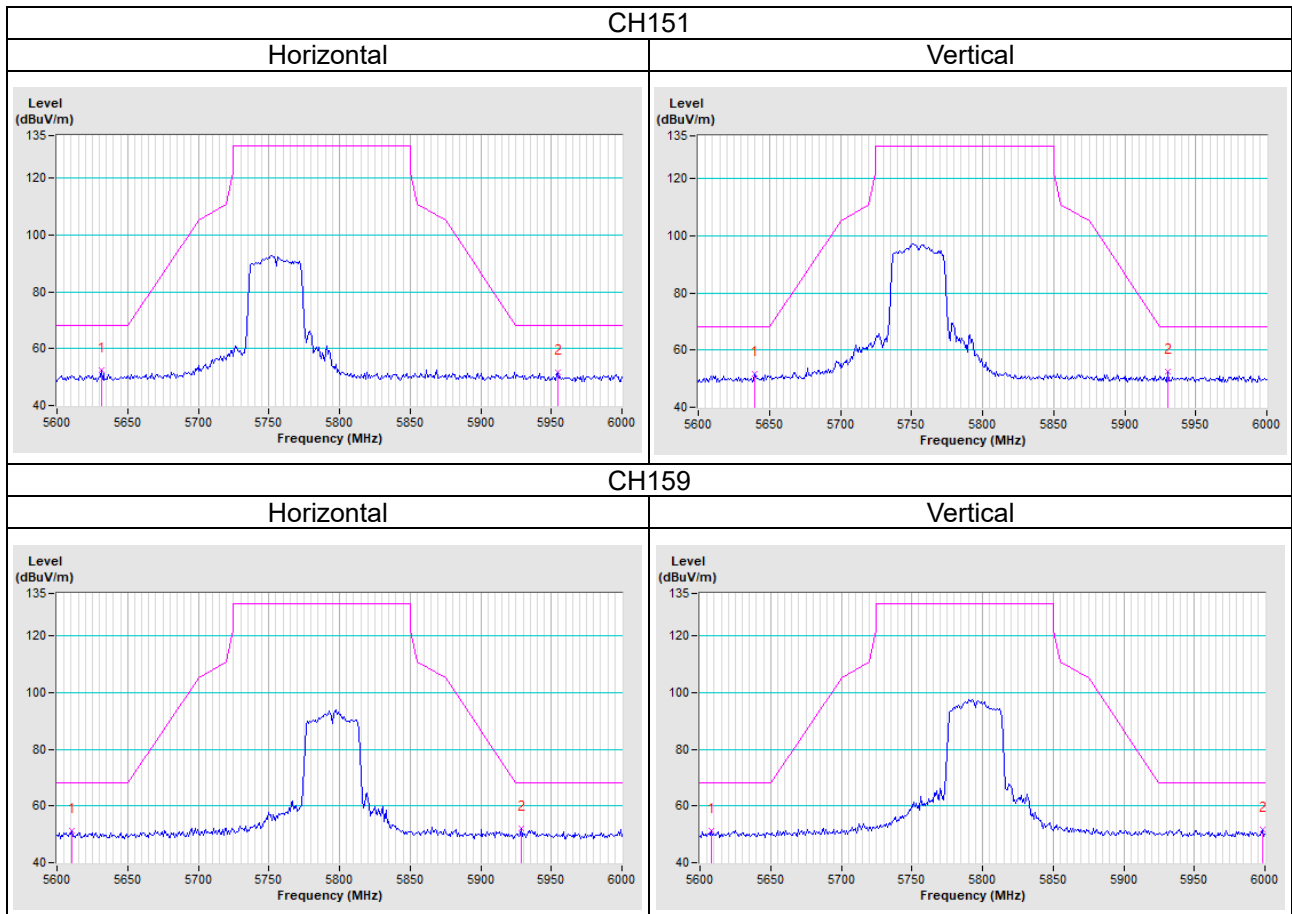
802.11a



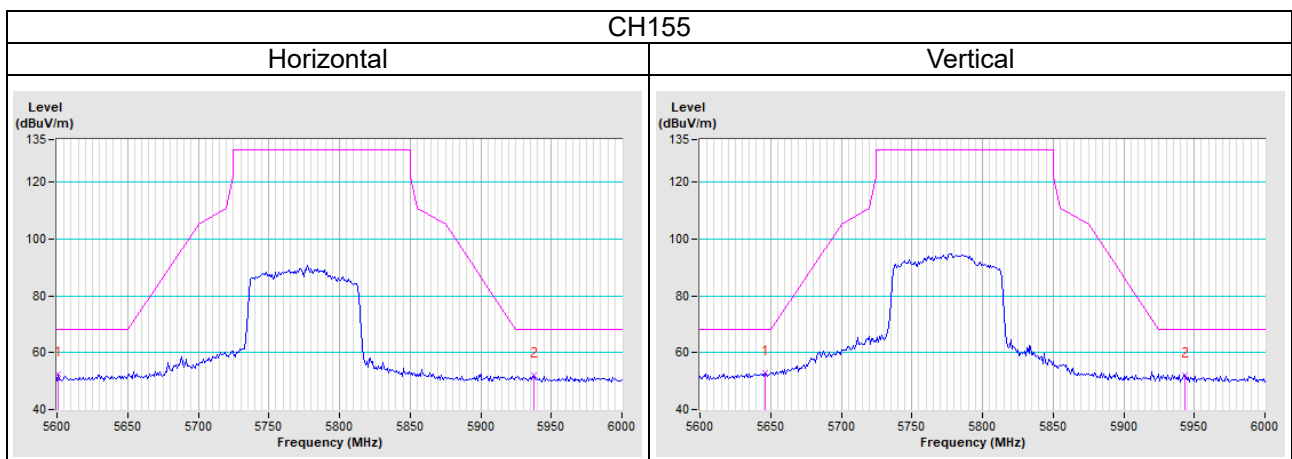
802.11n (HT20)



802.11n (HT40)

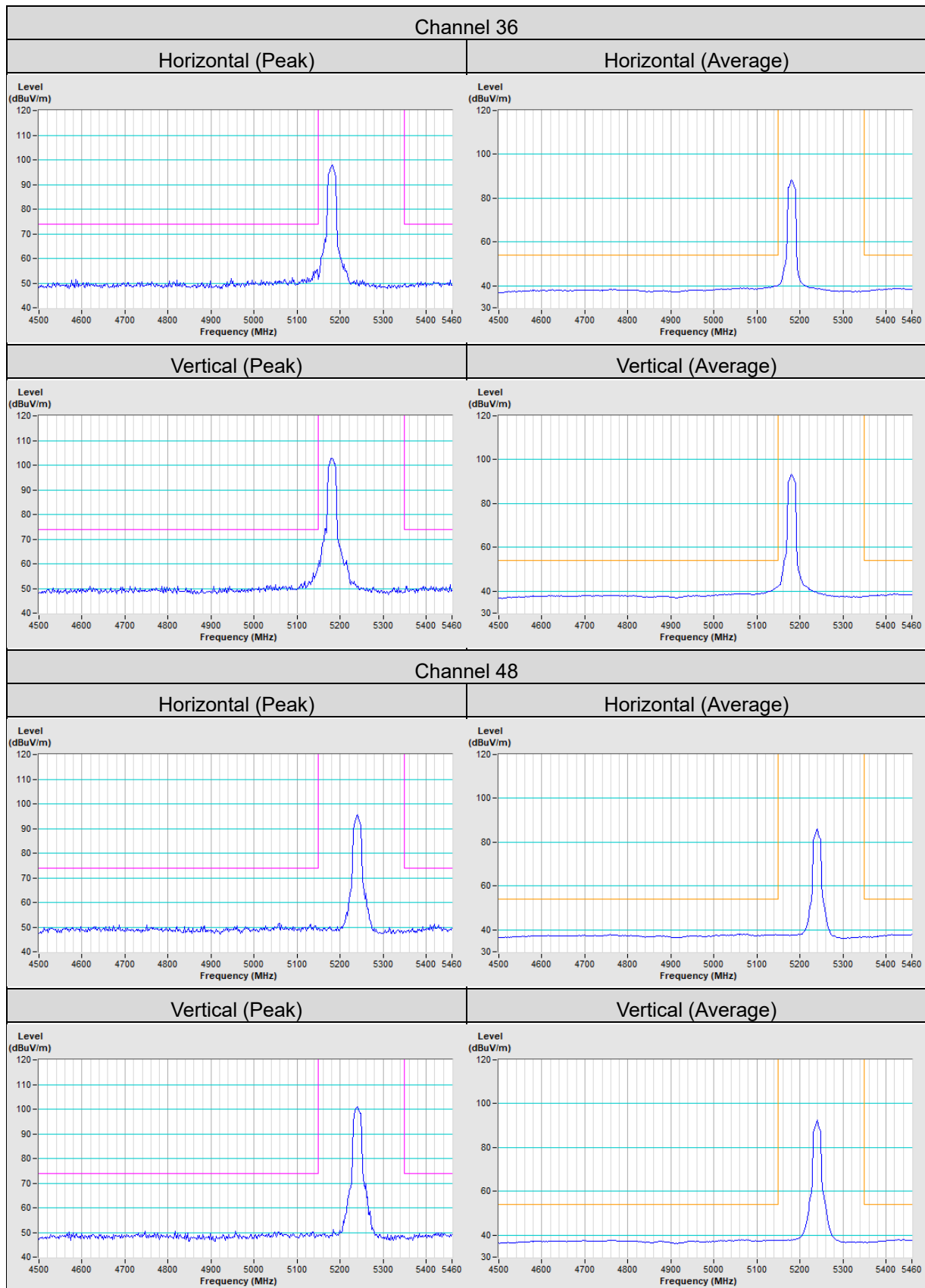


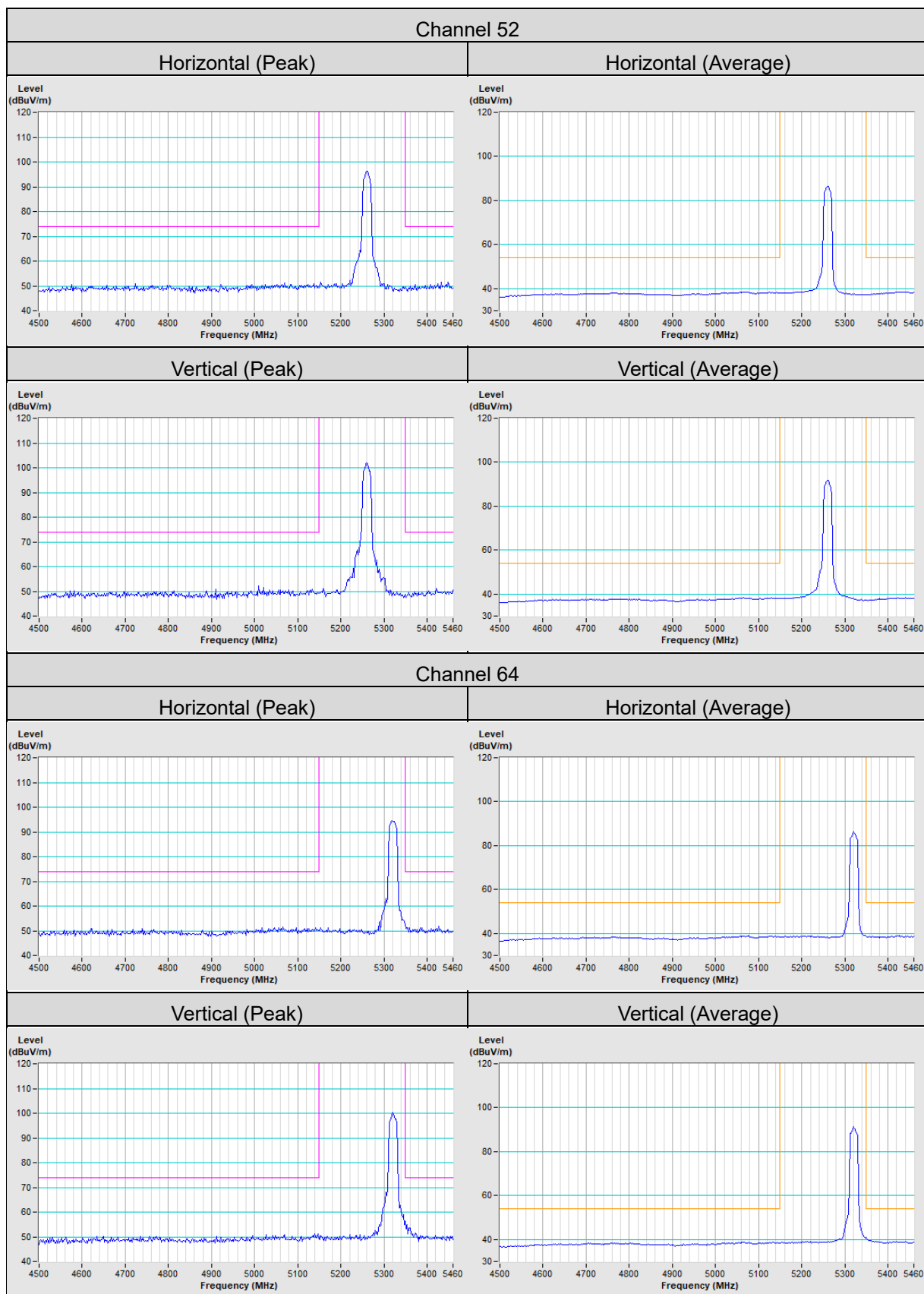
802.11ac (VHT80)

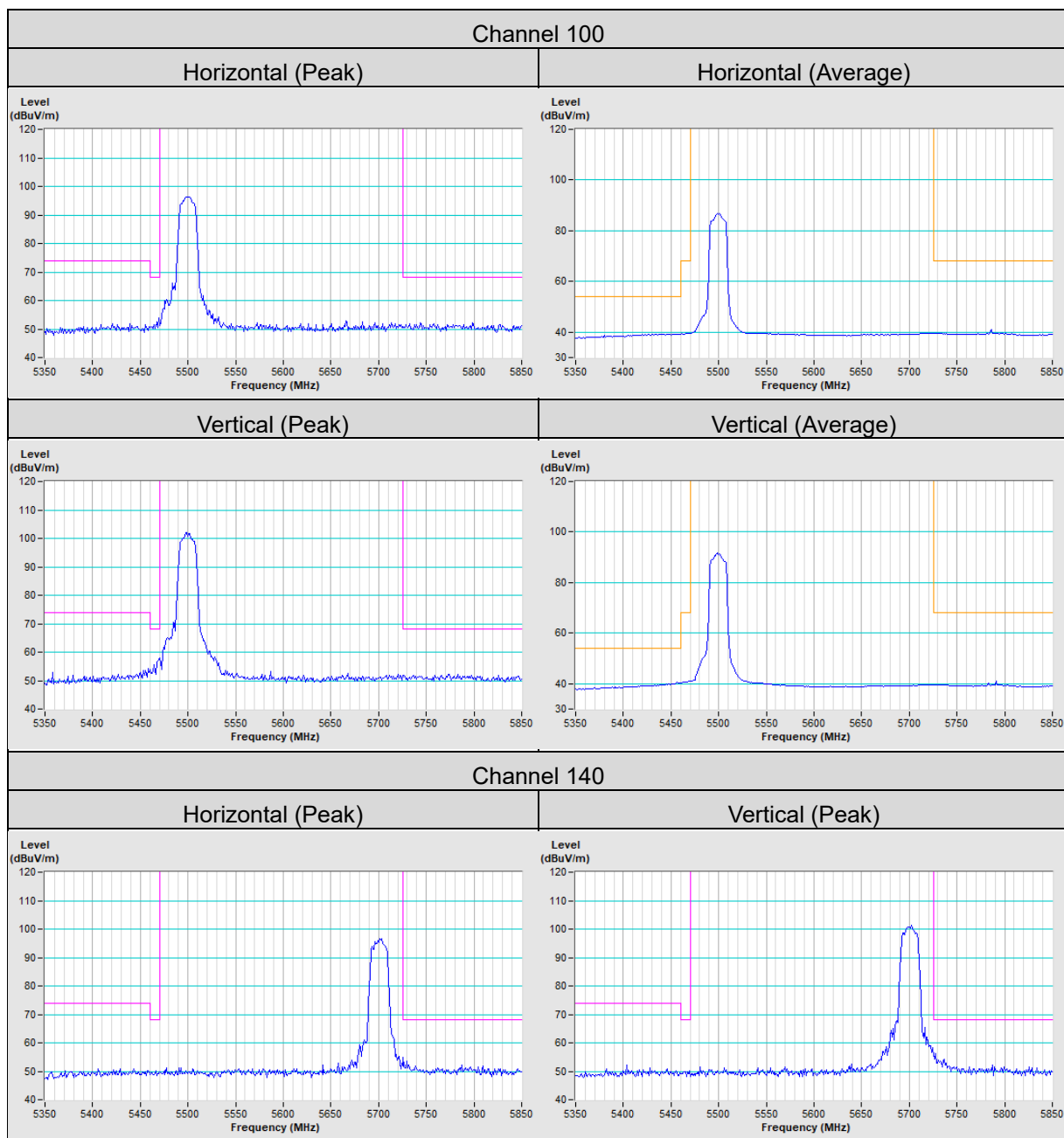


Annex B- Band Edge Measurement

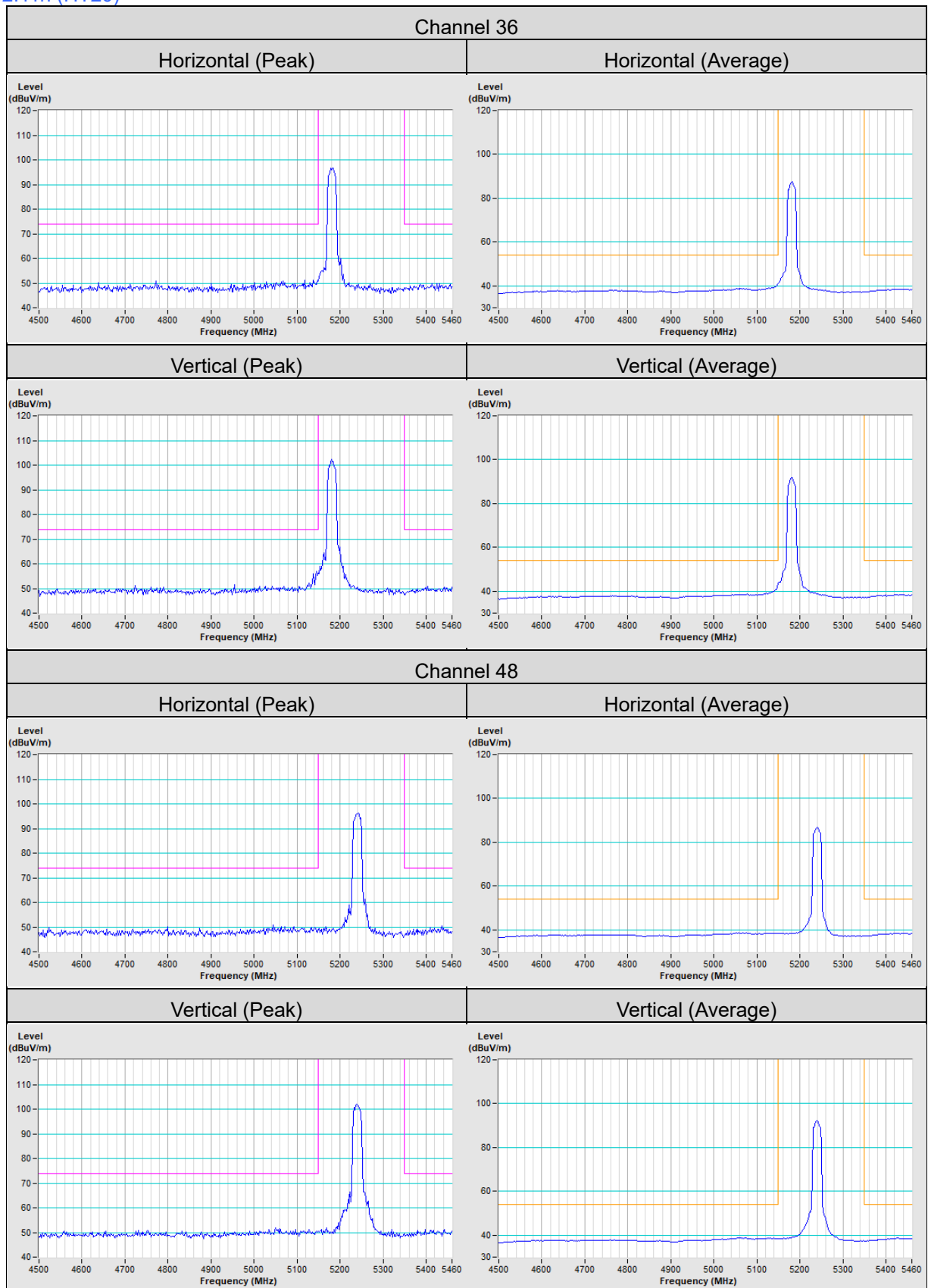
802.11a

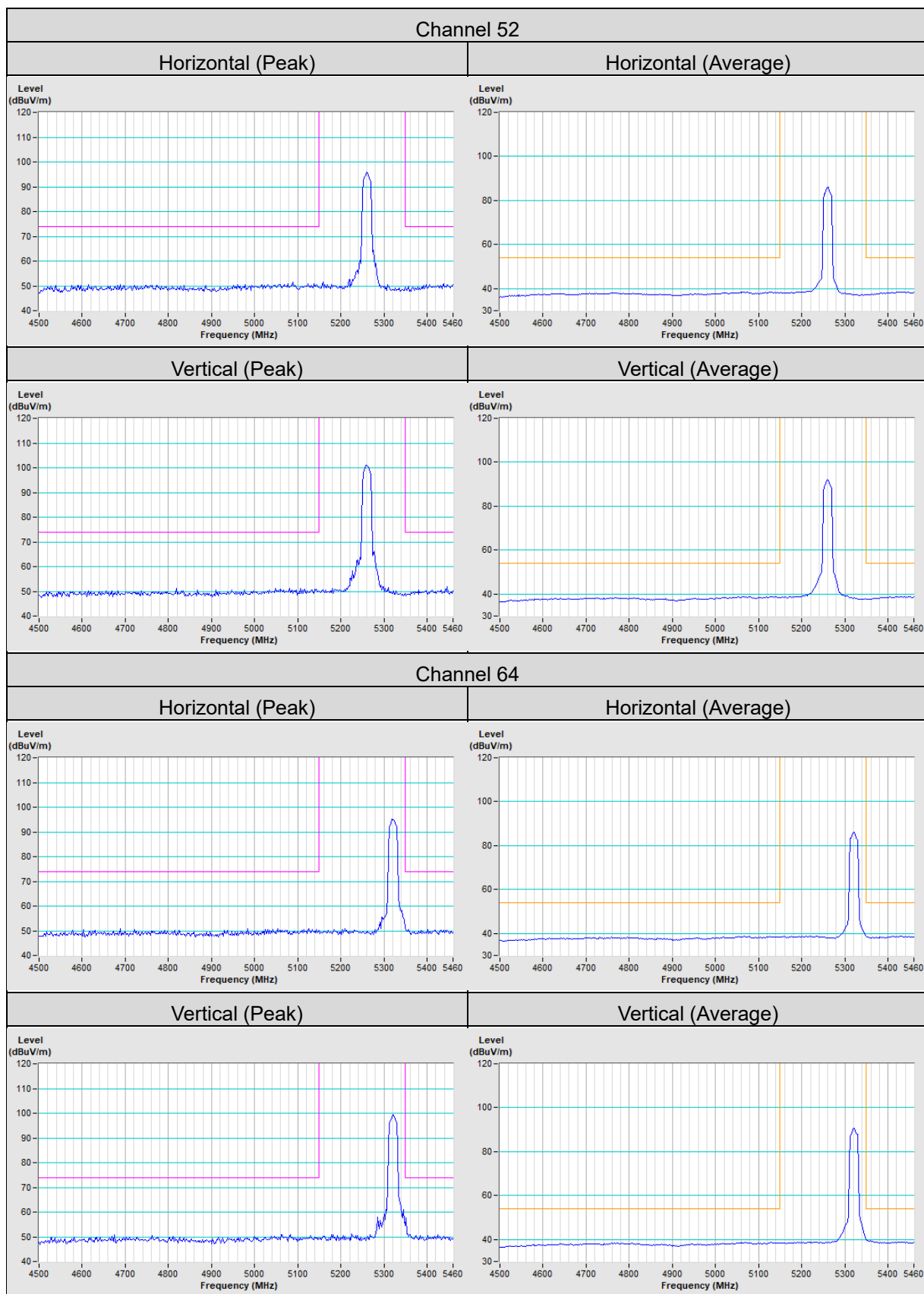


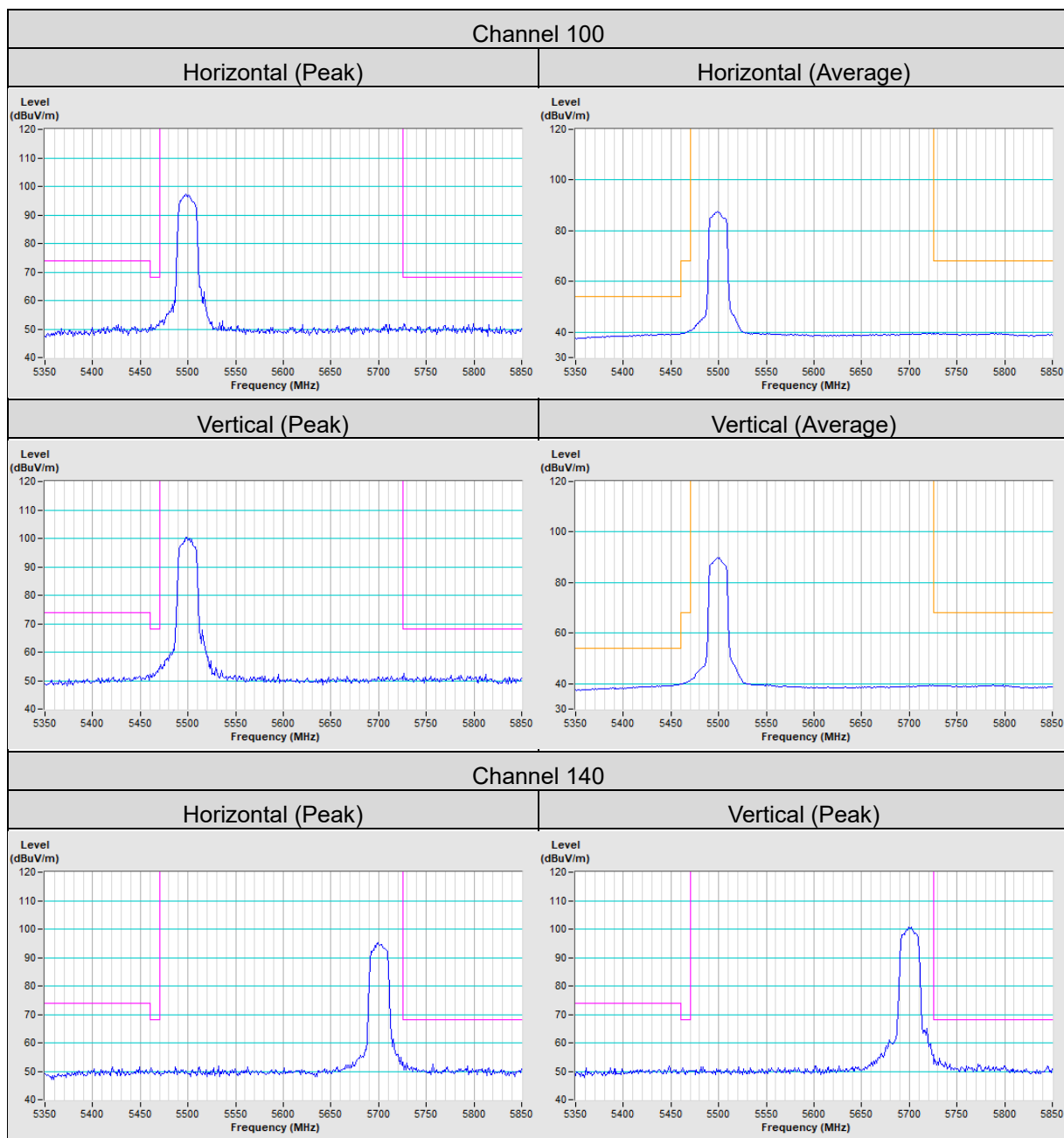




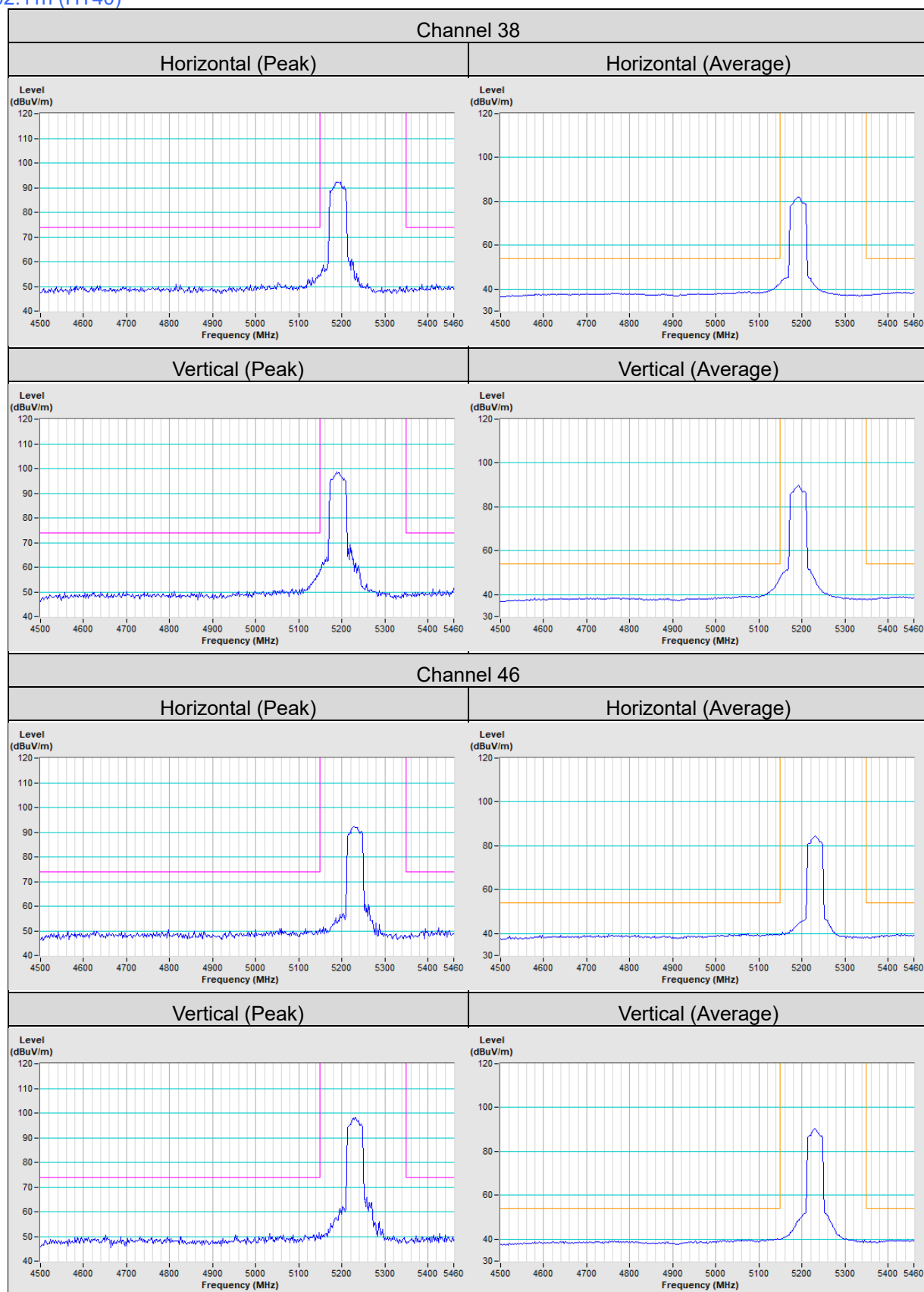
802.11n (HT20)

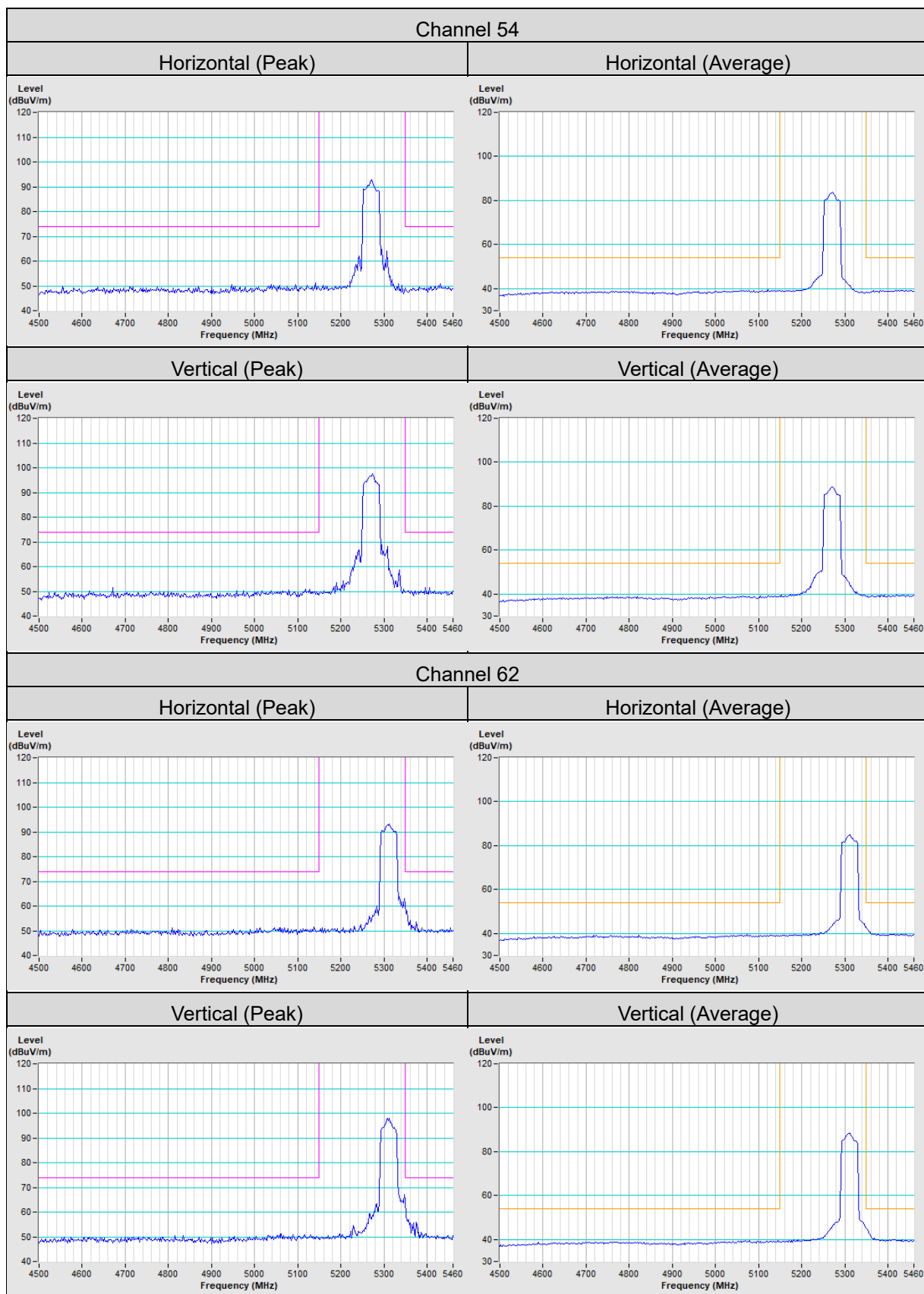


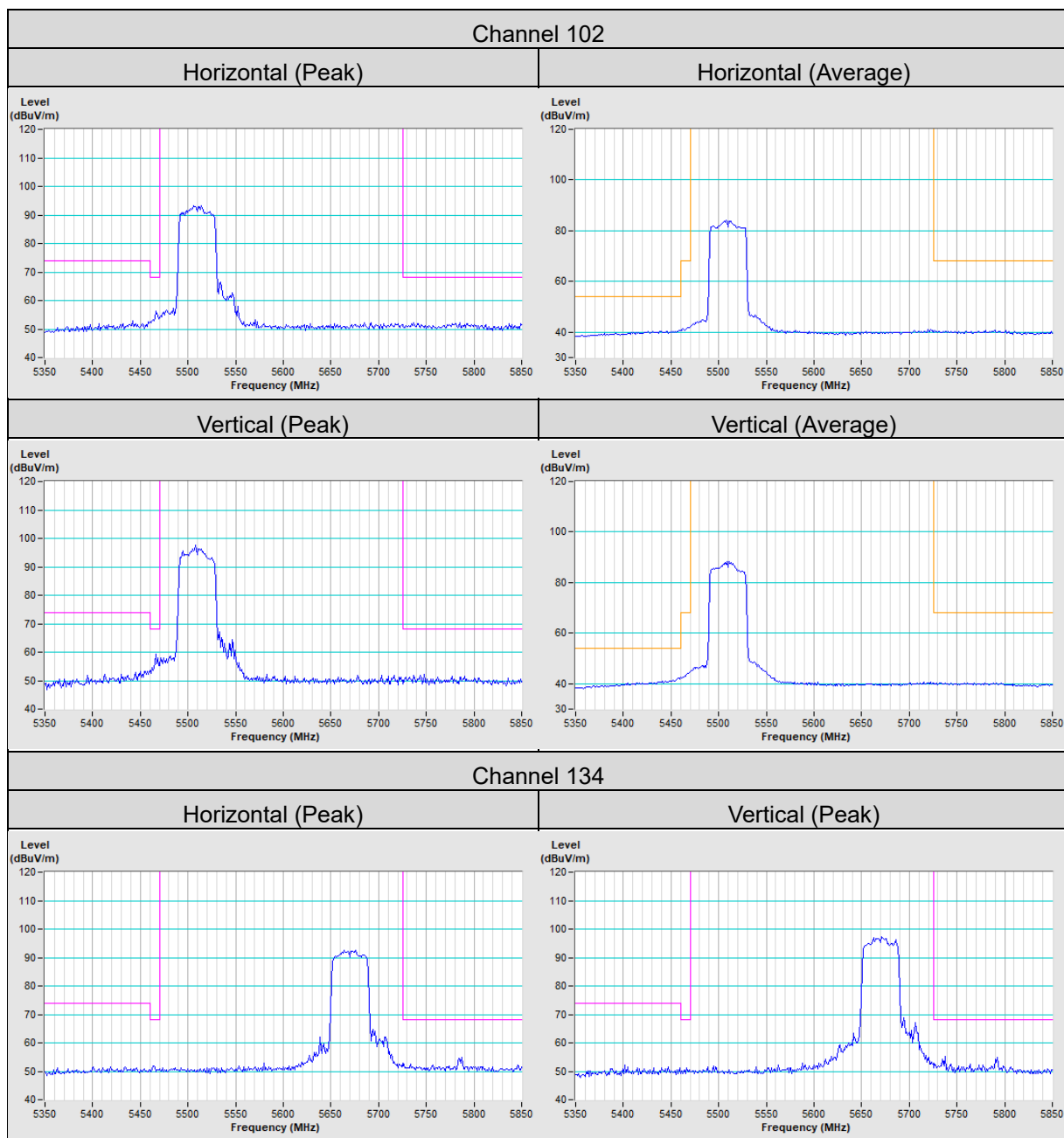




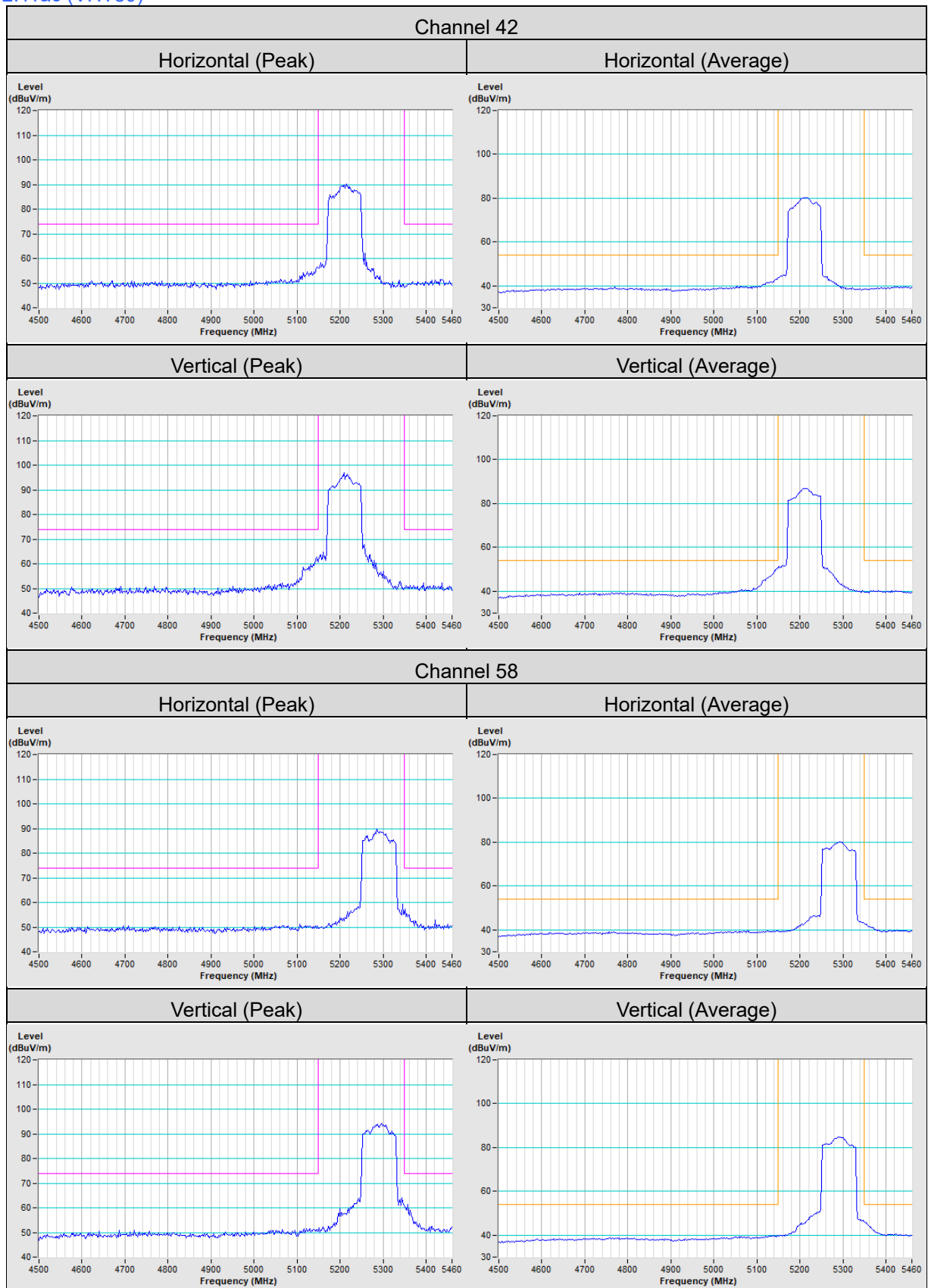
802.11n (HT40)

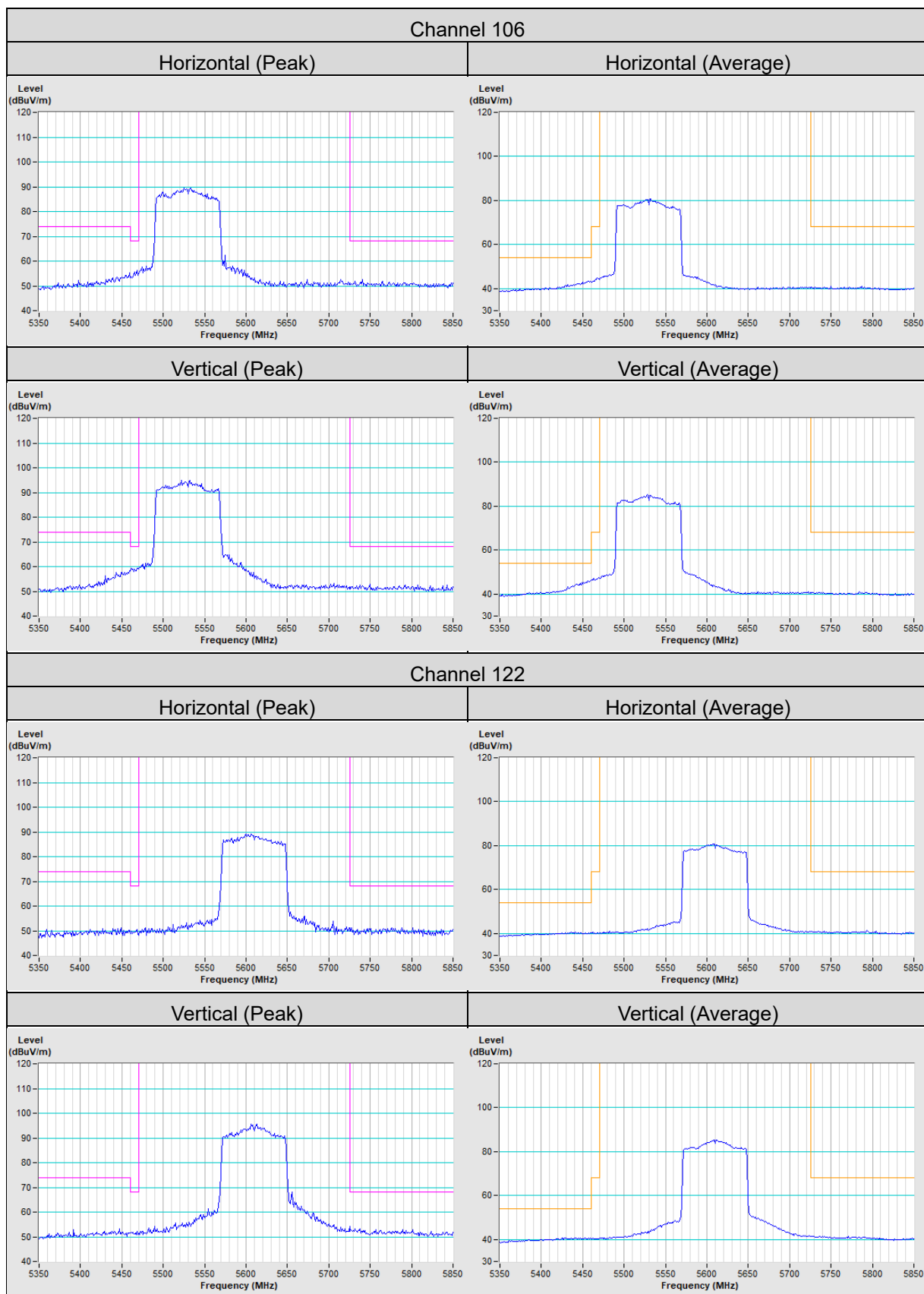






802.11ac (VHT80)





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 and approved 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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