FCC Test Report

Report No.:	RF170313C12D
FCC ID:	QI3BIL-AC867
Test Model:	BEC AC867SQ, BEC AC867, BEC AC867EX (refer to item 3.1 for more details)
Received Date:	Mar. 12, 2019
Test Date:	Apr. 09 ~ Apr. 17, 2019
Issued Date:	May 06, 2019
Applicant:	Billion Electric Co., Ltd.
Address:	8F., No.192, Sec. 2, Zhongxing Rd., Xindian Dist., New Taipei City 23146, Taiwan (R.O.C.)
Issued By:	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
Lab Address:	No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan (R.O.C.)
Test Location:	No.19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City 33383, TAIWAN (R.O.C.)
FCC Registration / Designation Number:	788550 / TW0003

Testing Laboratory
2021

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Release Control Record

Issue No.	Description	Date Issued
RF170313C12D	Original release	May 06, 2019

1 Certificate of Conformity

Product:	AC867 5GHz Wave2 Ultra Long-Range Wireless Outdoor Customer Premises Equipment (refer to item 3.1 for more details)
Brand:	BEC, Billion
Test Model:	BEC AC867SQ, BEC AC867, BEC AC867EX (refer to item 3.1 for more details)
Sample Status:	Engineering sample
Applicant:	Billion Electric Co., Ltd.
Test Date:	Apr. 09 ~ Apr. 17, 2019
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 : Polly Chien , **Date:** May 06, 2019

Polly Chien / Specialist

Approved by : Bruce Chen , **Date:** May 06, 2019

Bruce Chen / 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 -10.66dB at 0.15223MHz
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 -1.2dB at 86.28MHz
15.407(a)(1/2/3)	Max Average Transmit Power	Pass	Meet the requirement of limit.
---	Occupied Bandwidth Measurement	-	Reference only.
15.407(a)(1/2/3)	Peak Power Spectral Density	Pass	Meet the requirement of limit.
15.407(e)	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	Antenna connectors are RSMA and IPEX not a standard connector.

*For U-NII-3 band compliance with rule part 15.407(b)(4)(i), the OOBE test plots were recorded in Annex A.
Note:
Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

2.1 Measurement Uncertainty

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

Measurement	Frequency	Expanded Uncertainty (k=2) (±)
Conducted Emissions at mains ports	150kHz ~ 30MHz	2.44 dB
Radiated Emissions up to 1 GHz	9kHz ~ 30MHz	3.04 dB
	30MHz ~ 200MHz	3.86 dB
	200MHz ~1000MHz	3.87 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	AC867 5GHz Wave2 Ultra Long-Range Wireless Outdoor Customer Premises Equipment (Refer to note)
Brand	BEC,Billion
Model	BEC AC867SQ, BEC AC867, BEC AC867EX
Model Difference	Refer to note
Status of EUT	Engineering sample
Power Supply Rating	24Vdc (POE)
Modulation Type	256QAM, 64QAM, 16QAM, QPSK, BPSK for OFDM
Modulation Technology	OFDM
Transfer Rate	802.11a: 54.0/ 48.0/ 36.0/ 24.0/ 18.0/ 12.0/ 9.0/ 6.0Mbps 802.11n: up to 300Mbps 802.11ac: up to 867Mbps
Operating Frequency	5180 ~ 5240MHz, 5745 ~ 5825MHz
Number of Channel	5180 ~ 5240MHz: 4 for 802.11a, 802.11n (HT20), 802.11ac (VHT20) 2 for 802.11n (HT40), 802.11ac (VHT40) 1 for 802.11ac (VHT80) 5745 ~ 5825MHz: 5 for 802.11a, 802.11n (HT20), 802.11ac (VHT20) 2 for 802.11n (HT40), 802.11ac (VHT40) 1 for 802.11ac (VHT80)
Output Power	Model: BEC AC867SQ: CDD Mode 5180 ~ 5240MHz: 34.844mW 5745 ~ 5825MHz: 164.287mW Beamforming Mode 5180 ~ 5240MHz: 17.423mW 5745 ~ 5825MHz: 81.294mW Model: BEC AC867: CDD Mode 5180 ~ 5240MHz: 4.135mW 5745 ~ 5825MHz: 106.612mW Beamforming Mode 5180 ~ 5240MHz: 2.0676mW 5745 ~ 5825MHz: 53.310mW Model: BEC AC867EX: CDD Mode 5180 ~ 5240MHz: 44.326mW 5745 ~ 5825MHz: 399.052mW Beamforming Mode 5180 ~ 5240MHz: 21.906mW 5745 ~ 5825MHz: 164.229mW

Antenna Type	Refer to note
Antenna Connector	Refer to note
Accessory Device	POE
Data Cable Supplied	NA

Note:

1. This report is issued as a supplementary report to the original BV CPS report no.: RF170313C12. The differences compared with original report are changing the product name, model name, brand name and applicant. Therefore, all test item had been re-tested.
2. The following models are electrically identical except the antenna designation as below.

Brand	Product Name	Model	Description
BEC,Billion	AC867 5GHz Outdoor CPE	BEC AC867SQ	Internal antenna. RJ45 are placed normally.
	AC867 5GHz Wave2 Ultra Long-Range Wireless Outdoor Customer Premises Equipment	BEC AC867	Internal antenna. RJ45 are placed reversely.
	AC867 5GHz Outdoor Access Point	BEC AC867EX	External antenna. RJ45 are placed normally.

3. The EUT incorporates a MIMO function. Physically, the EUT provides 2 completed transmitters and 2 receivers.

Modulation Mode	TX Function	Beamforming
802.11a	2TX	Not Support
802.11n (HT20)	2TX	Support
802.11n (HT40)	2TX	Support
802.11ac (VHT20)	2TX	Support
802.11ac (VHT40)	2TX	Support
802.11ac (VHT80)	2TX	Support

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

* For 5GHz band, CDD mode is the worst case for final radiated emission below 1GHz and power line conducted emission tests after pretesting CDD mode and beamforming mode.

4. The EUT consumes power from the following PoE.

Brand	EnGenius
Model	EPA2406GP
Input Power	100-240Vac, 0.4A, 50-60Hz
Output Power	24Vdc, 0.6A PIN 4,5: 24V PIN 7,8: RETURN
Power Line	0.5m non-shielded AC power cable without core

5. The EUT uses following antennas.

Model: BEC AC867SQ			
Ant.	Type	Connector	Gain (dBi)
			5.150 – 5.850GHz
1	PIFA	IPEX	13.35
2			13.42

* The maximum antenna gain is chosen for final test.

Model: BEC AC867			
Ant.	Type	Connector	Gain (dBi)
			5.150 – 5.850GHz
1	Patch	IPEX	15.3
2			15.4

* The maximum antenna gain is chosen for final test.

Model: BEC AC867EX					
Ant.	Type	Connector	Gain (dBi)		
			5.150GHz	5.550GHz	5.850GHz
-	Dipole	RSMA	5.12	5.09	5.17

* The maximum antenna gain is chosen for final test.

6. The EUT will install at outdoor area, the highest antenna gain from the horizon above 30 degrees as below, for more detail information please refer to antenna specification and user manual

Model	Antenna gain	Antenna install degree
BEC AC867SQ	5.46 dBi	
Due to device will restricted installation position as above photo, thus consider to above 30 degrees highest antenna gain are chosen from XZ Plane and YZ Plane antenna specification of 120-240° degrees, for XY plane antenna gain it will not effect to above 30 degrees from the horizon, therefore not required to evaluation.		
BEC AC867	14.42 dBi	
Due to device can be configuration at different angle ,thus consider to above 30 degrees from the horizon the highest antenna gain are chosen from antenna specification exhibits from 0 to 360 degrees for U-NII-1 band.		

Model	Antenna gain	Antenna install degree
BEC AC867EX	4.31 dBi	
Due to device will restricted installation position as above photo, thus consider to above 30 degrees highest antenna gain are chosen from XZ Plane and YZ Plane antenna specification of -60-60° degrees, for XY plane antenna gain it will not effect to above 30 degrees from the horizon, therefore not required to evaluation.		

3.2 Description of Test Modes

For 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

For 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≥1G	RE<1G	PLC	APCM	
A	√	√	√	√	Model: BEC AC867SQ
B	√	√	√	√	Model: BEC AC867
C	√	√	√	√	Model: BEC AC867EX

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

Note:

1. The EUT had been pre-tested on the positioned of each 3 axis. The worst case was found when positioned on Z-plane (mode A & C) and Y-plane (mode B).

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	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A, B, C	802.11a	5180-5240	36 to 48	36, 40, 48	OFDM	BPSK	6.0
A, B, C	802.11ac (VHT20)		36 to 48	36, 40, 48	OFDM	BPSK	6.5
A, B, C	802.11ac (VHT40)		38 to 46	38, 46	OFDM	BPSK	13.5
A, B, C	802.11ac (VHT80)		42	42	OFDM	BPSK	58.5
A, B, C	802.11a	5745-5825	149 to 165	149, 157, 165	OFDM	BPSK	6.0
A, B, C	802.11ac (VHT20)		149 to 165	149, 157, 165	OFDM	BPSK	6.5
A, B, C	802.11ac (VHT40)		151 to 159	151, 159	OFDM	BPSK	13.5
A, B, C	802.11ac (VHT80)		155	155	OFDM	BPSK	58.5

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	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A, B, C	802.11a	5180-5240	36 to 48	157	OFDM	BPSK	6.0
	802.11a	5745-5825	149 to 165		OFDM	BPSK	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	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A, B, C	802.11a	5180-5240	36 to 48	157	OFDM	BPSK	6.0
	802.11a	5745-5825	149 to 165		OFDM	BPSK	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	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A, B, C	802.11a	5180-5240	36 to 48	36, 40, 48	OFDM	BPSK	6.0
A, B, C	802.11ac (VHT20)		36 to 48	36, 40, 48	OFDM	BPSK	6.5
A, B, C	802.11ac (VHT40)		38 to 46	38, 46	OFDM	BPSK	13.5
A, B, C	802.11ac (VHT80)		42	42	OFDM	BPSK	58.5
A, B, C	802.11a	5745-5825	149 to 165	149, 157, 165	OFDM	BPSK	6.0
A, B, C	802.11ac (VHT20)		149 to 165	149, 157, 165	OFDM	BPSK	6.5
A, B, C	802.11ac (VHT40)		151 to 159	151, 159	OFDM	BPSK	13.5
A, B, C	802.11ac (VHT80)		155	155	OFDM	BPSK	58.5

Test Condition:

APPLICABLE TO	ENVIRONMENTAL CONDITIONS	INPUT POWER	TESTED BY
RE≥1G	24deg. C, 66%RH	24Vdc	Willy Cheng
RE<1G	24deg. C, 68%RH	24Vdc	Willy Cheng
PLC	23deg. C, 68%RH	24Vdc	Adair Peng
APCM	25deg. C, 60%RH	24Vdc	Chris Lin

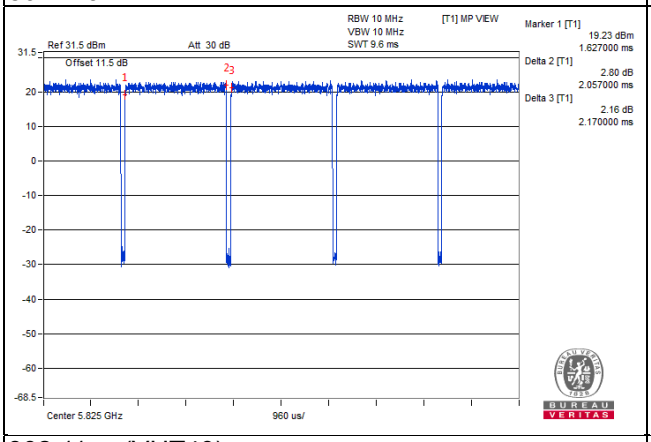
3.3 Duty Cycle of Test Signal

Duty cycle of test signal is > 98%, duty factor is not required.
Duty cycle of test signal is < 98 %, duty factor is required.

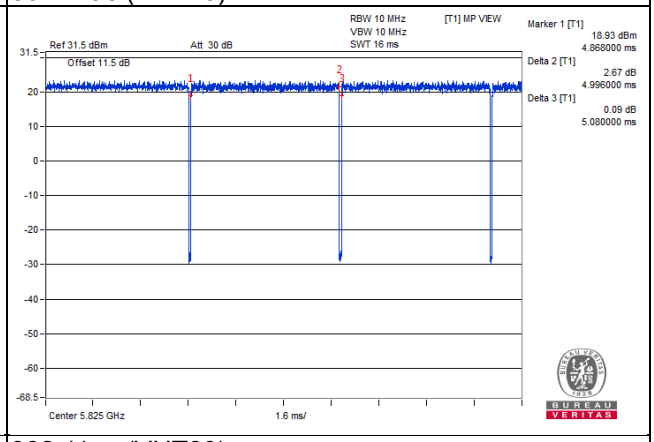
Test Mode A

802.11a: Duty cycle = 2.057/2.170 = 0.948, Duty factor = 10 * log(1/0.948) = 0.23
802.11ac (VHT20): Duty cycle = 4.996/5.080 = 0.983
802.11ac (VHT40): Duty cycle = 2.426/2.518 = 0.963, Duty factor = 10 * log(1/0.963) = 0.16
802.11ac (VHT80): Duty cycle = 1.137/1.249 = 0.910, Duty factor = 10 * log(1/0.910) = 0.41

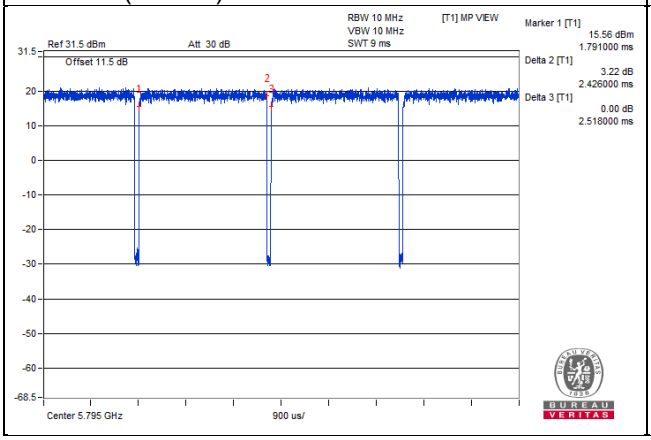
802.11a



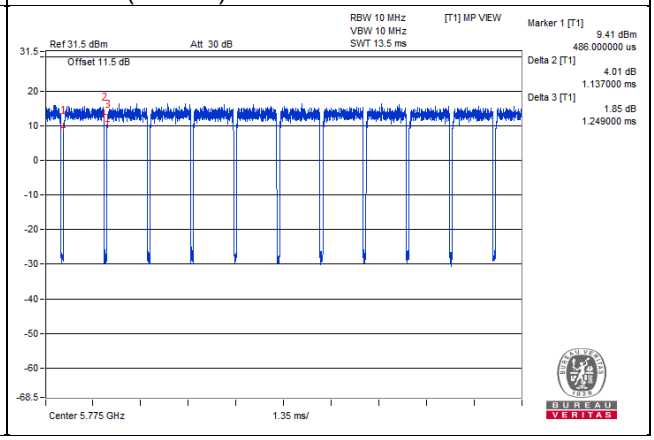
802.11ac (VHT20)



802.11ac (VHT40)



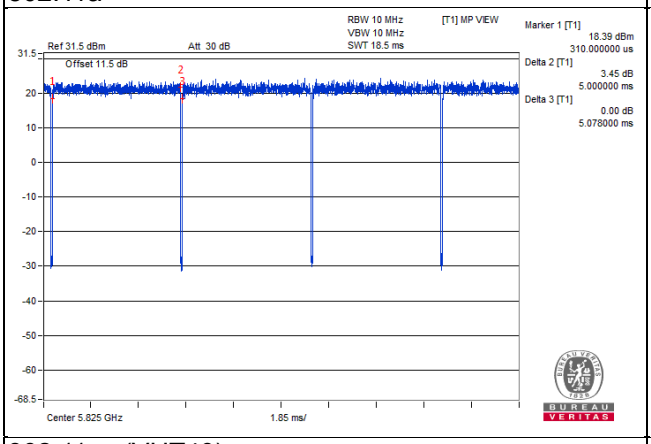
802.11ac (VHT80)



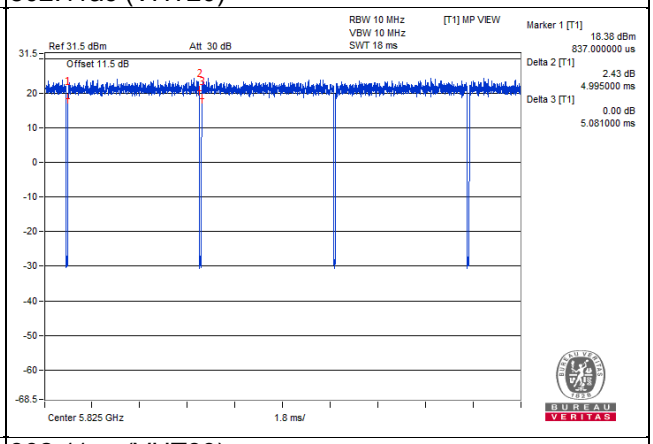
Test Mode B

802.11a: Duty cycle = 5.000/5.078 = 0.985
802.11ac (VHT20): Duty cycle = 4.995/5.081 = 0.983
802.11ac (VHT40): Duty cycle = 2.415/2.514 = 0.961, Duty factor = 10 * log(1/0.961) = 0.17
802.11ac (VHT80): Duty cycle = 1.142/1.248 = 0.915, Duty factor = 10 * log(1/0.915) = 0.39

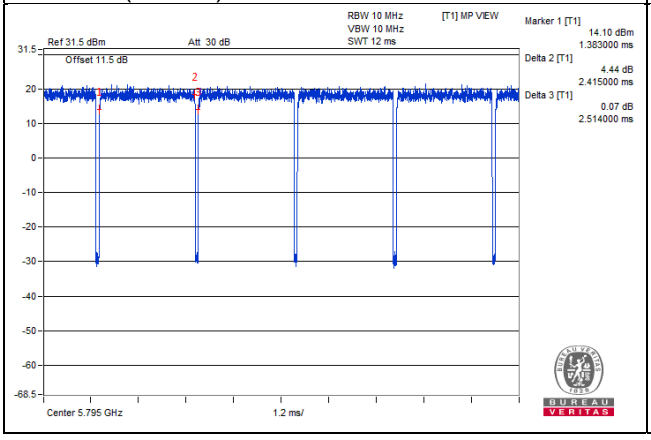
802.11a



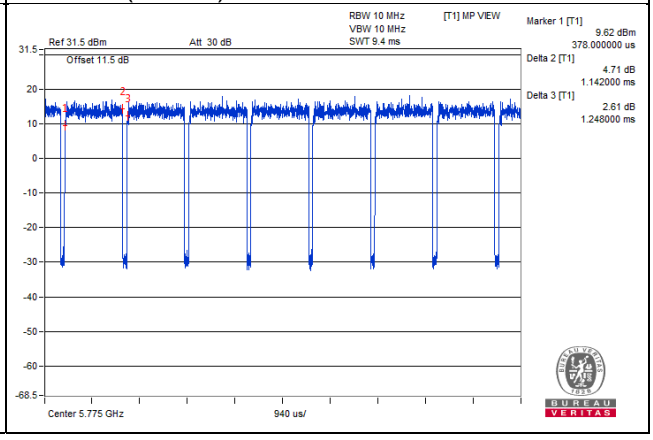
802.11ac (VHT20)



802.11ac (VHT40)



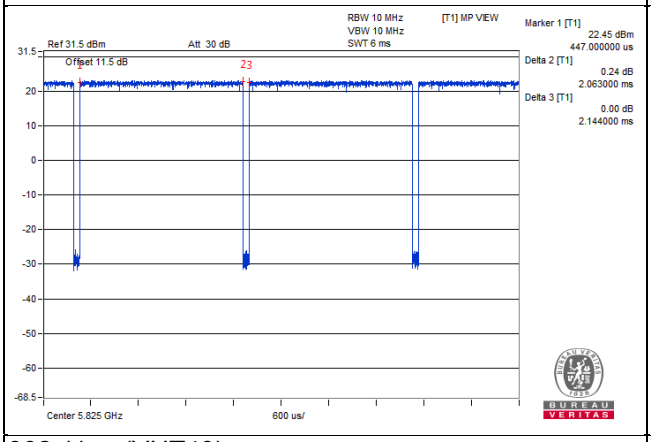
802.11ac (VHT80)



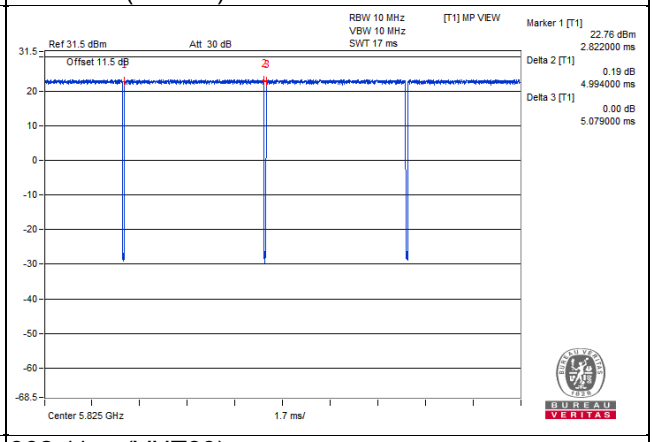
Test Mode C

802.11a: Duty cycle = 2.063/2.144 = 0.962, Duty factor = 10 * log(1/0.962) = 0.17
802.11ac (VHT20): Duty cycle = 4.994/5.079 = 0.983
802.11ac (VHT40): Duty cycle = 2.427/2.535 = 0.957, Duty factor = 10 * log(1/0.957) = 0.19
802.11ac (VHT80): Duty cycle = 1.140/1.244 = 0.916, Duty factor = 10 * log(1/0.916) = 0.38

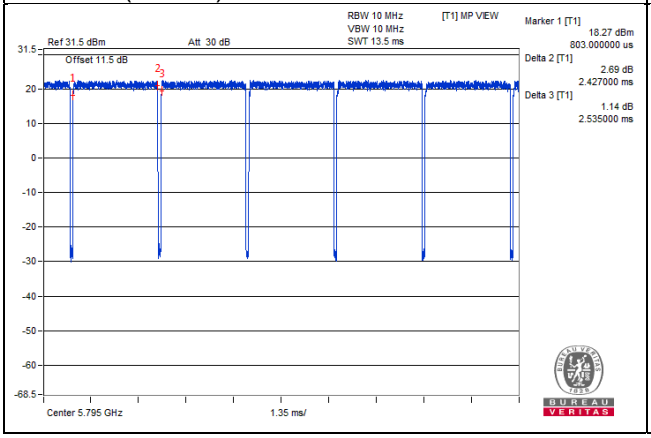
802.11a



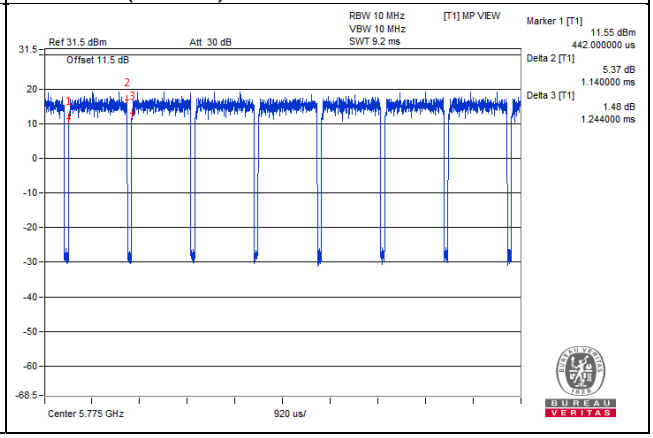
802.11ac (VHT20)



802.11ac (VHT40)



802.11ac (VHT80)



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.

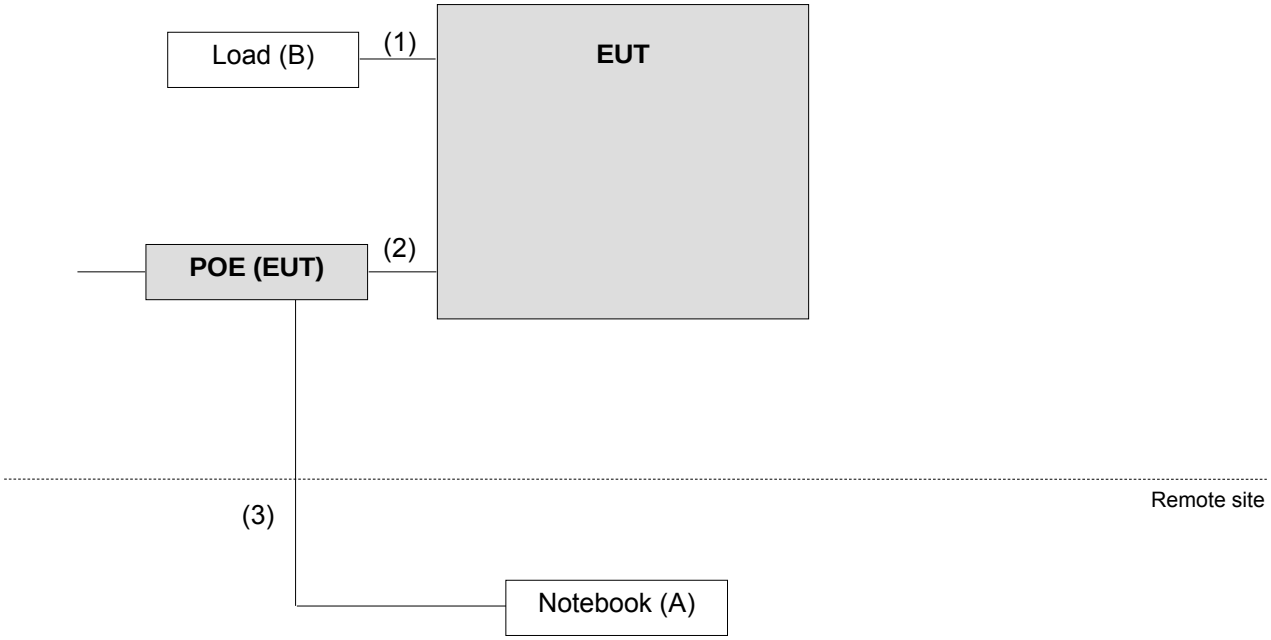
ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A.	Notebook	DELL	E5410	1HC2XM1	FCC DoC Approved	-
B.	Load	N/A	N/A	N/A	N/A	-

Note:

1. All power cords of the above support units are non-shielded (1.8m).
2. Item A acted as communication partner to transfer data.

ID	Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	RJ45 Cable	1	1.5	N	0	Cat5e
2.	RJ45 Cable	1	1.5	N	0	Cat5e
3.	RJ45 Cable	1	5	N	0	Cat5e

3.4.1 Configuration of System under Test



3.5 General Description of Applied Standards

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

FCC Part 15, Subpart E (15.407)
KDB 789033 D02 General UNII Test Procedure New Rules v02r01
KDB 662911 D01 Multiple Transmitter Output v02r01
ANSI C63.10:2013

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

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

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

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

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

4.1.2 Test Instruments

Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
Test Receiver ROHDE & SCHWARZ	ESIB7	100187	May 29, 2018	May 28, 2019
BILOG Antenna SCHWARZBECK	VULB9168	9168-171	Nov. 22, 2018	Nov. 21, 2019
HORN Antenna SCHWARZBECK	9120D	209	Nov. 25, 2018	Nov. 24, 2019
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA9170241	Nov. 25, 2018	Nov. 24, 2019
Loop Antenna TESEQ	HLA 6121	45745	Jun. 14, 2018	Jun. 13, 2019
Preamplifier Agilent (Below 1GHz)	8447D	2944A10738	Aug. 21, 2018	Aug. 20, 2019
Preamplifier Agilent (Above 1GHz)	8449B	3008A01976	Aug. 21, 2018	Aug. 20, 2019
RF signal cable HUBER+SUHNER	SUCOFLEX 104	Cable-CH3-03 (223653/4)	Aug. 21, 2018	Aug. 20, 2019
RF signal cable HUBER+SUHNER& EMCI	SUCOFLEX 104&EMC104-SM-SM-8000	Cable-CH3-03 (309224+170907)	Aug. 21, 2018	Aug. 20, 2019
Software BV ADT	ADT_Radiated_V7.6.15.9.5	NA	NA	NA
Antenna Tower inn-co GmbH	MA 4000	013303	NA	NA
Antenna Tower Controller BV ADT	AT100	AT93021702	NA	NA
Turn Table BV ADT	TT100	TT93021702	NA	NA
Turn Table Controller BV ADT	SC100	SC93021702	NA	NA
Boresight Antenna Fixture	FBA-01	FBA-SIP01	NA	NA
Pre-amplifier (18GHz-40GHz) EMC	EMC184045B	980175	Nov. 14, 2018	Nov. 13, 2019
USB Wideband Power Sensor KEYSIGHT	U2021XA	MY55050005/MY55190004/MY55190007/MY55210005	Jul. 17, 2018	Jul. 16, 2019

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 3.

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:

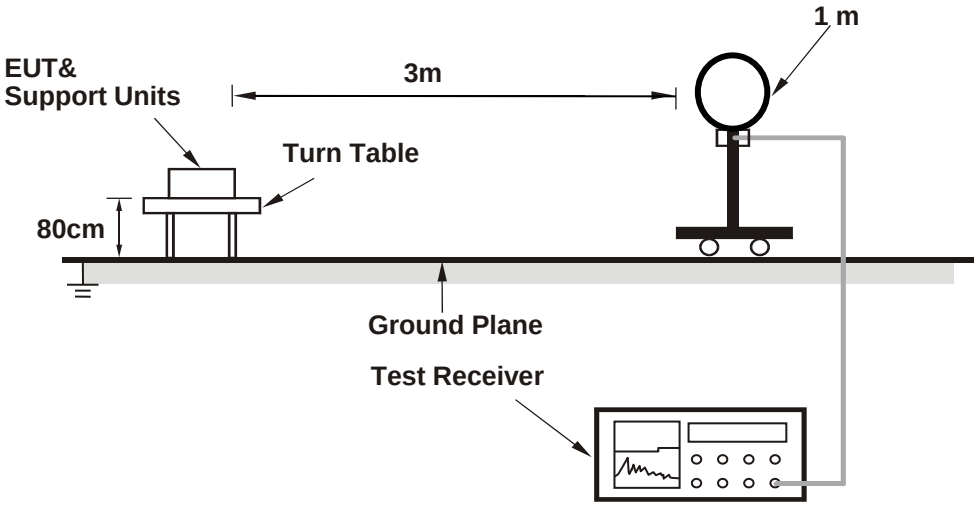
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.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

4.1.4 Deviation from Test Standard

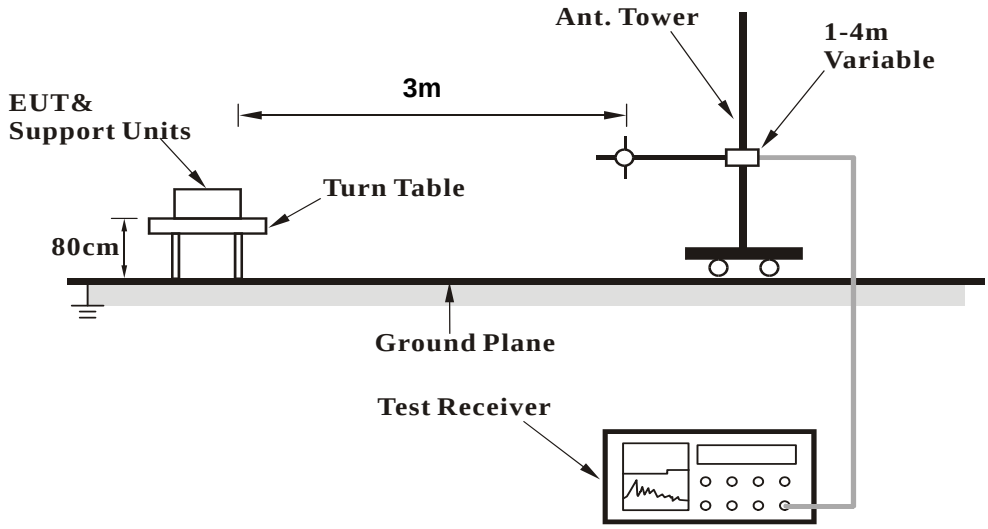
No deviation.

4.1.5 Test Set Up

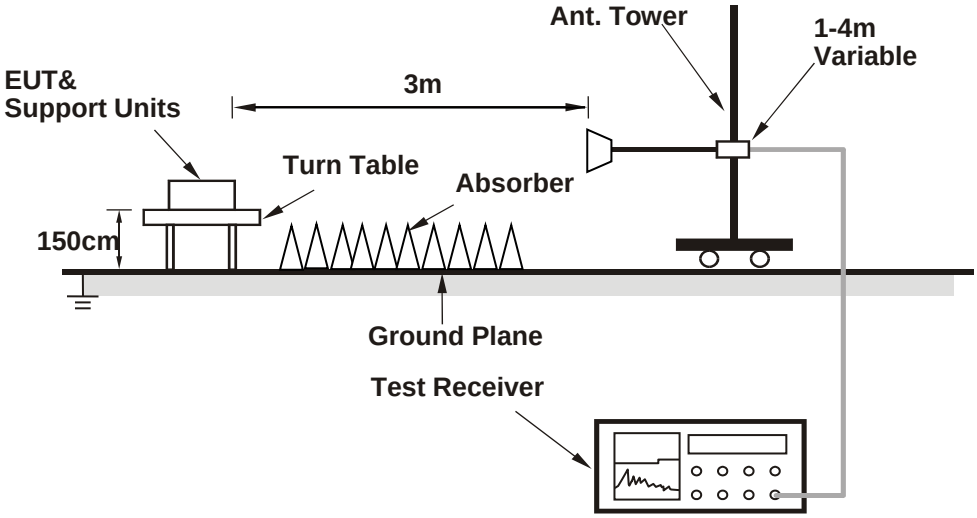
For Radiated emission below 30MHz



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

a. Placed the EUT on the testing table.
b. Prepared a notebook to act as a communication partner and placed it outside of testing area.
c. The communication partner connected with EUT via a RJ45 cable and ran a test program (provided by manufacturer) to enable EUT under transmission condition continuously at specific channel frequency.
d. The communication partner sent data to EUT by command "PING".

4.1.7 Test Results

Above 1GHz Worst-Case Data:

Test Mode A

802.11a

CHANNEL	TX Channel 36	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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)	CORRECTION FACTOR (dB/m)
1	5150.00	57.5 PK	74.0	-16.5	1.69 H	302	53.1	4.4
2	5150.00	48.8 AV	54.0	-5.2	1.69 H	302	44.4	4.4
3	*5180.00	111.6 PK			1.52 H	353	72.1	39.5
4	*5180.00	101.4 AV			1.52 H	353	61.9	39.5
5	#6906.00	63.2 PK	68.2	-5.0	1.73 H	346	53.5	9.7
6	#10360.00	57.7 PK	68.2	-10.5	1.96 H	265	41.7	16.0
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	5150.00	56.9 PK	74.0	-17.1	2.56 V	302	52.5	4.4
2	5150.00	46.2 AV	54.0	-7.8	2.56 V	302	41.8	4.4
3	*5180.00	110.3 PK			3.18 V	334	70.8	39.5
4	*5180.00	100.5 AV			3.18 V	334	61.0	39.5
5	#6906.00	55.8 PK	68.2	-12.4	2.13 V	89	46.1	9.7
6	#10360.00	57.3 PK	68.2	-10.9	2.14 V	318	41.3	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 40	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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)	CORRECTION FACTOR (dB/m)
1	*5200.00	112.8 PK			1.46 H	337	73.3	39.5
2	*5200.00	101.6 AV			1.46 H	337	62.1	39.5
3	#10400.00	57.3 PK	68.2	-10.9	2.69 H	113	41.1	16.2
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	*5200.00	110.6 PK			3.12 V	359	71.1	39.5
2	*5200.00	100.5 AV			3.12 V	359	61.0	39.5
3	#10400.00	57.8 PK	68.2	-10.4	2.64 V	18	41.6	16.2

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. 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) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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)	CORRECTION FACTOR (dB/m)
1	*5240.00	111.9 PK			1.38 H	325	72.6	39.3
2	*5240.00	101.7 AV			1.38 H	325	62.4	39.3
3	5350.00	56.8 PK	74.0	-17.2	2.13 H	142	52.5	4.3
4	5350.00	43.9 AV	54.0	-10.1	2.13 H	142	39.6	4.3
5	#10480.00	58.8 PK	68.2	-9.4	2.31 H	243	41.8	17.0
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	*5240.00	111.2 PK			3.18 V	346	71.9	39.3
2	*5240.00	101.3 AV			3.18 V	346	62.0	39.3
3	5350.00	58.6 PK	74.0	-15.4	2.93 V	287	54.3	4.3
4	5350.00	43.7 AV	54.0	-10.3	2.93 V	287	39.4	4.3
5	#10480.00	58.4 PK	68.2	-9.8	2.26 V	175	41.4	17.0

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. 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) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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)	CORRECTION FACTOR (dB/m)
1	#5644.80	62.4 PK	68.2	-5.8	1.78 H	332	57.9	4.5
2	*5745.00	123.2 PK			1.78 H	332	83.1	40.1
3	*5745.00	113.5 AV			1.78 H	332	73.4	40.1
4	#5934.40	64.2 PK	68.2	-4.0	1.78 H	332	58.9	5.3
5	11490.00	59.3 PK	74.0	-14.7	2.54 H	231	41.3	18.0
6	11490.00	47.2 AV	54.0	-6.8	2.54 H	231	29.2	18.0
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	#5645.96	62.8 PK	68.2	-5.4	1.32 V	351	58.3	4.5
2	*5745.00	120.3 PK			1.32 V	351	80.2	40.1
3	*5745.00	110.2 AV			1.32 V	351	70.1	40.1
4	#5933.89	63.0 PK	68.2	-5.2	1.32 V	351	57.7	5.3
5	11490.00	60.8 PK	74.0	-13.2	1.99 V	252	42.8	18.0
6	11490.00	47.9 AV	54.0	-6.1	1.99 V	252	29.9	18.0

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 157	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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)	CORRECTION FACTOR (dB/m)
1	#5624.80	62.1 PK	68.2	-6.1	1.69 H	332	57.6	4.5
2	*5785.00	122.1 PK			1.69 H	332	81.8	40.3
3	*5785.00	112.5 AV			1.69 H	332	72.2	40.3
4	#5938.40	63.9 PK	68.2	-4.3	1.69 H	332	58.6	5.3
5	11570.00	61.8 PK	74.0	-12.2	2.86 H	215	44.1	17.7
6	11570.00	48.2 AV	54.0	-5.8	2.86 H	215	30.5	17.7
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	#5609.32	62.2 PK	68.2	-6.0	1.38 V	319	57.6	4.6
2	*5785.00	120.2 PK			1.38 V	319	79.9	40.3
3	*5785.00	110.1 AV			1.38 V	319	69.8	40.3
4	#5993.60	63.3 PK	68.2	-4.9	1.38 V	319	57.9	5.4
5	11570.00	59.7 PK	74.0	-14.3	2.03 V	156	42.0	17.7
6	11570.00	48.3 AV	54.0	-5.7	2.03 V	156	30.6	17.7

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 165	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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)	CORRECTION FACTOR (dB/m)
1	#5638.52	61.7 PK	68.2	-6.5	1.69 H	327	57.2	4.5
2	*5825.00	122.2 PK			1.69 H	327	81.8	40.4
3	*5825.00	112.3 AV			1.69 H	327	71.9	40.4
4	#5988.00	63.7 PK	68.2	-4.5	1.69 H	327	58.3	5.4
5	11650.00	59.3 PK	74.0	-14.7	2.51 H	235	41.8	17.5
6	11650.00	47.2 AV	54.0	-6.8	2.51 H	235	29.7	17.5
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	#5634.40	61.8 PK	68.2	-6.4	1.35 V	332	57.3	4.5
2	*5825.00	119.0 PK			1.35 V	332	78.6	40.4
3	*5825.00	109.3 AV			1.35 V	332	68.9	40.4
4	#5984.00	63.2 PK	68.2	-5.0	1.35 V	332	57.8	5.4
5	11650.00	50.5 PK	74.0	-23.5	2.26 V	239	33.0	17.5
6	11650.00	47.1 AV	54.0	-6.9	2.26 V	239	29.6	17.5

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.

802.11ac (VHT20)

CHANNEL	TX Channel 36	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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)	CORRECTION FACTOR (dB/m)
1	5150.00	57.1 PK	74.0	-16.9	1.62 H	345	52.7	4.4
2	5150.00	44.3 AV	54.0	-9.7	1.62 H	345	39.9	4.4
3	*5180.00	112.2 PK			1.13 H	321	72.7	39.5
4	*5180.00	102.1 AV			1.13 H	321	62.6	39.5
5	#10360.00	58.3 PK	68.2	-9.9	2.03 H	111	42.3	16.0
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	5150.00	59.9 PK	74.0	-14.1	2.64 V	314	55.5	4.4
2	5150.00	48.7 AV	54.0	-5.3	2.64 V	314	44.3	4.4
3	*5180.00	113.7 PK			2.56 V	339	74.2	39.5
4	*5180.00	103.6 AV			2.56 V	339	64.1	39.5
5	#10360.00	58.1 PK	68.2	-10.1	2.93 V	342	42.1	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 40	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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)	CORRECTION FACTOR (dB/m)
1	*5200.00	112.0 PK			1.36 H	324	72.5	39.5
2	*5200.00	101.8 AV			1.36 H	324	62.3	39.5
3	#10400.00	58.6 PK	68.2	-9.6	2.26 H	64	42.4	16.2
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	*5200.00	110.1 PK			2.65 V	312	70.6	39.5
2	*5200.00	100.3 AV			2.65 V	312	60.8	39.5
3	#10400.00	57.6 PK	68.2	-10.6	2.13 V	14	41.4	16.2

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. 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) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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)	CORRECTION FACTOR (dB/m)
1	*5240.00	111.8 PK			1.39 H	332	72.5	39.3
2	*5240.00	101.5 AV			1.39 H	332	62.2	39.3
3	5350.00	56.5 PK	74.0	-17.5	1.69 H	287	52.2	4.3
4	5350.00	43.8 AV	54.0	-10.2	1.69 H	287	39.5	4.3
5	#10480.00	58.2 PK	68.2	-10.0	2.15 H	303	41.2	17.0
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	*5240.00	110.7 PK			2.82 V	341	71.4	39.3
2	*5240.00	100.3 AV			2.82 V	341	61.0	39.3
3	5350.00	56.3 PK	74.0	-17.7	2.52 V	263	52.0	4.3
4	5350.00	44.1 AV	54.0	-9.9	2.52 V	263	39.8	4.3
5	#10480.00	58.6 PK	68.2	-9.6	1.99 V	342	41.6	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 149	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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)	CORRECTION FACTOR (dB/m)
1	#5624.97	63.4 PK	68.2	-4.8	1.66 H	318	58.9	4.5
2	*5745.00	123.2 PK			1.66 H	318	83.1	40.1
3	*5745.00	113.4 AV			1.66 H	318	73.3	40.1
4	#5929.74	64.8 PK	68.2	-3.4	1.66 H	318	59.5	5.3
5	11490.00	59.3 PK	74.0	-14.7	2.69 H	212	41.3	18.0
6	11490.00	47.9 AV	54.0	-6.1	2.69 H	212	29.9	18.0
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	#5616.80	62.6 PK	68.2	-5.6	1.35 V	315	58.0	4.6
2	*5745.00	120.3 PK			1.35 V	315	80.2	40.1
3	*5745.00	110.4 AV			1.35 V	315	70.3	40.1
4	#5992.80	62.7 PK	68.2	-5.5	1.35 V	315	57.3	5.4
5	11490.00	59.8 PK	74.0	-14.2	1.99 V	187	41.8	18.0
6	11490.00	46.7 AV	54.0	-7.3	1.99 V	187	28.7	18.0

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 157	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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)	CORRECTION FACTOR (dB/m)
1	#5620.00	62.7 PK	68.2	-5.5	1.68 H	325	58.1	4.6
2	*5785.00	123.1 PK			1.68 H	325	82.8	40.3
3	*5785.00	112.0 AV			1.68 H	325	71.7	40.3
4	#5930.64	63.3 PK	68.2	-4.9	1.68 H	325	58.0	5.3
5	11570.00	59.2 PK	74.0	-14.8	2.31 H	308	41.5	17.7
6	11570.00	47.3 AV	54.0	-6.7	2.31 H	308	29.6	17.7
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	#5634.52	64.3 PK	68.2	-3.9	1.37 V	322	59.8	4.5
2	*5785.00	120.3 PK			1.37 V	322	80.0	40.3
3	*5785.00	110.2 AV			1.37 V	322	69.9	40.3
4	#5996.00	63.4 PK	68.2	-4.8	1.37 V	322	58.0	5.4
5	11570.00	59.7 PK	74.0	-14.3	1.84 V	269	42.0	17.7
6	11570.00	46.8 AV	54.0	-7.2	1.84 V	269	29.1	17.7

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 165	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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)	CORRECTION FACTOR (dB/m)
1	#5624.80	63.1 PK	68.2	-5.1	1.69 H	308	58.6	4.5
2	*5825.00	121.8 PK			1.69 H	308	81.4	40.4
3	*5825.00	111.6 AV			1.69 H	308	71.2	40.4
4	#5928.80	64.8 PK	68.2	-3.4	1.69 H	308	59.5	5.3
5	11650.00	59.8 PK	74.0	-14.2	2.51 H	183	42.3	17.5
6	11650.00	47.1 AV	54.0	-6.9	2.51 H	183	29.6	17.5
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	#5629.60	61.9 PK	68.2	-6.3	1.28 V	312	57.4	4.5
2	*5825.00	120.3 PK			1.28 V	312	79.9	40.4
3	*5825.00	110.2 AV			1.28 V	312	69.8	40.4
4	#5932.00	63.9 PK	68.2	-4.3	1.28 V	312	58.6	5.3
5	11650.00	60.1 PK	74.0	-13.9	1.89 V	283	42.6	17.5
6	11650.00	47.2 AV	54.0	-6.8	1.89 V	283	29.7	17.5

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.

802.11ac (VHT40)

CHANNEL	TX Channel 38	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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)	CORRECTION FACTOR (dB/m)
1	5150.00	62.5 PK	74.0	-11.5	1.54 H	315	58.1	4.4
2	5150.00	49.8 AV	54.0	-4.2	1.54 H	315	45.4	4.4
3	*5190.00	108.5 PK			1.21 H	324	69.0	39.5
4	*5190.00	98.2 AV			1.21 H	324	58.7	39.5
5	#10380.00	57.8 PK	68.2	-10.4	2.35 H	193	41.6	16.2
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	5150.00	58.5 PK	74.0	-15.5	2.85 V	329	54.1	4.4
2	5150.00	46.8 AV	54.0	-7.2	2.85 V	329	42.4	4.4
3	*5190.00	107.2 PK			2.57 V	355	67.7	39.5
4	*5190.00	97.0 AV			2.57 V	355	57.5	39.5
5	#10380.00	57.7 PK	68.2	-10.5	2.15 V	11	41.5	16.2

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. 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) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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)	CORRECTION FACTOR (dB/m)
1	*5230.00	108.8 PK			1.59 H	323	69.5	39.3
2	*5230.00	99.0 AV			1.59 H	323	59.7	39.3
3	5350.00	57.2 PK	74.0	-16.8	1.42 H	223	52.9	4.3
4	5350.00	43.6 AV	54.0	-10.4	1.42 H	223	39.3	4.3
5	#10460.00	58.6 PK	68.2	-9.6	2.03 H	115	41.8	16.8
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	*5230.00	107.2 PK			2.76 V	327	67.9	39.3
2	*5230.00	97.3 AV			2.76 V	327	58.0	39.3
3	5350.00	57.3 PK	74.0	-16.7	2.51 V	271	53.0	4.3
4	5350.00	43.7 AV	54.0	-10.3	2.51 V	271	39.4	4.3
5	#10460.00	59.1 PK	68.2	-9.1	2.17 V	264	42.3	16.8

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 151	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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)	CORRECTION FACTOR (dB/m)
1	#5650.00	60.3 PK	68.2	-7.9	1.86 H	320	55.8	4.5
2	#5650.00	62.4 PK	68.2	-5.8	1.49 H	318	57.9	4.5
3	*5755.00	117.8 PK			1.49 H	318	77.7	40.1
4	*5755.00	108.1 AV			1.49 H	318	68.0	40.1
5	#5988.80	62.9 PK	68.2	-5.3	1.49 H	318	57.5	5.4
6	11510.00	59.7 PK	74.0	-14.3	2.35 H	29	41.6	18.1
7	11510.00	45.8 AV	54.0	-8.2	2.35 H	29	27.7	18.1
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	#5650.00	64.9 PK	68.2	-3.3	1.32 V	311	60.4	4.5
2	#5650.00	62.5 PK	68.2	-5.7	1.36 V	325	58.0	4.5
3	*5755.00	117.1 PK			1.36 V	325	77.0	40.1
4	*5755.00	107.3 AV			1.36 V	325	67.2	40.1
5	#5987.86	59.9 PK	68.2	-8.3	1.36 V	325	54.5	5.4
6	11510.00	59.8 PK	74.0	-14.2	2.54 V	336	41.7	18.1
7	11510.00	46.2 AV	54.0	-7.8	2.54 V	336	28.1	18.1

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 159	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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)	CORRECTION FACTOR (dB/m)
1	#5600.80	61.8 PK	68.2	-6.4	1.53 H	319	57.2	4.6
2	*5795.00	119.1 PK			1.53 H	319	78.7	40.4
3	*5795.00	109.4 AV			1.53 H	319	69.0	40.4
4	#5925.00	59.5 PK	68.2	-8.7	1.96 H	347	54.2	5.3
5	#5932.80	63.7 PK	68.2	-4.5	1.53 H	319	58.4	5.3
6	11590.00	59.8 PK	74.0	-14.2	2.96 H	113	42.2	17.6
7	11590.00	47.3 AV	54.0	-6.7	2.96 H	113	29.7	17.6
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	#5635.20	59.3 PK	68.2	-8.9	1.13 V	321	54.8	4.5
2	*5795.00	117.1 PK			1.13 V	321	76.7	40.4
3	*5795.00	107.3 AV			1.13 V	321	66.9	40.4
4	#5925.00	61.2 PK	68.2	-7.0	1.38 V	351	55.9	5.3
5	#5944.80	60.9 PK	68.2	-7.3	1.13 V	321	55.6	5.3
6	11590.00	58.2 PK	74.0	-15.8	2.35 V	264	40.6	17.6
7	11590.00	45.6 AV	54.0	-8.4	2.35 V	264	28.0	17.6

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.

802.11ac (VHT80)

CHANNEL	TX Channel 42	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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)	CORRECTION FACTOR (dB/m)
1	5150.00	62.7 PK	74.0	-11.3	1.47 H	356	58.3	4.4
2	5150.00	50.3 AV	54.0	-3.7	1.47 H	356	45.9	4.4
3	*5210.00	105.7 PK			1.49 H	325	66.3	39.4
4	*5210.00	95.2 AV			1.49 H	325	55.8	39.4
5	5350.00	58.8 PK	74.0	-15.2	1.12 H	328	54.5	4.3
6	5350.00	44.9 AV	54.0	-9.1	1.12 H	328	40.6	4.3
7	#10420.00	58.3 PK	68.2	-9.9	1.57 H	58	41.8	16.5
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	5150.00	59.6 PK	74.0	-14.4	2.83 V	323	55.2	4.4
2	5150.00	46.5 AV	54.0	-7.5	2.83 V	323	42.1	4.4
3	*5210.00	103.2 PK			3.11 V	345	63.8	39.4
4	*5210.00	93.3 AV			3.11 V	345	53.9	39.4
5	5350.00	56.3 PK	74.0	-17.7	2.93 V	315	52.0	4.3
6	5350.00	43.8 AV	54.0	-10.2	2.93 V	315	39.5	4.3
7	#10420.00	58.3 PK	68.2	-9.9	2.36 V	252	41.8	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 155	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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)	CORRECTION FACTOR (dB/m)
1	#5650.00	63.4 PK	68.2	-4.8	1.52 H	318	58.9	4.5
2	#5650.00	61.3 PK	68.2	-6.9	1.73 H	341	56.8	4.5
3	*5775.00	112.2 PK			1.73 H	341	71.9	40.3
4	*5775.00	102.5 AV			1.73 H	341	62.2	40.3
5	#5925.00	63.5 PK	68.2	-4.7	1.64 H	323	58.2	5.3
6	#5928.00	65.3 PK	68.2	-2.9	1.73 H	341	60.0	5.3
7	11550.00	59.8 PK	74.0	-14.2	2.64 H	32	41.9	17.9
8	11550.00	46.3 AV	54.0	-7.7	2.64 H	32	28.4	17.9
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	#5650.00	66.2 PK	68.2	-2.0	1.32 V	329	61.7	4.5
2	#5650.00	64.6 PK	68.2	-3.6	1.42 V	351	60.1	4.5
3	*5775.00	110.9 PK			1.42 V	351	70.6	40.3
4	*5775.00	100.3 AV			1.42 V	351	60.0	40.3
5	#5925.00	63.1 PK	68.2	-5.1	1.14 V	317	57.8	5.3
6	#5925.13	62.9 PK	68.2	-5.3	1.42 V	351	57.6	5.3
7	11550.00	59.3 PK	74.0	-14.7	2.15 V	345	41.4	17.9
8	11550.00	46.3 AV	54.0	-7.7	2.15 V	345	28.4	17.9

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.

Test Mode B

802.11a

CHANNEL	TX Channel 36	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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)	CORRECTION FACTOR (dB/m)
1	5150.00	56.9 PK	74.0	-17.1	1.58 H	12	52.5	4.4
2	5150.00	43.3 AV	54.0	-10.7	1.58 H	12	38.9	4.4
3	*5180.00	107.8 PK			1.55 H	358	68.3	39.5
4	*5180.00	97.1 AV			1.55 H	358	57.6	39.5
5	#6906.00	66.2 PK	68.2	-2.0	1.35 H	312	56.5	9.7
6	#10360.00	57.7 PK	68.2	-10.5	2.56 H	235	41.7	16.0
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	5150.00	55.9 PK	74.0	-18.1	1.10 V	319	51.5	4.4
2	5150.00	43.8 AV	54.0	-10.2	1.10 V	319	39.4	4.4
3	*5180.00	104.3 PK			1.02 V	325	64.8	39.5
4	*5180.00	94.1 AV			1.02 V	325	54.6	39.5
5	#6906.00	60.8 PK	68.2	-7.4	1.13 V	345	51.1	9.7
6	#10360.00	58.7 PK	68.2	-9.5	1.96 V	237	42.7	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 40	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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)	CORRECTION FACTOR (dB/m)
1	*5200.00	107.5 PK			1.59 H	342	68.0	39.5
2	*5200.00	97.1 AV			1.59 H	342	57.6	39.5
3	#6933.00	63.7 PK	68.2	-4.5	1.38 H	297	53.9	9.8
4	#10400.00	58.3 PK	68.2	-9.9	2.36 H	225	42.1	16.2
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	*5200.00	104.8 PK			1.18 V	332	65.3	39.5
2	*5200.00	94.5 AV			1.18 V	332	55.0	39.5
3	#6933.00	60.7 PK	68.2	-7.5	1.04 V	341	50.9	9.8
4	#10400.00	58.2 PK	68.2	-10.0	2.02 V	186	42.0	16.2

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. 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) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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)	CORRECTION FACTOR (dB/m)
1	*5240.00	107.6 PK			1.51 H	324	68.3	39.3
2	*5240.00	97.0 AV			1.51 H	324	57.7	39.3
3	5350.00	57.9 PK	74.0	-16.1	1.46 H	310	53.6	4.3
4	5350.00	43.3 AV	54.0	-10.7	1.46 H	310	39.0	4.3
5	#6986.00	63.7 PK	68.2	-4.5	1.43 H	312	53.2	10.5
6	#10480.00	58.5 PK	68.2	-9.7	1.93 H	182	41.5	17.0
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	*5240.00	105.8 PK			1.03 V	315	66.5	39.3
2	*5240.00	95.4 AV			1.03 V	315	56.1	39.3
3	5350.00	53.4 PK	74.0	-20.6	1.10 V	352	49.1	4.3
4	5350.00	43.3 AV	54.0	-10.7	1.10 V	352	39.0	4.3
5	#6986.00	61.6 PK	68.2	-6.6	1.00 V	346	51.1	10.5
6	#10480.00	58.6 PK	68.2	-9.6	2.31 V	202	41.6	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 149	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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)	CORRECTION FACTOR (dB/m)
1	#5604.80	61.8 PK	68.2	-6.4	1.22 H	313	57.2	4.6
2	*5745.00	122.5 PK			1.22 H	313	82.4	40.1
3	*5745.00	110.9 AV			1.22 H	313	70.8	40.1
4	#5929.60	62.4 PK	68.2	-5.8	1.22 H	313	57.1	5.3
5	11490.00	60.3 PK	74.0	-13.7	2.83 H	216	42.3	18.0
6	11490.00	47.4 AV	54.0	-6.6	2.83 H	216	29.4	18.0
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	#5627.20	59.8 PK	68.2	-8.4	1.39 V	326	55.3	4.5
2	*5745.00	118.4 PK			1.39 V	326	78.3	40.1
3	*5745.00	107.8 AV			1.39 V	326	67.7	40.1
4	#5932.80	59.3 PK	68.2	-8.9	1.39 V	326	54.0	5.3
5	11490.00	61.3 PK	74.0	-12.7	2.56 V	318	43.3	18.0
6	11490.00	46.5 AV	54.0	-7.5	2.56 V	318	28.5	18.0

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 157	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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)	CORRECTION FACTOR (dB/m)
1	#5619.20	61.9 PK	68.2	-6.3	1.38 H	329	57.3	4.6
2	*5785.00	121.3 PK			1.38 H	329	81.0	40.3
3	*5785.00	111.0 AV			1.38 H	329	70.7	40.3
4	#5927.20	63.0 PK	68.2	-5.2	1.38 H	329	57.7	5.3
5	11570.00	61.3 PK	74.0	-12.7	2.14 H	153	43.6	17.7
6	11570.00	46.5 AV	54.0	-7.5	2.14 H	153	28.8	17.7
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	#5639.20	60.9 PK	68.2	-7.3	1.52 V	336	56.4	4.5
2	*5785.00	117.8 PK			1.52 V	336	77.5	40.3
3	*5785.00	107.8 AV			1.52 V	336	67.5	40.3
4	#5948.00	62.0 PK	68.2	-6.2	1.52 V	336	56.7	5.3
5	11570.00	60.3 PK	74.0	-13.7	1.86 V	228	42.6	17.7
6	11570.00	46.4 AV	54.0	-7.6	1.86 V	228	28.7	17.7

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 165	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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)	CORRECTION FACTOR (dB/m)
1	#5622.40	61.7 PK	68.2	-6.5	1.46 H	329	57.2	4.5
2	*5825.00	121.8 PK			1.46 H	329	81.4	40.4
3	*5825.00	111.2 AV			1.46 H	329	70.8	40.4
4	#5937.60	63.2 PK	68.2	-5.0	1.46 H	329	57.9	5.3
5	11650.00	60.4 PK	74.0	-13.6	2.32 H	219	42.9	17.5
6	11650.00	46.2 AV	54.0	-7.8	2.32 H	219	28.7	17.5
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	#5644.00	61.4 PK	68.2	-6.8	1.56 V	321	56.9	4.5
2	*5825.00	118.5 PK			1.56 V	321	78.1	40.4
3	*5825.00	108.2 AV			1.56 V	321	67.8	40.4
4	#5959.20	62.6 PK	68.2	-5.6	1.56 V	321	57.3	5.3
5	11650.00	60.4 PK	74.0	-13.6	2.56 V	205	42.9	17.5
6	11650.00	46.2 AV	54.0	-7.8	2.56 V	205	28.7	17.5

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.

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CHANNEL	TX Channel 36	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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)	CORRECTION FACTOR (dB/m)
1	5150.00	57.3 PK	74.0	-16.7	1.43 H	9	52.9	4.4
2	5150.00	43.2 AV	54.0	-10.8	1.43 H	9	38.8	4.4
3	*5180.00	107.2 PK			1.55 H	346	67.7	39.5
4	*5180.00	96.8 AV			1.55 H	346	57.3	39.5
5	#6906.00	65.9 PK	68.2	-2.3	1.66 H	318	56.2	9.7
6	#10360.00	58.3 PK	68.2	-9.9	1.88 H	169	42.3	16.0
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	5150.00	58.3 PK	74.0	-15.7	1.36 V	341	53.9	4.4
2	5150.00	43.1 AV	54.0	-10.9	1.36 V	341	38.7	4.4
3	*5180.00	105.8 PK			1.05 V	336	66.3	39.5
4	*5180.00	95.1 AV			1.05 V	336	55.6	39.5
5	#6906.00	62.3 PK	68.2	-5.9	1.01 V	332	52.6	9.7
6	#10360.00	58.1 PK	68.2	-10.1	2.52 V	183	42.1	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 40	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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)	CORRECTION FACTOR (dB/m)
1	*5200.00	106.9 PK			1.58 H	349	67.4	39.5
2	*5200.00	96.2 AV			1.58 H	349	56.7	39.5
3	#6933.00	64.2 PK	68.2	-4.0	1.92 H	315	54.4	9.8
4	#10400.00	58.7 PK	68.2	-9.5	2.96 H	215	42.5	16.2
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	*5200.00	106.1 PK			1.09 V	324	66.6	39.5
2	*5200.00	95.7 AV			1.09 V	324	56.2	39.5
3	#6933.00	63.1 PK	68.2	-5.1	1.04 V	325	53.3	9.8
4	#10400.00	58.4 PK	68.2	-9.8	2.35 V	213	42.2	16.2

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. 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) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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)	CORRECTION FACTOR (dB/m)
1	*5240.00	107.7 PK			1.62 H	345	68.4	39.3
2	*5240.00	97.3 AV			1.62 H	345	58.0	39.3
3	5350.00	58.2 PK	74.0	-15.8	1.49 H	302	53.9	4.3
4	5350.00	43.3 AV	54.0	-10.7	1.49 H	302	39.0	4.3
5	#6986.00	63.8 PK	68.2	-4.4	1.47 H	231	53.3	10.5
6	#10480.00	58.8 PK	68.2	-9.4	2.08 H	210	41.8	17.0
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	*5240.00	105.3 PK			1.35 V	314	66.0	39.3
2	*5240.00	94.9 AV			1.35 V	314	55.6	39.3
3	5350.00	57.2 PK	74.0	-16.8	1.42 V	311	52.9	4.3
4	5350.00	44.1 AV	54.0	-9.9	1.42 V	311	39.8	4.3
5	#6986.00	61.2 PK	68.2	-7.0	1.32 V	305	50.7	10.5
6	#10480.00	58.1 PK	68.2	-10.1	2.83 V	251	41.1	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 149	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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)	CORRECTION FACTOR (dB/m)
1	#5614.40	63.8 PK	68.2	-4.4	1.63 H	328	59.2	4.6
2	*5745.00	122.6 PK			1.63 H	328	82.5	40.1
3	*5745.00	111.2 AV			1.63 H	328	71.1	40.1
4	#5928.00	63.3 PK	68.2	-4.9	1.63 H	328	58.0	5.3
5	11490.00	60.6 PK	74.0	-13.4	2.93 H	264	42.6	18.0
6	11490.00	46.8 AV	54.0	-7.2	2.93 H	264	28.8	18.0
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	#5635.20	61.4 PK	68.2	-6.8	1.66 V	335	56.9	4.5
2	*5745.00	117.5 PK			1.66 V	335	77.4	40.1
3	*5745.00	107.1 AV			1.66 V	335	67.0	40.1
4	#5939.20	62.2 PK	68.2	-6.0	1.66 V	335	56.9	5.3
5	11490.00	60.5 PK	74.0	-13.5	2.62 V	138	42.5	18.0
6	11490.00	46.1 AV	54.0	-7.9	2.62 V	138	28.1	18.0

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 157	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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)	CORRECTION FACTOR (dB/m)
1	#5620.94	64.0 PK	68.2	-4.2	1.64 H	353	59.4	4.6
2	*5785.00	122.4 PK			1.64 H	353	82.1	40.3
3	*5785.00	111.8 AV			1.64 H	353	71.5	40.3
4	#5956.80	63.0 PK	68.2	-5.2	1.64 H	353	57.7	5.3
5	11570.00	60.5 PK	74.0	-13.5	1.96 H	233	42.8	17.7
6	11570.00	46.3 AV	54.0	-7.7	1.96 H	233	28.6	17.7
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	#5627.20	60.3 PK	68.2	-7.9	1.83 V	311	55.8	4.5
2	*5785.00	118.2 PK			1.83 V	311	77.9	40.3
3	*5785.00	107.8 AV			1.83 V	311	67.5	40.3
4	#5938.40	61.7 PK	68.2	-6.5	1.83 V	311	56.4	5.3
5	11570.00	60.2 PK	74.0	-13.8	2.55 V	263	42.5	17.7
6	11570.00	46.1 AV	54.0	-7.9	2.55 V	263	28.4	17.7

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 165	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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)	CORRECTION FACTOR (dB/m)
1	#5648.80	61.2 PK	68.2	-7.0	1.46 H	322	56.7	4.5
2	*5825.00	121.6 PK			1.46 H	322	81.2	40.4
3	*5825.00	101.2 AV			1.46 H	322	60.8	40.4
4	#5944.00	61.8 PK	68.2	-6.4	1.46 H	322	56.5	5.3
5	11650.00	60.3 PK	74.0	-13.7	2.69 H	258	42.8	17.5
6	11650.00	46.2 AV	54.0	-7.8	2.69 H	258	28.7	17.5
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	#5635.20	60.8 PK	68.2	-7.4	1.67 V	234	56.3	4.5
2	*5825.00	118.7 PK			1.67 V	234	78.3	40.4
3	*5825.00	108.1 AV			1.67 V	234	67.7	40.4
4	#5931.20	62.7 PK	68.2	-5.5	1.67 V	234	57.4	5.3
5	11650.00	60.3 PK	74.0	-13.7	2.35 V	181	42.8	17.5
6	11650.00	46.2 AV	54.0	-7.8	2.35 V	181	28.7	17.5

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.

802.11ac (VHT40)

CHANNEL	TX Channel 38	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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)	CORRECTION FACTOR (dB/m)
1	5150.00	56.9 PK	74.0	-17.1	1.69 H	18	52.5	4.4
2	5150.00	43.5 AV	54.0	-10.5	1.69 H	18	39.1	4.4
3	*5190.00	104.2 PK			1.62 H	355	64.7	39.5
4	*5190.00	93.9 AV			1.62 H	355	54.4	39.5
5	#6920.00	65.2 PK	68.2	-3.0	1.44 H	317	55.5	9.7
6	#10380.00	58.2 PK	68.2	-10.0	2.56 H	232	42.0	16.2
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	5150.00	57.1 PK	74.0	-16.9	1.42 V	301	52.7	4.4
2	5150.00	43.8 AV	54.0	-10.2	1.42 V	301	39.4	4.4
3	*5190.00	101.8 PK			1.05 V	332	62.3	39.5
4	*5190.00	91.7 AV			1.05 V	332	52.2	39.5
5	#6920.00	62.2 PK	68.2	-6.0	1.14 V	318	52.5	9.7
6	#10380.00	58.4 PK	68.2	-9.8	2.24 V	219	42.2	16.2

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. 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) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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)	CORRECTION FACTOR (dB/m)
1	*5230.00	103.9 PK			1.83 H	326	64.6	39.3
2	*5230.00	93.8 AV			1.83 H	326	54.5	39.3
3	5350.00	56.7 PK	74.0	-17.3	1.55 H	329	52.4	4.3
4	5350.00	44.1 AV	54.0	-9.9	1.55 H	329	39.8	4.3
5	#6973.00	63.8 PK	68.2	-4.4	1.42 H	315	53.5	10.3
6	#10460.00	58.4 PK	68.2	-9.8	1.83 H	199	41.6	16.8
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	*5230.00	102.8 PK			1.07 V	324	63.5	39.3
2	*5230.00	92.7 AV			1.07 V	324	53.4	39.3
3	5350.00	56.9 PK	74.0	-17.1	1.32 V	325	52.6	4.3
4	5350.00	43.8 AV	54.0	-10.2	1.32 V	325	39.5	4.3
5	#6973.00	60.2 PK	68.2	-8.0	1.09 V	312	49.9	10.3
6	#10460.00	58.4 PK	68.2	-9.8	1.47 V	113	41.6	16.8

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 151	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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)	CORRECTION FACTOR (dB/m)
1	#5614.89	63.5 PK	68.2	-4.7	1.64 H	318	58.9	4.6
2	*5755.00	117.2 PK			1.64 H	318	77.1	40.1
3	*5755.00	107.7 AV			1.64 H	318	67.6	40.1
4	#5944.56	62.4 PK	68.2	-5.8	1.64 H	318	57.1	5.3
5	11510.00	60.5 PK	74.0	-13.5	2.31 H	197	42.4	18.1
6	11510.00	46.2 AV	54.0	-7.8	2.31 H	197	28.1	18.1
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	#5618.59	60.6 PK	68.2	-7.6	1.37 V	281	56.0	4.6
2	*5755.00	114.7 PK			1.37 V	281	74.6	40.1
3	*5755.00	105.0 AV			1.37 V	281	64.9	40.1
4	#5956.00	59.0 PK	68.2	-9.2	1.37 V	281	53.7	5.3
5	11510.00	60.3 PK	74.0	-13.7	1.88 V	276	42.2	18.1
6	11510.00	46.1 AV	54.0	-7.9	1.88 V	276	28.0	18.1

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 159	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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)	CORRECTION FACTOR (dB/m)
1	#5632.31	63.3 PK	68.2	-4.9	1.86 H	314	58.8	4.5
2	*5795.00	117.5 PK			1.86 H	314	77.1	40.4
3	*5795.00	107.9 AV			1.86 H	314	67.5	40.4
4	#5926.40	62.3 PK	68.2	-5.9	1.86 H	314	57.0	5.3
5	11590.00	60.3 PK	74.0	-13.7	2.35 H	154	42.7	17.6
6	11590.00	46.8 AV	54.0	-7.2	2.35 H	154	29.2	17.6
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	#5626.40	60.4 PK	68.2	-7.8	1.53 V	308	55.9	4.5
2	*5795.00	114.3 PK			1.53 V	308	73.9	40.4
3	*5795.00	105.2 AV			1.53 V	308	64.8	40.4
4	#5947.20	59.3 PK	68.2	-8.9	1.53 V	308	54.0	5.3
5	11590.00	60.7 PK	74.0	-13.3	2.84 V	161	43.1	17.6
6	11590.00	46.8 AV	54.0	-7.2	2.84 V	161	29.2	17.6

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.

802.11ac (VHT80)

CHANNEL	TX Channel 42	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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)	CORRECTION FACTOR (dB/m)
1	5150.00	56.8 PK	74.0	-17.2	1.48 H	326	52.4	4.4
2	5150.00	44.2 AV	54.0	-9.8	1.48 H	326	39.8	4.4
3	*5210.00	100.2 PK			1.55 H	356	60.8	39.4
4	*5210.00	91.0 AV			1.55 H	356	51.6	39.4
5	5350.00	57.3 PK	74.0	-16.7	1.68 H	324	53.0	4.3
6	5350.00	43.7 AV	54.0	-10.3	1.68 H	324	39.4	4.3
7	#6946.00	63.2 PK	68.2	-5.0	1.17 H	302	53.3	9.9
8	#10420.00	58.4 PK	68.2	-9.8	1.83 H	236	41.9	16.5
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	5150.00	57.1 PK	74.0	-16.9	1.12 V	341	52.7	4.4
2	5150.00	43.4 AV	54.0	-10.6	1.12 V	341	39.0	4.4
3	*5210.00	98.8 PK			1.39 V	324	59.4	39.4
4	*5210.00	89.1 AV			1.39 V	324	49.7	39.4
5	5350.00	57.1 PK	74.0	-16.9	1.32 V	341	52.8	4.3
6	5350.00	43.5 AV	54.0	-10.5	1.32 V	341	39.2	4.3
7	#6946.00	61.1 PK	68.2	-7.1	1.45 V	289	51.2	9.9
8	#10420.00	58.5 PK	68.2	-9.7	2.09 V	258	42.0	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 155	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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)	CORRECTION FACTOR (dB/m)
1	#5649.60	63.5 PK	68.2	-4.7	1.58 H	319	59.0	4.5
2	#5650.00	66.7 PK	68.2	-1.5	1.52 H	323	62.2	4.5
3	*5775.00	113.8 PK			1.58 H	319	73.5	40.3
4	*5775.00	103.6 AV			1.58 H	319	63.3	40.3
5	#5925.00	65.3 PK	68.2	-2.9	1.64 H	347	60.0	5.3
6	#5983.20	63.2 PK	68.2	-5.0	1.58 H	319	57.8	5.4
7	11550.00	60.4 PK	74.0	-13.6	2.81 H	169	42.5	17.9
8	11550.00	46.3 AV	54.0	-7.7	2.81 H	169	28.4	17.9
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	#5649.60	61.6 PK	68.2	-6.6	1.38 V	315	57.1	4.5
2	#5650.00	64.2 PK	68.2	-4.0	1.08 V	311	59.7	4.5
3	*5775.00	111.0 PK			1.38 V	315	70.7	40.3
4	*5775.00	100.8 AV			1.38 V	315	60.5	40.3
5	#5925.00	62.5 PK	68.2	-5.7	1.16 V	323	57.2	5.3
6	#5935.13	60.3 PK	68.2	-7.9	1.38 V	315	55.0	5.3
7	11550.00	60.4 PK	74.0	-13.6	2.35 V	109	42.5	17.9
8	11550.00	46.7 AV	54.0	-7.3	2.35 V	109	28.8	17.9

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.

Test Mode C

802.11a

CHANNEL	TX Channel 36	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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)	CORRECTION FACTOR (dB/m)
1	5150.00	54.8 PK	74.0	-19.2	1.52 H	346	50.4	4.4
2	5150.00	41.5 AV	54.0	-12.5	1.52 H	346	37.1	4.4
3	*5180.00	101.8 PK			1.25 H	252	62.3	39.5
4	*5180.00	91.8 AV			1.25 H	252	52.3	39.5
5	#10360.00	56.9 PK	68.2	-11.3	1.66 H	193	40.9	16.0
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	5150.00	58.8 PK	74.0	-15.2	1.38 V	255	54.4	4.4
2	5150.00	45.9 AV	54.0	-8.1	1.38 V	255	41.5	4.4
3	*5180.00	109.4 PK			1.30 V	333	69.9	39.5
4	*5180.00	99.7 AV			1.30 V	333	60.2	39.5
5	#10360.00	56.8 PK	68.2	-11.4	2.55 V	283	40.8	16.0

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. 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) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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)	CORRECTION FACTOR (dB/m)
1	*5200.00	100.8 PK			1.22 H	205	61.3	39.5
2	*5200.00	90.9 AV			1.22 H	205	51.4	39.5
3	#10400.00	56.2 PK	68.2	-12.0	1.73 H	311	40.0	16.2
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	*5200.00	109.7 PK			1.26 V	328	70.2	39.5
2	*5200.00	99.3 AV			1.26 V	328	59.8	39.5
3	#10400.00	58.8 PK	68.2	-9.4	2.56 V	255	42.6	16.2

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. 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) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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)	CORRECTION FACTOR (dB/m)
1	*5240.00	101.7 PK			1.32 H	205	62.4	39.3
2	*5240.00	91.0 AV			1.32 H	205	51.7	39.3
3	5350.00	56.6 PK	74.0	-17.4	1.28 H	179	52.3	4.3
4	5350.00	43.9 AV	54.0	-10.1	1.28 H	179	39.6	4.3
5	#10480.00	58.4 PK	68.2	-9.8	1.83 H	230	41.4	17.0
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	*5240.00	109.9 PK			1.43 V	355	70.6	39.3
2	*5240.00	100.2 AV			1.43 V	355	60.9	39.3
3	5350.00	56.6 PK	74.0	-17.4	1.69 V	174	52.3	4.3
4	5350.00	44.5 AV	54.0	-9.5	1.69 V	174	40.2	4.3
5	#10480.00	57.8 PK	68.2	-10.4	1.86 V	166	40.8	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 149	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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)	CORRECTION FACTOR (dB/m)
1	#5624.00	55.5 PK	68.2	-12.7	1.55 H	176	51.0	4.5
2	*5745.00	111.0 PK			1.55 H	176	70.9	40.1
3	*5745.00	99.9 AV			1.55 H	176	59.8	40.1
4	#5993.60	57.0 PK	68.2	-11.2	1.55 H	176	51.6	5.4
5	11490.00	61.5 PK	74.0	-12.5	2.51 H	203	43.5	18.0
6	11490.00	50.6 AV	54.0	-3.4	2.51 H	203	32.6	18.0
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	#5614.40	56.3 PK	68.2	-11.9	1.22 V	314	51.7	4.6
2	*5745.00	116.9 PK			1.22 V	314	76.8	40.1
3	*5745.00	106.3 AV			1.22 V	314	66.2	40.1
4	#5998.40	58.4 PK	68.2	-9.8	1.22 V	314	53.0	5.4
5	11490.00	60.6 PK	74.0	-13.4	2.15 V	332	42.6	18.0
6	11490.00	49.8 AV	54.0	-4.2	2.15 V	332	31.8	18.0

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 157	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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)	CORRECTION FACTOR (dB/m)
1	#5621.60	56.1 PK	68.2	-12.1	1.36 H	243	51.6	4.5
2	*5785.00	109.0 PK			1.36 H	243	68.7	40.3
3	*5785.00	98.5 AV			1.36 H	243	58.2	40.3
4	#5957.60	57.4 PK	68.2	-10.8	1.36 H	243	52.1	5.3
5	11570.00	62.9 PK	74.0	-11.1	2.53 H	241	45.2	17.7
6	11570.00	50.2 AV	54.0	-3.8	2.53 H	241	32.5	17.7
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	#5623.20	55.7 PK	68.2	-12.5	1.32 V	325	51.2	4.5
2	*5785.00	120.8 PK			1.32 V	325	80.5	40.3
3	*5785.00	110.6 AV			1.32 V	325	70.3	40.3
4	#5996.00	57.4 PK	68.2	-10.8	1.32 V	325	52.0	5.4
5	11570.00	61.2 PK	74.0	-12.8	2.02 V	355	43.5	17.7
6	11570.00	50.0 AV	54.0	-4.0	2.02 V	355	32.3	17.7

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 165	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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)	CORRECTION FACTOR (dB/m)
1	#5637.60	55.1 PK	68.2	-13.1	1.23 H	185	50.6	4.5
2	*5825.00	109.6 PK			1.23 H	185	69.2	40.4
3	*5825.00	100.3 AV			1.23 H	185	59.9	40.4
4	#5948.00	56.4 PK	68.2	-11.8	1.23 H	185	51.1	5.3
5	11650.00	61.3 PK	74.0	-12.7	2.19 H	256	43.8	17.5
6	11650.00	50.0 AV	54.0	-4.0	2.19 H	256	32.5	17.5
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	#5617.60	56.3 PK	68.2	-11.9	1.35 V	325	51.7	4.6
2	*5825.00	121.2 PK			1.35 V	325	80.8	40.4
3	*5825.00	110.7 AV			1.35 V	325	70.3	40.4
4	#5947.20	57.8 PK	68.2	-10.4	1.35 V	325	52.5	5.3
5	11650.00	60.8 PK	74.0	-13.2	2.43 V	317	43.3	17.5
6	11650.00	49.9 AV	54.0	-4.1	2.43 V	317	32.4	17.5

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.

802.11ac (VHT20)

CHANNEL	TX Channel 36	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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)	CORRECTION FACTOR (dB/m)
1	5150.00	54.9 PK	74.0	-19.1	1.23 H	206	50.5	4.4
2	5150.00	43.9 AV	54.0	-10.1	1.23 H	206	39.5	4.4
3	*5180.00	100.3 PK			1.42 H	211	60.8	39.5
4	*5180.00	90.4 AV			1.42 H	211	50.9	39.5
5	#10360.00	58.0 PK	68.2	-10.2	1.97 H	251	42.0	16.0
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	5150.00	56.7 PK	74.0	-17.3	1.48 V	357	52.3	4.4
2	5150.00	44.8 AV	54.0	-9.2	1.48 V	357	40.4	4.4
3	*5180.00	108.6 PK			1.22 V	315	69.1	39.5
4	*5180.00	98.5 AV			1.22 V	315	59.0	39.5
5	#10360.00	57.5 PK	68.2	-10.7	2.43 V	289	41.5	16.0

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. 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) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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)	CORRECTION FACTOR (dB/m)
1	*5200.00	100.2 PK			1.43 H	225	60.7	39.5
2	*5200.00	89.4 AV			1.43 H	225	49.9	39.5
3	#10400.00	58.0 PK	68.2	-10.2	1.44 H	229	41.8	16.2
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	*5200.00	110.2 PK			1.32 V	315	70.7	39.5
2	*5200.00	99.6 AV			1.32 V	315	60.1	39.5
3	#10400.00	58.1 PK	68.2	-10.1	2.13 V	289	41.9	16.2

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. 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) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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)	CORRECTION FACTOR (dB/m)
1	*5240.00	101.1 PK			1.22 H	264	61.8	39.3
2	*5240.00	90.8 AV			1.22 H	264	51.5	39.3
3	5350.00	55.5 PK	74.0	-18.5	1.38 H	165	51.2	4.3
4	5350.00	44.2 AV	54.0	-9.8	1.38 H	165	39.9	4.3
5	#10480.00	59.0 PK	68.2	-9.2	2.18 H	225	42.0	17.0
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	*5240.00	109.6 PK			1.29 V	315	70.3	39.3
2	*5240.00	99.3 AV			1.29 V	315	60.0	39.3
3	5350.00	56.9 PK	74.0	-17.1	1.42 V	295	52.6	4.3
4	5350.00	44.8 AV	54.0	-9.2	1.42 V	295	40.5	4.3
5	#10480.00	58.1 PK	68.2	-10.1	1.96 V	254	41.1	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 149	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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)	CORRECTION FACTOR (dB/m)
1	#5608.00	55.1 PK	68.2	-13.1	1.33 H	209	50.5	4.6
2	*5745.00	111.3 PK			1.33 H	209	71.2	40.1
3	*5745.00	100.9 AV			1.33 H	209	60.8	40.1
4	#5926.40	56.6 PK	68.2	-11.6	1.33 H	209	51.3	5.3
5	11490.00	63.5 PK	74.0	-10.5	2.19 H	236	45.5	18.0
6	11490.00	51.0 AV	54.0	-3.0	2.19 H	236	33.0	18.0
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	#5606.40	55.7 PK	68.2	-12.5	1.38 V	342	51.1	4.6
2	*5745.00	121.0 PK			1.38 V	342	80.9	40.1
3	*5745.00	111.0 AV			1.38 V	342	70.9	40.1
4	#5940.80	56.8 PK	68.2	-11.4	1.38 V	342	51.5	5.3
5	11490.00	61.7 PK	74.0	-12.3	2.11 V	296	43.7	18.0
6	11490.00	49.9 AV	54.0	-4.1	2.11 V	296	31.9	18.0

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 157	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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)	CORRECTION FACTOR (dB/m)
1	#5617.60	54.9 PK	68.2	-13.3	1.25 H	222	50.3	4.6
2	*5785.00	111.1 PK			1.25 H	222	70.8	40.3
3	*5785.00	100.4 AV			1.25 H	222	60.1	40.3
4	#5944.80	56.7 PK	68.2	-11.5	1.25 H	222	51.4	5.3
5	11570.00	62.3 PK	74.0	-11.7	2.13 H	205	44.6	17.7
6	11570.00	50.2 AV	54.0	-3.8	2.13 H	205	32.5	17.7
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	#5638.12	55.3 PK	68.2	-12.9	1.32 V	323	50.8	4.5
2	*5785.00	121.0 PK			1.32 V	323	80.7	40.3
3	*5785.00	111.2 AV			1.32 V	323	70.9	40.3
4	#5950.20	57.0 PK	68.2	-11.2	1.32 V	323	51.7	5.3
5	11570.00	63.5 PK	74.0	-10.5	2.18 V	207	45.8	17.7
6	11570.00	49.3 AV	54.0	-4.7	2.18 V	207	31.6	17.7

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 165	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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)	CORRECTION FACTOR (dB/m)
1	#5604.00	56.6 PK	68.2	-11.6	1.32 H	199	52.0	4.6
2	*5825.00	110.3 PK			1.32 H	199	69.9	40.4
3	*5825.00	100.2 AV			1.32 H	199	59.8	40.4
4	#5968.00	58.1 PK	68.2	-10.1	1.32 H	199	52.8	5.3
5	11650.00	62.0 PK	74.0	-12.0	2.19 H	208	44.5	17.5
6	11650.00	49.2 AV	54.0	-4.8	2.19 H	208	31.7	17.5
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	#5604.80	55.5 PK	68.2	-12.7	1.32 V	302	50.9	4.6
2	*5825.00	120.9 PK			1.32 V	302	80.5	40.4
3	*5825.00	111.2 AV			1.32 V	302	70.8	40.4
4	#5941.60	57.8 PK	68.2	-10.4	1.32 V	302	52.5	5.3
5	11650.00	61.4 PK	74.0	-12.6	2.17 V	230	43.9	17.5
6	11650.00	49.0 AV	54.0	-5.0	2.17 V	230	31.5	17.5

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.

802.11ac (VHT40)

CHANNEL	TX Channel 38	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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)	CORRECTION FACTOR (dB/m)
1	5150.00	56.0 PK	74.0	-18.0	1.55 H	113	51.6	4.4
2	5150.00	43.9 AV	54.0	-10.1	1.55 H	113	39.5	4.4
3	*5190.00	96.0 PK			1.32 H	174	56.5	39.5
4	*5190.00	87.1 AV			1.32 H	174	47.6	39.5
5	#10380.00	58.1 PK	68.2	-10.1	1.77 H	162	41.9	16.2
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	5150.00	63.7 PK	74.0	-10.3	1.32 V	144	59.3	4.4
2	5150.00	50.5 AV	54.0	-3.5	1.32 V	144	46.1	4.4
3	*5190.00	106.6 PK			1.35 V	296	67.1	39.5
4	*5190.00	97.4 AV			1.35 V	296	57.9	39.5
5	#10380.00	58.0 PK	68.2	-10.2	2.15 V	234	41.8	16.2

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. 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) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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)	CORRECTION FACTOR (dB/m)
1	*5230.00	97.1 PK			1.34 H	162	57.8	39.3
2	*5230.00	87.6 AV			1.34 H	162	48.3	39.3
3	5350.00	56.7 PK	74.0	-17.3	2.43 H	267	52.4	4.3
4	5350.00	45.9 AV	54.0	-8.1	2.43 H	267	41.6	4.3
5	#10460.00	58.5 PK	68.2	-9.7	1.52 H	335	41.7	16.8
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	*5230.00	107.0 PK			1.31 V	306	67.7	39.3
2	*5230.00	97.4 AV			1.31 V	306	58.1	39.3
3	5350.00	56.8 PK	74.0	-17.2	1.44 V	348	52.5	4.3
4	5350.00	45.0 AV	54.0	-9.0	1.44 V	348	40.7	4.3
5	#10460.00	58.6 PK	68.2	-9.6	2.56 V	189	41.8	16.8

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 151	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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)	CORRECTION FACTOR (dB/m)
1	#5602.40	55.0 PK	68.2	-13.2	1.12 H	349	50.4	4.6
2	#5650.00	55.6 PK	68.2	-12.6	1.29 H	355	51.1	4.5
3	*5755.00	104.9 PK			1.12 H	349	64.8	40.1
4	*5755.00	95.1 AV			1.12 H	349	55.0	40.1
5	#5939.20	57.2 PK	68.2	-11.0	1.12 H	349	51.9	5.3
6	11510.00	57.9 PK	74.0	-16.1	1.72 H	183	39.8	18.1
7	11510.00	46.3 AV	54.0	-7.7	1.72 H	183	28.2	18.1
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	#5649.60	59.8 PK	68.2	-8.4	1.23 V	325	55.3	4.5
2	#5650.00	66.0 PK	68.2	-2.2	1.35 V	259	61.5	4.5
3	*5755.00	117.4 PK			1.23 V	325	77.3	40.1
4	*5755.00	110.0 AV			1.23 V	325	69.9	40.1
5	#5995.20	58.0 PK	68.2	-10.2	1.23 V	325	52.6	5.4
6	11510.00	62.2 PK	74.0	-11.8	2.13 V	325	44.1	18.1
7	11510.00	49.3 AV	54.0	-4.7	2.13 V	325	31.2	18.1

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 159	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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)	CORRECTION FACTOR (dB/m)
1	#5602.40	55.3 PK	68.2	-12.9	1.25 H	346	50.7	4.6
2	*5795.00	102.3 PK			1.25 H	346	61.9	40.4
3	*5795.00	92.5 AV			1.25 H	346	52.1	40.4
4	#5925.00	61.2 PK	68.2	-7.0	1.36 H	324	55.9	5.3
5	#5931.20	57.1 PK	68.2	-11.1	1.25 H	346	51.8	5.3
6	11590.00	59.9 PK	74.0	-14.1	1.86 H	232	42.3	17.6
7	11590.00	47.9 AV	54.0	-6.1	1.86 H	232	30.3	17.6
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	#5642.40	57.8 PK	68.2	-10.4	1.43 V	232	53.3	4.5
2	*5795.00	116.4 PK			1.43 V	232	76.0	40.4
3	*5795.00	106.5 AV			1.43 V	232	66.1	40.4
4	#5925.00	66.4 PK	68.2	-1.8	2.05 V	336	61.1	5.3
5	#5931.80	64.5 PK	68.2	-3.7	1.43 V	232	59.2	5.3
6	11590.00	59.8 PK	74.0	-14.2	2.36 V	339	42.2	17.6
7	11590.00	47.9 AV	54.0	-6.1	2.36 V	339	30.3	17.6

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.

802.11ac (VHT80)

CHANNEL	TX Channel 42	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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)	CORRECTION FACTOR (dB/m)
1	5150.00	55.9 PK	74.0	-18.1	1.29 H	199	51.5	4.4
2	5150.00	43.9 AV	54.0	-10.1	1.29 H	199	39.5	4.4
3	*5210.00	93.7 PK			1.40 H	198	54.3	39.4
4	*5210.00	84.3 AV			1.40 H	198	44.9	39.4
5	5350.00	55.7 PK	74.0	-18.3	1.62 H	104	51.4	4.3
6	5350.00	42.9 AV	54.0	-11.1	1.62 H	104	38.6	4.3
7	#10420.00	57.8 PK	68.2	-10.4	2.58 H	197	41.3	16.5
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	5150.00	63.9 PK	74.0	-10.1	1.32 V	155	59.5	4.4
2	5150.00	50.8 AV	54.0	-3.2	1.32 V	155	46.4	4.4
3	*5210.00	102.5 PK			1.35 V	317	63.1	39.4
4	*5210.00	93.3 AV			1.35 V	317	53.9	39.4
5	5350.00	55.9 PK	74.0	-18.1	1.33 V	139	51.6	4.3
6	5350.00	43.9 AV	54.0	-10.1	1.33 V	139	39.6	4.3
7	#10420.00	58.0 PK	68.2	-10.2	1.76 V	339	41.5	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 155	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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)	CORRECTION FACTOR (dB/m)
1	#5624.00	56.4 PK	68.2	-11.8	1.18 H	212	51.9	4.5
2	#5650.00	56.0 PK	68.2	-12.2	1.83 H	264	51.5	4.5
3	*5775.00	97.1 PK			1.18 H	212	56.8	40.3
4	*5775.00	87.3 AV			1.18 H	212	47.0	40.3
5	#5925.00	56.4 PK	68.2	-11.8	1.36 H	312	51.1	5.3
6	#5928.00	57.8 PK	68.2	-10.4	1.18 H	212	52.5	5.3
7	11550.00	58.7 PK	74.0	-15.3	1.75 H	242	40.8	17.9
8	11550.00	46.5 AV	54.0	-7.5	1.75 H	242	28.6	17.9
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	#5648.80	62.8 PK	68.2	-5.4	1.52 V	213	58.3	4.5
2	#5650.00	66.3 PK	68.2	-1.9	1.43 V	325	61.8	4.5
3	*5775.00	109.3 PK			1.52 V	213	69.0	40.3
4	*5775.00	99.7 AV			1.52 V	213	59.4	40.3
5	#5925.00	65.0 PK	68.2	-3.2	1.69 V	311	59.7	5.3
6	#5931.20	62.5 PK	68.2	-5.7	1.52 V	213	57.2	5.3
7	11550.00	59.7 PK	74.0	-14.3	2.13 V	306	41.8	17.9
8	11550.00	46.4 AV	54.0	-7.6	2.13 V	306	28.5	17.9

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.

Below 1GHz Worst-Case Data:

Test Mode A

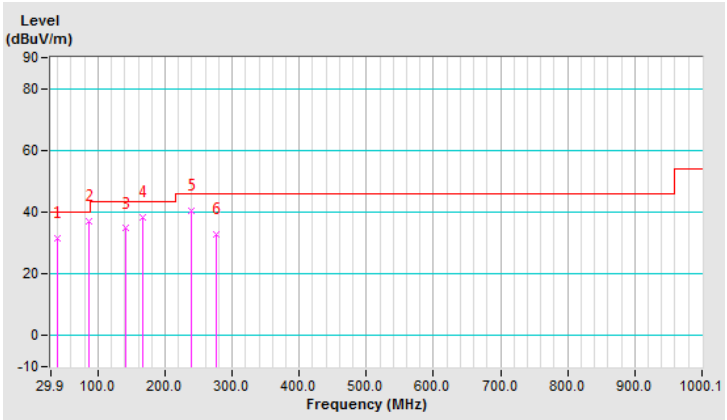
802.11a

CHANNEL	TX Channel 157	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)	CORRECTION FACTOR (dB/m)
1	39.62	31.6 QP	40.0	-8.4	2.00 H	96	42.0	-10.4
2	86.28	37.0 QP	40.0	-3.0	1.51 H	286	51.6	-14.6
3	140.72	34.7 QP	43.5	-8.8	2.00 H	235	44.3	-9.6
4	166.00	38.5 QP	43.5	-5.0	1.51 H	48	47.6	-9.1
5	239.88	40.5 QP	46.0	-5.5	1.00 H	89	50.1	-9.6
6	276.82	32.9 QP	46.0	-13.1	1.00 H	71	40.9	-8.0

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 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 20 dB below the permissible value to be report

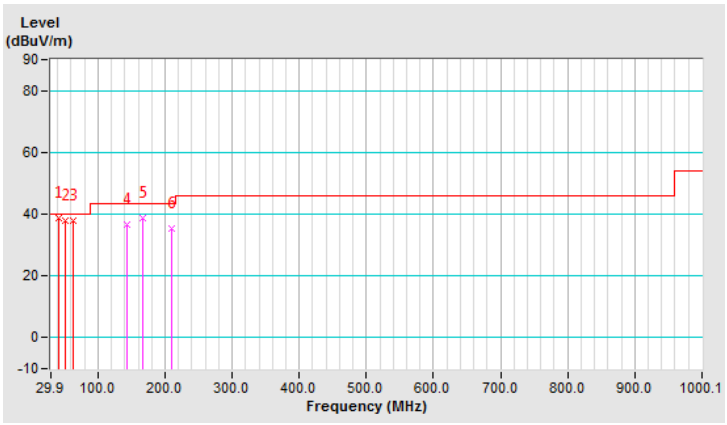


CHANNEL	TX Channel 157	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz		

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	41.04	38.6 QP	40.0	-1.4	1.00 V	249	48.7	-10.1
2	51.82	37.8 QP	40.0	-2.2	1.00 V	291	47.5	-9.7
3	62.48	38.0 QP	40.0	-2.0	1.00 V	306	48.4	-10.4
4	142.67	36.4 QP	43.5	-7.1	1.00 V	224	45.8	-9.4
5	166.00	38.8 QP	43.5	-4.7	1.00 V	236	47.9	-9.1
6	210.72	35.3 QP	43.5	-8.2	1.00 V	213	46.3	-11.0

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 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 20 dB below the permissible value to be report



Test Mode B

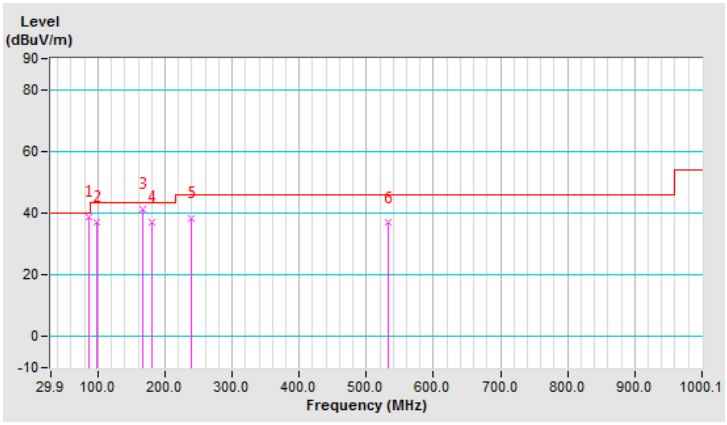
802.11a

CHANNEL	TX Channel 157	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)	CORRECTION FACTOR (dB/m)
1	**86.28**	**38.8 QP**	**40.0**	**-1.2**	**2.00 H**	**167**	**53.4**	**-14.6**
2	97.95	37.1 QP	43.5	-6.4	2.00 H	49	51.1	-14.0
3	166.00	41.1 QP	43.5	-2.4	1.51 H	105	50.2	-9.1
4	179.61	36.9 QP	43.5	-6.6	1.00 H	124	47.1	-10.2
5	239.88	38.4 QP	46.0	-7.6	1.00 H	92	48.0	-9.6
6	533.47	36.8 QP	46.0	-9.2	1.51 H	21	39.9	-3.1

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 20 dB below the permissible value to be report

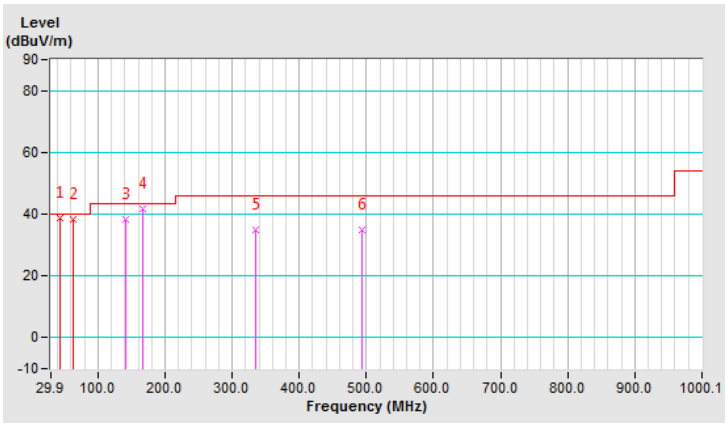


CHANNEL	TX Channel 157	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz		

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	43.30	38.6 QP	40.0	-1.4	1.00 V	1	48.6	-10.0
2	62.53	38.5 QP	40.0	-1.5	1.00 V	324	48.9	-10.4
3	140.72	38.2 QP	43.5	-5.3	1.00 V	266	47.8	-9.6
4	166.00	41.9 QP	43.5	-1.6	1.00 V	108	51.0	-9.1
5	335.15	34.9 QP	46.0	-11.1	1.00 V	79	41.6	-6.7
6	492.64	35.0 QP	46.0	-11.0	1.00 V	186	38.8	-3.8

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. 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 20 dB below the permissible value to be repor



Test Mode C

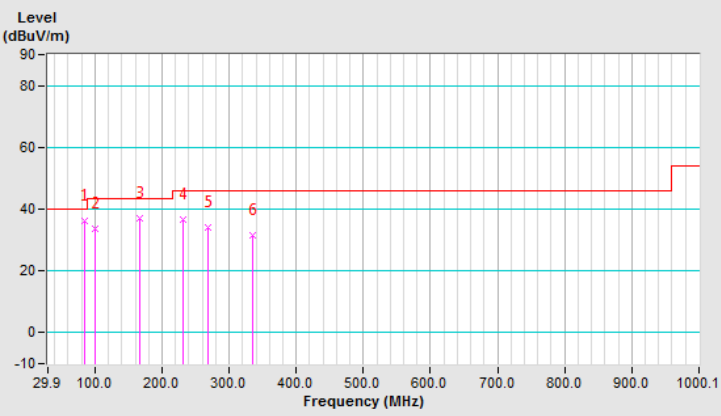
802.11a

CHANNEL	TX Channel 157	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)	CORRECTION FACTOR (dB/m)
1	84.34	36.1 QP	40.0	-3.9	2.00 H	152	50.5	-14.4
2	99.89	33.8 QP	43.5	-9.7	2.00 H	62	47.4	-13.6
3	166.00	36.9 QP	43.5	-6.6	1.51 H	245	46.0	-9.1
4	232.11	36.4 QP	46.0	-9.6	1.01 H	119	46.6	-10.2
5	269.05	34.2 QP	46.0	-11.8	1.01 H	88	42.5	-8.3
6	335.15	31.4 QP	46.0	-14.6	2.00 H	309	38.1	-6.7

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 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 20 dB below the permissible value to be report

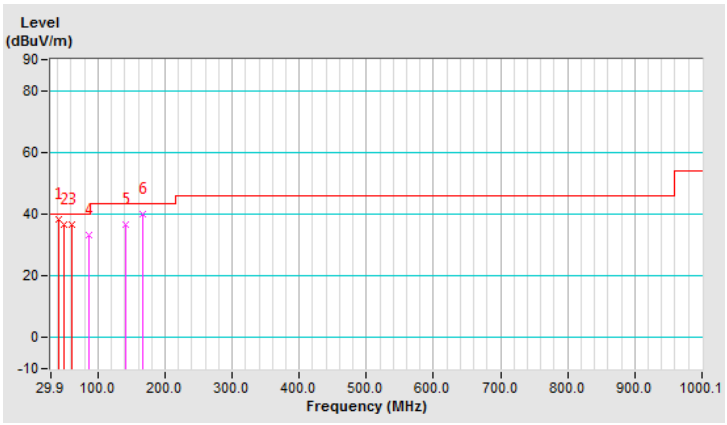


CHANNEL	TX Channel 157	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz		

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	41.42	38.5 QP	40.0	-1.5	1.00 V	229	48.6	-10.1
2	49.47	36.6 QP	40.0	-3.4	1.00 V	274	46.3	-9.7
3	61.36	36.4 QP	40.0	-3.6	1.00 V	296	46.9	-10.5
4	86.28	33.2 QP	40.0	-6.8	1.00 V	67	47.8	-14.6
5	140.72	36.7 QP	43.5	-6.8	1.00 V	104	46.3	-9.6
6	166.00	39.9 QP	43.5	-3.6	1.00 V	285	49.0	-9.1

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 20 dB below the permissible value to be report



4.2 Conducted Emission Measurement

4.2.1 Limits of Conducted Emission Measurement

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

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

4.2.2 Test Instruments

Tested date: Apr. 13, 2019

Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
Test Receiver ROHDE & SCHWARZ	ESCI	100613	Dec. 10, 2018	Dec. 09, 2019
RF signal cable Woken	5D-FB	Cable-cond1-01	Sep. 05, 2018	Sep. 04, 2019
LISN ROHDE & SCHWARZ (EUT)	ENV216	101826	Feb. 21, 2019	Feb. 20, 2020
LISN ROHDE & SCHWARZ (Peripheral)	ESH3-Z5	100311	Aug. 19, 2018	Aug. 18, 2019
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.
3. The VCCI Site Registration No. is C-12040.

4.2.3 Test Procedures

a. 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.

b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.

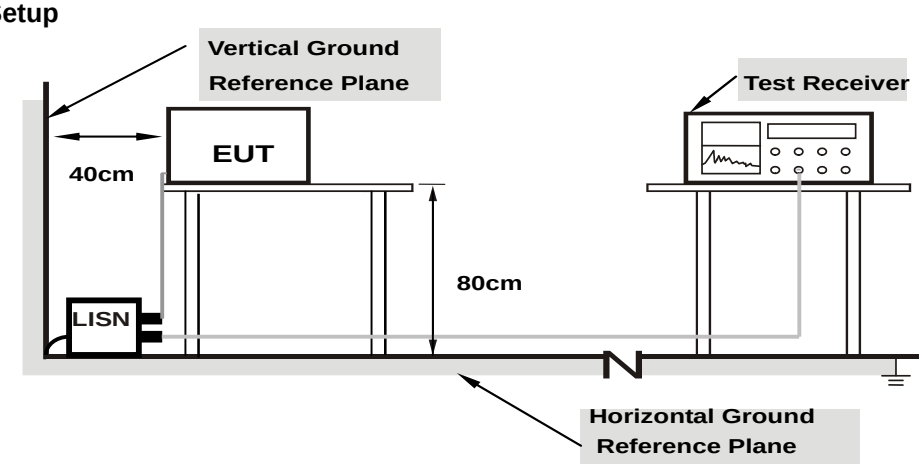
c. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

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

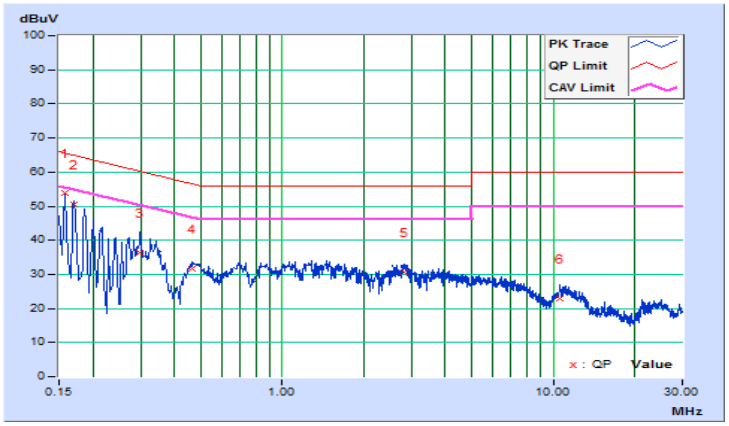
Test Mode A

Phase	Line (L)	Detector Function	Quasi-Peak (QP) / Average (AV)

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15782	9.69	44.21	28.96	53.90	38.65	65.58	55.58	-11.68	-16.93
2	0.16967	9.69	40.92	25.42	50.61	35.11	64.98	54.98	-14.37	-19.87
3	0.29858	9.68	26.85	18.51	36.53	28.19	60.28	50.28	-23.75	-22.09
4	0.46669	9.68	22.11	17.50	31.79	27.18	56.57	46.57	-24.78	-19.39
5	2.83226	9.72	20.81	15.32	30.53	25.04	56.00	46.00	-25.47	-20.96
6	10.57406	9.87	12.88	7.93	22.75	17.80	60.00	50.00	-37.25	-32.20

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.

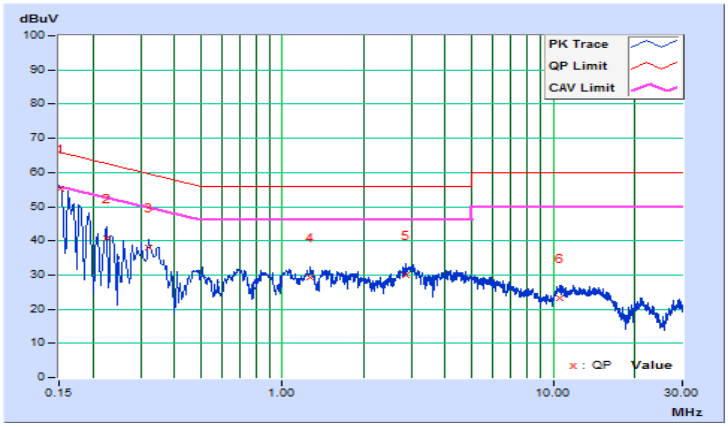


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	**0.15223**	**9.66**	**45.56**	**30.01**	**55.22**	**39.67**	**65.88**	**55.88**	**-10.66**	**-16.21**
2	0.22429	9.66	31.14	15.75	40.80	25.41	62.66	52.66	-21.86	-27.25
3	0.32187	9.65	28.46	20.43	38.11	30.08	59.66	49.66	-21.55	-19.58
4	1.26435	9.65	19.63	15.37	29.28	25.02	56.00	46.00	-26.72	-20.98
5	2.86354	9.69	20.20	15.05	29.89	24.74	56.00	46.00	-26.11	-21.26
6	10.62098	9.86	13.47	8.54	23.33	18.40	60.00	50.00	-36.67	-31.60

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.



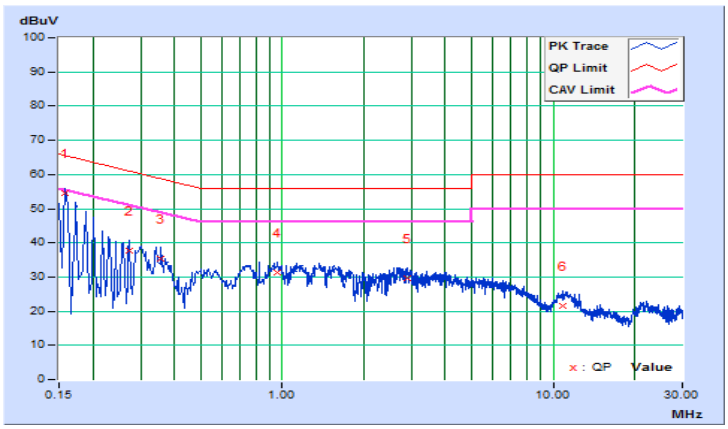
Test Mode B

Phase	Line (L)	Detector Function	Quasi-Peak (QP) / Average (AV)

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15782	9.69	44.79	30.30	54.48	39.99	65.58	55.58	-11.10	-15.59
2	0.27120	9.68	27.87	16.53	37.55	26.21	61.08	51.08	-23.53	-24.87
3	0.35723	9.68	25.68	18.35	35.36	28.03	58.79	48.79	-23.43	-20.76
4	0.96319	9.67	21.64	18.16	31.31	27.83	56.00	46.00	-24.69	-18.17
5	2.90655	9.72	19.93	13.74	29.65	23.46	56.00	46.00	-26.35	-22.54
6	10.85558	9.88	11.81	6.95	21.69	16.83	60.00	50.00	-38.31	-33.17

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.

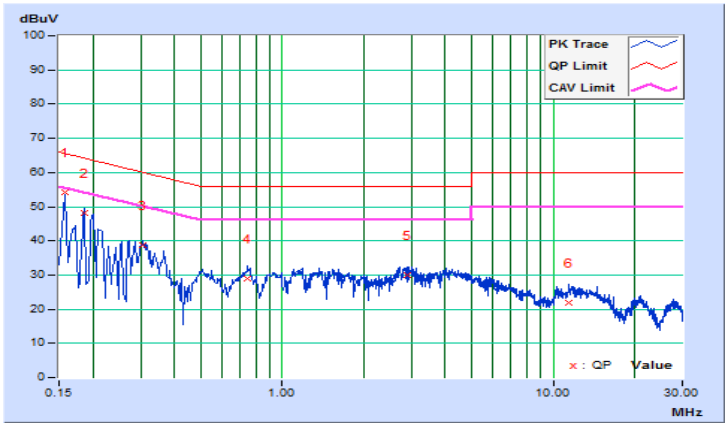


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15782	9.66	44.53	30.05	54.19	39.71	65.58	55.58	-11.39	-15.87
2	0.18519	9.66	38.52	22.84	48.18	32.50	64.25	54.25	-16.07	-21.75
3	0.30640	9.65	29.09	21.83	38.74	31.48	60.07	50.07	-21.33	-18.59
4	0.74399	9.64	19.23	14.94	28.87	24.58	56.00	46.00	-27.13	-21.42
5	2.89873	9.69	20.43	14.76	30.12	24.45	56.00	46.00	-25.88	-21.55
6	11.40298	9.87	12.03	7.24	21.90	17.11	60.00	50.00	-38.10	-32.89

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.



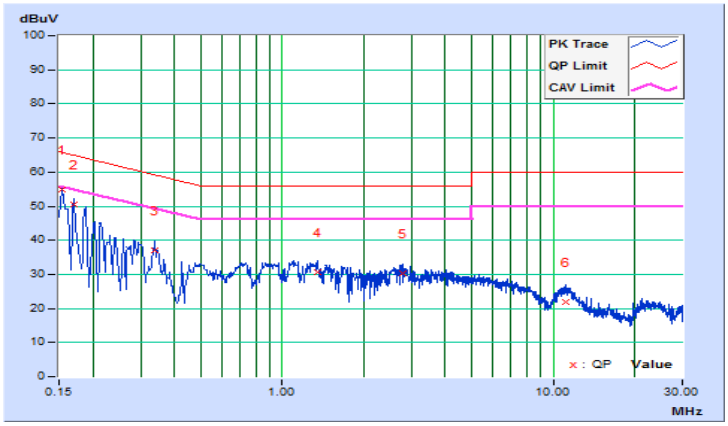
Test Mode C

Phase	Line (L)	Detector Function	Quasi-Peak (QP) / Average (AV)

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15391	9.69	45.07	30.87	54.76	40.56	65.79	55.79	-11.03	-15.23
2	0.16955	9.69	40.68	24.78	50.37	34.47	64.98	54.98	-14.61	-20.51
3	0.33768	9.68	27.48	18.20	37.16	27.88	59.26	49.26	-22.10	-21.38
4	1.35037	9.68	21.11	16.02	30.79	25.70	56.00	46.00	-25.21	-20.30
5	2.78143	9.72	20.71	15.19	30.43	24.91	56.00	46.00	-25.57	-21.09
6	11.08236	9.88	12.04	7.21	21.92	17.09	60.00	50.00	-38.08	-32.91

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.

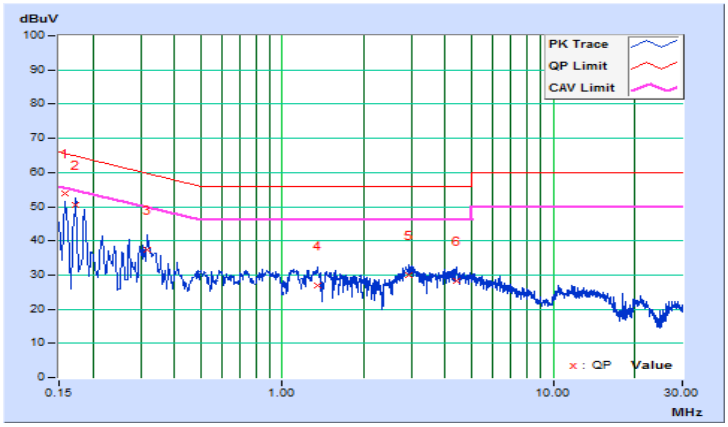


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15802	9.66	44.38	29.78	54.04	39.44	65.57	55.57	-11.53	-16.13
2	0.17346	9.66	40.77	25.44	50.43	35.10	64.79	54.79	-14.36	-19.69
3	0.31813	9.65	27.83	19.28	37.48	28.93	59.76	49.76	-22.28	-20.83
4	1.35667	9.65	17.44	11.64	27.09	21.29	56.00	46.00	-28.91	-24.71
5	2.91828	9.69	20.32	15.34	30.01	25.03	56.00	46.00	-25.99	-20.97
6	4.39626	9.73	18.53	13.19	28.26	22.92	56.00	46.00	-27.74	-23.08

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

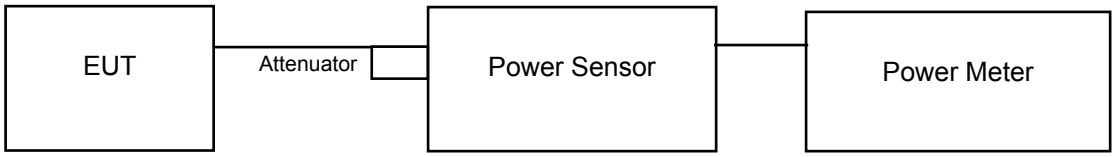
Operation Band	EUT Category		LIMIT
U-NII-1	√	Outdoor Access Point	1 Watt (30 dBm) (Max. e.i.r.p ≦ 125mW(21 dBm) at any elevation angle above 30 degrees as measured from the horizon)
	---	Fixed point-to-point Access Point	1 Watt (30 dBm)
	---	Indoor Access Point	1 Watt (30 dBm)
	√	Client device	250mW (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

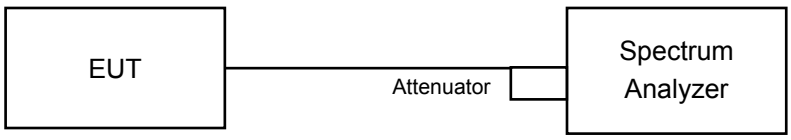
Per KDB 662911 Method of conducted output power measurement on IEEE 802.11 devices,
Array Gain = 0 dB (i.e., no array gain) for $N_{ANT} \leq 4$;
Array Gain = 0 dB (i.e., no array gain) for channel widths ≥ 40 MHz for any N_{ANT};
Array Gain = 5 log(N_{ANT}/N_{SS}) dB or 3 dB, whichever is less for 20-MHz 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 Measurement
802.11a, 802.11ac (VHT20), 802.11ac (VHT40)



802.11ac (VHT80)



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, 802.11ac (VHT20), 802.11ac (VHT40)
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)

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

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:

Test Mode A: CDD Mode

For U-NII-1 Band (Outdoor Access Point)

802.11a

Chan.	Freq. (MHz)	Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Gain (dBi)	EIRP (dBm)	EIRP limit (dBm)	Pass / Fail
		Chain 0	Chain 1							
36	5180	11.87	12.51	33.206	15.21	22.58	5.46	20.67	21.00	Pass
40	5200	11.94	12.67	34.124	15.33	22.58	5.46	20.79	21.00	Pass
48	5240	12.21	12.19	33.192	15.21	22.58	5.46	20.67	21.00	Pass

Note:
Gain = 13.42dBi > 6dBi, so the limit shall be reduced to 30-(13.42-6) = 22.58dBm.
Gain = 5.46dBi (above 30 degrees from the horizon),
EIRP = conducted power +(5.46dBi) + array gain = (0 dB (i.e., no array gain) for $N_{ANT} \leq 4$).

802.11ac (VHT20)

Chan.	Freq. (MHz)	Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Gain (dBi)	EIRP (dBm)	EIRP limit (dBm)	Pass / Fail
		Chain 0	Chain 1							
36	5180	11.91	12.86	**34.844**	15.42	22.58	5.46	20.88	21.00	Pass
40	5200	11.75	12.86	34.282	15.35	22.58	5.46	20.81	21.00	Pass
48	5240	11.94	12.42	33.089	15.20	22.58	5.46	20.66	21.00	Pass

Note:
Gain = 13.42dBi > 6dBi, so the limit shall be reduced to 30-(13.42-6) = 22.58dBm.
Gain = 5.46dBi (above 30 degrees from the horizon),
EIRP = conducted power +(5.46dBi) + array gain = (0 dB (i.e., no array gain) for $N_{ANT} \leq 4$).

802.11ac (VHT40)

Chan.	Freq. (MHz)	Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Gain (dBi)	EIRP (dBm)	EIRP limit (dBm)	Pass / Fail
		Chain 0	Chain 1							
38	5190	11.71	12.36	32.044	15.06	22.58	5.46	20.52	21.00	Pass
46	5230	12.04	12.22	32.668	15.14	22.58	5.46	20.60	21.00	Pass

Note:
Gain = 13.42dBi > 6dBi, so the limit shall be reduced to 30-(13.42-6) = 22.58dBm.
Gain = 5.46dBi (above 30 degrees from the horizon),
EIRP = conducted power +(5.46dBi) + array gain = (0 dB (i.e., no array gain) for $N_{ANT} \leq 4$).

802.11ac (VHT80)

Chan.	Freq. (MHz)	Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Gain (dBi)	EIRP (dBm)	EIRP limit (dBm)	Pass / Fail
		Chain 0	Chain 1							
42	5210	11.88	12.31	32.439	15.11	22.58	5.46	20.57	21.00	Pass

Note:
Gain = 13.42dBi > 6dBi, so the limit shall be reduced to 30-(13.42-6) = 22.58dBm.
Gain = 5.46dBi (above 30 degrees from the horizon),
EIRP = conducted power +(5.46dBi) + array gain = (0 dB (i.e., no array gain) for $N_{ANT} \leq 4$).

For U-NII-1 Band (Client device)

802.11a

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
36	5180	7.92	8.36	13.049	11.16	16.58	Pass
40	5200	8.01	8.46	13.339	11.25	16.58	Pass
48	5240	8.02	8.21	12.961	11.13	16.58	Pass

Note: Gain = 13.42dBi > 6dBi, so the limit shall be reduced to 24-(13.42-6) = 16.58dBm.

802.11ac (VHT20)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
36	5180	8.15	9.08	14.622	11.65	16.58	Pass
40	5200	8.35	9.01	14.801	11.70	16.58	Pass
48	5240	8.37	8.97	14.760	11.69	16.58	Pass

Note: Gain = 13.42dBi > 6dBi, so the limit shall be reduced to 24-(13.42-6) = 16.58dBm.

802.11ac (VHT40)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
38	5190	11.71	12.36	32.044	15.06	16.58	Pass
46	5230	12.04	12.22	**32.668**	15.14	16.58	Pass

Note: Gain = 13.42dBi > 6dBi, so the limit shall be reduced to 24-(13.42-6) = 16.58dBm.

802.11ac (VHT80)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
42	5210	11.88	12.31	32.439	15.11	16.58	Pass

Note: Gain = 13.42dBi > 6dBi, so the limit shall be reduced to 24-(13.42-6) = 16.58dBm.

For U-NII-3 Band

802.11a

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
149	5745	18.13	19.22	148.573	21.72	22.58	Pass
157	5785	18.76	19.50	**164.287**	22.16	22.58	Pass
165	5825	18.77	19.23	159.089	22.02	22.58	Pass

Note: Gain = 13.42dBi > 6dBi, so the limit shall be reduced to 30-(13.42-6) = 22.58dBm.

802.11ac (VHT20)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
149	5745	18.18	19.41	153.063	21.85	22.58	Pass
157	5785	18.39	19.44	156.926	21.96	22.58	Pass
165	5825	18.72	19.45	162.578	22.11	22.58	Pass

Note: Gain = 13.42dBi > 6dBi, so the limit shall be reduced to 30-(13.42-6) = 22.58dBm.

802.11ac (VHT40)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
151	5755	18.29	19.54	157.403	21.97	22.58	Pass
159	5795	18.61	19.39	159.507	22.03	22.58	Pass

Note: Gain = 13.42dBi > 6dBi, so the limit shall be reduced to 30-(13.42-6) = 22.58dBm.

802.11ac (VHT80)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
155	5775	15.12	16.46	76.768	18.85	22.58	Pass

Note: Gain = 13.42dBi > 6dBi, so the limit shall be reduced to 30-(13.42-6) = 22.58dBm.

Beamforming Mode

For U-NII-1 Band (Outdoor Access Point)

802.11ac (VHT20)

Chan.	Freq. (MHz)	Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Gain (dBi)	EIRP (dBm)	EIRP limit (dBm)	Pass / Fail
		Chain 0	Chain 1							
36	5180	8.90	9.85	**17.423**	12.41	19.57	8.47	20.88	21.00	Pass
40	5200	8.74	9.85	17.143	12.34	19.57	8.47	20.81	21.00	Pass
48	5240	8.93	9.41	16.546	12.19	19.57	8.47	20.66	21.00	Pass

Note:
1. Directional gain = 13.42dBi + 10log(2) = 16.43dBi > 6dBi, so the power limit shall be reduced to 30-(16.43-6) = 19.57dBm.
2. Gain = 5.46dBi (above 30 degrees from the horizon).
3. Beamforming gain = 3.01dBi
4. EIRP = conducted power + (5.46dBi) + beamforming gain (3.01dBi).

802.11ac (VHT40)

Chan.	Freq. (MHz)	Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Gain (dBi)	EIRP (dBm)	EIRP limit (dBm)	Pass / Fail
		Chain 0	Chain 1							
38	5190	8.70	9.35	16.023	12.05	19.57	8.47	20.52	21.00	Pass
46	5230	9.03	9.21	16.335	12.13	19.57	8.47	20.60	21.00	Pass

Note:
1. Directional gain = 13.42dBi + 10log(2) = 16.43dBi > 6dBi, so the power limit shall be reduced to 30-(16.43-6) = 19.57dBm.
2. Gain = 5.46dBi (above 30 degrees from the horizon).
3. Beamforming gain = 3.01dBi
4. EIRP = conducted power + (5.46dBi) + beamforming gain (3.01dBi).

802.11ac (VHT80)

Chan.	Freq. (MHz)	Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Gain (dBi)	EIRP (dBm)	EIRP limit (dBm)	Pass / Fail
		Chain 0	Chain 1							
42	5210	8.87	9.30	16.220	12.10	19.57	8.47	20.57	21.00	Pass

Note:
1. Directional gain = 13.42dBi + 10log(2) = 16.43dBi > 6dBi, so the power limit shall be reduced to 30-(16.43-6) = 19.57dBm.
2. Gain = 5.46dBi (above 30 degrees from the horizon).
3. Beamforming gain = 3.01dBi
4. EIRP = conducted power + (5.46dBi) + beamforming gain (3.01dBi).

For U-NII-1 Band (Client device)

802.11ac (VHT20)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
36	5180	5.14	6.07	7.312	8.64	13.57	Pass
40	5200	5.34	6.00	7.401	8.69	13.57	Pass
48	5240	5.36	5.96	7.381	8.68	13.57	Pass

Note: Directional gain = 13.42dBi +10 log(2)=16.43 > 6dBi, so the limit shall be reduced to 24-(16.43-6) = 13.57dBm.

802.11ac (VHT40)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
38	5190	8.70	9.35	16.023	12.05	13.57	Pass
46	5230	9.03	9.21	**16.335**	12.13	13.57	Pass

Note: Directional gain = 13.42dBi +10 log(2)=16.43 > 6dBi, so the limit shall be reduced to 24-(16.43-6) = 13.57dBm.

802.11ac (VHT80)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
42	5210	8.87	9.30	16.220	12.10	13.57	Pass

Note: Directional gain = 13.42dBi +10 log(2)=16.43 > 6dBi, so the limit shall be reduced to 24-(16.43-6) = 13.57dBm.

For U-NII-3 Band

802.11ac (VHT20)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
149	5745	15.17	16.40	76.537	18.84	19.57	Pass
157	5785	15.38	16.43	78.468	18.95	19.57	Pass
165	5825	15.71	16.44	**81.294**	19.10	19.57	Pass

Note: Directional gain = 13.42dBi +10 log(2)=16.43 > 6dBi, so the limit shall be reduced to 30-(16.43-6) = 19.57dBm.

802.11ac (VHT40)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
151	5755	15.28	16.53	78.707	18.96	19.57	Pass
159	5795	15.60	16.38	79.759	19.02	19.57	Pass

Note: Directional gain = 13.42dBi +10 log(2)=16.43 > 6dBi, so the limit shall be reduced to 30-(16.43-6) = 19.57dBm.

802.11ac (VHT80)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
155	5775	12.11	13.45	38.386	15.84	19.57	Pass

Note: Directional gain = 13.42dBi +10 log(2)=16.43 > 6dBi, so the limit shall be reduced to 30-(16.43-6) = 19.57dBm.

Test Mode B:

CDD Mode

For U-NII-1 Band (Outdoor Access Point)

802.11a

Chan.	Freq. (MHz)	Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Gain (dBi)	EIRP (dBm)	EIRP limit (dBm)	Pass / Fail
		Chain 0	Chain 1							
36	5180	3.40	2.78	4.085	6.11	20.60	14.42	20.53	21.00	Pass
40	5200	3.38	2.19	3.834	5.84	20.60	14.42	20.26	21.00	Pass
48	5240	3.57	2.20	3.935	5.95	20.60	14.42	20.37	21.00	Pass

Note:
Gain = 15.40dBi > 6dBi, so the limit shall be reduced to 30-(15.40-6) = 20.60dBm.
Gain = 14.42dBi (above 30 degrees from the horizon),
EIRP = conducted power +(14.42dBi) + array gain = (0 dB (i.e., no array gain) for $N_{ANT} \leq 4$).

802.11ac (VHT20)

Chan.	Freq. (MHz)	Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Gain (dBi)	EIRP (dBm)	EIRP limit (dBm)	Pass / Fail
		Chain 0	Chain 1							
36	5180	3.43	2.86	**4.135**	6.16	20.60	14.42	20.58	21.00	Pass
40	5200	3.45	2.75	4.097	6.12	20.60	14.42	20.54	21.00	Pass
48	5240	3.34	2.56	3.961	5.98	20.60	14.42	20.40	21.00	Pass

Note:
Gain = 15.40dBi > 6dBi, so the limit shall be reduced to 30-(15.40-6) = 20.60dBm.
Gain = 14.42dBi (above 30 degrees from the horizon),
EIRP = conducted power +(14.42dBi) + array gain = (0 dB (i.e., no array gain) for $N_{ANT} \leq 4$).

802.11ac (VHT40)

Chan.	Freq. (MHz)	Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Gain (dBi)	EIRP (dBm)	EIRP limit (dBm)	Pass / Fail
		Chain 0	Chain 1							
38	5190	3.22	2.46	3.861	5.87	20.60	14.42	20.29	21.00	Pass
46	5230	3.41	2.75	4.077	6.10	20.60	14.42	20.52	21.00	Pass

Note:
Gain = 15.40dBi > 6dBi, so the limit shall be reduced to 30-(15.40-6) = 20.60dBm.
Gain = 14.42dBi (above 30 degrees from the horizon),
EIRP = conducted power +(14.42dBi) + array gain = (0 dB (i.e., no array gain) for $N_{ANT} \leq 4$).

802.11ac (VHT80)

Chan.	Freq. (MHz)	Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Gain (dBi)	EIRP (dBm)	EIRP limit (dBm)	Pass / Fail
		Chain 0	Chain 1							
42	5210	3.07	2.78	3.925	5.94	20.60	14.42	20.36	21.00	Pass

Note:
Gain = 15.40dBi > 6dBi, so the limit shall be reduced to 30-(15.40-6) = 20.60dBm.
Gain = 14.42dBi (above 30 degrees from the horizon),
EIRP = conducted power +(14.42dBi) + array gain = (0 dB (i.e., no array gain) for $N_{ANT} \leq 4$).

For U-NII-1 Band (Client device)

802.11a

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
36	5180	3.40	2.78	4.085	6.11	14.60	Pass
40	5200	3.38	2.19	3.834	5.84	14.60	Pass
48	5240	3.57	2.20	3.935	5.95	14.60	Pass

Note: Gain = 15.40dBi > 6dBi, so the limit shall be reduced to 24-(15.40-6) = 14.60dBm.

802.11ac (VHT20)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
36	5180	3.43	2.86	**4.135**	6.16	14.60	Pass
40	5200	3.45	2.75	4.097	6.12	14.60	Pass
48	5240	3.34	2.56	3.961	5.98	14.60	Pass

Note: Gain = 15.40dBi > 6dBi, so the limit shall be reduced to 24-(15.40-6) = 14.60dBm.

802.11ac (VHT40)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
38	5190	3.22	2.46	3.861	5.87	14.60	Pass
46	5230	3.41	2.75	4.077	6.10	14.60	Pass

Note: Gain = 15.40dBi > 6dBi, so the limit shall be reduced to 24-(15.40-6) = 14.60dBm.

802.11ac (VHT80)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
42	5210	3.07	2.78	3.925	5.94	14.60	Pass

Note: Gain = 15.40dBi > 6dBi, so the limit shall be reduced to 24-(15.40-6) = 14.60dBm.

For U-NII-3 Band

802.11a

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
149	5745	16.90	16.64	95.110	19.78	20.60	Pass
157	5785	16.87	16.49	93.207	19.69	20.60	Pass
165	5825	17.21	16.80	100.465	20.02	20.60	Pass

Note: Gain = 15.40dBi > 6dBi, so the limit shall be reduced to 30-(15.40-6) = 20.60dBm.

802.11ac (VHT20)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
149	5745	17.01	16.96	99.893	20.00	20.60	Pass
157	5785	17.03	16.76	97.890	19.91	20.60	Pass
165	5825	17.42	17.11	**106.612**	20.28	20.60	Pass

Note: Gain = 15.40dBi > 6dBi, so the limit shall be reduced to 30-(15.40-6) = 20.60dBm.

802.11ac (VHT40)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
151	5755	16.82	16.74	95.290	19.79	20.60	Pass
159	5795	17.10	16.66	97.631	19.90	20.60	Pass

Note: Gain = 15.40dBi > 6dBi, so the limit shall be reduced to 30-(15.40-6) = 20.60dBm.

802.11ac (VHT80)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
155	5775	16.23	16.26	84.243	19.26	20.60	Pass

Note: Gain = 15.40dBi > 6dBi, so the limit shall be reduced to 30-(15.40-6) = 20.60dBm.

Beamforming Mode

For U-NII-1 Band (Outdoor Access Point)

802.11ac (VHT20)

Chan.	Freq. (MHz)	Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Gain (dBi)	EIRP (dBm)	EIRP limit (dBm)	Pass / Fail
		Chain 0	Chain 1							
36	5180	0.42	-0.15	**2.0676**	3.15	17.59	17.43	20.58	21.00	Pass
40	5200	0.44	-0.26	2.0485	3.11	17.59	17.43	20.54	21.00	Pass
48	5240	0.33	-0.45	1.9805	2.97	17.59	17.43	20.40	21.00	Pass

Note:
1. Directional gain = 15.40dBi +10 log(2)=18.41> 6dBi, so the limit shall be reduced to 30-(18.41-6) = 17.59dBm
2. Gain = 14.42dBi (above 30 degrees from the horizon).
3. Beamforming gain = 3.01dBi
4. EIRP = conducted power + (14.42dBi) + beamforming gain (3.01dBi).

802.11ac (VHT40)

Chan.	Freq. (MHz)	Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Gain (dBi)	EIRP (dBm)	EIRP limit (dBm)	Pass / Fail
		Chain 0	Chain 1							
38	5190	0.21	-0.55	1.9305	2.86	17.59	17.43	20.29	21.00	Pass
46	5230	0.40	-0.26	2.0384	3.09	17.59	17.43	20.52	21.00	Pass

Note:
1. Directional gain = 15.40dBi +10 log(2)=18.41> 6dBi, so the limit shall be reduced to 30-(18.41-6) = 17.59dBm
2. Gain = 14.42dBi (above 30 degrees from the horizon).
3. Beamforming gain = 3.01dBi
4. EIRP = conducted power + (14.42dBi) + beamforming gain (3.01dBi).

802.11ac (VHT80)

Chan.	Freq. (MHz)	Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Gain (dBi)	EIRP (dBm)	EIRP limit (dBm)	Pass / Fail
		Chain 0	Chain 1							
42	5210	0.06	-0.23	1.9623	2.93	17.59	17.43	20.36	21.00	Pass

Note:
1. Directional gain = 15.40dBi +10 log(2)=18.41> 6dBi, so the limit shall be reduced to 30-(18.41-6) = 17.59dBm
2. Gain = 14.42dBi (above 30 degrees from the horizon).
3. Beamforming gain = 3.01dBi
4. EIRP = conducted power + (14.42dBi) + beamforming gain (3.01dBi).

For U-NII-1 Band (Client device)

802.11ac (VHT20)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
36	5180	0.42	-0.15	**2.0676**	3.15	11.59	Pass
40	5200	0.44	-0.26	2.0485	3.11	11.59	Pass
48	5240	0.33	-0.45	1.9805	2.97	11.59	Pass

Note: Directional gain =15.40dBi +10 log(2) =18.41> 6dBi, so the limit shall be reduced to 24-(18.41-6) = 11.59dBm.

802.11ac (VHT40)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
38	5190	0.21	-0.55	1.9305	2.86	11.59	Pass
46	5230	0.40	-0.26	2.0384	3.09	11.59	Pass

Note: Directional gain =15.40dBi +10 log(2) =18.41> 6dBi, so the limit shall be reduced to 24-(18.41-6) = 11.59dBm.

802.11ac (VHT80)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
42	5210	0.06	-0.23	1.9623	2.93	11.59	Pass

Note: Directional gain =15.40dBi +10 log(2) =18.41> 6dBi, so the limit shall be reduced to 24-(18.41-6) = 11.59dBm.

For U-NII-3 Band

802.11ac (VHT20)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
149	5745	14.00	13.95	49.950	16.99	17.59	Pass
157	5785	14.02	13.75	48.949	16.90	17.59	Pass
165	5825	14.41	14.10	**53.310**	17.27	17.59	Pass

Note: Directional gain = 15.40dBi +10 log(2) =18.41> 6dBi, so the limit shall be reduced to 30-(18.41-6) = 17.59dBm.

802.11ac (VHT40)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
151	5755	13.81	13.73	47.649	16.78	17.59	Pass
159	5795	14.09	13.65	48.819	16.89	17.59	Pass

Note: Directional gain = 15.40dBi +10 log(2) =18.41> 6dBi, so the limit shall be reduced to 30-(18.41-6) = 17.59dBm.

802.11ac (VHT80)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
155	5775	13.22	13.25	42.124	16.25	17.59	Pass

Note: Directional gain = 15.40dBi +10 log(2) =18.41> 6dBi, so the limit shall be reduced to 30-(18.41-6) = 17.59dBm.

Test Mode C

CDD Mode

For U-NII-1 Band (Outdoor Access Point)

802.11a

Chan.	Freq. (MHz)	Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Gain (dBi)	EIRP (dBm)	EIRP limit (dBm)	Pass / Fail
		Chain 0	Chain 1							
36	5180	13.42	13.26	43.163	16.35	30.00	4.31	20.66	21.00	Pass
40	5200	13.56	13.35	**44.326**	16.47	30.00	4.31	20.78	21.00	Pass
48	5240	12.97	13.81	43.859	16.42	30.00	4.31	20.73	21.00	Pass

Note:
Gain = 5.17dBi < 6dBi, so the power limit no need to reduce.
Gain = 4.31dBi (above 30 degrees from the horizon),
EIRP = conducted power +(4.31dBi) + array gain = (0 dB (i.e., no array gain) for $N_{ANT} \leq 4$).

802.11ac (VHT20)

Chan.	Freq. (MHz)	Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Gain (dBi)	EIRP (dBm)	EIRP limit (dBm)	Pass / Fail
		Chain 0	Chain 1							
36	5180	13.47	13.34	43.810	16.42	30.00	4.31	20.73	21.00	Pass
40	5200	12.97	13.26	40.999	16.13	30.00	4.31	20.44	21.00	Pass
48	5240	12.76	13.42	40.859	16.11	30.00	4.31	20.42	21.00	Pass

Note:
Gain = 5.17dBi < 6dBi, so the power limit no need to reduce.
Gain = 4.31dBi (above 30 degrees from the horizon),
EIRP = conducted power +(4.31dBi) + array gain = (0 dB (i.e., no array gain) for $N_{ANT} \leq 4$).

802.11ac (VHT40)

Chan.	Freq. (MHz)	Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Gain (dBi)	EIRP (dBm)	EIRP limit (dBm)	Pass / Fail
		Chain 0	Chain 1							
38	5190	13.08	12.98	40.185	16.04	30.00	4.31	20.35	21.00	Pass
46	5230	13.12	13.41	42.440	16.28	30.00	4.31	20.59	21.00	Pass

Note:
Gain = 5.17dBi < 6dBi, so the power limit no need to reduce.
Gain = 4.31dBi (above 30 degrees from the horizon),
EIRP = conducted power +(4.31dBi) + array gain = (0 dB (i.e., no array gain) for $N_{ANT} \leq 4$).

802.11ac (VHT80)

Chan.	Freq. (MHz)	Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Gain (dBi)	EIRP (dBm)	EIRP limit (dBm)	Pass / Fail
		Chain 0	Chain 1							
42	5210	13.16	12.94	40.380	16.06	30.00	4.31	20.37	21.00	Pass

Note:
Gain = 5.17dBi < 6dBi, so the power limit no need to reduce.
Gain = 4.31dBi (above 30 degrees from the horizon),
EIRP = conducted power +(4.31dBi) + array gain = (0 dB (i.e., no array gain) for $N_{ANT} \leq 4$).

For U-NII-1 Band (Client device)

802.11a

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
36	5180	13.42	13.26	43.163	16.35	24	Pass
40	5200	13.56	13.35	**44.326**	16.47	24	Pass
48	5240	12.97	13.81	43.859	16.42	24	Pass

Note: Gain = 5.17dBi < 6dBi, so the power limit no need to reduce.

802.11ac (VHT20)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
36	5180	13.47	13.34	43.810	16.42	24	Pass
40	5200	12.97	13.26	40.999	16.13	24	Pass
48	5240	12.76	13.42	40.859	16.11	24	Pass

Note: Gain = 5.17dBi < 6dBi, so the power limit no need to reduce.

802.11ac (VHT40)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
38	5190	13.08	12.98	40.185	16.04	24	Pass
46	5230	13.12	13.41	42.440	16.28	24	Pass

Note: Gain = 5.17dBi < 6dBi, so the power limit no need to reduce.

802.11ac (VHT80)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
42	5210	13.16	12.94	40.380	16.06	24	Pass

Note: Gain = 5.17dBi < 6dBi, so the power limit no need to reduce.

For U-NII-3 Band

802.11a

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
149	5745	22.50	22.50	355.656	25.51	30	Pass
157	5785	22.50	22.50	355.656	25.51	30	Pass
165	5825	23.00	23.00	**399.052**	26.01	30	Pass

Note: Gain = 5.17dBi < 6dBi, so the power limit no need to reduce.

802.11ac (VHT20)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
149	5745	21.45	22.76	328.436	25.16	30	Pass
157	5785	21.86	22.34	324.858	25.12	30	Pass
165	5825	22.26	21.61	313.144	24.96	30	Pass

Note: Gain = 5.17dBi < 6dBi, so the power limit no need to reduce.

802.11ac (VHT40)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
151	5755	20.29	20.77	226.304	23.55	30	Pass
159	5795	21.63	21.88	299.716	24.77	30	Pass

Note: Gain = 5.17dBi < 6dBi, so the power limit no need to reduce.

802.11ac (VHT80)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
155	5775	16.81	17.65	106.183	20.26	30	Pass

Note: Gain = 5.17dBi < 6dBi, so the power limit no need to reduce.

Beamforming Mode

For U-NII-1 Band (Outdoor Access Point)

802.11ac (VHT20)

Chan.	Freq. (MHz)	Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Gain (dBi)	EIRP (dBm)	EIRP limit (dBm)	Pass / Fail
		Chain 0	Chain 1							
36	5180	10.46	10.33	**21.906**	13.41	27.82	7.32	20.73	21.00	Pass
40	5200	9.96	10.25	20.501	13.12	27.82	7.32	20.44	21.00	Pass
48	5240	9.75	10.41	20.431	13.10	27.82	7.32	20.42	21.00	Pass

Note:
1. Directional gain = 5.17+10 log (2) = 8.18dBi > 6dBi, so the power limit shall be reduced to 30-(8.18-6) = 27.82dBm.
2. Gain = 4.31dBi (above 30 degrees from the horizon).
3. Beamforming gain = 3.01dBi
4. EIRP = conducted power + (4.31dBi) + beamforming gain (3.01dBi).

802.11ac (VHT40)

Chan.	Freq. (MHz)	Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Gain (dBi)	EIRP (dBm)	EIRP limit (dBm)	Pass / Fail
		Chain 0	Chain 1							
38	5190	10.07	9.97	20.093	13.03	27.82	7.32	20.35	21.00	Pass
46	5230	10.11	10.40	21.222	13.27	27.82	7.32	20.59	21.00	Pass

Note:
1. Directional gain = 5.17+10 log (2) = 8.18dBi > 6dBi, so the power limit shall be reduced to 30-(8.18-6) = 27.82dBm.
2. Gain = 4.31dBi (above 30 degrees from the horizon).
3. Beamforming gain = 3.01dBi
4. EIRP = conducted power + (4.31dBi) + beamforming gain (3.01dBi).

802.11ac (VHT80)

Chan.	Freq. (MHz)	Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Gain (dBi)	EIRP (dBm)	EIRP limit (dBm)	Pass / Fail
		Chain 0	Chain 1							
42	5210	10.15	9.93	20.191	13.05	27.87	7.32	20.37	21.00	Pass

Note:
1. Directional gain = 5.17+10 log (2) = 8.18dBi > 6dBi, so the power limit shall be reduced to 30-(8.18-6) = 27.82dBm.
2. Gain = 4.31dBi (above 30 degrees from the horizon).
3. Beamforming gain = 3.01dBi
4. EIRP = conducted power + (4.31dBi) + beamforming gain (3.01dBi).

For U-NII-1 Band (Client device)

802.11ac (VHT20)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
36	5180	10.46	10.33	**21.906**	13.41	21.82	Pass
40	5200	9.96	10.25	20.501	13.12	21.82	Pass
48	5240	9.75	10.41	20.431	13.10	21.82	Pass

Note: Directional gain = 5.17+10 log (2) = 8.18dBi > 6dBi, so the power limit shall be reduced to 24-(8.18-6) = 21.82dBm.

802.11ac (VHT40)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
38	5190	10.07	9.97	20.093	13.03	21.82	Pass
46	5230	10.11	10.40	21.222	13.27	21.82	Pass

Note: Directional gain = 5.17+10 log (2) = 8.18dBi > 6dBi, so the power limit shall be reduced to 24-(8.18-6) = 21.82dBm.

802.11ac (VHT80)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
42	5210	10.15	9.93	20.191	13.05	21.82	Pass

Note: Directional gain = 5.17+10 log (2) = 8.18dBi > 6dBi, so the power limit shall be reduced to 24-(8.18-6) = 21.82dBm.

For U-NII-3 Band

802.11ac (VHT20)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
149	5745	18.44	19.75	**164.229**	22.15	27.82	Pass
157	5785	18.85	19.33	162.440	22.11	27.82	Pass
165	5825	19.25	18.60	156.584	21.95	27.82	Pass

Note: Directional gain = 5.17+10 log (2) = 8.18dBi > 6dBi, so the power limit shall be reduced to 30-(8.18-6) = 27.82dBm.

802.11ac (VHT40)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
151	5755	17.28	17.76	113.160	20.54	27.82	Pass
159	5795	18.62	18.87	149.868	21.76	27.82	Pass

Note: Directional gain = 5.17+10 log (2) = 8.18dBi > 6dBi, so the power limit shall be reduced to 30-(8.18-6) = 27.82dBm.

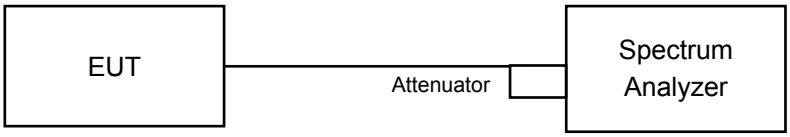
802.11ac (VHT80)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
155	5775	13.80	14.64	53.095	17.25	27.82	Pass

Note: Directional gain = 5.17+10 log (2) = 8.18dBi > 6dBi, so the power limit shall be reduced to 30-(8.18-6) = 27.82dBm.

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

Test Mode A

802.11a

Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
36	5180	16.56	16.32
40	5200	16.56	16.32
48	5240	16.56	16.44
149	5745	16.44	16.44
157	5785	16.44	16.44
165	5825	16.56	16.44

802.11ac (VHT20)

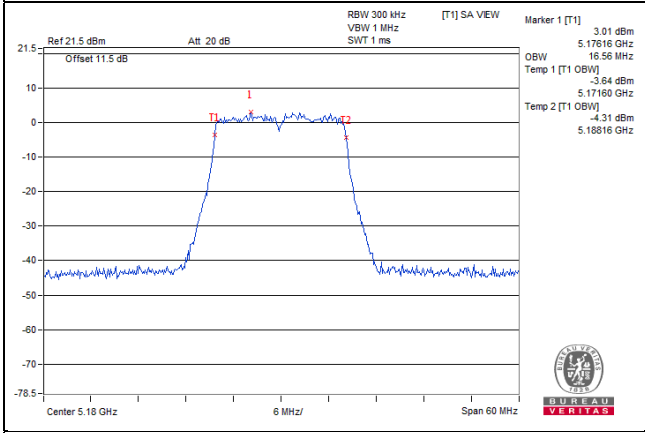
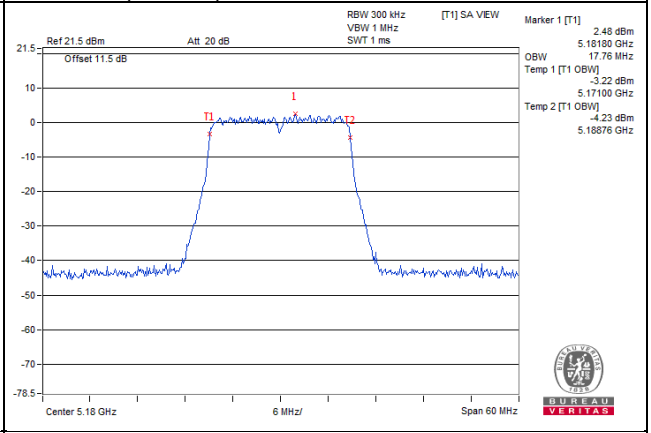
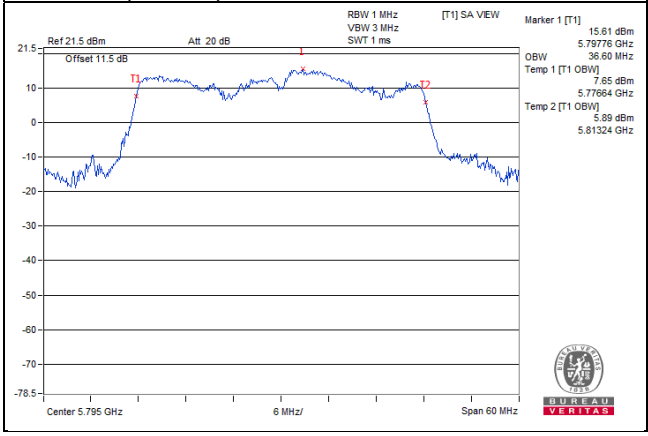
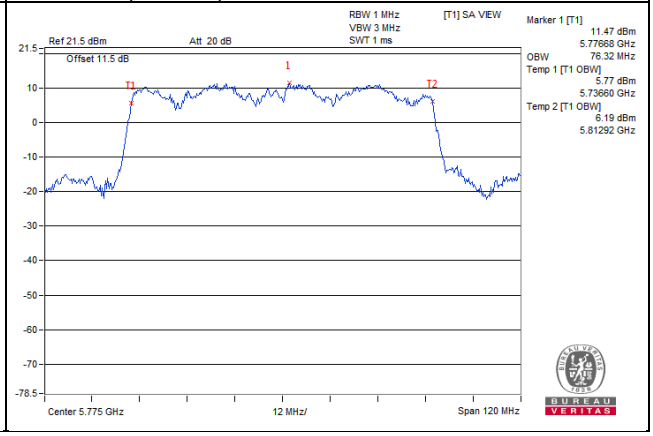
Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
36	5180	17.76	17.40
40	5200	17.76	17.40
48	5240	17.76	17.52
149	5745	17.64	17.52
157	5785	17.64	17.52
165	5825	17.64	17.40

802.11ac (VHT40)

Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
38	5190	36.00	36.36
46	5230	36.00	36.24
151	5755	36.26	36.48
159	5795	36.24	36.60

802.11ac (VHT80)

Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
42	5210	75.84	76.08
155	5775	75.84	76.32

Spectrum Plot of Worst Value	
802.11a	802.11ac (VHT20)
	
802.11ac (VHT40)	802.11ac (VHT80)
	

Test Mode B

802.11a

Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
36	5180	16.56	16.44
40	5200	16.56	16.44
48	5240	16.56	16.44
149	5745	17.52	16.32
157	5785	17.52	16.20
165	5825	17.52	16.20

802.11ac (VHT20)

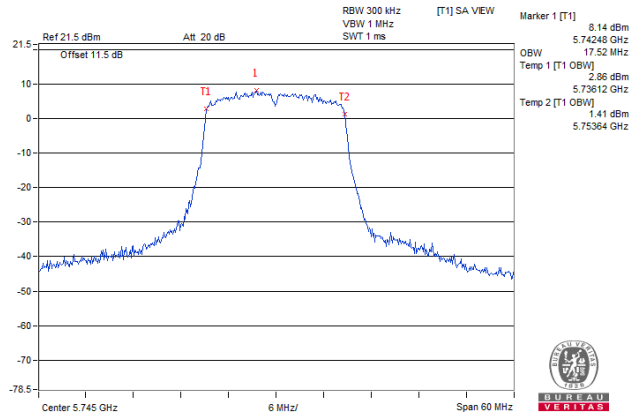
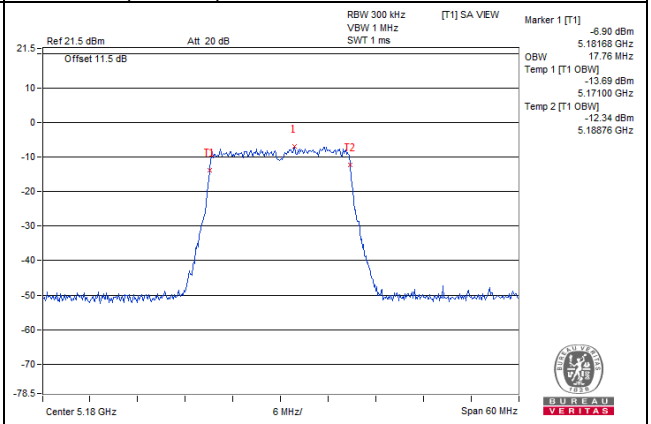
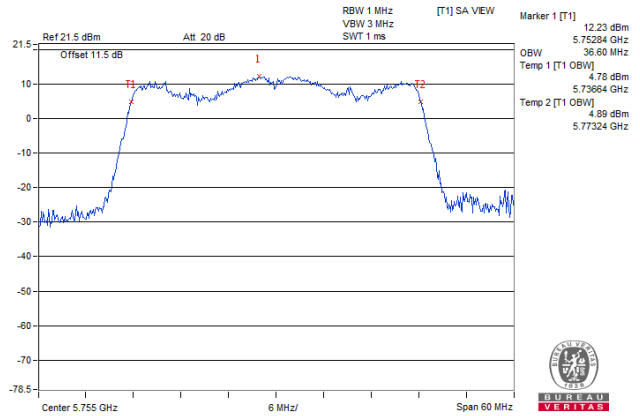
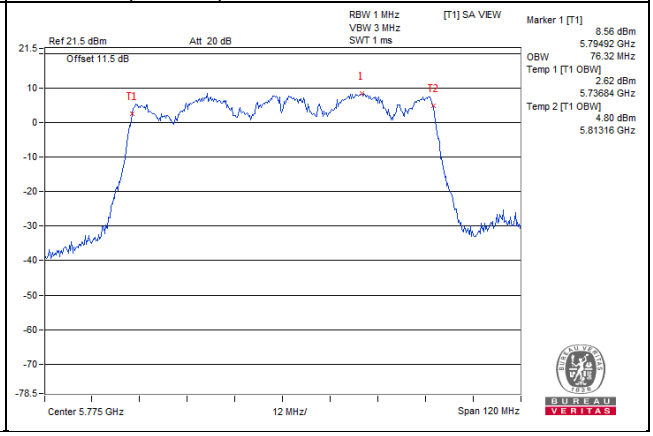
Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
36	5180	17.76	17.64
40	5200	17.76	17.64
48	5240	17.76	17.64
149	5745	17.52	17.16
157	5785	17.52	17.16
165	5825	17.52	17.28

802.11ac (VHT40)

Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
38	5190	36.00	36.12
46	5230	36.12	36.12
151	5755	36.36	36.60
159	5795	36.36	36.48

802.11ac (VHT80)

Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
42	5210	75.84	75.84
155	5775	76.08	76.32

Spectrum Plot of Worst Value	
802.11a	802.11ac (VHT20)
	
802.11ac (VHT40)	802.11ac (VHT80)
	

Test Mode C

802.11a

Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
36	5180	16.56	16.32
40	5200	16.44	16.44
48	5240	16.44	16.44
149	5745	20.16	29.76
157	5785	24.12	29.52
165	5825	28.68	29.28

802.11ac (VHT20)

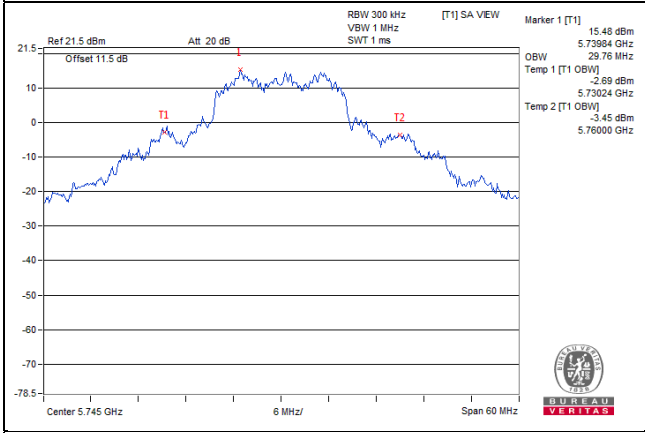
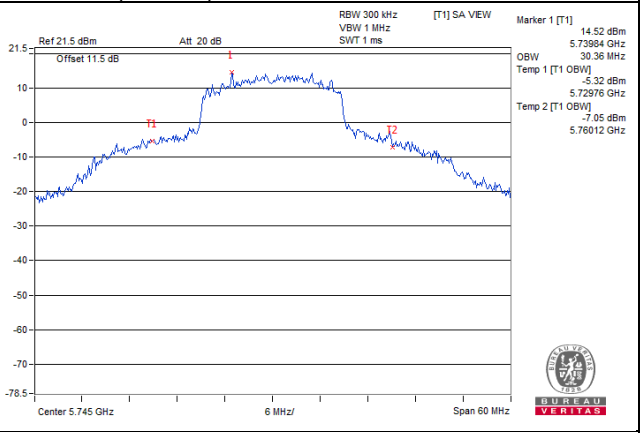
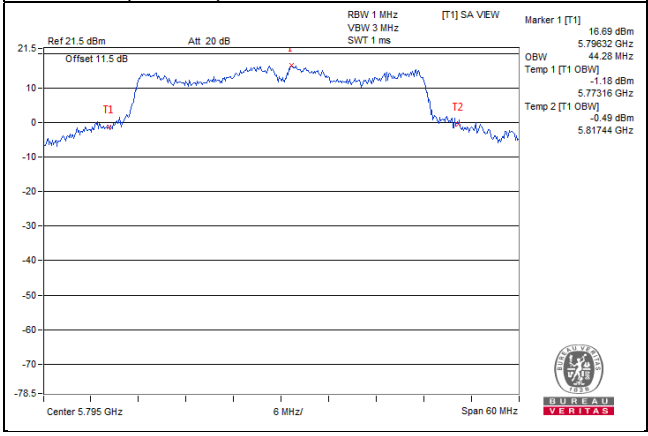
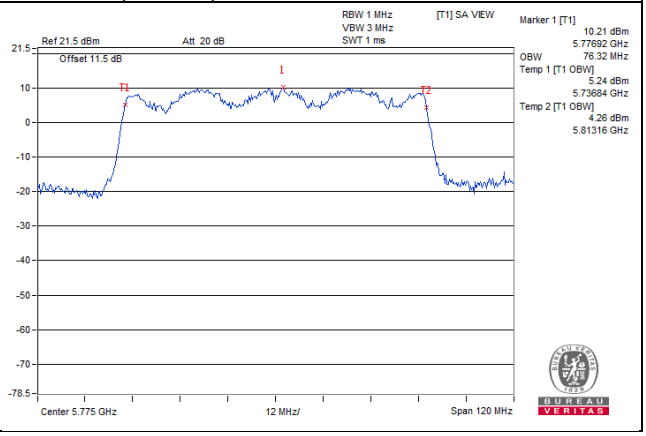
Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
36	5180	17.64	17.40
40	5200	17.64	17.52
48	5240	17.64	17.52
149	5745	24.12	30.36
157	5785	24.84	30.00
165	5825	30.24	29.16

802.11ac (VHT40)

Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
38	5190	36.12	36.36
46	5230	36.00	36.12
151	5755	36.48	37.68
159	5795	37.68	44.28

802.11ac (VHT80)

Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
42	5210	75.84	75.84
155	5775	75.84	76.32

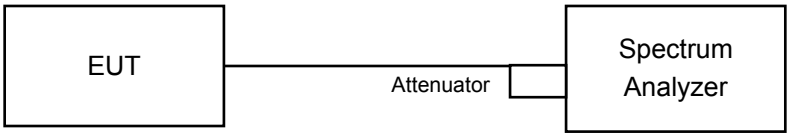
Spectrum Plot of Worst Value	
802.11a	802.11ac (VHT20)
	
802.11ac (VHT40)	802.11ac (VHT80)
	

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	
	√	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 band:

Using method SA-1, Duty cycle >98%:

a. Set span to encompass the entire emission bandwidth (EBW) of the signal.
b. Set RBW = 1 MHz, Set VBW ≥ 3 MHz, Detector = RMS
c. Sweep time = auto, trigger set to “free run”.
d. Trace average at least 100 traces in power averaging mode.
e. Record the max value

Using method SA-2, Duty cycle <98%

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

For U-NII-3 band:

Duty cycle >98%

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

Duty cycle <98%

a. Set span to encompass the entire emission bandwidth (EBW) of the signal.
b. Set RBW = 300 kHz, Set VBW ≥ 1 MHz, Detector = RMS
c. Use the peak marker function to determine the maximum power level in any 300 kHz band segment within the fundamental EBW.
d. Scale the observed power level to an equivalent value in 500 kHz by adjusting (reducing) the measured power by a bandwidth correction factor (BWCF) where BWCF = 10log(500 kHz/300kHz)
e. Sweep time = auto, trigger set to “free run”.
f. Trace average at least 100 traces in power averaging mode.
g. 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 Item 4.3.6.

4.5.7 Test Results

Test Mode A

For U-NII-1 Band (Outdoor Access Point)

802.11a

Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)		Duty Factor (dB)	Total PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1				
36	5180	-1.87	0.30	0.23	2.59	6.57	Pass
40	5200	-1.95	0.42	0.23	2.63	6.57	Pass
48	5240	-1.81	0.29	0.23	2.61	6.57	Pass

Note:
1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = 13.42dBi + 10log(2) = 16.43dBi > 6dBi, so the power density limit shall be reduced to 17-(16.43-6) = 6.57dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11ac (VHT20)

Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)		Total PSD (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1			
36	5180	-2.13	0.29	2.26	6.57	Pass
40	5200	-2.25	0.47	2.33	6.57	Pass
48	5240	-2.11	0.17	2.19	6.57	Pass

Note:
1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = 13.42dBi + 10log(2) = 16.43dBi > 6dBi, so the power density limit shall be reduced to 17-(16.43-6) = 6.57dBm.

802.11ac (VHT40)

Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)		Duty Factor (dB)	Total PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1				
38	5190	-5.45	-2.89	0.16	-0.81	6.57	Pass
46	5230	-5.46	-2.97	0.16	-0.87	6.57	Pass

Note:
1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = 13.42dBi + 10log(2) = 16.43dBi > 6dBi, so the power density limit shall be reduced to 17-(16.43-6) = 6.57dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

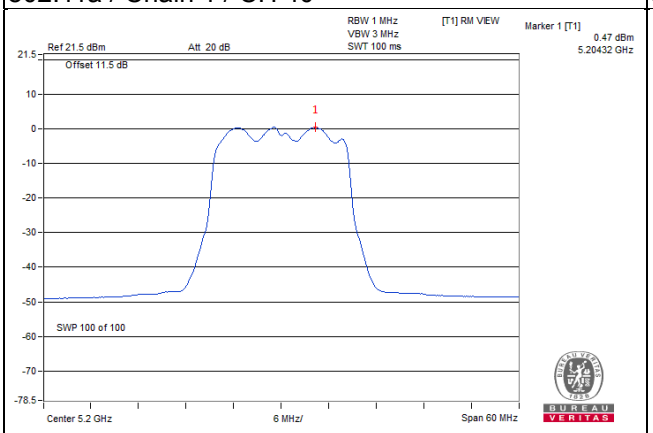
802.11ac (VHT80)

Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)		Duty Factor (dB)	Total PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1				
42	5210	-9.41	-6.65	0.41	-4.39	6.57	Pass

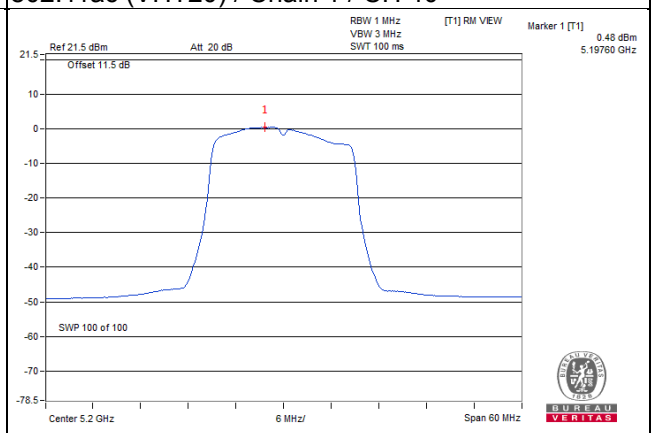
Note:
1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = 13.42dBi + 10log(2) = 16.43dBi > 6dBi, so the power density limit shall be reduced to 17-(16.43-6) = 6.57dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value

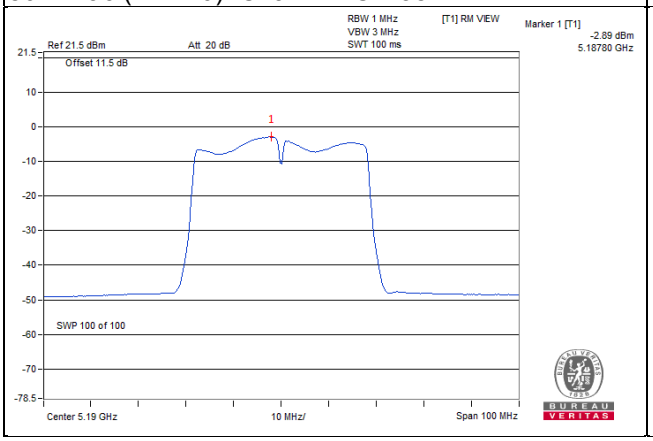
802.11a / Chain 1 / CH 40



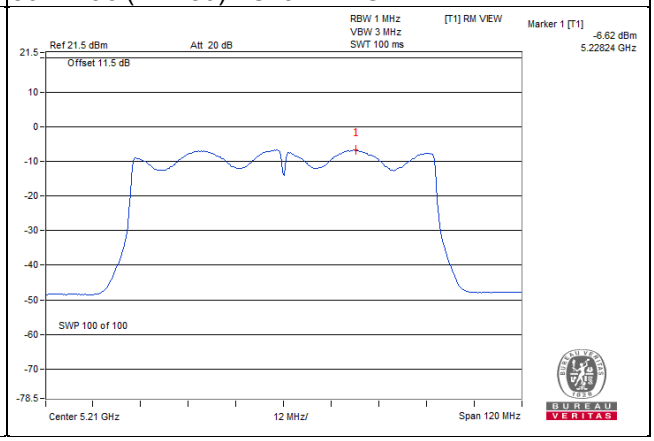
802.11ac (VHT20) / Chain 1 / CH 40



802.11ac (VHT40)/ Chain 1 / CH 38



802.11ac (VHT80) / Chain 1 / CH 42



For U-NII-1 Band (Client device)

802.11a

Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)		Duty Factor (dB)	Total PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1				
36	5180	-6.58	-3.97	0.23	-1.84	0.57	Pass
40	5200	-6.48	-3.91	0.23	-1.77	0.57	Pass
48	5240	-6.36	-4.16	0.23	-1.88	0.57	Pass

Note:
1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = 13.42dBi + 10log(2) = 16.43dBi > 6dBi, so the power density limit shall be reduced to 11-(16.43-6) = 0.57dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11ac (VHT20)

Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)		Total PSD (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1			
36	5180	-6.08	-3.36	-1.50	0.57	Pass
40	5200	-6.18	-3.18	-1.42	0.57	Pass
48	5240	-6.17	-3.64	-1.71	0.57	Pass

Note:
1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = 13.42dBi + 10log(2) = 16.43dBi > 6dBi, so the power density limit shall be reduced to 11-(16.43-6) = 0.57dBm.

802.11ac (VHT40)

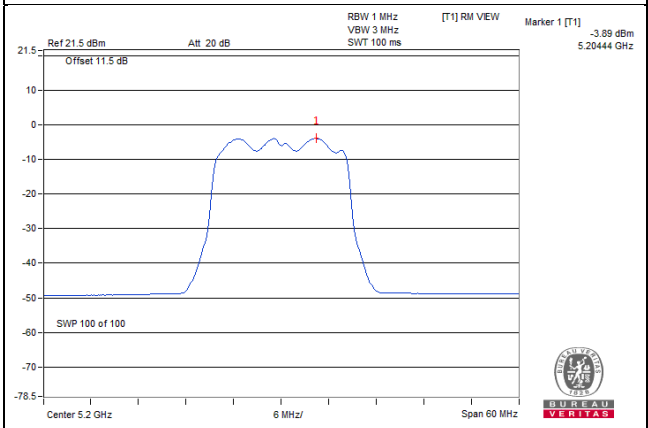
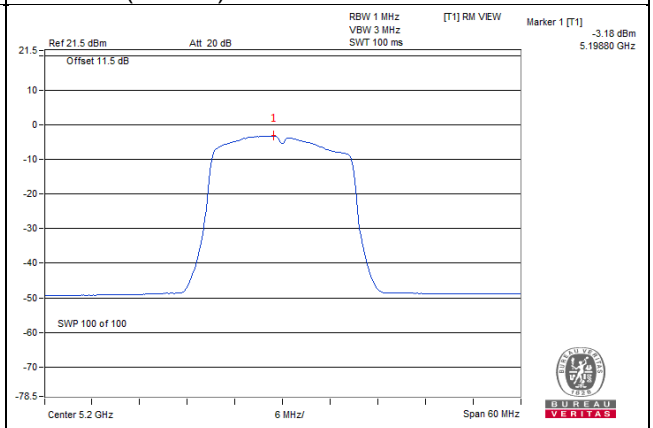
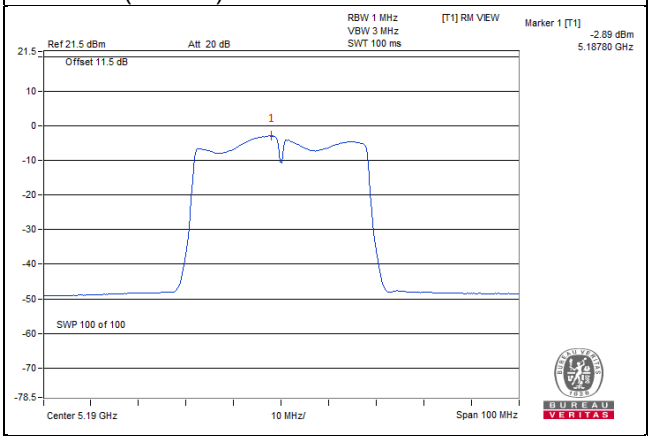
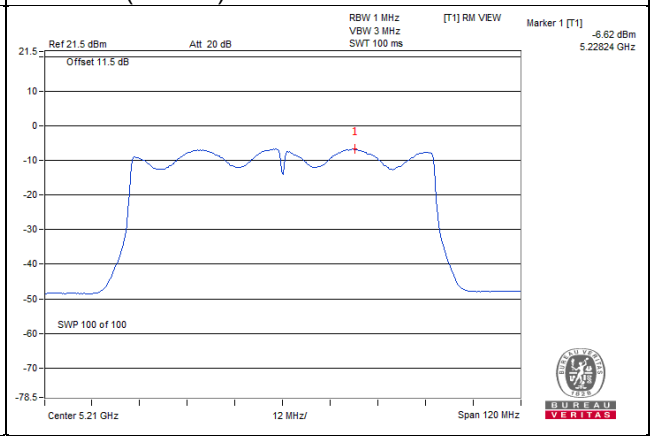
Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)		Duty Factor (dB)	Total PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1				
38	5190	-5.47	-2.87	0.16	-0.81	0.57	Pass
46	5230	-5.56	-2.99	0.16	-0.92	0.57	Pass

Note:
1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = 13.42dBi + 10log(2) = 16.43dBi > 6dBi, so the power density limit shall be reduced to 11-(16.43-6) = 0.57dBm.
3. 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)	Total PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1				
42	5210	-9.44	-6.83	0.41	-4.52	0.57	Pass

Note:
1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = 13.42dBi + 10log(2) = 16.43dBi > 6dBi, so the power density limit shall be reduced to 11-(16.43-6) = 0.57dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value	
802.11a / Chain 1 / CH 40	802.11ac (VHT20) / Chain 1 / CH 40
	
802.11ac (VHT40)/ Chain 1 / CH 38	802.11ac (VHT80) / Chain 1 / CH 42
	

For U-NII-3 Band

802.11a

TX chain	Chan.	Freq. (MHz)	PSD W/O Duty Factor		10 log (N=2) dB	Duty Factor (dB)	Total PSD With Duty Factor (dBm/500kHz)	Limit (dBm/ 500kHz)	Pass / Fail
			(dBm/300kHz)	(dBm/500kHz)					
0	149	5745	-3.75	-1.53	3.01	0.23	1.71	19.57	Pass
	157	5785	-3.65	-1.43	3.01	0.23	1.81	19.57	Pass
	165	5825	-3.32	-1.10	3.01	0.23	2.14	19.57	Pass
1	149	5745	-1.04	1.18	3.01	0.23	4.42	19.57	Pass
	157	5785	-0.65	1.57	3.01	0.23	4.81	19.57	Pass
	165	5825	-0.93	1.29	3.01	0.23	4.53	19.57	Pass

Note:
1. Directional gain = 13.42dBi + 10log(2) = 16.43dBi > 6dBi, so the power density limit shall be reduced to 30-(16.43-6) = 19.57dBm.
2. Refer to section 3.3 for duty cycle spectrum plot.

802.11n (HT20)

TX chain	Chan.	Freq. (MHz)	PSD W/O Duty Factor		10 log (N=2) dB	Total PSD (dBm/500kHz)	Limit (dBm/ 500kHz)	Pass / Fail
			(dBm/300kHz)	(dBm/500kHz)				
0	149	5745	-3.88	-1.66	3.01	1.35	19.57	Pass
	157	5785	-3.53	-1.31	3.01	1.70	19.57	Pass
	165	5825	-3.18	-0.96	3.01	2.05	19.57	Pass
1	149	5745	-0.88	1.34	3.01	4.35	19.57	Pass
	157	5785	-1.18	1.04	3.01	4.05	19.57	Pass
	165	5825	-1.02	1.20	3.01	4.21	19.57	Pass

Note:
1. Directional gain = 13.42dBi + 10log(2) = 16.43dBi > 6dBi, so the power density limit shall be reduced to 30-(16.43-6) = 19.57dBm.

802.11n (HT40)

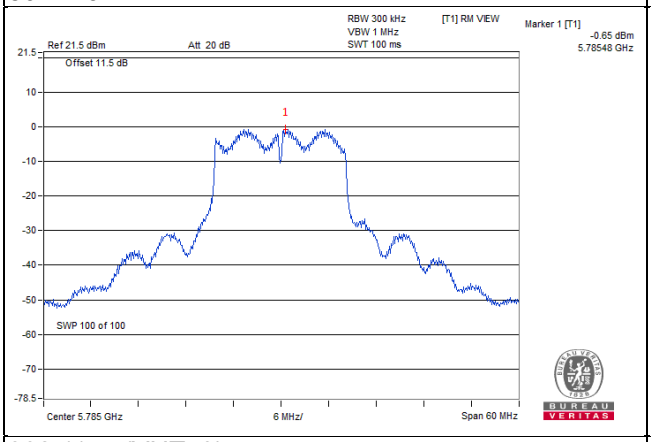
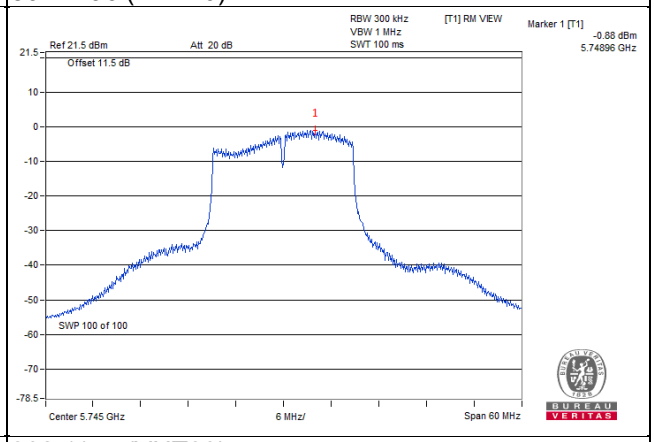
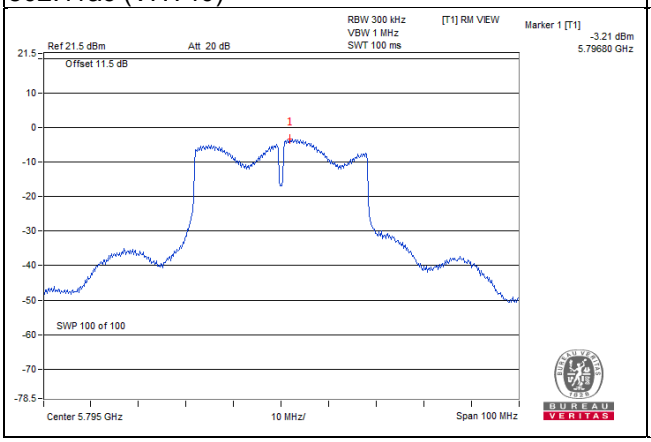
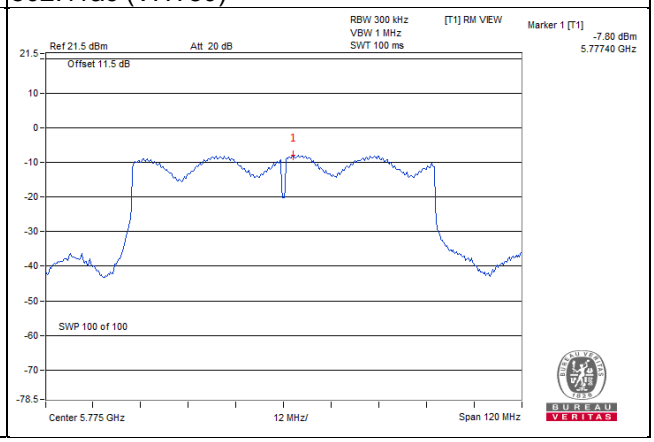
TX chain	Chan.	Freq. (MHz)	PSD W/O Duty Factor		10 log (N=2) dB	Duty Factor (dB)	Total PSD With Duty Factor (dBm/500kHz)	Limit (dBm/ 500kHz)	Pass / Fail
			(dBm/300kHz)	(dBm/500kHz)					
0	151	5755	-6.95	-4.73	3.01	0.16	-1.56	19.57	Pass
	159	5795	-6.50	-4.28	3.01	0.16	-1.11	19.57	Pass
1	151	5755	-3.82	-1.60	3.01	0.16	1.57	19.57	Pass
	159	5795	-3.21	-0.99	3.01	0.16	2.18	19.57	Pass

Note:
1. Directional gain = 13.42dBi + 10log(2) = 16.43dBi > 6dBi, so the power density limit shall be reduced to 30-(16.43-6) = 19.57dBm.
2. Refer to section 3.3 for duty cycle spectrum plot.

802.11ac (VHT80)

TX chain	Chan.	Freq. (MHz)	PSD W/O Duty Factor		10 log (N=2) dB	Duty Factor (dB)	Total PSD With Duty Factor (dBm/500kHz)	Limit (dBm/ 500kHz)	Pass / Fail
			(dBm/300kHz)	(dBm/500kHz)					
0	155	5775	-13.31	-11.09	3.01	0.41	-7.67	19.57	Pass
1	155	5775	-7.80	-5.58	3.01	0.41	-2.16	19.57	Pass

Note:
1. Directional gain = 13.42dBi + 10log(2) = 16.43dBi > 6dBi, so the power density limit shall be reduced to 30-(16.43-6) = 19.57dBm.
2. Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value	
802.11a	802.11ac (VHT20)
	
802.11ac (VHT40)	802.11ac (VHT80)
	

Test Mode B

For U-NII-1 Band (Outdoor Access Point)

802.11a

Chan.	Freq. (MHz)	PSD (dBm/MHz)		Total PSD (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1			
36	5180	-9.45	-10.40	-6.89	4.59	Pass
40	5200	-11.01	-10.55	-7.76	4.59	Pass
48	5240	-10.82	-10.25	-7.52	4.59	Pass

Note:
1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = 15.40dBi + 10log(2) = 18.41dBi > 6dBi, so the power density limit shall be reduced to 17-(18.41-6) = 4.59dBm.

802.11ac (VHT20)

Chan.	Freq. (MHz)	PSD (dBm/MHz)		Total PSD (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1			
36	5180	-11.94	-10.42	-8.10	4.59	Pass
40	5200	-11.85	-10.55	-8.14	4.59	Pass
48	5240	-11.73	-10.22	-7.90	4.59	Pass

Note:
1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = 15.40dBi + 10log(2) = 18.41dBi > 6dBi, so the power density limit shall be reduced to 17-(18.41-6) = 4.59dBm.

802.11ac (VHT40)

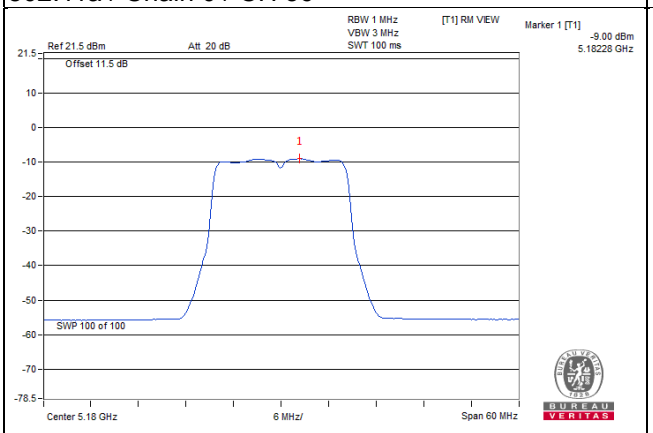
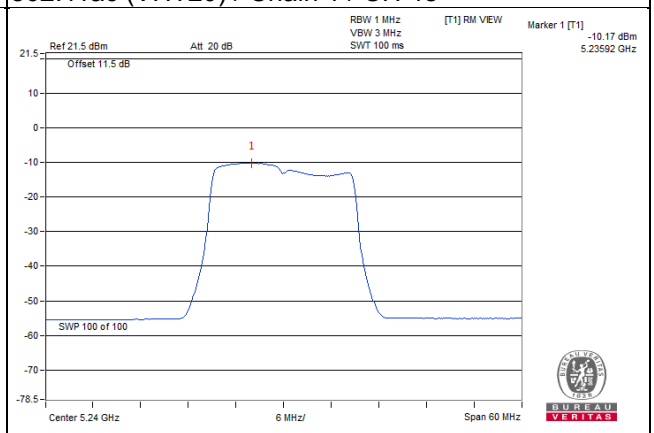
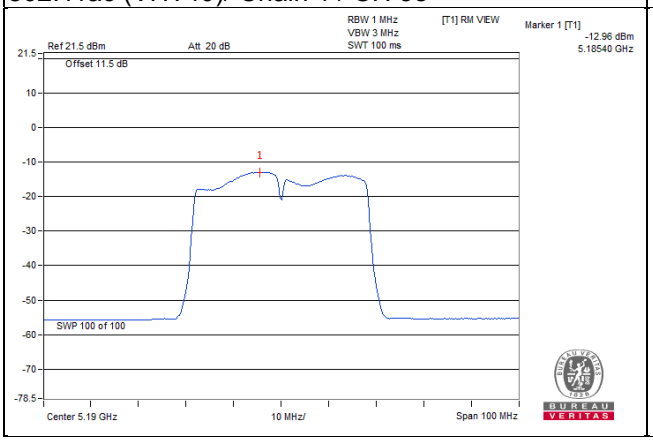
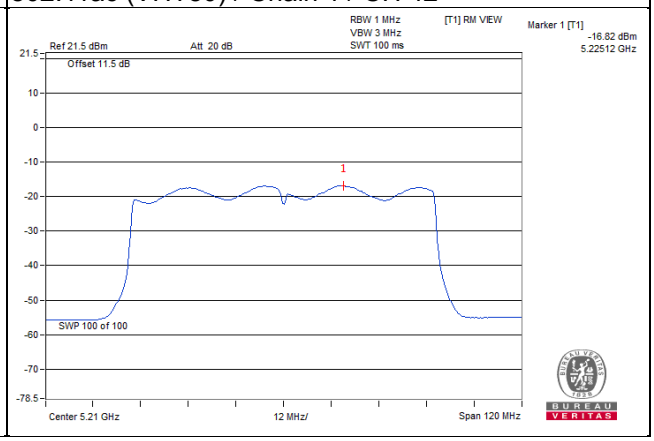
Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)		Duty Factor (dB)	Total PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1				
38	5190	-14.02	-13.14	0.17	-10.38	4.59	Pass
46	5230	-13.73	-13.32	0.17	-10.34	4.59	Pass

Note:
1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = 15.40dBi + 10log(2) = 18.41dBi > 6dBi, so the power density limit shall be reduced to 17-(18.41-6) = 4.59dBm.
3. 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)	Total PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1				
42	5210	-17.04	-16.96	0.39	-13.60	4.59	Pass

Note:
1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = 15.40dBi + 10log(2) = 18.41dBi > 6dBi, so the power density limit shall be reduced to 17-(18.41-6) = 4.59dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value	
802.11a / Chain 0 / CH 36	802.11ac (VHT20) / Chain 1 / CH 48
	
802.11ac (VHT40)/ Chain 1 / CH 38	802.11ac (VHT80) / Chain 1 / CH 42
	

For U-NII-1 Band (Client device)

802.11a

Chan.	Freq. (MHz)	PSD (dBm/MHz)		Total PSD (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1			
36	5180	-9.45	-10.40	-6.89	-1.41	Pass
40	5200	-11.01	-10.55	-7.76	-1.41	Pass
48	5240	-10.82	-10.25	-7.52	-1.41	Pass

Note:
1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = 15.40dBi + 10log(2) = 18.41dBi > 6dBi, so the power density limit shall be reduced to 11-(18.41-6) = -1.41dBm.

802.11ac (VHT20)

Chan.	Freq. (MHz)	PSD (dBm/MHz)		Total PSD (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1			
36	5180	-11.94	-10.42	-8.10	-1.41	Pass
40	5200	-11.85	-10.55	-8.14	-1.41	Pass
48	5240	-11.73	-10.22	-7.90	-1.41	Pass

Note:
1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = 15.40dBi + 10log(2) = 18.41dBi > 6dBi, so the power density limit shall be reduced to 11-(18.41-6) = -1.41dBm.

802.11ac (VHT40)

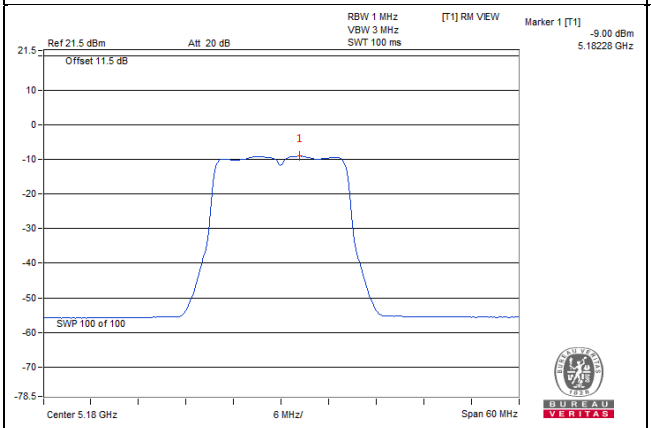
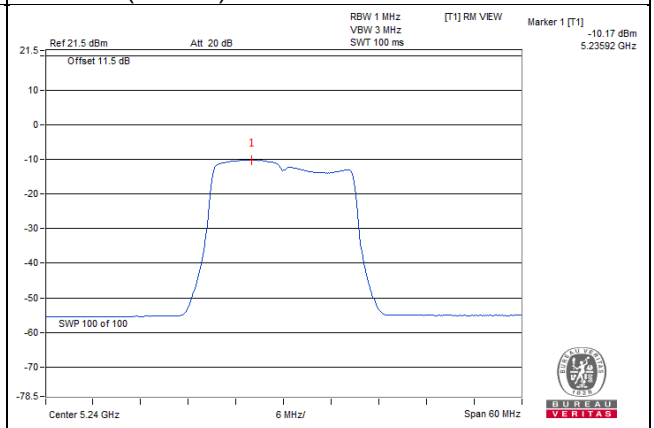
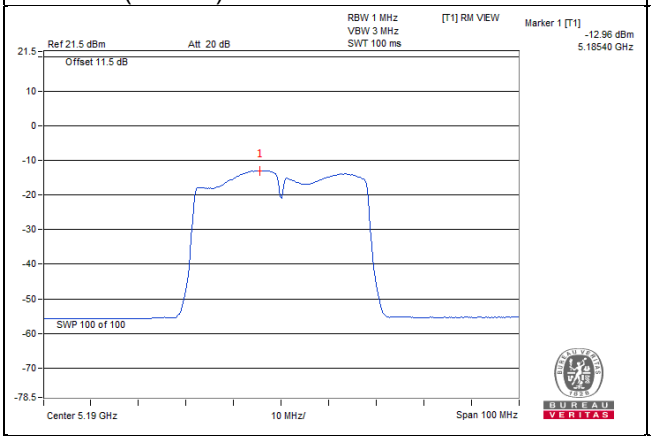
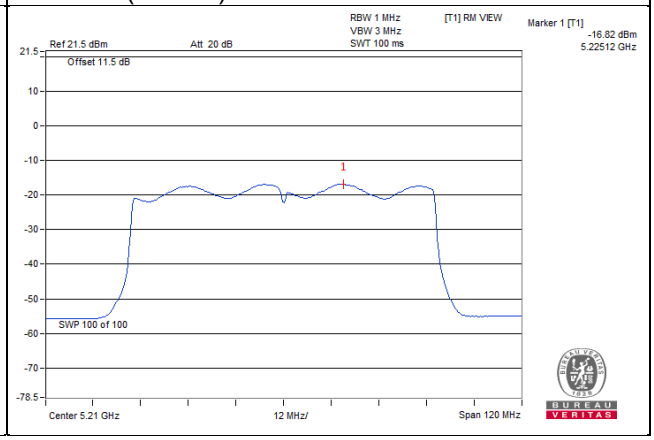
Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)		Duty Factor (dB)	Total PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1				
38	5190	-14.02	-13.14	0.17	-10.38	-1.41	Pass
46	5230	-13.73	-13.32	0.17	-10.34	-1.41	Pass

Note:
1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = 15.40dBi + 10log(2) = 18.41dBi > 6dBi, so the power density limit shall be reduced to 11-(18.41-6) = -1.41dBm.
3. 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)	Total PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1				
42	5210	-17.04	-16.96	0.39	-13.60	-1.41	Pass

Note:
1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = 15.40dBi + 10log(2) = 18.41dBi > 6dBi, so the power density limit shall be reduced to 11-(18.41-6) = -1.41dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value	
802.11a / Chain 0 / CH 36	802.11ac (VHT20) / Chain 1 / CH 48
	
802.11ac (VHT40)/ Chain 1 / CH 38	802.11ac (VHT80) / Chain 1 / CH 42
	

For U-NII-3 Band

802.11a

TX chain	Chan.	Freq. (MHz)	PSD W/O Duty Factor		10 log (N=2) dB	Total PSD (dBm/500kHz)	Limit (dBm/ 500kHz)	Pass / Fail
			(dBm/300kHz)	(dBm/500kHz)				
0	149	5745	-4.50	-2.28	3.01	0.73	17.59	Pass
	157	5785	-4.49	-2.27	3.01	0.74	17.59	Pass
	165	5825	-4.07	-1.85	3.01	1.16	17.59	Pass
1	149	5745	-2.77	-0.55	3.01	2.46	17.59	Pass
	157	5785	-3.09	-0.87	3.01	2.14	17.59	Pass
	165	5825	-2.82	-0.60	3.01	2.41	17.59	Pass

Note:
1. Directional gain = 15.40dBi + 10log(2) = 18.41dBi > 6dBi, so the power density limit shall be reduced to 30-(18.41-6) = 17.59dBm.

802.11ac (VHT20)

TX chain	Chan.	Freq. (MHz)	PSD W/O Duty Factor		10 log (N=2) dB	Total PSD (dBm/500kHz)	Limit (dBm/ 500kHz)	Pass / Fail
			(dBm/300kHz)	(dBm/500kHz)				
0	149	5745	-4.39	-2.17	3.01	0.84	17.59	Pass
	157	5785	-4.04	-1.82	3.01	1.19	17.59	Pass
	165	5825	-4.27	-2.05	3.01	0.96	17.59	Pass
1	149	5745	-3.19	-0.97	3.01	2.04	17.59	Pass
	157	5785	-3.18	-0.96	3.01	2.05	17.59	Pass
	165	5825	-3.26	-1.04	3.01	1.97	17.59	Pass

Note:
1. Directional gain = 15.40dBi + 10log(2) = 18.41dBi > 6dBi, so the power density limit shall be reduced to 30-(18.41-6) = 17.59dBm.

802.11ac (VHT40)

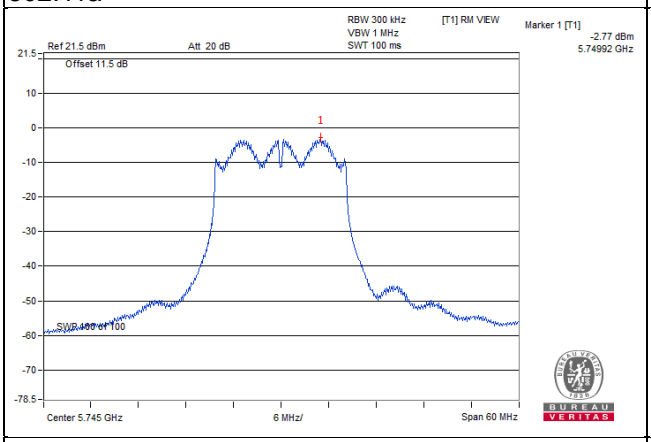
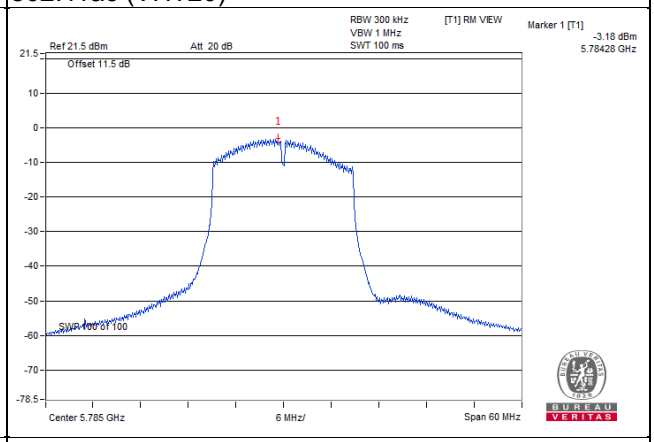
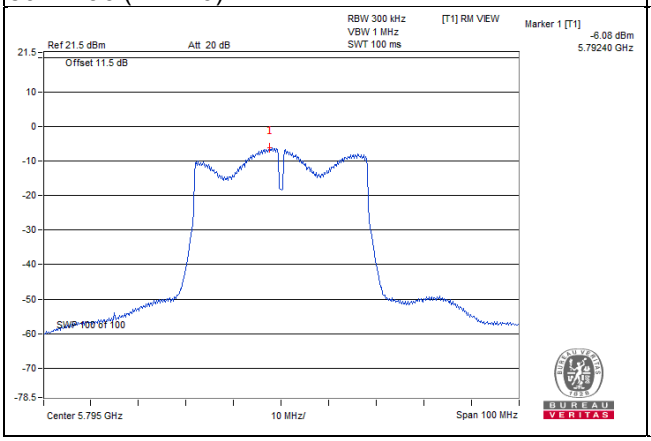
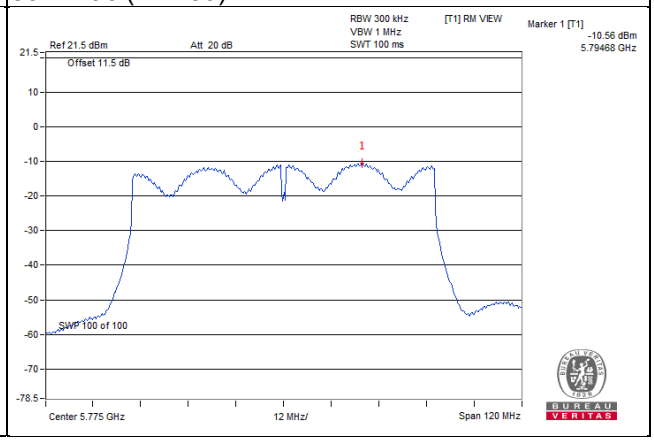
TX chain	Chan.	Freq. (MHz)	PSD W/O Duty Factor		10 log (N=2) dB	Duty Factor (dB)	Total PSD With Duty Factor (dBm/500kHz)	Limit (dBm/ 500kHz)	Pass / Fail
			(dBm/300kHz)	(dBm/500kHz)					
0	151	5755	-7.66	-5.44	3.01	0.17	-2.26	17.59	Pass
	159	5795	-7.23	-5.01	3.01	0.17	-1.83	17.59	Pass
1	151	5755	-6.27	-4.05	3.01	0.17	-0.87	17.59	Pass
	159	5795	-6.08	-3.86	3.01	0.17	-0.68	17.59	Pass

Note:
1. Directional gain = 15.40dBi + 10log(2) = 18.41dBi > 6dBi, so the power density limit shall be reduced to 30-(18.41-6) = 17.59dBm.
2. Refer to section 3.3 for duty cycle spectrum plot.

802.11ac (VHT80)

TX chain	Chan.	Freq. (MHz)	PSD W/O Duty Factor		10 log (N=2) dB	Duty Factor (dB)	Total PSD With Duty Factor (dBm/500kHz)	Limit (dBm/ 500kHz)	Pass / Fail
			(dBm/300kHz)	(dBm/500kHz)					
0	155	5775	-12.15	-9.93	3.01	0.39	-6.53	17.59	Pass
1	155	5775	-10.56	-8.34	3.01	0.39	-4.94	17.59	Pass

Note:
1. Directional gain = 15.40dBi + 10log(2) = 18.41dBi > 6dBi, so the power density limit shall be reduced to 30-(18.41-6) = 17.59dBm.
2. Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value	
802.11a	802.11ac (VHT20)
	
802.11ac (VHT40)	802.11ac (VHT80)
	

Test Mode C

For U-NII-1 Band (Outdoor Access Point)

802.11a

Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)		Duty Factor (dB)	Total PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1				
36	5180	-1.39	0.54	0.17	2.86	14.82	Pass
40	5200	-1.18	0.96	0.17	3.20	14.82	Pass
48	5240	-1.84	1.36	0.17	3.23	14.82	Pass

Note:
1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = 5.17dBi + 10log(2) = 8.18dBi > 6dBi, so the power density limit shall be reduced to 17-(8.18-6) = 14.82dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11ac (VHT20)

Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)		Total PSD (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1			
36	5180	-1.03	0.96	3.09	14.82	Pass
40	5200	-1.05	1.12	3.18	14.82	Pass
48	5240	-2.32	0.89	2.59	14.82	Pass

Note:
1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = 5.17dBi + 10log(2) = 8.18dBi > 6dBi, so the power density limit shall be reduced to 17-(8.18-6) = 14.82dBm.

802.11ac (VHT40)

Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)		Duty Factor (dB)	Total PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1				
38	5190	-4.19	-2.29	0.19	0.06	14.82	Pass
46	5230	-4.25	-2.20	0.19	0.10	14.82	Pass

Note:
1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = 5.17dBi + 10log(2) = 8.18dBi > 6dBi, so the power density limit shall be reduced to 17-(8.18-6) = 14.82dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

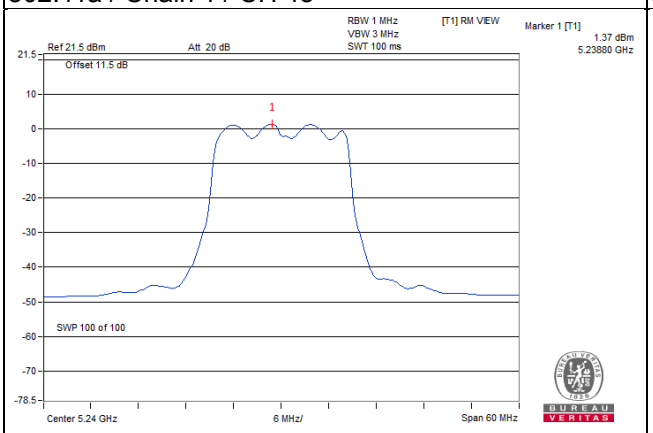
802.11ac (VHT80)

Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)		Duty Factor (dB)	Total PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1				
42	5210	-7.86	-6.05	0.38	-3.47	14.82	Pass

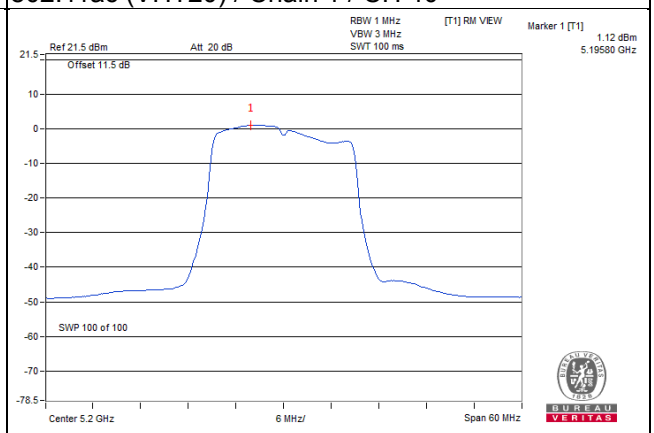
Note:
1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = 5.17dBi + 10log(2) = 8.18dBi > 6dBi, so the power density limit shall be reduced to 17-(8.18-6) = 14.82dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value

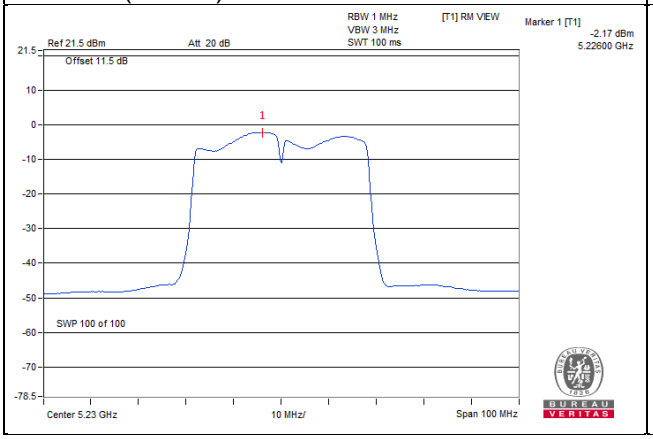
802.11a / Chain 1 / CH 48



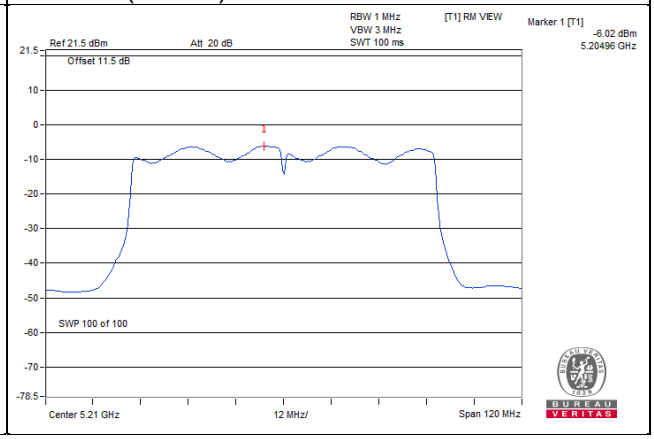
802.11ac (VHT20) / Chain 1 / CH 40



802.11ac (VHT40)/ Chain 1 / CH 46



802.11ac (VHT80) / Chain 1 / CH 42



For U-NII-1 Band (Client device)

802.11a

Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)		Duty Factor (dB)	Total PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1				
36	5180	-1.39	0.54	0.17	2.86	8.82	Pass
40	5200	-1.18	0.96	0.17	3.20	8.82	Pass
48	5240	-1.84	1.36	0.17	3.23	8.82	Pass

Note:
1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = 5.17dBi + 10log(2) = 8.18dBi > 6dBi, so the power density limit shall be reduced to 11-(8.18-6) = 8.82dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11ac (VHT20)

Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)		Total PSD (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1			
36	5180	-1.03	0.96	3.09	8.82	Pass
40	5200	-1.05	1.12	3.18	8.82	Pass
48	5240	-2.32	0.89	2.59	8.82	Pass

Note:
1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = 5.17dBi + 10log(2) = 8.18dBi > 6dBi, so the power density limit shall be reduced to 11-(8.18-6) = 8.82dBm.

802.11ac (VHT40)

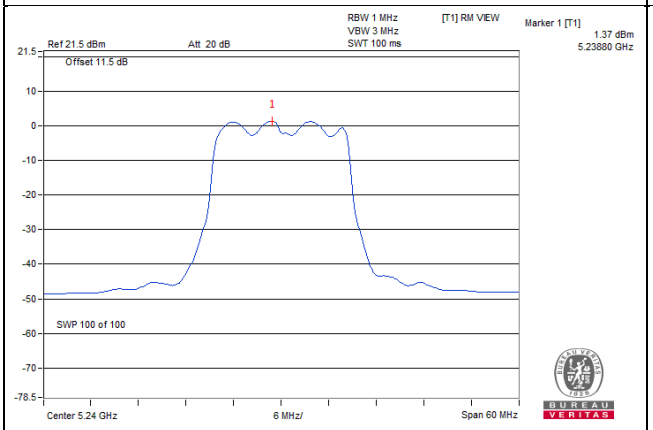
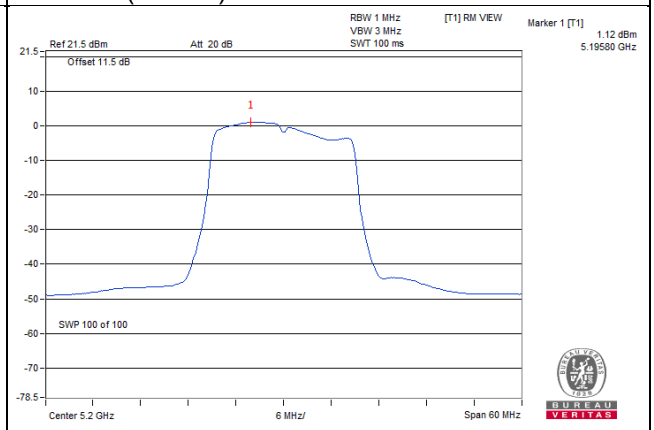
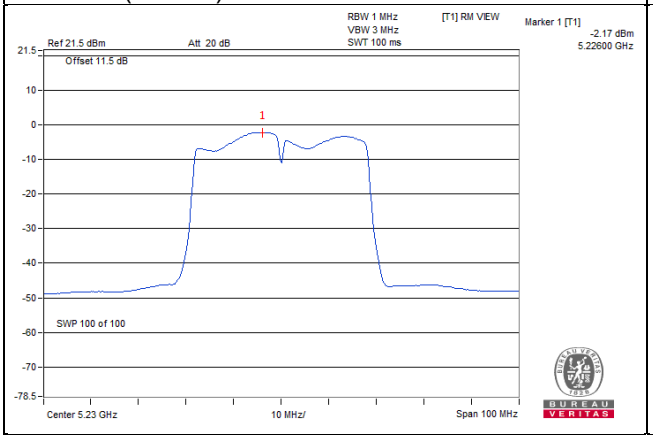
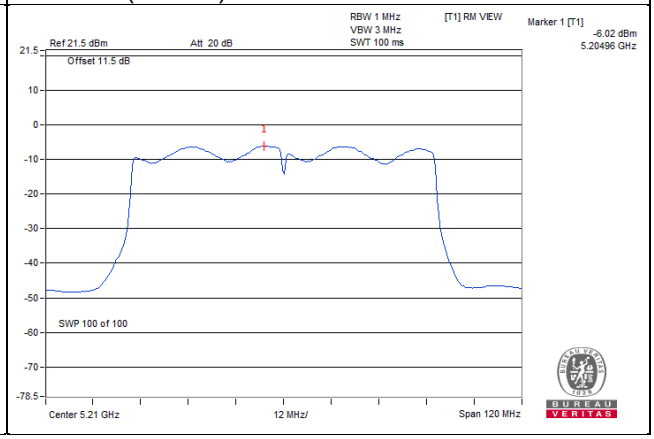
Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)		Duty Factor (dB)	Total PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1				
38	5190	-4.19	-2.29	0.19	0.06	8.82	Pass
46	5230	-4.25	-2.20	0.19	0.10	8.82	Pass

Note:
1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = 5.17dBi + 10log(2) = 8.18dBi > 6dBi, so the power density limit shall be reduced to 11-(8.18-6) = 8.82dBm.
3. 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)	Total PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1				
42	5210	-7.86	-6.05	0.38	-3.47	8.82	Pass

Note:
1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = 5.17dBi + 10log(2) = 8.18dBi > 6dBi, so the power density limit shall be reduced to 11-(8.18-6) = 8.82dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value	
802.11a / Chain 1 / CH 48	802.11ac (VHT20) / Chain 1 / CH 40
	
802.11ac (VHT40)/ Chain 1 / CH 46	802.11ac (VHT80) / Chain 1 / CH 42
	

For U-NII-3 Band

802.11a

TX chain	Chan.	Freq. (MHz)	PSD W/O Duty Factor		10 log (N=2) dB	Duty Factor (dB)	Total PSD With Duty Factor (dBm/500kHz)	Limit (dBm/ 500kHz)	Pass / Fail
			(dBm/300kHz)	(dBm/500kHz)					
0	149	5745	0.10	2.32	3.01	0.17	5.50	27.82	Pass
	157	5785	-0.24	1.98	3.01	0.17	5.16	27.82	Pass
	165	5825	0.21	2.43	3.01	0.17	5.61	27.82	Pass
1	149	5745	2.03	4.25	3.01	0.17	7.43	27.82	Pass
	157	5785	1.56	3.78	3.01	0.17	6.96	27.82	Pass
	165	5825	1.37	3.59	3.01	0.17	6.77	27.82	Pass

Note:
1. Directional gain = 5.17dBi + 10log(2) = 8.18dBi > 6dBi, so the power density limit shall be reduced to 30-(8.18-6) = 27.82dBm.
2. Refer to section 3.3 for duty cycle spectrum plot.

802.11n (HT20)

TX chain	Chan.	Freq. (MHz)	PSD (dBm/300 kHz)	PSD (dBm/500 kHz)	10 log (N=2) dB	Total PSD (dBm/500 kHz)	Limit (dBm/500 kHz)	Pass / Fail
0	149	5745	-0.01	2.21	3.01	5.22	27.82	Pass
	157	5785	0.06	2.28	3.01	5.29	27.82	Pass
	165	5825	0.03	2.25	3.01	5.26	27.82	Pass
1	149	5745	1.72	3.94	3.01	6.95	27.82	Pass
	157	5785	1.10	3.32	3.01	6.33	27.82	Pass
	165	5825	0.91	3.13	3.01	6.14	27.82	Pass

Note:
1. Directional gain = 5.17dBi + 10log(2) = 8.18dBi > 6dBi, so the power density limit shall be reduced to 30-(8.18-6) = 27.82dBm.

802.11n (HT40)

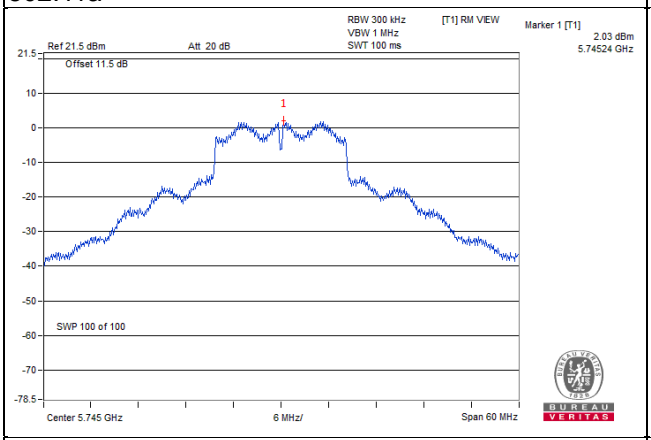
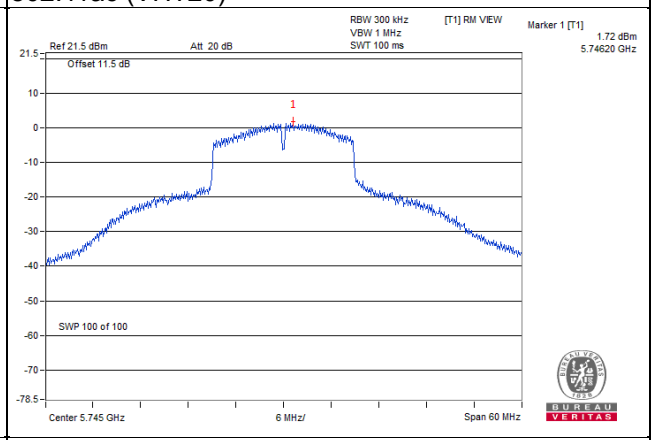
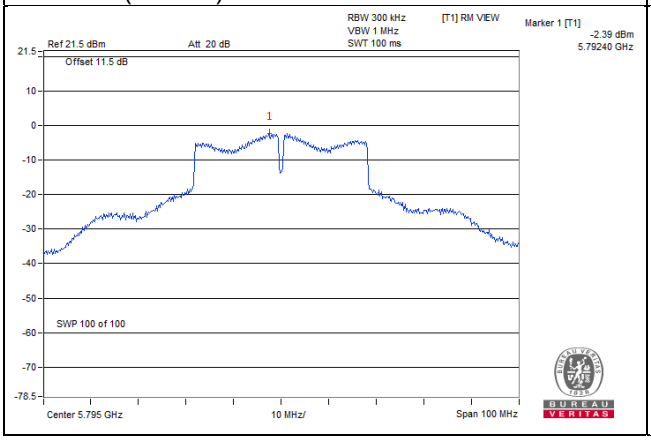
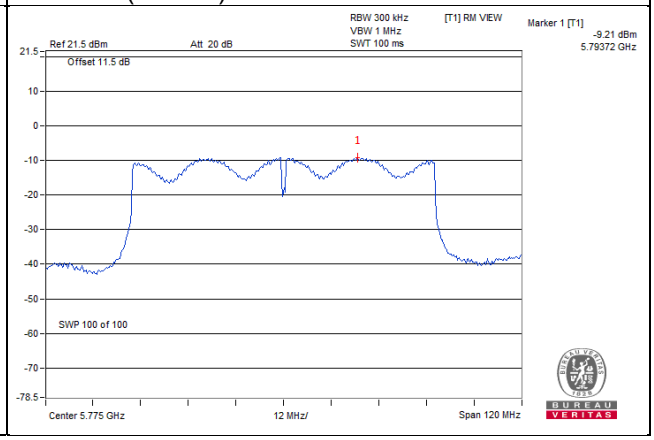
TX chain	Chan.	Freq. (MHz)	PSD W/O Duty Factor		10 log (N=2) dB	Duty Factor (dB)	Total PSD With Duty Factor (dBm/500kHz)	Limit (dBm/ 500kHz)	Pass / Fail
			(dBm/300kHz)	(dBm/500kHz)					
0	151	5755	-4.39	-2.17	3.01	0.19	1.03	27.82	Pass
	159	5795	-3.37	-1.15	3.01	0.19	2.05	27.82	Pass
1	151	5755	-3.13	-0.91	3.01	0.19	2.29	27.82	Pass
	159	5795	-2.39	-0.17	3.01	0.19	3.03	27.82	Pass

Note:
1. Directional gain = 5.17dBi + 10log(2) = 8.18dBi > 6dBi, so the power density limit shall be reduced to 30-(8.18-6) = 27.82dBm.
2. Refer to section 3.3 for duty cycle spectrum plot.

802.11ac (VHT80)

TX chain	Chan.	Freq. (MHz)	PSD W/O Duty Factor		10 log (N=2) dB	Duty Factor (dB)	Total PSD With Duty Factor (dBm/500kHz)	Limit (dBm/ 500kHz)	Pass / Fail
			(dBm/300kHz)	(dBm/500kHz)					
0	155	5775	-10.87	-8.65	3.01	0.38	-5.26	27.82	Pass
1	155	5775	-9.21	-6.99	3.01	0.38	-3.60	27.82	Pass

Note:
1. Directional gain = 5.17dBi + 10log(2) = 8.18dBi > 6dBi, so the power density limit shall be reduced to 30-(8.18-6) = 27.82dBm.
2. Refer to section 3.3 for duty cycle spectrum plot.

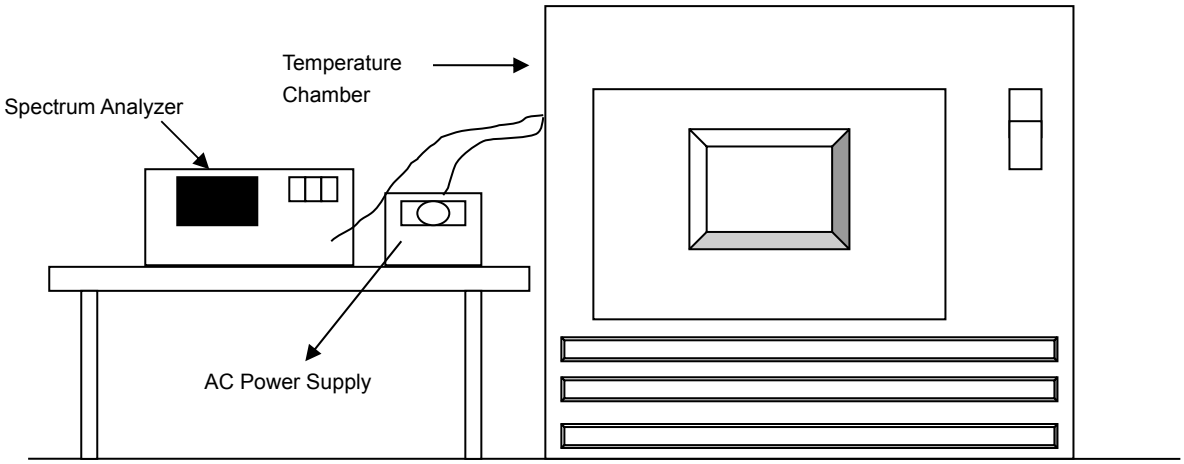
Spectrum Plot of Worst Value	
802.11a	802.11ac (VHT20)
	
802.11ac (VHT40)	802.11ac (VHT80)
	

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. 11, 2018	Jun. 10, 2019
WIT Standard Temperature And Humidity Chamber	TH-4S-C	W981030	Jun. 04, 2018	Jun. 03, 2019
Digital Multimeter Fluke	87-III	70360742	Jun. 29, 2018	Jun. 28, 2019
AC Power Supply Extech	CFW-105	E000603	NA	NA

4.6.4 Test Procedure

a. The EUT was placed inside the environmental test chamber and powered by nominal AC voltage.

b. Turn the EUT on and couple its output to a spectrum analyzer.

c. Turn the EUT off and set the chamber to the highest temperature specified.

d. Allow sufficient time (approximately 30 min) for the temperature of the chamber to stabilize, turn the EUT on and measure the operating frequency after 2, 5, and 10 minutes.

e. Repeat step c and d with every 10 degrees reduction until the lowest temperature achieved.

f. The test chamber was allowed to stabilize at +20 degree C for a minimum of 30 minutes. The supply voltage was then adjusted on the EUT from 85% to 115% and the frequency record.

4.6.5 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

Test Mode A

Frequency Stability Versus Temp.									
Operating Frequency: 5180MHz									
Temp. (℃)	Power Supply (Vac)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result
50	120	5179.9943	Pass	5179.997	Pass	5179.995	Pass	5179.9969	Pass
40	120	5180.0255	Pass	5180.0259	Pass	5180.0264	Pass	5180.0244	Pass
30	120	5179.9777	Pass	5179.9776	Pass	5179.9784	Pass	5179.9757	Pass
20	120	5179.997	Pass	5179.9953	Pass	5179.9953	Pass	5179.9975	Pass
10	120	5180.0135	Pass	5180.0111	Pass	5180.0114	Pass	5180.0134	Pass
0	120	5180.0209	Pass	5180.018	Pass	5180.0202	Pass	5180.017	Pass
-10	120	5179.9763	Pass	5179.9761	Pass	5179.9792	Pass	5179.9787	Pass
-20	120	5179.9847	Pass	5179.9863	Pass	5179.9849	Pass	5179.9861	Pass
-30	120	5180.0093	Pass	5180.0083	Pass	5180.0096	Pass	5180.0091	Pass

Frequency Stability Versus Voltage									
Operating Frequency: 5180MHz									
Temp. (℃)	Power Supply (Vac)	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	138	5179.9979	Pass	5179.9951	Pass	5179.995	Pass	5179.9981	Pass
	120	5179.997	Pass	5179.9953	Pass	5179.9953	Pass	5179.9975	Pass
	102	5179.9964	Pass	5179.9952	Pass	5179.9958	Pass	5179.9982	Pass

Test Mode B

Frequency Stability Versus Temp.									
Operating Frequency: 5180MHz									
Temp. (℃)	Power Supply (Vac)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result
50	120	5180.0087	Pass	5180.0098	Pass	5180.0113	Pass	5180.012	Pass
40	120	5180.0009	Pass	5180.0033	Pass	5180.0018	Pass	5179.9991	Pass
30	120	5179.9797	Pass	5179.9792	Pass	5179.9799	Pass	5179.9761	Pass
20	120	5180.0153	Pass	5180.0178	Pass	5180.0144	Pass	5180.0148	Pass
10	120	5179.994	Pass	5179.991	Pass	5179.9919	Pass	5179.9909	Pass
0	120	5180.0117	Pass	5180.0076	Pass	5180.0071	Pass	5180.0108	Pass
-10	120	5179.9985	Pass	5180.0033	Pass	5180.0007	Pass	5180.0004	Pass
-20	120	5180.01	Pass	5180.0125	Pass	5180.0126	Pass	5180.013	Pass
-30	120	5180.0059	Pass	5180.0023	Pass	5180.0049	Pass	5180.0045	Pass

Frequency Stability Versus Voltage									
Operating Frequency: 5180MHz									
Temp. (℃)	Power Supply (Vac)	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	138	5180.0152	Pass	5180.0175	Pass	5180.0146	Pass	5180.0145	Pass
	120	5180.0153	Pass	5180.0178	Pass	5180.0144	Pass	5180.0148	Pass
	102	5180.015	Pass	5180.0181	Pass	5180.0147	Pass	5180.0143	Pass

Test Mode C

Frequency Stability Versus Temp.									
Operating Frequency: 5180MHz									
Temp. (℃)	Power Supply (Vac)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result
50	120	5180.0024	Pass	5180.0057	Pass	5180.0062	Pass	5180.0027	Pass
40	120	5179.9966	Pass	5179.9993	Pass	5179.9951	Pass	5179.9959	Pass
30	120	5180.0204	Pass	5180.0202	Pass	5180.0206	Pass	5180.0209	Pass
20	120	5179.9898	Pass	5179.9916	Pass	5179.9881	Pass	5179.9895	Pass
10	120	5179.9955	Pass	5179.9961	Pass	5179.9921	Pass	5179.9935	Pass
0	120	5180.0057	Pass	5180.0058	Pass	5180.0061	Pass	5180.008	Pass
-10	120	5179.9873	Pass	5179.985	Pass	5179.9835	Pass	5179.9884	Pass
-20	120	5179.9918	Pass	5179.9938	Pass	5179.9931	Pass	5179.9965	Pass
-30	120	5180.0207	Pass	5180.0209	Pass	5180.0232	Pass	5180.0216	Pass

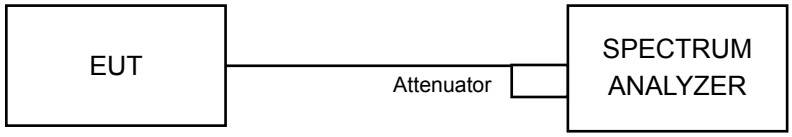
Frequency Stability Versus Voltage									
Operating Frequency: 5180MHz									
Temp. (℃)	Power Supply (Vac)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result
20	138	5179.9894	Pass	5179.9909	Pass	5179.9886	Pass	5179.9896	Pass
	120	5179.9898	Pass	5179.9916	Pass	5179.9881	Pass	5179.9895	Pass
	102	5179.9895	Pass	5179.9922	Pass	5179.9878	Pass	5179.9899	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

a. Set resolution bandwidth (RBW) = 100kHz

b. Set the video bandwidth (VBW) ≥ 3 x RBW, Detector = Peak.

c. Trace mode = max hold.

d. Sweep = auto couple.

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

4.7.5 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

Test Mode A

802.11a

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
149	5745	16.31	15.78	0.5	Pass
157	5785	16.37	15.15	0.5	Pass
165	5825	16.37	14.45	0.5	Pass

802.11ac (VHT20)

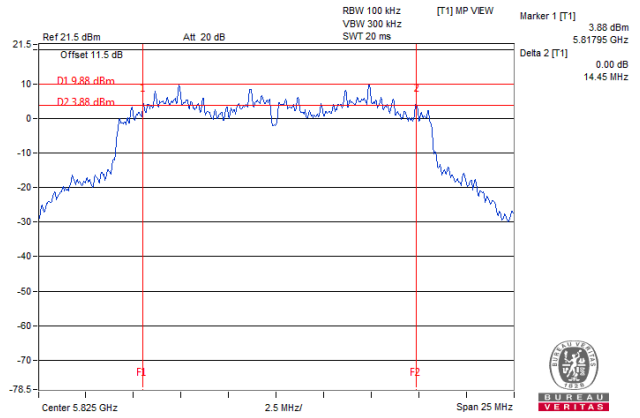
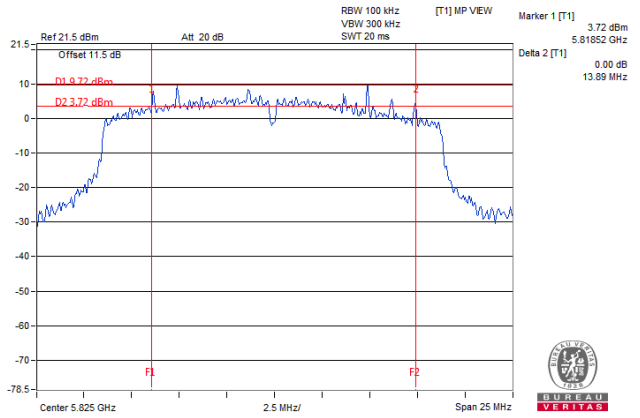
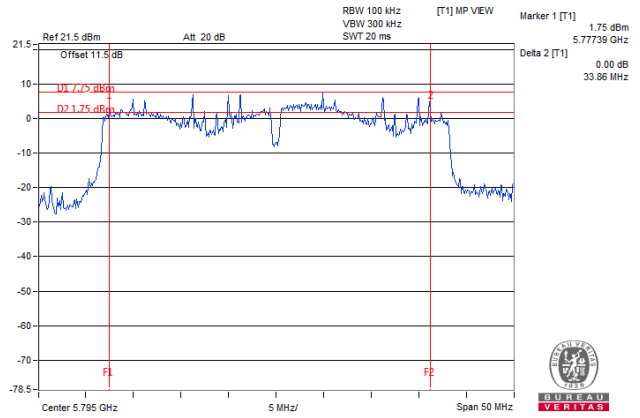
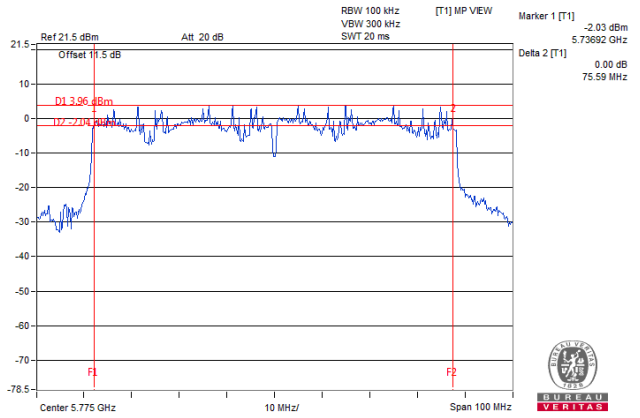
Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
149	5745	17.61	16.66	0.5	Pass
157	5785	17.58	15.12	0.5	Pass
165	5825	17.57	13.89	0.5	Pass

802.11ac (VHT40)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
151	5755	35.43	35.16	0.5	Pass
159	5795	35.22	33.86	0.5	Pass

802.11ac (VHT80)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
155	5775	75.98	75.59	0.5	Pass

Spectrum Plot of Worst Value	
802.11a	802.11ac (VHT20)
	
802.11ac (VHT40)	802.11ac (VHT80)
	

Test Mode B

802.11a

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
149	5745	15.33	12.62	0.5	Pass
157	5785	16.54	12.69	0.5	Pass
165	5825	16.93	15.67	0.5	Pass

802.11ac (VHT20)

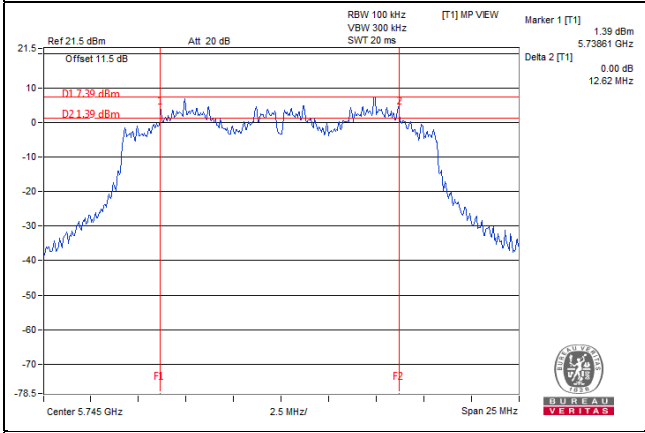
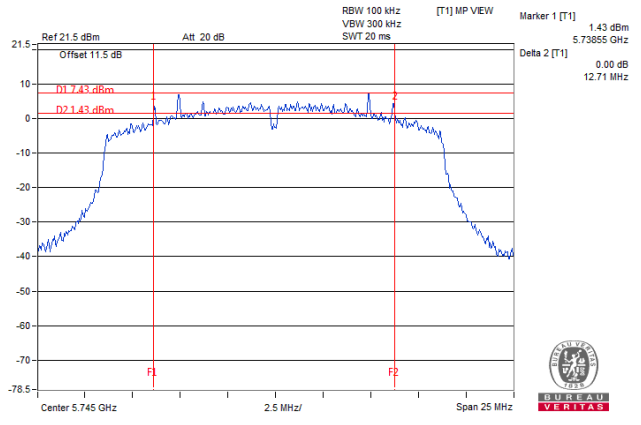
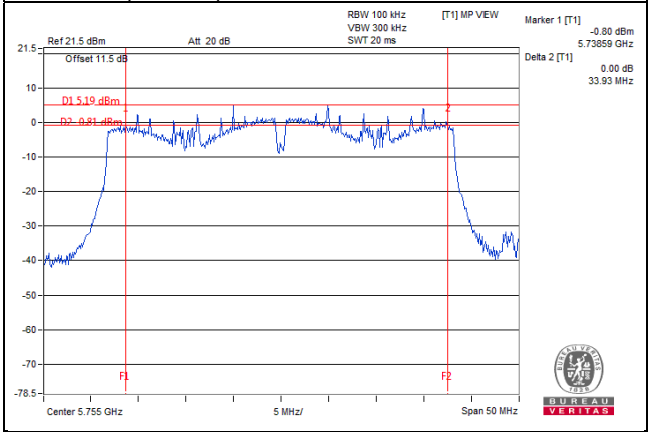
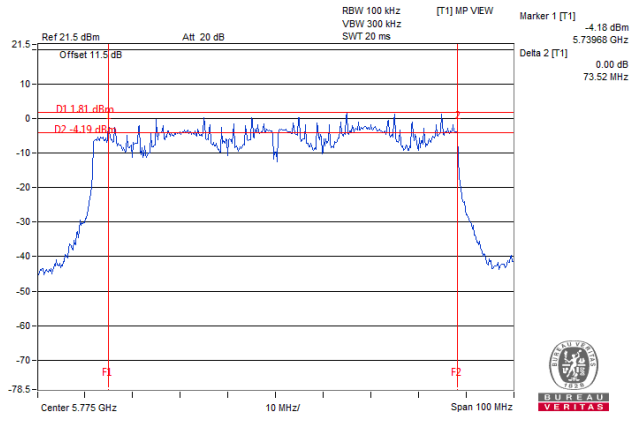
Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
149	5745	15.73	12.71	0.5	Pass
157	5785	15.75	13.22	0.5	Pass
165	5825	16.93	15.12	0.5	Pass

802.11ac (VHT40)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
151	5755	35.19	33.93	0.5	Pass
159	5795	35.45	34.15	0.5	Pass

802.11ac (VHT80)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
155	5775	75.72	73.52	0.5	Pass

Spectrum Plot of Worst Value	
802.11a	802.11ac (VHT20)
	
802.11ac (VHT40)	802.11ac (VHT80)
	

Test Mode C

802.11a

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
149	5745	15.49	15.07	0.5	Pass
157	5785	15.97	13.88	0.5	Pass
165	5825	15.86	12.68	0.5	Pass

802.11ac (VHT20)

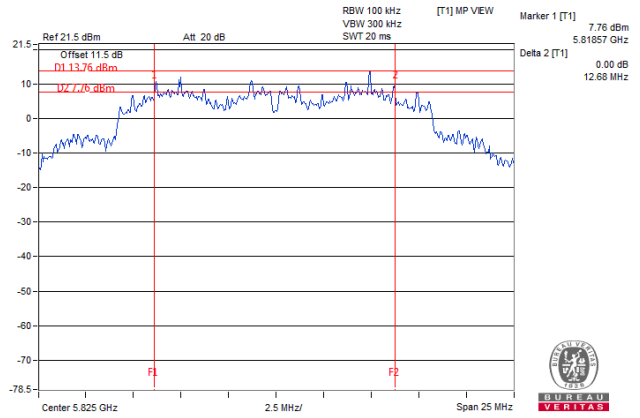
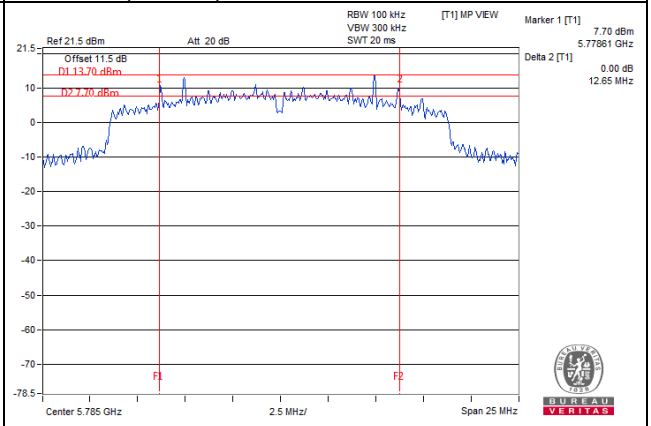
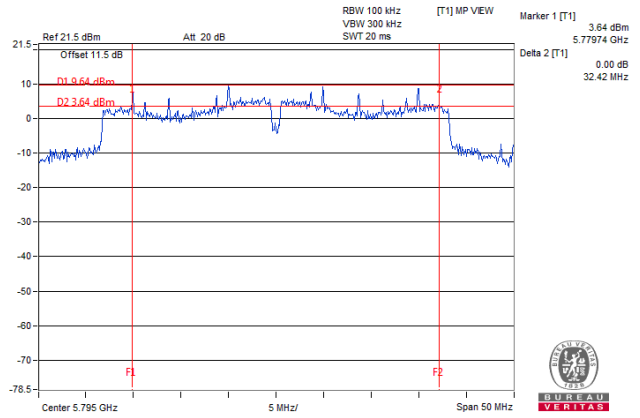
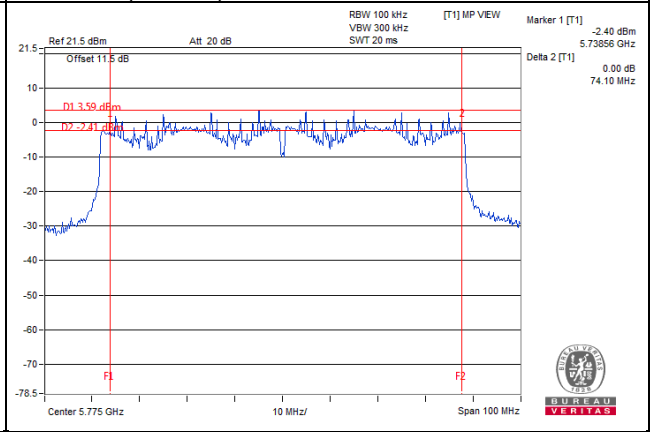
Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
149	5745	17.26	13.87	0.5	Pass
157	5785	17.62	12.65	0.5	Pass
165	5825	16.95	12.67	0.5	Pass

802.11ac (VHT40)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
151	5755	35.26	33.90	0.5	Pass
159	5795	35.17	32.42	0.5	Pass

802.11ac (VHT80)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
155	5775	75.82	74.10	0.5	Pass

Spectrum Plot of Worst Value	
802.11a	802.11ac (VHT20)
	
802.11ac (VHT40)	802.11ac (VHT80)
	

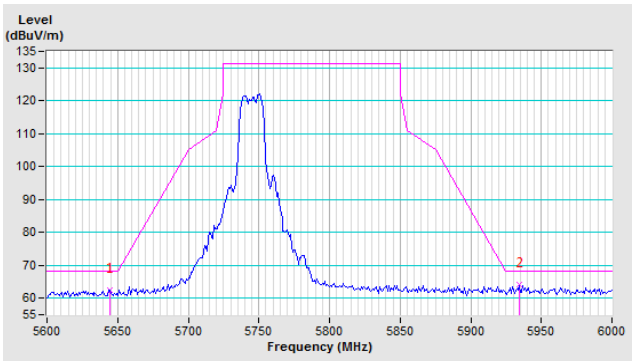
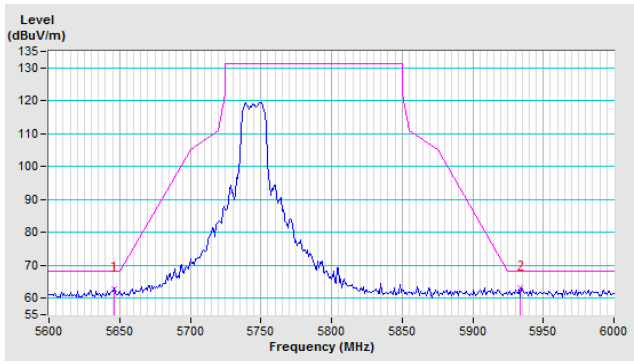
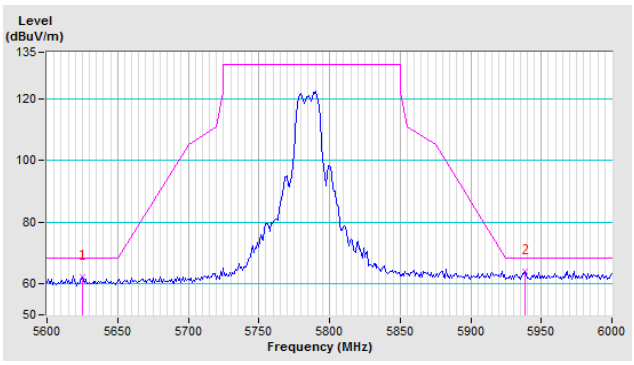
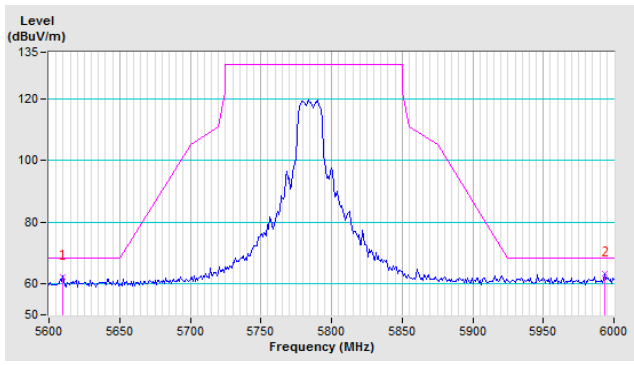
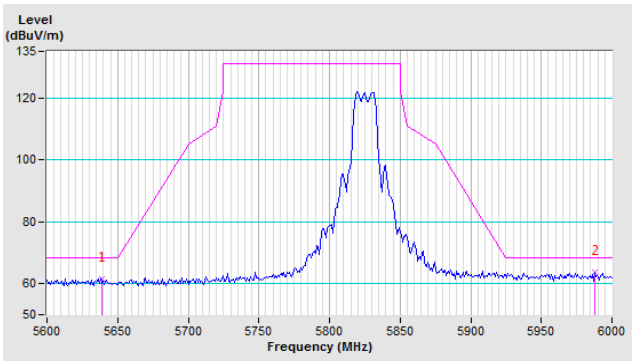
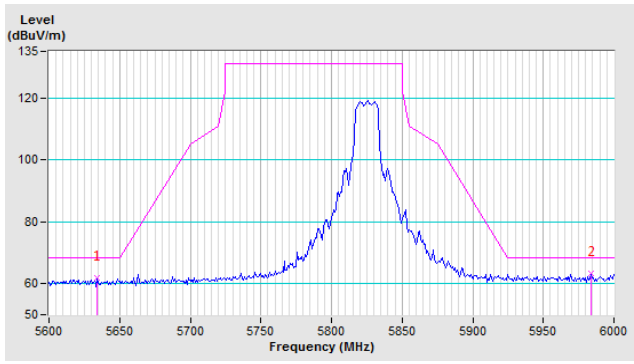
5 Pictures of Test Arrangements

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

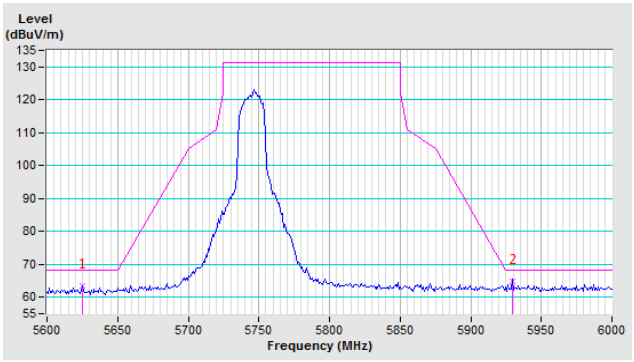
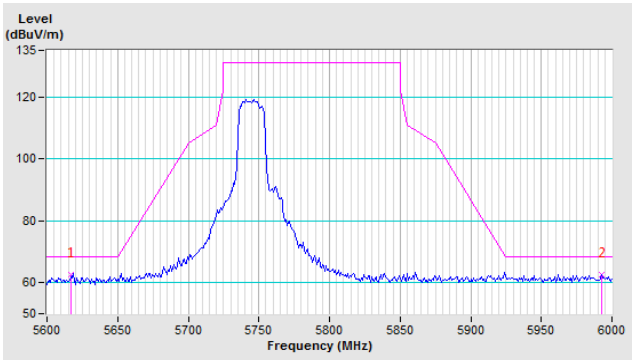
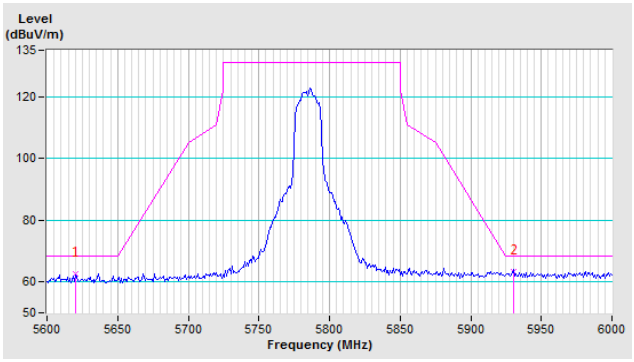
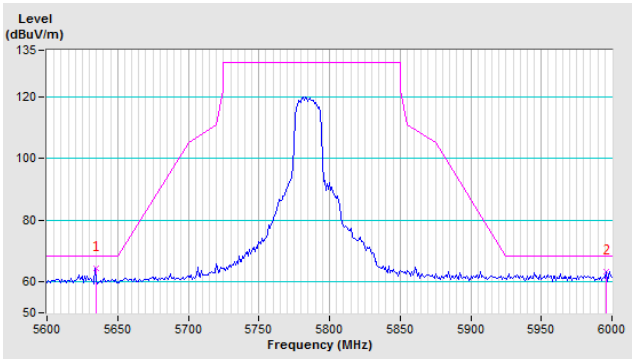
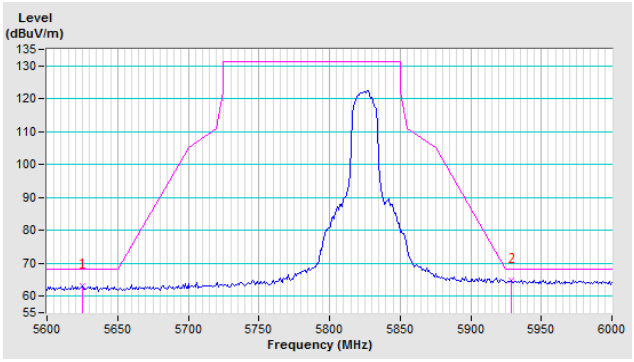
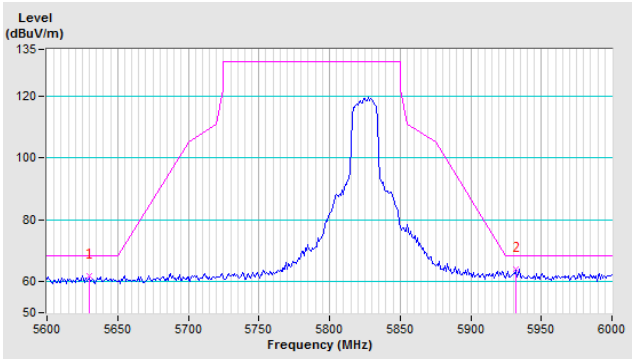
Annex A- Radiated Out of Band Emission (OOBE) Measurement (For U-NII-3 band)

Test Mode A

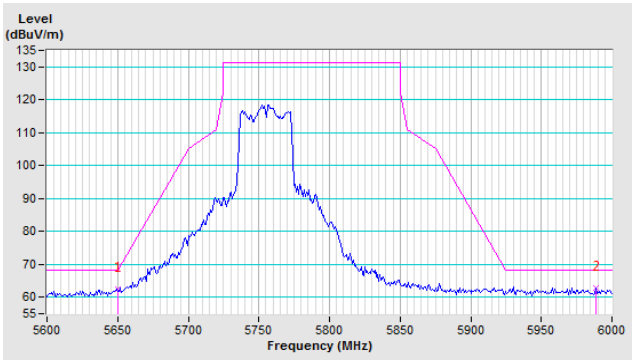
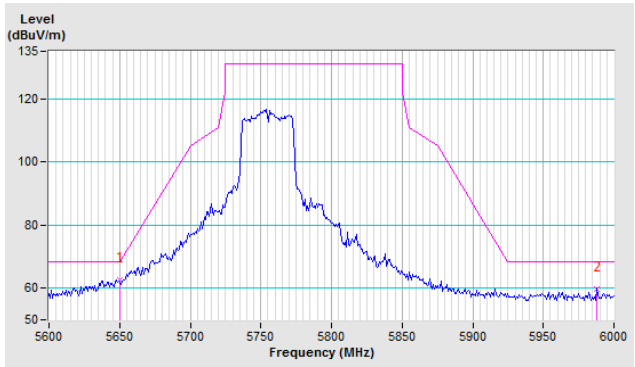
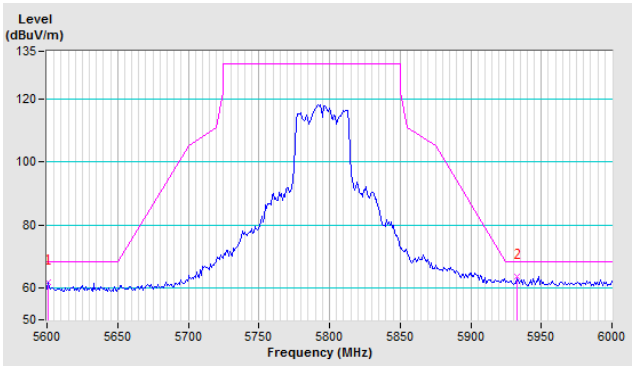
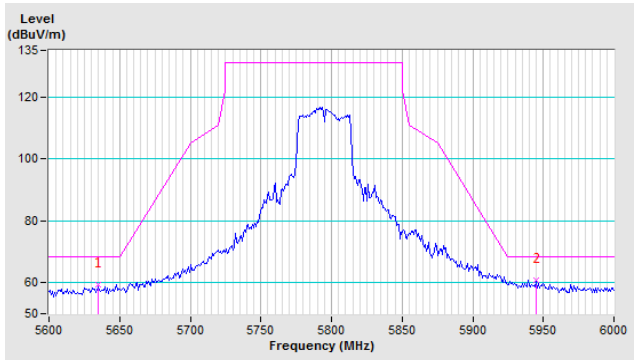
802.11a

CH149	
Horizontal	Vertical
	
CH157	
Horizontal	Vertical
	
CH165	
Horizontal	Vertical
	

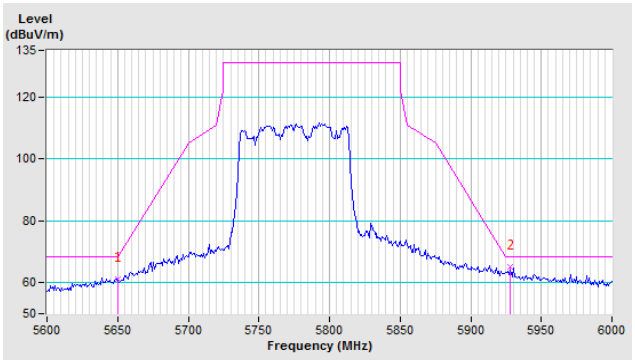
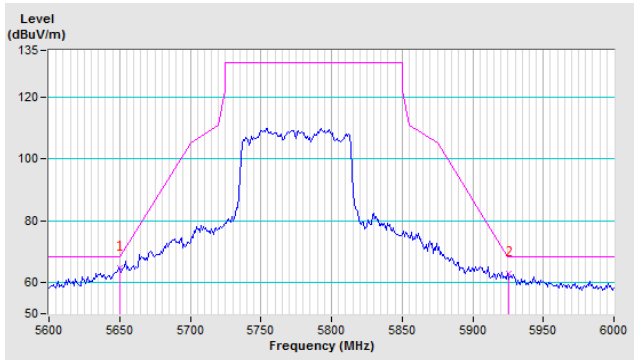
802.11ac (VHT20)

CH149	
Horizontal	Vertical
	
CH157	
Horizontal	Vertical
	
CH165	
Horizontal	Vertical
	

802.11ac (VHT40)

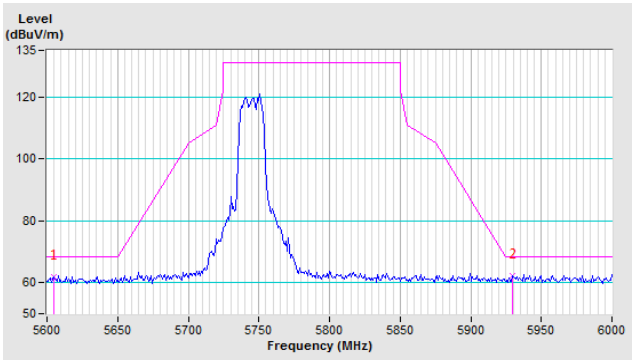
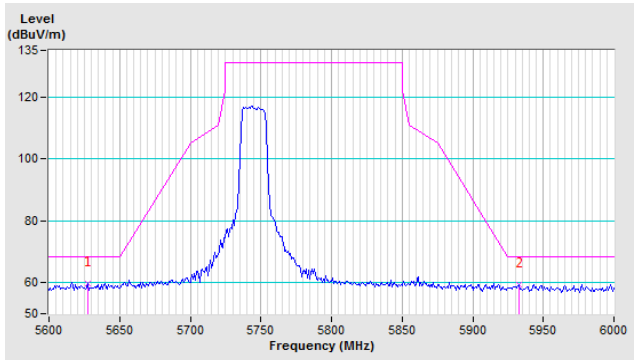
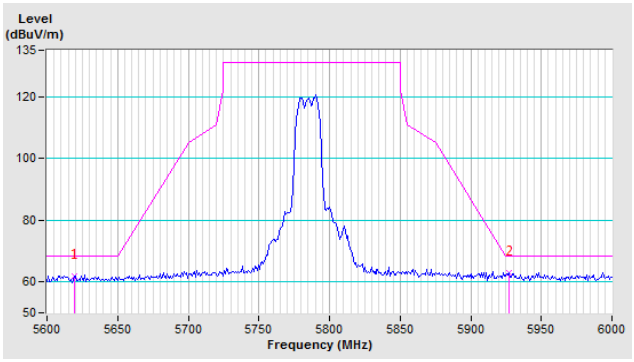
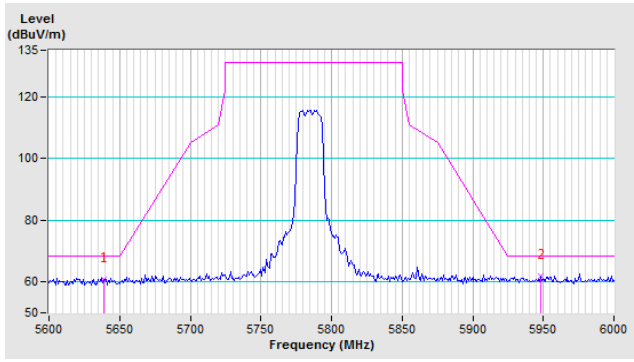
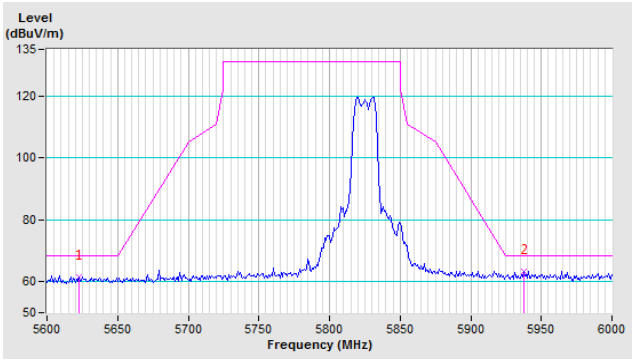
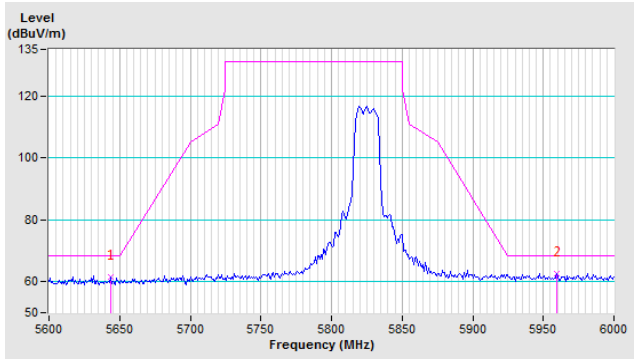
CH151	
Horizontal	Vertical
	
CH159	
Horizontal	Vertical
	

802.11ac (VHT80)

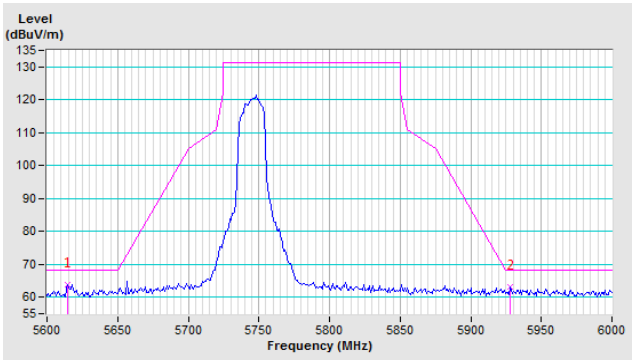
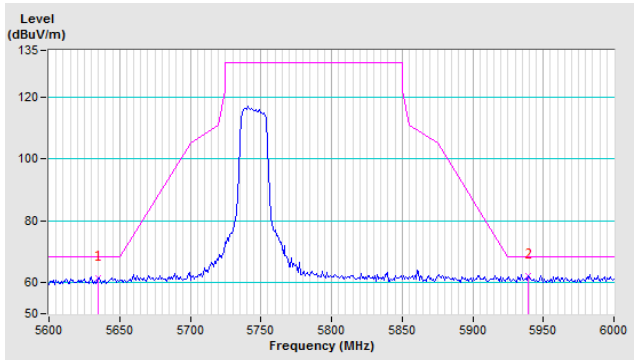
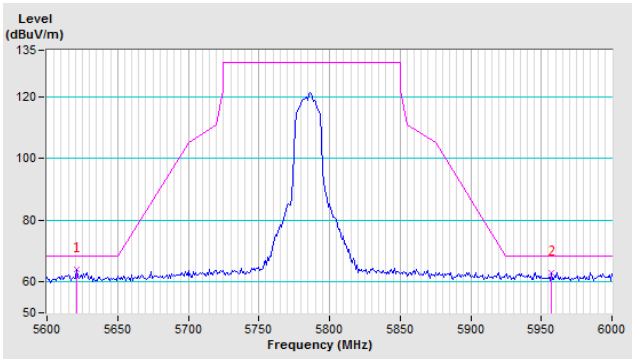
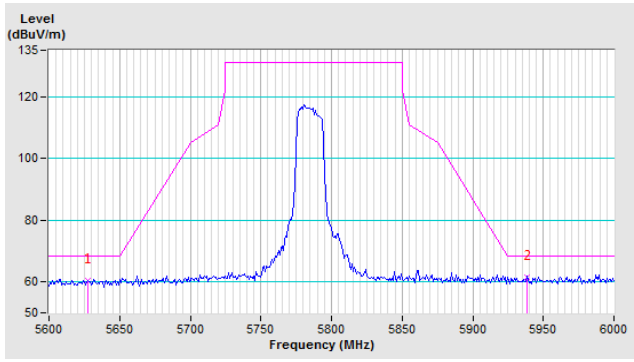
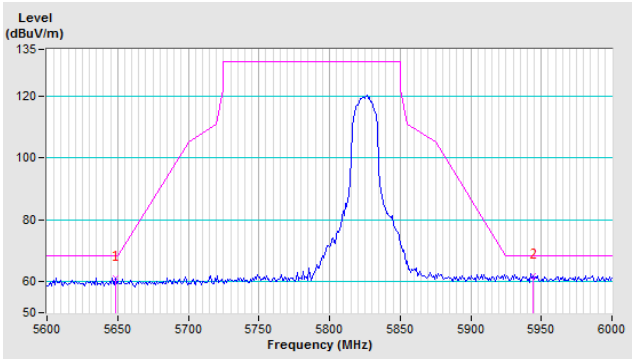
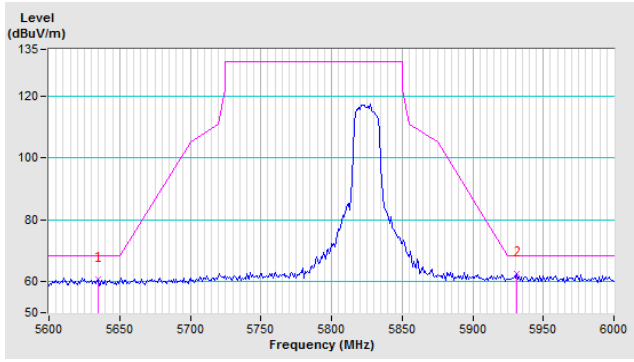
CH155	
Horizontal	Vertical
	

Test Mode B

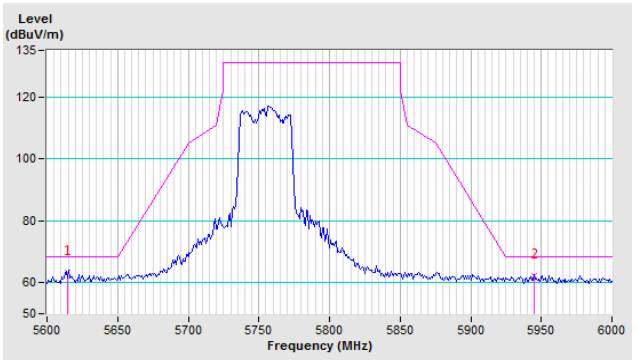
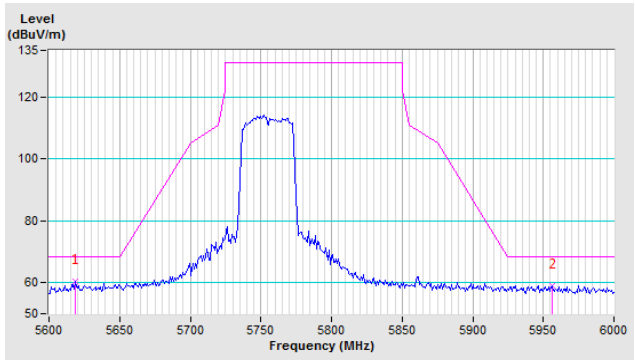
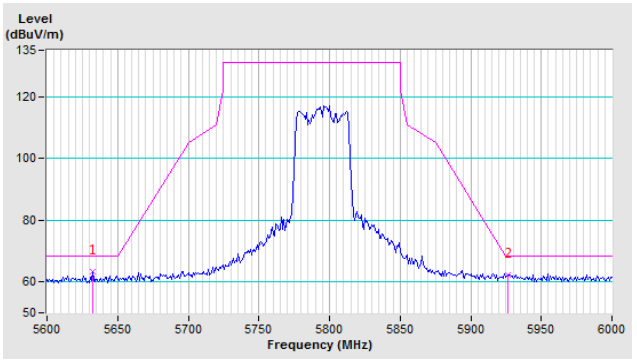
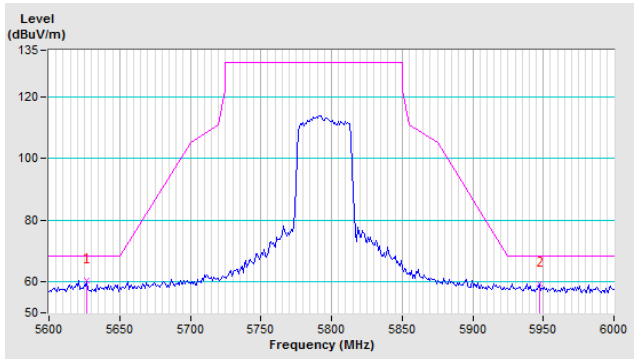
802.11a

CH149	
Horizontal	Vertical
	
CH157	
Horizontal	Vertical
	
CH165	
Horizontal	Vertical
	

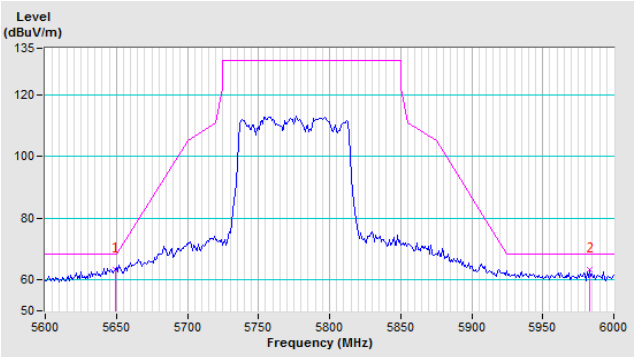
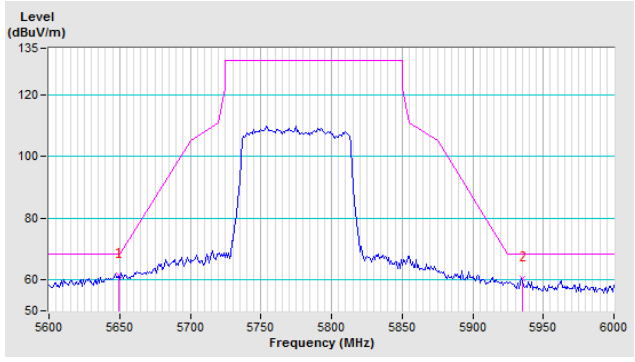
802.11ac (VHT20)

CH149	
Horizontal	Vertical
	
CH157	
Horizontal	Vertical
	
CH165	
Horizontal	Vertical
	

802.11ac (VHT40)

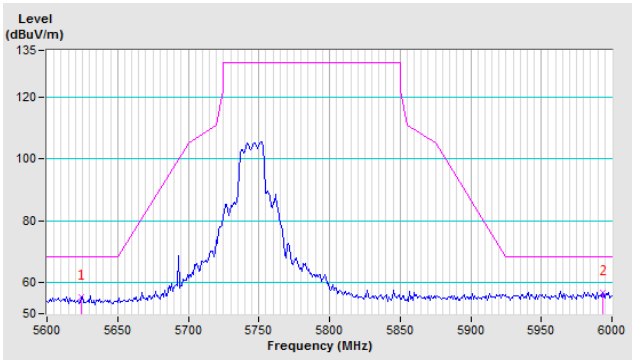
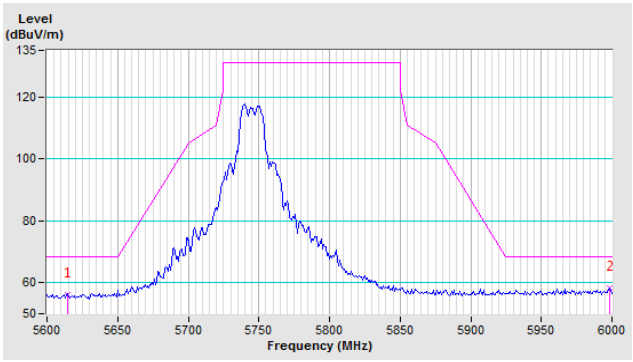
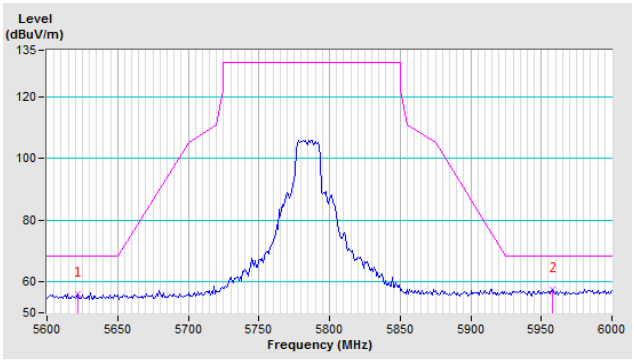
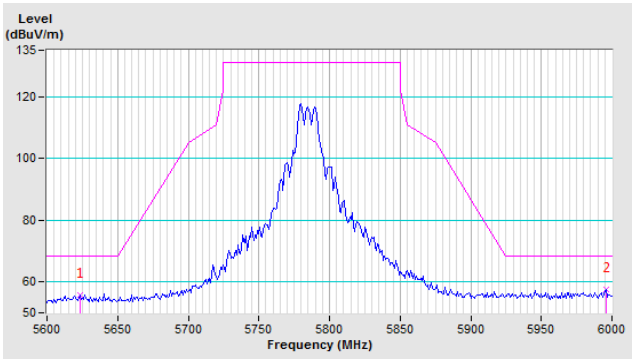
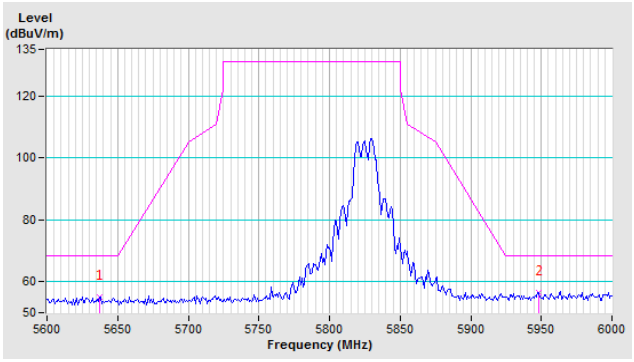
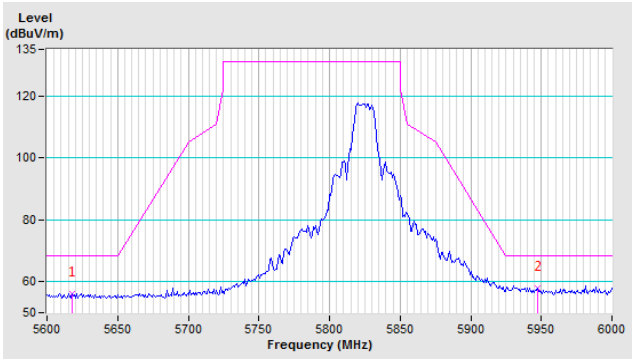
CH151	
Horizontal	Vertical
	
CH159	
Horizontal	Vertical
	

802.11ac (VHT80)

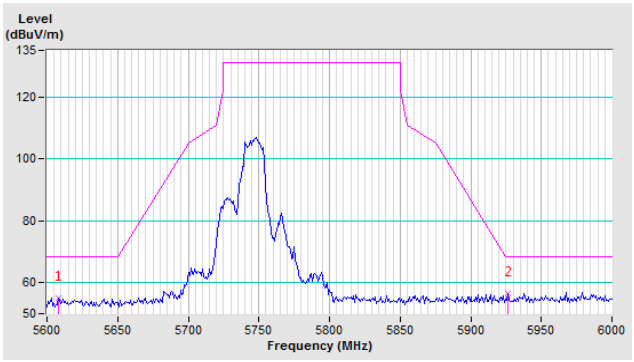
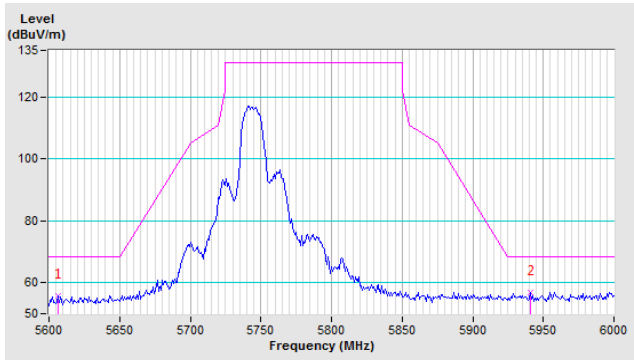
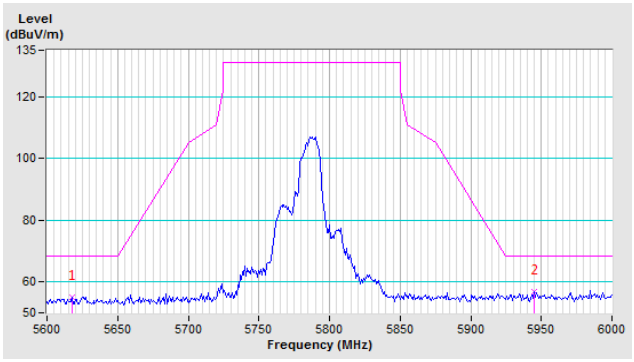
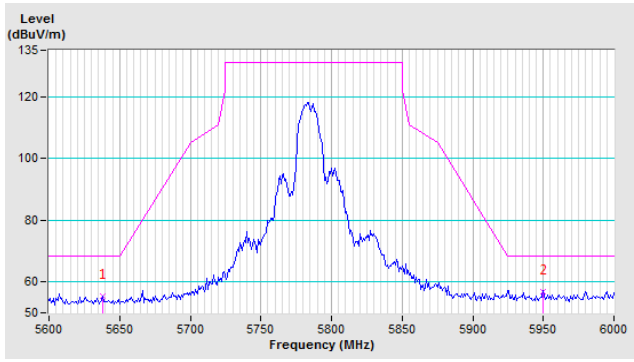
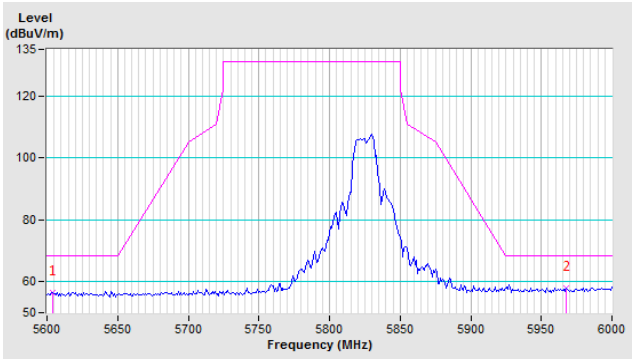
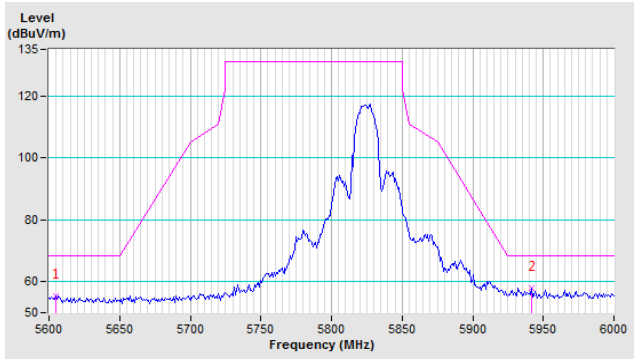
CH155	
Horizontal	Vertical
	

Test Mode C

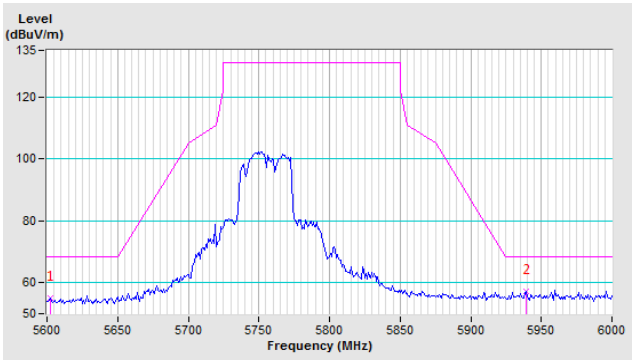
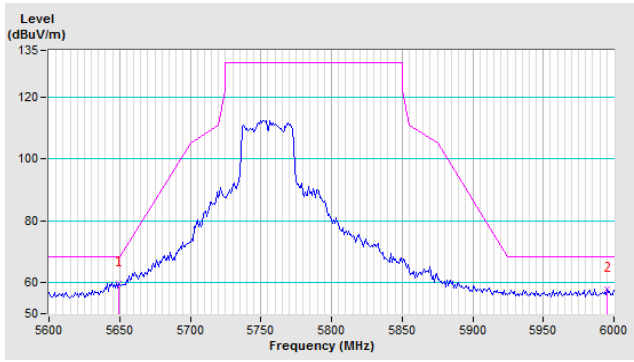
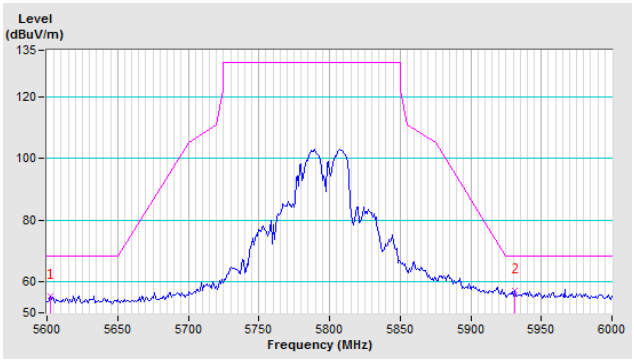
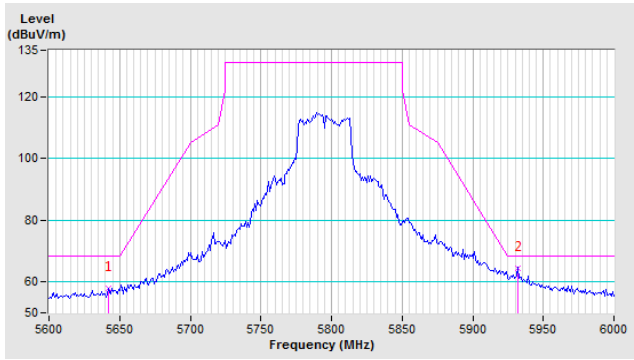
802.11a

CH149	
Horizontal	Vertical
	
CH157	
Horizontal	Vertical
	
CH165	
Horizontal	Vertical
	

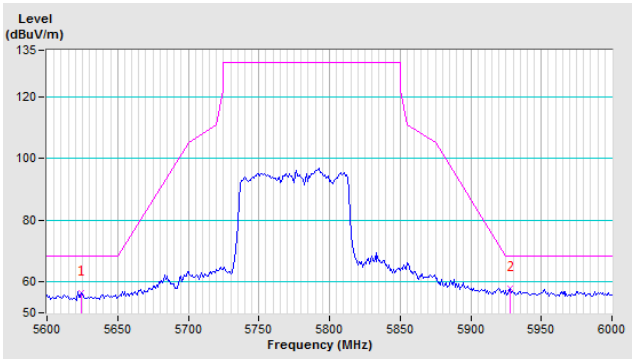
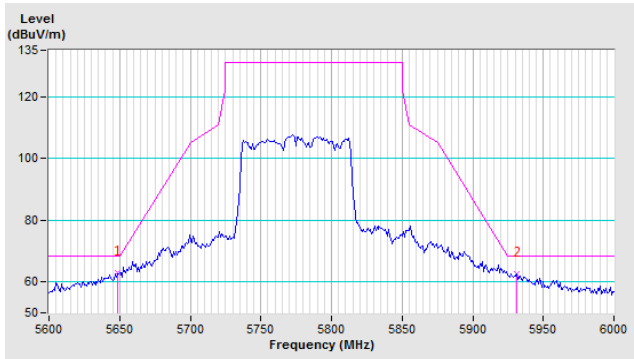
802.11ac (VHT20)

CH149	
Horizontal	Vertical
	
CH157	
Horizontal	Vertical
	
CH165	
Horizontal	Vertical
	

802.11ac (VHT40)

CH151	
Horizontal	Vertical
	
CH159	
Horizontal	Vertical
	

802.11ac (VHT80)

CH155	
Horizontal	Vertical
	

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.

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

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