FCC Test Report

Report No.:	RF180730C06D
FCC ID:	XU8TEW840APBO
Test Model:	TEW-840APBO, TEW-842APBO, TEW-844APBO
Series Model:	TEW-840APBO2K, TEW-844APBO2K (Refer to item 3.1 for more details)
Received Date:	Mar. 21, 2019
Test Date:	Apr. 11 ~ Apr. 13, 2019
Issued Date:	Apr. 19, 2019
Applicant:	TRENDnet, Inc.
Address:	20675 Manhattan Place, Torrance, CA 90501 U.S.A.
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

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Release Control Record

Issue No.	Description	Date Issued
RF180730C06D	Original release	Apr. 19, 2019

1 Certificate of Conformity

Product:	14 dBi WiFi AC867 Outdoor Directional PoE Access Point (Refer to item 3.1 for more details)
Brand:	TRENDnet
Test Model:	TEW-840APBO, TEW-842APBO, TEW-844APBO
Series Model:	TEW-840APBO2K, TEW-844APBO2K (Refer to item 3.1 for more details)
Sample Status:	Engineering sample
Applicant:	TRENDnet, Inc.
Test Date:	Apr. 11 ~ Apr. 13, 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 : _____ , **Date:** Apr. 19, 2019
Polly Chien / Specialist

Approved by : _____ , **Date:** Apr. 19, 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 -11.64dB at 0.15391MHz.
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 -1.1dB at 62.04MHz.
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	2.94 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	14 dBi WiFi AC867 Outdoor Directional PoE Access Point (Refer to note for more details)
Brand	TRENDnet
Test Model	TEW-840APBO, TEW-842APBO, TEW-844APBO
Series Model	TEW-840APBO2K, TEW-844APBO2K
Model Difference	Refer to note for more details
Sample Status	Engineering sample
Power Supply Rating	24Vdc from PoE
Modulation Type	256QAM, 64QAM, 16QAM, QPSK, BPSK
Modulation Technology	OFDM
Transfer Rate	802.11a: 54/48/36/24/18/12/9/6Mbps 802.11n: up to 300Mbps 802.11ac: up to 867Mbps
Operating Frequency	5180 ~ 5240MHz, 5745 ~ 5825MHz
Number of Channel	5180 ~ 5240MHz: 802.11a, 802.11n (HT20), 802.11ac (VHT20): 4 802.11n (HT40), 802.11ac (VHT40): 2 802.11ac (VHT80): 1 5745 ~ 5825MHz: 802.11a, 802.11n (HT20), 802.11ac (VHT20): 5 802.11n (HT40), 802.11ac (VHT40): 2 802.11ac (VHT80): 1
Output Power	Test Mode A (Patch Ant. for model: TEW-840APBO and TEW-840APBO2K) CDD Mode: 5180 ~ 5240MHz: 31.697mW 5745 ~ 5825MHz: 169.453mW Beamforming Mode: 5180 ~ 5240MHz: 15.815mW 5745 ~ 5825MHz: 83.287mW Test Mode B (Dipole Ant. for model: TEW-842APBO) CDD Mode: 5180 ~ 5240MHz: 42.907mW 5745 ~ 5825MHz: 468.772mW Beamforming Mode: 5180 ~ 5240MHz: 21.455mW 5745 ~ 5825MHz: 234.403mW Test Mode C (Patch Ant. for model: TEW-844APBO and TEW-844APBO2K) CDD Mode: 5180 ~ 5240MHz: 3.330mW 5745 ~ 5825MHz: 107.077mW Beamforming Mode: 5180 ~ 5240MHz: 1.665mW 5745 ~ 5825MHz: 52.807mW

Antenna Type	Refer to note
Antenna Connector	Refer to note
Accessory Device	PoE
Cable Supplied	0.5m non-shielded AC power cable without core

Note:

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

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

* The modulation and bandwidth are similar for 802.11n mode for 20MHz/40MHz and 802.11ac mode for 20MHz/40MHz, therefore investigated worst case to representative mode in test report. (Final test mode refer section 3.2.1)

* For 802.11n and 802.11ac, CDD mode and Beamforming mode are presented in power output test item. For other test items, CDD mode is the worst case for final tests after pretesting.

2. All models are listed as below. Model TEW-840APBO, TEW-842APBO and TEW-844APBO are the representative for final test.

Brand	Model	Product	Difference
TRENDnet	TEW-840APBO	14 dBi WiFi AC867 Outdoor Directional PoE Access Point	Internal direct 14dBi antenna
	TEW-840APBO2K	14 dBi WiFi AC867 Outdoor PoE Preconfigured Point-to-Point Bridge Kit	
	TEW-842APBO	5 dBi Wireless AC867 Outdoor PoE Omni-Directional Access Point	Accessory with external dipole 5dBi*2 antenna
	TEW-844APBO	19 dBi WiFi AC867 Outdoor Directional PoE Access Point	Internal direct 19dBi antenna
	TEW-844APBO2K	19 dBi WiFi AC867 Outdoor PoE Preconfigured Point-to-Point Bridge Kit	

3. The EUT consumes power from the following PoE.

PoE	
Brand	TRENDnet
Model	24VDC0600
Input Power	100-240Vac, 50-60Hz, 0.4A
Output Power	24V / 0.6A PIN 4,5:24V PIN 7,8:RETURN

4. The following antennas were provided to the EUT.

No.	Type	Connector	Gain (dBi)			Remark
1	Patch	I-PEX	Ant. 1 (5150-5850MHz)		Ant. 2 (5150-5850MHz)	For Model: TEW-840APBO and TEW-840APBO2K use only
			13.35		13.42	
2	Dipole	RSMA	5150MHz	5550MHz	5850MHz	For Model: TEW-842APBO use only
			5.12	5.09	5.17	
3	Patch	I-PEX	Ant. 1 (5150-5925MHz)		Ant. 2 (5150-5925MHz)	For Model: TEW-844APBO and TEW-844APBO2K use only
			15.5		15.5	

5. 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

Antenna No.	Antenna gain	Antenna install degree
1	5.46dBi	
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.		
2	4.31dBi	
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	14.42dBi	
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.		

3.2 Description of Test Modes

For 5180 ~ 5240MHz:

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

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

2 channels are provided for 802.11n (HT40):

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):

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

2 channels are provided for 802.11n (HT40):

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: TEW-840APBO
B	√	√	√	√	Model: TEW-842APBO
C	√	√	√	√	Model: TEW-844APBO

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

Radiated Emission Test (Above 1GHz):

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

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

EUT Configure Mode	Mode	Frequency Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Data Rate (Mbps)
A, B, C	802.11a	5180-5240	36 to 48	36, 40, 48	OFDM	6.0
	802.11n (HT20)		36 to 48	36, 40, 48	OFDM	6.5
	802.11n (HT40)		38 to 46	38, 46	OFDM	13.5
	802.11ac (VHT80)		42	42	OFDM	29.3
A, B, C	802.11a	5745-5825	149 to 165	149, 157, 165	OFDM	6.0
	802.11n (HT20)		149 to 165	149, 157, 165	OFDM	6.5
	802.11n (HT40)		151 to 159	151, 159	OFDM	13.5
	802.11ac (VHT80)		155	155	OFDM	29.3

Radiated Emission Test (Below 1GHz):

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

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

EUT Configure Mode	Mode	Frequency Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Data Rate (Mbps)
A, B, C	802.11a	5180-5240	36 to 48	165	OFDM	6.0
	802.11a	5745-5825	149 to 165		OFDM	6.0

Power Line Conducted Emission Test:

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

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

EUT Configure Mode	Mode	Frequency Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Data Rate (Mbps)
A, B, C	802.11a	5180-5240	36 to 48	165	OFDM	6.0
	802.11a	5745-5825	149 to 165		OFDM	6.0

Antenna Port Conducted Measurement:

☒ This item includes all test value of each mode, but only includes spectrum plot of worst value of each mode.
☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
☒ Following channel(s) was (were) selected for the final test as listed below.

EUT Configure Mode	Mode	Frequency Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Data Rate (Mbps)
A, B, C	802.11a	5180-5240	36 to 48	36, 40, 48	OFDM	6.0
	802.11n (HT20)		36 to 48	36, 40, 48	OFDM	6.5
	802.11n (HT40)		38 to 46	38, 46	OFDM	13.5
	802.11ac (VHT80)		42	42	OFDM	29.3
A, B, C	802.11a	5745-5825	149 to 165	149, 157, 165	OFDM	6.0
	802.11n (HT20)		149 to 165	149, 157, 165	OFDM	6.5
	802.11n (HT40)		151 to 159	151, 159	OFDM	13.5
	802.11ac (VHT80)		155	155	OFDM	29.3

Test Condition:

Applicable to	Environmental Conditions	Input Power	Tested by
RE≥1G	24 deg. C, 67% RH	120Vac, 60Hz	Willy Cheng
RE<1G	24 deg. C, 68% RH	120Vac, 60Hz	Willy Cheng
PLC	23 deg. C, 68% RH	120Vac, 60Hz	Adair Peng
APCM	25 deg. C, 60% RH	120Vac, 60Hz	Chris Lin

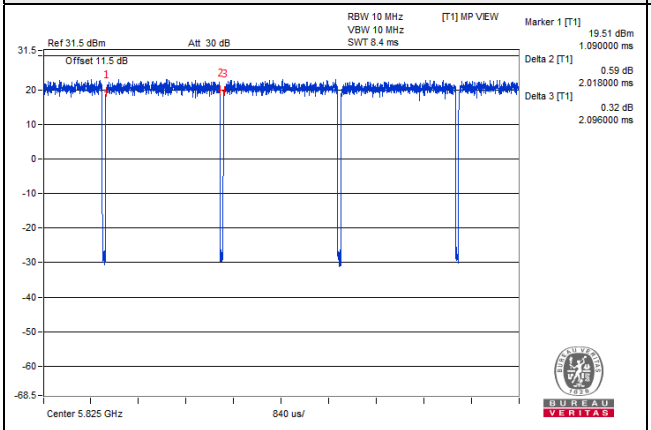
3.3 Duty Cycle of Test Signal

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

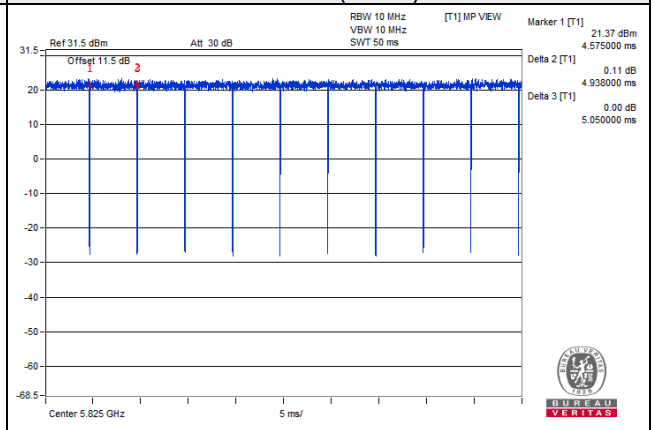
Test Mode A

802.11a: Duty cycle = 2.018/2.096 = 0.963, Duty factor = 10 * log (1/0.963) = 0.16
802.11n (HT20): Duty cycle = 4.938/5.050 = 0.978, Duty factor = 10 * log (1/0.978) = 0.10
802.11n (HT40): Duty cycle = 2.395/2.469 = 0.970, Duty factor = 10 * log (1/0.970) = 0.13
802.11ac (VHT80): Duty cycle = 1.126/1.204 = 0.935, Duty factor = 10 * log (1/0.935) = 0.29

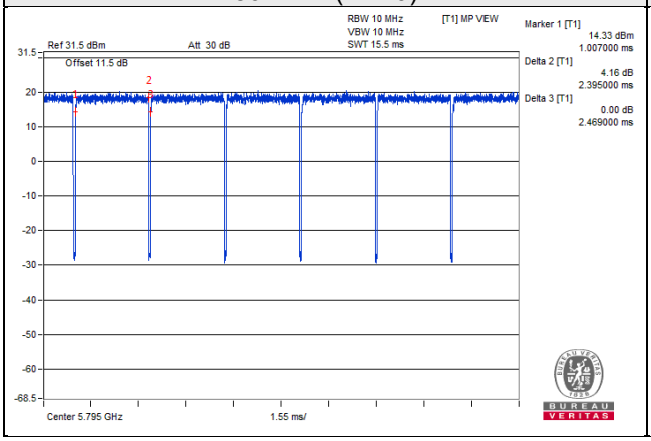
802.11a



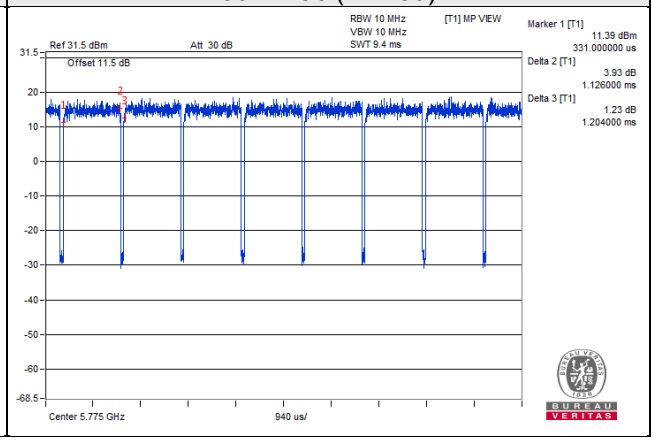
802.11n (HT20)



802.11n (HT40)



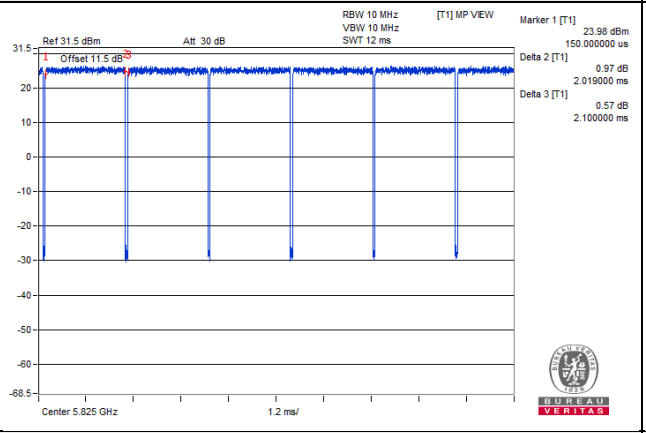
802.11ac (VHT80)



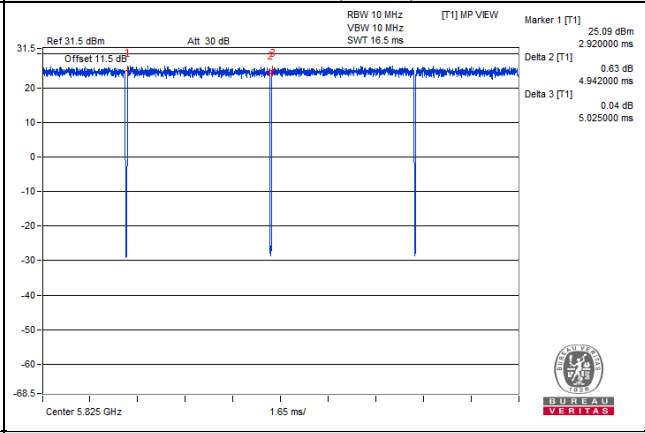
Test Mode B

802.11a: Duty cycle = 2.019/2.100 = 0.961, Duty factor = 10 * log (1/0.961) = 0.17
802.11n (HT20): Duty cycle = 4.942/5.025 = 0.983
802.11n (HT40): Duty cycle = 2.391/2.460 = 0.972, Duty factor = 10 * log (1/0.972) = 0.12
802.11ac (VHT80): Duty cycle = 1.123/1.203 = 0.933, Duty factor = 10 * log (1/0.933) = 0.30

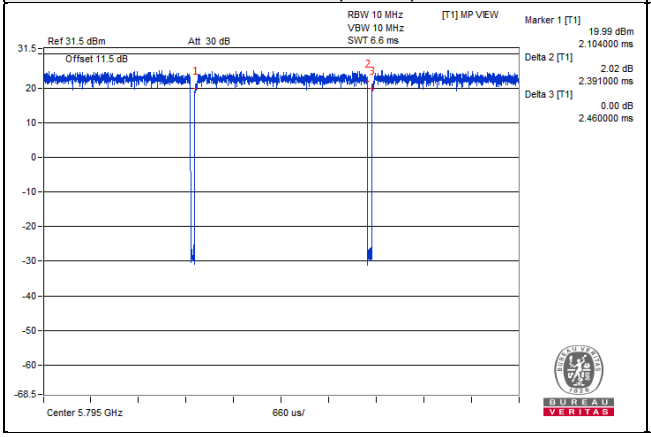
802.11a



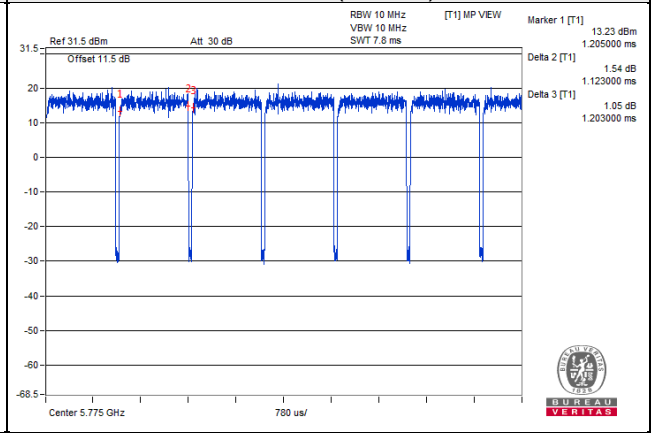
802.11n (HT20)



802.11n (HT40)



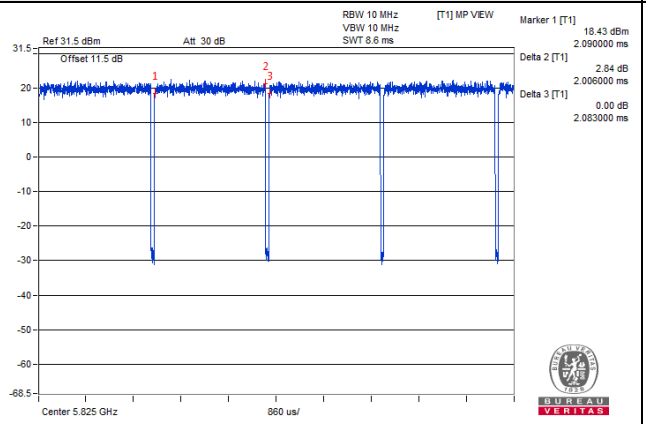
802.11ac (VHT80)



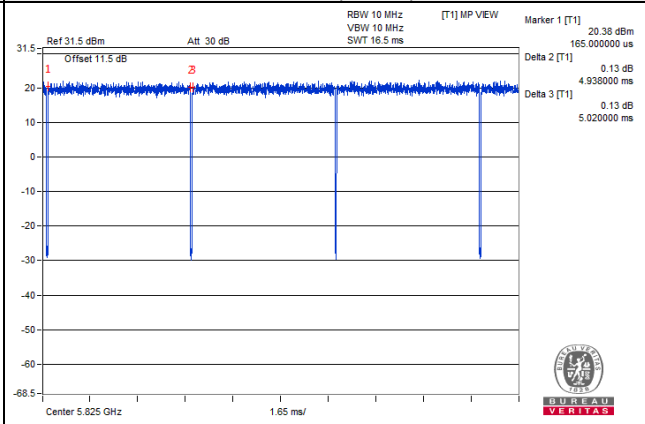
Test Mode C

802.11a: Duty cycle = 2.006/2.083 = 0.963, Duty factor = 10 * log (1/0.963) = 0.16
802.11n (HT20): Duty cycle = 4.938/5.020 = 0.984
802.11n (HT40): Duty cycle = 2.396/2.471 = 0.970, Duty factor = 10 * log (1/0.970) = 0.13
802.11ac (VHT80): Duty cycle = 1.126/1.198 = 0.940, Duty factor = 10 * log (1/0.940) = 0.27

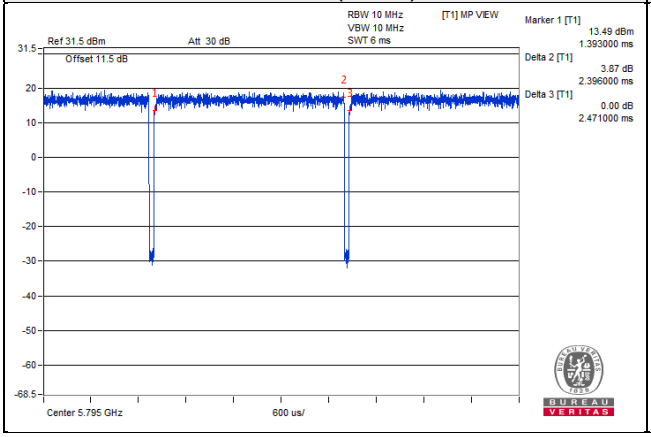
802.11a



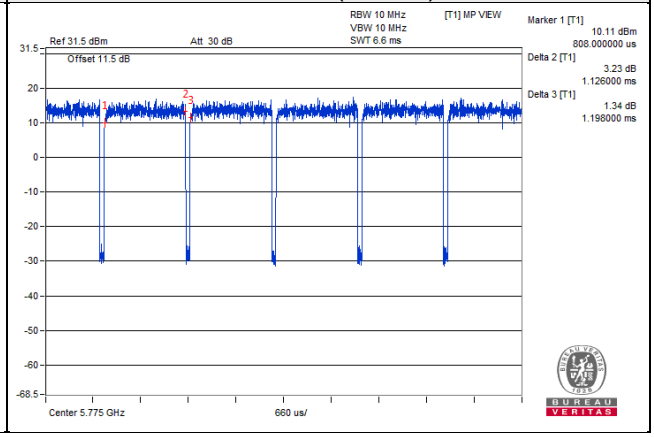
802.11n (HT20)



802.11n (HT40)



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.

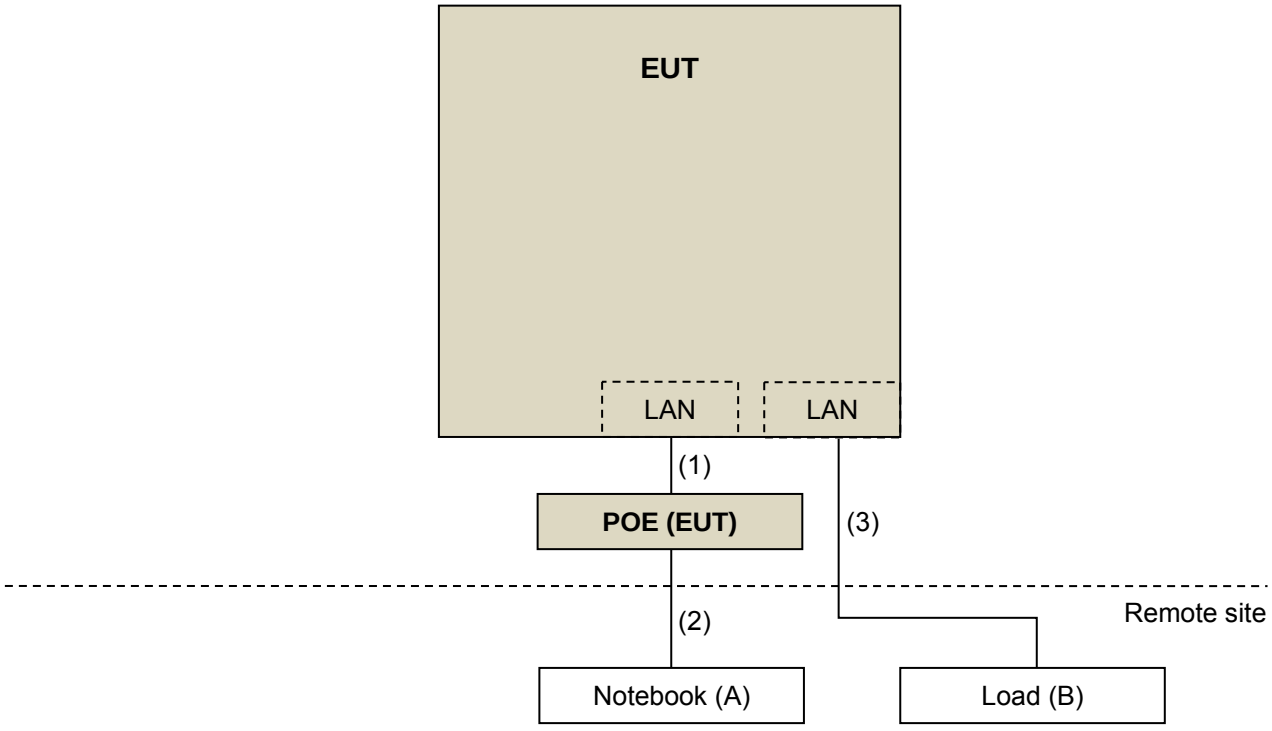
ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A.	Notebook	DELL	E5410	1HC2XM1	FCC DoC Approved	-
B.	Load	NA	NA	NA	NA	-

Note:

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

ID	Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	RJ45, Cat5e	1	1.5	N	0	-
2.	RJ45, Cat5e	1	5	N	0	-
3.	RJ45, Cat5e	1	15	N	0	-

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
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA9170241	Dec. 01, 2017	Nov. 30, 2018
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.
3. The horn antenna and preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
4. The FCC Designation Number is TW0003. The number will be varied with the Lab location and scope as attached.
5. The IC Site Registration No. is 7450F-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.

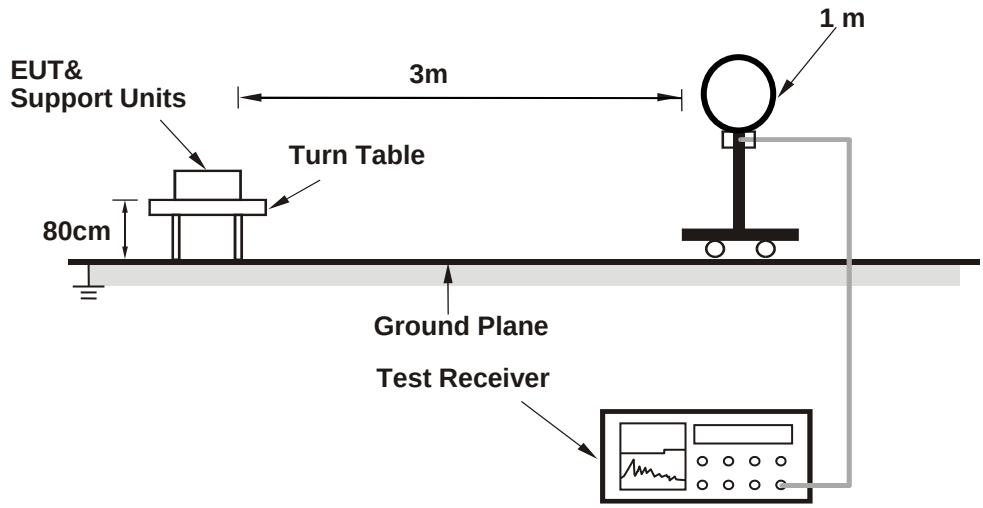
4. All modes of operation were investigated and the worst-case emissions are reported.

4.1.4 Deviation from Test Standard

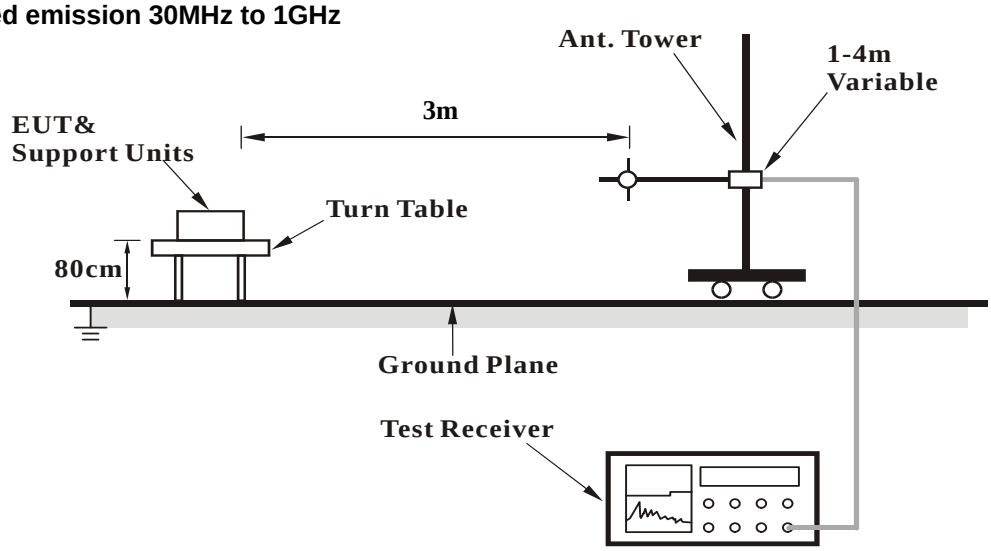
No deviation.

4.1.5 Test Setup

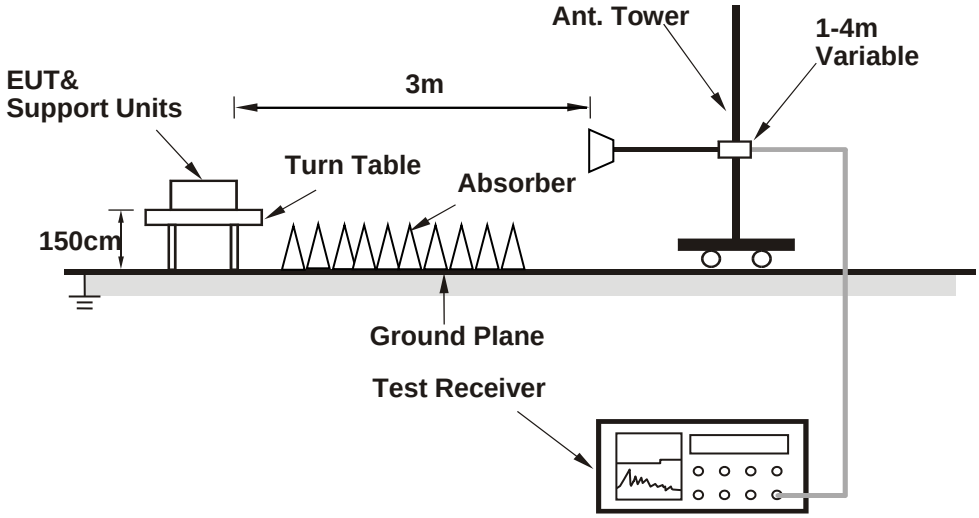
For Radiated emission below 30MHz



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 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	58.0 PK	74.0	-16.0	1.92 H	341	53.6	4.4
2	5150.00	44.1 AV	54.0	-9.9	1.92 H	341	39.7	4.4
3	*5180.00	111.8 PK			1.56 H	318	72.3	39.5
4	*5180.00	100.3 AV			1.56 H	318	60.8	39.5
5	#10360.00	57.4 PK	68.2	-10.8	2.03 H	255	41.4	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	57.8 PK	74.0	-16.2	1.58 V	346	53.4	4.4
2	5150.00	44.7 AV	54.0	-9.3	1.58 V	346	40.3	4.4
3	*5180.00	112.9 PK			1.62 V	351	73.4	39.5
4	*5180.00	100.1 AV			1.62 V	351	60.6	39.5
5	#10360.00	56.9 PK	68.2	-11.3	2.25 V	289	40.9	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	112.1 PK			1.93 H	315	72.6	39.5
2	*5200.00	100.0 AV			1.93 H	315	60.5	39.5
3	#10400.00	57.3 PK	68.2	-10.9	2.56 H	193	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	113.1 PK			1.83 V	328	73.6	39.5
2	*5200.00	100.2 AV			1.83 V	328	60.7	39.5
3	#10400.00	58.3 PK	68.2	-9.9	2.25 V	183	42.1	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	111.7 PK			1.69 H	323	72.4	39.3
2	*5240.00	100.2 AV			1.69 H	323	60.9	39.3
3	5350.00	59.3 PK	74.0	-14.7	1.93 H	325	55.0	4.3
4	5350.00	46.5 AV	54.0	-7.5	1.93 H	325	42.2	4.3
5	#10480.00	58.2 PK	68.2	-10.0	2.18 H	239	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	113.2 PK			1.89 V	311	73.9	39.3
2	*5240.00	101.0 AV			1.89 V	311	61.7	39.3
3	5350.00	59.5 PK	74.0	-14.5	1.96 V	328	55.2	4.3
4	5350.00	46.5 AV	54.0	-7.5	1.96 V	328	42.2	4.3
5	#10480.00	57.3 PK	68.2	-10.9	2.18 V	293	40.3	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	#5644.87	57.9 PK	68.2	-10.3	1.83 H	328	53.4	4.5
2	*5745.00	118.2 PK			1.83 H	328	78.1	40.1
3	*5745.00	107.3 AV			1.83 H	328	67.2	40.1
4	#5955.77	58.2 PK	68.2	-10.0	1.83 H	328	52.9	5.3
5	11490.00	58.8 PK	74.0	-15.2	1.85 H	254	40.8	18.0
6	11490.00	45.4 AV	54.0	-8.6	1.85 H	254	27.4	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	#5621.79	58.4 PK	68.2	-9.8	1.73 V	324	53.9	4.5
2	*5745.00	118.4 PK			1.73 V	324	78.3	40.1
3	*5745.00	106.8 AV			1.73 V	324	66.7	40.1
4	#5948.72	58.1 PK	68.2	-10.1	1.73 V	324	52.8	5.3
5	11490.00	58.5 PK	74.0	-15.5	2.36 V	148	40.5	18.0
6	11490.00	44.9 AV	54.0	-9.1	2.36 V	148	26.9	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	#5642.95	58.4 PK	68.2	-9.8	2.06 H	351	53.9	4.5
2	*5785.00	118.9 PK			2.06 H	351	78.6	40.3
3	*5785.00	107.1 AV			2.06 H	351	66.8	40.3
4	#5936.54	58.6 PK	68.2	-9.6	2.06 H	351	53.3	5.3
5	11570.00	58.5 PK	74.0	-15.5	1.46 H	219	40.8	17.7
6	11570.00	45.8 AV	54.0	-8.2	1.46 H	219	28.1	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	#5631.41	59.5 PK	68.2	-8.7	1.75 V	321	55.0	4.5
2	*5785.00	119.1 PK			1.75 V	321	78.8	40.3
3	*5785.00	106.8 AV			1.75 V	321	66.5	40.3
4	#5957.05	57.6 PK	68.2	-10.6	1.75 V	321	52.3	5.3
5	11570.00	58.6 PK	74.0	-15.4	1.69 V	254	40.9	17.7
6	11570.00	45.7 AV	54.0	-8.3	1.69 V	254	28.0	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	#5625.00	58.7 PK	68.2	-9.5	1.96 H	342	54.2	4.5
2	*5825.00	120.2 PK			1.96 H	342	79.8	40.4
3	*5825.00	109.1 AV			1.96 H	342	68.7	40.4
4	#5933.33	59.0 PK	68.2	-9.2	1.96 H	342	53.7	5.3
5	11650.00	59.6 PK	74.0	-14.4	1.83 H	257	42.1	17.5
6	11650.00	45.1 AV	54.0	-8.9	1.83 H	257	27.6	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	#5623.72	59.3 PK	68.2	-8.9	1.73 V	314	54.8	4.5
2	*5825.00	118.6 PK			1.73 V	314	78.2	40.4
3	*5825.00	105.9 AV			1.73 V	314	65.5	40.4
4	#5952.56	57.5 PK	68.2	-10.7	1.73 V	314	52.2	5.3
5	11650.00	58.8 PK	74.0	-15.2	2.83 V	291	41.3	17.5
6	11650.00	45.9 AV	54.0	-8.1	2.83 V	291	28.4	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

802.11n (HT20)

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	58.7 PK	74.0	-15.3	1.78 H	346	54.3	4.4
2	5150.00	46.3 AV	54.0	-7.7	1.78 H	346	41.9	4.4
3	*5180.00	111.1 PK			1.69 H	348	71.6	39.5
4	*5180.00	100.0 AV			1.69 H	348	60.5	39.5
5	#10360.00	57.3 PK	68.2	-10.9	2.23 H	258	41.3	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	58.1 PK	74.0	-15.9	1.62 V	346	53.7	4.4
2	5150.00	44.7 AV	54.0	-9.3	1.62 V	346	40.3	4.4
3	*5180.00	113.5 PK			1.34 V	328	74.0	39.5
4	*5180.00	101.3 AV			1.34 V	328	61.8	39.5
5	#10360.00	57.3 PK	68.2	-10.9	2.64 V	189	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	111.8 PK			1.42 H	349	72.3	39.5
2	*5200.00	100.1 AV			1.42 H	349	60.6	39.5
3	#10400.00	57.2 PK	68.2	-11.0	2.39 H	135	41.0	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	112.8 PK			1.58 V	342	73.3	39.5
2	*5200.00	100.3 AV			1.58 V	342	60.8	39.5
3	#10400.00	57.5 PK	68.2	-10.7	2.52 V	296	41.3	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	111.5 PK			1.83 H	307	72.2	39.3
2	*5240.00	99.8 AV			1.83 H	307	60.5	39.3
3	5350.00	60.2 PK	74.0	-13.8	1.62 H	358	55.9	4.3
4	5350.00	47.0 AV	54.0	-7.0	1.62 H	358	42.7	4.3
5	#10480.00	58.3 PK	68.2	-9.9	2.32 H	268	41.3	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	112.6 PK			1.79 V	355	73.3	39.3
2	*5240.00	100.1 AV			1.79 V	355	60.8	39.3
3	5350.00	59.5 PK	74.0	-14.5	2.05 V	327	55.2	4.3
4	5350.00	47.3 AV	54.0	-6.7	2.05 V	327	43.0	4.3
5	#10480.00	58.1 PK	68.2	-10.1	2.58 V	291	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	#5616.67	58.0 PK	68.2	-10.2	1.68 H	342	53.4	4.6
2	*5745.00	118.2 PK			1.68 H	342	78.1	40.1
3	*5745.00	107.1 AV			1.68 H	342	67.0	40.1
4	#5968.59	58.5 PK	68.2	-9.7	1.68 H	342	53.2	5.3
5	11490.00	57.6 PK	74.0	-16.4	2.39 H	281	39.6	18.0
6	11490.00	44.6 AV	54.0	-9.4	2.39 H	281	26.6	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	#5627.56	56.1 PK	68.2	-12.1	1.64 V	327	51.6	4.5
2	*5745.00	117.8 PK			1.64 V	327	77.7	40.1
3	*5745.00	105.4 AV			1.64 V	327	65.3	40.1
4	#5930.13	56.8 PK	68.2	-11.4	1.64 V	327	51.5	5.3
5	11490.00	58.3 PK	74.0	-15.7	2.68 V	205	40.3	18.0
6	11490.00	44.0 AV	54.0	-10.0	2.68 V	205	26.0	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	#5612.82	58.0 PK	68.2	-10.2	2.05 H	317	53.4	4.6
2	*5785.00	119.0 PK			2.05 H	317	78.7	40.3
3	*5785.00	107.5 AV			2.05 H	317	67.2	40.3
4	#5944.23	58.4 PK	68.2	-9.8	2.05 H	317	53.1	5.3
5	11570.00	58.8 PK	74.0	-15.2	2.48 H	239	41.1	17.7
6	11570.00	45.2 AV	54.0	-8.8	2.48 H	239	27.5	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	#5635.90	59.2 PK	68.2	-9.0	1.94 V	327	54.7	4.5
2	*5785.00	118.4 PK			1.94 V	327	78.1	40.3
3	*5785.00	106.3 AV			1.94 V	327	66.0	40.3
4	#5937.18	57.8 PK	68.2	-10.4	1.94 V	327	52.5	5.3
5	11570.00	58.2 PK	74.0	-15.8	2.84 V	198	40.5	17.7
6	11570.00	45.0 AV	54.0	-9.0	2.84 V	198	27.3	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	#5628.21	58.7 PK	68.2	-9.5	1.93 H	327	54.2	4.5
2	*5825.00	119.8 PK			1.93 H	327	79.4	40.4
3	*5825.00	108.3 AV			1.93 H	327	67.9	40.4
4	#5950.00	58.5 PK	68.2	-9.7	1.93 H	327	53.2	5.3
5	11650.00	58.9 PK	74.0	-15.1	2.65 H	197	41.4	17.5
6	11650.00	45.7 AV	54.0	-8.3	2.65 H	197	28.2	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	#5608.33	58.9 PK	68.2	-9.3	1.85 V	329	54.3	4.6
2	*5825.00	118.0 PK			1.85 V	329	77.6	40.4
3	*5825.00	105.3 AV			1.85 V	329	64.9	40.4
4	#5962.82	58.4 PK	68.2	-9.8	1.85 V	329	53.1	5.3
5	11650.00	59.3 PK	74.0	-14.7	2.48 V	251	41.8	17.5
6	11650.00	45.5 AV	54.0	-8.5	2.48 V	251	28.0	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

802.11n (HT40)

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	59.0 PK	74.0	-15.0	1.69 H	343	54.6	4.4
2	5150.00	47.3 AV	54.0	-6.7	1.69 H	343	42.9	4.4
3	*5190.00	108.3 PK			1.59 H	332	68.8	39.5
4	*5190.00	97.9 AV			1.59 H	332	58.4	39.5
5	#10380.00	57.4 PK	68.2	-10.8	2.56 H	285	41.2	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	58.1 PK	74.0	-15.9	1.65 V	342	53.7	4.4
2	5150.00	45.2 AV	54.0	-8.8	1.65 V	342	40.8	4.4
3	*5190.00	109.2 PK			1.86 V	342	69.7	39.5
4	*5190.00	98.7 AV			1.86 V	342	59.2	39.5
5	#10380.00	57.3 PK	68.2	-10.9	2.43 V	152	41.1	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	108.1 PK			1.68 H	327	68.8	39.3
2	*5230.00	97.8 AV			1.68 H	327	58.5	39.3
3	5350.00	59.5 PK	74.0	-14.5	1.79 H	325	55.2	4.3
4	5350.00	49.2 AV	54.0	-4.8	1.79 H	325	44.9	4.3
5	#10460.00	58.6 PK	68.2	-9.6	2.18 H	293	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	109.2 PK			1.72 V	345	69.9	39.3
2	*5230.00	98.5 AV			1.72 V	345	59.2	39.3
3	5350.00	60.5 PK	74.0	-13.5	1.75 V	329	56.2	4.3
4	5350.00	46.9 AV	54.0	-7.1	1.75 V	329	42.6	4.3
5	#10460.00	58.1 PK	68.2	-10.1	2.38 V	299	41.3	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	#5621.79	60.4 PK	68.2	-7.8	2.07 H	342	55.9	4.5
2	*5755.00	115.8 PK			2.07 H	342	75.7	40.1
3	*5755.00	105.1 AV			2.07 H	342	65.0	40.1
4	#5998.72	59.4 PK	68.2	-8.8	2.07 H	342	54.0	5.4
5	11510.00	58.0 PK	74.0	-16.0	1.96 H	285	39.9	18.1
6	11510.00	45.0 AV	54.0	-9.0	1.96 H	285	26.9	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	#5604.26	60.6 PK	68.2	-7.6	1.83 V	325	56.0	4.6
2	*5755.00	114.3 PK			1.83 V	325	74.2	40.1
3	*5755.00	103.0 AV			1.83 V	325	62.9	40.1
4	#5955.13	58.3 PK	68.2	-9.9	1.83 V	325	53.0	5.3
5	11510.00	57.6 PK	74.0	-16.4	2.58 V	193	39.5	18.1
6	11510.00	44.8 AV	54.0	-9.2	2.58 V	193	26.7	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	#5606.41	59.6 PK	68.2	-8.6	1.96 H	348	55.0	4.6
2	*5795.00	116.5 PK			1.96 H	348	76.1	40.4
3	*5795.00	106.2 AV			1.96 H	348	65.8	40.4
4	#5958.97	58.7 PK	68.2	-9.5	1.96 H	348	53.4	5.3
5	11590.00	58.7 PK	74.0	-15.3	2.93 H	102	41.1	17.6
6	11590.00	45.4 AV	54.0	-8.6	2.93 H	102	27.8	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	#5606.41	59.1 PK	68.2	-9.1	1.48 V	321	54.5	4.6
2	*5795.00	115.0 PK			1.48 V	321	74.6	40.4
3	*5795.00	103.9 AV			1.48 V	321	63.5	40.4
4	#5959.62	58.4 PK	68.2	-9.8	1.48 V	321	53.1	5.3
5	11590.00	58.2 PK	74.0	-15.8	2.48 V	105	40.6	17.6
6	11590.00	45.3 AV	54.0	-8.7	2.48 V	105	27.7	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	58.9 PK	74.0	-15.1	1.65 H	324	54.5	4.4
2	5150.00	46.6 AV	54.0	-7.4	1.65 H	324	42.2	4.4
3	*5210.00	104.9 PK			1.69 H	325	65.5	39.4
4	*5210.00	94.1 AV			1.69 H	325	54.7	39.4
5	5350.00	60.2 PK	74.0	-13.8	1.87 H	329	55.9	4.3
6	5350.00	47.6 AV	54.0	-6.4	1.87 H	329	43.3	4.3
7	#10420.00	57.7 PK	68.2	-10.5	2.19 H	163	41.2	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	60.8 PK	74.0	-13.2	1.42 V	318	56.4	4.4
2	5150.00	46.7 AV	54.0	-7.3	1.42 V	318	42.3	4.4
3	*5210.00	105.9 PK			1.59 V	342	66.5	39.4
4	*5210.00	94.8 AV			1.59 V	342	55.4	39.4
5	5350.00	59.8 PK	74.0	-14.2	1.69 V	352	55.5	4.3
6	5350.00	47.2 AV	54.0	-6.8	1.69 V	352	42.9	4.3
7	#10420.00	57.3 PK	68.2	-10.9	2.56 V	281	40.8	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	#5649.55	64.3 PK	68.2	-3.9	1.98 H	312	59.8	4.5
2	#5650.00	66.1 PK	68.2	-2.1	1.65 H	321	61.6	4.5
3	*5775.00	112.8 PK			1.98 H	312	72.5	40.3
4	*5775.00	100.9 AV			1.98 H	312	60.6	40.3
5	#5925.00	65.6 PK	68.2	-2.6	1.58 H	325	60.3	5.3
6	#5925.98	62.6 PK	68.2	-5.6	1.98 H	312	57.3	5.3
7	11550.00	58.2 PK	74.0	-15.8	2.43 H	199	40.3	17.9
8	11550.00	45.1 AV	54.0	-8.9	2.43 H	199	27.2	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	#5648.72	60.7 PK	68.2	-7.5	1.73 V	307	56.2	4.5
2	#5650.00	61.5 PK	68.2	-6.7	1.75 V	312	57.0	4.5
3	*5775.00	111.2 PK			1.73 V	307	70.9	40.3
4	*5775.00	100.0 AV			1.73 V	307	59.7	40.3
5	#5925.00	58.3 PK	68.2	-9.9	1.43 V	312	53.0	5.3
6	#5931.41	58.5 PK	68.2	-9.7	1.73 V	307	53.2	5.3
7	11550.00	58.1 PK	74.0	-15.9	2.36 V	218	40.2	17.9
8	11550.00	45.0 AV	54.0	-9.0	2.36 V	218	27.1	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	56.6 PK	74.0	-17.4	1.56 H	318	52.2	4.4
2	5150.00	42.5 AV	54.0	-11.5	1.56 H	318	38.1	4.4
3	*5180.00	100.2 PK			1.09 H	326	60.7	39.5
4	*5180.00	90.0 AV			1.09 H	326	50.5	39.5
5	#10360.00	58.4 PK	68.2	-9.8	1.64 H	258	42.4	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	56.1 PK	74.0	-17.9	1.58 V	225	51.7	4.4
2	5150.00	43.3 AV	54.0	-10.7	1.58 V	225	38.9	4.4
3	*5180.00	111.2 PK			1.73 V	202	71.7	39.5
4	*5180.00	100.7 AV			1.73 V	202	61.2	39.5
5	#10360.00	57.6 PK	68.2	-10.6	2.55 V	296	41.6	16.0

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. 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	101.1 PK			1.03 H	342	61.6	39.5
2	*5200.00	90.8 AV			1.03 H	342	51.3	39.5
3	#10400.00	56.1 PK	68.2	-12.1	2.36 H	294	39.9	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	*5200.00	111.7 PK			1.83 V	159	72.2	39.5
2	*5200.00	100.6 AV			1.83 V	159	61.1	39.5
3	#10400.00	56.5 PK	68.2	-11.7	1.72 V	303	40.3	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	101.3 PK			1.23 H	342	62.0	39.3
2	*5240.00	91.1 AV			1.23 H	342	51.8	39.3
3	5350.00	55.3 PK	74.0	-18.7	1.39 H	317	51.0	4.3
4	5350.00	42.1 AV	54.0	-11.9	1.39 H	317	37.8	4.3
5	#10480.00	56.2 PK	68.2	-12.0	1.43 H	262	39.2	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	111.9 PK			1.83 V	165	72.6	39.3
2	*5240.00	101.2 AV			1.83 V	165	61.9	39.3
3	5350.00	56.4 PK	74.0	-17.6	1.59 V	188	52.1	4.3
4	5350.00	43.1 AV	54.0	-10.9	1.59 V	188	38.8	4.3
5	#10480.00	58.6 PK	68.2	-9.6	1.83 V	309	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	#5635.90	55.4 PK	68.2	-12.8	1.85 H	304	50.9	4.5
2	*5745.00	110.0 PK			1.85 H	304	69.9	40.1
3	*5745.00	99.8 AV			1.85 H	304	59.7	40.1
4	#5942.31	58.1 PK	68.2	-10.1	1.85 H	304	52.8	5.3
5	11490.00	59.2 PK	74.0	-14.8	1.96 H	328	41.2	18.0
6	11490.00	45.8 AV	54.0	-8.2	1.96 H	328	27.8	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	#5632.05	57.8 PK	68.2	-10.4	1.58 V	135	53.3	4.5
2	*5745.00	120.6 PK			1.58 V	135	80.5	40.1
3	*5745.00	109.8 AV			1.58 V	135	69.7	40.1
4	#5929.49	57.5 PK	68.2	-10.7	1.58 V	135	52.2	5.3
5	11490.00	61.3 PK	74.0	-12.7	2.54 V	327	43.3	18.0
6	11490.00	46.9 AV	54.0	-7.1	2.54 V	327	28.9	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	#5635.26	54.5 PK	68.2	-13.7	1.66 H	324	50.0	4.5
2	*5785.00	108.9 PK			1.66 H	324	68.6	40.3
3	*5785.00	98.5 AV			1.66 H	324	58.2	40.3
4	#5931.41	57.1 PK	68.2	-11.1	1.66 H	324	51.8	5.3
5	11570.00	59.4 PK	74.0	-14.6	2.36 H	285	41.7	17.7
6	11570.00	45.3 AV	54.0	-8.7	2.36 H	285	27.6	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	#5616.67	57.3 PK	68.2	-10.9	1.68 V	156	52.7	4.6
2	*5785.00	121.9 PK			1.68 V	156	81.6	40.3
3	*5785.00	110.6 AV			1.68 V	156	70.3	40.3
4	#5942.95	58.1 PK	68.2	-10.1	1.68 V	156	52.8	5.3
5	11570.00	60.8 PK	74.0	-13.2	2.53 V	317	43.1	17.7
6	11570.00	47.2 AV	54.0	-6.8	2.53 V	317	29.5	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	#5610.26	55.3 PK	68.2	-12.9	3.19 H	185	50.7	4.6
2	*5825.00	108.9 PK			3.19 H	185	68.5	40.4
3	*5825.00	98.1 AV			3.19 H	185	57.7	40.4
4	#5944.23	57.4 PK	68.2	-10.8	3.19 H	185	52.1	5.3
5	11650.00	59.6 PK	74.0	-14.4	1.73 H	259	42.1	17.5
6	11650.00	45.7 AV	54.0	-8.3	1.73 H	259	28.2	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	#5625.64	57.1 PK	68.2	-11.1	1.72 V	55	52.6	4.5
2	*5825.00	121.8 PK			1.72 V	55	81.4	40.4
3	*5825.00	110.6 AV			1.72 V	55	70.2	40.4
4	#5927.56	58.0 PK	68.2	-10.2	1.72 V	55	52.7	5.3
5	11650.00	60.8 PK	74.0	-13.2	2.54 V	296	43.3	17.5
6	11650.00	47.9 AV	54.0	-6.1	2.54 V	296	30.4	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

802.11n (HT20)

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	54.6 PK	74.0	-19.4	1.08 H	319	50.2	4.4
2	5150.00	42.4 AV	54.0	-11.6	1.08 H	319	38.0	4.4
3	*5180.00	101.0 PK			1.00 H	326	61.5	39.5
4	*5180.00	90.3 AV			1.00 H	326	50.8	39.5
5	#10360.00	57.8 PK	68.2	-10.4	1.84 H	257	41.8	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	56.2 PK	74.0	-17.8	1.78 V	192	51.8	4.4
2	5150.00	42.9 AV	54.0	-11.1	1.78 V	192	38.5	4.4
3	*5180.00	111.9 PK			1.55 V	134	72.4	39.5
4	*5180.00	101.3 AV			1.55 V	134	61.8	39.5
5	#10360.00	57.6 PK	68.2	-10.6	1.99 V	232	41.6	16.0

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. 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	101.6 PK			1.34 H	325	62.1	39.5
2	*5200.00	90.8 AV			1.34 H	325	51.3	39.5
3	#10400.00	57.6 PK	68.2	-10.6	2.64 H	215	41.4	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	111.7 PK			1.73 V	155	72.2	39.5
2	*5200.00	100.9 AV			1.73 V	155	61.4	39.5
3	#10400.00	58.3 PK	68.2	-9.9	2.21 V	256	42.1	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	99.2 PK			1.00 H	342	59.9	39.3
2	*5240.00	88.6 AV			1.00 H	342	49.3	39.3
3	5350.00	56.3 PK	74.0	-17.7	1.48 H	302	52.0	4.3
4	5350.00	43.5 AV	54.0	-10.5	1.48 H	302	39.2	4.3
5	#10480.00	58.3 PK	68.2	-9.9	2.08 H	231	41.3	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	110.4 PK			1.73 V	168	71.1	39.3
2	*5240.00	99.7 AV			1.73 V	168	60.4	39.3
3	5350.00	58.2 PK	74.0	-15.8	1.92 V	134	53.9	4.3
4	5350.00	44.3 AV	54.0	-9.7	1.92 V	134	40.0	4.3
5	#10480.00	58.6 PK	68.2	-9.6	2.93 V	205	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	#5628.85	55.0 PK	68.2	-13.2	1.49 H	321	50.5	4.5
2	*5745.00	108.6 PK			1.49 H	321	68.5	40.1
3	*5745.00	98.0 AV			1.49 H	321	57.9	40.1
4	#5939.10	57.5 PK	68.2	-10.7	1.49 H	321	52.2	5.3
5	11490.00	59.3 PK	74.0	-14.7	2.15 H	263	41.3	18.0
6	11490.00	45.2 AV	54.0	-8.8	2.15 H	263	27.2	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	#5633.33	57.8 PK	68.2	-10.4	1.43 V	26	53.3	4.5
2	*5745.00	119.8 PK			1.43 V	26	79.7	40.1
3	*5745.00	109.2 AV			1.43 V	26	69.1	40.1
4	#5982.05	58.6 PK	68.2	-9.6	1.43 V	26	53.2	5.4
5	11490.00	59.6 PK	74.0	-14.4	2.62 V	305	41.6	18.0
6	11490.00	45.9 AV	54.0	-8.1	2.62 V	305	27.9	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	#5608.45	56.1 PK	68.2	-12.1	1.32 H	318	51.5	4.6
2	*5785.00	109.2 PK			1.32 H	318	68.9	40.3
3	*5785.00	98.6 AV			1.32 H	318	58.3	40.3
4	#5953.21	57.7 PK	68.2	-10.5	1.32 H	318	52.4	5.3
5	11570.00	58.5 PK	74.0	-15.5	2.61 H	203	40.8	17.7
6	11570.00	46.2 AV	54.0	-7.8	2.61 H	203	28.5	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	#5614.74	57.6 PK	68.2	-10.6	1.56 V	103	53.0	4.6
2	*5785.00	121.8 PK			1.56 V	103	81.5	40.3
3	*5785.00	110.6 AV			1.56 V	103	70.3	40.3
4	#5937.18	57.7 PK	68.2	-10.5	1.56 V	103	52.4	5.3
5	11570.00	60.9 PK	74.0	-13.1	1.85 V	318	43.2	17.7
6	11570.00	47.2 AV	54.0	-6.8	1.85 V	318	29.5	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	#5616.03	55.2 PK	68.2	-13.0	3.32 H	185	50.6	4.6
2	*5825.00	111.2 PK			3.32 H	185	70.8	40.4
3	*5825.00	99.8 AV			3.32 H	185	59.4	40.4
4	#5946.79	58.1 PK	68.2	-10.1	3.32 H	185	52.8	5.3
5	11650.00	59.8 PK	74.0	-14.2	2.57 H	143	42.3	17.5
6	11650.00	45.7 AV	54.0	-8.3	2.57 H	143	28.2	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	#5623.72	57.0 PK	68.2	-11.2	1.95 V	107	52.5	4.5
2	*5825.00	121.9 PK			1.95 V	107	81.5	40.4
3	*5825.00	110.7 AV			1.95 V	107	70.3	40.4
4	#5937.46	57.9 PK	68.2	-10.3	1.95 V	107	52.6	5.3
5	11650.00	60.3 PK	74.0	-13.7	2.18 V	326	42.8	17.5
6	11650.00	47.6 AV	54.0	-6.4	2.18 V	326	30.1	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

802.11n (HT40)

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	56.6 PK	74.0	-17.4	1.63 H	254	52.2	4.4
2	5150.00	44.2 AV	54.0	-9.8	1.63 H	254	39.8	4.4
3	*5190.00	96.6 PK			1.69 H	135	57.1	39.5
4	*5190.00	86.1 AV			1.69 H	135	46.6	39.5
5	#10380.00	57.5 PK	68.2	-10.7	2.96 H	235	41.3	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	58.9 PK	74.0	-15.1	1.89 V	172	54.5	4.4
2	5150.00	45.8 AV	54.0	-8.2	1.89 V	172	41.4	4.4
3	*5190.00	109.2 PK			1.61 V	173	69.7	39.5
4	*5190.00	98.3 AV			1.61 V	173	58.8	39.5
5	#10380.00	57.9 PK	68.2	-10.3	1.85 V	231	41.7	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	96.5 PK			1.59 H	133	57.2	39.3
2	*5230.00	85.3 AV			1.59 H	133	46.0	39.3
3	5350.00	57.6 PK	74.0	-16.4	1.72 H	210	53.3	4.3
4	5350.00	43.5 AV	54.0	-10.5	1.72 H	210	39.2	4.3
5	#10460.00	58.5 PK	68.2	-9.7	2.59 H	293	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	108.2 PK			1.69 V	193	68.9	39.3
2	*5230.00	97.5 AV			1.69 V	193	58.2	39.3
3	5350.00	57.9 PK	74.0	-16.1	1.66 V	231	53.6	4.3
4	5350.00	44.2 AV	54.0	-9.8	1.66 V	231	39.9	4.3
5	#10460.00	58.2 PK	68.2	-10.0	2.35 V	264	41.4	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	#5648.97	56.4 PK	68.2	-11.8	1.59 H	258	51.9	4.5
2	#5650.00	56.5 PK	68.2	-11.7	1.99 H	236	52.0	4.5
3	*5755.00	107.1 PK			1.59 H	258	67.0	40.1
4	*5755.00	96.5 AV			1.59 H	258	56.4	40.1
5	#5958.33	57.9 PK	68.2	-10.3	1.59 H	258	52.6	5.3
6	11510.00	59.6 PK	74.0	-14.4	1.98 H	100	41.5	18.1
7	11510.00	46.2 AV	54.0	-7.8	1.98 H	100	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	#5639.96	60.4 PK	68.2	-7.8	1.61 V	134	55.9	4.5
2	#5650.00	66.0 PK	68.2	-2.2	1.49 V	103	61.5	4.5
3	*5755.00	119.1 PK			1.61 V	134	79.0	40.1
4	*5755.00	108.4 AV			1.61 V	134	68.3	40.1
5	#5932.05	57.2 PK	68.2	-11.0	1.61 V	134	51.9	5.3
6	11510.00	59.6 PK	74.0	-14.4	1.84 V	339	41.5	18.1
7	11510.00	46.6 AV	54.0	-7.4	1.84 V	339	28.5	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	#5601.92	55.8 PK	68.2	-12.4	2.06 H	347	51.2	4.6
2	*5795.00	107.9 PK			2.06 H	347	67.5	40.4
3	*5795.00	97.2 AV			2.06 H	347	56.8	40.4
4	#5925.00	57.6 PK	68.2	-10.6	2.37 H	318	52.3	5.3
5	#5937.82	57.4 PK	68.2	-10.8	2.06 H	347	52.1	5.3
6	11590.00	58.9 PK	74.0	-15.1	2.43 H	96	41.3	17.6
7	11590.00	45.7 AV	54.0	-8.3	2.43 H	96	28.1	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	#5647.44	60.2 PK	68.2	-8.0	1.32 V	228	55.7	4.5
2	*5795.00	118.7 PK			1.32 V	228	78.3	40.4
3	*5795.00	107.3 AV			1.32 V	228	66.9	40.4
4	#5925.00	63.8 PK	68.2	-4.4	2.38 V	115	58.5	5.3
5	#5927.26	60.4 PK	68.2	-7.8	1.32 V	228	55.1	5.3
6	11590.00	60.5 PK	74.0	-13.5	1.89 V	341	42.9	17.6
7	11590.00	47.3 AV	54.0	-6.7	1.89 V	341	29.7	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	57.3 PK	74.0	-16.7	1.53 H	168	52.9	4.4
2	5150.00	44.2 AV	54.0	-9.8	1.53 H	168	39.8	4.4
3	*5210.00	93.8 PK			1.62 H	183	54.4	39.4
4	*5210.00	83.7 AV			1.62 H	183	44.3	39.4
5	5350.00	56.8 PK	74.0	-17.2	1.69 H	203	52.5	4.3
6	5350.00	44.2 AV	54.0	-9.8	1.69 H	203	39.9	4.3
7	#10420.00	57.7 PK	68.2	-10.5	2.83 H	214	41.2	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	58.8 PK	74.0	-15.2	1.32 V	305	54.4	4.4
2	5150.00	45.8 AV	54.0	-8.2	1.32 V	305	41.4	4.4
3	*5210.00	104.2 PK			1.69 V	203	64.8	39.4
4	*5210.00	93.8 AV			1.69 V	203	54.4	39.4
5	5350.00	57.1 PK	74.0	-16.9	1.65 V	342	52.8	4.3
6	5350.00	44.2 AV	54.0	-9.8	1.65 V	342	39.9	4.3
7	#10420.00	57.6 PK	68.2	-10.6	2.64 V	235	41.1	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	#5648.73	56.4 PK	68.2	-11.8	1.76 H	296	51.9	4.5
2	#5650.00	55.6 PK	68.2	-12.6	1.95 H	265	51.1	4.5
3	*5775.00	98.5 PK			1.76 H	296	58.2	40.3
4	*5775.00	88.1 AV			1.76 H	296	47.8	40.3
5	#5925.00	57.8 PK	68.2	-10.4	2.00 H	316	52.5	5.3
6	#5931.41	57.4 PK	68.2	-10.8	1.76 H	296	52.1	5.3
7	11550.00	59.3 PK	74.0	-14.7	1.62 H	355	41.4	17.9
8	11550.00	46.5 AV	54.0	-7.5	1.62 H	355	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	#5649.12	63.3 PK	68.2	-4.9	1.33 V	147	58.8	4.5
2	#5650.00	65.7 PK	68.2	-2.5	1.43 V	159	61.2	4.5
3	*5775.00	110.8 PK			1.33 V	147	70.5	40.3
4	*5775.00	100.3 AV			1.33 V	147	60.0	40.3
5	#5925.00	61.0 PK	68.2	-7.2	1.84 V	239	55.7	5.3
6	#5927.85	59.9 PK	68.2	-8.3	1.33 V	147	54.6	5.3
7	11550.00	59.6 PK	74.0	-14.4	2.34 V	258	41.7	17.9
8	11550.00	46.3 AV	54.0	-7.7	2.34 V	258	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 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	58.0 PK	74.0	-16.0	1.92 H	15	53.6	4.4
2	5150.00	45.9 AV	54.0	-8.1	1.92 H	15	41.5	4.4
3	*5180.00	106.5 PK			1.92 H	5	67.0	39.5
4	*5180.00	95.2 AV			1.92 H	5	55.7	39.5
5	#10360.00	58.2 PK	68.2	-10.0	1.96 H	255	42.2	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	57.1 PK	74.0	-16.9	2.05 V	329	52.7	4.4
2	5150.00	44.2 AV	54.0	-9.8	2.05 V	329	39.8	4.4
3	*5180.00	104.3 PK			2.49 V	351	64.8	39.5
4	*5180.00	93.5 AV			2.49 V	351	54.0	39.5
5	#10360.00	57.2 PK	68.2	-11.0	1.82 V	213	41.2	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	104.8 PK			1.64 H	11	65.3	39.5
2	*5200.00	94.2 AV			1.64 H	11	54.7	39.5
3	#10400.00	58.0 PK	68.2	-10.2	2.25 H	214	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	103.2 PK			2.03 V	312	63.7	39.5
2	*5200.00	93.0 AV			2.03 V	312	53.5	39.5
3	#10400.00	58.6 PK	68.2	-9.6	1.99 V	164	42.4	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	103.2 PK			1.65 H	18	63.9	39.3
2	*5240.00	92.0 AV			1.65 H	18	52.7	39.3
3	5350.00	58.6 PK	74.0	-15.4	1.73 H	55	54.3	4.3
4	5350.00	47.2 AV	54.0	-6.8	1.73 H	55	42.9	4.3
5	#10480.00	58.4 PK	68.2	-9.8	2.64 H	238	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	103.1 PK			1.93 V	313	63.8	39.3
2	*5240.00	92.0 AV			1.93 V	313	52.7	39.3
3	5350.00	59.5 PK	74.0	-14.5	1.95 V	342	55.2	4.3
4	5350.00	46.1 AV	54.0	-7.9	1.95 V	342	41.8	4.3
5	#10480.00	58.0 PK	68.2	-10.2	2.51 V	236	41.0	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	#5646.23	62.7 PK	68.2	-5.5	1.55 H	326	58.2	4.5
2	#5650.00	64.3 PK	68.2	-3.9	1.79 H	326	59.8	4.5
3	*5745.00	119.1 PK			1.55 H	326	79.0	40.1
4	*5745.00	107.2 AV			1.55 H	326	67.1	40.1
5	#5933.97	58.0 PK	68.2	-10.2	1.55 H	326	52.7	5.3
6	11490.00	59.5 PK	74.0	-14.5	1.76 H	132	41.5	18.0
7	11490.00	46.5 AV	54.0	-7.5	1.76 H	132	28.5	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	#5642.31	59.9 PK	68.2	-8.3	1.96 V	347	55.4	4.5
2	#5650.00	61.5 PK	68.2	-6.7	1.72 V	325	57.0	4.5
3	*5745.00	118.8 PK			1.96 V	347	78.7	40.1
4	*5745.00	107.2 AV			1.96 V	347	67.1	40.1
5	#5962.18	58.6 PK	68.2	-9.6	1.96 V	347	53.3	5.3
6	11490.00	58.3 PK	74.0	-15.7	2.36 V	182	40.3	18.0
7	11490.00	45.9 AV	54.0	-8.1	2.36 V	182	27.9	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	#5620.51	60.9 PK	68.2	-7.3	1.69 H	323	56.3	4.6
2	*5785.00	120.2 PK			1.69 H	323	79.9	40.3
3	*5785.00	108.3 AV			1.69 H	323	68.0	40.3
4	#5939.10	57.9 PK	68.2	-10.3	1.69 H	323	52.6	5.3
5	11570.00	58.6 PK	74.0	-15.4	1.58 H	134	40.9	17.7
6	11570.00	46.2 AV	54.0	-7.8	1.58 H	134	28.5	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	#5611.54	59.6 PK	68.2	-8.6	1.62 V	343	55.0	4.6
2	*5785.00	118.5 PK			1.62 V	343	78.2	40.3
3	*5785.00	107.9 AV			1.62 V	343	67.6	40.3
4	#5962.18	57.1 PK	68.2	-11.1	1.62 V	343	51.8	5.3
5	11570.00	58.2 PK	74.0	-15.8	1.92 V	231	40.5	17.7
6	11570.00	45.9 AV	54.0	-8.1	1.92 V	231	28.2	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	#5629.49	60.5 PK	68.2	-7.7	1.57 H	341	56.0	4.5
2	*5825.00	120.5 PK			1.57 H	341	80.1	40.4
3	*5825.00	108.7 AV			1.57 H	341	68.3	40.4
4	#5953.21	58.0 PK	68.2	-10.2	1.57 H	341	52.7	5.3
5	11650.00	59.5 PK	74.0	-14.5	2.31 H	226	42.0	17.5
6	11650.00	47.8 AV	54.0	-6.2	2.31 H	226	30.3	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	#5607.69	60.3 PK	68.2	-7.9	1.63 V	315	55.7	4.6
2	*5825.00	120.2 PK			1.63 V	315	79.8	40.4
3	*5825.00	109.1 AV			1.63 V	315	68.7	40.4
4	#5945.51	57.6 PK	68.2	-10.6	1.63 V	315	52.3	5.3
5	11650.00	58.9 PK	74.0	-15.1	1.83 V	257	41.4	17.5
6	11650.00	46.5 AV	54.0	-7.5	1.83 V	257	29.0	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

802.11n (HT20)

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	56.5 PK	74.0	-17.5	1.35 H	9	52.1	4.4
2	5150.00	44.5 AV	54.0	-9.5	1.35 H	9	40.1	4.4
3	*5180.00	103.5 PK			1.58 H	10	64.0	39.5
4	*5180.00	92.9 AV			1.58 H	10	53.4	39.5
5	#10360.00	56.8 PK	68.2	-11.4	2.26 H	201	40.8	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	56.3 PK	74.0	-17.7	2.03 V	326	51.9	4.4
2	5150.00	44.1 AV	54.0	-9.9	2.03 V	326	39.7	4.4
3	*5180.00	103.1 PK			2.08 V	352	63.6	39.5
4	*5180.00	92.6 AV			2.08 V	352	53.1	39.5
5	#10360.00	57.3 PK	68.2	-10.9	1.99 V	236	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	104.5 PK			1.55 H	13	65.0	39.5
2	*5200.00	93.1 AV			1.55 H	13	53.6	39.5
3	#10400.00	56.7 PK	68.2	-11.5	2.96 H	143	40.5	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	103.5 PK			2.38 V	326	64.0	39.5
2	*5200.00	92.9 AV			2.38 V	326	53.4	39.5
3	#10400.00	56.7 PK	68.2	-11.5	2.56 V	327	40.5	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 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	103.2 PK			1.42 H	2	63.9	39.3
2	*5240.00	92.0 AV			1.42 H	2	52.7	39.3
3	5350.00	59.1 PK	74.0	-14.9	1.59 H	13	54.8	4.3
4	5350.00	46.6 AV	54.0	-7.4	1.59 H	13	42.3	4.3
5	#10480.00	58.9 PK	68.2	-9.3	2.36 H	211	41.9	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	103.5 PK			1.92 V	313	64.2	39.3
2	*5240.00	92.1 AV			1.92 V	313	52.8	39.3
3	5350.00	58.7 PK	74.0	-15.3	2.09 V	326	54.4	4.3
4	5350.00	45.9 AV	54.0	-8.1	2.09 V	326	41.6	4.3
5	#10480.00	58.5 PK	68.2	-9.7	2.57 V	328	41.5	17.0

Remarks:

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

CHANNEL	TX Channel 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	#5647.44	61.1 PK	68.2	-7.1	1.82 H	351	56.6	4.5
2	#5650.00	63.7 PK	68.2	-4.5	1.86 H	342	59.2	4.5
3	*5745.00	119.4 PK			1.82 H	351	79.3	40.1
4	*5745.00	107.2 AV			1.82 H	351	67.1	40.1
5	#5937.18	58.0 PK	68.2	-10.2	1.82 H	351	52.7	5.3
6	11490.00	58.0 PK	74.0	-16.0	1.02 H	173	40.0	18.0
7	11490.00	45.9 AV	54.0	-8.1	1.02 H	173	27.9	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	#5625.64	59.3 PK	68.2	-8.9	1.73 V	355	54.8	4.5
2	#5650.00	60.6 PK	68.2	-7.6	1.82 V	335	56.1	4.5
3	*5745.00	119.3 PK			1.73 V	355	79.2	40.1
4	*5745.00	108.2 AV			1.73 V	355	68.1	40.1
5	#5950.64	56.6 PK	68.2	-11.6	1.73 V	355	51.3	5.3
6	11490.00	58.7 PK	74.0	-15.3	2.08 V	147	40.7	18.0
7	11490.00	46.3 AV	54.0	-7.7	2.08 V	147	28.3	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	#5630.13	60.5 PK	68.2	-7.7	1.65 H	343	56.0	4.5
2	*5785.00	120.0 PK			1.65 H	343	79.7	40.3
3	*5785.00	108.2 AV			1.65 H	343	67.9	40.3
4	#5926.92	57.8 PK	68.2	-10.4	1.65 H	343	52.5	5.3
5	11570.00	58.8 PK	74.0	-15.2	1.69 H	132	41.1	17.7
6	11570.00	46.2 AV	54.0	-7.8	1.69 H	132	28.5	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	#5618.59	60.6 PK	68.2	-7.6	1.96 V	335	56.0	4.6
2	*5785.00	119.6 PK			1.96 V	335	79.3	40.3
3	*5785.00	108.5 AV			1.96 V	335	68.2	40.3
4	#5927.56	56.9 PK	68.2	-11.3	1.96 V	335	51.6	5.3
5	11570.00	58.3 PK	74.0	-15.7	2.19 V	263	40.6	17.7
6	11570.00	45.0 AV	54.0	-9.0	2.19 V	263	27.3	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	#5603.85	62.1 PK	68.2	-6.1	1.49 H	352	57.5	4.6
2	*5825.00	119.4 PK			1.49 H	352	79.0	40.4
3	*5825.00	108.1 AV			1.49 H	352	67.7	40.4
4	#5960.90	58.4 PK	68.2	-9.8	1.49 H	352	53.1	5.3
5	11650.00	59.7 PK	74.0	-14.3	1.76 H	155	42.2	17.5
6	11650.00	47.0 AV	54.0	-7.0	1.76 H	155	29.5	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	#5635.90	60.4 PK	68.2	-7.8	1.92 V	335	55.9	4.5
2	*5825.00	118.4 PK			1.92 V	335	78.0	40.4
3	*5825.00	106.9 AV			1.92 V	335	66.5	40.4
4	#5953.21	57.4 PK	68.2	-10.8	1.92 V	335	52.1	5.3
5	11650.00	59.2 PK	74.0	-14.8	2.55 V	293	41.7	17.5
6	11650.00	45.2 AV	54.0	-8.8	2.55 V	293	27.7	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

802.11n (HT40)

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	57.6 PK	74.0	-16.4	1.59 H	15	53.2	4.4
2	5150.00	44.8 AV	54.0	-9.2	1.59 H	15	40.4	4.4
3	*5190.00	100.5 PK			1.62 H	3	61.0	39.5
4	*5190.00	90.2 AV			1.62 H	3	50.7	39.5
5	#10380.00	57.9 PK	68.2	-10.3	2.56 H	193	41.7	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	56.6 PK	74.0	-17.4	1.76 V	325	52.2	4.4
2	5150.00	44.1 AV	54.0	-9.9	1.76 V	325	39.7	4.4
3	*5190.00	100.2 PK			2.34 V	311	60.7	39.5
4	*5190.00	90.3 AV			2.34 V	311	50.8	39.5
5	#10380.00	57.3 PK	68.2	-10.9	2.83 V	329	41.1	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	100.3 PK			1.52 H	5	61.0	39.3
2	*5230.00	90.2 AV			1.52 H	5	50.9	39.3
3	5350.00	58.3 PK	74.0	-15.7	1.42 H	17	54.0	4.3
4	5350.00	47.1 AV	54.0	-6.9	1.42 H	17	42.8	4.3
5	#10460.00	57.8 PK	68.2	-10.4	2.55 H	266	41.0	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	100.2 PK			1.92 V	336	60.9	39.3
2	*5230.00	90.1 AV			1.92 V	336	50.8	39.3
3	5350.00	59.9 PK	74.0	-14.1	2.02 V	312	55.6	4.3
4	5350.00	47.1 AV	54.0	-6.9	2.02 V	312	42.8	4.3
5	#10460.00	58.4 PK	68.2	-9.8	2.57 V	231	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	#5613.46	60.4 PK	68.2	-7.8	1.63 H	342	55.8	4.6
2	*5755.00	115.8 PK			1.63 H	342	75.7	40.1
3	*5755.00	104.9 AV			1.63 H	342	64.8	40.1
4	#5970.51	57.8 PK	68.2	-10.4	1.63 H	342	52.5	5.3
5	11510.00	58.2 PK	74.0	-15.8	1.56 H	125	40.1	18.1
6	11510.00	46.2 AV	54.0	-7.8	1.56 H	125	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	#5623.72	59.7 PK	68.2	-8.5	1.96 V	337	55.2	4.5
2	*5755.00	115.7 PK			1.96 V	337	75.6	40.1
3	*5755.00	104.8 AV			1.96 V	337	64.7	40.1
4	#5932.69	57.2 PK	68.2	-11.0	1.96 V	337	51.9	5.3
5	11510.00	58.1 PK	74.0	-15.9	2.06 V	182	40.0	18.1
6	11510.00	45.3 AV	54.0	-8.7	2.06 V	182	27.2	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	#5619.87	60.0 PK	68.2	-8.2	1.59 H	324	55.4	4.6
2	*5795.00	116.5 PK			1.59 H	324	76.1	40.4
3	*5795.00	105.9 AV			1.59 H	324	65.5	40.4
4	#5925.64	57.2 PK	68.2	-11.0	1.59 H	324	51.9	5.3
5	11590.00	58.8 PK	74.0	-15.2	1.83 H	143	41.2	17.6
6	11590.00	46.1 AV	54.0	-7.9	1.83 H	143	28.5	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	#5646.79	59.9 PK	68.2	-8.3	1.92 V	335	55.4	4.5
2	*5795.00	116.1 PK			1.92 V	335	75.7	40.4
3	*5795.00	105.2 AV			1.92 V	335	64.8	40.4
4	#5937.82	57.5 PK	68.2	-10.7	1.92 V	335	52.2	5.3
5	11590.00	58.2 PK	74.0	-15.8	2.16 V	293	40.6	17.6
6	11590.00	45.1 AV	54.0	-8.9	2.16 V	293	27.5	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	57.3 PK	74.0	-16.7	1.37 H	11	52.9	4.4
2	5150.00	45.2 AV	54.0	-8.8	1.37 H	11	40.8	4.4
3	*5210.00	97.1 PK			1.68 H	14	57.7	39.4
4	*5210.00	87.0 AV			1.68 H	14	47.6	39.4
5	5350.00	58.8 PK	74.0	-15.2	1.69 H	23	54.5	4.3
6	5350.00	47.1 AV	54.0	-6.9	1.69 H	23	42.8	4.3
7	#10420.00	57.6 PK	68.2	-10.6	2.95 H	179	41.1	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	56.2 PK	74.0	-17.8	1.94 V	302	51.8	4.4
2	5150.00	43.7 AV	54.0	-10.3	1.94 V	302	39.3	4.4
3	*5210.00	96.6 PK			2.02 V	317	57.2	39.4
4	*5210.00	86.3 AV			2.02 V	317	46.9	39.4
5	5350.00	59.5 PK	74.0	-14.5	1.92 V	309	55.2	4.3
6	5350.00	46.9 AV	54.0	-7.1	1.92 V	309	42.6	4.3
7	#10420.00	57.1 PK	68.2	-11.1	2.41 V	218	40.6	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	#5645.51	63.5 PK	68.2	-4.7	1.96 H	342	59.0	4.5
2	#5650.00	65.9 PK	68.2	-2.3	1.92 H	345	61.4	4.5
3	*5775.00	112.8 PK			1.96 H	342	72.5	40.3
4	*5775.00	101.9 AV			1.96 H	342	61.6	40.3
5	#5925.00	61.1 PK	68.2	-7.1	1.99 H	326	55.8	5.3
6	#5936.54	58.0 PK	68.2	-10.2	1.96 H	342	52.7	5.3
7	11550.00	58.9 PK	74.0	-15.1	1.83 H	126	41.0	17.9
8	11550.00	46.1 AV	54.0	-7.9	1.83 H	126	28.2	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	#5624.36	62.3 PK	68.2	-5.9	1.99 V	332	57.8	4.5
2	#5650.00	63.2 PK	68.2	-5.0	2.03 V	341	58.7	4.5
3	*5775.00	112.1 PK			1.99 V	332	71.8	40.3
4	*5775.00	101.3 AV			1.99 V	332	61.0	40.3
5	#5925.00	59.5 PK	68.2	-8.7	1.85 V	312	54.2	5.3
6	#5975.00	57.3 PK	68.2	-10.9	1.99 V	332	51.9	5.4
7	11550.00	58.9 PK	74.0	-15.1	2.46 V	258	41.0	17.9
8	11550.00	45.8 AV	54.0	-8.2	2.46 V	258	27.9	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

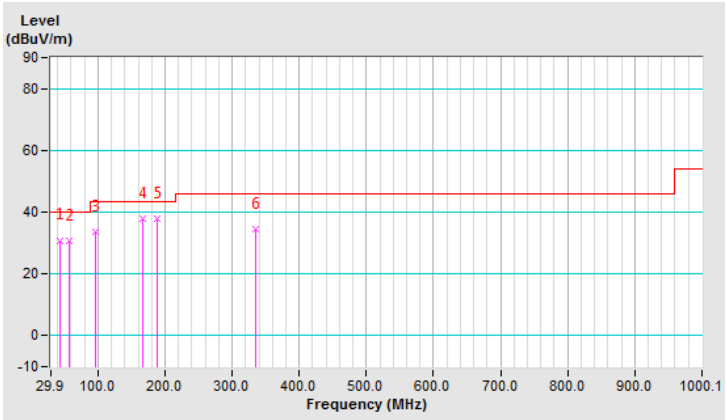
802.11a

CHANNEL	TX Channel 165	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	43.51	30.9 QP	40.0	-9.1	1.49 H	148	40.9	-10.0
2	57.12	30.7 QP	40.0	-9.3	1.99 H	263	40.8	-10.1
3	96.01	33.5 QP	43.5	-10.0	1.99 H	211	47.5	-14.0
4	166.00	37.8 QP	43.5	-5.7	1.49 H	235	46.9	-9.1
5	187.39	37.7 QP	43.5	-5.8	1.00 H	253	48.6	-10.9
6	335.15	34.7 QP	46.0	-11.3	1.00 H	311	41.4	-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

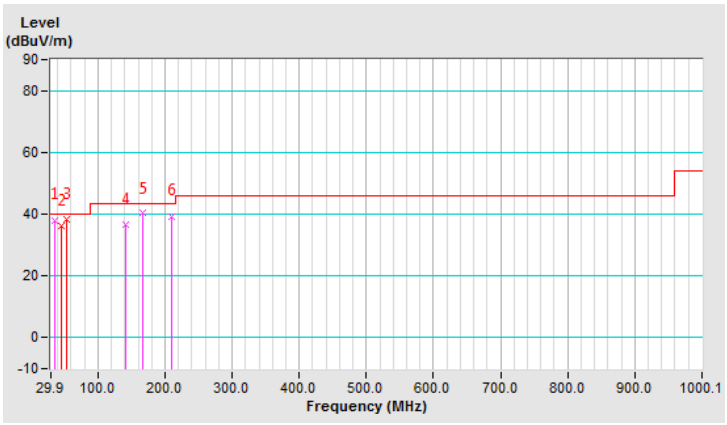


CHANNEL	TX Channel 165	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz		

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	35.73	38.1 QP	40.0	-1.9	1.00 V	357	49.2	-11.1
2	45.99	36.3 QP	40.0	-3.7	1.00 V	38	46.0	-9.7
3	53.36	38.4 QP	40.0	-1.6	1.00 V	8	48.2	-9.8
4	140.72	36.5 QP	43.5	-7.0	1.00 V	221	46.1	-9.6
5	166.00	40.2 QP	43.5	-3.3	1.00 V	265	49.3	-9.1
6	210.72	39.4 QP	43.5	-4.1	1.00 V	20	50.4	-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

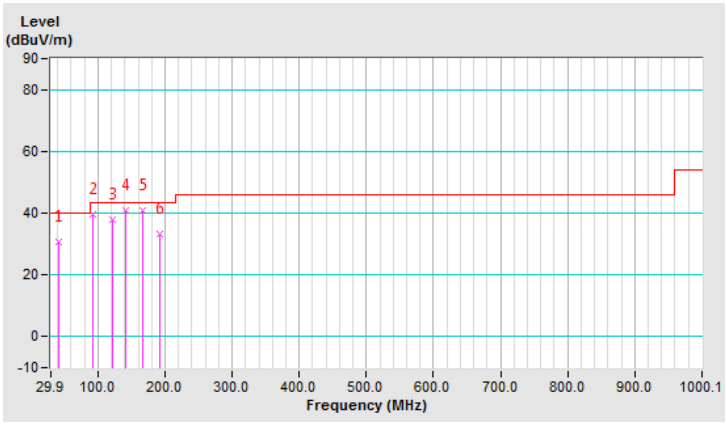
802.11a

CHANNEL	TX Channel 165	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	41.57	30.8 QP	40.0	-9.2	1.99 H	115	40.9	-10.1
2	92.12	39.5 QP	43.5	-4.0	1.99 H	235	53.9	-14.4
3	121.28	37.8 QP	43.5	-5.7	1.49 H	6	49.1	-11.3
4	140.72	40.7 QP	43.5	-2.8	1.99 H	50	50.3	-9.6
5	166.00	41.0 QP	43.5	-2.5	1.49 H	262	50.1	-9.1
6	193.22	33.3 QP	43.5	-10.2	1.00 H	127	44.5	-11.2

Remarks:

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

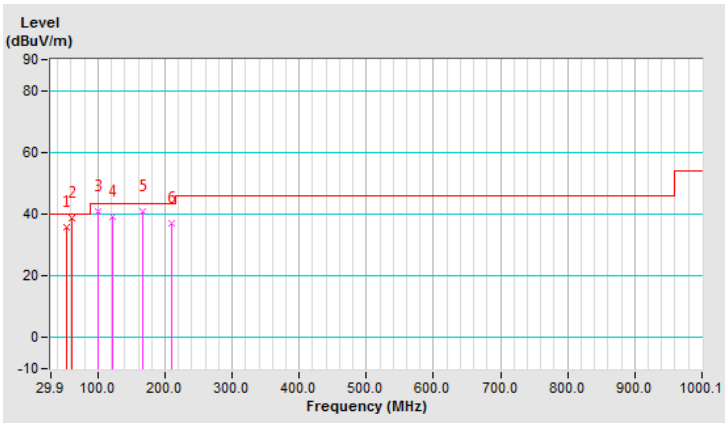


CHANNEL	TX Channel 165	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz		

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	53.43	35.9 QP	40.0	-4.1	1.00 V	10	45.7	-9.8
2	**62.04**	**38.9 QP**	**40.0**	**-1.1**	**1.00 V**	**19**	**49.4**	**-10.5**
3	99.89	40.7 QP	43.5	-2.8	1.00 V	100	54.3	-13.6
4	121.28	39.0 QP	43.5	-4.5	1.00 V	44	50.3	-11.3
5	166.00	41.0 QP	43.5	-2.5	1.00 V	197	50.1	-9.1
6	210.72	37.0 QP	43.5	-6.5	1.49 V	16	48.0	-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 repor



Test Mode C

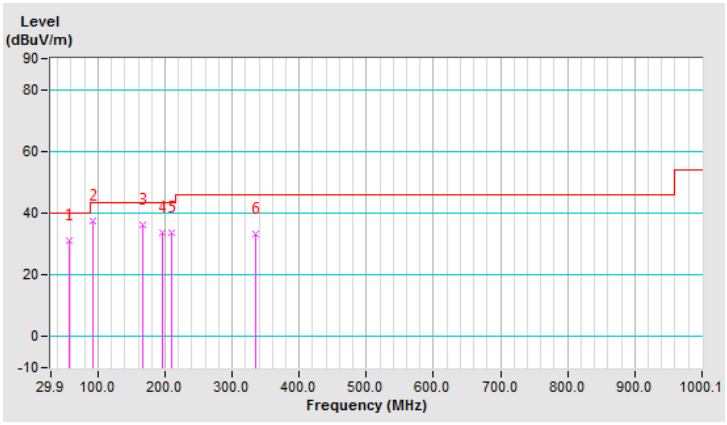
802.11a

CHANNEL	TX Channel 165	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	57.12	31.0 QP	40.0	-9.0	1.99 H	266	41.1	-10.1
2	92.12	37.6 QP	43.5	-5.9	1.99 H	229	52.0	-14.4
3	166.00	36.3 QP	43.5	-7.2	1.50 H	158	45.4	-9.1
4	197.11	33.8 QP	43.5	-9.7	1.50 H	261	45.0	-11.2
5	210.72	33.8 QP	43.5	-9.7	1.50 H	80	44.8	-11.0
6	335.15	33.3 QP	46.0	-12.7	1.00 H	291	40.0	-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

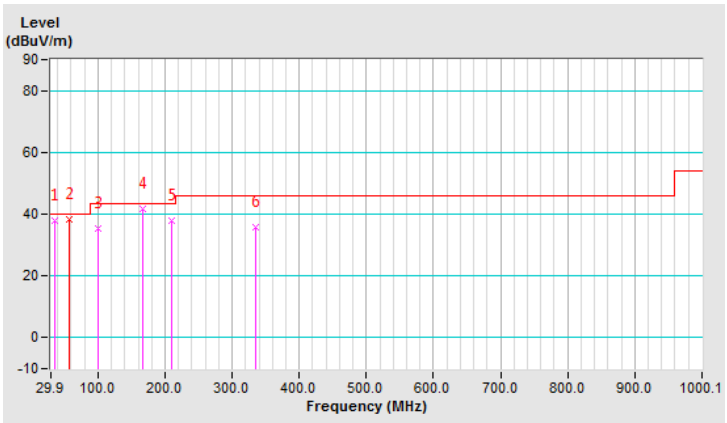


CHANNEL	TX Channel 165	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz		

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	35.73	37.7 QP	40.0	-2.3	1.00 V	94	48.8	-11.1
2	56.67	38.5 QP	40.0	-1.5	1.00 V	26	48.5	-10.0
3	99.89	35.5 QP	43.5	-8.0	1.00 V	73	49.1	-13.6
4	166.00	41.5 QP	43.5	-2.0	1.00 V	287	50.6	-9.1
5	210.72	38.0 QP	43.5	-5.5	1.49 V	13	49.0	-11.0
6	335.15	35.6 QP	46.0	-10.4	1.00 V	19	42.3	-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



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

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.

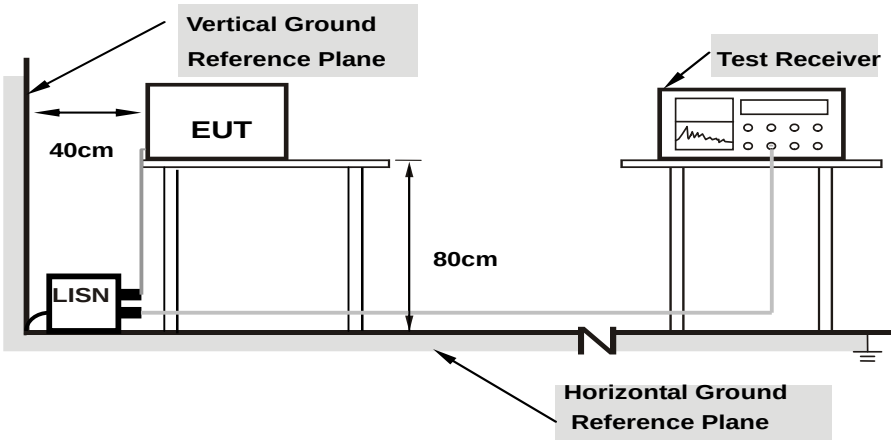
c. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

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

Worst-case data:

Test Mode A

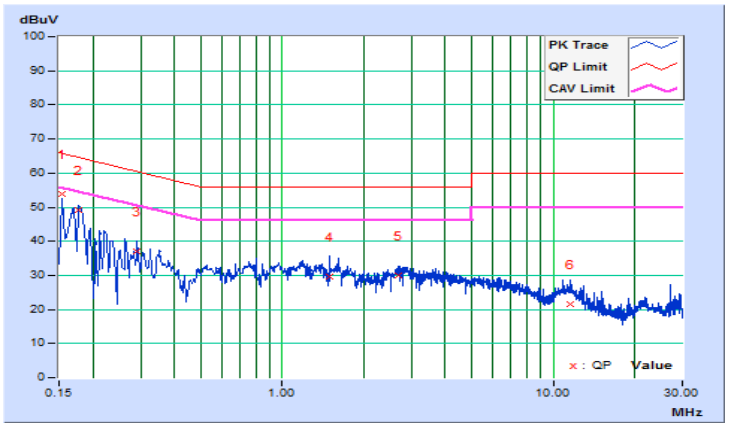
802.11a

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

No	Freq.	Corr. Factor	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15391	9.69	44.28	29.95	53.97	39.64	65.79	55.79	-11.82	-16.15
2	0.17744	9.68	39.54	25.12	49.22	34.80	64.60	54.60	-15.38	-19.80
3	0.29076	9.68	27.20	18.78	36.88	28.46	60.50	50.50	-23.62	-22.04
4	1.49895	9.68	19.84	14.13	29.52	23.81	56.00	46.00	-26.48	-22.19
5	2.68368	9.72	20.39	14.81	30.11	24.53	56.00	46.00	-25.89	-21.47
6	11.57111	9.88	11.70	6.47	21.58	16.35	60.00	50.00	-38.42	-33.65

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.

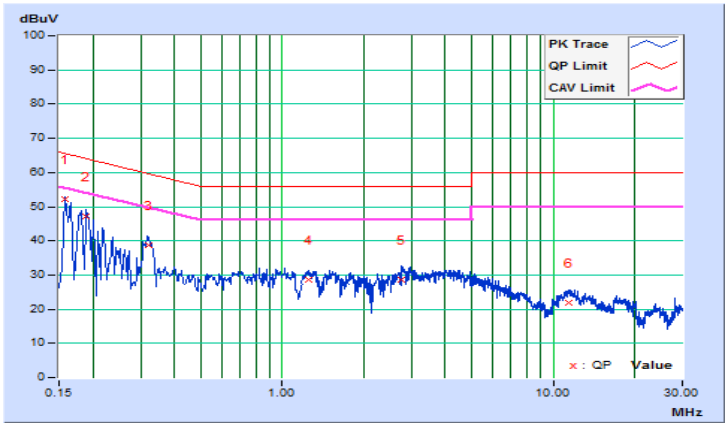


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)

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	42.45	26.87	52.11	36.53	65.58	55.58	-13.47	-19.05
2	0.18910	9.66	37.48	22.17	47.14	31.83	64.08	54.08	-16.94	-22.25
3	0.32204	9.65	29.19	21.00	38.84	30.65	59.65	49.65	-20.81	-19.00
4	1.25653	9.65	19.08	15.24	28.73	24.89	56.00	46.00	-27.27	-21.11
5	2.76188	9.69	18.90	13.59	28.59	23.28	56.00	46.00	-27.41	-22.72
6	11.38734	9.87	12.01	7.14	21.88	17.01	60.00	50.00	-38.12	-32.99

Remarks:

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



Test Mode B

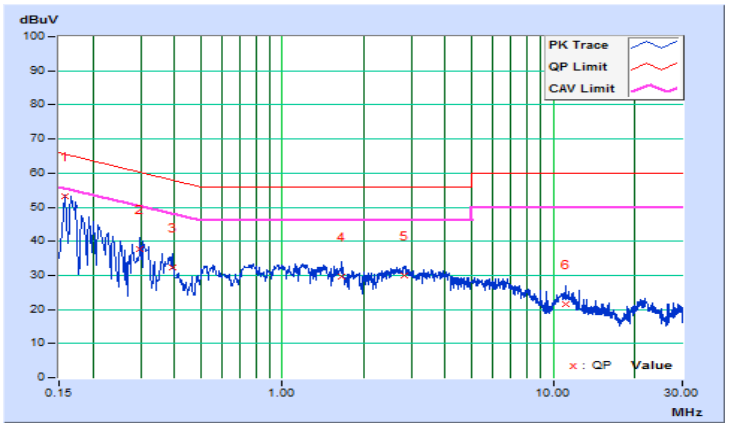
802.11a

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	0.15760	9.69	43.54	29.07	53.23	38.76	65.59	55.59	-12.36	-16.83
2	0.29858	9.68	28.05	21.39	37.73	31.07	60.28	50.28	-22.55	-19.21
3	0.39242	9.68	22.74	15.57	32.42	25.25	58.01	48.01	-25.59	-22.76
4	1.65535	9.69	19.99	15.48	29.68	25.17	56.00	46.00	-26.32	-20.83
5	2.82053	9.72	20.11	14.06	29.83	23.78	56.00	46.00	-26.17	-22.22
6	11.13319	9.88	11.53	6.67	21.41	16.55	60.00	50.00	-38.59	-33.45

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.

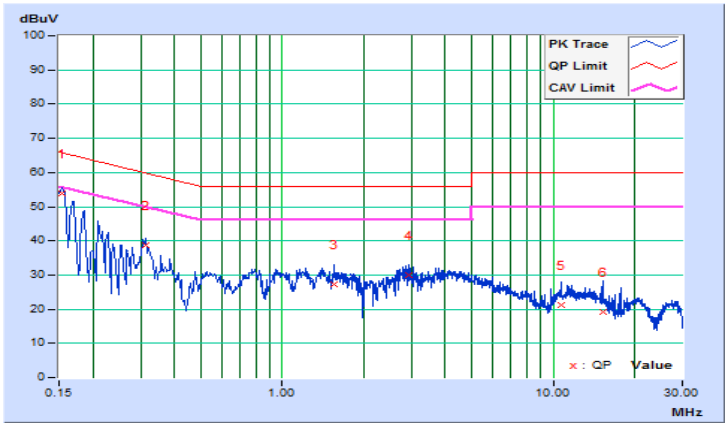


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)

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	0.15391	9.66	44.10	28.78	53.76	38.44	65.79	55.79	-12.03	-17.35
2	0.31422	9.65	29.17	21.98	38.82	31.63	59.86	49.86	-21.04	-18.23
3	1.55369	9.66	17.45	10.99	27.11	20.65	56.00	46.00	-28.89	-25.35
4	2.93783	9.69	20.20	15.13	29.89	24.82	56.00	46.00	-26.11	-21.18
5	10.69136	9.86	11.46	6.48	21.32	16.34	60.00	50.00	-38.68	-33.66
6	15.32471	9.93	9.41	4.43	19.34	14.36	60.00	50.00	-40.66	-35.64

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

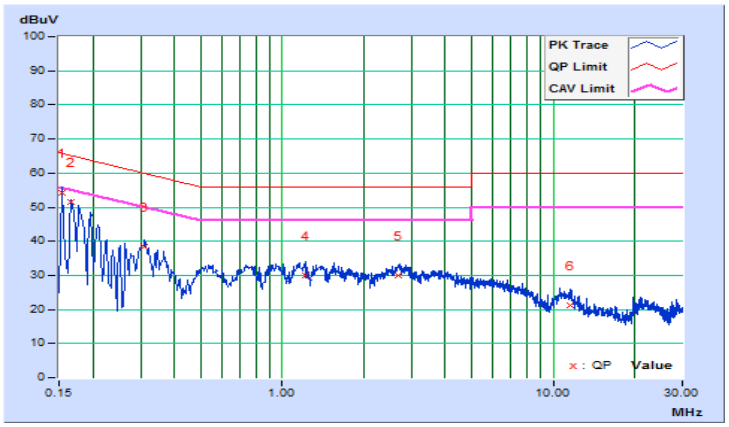
802.11a

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**	**44.46**	**30.03**	**54.15**	**39.72**	**65.79**	**55.79**	**-11.64**	**-16.07**
2	0.16564	9.69	41.90	26.05	51.59	35.74	65.18	55.18	-13.59	-19.44
3	0.31021	9.68	28.66	21.08	38.34	30.76	59.96	49.96	-21.62	-19.20
4	1.21743	9.68	20.36	15.15	30.04	24.83	56.00	46.00	-25.96	-21.17
5	2.67977	9.72	20.36	15.01	30.08	24.73	56.00	46.00	-25.92	-21.27
6	11.53201	9.88	11.36	6.38	21.24	16.26	60.00	50.00	-38.76	-33.74

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.

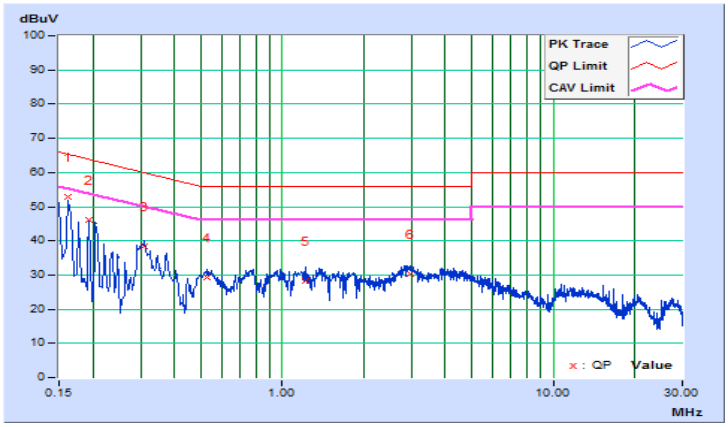


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)

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	0.16181	9.66	43.13	28.07	52.79	37.73	65.37	55.37	-12.58	-17.64
2	0.19301	9.66	36.35	20.53	46.01	30.19	63.91	53.91	-17.90	-23.72
3	0.30939	9.65	28.81	21.25	38.46	30.90	59.99	49.99	-21.53	-19.09
4	0.52960	9.65	19.62	14.66	29.27	24.31	56.00	46.00	-26.73	-21.69
5	1.21743	9.65	18.53	12.93	28.18	22.58	56.00	46.00	-27.82	-23.42
6	2.96129	9.69	20.60	15.33	30.29	25.02	56.00	46.00	-25.71	-20.98

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)
		Mobile and Portable client device	250mW (24 dBm)
U-NII-2A			250mW (24 dBm) or 11 dBm+10 log B*
U-NII-2C			250mW (24 dBm) or 11 dBm+10 log B*
U-NII-3	√		1 Watt (30 dBm)

*B is the 26 dB emission bandwidth in megahertz

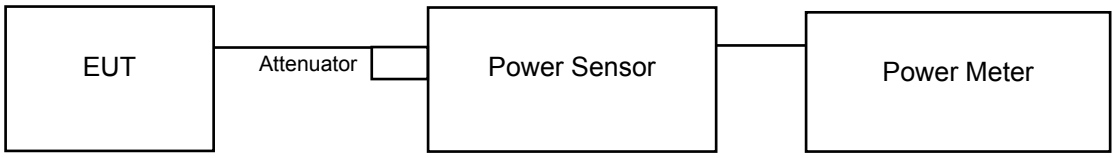
Per KDB 662911 Method of conducted output power measurement on IEEE 802.11 devices,

Array Gain = 0 dB (i.e., no array gain) for $N_{ANT} \leq 4$;
Array Gain = 0 dB (i.e., no array gain) for channel widths ≥ 40 MHz for any N_{ANT};
Array Gain = 5 log(N_{ANT}/N_{SS}) dB or 3 dB, whichever is less for 20-MHz channel widths with $N_{ANT} \geq 5$.

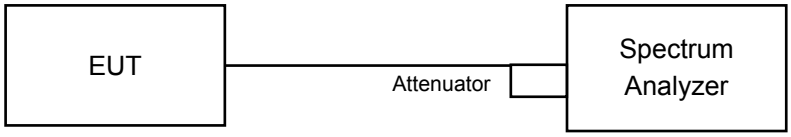
For power measurements on all other devices: Array Gain = 10 log(N_{ANT}/N_{SS}) dB.

4.3.2 Test Setup

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



802.11ac (VHT80)



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

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

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

For 802.11ac (VHT80)

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

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

Test Mode A (CDD Mode)

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	12.01	11.99	**31.697**	15.01	22.58	5.46	20.47	21.00	Pass
40	5200	11.75	11.64	29.550	14.71	22.58	5.46	20.17	21.00	Pass
48	5240	12.19	11.74	31.486	14.98	22.58	5.46	20.44	21.00	Pass

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

802.11n (HT20)

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	12.05	11.93	31.628	15.00	22.58	5.46	20.46	21.00	Pass
40	5200	12.04	11.87	31.378	14.97	22.58	5.46	20.43	21.00	Pass
48	5240	12.06	11.86	31.415	14.97	22.58	5.46	20.43	21.00	Pass

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

802.11n (HT40)

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	11.75	11.43	28.862	14.60	22.58	5.46	20.06	21.00	Pass
46	5230	12.05	11.85	31.343	14.96	22.58	5.46	20.42	21.00	Pass

Note:
1. Gain = 13.42dBi > 6dBi, so the power limit shall be reduced to 30-(13.42-6) = 22.58dBm.
2. Gain = 5.46dBi (above 30 degrees from the horizon).
3. 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	11.84	11.71	30.101	14.79	22.58	5.46	20.25	21.00	Pass

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

Test Mode A (Beamforming Mode)

802.11n (HT20)

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	9.04	8.92	**15.815**	11.99	19.57	5.46	20.46	21.00	Pass
40	5200	9.03	8.86	15.689	11.96	19.57	5.46	20.43	21.00	Pass
48	5240	9.05	8.85	15.709	11.96	19.57	5.46	20.43	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).

802.11n (HT40)

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	8.74	8.42	14.432	11.59	19.57	5.46	20.06	21.00	Pass
46	5230	9.04	8.84	15.673	11.95	19.57	5.46	20.42	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	8.83	8.70	15.051	11.78	19.57	5.46	20.52	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).

Test Mode B (CDD Mode)

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	13.06	13.27	41.462	16.18	30.00	4.31	20.49	21.00	Pass
40	5200	13.40	13.20	42.771	16.31	30.00	4.31	20.62	21.00	Pass
48	5240	12.99	12.67	38.400	15.84	30.00	4.31	20.15	21.00	Pass

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

802.11n (HT20)

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	13.04	12.89	39.591	15.98	30.00	4.31	20.29	21.00	Pass
40	5200	12.97	13.02	39.860	16.01	30.00	4.31	20.32	21.00	Pass
48	5240	12.97	12.81	38.914	15.90	30.00	4.31	20.21	21.00	Pass

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

802.11n (HT40)

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	13.34	13.29	**42.907**	16.33	30.00	4.31	20.64	21.00	Pass
46	5230	13.23	12.78	40.005	16.02	30.00	4.31	20.33	21.00	Pass

Note:
1. Gain = 5.17dBi < 6dBi, so the power limit no need to reduced.
2. Gain = 4.31dBi (above 30 degrees from the horizon).
3. 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	13.11	12.92	40.052	16.03	30.00	4.31	20.34	21.00	Pass

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

Test Mode B (Beamforming Mode)

802.11n (HT20)

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	10.03	9.88	19.796	12.97	27.82	4.31	20.29	21.00	Pass
40	5200	9.96	10.01	19.931	13.00	27.82	4.31	20.32	21.00	Pass
48	5240	9.96	9.80	19.458	12.89	27.82	4.31	20.21	21.00	Pass

Note:
1. Directional gain = 5.17dBi + 10log(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).

802.11n (HT40)

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	10.33	10.28	**21.455**	13.32	27.82	4.31	20.64	21.00	Pass
46	5230	10.22	9.77	20.004	13.01	27.82	4.31	20.33	21.00	Pass

Note:
1. Directional gain = 5.17dBi + 10log(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	10.10	9.91	20.028	13.02	27.82	4.31	20.34	21.00	Pass

Note:
1. Directional gain = 5.17dBi + 10log(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).

Test Mode C (CDD Mode)

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	2.63	1.74	3.325	5.22	20.50	14.42	19.64	21.00	Pass
40	5200	2.36	2.03	3.318	5.21	20.50	14.42	19.63	21.00	Pass
48	5240	2.56	1.73	3.292	5.17	20.50	14.42	19.59	21.00	Pass

Note:
1. Gain = 15.50dBi > 6dBi, so the power limit shall be reduced to 30-(15.50-6) = 20.50dBm.
2. Gain = 14.42dBi (above 30 degrees from the horizon).
3. EIRP = conducted power + (14.42dBi) + array gain (0 dB (i.e., no array gain) for $N_{ANT} \leq 4$).

802.11n (HT20)

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	2.65	1.73	**3.330**	5.22	20.50	14.42	19.64	21.00	Pass
40	5200	2.19	1.46	3.056	4.85	20.50	14.42	19.27	21.00	Pass
48	5240	2.34	1.27	3.054	4.85	20.50	14.42	19.27	21.00	Pass

Note:
1. Gain = 15.50dBi > 6dBi, so the power limit shall be reduced to 30-(15.50-6) = 20.50dBm.
2. Gain = 14.42dBi (above 30 degrees from the horizon).
3. EIRP = conducted power + (14.42dBi) + array gain (0 dB (i.e., no array gain) for $N_{ANT} \leq 4$).

802.11n (HT40)

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	2.88	1.19	3.256	5.13	20.50	14.42	19.55	21.00	Pass
46	5230	2.10	1.54	3.048	4.84	20.50	14.42	19.26	21.00	Pass

Note:
1. Gain = 15.50dBi > 6dBi, so the power limit shall be reduced to 30-(15.50-6) = 20.50dBm.
2. Gain = 14.42dBi (above 30 degrees from the horizon).
3. 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	2.21	2.10	3.285	5.17	20.50	14.42	19.59	21.00	Pass

Note:
1. Gain = 15.50dBi > 6dBi, so the power limit shall be reduced to 30-(15.50-6) = 20.50dBm.
2. Gain = 14.42dBi (above 30 degrees from the horizon).
3. EIRP = conducted power + (14.42dBi) + array gain (0 dB (i.e., no array gain) for $N_{ANT} \leq 4$).

Test Mode C (Beamforming Mode)

802.11n (HT20)

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	-0.36	-1.28	**1.665**	2.21	17.49	14.42	16.63	21.00	Pass
40	5200	-0.82	-1.55	1.528	1.84	17.49	14.42	16.26	21.00	Pass
48	5240	-0.67	-1.74	1.527	1.84	17.49	14.42	16.26	21.00	Pass

Note:
1. Directional gain = 15.50dBi + 10log(2) = 18.51dBi > 6dBi, so the power limit shall be reduced to 30-(18.51-6) = 17.49dBm.
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).

802.11n (HT40)

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	-0.13	-1.82	1.628	2.12	17.49	14.42	16.54	21.00	Pass
46	5230	-0.91	-1.47	1.524	1.83	17.49	14.42	16.25	21.00	Pass

Note:
1. Directional gain = 15.50dBi + 10log(2) = 18.51dBi > 6dBi, so the power limit shall be reduced to 30-(18.51-6) = 17.49dBm.
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	-0.80	-0.91	1.643	2.16	17.49	14.42	16.58	21.00	Pass

Note:
1. Directional gain = 15.50dBi + 10log(2) = 18.51dBi > 6dBi, so the power limit shall be reduced to 30-(18.51-6) = 17.49dBm.
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-3 Band

Test Mode A (CDD Mode)

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	19.34	19.15	168.125	22.26	22.58	Pass
157	5785	19.12	18.85	158.394	22.00	22.58	Pass
165	5825	19.32	19.24	**169.453**	22.29	22.58	Pass

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

802.11n (HT20)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
149	5745	19.00	18.88	156.701	21.95	22.58	Pass
157	5785	18.72	18.42	143.975	21.58	22.58	Pass
165	5825	19.06	18.81	156.571	21.95	22.58	Pass

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

802.11n (HT40)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
151	5755	19.27	19.14	166.563	22.22	22.58	Pass
159	5795	19.03	18.76	155.145	21.91	22.58	Pass

Note: Gain = 13.42dBi > 6dBi, so the power 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	18.95	18.79	154.207	21.88	22.58	Pass

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

Test Mode A (Beamforming Mode)

802.11n (HT20)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
149	5745	15.99	15.87	78.356	18.94	19.57	Pass
157	5785	15.71	15.41	71.993	18.57	19.57	Pass
165	5825	16.05	15.80	78.291	18.94	19.57	Pass

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

802.11n (HT40)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
151	5755	16.26	16.13	**83.287**	19.21	19.57	Pass
159	5795	16.02	15.75	77.578	18.90	19.57	Pass

Note: Directional gain = 13.42dBi + 10log(2) = 16.43dBi > 6dBi, so the power 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	15.94	15.78	77.108	18.87	19.57	Pass

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

Test Mode B (CDD Mode)

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	24.06	23.17	462.174	26.65	30.00	Pass
157	5785	23.70	23.21	443.834	26.47	30.00	Pass
165	5825	23.54	22.72	413.012	26.16	30.00	Pass

802.11n (HT20)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
149	5745	23.59	22.90	423.544	26.27	30.00	Pass
157	5785	23.35	22.98	414.881	26.18	30.00	Pass
165	5825	23.17	22.55	387.378	25.88	30.00	Pass

802.11n (HT40)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
151	5755	24.09	23.27	**468.772**	26.71	30.00	Pass
159	5795	23.89	23.34	460.680	26.63	30.00	Pass

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	19.68	19.05	173.250	22.39	30.00	Pass

Test Mode B (Beamforming Mode)

802.11n (HT20)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
149	5745	20.58	19.89	211.787	23.26	27.82	Pass
157	5785	20.34	19.97	207.455	23.17	27.82	Pass
165	5825	20.16	19.54	193.703	22.87	27.82	Pass

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

802.11n (HT40)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
151	5755	21.08	20.26	**234.403**	23.70	27.82	Pass
159	5795	20.88	20.33	230.357	23.62	27.82	Pass

Note: Directional gain = 5.17dBi + 10log(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	16.67	16.04	86.631	19.38	27.82	Pass

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

Test Mode C (CDD Mode)

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	17.52	16.08	97.045	19.87	20.50	Pass
157	5785	17.26	15.86	91.759	19.63	20.50	Pass
165	5825	18.05	16.36	**107.077**	20.30	20.50	Pass

Note: Gain = 15.50dBi > 6dBi, so the power limit shall be reduced to 30-(15.50-6) = 20.50dBm.

802.11n (HT20)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
149	5745	17.71	16.25	101.190	20.05	20.50	Pass
157	5785	18.01	16.27	105.605	20.24	20.50	Pass
165	5825	17.73	15.96	98.739	19.94	20.50	Pass

Note: Gain = 15.50dBi > 6dBi, so the power limit shall be reduced to 30-(15.50-6) = 20.50dBm.

802.11n (HT40)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
151	5755	17.57	16.04	97.327	19.88	20.50	Pass
159	5795	17.83	16.02	100.668	20.03	20.50	Pass

Note: Gain = 15.50dBi > 6dBi, so the power limit shall be reduced to 30-(15.50-6) = 20.50dBm.

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	17.66	16.11	99.177	19.96	20.50	Pass

Note: Gain = 15.50dBi > 6dBi, so the power limit shall be reduced to 30-(15.50-6) = 20.50dBm.

Test Mode C (Beamforming Mode)

802.11n (HT20)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
149	5745	14.70	13.24	50.598	17.04	17.49	Pass
157	5785	15.00	13.26	**52.807**	17.23	17.49	Pass
165	5825	14.72	12.95	49.372	16.93	17.49	Pass

Note: Directional gain = 15.50dBi + 10log(2) = 18.51dBi > 6dBi, so the power limit shall be reduced to 30-(18.51-6)= 17.49dBm.

802.11n (HT40)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
151	5755	14.56	13.03	48.667	16.87	17.49	Pass
159	5795	14.82	13.01	50.338	17.02	17.49	Pass

Note: Directional gain = 15.50dBi + 10log(2) = 18.51dBi > 6dBi, so the power limit shall be reduced to 30-(18.51-6)= 17.49dBm.

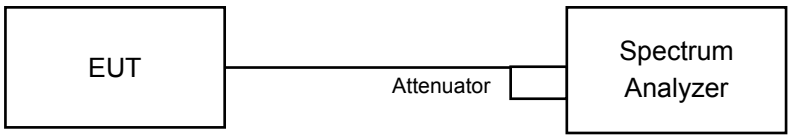
802.11ac (VHT80)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
155	5775	14.65	13.10	49.591	16.95	17.49	Pass

Note: Directional gain = 15.50dBi + 10log(2) = 18.51dBi > 6dBi, so the power limit shall be reduced to 30-(18.51-6)= 17.49dBm.

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	16.44	16.56
40	5200	16.44	16.44
48	5240	16.44	16.56
149	5745	16.44	16.56
157	5785	16.44	16.44
165	5825	16.43	16.56

802.11n (HT20)

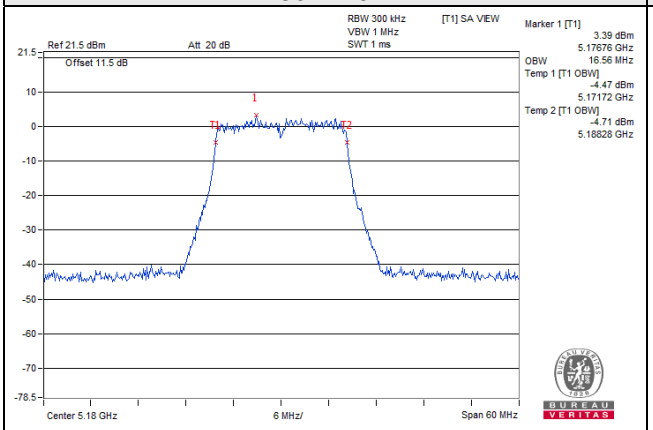
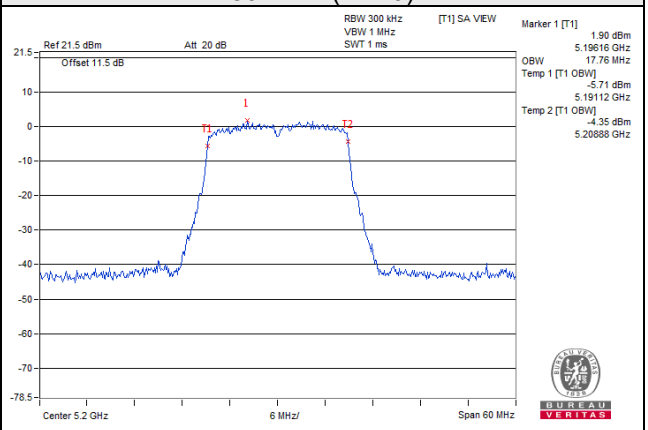
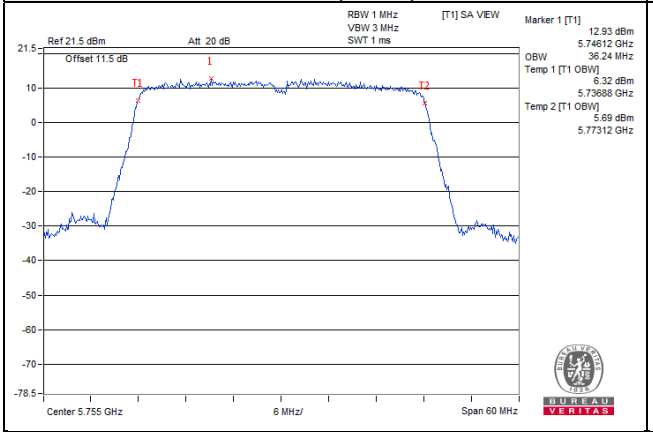
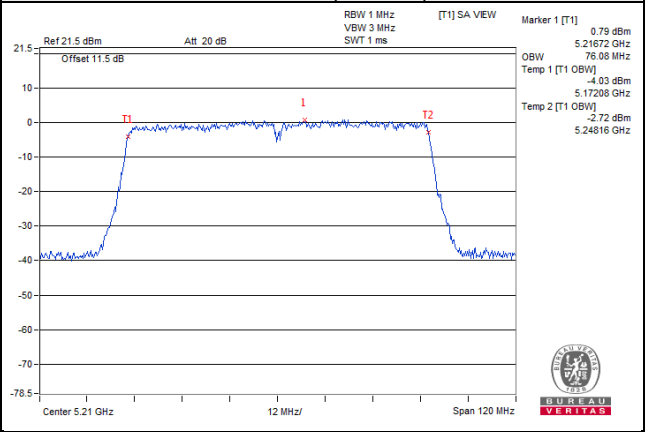
Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
36	5180	17.64	17.76
40	5200	17.76	17.76
48	5240	17.64	17.76
149	5745	17.76	17.76
157	5785	17.64	17.64
165	5825	17.64	17.64

802.11n (HT40)

Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
38	5190	36.12	36.12
46	5230	36.12	36.12
151	5755	36.12	36.24
159	5795	36.12	36.00

802.11ac (VHT80)

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

Spectrum Plot of Worst Value	
802.11a	802.11n (HT20)
	
802.11n (HT40)	802.11ac (VHT80)
	

Test Mode B

802.11a

Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
36	5180	16.44	16.44
40	5200	16.44	16.44
48	5240	16.44	16.44
149	5745	16.56	16.56
157	5785	16.56	16.68
165	5825	16.56	16.56

802.11n (HT20)

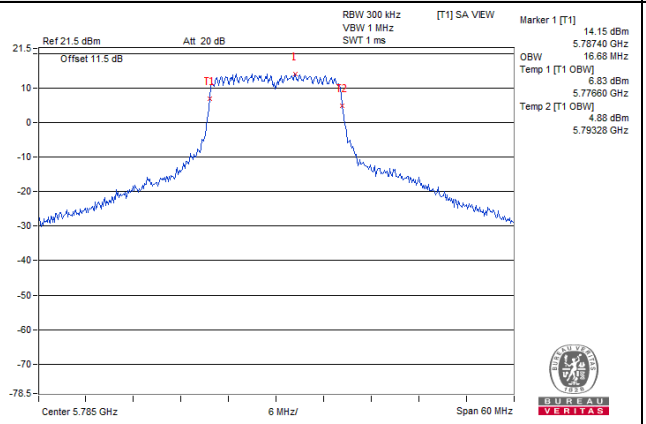
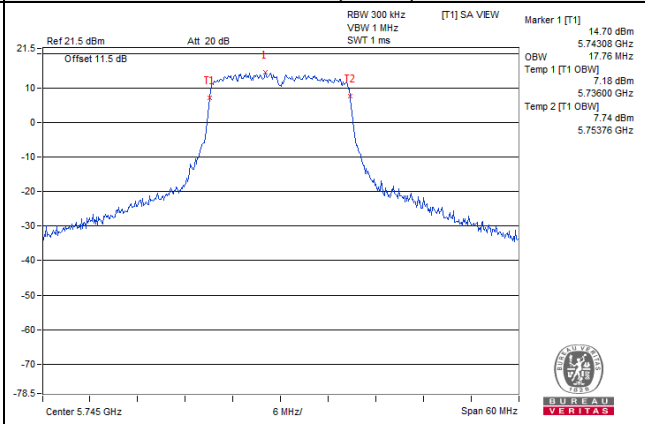
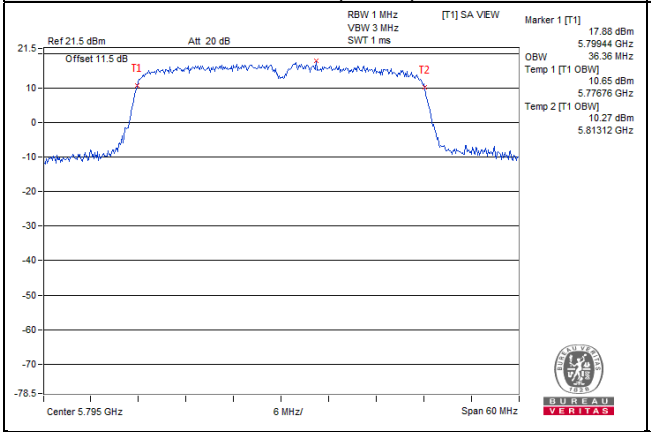
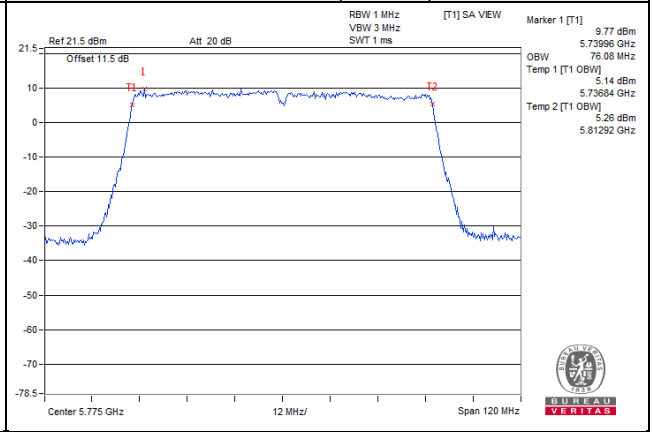
Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
36	5180	17.64	17.64
40	5200	17.64	17.76
48	5240	17.64	17.64
149	5745	17.76	17.76
157	5785	17.76	17.76
165	5825	17.76	17.76

802.11n (HT40)

Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
38	5190	36.00	36.00
46	5230	36.12	36.12
151	5755	36.26	36.24
159	5795	36.24	36.36

802.11ac (VHT80)

Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
42	5210	75.60	75.84
155	5775	76.08	76.08

Spectrum Plot of Worst Value	
802.11a	802.11n (HT20)
	
802.11n (HT40)	802.11ac (VHT80)
	

Test Mode C

802.11a

Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
36	5180	16.56	16.56
40	5200	16.68	16.56
48	5240	16.56	16.44
149	5745	16.44	16.44
157	5785	16.44	16.44
165	5825	16.44	16.44

802.11n (HT20)

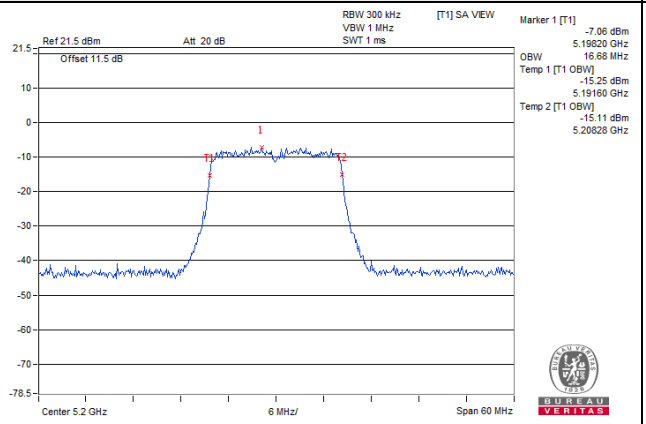
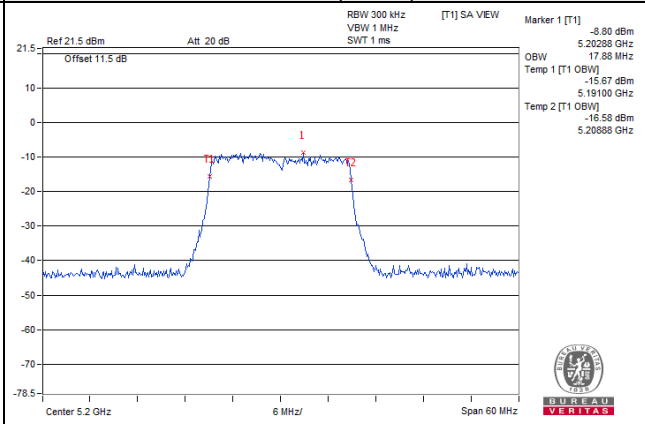
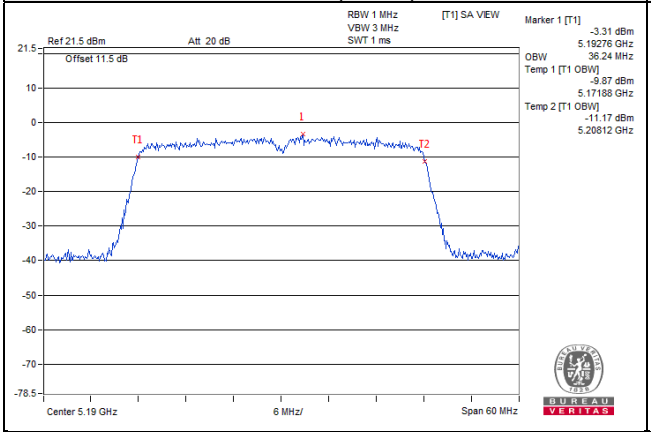
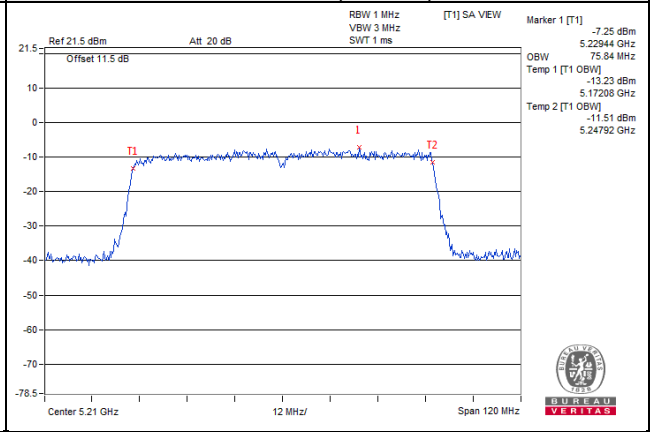
Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
36	5180	17.76	17.64
40	5200	17.64	17.88
48	5240	17.64	17.88
149	5745	17.64	17.64
157	5785	17.76	17.64
165	5825	17.76	17.64

802.11n (HT40)

Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
38	5190	36.24	36.12
46	5230	36.24	36.00
151	5755	36.24	36.24
159	5795	36.12	36.12

802.11ac (VHT80)

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

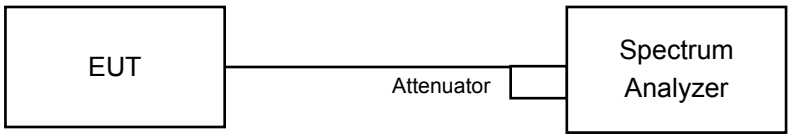
Spectrum Plot of Worst Value	
802.11a	802.11n (HT20)
	
802.11n (HT40)	802.11ac (VHT80)
	

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	
		Mobile and Portable client device	11dBm/ MHz
U-NII-2A			11dBm/ MHz
U-NII-2C			11dBm/ MHz
U-NII-3	√		30dBm/ 500kHz

4.5.2 Test Setup



4.5.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.5.4 Test Procedures

For U-NII-1 band:

Duty cycle of test signal is ≥ 98%

Using method SA-1

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

Duty cycle of test signal is < 98%

Using method SA-2

a. Set span to encompass the entire emission bandwidth (EBW) of the signal.

b. Set RBW = 1MHz, Set VBW ≥ 3 MHz, Detector = RMS

c. Set Channel power measure = 1MHz

d. Sweep time = auto, trigger set to “free run”.

e. Trace average at least 100 traces in power averaging mode.

f. Record the max value and add 10 log (1/duty cycle)

For U-NII-3 band:

Duty cycle of test signal is ≥ 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 of test signal is < 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 / 300 kHz)

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 4.3.6.

4.5.7 Test Results

For U-NII-1 band:

Test Mode A

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	-2.34	-1.85	0.16	1.08	6.57	Pass
40	5200	-3.19	-1.97	0.16	0.63	6.57	Pass
48	5240	-2.66	-2.63	0.16	0.53	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.

802.11n (HT20)

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	-2.70	-2.53	0.10	0.50	6.57	Pass
40	5200	-2.76	-2.53	0.10	0.47	6.57	Pass
48	5240	-3.46	-2.77	0.10	0.01	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.

802.11n (HT40)

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	-6.29	-5.53	0.13	-2.75	6.57	Pass
46	5230	-5.78	-5.53	0.13	-2.51	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.

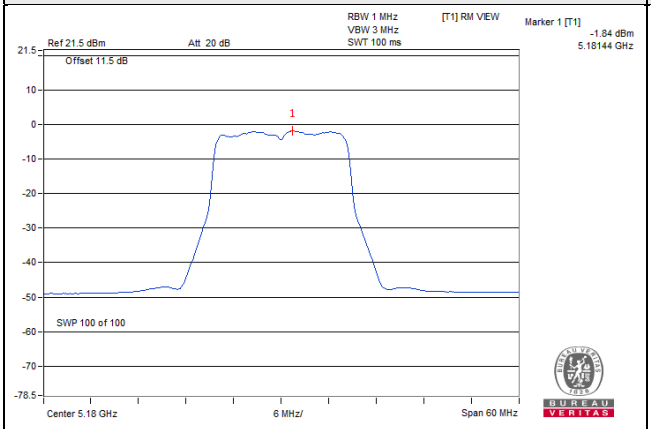
802.11ac (VHT80)

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	-9.56	-9.14	0.29	-6.04	6.57	Pass

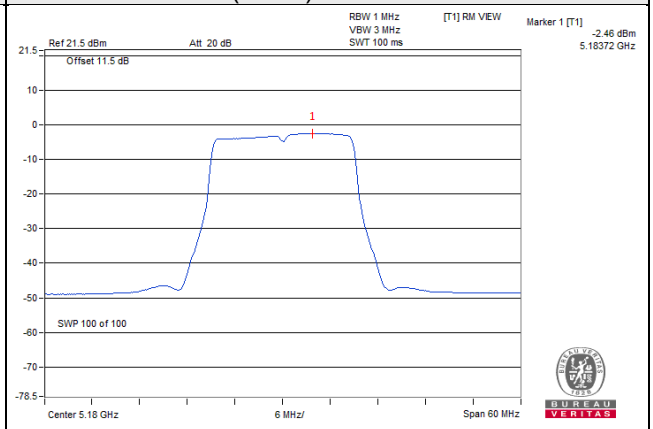
Note:
1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = 13.42dBi + 10log(2) = 16.43dBi > 6dBi, so the power density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

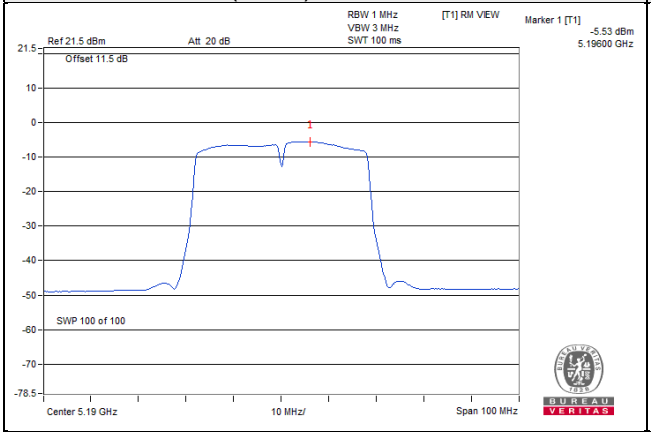
802.11a / Chain 1 / CH 36



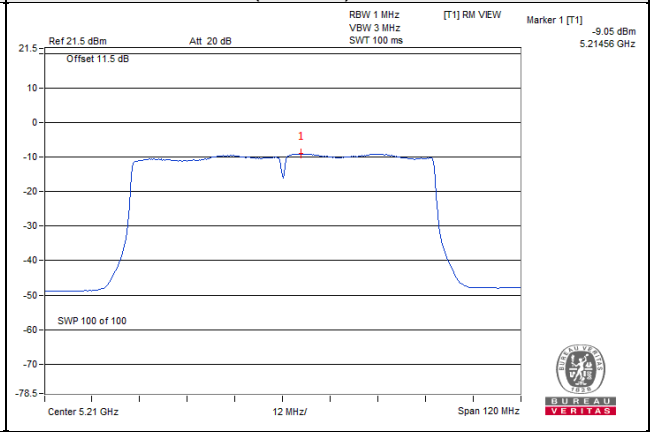
802.11n (HT20) / Chain 1 / CH 36



802.11n (HT40) / Chain 1 / CH 38



802.11ac (VHT80) / Chain 1 / 42



Test Mode B

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	-0.58	-0.12	0.17	2.84	14.82	Pass
40	5200	-0.16	-0.03	0.17	3.09	14.82	Pass
48	5240	-0.53	-0.56	0.17	2.64	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.

802.11n (HT20)

Chan.	Freq. (MHz)	PSD (dBm/MHz)		Total PSD (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1			
36	5180	-1.61	-0.40	2.05	14.82	Pass
40	5200	-0.24	-0.79	2.50	14.82	Pass
48	5240	-0.65	-0.78	2.30	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.

802.11n (HT40)

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	-2.46	-2.34	0.12	0.73	14.82	Pass
46	5230	-3.18	-3.16	0.12	-0.04	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.

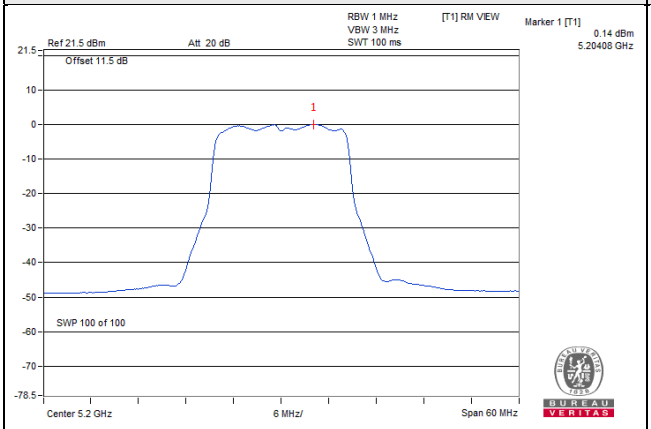
802.11ac (VHT80)

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	-6.51	-6.44	0.30	-3.16	14.82	Pass

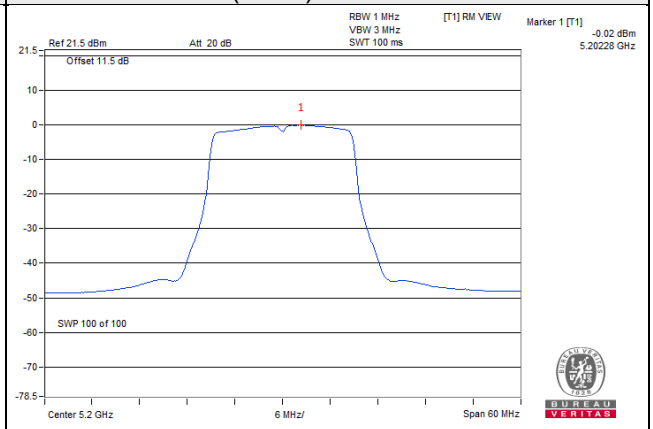
Note:
1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = 5.17dBi + 10log(2) = 8.18dBi > 6dBi, so the power density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

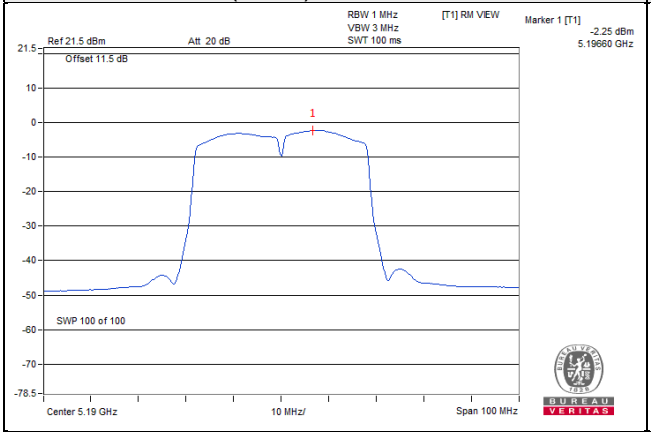
802.11a / Chain 1 / CH 40



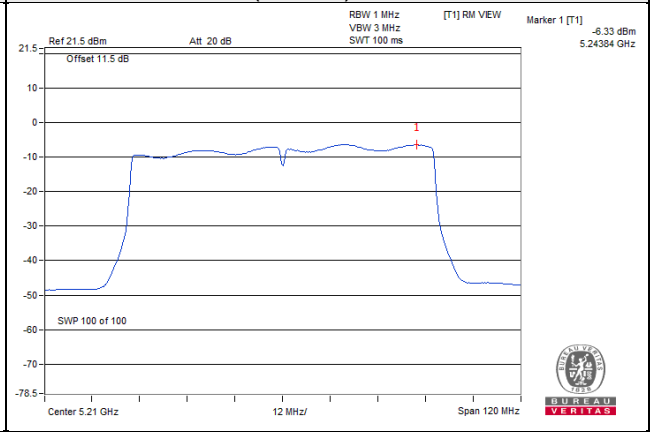
802.11n (HT20) / Chain 0 / CH 40



802.11n (HT40) / Chain 1 / CH 38



802.11ac (VHT80) / Chain 1 / 42



Test Mode C

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	-11.44	-12.84	0.16	-8.91	4.49	Pass
40	5200	-11.46	-12.01	0.16	-8.56	4.49	Pass
48	5240	-11.43	-12.25	0.16	-8.65	4.49	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 = 15.50dBi + 10log(2) = 18.51dBi > 6dBi, so the power density limit shall be reduced to 17-(18.51-6) = 4.49dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11n (HT20)

Chan.	Freq. (MHz)	PSD (dBm/MHz)		Total PSD (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1			
36	5180	-12.66	-13.07	-9.85	4.49	Pass
40	5200	-12.06	-13.26	-9.61	4.49	Pass
48	5240	-11.93	-13.38	-9.58	4.49	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 = 15.50dBi + 10log(2) = 18.51dBi > 6dBi, so the power density limit shall be reduced to 17-(18.51-6) = 4.49dBm.

802.11n (HT40)

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	-14.14	-15.21	0.13	-11.50	4.49	Pass
46	5230	-14.81	-15.34	0.13	-11.93	4.49	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 = 15.50dBi + 10log(2) = 18.51dBi > 6dBi, so the power density limit shall be reduced to 17-(18.51-6) = 4.49dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

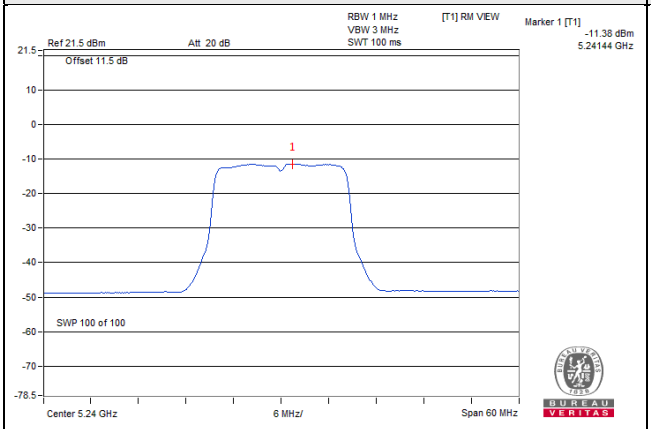
802.11ac (VHT80)

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	-17.82	-18.53	0.27	-14.88	4.49	Pass

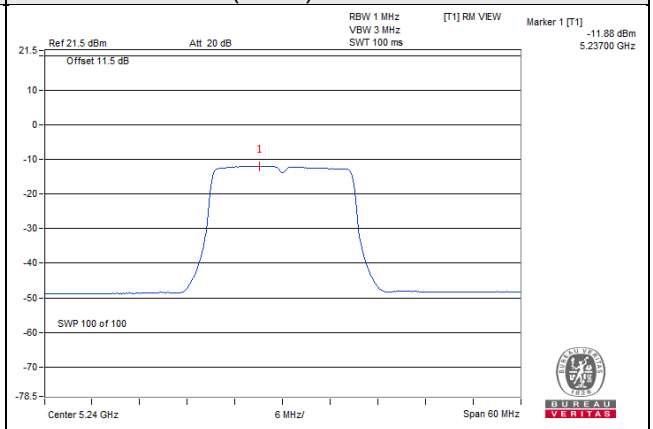
Note:
1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = 15.50dBi + 10log(2) = 18.51dBi > 6dBi, so the power density limit shall be reduced to 17-(18.51-6) = 4.49dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value

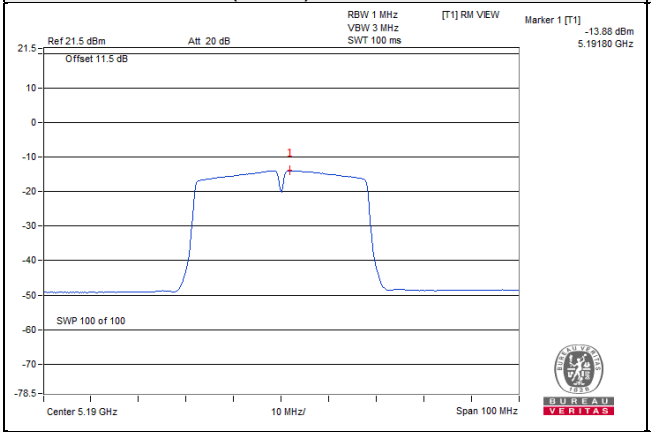
802.11a / Chain 1 / CH 48



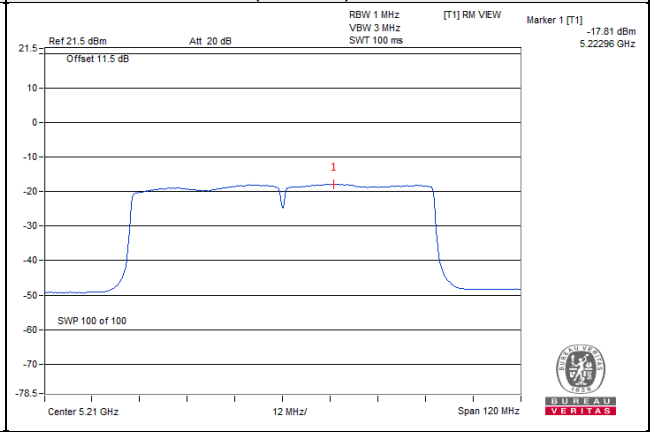
802.11n (HT20) / Chain 0 / CH 48



802.11n (HT40) / Chain 0 / CH 38



802.11ac (VHT80) / Chain 0 / 42



For U-NII-3 band:

Test Mode A

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	-3.17	-0.95	3.01	0.16	2.22	19.57	Pass
	157	5785	-3.49	-1.27	3.01	0.16	1.90	19.57	Pass
	165	5825	-3.34	-1.12	3.01	0.16	2.05	19.57	Pass
1	149	5745	-3.36	-1.14	3.01	0.16	2.03	19.57	Pass
	157	5785	-3.65	-1.43	3.01	0.16	1.74	19.57	Pass
	165	5825	-3.15	-0.93	3.01	0.16	2.24	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	Duty Factor (dB)	Total PSD With Duty Factor (dBm/500kHz)	Limit (dBm/ 500kHz)	Pass / Fail
			(dBm/300kHz)	(dBm/500kHz)					
0	149	5745	-4.25	-2.03	3.01	0.10	1.08	19.57	Pass
	157	5785	-4.26	-2.04	3.01	0.10	1.07	19.57	Pass
	165	5825	-3.90	-1.68	3.01	0.10	1.43	19.57	Pass
1	149	5745	-3.97	-1.75	3.01	0.10	1.36	19.57	Pass
	157	5785	-4.20	-1.98	3.01	0.10	1.13	19.57	Pass
	165	5825	-3.71	-1.49	3.01	0.10	1.62	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 (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	-7.00	-4.78	3.01	0.13	-1.64	19.57	Pass
	159	5795	-7.06	-4.84	3.01	0.13	-1.70	19.57	Pass
1	151	5755	-6.73	-4.51	3.01	0.13	-1.37	19.57	Pass
	159	5795	-6.88	-4.66	3.01	0.13	-1.52	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.

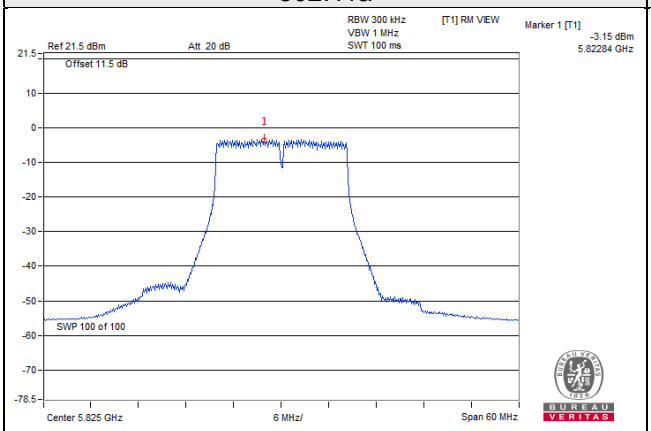
802.11ac (VHT80)

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	-10.69	-8.47	3.01	0.29	-5.17	19.57	Pass
1	155	5775	-10.53	-8.31	3.01	0.29	-5.01	19.57	Pass

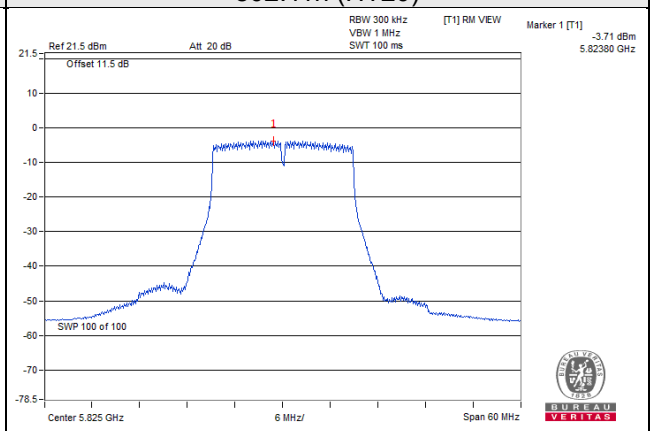
Note:
1. Directional gain = 13.42dBi + 10log(2) = 16.43dBi > 6dBi, so the power density limit shall be reduced to 30-(16.43-6) = 19.57dBm.
2. Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value

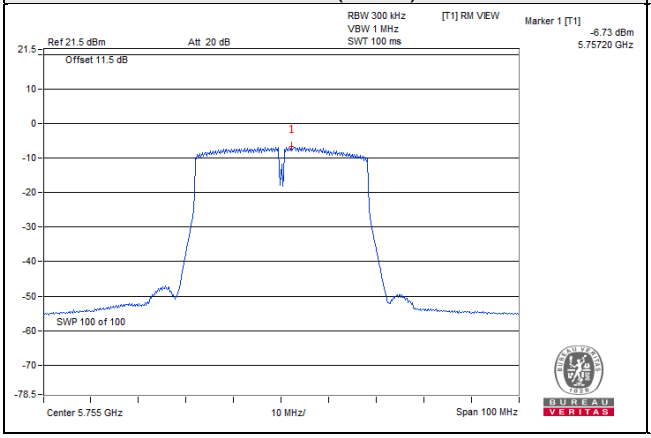
802.11a



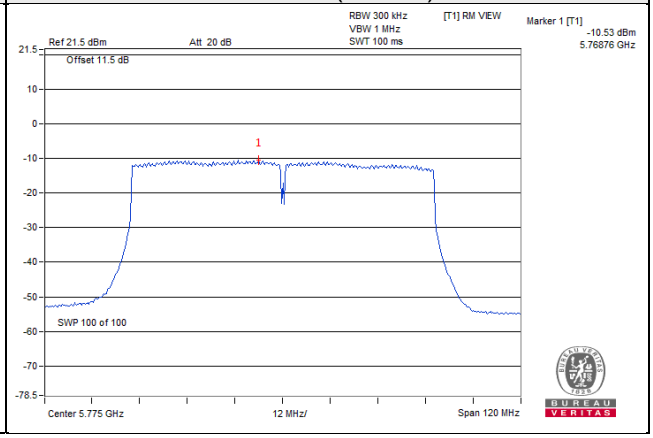
802.11n (HT20)



802.11n (HT40)



802.11ac (VHT80)



Test Mode B

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	2.21	4.43	3.01	0.17	7.61	27.82	Pass
	157	5785	1.83	4.05	3.01	0.17	7.23	27.82	Pass
	165	5825	1.32	3.54	3.01	0.17	6.72	27.82	Pass
1	149	5745	1.41	3.63	3.01	0.17	6.81	27.82	Pass
	157	5785	1.26	3.48	3.01	0.17	6.66	27.82	Pass
	165	5825	0.41	2.63	3.01	0.17	5.81	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	1.43	3.65	3.01	6.66	27.82	Pass
	157	5785	1.35	3.57	3.01	6.58	27.82	Pass
	165	5825	0.17	2.39	3.01	5.40	27.82	Pass
1	149	5745	0.95	3.17	3.01	6.18	27.82	Pass
	157	5785	0.83	3.05	3.01	6.06	27.82	Pass
	165	5825	-0.31	1.91	3.01	4.92	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	-1.12	1.10	3.01	0.12	4.23	27.82	Pass
	159	5795	-1.58	0.64	3.01	0.12	3.77	27.82	Pass
1	151	5755	-1.71	0.51	3.01	0.12	3.64	27.82	Pass
	159	5795	-2.00	0.22	3.01	0.12	3.35	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.

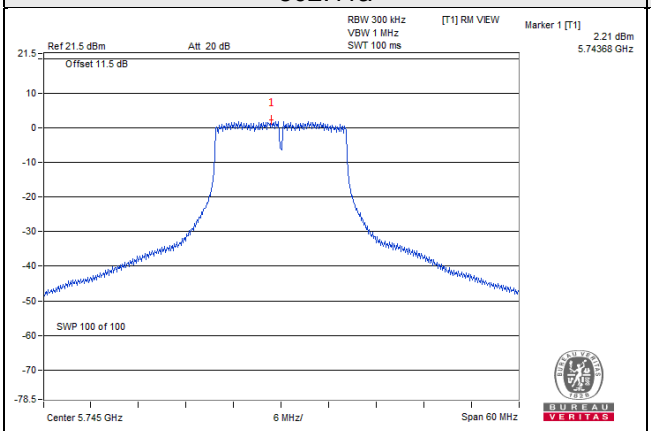
802.11ac (VHT80)

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	-9.53	-7.31	3.01	0.30	-4.00	27.82	Pass
1	155	5775	-9.88	-7.66	3.01	0.30	-4.35	27.82	Pass

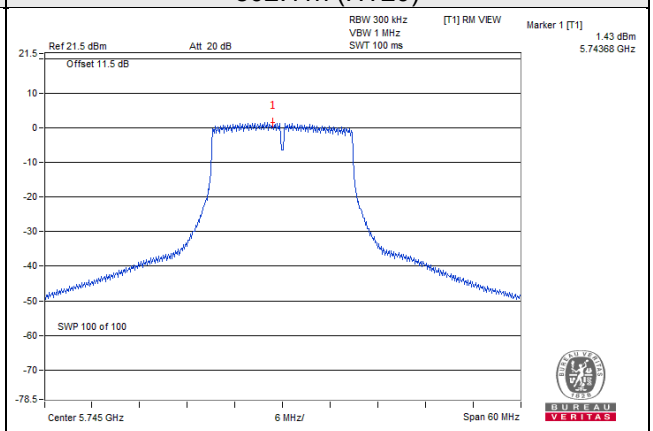
Note:
1. Directional gain = 5.17dBi + 10log(2) = 8.18dBi > 6dBi, so the power density limit shall be reduced to 30-(8.18-6) = 27.82dBm.
2. Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value

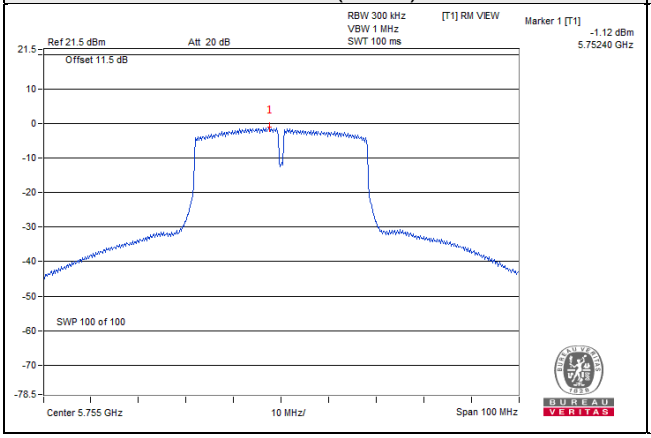
802.11a



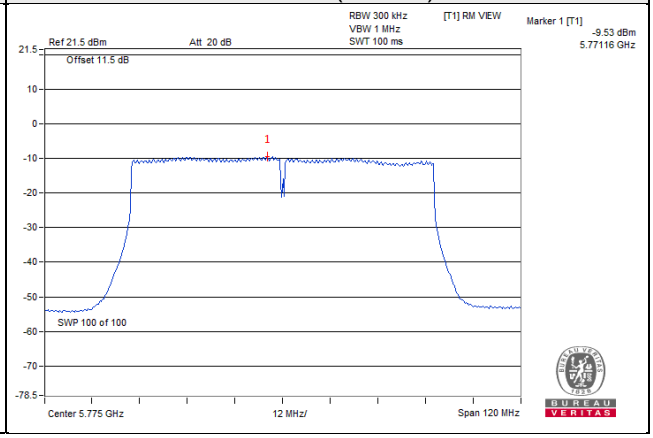
802.11n (HT20)



802.11n (HT40)



802.11ac (VHT80)



Test Mode C

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	-4.88	-2.66	3.01	0.16	0.51	17.49	Pass
	157	5785	-5.20	-2.98	3.01	0.16	0.19	17.49	Pass
	165	5825	-4.28	-2.06	3.01	0.16	1.11	17.49	Pass
1	149	5745	-6.27	-4.05	3.01	0.16	-0.88	17.49	Pass
	157	5785	-6.83	-4.61	3.01	0.16	-1.44	17.49	Pass
	165	5825	-6.13	-3.91	3.01	0.16	-0.74	17.49	Pass

Note:
1. Directional gain = 15.50dBi + 10log(2) = 18.51dBi > 6dBi, so the power density limit shall be reduced to 30-(18.51-6) = 17.49dBm.
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	-4.90	-2.68	3.01	0.33	17.49	Pass
	157	5785	-4.79	-2.57	3.01	0.44	17.49	Pass
	165	5825	-5.13	-2.91	3.01	0.10	17.49	Pass
1	149	5745	-6.77	-4.55	3.01	-1.54	17.49	Pass
	157	5785	-6.55	-4.33	3.01	-1.32	17.49	Pass
	165	5825	-6.63	-4.41	3.01	-1.40	17.49	Pass

Note:
1. Directional gain = 15.50dBi + 10log(2) = 18.51dBi > 6dBi, so the power density limit shall be reduced to 30-(18.51-6) = 17.49dBm.

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	-8.42	-6.20	3.01	0.13	-3.06	17.49	Pass
	159	5795	-8.01	-5.79	3.01	0.13	-2.65	17.49	Pass
1	151	5755	-9.86	-7.64	3.01	0.13	-4.50	17.49	Pass
	159	5795	-9.48	-7.26	3.01	0.13	-4.12	17.49	Pass

Note:
1. Directional gain = 15.50dBi + 10log(2) = 18.51dBi > 6dBi, so the power density limit shall be reduced to 30-(18.51-6) = 17.49dBm.
2. Refer to section 3.3 for duty cycle spectrum plot.

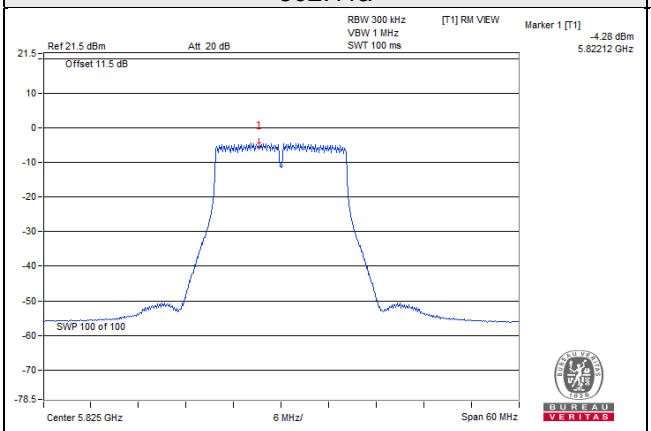
802.11ac (VHT80)

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	-11.61	-9.39	3.01	0.27	-6.11	17.49	Pass
1	155	5775	-13.35	-11.13	3.01	0.27	-7.85	17.49	Pass

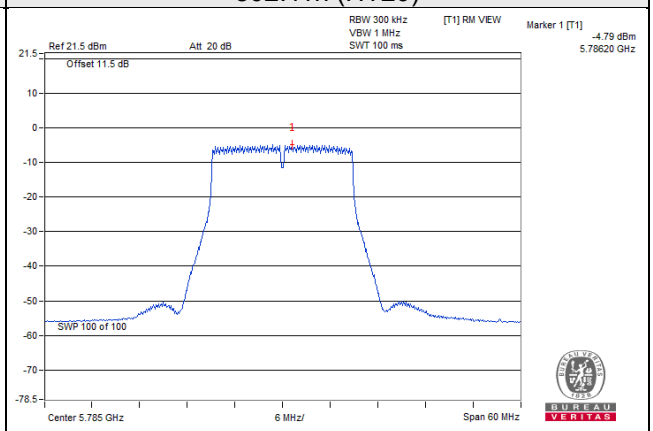
Note:
1. Directional gain = 15.50dBi + 10log(2) = 18.51dBi > 6dBi, so the power density limit shall be reduced to 30-(18.51-6) = 17.49dBm.
2. Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value

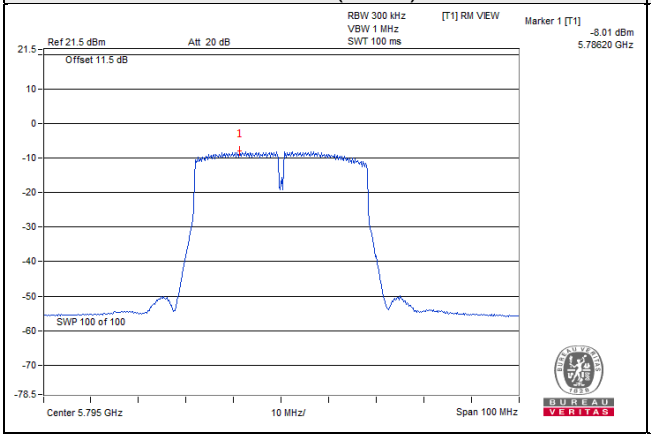
802.11a



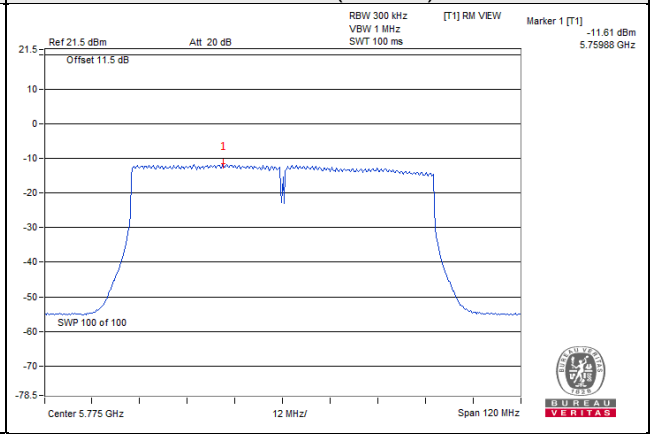
802.11n (HT20)



802.11n (HT40)



802.11ac (VHT80)

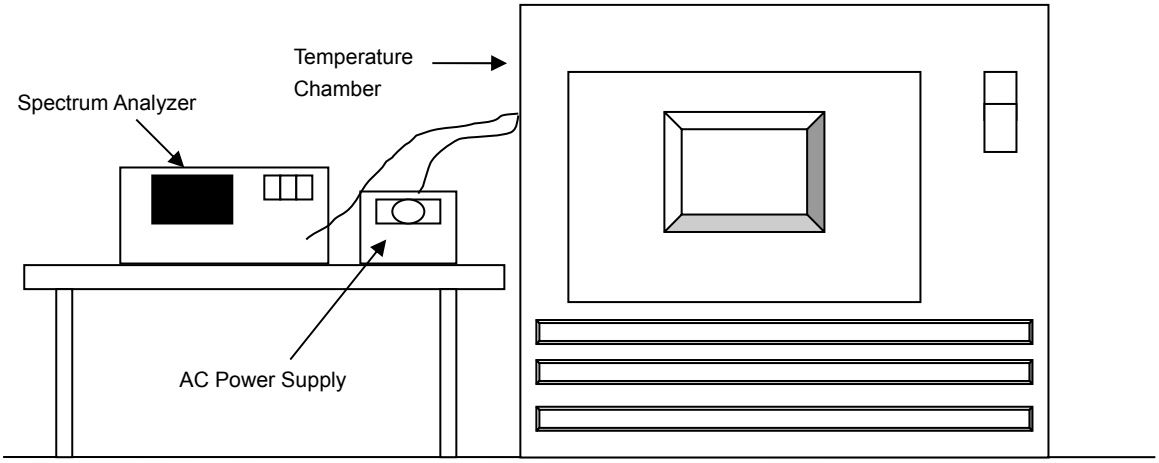


4.6 Frequency Stability

4.6.1 Limits of Frequency Stability Measurement

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

4.6.2 Test Setup



4.6.3 Test Instruments

Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100039	Jun. 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 2 and 3 with the temperature chamber set to the lowest temperature.

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	5179.9855	Pass	5179.9875	Pass	5179.9846	Pass	5179.9877	Pass
40	120	5179.9767	Pass	5179.9768	Pass	5179.9766	Pass	5179.9761	Pass
30	120	5179.9777	Pass	5179.9809	Pass	5179.9817	Pass	5179.9800	Pass
20	120	5180.0019	Pass	5180.0009	Pass	5179.9998	Pass	5180.0023	Pass
10	120	5180.0000	Pass	5180.0021	Pass	5180.0018	Pass	5180.0042	Pass
0	120	5180.0072	Pass	5180.0041	Pass	5180.0052	Pass	5180.0051	Pass
-10	120	5180.0155	Pass	5180.0119	Pass	5180.0145	Pass	5180.0112	Pass
-20	120	5180.0142	Pass	5180.0128	Pass	5180.0112	Pass	5180.0153	Pass
-30	120	5180.0102	Pass	5180.0077	Pass	5180.0107	Pass	5180.0085	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	5180.0018	Pass	5180.0009	Pass	5179.9989	Pass	5180.0016	Pass
	120	5180.0019	Pass	5180.0009	Pass	5179.9998	Pass	5180.0023	Pass
	102	5180.0011	Pass	5180.0013	Pass	5179.9994	Pass	5180.0022	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	5180.0120	Pass	5180.0128	Pass	5180.0115	Pass	5180.0105	Pass
40	120	5180.0097	Pass	5180.0072	Pass	5180.0102	Pass	5180.0087	Pass
30	120	5179.9941	Pass	5179.9905	Pass	5179.9944	Pass	5179.9943	Pass
20	120	5180.0042	Pass	5180.0029	Pass	5180.0033	Pass	5180.0047	Pass
10	120	5179.9860	Pass	5179.989	Pass	5179.9892	Pass	5179.9906	Pass
0	120	5180.02400	Pass	5180.0221	Pass	5180.0257	Pass	5180.0263	Pass
-10	120	5179.9812	Pass	5179.9794	Pass	5179.9800	Pass	5179.9781	Pass
-20	120	5180.0099	Pass	5180.009	Pass	5180.0116	Pass	5180.0115	Pass
-30	120	5179.9765	Pass	5179.9778	Pass	5179.9779	Pass	5179.9799	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	5180.0035	Pass	5180.0033	Pass	5180.0029	Pass	5180.0047	Pass
	120	5180.0042	Pass	5180.0029	Pass	5180.0033	Pass	5180.0047	Pass
	102	5180.0040	Pass	5180.0023	Pass	5180.0030	Pass	5180.0040	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	5180.0066	Pass	5180.0078	Pass	5180.0056	Pass	5180.0062	Pass
40	120	5179.9961	Pass	5179.9965	Pass	5180.0003	Pass	5179.9992	Pass
30	120	5180.0034	Pass	5180.0011	Pass	5180.0038	Pass	5180.0038	Pass
20	120	5180.0068	Pass	5180.0050	Pass	5180.0034	Pass	5180.0058	Pass
10	120	5179.9854	Pass	5179.9839	Pass	5179.9825	Pass	5179.9823	Pass
0	120	5180.0100	Pass	5180.0071	Pass	5180.0074	Pass	5180.0055	Pass
-10	120	5180.0251	Pass	5180.0261	Pass	5180.0265	Pass	5180.0269	Pass
-20	120	5179.9750	Pass	5179.9747	Pass	5179.9771	Pass	5179.9777	Pass
-30	120	5180.0055	Pass	5180.0050	Pass	5180.0054	Pass	5180.0058	Pass

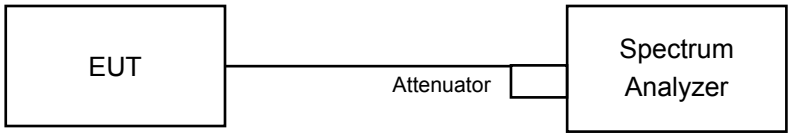
Frequency Stability Versus Voltage									
Operating Frequency: 5180MHz									
Temp. (℃)	Power Supply (Vac)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result
20	138	5180.0073	Pass	5180.0058	Pass	5180.0028	Pass	5180.0057	Pass
	120	5180.0068	Pass	5180.005	Pass	5180.0034	Pass	5180.0058	Pass
	102	5180.0074	Pass	5180.0056	Pass	5180.0038	Pass	5180.0049	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	16.39	16.38	0.5	Pass
157	5785	16.40	16.39	0.5	Pass
165	5825	16.38	16.42	0.5	Pass

802.11n (HT20)

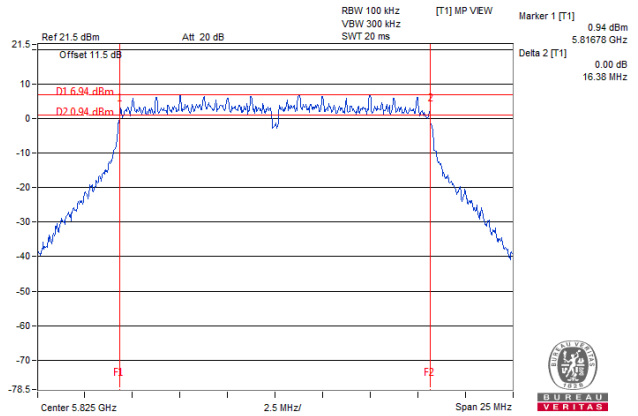
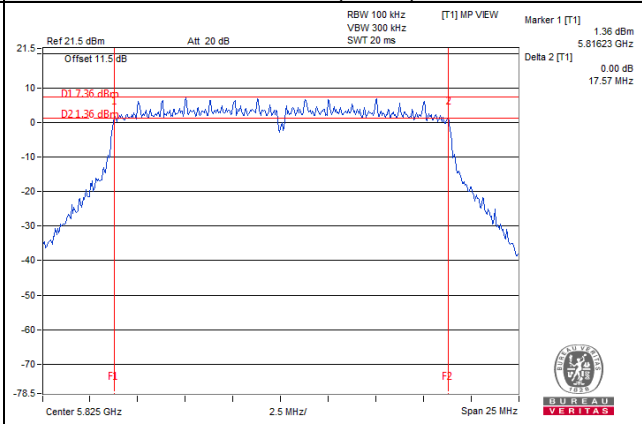
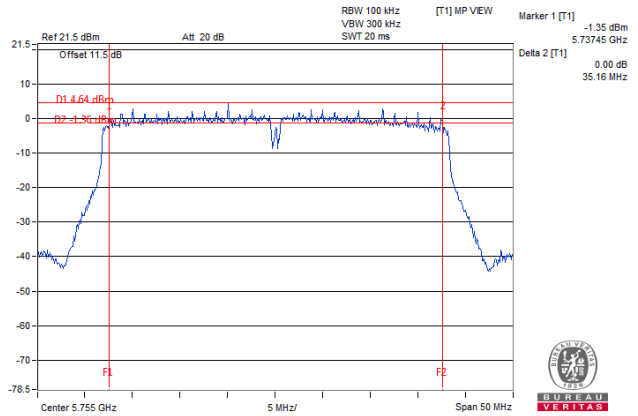
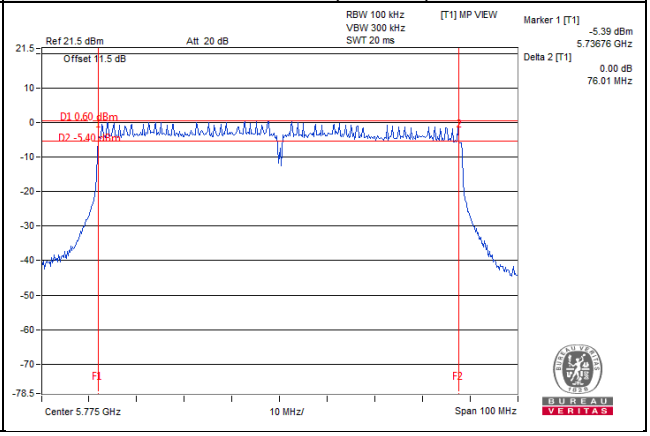
Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
149	5745	17.63	17.64	0.5	Pass
157	5785	17.58	17.60	0.5	Pass
165	5825	17.60	17.57	0.5	Pass

802.11n (HT40)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
151	5755	35.16	35.24	0.5	Pass
159	5795	35.20	35.18	0.5	Pass

802.11ac (VHT80)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
155	5775	76.05	76.01	0.5	Pass

Spectrum Plot of Worst Value	
802.11a	802.11n (HT20)
	
802.11n (HT40)	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	16.38	16.41	0.5	Pass
157	5785	16.37	16.41	0.5	Pass
165	5825	16.37	16.39	0.5	Pass

802.11n (HT20)

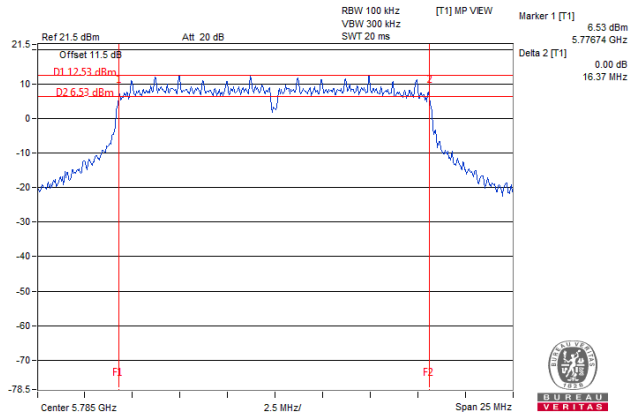
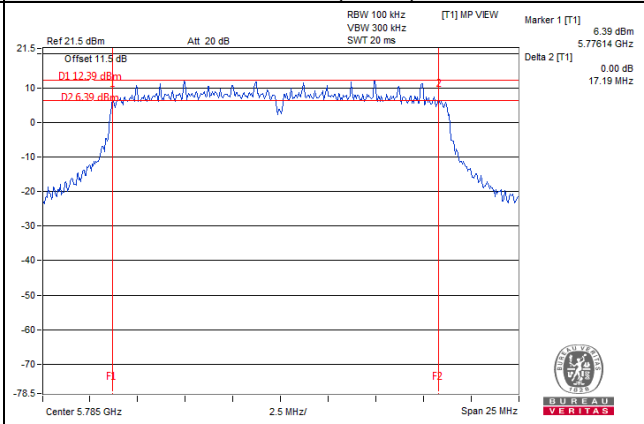
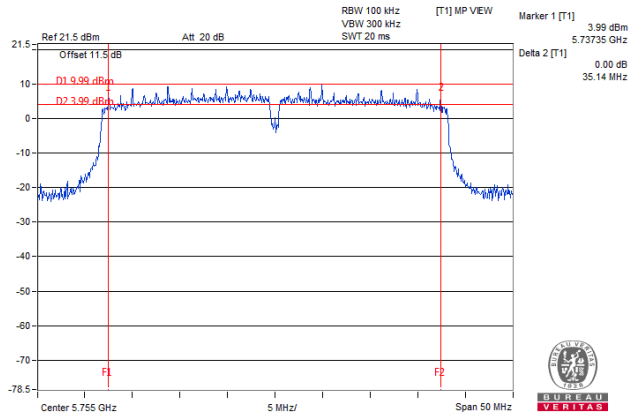
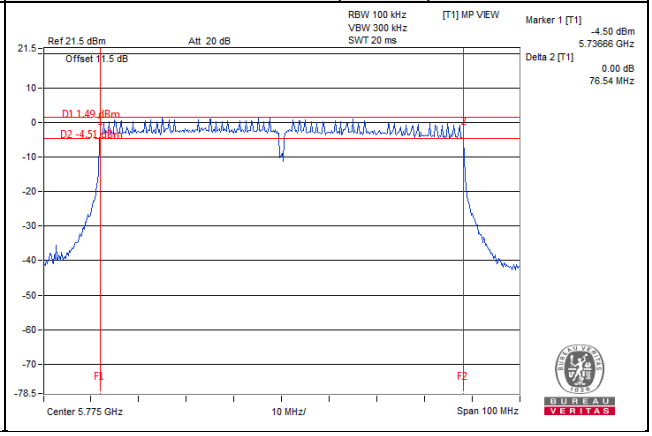
Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
149	5745	17.22	17.62	0.5	Pass
157	5785	17.19	17.60	0.5	Pass
165	5825	17.62	17.63	0.5	Pass

802.11n (HT40)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
151	5755	35.14	35.22	0.5	Pass
159	5795	35.22	35.15	0.5	Pass

802.11ac (VHT80)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
155	5775	76.62	76.54	0.5	Pass

Spectrum Plot of Worst Value	
802.11a	802.11n (HT20)
	
802.11n (HT40)	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	16.39	16.40	0.5	Pass
157	5785	16.42	16.43	0.5	Pass
165	5825	16.41	16.42	0.5	Pass

802.11n (HT20)

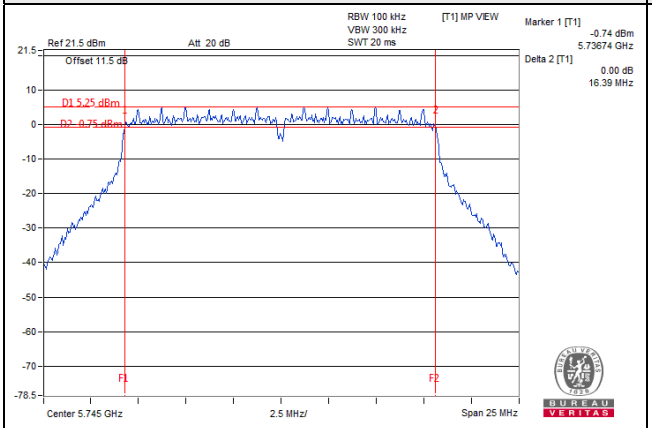
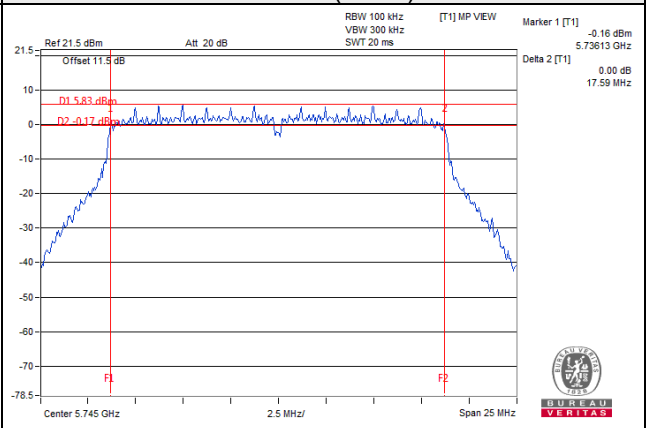
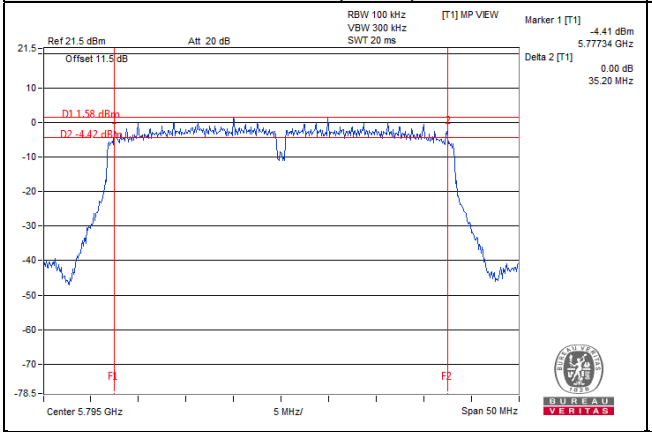
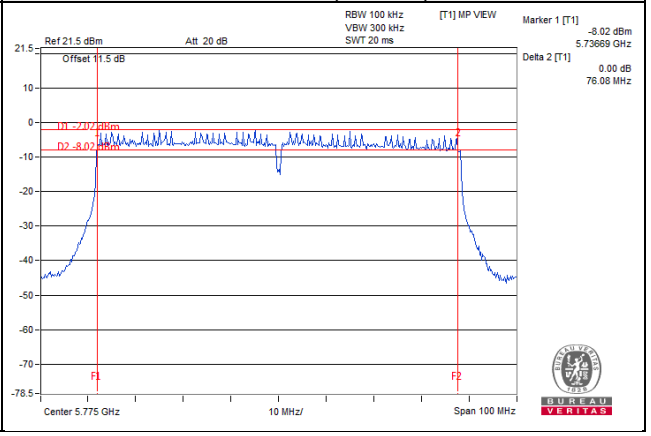
Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
149	5745	17.59	17.60	0.5	Pass
157	5785	17.62	17.63	0.5	Pass
165	5825	17.62	17.63	0.5	Pass

802.11n (HT40)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
151	5755	35.21	35.22	0.5	Pass
159	5795	35.23	35.20	0.5	Pass

802.11ac (VHT80)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
155	5775	76.62	76.08	0.5	Pass

Spectrum Plot of Worst Value	
802.11a	802.11n (HT20)
	
802.11n (HT40)	802.11ac (VHT80)
	

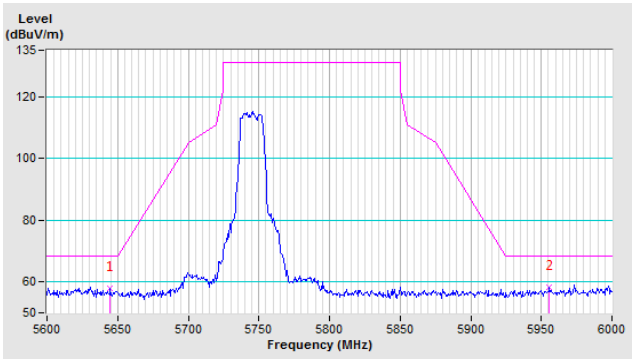
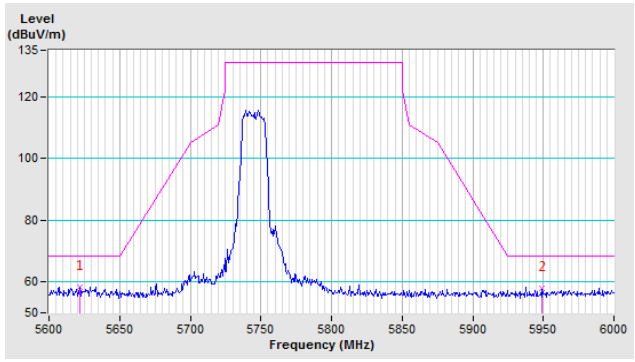
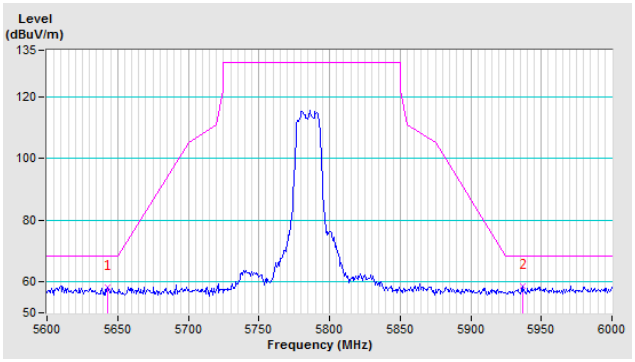
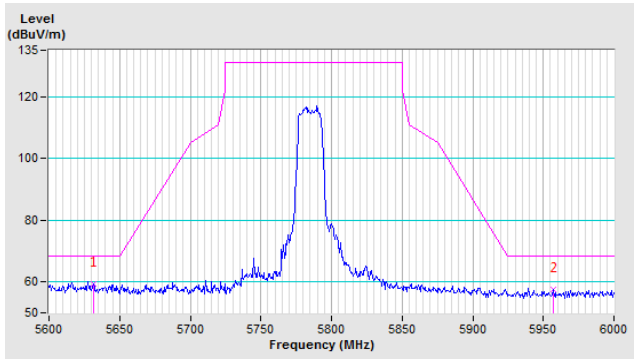
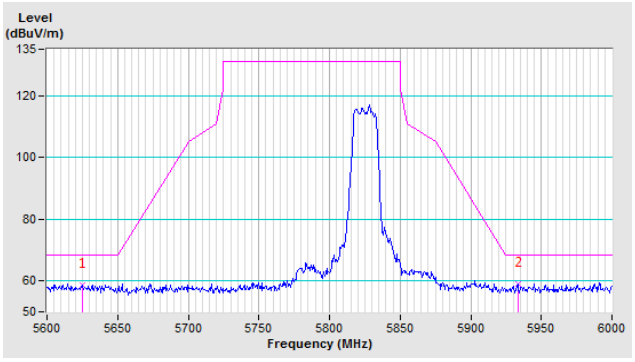
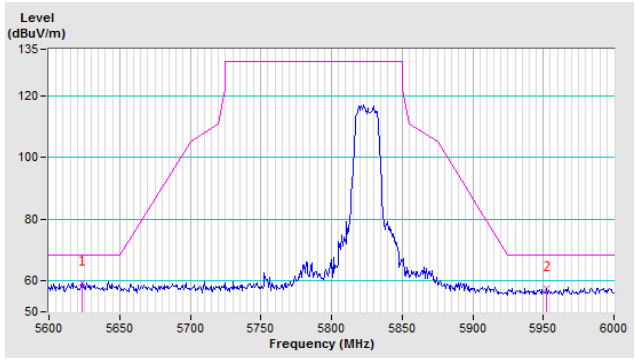
5 Pictures of Test Arrangements

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

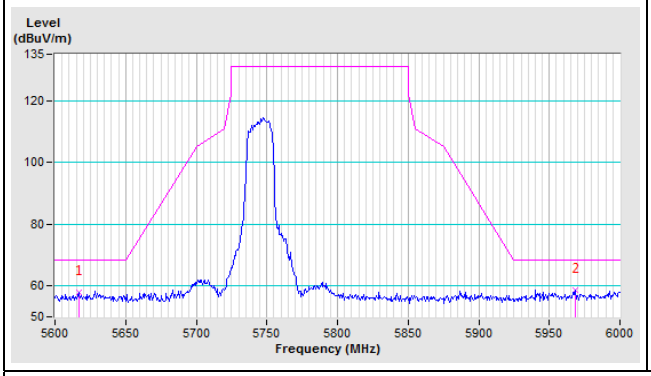
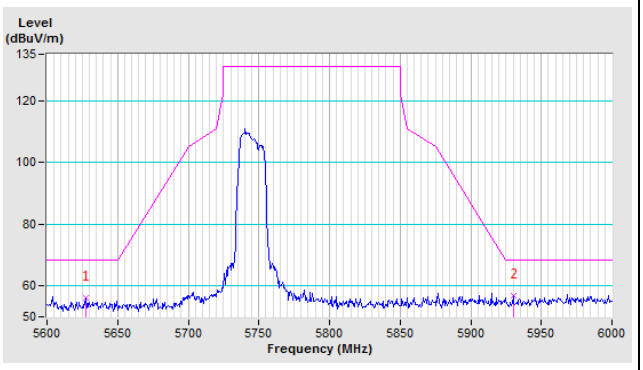
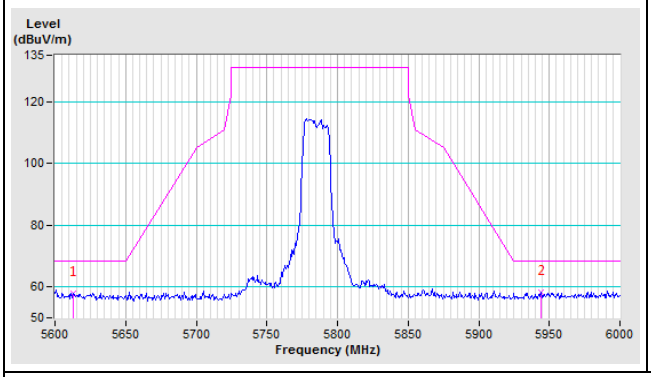
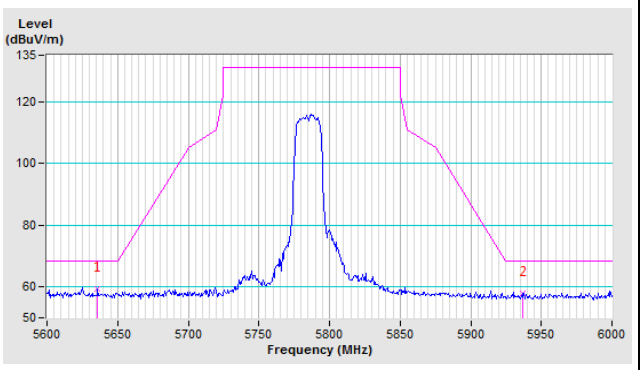
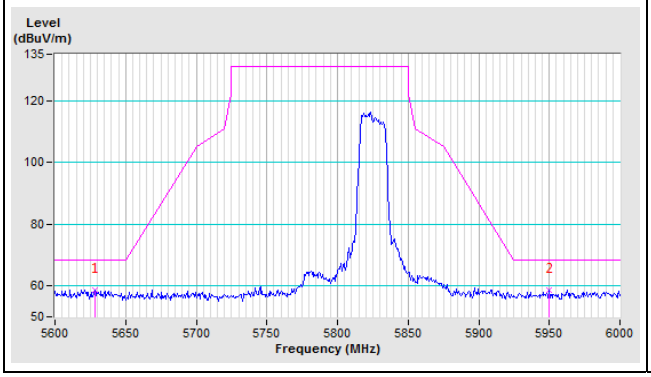
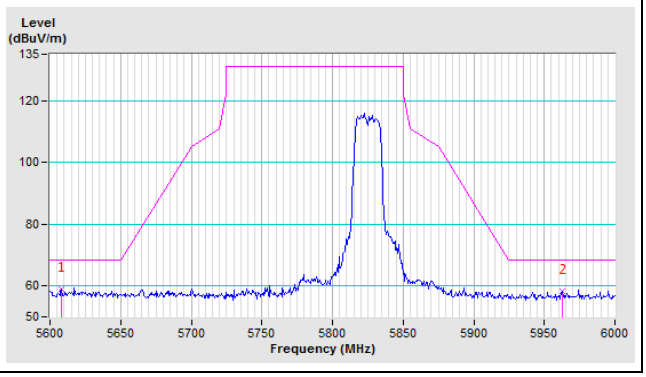
Annex A- Radiated Out of Band Emission (OOBE) Measurement (For U-NII-3 band)

Test Mode A

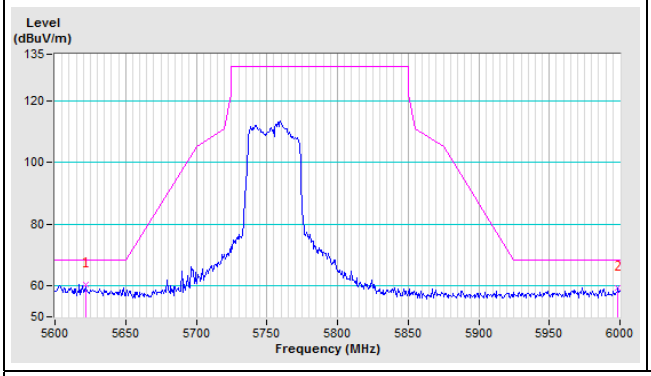
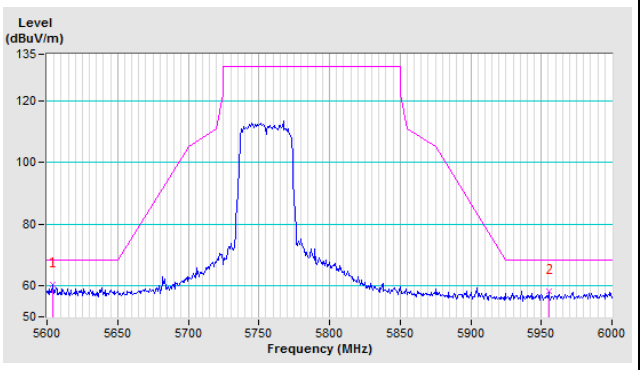
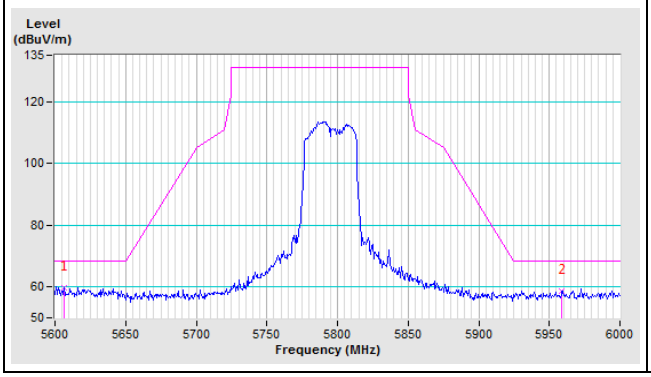
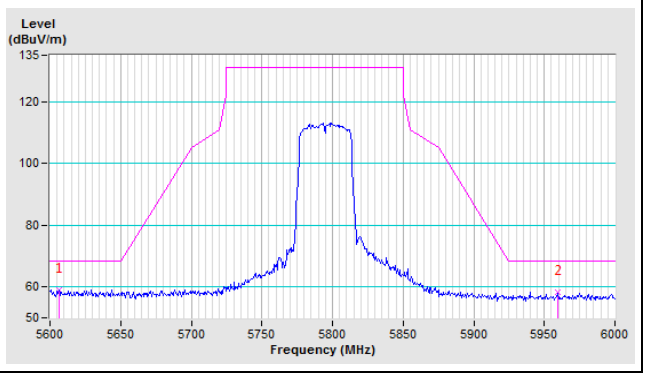
802.11a

CH149	
Horizontal	Vertical
	
CH157	
Horizontal	Vertical
	
CH165	
Horizontal	Vertical
	

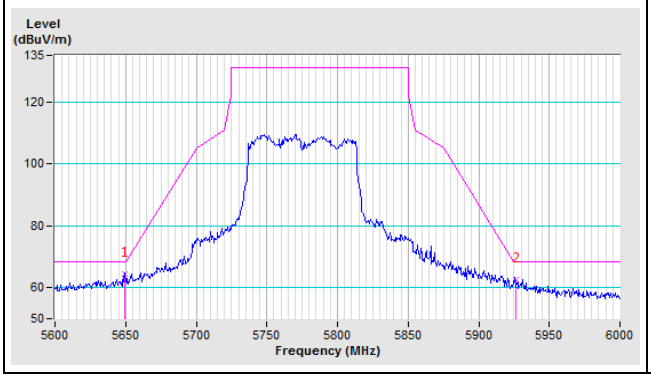
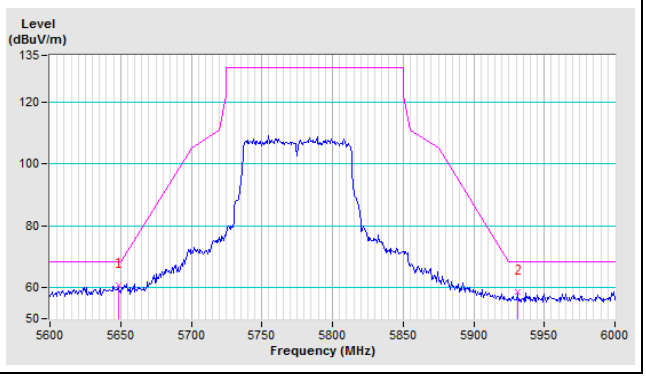
802.11n (HT20)

CH149	
Horizontal	Vertical
	
CH157	
Horizontal	Vertical
	
CH165	
Horizontal	Vertical
	

802.11n (HT40)

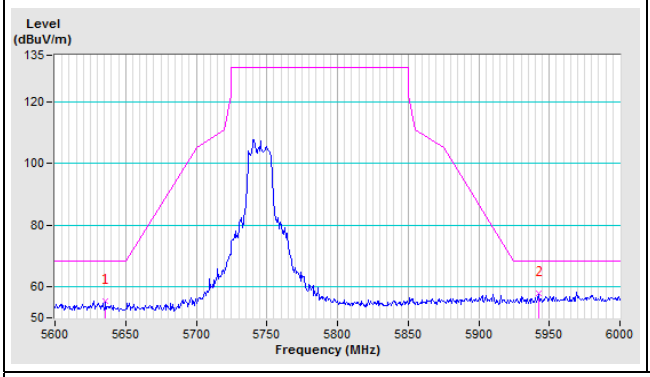
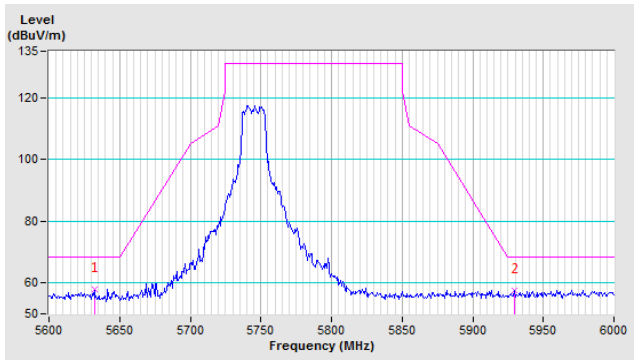
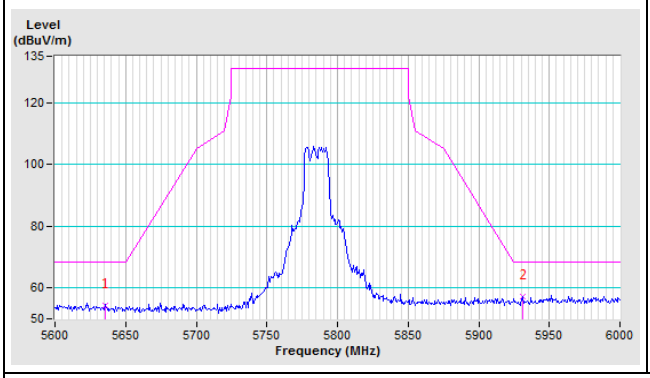
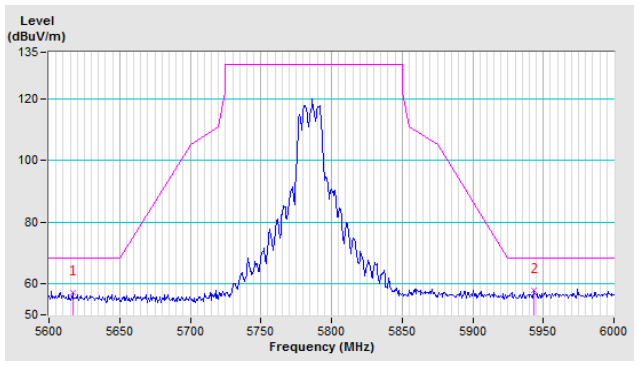
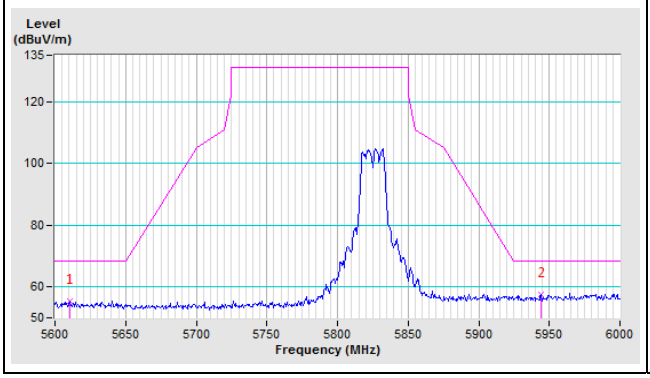
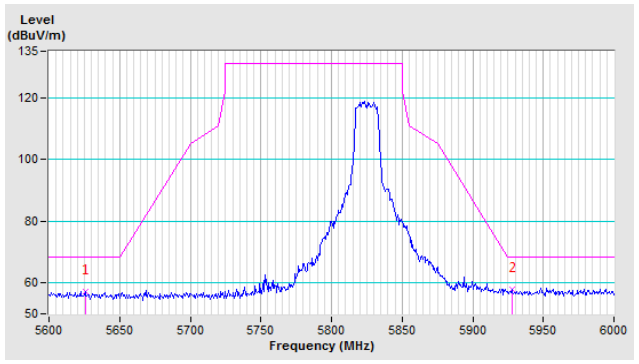
CH151	
Horizontal	Vertical
	
CH159	
Horizontal	Vertical
	

802.11ac (VHT80)

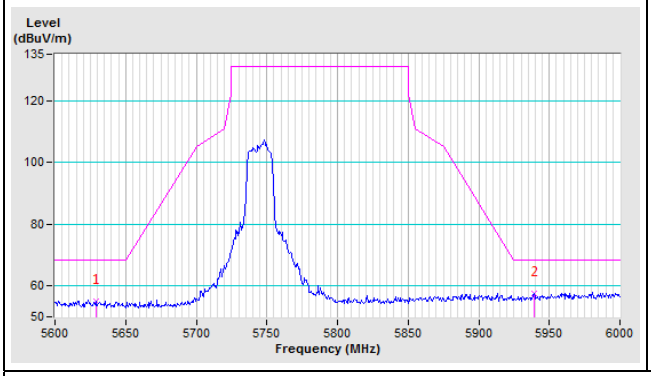
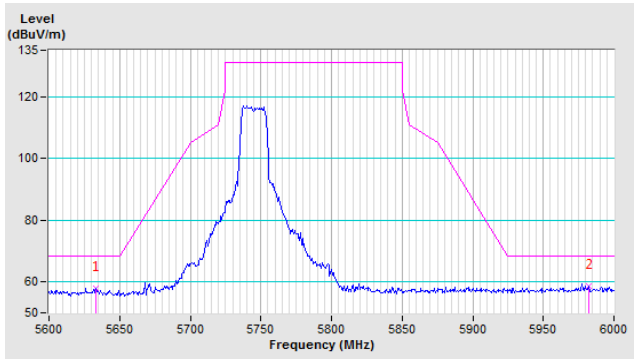
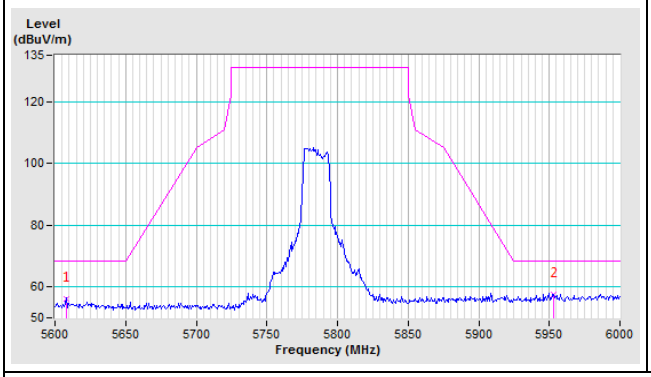
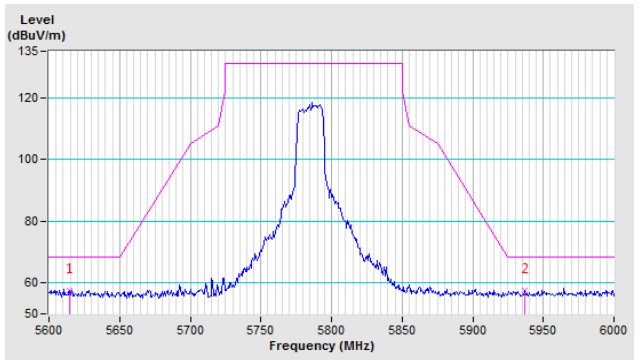
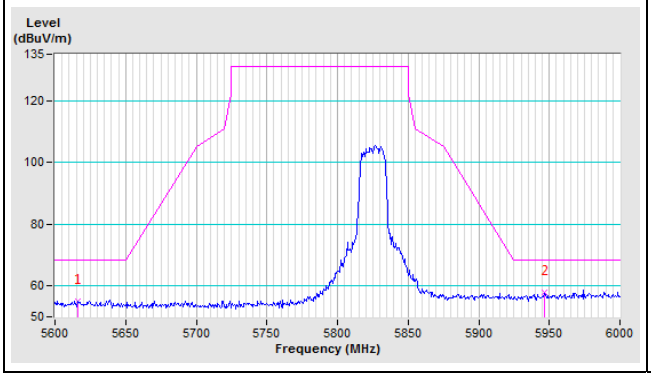
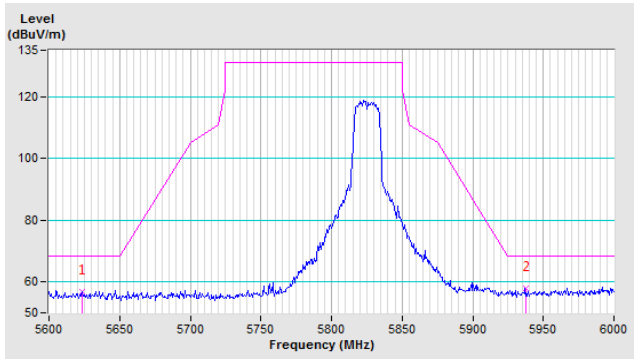
CH155	
Horizontal	Vertical
	

Test Mode B

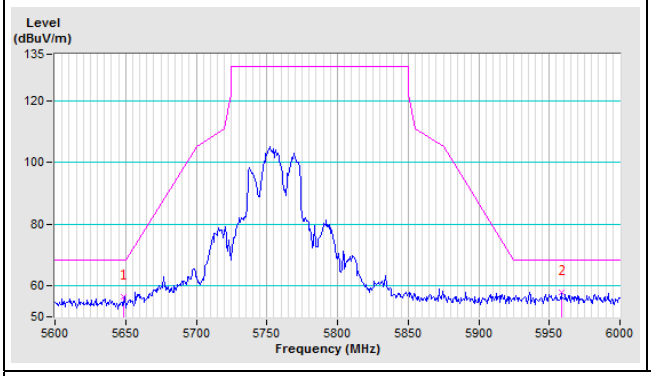
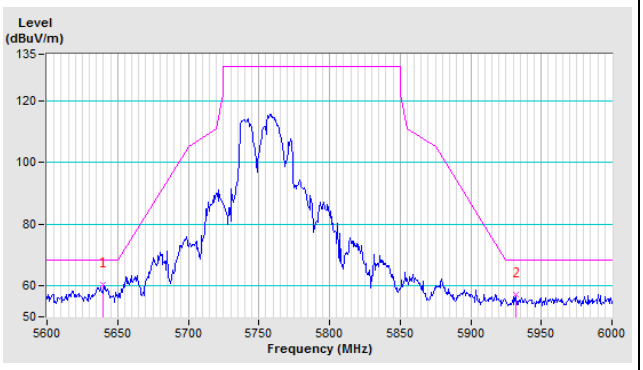
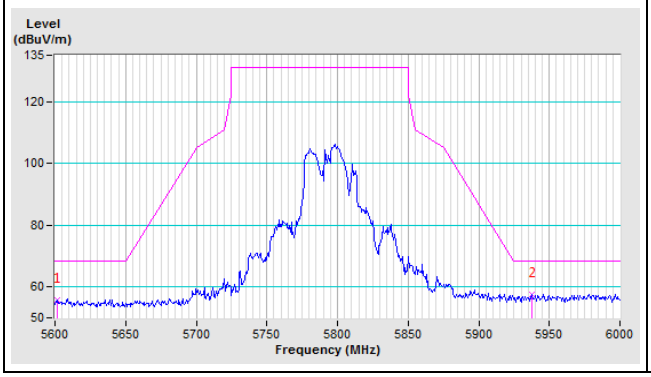
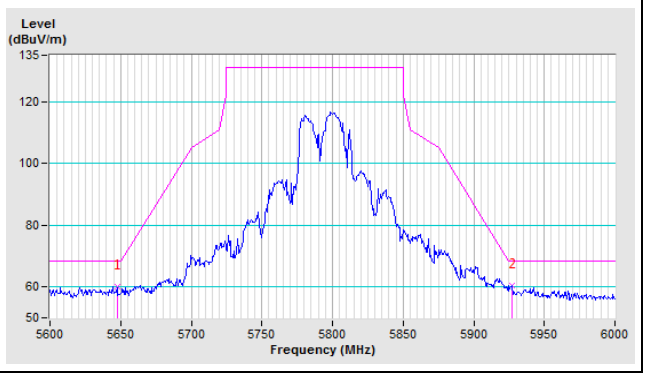
802.11a

CH149	
Horizontal	Vertical
	
CH157	
Horizontal	Vertical
	
CH165	
Horizontal	Vertical
	

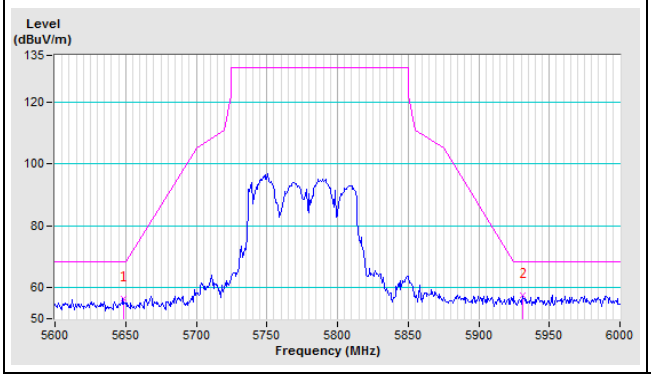
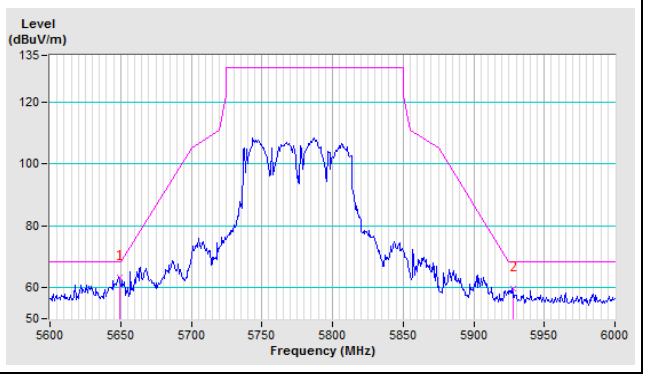
802.11n (HT20)

CH149	
Horizontal	Vertical
	
CH157	
Horizontal	Vertical
	
CH165	
Horizontal	Vertical
	

802.11n (HT40)

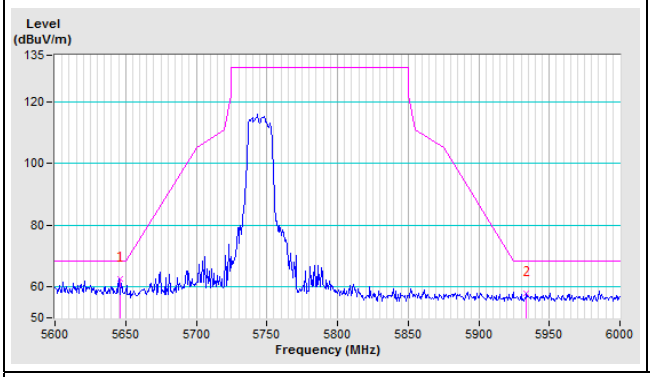
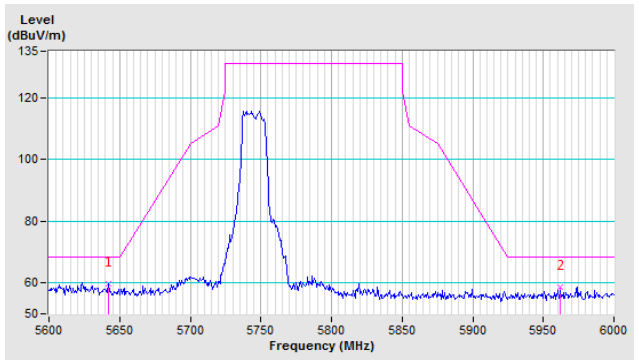
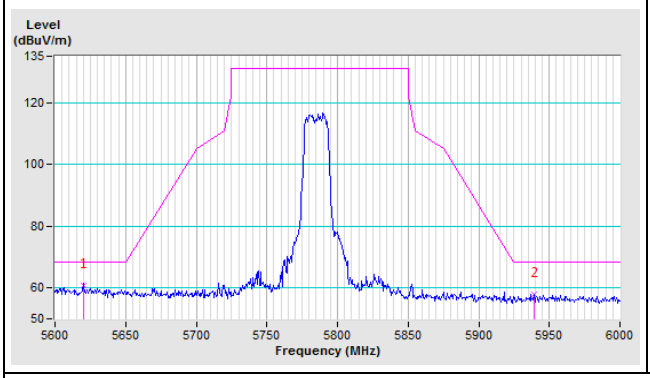
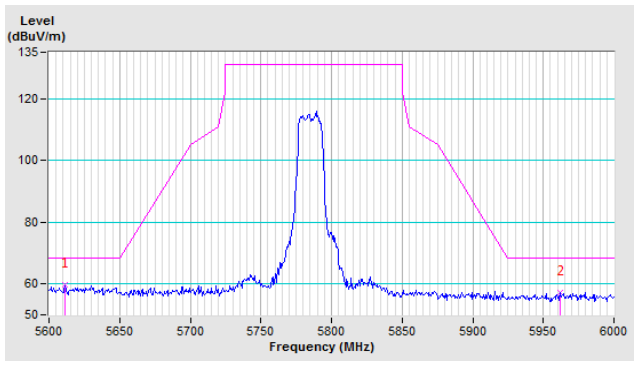
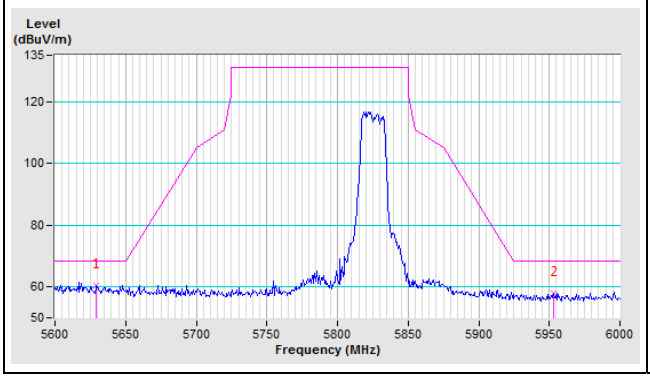
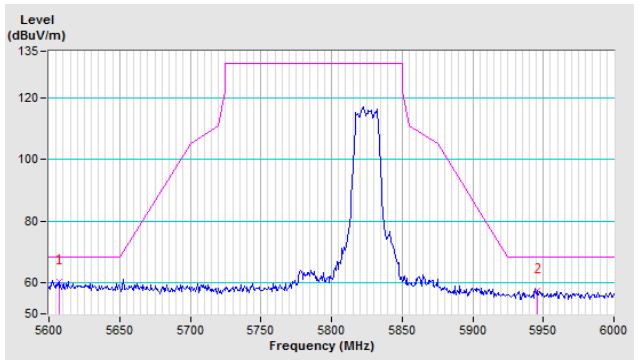
CH151	
Horizontal	Vertical
	
CH159	
Horizontal	Vertical
	

802.11ac (VHT80)

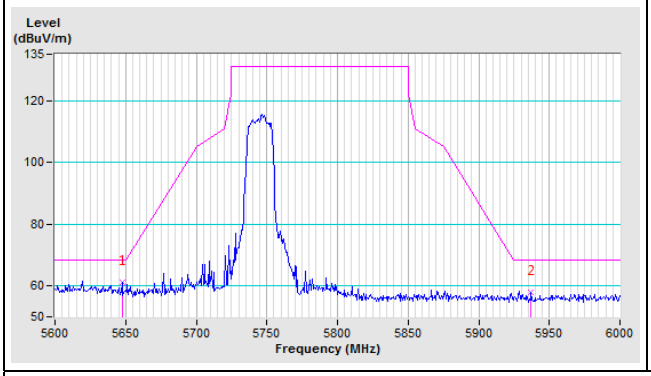
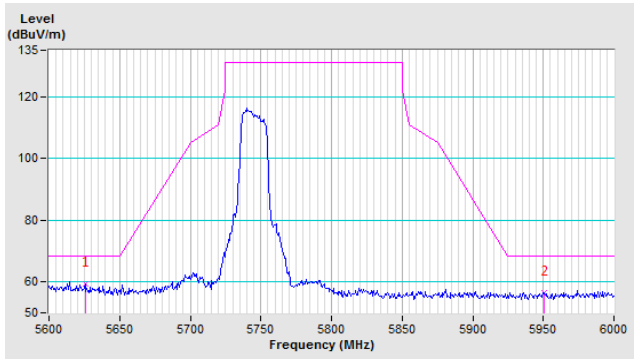
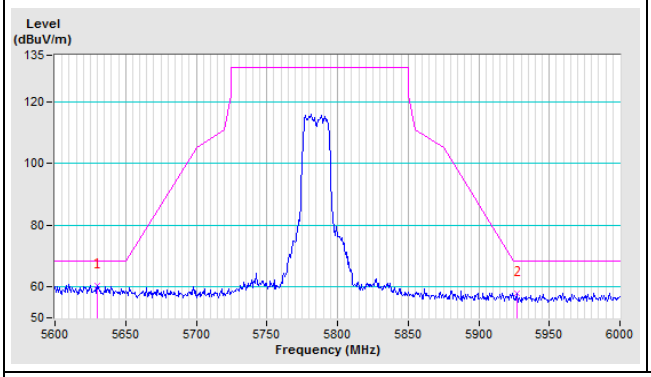
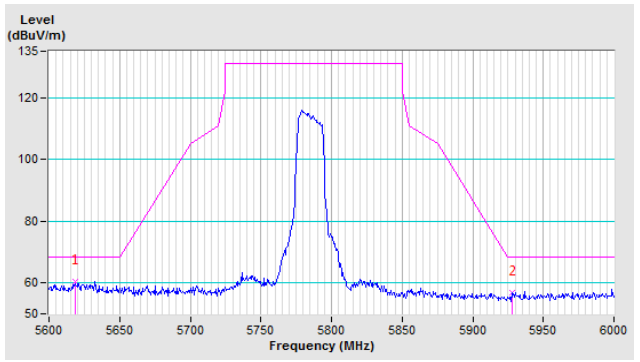
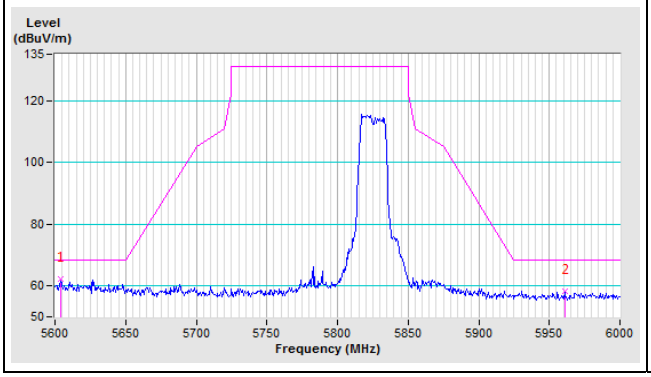
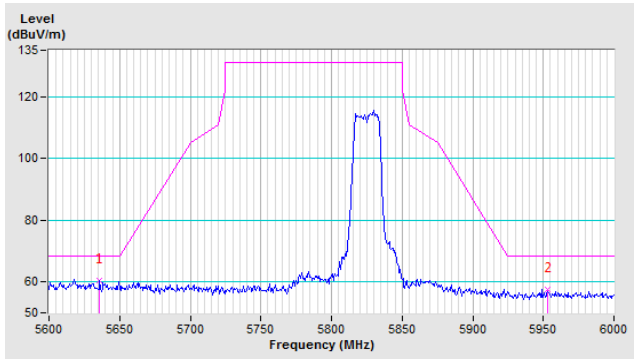
CH155	
Horizontal	Vertical
	

Test Mode C

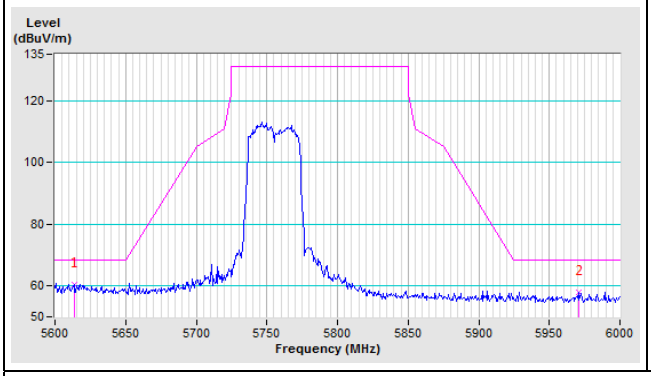
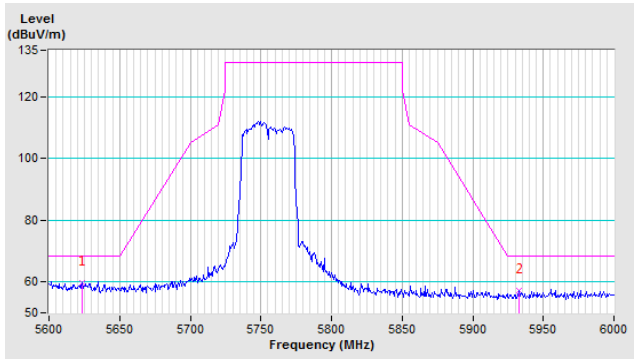
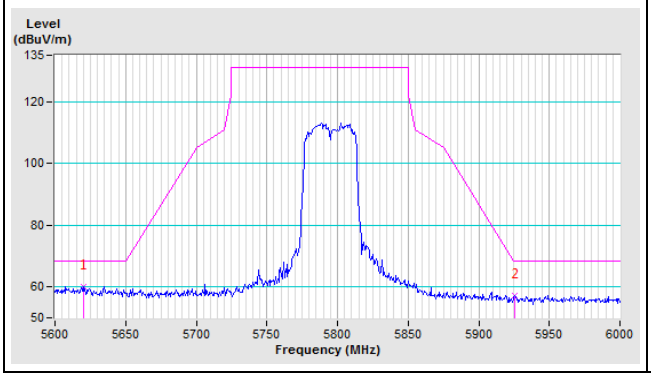
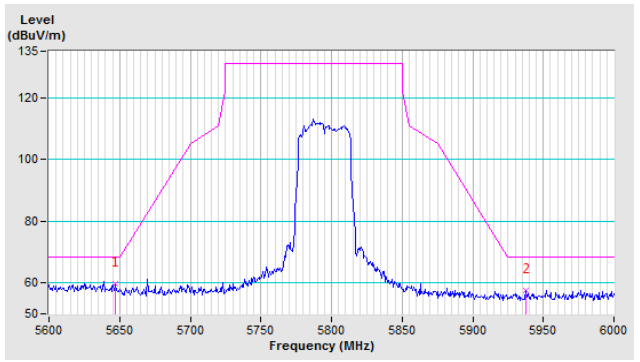
802.11a

CH149	
Horizontal	Vertical
	
CH157	
Horizontal	Vertical
	
CH165	
Horizontal	Vertical
	

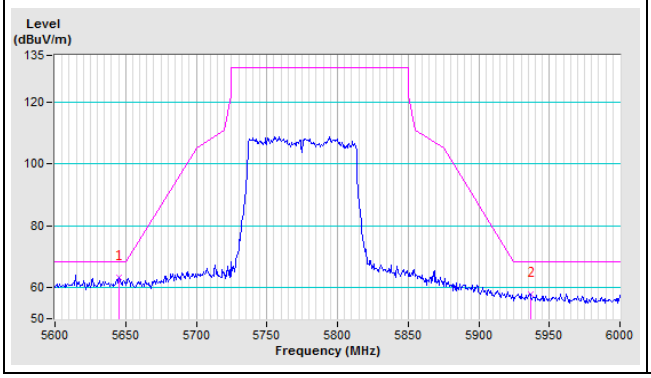
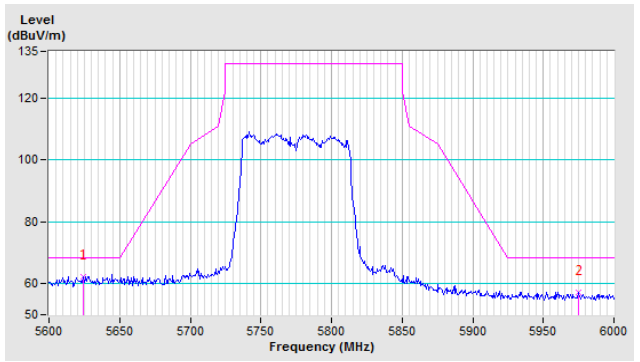
802.11n (HT20)

CH149	
Horizontal	Vertical
	
CH157	
Horizontal	Vertical
	
CH165	
Horizontal	Vertical
	

802.11n (HT40)

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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