FCC Test Report

Report No.:	RF180730C06
FCC ID:	A8J-ENSTA5-ACV2
Test Model:	ENS500-ACv2, ENS500EXT-ACv2, EnStation5-ACv2
Series Model:	EAS100-14, EAS100EXT, EAS100-19 (Refer to item 3.1 for more details)
Received Date:	Jul. 30, 2018
Test Date:	Aug. 24 ~ Sep. 07, 2018
Issued Date:	Sep. 17, 2018
Applicant:	EnGenius Technologies
Address:	1580 Scenic Avenue, Costa Mesa, CA92626
Issued By:	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
Lab Address:	No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan (R.O.C.)
Test Location:	No. 19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City 33383, TAIWAN (R.O.C.)
FCC Registration / Designation Number:	788550 / TW0003

Testing Laboratory
2021

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The report must not be used by the client to claim product certification, approval, or endorsement by TAF or any government agencies.

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Release Control Record

Issue No.	Description	Date Issued
RF180730C06	Original release	Sep. 17, 2018

1 Certificate of Conformity

Product:	Outdoor Long Range Wireless Access Point
Brand:	EnGenius, emplus
Test Model:	ENS500-ACv2, ENS500EXT-ACv2, EnStation5-ACv2
Series Model:	EAS100-14, EAS100EXT, EAS100-19 (Refer to item 3.1 for more details)
Sample Status:	Engineering sample
Applicant:	EnGenius Technologies
Test Date:	Aug. 24 ~ Sep. 07, 2018
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 : Celine Chou , **Date:** Sep. 17, 2018

Celine Chou / Senior Specialist

Approved by : Bruce Chen , **Date:** Sep. 17, 2018

Bruce Chen / Project Engineer

2 Summary of Test Results

47 CFR FCC Part 15, Subpart E (Section 15.407)			
FCC Clause	Test Item	Result	Remarks
15.407(b)(6)	AC Power Conducted Emissions	Pass	Meet the requirement of limit. Minimum passing margin is -10.84dB 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 -1.3dB at 5650.00MHz.
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.

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	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	Outdoor Long Range Wireless Access Point
Brand	EnGenius, emplus
Test Model	ENS500-ACv2, ENS500EXT-ACv2, EnStation5-ACv2
Series Model	EAS100-14, EAS100EXT, EAS100-19
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: ENS500-ACv2 and EAS100-14) CDD Mode: 5180 ~ 5240MHz: 33.318mW 5745 ~ 5825MHz: 171.220mW Beamforming Mode: 5180 ~ 5240MHz: 16.672mW 5745 ~ 5825MHz: 84.918mW Test Mode B (Dipole Ant. for model: ENS500EXT-ACv2 and EAS100EXT) CDD Mode: 5180 ~ 5240MHz: 45.887mW 5745 ~ 5825MHz: 520.424mW Beamforming Mode: 5180 ~ 5240MHz: 22.594mW 5745 ~ 5825MHz: 260.016mW Test Mode C (Patch Ant. for model: EnStation5-ACv2 and EAS100-19) CDD Mode: 5180 ~ 5240MHz: 3.424mW 5745 ~ 5825MHz: 109.657mW Beamforming Mode: 5180 ~ 5240MHz: 1.714mW 5745 ~ 5825MHz: 54.828mW

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 ENS500-ACv2, ENS500EXT-ACv2 and EnStation5-ACv2 are the representative for final test.

Brand	Model	Difference
EnGenius	ENS500-ACv2	Internal direct 14dBi antenna
	ENS500EXT-ACv2	Accessory with external dipole 5dBi*2 antenna
	EnStation5-ACv2	Internal direct 19dBi antenna
emplus	EAS100-14	Internal direct 14dBi antenna
	EAS100EXT	Accessory with external dipole 5dBi*2 antenna
	EAS100-19	Internal direct 19dBi antenna

3. The EUT consumes power from the following PoE.

PoE	
Brand	EnGenius
Model	EPA2406GR
Input Power	100-240Vac, 50-60Hz, 0.4A
Output Power	24Vdc, 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: ENS500-ACv2 and EAS100-14 use only
			13.35	13.42		
2	Dipole	RSMA	5150MHz	5550MHz	5850MHz	For Model: ENS500EXT-ACv2 and EAS100EXT use only
			5.12	5.09	5.17	
3	Patch	I-PEX	Ant. 1 (5150-5925MHz)	Ant. 2 (5150-5925MHz)		For Model: EnStation5-ACv2 and EAS100-19 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: ENS500-ACv2
B	√	√	√	√	Model: ENS500EXT-ACv2
C	√	√	√	√	Model: EnStation5-ACv2

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:

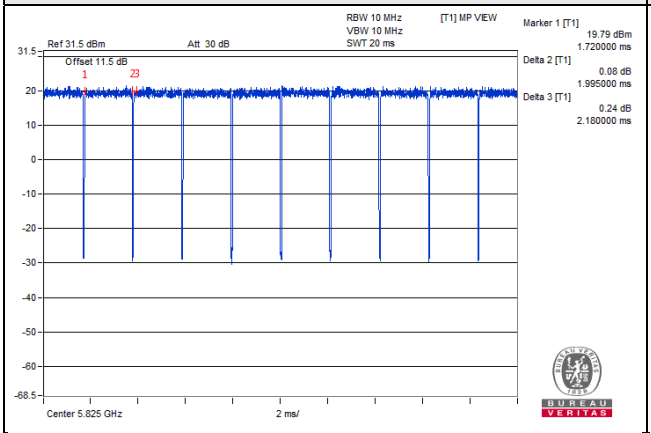
Applicable to	Environmental Conditions	Input Power	Tested by
RE≥1G	26 deg. C, 69% RH 27 deg. C, 69% RH 25 deg. C, 66% RH	120Vac, 60Hz	Willy Cheng Adair Peng
RE<1G	23 deg. C, 67% RH	120Vac, 60Hz	Adair Peng
PLC	25 deg. C, 63% RH	120Vac, 60Hz	Jones Chang
APCM	25 deg. C, 60% RH	120Vac, 60Hz	Chris Lin

3.3 Duty Cycle of Test Signal

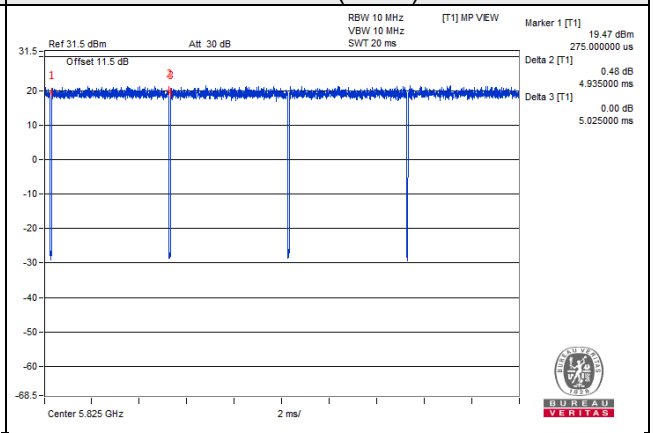
802.11a, 802.11n (HT40), 802.11ac (VHT80): Duty cycle of test signal is < 98%, duty factor is required.
802.11n (HT20): Duty cycle of test signal is ≥ 98%, duty factor is not required.

802.11a: Duty cycle = 1.995/2.180 = 0.915, Duty factor = 10 * log (1/0.915) = 0.39
802.11n (HT20): Duty cycle = 4.935/5.025 = 0.982
802.11n (HT40): Duty cycle = 2.400/2.468 = 0.972, Duty factor = 10 * log (1/0.972) = 0.12
802.11ac (VHT80): Duty cycle = 1.112/1.203 = 0.924, Duty factor = 10 * log (1/0.924) = 0.34

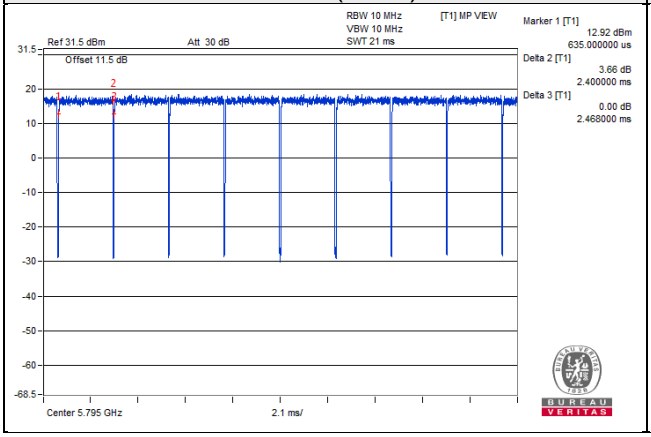
802.11a



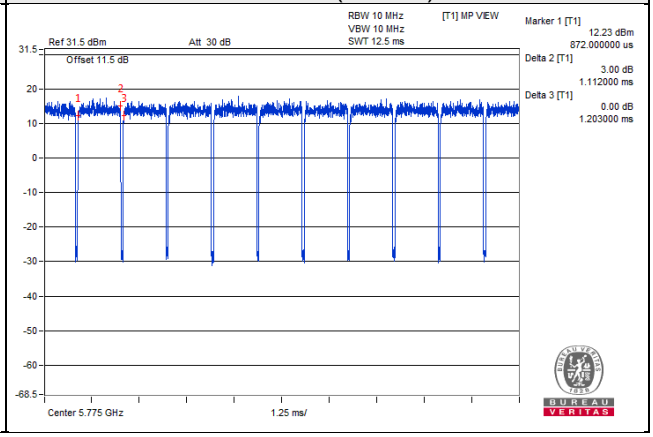
802.11n (HT20)



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.

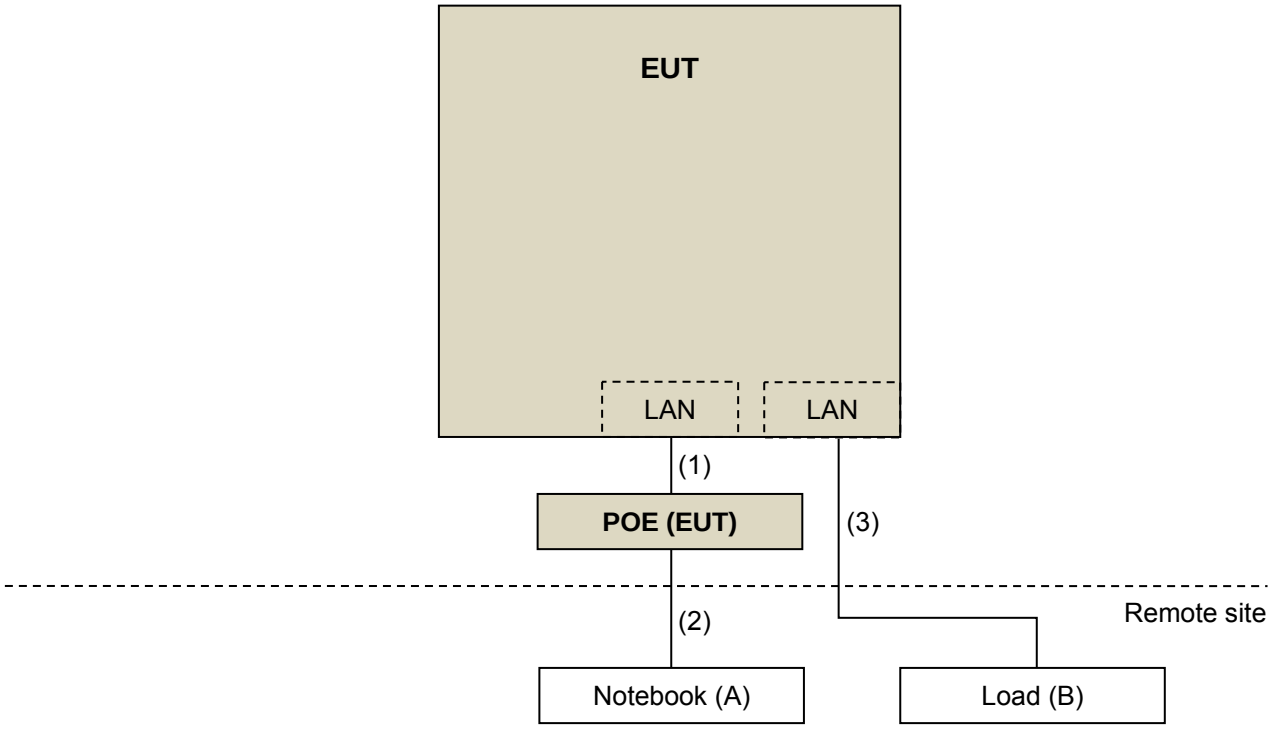
ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A.	Notebook	DELL	E5410	1HC2XM1	FCC DoC Approved	-
B.	Load	NA	NA	NA	NA	-

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
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100041	Dec. 12, 2017	Dec. 11, 2018
BILOG Antenna SCHWARZBECK	VULB9168	9168-171	Dec. 11, 2017	Dec. 10, 2018
HORN Antenna SCHWARZBECK	9120D	209	Dec. 13, 2017	Dec. 12, 2018
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	3008A02465	Apr. 03, 2018	Apr. 02, 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, 2017	Nov. 13, 2018
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 4.
3. The FCC Designation Number is TW0003. The number will be varied with the Lab location and scope as attached.
4. The IC Site Registration No. is IC 7450F-4.

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.

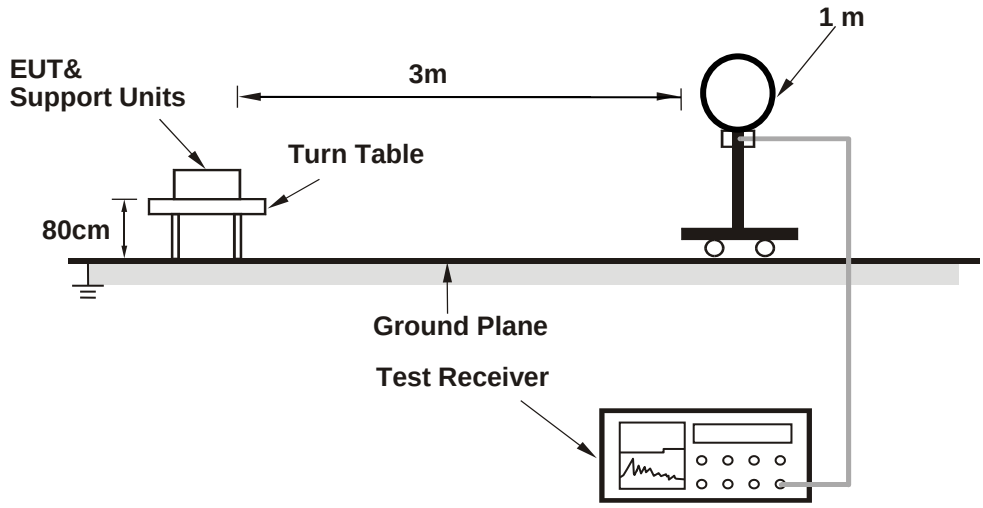
4. All modes of operation were investigated and the worst-case emissions are reported.

4.1.4 Deviation from Test Standard

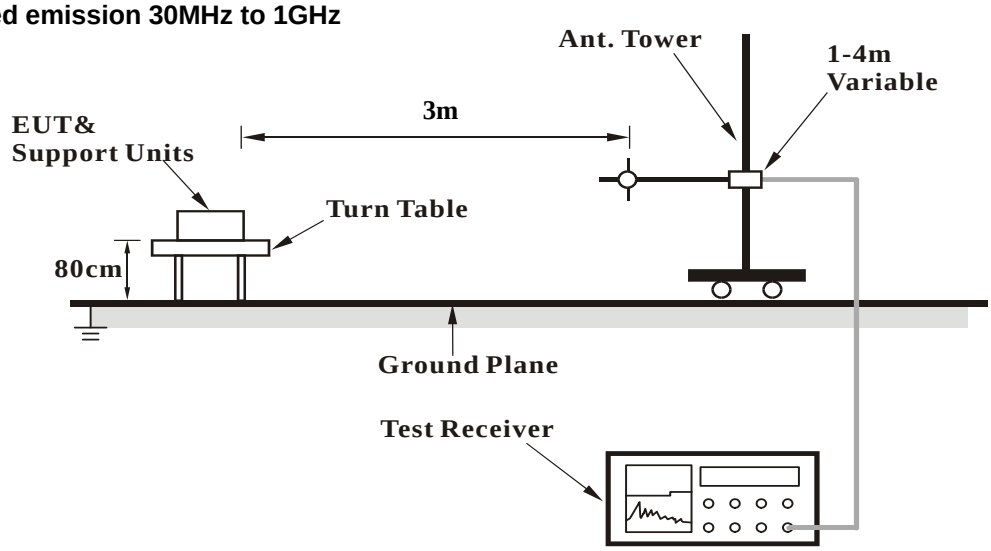
No deviation.

4.1.5 Test Setup

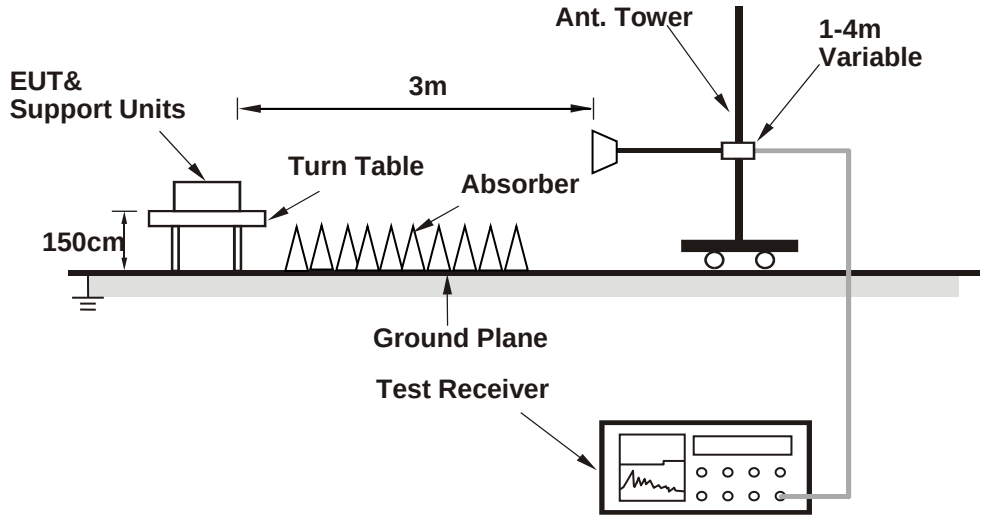
For Radiated emission below 30MHz



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	58.3 PK	74.0	-15.7	1.85 H	350	54.8	3.5
2	5150.00	44.7 AV	54.0	-9.3	1.85 H	350	41.2	3.5
3	*5180.00	112.5 PK			1.52 H	349	73.3	39.2
4	*5180.00	101.1 AV			1.52 H	349	61.9	39.2
5	#10360.00	57.0 PK	68.2	-11.2	1.99 H	216	41.6	15.4
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	1.47 V	351	54.6	3.5
2	5150.00	45.1 AV	54.0	-8.9	1.47 V	351	41.6	3.5
3	*5180.00	113.6 PK			1.56 V	350	74.4	39.2
4	*5180.00	101.2 AV			1.56 V	350	62.0	39.2
5	#10360.00	56.0 PK	68.2	-12.2	2.31 V	256	40.6	15.4

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5200.00	112.8 PK			1.76 H	348	73.5	39.3
2	*5200.00	101.2 AV			1.76 H	348	61.9	39.3
3	#10400.00	57.5 PK	68.2	-10.7	2.36 H	218	41.9	15.6
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	*5200.00	113.9 PK			1.60 V	347	74.6	39.3
2	*5200.00	101.5 AV			1.60 V	347	62.2	39.3
3	#10400.00	57.9 PK	68.2	-10.3	1.69 V	233	42.3	15.6

Remarks:

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

CHANNEL	TX Channel 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	112.4 PK			1.66 H	349	73.3	39.1
2	*5240.00	101.1 AV			1.66 H	349	62.0	39.1
3	5350.00	60.5 PK	74.0	-13.5	1.68 H	346	56.8	3.7
4	5350.00	47.3 AV	54.0	-6.7	1.68 H	346	43.6	3.7
5	#10480.00	58.6 PK	68.2	-9.6	2.23 H	181	42.4	16.2
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	114.0 PK			1.62 V	347	74.9	39.1
2	*5240.00	101.9 AV			1.62 V	347	62.8	39.1
3	5350.00	60.2 PK	74.0	-13.8	1.83 V	331	56.5	3.7
4	5350.00	47.0 AV	54.0	-7.0	1.83 V	331	43.3	3.7
5	#10480.00	57.7 PK	68.2	-10.5	2.11 V	261	41.5	16.2

Remarks:

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

CHANNEL	TX Channel 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	#5630.77	58.3 PK	68.2	-9.9	1.71 H	352	54.1	4.2
2	*5745.00	119.1 PK			1.71 H	352	79.3	39.8
3	*5745.00	108.0 AV			1.71 H	352	68.2	39.8
4	#5973.08	59.0 PK	68.2	-9.2	1.71 H	352	54.0	5.0
5	11490.00	57.9 PK	74.0	-16.1	1.78 H	236	41.1	16.8
6	11490.00	44.3 AV	54.0	-9.7	1.78 H	236	27.5	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	#5633.33	58.5 PK	68.2	-9.7	1.62 V	350	54.3	4.2
2	*5745.00	119.1 PK			1.62 V	350	79.3	39.8
3	*5745.00	107.3 AV			1.62 V	350	67.5	39.8
4	#5937.82	58.2 PK	68.2	-10.0	1.62 V	350	53.4	4.8
5	11490.00	58.0 PK	74.0	-16.0	1.79 V	232	41.2	16.8
6	11490.00	44.4 AV	54.0	-9.6	1.79 V	232	27.6	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 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	#5618.59	60.6 PK	68.2	-7.6	1.93 H	353	56.4	4.2
2	*5785.00	119.6 PK			1.93 H	353	79.5	40.1
3	*5785.00	108.2 AV			1.93 H	353	68.1	40.1
4	#5974.36	58.8 PK	68.2	-9.4	1.93 H	353	53.8	5.0
5	11570.00	58.8 PK	74.0	-15.2	1.89 H	247	41.8	17.0
6	11570.00	45.2 AV	54.0	-8.8	1.89 H	247	28.2	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	#5620.51	58.0 PK	68.2	-10.2	1.62 V	354	53.8	4.2
2	*5785.00	119.9 PK			1.62 V	354	79.8	40.1
3	*5785.00	107.4 AV			1.62 V	354	67.3	40.1
4	#5973.08	57.5 PK	68.2	-10.7	1.62 V	354	52.5	5.0
5	11570.00	58.8 PK	74.0	-15.2	1.59 V	233	41.8	17.0
6	11570.00	45.3 AV	54.0	-8.7	1.59 V	233	28.3	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 165	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5604.49	60.9 PK	68.2	-7.3	1.85 H	353	56.7	4.2
2	*5825.00	120.9 PK			1.85 H	353	80.6	40.3
3	*5825.00	109.6 AV			1.85 H	353	69.3	40.3
4	#5926.92	61.7 PK	68.2	-6.5	1.85 H	353	56.8	4.9
5	11650.00	59.8 PK	74.0	-14.2	1.96 H	238	43.2	16.6
6	11650.00	45.6 AV	54.0	-8.4	1.96 H	238	29.0	16.6
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	#5633.97	59.2 PK	68.2	-9.0	1.64 V	353	55.0	4.2
2	*5825.00	119.4 PK			1.64 V	353	79.1	40.3
3	*5825.00	107.0 AV			1.64 V	353	66.7	40.3
4	#5974.36	57.6 PK	68.2	-10.6	1.64 V	353	52.6	5.0
5	11650.00	59.3 PK	74.0	-14.7	2.38 V	269	42.7	16.6
6	11650.00	46.0 AV	54.0	-8.0	2.38 V	269	29.4	16.6

Remarks:

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

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	59.6 PK	74.0	-14.4	1.60 H	353	56.1	3.5
2	5150.00	47.2 AV	54.0	-6.8	1.60 H	353	43.7	3.5
3	*5180.00	111.8 PK			1.60 H	353	72.6	39.2
4	*5180.00	100.8 AV			1.60 H	353	61.6	39.2
5	#10360.00	57.6 PK	68.2	-10.6	1.86 H	231	42.2	15.4
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	1.50 V	352	55.4	3.5
2	5150.00	45.1 AV	54.0	-8.9	1.50 V	352	41.6	3.5
3	*5180.00	114.2 PK			1.46 V	353	75.0	39.2
4	*5180.00	101.9 AV			1.46 V	353	62.7	39.2
5	#10360.00	57.8 PK	68.2	-10.4	2.16 V	174	42.4	15.4

Remarks:

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

CHANNEL	TX Channel 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	112.6 PK			1.31 H	352	73.3	39.3
2	*5200.00	101.3 AV			1.31 H	352	62.0	39.3
3	#10400.00	57.9 PK	68.2	-10.3	2.56 H	213	42.3	15.6
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	*5200.00	113.7 PK			1.46 V	352	74.4	39.3
2	*5200.00	101.9 AV			1.46 V	352	62.6	39.3
3	#10400.00	57.9 PK	68.2	-10.3	2.43 V	254	42.3	15.6

Remarks:

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

CHANNEL	TX Channel 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	112.3 PK			1.47 H	352	73.2	39.1
2	*5240.00	101.0 AV			1.47 H	352	61.9	39.1
3	5350.00	61.0 PK	74.0	-13.0	1.48 H	344	57.3	3.7
4	5350.00	47.2 AV	54.0	-6.8	1.48 H	344	43.5	3.7
5	#10480.00	58.1 PK	68.2	-10.1	2.55 H	225	41.9	16.2
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	113.4 PK			1.63 V	350	74.3	39.1
2	*5240.00	101.3 AV			1.63 V	350	62.2	39.1
3	5350.00	60.3 PK	74.0	-13.7	1.75 V	353	56.6	3.7
4	5350.00	48.0 AV	54.0	-6.0	1.75 V	353	44.3	3.7
5	#10480.00	58.4 PK	68.2	-9.8	2.38 V	267	42.2	16.2

Remarks:

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

CHANNEL	TX Channel 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	#5620.51	62.1 PK	68.2	-6.1	1.91 H	355	57.9	4.2
2	*5745.00	118.9 PK			1.91 H	355	79.1	39.8
3	*5745.00	107.8 AV			1.91 H	355	68.0	39.8
4	#5955.77	59.5 PK	68.2	-8.7	1.91 H	355	54.7	4.8
5	11490.00	57.8 PK	74.0	-16.2	2.06 H	256	41.0	16.8
6	11490.00	44.2 AV	54.0	-9.8	2.06 H	256	27.4	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	#5607.05	58.0 PK	68.2	-10.2	1.52 V	353	53.8	4.2
2	*5745.00	118.6 PK			1.52 V	353	78.8	39.8
3	*5745.00	106.6 AV			1.52 V	353	66.8	39.8
4	#5951.28	57.1 PK	68.2	-11.1	1.52 V	353	52.3	4.8
5	11490.00	58.6 PK	74.0	-15.4	2.53 V	198	41.8	16.8
6	11490.00	44.3 AV	54.0	-9.7	2.53 V	198	27.5	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 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	#5625.64	62.2 PK	68.2	-6.0	1.88 H	348	58.0	4.2
2	*5785.00	119.7 PK			1.88 H	348	79.6	40.1
3	*5785.00	108.4 AV			1.88 H	348	68.3	40.1
4	#5946.79	59.9 PK	68.2	-8.3	1.88 H	348	55.1	4.8
5	11570.00	59.1 PK	74.0	-14.9	2.31 H	185	42.1	17.0
6	11570.00	45.4 AV	54.0	-8.6	2.31 H	185	28.4	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	#5601.28	58.4 PK	68.2	-9.8	1.85 V	350	54.2	4.2
2	*5785.00	119.2 PK			1.85 V	350	79.1	40.1
3	*5785.00	107.2 AV			1.85 V	350	67.1	40.1
4	#5942.95	58.3 PK	68.2	-9.9	1.85 V	350	53.5	4.8
5	11570.00	58.5 PK	74.0	-15.5	2.62 V	187	41.5	17.0
6	11570.00	45.1 AV	54.0	-8.9	2.62 V	187	28.1	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 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	#5632.05	60.4 PK	68.2	-7.8	1.85 H	356	56.2	4.2
2	*5825.00	120.5 PK			1.85 H	356	80.2	40.3
3	*5825.00	109.2 AV			1.85 H	356	68.9	40.3
4	#5929.49	60.4 PK	68.2	-7.8	1.85 H	356	55.5	4.9
5	11650.00	59.3 PK	74.0	-14.7	2.33 H	167	42.7	16.6
6	11650.00	45.9 AV	54.0	-8.1	2.33 H	167	29.3	16.6
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	#5649.36	58.7 PK	68.2	-9.5	1.72 V	354	54.4	4.3
2	*5825.00	118.8 PK			1.72 V	354	78.5	40.3
3	*5825.00	106.6 AV			1.72 V	354	66.3	40.3
4	#5951.28	57.8 PK	68.2	-10.4	1.72 V	354	53.0	4.8
5	11650.00	59.5 PK	74.0	-14.5	2.31 V	186	42.9	16.6
6	11650.00	45.9 AV	54.0	-8.1	2.31 V	186	29.3	16.6

Remarks:

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

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	59.5 PK	74.0	-14.5	1.53 H	351	56.0	3.5
2	5150.00	48.0 AV	54.0	-6.0	1.53 H	351	44.5	3.5
3	*5190.00	108.6 PK			1.51 H	349	69.3	39.3
4	*5190.00	98.3 AV			1.51 H	349	59.0	39.3
5	#10380.00	56.8 PK	68.2	-11.4	2.24 H	218	41.3	15.5
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	58.7 PK	74.0	-15.3	1.56 V	353	55.2	3.5
2	5150.00	45.8 AV	54.0	-8.2	1.56 V	353	42.3	3.5
3	*5190.00	110.1 PK			1.62 V	351	70.8	39.3
4	*5190.00	99.5 AV			1.62 V	351	60.2	39.3
5	#10380.00	57.1 PK	68.2	-11.1	2.12 V	186	41.6	15.5

Remarks:

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

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	108.9 PK			1.55 H	356	69.8	39.1
2	*5230.00	98.5 AV			1.55 H	356	59.4	39.1
3	5350.00	60.3 PK	74.0	-13.7	1.59 H	344	56.6	3.7
4	5350.00	49.9 AV	54.0	-4.1	1.59 H	344	46.2	3.7
5	#10460.00	58.1 PK	68.2	-10.1	2.08 H	256	42.1	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	*5230.00	110.3 PK			1.63 V	356	71.2	39.1
2	*5230.00	99.3 AV			1.63 V	356	60.2	39.1
3	5350.00	61.3 PK	74.0	-12.7	1.63 V	354	57.6	3.7
4	5350.00	47.5 AV	54.0	-6.5	1.63 V	354	43.8	3.7
5	#10460.00	57.3 PK	68.2	-10.9	2.18 V	269	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 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	#5617.31	60.4 PK	68.2	-7.8	1.87 H	351	56.2	4.2
2	*5755.00	116.5 PK			1.87 H	351	76.7	39.8
3	*5755.00	105.9 AV			1.87 H	351	66.1	39.8
4	#5973.08	59.4 PK	68.2	-8.8	1.87 H	351	54.4	5.0
5	11510.00	58.2 PK	74.0	-15.8	1.67 H	236	41.3	16.9
6	11510.00	45.2 AV	54.0	-8.8	1.67 H	236	28.3	16.9
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	#5647.44	59.2 PK	68.2	-9.0	1.71 V	351	54.9	4.3
2	*5755.00	115.2 PK			1.71 V	351	75.4	39.8
3	*5755.00	104.1 AV			1.71 V	351	64.3	39.8
4	#5977.56	57.6 PK	68.2	-10.6	1.71 V	351	52.6	5.0
5	11510.00	57.9 PK	74.0	-16.1	2.08 V	213	41.0	16.9
6	11510.00	45.1 AV	54.0	-8.9	2.08 V	213	28.2	16.9

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5600.64	60.1 PK	68.2	-8.1	1.86 H	352	55.9	4.2
2	*5795.00	117.3 PK			1.86 H	352	77.2	40.1
3	*5795.00	106.9 AV			1.86 H	352	66.8	40.1
4	#5972.44	59.4 PK	68.2	-8.8	1.86 H	352	54.4	5.0
5	11590.00	59.0 PK	74.0	-15.0	2.62 H	194	42.0	17.0
6	11590.00	45.8 AV	54.0	-8.2	2.62 H	194	28.8	17.0
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5638.46	58.4 PK	68.2	-9.8	1.66 V	350	54.2	4.2
2	*5795.00	115.8 PK			1.66 V	350	75.7	40.1
3	*5795.00	104.7 AV			1.66 V	350	64.6	40.1
4	#5946.15	57.7 PK	68.2	-10.5	1.66 V	350	52.9	4.8
5	11590.00	58.8 PK	74.0	-15.2	2.36 V	255	41.8	17.0
6	11590.00	45.6 AV	54.0	-8.4	2.36 V	255	28.6	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

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	59.8 PK	74.0	-14.2	1.54 H	352	56.3	3.5
2	5150.00	47.2 AV	54.0	-6.8	1.54 H	352	43.7	3.5
3	*5210.00	105.6 PK			1.56 H	351	66.4	39.2
4	*5210.00	95.0 AV			1.56 H	351	55.8	39.2
5	5350.00	61.0 PK	74.0	-13.0	1.47 H	355	57.3	3.7
6	5350.00	48.0 AV	54.0	-6.0	1.47 H	355	44.3	3.7
7	#10420.00	57.5 PK	68.2	-10.7	2.34 H	193	41.8	15.7
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	5150.00	61.5 PK	74.0	-12.5	1.51 V	349	58.0	3.5
2	5150.00	47.3 AV	54.0	-6.7	1.51 V	349	43.8	3.5
3	*5210.00	107.0 PK			1.60 V	353	67.8	39.2
4	*5210.00	95.5 AV			1.60 V	353	56.3	39.2
5	5350.00	60.7 PK	74.0	-13.3	1.55 V	356	57.0	3.7
6	5350.00	47.9 AV	54.0	-6.1	1.55 V	356	44.2	3.7
7	#10420.00	57.9 PK	68.2	-10.3	2.28 V	264	42.2	15.7

Remarks:

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

CHANNEL	TX Channel 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	#5649.36	64.9 PK	68.2	-3.3	1.87 H	350	60.6	4.3
2	#5650.00	66.7 PK	68.2	-1.5	1.53 H	352	62.4	4.3
3	*5775.00	113.6 PK			1.87 H	350	73.6	40.0
4	*5775.00	102.2 AV			1.87 H	350	62.2	40.0
5	#5925.00	66.0 PK	68.2	-2.2	1.61 H	349	61.1	4.9
6	#5925.64	63.5 PK	68.2	-4.7	1.87 H	350	58.6	4.9
7	11550.00	58.5 PK	74.0	-15.5	2.63 H	231	41.5	17.0
8	11550.00	45.5 AV	54.0	-8.5	2.63 H	231	28.5	17.0
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5644.87	60.4 PK	68.2	-7.8	1.58 V	349	56.1	4.3
2	#5650.00	62.3 PK	68.2	-5.9	1.63 V	352	58.0	4.3
3	*5775.00	112.0 PK			1.58 V	349	72.0	40.0
4	*5775.00	100.8 AV			1.58 V	349	60.8	40.0
5	#5925.00	59.0 PK	68.2	-9.2	1.51 V	339	54.1	4.9
6	#5936.54	58.3 PK	68.2	-9.9	1.58 V	349	53.5	4.8
7	11550.00	58.5 PK	74.0	-15.5	1.89 V	262	41.5	17.0
8	11550.00	45.5 AV	54.0	-8.5	1.89 V	262	28.5	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

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	54.4 PK	74.0	-19.6	1.23 H	344	50.9	3.5
2	5150.00	41.1 AV	54.0	-12.9	1.23 H	344	37.6	3.5
3	*5180.00	101.8 PK			1.01 H	358	62.6	39.2
4	*5180.00	90.9 AV			1.01 H	358	51.7	39.2
5	#10360.00	55.9 PK	68.2	-12.3	1.55 H	299	40.5	15.4
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	56.5 PK	74.0	-17.5	1.60 V	210	53.0	3.5
2	5150.00	44.0 AV	54.0	-10.0	1.60 V	210	40.5	3.5
3	*5180.00	112.5 PK			1.59 V	196	73.3	39.2
4	*5180.00	101.8 AV			1.59 V	196	62.6	39.2
5	#10360.00	56.4 PK	68.2	-11.8	1.70 V	303	41.0	15.4

Remarks:

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

CHANNEL	TX Channel 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	102.5 PK			1.07 H	356	63.2	39.3
2	*5200.00	91.9 AV			1.07 H	356	52.6	39.3
3	#10400.00	56.3 PK	68.2	-11.9	1.63 H	303	40.7	15.6
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	*5200.00	112.5 PK			1.74 V	136	73.2	39.3
2	*5200.00	101.4 AV			1.74 V	136	62.1	39.3
3	#10400.00	57.1 PK	68.2	-11.1	1.63 V	320	41.5	15.6

Remarks:

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

CHANNEL	TX Channel 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	102.0 PK			1.10 H	358	62.9	39.1
2	*5240.00	91.1 AV			1.10 H	358	52.0	39.1
3	5350.00	55.7 PK	74.0	-18.3	1.18 H	349	52.0	3.7
4	5350.00	42.7 AV	54.0	-11.3	1.18 H	349	39.0	3.7
5	#10480.00	57.1 PK	68.2	-11.1	1.53 H	298	40.9	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	*5240.00	113.2 PK			1.64 V	145	74.1	39.1
2	*5240.00	102.1 AV			1.64 V	145	63.0	39.1
3	5350.00	56.7 PK	74.0	-17.3	1.61 V	154	53.0	3.7
4	5350.00	43.5 AV	54.0	-10.5	1.61 V	154	39.8	3.7
5	#10480.00	58.1 PK	68.2	-10.1	1.73 V	315	41.9	16.2

Remarks:

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

CHANNEL	TX Channel 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	#5627.56	55.3 PK	68.2	-12.9	1.76 H	299	51.1	4.2
2	*5745.00	111.4 PK			1.76 H	299	71.6	39.8
3	*5745.00	100.4 AV			1.76 H	299	60.6	39.8
4	#5969.23	58.2 PK	68.2	-10.0	1.76 H	299	53.3	4.9
5	11490.00	58.4 PK	74.0	-15.6	1.48 H	316	41.6	16.8
6	11490.00	45.0 AV	54.0	-9.0	1.48 H	316	28.2	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	#5641.67	58.0 PK	68.2	-10.2	1.51 V	122	53.7	4.3
2	*5745.00	121.9 PK			1.51 V	122	82.1	39.8
3	*5745.00	110.9 AV			1.51 V	122	71.1	39.8
4	#5959.62	57.7 PK	68.2	-10.5	1.51 V	122	52.9	4.8
5	11490.00	60.1 PK	74.0	-13.9	1.57 V	350	43.3	16.8
6	11490.00	46.5 AV	54.0	-7.5	1.57 V	350	29.7	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 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	#5622.44	54.9 PK	68.2	-13.3	1.80 H	302	50.7	4.2
2	*5785.00	110.4 PK			1.80 H	302	70.3	40.1
3	*5785.00	99.3 AV			1.80 H	302	59.2	40.1
4	#5951.28	57.4 PK	68.2	-10.8	1.80 H	302	52.6	4.8
5	11570.00	59.9 PK	74.0	-14.1	1.53 H	303	42.9	17.0
6	11570.00	46.0 AV	54.0	-8.0	1.53 H	303	29.0	17.0
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5632.05	59.6 PK	68.2	-8.6	1.57 V	120	55.4	4.2
2	*5785.00	123.1 PK			1.57 V	120	83.0	40.1
3	*5785.00	111.9 AV			1.57 V	120	71.8	40.1
4	#5925.00	58.7 PK	68.2	-9.5	1.57 V	120	53.8	4.9
5	11570.00	61.2 PK	74.0	-12.8	1.58 V	347	44.2	17.0
6	11570.00	47.9 AV	54.0	-6.1	1.58 V	347	30.9	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 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	#5607.69	54.7 PK	68.2	-13.5	3.30 H	192	50.5	4.2
2	*5825.00	110.7 PK			3.30 H	192	70.4	40.3
3	*5825.00	99.3 AV			3.30 H	192	59.0	40.3
4	#5957.69	58.2 PK	68.2	-10.0	3.30 H	192	53.4	4.8
5	11650.00	60.0 PK	74.0	-14.0	1.32 H	305	43.4	16.6
6	11650.00	46.4 AV	54.0	-7.6	1.32 H	305	29.8	16.6
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	#5622.44	56.4 PK	68.2	-11.8	1.96 V	63	52.2	4.2
2	*5825.00	123.1 PK			1.96 V	63	82.8	40.3
3	*5825.00	112.0 AV			1.96 V	63	71.7	40.3
4	#5926.92	60.4 PK	68.2	-7.8	1.96 V	63	55.5	4.9
5	11650.00	61.6 PK	74.0	-12.4	1.64 V	350	45.0	16.6
6	11650.00	48.2 AV	54.0	-5.8	1.64 V	350	31.6	16.6

Remarks:

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

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	54.4 PK	74.0	-19.6	1.15 H	352	50.9	3.5
2	5150.00	41.3 AV	54.0	-12.7	1.15 H	352	37.8	3.5
3	*5180.00	101.9 PK			1.02 H	349	62.7	39.2
4	*5180.00	90.9 AV			1.02 H	349	51.7	39.2
5	#10360.00	56.2 PK	68.2	-12.0	1.63 H	309	40.8	15.4
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	56.0 PK	74.0	-18.0	1.69 V	159	52.5	3.5
2	5150.00	43.3 AV	54.0	-10.7	1.69 V	159	39.8	3.5
3	*5180.00	113.0 PK			1.62 V	149	73.8	39.2
4	*5180.00	102.0 AV			1.62 V	149	62.8	39.2
5	#10360.00	57.0 PK	68.2	-11.2	1.63 V	331	41.6	15.4

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. 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	102.8 PK			1.07 H	350	63.5	39.3
2	*5200.00	91.6 AV			1.07 H	350	52.3	39.3
3	#10400.00	56.6 PK	68.2	-11.6	1.59 H	294	41.0	15.6
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	*5200.00	112.9 PK			1.61 V	147	73.6	39.3
2	*5200.00	101.8 AV			1.61 V	147	62.5	39.3
3	#10400.00	57.4 PK	68.2	-10.8	1.75 V	329	41.8	15.6

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. 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	100.6 PK			1.06 H	354	61.5	39.1
2	*5240.00	89.9 AV			1.06 H	354	50.8	39.1
3	5350.00	55.7 PK	74.0	-18.3	1.11 H	343	52.0	3.7
4	5350.00	42.9 AV	54.0	-11.1	1.11 H	343	39.2	3.7
5	#10480.00	57.0 PK	68.2	-11.2	1.61 H	312	40.8	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	*5240.00	111.1 PK			1.62 V	145	72.0	39.1
2	*5240.00	100.5 AV			1.62 V	145	61.4	39.1
3	5350.00	57.1 PK	74.0	-16.9	1.73 V	153	53.4	3.7
4	5350.00	43.7 AV	54.0	-10.3	1.73 V	153	40.0	3.7
5	#10480.00	57.9 PK	68.2	-10.3	1.72 V	315	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 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	#5642.31	55.0 PK	68.2	-13.2	1.51 H	309	50.7	4.3
2	*5745.00	109.8 PK			1.51 H	309	70.0	39.8
3	*5745.00	98.3 AV			1.51 H	309	58.5	39.8
4	#5983.33	58.6 PK	68.2	-9.6	1.51 H	309	53.6	5.0
5	11490.00	57.7 PK	74.0	-16.3	2.23 H	199	40.9	16.8
6	11490.00	44.7 AV	54.0	-9.3	2.23 H	199	27.9	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	#5630.13	60.1 PK	68.2	-8.1	1.39 V	17	55.9	4.2
2	*5745.00	120.9 PK			1.39 V	17	81.1	39.8
3	*5745.00	109.6 AV			1.39 V	17	69.8	39.8
4	#5939.74	57.9 PK	68.2	-10.3	1.39 V	17	53.1	4.8
5	11490.00	59.7 PK	74.0	-14.3	2.92 V	350	42.9	16.8
6	11490.00	46.5 AV	54.0	-7.5	2.92 V	350	29.7	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 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	#5603.21	55.6 PK	68.2	-12.6	1.51 H	303	51.4	4.2
2	*5785.00	110.0 PK			1.51 H	303	69.9	40.1
3	*5785.00	98.7 AV			1.51 H	303	58.6	40.1
4	#5954.49	57.2 PK	68.2	-11.0	1.51 H	303	52.4	4.8
5	11570.00	58.3 PK	74.0	-15.7	2.29 H	188	41.3	17.0
6	11570.00	45.3 AV	54.0	-8.7	2.29 H	188	28.3	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	#5626.92	58.8 PK	68.2	-9.4	1.47 V	121	54.6	4.2
2	*5785.00	122.9 PK			1.47 V	121	82.8	40.1
3	*5785.00	111.5 AV			1.47 V	121	71.4	40.1
4	#5941.67	57.8 PK	68.2	-10.4	1.47 V	121	53.0	4.8
5	11570.00	61.5 PK	74.0	-12.5	1.51 V	349	44.5	17.0
6	11570.00	47.7 AV	54.0	-6.3	1.51 V	349	30.7	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 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	#5628.85	54.8 PK	68.2	-13.4	3.59 H	192	50.6	4.2
2	*5825.00	112.6 PK			3.59 H	192	72.3	40.3
3	*5825.00	100.9 AV			3.59 H	192	60.6	40.3
4	#5968.59	57.9 PK	68.2	-10.3	3.59 H	192	53.0	4.9
5	11650.00	60.0 PK	74.0	-14.0	2.13 H	196	43.4	16.6
6	11650.00	45.6 AV	54.0	-8.4	2.13 H	196	29.0	16.6
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	#5630.77	57.7 PK	68.2	-10.5	1.82 V	83	53.5	4.2
2	*5825.00	123.3 PK			1.82 V	83	83.0	40.3
3	*5825.00	112.2 AV			1.82 V	83	71.9	40.3
4	#5925.64	60.0 PK	68.2	-8.2	1.82 V	83	55.1	4.9
5	11650.00	60.8 PK	74.0	-13.2	1.59 V	349	44.2	16.6
6	11650.00	47.9 AV	54.0	-6.1	1.59 V	349	31.3	16.6

Remarks:

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

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	55.8 PK	74.0	-18.2	1.75 H	241	52.3	3.5
2	5150.00	43.1 AV	54.0	-10.9	1.75 H	241	39.6	3.5
3	*5190.00	97.2 PK			1.56 H	140	57.9	39.3
4	*5190.00	86.6 AV			1.56 H	140	47.3	39.3
5	#10380.00	57.3 PK	68.2	-10.9	2.23 H	186	41.8	15.5
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	58.4 PK	74.0	-15.6	1.64 V	145	54.9	3.5
2	5150.00	45.5 AV	54.0	-8.5	1.64 V	145	42.0	3.5
3	*5190.00	110.0 PK			1.52 V	141	70.7	39.3
4	*5190.00	99.1 AV			1.52 V	141	59.8	39.3
5	#10380.00	57.4 PK	68.2	-10.8	1.74 V	296	41.9	15.5

Remarks:

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

CHANNEL	TX Channel 46	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5230.00	97.4 PK			1.52 H	146	58.3	39.1
2	*5230.00	86.7 AV			1.52 H	146	47.6	39.1
3	5350.00	57.1 PK	74.0	-16.9	1.63 H	193	53.4	3.7
4	5350.00	43.0 AV	54.0	-11.0	1.63 H	193	39.3	3.7
5	#10460.00	58.1 PK	68.2	-10.1	2.25 H	183	42.1	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	*5230.00	109.6 PK			1.53 V	187	70.5	39.1
2	*5230.00	99.0 AV			1.53 V	187	59.9	39.1
3	5350.00	57.4 PK	74.0	-16.6	1.59 V	203	53.7	3.7
4	5350.00	44.3 AV	54.0	-9.7	1.59 V	203	40.6	3.7
5	#10460.00	57.9 PK	68.2	-10.3	1.96 V	231	41.9	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 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	#5649.36	56.5 PK	68.2	-11.7	1.86 H	284	52.2	4.3
2	#5650.00	55.9 PK	68.2	-12.3	1.93 H	303	51.6	4.3
3	*5755.00	108.4 PK			1.86 H	284	68.6	39.8
4	*5755.00	98.1 AV			1.86 H	284	58.3	39.8
5	#5935.90	58.0 PK	68.2	-10.2	1.86 H	284	53.2	4.8
6	11510.00	59.1 PK	74.0	-14.9	1.51 H	321	42.2	16.9
7	11510.00	45.8 AV	54.0	-8.2	1.51 H	321	28.9	16.9
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	#5649.36	63.9 PK	68.2	-4.3	1.45 V	122	59.6	4.3
2	#5650.00	66.7 PK	68.2	-1.5	1.44 V	121	62.4	4.3
3	*5755.00	120.5 PK			1.45 V	122	80.7	39.8
4	*5755.00	109.5 AV			1.45 V	122	69.7	39.8
5	#5962.82	58.7 PK	68.2	-9.5	1.45 V	122	53.9	4.8
6	11510.00	59.9 PK	74.0	-14.1	1.55 V	348	43.0	16.9
7	11510.00	46.4 AV	54.0	-7.6	1.55 V	348	29.5	16.9

Remarks:

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

CHANNEL	TX Channel 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	#5608.97	56.2 PK	68.2	-12.0	1.87 H	306	52.0	4.2
2	*5795.00	109.4 PK			1.87 H	306	69.3	40.1
3	*5795.00	98.7 AV			1.87 H	306	58.6	40.1
4	#5925.00	58.5 PK	68.2	-9.7	1.99 H	283	53.6	4.9
5	#5945.51	57.6 PK	68.2	-10.6	1.87 H	306	52.8	4.8
6	11590.00	59.7 PK	74.0	-14.3	1.47 H	311	42.7	17.0
7	11590.00	45.9 AV	54.0	-8.1	1.47 H	311	28.9	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	#5644.23	60.0 PK	68.2	-8.2	1.45 V	204	55.7	4.3
2	*5795.00	120.3 PK			1.45 V	204	80.2	40.1
3	*5795.00	109.8 AV			1.45 V	204	69.7	40.1
4	#5925.00	64.5 PK	68.2	-3.7	2.02 V	89	59.6	4.9
5	#5926.92	60.6 PK	68.2	-7.6	1.45 V	204	55.7	4.9
6	11590.00	60.2 PK	74.0	-13.8	1.60 V	352	43.2	17.0
7	11590.00	47.0 AV	54.0	-7.0	1.60 V	352	30.0	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

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	46.1 PK	74.0	-27.9	1.62 H	155	42.6	3.5
2	5150.00	43.1 AV	54.0	-10.9	1.62 H	155	39.6	3.5
3	*5210.00	94.4 PK			1.55 H	143	55.2	39.2
4	*5210.00	84.4 AV			1.55 H	143	45.2	39.2
5	5350.00	57.0 PK	74.0	-17.0	1.59 H	186	53.3	3.7
6	5350.00	44.0 AV	54.0	-10.0	1.59 H	186	40.3	3.7
7	#10420.00	57.3 PK	68.2	-10.9	2.64 H	199	41.6	15.7
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	5150.00	58.5 PK	74.0	-15.5	1.40 V	323	55.0	3.5
2	5150.00	45.7 AV	54.0	-8.3	1.40 V	323	42.2	3.5
3	*5210.00	105.6 PK			1.54 V	193	66.4	39.2
4	*5210.00	95.1 AV			1.54 V	193	55.9	39.2
5	5350.00	57.4 PK	74.0	-16.6	1.52 V	337	53.7	3.7
6	5350.00	44.4 AV	54.0	-9.6	1.52 V	337	40.7	3.7
7	#10420.00	57.0 PK	68.2	-11.2	1.88 V	205	41.3	15.7

Remarks:

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

CHANNEL	TX Channel 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	#5648.08	56.3 PK	68.2	-11.9	1.90 H	309	52.0	4.3
2	#5650.00	56.1 PK	68.2	-12.1	1.73 H	288	51.8	4.3
3	*5775.00	99.8 PK			1.90 H	309	59.8	40.0
4	*5775.00	89.5 AV			1.90 H	309	49.5	40.0
5	#5925.00	57.5 PK	68.2	-10.7	1.83 H	300	52.6	4.9
6	#5951.92	57.6 PK	68.2	-10.6	1.90 H	309	52.8	4.8
7	11550.00	58.9 PK	74.0	-15.1	1.44 H	320	41.9	17.0
8	11550.00	45.5 AV	54.0	-8.5	1.44 H	320	28.5	17.0
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5648.72	63.5 PK	68.2	-4.7	1.45 V	121	59.2	4.3
2	**#5650.00**	**66.9 PK**	**68.2**	**-1.3**	**1.36 V**	**143**	**62.6**	**4.3**
3	*5775.00	112.2 PK			1.45 V	121	72.2	40.0
4	*5775.00	101.9 AV			1.45 V	121	61.9	40.0
5	#5925.00	61.9 PK	68.2	-6.3	1.63 V	209	57.0	4.9
6	#5926.92	59.7 PK	68.2	-8.5	1.45 V	121	54.8	4.9
7	11550.00	59.3 PK	74.0	-14.7	1.59 V	351	42.3	17.0
8	11550.00	46.0 AV	54.0	-8.0	1.59 V	351	29.0	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

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	58.1 PK	74.0	-15.9	1.56 H	4	54.6	3.5
2	5150.00	46.3 AV	54.0	-7.7	1.56 H	4	42.8	3.5
3	*5180.00	107.6 PK			1.84 H	3	68.4	39.2
4	*5180.00	95.4 AV			1.84 H	3	56.2	39.2
5	#10360.00	57.4 PK	68.2	-10.8	1.88 H	264	42.0	15.4
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	57.6 PK	74.0	-16.4	2.18 V	355	54.1	3.5
2	5150.00	44.5 AV	54.0	-9.5	2.18 V	355	41.0	3.5
3	*5180.00	105.6 PK			2.33 V	346	66.4	39.2
4	*5180.00	94.5 AV			2.33 V	346	55.3	39.2
5	#10360.00	56.3 PK	68.2	-11.9	1.96 V	269	40.9	15.4

Remarks:

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

CHANNEL	TX Channel 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	105.5 PK			1.53 H	2	66.2	39.3
2	*5200.00	94.3 AV			1.53 H	2	55.0	39.3
3	#10400.00	57.4 PK	68.2	-10.8	2.16 H	263	41.8	15.6
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	*5200.00	104.9 PK			2.15 V	348	65.6	39.3
2	*5200.00	94.6 AV			2.15 V	348	55.3	39.3
3	#10400.00	57.8 PK	68.2	-10.4	2.34 V	188	42.2	15.6

Remarks:

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

CHANNEL	TX Channel 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	104.3 PK			1.52 H	4	65.2	39.1
2	*5240.00	92.7 AV			1.52 H	4	53.6	39.1
3	5350.00	58.5 PK	74.0	-15.5	1.64 H	74	54.8	3.7
4	5350.00	47.6 AV	54.0	-6.4	1.64 H	74	43.9	3.7
5	#10480.00	58.3 PK	68.2	-9.9	2.01 H	215	42.1	16.2
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	104.4 PK			2.12 V	346	65.3	39.1
2	*5240.00	93.6 AV			2.12 V	346	54.5	39.1
3	5350.00	60.0 PK	74.0	-14.0	2.09 V	334	56.3	3.7
4	5350.00	46.9 AV	54.0	-7.1	2.09 V	334	43.2	3.7
5	#10480.00	58.2 PK	68.2	-10.0	2.86 V	289	42.0	16.2

Remarks:

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

CHANNEL	TX Channel 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	#5645.51	62.7 PK	68.2	-5.5	1.62 H	355	58.4	4.3
2	#5650.00	65.1 PK	68.2	-3.1	1.85 H	357	60.8	4.3
3	*5745.00	120.2 PK			1.62 H	355	80.4	39.8
4	*5745.00	108.4 AV			1.62 H	355	68.6	39.8
5	#5985.26	58.5 PK	68.2	-9.7	1.62 H	355	53.5	5.0
6	11490.00	58.1 PK	74.0	-15.9	1.61 H	101	41.3	16.8
7	11490.00	45.4 AV	54.0	-8.6	1.61 H	101	28.6	16.8
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5623.72	59.9 PK	68.2	-8.3	1.81 V	351	55.7	4.2
2	#5650.00	62.2 PK	68.2	-6.0	1.90 V	349	57.9	4.3
3	*5745.00	119.9 PK			1.81 V	351	80.1	39.8
4	*5745.00	108.8 AV			1.81 V	351	69.0	39.8
5	#5974.36	58.5 PK	68.2	-9.7	1.81 V	351	53.5	5.0
6	11490.00	58.1 PK	74.0	-15.9	2.51 V	199	41.3	16.8
7	11490.00	44.6 AV	54.0	-9.4	2.51 V	199	27.8	16.8

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5619.87	61.4 PK	68.2	-6.8	1.57 H	354	57.2	4.2
2	*5785.00	121.0 PK			1.57 H	354	80.9	40.1
3	*5785.00	109.1 AV			1.57 H	354	69.0	40.1
4	#5936.54	58.0 PK	68.2	-10.2	1.57 H	354	53.2	4.8
5	11570.00	59.1 PK	74.0	-14.9	1.72 H	99	42.1	17.0
6	11570.00	46.6 AV	54.0	-7.4	1.72 H	99	29.6	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	#5630.13	59.5 PK	68.2	-8.7	1.74 V	351	55.3	4.2
2	*5785.00	119.3 PK			1.74 V	351	79.2	40.1
3	*5785.00	108.5 AV			1.74 V	351	68.4	40.1
4	#5979.49	57.2 PK	68.2	-11.0	1.74 V	351	52.2	5.0
5	11570.00	58.6 PK	74.0	-15.4	2.06 V	192	41.6	17.0
6	11570.00	45.5 AV	54.0	-8.5	2.06 V	192	28.5	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 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	#5617.31	61.4 PK	68.2	-6.8	1.64 H	354	57.2	4.2
2	*5825.00	121.2 PK			1.64 H	354	80.9	40.3
3	*5825.00	109.5 AV			1.64 H	354	69.2	40.3
4	#5955.13	58.0 PK	68.2	-10.2	1.64 H	354	53.2	4.8
5	11650.00	60.0 PK	74.0	-14.0	1.68 H	100	43.4	16.6
6	11650.00	48.0 AV	54.0	-6.0	1.68 H	100	31.4	16.6
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	#5602.56	60.8 PK	68.2	-7.4	1.72 V	349	56.6	4.2
2	*5825.00	120.8 PK			1.72 V	349	80.5	40.3
3	*5825.00	109.7 AV			1.72 V	349	69.4	40.3
4	#5944.23	57.8 PK	68.2	-10.4	1.72 V	349	53.0	4.8
5	11650.00	59.5 PK	74.0	-14.5	1.96 V	233	42.9	16.6
6	11650.00	45.8 AV	54.0	-8.2	1.96 V	233	29.2	16.6

Remarks:

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

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	56.8 PK	74.0	-17.2	1.46 H	4	53.3	3.5
2	5150.00	44.9 AV	54.0	-9.1	1.46 H	4	41.4	3.5
3	*5180.00	104.6 PK			1.43 H	2	65.4	39.2
4	*5180.00	93.3 AV			1.43 H	2	54.1	39.2
5	#10360.00	57.0 PK	68.2	-11.2	2.17 H	184	41.6	15.4
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	57.0 PK	74.0	-17.0	2.26 V	331	53.5	3.5
2	5150.00	44.7 AV	54.0	-9.3	2.26 V	331	41.2	3.5
3	*5180.00	104.5 PK			2.32 V	346	65.3	39.2
4	*5180.00	93.5 AV			2.32 V	346	54.3	39.2
5	#10360.00	56.6 PK	68.2	-11.6	2.21 V	198	41.2	15.4

Remarks:

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

CHANNEL	TX Channel 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	105.6 PK			1.50 H	3	66.3	39.3
2	*5200.00	94.1 AV			1.50 H	3	54.8	39.3
3	#10400.00	57.2 PK	68.2	-11.0	2.36 H	189	41.6	15.6
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	*5200.00	104.9 PK			2.16 V	348	65.6	39.3
2	*5200.00	93.7 AV			2.16 V	348	54.4	39.3
3	#10400.00	57.1 PK	68.2	-11.1	2.39 V	308	41.5	15.6

Remarks:

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

CHANNEL	TX Channel 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	104.7 PK			1.35 H	1	65.6	39.1
2	*5240.00	93.6 AV			1.35 H	1	54.5	39.1
3	5350.00	59.7 PK	74.0	-14.3	1.42 H	8	56.0	3.7
4	5350.00	47.4 AV	54.0	-6.6	1.42 H	8	43.7	3.7
5	#10480.00	58.1 PK	68.2	-10.1	1.96 H	208	41.9	16.2
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	104.6 PK			2.11 V	342	65.5	39.1
2	*5240.00	93.4 AV			2.11 V	342	54.3	39.1
3	5350.00	59.2 PK	74.0	-14.8	2.18 V	351	55.5	3.7
4	5350.00	46.4 AV	54.0	-7.6	2.18 V	351	42.7	3.7
5	#10480.00	57.5 PK	68.2	-10.7	2.69 V	335	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 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	#5619.23	61.5 PK	68.2	-6.7	1.77 H	357	57.3	4.2
2	#5650.00	64.6 PK	68.2	-3.6	1.79 H	357	60.3	4.3
3	*5745.00	120.1 PK			1.77 H	357	80.3	39.8
4	*5745.00	108.1 AV			1.77 H	357	68.3	39.8
5	#5928.85	58.2 PK	68.2	-10.0	1.77 H	357	53.3	4.9
6	11490.00	58.2 PK	68.2	-10.0	1.54 H	103	41.4	16.8
7	11490.00	45.4 AV	54.0	-8.6	1.54 H	103	28.6	16.8
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5614.74	60.0 PK	68.2	-8.2	1.82 V	351	55.8	4.2
2	#5650.00	61.2 PK	68.2	-7.0	1.97 V	348	56.9	4.3
3	*5745.00	120.0 PK			1.82 V	351	80.2	39.8
4	*5745.00	109.0 AV			1.82 V	351	69.2	39.8
5	#5973.72	57.2 PK	68.2	-11.0	1.82 V	351	52.2	5.0
6	11490.00	57.7 PK	74.0	-16.3	2.15 V	196	40.9	16.8
7	11490.00	44.6 AV	54.0	-9.4	2.15 V	196	27.8	16.8

Remarks:

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

CHANNEL	TX Channel 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	#5609.62	61.0 PK	68.2	-7.2	1.57 H	355	56.8	4.2
2	*5785.00	120.6 PK			1.57 H	355	80.5	40.1
3	*5785.00	109.0 AV			1.57 H	355	68.9	40.1
4	#5981.41	58.0 PK	68.2	-10.2	1.57 H	355	53.0	5.0
5	11570.00	59.3 PK	74.0	-14.7	1.52 H	104	42.3	17.0
6	11570.00	46.5 AV	54.0	-7.5	1.52 H	104	29.5	17.0
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5632.69	60.5 PK	68.2	-7.7	1.81 V	349	56.3	4.2
2	*5785.00	120.3 PK			1.81 V	349	80.2	40.1
3	*5785.00	109.3 AV			1.81 V	349	69.2	40.1
4	#5936.54	57.2 PK	68.2	-11.0	1.81 V	349	52.4	4.8
5	11570.00	58.5 PK	74.0	-15.5	2.34 V	256	41.5	17.0
6	11570.00	45.1 AV	54.0	-8.9	2.34 V	256	28.1	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 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	#5626.92	62.0 PK	68.2	-6.2	1.63 H	356	57.8	4.2
2	*5825.00	120.2 PK			1.63 H	356	79.9	40.3
3	*5825.00	108.7 AV			1.63 H	356	68.4	40.3
4	#5930.77	58.3 PK	68.2	-9.9	1.63 H	356	53.4	4.9
5	11650.00	60.4 PK	74.0	-13.6	1.63 H	100	43.8	16.6
6	11650.00	47.8 AV	54.0	-6.2	1.63 H	100	31.2	16.6
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	#5617.95	60.9 PK	68.2	-7.3	1.77 V	349	56.7	4.2
2	*5825.00	119.2 PK			1.77 V	349	78.9	40.3
3	*5825.00	108.4 AV			1.77 V	349	68.1	40.3
4	#5948.72	57.7 PK	68.2	-10.5	1.77 V	349	52.9	4.8
5	11650.00	59.9 PK	74.0	-14.1	2.69 V	234	43.3	16.6
6	11650.00	45.8 AV	54.0	-8.2	2.69 V	234	29.2	16.6

Remarks:

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

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	57.8 PK	74.0	-16.2	1.52 H	13	54.3	3.5
2	5150.00	45.5 AV	54.0	-8.5	1.52 H	13	42.0	3.5
3	*5190.00	101.3 PK			1.44 H	2	62.0	39.3
4	*5190.00	91.0 AV			1.44 H	2	51.7	39.3
5	#10380.00	57.3 PK	68.2	-10.9	2.31 H	226	41.8	15.5
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	57.2 PK	74.0	-16.8	2.02 V	338	53.7	3.5
2	5150.00	44.4 AV	54.0	-9.6	2.02 V	338	40.9	3.5
3	*5190.00	101.3 PK			2.11 V	346	62.0	39.3
4	*5190.00	91.4 AV			2.11 V	346	52.1	39.3
5	#10380.00	56.9 PK	68.2	-11.3	2.98 V	314	41.4	15.5

Remarks:

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

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	101.8 PK			1.45 H	3	62.7	39.1
2	*5230.00	91.1 AV			1.45 H	3	52.0	39.1
3	5350.00	58.7 PK	74.0	-15.3	1.49 H	5	55.0	3.7
4	5350.00	47.7 AV	54.0	-6.3	1.49 H	5	44.0	3.7
5	#10460.00	57.3 PK	68.2	-10.9	1.89 H	206	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	*5230.00	101.2 PK			2.11 V	346	62.1	39.1
2	*5230.00	91.0 AV			2.11 V	346	51.9	39.1
3	5350.00	60.7 PK	74.0	-13.3	1.98 V	347	57.0	3.7
4	5350.00	47.8 AV	54.0	-6.2	1.98 V	347	44.1	3.7
5	#10460.00	58.0 PK	68.2	-10.2	2.28 V	265	42.0	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 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	#5600.64	60.8 PK	68.2	-7.4	1.75 H	356	56.6	4.2
2	*5755.00	116.4 PK			1.75 H	356	76.6	39.8
3	*5755.00	105.6 AV			1.75 H	356	65.8	39.8
4	#5928.85	58.1 PK	68.2	-10.1	1.75 H	356	53.2	4.9
5	11510.00	58.8 PK	74.0	-15.2	1.67 H	101	41.9	16.9
6	11510.00	46.1 AV	54.0	-7.9	1.67 H	101	29.2	16.9
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	#5634.62	60.2 PK	68.2	-8.0	1.84 V	349	56.0	4.2
2	*5755.00	116.3 PK			1.84 V	349	76.5	39.8
3	*5755.00	105.5 AV			1.84 V	349	65.7	39.8
4	#5955.77	57.6 PK	68.2	-10.6	1.84 V	349	52.8	4.8
5	11510.00	58.2 PK	74.0	-15.8	2.31 V	196	41.3	16.9
6	11510.00	45.2 AV	54.0	-8.8	2.31 V	196	28.3	16.9

Remarks:

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

CHANNEL	TX Channel 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	#5607.69	60.0 PK	68.2	-8.2	1.67 H	354	55.8	4.2
2	*5795.00	117.1 PK			1.67 H	354	77.0	40.1
3	*5795.00	106.4 AV			1.67 H	354	66.3	40.1
4	#5949.36	57.3 PK	68.2	-10.9	1.67 H	354	52.5	4.8
5	11590.00	59.2 PK	74.0	-14.8	1.65 H	105	42.2	17.0
6	11590.00	46.3 AV	54.0	-7.7	1.65 H	105	29.3	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	#5639.10	60.4 PK	68.2	-7.8	1.80 V	349	56.2	4.2
2	*5795.00	116.8 PK			1.80 V	349	76.7	40.1
3	*5795.00	106.0 AV			1.80 V	349	65.9	40.1
4	#5951.92	57.7 PK	68.2	-10.5	1.80 V	349	52.9	4.8
5	11590.00	58.5 PK	74.0	-15.5	2.41 V	253	41.5	17.0
6	11590.00	45.4 AV	54.0	-8.6	2.41 V	253	28.4	17.0

Remarks:

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

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	57.8 PK	74.0	-16.2	1.49 H	5	54.3	3.5
2	5150.00	45.8 AV	54.0	-8.2	1.49 H	5	42.3	3.5
3	*5210.00	98.4 PK			1.54 H	3	59.2	39.2
4	*5210.00	88.2 AV			1.54 H	3	49.0	39.2
5	5350.00	59.3 PK	74.0	-14.7	1.44 H	11	55.6	3.7
6	5350.00	47.5 AV	54.0	-6.5	1.44 H	11	43.8	3.7
7	#10420.00	57.0 PK	68.2	-11.2	2.36 H	254	41.3	15.7
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	5150.00	56.8 PK	74.0	-17.2	2.15 V	323	53.3	3.5
2	5150.00	44.2 AV	54.0	-9.8	2.15 V	323	40.7	3.5
3	*5210.00	98.0 PK			2.10 V	344	58.8	39.2
4	*5210.00	87.8 AV			2.10 V	344	48.6	39.2
5	5350.00	60.0 PK	74.0	-14.0	2.21 V	318	56.3	3.7
6	5350.00	47.6 AV	54.0	-6.4	2.21 V	318	43.9	3.7
7	#10420.00	57.6 PK	68.2	-10.6	2.56 V	254	41.9	15.7

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency
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	#5614.74	63.9 PK	68.2	-4.3	1.87 H	356	59.7	4.2
2	#5650.00	66.6 PK	68.2	-1.6	1.84 H	357	62.3	4.3
3	*5775.00	113.4 PK			1.87 H	356	73.4	40.0
4	*5775.00	102.5 AV			1.87 H	356	62.5	40.0
5	#5925.00	61.8 PK	68.2	-6.4	1.90 H	351	56.9	4.9
6	#5957.69	58.1 PK	68.2	-10.1	1.87 H	356	53.3	4.8
7	11550.00	59.3 PK	74.0	-14.7	1.64 H	103	42.3	17.0
8	11550.00	46.6 AV	54.0	-7.4	1.64 H	103	29.6	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	#5644.87	62.8 PK	68.2	-5.4	1.91 V	350	58.5	4.3
2	#5650.00	64.0 PK	68.2	-4.2	1.91 V	350	59.7	4.3
3	*5775.00	112.9 PK			1.91 V	350	72.9	40.0
4	*5775.00	102.5 AV			1.91 V	350	62.5	40.0
5	#5925.00	60.1 PK	68.2	-8.1	1.73 V	352	55.2	4.9
6	#5934.62	57.4 PK	68.2	-10.8	1.91 V	350	52.6	4.8
7	11550.00	58.4 PK	74.0	-15.6	2.39 V	217	41.4	17.0
8	11550.00	45.5 AV	54.0	-8.5	2.39 V	217	28.5	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

Below 1GHz Worst-Case Data:

Test Mode A

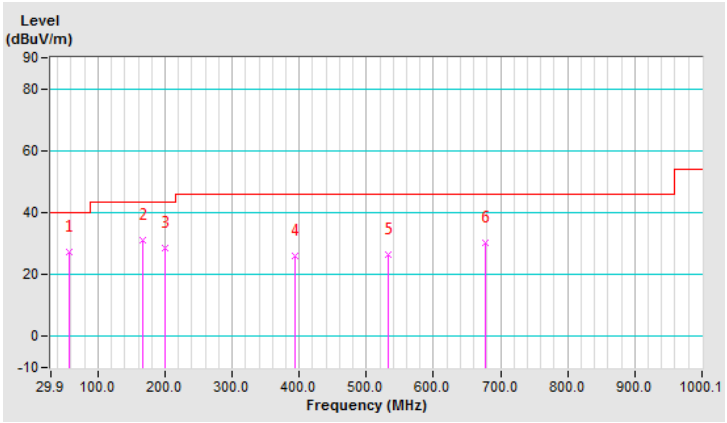
802.11a

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	57.12	27.2 QP	40.0	-12.8	1.99 H	24	36.8	-9.6
2	166.00	31.1 QP	43.5	-12.4	1.49 H	259	40.1	-9.0
3	201.00	28.7 QP	43.5	-14.8	1.49 H	156	40.5	-11.8
4	393.48	26.0 QP	46.0	-20.0	1.00 H	156	31.7	-5.7
5	533.47	26.4 QP	46.0	-19.6	1.49 H	11	29.4	-3.0
6	677.35	30.1 QP	46.0	-15.9	1.00 H	21	30.0	0.1

Remarks:

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

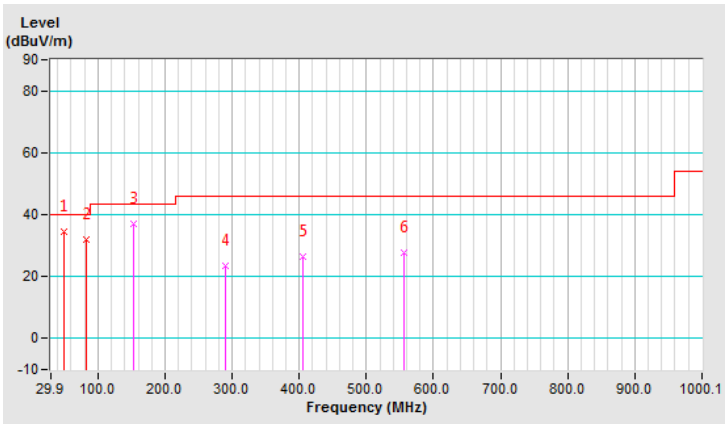


CHANNEL	TX Channel 165	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz		

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	50.01	34.4 QP	40.0	-5.6	1.00 V	294	43.7	-9.3
2	82.45	32.0 QP	40.0	-8.0	1.49 V	130	46.0	-14.0
3	152.39	37.0 QP	43.5	-6.5	1.00 V	318	46.0	-9.0
4	290.43	23.5 QP	46.0	-22.5	1.99 V	3	31.2	-7.7
5	405.15	26.3 QP	46.0	-19.7	1.00 V	275	31.8	-5.5
6	556.80	27.7 QP	46.0	-18.3	1.49 V	174	30.2	-2.5

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 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

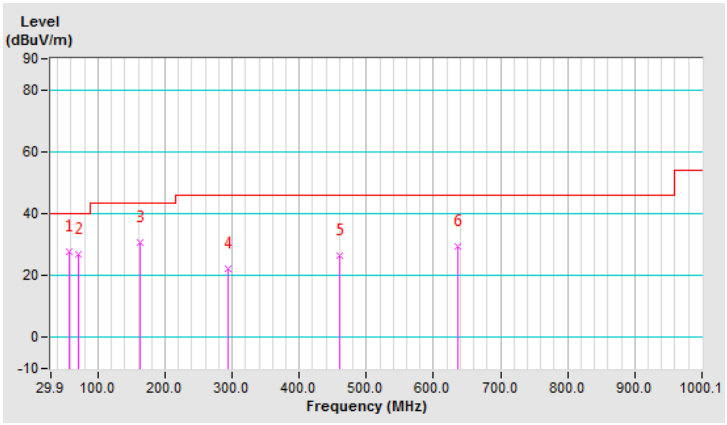
802.11a

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	57.12	27.7 QP	40.0	-12.3	1.99 H	59	37.3	-9.6
2	70.73	26.8 QP	40.0	-13.2	1.99 H	202	38.3	-11.5
3	162.11	30.8 QP	43.5	-12.7	1.49 H	275	39.7	-8.9
4	294.32	22.1 QP	46.0	-23.9	1.49 H	85	29.7	-7.6
5	459.59	26.5 QP	46.0	-19.5	1.00 H	151	30.7	-4.2
6	636.52	29.5 QP	46.0	-16.5	1.99 H	318	29.9	-0.4

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit 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

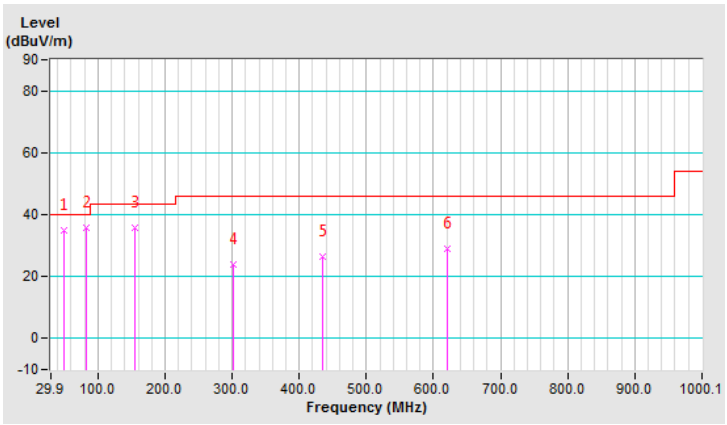


CHANNEL	TX Channel 165	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz		

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	49.34	35.0 QP	40.0	-5.0	1.01 V	304	44.3	-9.3
2	82.40	35.9 QP	40.0	-4.1	2.00 V	160	49.8	-13.9
3	154.33	35.9 QP	43.5	-7.6	1.50 V	273	44.9	-9.0
4	302.10	23.9 QP	46.0	-22.1	1.01 V	14	31.3	-7.4
5	434.31	26.4 QP	46.0	-19.6	1.01 V	162	30.8	-4.4
6	620.96	29.0 QP	46.0	-17.0	1.50 V	17	29.7	-0.7

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



Test Mode C

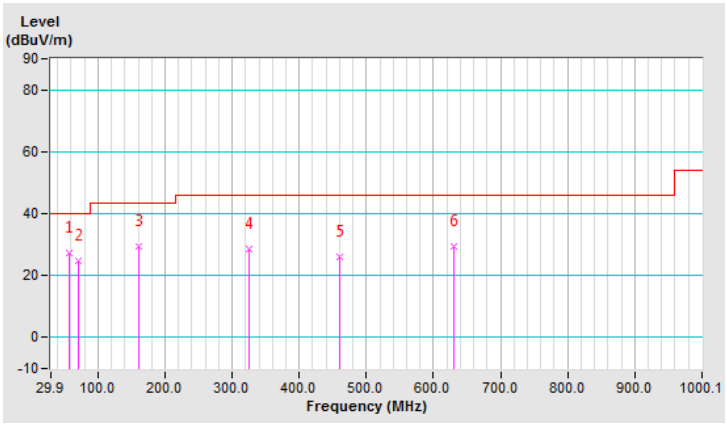
802.11a

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	27.1 QP	40.0	-12.9	1.54 H	176	36.7	-9.6
2	70.73	24.9 QP	40.0	-15.1	1.54 H	176	36.4	-11.5
3	160.17	29.3 QP	43.5	-14.2	1.54 H	201	38.1	-8.8
4	325.43	28.5 QP	46.0	-17.5	1.00 H	115	35.3	-6.8
5	459.59	26.1 QP	46.0	-19.9	1.54 H	187	30.3	-4.2
6	630.69	29.3 QP	46.0	-16.7	1.54 H	8	29.8	-0.5

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 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

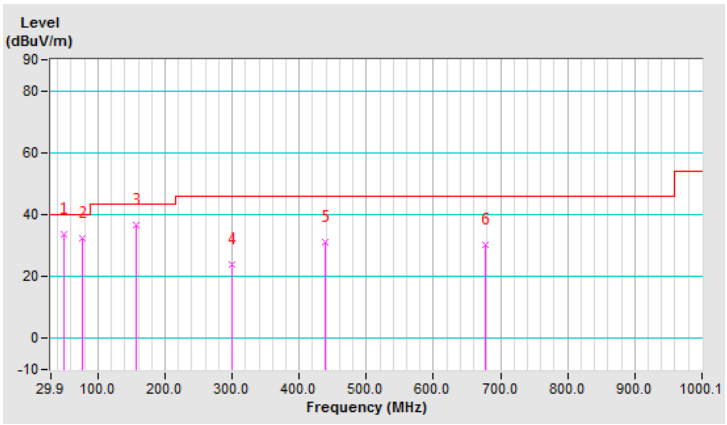


CHANNEL	TX Channel 165	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz		

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	49.34	33.5 QP	40.0	-6.5	1.00 V	340	42.8	-9.3
2	76.56	32.2 QP	40.0	-7.8	1.00 V	192	44.9	-12.7
3	156.28	36.7 QP	43.5	-6.8	1.00 V	118	45.6	-8.9
4	300.16	23.7 QP	46.0	-22.3	1.00 V	21	31.1	-7.4
5	438.20	31.2 QP	46.0	-14.8	1.00 V	154	35.6	-4.4
6	677.35	30.2 QP	46.0	-15.8	1.50 V	292	30.1	0.1

Remarks:

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



4.2 Conducted Emission Measurement

4.2.1 Limits of Conducted Emission Measurement

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

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

4.2.2 Test Instruments

Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
Test Receiver ROHDE & SCHWARZ	ESCI	100613	Nov. 23, 2017	Nov. 22, 2018
RF signal cable Woken	5D-FB	Cable-cond1-01	Sep. 05, 2017	Sep. 04, 2018
			Sep. 05, 2018	Sep. 04, 2019
LISN ROHDE & SCHWARZ (EUT)	ENV216	101826	Feb. 26, 2018	Feb. 25, 2019
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-2040.

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.

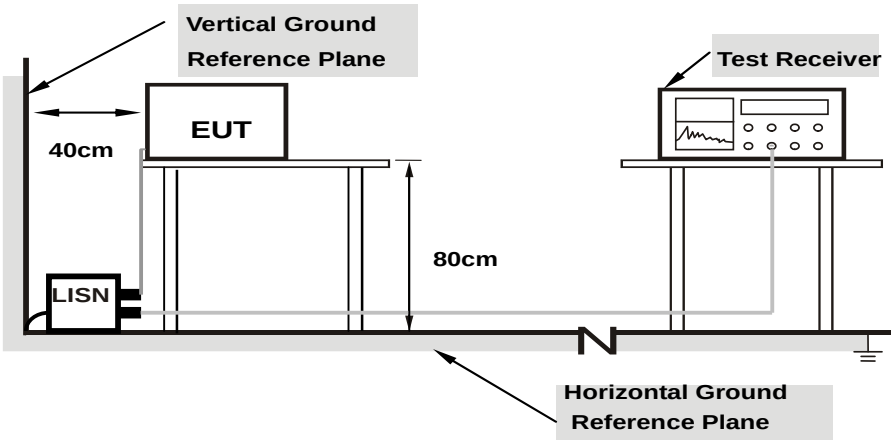
c. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

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

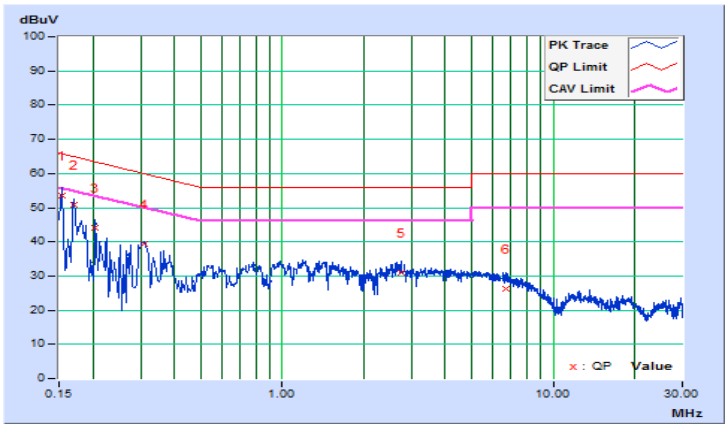
802.11a

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	9.67	43.94	27.46	53.61	37.13	65.79	55.79	-12.18	-18.66
2	0.16955	9.67	41.02	24.48	50.69	34.15	64.98	54.98	-14.29	-20.83
3	0.20474	9.67	34.46	19.07	44.13	28.74	63.42	53.42	-19.29	-24.68
4	0.31021	9.66	29.64	22.10	39.30	31.76	59.96	49.96	-20.66	-18.20
5	2.73842	9.70	21.26	16.05	30.96	25.75	56.00	46.00	-25.04	-20.25
6	6.67188	9.78	16.38	10.18	26.16	19.96	60.00	50.00	-33.84	-30.04

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.

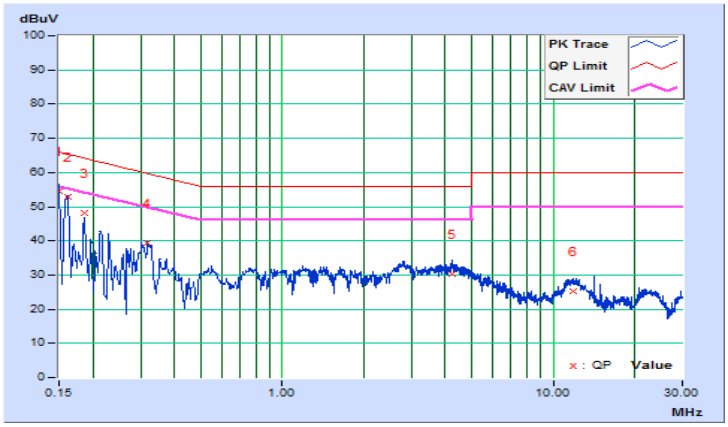


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)

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	0.15000	9.68	44.86	27.68	54.54	37.36	66.00	56.00	-11.46	-18.64
2	0.16139	9.68	43.14	25.92	52.82	35.60	65.39	55.39	-12.57	-19.79
3	0.18519	9.67	38.61	22.48	48.28	32.15	64.25	54.25	-15.97	-22.10
4	0.31849	9.67	29.78	24.04	39.45	33.71	59.75	49.75	-20.30	-16.04
5	4.22422	9.73	20.65	14.83	30.38	24.56	56.00	46.00	-25.62	-21.44
6	11.82917	9.89	15.26	10.55	25.15	20.44	60.00	50.00	-34.85	-29.56

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

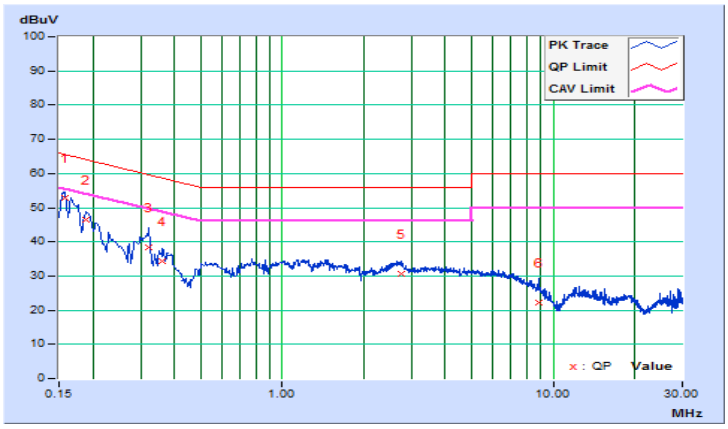
802.11a

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	0.15719	9.67	43.27	26.95	52.94	36.62	65.61	55.61	-12.67	-18.99
2	0.18903	9.67	36.96	21.74	46.63	31.41	64.08	54.08	-17.45	-22.67
3	0.32204	9.66	28.57	21.73	38.23	31.39	59.65	49.65	-21.42	-18.26
4	0.36143	9.66	24.72	17.49	34.38	27.15	58.70	48.70	-24.32	-21.55
5	2.76579	9.70	20.92	15.58	30.62	25.28	56.00	46.00	-25.38	-20.72
6	8.83802	9.83	12.52	7.71	22.35	17.54	60.00	50.00	-37.65	-32.46

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.

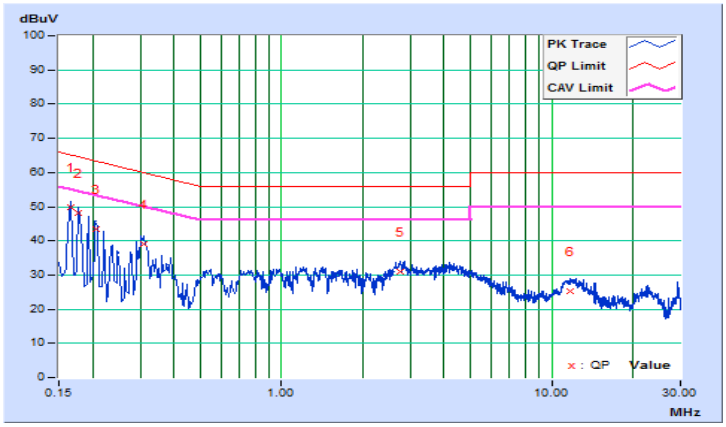


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)

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	0.16564	9.68	40.24	23.92	49.92	33.60	65.18	55.18	-15.26	-21.58
2	0.17744	9.67	38.54	22.03	48.21	31.70	64.60	54.60	-16.39	-22.90
3	0.20511	9.67	33.61	18.32	43.28	27.99	63.40	53.40	-20.12	-25.41
4	0.31021	9.67	29.50	22.00	39.17	31.67	59.96	49.96	-20.79	-18.29
5	2.76188	9.70	21.30	16.46	31.00	26.16	56.00	46.00	-25.00	-19.84
6	11.72360	9.89	15.33	10.55	25.22	20.44	60.00	50.00	-34.78	-29.56

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

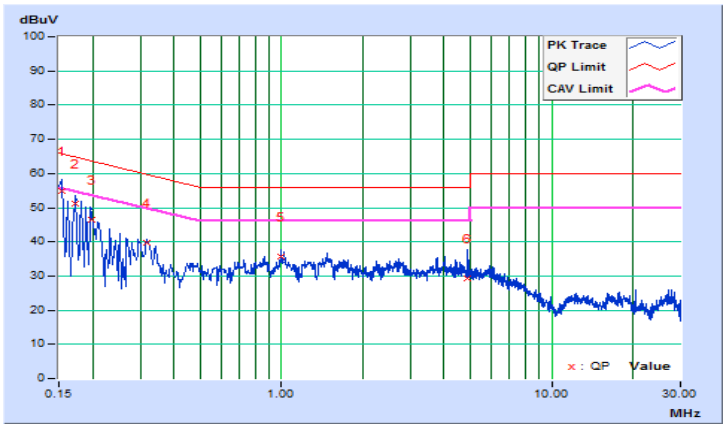
802.11a

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**	**9.67**	**45.28**	**29.02**	**54.95**	**38.69**	**65.79**	**55.79**	**-10.84**	**-17.10**
2	0.17346	9.67	41.48	25.49	51.15	35.16	64.79	54.79	-13.64	-19.63
3	0.19717	9.67	36.69	19.86	46.36	29.53	63.73	53.73	-17.37	-24.20
4	0.31765	9.66	30.22	24.76	39.88	34.42	59.77	49.77	-19.89	-15.35
5	0.99456	9.65	25.88	21.97	35.53	31.62	56.00	46.00	-20.47	-14.38
6	4.90065	9.75	19.49	13.76	29.24	23.51	56.00	46.00	-26.76	-22.49

Remarks:

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

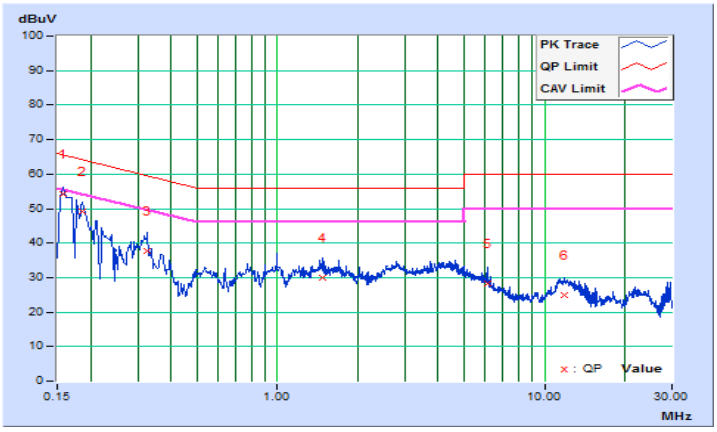


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)

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	9.68	44.48	27.88	54.16	37.56	65.58	55.58	-11.42	-18.02
2	0.18519	9.67	39.35	23.09	49.02	32.76	64.25	54.25	-15.23	-21.49
3	0.32595	9.67	27.89	20.82	37.56	30.49	59.55	49.55	-21.99	-19.06
4	1.46767	9.66	20.37	14.64	30.03	24.30	56.00	46.00	-25.97	-21.70
5	6.10493	9.78	18.57	13.41	28.35	23.19	60.00	50.00	-31.65	-26.81
6	11.88000	9.89	15.17	10.42	25.06	20.31	60.00	50.00	-34.94	-29.69

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

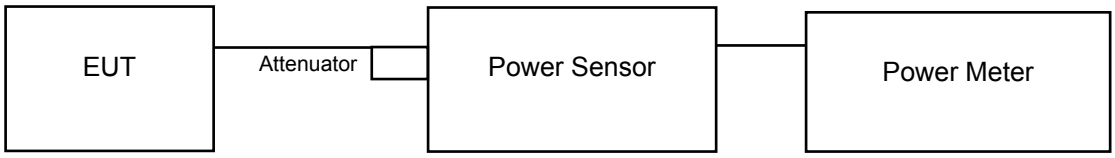
Per KDB 662911 Method of conducted output power measurement on IEEE 802.11 devices,

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 $N_{ANT} \geq 5$.

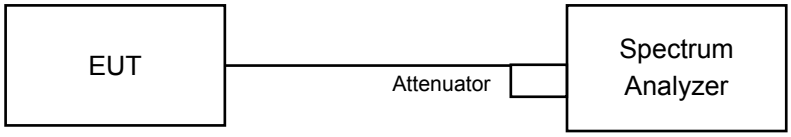
For power measurements on all other devices: Array Gain = 10 log(N_{ANT}/N_{SS}) dB.

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	11.97	12.17	32.222	15.08	22.58	5.46	20.54	21.00	Pass
40	5200	11.85	12.23	32.022	15.05	22.58	5.46	20.51	21.00	Pass
48	5240	11.74	12.18	31.448	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	12.16	12.22	33.116	15.20	22.58	5.46	20.66	21.00	Pass
40	5200	11.98	12.44	33.315	15.23	22.58	5.46	20.69	21.00	Pass
48	5240	11.83	12.26	32.068	15.06	22.58	5.46	20.52	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	11.82	12.24	31.954	15.05	22.58	5.46	20.51	21.00	Pass
46	5230	11.89	12.52	**33.318**	15.23	22.58	5.46	20.69	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	11.79	12.29	32.044	15.06	22.58	5.46	20.52	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	9.15	9.21	16.558	12.19	19.57	5.46	20.66	21.00	Pass
40	5200	8.97	9.43	16.672	12.22	19.57	5.46	20.69	21.00	Pass
48	5240	8.82	9.25	16.032	12.05	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).

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	8.81	9.23	15.996	12.04	19.57	5.46	20.51	21.00	Pass
46	5230	8.88	9.51	**16.672**	12.22	19.57	5.46	20.69	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	8.78	9.28	16.032	12.05	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	13.84	13.36	**45.887**	16.62	30.00	4.31	20.93	21.00	Pass
40	5200	13.58	13.55	45.449	16.58	30.00	4.31	20.89	21.00	Pass
48	5240	13.28	13.30	42.661	16.30	30.00	4.31	20.61	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	13.50	13.22	43.376	16.37	30.00	4.31	20.68	21.00	Pass
40	5200	13.29	13.19	42.175	16.25	30.00	4.31	20.56	21.00	Pass
48	5240	13.43	13.33	43.557	16.39	30.00	4.31	20.70	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	13.72	13.35	45.177	16.55	30.00	4.31	20.86	21.00	Pass
46	5230	13.32	13.14	42.084	16.24	30.00	4.31	20.55	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	13.33	13.19	42.373	16.27	30.00	4.31	20.58	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	10.49	10.21	21.677	13.36	27.82	4.31	20.68	21.00	Pass
40	5200	10.28	10.18	21.086	13.24	27.82	4.31	20.56	21.00	Pass
48	5240	10.42	10.32	21.777	13.38	27.82	4.31	20.70	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	10.71	10.34	**22.594**	13.54	27.82	4.31	20.86	21.00	Pass
46	5230	10.31	10.13	21.038	13.23	27.82	4.31	20.55	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	10.32	10.18	21.184	13.26	27.82	4.31	20.58	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	2.38	2.19	3.386	5.30	20.50	14.42	19.72	21.00	Pass
40	5200	2.35	2.28	3.408	5.32	20.50	14.42	19.74	21.00	Pass
48	5240	2.13	2.25	3.312	5.20	20.50	14.42	19.62	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	2.31	2.36	**3.424**	5.35	20.50	14.42	19.77	21.00	Pass
40	5200	2.35	2.28	3.408	5.32	20.50	14.42	19.74	21.00	Pass
48	5240	2.42	2.19	3.402	5.32	20.50	14.42	19.74	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	2.15	2.08	3.255	5.13	20.50	14.42	19.55	21.00	Pass
46	5230	2.26	1.99	3.264	5.14	20.50	14.42	19.56	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	2.14	2.23	3.308	5.20	20.50	14.42	19.62	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	-0.70	-0.65	**1.714**	2.34	17.49	14.42	19.77	21.00	Pass
40	5200	-0.66	-0.73	1.702	2.31	17.49	14.42	19.74	21.00	Pass
48	5240	-0.59	-0.82	1.702	2.31	17.49	14.42	19.74	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	-0.86	-0.93	1.629	2.12	17.49	14.42	19.55	21.00	Pass
46	5230	-0.75	-1.02	1.633	2.13	17.49	14.42	19.56	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	-0.87	-0.78	1.656	2.19	17.49	14.42	19.62	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	19.21	19.42	170.866	22.33	22.58	Pass
157	5785	19.17	19.39	169.500	22.29	22.58	Pass
165	5825	19.37	19.28	**171.220**	22.34	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	18.92	19.22	161.543	22.08	22.58	Pass
157	5785	18.89	19.19	160.431	22.05	22.58	Pass
165	5825	19.18	18.89	160.240	22.05	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	19.28	19.29	169.641	22.30	22.58	Pass
159	5795	19.07	19.23	164.477	22.16	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	19.09	19.28	165.819	22.20	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	15.91	16.21	80.724	19.07	19.57	Pass
157	5785	15.88	16.18	80.168	19.04	19.57	Pass
165	5825	16.17	15.88	80.168	19.04	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	16.27	16.28	**84.918**	19.29	19.57	Pass
159	5795	16.06	16.22	82.224	19.15	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	16.08	16.27	82.985	19.19	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	23.36	471.453	26.73	30.00	Pass
157	5785	23.93	23.18	455.142	26.58	30.00	Pass
165	5825	23.72	22.91	430.939	26.34	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	23.75	22.89	431.673	26.35	30.00	Pass
157	5785	23.62	22.87	423.786	26.27	30.00	Pass
165	5825	23.28	22.78	402.485	26.05	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	24.58	23.68	**520.424**	27.16	30.00	Pass
159	5795	24.57	23.49	509.775	27.07	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	19.96	18.99	178.333	22.51	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	20.74	19.88	215.774	23.34	27.82	Pass
157	5785	20.61	19.86	211.836	23.26	27.82	Pass
165	5825	20.27	19.77	201.372	23.04	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	21.57	20.67	**260.016**	24.15	27.82	Pass
159	5795	21.56	20.48	254.683	24.06	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	16.95	15.98	89.125	19.50	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	17.19	17.16	104.360	20.19	20.50	Pass
157	5785	16.98	17.11	101.292	20.06	20.50	Pass
165	5825	17.41	17.37	**109.657**	20.40	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	17.42	17.35	109.533	20.40	20.50	Pass
157	5785	17.41	17.27	108.414	20.35	20.50	Pass
165	5825	17.26	17.03	103.677	20.16	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	17.26	17.14	104.972	20.21	20.50	Pass
159	5795	17.29	17.42	108.788	20.37	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	17.18	17.11	103.644	20.16	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	14.41	14.34	**54.828**	17.39	17.49	Pass
157	5785	14.40	14.26	54.200	17.34	17.49	Pass
165	5825	14.25	14.02	51.880	17.15	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	14.25	14.13	52.481	17.20	17.49	Pass
159	5795	14.28	14.41	54.450	17.36	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.

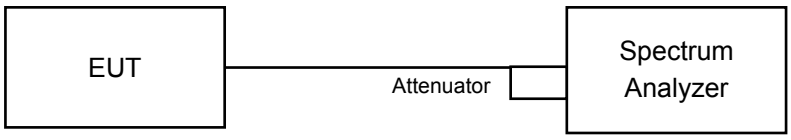
802.11ac (VHT80)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
155	5775	14.17	14.10	51.880	17.15	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	16.44
40	5200	16.44	16.44
48	5240	16.44	16.44
149	5745	16.44	16.44
157	5785	16.44	16.44
165	5825	16.44	16.44

802.11n (HT20)

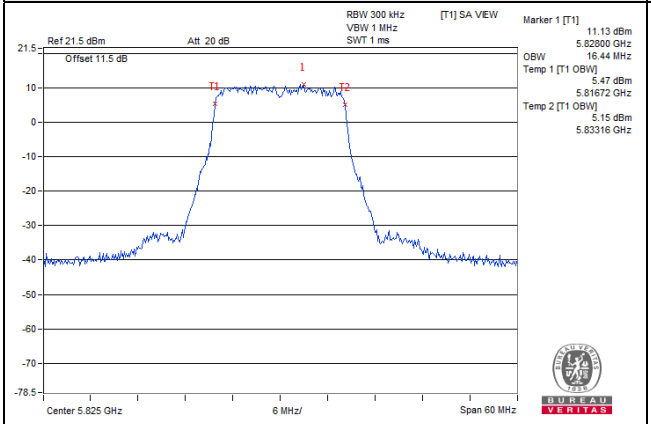
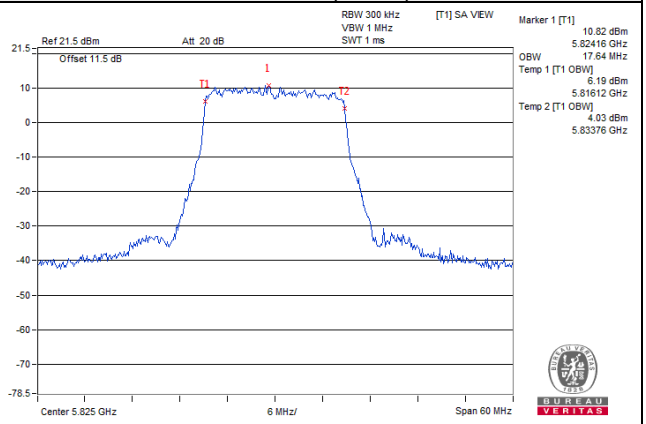
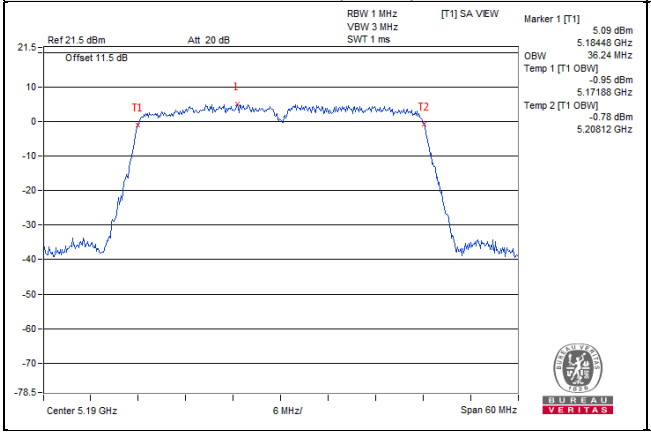
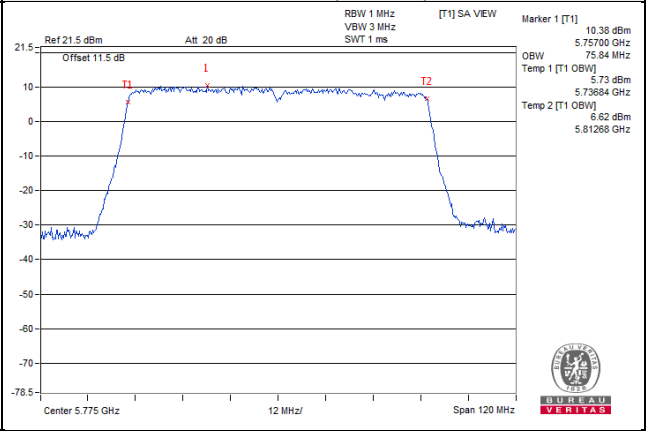
Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
36	5180	17.64	17.64
40	5200	17.64	17.64
48	5240	17.64	17.64
149	5745	17.64	17.64
157	5785	17.64	17.64
165	5825	17.64	17.64

802.11n (HT40)

Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
38	5190	36.24	36.24
46	5230	36.24	36.00
151	5755	36.00	36.00
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	75.84

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	16.56	16.44
40	5200	16.56	16.44
48	5240	16.44	16.44
149	5745	16.80	16.92
157	5785	17.04	17.28
165	5825	16.92	17.64

802.11n (HT20)

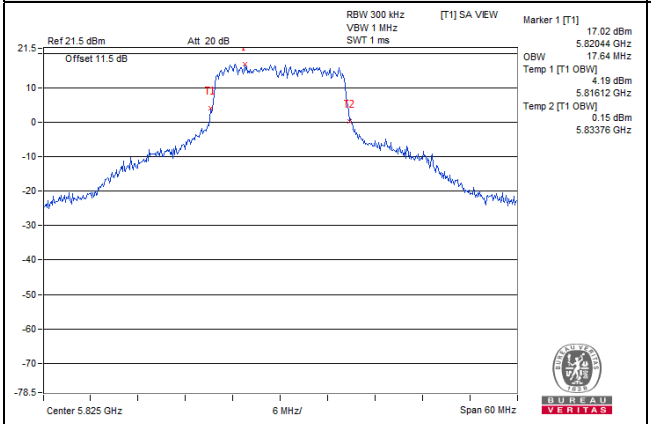
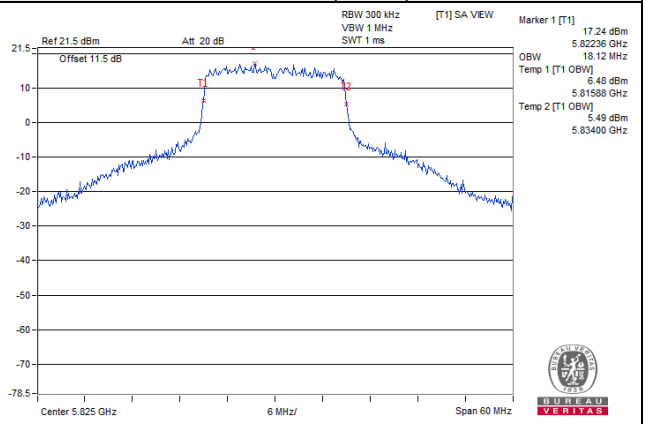
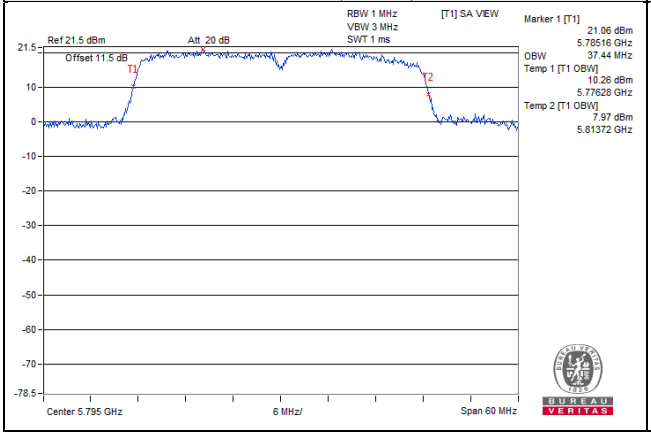
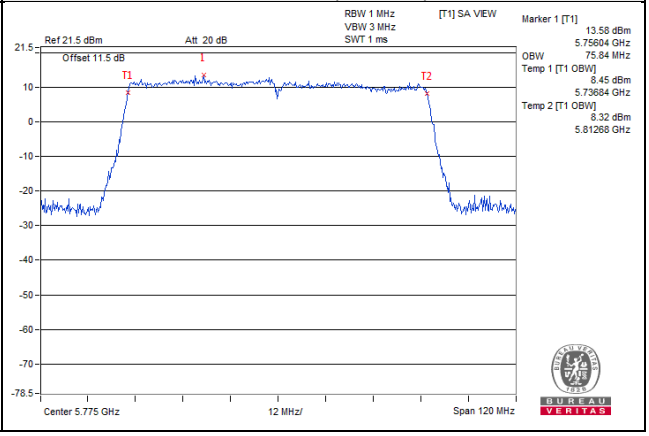
Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
36	5180	17.64	17.64
40	5200	17.64	17.64
48	5240	17.64	17.64
149	5745	17.88	17.88
157	5785	18.00	18.12
165	5825	17.88	18.12

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	36.84	36.84
159	5795	37.08	37.44

802.11ac (VHT80)

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

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

802.11n (HT20)

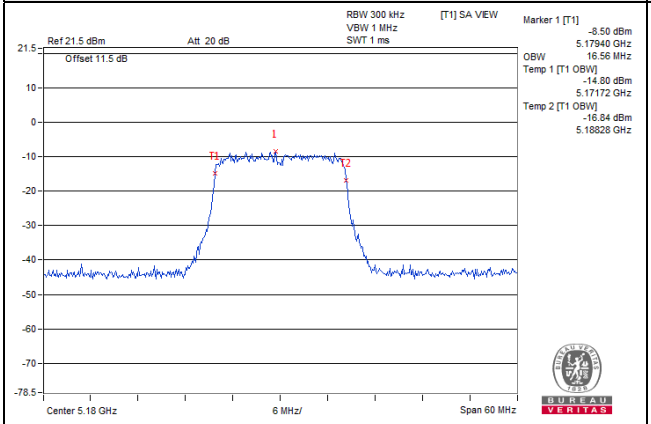
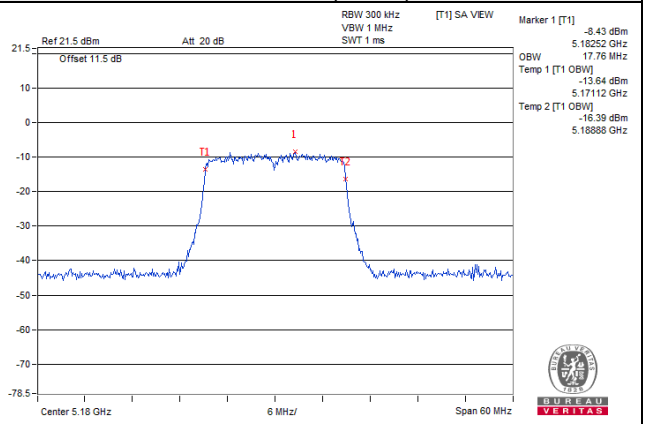
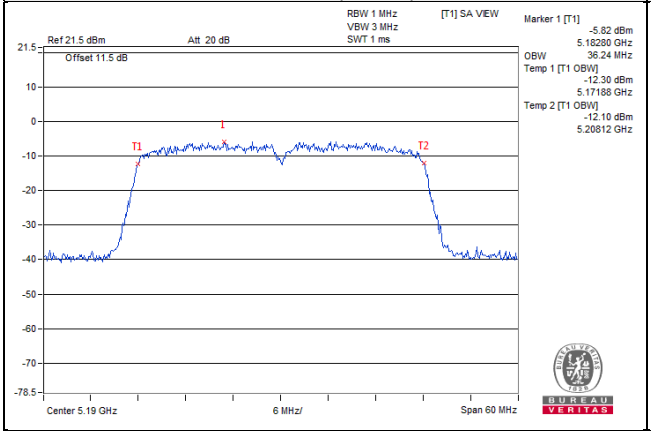
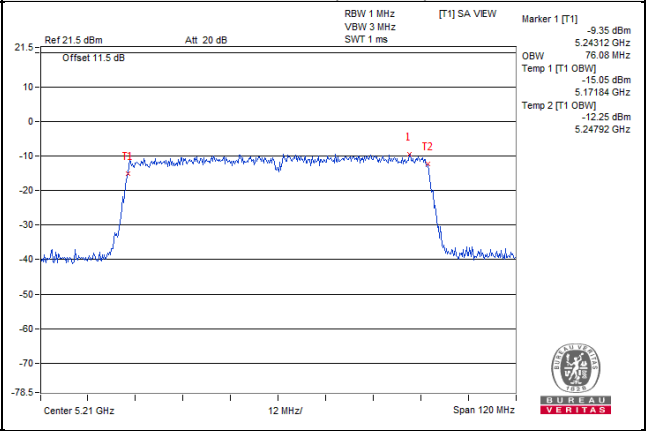
Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
36	5180	17.76	17.64
40	5200	17.64	17.64
48	5240	17.64	17.64
149	5745	17.64	17.64
157	5785	17.64	17.64
165	5825	17.64	17.64

802.11n (HT40)

Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
38	5190	36.24	36.24
46	5230	36.12	36.12
151	5755	36.18	36.12
159	5795	36.12	36.12

802.11ac (VHT80)

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

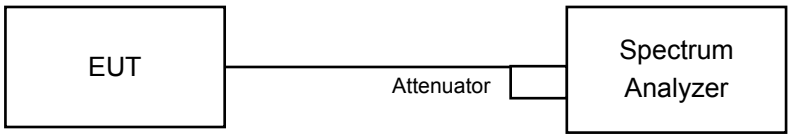
Spectrum Plot of Worst Value	
802.11a	802.11n (HT20)
	
802.11n (HT40)	802.11ac (VHT80)
	

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	-1.22	-1.33	0.39	2.12	6.57	Pass
40	5200	-1.45	-1.21	0.39	2.07	6.57	Pass
48	5240	-1.55	-1.09	0.39	2.08	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 (dBm/MHz)		Total PSD (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1			
36	5180	-1.39	-1.26	1.69	6.57	Pass
40	5200	-1.38	-1.31	1.67	6.57	Pass
48	5240	-1.60	-1.25	1.59	6.57	Pass

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

802.11n (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	-4.68	-4.30	0.12	-1.35	6.57	Pass
46	5230	-4.23	-3.94	0.12	-0.95	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.

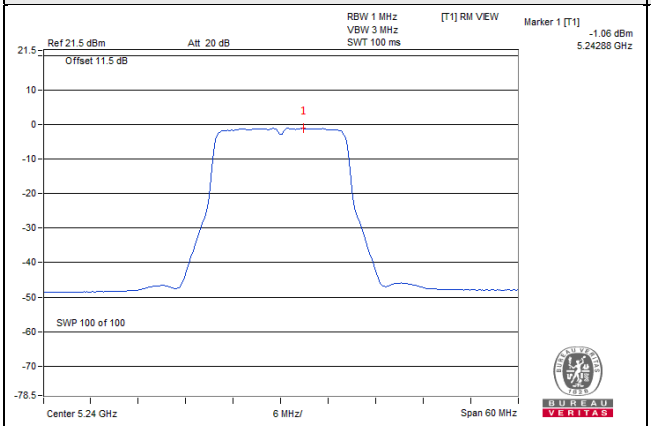
802.11ac (VHT80)

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	-8.05	-7.87	0.34	-4.61	6.57	Pass

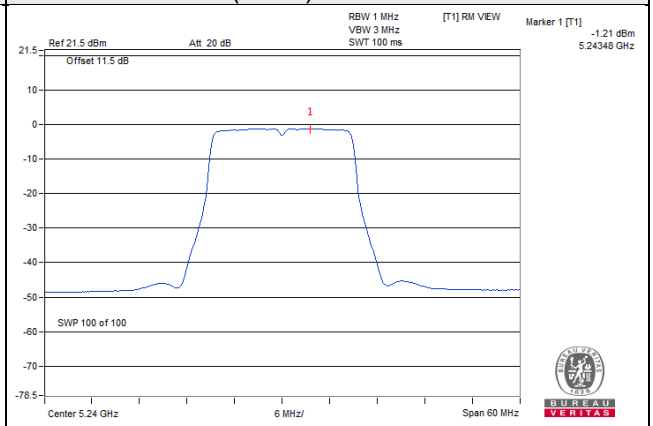
Note:
1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = 13.42dBi + 10log(2) = 16.43dBi > 6dBi, so the power density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

Spectrum Plot of Worst Value

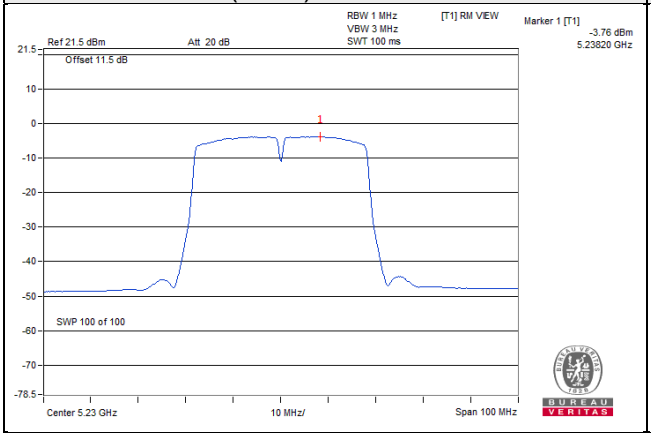
802.11a / Chain 1 / CH 48



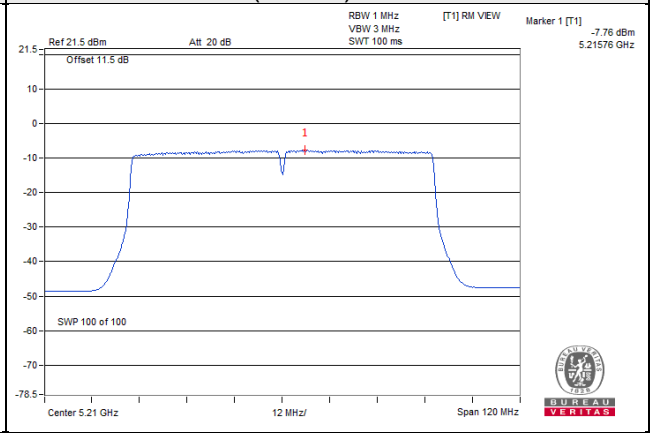
802.11n (HT20) / Chain 1 / CH 48



802.11n (HT40) / Chain 1 / CH 46



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	2.20	2.45	0.39	5.72	14.82	Pass
40	5200	2.03	1.93	0.39	5.38	14.82	Pass
48	5240	2.16	2.11	0.39	5.53	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	1.48	2.09	4.81	14.82	Pass
40	5200	2.22	1.63	4.95	14.82	Pass
48	5240	2.41	2.21	5.32	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	-1.47	-0.89	0.12	1.96	14.82	Pass
46	5230	-0.47	-0.66	0.12	2.57	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.

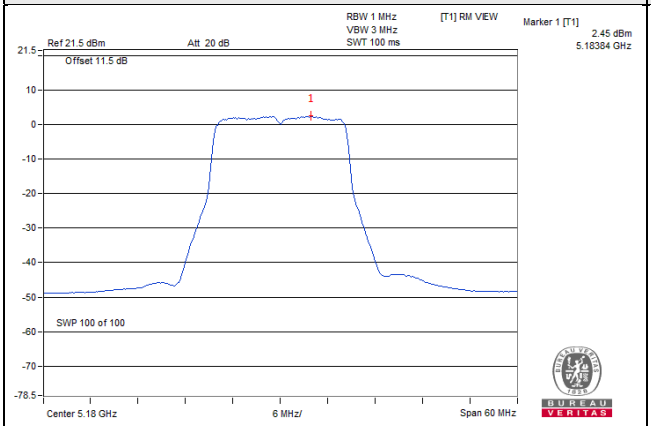
802.11ac (VHT80)

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	-3.94	-4.14	0.34	-0.69	14.82	Pass

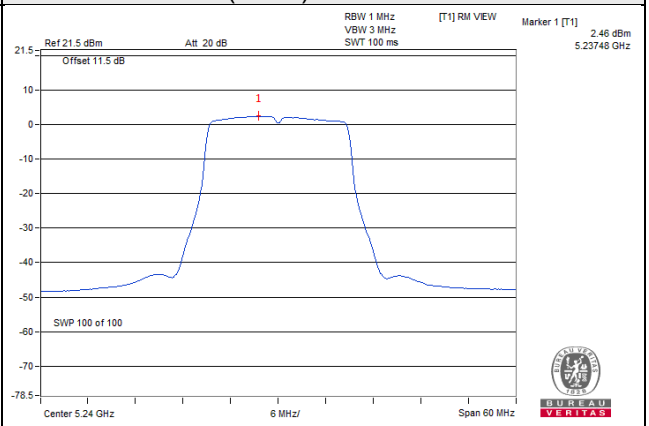
Note:
1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = 5.17dBi + 10log(2) = 8.18dBi > 6dBi, so the power density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

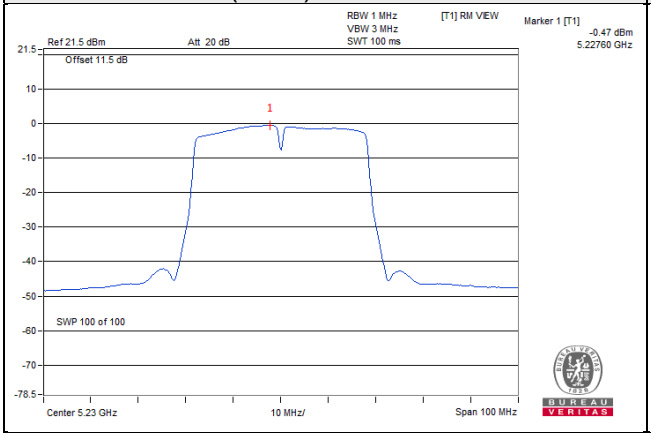
802.11a / Chain 1 / CH 36



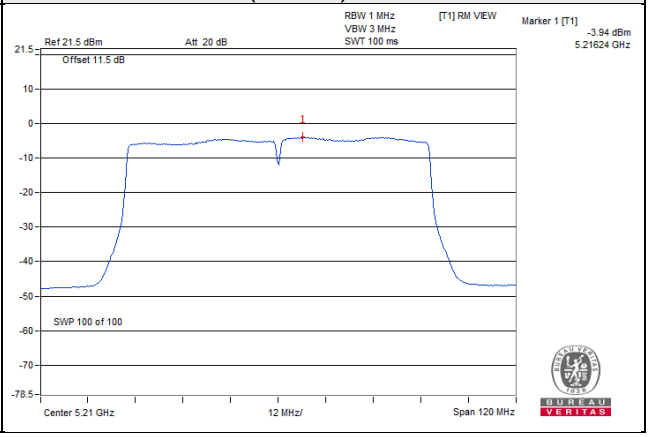
802.11n (HT20) / Chain 0 / CH 48



802.11n (HT40) / Chain 0 / CH 46



802.11ac (VHT80) / Chain 0 / 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	-13.03	-12.15	0.39	-9.17	4.49	Pass
40	5200	-13.30	-12.03	0.39	-9.22	4.49	Pass
48	5240	-12.99	-11.84	0.39	-8.98	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	-13.41	-12.11	-9.70	4.49	Pass
40	5200	-13.07	-12.04	-9.51	4.49	Pass
48	5240	-12.93	-11.88	-9.36	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	-16.39	-15.14	0.12	-12.59	4.49	Pass
46	5230	-16.21	-15.02	0.12	-12.44	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.

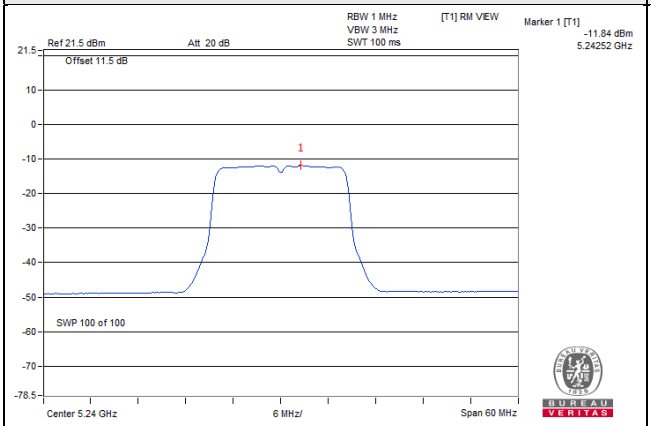
802.11ac (VHT80)

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	-19.65	-18.66	0.34	-15.78	4.49	Pass

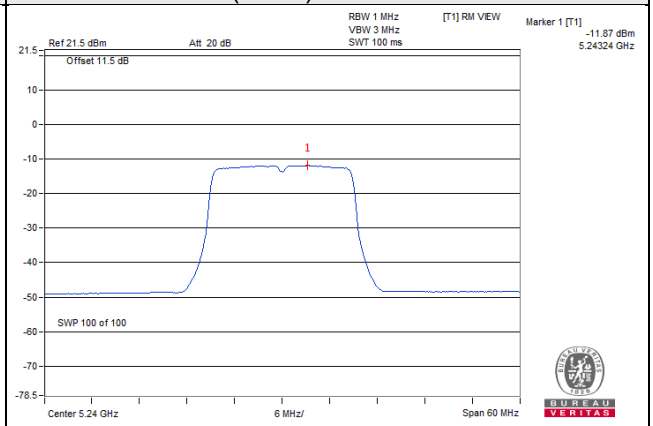
Note:
1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = 15.50dBi + 10log(2) = 18.51dBi > 6dBi, so the power density 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

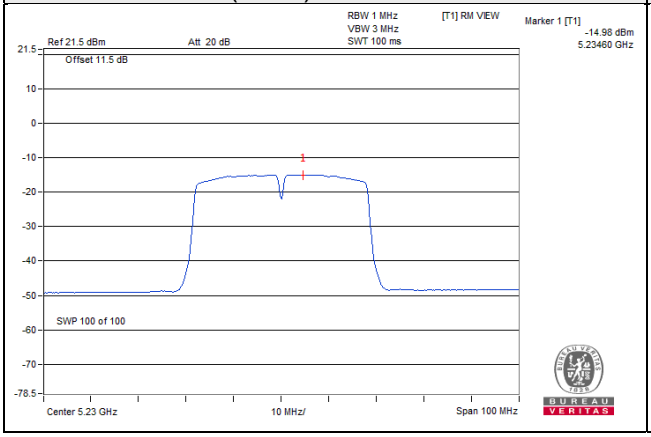
802.11a / Chain 1 / CH 48



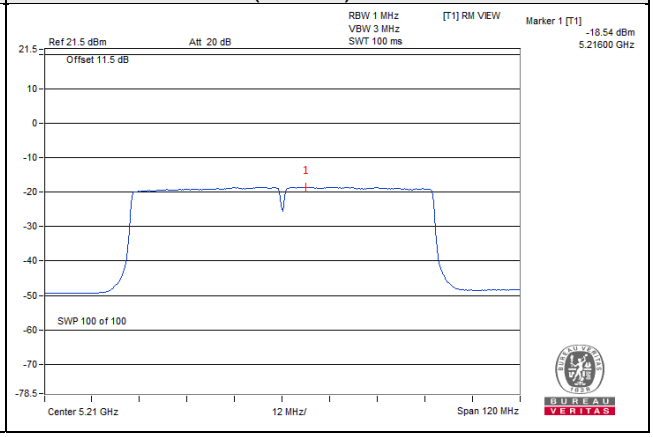
802.11n (HT20) / Chain 1 / CH 48



802.11n (HT40) / Chain 1 / CH 46



802.11ac (VHT80) / Chain 1 / 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	-1.85	0.37	3.01	0.39	3.77	19.57	Pass
	157	5785	-1.70	0.52	3.01	0.39	3.92	19.57	Pass
	165	5825	-1.33	0.89	3.01	0.39	4.29	19.57	Pass
1	149	5745	-1.67	0.55	3.01	0.39	3.95	19.57	Pass
	157	5785	-1.41	0.81	3.01	0.39	4.21	19.57	Pass
	165	5825	-1.42	0.80	3.01	0.39	4.20	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 (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	-2.44	-0.22	3.01	2.79	19.57	Pass
	157	5785	-2.41	-0.19	3.01	2.82	19.57	Pass
	165	5825	-1.75	0.47	3.01	3.48	19.57	Pass
1	149	5745	-2.16	0.06	3.01	3.07	19.57	Pass
	157	5785	-1.78	0.44	3.01	3.45	19.57	Pass
	165	5825	-1.59	0.63	3.01	3.64	19.57	Pass

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

802.11n (HT40)

TX chain	Chan.	Freq. (MHz)	PSD W/O Duty Factor		10 log (N=2) dB	Duty Factor (dB)	Total PSD With Duty Factor (dBm/500kHz)	Limit (dBm/ 500kHz)	Pass / Fail
			(dBm/300kHz)	(dBm/500kHz)					
0	151	5755	-4.97	-2.75	3.01	0.12	0.38	19.57	Pass
	159	5795	-4.94	-2.72	3.01	0.12	0.41	19.57	Pass
1	151	5755	-4.79	-2.57	3.01	0.12	0.56	19.57	Pass
	159	5795	-4.71	-2.49	3.01	0.12	0.64	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.

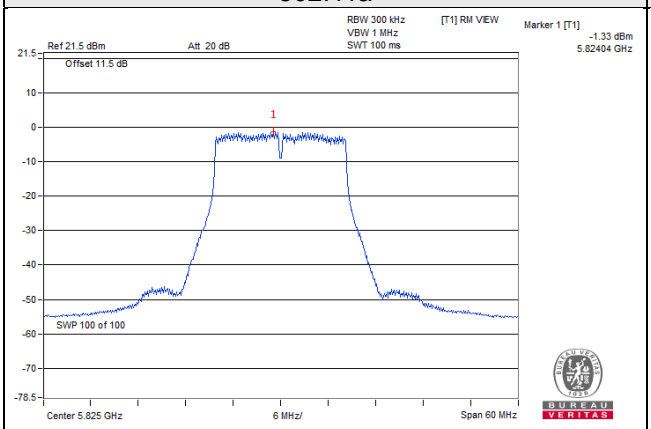
802.11ac (VHT80)

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	-8.71	-6.49	3.01	0.34	-3.14	19.57	Pass
1	155	5775	-8.33	-6.11	3.01	0.34	-2.76	19.57	Pass

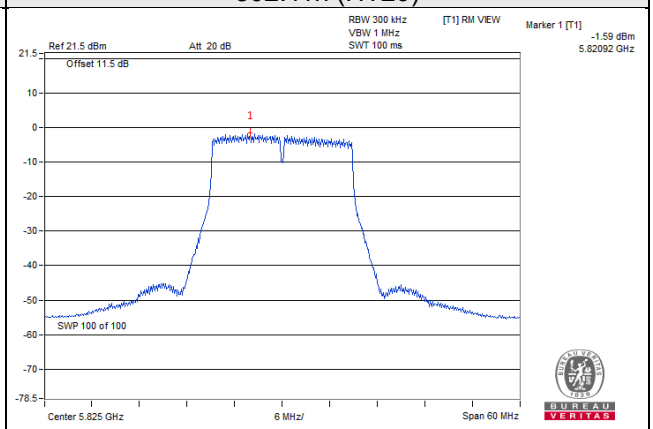
Note:
1. Directional gain = 13.42dBi + 10log(2) = 16.43dBi > 6dBi, so the power density limit shall be reduced to 30-(16.43-6) = 19.57dBm.
2. Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value

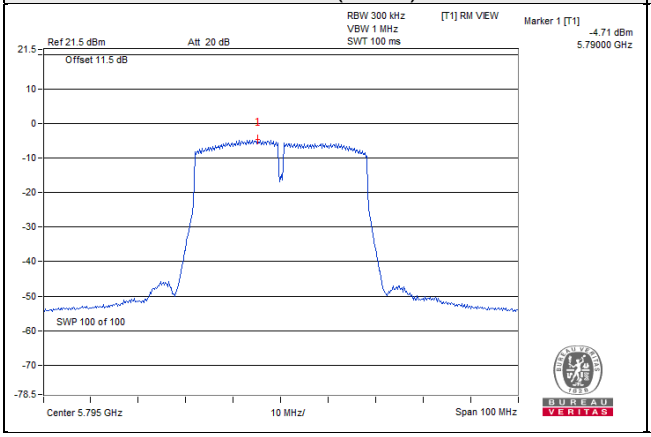
802.11a



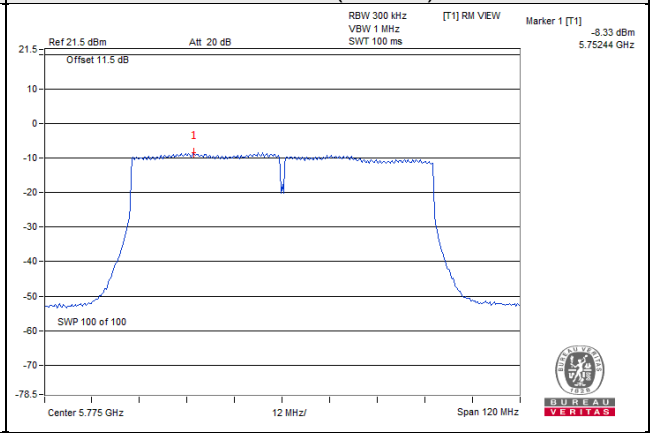
802.11n (HT20)



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	4.22	6.44	3.01	0.39	9.84	27.82	Pass
	157	5785	4.55	6.77	3.01	0.39	10.17	27.82	Pass
	165	5825	4.34	6.56	3.01	0.39	9.96	27.82	Pass
1	149	5745	4.10	6.32	3.01	0.39	9.72	27.82	Pass
	157	5785	4.16	6.38	3.01	0.39	9.78	27.82	Pass
	165	5825	4.06	6.28	3.01	0.39	9.68	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	3.75	5.97	3.01	8.98	27.82	Pass
	157	5785	4.25	6.47	3.01	9.48	27.82	Pass
	165	5825	3.98	6.20	3.01	9.21	27.82	Pass
1	149	5745	2.96	5.18	3.01	8.19	27.82	Pass
	157	5785	3.91	6.13	3.01	9.14	27.82	Pass
	165	5825	3.87	6.09	3.01	9.10	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	1.86	4.08	3.01	0.12	7.21	27.82	Pass
	159	5795	1.85	4.07	3.01	0.12	7.20	27.82	Pass
1	151	5755	1.46	3.68	3.01	0.12	6.81	27.82	Pass
	159	5795	1.42	3.64	3.01	0.12	6.77	27.82	Pass

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

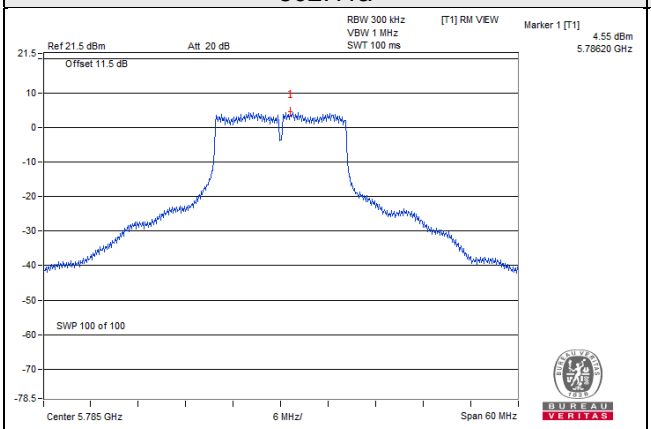
802.11ac (VHT80)

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	-6.39	-4.17	3.01	0.34	-0.82	27.82	Pass
1	155	5775	-6.52	-4.30	3.01	0.34	-0.95	27.82	Pass

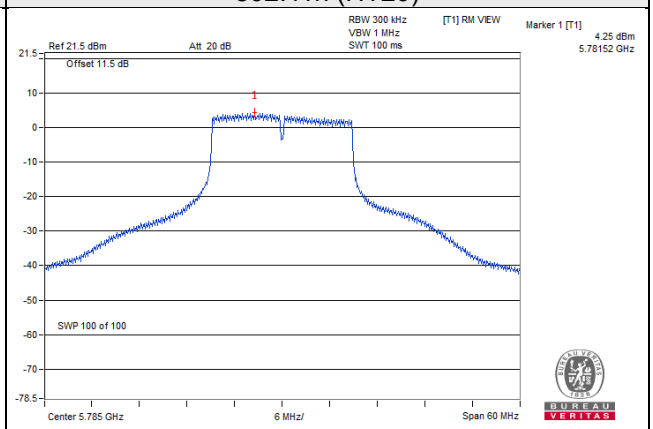
Note:
1. Directional gain = 5.17dBi + 10log(2) = 8.18dBi > 6dBi, so the power density limit shall be reduced to 30-(8.18-6) = 27.82dBm.
2. Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value

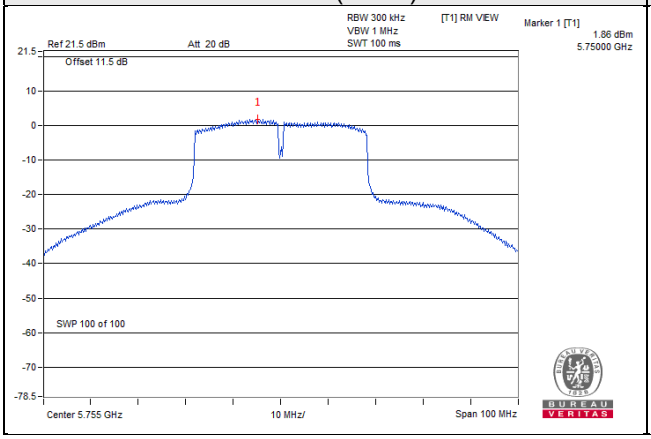
802.11a



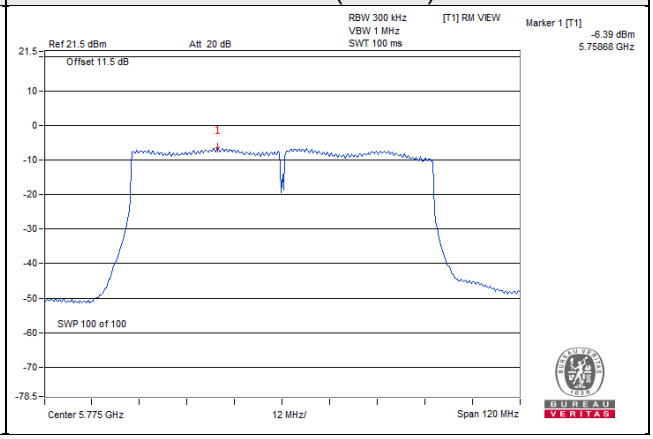
802.11n (HT20)



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	-5.31	-3.09	3.01	0.39	0.31	17.49	Pass
	157	5785	-5.04	-2.82	3.01	0.39	0.58	17.49	Pass
	165	5825	-5.26	-3.04	3.01	0.39	0.36	17.49	Pass
1	149	5745	-4.48	-2.26	3.01	0.39	1.14	17.49	Pass
	157	5785	-4.33	-2.11	3.01	0.39	1.29	17.49	Pass
	165	5825	-3.90	-1.68	3.01	0.39	1.72	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	-5.46	-3.24	3.01	-0.23	17.49	Pass
	157	5785	-5.05	-2.83	3.01	0.18	17.49	Pass
	165	5825	-5.68	-3.46	3.01	-0.45	17.49	Pass
1	149	5745	-3.89	-1.67	3.01	1.34	17.49	Pass
	157	5785	-4.38	-2.16	3.01	0.85	17.49	Pass
	165	5825	-4.10	-1.88	3.01	1.13	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	-8.39	-6.17	3.01	0.12	-3.04	17.49	Pass
	159	5795	-8.75	-6.53	3.01	0.12	-3.40	17.49	Pass
1	151	5755	-7.51	-5.29	3.01	0.12	-2.16	17.49	Pass
	159	5795	-6.92	-4.70	3.01	0.12	-1.57	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.

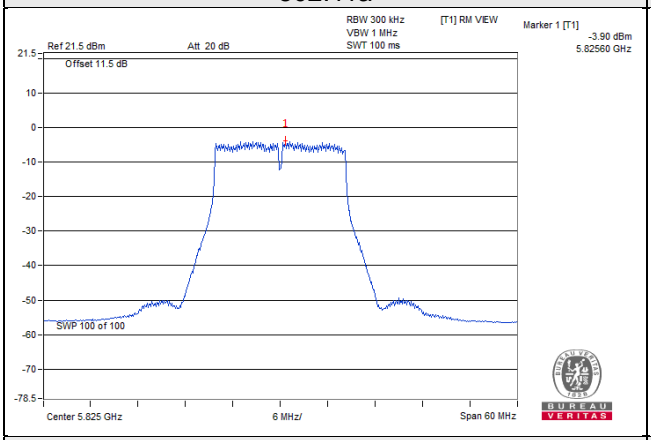
802.11ac (VHT80)

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	-11.96	-9.74	3.01	0.34	-6.39	17.49	Pass
1	155	5775	-11.11	-8.89	3.01	0.34	-5.54	17.49	Pass

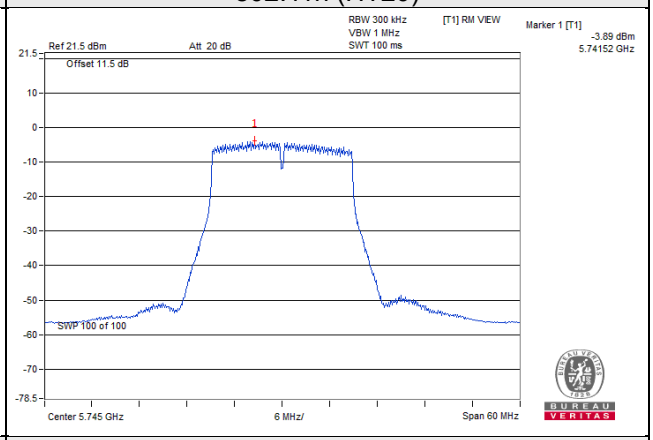
Note:
1. Directional gain = 15.50dBi + 10log(2) = 18.51dBi > 6dBi, so the power density limit shall be reduced to 30-(18.51-6) = 17.49dBm.
2. Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value

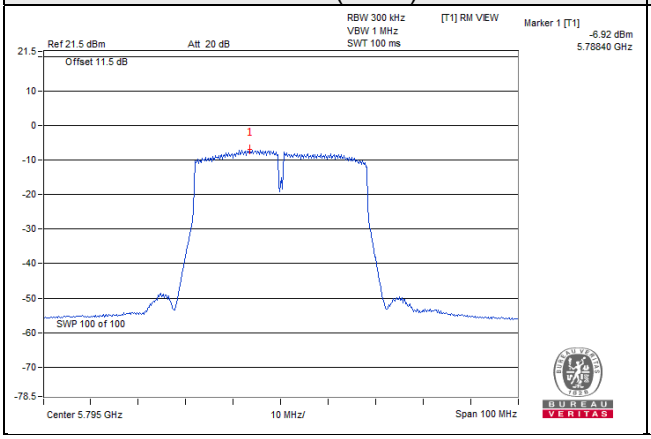
802.11a



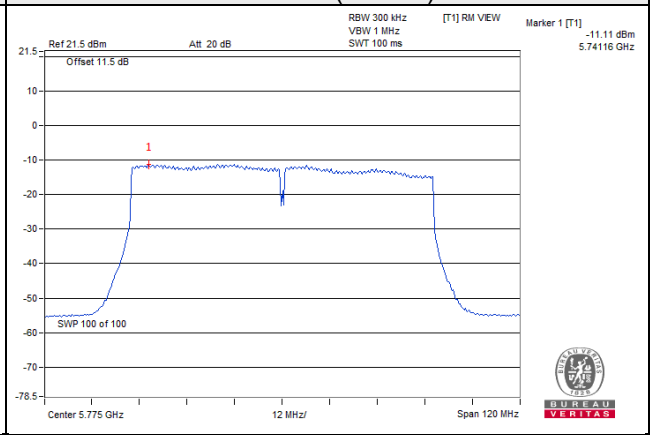
802.11n (HT20)



802.11n (HT40)



802.11ac (VHT80)

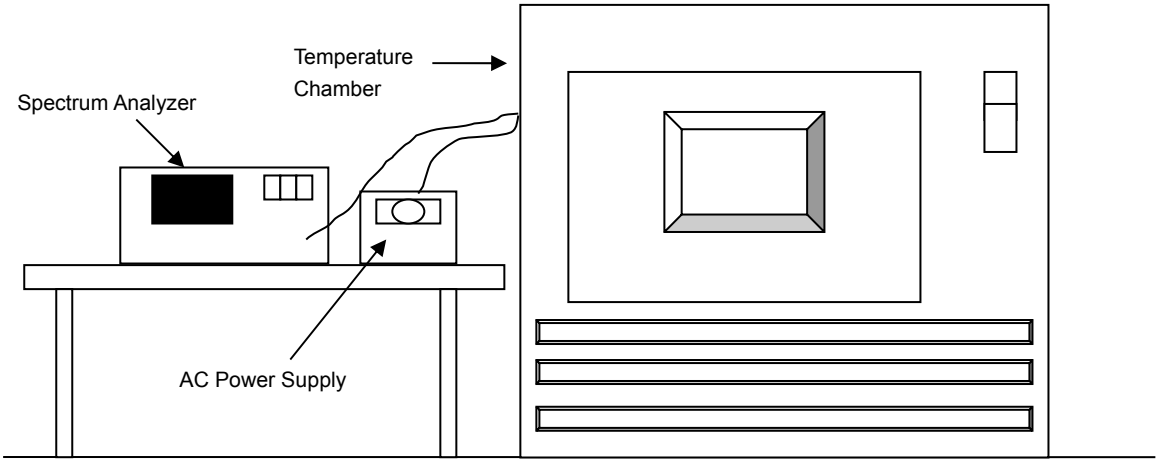


4.6 Frequency Stability

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

Refer to section 4.1.2 to get information of above instrument.

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	5179.9887	Pass	5179.9884	Pass	5179.9928	Pass	5179.9886	Pass
40	120	5179.9947	Pass	5179.9959	Pass	5179.9966	Pass	5179.9966	Pass
30	120	5180.02	Pass	5180.0206	Pass	5180.0168	Pass	5180.0199	Pass
20	120	5179.9838	Pass	5179.9834	Pass	5179.9873	Pass	5179.9854	Pass
10	120	5180.0106	Pass	5180.0097	Pass	5180.0133	Pass	5180.0133	Pass
0	120	5180.0113	Pass	5180.0106	Pass	5180.0139	Pass	5180.01	Pass
-10	120	5179.9797	Pass	5179.9778	Pass	5179.9781	Pass	5179.9782	Pass
-20	120	5179.9863	Pass	5179.9851	Pass	5179.9844	Pass	5179.9861	Pass
-30	120	5180.0056	Pass	5180.0048	Pass	5180.0082	Pass	5180.0041	Pass

Frequency Stability Versus Voltage									
Operating Frequency: 5180MHz									
Temp. (℃)	Power Supply (Vac)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result
20	138	5179.9828	Pass	5179.9832	Pass	5179.9869	Pass	5179.985	Pass
	120	5179.9838	Pass	5179.9834	Pass	5179.9873	Pass	5179.9854	Pass
	102	5179.983	Pass	5179.9838	Pass	5179.9865	Pass	5179.9852	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	5180.0047	Pass	5180.0063	Pass	5180.0042	Pass	5180.0059	Pass
40	120	5179.9779	Pass	5179.9794	Pass	5179.9813	Pass	5179.982	Pass
30	120	5180.0229	Pass	5180.0212	Pass	5180.0234	Pass	5180.0212	Pass
20	120	5180.016	Pass	5180.0154	Pass	5180.0166	Pass	5180.0172	Pass
10	120	5180.0149	Pass	5180.0136	Pass	5180.0128	Pass	5180.0123	Pass
0	120	5179.9793	Pass	5179.9808	Pass	5179.9795	Pass	5179.9785	Pass
-10	120	5179.9768	Pass	5179.9751	Pass	5179.9794	Pass	5179.9797	Pass
-20	120	5180.0013	Pass	5180.0019	Pass	5180.003	Pass	5180.0035	Pass
-30	120	5180.0066	Pass	5180.0066	Pass	5180.0069	Pass	5180.0087	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	5180.017	Pass	5180.0152	Pass	5180.0162	Pass	5180.0181	Pass
	120	5180.016	Pass	5180.0154	Pass	5180.0166	Pass	5180.0172	Pass
	102	5180.017	Pass	5180.0157	Pass	5180.0161	Pass	5180.0162	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	5179.9922	Pass	5179.9932	Pass	5179.9923	Pass	5179.9923	Pass
40	120	5179.9868	Pass	5179.9902	Pass	5179.9885	Pass	5179.989	Pass
30	120	5179.9759	Pass	5179.9764	Pass	5179.9767	Pass	5179.9767	Pass
20	120	5179.9944	Pass	5179.9961	Pass	5179.9923	Pass	5179.9917	Pass
10	120	5179.9811	Pass	5179.979	Pass	5179.9797	Pass	5179.9767	Pass
0	120	5179.9851	Pass	5179.9847	Pass	5179.9859	Pass	5179.9869	Pass
-10	120	5179.9939	Pass	5179.9893	Pass	5179.9914	Pass	5179.99	Pass
-20	120	5180.0067	Pass	5180.0089	Pass	5180.0069	Pass	5180.0112	Pass
-30	120	5179.9858	Pass	5179.99	Pass	5179.9874	Pass	5179.9896	Pass

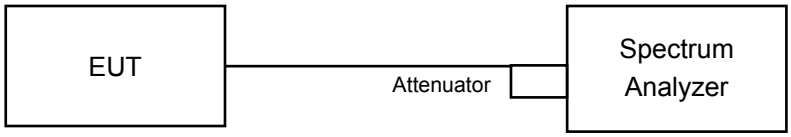
Frequency Stability Versus Voltage									
Operating Frequency: 5180MHz									
Temp. (℃)	Power Supply (Vac)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result
20	138	5179.9949	Pass	5179.9953	Pass	5179.9915	Pass	5179.9927	Pass
	120	5179.9944	Pass	5179.9961	Pass	5179.9923	Pass	5179.9917	Pass
	102	5179.9938	Pass	5179.9956	Pass	5179.9931	Pass	5179.9911	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	16.35	16.40	0.5	Pass
157	5785	16.36	16.40	0.5	Pass
165	5825	16.38	16.39	0.5	Pass

802.11n (HT20)

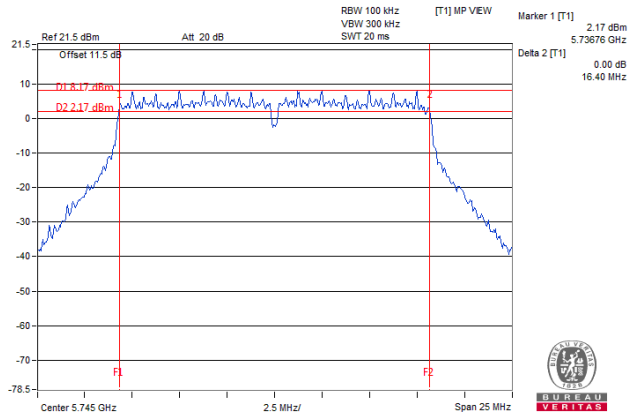
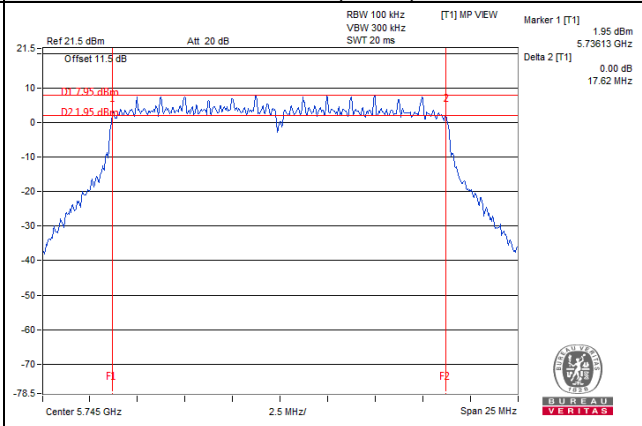
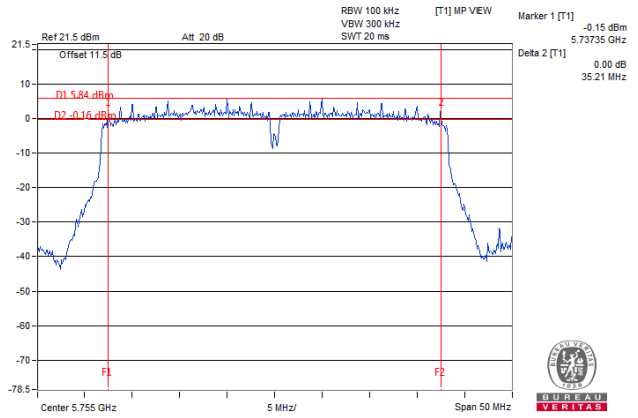
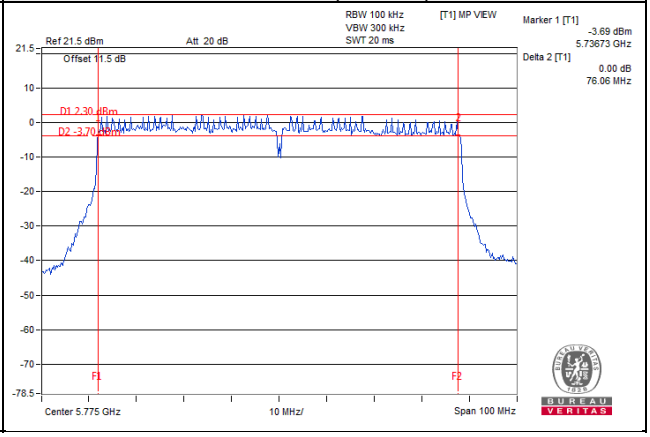
Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
149	5745	17.62	17.60	0.5	Pass
157	5785	17.23	17.30	0.5	Pass
165	5825	17.23	17.24	0.5	Pass

802.11n (HT40)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
151	5755	35.21	35.19	0.5	Pass
159	5795	35.19	35.14	0.5	Pass

802.11ac (VHT80)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
155	5775	76.06	76.05	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	16.36	0.5	Pass
157	5785	16.39	16.37	0.5	Pass
165	5825	16.41	16.39	0.5	Pass

802.11n (HT20)

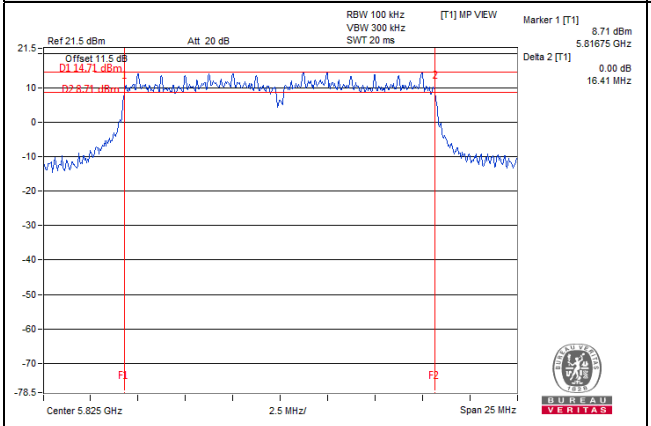
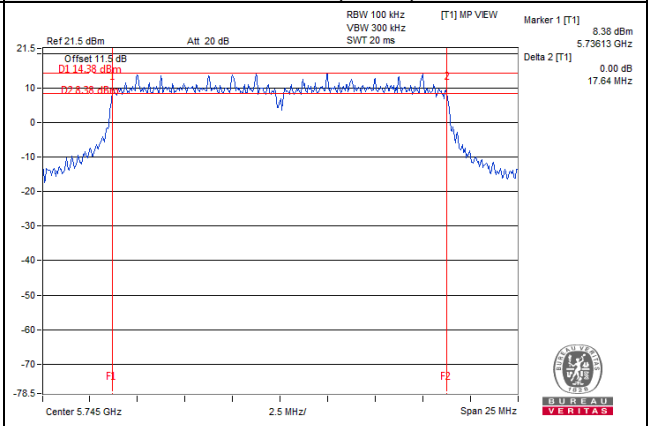
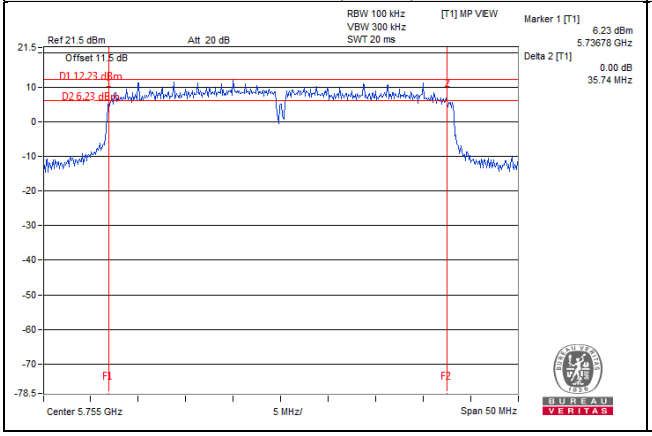
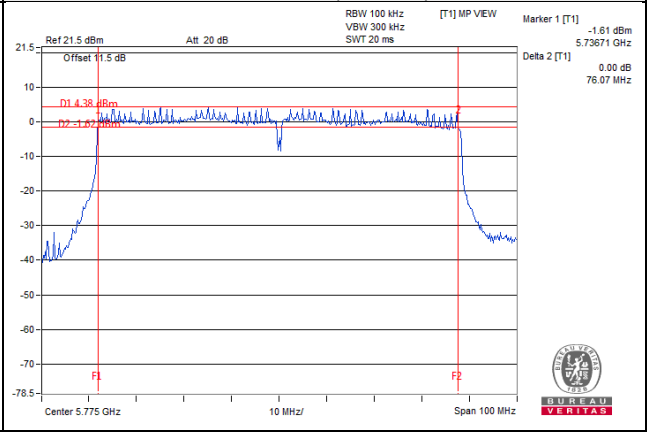
Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
149	5745	17.59	17.64	0.5	Pass
157	5785	17.60	17.17	0.5	Pass
165	5825	16.33	17.55	0.5	Pass

802.11n (HT40)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
151	5755	35.37	35.74	0.5	Pass
159	5795	35.15	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	76.07	76.06	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	16.41	16.42	0.5	Pass
157	5785	16.39	16.39	0.5	Pass
165	5825	16.41	16.39	0.5	Pass

802.11n (HT20)

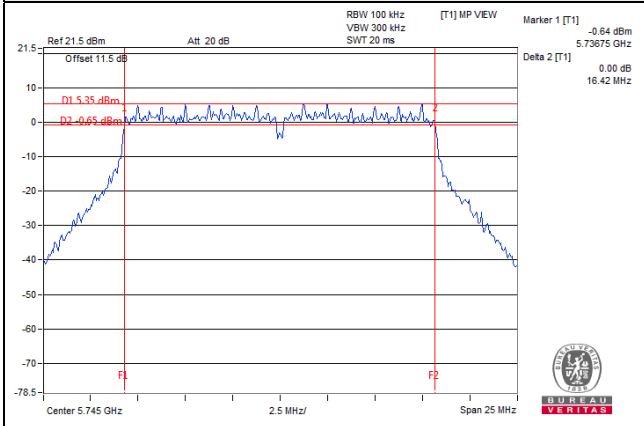
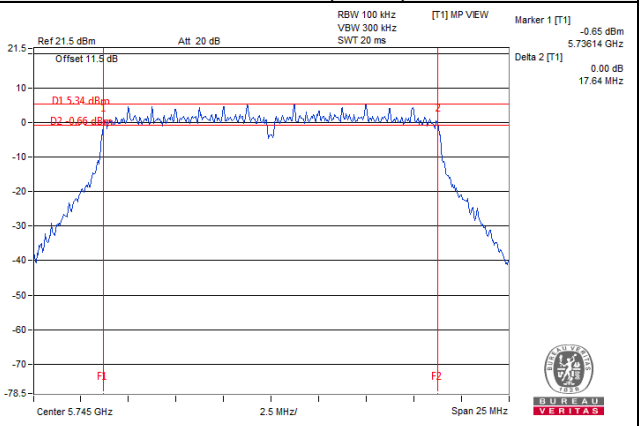
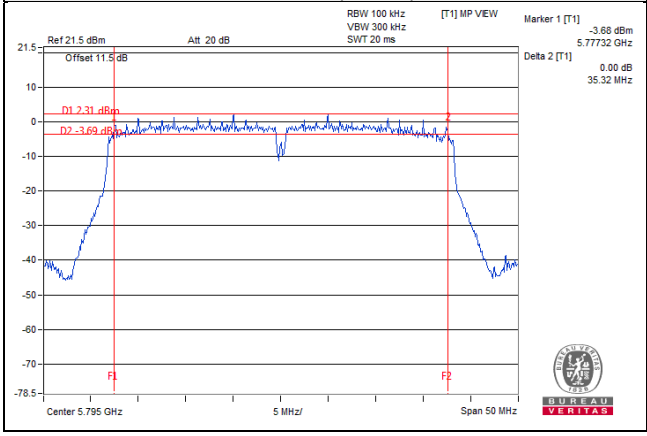
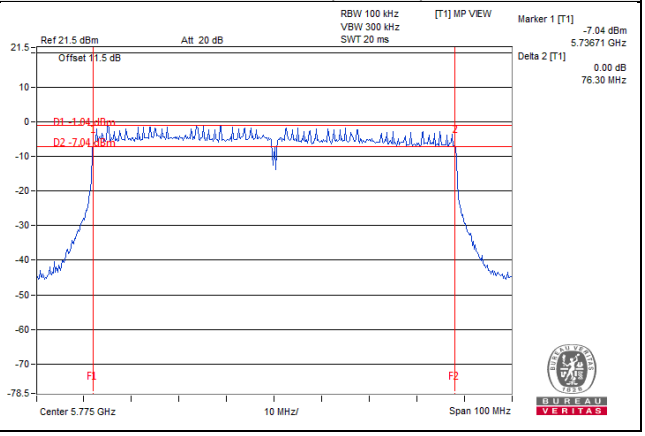
Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
149	5745	17.64	16.97	0.5	Pass
157	5785	17.58	17.59	0.5	Pass
165	5825	17.57	17.01	0.5	Pass

802.11n (HT40)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
151	5755	35.15	35.17	0.5	Pass
159	5795	35.32	35.23	0.5	Pass

802.11ac (VHT80)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
155	5775	76.30	76.05	0.5	Pass

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

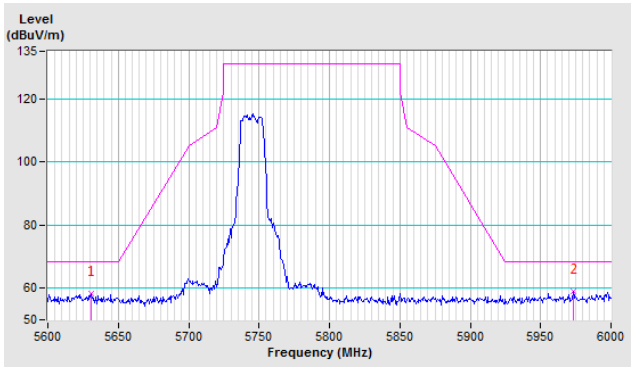
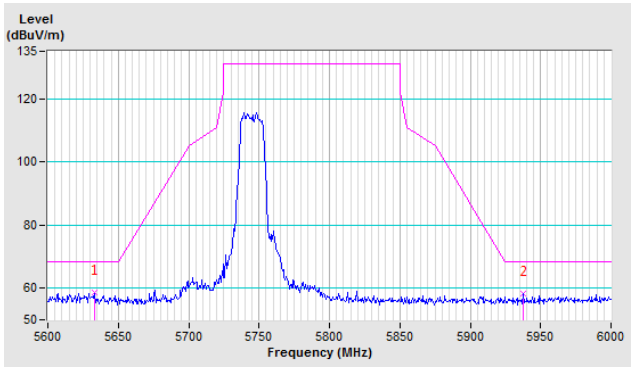
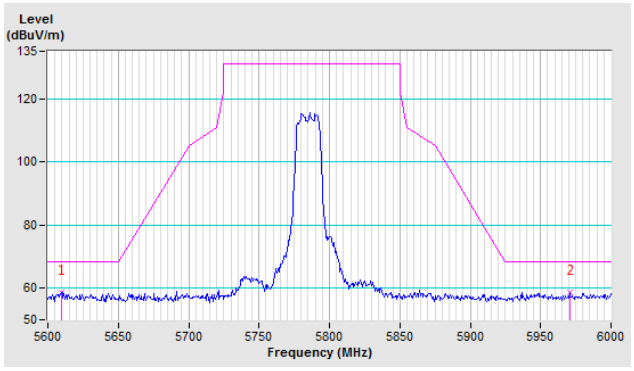
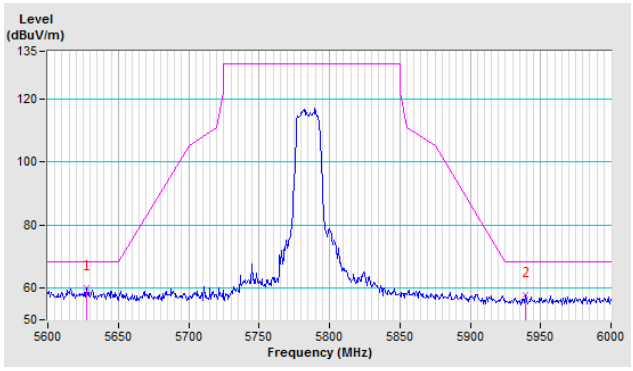
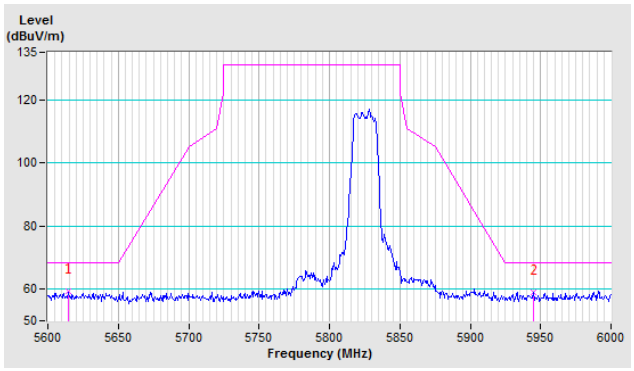
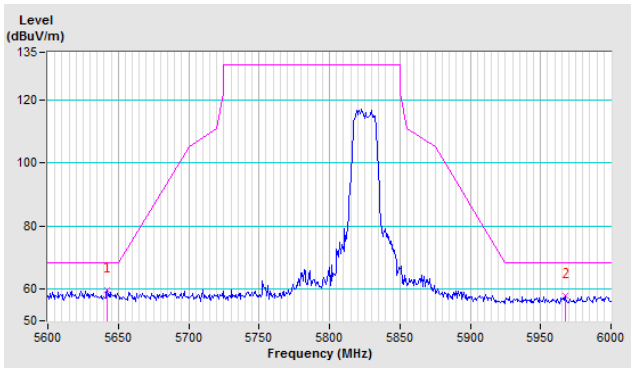
5 Pictures of Test Arrangements

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

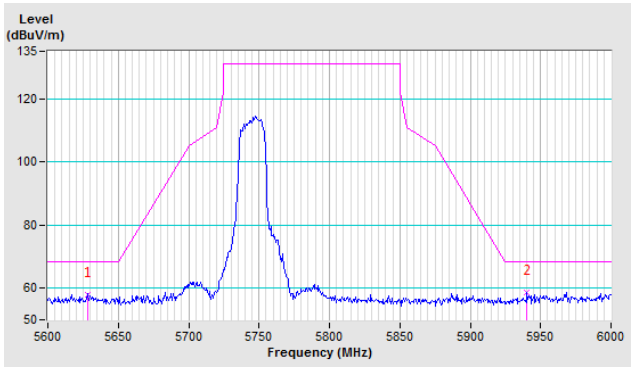
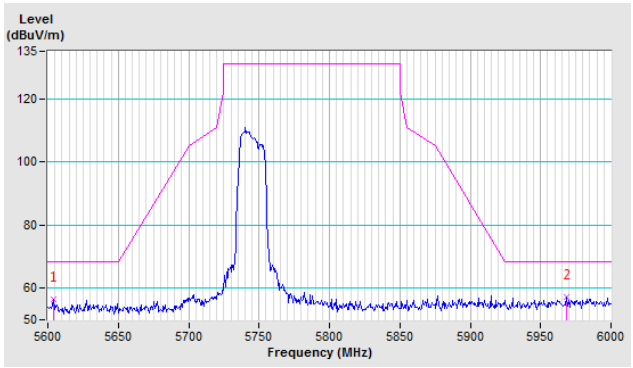
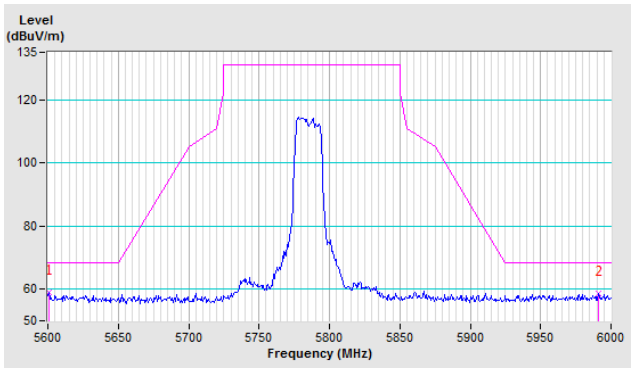
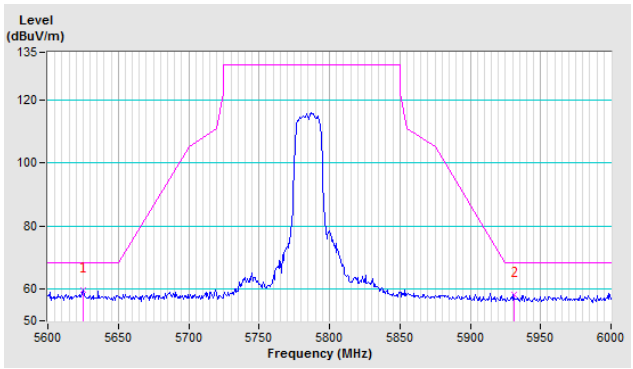
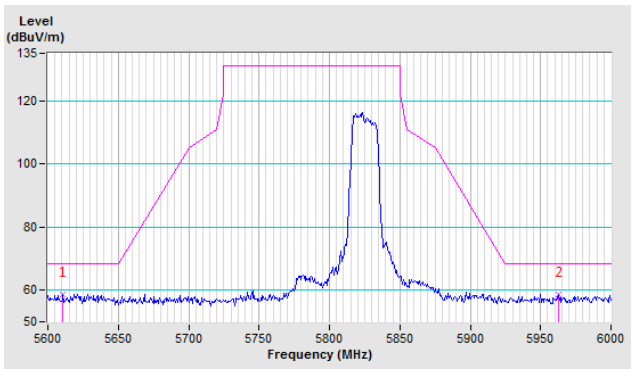
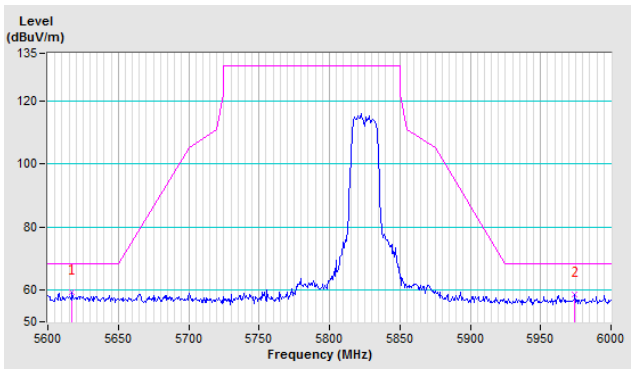
Annex A- Radiated Out of Band Emission (OOBE) Measurement (For U-NII-3 band)

Test Mode A

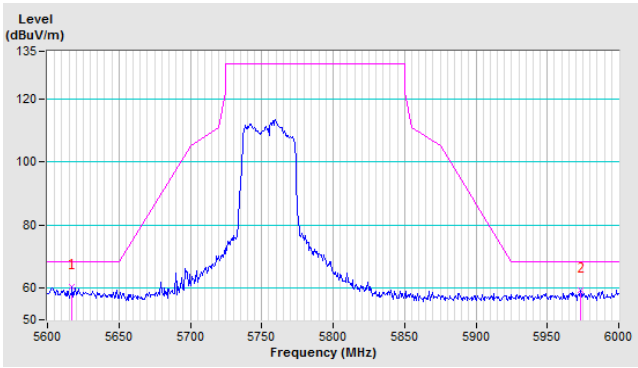
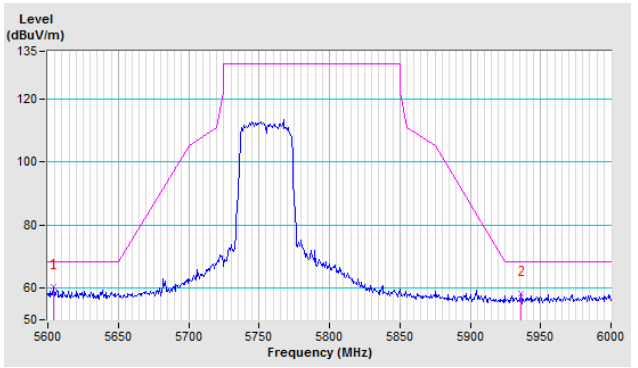
802.11a

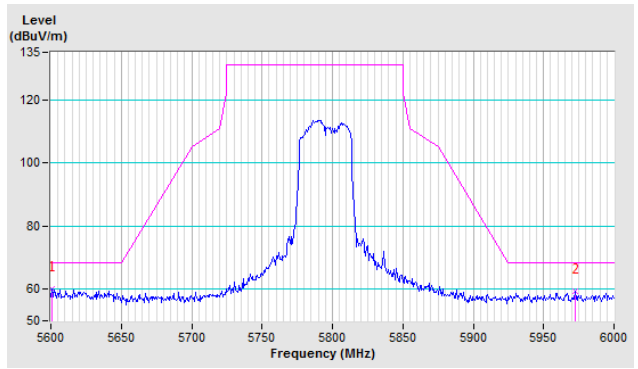
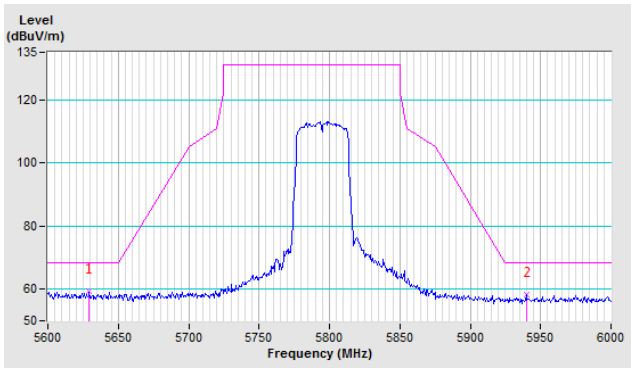
CH149	
Horizontal	Vertical
	
CH157	
Horizontal	Vertical
	
CH165	
Horizontal	Vertical
	

802.11n (HT20)

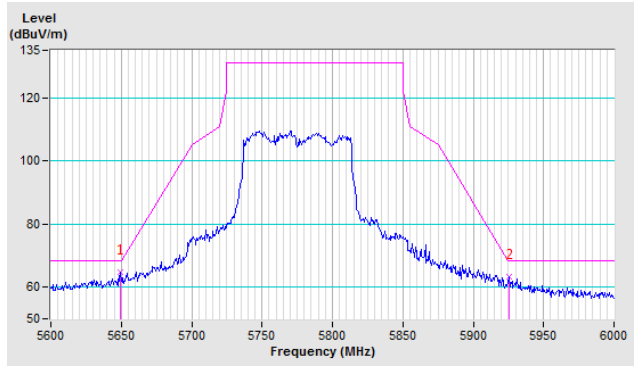
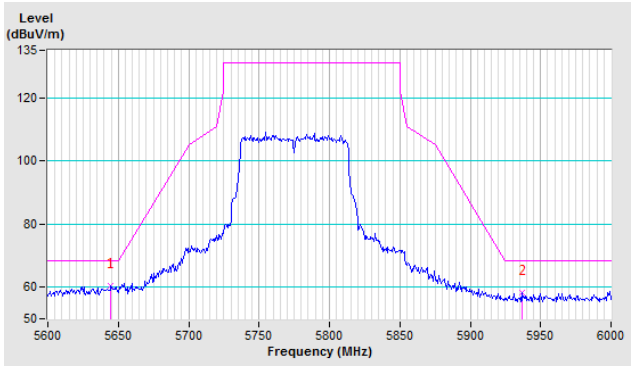
CH149	
Horizontal	Vertical
	
CH157	
Horizontal	Vertical
	
CH165	
Horizontal	Vertical
	

802.11n (HT40)

CH151	
Horizontal	Vertical
	

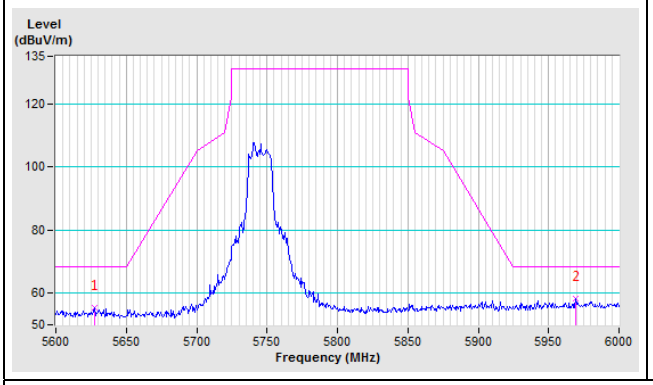
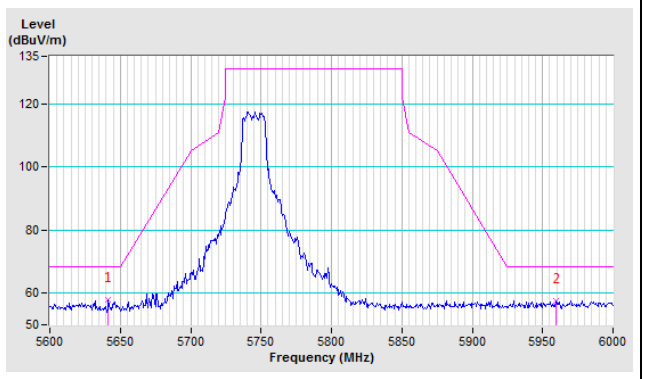
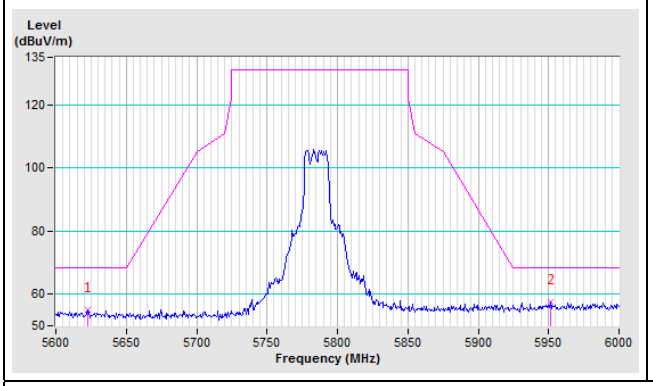
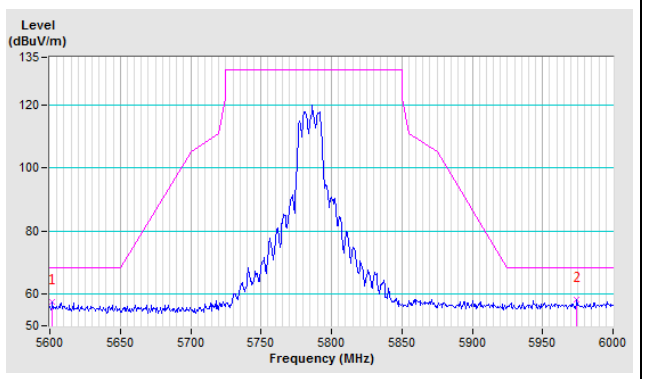
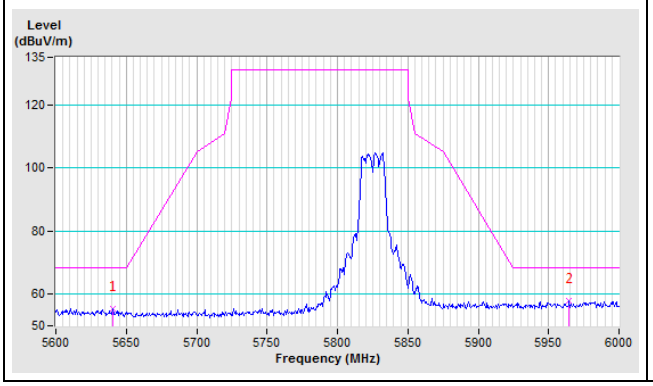
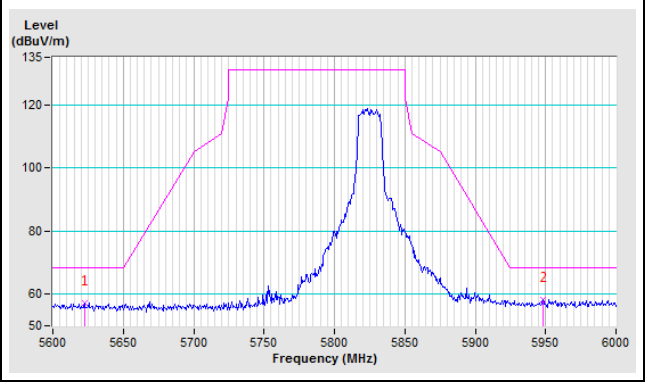
CH159	
Horizontal	Vertical
	

802.11ac (VHT80)

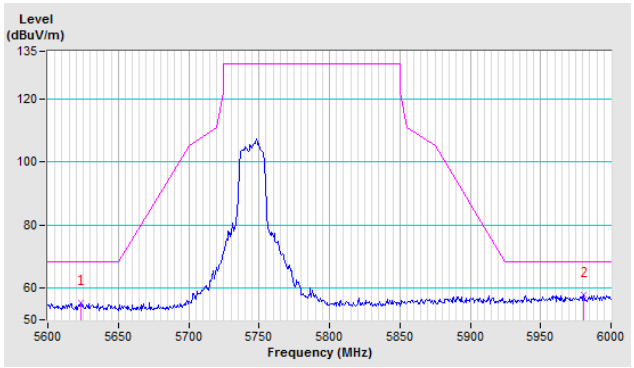
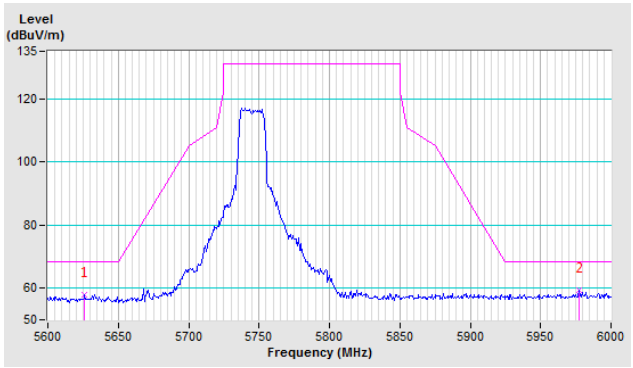
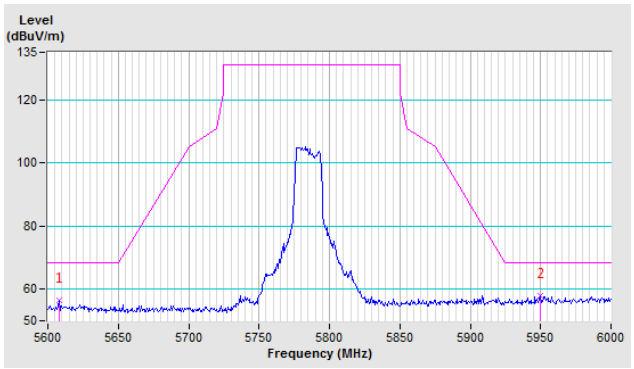
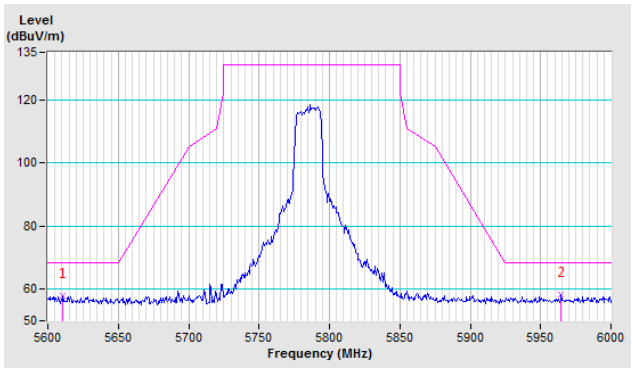
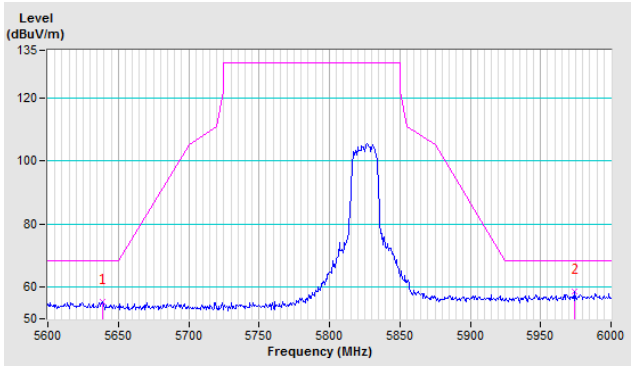
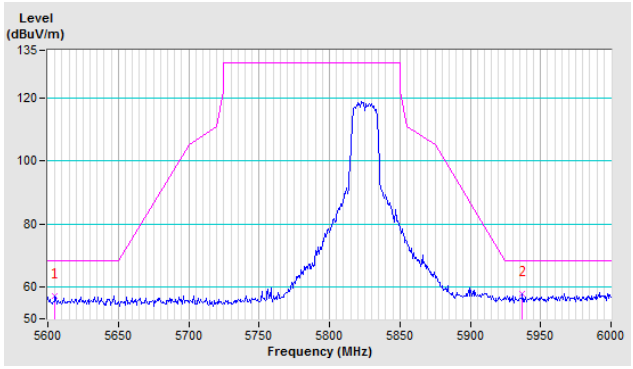
CH155	
Horizontal	Vertical
	

Test Mode B

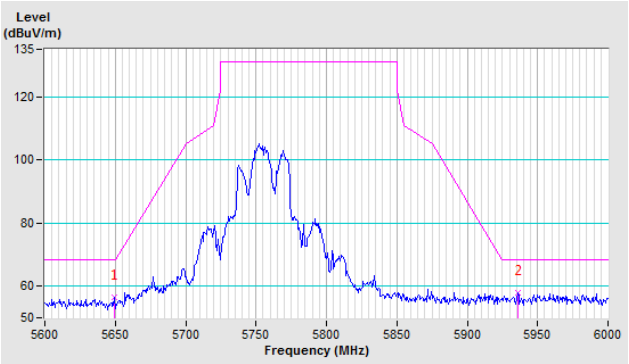
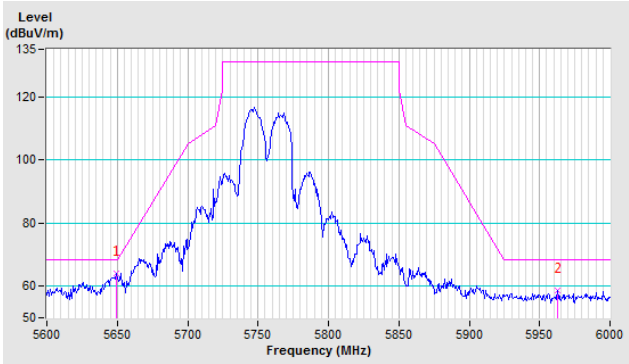
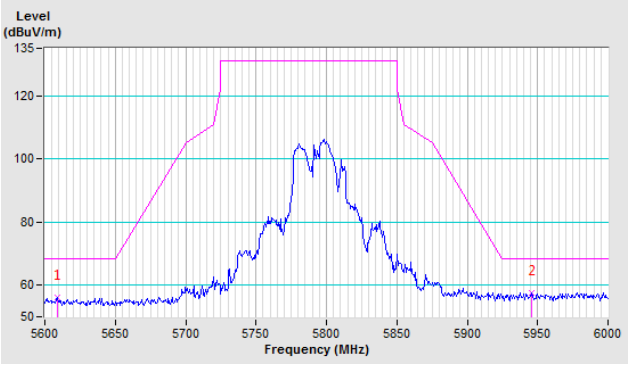
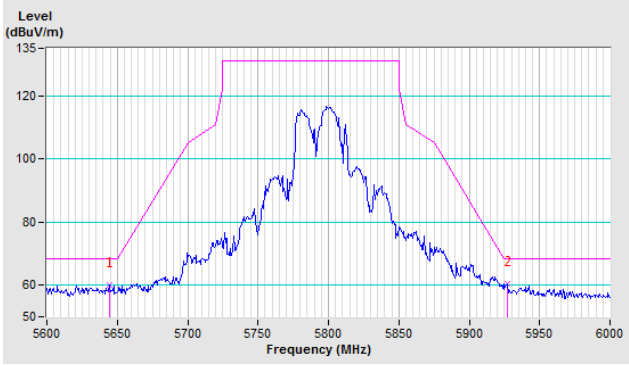
802.11a

CH149	
Horizontal	Vertical
	
CH157	
Horizontal	Vertical
	
CH165	
Horizontal	Vertical
	

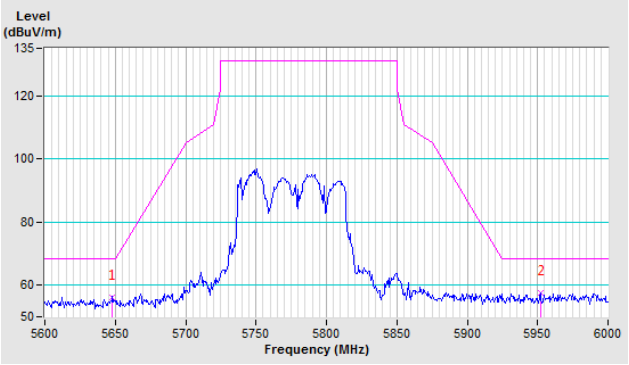
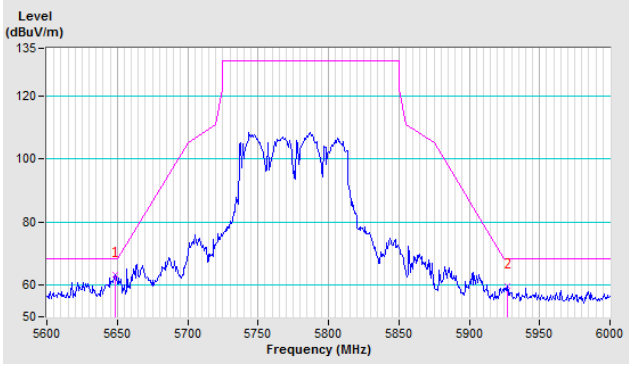
802.11n (HT20)

CH149	
Horizontal	Vertical
	
CH157	
Horizontal	Vertical
	
CH165	
Horizontal	Vertical
	

802.11n (HT40)

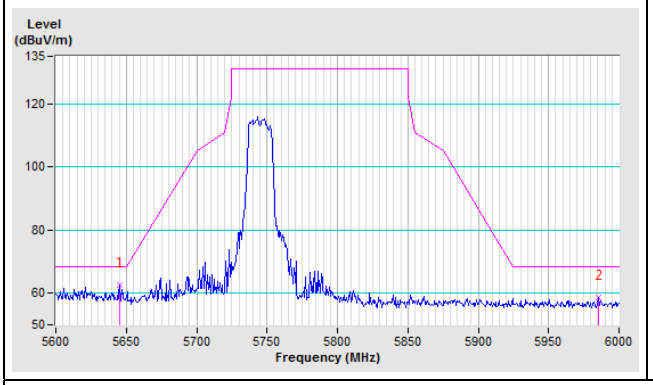
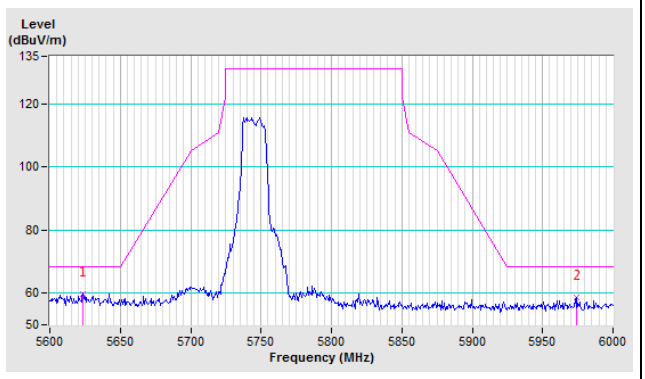
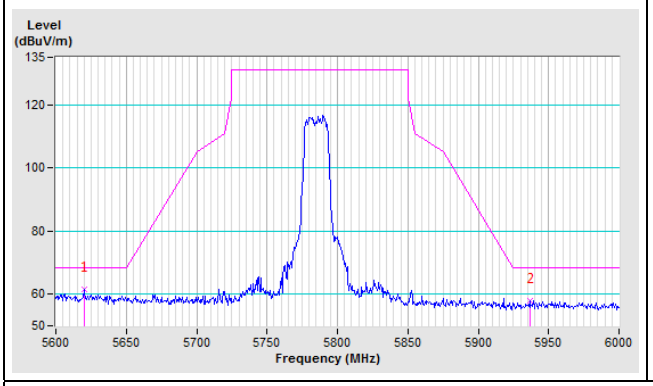
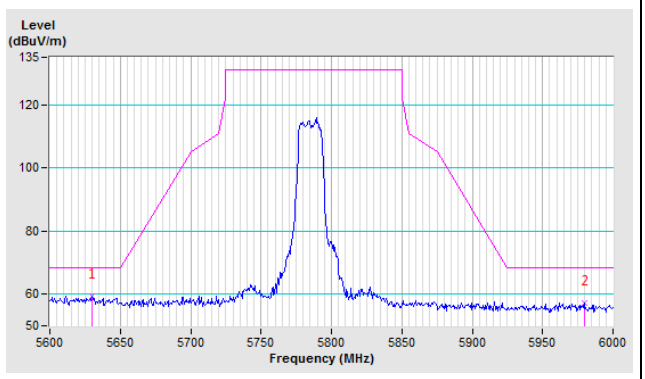
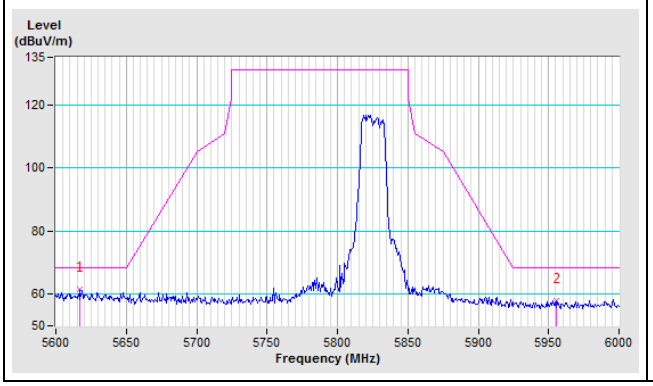
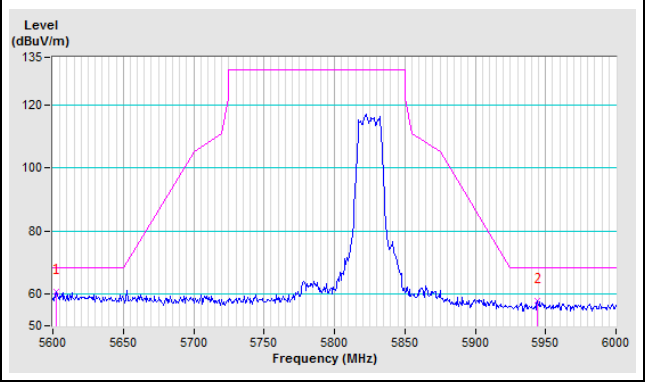
CH151	
Horizontal	Vertical
	
CH159	
Horizontal	Vertical
	

802.11ac (VHT80)

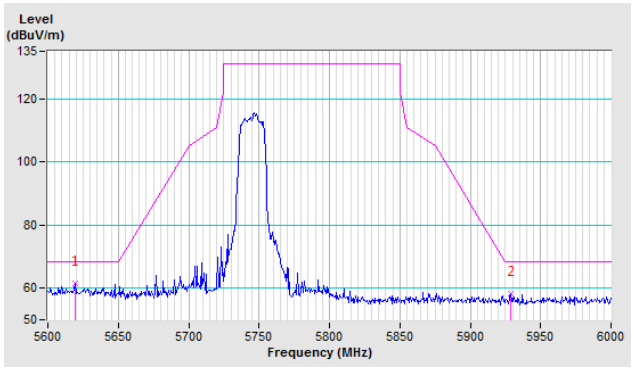
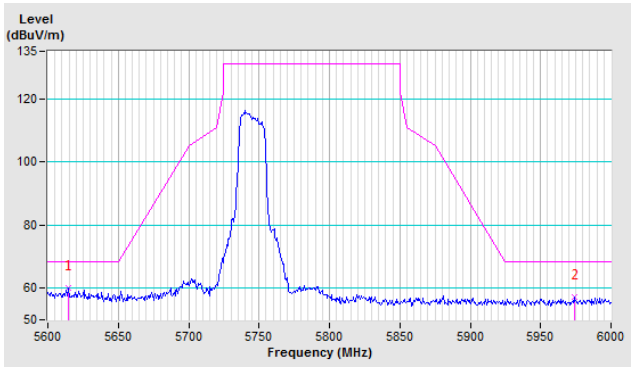
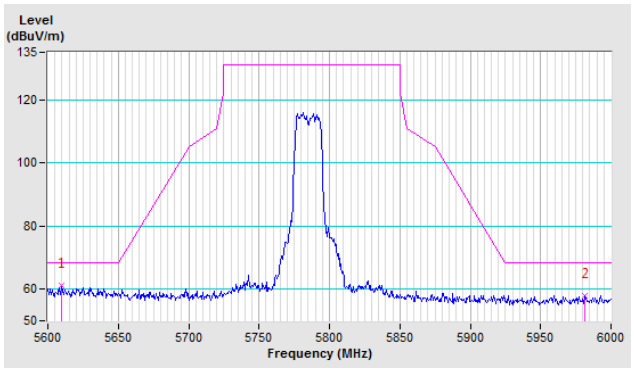
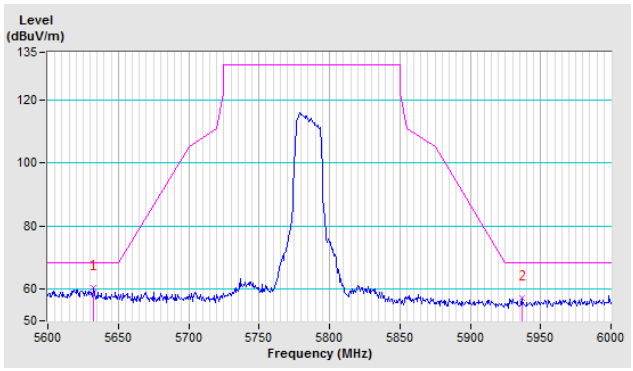
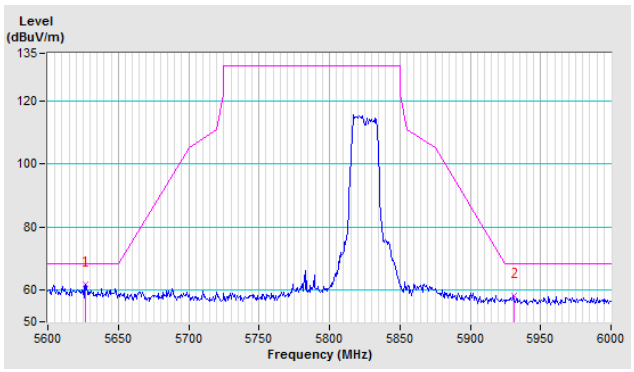
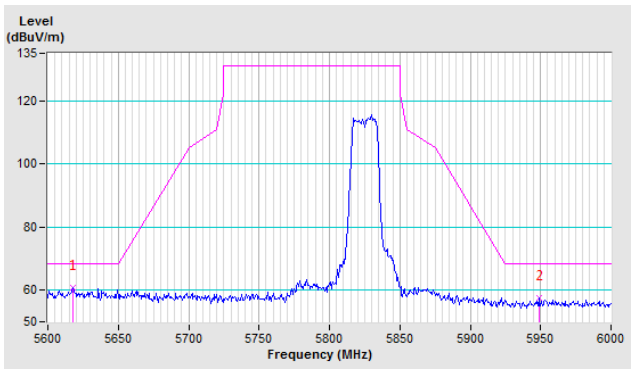
CH155	
Horizontal	Vertical
	

Test Mode C

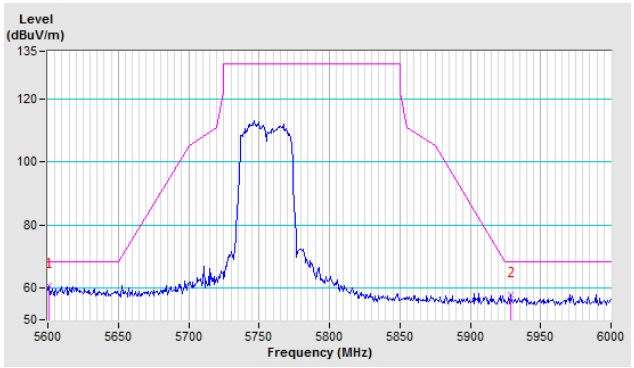
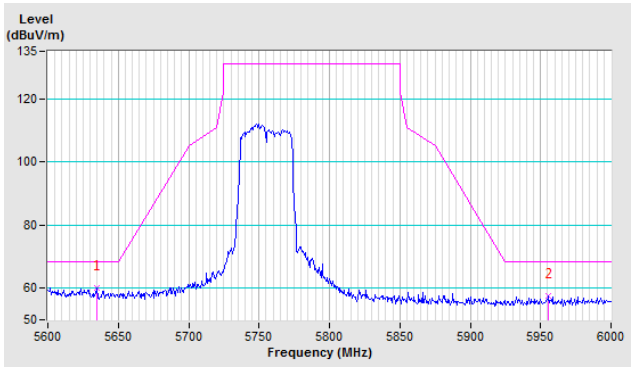
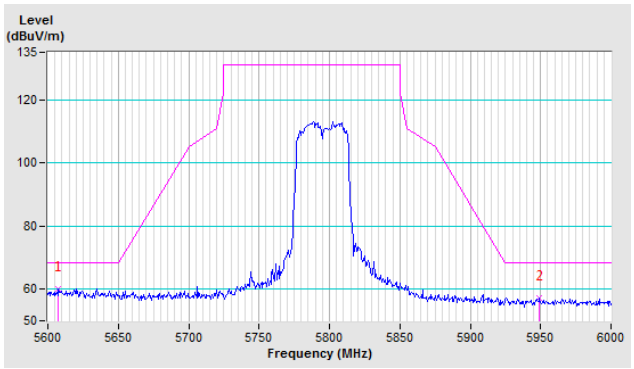
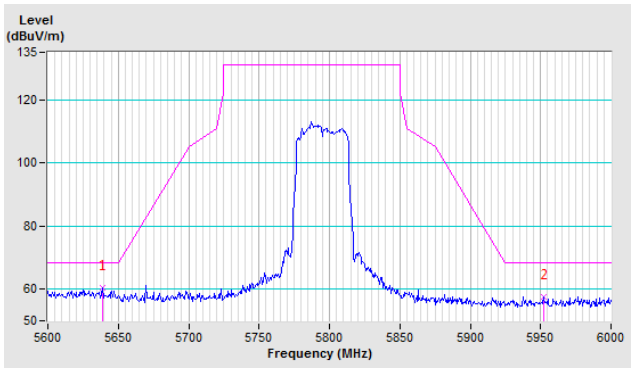
802.11a

CH149	
Horizontal	Vertical
	
CH157	
Horizontal	Vertical
	
CH165	
Horizontal	Vertical
	

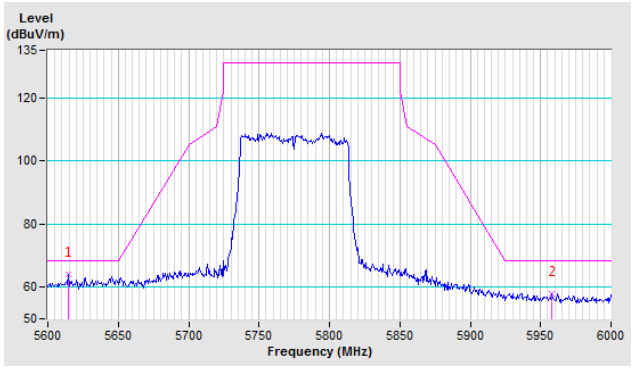
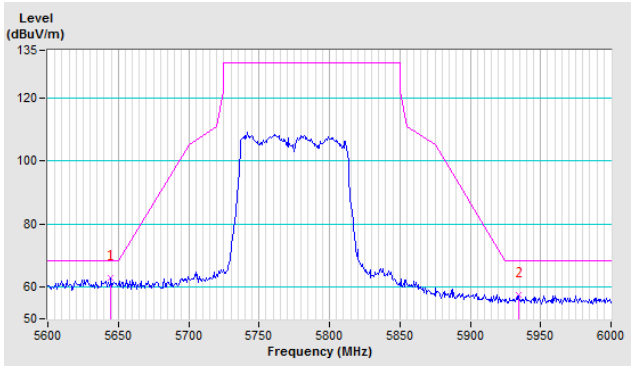
802.11n (HT20)

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 on the Testing Laboratories

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

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

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

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

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