

FCC Test Report

Report No.: RF170222C39-1

FCC ID: ACQ-DSR830

Test Model: DSR830

Received Date: Feb. 22, 2017

Test Date: Mar. 15 ~ May 02, 2017

Issued Date: May 11, 2017

Applicant: ARRIS Group, Inc.

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Issued By: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch

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Table of Contents

Release Control Record	4
1 Certificate of Conformity	5
2 Summary of Test Results	6
2.1 Measurement Uncertainty	6
2.2 Modification Record	6
3 General Information	7
3.1 General Description of EUT	7
3.2 Description of Test Modes	9
3.2.1 Test Mode Applicability and Tested Channel Detail	10
3.3 Duty Cycle of Test Signal	12
3.4 Description of Support Units	14
3.4.1 Configuration of System under Test	14
3.5 General Description of Applied Standards	14
4 Test Types and Results	15
4.1 Radiated Emission and Bandedge Measurement	15
4.1.1 Limits of Radiated Emission and Bandedge Measurement	15
4.1.2 Test Instruments	16
4.1.3 Test Procedures	17
4.1.4 Deviation from Test Standard	18
4.1.5 Test Setup	18
4.1.6 EUT Operating Conditions	19
4.1.7 Test Results	20
4.2 Conducted Emission Measurement	57
4.2.1 Limits of Conducted Emission Measurement	57
4.2.2 Test Instruments	57
4.2.3 Test Procedures	58
4.2.4 Deviation from Test Standard	58
4.2.5 Test Setup	58
4.2.6 EUT Operating Conditions	58
4.2.7 Test Results	59
4.3 Transmit Power Measurement	61
4.3.1 Limits of Transmit Power Measurement	61
4.3.2 Test Setup	61
4.3.3 Test Instruments	61
4.3.4 Test Procedure	62
4.3.5 Deviation from Test Standard	62
4.3.6 EUT Operating Conditions	62
4.3.7 Test Result	63
4.4 Occupied Bandwidth Measurement	66
4.4.1 Test Setup	66
4.4.2 Test Instruments	66
4.4.3 Test Procedure	66
4.4.4 Test Result	67
4.5 Peak Power Spectral Density Measurement	71
4.5.1 Limits of Peak Power Spectral Density Measurement	71
4.5.2 Test Setup	71
4.5.3 Test Instruments	71
4.5.4 Test Procedures	71
4.5.5 Deviation from Test Standard	72
4.5.6 EUT Operating Conditions	72
4.5.7 Test Results	73
4.6 Frequency Stability	82
4.6.1 Limits of Frequency Stability Measurement	82

4.6.2 Test Setup	82
4.6.3 Test Instruments	82
4.6.4 Test Procedure	82
4.6.5 Deviation from Test Standard	82
4.6.6 EUT Operating Condition	82
4.6.7 Test Results	83
4.7 6dB Bandwidth Measurement	84
4.7.1 Limits of 6dB Bandwidth Measurement	84
4.7.2 Test Setup	84
4.7.3 Test Instruments	84
4.7.4 Test Procedure	84
4.7.5 Deviation from Test Standard	84
4.7.6 EUT Operating Condition	84
4.7.7 Test Results	85
5 Pictures of Test Arrangements	89
Annex A- Radiated Out of Band Emission (OOBE) Measurement (For U-NII-3 band)	90
Appendix – Information on the Testing Laboratories	96

Release Control Record

Issue No.	Description	Date Issued
RF170222C39-1	Original release.	May 11, 2017

1 Certificate of Conformity

Product: Satellite Set-Top Box

Brand: ARRIS Group, Inc.

Test Model: DSR830

Sample Status: Engineering sample

Applicant: ARRIS Group, Inc.

Test Date: Mar. 15 ~ May 02, 2017

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 EMC characteristics under the conditions specified in this report.

Prepared by : Celine Chou , **Date:** May 11, 2017
Celine Chou / Specialist

Approved by : Ken Liu , **Date:** May 11, 2017
Ken Liu / Senior Manager

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 -5.46dB at 0.47663MHz.
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 -0.5dB at 5150.00MHz.
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 connector is UFL not a standard connector.

*For U-NII-3 band compliance with rule part 15.407(b)(4)(i), the OOB 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	Satellite Set-Top Box
Brand	ARRIS Group, Inc.
Test Model	DSR830
Sample Status	Engineering sample
Power Supply Rating	12Vdc from adapter
Modulation Type	256QAM, 64QAM, 16QAM, QPSK, BPSK
Modulation Technology	OFDM
Transfer Rate	802.11a: 54/48/36/24/18/12/9/6Mbps 802.11n: up to 300Mbps 802.11ac: up to 866.7Mbps
Operating Frequency	5180~5240MHz, 5745~5825MHz
Number of Channel	5180~5240MHz: 802.11a, 802.11n (HT20), 802.11ac (VHT20): 4 802.11n (HT40), 802.11n (HT40): 2 802.11ac (VHT80): 1 5745~5825MHz: 802.11a, 802.11n (HT20), 802.11ac (VHT20): 5 802.11n (HT40), 802.11n (HT40): 2 802.11ac (VHT80): 1
Output Power	CDD Mode, 1TX: 5180~5240MHz: 102.565mW 5745~5825MHz: 84.333mW CDD Mode, 2TX: 5180~5240MHz: 183.122mW 5745~5825MHz: 173.409mW Beamforming Mode, 2TX: 5180~5240MHz: 178.456mW 5745~5825MHz: 173.409mW
Antenna Type	Refer to Note
Antenna Connector	Refer to Note
Accessory Device	Adapter, Remote Controller
Cable Supplied	2.0m shielded HDMI cable without core

Note:

1. The EUT incorporates a MIMO function. Physically, the EUT provides 2 completed transmitters and 2 receivers. The EUT supports diversity parameter. Antenna 1 is the 5GHz max. gain for final test.

Modulation Mode	TX Function	Beamforming
802.11a	1TX, 2TX	Not Support
802.11n (HT20)	1TX, 2TX	Support
802.11n (HT40)	1TX, 2TX	Support
802.11ac (VHT20)	1TX, 2TX	Support
802.11ac (VHT40)	1TX, 2TX	Support
802.11ac (VHT80)	1TX, 2TX	Support

* 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, Beamforming mode is the worst case for final tests after pretesting.

2. The EUT uses following antennas.

Ant. Type	Stamped Metal				
Connector Type	UFL				
Single Antenna Gain (dBi)					
Item	2.4G	5G Band 1	5G Band 2	5G Band 3	5G Band 4
Ant. 0	2.76	3.53	3.53	3.11	3.11
Ant. 1	2.97	4.79	5.08	4.79	4.79

* For 1TX: The 5GHz max. gain (antenna 1) is chosen for final tests since it has the maximum gain among all antennas.

3. The EUT uses following adapter.

Brand	LITEON
Model	PB-1300-3AR3
Input Power	100-120Vac, 60Hz, 1A
Output Power	12Vdc, 2.5A
Power Line	1.8m cable without core attached on adapter

4. 2.4GHz and 5GHz technologies can not transmit at same time.

3.2 Description of Test Modes

5180~5240MHz:

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

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

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

Channel	Frequency	Channel	Frequency
38	5190 MHz	46	5230 MHz

1 channel is provided for 802.11ac (VHT80):

Channel	Frequency
42	5210MHz

5745~5825MHz:

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

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

2 channels are provided for 802.11n (HT40), 802.11n (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 $\geq$ 1G	RE<1G	PLC	APCM	
-	√	√	√	√	-

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

RE<1G: Radiated Emission below 1GHz

PLC: Power Line Conducted Emission

APCM: Antenna Port Conducted Measurement

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

Radiated Emission Test (Above 1GHz):

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

EUT Configure Mode	Mode	Frequency Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Data Rate (Mbps)	TX Function
-	802.11a	5180-5240	36 to 48	36, 40, 48	OFDM	6.0	1TX / 2TX
	802.11n (HT20)		36 to 48	36, 40, 48	OFDM	6.5 / 7.2	1TX / 2TX
	802.11n (HT40)		38 to 46	38, 46	OFDM	13.5 / 15.0	1TX / 2TX
	802.11ac (VHT80)		42	42	OFDM	29.3 / 65.0	1TX / 2TX
-	802.11a	5745-5825	149 to 165	149, 157, 165	OFDM	6.0	1TX / 2TX
	802.11n (HT20)		149 to 165	149, 157, 165	OFDM	6.5 / 7.2	1TX / 2TX
	802.11n (HT40)		151 to 159	151, 159	OFDM	13.5 / 15.0	1TX / 2TX
	802.11ac (VHT80)		155	155	OFDM	29.3 / 65.0	1TX / 2TX

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)	TX Function
-	802.11a	5180-5240	36 to 48	36	OFDM	6.0	2TX
-	802.11a	5745-5825	149 to 165		OFDM	6.0	2TX

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)	TX Function
-	802.11a	5180-5240	36 to 48	36	OFDM	6.0	2TX
-	802.11a	5745-5825	149 to 165		OFDM	6.0	2TX

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)	TX Function
-	802.11a	5180-5240	36 to 48	36, 40, 48	OFDM	6.0	1TX / 2TX
	802.11n (HT20)		36 to 48	36, 40, 48	OFDM	6.5 / 7.2	1TX / 2TX
	802.11n (HT40)		38 to 46	38, 46	OFDM	13.5 / 15.0	1TX / 2TX
	802.11ac (VHT80)		42	42	OFDM	29.3 / 65.0	1TX / 2TX
-	802.11a	5745-5825	149 to 165	149, 157, 165	OFDM	6.0	1TX / 2TX
	802.11n (HT20)		149 to 165	149, 157, 165	OFDM	6.5 / 7.2	1TX / 2TX
	802.11n (HT40)		151 to 159	151, 159	OFDM	13.5 / 15.0	1TX / 2TX
	802.11ac (VHT80)		155	155	OFDM	29.3 / 65.0	1TX / 2TX

Test Condition:

Applicable to	Environmental Conditions	Input Power	Tested by
RE_≥1G	20 deg. C, 66% RH	120Vac, 60Hz	James Yang
RE_{<}1G	20 deg. C, 66% RH	120Vac, 60Hz	James Yang
PLC	20 deg. C, 69% RH	120Vac, 60Hz	Bayu Chen
APCM	25 deg. C, 60% RH	120Vac, 60Hz	Frank Liu

3.3 Duty Cycle of Test Signal

1TX

802.11a, 802.11n (HT20): Duty cycle of test signal is $\geq 98\%$, duty factor is not required.

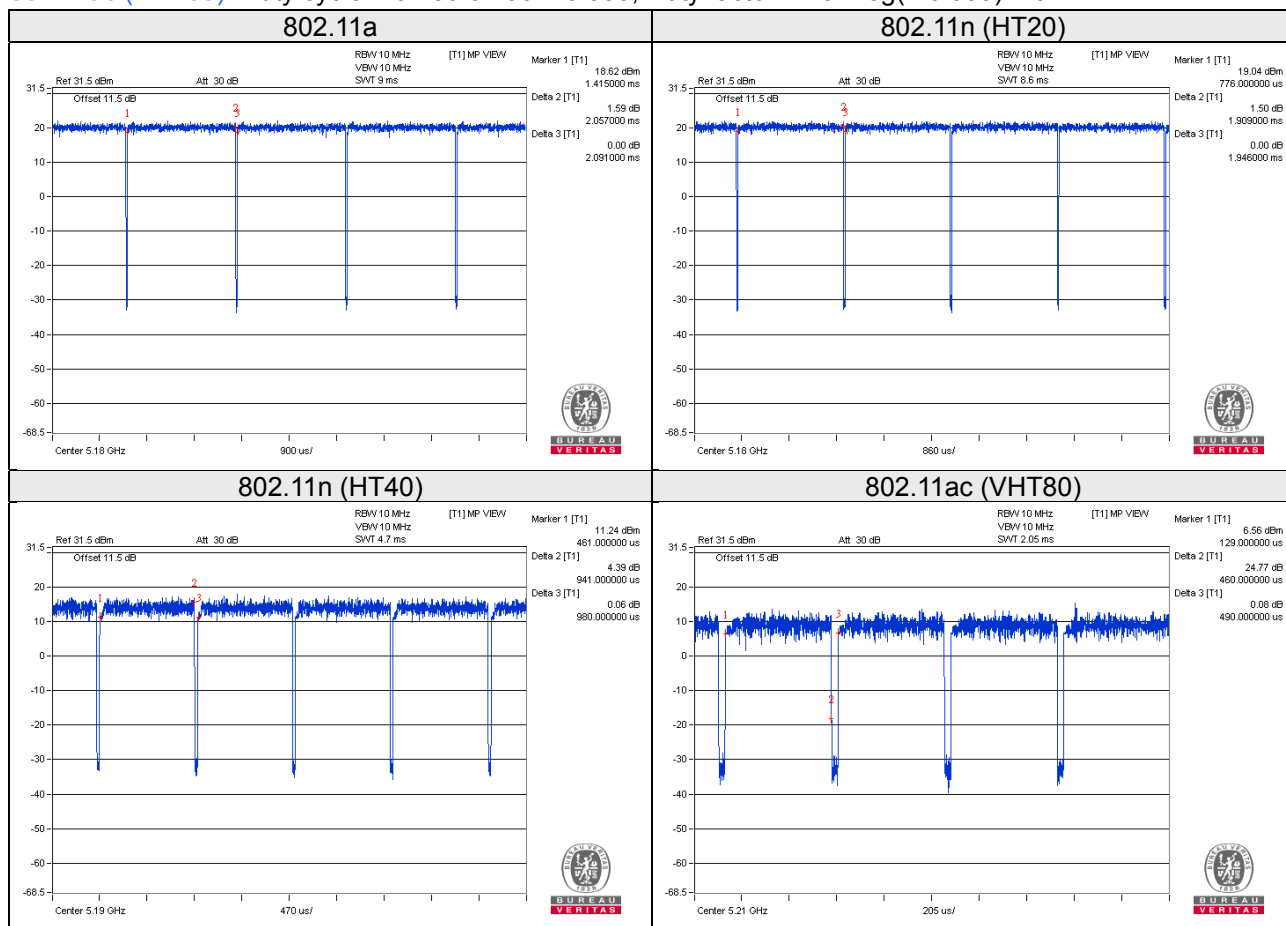
802.11n (HT40), 802.11ac (VHT80): Duty cycle of test signal is $< 98\%$, duty factor is required.

802.11a: Duty cycle = $2.057/2.091 = 0.984$

802.11n (HT20): Duty cycle = $1.909/1.946 = 0.981$

802.11n (HT40): Duty cycle = $0.941/0.980 = 0.960$, Duty factor = $10 * \log(1/0.960) = 0.18$

802.11ac (VHT80): Duty cycle = $0.460/0.490 = 0.939$, Duty factor = $10 * \log(1/0.939) = 0.27$



2TX

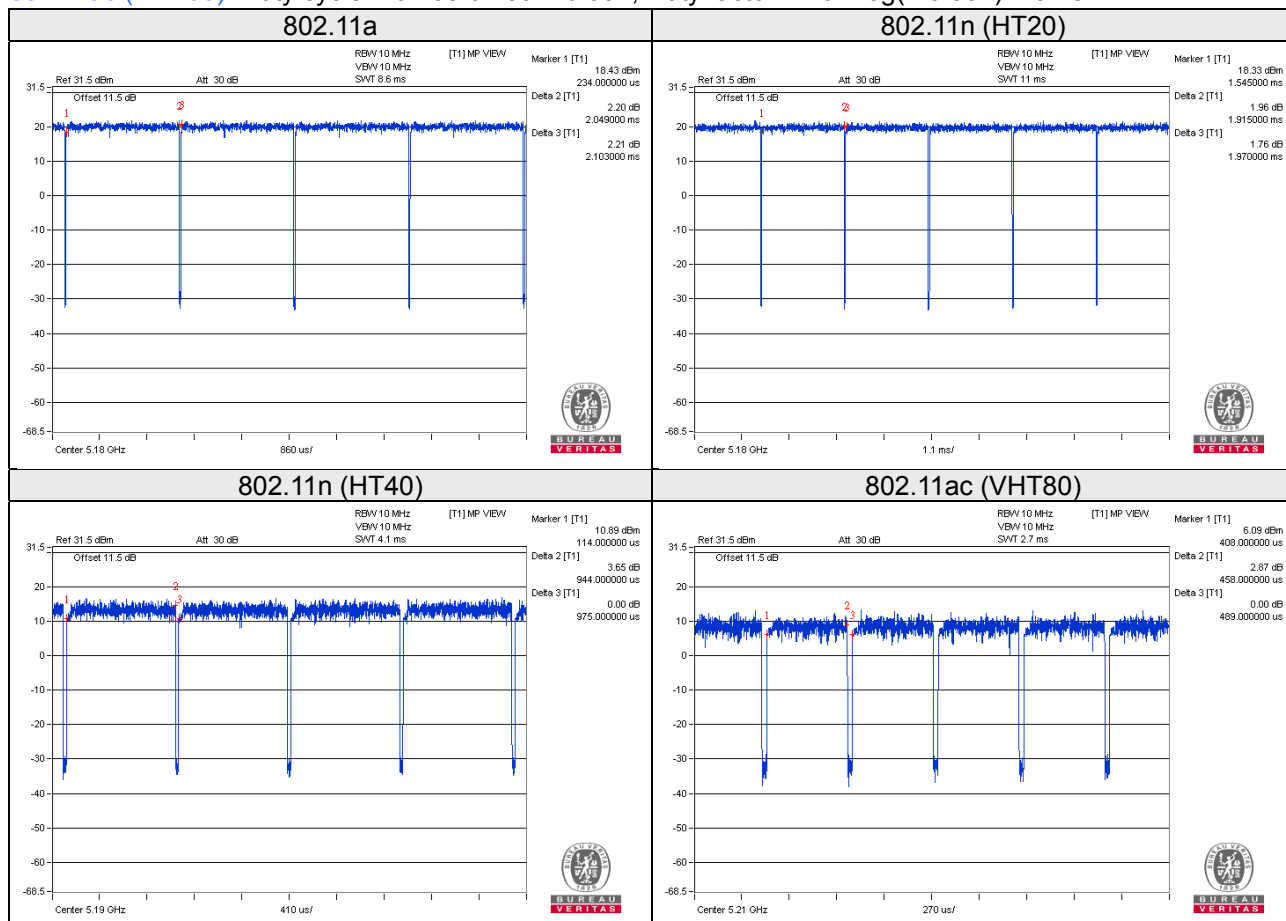
Duty cycle of test signal is < 98%, duty factor is required.

802.11a: Duty cycle = $2.049/2.103 = 0.974$, Duty factor = $10 * \log(1/0.974) = 0.11$

802.11n (HT20): Duty cycle = $1.915/1.970 = 0.972$, Duty factor = $10 * \log(1/0.972) = 0.12$

802.11n (HT40): Duty cycle = $0.944/0.975 = 0.968$, Duty factor = $10 * \log(1/0.968) = 0.14$

802.11ac (VHT80): Duty cycle = $0.458/0.489 = 0.937$, Duty factor = $10 * \log(1/0.937) = 0.28$



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.

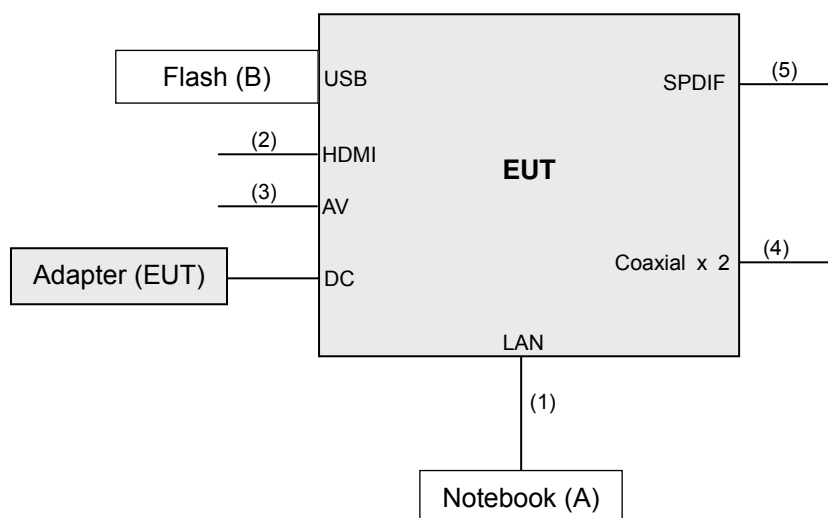
ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A.	Notebook	DELL	E5410	1HC2XM1	FCC DoC Approved	-
B.	USB Flash	HP	v250W	01	NA	-

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	3	N	0	-
2.	HDMI	1	2	Y	0	Accessory of EUT
3.	AV	1	1.8	Y	0	-
4.	Coaxial	2	3	Y	0	-
5.	SPDIF	1	1	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 v01r04

662911 D01 Multiple Transmitter Output v02r01

ANSI C63.10:2013

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

Note: The EUT has been verified to comply with the requirements of FCC Part 15, Subpart B, Class B (DoC). The test report has been issued separately.

4 Test Types and Results

4.1 Radiated Emission and Bandedge Measurement

4.1.1 Limits of Radiated Emission and Bandedge Measurement

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

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

NOTE:

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).
3. For frequencies above 1000MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20dB under any condition of modulation.

Limits of unwanted emission out of the restricted bands

Applicable To			Limit	
789033 D02 General UNII Test Procedure New Rules v01r03			Field Strength at 3m	
			PK: 74 (dBμV/m)	AV: 54 (dBμV/m)
Frequency Band	Applicable To		EIRP Limit	Equivalent Field Strength at 3m
5150~5250 MHz	15.407(b)(1)		PK: -27 (dBm/MHz)	PK: 68.2(dBμV/m)
5250~5350 MHz	15.407(b)(2)			
5470~5725 MHz	15.407(b)(3)			
5725~5850 MHz	☒	15.407(b)(4)(i)	PK:-27 (dBm/MHz) ^{*1} PK:10 (dBm/MHz) ^{*2} PK:15.6 (dBm/MHz) ^{*3} PK:27 (dBm/MHz) ^{*4}	PK: 68.2(dBμV/m) ^{*1} PK:105.2 (dBμV/m) ^{*2} PK: 110.8(dBμV/m) ^{*3} PK:122.2 (dBμV/m) ^{*4}
	☐	15.407(b)(4)(ii)	Emission limits in section 15.247(d)	
^{*1} beyond 75 MHz or more above of the band edge.			^{*2} below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above.	
^{*3} below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above.			^{*4} from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.	

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

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

4.1.2 Test Instruments

Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
Test Receiver ROHDE & SCHWARZ	ESCI	100424	Oct. 24, 2016	Oct. 23, 2017
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100040	Aug. 16, 2016	Aug. 15, 2017
BILOG Antenna SCHWARZBECK	VULB9168	9168-155	Dec. 28, 2016	Dec. 27, 2017
HORN Antenna SCHWARZBECK	BBHA 9120D	9120D-1170	Dec. 15, 2016	Dec. 14, 2017
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA9170241	Dec. 14, 2016	Dec. 13, 2017
Loop Antenna	EM-6879	269	Aug. 11, 2016	Aug. 10, 2017
Preamplifier Agilent	8449B	3008A01960	Aug. 09, 2016	Aug. 08, 2017
Preamplifier Agilent	8447D	2944A10631	Aug. 09, 2016	Aug. 08, 2017
RF signal cable HUBER+SUHNER	SUCOFLEX 104	MY 13380+295012/04	Aug. 09, 2016	Aug. 08, 2017
RF signal cable HUBER+SUHNER	SUCOFLEX 104	Cable-CH4-03 (250724)	Aug. 09, 2016	Aug. 08, 2017
Software BV ADT	ADT_Radiated_ V7.6.15.9.4	NA	NA	NA
Antenna Tower inn-co GmbH	MA 4000	010303	NA	NA
Antenna Tower Controller BV ADT	AT100	AT93021703	NA	NA
Turn Table BV ADT	TT100	TT93021703	NA	NA
Turn Table Controller BV ADT	SC100	SC93021703	NA	NA
26GHz ~ 40GHz Amplifier	EM26400	815221	Oct. 17, 2016	Oct. 16, 2017
High Speed Peak Power Meter	ML2495A	0824012	Aug. 11, 2016	Aug. 10, 2017
Power Sensor	MA2411B	0738171	Aug. 11, 2016	Aug. 10, 2017
WIT Standard Temperature And Humidity Chamber	TH-4S-C	W981030	Jun. 08, 2016	Jun. 07, 2017

- 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 horn antenna and preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
4. The FCC Site Registration No. is 460141.
5. The IC Site Registration No. is IC7450F-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. Both X and Y axes of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Quasi-Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

Note:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 9kHz at frequency below 30MHz.

For Radiated emission above 30MHz

- a. The EUT was placed on the top of a rotating table 0.8 meters (for 30MHz ~ 1GHz) / 1.5 meters (for above 1GHz) above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.
- f. The test-receiver system was set to peak and average detect function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz. If the peak reading value also meets average limit, measurement with the average detector is unnecessary.

Note:

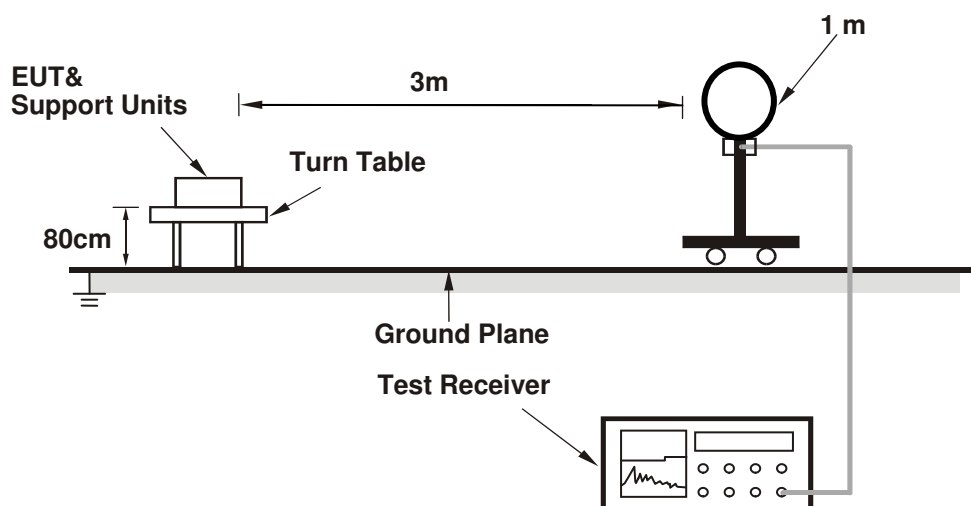
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.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

4.1.4 Deviation from Test Standard

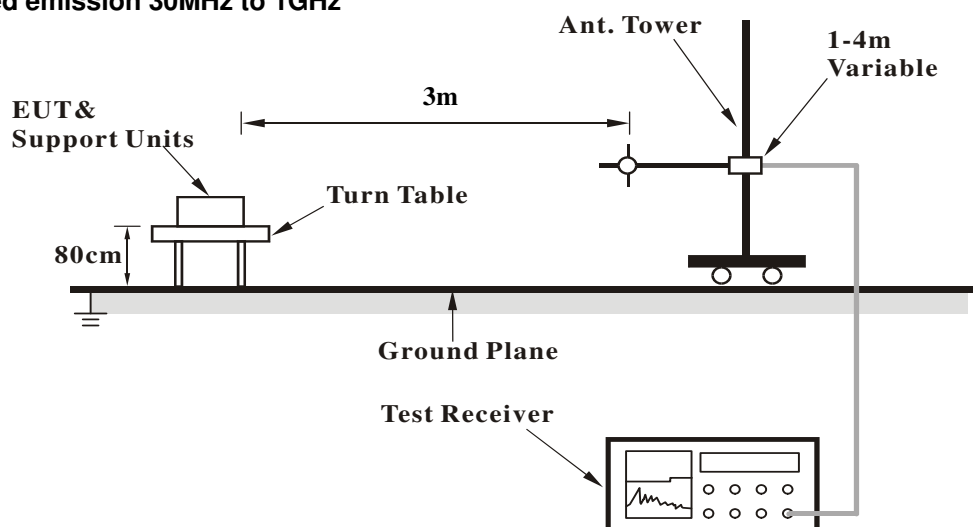
No deviation.

4.1.5 Test Setup

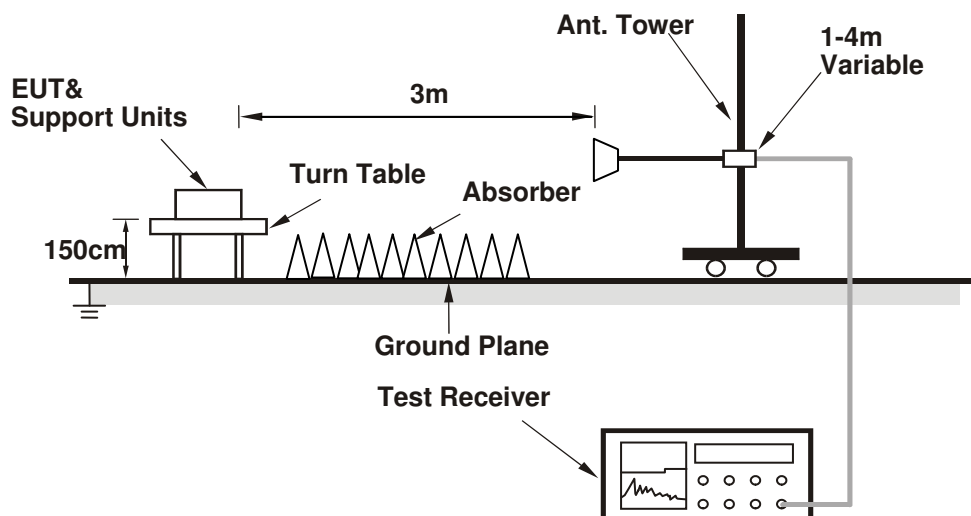
For Radiated emission below 30MHz



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

- Placed the EUT on the testing table.
- Prepared a notebook to act as a communication partner and placed it outside of testing area.
- 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.
- The communication partner sent data to EUT by command "PING".
- The necessary accessories enable the system in full functions.

4.1.7 Test Results

Above 1GHz data:

1TX

802.11a

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

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	68.7 PK	74.0	-5.3	1.05 H	333	67.9	0.8
2	5150.00	53.4 AV	54.0	-0.6	1.05 H	333	52.6	0.8
3	*5180.00	108.6 PK			1.24 H	354	69.9	38.7
4	*5180.00	98.1 AV			1.24 H	354	59.4	38.7
5	#10360.00	58.1 PK	74.0	-15.9	1.86 H	146	45.4	12.7
6	#10360.00	44.5 AV	54.0	-9.5	1.86 H	146	31.8	12.7
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	60.9 PK	74.0	-13.1	1.32 V	15	60.1	0.8
2	5150.00	46.6 AV	54.0	-7.4	1.32 V	15	45.8	0.8
3	*5180.00	101.5 PK			1.26 V	9	62.8	38.7
4	*5180.00	91.3 AV			1.26 V	9	52.6	38.7
5	#10360.00	57.4 PK	74.0	-16.6	1.86 V	142	44.7	12.7
6	#10360.00	44.6 AV	54.0	-9.4	1.86 V	142	31.9	12.7

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

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	109.5 PK			1.51 H	334	70.8	38.7
2	*5200.00	99.4 AV			1.51 H	334	60.7	38.7
3	#10400.00	57.9 PK	74.0	-16.1	1.76 H	148	45.2	12.7
4	#10400.00	44.7 AV	54.0	-9.3	1.76 H	148	32.0	12.7
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	*5200.00	105.3 PK			2.45 V	272	66.6	38.7
2	*5200.00	95.9 AV			2.45 V	272	57.2	38.7
3	#10400.00	58.0 PK	74.0	-16.0	1.92 V	26	45.3	12.7
4	#10400.00	44.5 AV	54.0	-9.5	1.92 V	26	31.8	12.7

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

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	110.2 PK			1.10 H	336	71.4	38.8
2	*5240.00	100.0 AV			1.10 H	336	61.2	38.8
3	5350.00	56.8 PK	74.0	-17.2	1.02 H	341	55.7	1.1
4	5350.00	43.4 AV	54.0	-10.6	1.02 H	341	42.3	1.1
5	#10480.00	57.7 PK	74.0	-16.3	1.86 H	241	44.2	13.5
6	#10480.00	45.3 AV	54.0	-8.7	1.86 H	241	31.8	13.5
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	*5240.00	106.4 PK			2.45 V	270	67.6	38.8
2	*5240.00	96.0 AV			2.45 V	270	57.2	38.8
3	5350.00	55.9 PK	74.0	-18.1	2.48 V	239	54.8	1.1
4	5350.00	43.3 AV	54.0	-10.7	2.48 V	239	42.2	1.1
5	#10480.00	58.6 PK	74.0	-15.4	1.63 V	159	45.1	13.5
6	#10480.00	45.1 AV	54.0	-8.9	1.63 V	159	31.6	13.5

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

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	#5632.80	58.2 PK	68.2	-10.0	1.24 H	83	56.5	1.7
2	*5745.00	111.4 PK			1.24 H	83	71.5	39.9
3	*5745.00	101.1 AV			1.24 H	83	61.2	39.9
4	#5978.40	59.2 PK	68.2	-9.0	1.24 H	83	56.4	2.8
5	11490.00	60.1 PK	74.0	-13.9	1.86 H	55	45.6	14.5
6	11490.00	46.7 AV	54.0	-7.3	1.86 H	55	32.2	14.5
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	#5613.60	57.3 PK	68.2	-10.9	3.11 V	235	55.6	1.7
2	*5745.00	110.3 PK			3.11 V	235	70.4	39.9
3	*5745.00	99.9 AV			3.11 V	235	60.0	39.9
4	#5979.20	58.6 PK	68.2	-9.6	3.11 V	235	55.8	2.8
5	11490.00	60.4 PK	74.0	-13.6	1.79 V	256	45.9	14.5
6	11490.00	46.3 AV	54.0	-7.7	1.79 V	256	31.8	14.5

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5622.40	58.1 PK	68.2	-10.1	1.25 H	91	56.4	1.7
2	*5785.00	110.9 PK			1.25 H	91	70.8	40.1
3	*5785.00	101.0 AV			1.25 H	91	60.9	40.1
4	#5983.20	58.3 PK	68.2	-9.9	1.25 H	91	55.5	2.8
5	11570.00	60.5 PK	74.0	-13.5	2.37 H	264	46.2	14.3
6	11570.00	46.6 AV	54.0	-7.4	2.37 H	264	32.3	14.3
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5629.60	57.3 PK	68.2	-10.9	3.08 V	205	55.6	1.7
2	*5785.00	110.5 PK			3.08 V	205	70.4	40.1
3	*5785.00	100.5 AV			3.08 V	205	60.4	40.1
4	#5964.00	58.5 PK	68.2	-9.7	3.08 V	205	55.8	2.7
5	11570.00	60.6 PK	74.0	-13.4	1.94 V	275	46.3	14.3
6	11570.00	46.6 AV	54.0	-7.4	1.94 V	275	32.3	14.3

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5612.80	56.9 PK	68.2	-11.3	1.26 H	88	55.2	1.7
2	*5825.00	110.2 PK			1.26 H	88	70.0	40.2
3	*5825.00	100.1 AV			1.26 H	88	59.9	40.2
4	#5963.20	58.6 PK	68.2	-9.6	1.26 H	88	56.0	2.6
5	11650.00	59.8 PK	74.0	-14.2	1.77 H	328	45.4	14.4
6	11650.00	46.6 AV	54.0	-7.4	1.77 H	328	32.2	14.4
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	#5648.80	57.8 PK	68.2	-10.4	3.24 V	208	56.1	1.7
2	*5825.00	110.1 PK			3.24 V	208	69.9	40.2
3	*5825.00	99.8 AV			3.24 V	208	59.6	40.2
4	#5988.00	58.8 PK	68.2	-9.4	3.24 V	208	56.0	2.8
5	11650.00	59.9 PK	74.0	-14.1	1.50 V	148	45.5	14.4
6	11650.00	46.6 AV	54.0	-7.4	1.50 V	148	32.2	14.4

Remarks:

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

802.11n (HT20)

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

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	69.5 PK	74.0	-4.5	1.23 H	333	68.7	0.8
2	5150.00	53.4 AV	54.0	-0.6	1.23 H	333	52.6	0.8
3	*5180.00	108.8 PK			1.14 H	335	70.1	38.7
4	*5180.00	97.9 AV			1.14 H	335	59.2	38.7
5	#10360.00	57.5 PK	74.0	-16.5	1.72 H	76	44.8	12.7
6	#10360.00	44.5 AV	54.0	-9.5	1.72 H	76	31.8	12.7
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	63.2 PK	74.0	-10.8	2.45 V	257	62.4	0.8
2	5150.00	47.7 AV	54.0	-6.3	2.45 V	257	46.9	0.8
3	*5180.00	104.9 PK			2.41 V	254	66.2	38.7
4	*5180.00	93.6 AV			2.41 V	254	54.9	38.7
5	#10360.00	57.8 PK	74.0	-16.2	1.83 V	124	45.1	12.7
6	#10360.00	44.9 AV	54.0	-9.1	1.83 V	124	32.2	12.7

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

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	110.1 PK			1.12 H	336	71.4	38.7
2	*5200.00	99.5 AV			1.12 H	336	60.8	38.7
3	#10400.00	57.5 PK	74.0	-16.5	1.86 H	164	44.8	12.7
4	#10400.00	44.8 AV	54.0	-9.2	1.86 H	164	32.1	12.7
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	*5200.00	106.2 PK			2.46 V	263	67.5	38.7
2	*5200.00	95.4 AV			2.46 V	263	56.7	38.7
3	#10400.00	57.6 PK	74.0	-16.4	1.72 V	190	44.9	12.7
4	#10400.00	44.7 AV	54.0	-9.3	1.72 V	190	32.0	12.7

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

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	110.6 PK			1.09 H	335	71.8	38.8
2	*5240.00	99.8 AV			1.09 H	335	61.0	38.8
3	5350.00	57.0 PK	74.0	-17.0	1.21 H	330	55.9	1.1
4	5350.00	43.7 AV	54.0	-10.3	1.21 H	330	42.6	1.1
5	#10480.00	58.3 PK	74.0	-15.7	1.63 H	237	44.8	13.5
6	#10480.00	45.3 AV	54.0	-8.7	1.63 H	237	31.8	13.5
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	*5240.00	107.1 PK			2.47 V	269	68.3	38.8
2	*5240.00	96.3 AV			2.47 V	269	57.5	38.8
3	5350.00	55.9 PK	74.0	-18.1	2.45 V	273	54.8	1.1
4	5350.00	43.1 AV	54.0	-10.9	2.45 V	273	42.0	1.1
5	#10480.00	58.4 PK	74.0	-15.6	2.79 V	328	44.9	13.5
6	#10480.00	45.0 AV	54.0	-9.0	2.79 V	328	31.5	13.5

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

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	#5632.00	57.2 PK	68.2	-11.0	1.28 H	90	55.5	1.7
2	*5745.00	111.6 PK			1.28 H	90	71.7	39.9
3	*5745.00	100.9 AV			1.28 H	90	61.0	39.9
4	#5961.60	59.0 PK	68.2	-9.2	1.28 H	90	56.4	2.6
5	11490.00	61.0 PK	74.0	-13.0	1.68 H	194	46.5	14.5
6	11490.00	46.5 AV	54.0	-7.5	1.68 H	194	32.0	14.5
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5607.20	58.0 PK	68.2	-10.2	3.12 V	204	56.3	1.7
2	*5745.00	110.4 PK			3.12 V	204	70.5	39.9
3	*5745.00	99.7 AV			3.12 V	204	59.8	39.9
4	#5945.60	60.3 PK	68.2	-7.9	3.12 V	204	57.7	2.6
5	11490.00	59.8 PK	74.0	-14.2	2.65 V	334	45.3	14.5
6	11490.00	46.3 AV	54.0	-7.7	2.65 V	334	31.8	14.5

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

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	#5628.80	57.5 PK	68.2	-10.7	1.28 H	93	55.8	1.7
2	*5785.00	111.2 PK			1.28 H	93	71.1	40.1
3	*5785.00	100.9 AV			1.28 H	93	60.8	40.1
4	#5977.60	58.8 PK	68.2	-9.4	1.28 H	93	56.0	2.8
5	11570.00	60.2 PK	74.0	-13.8	2.47 H	239	45.9	14.3
6	11570.00	46.8 AV	54.0	-7.2	2.47 H	239	32.5	14.3
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5621.60	58.2 PK	68.2	-10.0	3.28 V	207	56.5	1.7
2	*5785.00	111.8 PK			3.28 V	207	71.7	40.1
3	*5785.00	100.7 AV			3.28 V	207	60.6	40.1
4	#5971.20	58.7 PK	68.2	-9.5	3.28 V	207	56.0	2.7
5	11570.00	61.4 PK	74.0	-12.6	2.08 V	45	47.1	14.3
6	11570.00	46.6 AV	54.0	-7.4	2.08 V	45	32.3	14.3

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5600.80	58.7 PK	68.2	-9.5	1.28 H	91	57.1	1.6
2	*5825.00	111.2 PK			1.28 H	91	71.0	40.2
3	*5825.00	100.4 AV			1.28 H	91	60.2	40.2
4	#5990.40	58.7 PK	68.2	-9.5	1.28 H	91	55.9	2.8
5	11650.00	60.5 PK	74.0	-13.5	1.72 H	37	46.1	14.4
6	11650.00	46.6 AV	54.0	-7.4	1.72 H	37	32.2	14.4
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	#5642.40	58.1 PK	68.2	-10.1	3.28 V	205	56.4	1.7
2	*5825.00	110.7 PK			3.28 V	205	70.5	40.2
3	*5825.00	99.9 AV			3.28 V	205	59.7	40.2
4	#5974.40	59.0 PK	68.2	-9.2	3.28 V	205	56.3	2.7
5	11650.00	60.1 PK	74.0	-13.9	2.71 V	168	45.7	14.4
6	11650.00	46.8 AV	54.0	-7.2	2.71 V	168	32.4	14.4

Remarks:

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

802.11n (HT40)

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

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	64.8 PK	74.0	-9.2	1.23 H	332	64.0	0.8
2	5150.00	53.1 AV	54.0	-0.9	1.23 H	332	52.3	0.8
3	*5190.00	102.3 PK			1.13 H	336	63.6	38.7
4	*5190.00	91.9 AV			1.13 H	336	53.2	38.7
5	#10380.00	57.7 PK	74.0	-16.3	1.49 H	25	44.9	12.8
6	#10380.00	46.1 AV	54.0	-7.9	1.49 H	25	33.3	12.8
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	5150.00	58.4 PK	74.0	-15.6	2.41 V	272	57.6	0.8
2	5150.00	45.2 AV	54.0	-8.8	2.41 V	272	44.4	0.8
3	*5190.00	98.0 PK			2.47 V	262	59.3	38.7
4	*5190.00	87.5 AV			2.47 V	262	48.8	38.7
5	#10380.00	58.1 PK	74.0	-15.9	1.23 V	323	45.3	12.8
6	#10380.00	45.6 AV	54.0	-8.4	1.23 V	323	32.8	12.8

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

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	66.7 PK	74.0	-7.3	1.24 H	333	65.9	0.8
2	5150.00	53.3 AV	54.0	-0.7	1.24 H	333	52.5	0.8
3	*5230.00	108.8 PK			1.11 H	336	70.0	38.8
4	*5230.00	97.7 AV			1.11 H	336	58.9	38.8
5	#10460.00	58.8 PK	74.0	-15.2	1.88 H	153	45.5	13.3
6	#10460.00	45.7 AV	54.0	-8.3	1.88 H	153	32.4	13.3
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	59.2 PK	74.0	-14.8	2.50 V	263	58.4	0.8
2	5150.00	46.6 AV	54.0	-7.4	2.50 V	263	45.8	0.8
3	*5230.00	104.4 PK			2.47 V	269	65.6	38.8
4	*5230.00	93.7 AV			2.47 V	269	54.9	38.8
5	#10460.00	57.7 PK	74.0	-16.3	2.86 V	114	44.4	13.3
6	#10460.00	45.5 AV	54.0	-8.5	2.86 V	114	32.2	13.3

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5644.00	62.4 PK	68.2	-5.8	1.17 H	94	60.7	1.7
2	*5755.00	108.8 PK			1.17 H	94	68.9	39.9
3	*5755.00	97.9 AV			1.17 H	94	58.0	39.9
4	#5982.40	58.3 PK	68.2	-9.9	1.17 H	94	55.5	2.8
5	11510.00	60.6 PK	74.0	-13.4	1.79 H	231	46.1	14.5
6	11510.00	47.8 AV	54.0	-6.2	1.79 H	231	33.3	14.5
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5644.80	60.8 PK	68.2	-7.4	3.29 V	231	59.1	1.7
2	*5755.00	108.5 PK			3.29 V	231	68.6	39.9
3	*5755.00	97.8 AV			3.29 V	231	57.9	39.9
4	#5970.40	58.7 PK	68.2	-9.5	3.29 V	231	56.0	2.7
5	11510.00	60.8 PK	74.0	-13.2	2.62 V	351	46.3	14.5
6	11510.00	47.2 AV	54.0	-6.8	2.62 V	351	32.7	14.5

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5647.20	58.2 PK	68.2	-10.0	1.17 H	82	56.5	1.7
2	*5795.00	108.5 PK			1.17 H	82	68.4	40.1
3	*5795.00	98.1 AV			1.17 H	82	58.0	40.1
4	#5942.40	59.2 PK	68.2	-9.0	1.17 H	82	56.6	2.6
5	11590.00	60.6 PK	74.0	-13.4	1.98 H	256	46.3	14.3
6	11590.00	48.0 AV	54.0	-6.0	1.98 H	256	33.7	14.3
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	#5628.80	58.3 PK	68.2	-9.9	3.30 V	206	56.6	1.7
2	*5795.00	109.0 PK			3.30 V	206	68.9	40.1
3	*5795.00	98.1 AV			3.30 V	206	58.0	40.1
4	#5943.20	59.9 PK	68.2	-8.3	3.30 V	206	57.3	2.6
5	11590.00	60.5 PK	74.0	-13.5	2.41 V	296	46.2	14.3
6	11590.00	48.0 AV	54.0	-6.0	2.41 V	296	33.7	14.3

Remarks:

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

802.11ac (VHT80)

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (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	64.5 PK	74.0	-9.5	1.04 H	333	63.7	0.8
2	5150.00	53.2 AV	54.0	-0.8	1.04 H	333	52.4	0.8
3	*5210.00	99.3 PK			1.11 H	335	60.6	38.7
4	*5210.00	88.1 AV			1.11 H	335	49.4	38.7
5	5350.00	57.4 PK	74.0	-16.6	1.02 H	340	56.3	1.1
6	5350.00	44.8 AV	54.0	-9.2	1.02 H	340	43.7	1.1
7	#10420.00	58.3 PK	74.0	-15.7	1.63 H	72	45.4	12.9
8	#10420.00	45.8 AV	54.0	-8.2	1.63 H	72	32.9	12.9
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	5150.00	58.1 PK	74.0	-15.9	2.45 V	260	57.3	0.8
2	5150.00	45.7 AV	54.0	-8.3	2.45 V	260	44.9	0.8
3	*5210.00	93.8 PK			2.44 V	257	55.1	38.7
4	*5210.00	83.4 AV			2.44 V	257	44.7	38.7
5	5350.00	56.5 PK	74.0	-17.5	2.39 V	247	55.4	1.1
6	5350.00	44.2 AV	54.0	-9.8	2.39 V	247	43.1	1.1
7	#10420.00	58.5 PK	74.0	-15.5	1.70 V	121	45.6	12.9
8	#10420.00	45.7 AV	54.0	-8.3	1.70 V	121	32.8	12.9

Remarks:

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

CHANNEL	TX Channel 155	DETECTOR	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz	FUNCTION	Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5648.80	65.6 PK	68.2	-2.6	1.20 H	80	63.9	1.7
2	#5650.00	67.6 PK	68.2	-0.6	1.18 H	90	65.9	1.7
3	*5775.00	103.9 PK			1.20 H	80	63.9	40.0
4	*5775.00	92.4 AV			1.20 H	80	52.4	40.0
5	#5928.80	60.2 PK	68.2	-8.0	1.20 H	80	57.6	2.6
6	11550.00	60.8 PK	74.0	-13.2	1.97 H	228	46.3	14.5
7	11550.00	47.9 AV	54.0	-6.1	1.97 H	228	33.4	14.5
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	#5636.80	63.2 PK	68.2	-5.0	3.29 V	207	61.5	1.7
2	#5650.00	65.3 PK	68.2	-2.9	3.27 V	200	63.6	1.7
3	*5775.00	102.6 PK			3.29 V	207	62.6	40.0
4	*5775.00	92.1 AV			3.29 V	207	52.1	40.0
5	#5935.20	60.0 PK	68.2	-8.2	3.29 V	207	57.4	2.6
6	11550.00	60.1 PK	74.0	-13.9	1.65 V	182	45.6	14.5
7	11550.00	47.7 AV	54.0	-6.3	1.65 V	182	33.2	14.5

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.

2TX

802.11a

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

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	67.7 PK	74.0	-6.3	1.38 H	338	66.9	0.8
2	5150.00	52.8 AV	54.0	-1.2	1.38 H	338	52.0	0.8
3	*5180.00	108.9 PK			1.13 H	338	70.2	38.7
4	*5180.00	98.8 AV			1.13 H	338	60.1	38.7
5	#10360.00	58.0 PK	74.0	-16.0	1.82 H	213	45.3	12.7
6	#10360.00	44.6 AV	54.0	-9.4	1.82 H	213	31.9	12.7
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	69.8 PK	74.0	-4.2	1.71 V	13	69.0	0.8
2	5150.00	53.2 AV	54.0	-0.8	1.71 V	13	52.4	0.8
3	*5180.00	111.5 PK			1.01 V	12	72.8	38.7
4	*5180.00	101.8 AV			1.01 V	12	63.1	38.7
5	#10360.00	57.8 PK	74.0	-16.2	1.76 V	108	45.1	12.7
6	#10360.00	44.7 AV	54.0	-9.3	1.76 V	108	32.0	12.7

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

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	110.2 PK			1.57 H	338	71.5	38.7
2	*5200.00	99.8 AV			1.57 H	338	61.1	38.7
3	#10400.00	58.4 PK	74.0	-15.6	1.43 H	148	45.7	12.7
4	#10400.00	44.7 AV	54.0	-9.3	1.43 H	148	32.0	12.7
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	*5200.00	113.7 PK			1.19 V	14	75.0	38.7
2	*5200.00	104.0 AV			1.19 V	14	65.3	38.7
3	#10400.00	58.2 PK	74.0	-15.8	1.83 V	314	45.5	12.7
4	#10400.00	44.7 AV	54.0	-9.3	1.83 V	314	32.0	12.7

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	111.1 PK			1.93 H	335	72.3	38.8
2	*5240.00	100.6 AV			1.93 H	335	61.8	38.8
3	5350.00	56.7 PK	74.0	-17.3	1.95 H	327	55.6	1.1
4	5350.00	43.5 AV	54.0	-10.5	1.95 H	327	42.4	1.1
5	#10480.00	58.1 PK	74.0	-15.9	1.77 H	287	44.6	13.5
6	#10480.00	45.2 AV	54.0	-8.8	1.77 H	287	31.7	13.5
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	*5240.00	114.0 PK			1.19 V	101	75.2	38.8
2	*5240.00	104.2 AV			1.19 V	101	65.4	38.8
3	5350.00	57.9 PK	74.0	-16.1	1.25 V	117	56.8	1.1
4	5350.00	44.3 AV	54.0	-9.7	1.25 V	117	43.2	1.1
5	#10480.00	58.3 PK	74.0	-15.7	2.33 V	25	44.8	13.5
6	#10480.00	45.2 AV	54.0	-8.8	2.33 V	25	31.7	13.5

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

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	#5608.80	58.2 PK	68.2	-10.0	1.30 H	93	56.5	1.7
2	*5745.00	112.5 PK			1.30 H	93	72.6	39.9
3	*5745.00	102.1 AV			1.30 H	93	62.2	39.9
4	#5988.00	60.1 PK	68.2	-8.1	1.30 H	93	57.3	2.8
5	11490.00	60.4 PK	74.0	-13.6	1.84 H	336	45.9	14.5
6	11490.00	46.7 AV	54.0	-7.3	1.84 H	336	32.2	14.5
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	#5638.40	57.7 PK	68.2	-10.5	1.15 V	22	56.0	1.7
2	*5745.00	114.4 PK			1.15 V	22	74.5	39.9
3	*5745.00	104.2 AV			1.15 V	22	64.3	39.9
4	#5993.60	59.8 PK	68.2	-8.4	1.15 V	22	57.0	2.8
5	11490.00	60.0 PK	74.0	-14.0	2.17 V	358	45.5	14.5
6	11490.00	46.8 AV	54.0	-7.2	2.17 V	358	32.3	14.5

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

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	#5607.20	58.9 PK	68.2	-9.3	1.27 H	89	57.2	1.7
2	*5785.00	112.0 PK			1.27 H	89	71.9	40.1
3	*5785.00	101.6 AV			1.27 H	89	61.5	40.1
4	#5946.40	59.3 PK	68.2	-8.9	1.27 H	89	56.7	2.6
5	11570.00	60.5 PK	74.0	-13.5	2.66 H	184	46.2	14.3
6	11570.00	46.7 AV	54.0	-7.3	2.66 H	184	32.4	14.3
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	#5605.60	57.4 PK	68.2	-10.8	1.14 V	22	55.7	1.7
2	*5785.00	114.4 PK			1.14 V	22	74.3	40.1
3	*5785.00	104.6 AV			1.14 V	22	64.5	40.1
4	#5992.00	58.4 PK	68.2	-9.8	1.14 V	22	55.6	2.8
5	11570.00	60.4 PK	74.0	-13.6	1.75 V	286	46.1	14.3
6	11570.00	46.5 AV	54.0	-7.5	1.75 V	286	32.2	14.3

Remarks:

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

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

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	#5636.80	58.1 PK	68.2	-10.1	1.48 H	88	56.4	1.7
2	*5825.00	111.7 PK			1.48 H	88	71.5	40.2
3	*5825.00	101.4 AV			1.48 H	88	61.2	40.2
4	#5988.00	59.2 PK	68.2	-9.0	1.48 H	88	56.4	2.8
5	11650.00	59.8 PK	74.0	-14.2	1.72 H	294	45.4	14.4
6	11650.00	46.4 AV	54.0	-7.6	1.72 H	294	32.0	14.4
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	#5639.20	58.1 PK	68.2	-10.1	1.13 V	24	56.4	1.7
2	*5825.00	113.7 PK			1.13 V	24	73.5	40.2
3	*5825.00	104.0 AV			1.13 V	24	63.8	40.2
4	#5947.20	59.1 PK	68.2	-9.1	1.13 V	24	56.5	2.6
5	11650.00	60.2 PK	74.0	-13.8	1.97 V	194	45.8	14.4
6	11650.00	46.8 AV	54.0	-7.2	1.97 V	194	32.4	14.4

Remarks:

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

802.11n (HT20)

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

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	68.0 PK	74.0	-6.0	1.40 H	6	67.2	0.8
2	5150.00	50.6 AV	54.0	-3.4	1.40 H	6	49.8	0.8
3	*5180.00	109.1 PK			1.55 H	334	70.4	38.7
4	*5180.00	97.6 AV			1.55 H	334	58.9	38.7
5	#10360.00	57.9 PK	74.0	-16.1	1.95 H	261	45.2	12.7
6	#10360.00	44.7 AV	54.0	-9.3	1.95 H	261	32.0	12.7
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	67.5 PK	74.0	-6.5	1.22 V	3	66.7	0.8
2	5150.00	53.1 AV	54.0	-0.9	1.22 V	3	52.3	0.8
3	*5180.00	110.1 PK			1.51 V	10	71.4	38.7
4	*5180.00	100.2 AV			1.51 V	10	61.5	38.7
5	#10360.00	57.6 PK	74.0	-16.4	1.99 V	318	44.9	12.7
6	#10360.00	44.5 AV	54.0	-9.5	1.99 V	318	31.8	12.7

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

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	110.9 PK			1.35 H	337	72.2	38.7
2	*5200.00	99.3 AV			1.35 H	337	60.6	38.7
3	#10400.00	58.2 PK	74.0	-15.8	1.84 H	276	45.5	12.7
4	#10400.00	44.9 AV	54.0	-9.1	1.84 H	276	32.2	12.7
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	*5200.00	113.7 PK			1.12 V	12	75.0	38.7
2	*5200.00	103.3 AV			1.12 V	12	64.6	38.7
3	#10400.00	58.0 PK	74.0	-16.0	1.87 V	186	45.3	12.7
4	#10400.00	44.7 AV	54.0	-9.3	1.87 V	186	32.0	12.7

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	111.7 PK			1.15 H	336	72.9	38.8
2	*5240.00	100.0 AV			1.15 H	336	61.2	38.8
3	5350.00	57.4 PK	74.0	-16.6	1.24 H	352	56.3	1.1
4	5350.00	43.7 AV	54.0	-10.3	1.24 H	352	42.6	1.1
5	#10480.00	58.5 PK	74.0	-15.5	1.82 H	189	45.0	13.5
6	#10480.00	45.5 AV	54.0	-8.5	1.82 H	189	32.0	13.5
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	*5240.00	113.0 PK			1.26 V	15	74.2	38.8
2	*5240.00	102.8 AV			1.26 V	15	64.0	38.8
3	5380.00	57.1 PK	74.0	-16.9	1.28 V	22	55.9	1.2
4	5380.00	44.0 AV	54.0	-10.0	1.28 V	22	42.8	1.2
5	#10480.00	59.1 PK	74.0	-14.9	1.73 V	182	45.6	13.5
6	#10480.00	45.4 AV	54.0	-8.6	1.73 V	182	31.9	13.5

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

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	#5628.00	58.1 PK	68.2	-10.1	1.26 H	83	56.4	1.7
2	*5745.00	113.3 PK			1.26 H	83	73.4	39.9
3	*5745.00	101.8 AV			1.26 H	83	61.9	39.9
4	#5955.20	60.2 PK	68.2	-8.0	1.26 H	83	57.6	2.6
5	11490.00	59.7 PK	74.0	-14.3	1.85 H	44	45.2	14.5
6	11490.00	46.4 AV	54.0	-7.6	1.85 H	44	31.9	14.5
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	#5632.80	58.9 PK	68.2	-9.3	1.13 V	20	57.2	1.7
2	*5745.00	114.1 PK			1.13 V	20	74.2	39.9
3	*5745.00	103.6 AV			1.13 V	20	63.7	39.9
4	#5961.60	58.9 PK	68.2	-9.3	1.13 V	20	56.3	2.6
5	11490.00	60.3 PK	74.0	-13.7	3.22 V	285	45.8	14.5
6	11490.00	46.7 AV	54.0	-7.3	3.22 V	285	32.2	14.5

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5619.20	58.8 PK	68.2	-9.4	1.32 H	88	57.1	1.7
2	*5785.00	113.6 PK			1.32 H	88	73.5	40.1
3	*5785.00	101.9 AV			1.32 H	88	61.8	40.1
4	#5950.40	59.4 PK	68.2	-8.8	1.32 H	88	56.8	2.6
5	11570.00	60.6 PK	74.0	-13.4	1.29 H	308	46.3	14.3
6	11570.00	46.7 AV	54.0	-7.3	1.29 H	308	32.4	14.3
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	#5647.20	57.5 PK	68.2	-10.7	1.11 V	22	55.8	1.7
2	*5785.00	114.3 PK			1.11 V	22	74.2	40.1
3	*5785.00	104.2 AV			1.11 V	22	64.1	40.1
4	#5940.80	59.1 PK	68.2	-9.1	1.11 V	22	56.5	2.6
5	11570.00	59.6 PK	74.0	-14.4	2.87 V	282	45.3	14.3
6	11570.00	46.8 AV	54.0	-7.2	2.87 V	282	32.5	14.3

Remarks:

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

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

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	#5642.40	57.7 PK	68.2	-10.5	1.35 H	89	56.0	1.7
2	*5825.00	112.9 PK			1.35 H	89	72.7	40.2
3	*5825.00	101.4 AV			1.35 H	89	61.2	40.2
4	#5976.80	59.0 PK	68.2	-9.2	1.35 H	89	56.2	2.8
5	11650.00	60.0 PK	74.0	-14.0	2.61 H	283	45.6	14.4
6	11650.00	46.7 AV	54.0	-7.3	2.61 H	283	32.3	14.4
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	#5611.20	57.2 PK	68.2	-11.0	1.11 V	24	55.5	1.7
2	*5825.00	113.5 PK			1.11 V	24	73.3	40.2
3	*5825.00	102.8 AV			1.11 V	24	62.6	40.2
4	#5982.40	58.4 PK	68.2	-9.8	1.11 V	24	55.6	2.8
5	11650.00	59.4 PK	74.0	-14.6	1.66 V	284	45.0	14.4
6	11650.00	46.4 AV	54.0	-7.6	1.66 V	284	32.0	14.4

Remarks:

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

802.11n (HT40)

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

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	65.9 PK	74.0	-8.1	1.31 H	333	65.1	0.8
2	5150.00	51.9 AV	54.0	-2.1	1.31 H	333	51.1	0.8
3	*5190.00	102.8 PK			1.28 H	332	64.1	38.7
4	*5190.00	91.5 AV			1.28 H	332	52.8	38.7
5	#10380.00	58.4 PK	74.0	-15.6	1.75 H	355	45.6	12.8
6	#10380.00	45.8 AV	54.0	-8.2	1.75 H	355	33.0	12.8
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	5150.00	66.7 PK	74.0	-7.3	1.46 V	12	65.9	0.8
2	5150.00	53.5 AV	54.0	-0.5	1.46 V	12	52.7	0.8
3	*5190.00	103.8 PK			1.52 V	10	65.1	38.7
4	*5190.00	94.1 AV			1.52 V	10	55.4	38.7
5	#10380.00	59.0 PK	74.0	-15.0	1.85 V	284	46.2	12.8
6	#10380.00	45.8 AV	54.0	-8.2	1.85 V	284	33.0	12.8

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

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	63.1 PK	74.0	-10.9	1.54 H	1	62.3	0.8
2	5150.00	51.0 AV	54.0	-3.0	1.54 H	1	50.2	0.8
3	*5230.00	108.1 PK			1.30 H	338	69.3	38.8
4	*5230.00	96.8 AV			1.30 H	338	58.0	38.8
5	#10460.00	58.7 PK	74.0	-15.3	1.93 H	263	45.4	13.3
6	#10460.00	45.4 AV	54.0	-8.6	1.93 H	263	32.1	13.3
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	67.5 PK	74.0	-6.5	1.00 V	12	66.7	0.8
2	5150.00	53.3 AV	54.0	-0.7	1.00 V	12	52.5	0.8
3	*5230.00	109.7 PK			1.00 V	13	70.9	38.8
4	*5230.00	100.1 AV			1.00 V	13	61.3	38.8
5	#10460.00	57.8 PK	74.0	-16.2	1.47 V	327	44.5	13.3
6	#10460.00	45.7 AV	54.0	-8.3	1.47 V	327	32.4	13.3

Remarks:

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

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

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	#5645.60	62.8 PK	68.2	-5.4	1.36 H	86	61.1	1.7
2	*5755.00	110.2 PK			1.36 H	86	70.3	39.9
3	*5755.00	99.2 AV			1.36 H	86	59.3	39.9
4	#5936.00	59.0 PK	68.2	-9.2	1.36 H	86	56.4	2.6
5	11510.00	59.0 PK	74.0	-15.0	2.31 H	285	44.5	14.5
6	11510.00	45.8 AV	54.0	-8.2	2.31 H	285	31.3	14.5
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5644.00	63.4 PK	68.2	-4.8	1.01 V	21	61.7	1.7
2	*5755.00	112.1 PK			1.01 V	21	72.2	39.9
3	*5755.00	101.5 AV			1.01 V	21	61.6	39.9
4	#5980.80	58.4 PK	68.2	-9.8	1.01 V	21	55.6	2.8
5	11490.00	60.7 PK	74.0	-13.3	2.86 V	45	46.2	14.5
6	11490.00	47.4 AV	54.0	-6.6	2.86 V	45	32.9	14.5

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5600.80	58.1 PK	68.2	-10.1	1.36 H	89	56.5	1.6
2	*5795.00	109.5 PK			1.36 H	89	69.4	40.1
3	*5795.00	98.0 AV			1.36 H	89	57.9	40.1
4	#5988.00	58.9 PK	68.2	-9.3	1.36 H	89	56.1	2.8
5	11590.00	59.8 PK	74.0	-14.2	1.89 H	263	45.5	14.3
6	11590.00	47.9 AV	54.0	-6.1	1.89 H	263	33.6	14.3
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	#5630.40	57.5 PK	68.2	-10.7	1.01 V	21	55.8	1.7
2	*5795.00	111.8 PK			1.01 V	21	71.7	40.1
3	*5795.00	101.4 AV			1.01 V	21	61.3	40.1
4	#5956.00	59.1 PK	68.2	-9.1	1.01 V	21	56.5	2.6
5	11590.00	60.8 PK	74.0	-13.2	2.36 V	352	46.5	14.3
6	11590.00	47.7 AV	54.0	-6.3	2.36 V	352	33.4	14.3

Remarks:

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

802.11ac (VHT80)

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	63.0 PK	74.0	-11.0	1.48 H	335	62.2	0.8
2	5150.00	51.7 AV	54.0	-2.3	1.48 H	335	50.9	0.8
3	*5210.00	100.1 PK			1.00 H	333	61.4	38.7
4	*5210.00	88.1 AV			1.00 H	333	49.4	38.7
5	5350.00	57.8 PK	74.0	-16.2	1.56 H	318	56.7	1.1
6	5350.00	44.9 AV	54.0	-9.1	1.56 H	318	43.8	1.1
7	#10420.00	58.0 PK	74.0	-16.0	1.76 H	267	45.1	12.9
8	#10420.00	45.5 AV	54.0	-8.5	1.76 H	267	32.6	12.9
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	5150.00	65.2 PK	74.0	-8.8	1.02 V	11	64.4	0.8
2	5150.00	53.4 AV	54.0	-0.6	1.02 V	11	52.6	0.8
3	*5210.00	101.0 PK			1.00 V	12	62.3	38.7
4	*5210.00	91.1 AV			1.00 V	12	52.4	38.7
5	5350.00	57.3 PK	74.0	-16.7	1.18 V	25	56.2	1.1
6	5350.00	45.4 AV	54.0	-8.6	1.18 V	25	44.3	1.1
7	#10420.00	59.1 PK	74.0	-14.9	1.68 V	165	46.2	12.9
8	#10420.00	46.0 AV	54.0	-8.0	1.68 V	165	33.1	12.9

Remarks:

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

CHANNEL	TX Channel 155	DETECTOR	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz	FUNCTION	Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5644.00	66.6 PK	68.2	-1.6	1.33 H	81	64.9	1.7
2	#5649.00	67.6 PK	68.2	-0.6	1.31 H	89	65.9	1.7
3	*5775.00	105.8 PK			1.33 H	81	65.8	40.0
4	*5775.00	93.7 AV			1.33 H	81	53.7	40.0
5	#5943.20	60.1 PK	68.2	-8.1	1.33 H	81	57.5	2.6
6	11550.00	60.2 PK	74.0	-13.8	1.49 H	277	45.7	14.5
7	11550.00	47.8 AV	54.0	-6.2	1.49 H	277	33.3	14.5
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5644.00	66.8 PK	68.2	-1.4	1.02 V	21	65.1	1.7
2	#5649.00	66.8 PK	68.2	-1.4	1.15 V	35	65.1	1.7
3	*5775.00	106.7 PK			1.02 V	21	66.7	40.0
4	*5775.00	96.1 AV			1.02 V	21	56.1	40.0
5	#5940.80	59.8 PK	68.2	-8.4	1.02 V	21	57.2	2.6
6	11550.00	60.7 PK	74.0	-13.3	2.73 V	233	46.2	14.5
7	11550.00	47.8 AV	54.0	-6.2	2.73 V	233	33.3	14.5

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.

Below 1GHz Worst-Case Data: 802.11a

CHANNEL	TX Channel 36	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	26.9 QP	40.0	-13.1	2.00 H	227	41.5	-14.6
2	146.56	29.7 QP	43.5	-13.8	2.00 H	88	43.7	-14.0
3	405.15	31.9 QP	46.0	-14.1	1.00 H	166	42.0	-10.1
4	486.81	37.4 QP	46.0	-8.6	2.00 H	178	45.6	-8.2
5	729.84	37.8 QP	46.0	-8.2	1.00 H	112	40.6	-2.8
6	897.05	38.0 QP	46.0	-8.0	1.50 H	188	37.9	0.1
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	55.18	32.8 QP	40.0	-7.2	1.00 V	7	47.3	-14.5
2	101.84	30.1 QP	43.5	-13.4	1.00 V	66	48.3	-18.2
3	405.15	30.7 QP	46.0	-15.3	1.00 V	222	40.8	-10.1
4	566.52	35.1 QP	46.0	-10.9	1.00 V	12	41.7	-6.6
5	729.84	39.6 QP	46.0	-6.4	1.49 V	224	42.4	-2.8
6	932.05	35.1 QP	46.0	-10.9	2.00 V	23	34.1	1.0

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

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. 21, 2016	Nov. 20, 2017
RF signal cable (with 10dB PAD) Woken	5D-FB	Cable-cond1-01	Dec. 22, 2016	Dec. 21, 2017
LISN ROHDE & SCHWARZ (EUT)	ESH3-Z5	835239/001	Mar. 10, 2017	Mar. 09, 2018
LISN ROHDE & SCHWARZ (Peripheral)	ESH3-Z5	100311	Jul. 28, 2016	Jul. 27, 2017
Software ADT	BV ADT_Cond_ V7.3.7.3	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

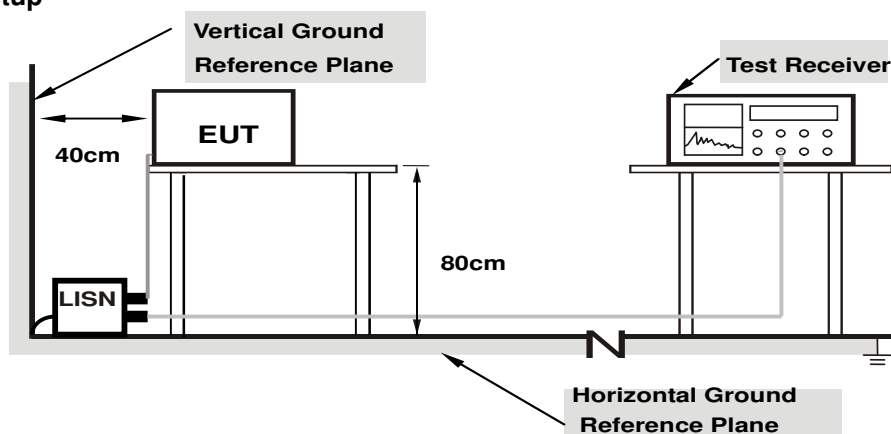
- The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance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

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

4.2.4 Deviation from Test Standard

No deviation.

4.2.5 Test Setup



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

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

4.2.6 EUT Operating Conditions

Same as 4.1.6.

4.2.7 Test Results

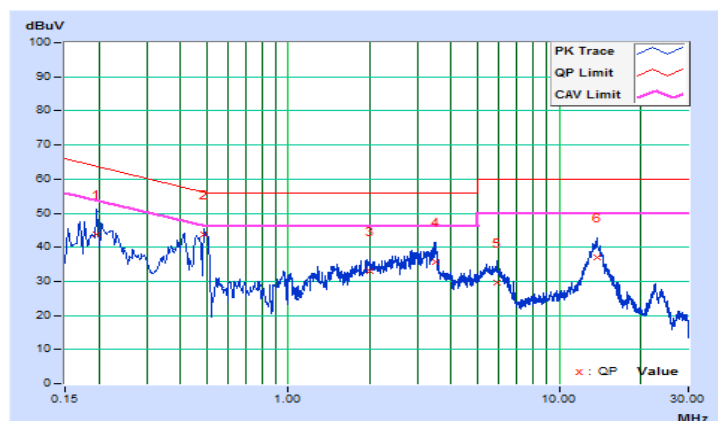
Worst-case data: 802.11a

Phase	Line (L)	Detector Function	Quasi-Peak (QP) / Average (AV)
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No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.19692	10.43	33.42	26.52	43.85	36.95	63.74	53.74	-19.89	-16.79
2	0.49017	10.50	33.18	21.67	43.68	32.17	56.16	46.16	-12.48	-13.99
3	1.99552	10.52	22.63	14.24	33.15	24.76	56.00	46.00	-22.85	-21.24
4	3.48523	10.62	24.94	15.99	35.56	26.61	56.00	46.00	-20.44	-19.39
5	5.92898	10.74	19.05	13.90	29.79	24.64	60.00	50.00	-30.21	-25.36
6	13.87410	11.10	25.80	20.42	36.90	31.52	60.00	50.00	-23.10	-18.48

REMARKS:

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

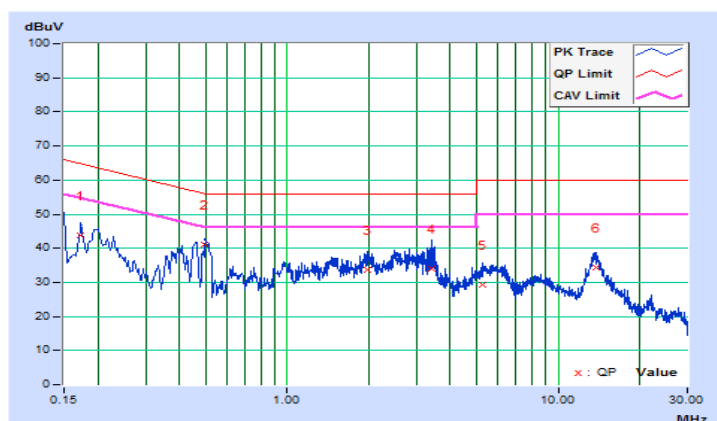


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)
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No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.17328	10.18	33.74	23.84	43.92	34.02	64.80	54.80	-20.88	-20.78
2	0.49799	10.23	30.79	23.29	41.02	33.52	56.03	46.03	-15.01	-12.51
3	1.98379	10.31	23.39	13.69	33.70	24.00	56.00	46.00	-22.30	-22.00
4	3.43049	10.39	23.65	13.07	34.04	23.46	56.00	46.00	-21.96	-22.54
5	5.29165	10.47	18.82	13.13	29.29	23.60	60.00	50.00	-30.71	-26.40
6	13.86628	10.79	23.44	18.08	34.23	28.87	60.00	50.00	-25.77	-21.13

REMARKS:

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



4.3 Transmit Power Measurement

4.3.1 Limits of Transmit Power Measurement

Operation Band	EUT Category		Limit
U-NII-1		Outdoor Access Point	1 Watt (30 dBm) (Max. e.i.r.p $\leq$ 125mW(21 dBm) at any elevation angle above 30 degrees as measured from the horizon)
		Fixed point-to-point Access Point	1 Watt (30 dBm)
		Indoor Access Point	1 Watt (30 dBm)
	√	Mobile and Portable client device	250mW (24 dBm)
U-NII-2A	-		250mW (24 dBm) or 11 dBm+10 log B*
U-NII-2C	-		250mW (24 dBm) or 11 dBm+10 log B*
U-NII-3	√		1 Watt (30 dBm)

*B is the 26 dB emission bandwidth in megahertz

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

Array Gain = 0 dB (i.e., no array gain) for $N_{ANT} \leq 4$;

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

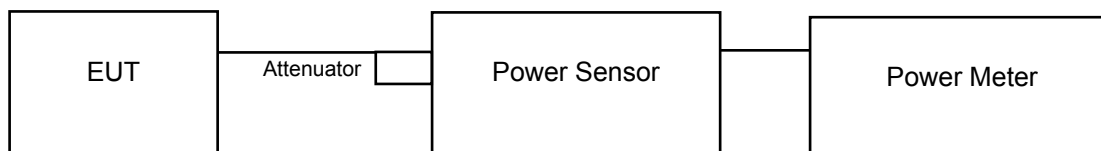
Array Gain = 5 log(N_{ANT}/N_{SS}) dB or 3 dB, whichever is less for 20-MHz channel widths with $N_{ANT} \geq 5$.

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

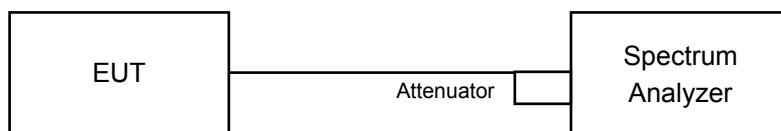
4.3.2 Test Setup

For Power Output

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



802.11ac (VHT80)



4.3.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.3.4 Test Procedure

For Average Power Measurement

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

Method PM is used to perform output power measurement, trigger and gating function of wide band power meter is enabled to measure max output power of TX on burst. 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 $\geq$ 3 MHz.
- e. Number of points in sweep $\geq$ 2 Span / RBW.
- f. Sweep time $\leq$ (number of points in sweep) * T
- g. Using emission bandwidth to determine the frequency span for integration the channel bandwidth.
- h. Detector = RMS.
- i. Trace mode = max hold.
- j. Allow max hold to run for at least 60 seconds, or longer as needed to allow the trace to stabilize.
- k. Compute power by integrating the spectrum across the EBW (or, alternatively, the entire 99% occupied bandwidth) of the signal using the instrument's band power measurement function with band limits set equal to the EBW (or occupied bandwidth) band edges. If the instrument does not have a band power function, sum the spectrum levels (in power units) at 1 MHz intervals extending across the EBW (or, alternatively, the entire 99% occupied bandwidth) of the spectrum.

4.3.5 Deviation from Test Standard

No deviation.

4.3.6 EUT Operating Conditions

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

4.3.7 Test Result

Power Output:

CDD Mode, 1TX

802.11a

Chan.	Freq. (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
36	5180	61.944	17.92	24.00	Pass
40	5200	85.901	19.34	24.00	Pass
48	5240	85.507	19.32	24.00	Pass
149	5745	80.168	19.04	30.00	Pass
157	5785	80.168	19.04	30.00	Pass
165	5825	78.163	18.93	30.00	Pass

802.11n (HT20)

Chan.	Freq. (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
36	5180	63.387	18.02	24.00	Pass
40	5200	89.125	19.50	24.00	Pass
48	5240	86.896	19.39	24.00	Pass
149	5745	77.625	18.90	30.00	Pass
157	5785	77.804	18.91	30.00	Pass
165	5825	79.068	18.98	30.00	Pass

802.11n (HT40)

Chan.	Freq. (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
38	5190	29.648	14.72	24.00	Pass
46	5230	102.565	20.11	24.00	Pass
151	5755	84.333	19.26	30.00	Pass
159	5795	81.846	19.13	30.00	Pass

802.11ac (VHT80)

Chan.	Freq. (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
42	5210	24.831	13.95	24.00	Pass
155	5775	48.641	16.87	30.00	Pass

CDD Mode, 2TX

802.11a

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
36	5180	18.26	17.70	125.872	21.00	24.00	Pass
40	5200	19.68	19.49	181.817	22.60	24.00	Pass
48	5240	19.66	19.38	179.166	22.53	24.00	Pass
149	5745	19.53	19.01	169.359	22.29	30.00	Pass
157	5785	19.07	18.72	155.197	21.91	30.00	Pass
165	5825	18.01	18.17	128.856	21.10	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				
36	5180	17.84	17.20	113.295	20.54	24.00	Pass
40	5200	19.51	19.50	178.456	22.52	24.00	Pass
48	5240	19.40	19.34	172.997	22.38	24.00	Pass
149	5745	19.54	19.06	170.488	22.32	30.00	Pass
157	5785	19.02	18.71	154.101	21.88	30.00	Pass
165	5825	18.11	18.32	132.634	21.23	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				
38	5190	14.67	14.02	54.544	17.37	24.00	Pass
46	5230	19.75	19.48	183.122	22.63	24.00	Pass
151	5755	19.44	19.32	173.409	22.39	30.00	Pass
159	5795	18.97	18.56	150.665	21.78	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				
42	5210	13.62	13.32	44.492	16.48	24.00	Pass
155	5775	17.63	17.50	114.177	20.58	30.00	Pass

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				
36	5180	16.43	15.91	82.948	19.19	22.81	Pass
40	5200	19.51	19.50	178.456	22.52	22.81	Pass
48	5240	19.40	19.34	172.997	22.38	22.81	Pass
149	5745	19.54	19.06	170.488	22.32	29.00	Pass
157	5785	19.02	18.71	154.101	21.88	29.00	Pass
165	5825	18.11	18.32	132.634	21.23	29.00	Pass

802.11n (HT40)

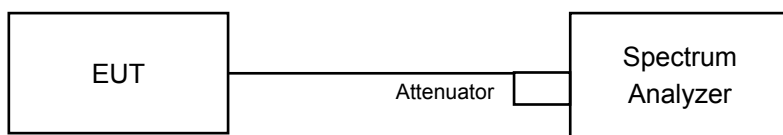
Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
38	5190	12.81	12.77	38.022	15.80	22.81	Pass
46	5230	19.06	18.88	157.806	21.98	22.81	Pass
151	5755	19.44	19.32	173.409	22.39	29.00	Pass
159	5795	18.97	18.56	150.665	21.78	29.00	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				
42	5210	13.39	12.96	41.597	16.19	22.81	Pass
155	5775	16.81	15.54	83.783	19.23	29.00	Pass

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

1TX

802.11a

Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)
36	5180	17.28
40	5200	18.12
48	5240	18.24
149	5745	19.30
157	5785	18.60
165	5825	18.00

802.11n (HT20)

Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)
36	5180	18.24
40	5200	18.60
48	5240	18.72
149	5745	19.44
157	5785	19.56
165	5825	18.84

802.11n (HT40)

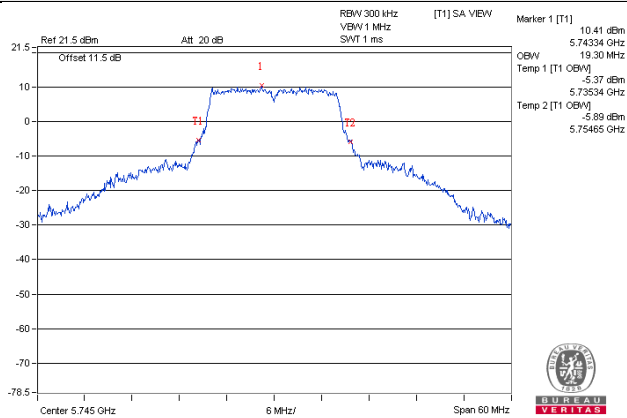
Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)
38	5190	36.72
46	5230	37.44
151	5755	37.68
159	5795	37.32

802.11ac (VHT80)

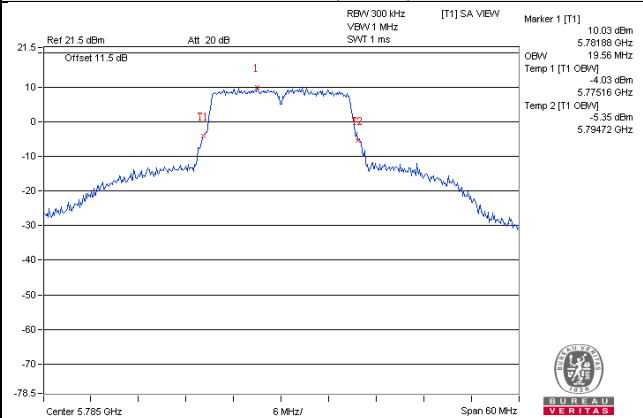
Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)
42	5210	75.84
155	5775	76.08

Spectrum Plot of Worst Value

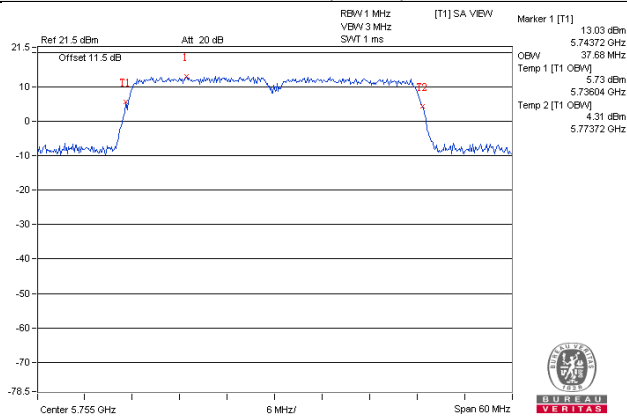
802.11a



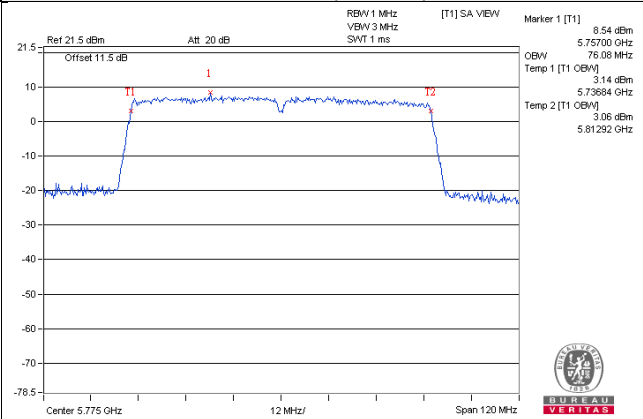
802.11n (HT20)



802.11n (HT40)



802.11ac (VHT80)



2TX

802.11a

Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
36	5180	17.04	17.16
40	5200	18.00	18.48
48	5240	18.36	18.48
149	5745	19.73	19.47
157	5785	18.48	18.00
165	5825	17.76	17.64

802.11n (HT20)

Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
36	5180	18.00	18.12
40	5200	18.72	19.32
48	5240	18.72	19.32
149	5745	21.00	19.92
157	5785	19.32	18.84
165	5825	18.60	18.36

802.11n (HT40)

Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
38	5190	36.72	36.60
46	5230	37.08	37.44
151	5755	37.68	37.08
159	5795	37.20	37.08

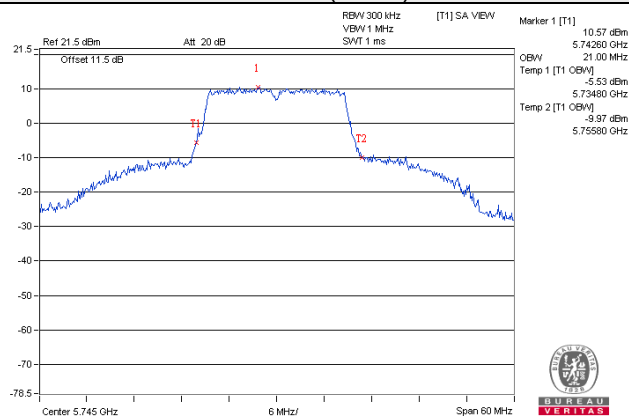
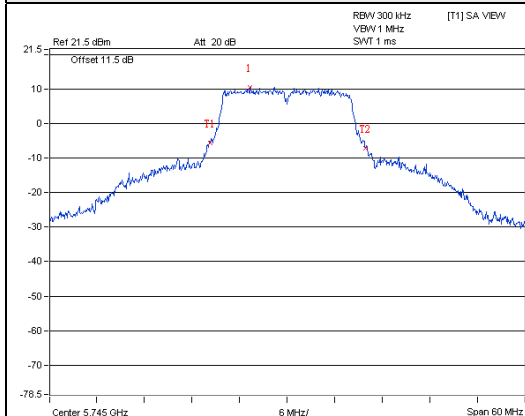
802.11ac (VHT80)

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

Spectrum Plot of Worst Value

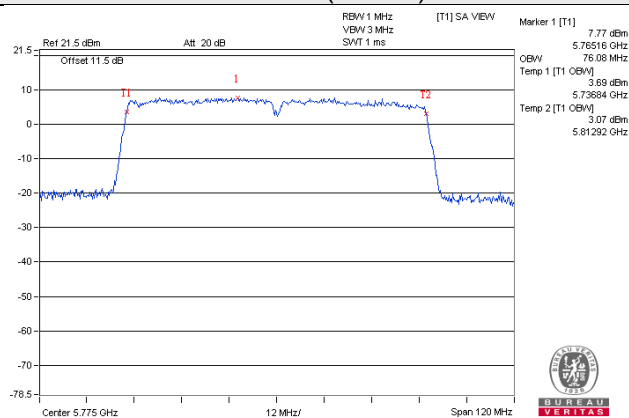
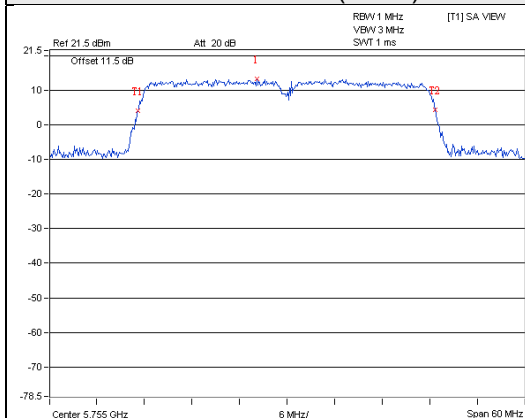
802.11a

802.11n (HT20)



802.11n (HT40)

802.11ac (VHT80)

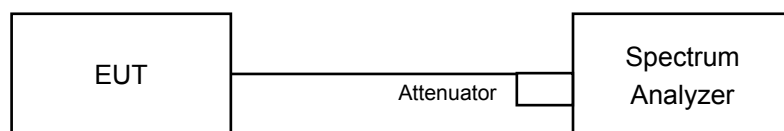


4.5 Peak Power Spectral Density Measurement

4.5.1 Limits of Peak Power Spectral Density Measurement

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

4.5.2 Test Setup



4.5.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.5.4 Test Procedures

For U-NII-1 band:

Duty cycle of test signal is $\geq 98\%$

- Using method SA-1
- Set span to encompass the entire emission bandwidth (EBW) of the signal.
- Set RBW = 1MHz, Set VBW ≥ 3 MHz, Detector = RMS
- Set Channel power measure = 1MHz
- Sweep time = auto, trigger set to "free run".
- Trace average at least 100 traces in power averaging mode.
- 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 $\geq$ 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 $\geq$ 98%

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

1TX

802.11a

Chan.	Freq. (MHz)	PSD (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
36	5180	4.24	11.00	Pass
40	5200	5.75	11.00	Pass
48	5240	5.68	11.00	Pass

802.11n (HT20)

Chan.	Freq. (MHz)	PSD (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
36	5180	4.07	11.00	Pass
40	5200	5.53	11.00	Pass
48	5240	5.54	11.00	Pass

802.11n (HT40)

Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)	Duty Factor (dB)	PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
38	5190	-2.05	0.18	-1.87	11.00	Pass
46	5230	3.28	0.18	3.46	11.00	Pass

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

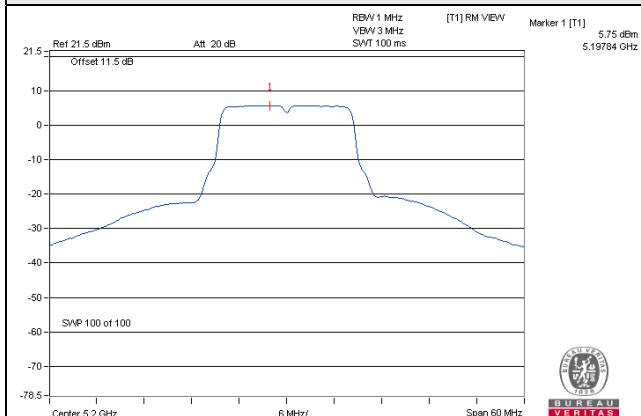
802.11ac (VHT80)

Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)	Duty Factor (dB)	PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
42	5210	-6.11	0.27	-5.84	11.00	Pass

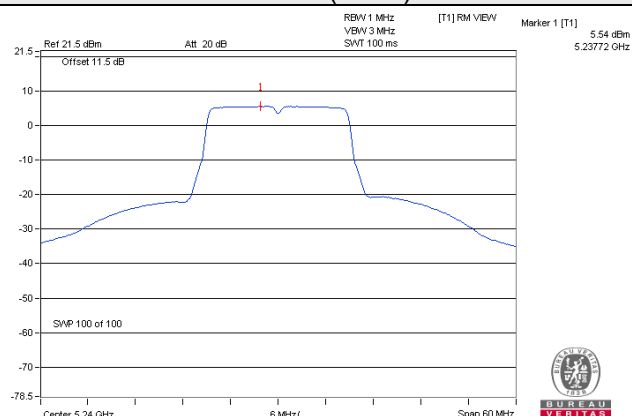
Note: Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value

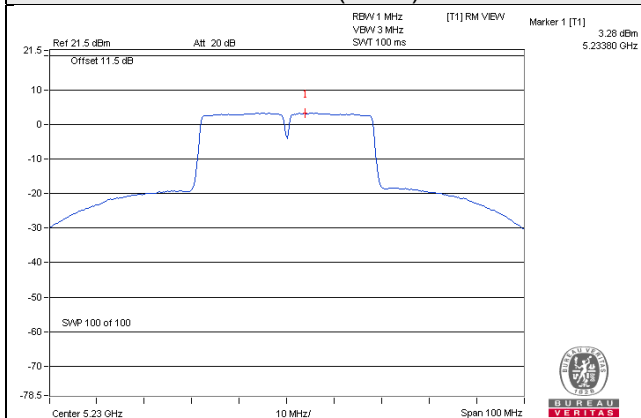
802.11a



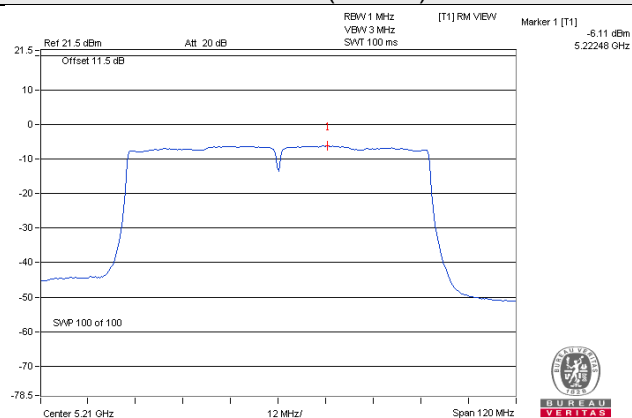
802.11n (HT20)



802.11n (HT40)



802.11ac (VHT80)



2TX

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	4.19	4.75	0.11	7.60	9.81	Pass
40	5200	5.85	6.29	0.11	9.20	9.81	Pass
48	5240	5.90	6.02	0.11	9.09	9.81	Pass

Note:

- 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.
- Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2/N]$ = 7.19dBi > 6dBi, so the limit shall be reduced to $11-(7.19-6) = 9.81\text{dBm}$.
- Refer to section 3.3 for duty cycle spectrum plot.

802.11n (HT20)

Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)		Duty Factor (dB)	Total PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1				
36	5180	3.43	4.17	0.12	6.95	9.81	Pass
40	5200	5.61	5.96	0.12	8.92	9.81	Pass
48	5240	5.44	5.71	0.12	8.71	9.81	Pass

Note:

- 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.
- Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2/N]$ = 7.19dBi > 6dBi, so the limit shall be reduced to $11-(7.19-6) = 9.81\text{dBm}$.
- Refer to section 3.3 for duty cycle spectrum plot.

802.11n (HT40)

Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)		Duty Factor (dB)	Total PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1				
38	5190	-2.76	-1.95	0.14	0.82	9.81	Pass
46	5230	2.62	3.14	0.14	6.04	9.81	Pass

Note:

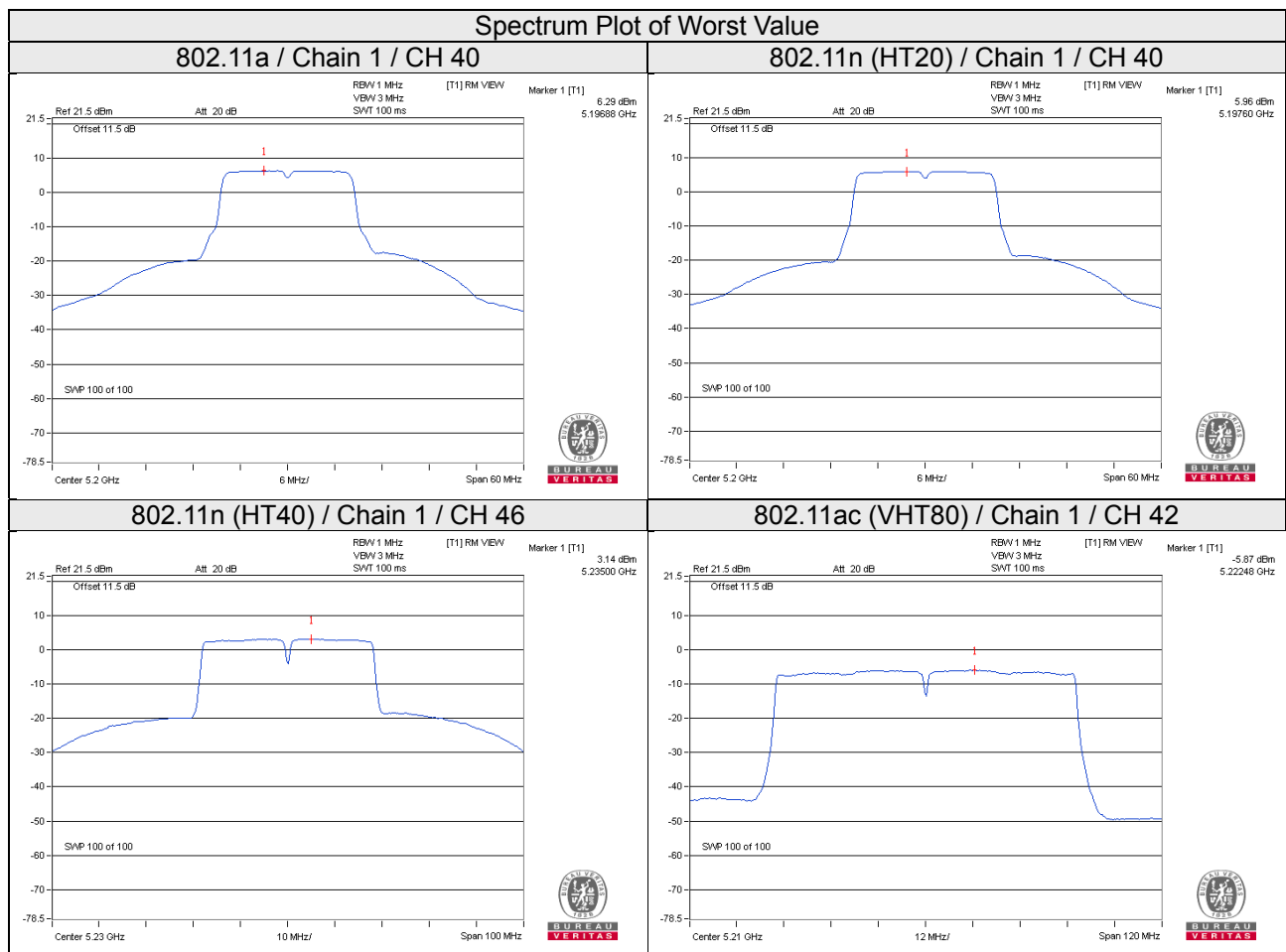
- Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
- Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2/N]$ = 7.19dBi > 6dBi, so the limit shall be reduced to $11-(7.19-6) = 9.81\text{dBm}$.
- Refer to section 3.3 for duty cycle spectrum plot.

802.11ac (VHT80)

Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)		Duty Factor (dB)	Total PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1				
42	5210	-6.52	-5.89	0.28	-2.90	9.81	Pass

Note:

- 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.
- Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2/N] = 7.19\text{dBi} > 6\text{dBi}$, so the limit shall be reduced to $11-(7.19-6) = 9.81\text{dBm}$.
- Refer to section 3.3 for duty cycle spectrum plot.



For U-NII-3 band:

1TX

802.11a

Chan.	Freq. (MHz)	PSD (dBm/300kHz)	PSD (dBm/500kHz)	Limit (dBm/500kHz)	Pass / Fail
149	5745	-2.16	0.06	30.00	Pass
157	5785	-2.54	-0.32	30.00	Pass
165	5825	-3.17	-0.95	30.00	Pass

802.11n (HT20)

Chan.	Freq. (MHz)	PSD (dBm/300kHz)	PSD (dBm/500kHz)	Limit (dBm/500kHz)	Pass / Fail
149	5745	-2.72	-0.50	30.00	Pass
157	5785	-2.96	-0.74	30.00	Pass
165	5825	-3.49	-1.27	30.00	Pass

802.11n (HT40)

Chan.	Freq. (MHz)	PSD w/o Duty Factor		Duty Factor (dB)	Total PSD with Duty Factor (dBm/500kHz)	Limit (dBm/500kHz)	Pass / Fail
		(dBm/300kHz)	(dBm/500kHz)				
151	5755	-5.74	-3.52	0.18	-3.34	30.00	Pass
159	5795	-6.45	-4.23	0.18	-4.05	30.00	Pass

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

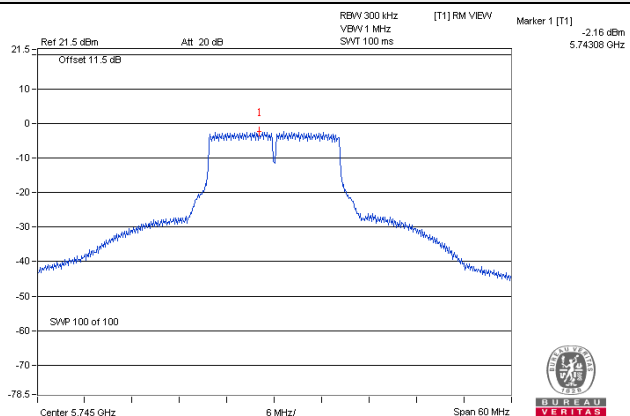
802.11ac (VHT80)

Chan.	Freq. (MHz)	PSD w/o Duty Factor		Duty Factor (dB)	Total PSD with Duty Factor (dBm/500kHz)	Limit (dBm/500kHz)	Pass / Fail
		(dBm/300kHz)	(dBm/500kHz)				
155	5775	-11.39	-9.17	0.27	-8.90	30.00	Pass

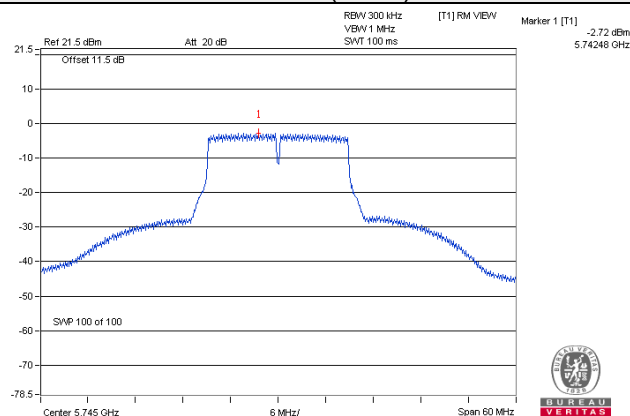
Note: Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value

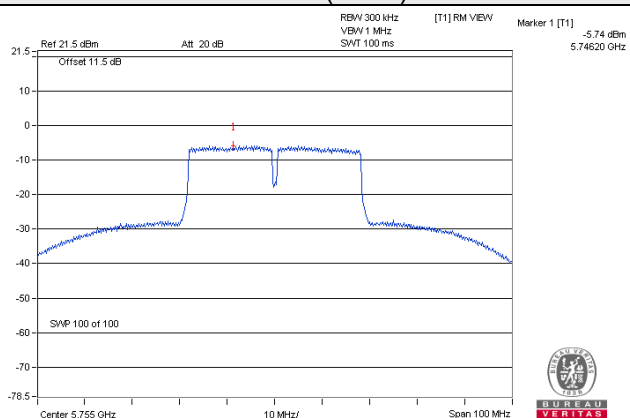
802.11a



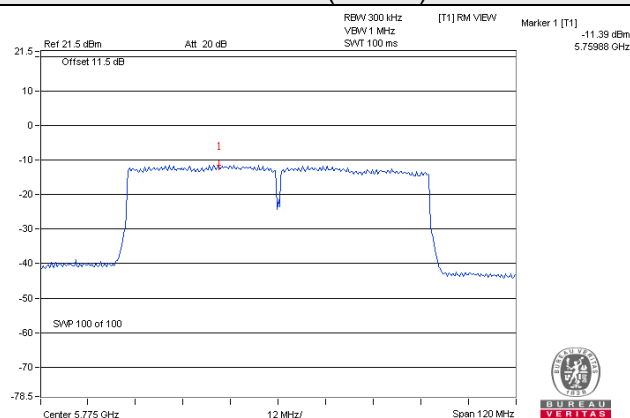
802.11n (HT20)



802.11n (HT40)



802.11ac (VHT80)



2TX

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	-1.90	0.32	3.01	0.11	3.44	29.00	Pass
	157	5785	-2.55	-0.33	3.01	0.11	2.79	29.00	Pass
	165	5825	-2.94	-0.72	3.01	0.11	2.40	29.00	Pass
1	149	5745	-2.51	-0.29	3.01	0.11	2.83	29.00	Pass
	157	5785	-3.22	-1.00	3.01	0.11	2.12	29.00	Pass
	165	5825	-3.58	-1.36	3.01	0.11	1.76	29.00	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 = $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2/N]$ = 7.00dBi > 6dBi, so the limit shall be reduced to 30-(7.00-6) = 29.00dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11n (HT20)

TX chain	Chan.	Freq. (MHz)	PSD w/o Duty Factor		10 log (N=2) dB	Duty Factor (dB)	Total PSD with Duty Factor (dBm/500kHz)	Limit (dBm/500kHz)	Pass / Fail
			(dBm/300kHz)	(dBm/500kHz)					
0	149	5745	-2.34	-0.12	3.01	0.12	3.01	29.00	Pass
	157	5785	-2.89	-0.67	3.01	0.12	2.46	29.00	Pass
	165	5825	-3.24	-1.02	3.01	0.12	2.11	29.00	Pass
1	149	5745	-2.82	-0.60	3.01	0.12	2.53	29.00	Pass
	157	5785	-3.36	-1.14	3.01	0.12	1.99	29.00	Pass
	165	5825	-3.91	-1.69	3.01	0.12	1.44	29.00	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 = $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2/N]$ = 7.00dBi > 6dBi, so the limit shall be reduced to 30-(7.00-6) = 29.00dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11n (HT40)

TX chain	Chan.	Freq. (MHz)	PSD w/o Duty Factor		10 log (N=2) dB	Duty Factor (dB)	Total PSD with Duty Factor (dBm/500kHz)	Limit (dBm/500kHz)	Pass / Fail
			(dBm/300kHz)	(dBm/500kHz)					
0	151	5755	-5.79	-3.57	3.01	0.14	-0.42	29.00	Pass
	159	5795	-6.35	-4.13	3.01	0.14	-0.98	29.00	Pass
1	151	5755	-6.37	-4.15	3.01	0.14	-1.00	29.00	Pass
	159	5795	-6.96	-4.74	3.01	0.14	-1.59	29.00	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 = $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2/N]$ = 7.00dBi > 6dBi, so the limit shall be reduced to 30-(7.00-6) = 29.00dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11ac (VHT80)

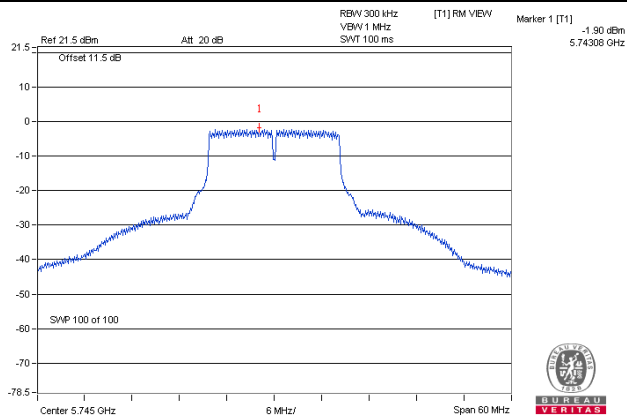
TX chain	Chan.	Freq. (MHz)	PSD w/o Duty Factor		10 log (N=3) dB	Duty Factor (dB)	Total PSD with Duty Factor (dBm/500kHz)	Limit (dBm/500kHz)	Pass / Fail
			(dBm/300kHz)	(dBm/500kHz)					
0	155	5775	-10.68	-8.46	3.01	0.28	-5.17	29.00	Pass
1	155	5775	-11.49	-9.27	3.01	0.28	-5.98	29.00	Pass

Note:

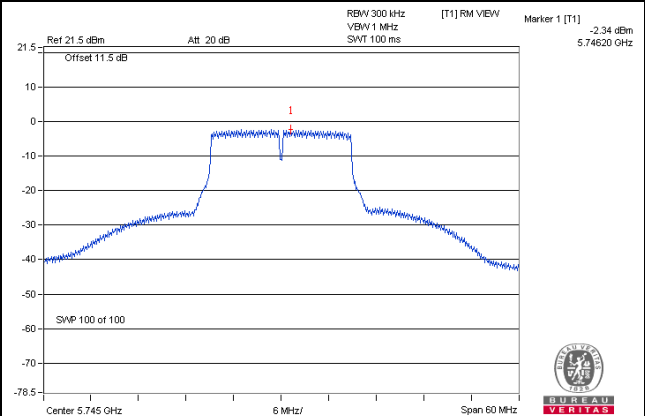
1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2/N]$ = 7.00dBi > 6dBi, so the limit shall be reduced to 30-(7.00-6) = 29.00dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value

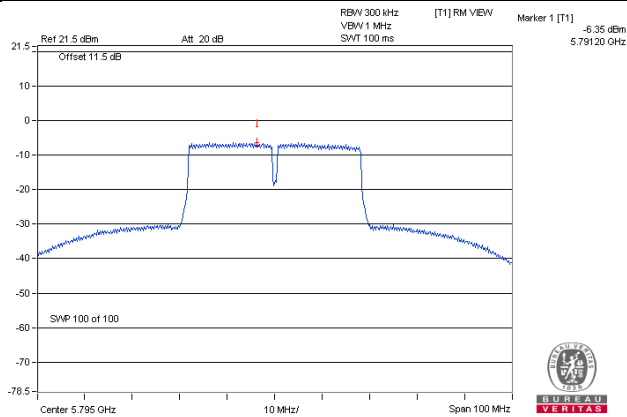
802.11a



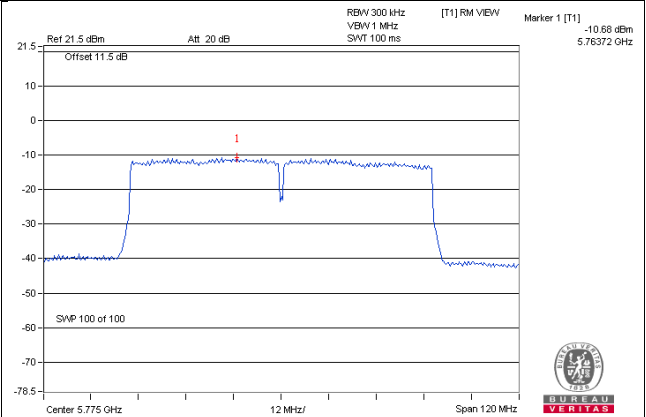
802.11n (HT20)



802.11n (HT40)



802.11ac (VHT80)

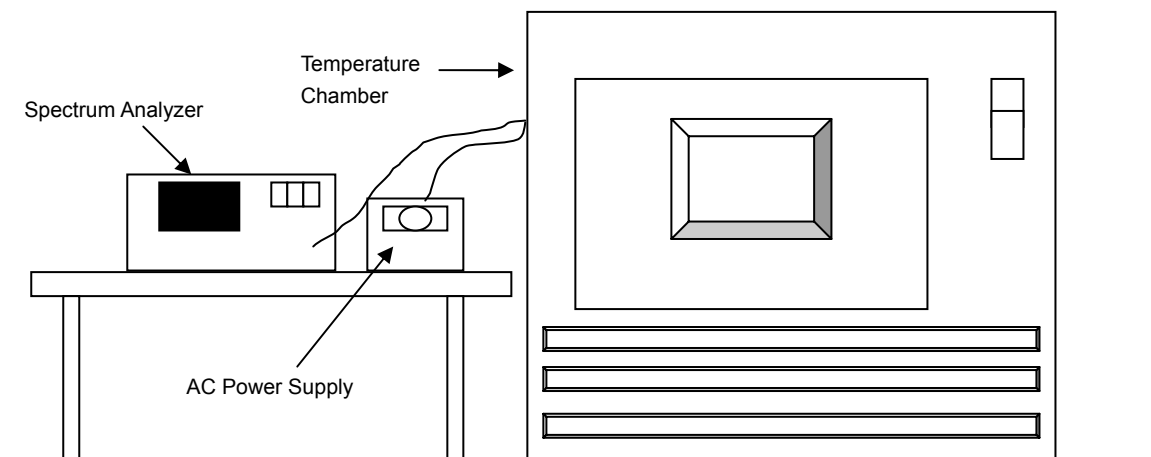


4.6 Frequency Stability

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

- The EUT was placed inside the environmental test chamber and powered by nominal AC voltage.
- Turn the EUT on and couple its output to a spectrum analyzer.
- Turn the EUT off and set the chamber to the highest temperature specified.
- Allow sufficient time (approximately 30 min) for the temperature of the chamber to stabilize, turn the EUT on and measure the operating frequency after 2, 5, and 10 minutes.
- Repeat step 2 and 3 with the temperature chamber set to the lowest temperature.
- The test chamber was allowed to stabilize at +20 degree C for a minimum of 30 minutes. The supply voltage was then adjusted on the EUT from 85% to 115% and the frequency record.

4.6.5 Deviation from Test Standard

No deviation.

4.6.6 EUT Operating Condition

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

4.6.7 Test Results

Frequency Stability Versus Temp.									
Operating Frequency: 5180MHz									
Temp. (°C)	Power Supply (Vac)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)
50	120	5180.0034	0.00007	5180.0002	0.00000	5180.0016	0.00003	5179.9999	0.00000
40	120	5180.0122	0.00024	5180.0111	0.00021	5180.0123	0.00024	5180.0146	0.00028
30	120	5179.9999	0.00000	5179.9988	-0.00002	5179.9987	-0.00003	5179.9998	0.00000
20	120	5179.9758	-0.00047	5179.9762	-0.00046	5179.9762	-0.00046	5179.9745	-0.00049
10	120	5180.0166	0.00032	5180.0172	0.00033	5180.0151	0.00029	5180.0153	0.00030
0	120	5180.0052	0.00010	5180.0018	0.00003	5180.0018	0.00003	5180.0013	0.00003
-10	120	5180.0171	0.00033	5180.0185	0.00036	5180.0183	0.00035	5180.0185	0.00036
-20	120	5180.0193	0.00037	5180.0197	0.00038	5180.0233	0.00045	5180.0212	0.00041
-30	120	5179.9967	-0.00006	5179.9963	-0.00007	5179.9974	-0.00005	5179.9986	-0.00003

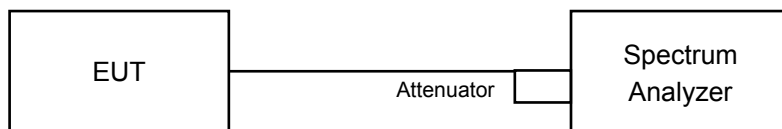
Frequency Stability Versus Voltage									
Operating Frequency: 5180MHz									
Temp. (°C)	Power Supply (Vac)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)
20	138	5179.975	-0.00048	5179.9768	-0.00045	5179.9759	-0.00047	5179.9744	-0.00049
	120	5179.9758	-0.00047	5179.9762	-0.00046	5179.9762	-0.00046	5179.9745	-0.00049
	102	5179.9767	-0.00045	5179.9754	-0.00047	5179.9772	-0.00044	5179.9746	-0.00049

4.7 6dB Bandwidth Measurement

4.7.1 Limits of 6dB Bandwidth Measurement

The minimum of 6dB Bandwidth Measurement is 0.5MHz.

4.7.2 Test Setup



4.7.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.7.4 Test Procedure

Measurement Procedure REF

- Set resolution bandwidth (RBW) = 100kHz
- Set the video bandwidth (VBW) $\geq 3 \times$ RBW, Detector = Peak.
- Trace mode = max hold.
- Sweep = auto couple.
- Measure the maximum width of the emission that is constrained by the frequencies associated with the two amplitude points (upper and lower) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission

4.7.5 Deviation from Test Standard

No deviation.

4.7.6 EUT Operating Condition

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

4.7.7 Test Results

1TX

802.11a

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
149	5745	16.38	0.5	Pass
157	5785	16.40	0.5	Pass
165	5825	16.40	0.5	Pass

802.11n (HT20)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
149	5745	17.64	0.5	Pass
157	5785	17.63	0.5	Pass
165	5825	17.63	0.5	Pass

802.11n (HT40)

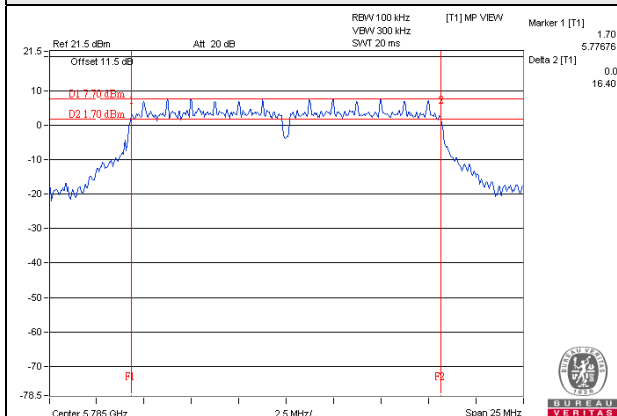
Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
151	5755	36.42	0.5	Pass
159	5795	36.42	0.5	Pass

802.11ac (VHT80)

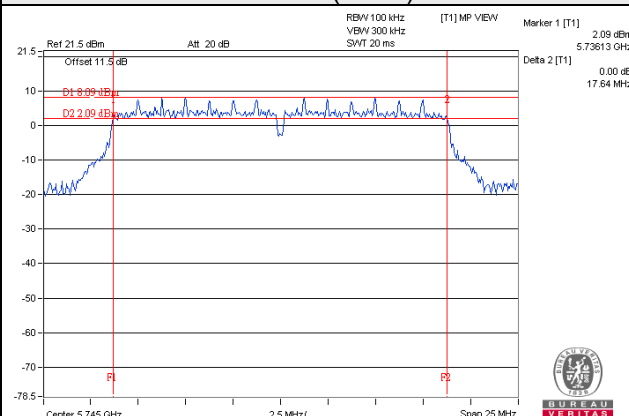
Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
155	5775	76.13	0.5	Pass

Spectrum Plot of Worst Value

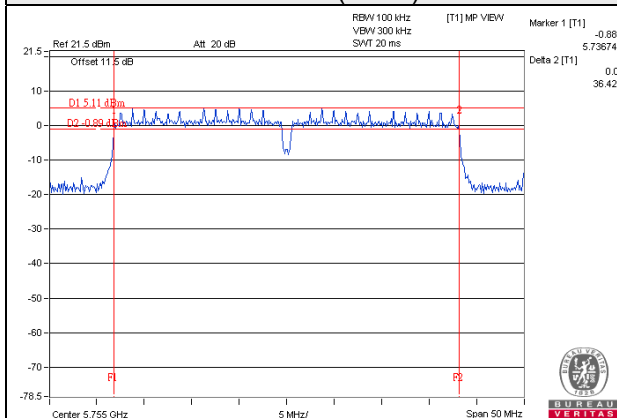
802.11a



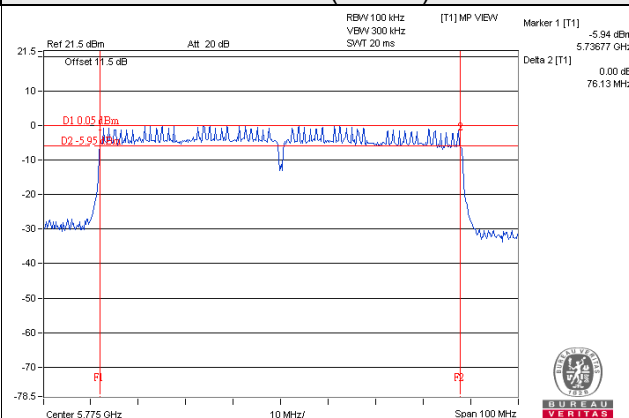
802.11n (HT20)



802.11n (HT40)



802.11ac (VHT80)



2TX

802.11a

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
149	5745	16.38	16.39	0.5	Pass
157	5785	16.40	16.42	0.5	Pass
165	5825	16.41	16.42	0.5	Pass

802.11n (HT20)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
149	5745	17.63	17.65	0.5	Pass
157	5785	17.64	17.65	0.5	Pass
165	5825	17.66	17.67	0.5	Pass

802.11n (HT40)

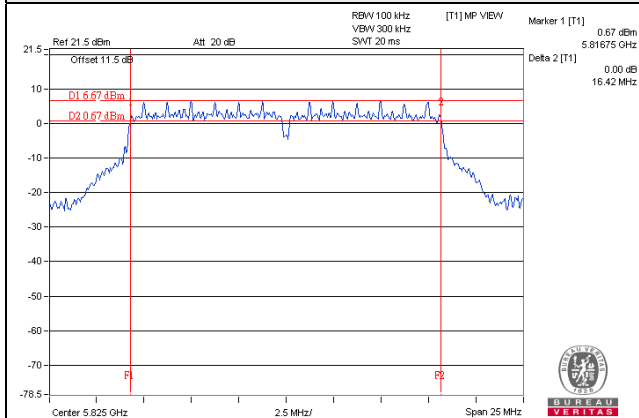
Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
151	5755	36.41	36.44	0.5	Pass
159	5795	36.41	36.45	0.5	Pass

802.11ac (VHT80)

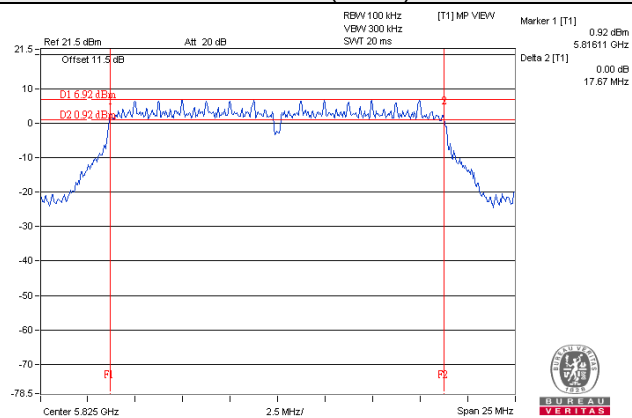
Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
155	5775	76.05	76.08	0.5	Pass

Spectrum Plot of Worst Value

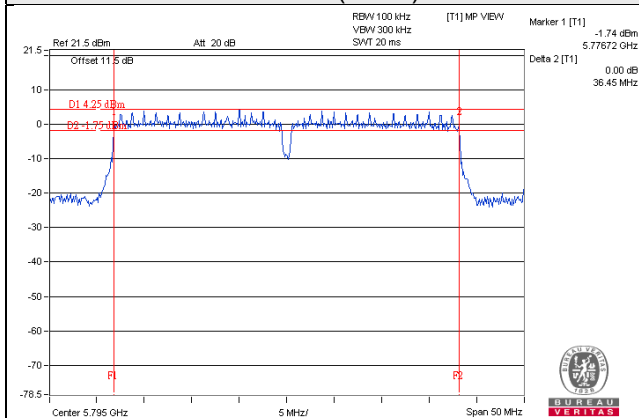
802.11a



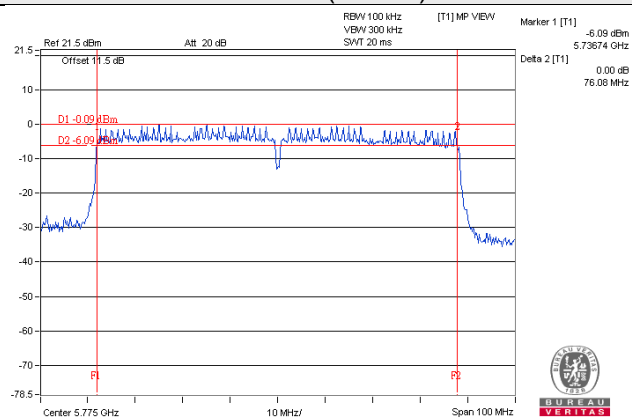
802.11n (HT20)



802.11n (HT40)



802.11ac (VHT80)



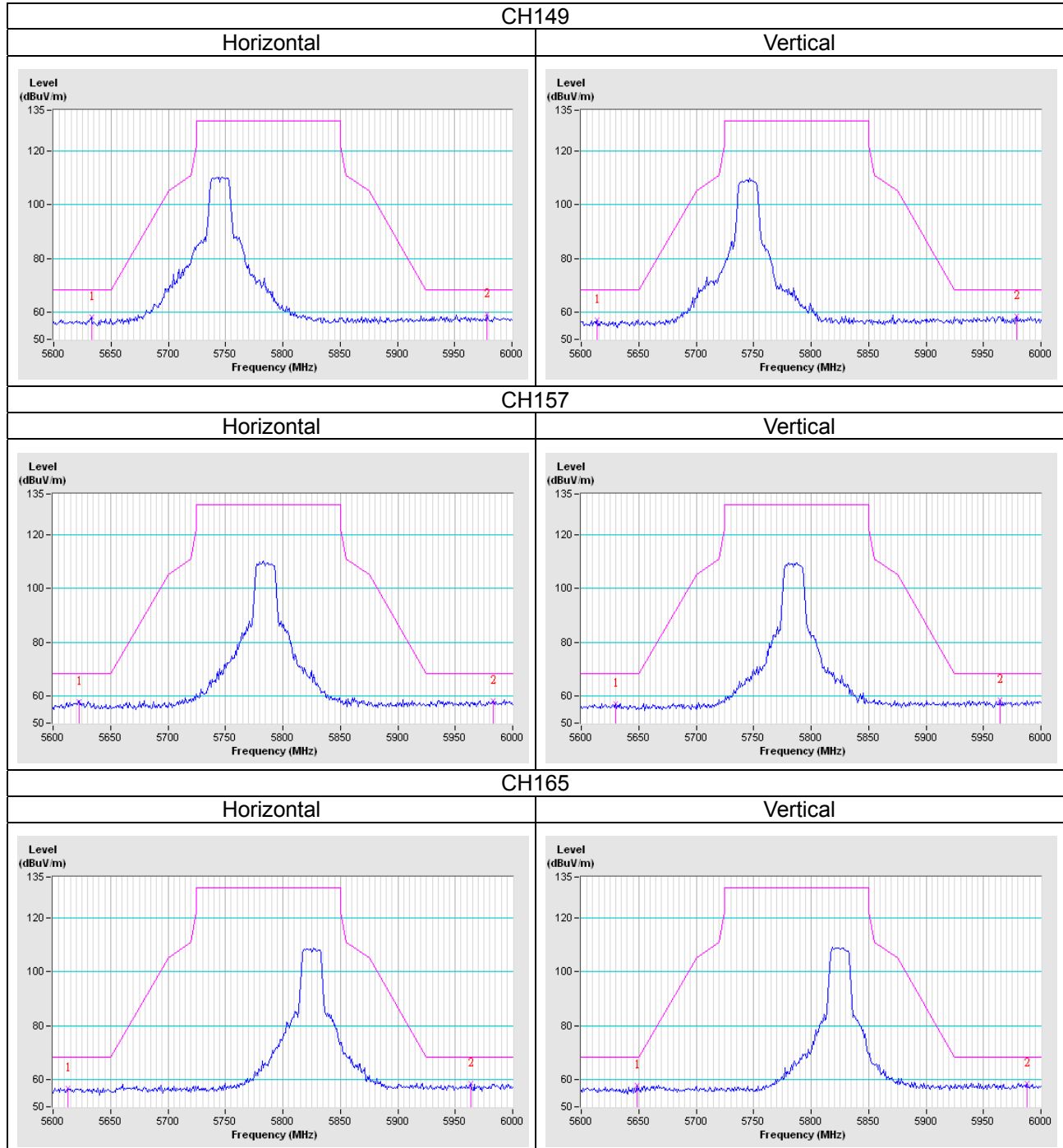
5 Pictures of Test Arrangements

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

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

1TX

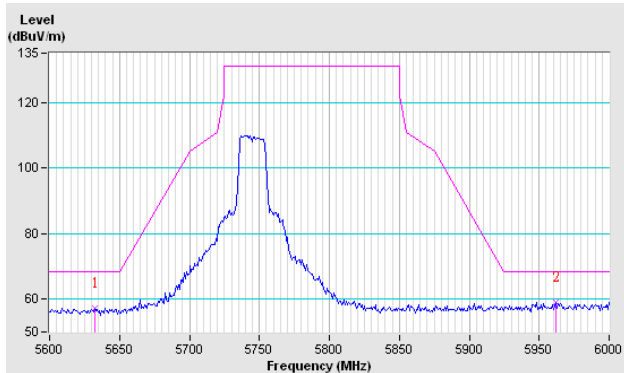
802.11a



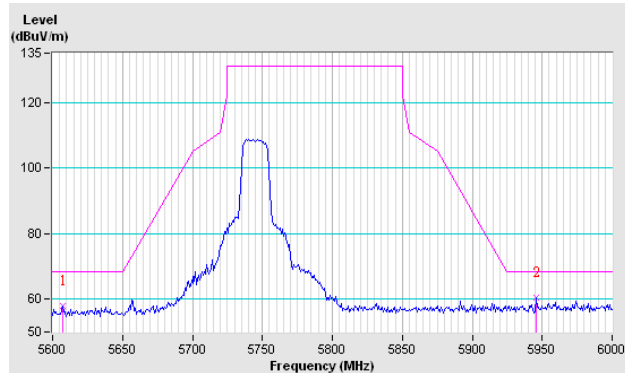
802.11n (HT20)

CH149

Horizontal

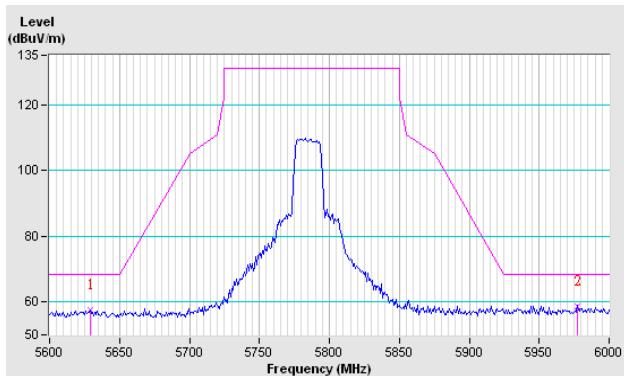


Vertical

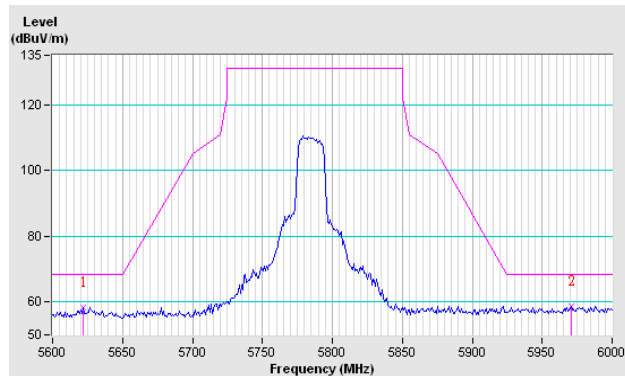


CH157

Horizontal

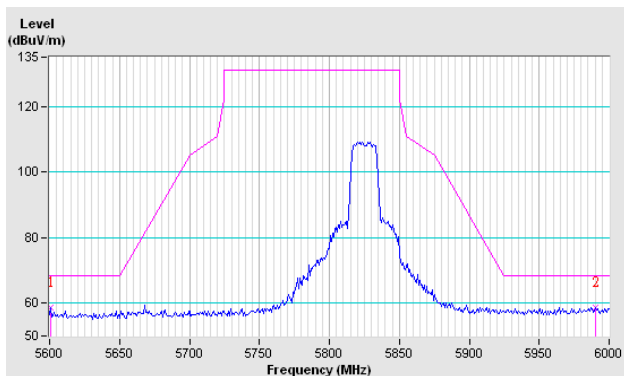


Vertical

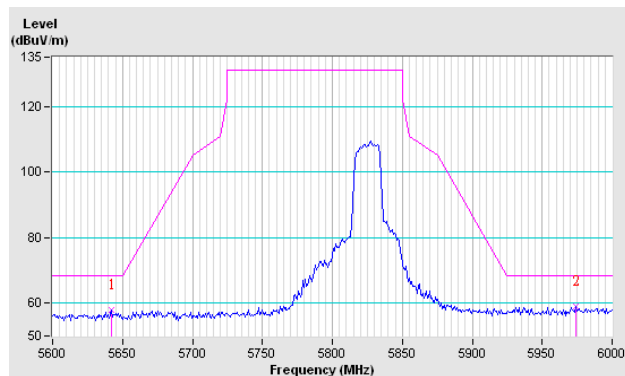


CH165

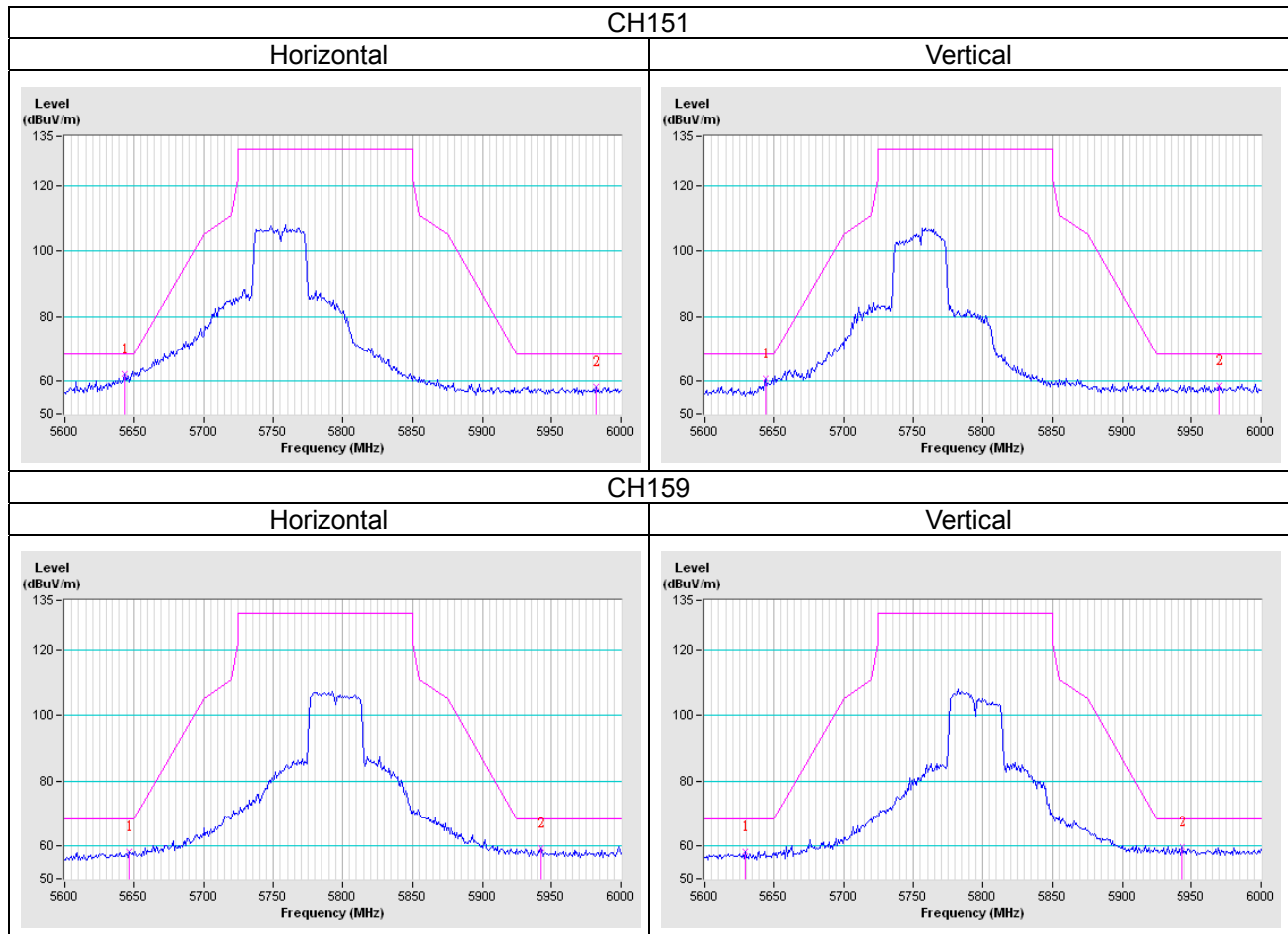
Horizontal



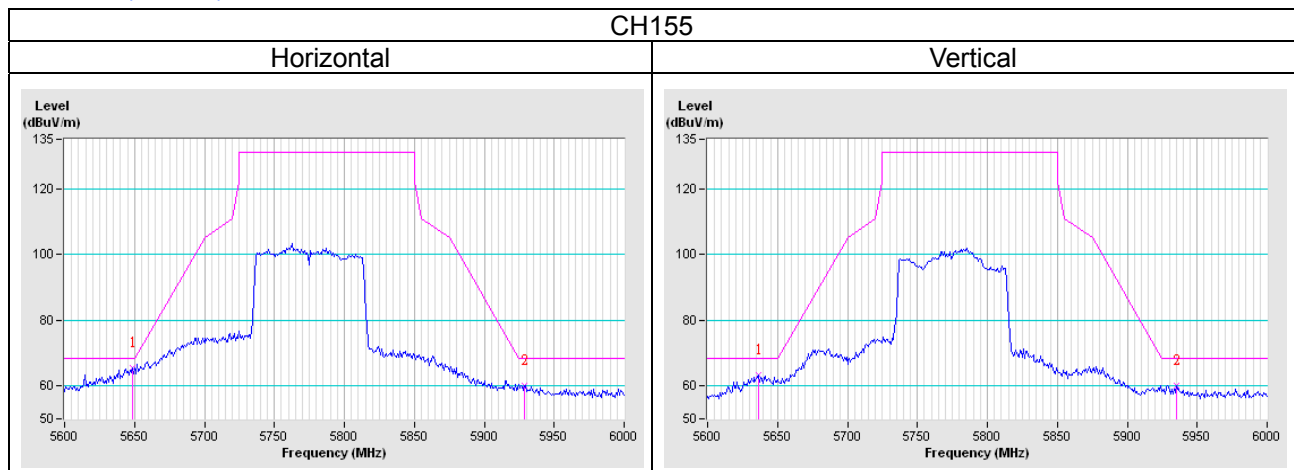
Vertical



802.11n (HT40)



802.11ac (VHT80)



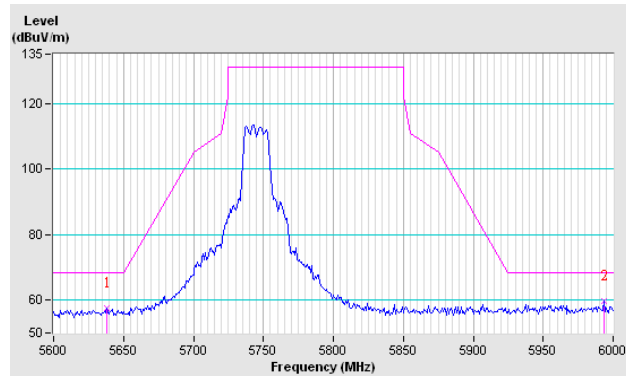
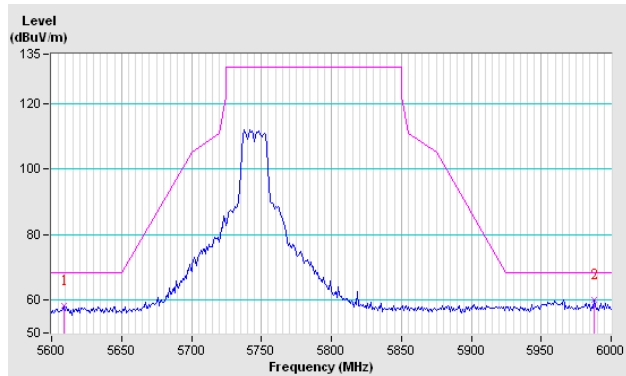
2TX

802.11a

CH149

Horizontal

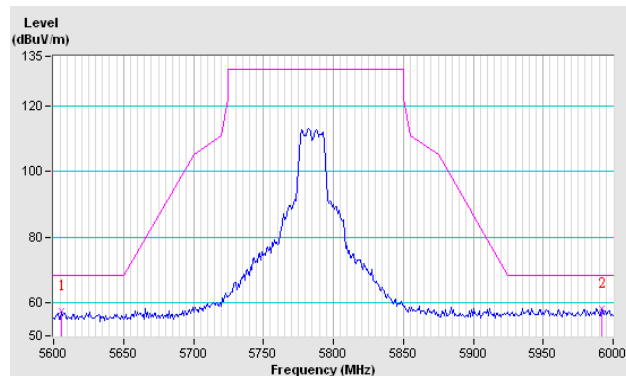
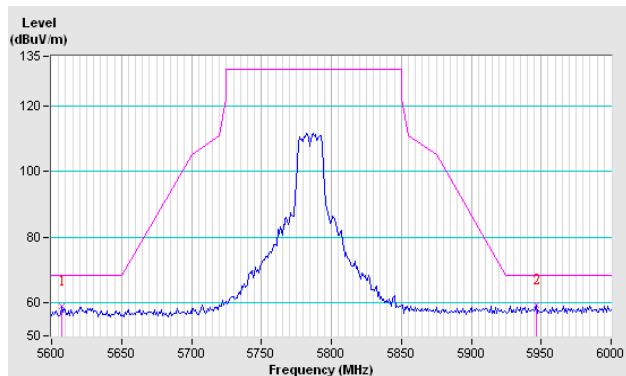
Vertical



CH157

Horizontal

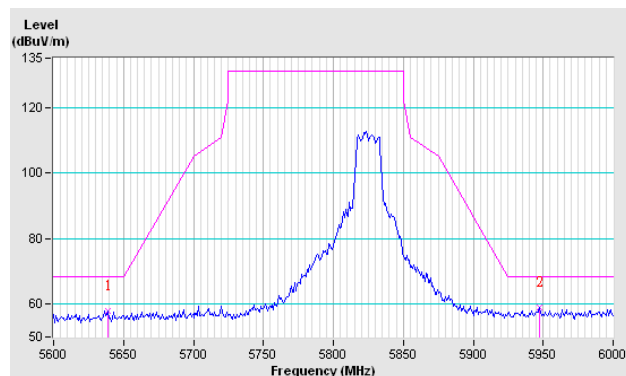
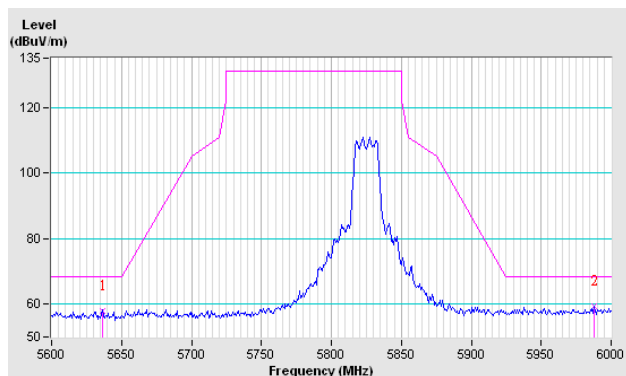
Vertical



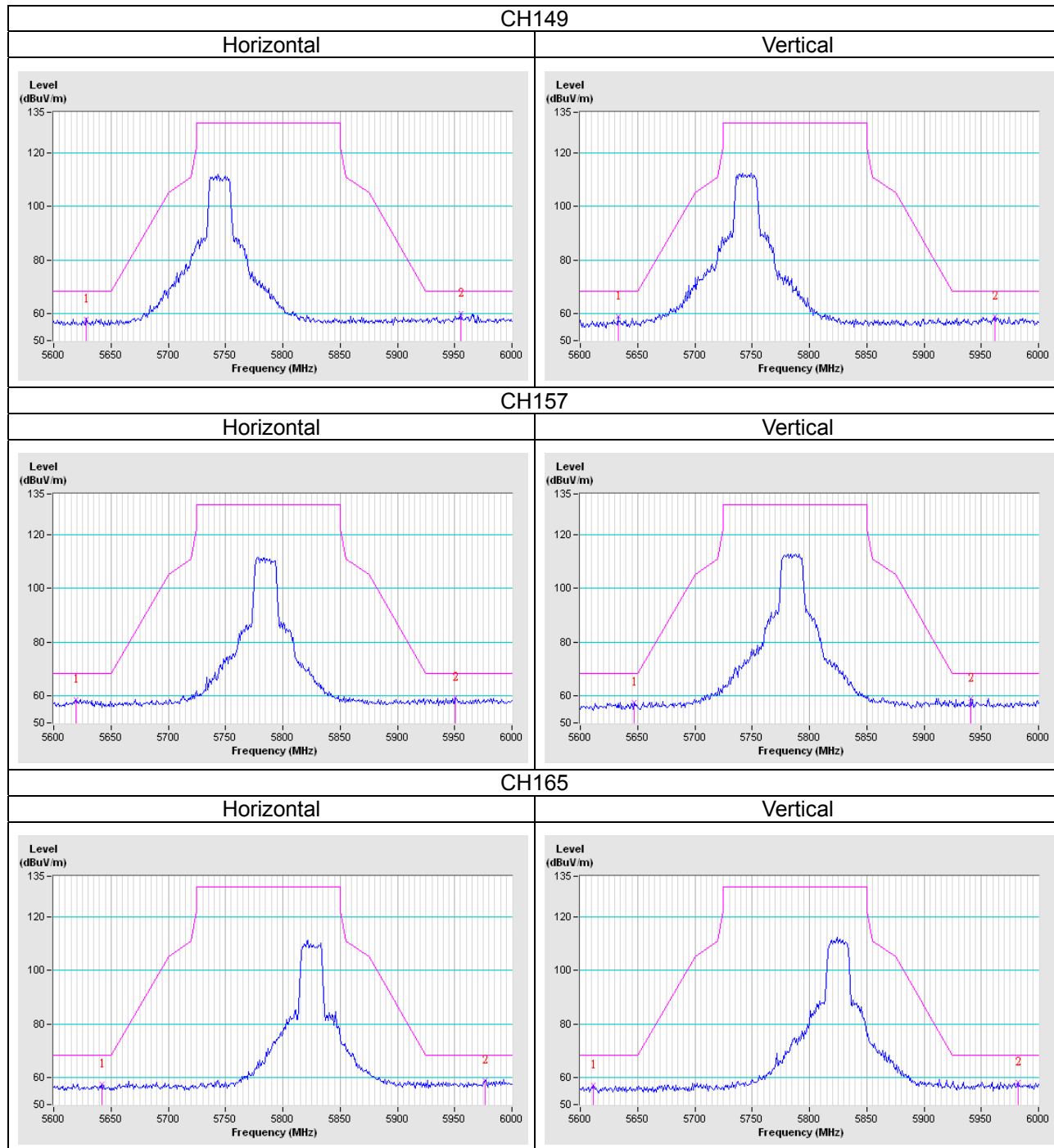
CH165

Horizontal

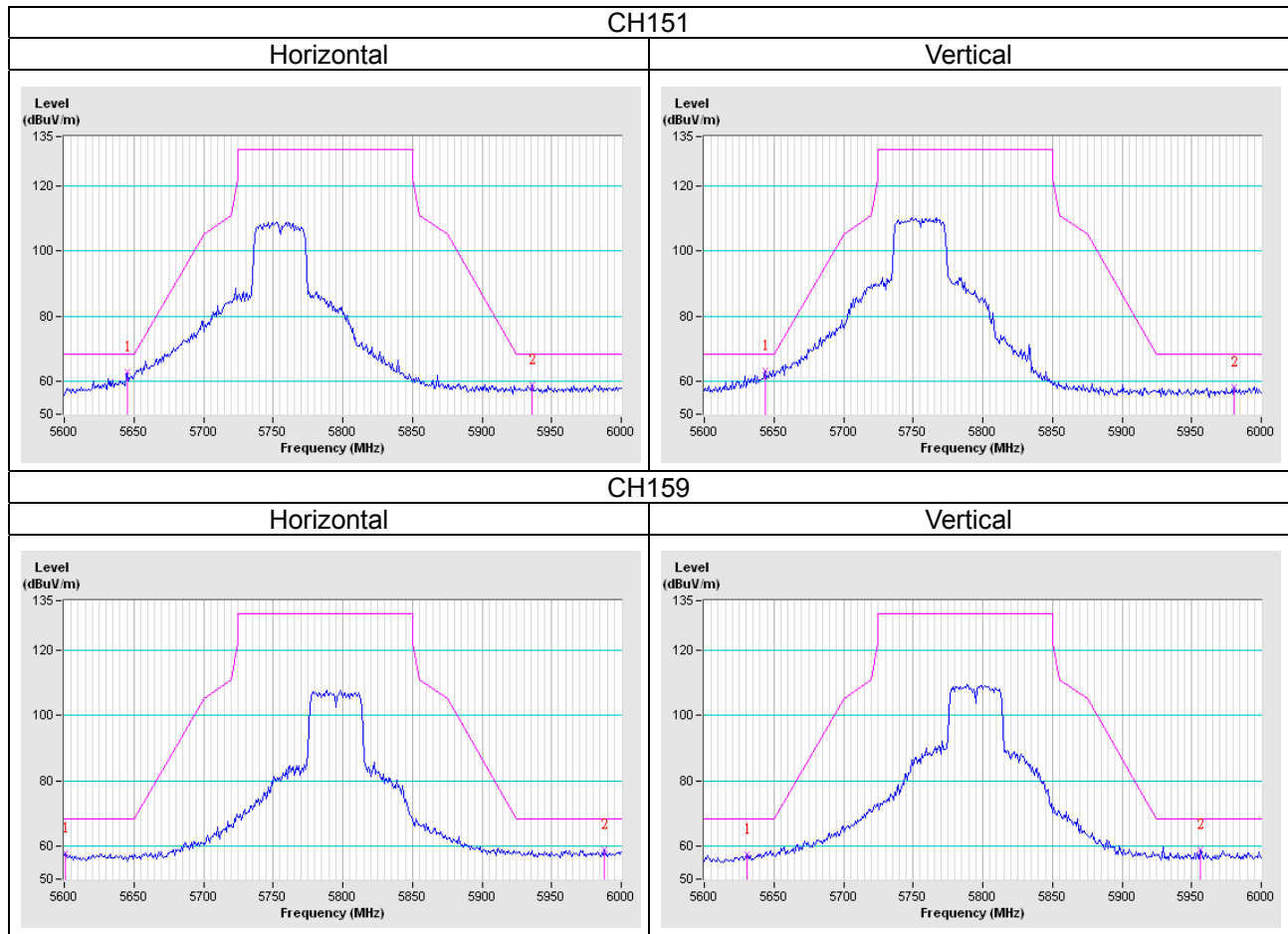
Vertical



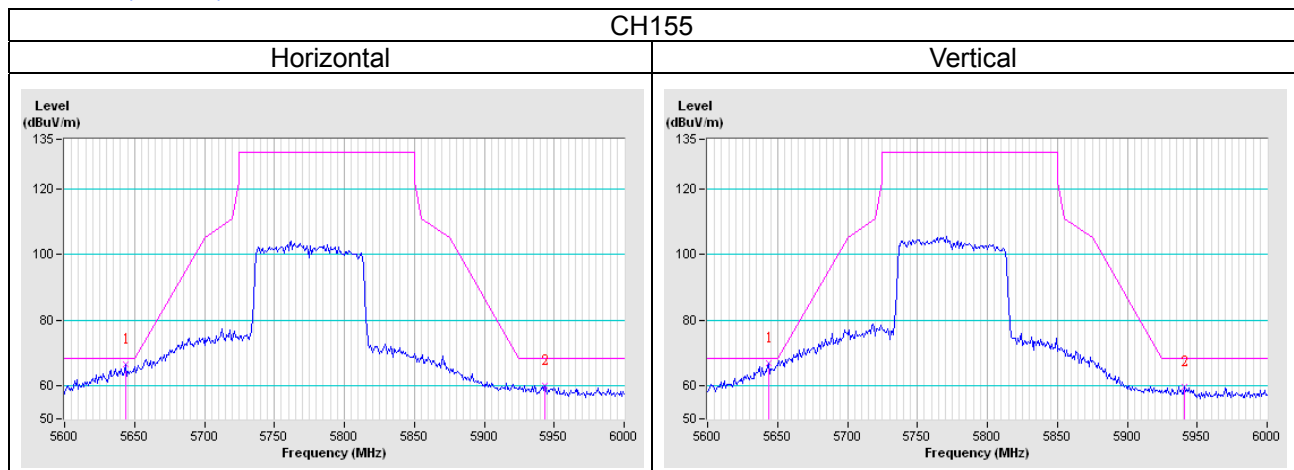
802.11n (HT20)



802.11n (HT40)



802.11ac (VHT80)



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 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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Fax: 886-2-26051924

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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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