FCC Test Report

Report No.:	RF171128C32-1
FCC ID:	UCC-AX500
Test Model:	AX500-X, AX500-S, AX500-T (Refer to item 3.1 for the more details)
Received Date:	Nov. 28, 2017
Test Date:	Dec. 15, 2017 ~ Mar. 06, 2018
Issued Date:	Mar. 12, 2018
Applicant:	Altai Technologies Limited
Address:	Unit 209, 2/F, Lakeside 2, 10 Science Park West Avenue, HK Science Park, Shatin, Hong Kong
Issued By:	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
Lab Address:	No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan (R.O.C.)
Test Location:	No. 19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City 33383, TAIWAN (R.O.C.)
FCC Registration/ Designation Number:	788550 / TW0003

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Release Control Record

Issue No.	Description	Date Issued
RF171128C32-1	Original release.	Mar. 12, 2018

1 Certificate of Conformity

Product:	Wireless 802.11 abgn/ac device
Brand:	Altai
Test Model:	AX500-X, AX500-S, AX500-T (Refer to item 3.1 for the more details)
Sample Status:	Engineering sample
Applicant:	Altai Technologies Limited
Test Date:	Dec. 15, 2017 ~ Mar. 06, 2018
Standards:	47 CFR FCC Part 15, Subpart E (Section 15.407) ANSI C63.10:2013

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

Prepared by : Polly Chien , **Date:** Mar. 12, 2018

Polly Chien / Specialist

Approved by : Bruce Chen , **Date:** Mar. 12, 2018

Bruce Chen / Project Engineer

2 Summary of Test Results

47 CFR FCC Part 15, Subpart E (Section 15.407)			
FCC Clause	Test Item	Result	Remarks
15.407(b)(6)	AC Power Conducted Emissions	Pass	Meet the requirement of limit. Minimum passing margin is -8.06dB at 0.48203MHz.
15.407(b) (1/2/3/4(i/ii)/6)	Radiated Emissions & Band Edge Measurement	Pass	Meet the requirement of limit. Minimum passing margin is -1.4dB at 5150.00MHz & 5650.00MHz & 11590.00MHz.
15.407(a)(1/2/3)	Max Average Transmit Power	Pass	Meet the requirement of limit.
---	Occupied Bandwidth Measurement	Pass	Meet the requirement of limit.
15.407(a)(1/2/3)	Peak Power Spectral Density	Pass	Meet the requirement of limit. (U-NII-3 Band only)
15.407(e)	6dB bandwidth	Pass	Meet the requirement of limit.
15.407(g)	Frequency Stability	Pass	Meet the requirement of limit.
15.203	Antenna Requirement	Pass	Model: AX500-X: Antenna connector is 2x N-female not a standard connector. Model: AX500-S & Model: AX500-T: No antenna connector is used.

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	Wireless 802.11 abgn/ac device
Brand	Altai
Test Model	AX500-X, AX500-S, AX500-T (Refer to NOTE for the more details)
Status of EUT	Engineering sample
Power Supply Rating	54Vdc (PoE)
Modulation Type	256QAM, 64QAM, 16QAM, QPSK, BPSK
Modulation Technology	OFDM
Transfer Rate	802.11a: 54/48/36/24/18/12/9/6Mbps 802.11n: up to 300Mbps 802.11ac: up to 867Mbps
Operating Frequency	5180~5240MHz, 5745~5825MHz
Number of Channel	5180~5240MHz: 802.11a, 802.11n (HT20), 802.11ac (VHT20): 4 802.11n (HT40), 802.11ac (VHT40): 2 802.11ac (VHT80): 1 5745~5825MHz: 802.11a, 802.11n (HT20), 802.11ac (VHT20): 5 802.11n (HT40), 802.11ac (VHT40): 2 802.11ac (VHT80): 1
Output Power	EUT Model: AX500-X: 5180~5240MHz: 2.982mW 5745~5825MHz: 93.181mW EUT Model: AX500-S: 5180~5240MHz: 4.871mW 5745~5825MHz: 150.431mW EUT Model: AX500-T: 5180~5240MHz: 19.515mW 5745~5825MHz: 573.526mW
Antenna Type	Refer to note
Antenna Connector	Refer to note
Accessory Device	0.5m non-shielded power cord without core 1.8m non-shielded ground cable without core ANT(2.4GHz Band): Brand: Altai, Model: SD.AN-2M05-00 ANT(5GHz Band): Brand: Altai, Model: SD.AN-5S16-00 2.0m shielded antenna cable PoE
Cable Supplied	NA

Note:

1. All models are listed as below.

Model	Remark
AX500-X	External Omni ANT& Sector ANT
AX500-S	Internal Sector Smart ANT
AX500-T	Internal Omni Smart ANT

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

5GHz Band	
Modulation Mode	TX Function
802.11a	2TX
802.11n (HT20)	2TX
802.11n (HT40)	2TX
802.11ac (VHT20)	2TX
802.11ac (VHT40)	2TX
802.11ac (VHT80)	2TX

3. The EUT consumes power from the following PoE.

PoE	
Brand	EnGenius
Model	EPA5006GP
Input Power	100-240Vac~0.8A, 50-60Hz
Output Power	54Vdc / 0.6A PIN 4,5:54V PIN 7,8:RETURN

4. WLAN 2.4GHz and WLAN 5GHz technologies can transmit at same time.
5. Spurious emission of the simultaneous operation (WLAN 2.4GHz and WLAN 5GHz) has been evaluated and no non-compliance was found.
6. The following antennas were provided to the EUT.

	Freq. Range	Type	Connector	Gain (dBi)	
				2.4GHz Band	5GHz Band
Model: AX500-X					
1	2.4GHz Band	Omni	N-male	5	-
2	5GHz Band	Sector	2x N-female	-	16

Freq. Range	Type	Connector		Gain (dBi)					
Model: AX500-S				Vpol Azimuth			Hpol Azimuth		
				2.41 GHz	2.45 GHz	2.48 GHz	2.41 GHz	2.45 GHz	2.48 GHz
2.4GHz Band	Internal Sector Smart ANT	NA	Conf. 0	8.3	7.9	8.0	8.0	8.5	8.3
			Conf. 1	6.8	7.1	7.1	6.2	6.8	7.0
			Conf. 2	8.5	8.5	8.6	7.8	7.9	7.9
			Conf. 3	6.6	7.1	7.3	6.4	6.8	6.7
			Conf. 4	8.0	7.8	7.8	8.2	8.6	8.5
			Conf. 5	6.5	6.9	6.3	6.2	6.5	6.0
			Conf. 6	8.1	7.3	6.7	8.7	**8.8**	8.1
			Conf. 7	8.4	7.7	7.0	8.4	8.4	7.7
			Conf. 8	7.1	5.8	4.5	7.2	6.9	6.1
			Conf. 5+8 (RX only)	8.8	8.1	7.4	9.1	9.2	8.5

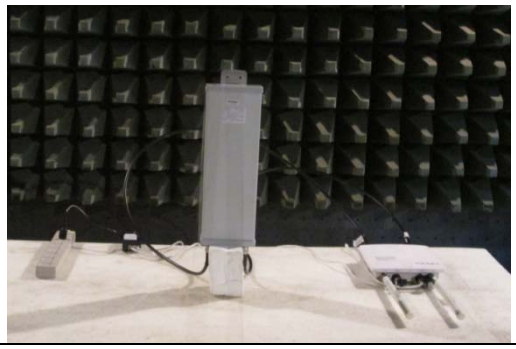
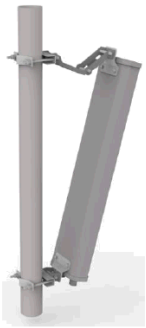
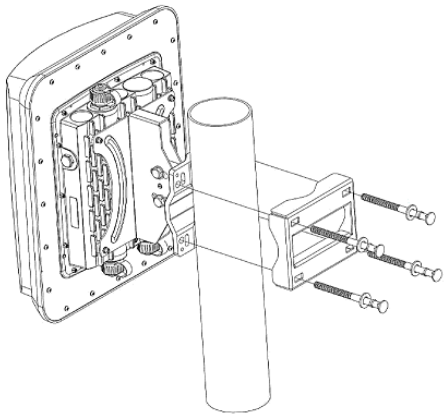
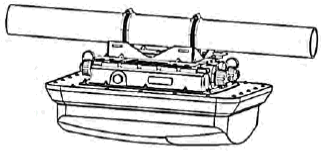
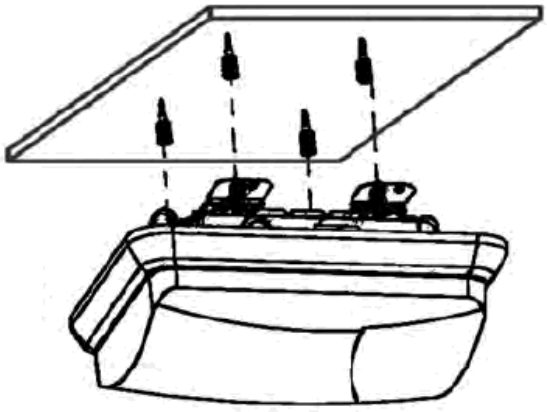
Freq. Range	Type	Connector	Gain (dBi)						
				Vpol Azimuth			Hpol Azimuth		
				5.2 GHz	5.5 GHz	5.8 GHz	5.2 GHz	5.5 GHz	5.8 GHz
5GHz Band	Internal Sector Smart ANT	NA	Conf. 0	11.4	13.1	12.6	11.1	10.1	11.2
			Conf. 1	9.8	11.5	10.2	9.7	8.4	8.7
			Conf. 2	11.4	12.3	11.3	11.9	10.0	11.0
			Conf. 3	12.2	12.1	11.4	10.0	9.4	9.6
			Conf. 4	13.0	**14.1**	12.8	11.8	11.3	12.1
			Conf. 5	8.5	8.6	6.3	7.1	7.4	5.0
			Conf. 6	7.5	9.1	8.8	10.2	8.0	6.1
			Conf. 7	9.5	10.8	9.0	9.8	8.5	6.8
			Conf. 8	6.9	8.9	7.4	8.1	7.2	6.6
			Conf. 5+8 (RX only)	10.2	11.5	9.7	10.9	9.2	7.5

*2.4GHz Band: Maximum antenna gain at Conf. 6 was chose for final test.
*5GHz Band: Maximum antenna gain at Conf. 4 was chose for final test.

Freq. Range	Type	Connector	Gain (dBi)			
Model: AX500-T				LEAF2GHz - Azimuth		
				2.41 GHz	2.45 GHz	2.48 GHz
2.4GHz Band	Internal Omni Smart ANT	NA	Conf. 0	3.3	2.6	2.2
			Conf. 1	4.7	4.4	4.2
			Conf. 2	3.7	3.8	3.7
			Conf. 3	5.7	5.7	5.9
			Conf. 4	5.8	5.4	5.3
			Conf. 5	6.3	5.6	5.5
			Conf. 6	5.9	4.9	4.5
			Conf. 7	5.1	4.8	4.7
			Conf. 8	4.1	3.8	3.5
				ANT3 (ZOR 2GHz) - Azimuth		
				2.41 GHz	2.45 GHz	2.48 GHz
			Conf. 0	4.4	5.0	5.4
			Conf. 1	3.8	2.7	1.1
			Conf. 2	**6.6**	6.3	5.2
			Conf. 3	2.8	1.5	-0.3
			Conf. 4	5.4	5.4	4.9
			Conf. 5	0	0.3	0.2
			Conf. 6	4.3	4.0	3.9
			Conf. 7	1.0	1.2	1.1
			Conf. 8	6.5	6.1	5.4
				LEAF5GHz - Azimuth		
				5.2 GHz	5.5 GHz	5.8 GHz
5GHz Band	Internal Omni Smart ANT	NA	Conf. 0	6.2	5.0	6.0
			Conf. 1	6.2	6.6	5.4
			Conf. 2	5.7	4.5	6.1
			Conf. 3	6.4	6.6	5.7
			Conf. 4	6.9	5.9	6.2
			Conf. 5	6.9	5.9	6.4
			Conf. 6	6.3	7.0	6.9
			Conf. 7	7.3	6.9	**7.9**
			Conf. 8	6.6	5.7	7.1
				ANT4 (CROSS 5GHz) - Azimuth		
				5.2 GHz	5.5 GHz	5.8 GHz
			Conf. 0	3.5	5.7	5.3
			Conf. 1	6.3	6.8	4.9
			Conf. 2	7.1	7.3	5.2
			Conf. 3	5.7	6.7	4.8
			Conf. 4	4.4	5.7	5.0
			Conf. 5	4.1	6.3	4.2
			Conf. 6	3.5	5.4	3.8
			Conf. 7	4.4	5.4	3.8
			Conf. 8	5.0	5.8	4.5

*2.4GHz Band: Maximum antenna gain at Conf. 2 (ANT3 (ZOR 2GHz) - Azimuth) was chose for final test.
*5GHz Band: Maximum antenna gain at Conf. 7 (LEAF5GHz - Azimuth) was chose for final test.

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

Model	Antenna gain	Antenna install degree
Model: AX500-X	16 dBi	 
Due to device will restricted installation position as above photo, thus consider to above 30 degrees highest antenna gain are chosen from Max Gain		
Model: AX500-S	14.10 dBi	 
Due to device will restricted installation position as above photo, thus consider to above 30 degrees highest antenna gain are chosen from Max Gain		
Model: AX500-T	7.90 dBi	
Due to device will restricted installation position as above photo, thus consider to above 30 degrees highest antenna gain are chosen from Max Gain		

8. WLAN 2.4GHz and WLAN 5GHz technologies can transmit at same time.
9. Spurious emission of the simultaneous operation (WLAN 2.4GHz and WLAN 5GHz) has been evaluated and no non-compliance was found.

3.2 Description of Test Modes

5180~5240MHz:

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

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

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

Channel	Frequency	Channel	Frequency
38	5190 MHz	46	5230 MHz

1 channel is provided for 802.11ac (VHT80):

Channel	Frequency
42	5210MHz

5745~5825MHz:

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

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

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

Channel	Frequency	Channel	Frequency
151	5755MHz	159	5795MHz

1 channel is provided for 802.11ac (VHT80):

Channel	Frequency
155	5775MHz

3.2.1 Test Mode Applicability and Tested Channel Detail

EUT Configure Mode	Applicable to				Description
	RE≥1G	RE<1G	PLC	APCM	
A	√	√	√	√	EUT Model: AX500-X
B	√	√	√	√	EUT Model: AX500-S
C	√	√	√	√	EUT Model: AX500-T

Where RE≥1G: Radiated Emission above 1GHz & Bandedge Measurement RE<1G: Radiated Emission below 1GHz

PLC: Power Line Conducted Emission APCM: Antenna Port Conducted Measurement

NOTE:

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

Radiated Emission Test (Above 1GHz):

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

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

EUT Configure Mode	Mode	Frequency Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Data Rate (Mbps)
A, B, C	802.11a	5180-5240	36 to 48	36, 40, 48	OFDM	6.0
	802.11n (HT20)		36 to 48	36, 40, 48	OFDM	7.2
	802.11n (HT40)		38 to 46	38, 46	OFDM	15.0
	802.11ac (VHT80)		42	42	OFDM	58.5
A, B, C	802.11a	5745-5825	149 to 165	149, 157, 165	OFDM	6.0
	802.11n (HT20)		149 to 165	149, 157, 165	OFDM	7.2
	802.11n (HT40)		151 to 159	151, 159	OFDM	15.0
	802.11ac (VHT80)		155	155	OFDM	58.5

Radiated Emission Test (Below 1GHz):

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

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

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

Power Line Conducted Emission Test:

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

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

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

Antenna Port Conducted Measurement:

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

EUT Configure Mode	Mode	Frequency Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Data Rate (Mbps)
A, B, C	802.11a	5180-5240	36 to 48	36, 40, 48	OFDM	6.0
	802.11n (HT20)		36 to 48	36, 40, 48	OFDM	7.2
	802.11n (HT40)		38 to 46	38, 46	OFDM	15.0
	802.11ac (VHT80)		42	42	OFDM	58.5
A, B, C	802.11a	5745-5825	149 to 165	149, 157, 165	OFDM	6.0
	802.11n (HT20)		149 to 165	149, 157, 165	OFDM	7.2
	802.11n (HT40)		151 to 159	151, 159	OFDM	15.0
	802.11ac (VHT80)		155	155	OFDM	58.5

Test Condition:

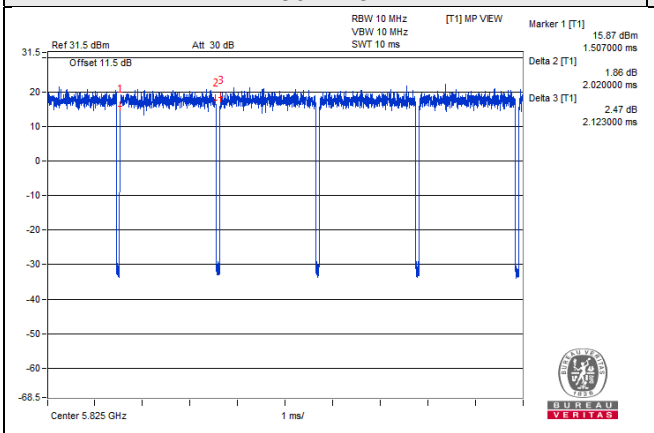
Applicable to	Environmental Conditions	Input Power	Tested by
RE≥1G	22deg. C, 65%RH 21deg. C, 66%RH	120Vac, 60Hz	Willy Chen, Adair Peng
RE<1G	22deg. C, 65%RH 21deg. C, 67%RH	120Vac, 60Hz	Willy Chen, Adair Peng
PLC	25deg. C, 75%RH	120Vac, 60Hz	Adair Peng
APCM	25deg. C, 60%RH	120Vac, 60Hz	Alan Wu

3.3 Duty Cycle of Test Signal

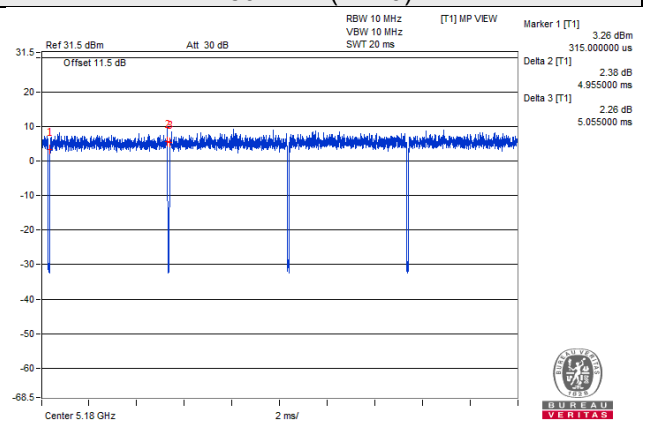
Duty cycle of test signal is > 98%, duty factor is not required
Duty cycle of test signal is < 98 %, duty factor is required

802.11a: Duty cycle = 2.02/2.123 = 0.951, Duty factor = 10 * log(1/0.951) = 0.22
802.11n (HT20): Duty cycle = 4.955/5.055 = 0.9802
802.11n (HT40): Duty cycle = 2.402/2.487 = 0.966, Duty factor = 10 * log(1/0.966) = 0.15
802.11ac (VHT80): Duty cycle = 1.133/1.214 = 0.933, Duty factor = 10 * log(1/0.933) = 0.30

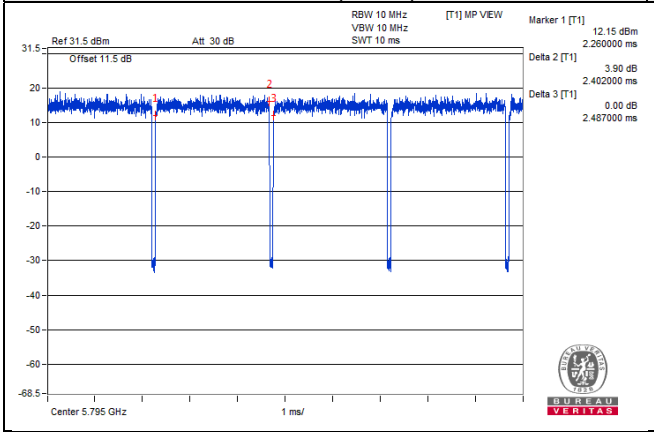
802.11a



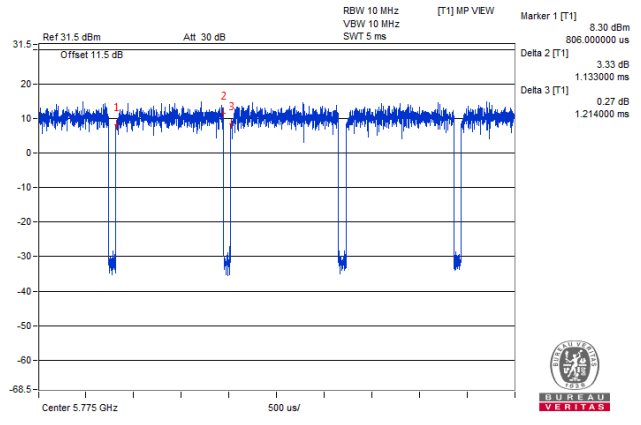
802.11n (HT20)



802.11n (HT40)



802.11ac (VHT80)



3.4 Description of Support Units

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

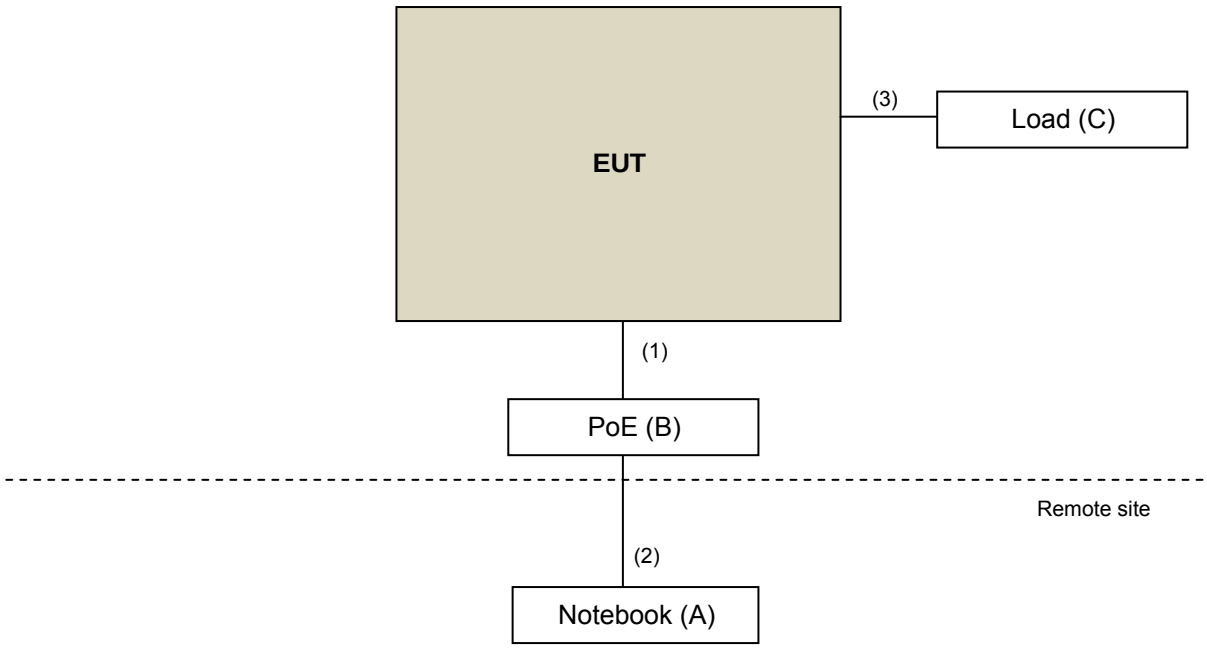
ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A.	Notebook	Lenovo	80Q7	PF0KUGU6	FCC DoC Approved	-
B.	PoE	EnGenius	EPA5006GP	NA	NA	Provided by manufacturer
C.	Load	NA	NA	NA	NA	-

Note:

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

ID	Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	RJ45 cable	1	1.0	N	0	Cat5e
2.	RJ45 cable	1	3	N	0	Cat5e
3.	RJ45 cable	2	1.0	N	0	Cat5e

3.4.1 Configuration of System under Test



3.5 General Description of Applied Standards

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

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

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

4 Test Types and Results

4.1 Radiated Emission and Bandedge Measurement

4.1.1 Limits of Radiated Emission and Bandedge Measurement

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

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

NOTE:

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

Limits of unwanted emission out of the restricted bands

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

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

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

4.1.2 Test Instruments

Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
Test Receiver ROHDE & SCHWARZ	ESIB7	100187	May 02, 2017	May 01, 2018
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100041	Dec. 12, 2017	Dec. 11, 2018
BILOG Antenna SCHWARZBECK	VULB9168	9168-171	Dec. 11, 2017	Dec. 10, 2018
HORN Antenna SCHWARZBECK	9120D	209	Dec. 13, 2017	Dec. 12, 2018
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA9170241	Dec. 01, 2017	Nov. 30, 2018
Loop Antenna EMCI	EM-6879	269	Aug. 11, 2017	Aug. 10, 2018
Preamplifier Agilent (Below 1GHz)	8447D	2944A10738	Aug. 21, 2017	Aug. 20, 2018
Preamplifier Agilent (Above 1GHz)	8449B	3008A02465	Apr. 05, 2017	Apr. 04, 2018
RF signal cable HUBER+SUHNER	SUCOFLEX 104	Cable-CH3-03 (223653/4)	Aug. 21, 2017	Aug. 20, 2018
RF signal cable HUBER+SUHNER& EMCI	SUCOFLEX 104&EMC104-SM-SM-8000	Cable-CH3-03 (309224+170907)	Sep.11, 2017	Sep. 10, 2018
Software BV ADT	ADT_Radiated_ V7.6.15.9.4	NA	NA	NA
Antenna Tower inn-co GmbH	MA 4000	013303	NA	NA
Antenna Tower Controller BV ADT	AT100	AT93021702	NA	NA
Turn Table BV ADT	TT100	TT93021702	NA	NA
Turn Table Controller BV ADT	SC100	SC93021702	NA	NA
Boresight Antenna Fixture	FBA-01	FBA-SIP01	NA	NA
High Speed Peak Power Meter	ML2495A	0824012	Aug. 18, 2017	Aug. 17, 2018
Power Sensor	MA2411B	0738171	Aug. 18, 2017	Aug. 17, 2018
26GHz ~ 40GHz Amplifier Agilent	8449B	3008A1960	Aug. 08, 2017	Aug. 07, 2018

Note:
1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in HwaYa Chamber 3.
3. The horn antenna and preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
4. The FCC Designation Number is TW0003. The number will be varied with the Lab location and scope as attached.
5. The IC Site Registration No. is IC 7450F-3.

4.1.3 Test Procedures

For Radiated emission below 30MHz

a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter chamber room. The table was rotated 360 degrees to determine the position of the highest radiation.

b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

c. Parallel, perpendicular, and ground-parallel orientations of the antenna are set to make the measurement.

d. For each suspected emission, the EUT was arranged to its worst case and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

e. The test-receiver system was set to Quasi-Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

Note:

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

For Radiated emission above 30MHz

a. The EUT was placed on the top of a rotating table 0.8 meters (for 30MHz ~ 1GHz) / 1.5 meters (for above 1GHz) above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.

b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

c. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

e. The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.

f. The test-receiver system was set to peak and average detect function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz. If the peak reading value also meets average limit, measurement with the average detector is unnecessary.

Note:

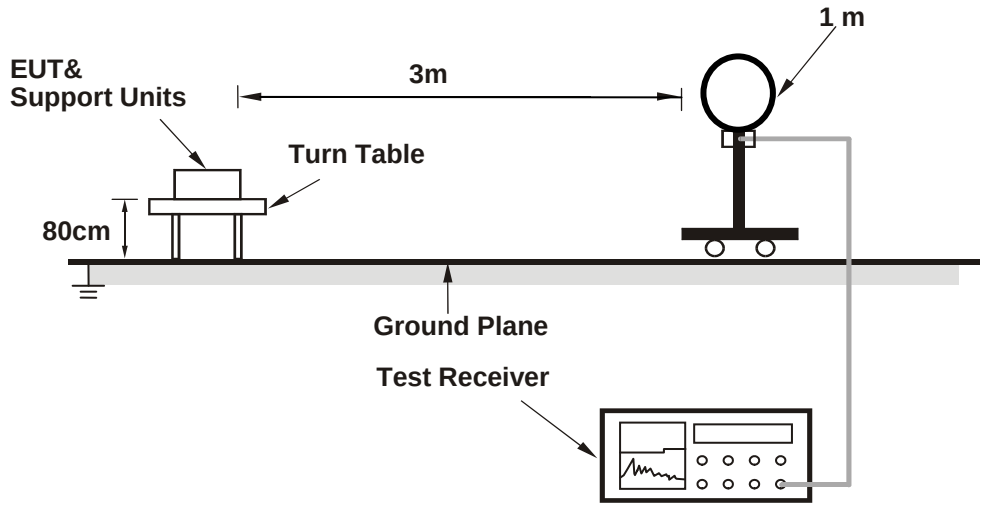
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.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

4.1.4 Deviation from Test Standard

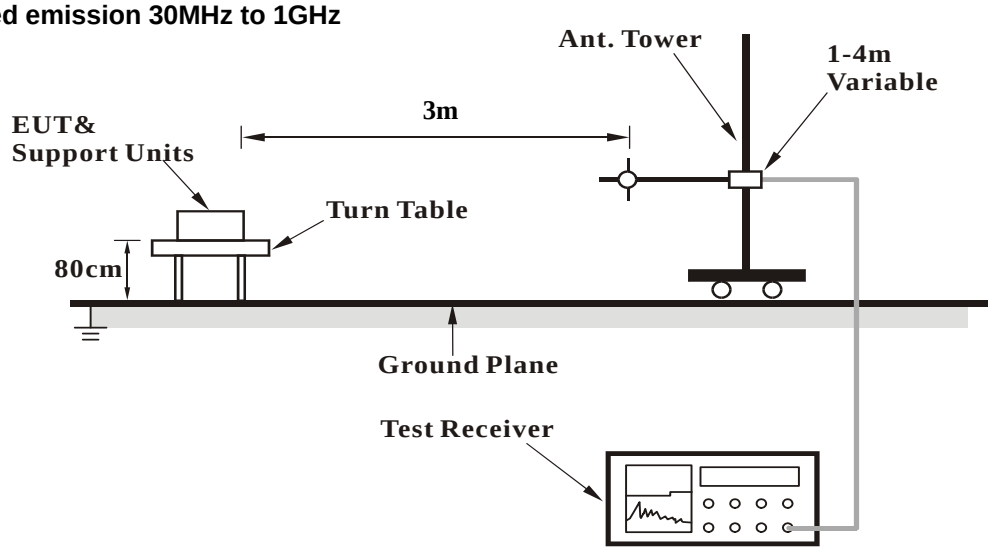
No deviation.

4.1.5 Test Set Up

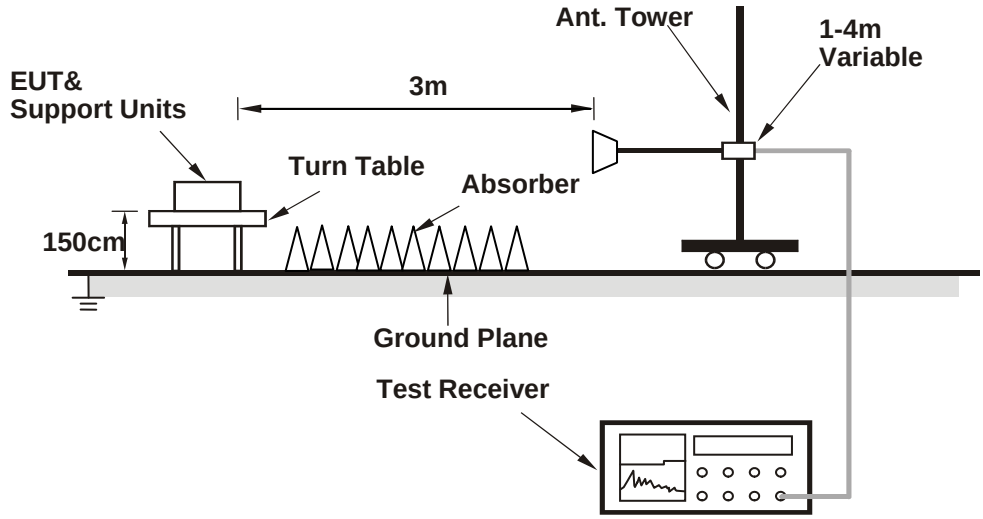
For Radiated emission below 30MHz



For Radiated emission 30MHz to 1GHz



For Radiated emission above 1GHz



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

4.1.6 EUT Operating Conditions

a. Placed the EUT on the testing table.
b. Prepared a notebook to act as a communication partner and placed it outside of testing area.
c. The communication partner connected with EUT via a RJ45 cable and ran a test program (QRCT) to enable EUT under transmission condition continuously at specific channel frequency.
d. The necessary accessories enable the system in full functions.

4.1.7 Test Results

Above 1GHz data:

Mode A

802.11a

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5136.00	64.8 PK	74.0	-9.2	1.71 H	354	61.10	3.70
2	5136.00	50.6 AV	54.0	-3.4	1.71 H	354	46.90	3.70
3	5150.00	63.0 PK	74.0	-11.0	1.71 H	354	59.30	3.70
4	5150.00	49.0 AV	54.0	-5.0	1.71 H	354	45.30	3.70
5	*5180.00	122.0 PK			1.71 H	357	82.40	39.60
6	*5180.00	111.3 AV			1.71 H	357	71.70	39.60
7	#10360.00	58.2 PK	74.0	-15.8	2.43 H	214	42.60	15.60
8	#10360.00	44.6 AV	54.0	-9.4	2.43 H	214	29.00	15.60
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	5136.00	63.5 PK	74.0	-10.5	1.75 V	356	59.80	3.70
2	5136.00	52.3 AV	54.0	-1.7	1.75 V	356	48.60	3.70
3	5150.00	62.0 PK	74.0	-12.0	1.75 V	356	58.30	3.70
4	5150.00	49.2 AV	54.0	-4.8	1.75 V	356	45.50	3.70
5	*5180.00	123.2 PK			1.74 V	338	83.60	39.60
6	*5180.00	112.3 AV			1.74 V	338	72.70	39.60
7	#10360.00	58.0 PK	74.0	-16.0	2.59 V	331	42.40	15.60
8	#10360.00	44.4 AV	54.0	-9.6	2.59 V	331	28.80	15.60

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5136.00	60.1 PK	74.0	-13.9	1.69 H	353	56.40	3.70
2	5136.00	50.6 AV	54.0	-3.4	1.69 H	353	46.90	3.70
3	*5200.00	121.9 PK			1.71 H	354	82.30	39.60
4	*5200.00	111.1 AV			1.71 H	354	71.50	39.60
5	#10400.00	57.7 PK	74.0	-16.3	2.14 H	279	42.10	15.60
6	#10400.00	44.5 AV	54.0	-9.5	2.14 H	279	28.90	15.60
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	5136.00	61.4 PK	74.0	-12.6	1.73 V	355	57.70	3.70
2	5136.00	52.2 AV	54.0	-1.8	1.73 V	355	48.50	3.70
3	*5200.00	123.0 PK			1.74 V	337	83.40	39.60
4	*5200.00	112.1 AV			1.74 V	337	72.50	39.60
5	#10400.00	58.0 PK	74.0	-16.0	2.22 V	274	42.40	15.60
6	#10400.00	44.6 AV	54.0	-9.4	2.22 V	274	29.00	15.60

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5136.00	58.8 PK	74.0	-15.2	1.76 H	353	55.10	3.70
2	5136.00	49.1 AV	54.0	-4.9	1.76 H	353	45.40	3.70
3	*5240.00	121.5 PK			1.72 H	354	82.10	39.40
4	*5240.00	110.7 AV			1.72 H	354	71.30	39.40
5	5350.00	57.4 PK	74.0	-16.6	1.73 H	334	53.60	3.80
6	5350.00	45.0 AV	54.0	-9.0	1.73 H	334	41.20	3.80
7	5376.00	58.6 PK	74.0	-15.4	1.73 H	334	54.90	3.70
8	5376.00	47.5 AV	54.0	-6.5	1.73 H	334	43.80	3.70
9	#10480.00	58.8 PK	74.0	-15.2	1.33 H	276	42.20	16.60
10	#10480.00	44.8 AV	54.0	-9.2	1.33 H	276	28.20	16.60
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	5136.00	60.9 PK	74.0	-13.1	1.75 V	357	57.20	3.70
2	5136.00	52.3 AV	54.0	-1.7	1.75 V	357	48.60	3.70
3	*5240.00	122.9 PK			1.73 V	341	83.50	39.40
4	*5240.00	112.2 AV			1.73 V	341	72.80	39.40
5	5350.00	62.7 PK	74.0	-11.3	1.76 V	354	58.90	3.80
6	5350.00	48.6 AV	54.0	-5.4	1.76 V	354	44.80	3.80
7	5376.00	60.1 PK	74.0	-13.9	1.73 V	353	56.40	3.70
8	5376.00	49.9 AV	54.0	-4.1	1.73 V	353	46.20	3.70
9	#10480.00	58.2 PK	74.0	-15.8	1.51 V	332	41.60	16.60
10	#10480.00	44.6 AV	54.0	-9.4	1.51 V	332	28.00	16.60

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5646.40	59.0 PK	68.2	-9.2	1.76 H	357	54.70	4.30
2	*5745.00	121.4 PK			1.76 H	357	81.30	40.10
3	*5745.00	110.6 AV			1.76 H	357	70.50	40.10
4	#5944.80	59.6 PK	68.2	-8.6	1.76 H	357	54.60	5.00
5	11490.00	60.2 PK	74.0	-13.8	2.82 H	195	42.40	17.80
6	11490.00	46.8 AV	54.0	-7.2	2.82 H	195	29.00	17.80
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	#5636.00	60.5 PK	68.2	-7.7	1.80 V	340	56.30	4.20
2	*5745.00	124.4 PK			1.80 V	340	84.30	40.10
3	*5745.00	113.7 AV			1.80 V	340	73.60	40.10
4	#5934.40	60.1 PK	68.2	-8.1	1.80 V	340	55.10	5.00
5	11490.00	60.5 PK	74.0	-13.5	2.34 V	273	42.70	17.80
6	11490.00	47.0 AV	54.0	-7.0	2.34 V	273	29.20	17.80

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5628.80	58.4 PK	68.2	-9.8	1.76 H	344	54.20	4.20
2	*5785.00	122.2 PK			1.76 H	344	81.90	40.30
3	*5785.00	111.6 AV			1.76 H	344	71.30	40.30
4	#5931.20	60.3 PK	68.2	-7.9	1.76 H	344	55.30	5.00
5	11570.00	60.1 PK	74.0	-13.9	3.78 H	154	42.00	18.10
6	11570.00	47.3 AV	54.0	-6.7	3.78 H	154	29.20	18.10
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5616.00	59.1 PK	68.2	-9.1	1.83 V	341	54.90	4.20
2	*5785.00	125.6 PK			1.83 V	341	85.30	40.30
3	*5785.00	114.9 AV			1.83 V	341	74.60	40.30
4	#5934.40	60.5 PK	68.2	-7.7	1.83 V	341	55.50	5.00
5	11570.00	61.9 PK	74.0	-12.1	1.83 V	286	43.80	18.10
6	11570.00	47.1 AV	54.0	-6.9	1.83 V	286	29.00	18.10

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5632.00	58.6 PK	68.2	-9.6	1.77 H	346	54.40	4.20
2	*5825.00	122.9 PK			1.77 H	346	82.40	40.50
3	*5825.00	112.1 AV			1.77 H	346	71.60	40.50
4	#5948.80	60.1 PK	68.2	-8.1	1.77 H	346	55.10	5.00
5	11650.00	59.5 PK	74.0	-14.5	3.07 H	222	41.80	17.70
6	11650.00	46.5 AV	54.0	-7.5	3.07 H	222	28.80	17.70
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	59.2 PK	68.2	-9.0	1.79 V	339	55.00	4.20
2	*5825.00	126.0 PK			1.79 V	339	85.50	40.50
3	*5825.00	115.1 AV			1.79 V	339	74.60	40.50
4	#5958.40	61.1 PK	68.2	-7.1	1.79 V	339	56.10	5.00
5	11650.00	60.3 PK	74.0	-13.7	1.47 V	226	42.60	17.70
6	11650.00	46.8 AV	54.0	-7.2	1.47 V	226	29.10	17.70

Remarks:

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

802.11n (HT20)

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5136.00	63.6 PK	74.0	-10.4	1.68 H	338	59.90	3.70
2	5136.00	52.2 AV	54.0	-1.8	1.68 H	338	48.50	3.70
3	5150.00	63.6 PK	74.0	-10.4	1.68 H	338	59.90	3.70
4	5150.00	50.3 AV	54.0	-3.7	1.68 H	338	46.60	3.70
5	*5180.00	123.3 PK			1.71 H	353	83.70	39.60
6	*5180.00	111.9 AV			1.71 H	353	72.30	39.60
7	#10360.00	57.9 PK	74.0	-16.1	1.94 H	233	42.30	15.60
8	#10360.00	44.4 AV	54.0	-9.6	1.94 H	233	28.80	15.60
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	5136.00	62.7 PK	74.0	-11.3	1.77 V	357	59.00	3.70
2	5136.00	52.4 AV	54.0	-1.6	1.77 V	357	48.70	3.70
3	5150.00	63.6 PK	74.0	-10.4	1.77 V	357	59.90	3.70
4	5150.00	50.3 AV	54.0	-3.7	1.77 V	357	46.60	3.70
5	*5180.00	124.2 PK			1.72 V	334	84.60	39.60
6	*5180.00	112.5 AV			1.72 V	334	72.90	39.60
7	#10360.00	58.4 PK	74.0	-15.6	2.94 V	238	42.80	15.60
8	#10360.00	44.5 AV	54.0	-9.5	2.94 V	238	28.90	15.60

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5136.00	61.5 PK	74.0	-12.5	1.65 H	339	57.80	3.70
2	5136.00	52.0 AV	54.0	-2.0	1.65 H	339	48.30	3.70
3	*5200.00	123.6 PK			1.68 H	342	84.00	39.60
4	*5200.00	112.7 AV			1.68 H	342	73.10	39.60
5	#10400.00	58.4 PK	74.0	-15.6	1.48 H	227	42.80	15.60
6	#10400.00	44.3 AV	54.0	-9.7	1.48 H	227	28.70	15.60
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	5136.00	62.9 PK	74.0	-11.1	1.76 V	354	59.20	3.70
2	5136.00	52.2 AV	54.0	-1.8	1.76 V	354	48.50	3.70
3	*5200.00	125.0 PK			1.72 V	333	85.40	39.60
4	*5200.00	113.6 AV			1.72 V	333	74.00	39.60
5	#10400.00	58.1 PK	74.0	-15.9	1.84 V	231	42.50	15.60
6	#10400.00	44.3 AV	54.0	-9.7	1.84 V	231	28.70	15.60

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5136.00	60.9 PK	74.0	-13.1	1.63 H	339	57.20	3.70
2	5136.00	51.7 AV	54.0	-2.3	1.63 H	339	48.00	3.70
3	*5240.00	123.5 PK			1.65 H	352	84.10	39.40
4	*5240.00	112.5 AV			1.65 H	352	73.10	39.40
5	5350.00	59.4 PK	74.0	-14.6	1.63 H	341	55.60	3.80
6	5350.00	46.2 AV	54.0	-7.8	1.63 H	341	42.40	3.80
7	5376.00	60.3 PK	74.0	-13.7	1.63 H	341	56.60	3.70
8	5376.00	50.0 AV	54.0	-4.0	1.63 H	341	46.30	3.70
9	#10480.00	58.5 PK	74.0	-15.5	1.93 H	256	41.90	16.60
10	#10480.00	45.1 AV	54.0	-8.9	1.93 H	256	28.50	16.60
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	5136.00	61.1 PK	74.0	-12.9	1.75 V	354	57.40	3.70
2	5136.00	52.0 AV	54.0	-2.0	1.75 V	354	48.30	3.70
3	*5240.00	125.0 PK			1.68 V	328	85.60	39.40
4	*5240.00	113.6 AV			1.68 V	328	74.20	39.40
5	5350.00	60.7 PK	74.0	-13.3	1.79 V	358	56.90	3.80
6	5350.00	48.2 AV	54.0	-5.8	1.79 V	358	44.40	3.80
7	5376.00	61.9 PK	74.0	-12.1	1.79 V	358	58.20	3.70
8	5376.00	51.0 AV	54.0	-3.0	1.79 V	358	47.30	3.70
9	#10480.00	58.5 PK	74.0	-15.5	2.22 V	274	41.90	16.60
10	#10480.00	45.0 AV	54.0	-9.0	2.22 V	274	28.40	16.60

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5640.00	58.6 PK	68.2	-9.6	1.81 H	349	54.40	4.20
2	*5745.00	121.8 PK			1.81 H	349	81.70	40.10
3	*5745.00	110.7 AV			1.81 H	349	70.60	40.10
4	#5949.60	58.8 PK	68.2	-9.4	1.81 H	349	53.80	5.00
5	11490.00	60.7 PK	74.0	-13.3	3.11 H	189	42.90	17.80
6	11490.00	46.8 AV	54.0	-7.2	3.11 H	189	29.00	17.80
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5620.80	59.7 PK	68.2	-8.5	1.82 V	337	55.50	4.20
2	*5745.00	125.1 PK			1.82 V	337	85.00	40.10
3	*5745.00	113.6 AV			1.82 V	337	73.50	40.10
4	#5953.60	60.5 PK	68.2	-7.7	1.82 V	337	55.50	5.00
5	11490.00	59.9 PK	74.0	-14.1	2.57 V	221	42.10	17.80
6	11490.00	46.7 AV	54.0	-7.3	2.57 V	221	28.90	17.80

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5649.60	57.9 PK	68.2	-10.3	1.73 H	343	53.60	4.30
2	*5785.00	122.6 PK			1.73 H	343	82.30	40.30
3	*5785.00	111.8 AV			1.73 H	343	71.50	40.30
4	#5940.00	59.0 PK	68.2	-9.2	1.73 H	343	54.10	4.90
5	11570.00	60.8 PK	74.0	-13.2	3.18 H	261	42.70	18.10
6	11570.00	47.4 AV	54.0	-6.6	3.18 H	261	29.30	18.10
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5608.00	59.4 PK	68.2	-8.8	1.82 V	334	55.20	4.20
2	*5785.00	126.0 PK			1.82 V	334	85.70	40.30
3	*5785.00	114.5 AV			1.82 V	334	74.20	40.30
4	#5925.60	60.6 PK	68.2	-7.6	1.82 V	334	55.70	4.90
5	11570.00	61.0 PK	74.0	-13.0	2.63 V	245	42.90	18.10
6	11570.00	47.3 AV	54.0	-6.7	2.63 V	245	29.20	18.10

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5637.60	58.4 PK	68.2	-9.8	1.81 H	350	54.20	4.20
2	*5825.00	123.2 PK			1.81 H	350	82.70	40.50
3	*5825.00	112.2 AV			1.81 H	350	71.70	40.50
4	#5951.20	59.3 PK	68.2	-8.9	1.81 H	350	54.30	5.00
5	11650.00	60.2 PK	74.0	-13.8	3.16 H	293	42.50	17.70
6	11650.00	46.5 AV	54.0	-7.5	3.16 H	293	28.80	17.70
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5649.60	59.5 PK	68.2	-8.7	1.81 V	338	55.20	4.30
2	*5825.00	126.6 PK			1.81 V	338	86.10	40.50
3	*5825.00	115.4 AV			1.81 V	338	74.90	40.50
4	#5934.40	60.8 PK	68.2	-7.4	1.81 V	338	55.80	5.00
5	11650.00	60.0 PK	74.0	-14.0	2.57 V	193	42.30	17.70
6	11650.00	46.7 AV	54.0	-7.3	2.57 V	193	29.00	17.70

Remarks:

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

802.11n (HT40)

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	65.9 PK	74.0	-8.1	1.66 H	344	62.20	3.70
2	5150.00	52.5 AV	54.0	-1.5	1.66 H	344	48.80	3.70
3	*5190.00	118.8 PK			1.64 H	343	79.20	39.60
4	*5190.00	108.4 AV			1.64 H	343	68.80	39.60
5	#10380.00	57.5 PK	74.0	-16.5	2.06 H	293	41.90	15.60
6	#10380.00	44.5 AV	54.0	-9.5	2.06 H	293	28.90	15.60
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	65.8 PK	74.0	-8.2	1.69 V	328	62.10	3.70
2	5150.00	52.5 AV	54.0	-1.5	1.69 V	328	48.80	3.70
3	*5190.00	119.5 PK			1.71 V	327	79.90	39.60
4	*5190.00	109.0 AV			1.71 V	327	69.40	39.60
5	#10380.00	58.0 PK	74.0	-16.0	2.45 V	338	42.40	15.60
6	#10380.00	44.4 AV	54.0	-9.6	2.45 V	338	28.80	15.60

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5136.00	61.6 PK	74.0	-12.4	1.71 H	356	57.90	3.70
2	5136.00	51.7 AV	54.0	-2.3	1.71 H	356	48.00	3.70
3	*5230.00	120.3 PK			1.66 H	351	80.90	39.40
4	*5230.00	110.3 AV			1.66 H	351	70.90	39.40
5	5350.00	59.2 PK	74.0	-14.8	1.69 H	344	55.40	3.80
6	5350.00	47.4 AV	54.0	-6.6	1.69 H	344	43.60	3.80
7	5376.00	60.1 PK	74.0	-13.9	1.69 H	344	56.40	3.70
8	5376.00	50.9 AV	54.0	-3.1	1.69 H	344	47.20	3.70
9	#10460.00	58.5 PK	74.0	-15.5	1.33 H	256	42.30	16.20
10	#10460.00	44.8 AV	54.0	-9.2	1.33 H	256	28.60	16.20
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	5136.00	62.7 PK	74.0	-11.3	1.75 V	353	59.00	3.70
2	5136.00	52.4 AV	54.0	-1.6	1.75 V	353	48.70	3.70
3	*5230.00	121.8 PK			1.72 V	338	82.40	39.40
4	*5230.00	111.3 AV			1.72 V	338	71.90	39.40
5	5350.00	60.2 PK	74.0	-13.8	1.74 V	356	56.40	3.80
6	5350.00	48.5 AV	54.0	-5.5	1.74 V	356	44.70	3.80
7	5376.00	61.6 PK	74.0	-12.4	1.74 V	356	57.90	3.70
8	5376.00	51.0 AV	54.0	-3.0	1.74 V	356	47.30	3.70
9	#10460.00	58.3 PK	74.0	-15.7	2.48 V	339	42.10	16.20
10	#10460.00	44.5 AV	54.0	-9.5	2.48 V	339	28.30	16.20

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5640.00	58.3 PK	68.2	-9.9	1.79 H	341	54.10	4.20
2	*5755.00	118.8 PK			1.79 H	341	78.70	40.10
3	*5755.00	108.3 AV			1.79 H	341	68.20	40.10
4	#5952.00	59.7 PK	68.2	-8.5	1.79 H	341	54.70	5.00
5	11510.00	59.7 PK	74.0	-14.3	3.03 H	198	41.90	17.80
6	11510.00	46.9 AV	54.0	-7.1	3.03 H	198	29.10	17.80
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5646.40	59.6 PK	68.2	-8.6	1.81 V	336	55.30	4.30
2	*5755.00	121.8 PK			1.81 V	336	81.70	40.10
3	*5755.00	111.5 AV			1.81 V	336	71.40	40.10
4	#5968.80	60.9 PK	68.2	-7.3	1.81 V	336	55.90	5.00
5	11510.00	59.2 PK	74.0	-14.8	2.63 V	261	41.40	17.80
6	11510.00	46.0 AV	54.0	-8.0	2.63 V	261	28.20	17.80

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5648.80	58.9 PK	68.2	-9.3	1.78 H	350	54.60	4.30
2	*5795.00	119.2 PK			1.78 H	350	78.90	40.30
3	*5795.00	109.1 AV			1.78 H	350	68.80	40.30
4	#5926.40	59.3 PK	68.2	-8.9	1.78 H	350	54.40	4.90
5	11590.00	61.0 PK	74.0	-13.0	2.94 H	187	43.00	18.00
6	11590.00	47.1 AV	54.0	-6.9	2.94 H	187	29.10	18.00
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5631.20	59.3 PK	68.2	-8.9	1.80 V	338	55.10	4.20
2	*5795.00	122.3 PK			1.80 V	338	82.00	40.30
3	*5795.00	111.9 AV			1.80 V	338	71.60	40.30
4	#5956.80	61.6 PK	68.2	-6.6	1.80 V	338	56.60	5.00
5	11590.00	60.9 PK	74.0	-13.1	2.21 V	193	42.90	18.00
6	11590.00	47.3 AV	54.0	-6.7	2.21 V	193	29.30	18.00

Remarks:

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

802.11ac (VHT80)

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	65.5 PK	74.0	-8.5	1.61 H	359	61.80	3.70
2	5150.00	52.1 AV	54.0	-1.9	1.61 H	359	48.40	3.70
3	*5210.00	114.6 PK			1.65 H	360	75.10	39.50
4	*5210.00	104.2 AV			1.65 H	360	64.70	39.50
5	5350.00	59.9 PK	74.0	-14.1	1.68 H	342	56.10	3.80
6	5350.00	48.1 AV	54.0	-5.9	1.68 H	342	44.30	3.80
7	#10420.00	57.7 PK	74.0	-16.3	1.88 H	242	41.90	15.80
8	#10420.00	44.9 AV	54.0	-9.1	1.88 H	242	29.10	15.80
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	67.3 PK	74.0	-6.7	1.75 V	347	63.60	3.70
2	**5150.00**	**52.6 AV**	**54.0**	**-1.4**	**1.75 V**	**347**	**48.90**	**3.70**
3	*5210.00	116.4 PK			1.74 V	338	76.90	39.50
4	*5210.00	105.6 AV			1.74 V	338	66.10	39.50
5	5350.00	61.4 PK	74.0	-12.6	1.74 V	336	57.60	3.80
6	5350.00	49.0 AV	54.0	-5.0	1.74 V	336	45.20	3.80
7	#10420.00	57.7 PK	74.0	-16.3	2.34 V	239	41.90	15.80
8	#10420.00	44.2 AV	54.0	-9.8	2.34 V	239	28.40	15.80

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5648.00	60.4 PK	68.2	-7.8	1.75 H	341	56.10	4.30
2	*5775.00	115.6 PK			1.75 H	341	75.40	40.20
3	*5775.00	105.6 AV			1.75 H	341	65.40	40.20
4	#5932.00	60.0 PK	68.2	-8.2	1.75 H	341	55.00	5.00
5	11550.00	59.7 PK	74.0	-14.3	3.03 H	281	41.70	18.00
6	11550.00	46.9 AV	54.0	-7.1	3.03 H	281	28.90	18.00
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5634.40	62.7 PK	68.2	-5.5	1.80 V	339	58.50	4.20
2	*5775.00	119.1 PK			1.80 V	339	78.90	40.20
3	*5775.00	108.8 AV			1.80 V	339	68.60	40.20
4	#5924.00	63.4 PK	68.9	-5.5	1.80 V	339	58.50	4.90
5	11550.00	60.3 PK	74.0	-13.7	2.49 V	157	42.30	18.00
6	11550.00	47.2 AV	54.0	-6.8	2.49 V	157	29.20	18.00

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.

Mode B

802.11a

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	54.4 PK	74.0	-19.6	1.44 H	57	50.70	3.70
2	5150.00	41.7 AV	54.0	-12.3	1.44 H	57	38.00	3.70
3	*5180.00	101.8 PK			1.25 H	38	62.20	39.60
4	*5180.00	90.8 AV			1.25 H	38	51.20	39.60
5	#10360.00	54.5 PK	74.0	-19.5	1.57 H	99	38.90	15.60
6	#10360.00	42.6 AV	54.0	-11.4	1.57 H	99	27.00	15.60
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	54.2 PK	74.0	-19.8	1.22 V	46	50.50	3.70
2	5150.00	42.1 AV	54.0	-11.9	1.22 V	46	38.40	3.70
3	*5180.00	103.6 PK			1.06 V	27	64.00	39.60
4	*5180.00	92.4 AV			1.06 V	27	52.80	39.60
5	#10360.00	52.9 PK	74.0	-21.1	1.55 V	110	37.30	15.60
6	#10360.00	40.4 AV	54.0	-13.6	1.55 V	110	24.80	15.60

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5200.00	66.4 PK			1.18 H	40	62.70	3.70
2	*5200.00	55.4 AV			1.18 H	40	51.70	3.70
3	#10400.00	53.9 PK	74.0	-20.1	1.39 H	110	38.30	15.60
4	#10400.00	42.1 AV	54.0	-11.9	1.39 H	110	26.50	15.60
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5200.00	103.3 PK			1.00 V	27	63.70	39.60
2	*5200.00	92.3 AV			1.00 V	27	52.70	39.60
3	#10400.00	52.2 PK	74.0	-21.8	1.51 V	119	36.60	15.60
4	#10400.00	38.3 AV	54.0	-15.7	1.51 V	119	22.70	15.60

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	102.5 PK			1.33 H	42	63.10	39.40
2	*5240.00	91.7 AV			1.33 H	42	52.30	39.40
3	5350.00	54.4 PK	74.0	-19.6	1.22 H	55	50.60	3.80
4	5350.00	41.5 AV	54.0	-12.5	1.22 H	55	37.70	3.80
5	#10480.00	56.6 PK	74.0	-17.4	1.69 H	122	40.00	16.60
6	#10480.00	43.5 AV	54.0	-10.5	1.69 H	122	26.90	16.60
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	102.1 PK			1.07 V	31	62.70	39.40
2	*5240.00	91.1 AV			1.07 V	31	51.70	39.40
3	5350.00	55.3 PK	74.0	-18.7	1.33 V	99	51.50	3.80
4	5350.00	41.0 AV	54.0	-13.0	1.33 V	99	37.20	3.80
5	#10480.00	53.6 PK	74.0	-20.4	1.51 V	128	37.00	16.60
6	#10480.00	40.4 AV	54.0	-13.6	1.51 V	128	23.80	16.60

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5632.80	57.4 PK	68.2	-10.8	1.54 H	33	53.20	4.20
2	*5745.00	117.4 PK			1.54 H	33	77.30	40.10
3	*5745.00	106.6 AV			1.54 H	33	66.50	40.10
4	#5933.60	57.1 PK	68.2	-11.1	1.54 H	33	52.10	5.00
5	11490.00	58.7 PK	74.0	-15.3	2.55 H	152	40.90	17.80
6	11490.00	45.6 AV	54.0	-8.4	2.55 H	152	27.80	17.80
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	58.7 PK	68.2	-9.5	1.53 V	30	54.50	4.20
2	*5745.00	121.4 PK			1.53 V	30	81.30	40.10
3	*5745.00	110.1 AV			1.53 V	30	70.00	40.10
4	#5944.80	57.4 PK	68.2	-10.8	1.53 V	30	52.40	5.00
5	11490.00	60.3 PK	74.0	-13.7	2.86 V	133	42.50	17.80
6	11490.00	47.0 AV	54.0	-7.0	2.86 V	133	29.20	17.80

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5628.80	56.7 PK	68.2	-11.5	1.64 H	37	52.50	4.20
2	*5785.00	117.9 PK			1.64 H	37	77.60	40.30
3	*5785.00	107.0 AV			1.64 H	37	66.70	40.30
4	#5936.80	57.3 PK	68.2	-10.9	1.64 H	37	52.40	4.90
5	11570.00	61.1 PK	74.0	-12.9	2.48 H	33	43.00	18.10
6	11570.00	47.1 AV	54.0	-6.9	2.48 H	33	29.00	18.10
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5625.60	58.1 PK	68.2	-10.1	1.57 V	30	53.90	4.20
2	*5785.00	121.6 PK			1.57 V	30	81.30	40.30
3	*5785.00	110.6 AV			1.57 V	30	70.30	40.30
4	#5969.60	57.4 PK	68.2	-10.8	1.57 V	30	52.40	5.00
5	11570.00	60.3 PK	74.0	-13.7	2.63 V	173	42.20	18.10
6	11570.00	47.0 AV	54.0	-7.0	2.63 V	173	28.90	18.10

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5644.00	56.4 PK	68.2	-11.8	1.59 H	33	52.10	4.30
2	*5825.00	116.8 PK			1.59 H	33	76.30	40.50
3	*5825.00	106.0 AV			1.59 H	33	65.50	40.50
4	#5948.00	57.8 PK	68.2	-10.4	1.59 H	33	52.80	5.00
5	11650.00	59.4 PK	74.0	-14.6	2.88 H	43	41.70	17.70
6	11650.00	45.8 AV	54.0	-8.2	2.88 H	43	28.10	17.70
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5604.80	57.6 PK	68.2	-10.6	1.56 V	29	53.40	4.20
2	*5825.00	119.8 PK			1.56 V	29	79.30	40.50
3	*5825.00	108.7 AV			1.56 V	29	68.20	40.50
4	#5931.20	58.4 PK	68.2	-9.8	1.56 V	29	53.40	5.00
5	11650.00	59.2 PK	74.0	-14.8	3.19 V	13	41.50	17.70
6	11650.00	47.9 AV	54.0	-6.1	3.19 V	13	30.20	17.70

Remarks:

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

802.11n (HT20)

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	44.1 PK	74.0	-29.9	1.39 H	61	40.40	3.70
2	5150.00	41.6 AV	54.0	-12.4	1.39 H	61	37.90	3.70
3	*5180.00	101.0 PK			1.23 H	46	61.40	39.60
4	*5180.00	90.5 AV			1.23 H	46	50.90	39.60
5	#10360.00	55.8 PK	74.0	-18.2	1.51 H	78	40.20	15.60
6	#10360.00	42.8 AV	54.0	-11.2	1.51 H	78	27.20	15.60
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	45.1 PK	74.0	-28.9	1.19 V	27	41.40	3.70
2	5150.00	42.5 AV	54.0	-11.5	1.19 V	27	38.80	3.70
3	*5180.00	102.1 PK			1.17 V	32	62.50	39.60
4	*5180.00	91.8 AV			1.17 V	32	52.20	39.60
5	#10360.00	55.0 PK	74.0	-19.0	1.41 V	132	39.40	15.60
6	#10360.00	41.6 AV	54.0	-12.4	1.41 V	132	26.00	15.60

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5200.00	100.9 PK			1.31 H	51	61.30	39.60
2	*5200.00	90.5 AV			1.31 H	51	50.90	39.60
3	#10400.00	54.9 PK	74.0	-19.1	1.63 H	133	39.30	15.60
4	#10400.00	42.3 AV	54.0	-11.7	1.63 H	133	26.70	15.60
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	102.3 PK			1.17 V	39	62.70	39.60
2	*5200.00	91.8 AV			1.17 V	39	52.20	39.60
3	#10400.00	53.8 PK	74.0	-20.2	1.36 V	108	38.20	15.60
4	#10400.00	40.3 AV	54.0	-13.7	1.36 V	108	24.70	15.60

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	102.1 PK			1.36 H	39	62.70	39.40
2	*5240.00	91.5 AV			1.36 H	39	52.10	39.40
3	5350.00	53.5 PK	74.0	-20.5	1.51 H	49	49.70	3.80
4	5350.00	41.0 AV	54.0	-13.0	1.51 H	49	37.20	3.80
5	#10480.00	55.7 PK	74.0	-18.3	1.69 H	141	39.10	16.60
6	#10480.00	42.9 AV	54.0	-11.1	1.69 H	141	26.30	16.60
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	102.4 PK			1.02 V	35	63.00	39.40
2	*5240.00	91.4 AV			1.02 V	35	52.00	39.40
3	5350.00	54.4 PK	74.0	-19.6	1.26 V	66	50.60	3.80
4	5350.00	41.5 AV	54.0	-12.5	1.26 V	66	37.70	3.80
5	#10480.00	55.3 PK	74.0	-18.7	1.58 V	94	38.70	16.60
6	#10480.00	42.0 AV	54.0	-12.0	1.58 V	94	25.40	16.60

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5624.00	57.2 PK	68.2	-11.0	1.56 H	35	53.00	4.20
2	*5745.00	118.2 PK			1.56 H	35	78.10	40.10
3	*5745.00	106.9 AV			1.56 H	35	66.80	40.10
4	#5947.20	57.2 PK	68.2	-11.0	1.56 H	35	52.20	5.00
5	11490.00	59.0 PK	74.0	-15.0	2.84 H	31	41.20	17.80
6	11490.00	46.2 AV	54.0	-7.8	2.84 H	31	28.40	17.80
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5631.20	58.2 PK	68.2	-10.0	1.54 V	27	54.00	4.20
2	*5745.00	121.9 PK			1.54 V	27	81.80	40.10
3	*5745.00	110.5 AV			1.54 V	27	70.40	40.10
4	#5930.40	57.7 PK	68.2	-10.5	1.54 V	27	52.70	5.00
5	11490.00	59.3 PK	74.0	-14.7	1.49 V	283	41.50	17.80
6	11490.00	46.4 AV	54.0	-7.6	1.49 V	283	28.60	17.80

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5644.80	57.3 PK	68.2	-10.9	1.62 H	36	53.00	4.30
2	*5785.00	118.2 PK			1.62 H	36	77.90	40.30
3	*5785.00	107.0 AV			1.62 H	36	66.70	40.30
4	#5944.00	57.4 PK	68.2	-10.8	1.62 H	36	52.40	5.00
5	11570.00	60.4 PK	74.0	-13.6	2.86 H	77	42.30	18.10
6	11570.00	46.4 AV	54.0	-7.6	2.86 H	77	28.30	18.10
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	57.8 PK	68.2	-10.4	1.50 V	30	53.60	4.20
2	*5785.00	121.5 PK			1.50 V	30	81.20	40.30
3	*5785.00	109.6 AV			1.50 V	30	69.30	40.30
4	#5937.60	57.2 PK	68.2	-11.0	1.50 V	30	52.30	4.90
5	11570.00	60.2 PK	74.0	-13.8	2.89 V	13	42.10	18.10
6	11570.00	46.2 AV	54.0	-7.8	2.89 V	13	28.10	18.10

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5620.00	56.7 PK	68.2	-11.5	1.52 H	34	52.50	4.20
2	*5825.00	117.3 PK			1.52 H	34	76.80	40.50
3	*5825.00	106.5 AV			1.52 H	34	66.00	40.50
4	#5941.60	57.2 PK	68.2	-11.0	1.52 H	34	52.30	4.90
5	11650.00	59.3 PK	74.0	-14.7	2.78 H	17	41.60	17.70
6	11650.00	46.0 AV	54.0	-8.0	2.78 H	17	28.30	17.70
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	#5640.80	59.1 PK	68.2	-9.1	1.49 V	28	54.90	4.20
2	*5825.00	120.4 PK			1.49 V	28	79.90	40.50
3	*5825.00	108.7 AV			1.49 V	28	68.20	40.50
4	#5939.20	58.2 PK	68.2	-10.0	1.49 V	28	53.30	4.90
5	11650.00	61.9 PK	74.0	-12.1	3.19 V	13	44.20	17.70
6	11650.00	48.0 AV	54.0	-6.0	3.19 V	13	30.30	17.70

Remarks:

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

802.11n (HT40)

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	54.6 PK	74.0	-19.4	1.43 H	70	50.90	3.70
2	5150.00	41.9 AV	54.0	-12.1	1.43 H	70	38.20	3.70
3	*5190.00	99.0 PK			1.26 H	42	59.40	39.60
4	*5190.00	88.8 AV			1.26 H	42	49.20	39.60
5	#10380.00	55.3 PK	74.0	-18.7	1.71 H	123	39.70	15.60
6	#10380.00	42.0 AV	54.0	-12.0	1.71 H	123	26.40	15.60
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	55.0 PK	74.0	-19.0	1.41 V	56	51.30	3.70
2	5150.00	42.8 AV	54.0	-11.2	1.41 V	56	39.10	3.70
3	*5190.00	99.5 PK			1.11 V	30	59.90	39.60
4	*5190.00	89.3 AV			1.11 V	30	49.70	39.60
5	#10380.00	54.9 PK	74.0	-19.1	1.66 V	79	39.30	15.60
6	#10380.00	41.7 AV	54.0	-12.3	1.66 V	79	26.10	15.60

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5230.00	98.8 PK			1.33 H	49	59.40	39.40
2	*5230.00	88.9 AV			1.33 H	49	49.50	39.40
3	5350.00	53.1 PK	74.0	-20.9	1.49 H	69	49.30	3.80
4	5350.00	41.0 AV	54.0	-13.0	1.49 H	69	37.20	3.80
5	#10460.00	54.5 PK	74.0	-19.5	1.69 H	111	38.30	16.20
6	#10460.00	42.1 AV	54.0	-11.9	1.69 H	111	25.90	16.20
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5230.00	99.4 PK			1.06 V	32	60.00	39.40
2	*5230.00	89.4 AV			1.06 V	32	50.00	39.40
3	5350.00	54.6 PK	74.0	-19.4	1.49 V	49	50.80	3.80
4	5350.00	41.5 AV	54.0	-12.5	1.49 V	49	37.70	3.80
5	#10460.00	54.4 PK	74.0	-19.6	1.67 V	110	38.20	16.20
6	#10460.00	41.2 AV	54.0	-12.8	1.67 V	110	25.00	16.20

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5646.40	56.6 PK	68.2	-11.6	1.56 H	37	52.30	4.30
2	*5755.00	114.2 PK			1.56 H	37	74.10	40.10
3	*5755.00	104.0 AV			1.56 H	37	63.90	40.10
4	#5932.80	57.3 PK	68.2	-10.9	1.56 H	37	52.30	5.00
5	11510.00	59.3 PK	74.0	-14.7	2.58 H	3	41.50	17.80
6	11510.00	46.2 AV	54.0	-7.8	2.58 H	3	28.40	17.80
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5602.40	57.2 PK	68.2	-11.0	1.53 V	29	53.00	4.20
2	*5755.00	117.9 PK			1.53 V	29	77.80	40.10
3	*5755.00	107.3 AV			1.53 V	29	67.20	40.10
4	#5966.40	57.1 PK	68.2	-11.1	1.53 V	29	52.10	5.00
5	11510.00	59.1 PK	74.0	-14.9	2.94 V	25	41.30	17.80
6	11510.00	47.0 AV	54.0	-7.0	2.94 V	25	29.20	17.80

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5625.60	56.4 PK	68.2	-11.8	1.65 H	35	52.20	4.20
2	*5795.00	115.1 PK			1.65 H	35	74.80	40.30
3	*5795.00	104.8 AV			1.65 H	35	64.50	40.30
4	#5930.40	57.2 PK	68.2	-11.0	1.65 H	35	52.20	5.00
5	11590.00	59.5 PK	74.0	-14.5	2.64 H	31	41.50	18.00
6	11590.00	46.7 AV	54.0	-7.3	2.64 H	31	28.70	18.00
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	57.8 PK	68.2	-10.4	1.50 V	29	53.60	4.20
2	*5795.00	117.7 PK			1.50 V	29	77.40	40.30
3	*5795.00	107.4 AV			1.50 V	29	67.10	40.30
4	#5951.20	57.8 PK	68.2	-10.4	1.50 V	29	52.80	5.00
5	11590.00	60.5 PK	74.0	-13.5	3.18 V	24	42.50	18.00
6	11590.00	47.4 AV	54.0	-6.6	3.18 V	24	29.40	18.00

Remarks:

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

802.11ac (VHT80)

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	54.8 PK	74.0	-19.2	1.39 H	66	51.10	3.70
2	5150.00	41.9 AV	54.0	-12.1	1.39 H	66	38.20	3.70
3	*5210.00	95.9 PK			1.26 H	44	56.40	39.50
4	*5210.00	85.5 AV			1.26 H	44	46.00	39.50
5	5350.00	55.0 PK	74.0	-19.0	1.55 H	55	51.20	3.80
6	5350.00	41.7 AV	54.0	-12.3	1.55 H	55	37.90	3.80
7	#10420.00	55.7 PK	74.0	-18.3	1.61 H	110	39.90	15.80
8	#10420.00	43.2 AV	54.0	-10.8	1.61 H	110	27.40	15.80
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	53.9 PK	74.0	-20.1	1.17 V	56	50.20	3.70
2	5150.00	42.4 AV	54.0	-11.6	1.17 V	56	38.70	3.70
3	*5210.00	95.8 PK			1.10 V	28	56.30	39.50
4	*5210.00	86.2 AV			1.10 V	28	46.70	39.50
5	5350.00	54.1 PK	74.0	-19.9	1.22 V	66	50.30	3.80
6	5350.00	41.5 AV	54.0	-12.5	1.22 V	66	37.70	3.80
7	#10420.00	55.7 PK	74.0	-18.3	1.55 V	101	39.90	15.80
8	#10420.00	42.1 AV	54.0	-11.9	1.55 V	101	26.30	15.80

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5648.00	59.2 PK	68.2	-9.0	1.61 H	36	54.90	4.30
2	#5650.00	61.0 PK	68.2	-7.2	1.84 H	68	56.70	4.30
3	*5775.00	110.6 PK			1.61 H	36	70.40	40.20
4	*5775.00	100.7 AV			1.61 H	36	60.50	40.20
5	#5925.00	59.0 PK	68.2	-9.2	1.77 H	46	54.10	4.90
6	#5930.40	57.1 PK	68.2	-11.1	1.61 H	36	52.10	5.00
7	11550.00	58.6 PK	74.0	-15.4	2.38 H	14	40.60	18.00
8	11550.00	46.3 AV	54.0	-7.7	2.38 H	14	28.30	18.00
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5646.40	60.3 PK	68.2	-7.9	1.54 V	28	56.00	4.30
2	#5650.00	62.5 PK	68.2	-5.7	1.49 V	29	58.20	4.30
3	*5775.00	114.8 PK			1.54 V	28	74.60	40.20
4	*5775.00	104.3 AV			1.54 V	28	64.10	40.20
5	#5925.00	59.7 PK	68.2	-8.5	1.56 V	26	54.80	4.90
6	#5933.60	58.6 PK	68.2	-9.6	1.54 V	28	53.60	5.00
7	11550.00	59.0 PK	74.0	-15.0	2.79 V	13	41.00	18.00
8	11550.00	46.6 AV	54.0	-7.4	2.79 V	13	28.60	18.00

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.

Mode C

802.11a

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	55.1 PK	74.0	-18.9	2.48 H	76	51.40	3.70
2	5150.00	43.1 AV	54.0	-10.9	2.48 H	76	39.40	3.70
3	*5180.00	106.3 PK			3.17 H	13	66.70	39.60
4	*5180.00	95.8 AV			3.17 H	13	56.20	39.60
5	#10360.00	57.4 PK	74.0	-16.6	2.22 H	178	41.80	15.60
6	#10360.00	44.3 AV	54.0	-9.7	2.22 H	178	28.70	15.60
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	55.5 PK	74.0	-18.5	2.56 V	34	51.80	3.70
2	5150.00	42.7 AV	54.0	-11.3	2.56 V	34	39.00	3.70
3	*5180.00	107.1 PK			2.25 V	349	67.50	39.60
4	*5180.00	95.9 AV			2.25 V	349	56.30	39.60
5	#10360.00	57.5 PK	74.0	-16.5	1.68 V	313	41.90	15.60
6	#10360.00	44.5 AV	54.0	-9.5	1.68 V	313	28.90	15.60

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5200.00	106.5 PK			3.10 H	14	66.90	39.60
2	*5200.00	96.0 AV			3.10 H	14	56.40	39.60
3	#10400.00	57.7 PK	74.0	-16.3	2.17 H	166	42.10	15.60
4	#10400.00	44.0 AV	54.0	-10.0	2.17 H	166	28.40	15.60
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	107.0 PK			1.95 V	347	67.40	39.60
2	*5200.00	96.2 AV			1.95 V	347	56.60	39.60
3	#10400.00	56.8 PK	74.0	-17.2	1.84 V	305	41.20	15.60
4	#10400.00	44.4 AV	54.0	-9.6	1.84 V	305	28.80	15.60

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	106.5 PK			3.25 H	12	67.10	39.40
2	*5240.00	95.8 AV			3.25 H	12	56.40	39.40
3	5350.00	56.4 PK	74.0	-17.6	2.93 H	26	52.60	3.80
4	5350.00	42.9 AV	54.0	-11.1	2.93 H	26	39.10	3.80
5	#10480.00	58.9 PK	74.0	-15.1	2.51 H	177	42.30	16.60
6	#10480.00	45.1 AV	54.0	-8.9	2.51 H	177	28.50	16.60
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			2.03 V	348	67.70	39.40
2	*5240.00	96.2 AV			2.03 V	348	56.80	39.40
3	5350.00	55.5 PK	74.0	-18.5	1.99 V	354	51.70	3.80
4	5350.00	42.7 AV	54.0	-11.3	1.99 V	354	38.90	3.80
5	#10480.00	58.2 PK	74.0	-15.8	1.42 V	281	41.60	16.60
6	#10480.00	45.3 AV	54.0	-8.7	1.42 V	281	28.70	16.60

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5633.60	55.7 PK	68.2	-12.5	2.74 H	21	51.50	4.20
2	*5745.00	114.1 PK			2.74 H	21	74.00	40.10
3	*5745.00	103.7 AV			2.74 H	21	63.60	40.10
4	#5957.60	55.3 PK	68.2	-12.9	2.74 H	21	50.30	5.00
5	11490.00	67.4 PK	74.0	-6.6	3.57 H	192	49.60	17.80
6	11490.00	52.5 AV	54.0	-1.5	3.57 H	192	34.70	17.80
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	#5640.80	55.8 PK	68.2	-12.4	2.60 V	28	51.60	4.20
2	*5745.00	120.4 PK			2.60 V	28	80.30	40.10
3	*5745.00	108.5 AV			2.60 V	28	68.40	40.10
4	#5935.20	57.1 PK	68.2	-11.1	2.60 V	28	52.20	4.90
5	11490.00	66.4 PK	74.0	-7.6	2.13 V	16	48.60	17.80
6	11490.00	50.8 AV	54.0	-3.2	2.13 V	16	33.00	17.80

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5644.00	54.9 PK	68.2	-13.3	2.39 H	32	50.60	4.30
2	*5785.00	116.3 PK			2.39 H	32	76.00	40.30
3	*5785.00	105.3 AV			2.39 H	32	65.00	40.30
4	#5961.60	56.1 PK	68.2	-12.1	2.39 H	32	51.10	5.00
5	11570.00	67.2 PK	74.0	-6.8	3.45 H	134	49.10	18.10
6	11570.00	52.5 AV	54.0	-1.5	3.45 H	134	34.40	18.10
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	54.9 PK	68.2	-13.3	2.64 V	27	50.60	4.30
2	*5785.00	119.9 PK			2.64 V	27	79.60	40.30
3	*5785.00	108.4 AV			2.64 V	27	68.10	40.30
4	#5936.80	55.7 PK	68.2	-12.5	2.64 V	27	50.80	4.90
5	11570.00	65.0 PK	74.0	-9.0	2.49 V	67	46.90	18.10
6	11570.00	50.5 AV	54.0	-3.5	2.49 V	67	32.40	18.10

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5623.20	54.9 PK	68.2	-13.3	2.40 H	29	50.70	4.20
2	*5825.00	116.4 PK			2.40 H	29	75.90	40.50
3	*5825.00	105.9 AV			2.40 H	29	65.40	40.50
4	#5964.80	56.3 PK	68.2	-11.9	2.40 H	29	51.30	5.00
5	11650.00	63.2 PK	74.0	-10.8	2.72 H	351	45.50	17.70
6	11650.00	48.7 AV	54.0	-5.3	2.72 H	351	31.00	17.70
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5634.40	55.2 PK	68.2	-13.0	2.78 V	29	51.00	4.20
2	*5825.00	120.8 PK			2.78 V	29	80.30	40.50
3	*5825.00	109.3 AV			2.78 V	29	68.80	40.50
4	#5929.60	55.8 PK	68.2	-12.4	2.78 V	29	50.80	5.00
5	11650.00	64.5 PK	74.0	-9.5	2.68 V	64	46.80	17.70
6	11650.00	49.8 AV	54.0	-4.2	2.68 V	64	32.10	17.70

Remarks:

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

802.11n (HT20)

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	55.6 PK	74.0	-18.4	2.76 H	354	51.90	3.70
2	5150.00	43.4 AV	54.0	-10.6	2.76 H	354	39.70	3.70
3	*5180.00	106.9 PK			3.23 H	13	67.30	39.60
4	*5180.00	95.2 AV			3.23 H	13	55.60	39.60
5	#10360.00	57.6 PK	74.0	-16.4	2.22 H	168	42.00	15.60
6	#10360.00	44.4 AV	54.0	-9.6	2.22 H	168	28.80	15.60
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	55.9 PK	74.0	-18.1	2.04 V	42	52.20	3.70
2	5150.00	42.9 AV	54.0	-11.1	2.04 V	42	39.20	3.70
3	*5180.00	106.7 PK			2.11 V	347	67.10	39.60
4	*5180.00	95.2 AV			2.11 V	347	55.60	39.60
5	#10360.00	57.2 PK	74.0	-16.8	1.58 V	293	41.60	15.60
6	#10360.00	44.5 AV	54.0	-9.5	1.58 V	293	28.90	15.60

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5200.00	107.0 PK			3.20 H	12	67.40	39.60
2	*5200.00	95.7 AV			3.20 H	12	56.10	39.60
3	#10400.00	56.7 PK	74.0	-17.3	2.64 H	183	41.10	15.60
4	#10400.00	44.0 AV	54.0	-10.0	2.64 H	183	28.40	15.60
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	106.3 PK			2.00 V	345	66.70	39.60
2	*5200.00	95.3 AV			2.00 V	345	55.70	39.60
3	#10400.00	57.1 PK	74.0	-16.9	1.47 V	306	41.50	15.60
4	#10400.00	44.3 AV	54.0	-9.7	1.47 V	306	28.70	15.60

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	106.6 PK			3.18 H	13	67.20	39.40
2	*5240.00	95.6 AV			3.18 H	13	56.20	39.40
3	5350.00	55.6 PK	74.0	-18.4	2.99 H	337	51.80	3.80
4	5350.00	43.7 AV	54.0	-10.3	2.99 H	337	39.90	3.80
5	#10480.00	59.8 PK	74.0	-14.2	2.59 H	138	43.20	16.60
6	#10480.00	46.1 AV	54.0	-7.9	2.59 H	138	29.50	16.60
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			2.04 V	347	67.00	39.40
2	*5240.00	95.3 AV			2.04 V	347	55.90	39.40
3	5350.00	55.4 PK	74.0	-18.6	2.44 V	354	51.60	3.80
4	5350.00	42.6 AV	54.0	-11.4	2.44 V	354	38.80	3.80
5	#10480.00	58.0 PK	74.0	-16.0	1.94 V	273	41.40	16.60
6	#10480.00	45.4 AV	54.0	-8.6	1.94 V	273	28.80	16.60

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5623.20	55.1 PK	68.2	-13.1	3.44 H	26	50.90	4.20
2	*5745.00	115.2 PK			3.44 H	26	75.10	40.10
3	*5745.00	104.1 AV			3.44 H	26	64.00	40.10
4	#5934.40	55.6 PK	68.2	-12.6	3.44 H	26	50.60	5.00
5	11490.00	67.1 PK	74.0	-6.9	3.66 H	180	49.30	17.80
6	11490.00	52.2 AV	54.0	-1.8	3.66 H	180	34.40	17.80
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	#5643.20	56.0 PK	68.2	-12.2	2.73 V	11	51.70	4.30
2	*5745.00	120.5 PK			2.73 V	11	80.40	40.10
3	*5745.00	109.2 AV			2.73 V	11	69.10	40.10
4	#5954.40	56.4 PK	68.2	-11.8	2.73 V	11	51.40	5.00
5	11490.00	63.9 PK	74.0	-10.1	2.46 V	69	46.10	17.80
6	11490.00	50.1 AV	54.0	-3.9	2.46 V	69	32.30	17.80

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5639.20	55.4 PK	68.2	-12.8	3.29 H	17	51.20	4.20
2	*5785.00	115.4 PK			3.29 H	17	75.10	40.30
3	*5785.00	104.3 AV			3.29 H	17	64.00	40.30
4	#5964.00	55.8 PK	68.2	-12.4	3.29 H	17	50.80	5.00
5	11570.00	67.8 PK	74.0	-6.2	3.67 H	180	49.70	18.10
6	11570.00	52.3 AV	54.0	-1.7	3.67 H	180	34.20	18.10
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	55.6 PK	68.2	-12.6	2.84 V	32	51.30	4.30
2	*5785.00	121.5 PK			2.84 V	32	81.20	40.30
3	*5785.00	109.5 AV			2.84 V	32	69.20	40.30
4	#5963.20	56.2 PK	68.2	-12.0	2.84 V	32	51.20	5.00
5	11570.00	64.3 PK	74.0	-9.7	2.47 V	68	46.20	18.10
6	11570.00	49.9 AV	54.0	-4.1	2.47 V	68	31.80	18.10

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5628.80	54.8 PK	68.2	-13.4	3.21 H	17	50.60	4.20
2	*5825.00	114.9 PK			3.21 H	17	74.40	40.50
3	*5825.00	104.1 AV			3.21 H	17	63.60	40.50
4	#5950.40	55.7 PK	68.2	-12.5	3.21 H	17	50.70	5.00
5	11650.00	62.9 PK	74.0	-11.1	3.56 H	194	45.20	17.70
6	11650.00	48.5 AV	54.0	-5.5	3.56 H	194	30.80	17.70
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	54.8 PK	68.2	-13.4	2.78 V	31	50.60	4.20
2	*5825.00	120.8 PK			2.78 V	31	80.30	40.50
3	*5825.00	108.9 AV			2.78 V	31	68.40	40.50
4	#5928.00	55.9 PK	68.2	-12.3	2.78 V	31	51.00	4.90
5	11650.00	63.7 PK	74.0	-10.3	2.72 V	69	46.00	17.70
6	11650.00	49.8 AV	54.0	-4.2	2.72 V	69	32.10	17.70

Remarks:

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

802.11n (HT40)

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	55.4 PK	74.0	-18.6	2.77 H	63	51.70	3.70
2	5150.00	43.0 AV	54.0	-11.0	2.77 H	63	39.30	3.70
3	*5190.00	102.7 PK			3.07 H	17	63.10	39.60
4	*5190.00	92.2 AV			3.07 H	17	52.60	39.60
5	#10380.00	56.5 PK	74.0	-17.5	1.97 H	203	40.90	15.60
6	#10380.00	43.3 AV	54.0	-10.7	1.97 H	203	27.70	15.60
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	55.0 PK	74.0	-19.0	2.71 V	87	51.30	3.70
2	5150.00	41.8 AV	54.0	-12.2	2.71 V	87	38.10	3.70
3	*5190.00	103.3 PK			2.49 V	33	63.70	39.60
4	*5190.00	92.8 AV			2.49 V	33	53.20	39.60
5	#10380.00	56.6 PK	74.0	-17.4	2.03 V	241	41.00	15.60
6	#10380.00	43.1 AV	54.0	-10.9	2.03 V	241	27.50	15.60

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5230.00	102.7 PK			3.26 H	18	63.30	39.40
2	*5230.00	92.0 AV			3.26 H	18	52.60	39.40
3	5350.00	53.9 PK	74.0	-20.1	2.83 H	54	50.10	3.80
4	5350.00	41.9 AV	54.0	-12.1	2.83 H	54	38.10	3.80
5	#10460.00	57.2 PK	74.0	-16.8	2.21 H	217	41.00	16.20
6	#10460.00	43.5 AV	54.0	-10.5	2.21 H	217	27.30	16.20
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5230.00	104.1 PK			2.58 V	33	64.70	39.40
2	*5230.00	92.9 AV			2.58 V	33	53.50	39.40
3	5350.00	54.7 PK	74.0	-19.3	2.49 V	77	50.90	3.80
4	5350.00	41.3 AV	54.0	-12.7	2.49 V	77	37.50	3.80
5	#10460.00	57.5 PK	74.0	-16.5	1.91 V	244	41.30	16.20
6	#10460.00	43.6 AV	54.0	-10.4	1.91 V	244	27.40	16.20

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5648.80	56.0 PK	68.2	-12.2	3.09 H	24	51.70	4.30
2	*5755.00	112.4 PK			3.09 H	24	72.30	40.10
3	*5755.00	102.7 AV			3.09 H	24	62.60	40.10
4	#5969.60	55.7 PK	68.2	-12.5	3.09 H	24	50.70	5.00
5	11510.00	66.0 PK	74.0	-8.0	3.63 H	181	48.20	17.80
6	11510.00	52.2 AV	54.0	-1.8	3.63 H	181	34.40	17.80
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	59.5 PK	68.2	-8.7	2.82 V	31	55.20	4.30
2	*5755.00	119.4 PK			2.82 V	31	79.30	40.10
3	*5755.00	108.3 AV			2.82 V	31	68.20	40.10
4	#5964.00	55.8 PK	68.2	-12.4	2.82 V	31	50.80	5.00
5	11510.00	65.6 PK	74.0	-8.4	2.71 V	322	47.80	17.80
6	11510.00	51.1 AV	54.0	-2.9	2.71 V	322	33.30	17.80

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5602.40	54.2 PK	68.2	-14.0	3.42 H	19	50.00	4.20
2	*5795.00	112.7 PK			3.42 H	19	72.40	40.30
3	*5795.00	102.5 AV			3.42 H	19	62.20	40.30
4	#5961.60	55.3 PK	68.2	-12.9	3.42 H	19	50.30	5.00
5	11590.00	67.4 PK	74.0	-6.6	3.46 H	183	49.40	18.00
6	**11590.00**	**52.6 AV**	**54.0**	**-1.4**	**3.64 H**	**183**	**34.60**	**18.00**
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5645.60	55.1 PK	68.2	-13.1	2.69 V	30	50.80	4.30
2	*5795.00	118.1 PK			2.69 V	30	77.80	40.30
3	*5795.00	106.9 AV			2.69 V	30	66.60	40.30
4	#5926.40	56.1 PK	68.2	-12.1	2.69 V	30	51.20	4.90
5	11590.00	61.8 PK	74.0	-12.2	2.67 V	322	43.80	18.00
6	11590.00	48.3 AV	54.0	-5.7	2.67 V	322	30.30	18.00

Remarks:

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

802.11ac (VHT80)

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	55.8 PK	74.0	-18.2	2.87 H	33	52.10	3.70
2	5150.00	42.2 AV	54.0	-11.8	2.87 H	33	38.50	3.70
3	*5210.00	98.6 PK			3.03 H	19	59.10	39.50
4	*5210.00	88.5 AV			3.03 H	19	49.00	39.50
5	5350.00	54.4 PK	74.0	-19.6	3.10 H	41	50.60	3.80
6	5350.00	41.3 AV	54.0	-12.7	3.10 H	41	37.50	3.80
7	#10420.00	55.1 PK	74.0	-18.9	1.87 H	193	39.30	15.80
8	#10420.00	42.9 AV	54.0	-11.1	1.87 H	193	27.10	15.80
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	54.7 PK	74.0	-19.3	2.77 V	103	51.00	3.70
2	5150.00	42.4 AV	54.0	-11.6	2.77 V	103	38.70	3.70
3	*5210.00	100.2 PK			2.62 V	33	60.70	39.50
4	*5210.00	89.3 AV			2.62 V	33	49.80	39.50
5	5350.00	44.0 PK	74.0	-30.0	2.56 V	91	40.20	3.80
6	5350.00	41.3 AV	54.0	-12.7	2.56 V	91	37.50	3.80
7	#10420.00	55.4 PK	74.0	-18.6	1.83 V	260	39.60	15.80
8	#10420.00	43.0 AV	54.0	-11.0	1.83 V	260	27.20	15.80

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5649.60	57.3 PK	68.2	-10.9	3.46 H	21	53.00	4.30
2	#5650.00	60.1 PK	68.2	-8.1	3.11 H	44	55.80	4.30
3	*5775.00	107.1 PK			3.46 H	21	66.90	40.20
4	*5775.00	97.2 AV			3.46 H	21	57.00	40.20
5	#5925.00	56.8 PK	68.2	-11.4	3.11 H	49	51.90	4.90
6	#5931.20	56.8 PK	68.2	-11.4	3.46 H	21	51.80	5.00
7	11550.00	62.7 PK	74.0	-11.3	3.51 H	193	44.70	18.00
8	11550.00	48.4 AV	54.0	-5.6	3.51 H	193	30.40	18.00
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5649.60	65.9 PK	68.2	-2.3	2.77 V	30	61.60	4.30
2	**#5650.00**	**66.8 PK**	**68.2**	**-1.4**	**3.00 V**	**30**	**62.50**	**4.30**
3	*5775.00	115.6 PK			2.77 V	30	75.40	40.20
4	*5775.00	104.5 AV			2.77 V	30	64.30	40.20
5	#5925.00	61.9 PK	68.2	-6.3	3.05 V	31	57.00	4.90
6	#5928.80	61.2 PK	68.2	-7.0	2.77 V	30	56.20	5.00
7	11550.00	64.1 PK	74.0	-9.9	2.71 V	322	46.10	18.00
8	11550.00	49.4 AV	54.0	-4.6	2.71 V	322	31.40	18.00

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 149	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz	TEST MODE	A

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	37.68	27.8 QP	40.0	-12.2	1.99 H	130	43.10	-15.30
2	57.12	29.5 QP	40.0	-10.5	1.99 H	168	43.90	-14.40
3	70.73	32.5 QP	40.0	-7.5	1.99 H	202	48.70	-16.20
4	84.34	32.5 QP	40.0	-7.5	1.99 H	259	51.60	-19.10
5	134.89	30.1 QP	43.5	-13.4	1.99 H	265	45.00	-14.90
6	329.32	27.2 QP	46.0	-18.8	1.00 H	244	39.30	-12.10
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	53.44	34.3 QP	40.0	-5.7	1.00 V	346	48.50	-14.20
2	71.99	36.4 QP	40.0	-3.6	1.41 V	11	52.80	-16.40
3	96.01	31.6 QP	43.5	-11.9	1.00 V	41	50.50	-18.90
4	111.56	28.8 QP	43.5	-14.7	1.00 V	69	46.00	-17.20
5	269.05	26.6 QP	46.0	-19.4	1.49 V	306	40.30	-13.70
6	329.32	27.4 QP	46.0	-18.6	1.49 V	168	39.50	-12.10

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

CHANNEL	TX Channel 149	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz	TEST MODE	B

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	47.40	29.2 QP	40.0	-10.8	1.51 H	14	43.50	-14.30
2	97.95	27.5 QP	43.5	-16.0	1.98 H	266	46.10	-18.60
3	154.33	25.5 QP	43.5	-18.0	1.98 H	63	39.30	-13.80
4	222.38	32.2 QP	46.0	-13.8	1.51 H	255	48.50	-16.30
5	288.49	25.5 QP	46.0	-20.5	1.01 H	105	38.50	-13.00
6	329.32	25.7 QP	46.0	-20.3	1.01 H	209	37.80	-12.10
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	49.51	35.2 QP	40.0	-4.8	1.00 V	26	49.30	-14.10
2	62.95	34.9 QP	40.0	-5.1	1.00 V	264	49.80	-14.90
3	158.22	26.5 QP	43.5	-17.0	1.00 V	148	40.30	-13.80
4	216.55	28.3 QP	46.0	-17.7	1.49 V	332	44.70	-16.40
5	290.43	29.0 QP	46.0	-17.0	1.49 V	144	42.00	-13.00
6	329.32	23.3 QP	46.0	-22.7	1.00 V	68	35.40	-12.10

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

CHANNEL	TX Channel 149	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz	TEST MODE	C

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	45.45	29.2 QP	40.0	-10.8	1.99 H	67	43.60	-14.40
2	105.73	26.6 QP	43.5	-16.9	1.99 H	256	44.40	-17.80
3	208.77	35.0 QP	43.5	-8.5	1.00 H	241	51.70	-16.70
4	286.55	27.2 QP	46.0	-18.8	1.00 H	265	40.20	-13.00
5	327.38	26.9 QP	46.0	-19.1	1.00 H	257	39.00	-12.10
6	432.37	22.3 QP	46.0	-23.7	1.99 H	208	32.60	-10.30
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	33.69	33.1 QP	40.0	-6.9	1.29 V	202	49.00	-15.90
2	61.74	34.0 QP	40.0	-6.0	1.00 V	0	48.70	-14.70
3	175.72	32.8 QP	43.5	-10.7	1.00 V	193	47.30	-14.50
4	208.77	30.9 QP	43.5	-12.6	1.00 V	18	47.60	-16.70
5	327.38	27.9 QP	46.0	-18.1	1.00 V	168	40.00	-12.10
6	430.42	24.0 QP	46.0	-22.0	1.00 V	175	34.40	-10.40

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

Tested date: Dec. 20, 2017

Description & Manufacturer	Model No.	Serial No.	Date Of Calibration	Due Date Of Calibration
Test Receiver ROHDE & SCHWARZ	ESCI	100613	Nov. 23, 2017	Nov. 22, 2018
RF signal cable (with 10dB PAD) Woken	5D-FB	Cable-cond1-01	Sep. 05, 2017	Sep. 04, 2018
LISN ROHDE & SCHWARZ (EUT)	ESH3-Z5	835239/001	Mar. 10, 2017	Mar. 09, 2018
LISN ROHDE & SCHWARZ (Peripheral)	ESH3-Z5	100311	Aug. 15, 2017	Aug. 14, 2018
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

a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.

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

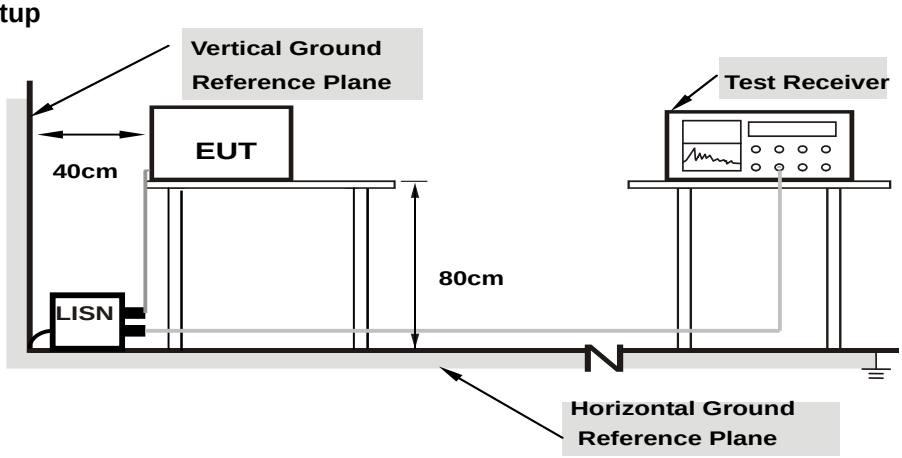
c. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

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

4.2.4 Deviation from Test Standard

No deviation.

4.2.5 Test Setup



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

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

4.2.6 EUT Operating Conditions

Same as 4.1.6.

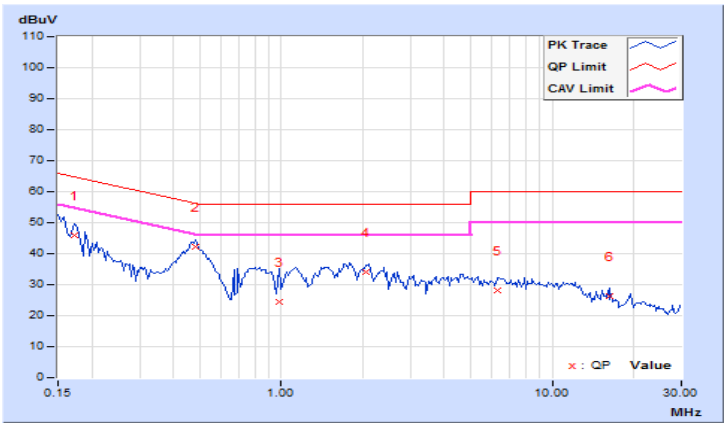
4.2.7 Test Results

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

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.17344	10.40	35.37	22.67	45.77	33.07	64.79	54.79	-19.02	-21.72
2	0.48203	10.31	32.07	27.22	42.38	37.53	56.30	46.30	-13.92	-8.77
3	0.97813	10.41	13.85	8.06	24.26	18.47	56.00	46.00	-31.74	-27.53
4	2.05469	10.37	23.62	20.31	33.99	30.68	56.00	46.00	-22.01	-15.32
5	6.30469	10.50	17.82	12.51	28.32	23.01	60.00	50.00	-31.68	-26.99
6	16.30859	10.68	15.69	12.16	26.37	22.84	60.00	50.00	-33.63	-27.16

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.

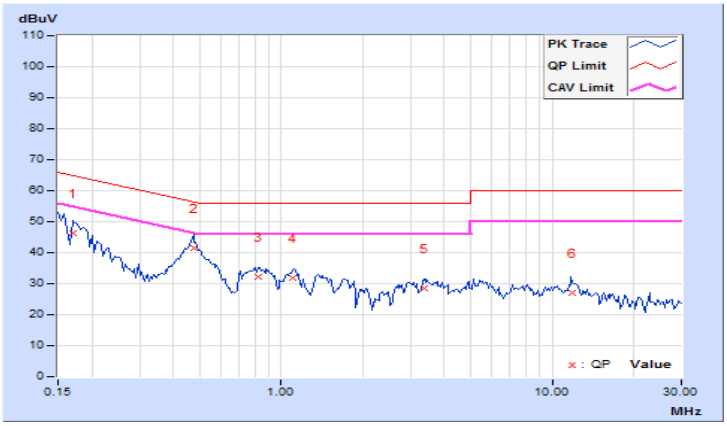


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	A		

No	Freq.	Corr. Factor	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.16953	10.25	36.13	22.79	46.38	33.04	64.98	54.98	-18.60	-21.94
2	0.47422	10.33	31.24	26.42	41.57	36.75	56.44	46.44	-14.87	-9.69
3	0.82578	10.33	21.74	18.43	32.07	28.76	56.00	46.00	-23.93	-17.24
4	1.10547	10.33	21.50	18.70	31.83	29.03	56.00	46.00	-24.17	-16.97
5	3.36719	10.54	18.10	13.60	28.64	24.14	56.00	46.00	-27.36	-21.86
6	11.87109	10.59	16.57	11.25	27.16	21.84	60.00	50.00	-32.84	-28.16

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.

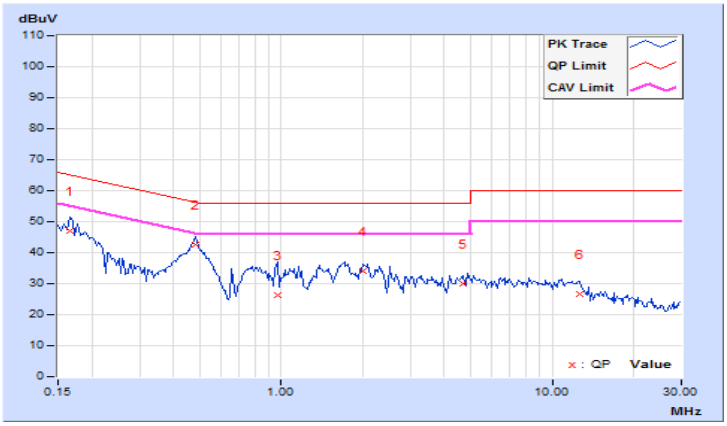


Phase	Line (L)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	B		

No	Freq.	Corr. Factor	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.16562	10.42	36.64	22.99	47.06	33.41	65.18	55.18	-18.12	-21.77
2	0.48203	10.31	32.29	27.48	42.60	37.79	56.30	46.30	-13.70	-8.51
3	0.97031	10.41	15.79	9.73	26.20	20.14	56.00	46.00	-29.80	-25.86
4	1.99609	10.37	23.82	20.08	34.19	30.45	56.00	46.00	-21.81	-15.55
5	4.69141	10.48	19.49	13.89	29.97	24.37	56.00	46.00	-26.03	-21.63
6	12.60938	10.60	15.99	10.96	26.59	21.56	60.00	50.00	-33.41	-28.44

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.

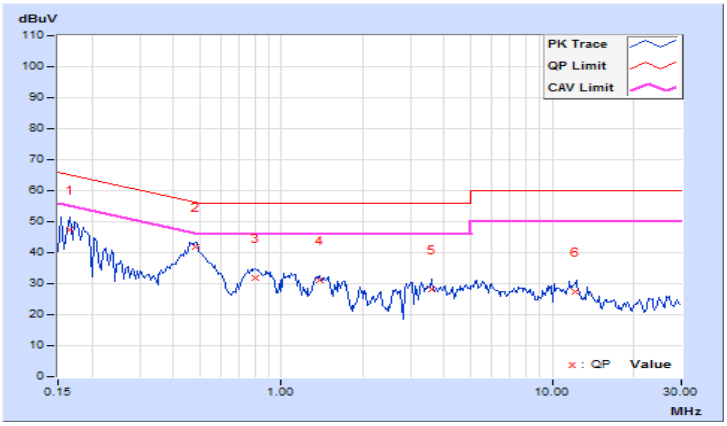


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	B		

No	Freq.	Corr. Factor	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.16562	10.26	37.05	22.93	47.31	33.19	65.18	55.18	-17.87	-21.99
2	0.48203	10.33	31.48	26.94	41.81	37.27	56.30	46.30	-14.49	-9.03
3	0.79844	10.33	21.49	18.57	31.82	28.90	56.00	46.00	-24.18	-17.10
4	1.38281	10.36	20.64	17.69	31.00	28.05	56.00	46.00	-25.00	-17.95
5	3.57813	10.56	17.50	12.17	28.06	22.73	56.00	46.00	-27.94	-23.27
6	12.10547	10.60	16.70	11.63	27.30	22.23	60.00	50.00	-32.70	-27.77

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.

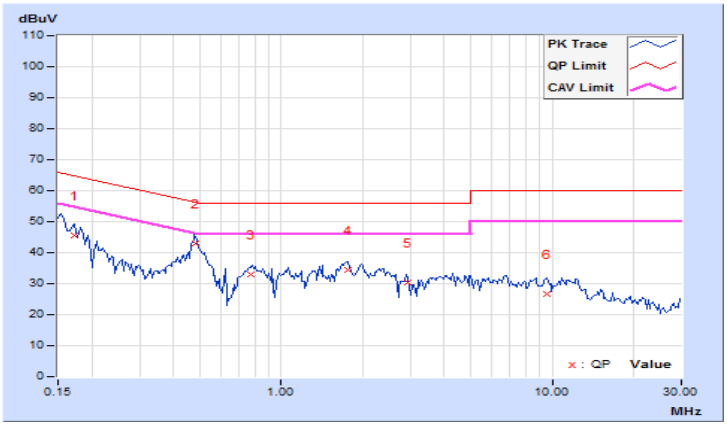


Phase	Line (L)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	C		

No	Freq.	Corr. Factor	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.17344	10.40	35.23	22.70	45.63	33.10	64.79	54.79	-19.16	-21.69
2	**0.48203**	**10.31**	**32.60**	**27.93**	**42.91**	**38.24**	**56.30**	**46.30**	**-13.39**	**-8.06**
3	0.77500	10.37	22.58	19.41	32.95	29.78	56.00	46.00	-23.05	-16.22
4	1.76172	10.38	24.05	19.88	34.43	30.26	56.00	46.00	-21.57	-15.74
5	2.93750	10.42	20.13	15.65	30.55	26.07	56.00	46.00	-25.45	-19.93
6	9.59375	10.54	16.07	10.82	26.61	21.36	60.00	50.00	-33.39	-28.64

REMARKS:

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

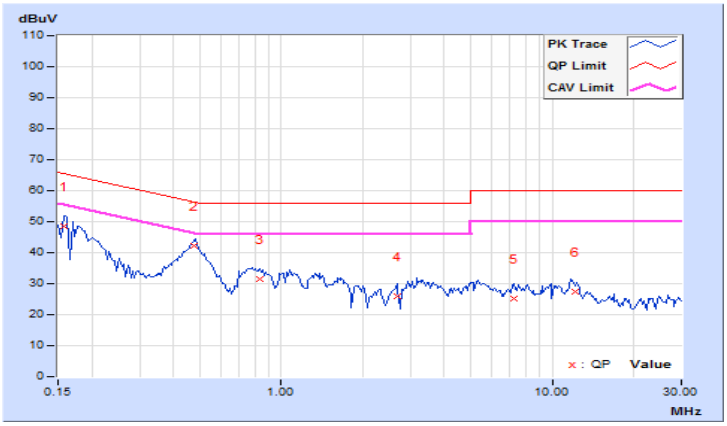


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	C		

No	Freq.	Corr. Factor	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15781	10.28	38.42	24.65	48.70	34.93	65.58	55.58	-16.88	-20.65
2	0.47422	10.33	31.77	26.75	42.10	37.08	56.44	46.44	-14.34	-9.36
3	0.82969	10.33	21.03	19.48	31.36	29.81	56.00	46.00	-24.64	-16.19
4	2.67578	10.47	15.39	8.81	25.86	19.28	56.00	46.00	-30.14	-26.72
5	7.26953	10.55	14.77	8.48	25.32	19.03	60.00	50.00	-34.68	-30.97
6	12.16797	10.61	16.63	11.65	27.24	22.26	60.00	50.00	-32.76	-27.74

REMARKS:

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



4.3 Transmit Power Measurement

4.3.1 Limits of Transmit Power Measurement

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

*B is the 26 dB emission bandwidth in megahertz

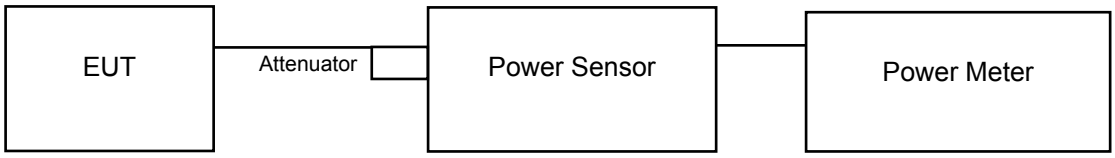
Per KDB 662911 Method of conducted output power measurement on IEEE 802.11 devices,

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

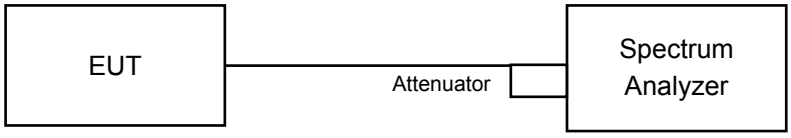
For power measurements on all other devices: Array Gain = 10 log(N_{ANT}/N_{SS}) dB.

4.3.2 Test Setup

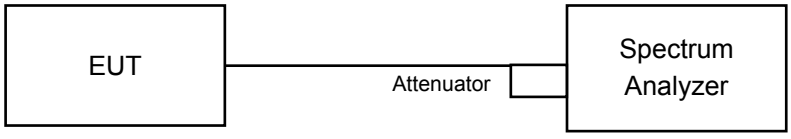
For Power Output
802.11a, 802.11n (HT20), 802.11n (HT40)



802.11ac (VHT80)



For 26dB Bandwidth



4.3.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.3.4 Test Procedure

For Average Power Measurement

For 802.11a, 802.11n (HT20), 802.11n (HT40)
Method PM is used to perform output power measurement, trigger and gating function of wide band power meter is enabled to measure max output power of TX on burst. Duty factor is not added to measured value.

For 802.11ac (VHT80)
a. Set span to encompass the entire 26 dB EBW (or, alternatively, the entire 99% occupied bandwidth) of the signal.
b. Set sweep trigger to “free run”.
c. Set RBW = 1 MHz
d. Set VBW ≥ 3 MHz
e. Number of points in sweep ≥ 2 Span / RBW
f. Sweep time ≤ (number of points in sweep) * T
g. Using emission bandwidth to determine the frequency span for integration the channel bandwidth.
h. Detector = RMS
i. Trace mode = max hold
j. Allow max hold to run for at least 60 seconds, or longer as needed to allow the trace to stabilize.
k. Compute power by integrating the spectrum across the EBW (or, alternatively, the entire 99% occupied bandwidth) of the signal using the instrument’s band power measurement function with band limits set equal to the EBW (or occupied bandwidth) band edges. If the instrument does not have a band power function, sum the spectrum levels (in power units) at 1 MHz intervals extending across the EBW (or, alternatively, the entire 99% occupied bandwidth) of the spectrum.

For 26dB Bandwidth
a. Set RBW = approximately 1% of the emission bandwidth.
b. Set the VBW > RBW.
c. Detector = Peak.
d. Trace mode = max hold.
e. Measure the maximum width of the emission that is 26 dB down from the peak of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.

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:

Mode A

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

802.11a

Chan.	Freq. (MHz)	Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Gain (dBi)	EIRP (dBm)	EIRP limit (dBm)	Pass / Fail
		Chain 0	Chain 1							
36	5180	1.65	1.76	2.962	4.72	20.00	16.00	20.72	21.00	Pass
40	5200	1.69	1.75	2.972	4.73	20.00	16.00	20.73	21.00	Pass
48	5240	1.68	1.79	**2.982**	4.75	20.00	16.00	20.75	21.00	Pass

Note:
Gain = 16dBi > 6dBi, so the power limit shall be reduced to 30-(16-6) = 20dBm.
Gain = 16dBi (above 30 degrees from the horizon),
EIRP = conducted power +(16dBi) + array gain = (0 dB (i.e., no array gain) for $N_{ANT} \leq 4$).

802.11n (HT20)

Chan.	Freq. (MHz)	Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Gain (dBi)	EIRP (dBm)	EIRP limit (dBm)	Pass / Fail
		Chain 0	Chain 1							
36	5180	1.77	1.68	2.975	4.73	20.00	16.00	20.73	21.00	Pass
40	5200	1.73	1.65	2.951	4.70	20.00	16.00	20.70	21.00	Pass
48	5240	1.79	1.63	2.965	4.72	20.00	16.00	20.72	21.00	Pass

Note:
Gain = 16dBi > 6dBi, so the power limit shall be reduced to 30-(16-6) = 20dBm.
Gain = 16dBi (above 30 degrees from the horizon),
EIRP = conducted power +(16dBi) + array gain = (0 dB (i.e., no array gain) for $N_{ANT} \leq 4$).

802.11n (HT40)

Chan.	Freq. (MHz)	Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Gain (dBi)	EIRP (dBm)	EIRP limit (dBm)	Pass / Fail
		Chain 0	Chain 1							
38	5190	1.62	1.63	2.907	4.63	20.00	16.00	20.63	21.00	Pass
46	5230	1.64	1.65	2.921	4.66	20.00	16.00	20.66	21.00	Pass

Note:
Gain = 16dBi > 6dBi, so the power limit shall be reduced to 30-(16-6) = 20dBm.
Gain = 16dBi (above 30 degrees from the horizon),
EIRP = conducted power +(16dBi) + array gain = (0 dB (i.e., no array gain) for $N_{ANT} \leq 4$).

802.11ac (VHT80)

Chan.	Freq. (MHz)	Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Gain (dBi)	EIRP (dBm)	EIRP limit (dBm)	Pass / Fail
		Chain 0	Chain 1							
42	5210	1.62	1.75	2.948	4.70	20.00	16.00	20.70	21.00	Pass

Note:
Gain = 16dBi > 6dBi, so the power limit shall be reduced to 30-(16-6) = 20dBm.
Gain = 16dBi (above 30 degrees from the horizon),
EIRP = conducted power +(16dBi) + array gain = (0 dB (i.e., no array gain) for $N_{ANT} \leq 4$).

For U-NII-3 Band

802.11a

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
149	5745	16.81	16.51	92.744	19.67	20.00	Pass
157	5785	16.56	16.46	89.549	19.52	20.00	Pass
165	5825	16.61	16.42	89.667	19.53	20.00	Pass

Note: Gain = 16dBi > 6dBi, so the limit shall be reduced to 30-(16-6) = 20.00dBm.

802.11n (HT20)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
149	5745	16.76	16.46	91.683	19.62	20.00	Pass
157	5785	16.59	16.44	89.659	19.53	20.00	Pass
165	5825	16.84	16.52	**93.181**	19.69	20.00	Pass

Note: Gain = 16dBi > 6dBi, so the limit shall be reduced to 30-(16-6) = 20.00dBm.

802.11n (HT40)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
151	5755	16.69	16.47	91.027	19.59	20.00	Pass
159	5795	16.58	16.43	89.453	19.52	20.00	Pass

Note: Gain = 16dBi > 6dBi, so the limit shall be reduced to 30-(16-6) = 20.00dBm.

802.11ac (VHT80)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
155	5775	16.63	16.48	90.489	19.57	20.00	Pass

Note: Gain = 16dBi > 6dBi, so the limit shall be reduced to 30-(16-6) = 20.00dBm.

Mode B

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

802.11a

Chan.	Freq. (MHz)	Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Gain (dBi)	EIRP (dBm)	EIRP limit (dBm)	Pass / Fail
		Chain 0	Chain 1							
36	5180	3.71	3.47	4.573	6.60	21.90	14.10	20.70	21.00	Pass
40	5200	3.67	3.43	4.531	6.56	21.90	14.10	20.66	21.00	Pass
48	5240	3.51	3.44	4.452	6.49	21.90	14.10	20.59	21.00	Pass

Note:
Gain = 14.10dBi > 6dBi, so the power limit shall be reduced to 30-(14.10-6) = 21.90dBm.
Gain = 14.10dBi (above 30 degrees from the horizon),
EIRP = conducted power +(14.10dBi) + array gain = (0 dB (i.e., no array gain) for $N_{ANT} \leq 4$).

802.11n (HT20)

Chan.	Freq. (MHz)	Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Gain (dBi)	EIRP (dBm)	EIRP limit (dBm)	Pass / Fail
		Chain 0	Chain 1							
36	5180	3.47	3.55	4.488	6.52	21.90	14.10	20.62	21.00	Pass
40	5200	3.77	3.96	**4.871**	6.88	21.90	14.10	20.98	21.00	Pass
48	5240	3.44	3.73	4.568	6.60	21.90	14.10	20.70	21.00	Pass

Note:
Gain = 14.10dBi > 6dBi, so the power limit shall be reduced to 30-(14.10-6) = 21.90dBm.
Gain = 14.10dBi (above 30 degrees from the horizon),
EIRP = conducted power +(14.10dBi) + array gain = (0 dB (i.e., no array gain) for $N_{ANT} \leq 4$).

802.11n (HT40)

Chan.	Freq. (MHz)	Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Gain (dBi)	EIRP (dBm)	EIRP limit (dBm)	Pass / Fail
		Chain 0	Chain 1							
38	5190	3.71	3.82	4.760	6.78	21.90	14.10	20.88	21.00	Pass
46	5230	3.61	3.74	4.662	6.69	21.90	14.10	20.79	21.00	Pass

Note:
Gain = 14.10dBi > 6dBi, so the power limit shall be reduced to 30-(14.10-6) = 21.90dBm.
Gain = 14.10dBi (above 30 degrees from the horizon),
EIRP = conducted power +(14.10dBi) + array gain = (0 dB (i.e., no array gain) for $N_{ANT} \leq 4$).

802.11ac (VHT80)

Chan.	Freq. (MHz)	Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Gain (dBi)	EIRP (dBm)	EIRP limit (dBm)	Pass / Fail
		Chain 0	Chain 1							
42	5210	3.58	3.92	4.746	6.76	21.90	14.10	20.86	21.00	Pass

Note:
Gain = 14.10dBi > 6dBi, so the power limit shall be reduced to 30-(14.10-6) = 21.90dBm.
Gain = 14.10dBi (above 30 degrees from the horizon),
EIRP = conducted power +(14.10dBi) + array gain = (0 dB (i.e., no array gain) for $N_{ANT} \leq 4$).

For U-NII-3 Band

802.11a

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
149	5745	18.61	18.26	139.599	21.45	21.90	Pass
157	5785	18.83	18.52	147.505	21.69	21.90	Pass
165	5825	18.71	18.21	140.524	21.48	21.90	Pass

Note: Gain = 14.10dBi > 6dBi, so the limit shall be reduced to 30-(14.10-6) = 21.90dBm.

802.11n (HT20)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
149	5745	18.93	18.49	148.795	21.73	21.90	Pass
157	5785	18.77	18.36	143.885	21.58	21.90	Pass
165	5825	19.02	18.49	**150.431**	21.77	21.90	Pass

Note: Gain = 14.10dBi > 6dBi, so the limit shall be reduced to 30-(14.10-6) = 21.90dBm.

802.11n (HT40)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
151	5755	18.71	18.25	141.136	21.50	21.90	Pass
159	5795	18.92	18.49	148.615	21.72	21.90	Pass

Note: Gain = 14.10dBi > 6dBi, so the limit shall be reduced to 30-(14.10-6) = 21.90dBm.

802.11ac (VHT80)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
155	5775	18.76	18.37	143.869	21.58	21.90	Pass

Note: Gain = 14.10dBi > 6dBi, so the limit shall be reduced to 30-(14.10-6) = 21.90dBm.

Mode C

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

802.11a

Chan.	Freq. (MHz)	Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Gain (dBi)	EIRP (dBm)	EIRP limit (dBm)	Pass / Fail
		Chain 0	Chain 1							
36	5180	10.06	9.72	**19.515**	12.90	28.10	7.90	20.80	21.00	Pass
40	5200	9.84	9.71	18.992	12.79	28.10	7.90	20.69	21.00	Pass
48	5240	9.87	9.55	18.721	12.72	28.10	7.90	20.62	21.00	Pass

Note:
Gain = 7.90dBi > 6dBi, so the power limit shall be reduced to 30-(7.90-6) = 28.10dBm.
Gain = 7.90dBi (above 30 degrees from the horizon),
EIRP = conducted power +(7.90dBi) + array gain = (0 dB (i.e., no array gain) for $N_{ANT} \leq 4$).

802.11n (HT20)

Chan.	Freq. (MHz)	Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Gain (dBi)	EIRP (dBm)	EIRP limit (dBm)	Pass / Fail
		Chain 0	Chain 1							
36	5180	9.77	9.61	18.625	12.70	28.10	7.90	20.60	21.00	Pass
40	5200	9.79	9.67	18.796	12.74	28.10	7.90	20.64	21.00	Pass
48	5240	9.79	9.63	18.711	12.72	28.10	7.90	20.62	21.00	Pass

Note:
Gain = 7.90dBi > 6dBi, so the power limit shall be reduced to 30-(7.90-6) = 28.10dBm.
Gain = 7.90dBi (above 30 degrees from the horizon),
EIRP = conducted power +(7.90dBi) + array gain = (0 dB (i.e., no array gain) for $N_{ANT} \leq 4$).

802.11n (HT40)

Chan.	Freq. (MHz)	Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Gain (dBi)	EIRP (dBm)	EIRP limit (dBm)	Pass / Fail
		Chain 0	Chain 1							
38	5190	9.84	9.73	19.035	12.80	28.10	7.90	20.70	21.00	Pass
46	5230	9.82	9.72	18.970	12.78	28.10	7.90	20.68	21.00	Pass

Note:
Gain = 7.90dBi > 6dBi, so the power limit shall be reduced to 30-(7.90-6) = 28.10dBm.
Gain = 7.90dBi (above 30 degrees from the horizon),
EIRP = conducted power +(7.90dBi) + array gain = (0 dB (i.e., no array gain) for $N_{ANT} \leq 4$).

802.11ac (VHT80)

Chan.	Freq. (MHz)	Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Gain (dBi)	EIRP (dBm)	EIRP limit (dBm)	Pass / Fail
		Chain 0	Chain 1							
42	5210	9.79	9.65	18.754	12.73	28.10	7.90	20.63	21.00	Pass

Note:
Gain = 7.90dBi > 6dBi, so the power limit shall be reduced to 30-(7.90-6) = 28.10dBm.
Gain = 7.90dBi (above 30 degrees from the horizon),
EIRP = conducted power +(7.90dBi) + array gain = (0 dB (i.e., no array gain) for $N_{ANT} \leq 4$).

For U-NII-3 Band

802.11a

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
149	5745	22.49	22.21	343.760	25.36	28.10	Pass
157	5785	23.33	22.97	413.431	26.16	28.10	Pass
165	5825	24.62	24.53	**573.526**	27.59	28.10	Pass

Note: Gain = 7.90dBi > 6dBi, so the limit shall be reduced to 30-(7.90-6) = 28.10dBm.

802.11n (HT20)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
149	5745	23.87	23.75	480.918	26.82	28.10	Pass
157	5785	23.91	23.79	485.369	26.86	28.10	Pass
165	5825	24.61	24.45	567.680	27.54	28.10	Pass

Note: Gain = 7.90dBi > 6dBi, so the limit shall be reduced to 30-(7.90-6) = 28.10dBm.

802.11n (HT40)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
151	5755	23.83	23.77	479.778	26.81	28.10	Pass
159	5795	23.90	23.73	481.519	26.83	28.10	Pass

Note: Gain = 7.90dBi > 6dBi, so the limit shall be reduced to 30-(7.90-6) = 28.10dBm.

802.11ac (VHT80)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
155	5775	21.88	21.65	300.388	24.78	28.10	Pass

Note: Gain = 7.90dBi > 6dBi, so the limit shall be reduced to 30-(7.90-6) = 28.10dBm.

26dB Bandwidth:

Mode A

802.11a

Chan.	Freq. (MHz)	26dBc Bandwidth (MHz)	
		Chain 0	Chain 1
36	5180	19.57	19.35
40	5200	19.58	19.15
48	5240	19.60	19.21

802.11n (HT20)

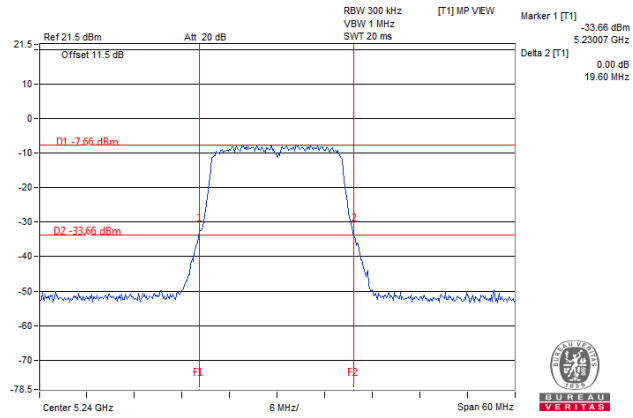
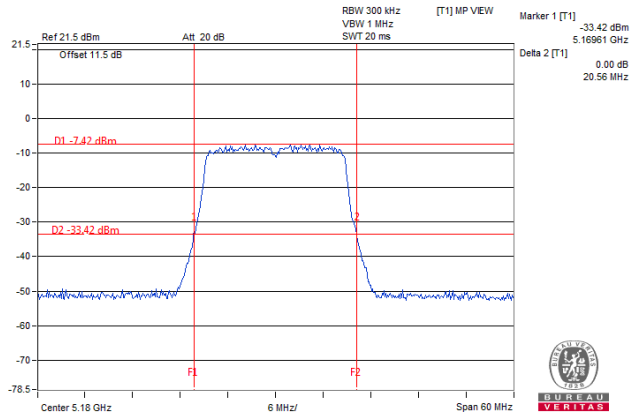
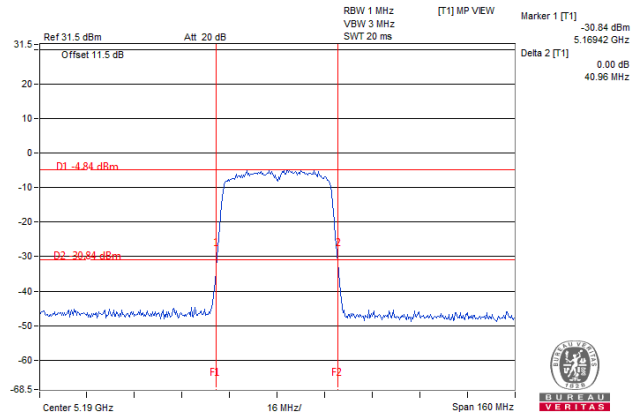
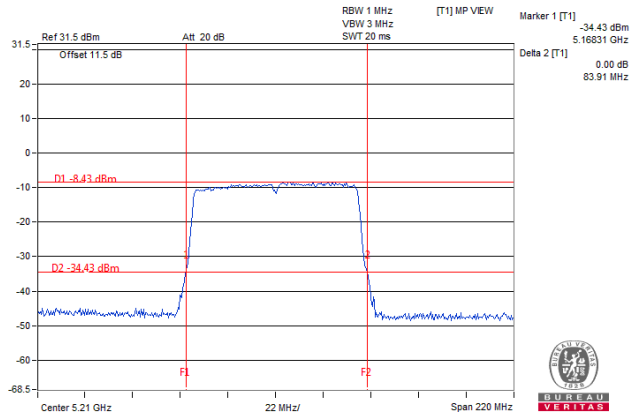
Chan.	Freq. (MHz)	26dBc Bandwidth (MHz)	
		Chain 0	Chain 1
36	5180	20.37	20.56
40	5200	20.43	20.29
48	5240	20.43	20.44

802.11n (HT40)

Chan.	Freq. (MHz)	26dBc Bandwidth (MHz)	
		Chain 0	Chain 1
38	5190	40.96	40.73
46	5230	40.86	40.53

802.11ac (VHT80)

Chan.	Freq. (MHz)	26dBc Bandwidth (MHz)	
		Chain 0	Chain 1
42	5210	83.91	83.48

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

Mode B

802.11a

Chan.	Freq. (MHz)	26dBc Bandwidth (MHz)	
		Chain 0	Chain 1
36	5180	19.49	19.15
40	5200	19.70	19.33
48	5240	19.45	19.32

802.11n (HT20)

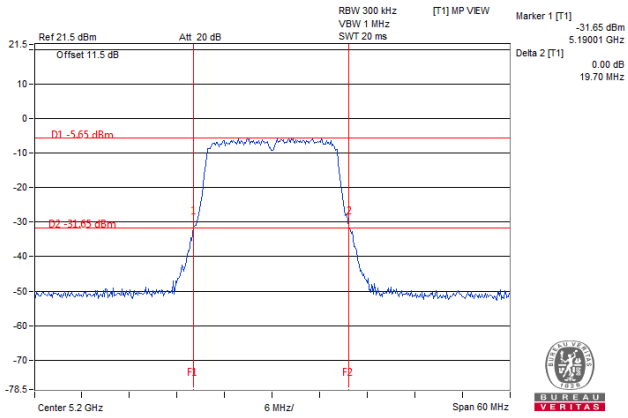
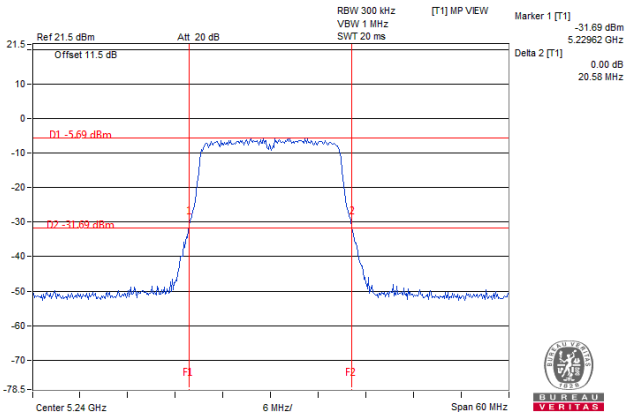
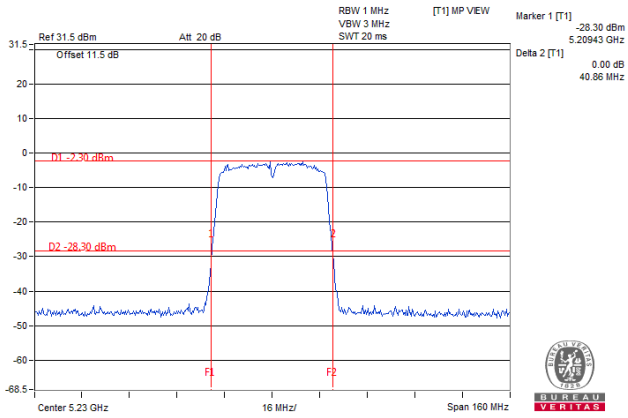
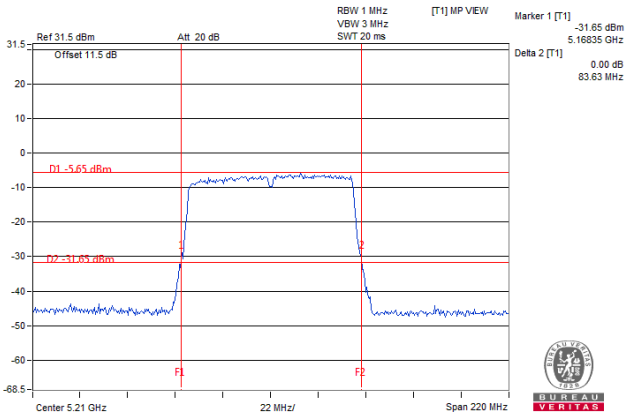
Chan.	Freq. (MHz)	26dBc Bandwidth (MHz)	
		Chain 0	Chain 1
36	5180	20.48	20.57
40	5200	20.41	20.38
48	5240	20.58	20.36

802.11n (HT40)

Chan.	Freq. (MHz)	26dBc Bandwidth (MHz)	
		Chain 0	Chain 1
38	5190	40.80	40.58
46	5230	40.86	40.66

802.11ac (VHT80)

Chan.	Freq. (MHz)	26dBc Bandwidth (MHz)	
		Chain 0	Chain 1
42	5210	83.63	83.08

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

Mode C

802.11a

Chan.	Freq. (MHz)	26dBc Bandwidth (MHz)	
		Chain 0	Chain 1
36	5180	19.46	19.26
40	5200	19.58	19.24
48	5240	19.60	19.06

802.11n (HT20)

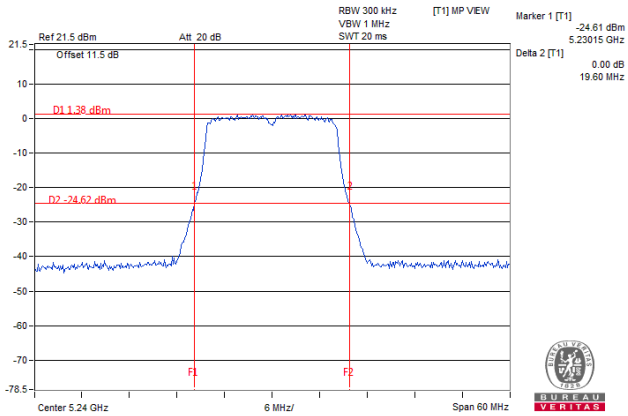
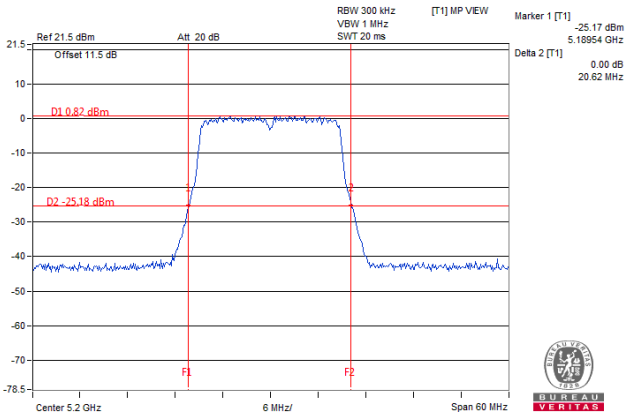
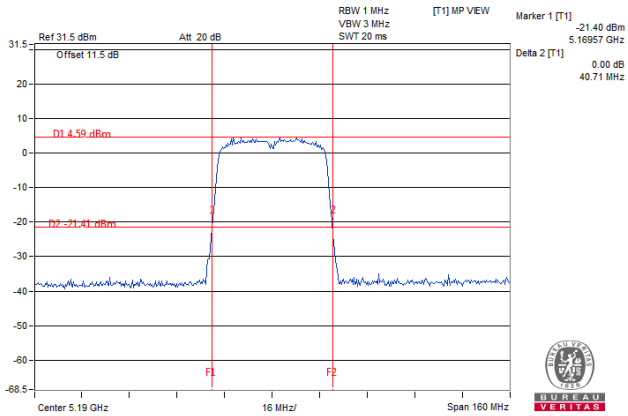
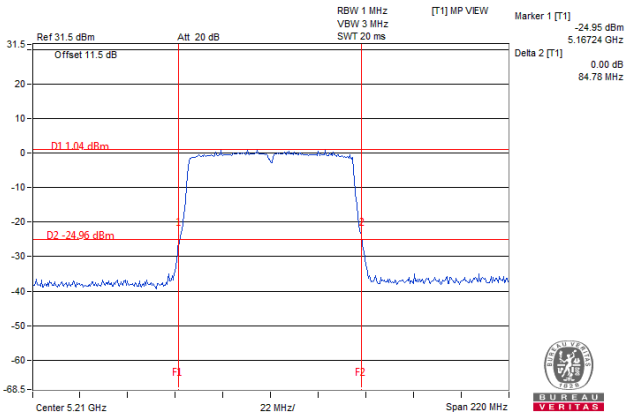
Chan.	Freq. (MHz)	26dBc Bandwidth (MHz)	
		Chain 0	Chain 1
36	5180	20.53	20.53
40	5200	20.54	20.62
48	5240	20.52	20.44

802.11n (HT40)

Chan.	Freq. (MHz)	26dBc Bandwidth (MHz)	
		Chain 0	Chain 1
38	5190	40.71	40.37
46	5230	40.64	40.59

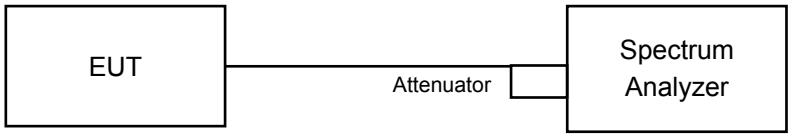
802.11ac (VHT80)

Chan.	Freq. (MHz)	26dBc Bandwidth (MHz)	
		Chain 0	Chain 1
42	5210	84.78	83.83

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

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

Mode A

802.11a

Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
36	5180	16.56	16.56
40	5200	16.56	16.56
48	5240	16.56	16.56
149	5745	16.56	17.76
157	5785	16.56	17.76
165	5825	16.56	17.76

802.11n (HT20)

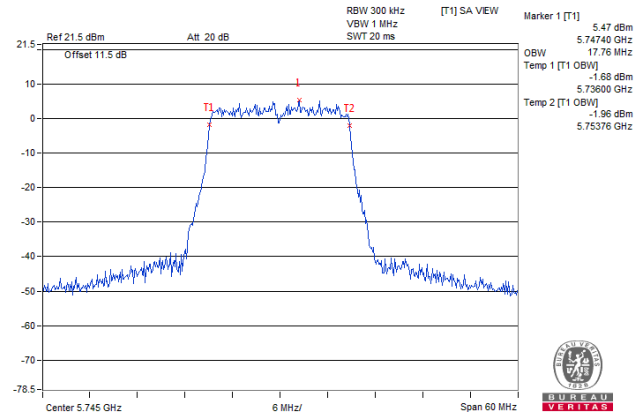
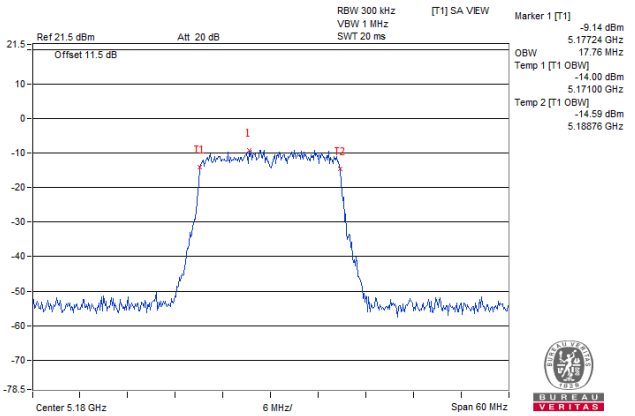
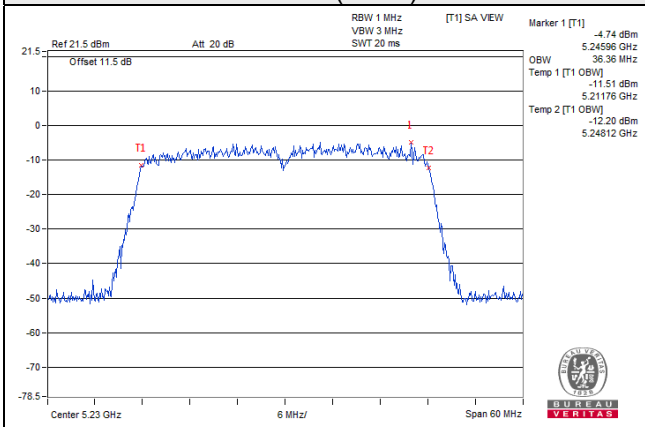
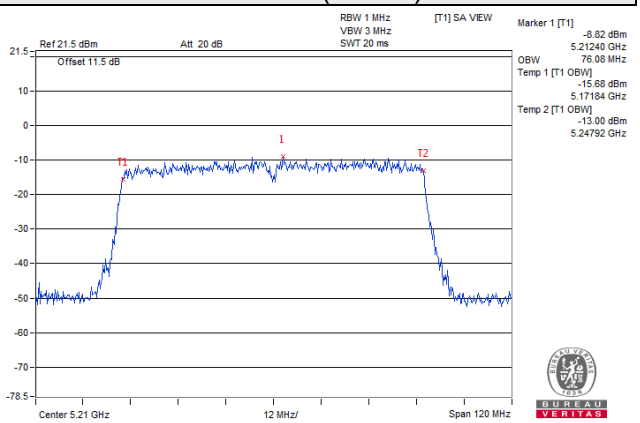
Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
36	5180	17.76	17.76
40	5200	17.76	17.64
48	5240	17.76	17.76
149	5745	17.76	17.76
157	5785	17.76	17.76
165	5825	17.76	17.64

802.11n (HT40)

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

802.11ac (VHT80)

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

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

Mode B

802.11a

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

802.11n (HT20)

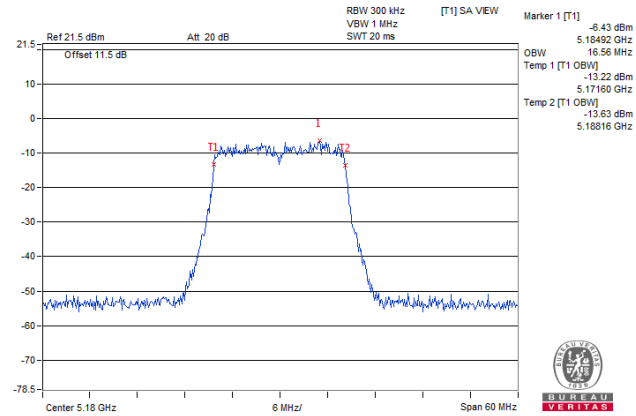
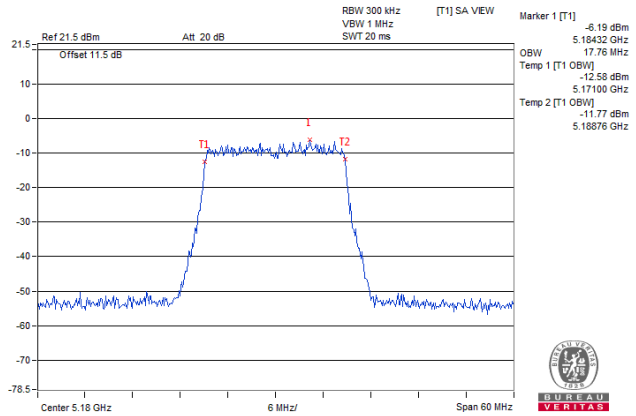
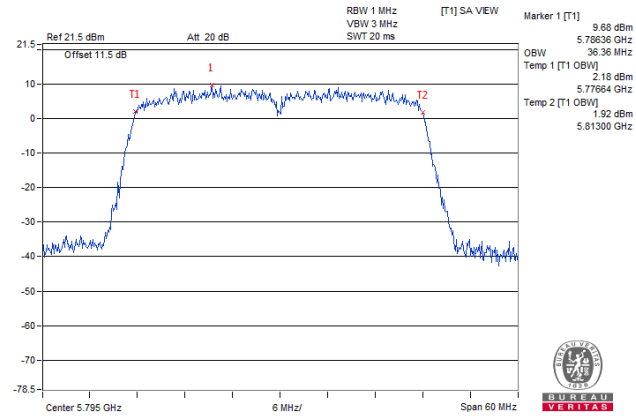
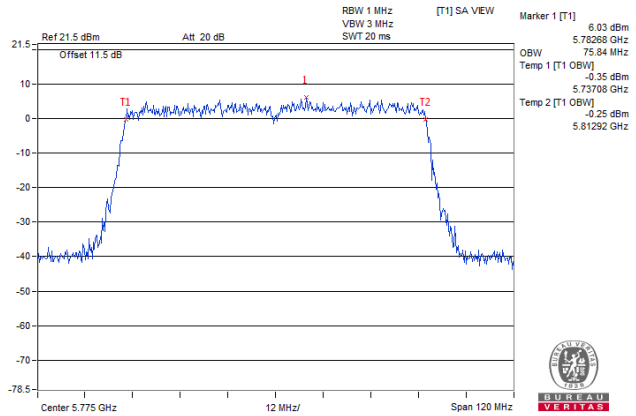
Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
36	5180	17.76	17.76
40	5200	17.76	17.76
48	5240	17.76	17.76
149	5745	17.64	17.76
157	5785	17.76	17.64
165	5825	17.64	17.64

802.11n (HT40)

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

802.11ac (VHT80)

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

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

Mode C

802.11a

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

802.11n (HT20)

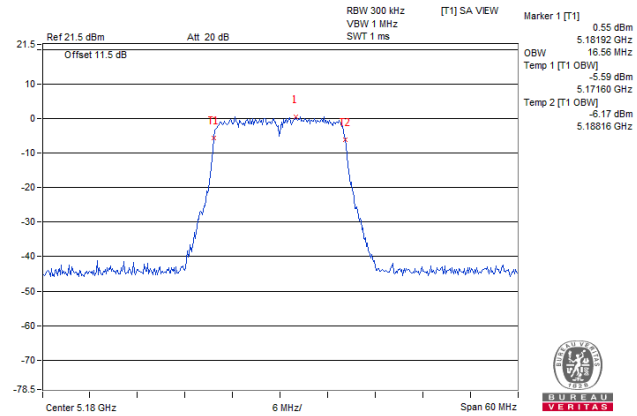
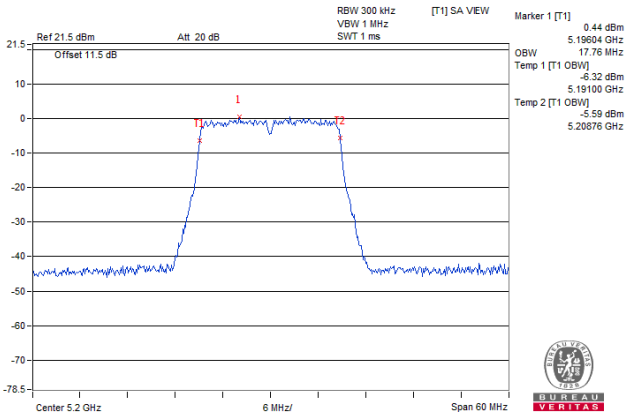
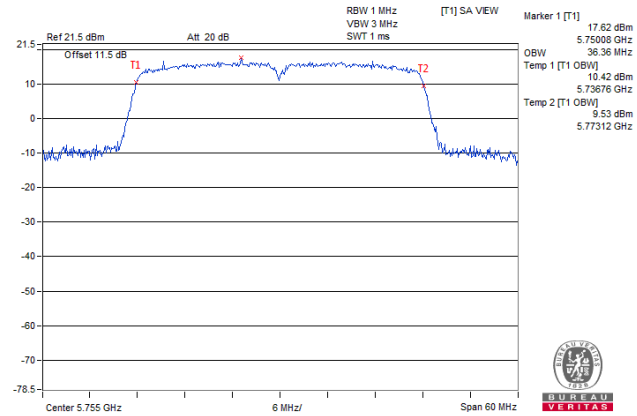
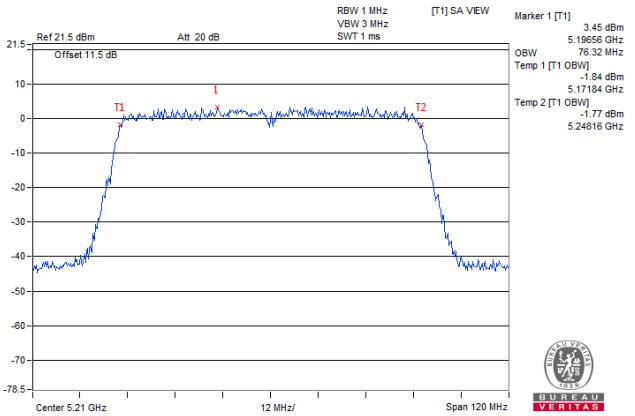
Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
36	5180	17.64	17.64
40	5200	17.76	17.76
48	5240	17.64	17.64
149	5745	17.76	17.76
157	5785	17.76	17.76
165	5825	17.76	17.64

802.11n (HT40)

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

802.11ac (VHT80)

Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
42	5210	75.60	76.32
155	5775	75.84	75.84

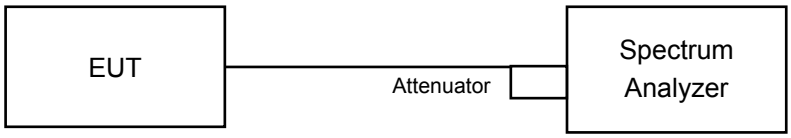
Spectrum Plot of Worst Value	
802.11a	802.11n (HT20)
	
802.11n (HT40)	802.11ac (VHT80)
	

4.5 Peak Power Spectral Density Measurement

4.5.1 Limits of Peak Power Spectral Density Measurement

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

4.5.2 Test Setup



4.5.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.5.4 Test Procedures

For U-NII-1band:
Duty cycle of test signal is ≥ 98%
Using method SA-1
1) Set span to encompass the entire emission bandwidth (EBW) of the signal.
2) Set RBW = 1MHz, Set VBW ≥ 3 MHz, Detector = RMS
3) Set Channel power measure = 1MHz
4) Sweep time = auto, trigger set to “free run”.
5) Trace average at least 100 traces in power averaging mode.
6) Record the max value

Using method SA-2, Duty cycle <98%
1) Set span to encompass the entire emission bandwidth (EBW) of the signal.
2) Set RBW = 30 kHz, Set VBW ≥ 1 MHz, Detector = RMS
3) Set Channel power measure = 1MHz
4) Sweep time = auto, trigger set to “free run”.
5) Trace average at least 100 traces in power averaging mode.
6) Record the max value and add 10 log (1/duty cycle)

For U-NII-3 band:
Duty cycle of test signal is ≥ 98%
1) Set span to encompass the entire emission bandwidth (EBW) of the signal.
2) Set RBW = 300 kHz, Set VBW ≥ 1 MHz, Detector = RMS.
3) Use the peak marker function to determine the maximum power level in any 300 kHz band segment within the fundamental EBW.
4) Scale the observed power level to an equivalent value in 500 kHz by adjusting (reducing) the measured 1) power by a bandwidth correction factor (BWCF) where BWCF = 10log(500 kHz / 300 kHz).
5) Sweep time = auto, trigger set to “free run”.
6) Trace average at least 100 traces in power averaging mode.
7) Record the max value.

Duty cycle <98%
1) Set span to encompass the entire emission bandwidth (EBW) of the signal.
2) Set RBW = 300 kHz, Set VBW ≥ 1 MHz, Detector = RMS
3) Use the peak marker function to determine the maximum power level in any 300 kHz band segment within the fundamental EBW.
4) Scale the observed power level to an equivalent value in 500 kHz by adjusting (reducing) the measured power by a bandwidth correction factor (BWCF) where BWCF = 10log(500 kHz/300kHz)
5) Sweep time = auto, trigger set to “free run”.
6) Trace average at least 100 traces in power averaging mode.
7) Record the max value and add 10 log (1/duty cycle)

4.5.5 Deviation from Test Standard

No deviation.

4.5.6 EUT Operating Conditions

Same as 4.3.6.

4.5.7 Test Results

Mode A

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

802.11a

Chan.	Frequency (MHz)	PSD W/O Duty Factor (dBm/MHz)		Duty Factor (dB)	Total PSD With Duty Factor (dBm/MHz)	Maximum Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1				
36	5180	-13.23	-13.08	0.22	-9.93	3.99	Pass
40	5200	-13.12	-12.80	0.22	-9.73	3.99	Pass
48	5240	-13.11	-12.39	0.22	-9.51	3.99	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 = 16dBi +10log (2) = 19.01dBi > 6dBi, so the power density limit shall be reduced to 17-(19.01-6) = 3.99dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11n (HT20)

Chan.	Frequency (MHz)	PSD W/O Duty Factor (dBm/MHz)		Total PSD (dBm/MHz)	Maximum Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1			
36	5180	-13.33	-13.24	-10.27	3.99	Pass
40	5200	-13.33	-13.09	-10.20	3.99	Pass
48	5240	-13.39	-12.60	-9.97	3.99	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 = 16dBi +10log (2) = 19.01dBi > 6dBi, so the power density limit shall be reduced to 17-(19.01-6) = 3.99dBm.

802.11n (HT40)

Chan.	Frequency (MHz)	PSD W/O Duty Factor (dBm/MHz)		Duty Factor (dB)	Total PSD With Duty Factor (dBm/MHz)	Maximum Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1				
38	5190	-16.14	-15.86	0.15	-12.84	3.99	Pass
46	5230	-15.84	-15.24	0.15	-12.37	3.99	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 = 16dBi +10log (2) = 19.01dBi > 6dBi, so the power density limit shall be reduced to 17-(19.01-6) = 3.99dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

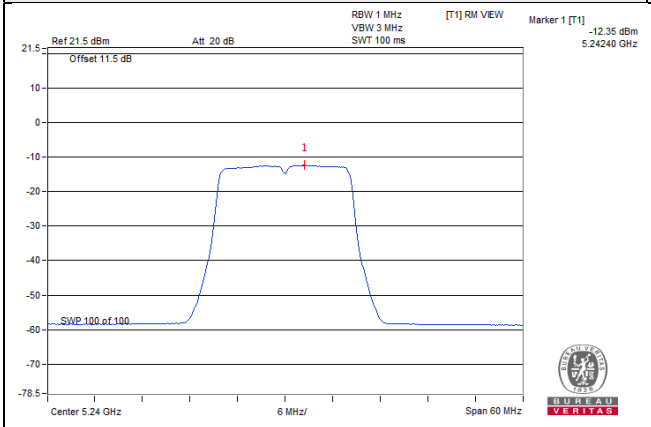
802.11ac (VHT80)

Chan.	Frequency (MHz)	PSD W/O Duty Factor (dBm/MHz)		Duty Factor (dB)	Total PSD With Duty Factor (dBm/MHz)	Maximum Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1				
42	5210	-19.53	-18.98	0.30	-15.94	3.99	Pass

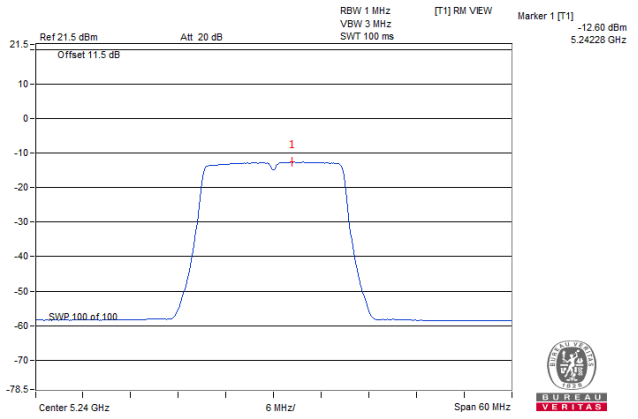
Note:
1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = 16dBi +10log (2) = 19.01dBi > 6dBi, so the power density limit shall be reduced to 17-(19.01-6) = 3.99dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value

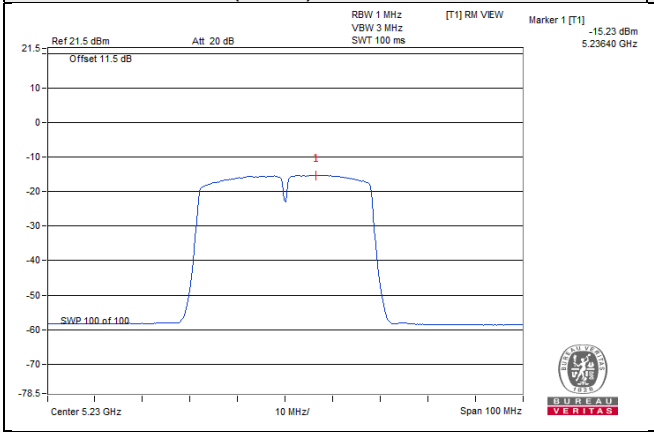
802.11a / Chain 1 / Ch 48



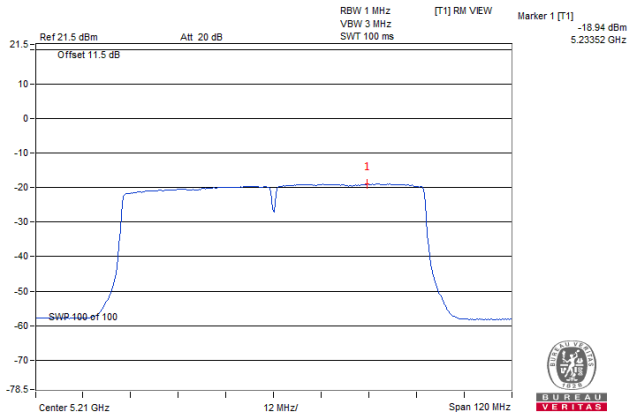
802.11n (HT20) / Chain 1 / Ch 48



802.11n (HT40) / Chain 1 / Ch 46



802.11ac (VHT80) / Chain 1 / Ch 42



For U-NII-3 band:

802.11a

TX chain	Channel	Freq. (MHz)	PSD (dBm/300kHz)	PSD (dBm/500kHz)	10 log (N=2) dB	Duty factor (dB)	Total PSD (dBm/500kHz)	Limit (dBm/500kHz)	Pass /Fail
0	149	5745	-6.66	-4.44	3.01	0.22	-1.21	16.99	Pass
	157	5785	-6.46	-4.24	3.01	0.22	-1.01	16.99	Pass
	165	5825	-6.11	-3.89	3.01	0.22	-0.66	16.99	Pass
1	149	5745	-7.12	-4.90	3.01	0.22	-1.67	16.99	Pass
	157	5785	-6.69	-4.47	3.01	0.22	-1.24	16.99	Pass
	165	5825	-6.68	-4.46	3.01	0.22	-1.23	16.99	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 = 16dBi + 10log(2)=19.01dBi > 6dBi, so the power density limit shall be reduced to 30-(19.01-6) = 16.99dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11n (HT20)

TX chain	Channel	Freq. (MHz)	PSD (dBm/300kHz)	PSD (dBm/500kHz)	10 log (N=2) dB	Total PSD (dBm/500kHz)	Limit (dBm/500kHz)	Pass /Fail
0	149	5745	-7.02	-4.80	3.01	-1.79	16.99	Pass
	157	5785	-6.78	-4.56	3.01	-1.55	16.99	Pass
	165	5825	-5.98	-3.76	3.01	-0.75	16.99	Pass
1	149	5745	-7.02	-4.80	3.01	-1.79	16.99	Pass
	157	5785	-6.64	-4.42	3.01	-1.41	16.99	Pass
	165	5825	-6.14	-3.92	3.01	-0.91	16.99	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 = 16dBi + 10log(2)=19.01dBi > 6dBi, so the power density limit shall be reduced to 30-(19.01-6) = 16.99dBm.

802.11n (HT40)

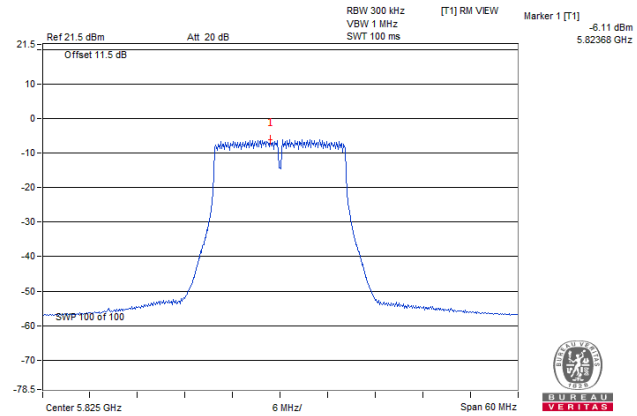
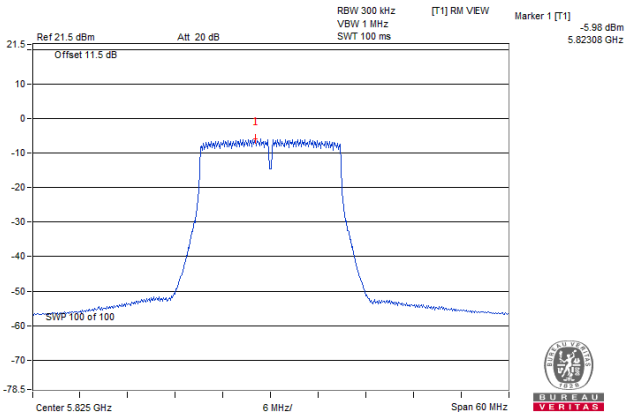
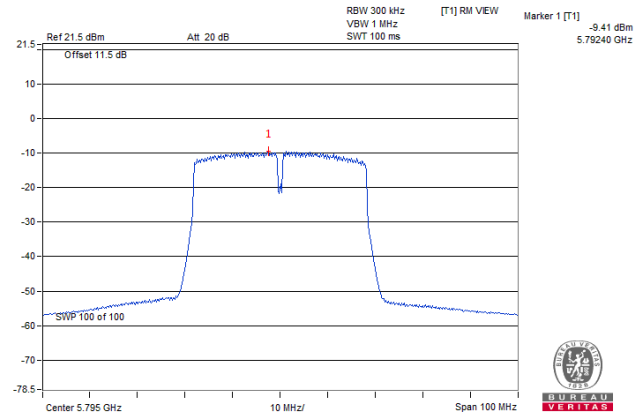
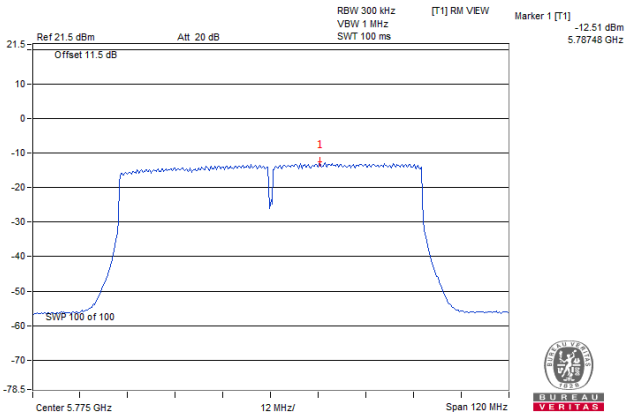
TX chain	Channel	Freq. (MHz)	PSD (dBm/300kHz)	PSD (dBm/500kHz)	10 log (N=2) dB	Duty factor	Total PSD (dBm/500kHz)	Limit (dBm/500kHz)	Pass /Fail
0	151	5755	-10.04	-7.82	3.01	0.15	-4.66	16.99	Pass
	159	5795	-9.59	-7.37	3.01	0.15	-4.21	16.99	Pass
1	151	5755	-9.97	-7.75	3.01	0.15	-4.59	16.99	Pass
	159	5795	-9.41	-7.19	3.01	0.15	-4.03	16.99	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 = 16dBi + 10log(2)=19.01dBi > 6dBi, so the power density limit shall be reduced to 30-(19.01-6) = 16.99dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11ac (VHT80)

TX chain	Channel	Freq. (MHz)	PSD (dBm/300kHz)	PSD (dBm/500kHz)	10 log (N=2) dB	Duty factor	Total PSD (dBm/500kHz)	Limit (dBm/500kHz)	Pass /Fail
0	155	5775	-12.51	-10.29	3.01	0.30	-6.98	16.99	Pass
1	155	5775	-13.40	-11.18	3.01	0.30	-7.87	16.99	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 = 16dBi + 10log(2)=19.01dBi > 6dBi, so the power density limit shall be reduced to 30-(19.01-6) = 16.99dBm.
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)
	

Mode B

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

802.11a

Chan.	Frequency (MHz)	PSD W/O Duty Factor (dBm/MHz)		Duty Factor (dB)	Total PSD With Duty Factor (dBm/MHz)	Maximum Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1				
36	5180	-11.41	-11.99	0.22	-8.46	5.89	Pass
40	5200	-11.30	-11.70	0.22	-8.27	5.89	Pass
48	5240	-11.23	-11.46	0.22	-8.12	5.89	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 = 14.10dBi +10log (2) = 17.11dBi > 6dBi, so the power density limit shall be reduced to 17-(17.11-6) = 5.89dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11n (HT20)

Chan.	Frequency (MHz)	PSD W/O Duty Factor (dBm/MHz)		Total PSD (dBm/MHz)	Maximum Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1			
36	5180	-11.33	-12.16	-8.72	5.89	Pass
40	5200	-11.27	-11.99	-8.60	5.89	Pass
48	5240	-11.23	-11.66	-8.43	5.89	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 = 14.10dBi +10log (2) = 17.11dBi > 6dBi, so the power density limit shall be reduced to 17-(17.11-6) = 5.89dBm.

802.11n (HT40)

Chan.	Frequency (MHz)	PSD W/O Duty Factor (dBm/MHz)		Duty Factor (dB)	Total PSD With Duty Factor (dBm/MHz)	Maximum Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1				
38	5190	-13.92	-14.52	0.15	-11.05	5.89	Pass
46	5230	-13.80	-14.14	0.15	-10.81	5.89	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 = 14.10dBi +10log (2) = 17.11dBi > 6dBi, so the power density limit shall be reduced to 17-(17.11-6) = 5.89dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

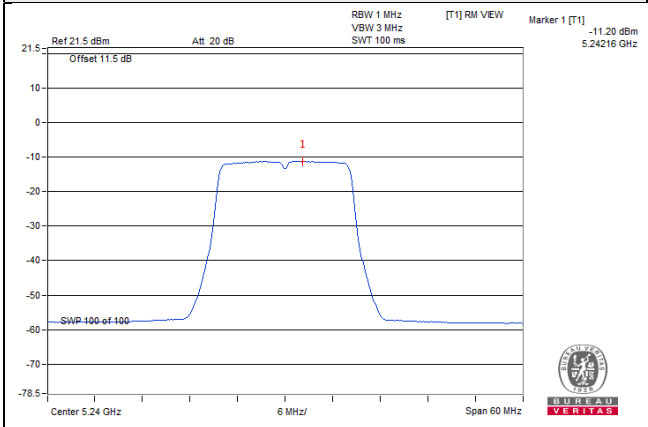
802.11ac (VHT80)

Chan.	Frequency (MHz)	PSD W/O Duty Factor (dBm/MHz)		Duty Factor (dB)	Total PSD With Duty Factor (dBm/MHz)	Maximum Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1				
42	5210	-17.41	-17.92	0.30	-14.35	5.89	Pass

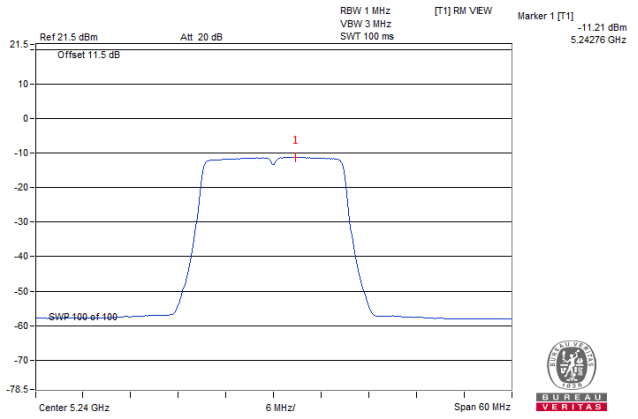
Note:
1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = 14.10dBi +10log (2) = 17.11dBi > 6dBi, so the power density limit shall be reduced to 17-(17.11-6) = 5.89dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value

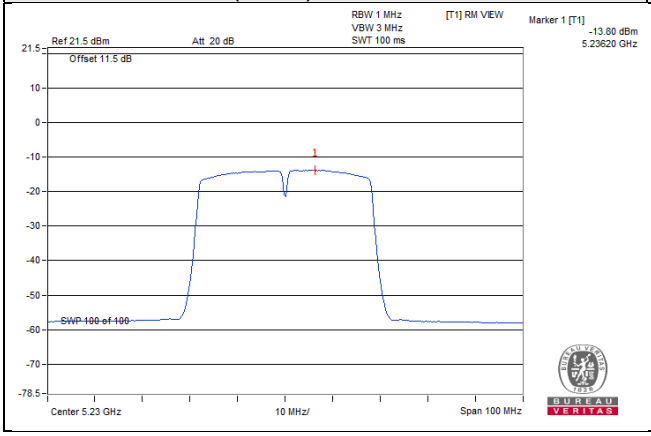
802.11a / Chain 0 / Ch 48



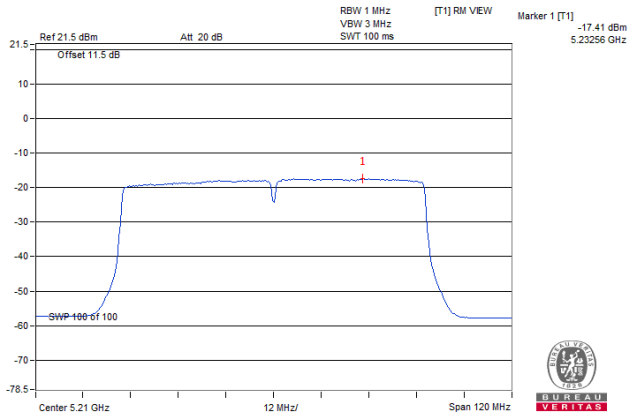
802.11n (HT20) / Chain 0 / Ch 48



802.11n (HT40) / Chain 0 / Ch 46



802.11ac (VHT80) / Chain 0 / Ch 42



For U-NII-3 band:

802.11a

TX chain	Channel	Freq. (MHz)	PSD (dBm/300kHz)	PSD (dBm/500kHz)	10 log (N=2) dB	Duty factor (dB)	Total PSD (dBm/500kHz)	Limit (dBm/500kHz)	Pass /Fail
0	149	5745	-6.21	-3.99	3.01	0.22	-0.76	18.89	Pass
	157	5785	-6.12	-3.90	3.01	0.22	-0.67	18.89	Pass
	165	5825	-6.41	-4.19	3.01	0.22	-0.96	18.89	Pass
1	149	5745	-6.48	-4.26	3.01	0.22	-1.03	18.89	Pass
	157	5785	-6.62	-4.40	3.01	0.22	-1.17	18.89	Pass
	165	5825	-7.41	-5.19	3.01	0.22	-1.96	18.89	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 = 14.10dBi + 10log(2)=17.11dBi > 6dBi, so the power density limit shall be reduced to 30-(17.11-6) = 18.89dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11n (HT20)

TX chain	Channel	Freq. (MHz)	PSD (dBm/300kHz)	PSD (dBm/500kHz)	10 log (N=2) dB	Total PSD (dBm/500kHz)	Limit (dBm/500kHz)	Pass /Fail
0	149	5745	-5.96	-3.74	3.01	-0.73	18.89	Pass
	157	5785	-6.38	-4.16	3.01	-1.15	18.89	Pass
	165	5825	-6.18	-3.96	3.01	-0.95	18.89	Pass
1	149	5745	-6.66	-4.44	3.01	-1.43	18.89	Pass
	157	5785	-7.37	-5.15	3.01	-2.14	18.89	Pass
	165	5825	-7.27	-5.05	3.01	-2.04	18.89	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 = 14.10dBi + 10log(2)=17.11dBi > 6dBi, so the power density limit shall be reduced to 30-(17.11-6) = 18.89dBm.

802.11n (HT40)

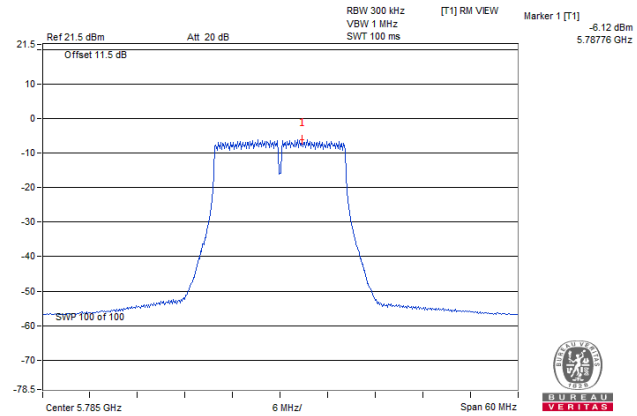
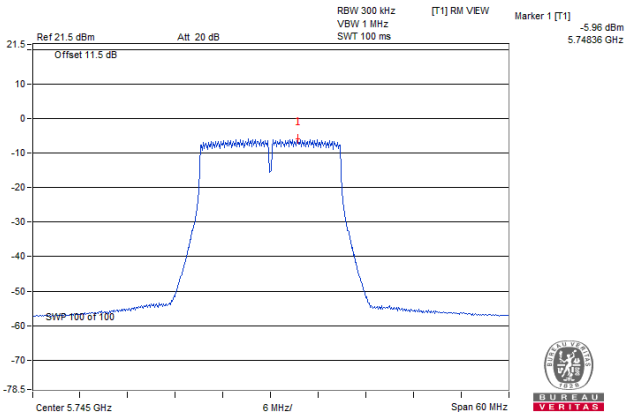
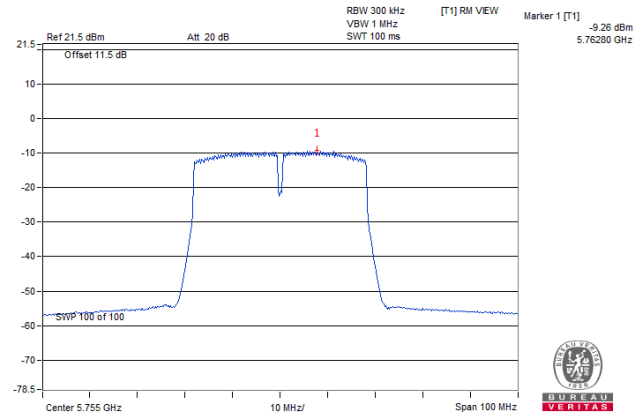
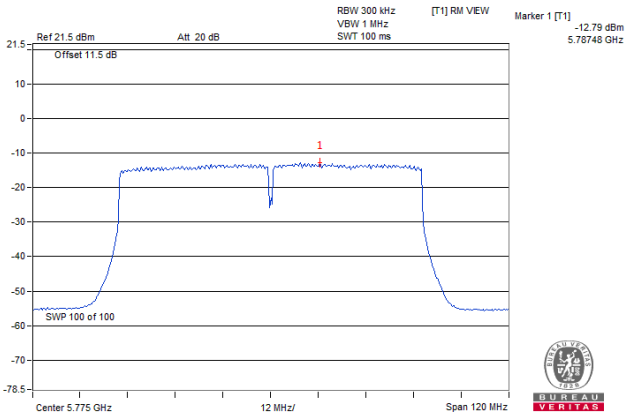
TX chain	Channel	Freq. (MHz)	PSD (dBm/300kHz)	PSD (dBm/500kHz)	10 log (N=2) dB	Duty factor	Total PSD (dBm/500kHz)	Limit (dBm/500kHz)	Pass /Fail
0	151	5755	-9.26	-7.04	3.01	0.15	-3.88	18.89	Pass
	159	5795	-9.33	-7.11	3.01	0.15	-3.95	18.89	Pass
1	151	5755	-10.18	-7.96	3.01	0.15	-4.80	18.89	Pass
	159	5795	-10.23	-8.01	3.01	0.15	-4.85	18.89	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 = 14.10dBi + 10log(2)=17.11dBi > 6dBi, so the power density limit shall be reduced to 30-(17.11-6) = 18.89dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11ac (VHT80)

TX chain	Channel	Freq. (MHz)	PSD (dBm/300kHz)	PSD (dBm/500kHz)	10 log (N=2) dB	Duty factor	Total PSD (dBm/500kHz)	Limit (dBm/500kHz)	Pass /Fail
0	155	5775	-12.79	-10.57	3.01	0.30	-7.26	18.89	Pass
1	155	5775	-13.62	-11.40	3.01	0.30	-8.09	18.89	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 = 14.10dBi + 10log(2)=17.11dBi > 6dBi, so the power density limit shall be reduced to 30-(17.11-6) = 18.89dBm.
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)
	

Mode C

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

802.11a

Chan.	Frequency (MHz)	PSD W/O Duty Factor (dBm/MHz)		Duty Factor (dB)	Total PSD With Duty Factor (dBm/MHz)	Maximum Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1				
36	5180	-3.57	-3.53	0.22	-0.32	12.09	Pass
40	5200	-3.37	-3.45	0.22	-0.18	12.09	Pass
48	5240	-3.38	-3.62	0.22	-0.27	12.09	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 = 7.90dBi +10log (2) = 10.91dBi > 6dBi, so the power density limit shall be reduced to 17-(10.91-6) = 12.09dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11n (HT20)

Chan.	Frequency (MHz)	PSD W/O Duty Factor (dBm/MHz)		Total PSD (dBm/MHz)	Maximum Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1			
36	5180	-3.68	-3.93	-0.79	12.09	Pass
40	5200	-3.71	-3.90	-0.79	12.09	Pass
48	5240	-3.78	-3.96	-0.86	12.09	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 = 7.90dBi +10log (2) = 10.91dBi > 6dBi, so the power density limit shall be reduced to 17-(10.91-6) = 12.09dBm.

802.11n (HT40)

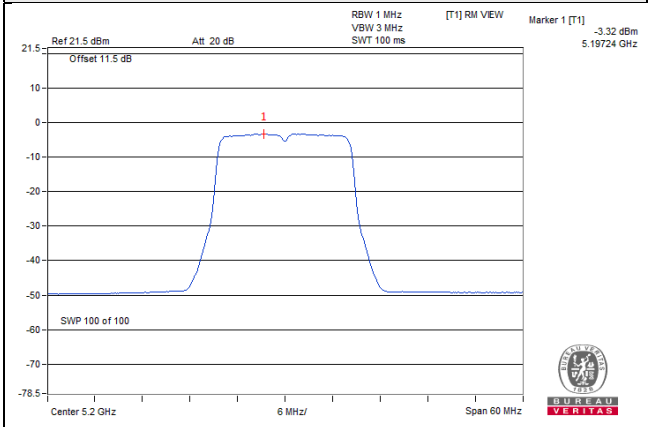
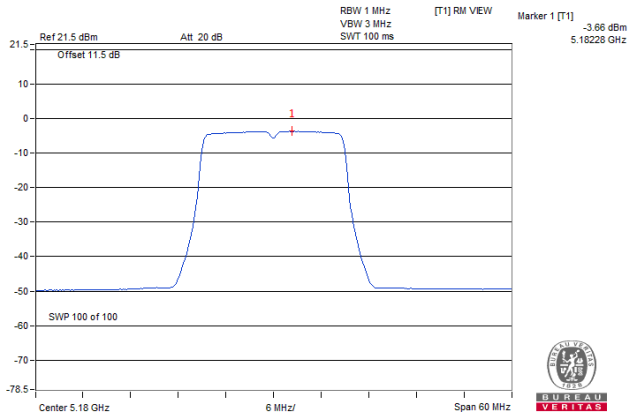
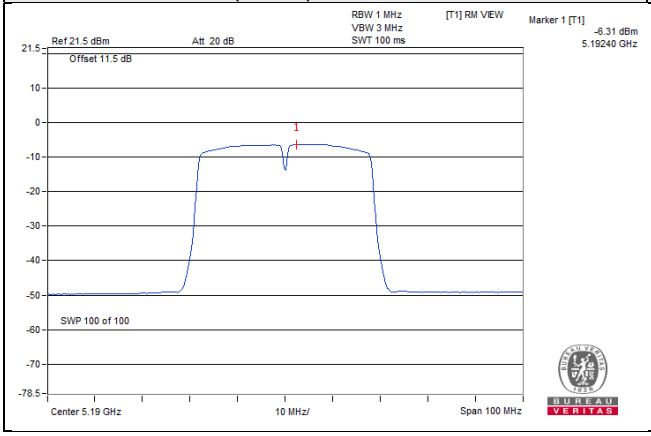
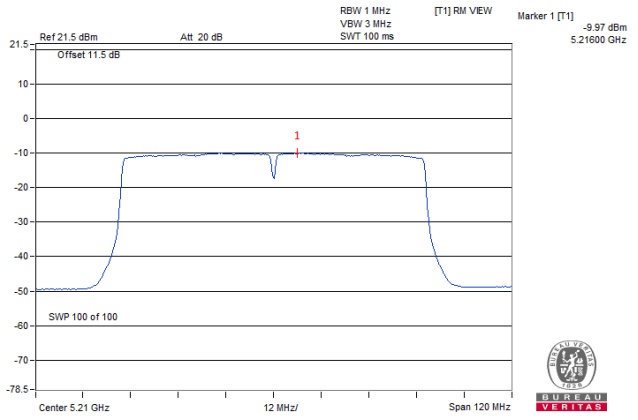
Chan.	Frequency (MHz)	PSD W/O Duty Factor (dBm/MHz)		Duty Factor (dB)	Total PSD With Duty Factor (dBm/MHz)	Maximum Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1				
38	5190	-6.32	-6.48	0.15	-3.24	12.09	Pass
46	5230	-6.42	-6.41	0.15	-3.25	12.09	Pass

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 = 7.90dBi +10log (2) = 10.91dBi > 6dBi, so the power density limit shall be reduced to 17-(10.91-6) = 12.09dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11ac (VHT80)

Chan.	Frequency (MHz)	PSD W/O Duty Factor (dBm/MHz)		Duty Factor (dB)	Total PSD With Duty Factor (dBm/MHz)	Maximum Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1				
42	5210	-10.00	-10.40	0.30	-6.89	12.09	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 = 7.90dBi +10log (2) = 10.91dBi > 6dBi, so the power density limit shall be reduced to 17-(10.91-6) = 12.09dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value	
802.11a / Chain 0 / Ch 40	802.11n (HT20) / Chain 0 / Ch 36
	
802.11n (HT40) / Chain 0 / Ch 38	802.11ac (VHT80) / Chain 0 / Ch 42
	

For U-NII-3 band:

802.11a

TX chain	Channel	Freq. (MHz)	PSD (dBm/300kHz)	PSD (dBm/500kHz)	10 log (N=2) dB	Duty factor (dB)	Total PSD (dBm/500kHz)	Limit (dBm/500kHz)	Pass /Fail
0	149	5745	-0.20	2.02	3.01	0.22	5.25	25.09	Pass
	157	5785	-0.24	1.98	3.01	0.22	5.21	25.09	Pass
	165	5825	0.66	2.88	3.01	0.22	6.11	25.09	Pass
1	149	5745	0.26	2.48	3.01	0.22	5.71	25.09	Pass
	157	5785	0.30	2.52	3.01	0.22	5.75	25.09	Pass
	165	5825	0.97	3.19	3.01	0.22	6.42	25.09	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 = 7.90dBi + 10log(2)=10.91dBi > 6dBi, so the power density limit shall be reduced to 30-(10.91-6) = 25.09dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11n (HT20)

TX chain	Channel	Freq. (MHz)	PSD (dBm/300kHz)	PSD (dBm/500kHz)	10 log (N=2) dB	Total PSD (dBm/500kHz)	Limit (dBm/500kHz)	Pass /Fail
0	149	5745	0.74	2.96	3.01	5.97	25.09	Pass
	157	5785	0.29	2.51	3.01	5.52	25.09	Pass
	165	5825	0.31	2.53	3.01	5.54	25.09	Pass
1	149	5745	1.09	3.31	3.01	6.32	25.09	Pass
	157	5785	0.56	2.78	3.01	5.79	25.09	Pass
	165	5825	0.54	2.76	3.01	5.77	25.09	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 = 7.90dBi + 10log(2)=10.91dBi > 6dBi, so the power density limit shall be reduced to 30-(10.91-6) = 25.09dBm.

802.11n (HT40)

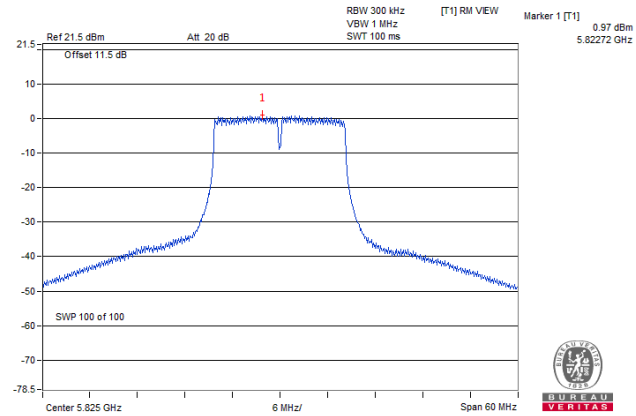
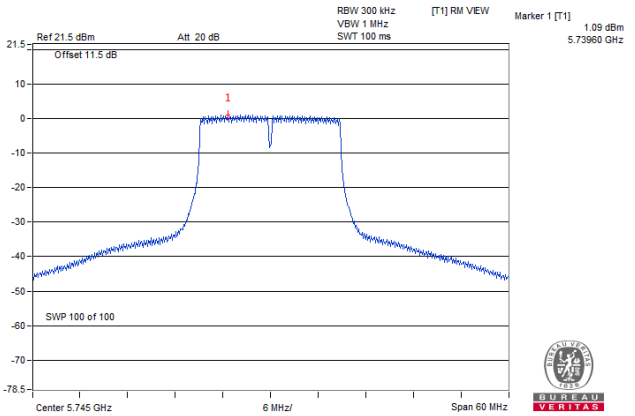
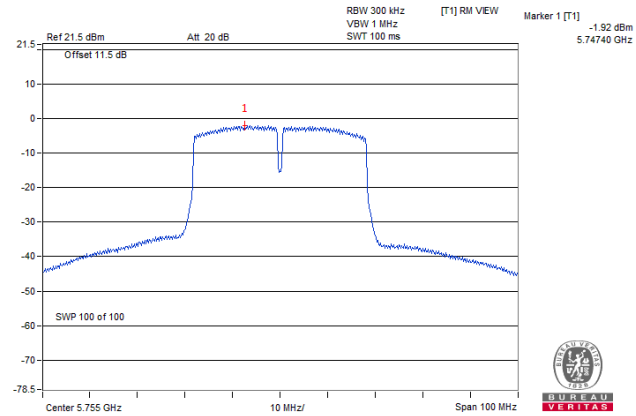
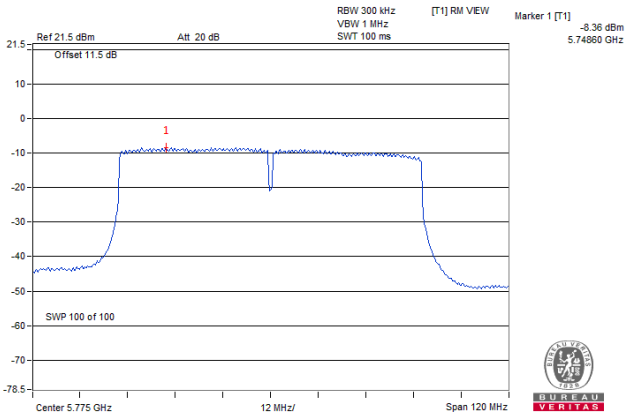
TX chain	Channel	Freq. (MHz)	PSD (dBm/300kHz)	PSD (dBm/500kHz)	10 log (N=2) dB	Duty factor	Total PSD (dBm/500kHz)	Limit (dBm/500kHz)	Pass /Fail
0	151	5755	-2.27	-0.05	3.01	0.15	3.11	25.09	Pass
	159	5795	-2.72	-0.50	3.01	0.15	2.66	25.09	Pass
1	151	5755	-1.92	0.30	3.01	0.15	3.46	25.09	Pass
	159	5795	-2.26	-0.04	3.01	0.15	3.12	25.09	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 = 7.90dBi + 10log(2)=10.91dBi > 6dBi, so the power density limit shall be reduced to 30-(10.91-6) = 25.09dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11ac (VHT80)

TX chain	Channel	Freq. (MHz)	PSD (dBm/300kHz)	PSD (dBm/500kHz)	10 log (N=2) dB	Duty factor	Total PSD (dBm/500kHz)	Limit (dBm/500kHz)	Pass /Fail
0	155	5775	-8.38	-6.16	3.01	0.30	-2.85	25.09	Pass
1	155	5775	-8.36	-6.14	3.01	0.30	-2.83	25.09	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 = 7.90dBi + 10log(2)=10.91dBi > 6dBi, so the power density limit shall be reduced to 30-(10.91-6) = 25.09dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

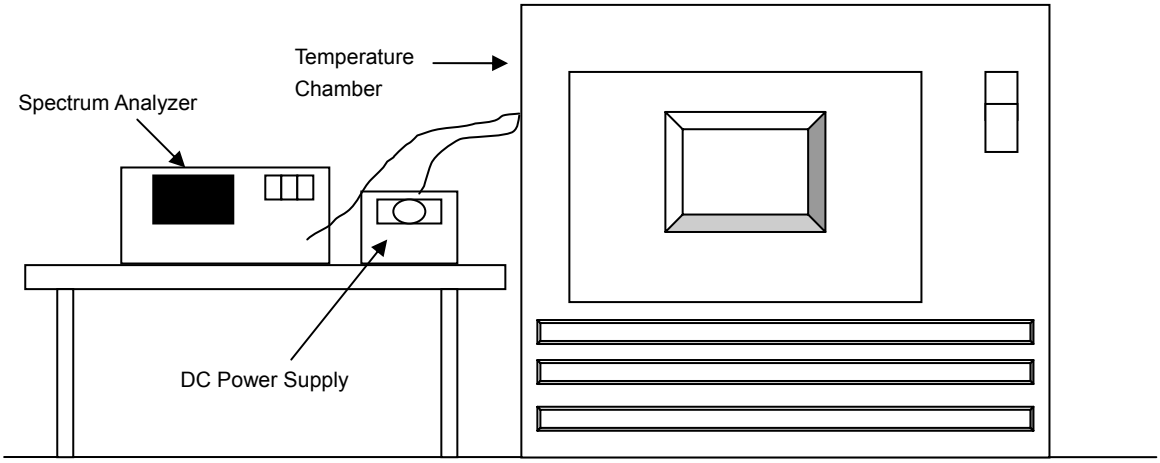
Spectrum Plot of Worst Value	
802.11a	802.11n (HT20)
	
802.11n (HT40)	802.11ac (VHT80)
	

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

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

4.6.5 Deviation from Test Standard

No deviation.

4.6.6 EUT Operating Condition

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

4.6.7 Test Results

Mode A

Frequency Stability Versus Temp.									
Operating Frequency: 5180MHz									
Temp. (℃)	Power Supply (Vdc)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result
60	54	5180.0013	PASS	5179.9988	PASS	5179.9993	PASS	5179.9979	PASS
50	54	5180.0224	PASS	5180.0243	PASS	5180.0227	PASS	5180.0263	PASS
40	54	5180.0148	PASS	5180.0161	PASS	5180.0133	PASS	5180.0158	PASS
30	54	5180.0067	PASS	5180.0047	PASS	5180.0066	PASS	5180.0067	PASS
20	54	5179.9936	PASS	5179.9919	PASS	5179.9924	PASS	5179.9942	PASS
10	54	5179.9815	PASS	5179.9782	PASS	5179.978	PASS	5179.9791	PASS
0	54	5180.0200	PASS	5180.0198	PASS	5180.0227	PASS	5180.0197	PASS
-10	54	5179.9775	PASS	5179.9776	PASS	5179.9797	PASS	5179.9800	PASS
-20	54	5180.0093	PASS	5180.0087	PASS	5180.0054	PASS	5180.0092	PASS
-30	54	5180.0043	PASS	5180.0031	PASS	5180.0042	PASS	5180.0037	PASS
-40	54	5180.0165	PASS	5180.0148	PASS	5180.0172	PASS	5180.0145	PASS

Frequency Stability Versus Voltage									
Operating Frequency: 5180MHz									
Temp. (℃)	Power Supply (Vdc)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result
20	62.1	5179.9946	PASS	5179.9924	PASS	5179.9930	PASS	5179.9939	PASS
	54.0	5179.9936	PASS	5179.9919	PASS	5179.9924	PASS	5179.9942	PASS
	45.9	5179.9933	PASS	5179.9922	PASS	5179.9926	PASS	5179.9951	PASS

Mode B

Frequency Stability Versus Temp.									
Operating Frequency: 5180MHz									
Temp. (℃)	Power Supply (Vdc)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result
60	54	5180.0147	PASS	5180.016	PASS	5180.0139	PASS	5180.0132	PASS
50	54	5180.0012	PASS	5180.004	PASS	5179.9998	PASS	5179.9996	PASS
40	54	5180.0103	PASS	5180.0117	PASS	5180.0115	PASS	5180.0115	PASS
30	54	5180.0074	PASS	5180.0076	PASS	5180.0067	PASS	5180.0074	PASS
20	54	5180.0226	PASS	5180.023	PASS	5180.0212	PASS	5180.0212	PASS
10	54	5179.9988	PASS	5179.9958	PASS	5179.9953	PASS	5179.9986	PASS
0	54	5180.0246	PASS	5180.0226	PASS	5180.0244	PASS	5180.0222	PASS
-10	54	5180.0211	PASS	5180.0234	PASS	5180.0248	PASS	5180.0236	PASS
-20	54	5179.9907	PASS	5179.993	PASS	5179.9908	PASS	5179.9925	PASS
-30	54	5180.0015	PASS	5179.9994	PASS	5180.001	PASS	5180.0000	PASS
-40	54	5180.0101	PASS	5180.0109	PASS	5180.013	PASS	5180.0092	PASS

Frequency Stability Versus Voltage									
Operating Frequency: 5180MHz									
Temp. (℃)	Power Supply (Vdc)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result
20	62.1	5180.0222	PASS	5180.0229	PASS	5180.0212	PASS	5180.0208	PASS
	54.0	5180.0226	PASS	5180.023	PASS	5180.0212	PASS	5180.0212	PASS
	45.9	5180.0220	PASS	5180.0239	PASS	5180.0212	PASS	5180.0216	PASS

Mode C

Frequency Stability Versus Temp.									
Operating Frequency: 5180MHz									
Temp. (℃)	Power Supply (Vdc)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result
50	54	5179.9808	PASS	5179.9808	PASS	5179.9839	PASS	5179.9844	PASS
40	54	5180.0210	PASS	5180.0194	PASS	5180.019	PASS	5180.0193	PASS
30	54	5180.0076	PASS	5180.0090	PASS	5180.0100	PASS	5180.0076	PASS
20	54	5180.0020	PASS	5180.0019	PASS	5180.0030	PASS	5180.0042	PASS
10	54	5179.9912	PASS	5179.9894	PASS	5179.9903	PASS	5179.9940	PASS
0	54	5180.0240	PASS	5180.0261	PASS	5180.0219	PASS	5180.0223	PASS
-10	54	5179.9832	PASS	5179.9844	PASS	5179.9831	PASS	5179.9862	PASS
-20	54	5180.0239	PASS	5180.0206	PASS	5180.0193	PASS	5180.0224	PASS
-30	54	5179.9756	PASS	5179.9790	PASS	5179.9746	PASS	5179.9790	PASS

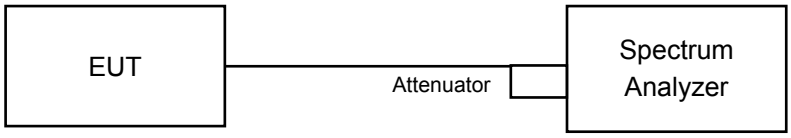
Frequency Stability Versus Voltage									
Operating Frequency: 5180MHz									
Temp. (℃)	Power Supply (Vdc)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result
20	62.1	5180.0015	PASS	5180.0017	PASS	5180.0030	PASS	5180.0042	PASS
	54.0	5180.0020	PASS	5180.0019	PASS	5180.0030	PASS	5180.0042	PASS
	45.9	5180.0018	PASS	5180.0026	PASS	5180.0036	PASS	5180.0036	PASS

4.7 6dB Bandwidth Measurement

4.7.1 Limits of 6dB Bandwidth Measurement

The minimum of 6dB Bandwidth Measurement is 0.5MHz.

4.7.2 Test Setup



4.7.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.7.4 Test Procedure

Measurement Procedure REF

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

4.7.5 Deviation from Test Standard

No deviation.

4.7.6 EUT Operating Condition

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

4.7.7 Test Results

Mode A

802.11a

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
149	5745	16.41	17.67	0.5	Pass
157	5785	16.41	17.66	0.5	Pass
165	5825	16.42	17.68	0.5	Pass

802.11n (HT20)

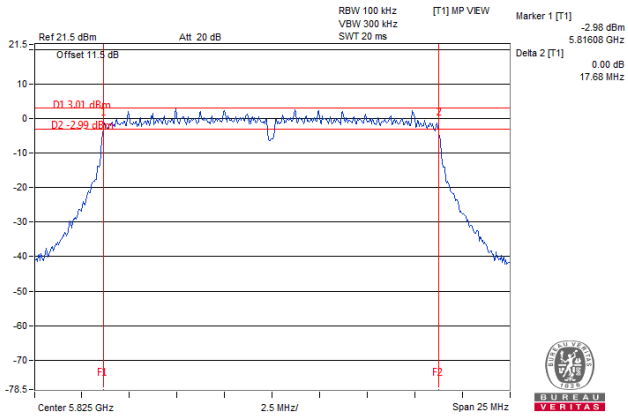
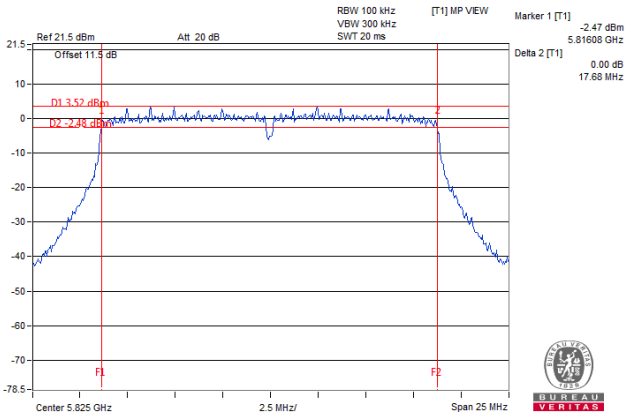
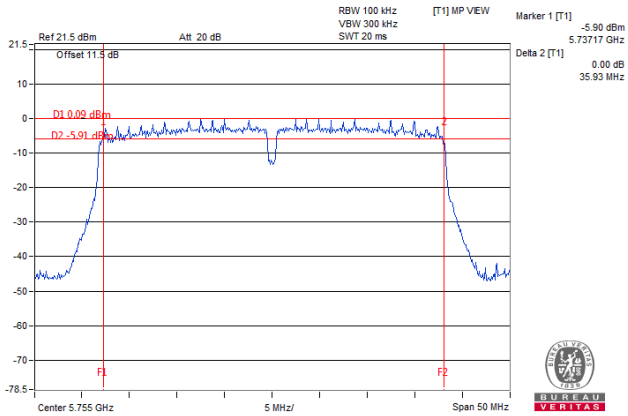
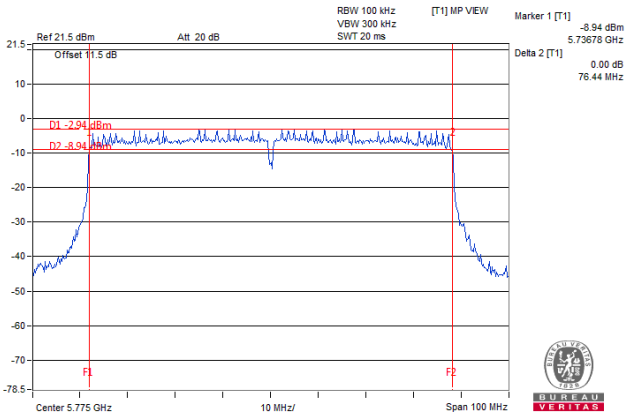
Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
149	5745	17.66	17.68	0.5	Pass
157	5785	17.64	17.67	0.5	Pass
165	5825	17.68	17.66	0.5	Pass

802.11n (HT40)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
151	5755	35.93	35.34	0.5	Pass
159	5795	35.43	35.42	0.5	Pass

802.11ac (VHT80)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
155	5775	76.06	76.44	0.5	Pass

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

Mode B

802.11a

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
149	5745	16.42	16.43	0.5	Pass
157	5785	16.43	16.45	0.5	Pass
165	5825	16.42	16.44	0.5	Pass

802.11n (HT20)

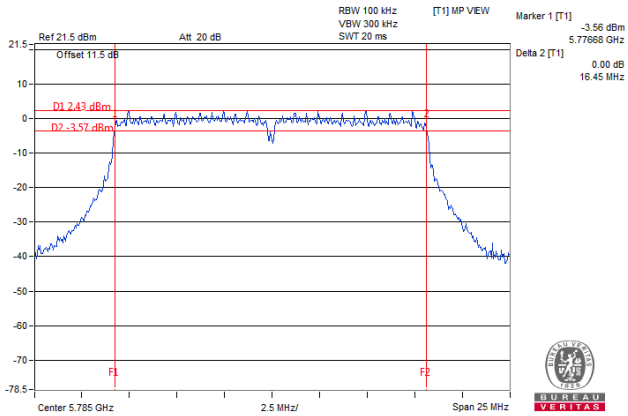
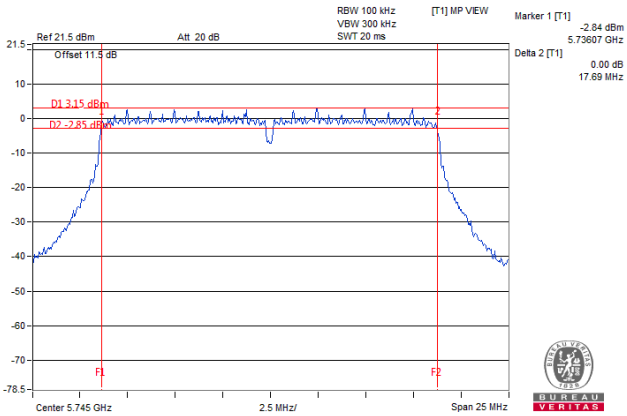
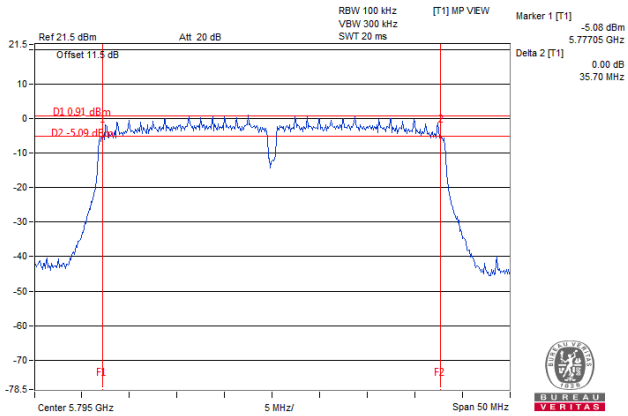
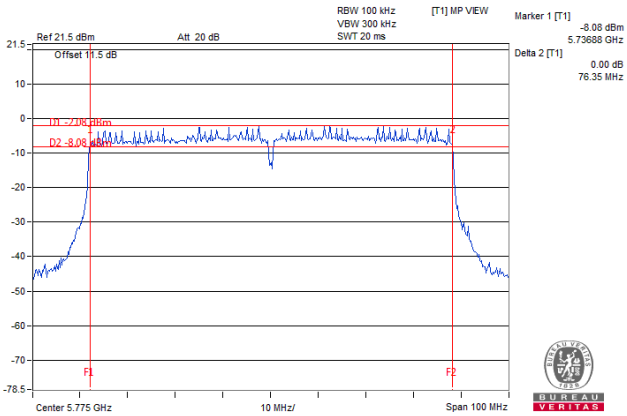
Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
149	5745	17.67	17.69	0.5	Pass
157	5785	17.65	17.68	0.5	Pass
165	5825	17.66	17.68	0.5	Pass

802.11n (HT40)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
151	5755	35.58	35.50	0.5	Pass
159	5795	35.70	35.45	0.5	Pass

802.11ac (VHT80)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
155	5775	76.35	75.99	0.5	Pass

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

Mode C

802.11a

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
149	5745	16.42	16.45	0.5	Pass
157	5785	16.42	16.45	0.5	Pass
165	5825	16.42	16.44	0.5	Pass

802.11n (HT20)

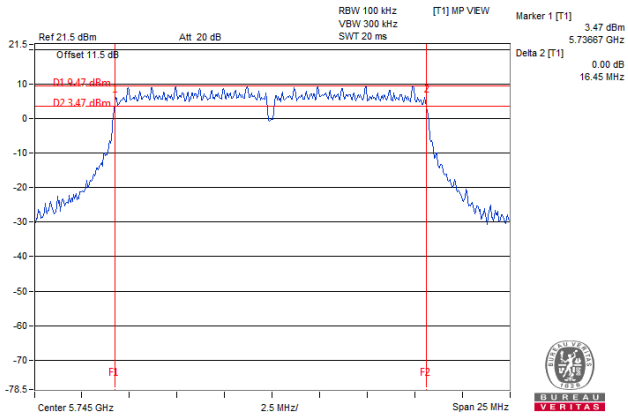
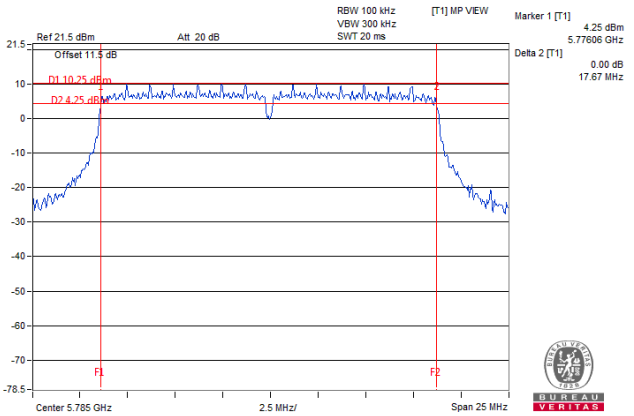
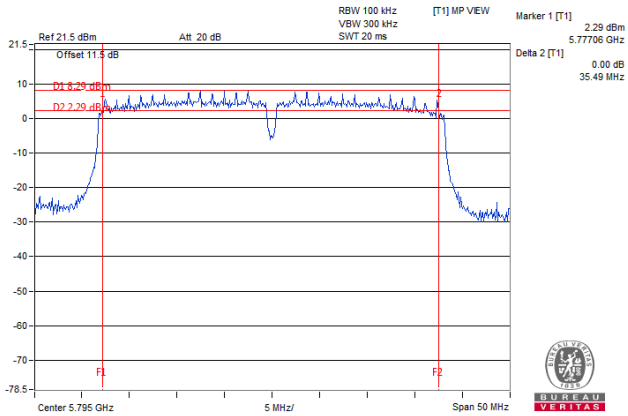
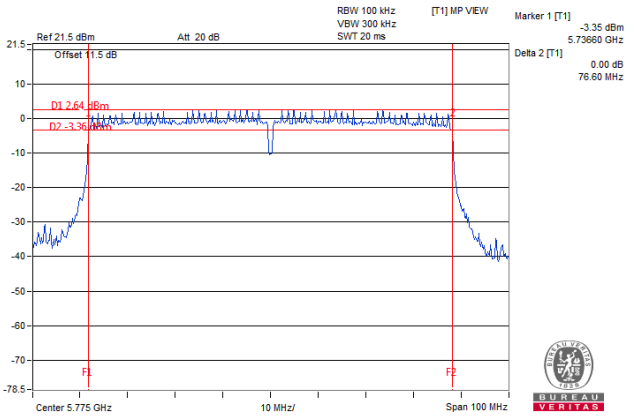
Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
149	5745	17.66	17.65	0.5	Pass
157	5785	17.66	17.67	0.5	Pass
165	5825	17.64	17.66	0.5	Pass

802.11n (HT40)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
151	5755	35.25	35.31	0.5	Pass
159	5795	35.31	35.49	0.5	Pass

802.11ac (VHT80)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
155	5775	76.60	76.19	0.5	Pass

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

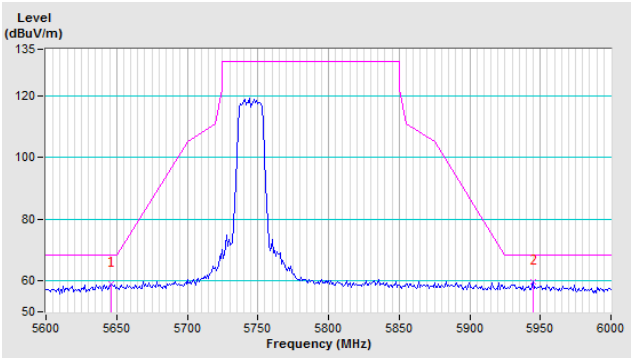
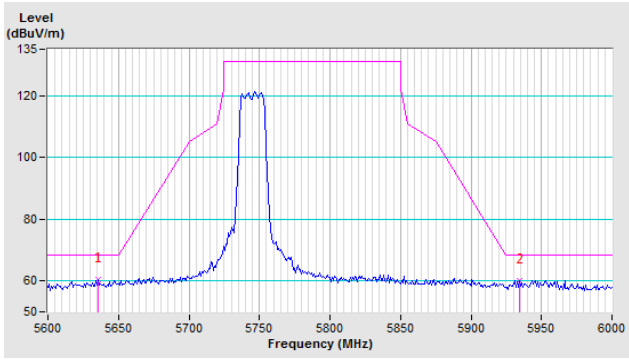
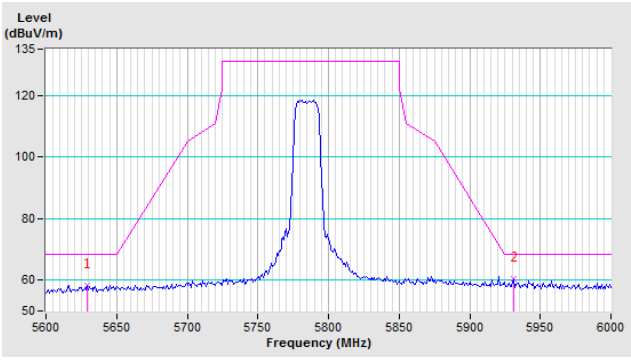
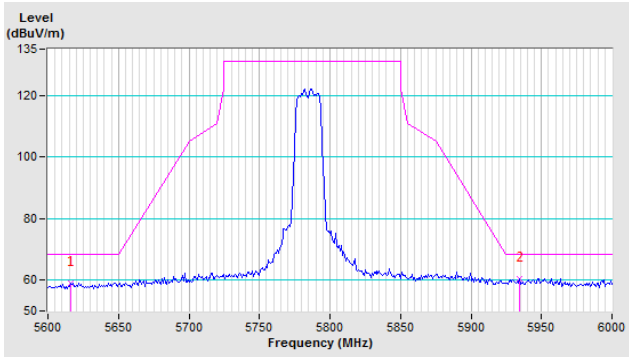
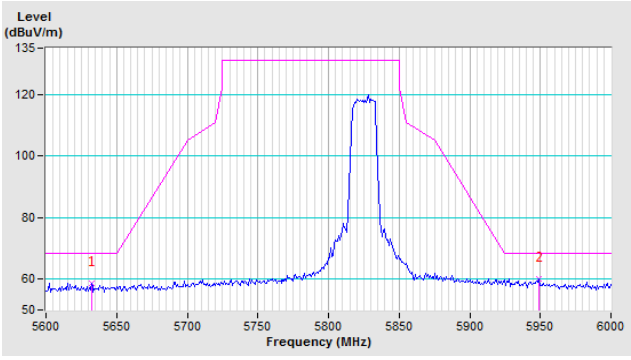
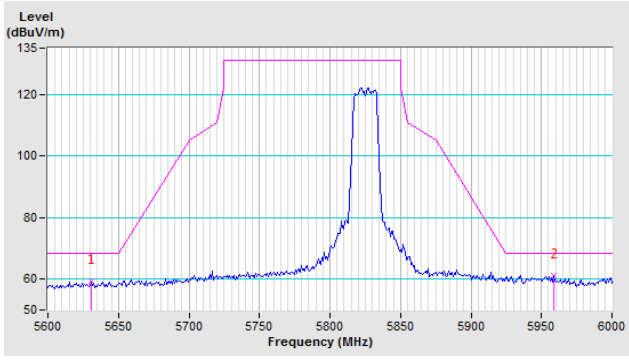
5 Pictures of Test Arrangements

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

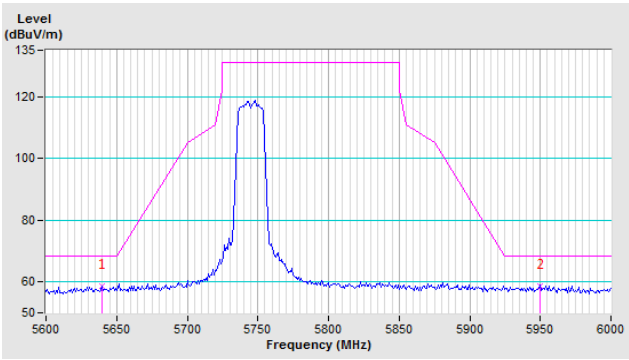
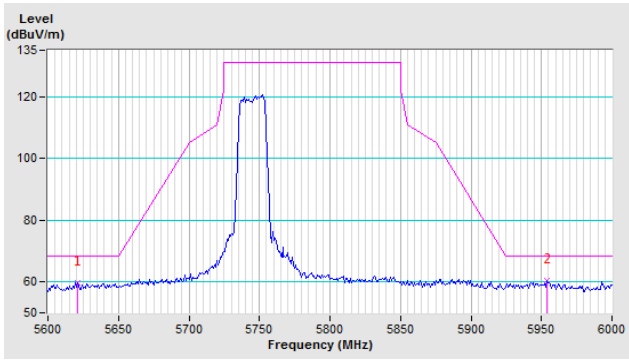
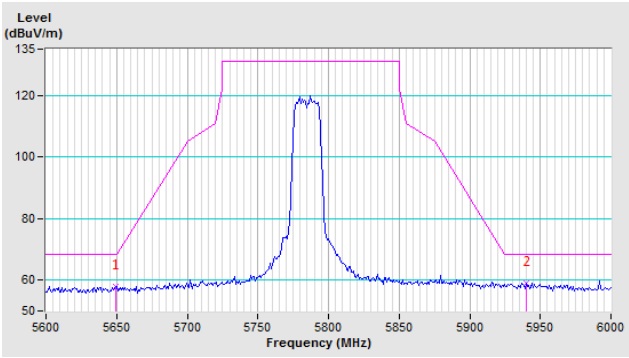
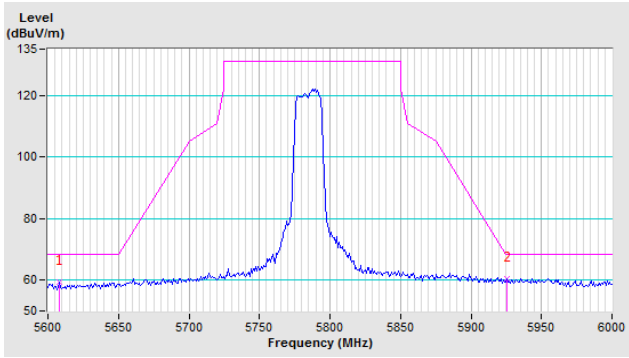
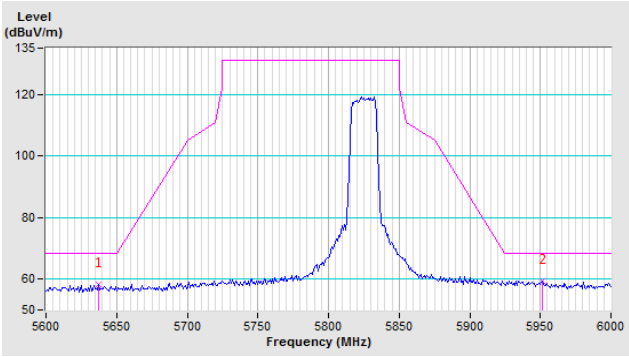
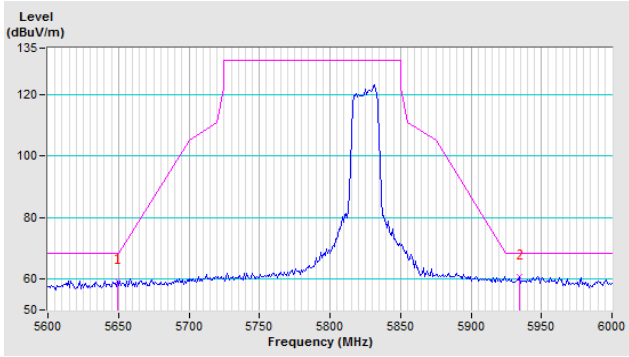
Annex A- Radiated Out of Band Emission (OOBE) Measurement (For U-NII-3 band)

Mode A

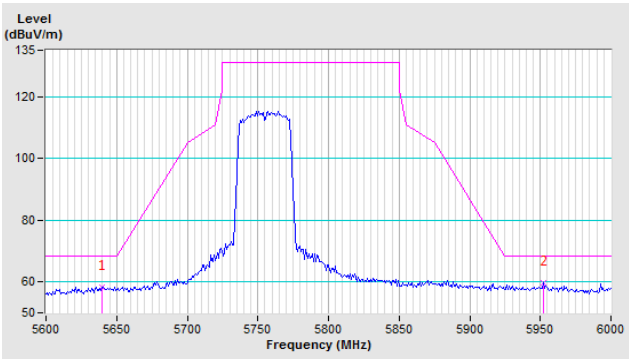
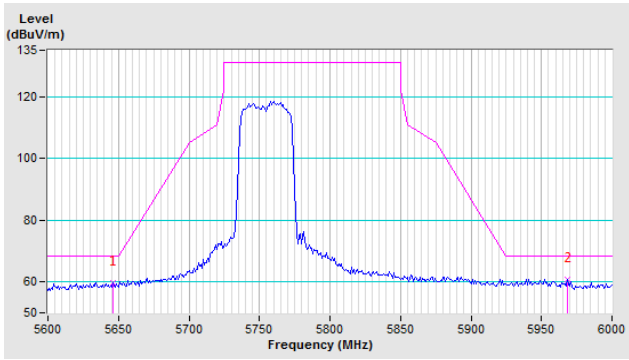
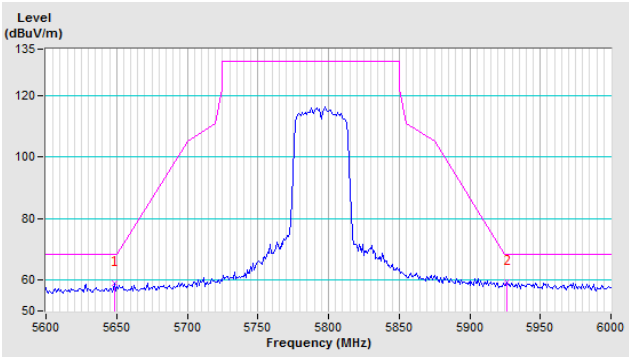
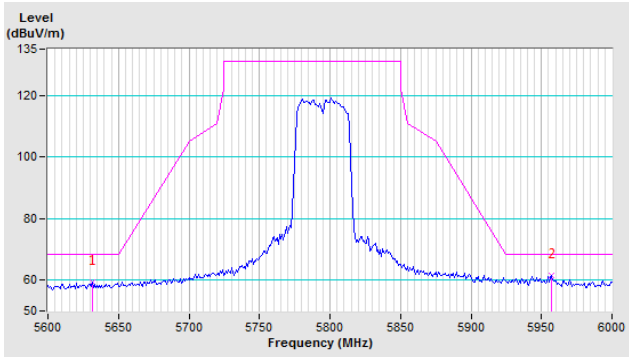
802.11a

CH149	
Horizontal	Vertical
	
CH157	
Horizontal	Vertical
	
CH165	
Horizontal	Vertical
	

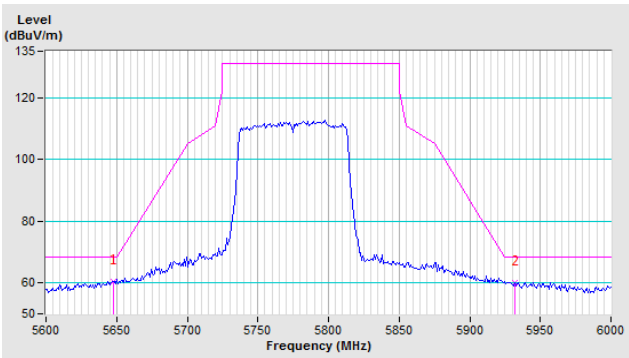
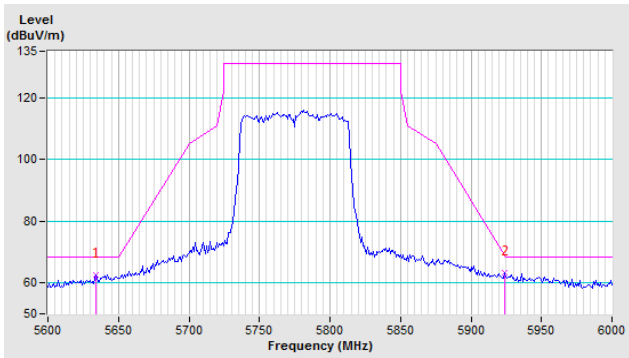
802.11n (HT20)

CH149	
Horizontal	Vertical
	
CH157	
Horizontal	Vertical
	
CH165	
Horizontal	Vertical
	

802.11n (HT40)

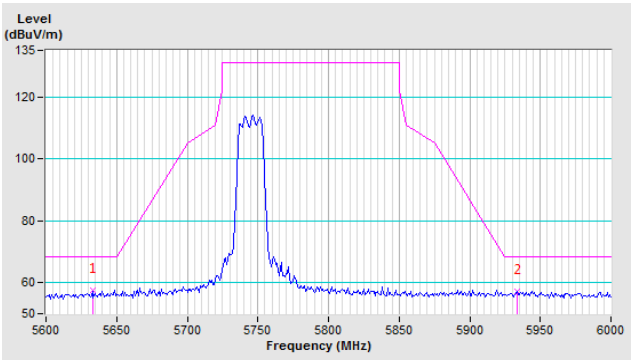
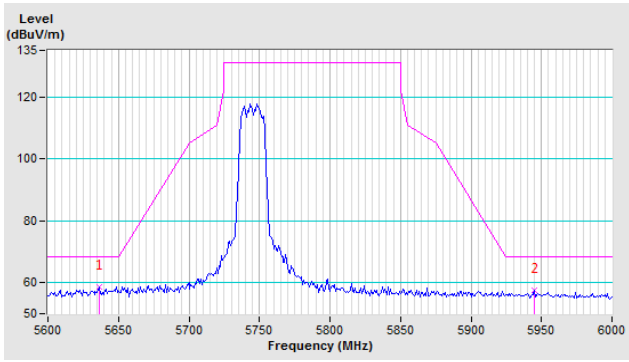
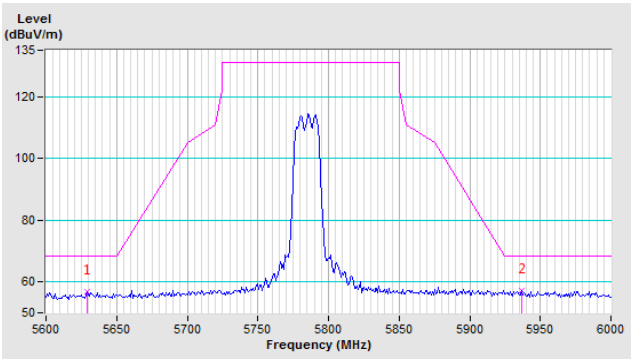
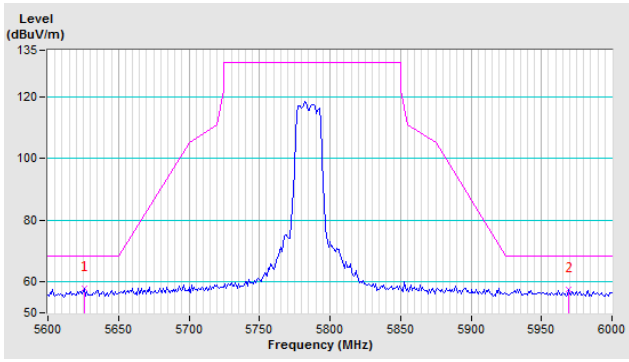
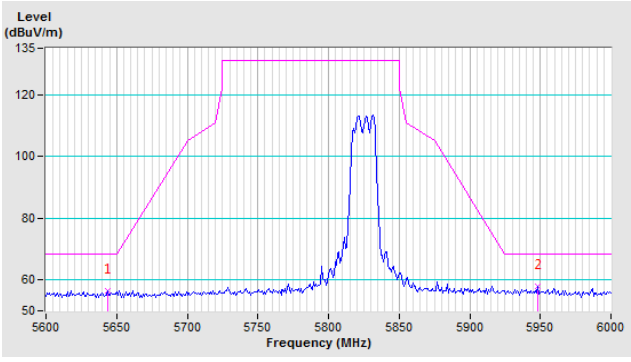
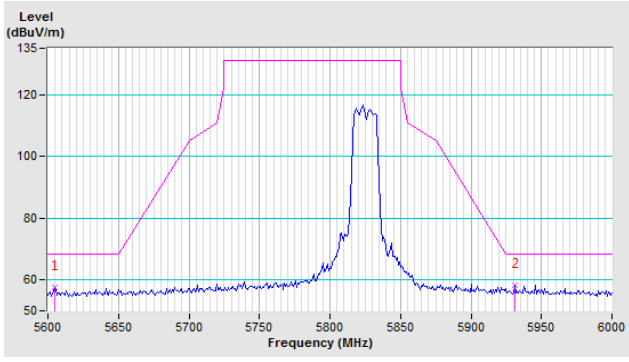
CH151	
Horizontal	Vertical
	
CH159	
Horizontal	Vertical
	

802.11ac (VHT80)

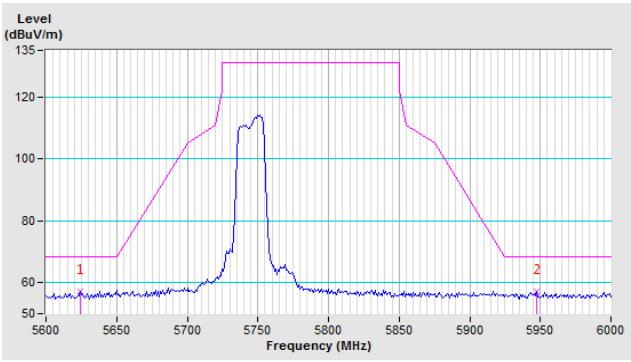
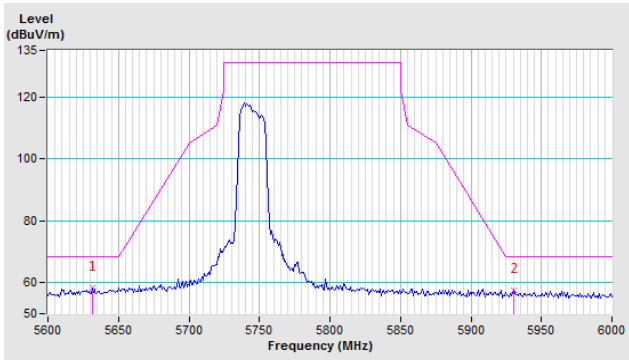
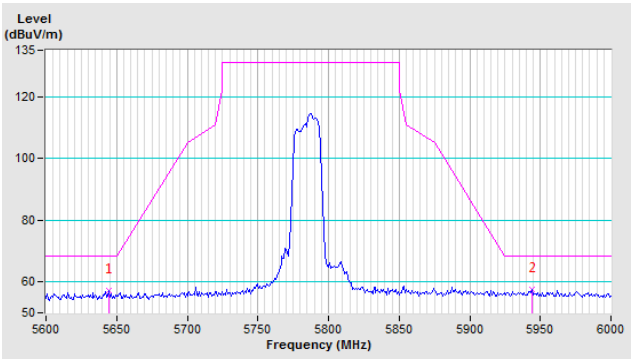
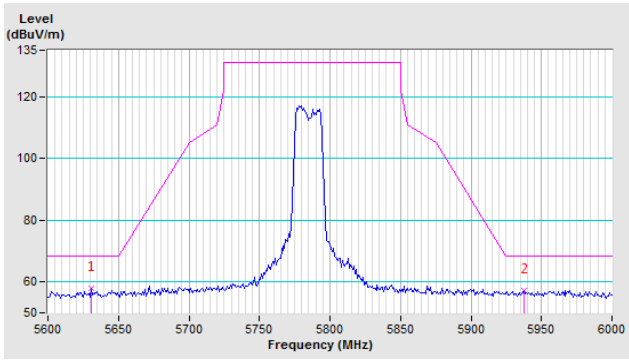
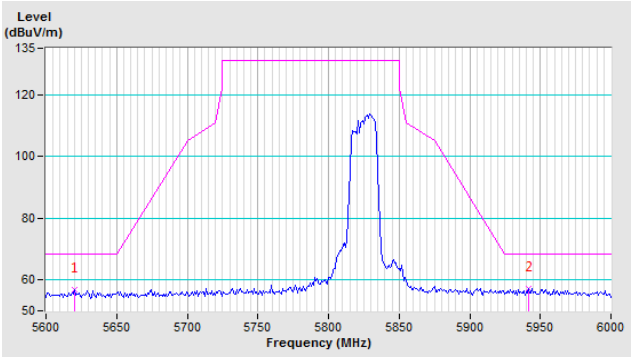
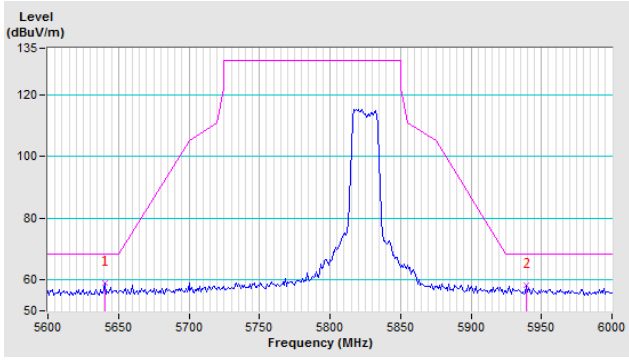
CH155	
Horizontal	Vertical
	

Mode B

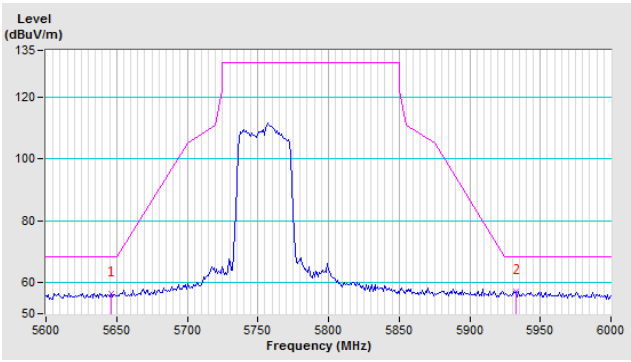
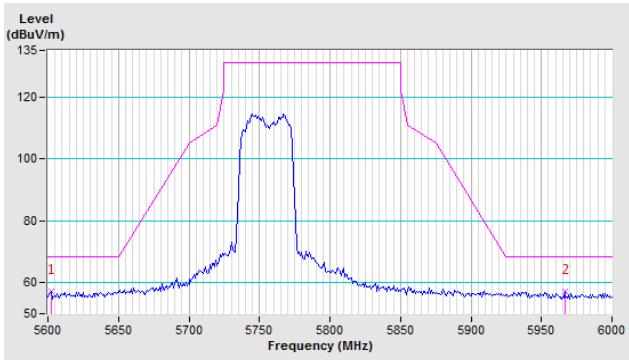
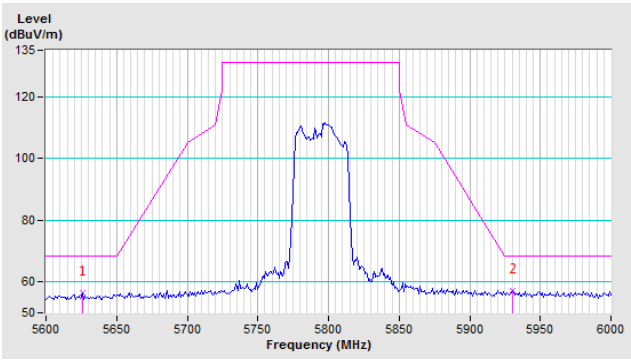
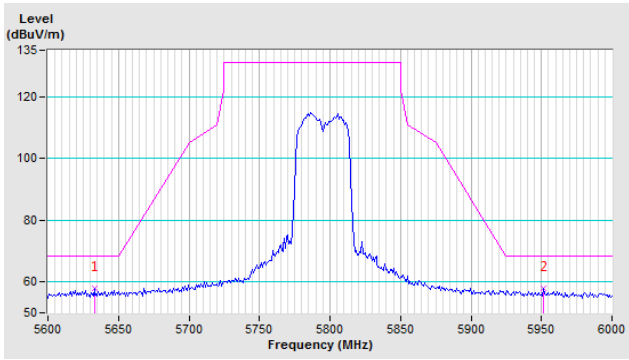
802.11a

CH149	
Horizontal	Vertical
	
CH157	
Horizontal	Vertical
	
CH165	
Horizontal	Vertical
	

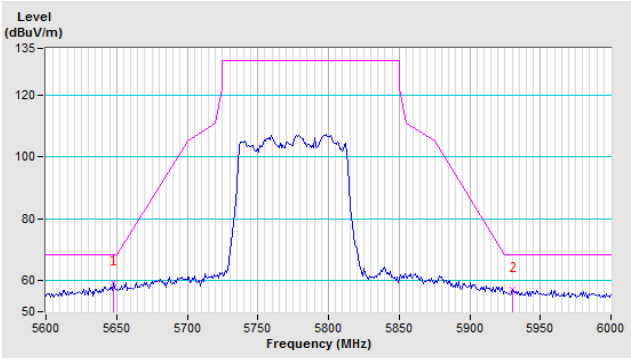
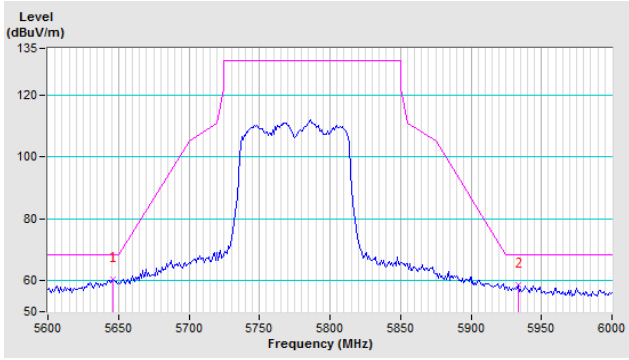
802.11n (HT20)

CH149	
Horizontal	Vertical
	
CH157	
Horizontal	Vertical
	
CH165	
Horizontal	Vertical
	

802.11n (HT40)

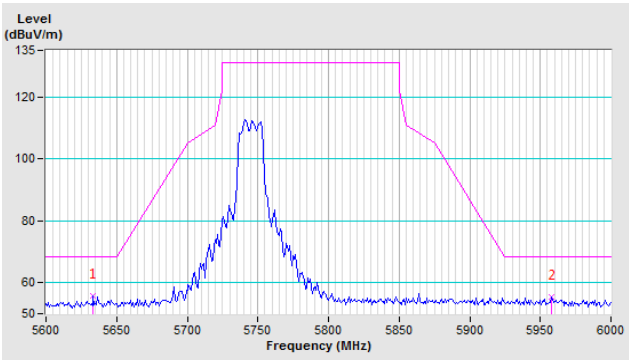
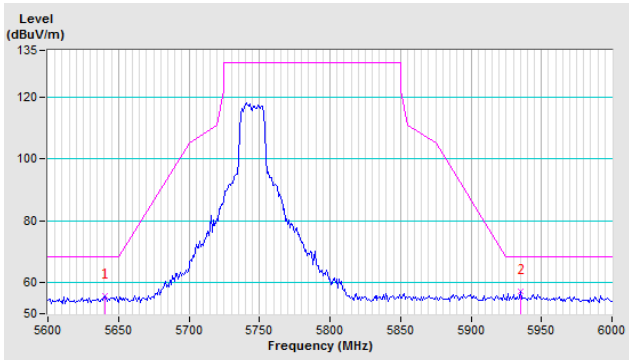
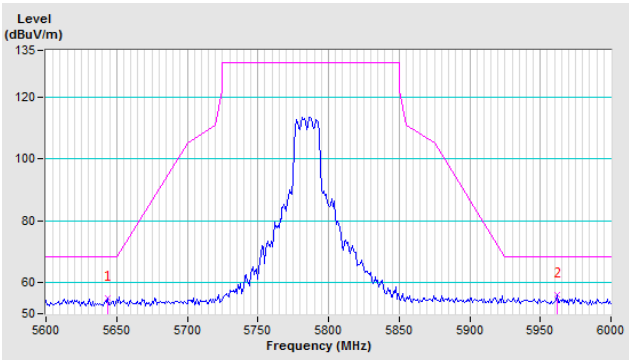
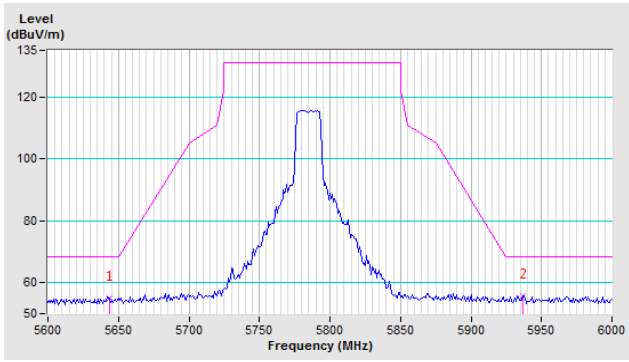
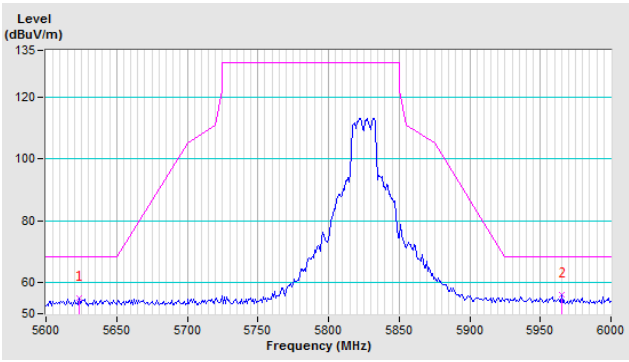
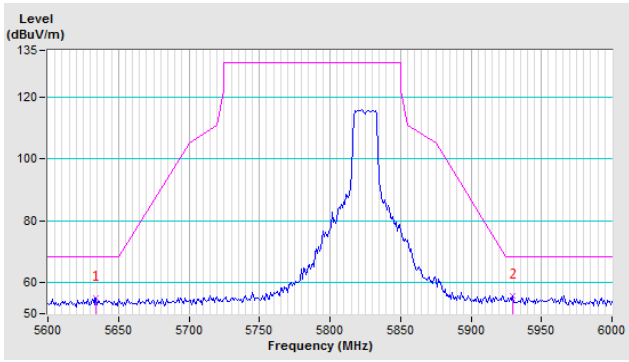
CH151	
Horizontal	Vertical
	
CH159	
Horizontal	Vertical
	

802.11ac (VHT80)

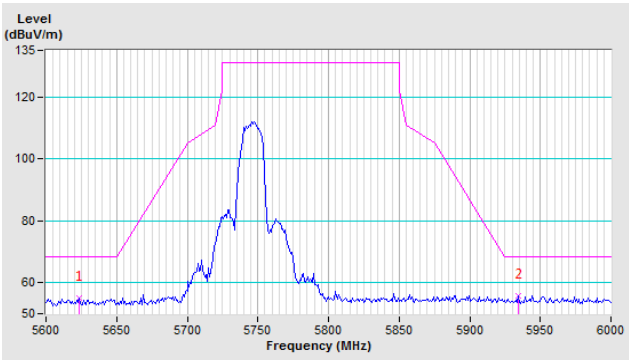
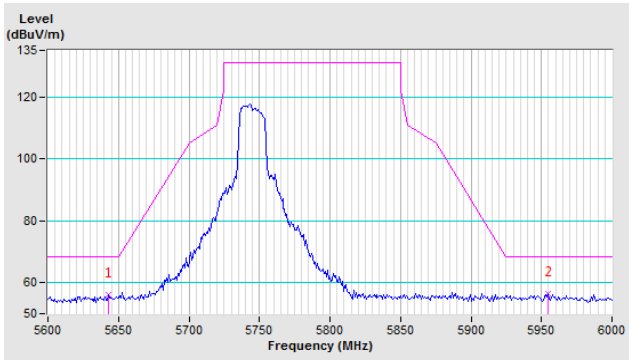
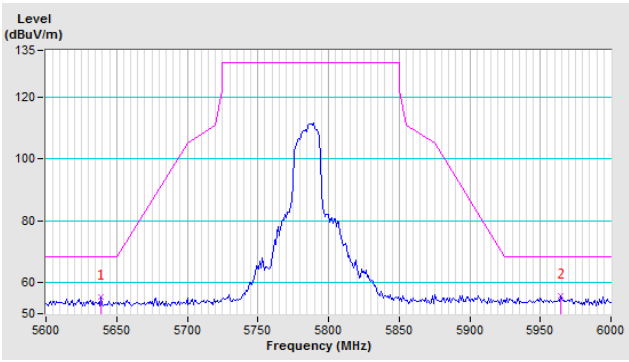
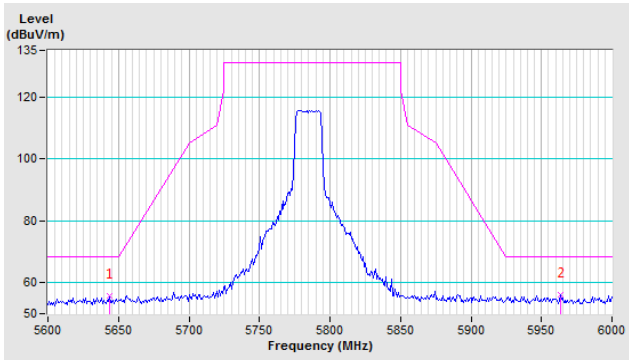
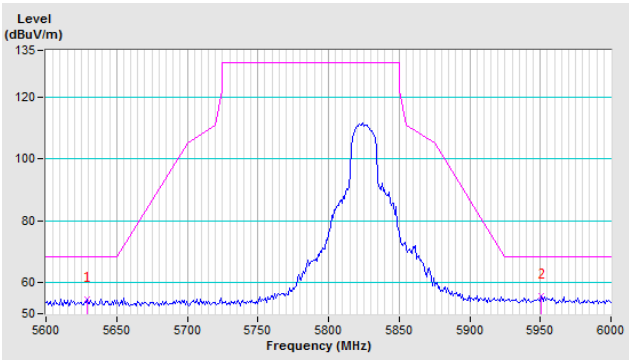
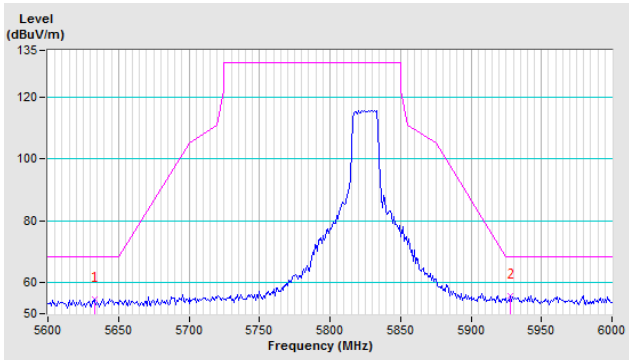
CH155	
Horizontal	Vertical
	

Mode C

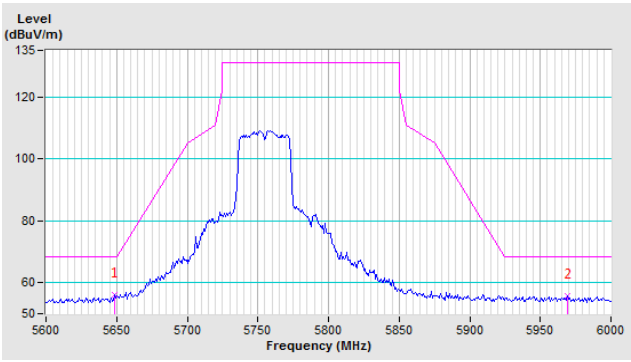
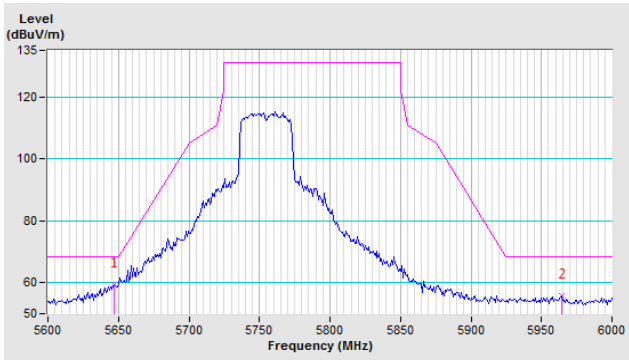
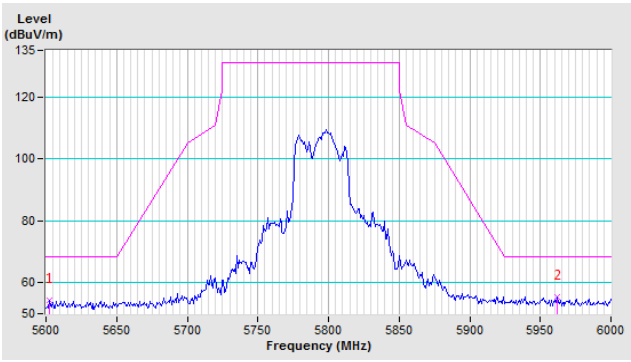
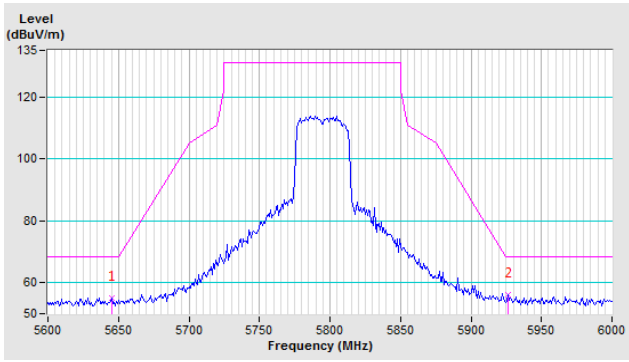
802.11a

CH149	
Horizontal	Vertical
	
CH157	
Horizontal	Vertical
	
CH165	
Horizontal	Vertical
	

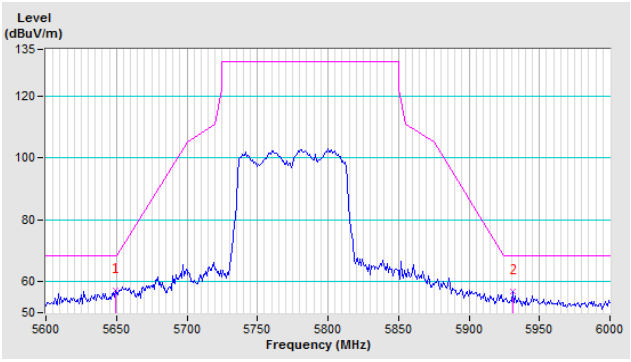
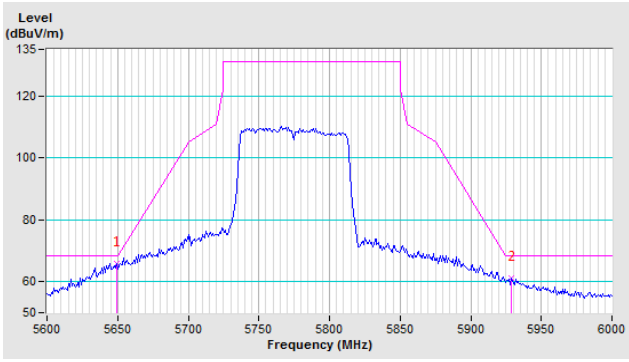
802.11n (HT20)

CH149	
Horizontal	Vertical
	
CH157	
Horizontal	Vertical
	
CH165	
Horizontal	Vertical
	

802.11n (HT40)

CH151	
Horizontal	Vertical
	
CH159	
Horizontal	Vertical
	

802.11ac (VHT80)

CH155	
Horizontal	Vertical
	

Appendix – Information on the Testing Laboratories

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

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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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