FCC Test Report
(5GHz WLAN)

Report No.:	RF190807D08A-1
FCC ID:	TK4WLE1216V520
Test Model:	WLE1216V5-20, WLE1216V5-20-I
Received Date:	Nov. 18, 2019
Test Date:	Nov. 29 to Dec. 27, 2019
Issued Date:	Mar. 9, 2020
Applicant:	Compex Systems Pte Ltd
Address:	No 9 Harrison Road, Harrison Industrial Building, #05-01, 369651, Singapore
Issued By:	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch Lin Kou Laboratories
Lab Address:	No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan
FCC Registration / Designation Number:	198487 / TW2021

Testing Laboratory
2021

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Release Control Record

Issue No.	Description	Date Issued
RF190807D08A-1	Original release.	Mar. 9, 2020

1 Certificate of Conformity

Product:	WiFi Module
Equipment Class:	Unlicensed National Information Infrastructure TX
Brand:	COMPEX
Test Model:	WLE1216V5-20, WLE1216V5-20-I
Sample Status:	Pre-Production
Applicant:	Compex Systems Pte Ltd
Test Date:	Nov. 29 to Dec. 27, 2019
Standard:	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 : Jessica Cheng , **Date:** Mar. 9, 2020

Jessica Cheng / Senior Specialist

Approved by : Rex. Lai , **Date:** Mar. 9, 2020

Rex Lai / Associate Technical Manager

2 Summary of Test Results

47 CFR FCC Part 15, Subpart E (Section 15.407)			
FCC Clause	Test Item	Result	Remarks
15.407(b)(6)	AC Power Conducted Emissions	N/A	Refer to Note 2 below
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 -1.52dB at 5725.00MHz.
15.407(a)(1/2/3)	Max Average Transmit Power	Pass	Meet the requirement of limit.
---	Occupied Bandwidth Measurement	N/A	Refer to Note 2 below
15.407(a)(1/2/3)	Peak Power Spectral Density	N/A	Refer to Note 2 below
15.407(e)	6dB bandwidth	N/A	Refer to Note 2 below
15.407(g)	Frequency Stability	N/A	Refer to Note 2 below
15.203	Antenna Requirement	Pass	Antenna connector is Reverse SMA not a standard connector.

Note:

1. Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.
2. Test items: Radiated Emissions above 1GHz and Max Average Transmit Power were performed for this addendum. The others testing data refer to original test report.
3. N/A: Not Applicable

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) (±)
Radiated Emissions above 1 GHz	Above 1GHz	5.42 dB
Conducted Emissions	9kHz ~ 40GHz	2.63 dB

2.2 Modification Record

There were no modifications required for compliance.

3 General Information

3.1 General Description of EUT

Product	WiFi Module
Brand	COMPEX
Test Model	WLE1216V5-20, WLE1216V5-20-I
Status of EUT	Pre-Production
Modulation Type	64QAM, 16QAM, QPSK, BPSK for OFDM 256QAM for OFDM in 11ac mode only.
Modulation Technology	OFDM
Transfer Rate	802.11a: up to 54Mbps 802.11n: up to 600Mbps 802.11ac: up to 1733.2Mbps
Operating Frequency	5260~5320MHz, 5500~5720MHz
Number of Channel	**5260~5320MHz:** 802.11a, 802.11n (20MHz), 802.11ac (20MHz): 4 802.11n (40MHz), 802.11ac (40MHz): 2 802.11ac (80MHz), 802.11ac (80MHz +80MHz): 1 **5500~5720MHz:** 802.11a, 802.11n (20MHz), 802.11ac (20MHz): 12 802.11n (40MHz), 802.11ac (40MHz): 6 802.11ac (80MHz), 802.11ac (80MHz +80MHz): 4
Output Power	**5260~5320MHz:** 89.684mW **5500~5720MHz:** 83.01mW
Antenna Type	Refer to note as below
Antenna Connector	Reverse SMA
Accessory Device	N/A
Data Cable Supplied	N/A

Note:

1. The difference compared with original test report is adding frequency bands: 5260-5320MHz and 5500-5720MHz by software and adding antenna source (Dipole antenna model: RFDPA171300SBLB801); therefore only Radiated Emissions above 1GHz and Max Average Transmit Power were performed for this addendum, and the others testing data refer to original test report.
2. This report is prepared for FCC class II permissive change.
3. 2.4GHz & 5GHz technologies can transmit at same time.
4. The emission of the simultaneous operation has been evaluated and no non-compliance was found.

5. The antenna information is listed as below:

Description	Platform: Network Security Appliance (Brand: Check Point / Model: V-81W)		
	2412-2462MHz	5180-5825MHz	
Antenna Type	Dipole Antenna	Dipole Antenna	
Antenna model	RFDPA171300SBLB801	RFDPA171300SBLB801	
Maximum Gain (dBi)	2.22	4.29	
Remark	. Original Approved		Additional
	-	The DFS bands 2A and 2C are disabled by software	Add DFS bands 2A and 2C are used by software

6. The EUT provides 4 completed transmitters and 4 receivers.

Modulation Mode	TX FUNCTION
802.11a	1TX
802.11n (20MHz)	4TX
802.11n (40MHz)	4TX
802.11ac (20MHz)	4TX
802.11ac (40MHz)	4TX
802.11ac (80MHz)	4TX
802.11ac (80MHz + 80MHz)	2TX+2TX

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

7. Accessory device of Platform as follows.

Brand	Model	Rating
FSP	FSP060-DHAN3	AC I/P : 100-240V ~ 1.8A 50-60Hz DC O/P 12V===5.0A Power cord: AC 2 Pin, Non-shielded DC cable (1.2m) With one Core

8. The above EUT information is declared by manufacturer and for more detailed features description, please refers to the manufacturer's specifications or user's manual.

3.2 Description of Test Modes

5260~5320MHz:

4 channels are provided for 802.11a, 802.11n (20MHz), 802.11ac (20MHz):

Channel	Frequency	Channel	Frequency
52	5260 MHz	60	5300 MHz
56	5280 MHz	64	5320 MHz

2 channels are provided for 802.11n (40MHz), 802.11ac (40MHz):

Channel	Frequency	Channel	Frequency
54	5270 MHz	62	5310 MHz

1 channel is provided for 802.11ac (80MHz), 802.11ac (80MHz +80MHz):

Channel	Frequency
58	5290MHz

5500~5720MHz:

12 channels are provided for 802.11a, 802.11n (20MHz), 802.11ac (20MHz):

Channel	Frequency	Channel	Frequency
100	5500 MHz	124	5620 MHz
104	5520 MHz	128	5640 MHz
108	5540 MHz	132	5660 MHz
112	5560 MHz	136	5680 MHz
116	5580 MHz	140	5700 MHz
120	5600 MHz	144	5720 MHz

6 channels are provided for 802.11n (40MHz), 802.11ac (40MHz):

Channel	Frequency	Channel	Frequency
102	5510 MHz	126	5630 MHz
110	5550 MHz	134	5670 MHz
118	5590 MHz	142	5710 MHz

3 channels are provided for 802.11ac (80MHz), 802.11ac (80MHz +80MHz):

Channel	Frequency	Channel	Frequency
106	5530MHz	122	5610 MHz
138	5690 MHz		

802.11ac (80MHz +80MHz) only support channel as below:

Channel	Frequency
58+106	5290 MHz + 5530 MHz

3.2.1 Test Mode Applicability and Tested Channel Detail

EUT Configure Mode	Applicable To				Description
	RE≥1G	RE<1G	PLC	APCM	
-	√	Note 2	Note 2	√	-

Where **RE≥1G:** Radiated Emission above 1GHz **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 **X-plane**.
2. Test items: Radiated Emissions above 1GHz and Max Average Transmit Power were performed for this addendum. The others testing data refer to original test report.

Radiated Emission Test (Above 1GHz):

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

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

EUT Configure Mode	Mode	FREQ. Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
-	802.11a	5260-5320	52 to 64	52, 60, 64	OFDM	BPSK	6
-	802.11ac (20MHz)		52 to 64	52, 60, 64	OFDM	BPSK	6.5
-	802.11ac (40MHz)		54 to 62	54, 62	OFDM	BPSK	13.5
-	802.11ac (80MHz)		58	58	OFDM	BPSK	29.3
-	802.11a	5500-5720	100 to 144	100, 116,140, 144	OFDM	BPSK	6
-	802.11ac (20MHz)		100 to 144	100, 116,140, 144	OFDM	BPSK	6.5
-	802.11ac (40MHz)		102 to 142	102, 110, 134, 142	OFDM	BPSK	13.5
-	802.11ac (80MHz)		106 to 138	106, 138	OFDM	BPSK	29.3
	802.11ac (80MHz+80MHz)	5260-5320 & 5500-5720	58+106	58+106	OFDM	BPSK	29.3

Antenna Port Conducted Measurement:

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

EUT Configure Mode	Mode	FREQ. Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
-	802.11a	5260-5320	52 to 64	52, 60, 64	OFDM	BPSK	6
-	802.11ac (20MHz)		52 to 64	52, 60, 64	OFDM	BPSK	6.5
-	802.11ac (40MHz)		54 to 62	54, 62	OFDM	BPSK	13.5
-	802.11ac (80MHz)		58	58	OFDM	BPSK	29.3
-	802.11a	5500-5720	100 to 144	100, 116,140, 144	OFDM	BPSK	6
-	802.11ac (20MHz)		100 to 144	100, 116,140, 144	OFDM	BPSK	6.5
-	802.11ac (40MHz)		102 to 142	102, 110, 134, 142	OFDM	BPSK	13.5
-	802.11ac (80MHz)		106 to 138	106, 138	OFDM	BPSK	29.3
	802.11ac (80MHz+80MHz)	5260-5320 & 5500-5720	58+106	58+106	OFDM	BPSK	29.3

Test Condition:

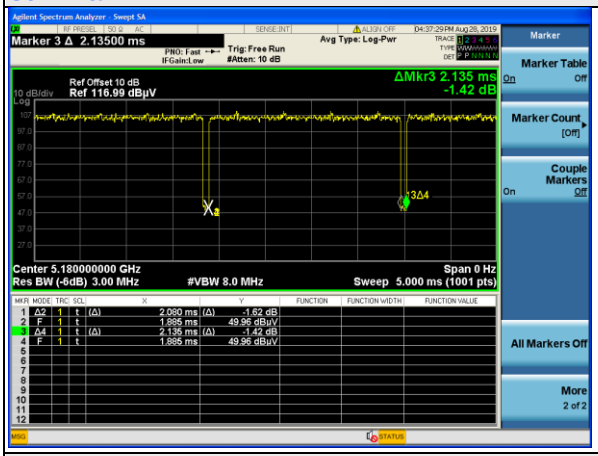
Applicable To	Environmental Conditions	Input Power (system)	Tested By
RE≥1G	23deg. C, 77%RH	120Vac, 60Hz	Dalen Dai
APCM	25deg. C, 76%RH	120Vac, 60Hz	Saxon Lee

3.3 Duty Cycle of Test Signal

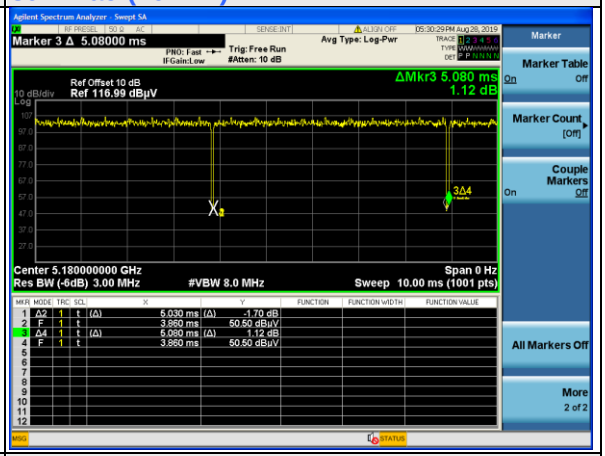
If duty cycle of test signal is ≥ 98 %, duty factor is not required.
If duty cycle of test signal is < 98%, duty factor shall be considered.

802.11a: Duty cycle = 2.08/2.135 = 0.974, Duty factor = 10 * log(1/0.974) = 0.11
802.11ac (20MHz): Duty cycle = 5.03/5.08 = 0.99
802.11ac (40MHz): Duty cycle = 2.445/2.51 = Duty factor = 10 * log(1/0.974) = 0.11
802.11ac (80MHz): Duty cycle = 3.39/3.85 = 0.881, Duty factor = 10 * log(1/0.881) = 0.55

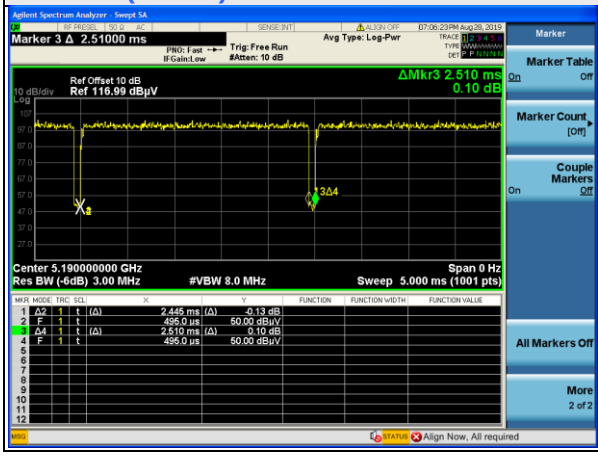
802.11a



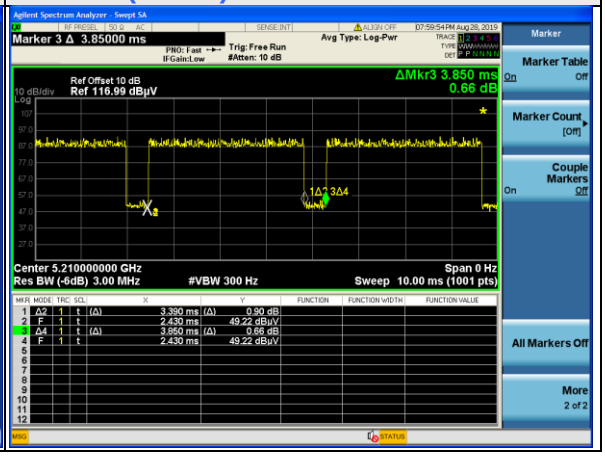
802.11ac (20MHz)



802.11ac (40MHz)



802.11ac (80MHz)



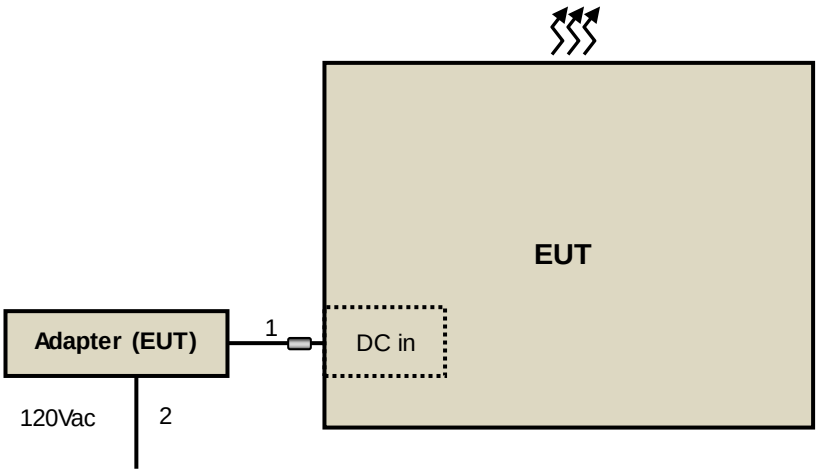
3.4 Description of Support Units

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	Cable Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	DC cable	1	1.2	N	1	Supplied by client
2.	AC power cord	1	1.8	N	0	Provided by Lab

Note: The core(s) is(are) originally attached to the cable(s).

3.4.1 Configuration of System under Test



3.5 General Description of Applied Standard

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

Test standard:

FCC Part 15, Subpart E (15.407)
ANSI C63.10-2013

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

References Test Guidance :

KDB 789033 D02 General UNII Test Procedure New Rules v02r01
KDB 662911 D01 Multiple Transmitter Output v02r01

All test items have been performed as a reference to the above KDB test guidance.

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.	CALIBRATED DATE	CALIBRATED UNTIL
HP Preamplifier	8447D	2432A03504	Feb. 20, 2019	Feb. 19, 2020
HP Preamplifier	8449B	3008A01201	Feb. 21, 2019	Feb. 20, 2020
MITEQ Preamplifier	AMF-6F-260400-33-8P	892164	Feb. 20, 2019	Feb. 19, 2020
Agilent TEST RECEIVER	N9038A	MY51210129	Mar. 05, 2019	Mar. 04, 2020
Schwarzbeck Antenna	VULB 9168	139	Nov. 7, 2019	Nov. 6, 2020
Schwarzbeck Antenna	VHBA 9123	480	Jun. 3, 2019	Jun. 2, 2021
Schwarzbeck Horn Antenna	BBHA-9170	212	Nov. 24, 2019	Nov. 23, 2020
Schwarzbeck Horn Antenna	BBHA 9120-D1	D130	Nov. 24, 2019	Nov. 23, 2020
ADT. Turn Table	TT100	0306	NA	NA
ADT. Tower	AT100	0306	NA	NA
Software	Radiated_V7.6.15.9.5	NA	NA	NA
SUHNER RF cable With 4dB PAD	SF102	Cable-CH6-01	Jul. 10, 2019	Jul. 9, 2020
SUHNER RF cable With 3/4dB PAD	SF102	Cable-CH8-3.6m	Jul. 10, 2019	Jul. 9, 2020
KEYSIGHT MIMO Powermeasurement Test set	U2021XA	U2021XA-001	Jun. 11, 2019	Jun. 10, 2020
KEYSIGHT Spectrum Analyzer	N9030A	MY54490260	Jul. 30, 2019	Jul. 29, 2020
Loop Antenna EMCI	LPA600	270	Aug. 23, 2019	Aug. 22, 2021
EMCO Horn Antenna	3115	00028257	Nov. 24, 2019	Nov. 23, 2020
Highpass filter Wainwright Instruments	WHK 3.1/18G-10SS	SN 8	NA	NA
ROHDE & SCHWARZ Spectrum Analyzer	FSV40	101042	Sep. 23, 2019	Sep. 22, 2020
Anritsu Power Sensor	MA2411B	0738404	Apr. 16, 2019	Apr. 15, 2020
Anritsu Power Meter	ML2495A	0842014	Apr. 16, 2019	Apr. 15, 2020

NOTE: 1. The calibration interval of the above test instruments is 12/24 months. And the calibrations are traceable to NML/ROC and NIST/USA.
2. The horn antenna and HP preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
3. The test was performed in Chamber No. 6.

4.1.3 Test Procedure

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 detects function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz. If the peak reading value also meets average limit, measurement with the average detector is unnecessary.

Note:

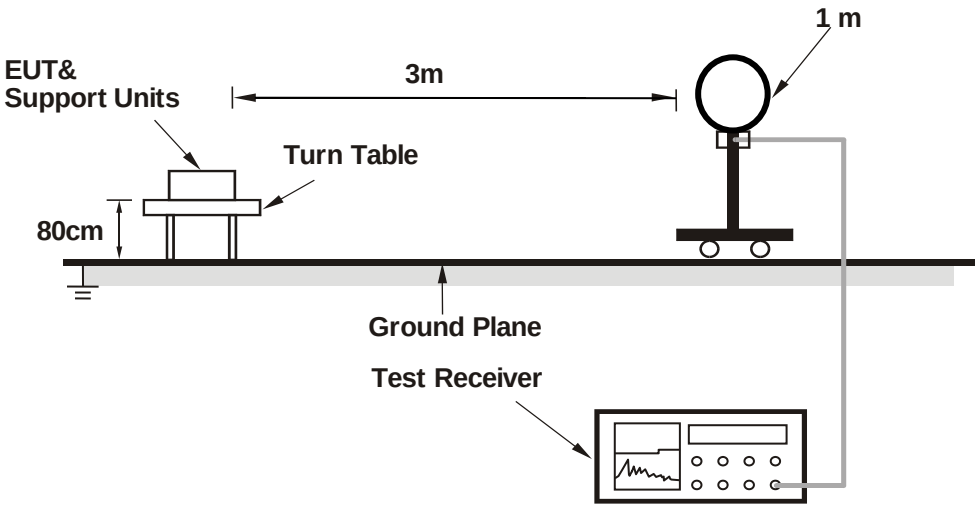
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.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

4.1.4 Deviation from Test Standard

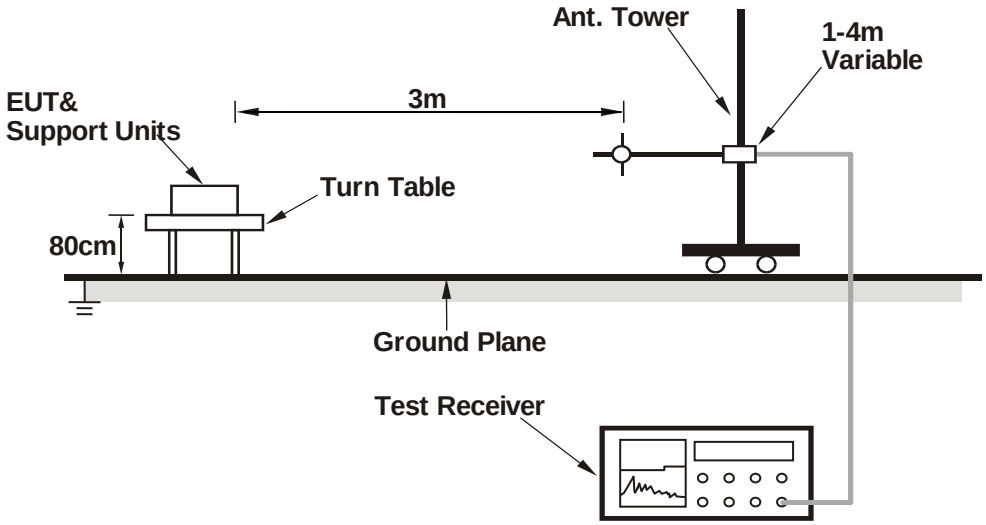
No deviation.

4.1.5 Test Setup

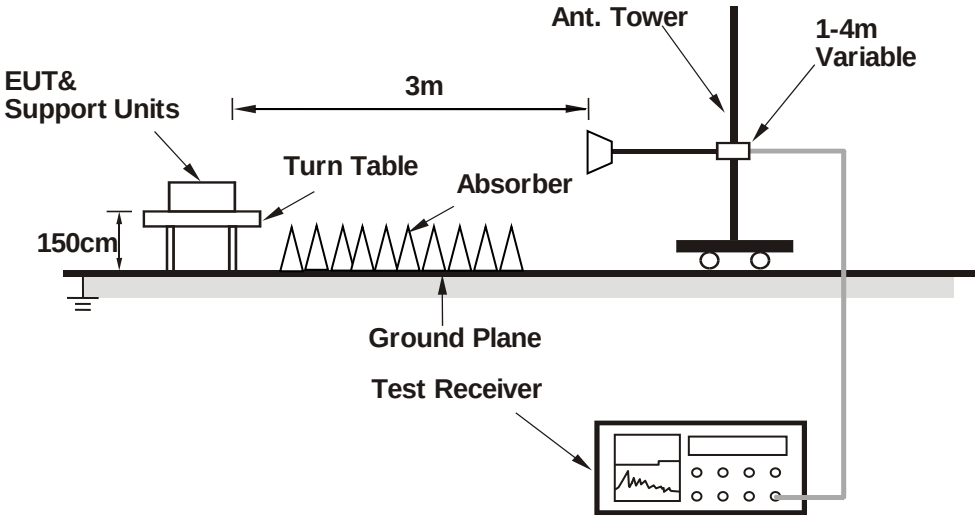
For Radiated emission below 30MHz



For Radiated emission 30MHz to 1GHz



For Radiated emission above 1GHz



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

4.1.6 EUT Operating Condition

Set the EUT under transmission condition continuously at specific channel frequency.

4.1.7 Test Results

802.11a

CHANNEL	TX Channel 52	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	61.09 PK	74.00	-12.91	1.75 H	247	52.17	8.92
2	5150.00	48.53 AV	54.00	-5.47	1.75 H	247	39.61	8.92
3	*5260.00	100.42 PK			1.75 H	247	91.08	9.34
4	*5260.00	89.98 AV			1.75 H	247	80.64	9.34
5	#10520.00	57.06 PK	68.20	-11.14	1.32 H	151	40.57	16.49
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	62.11 PK	74.00	-11.89	1.43 V	196	53.19	8.92
2	5150.00	49.20 AV	54.00	-4.80	1.43 V	196	40.28	8.92
3	*5260.00	110.62 PK			1.43 V	196	101.28	9.34
4	*5260.00	100.33 AV			1.43 V	196	90.99	9.34
5	#10520.00	57.38 PK	68.20	-10.82	1.64 V	227	40.89	16.49

REMARKS:

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

CHANNEL	TX Channel 60	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	*5300.00	100.44 PK			1.72 H	253	90.86	9.58
2	*5300.00	89.87 AV			1.72 H	253	80.29	9.58
3	10600.00	56.96 PK	74.00	-17.04	1.38 H	156	40.43	16.53
4	10600.00	43.92 AV	54.00	-10.08	1.38 H	156	27.39	16.53
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	110.27 PK			1.28 V	196	100.69	9.58
2	*5300.00	99.85 AV			1.28 V	196	90.27	9.58
3	10600.00	57.29 PK	74.00	-16.71	1.70 V	231	40.76	16.53
4	10600.00	44.21 AV	54.00	-9.79	1.70 V	231	27.68	16.53

REMARKS:

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

CHANNEL	TX Channel 64	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	*5320.00	100.45 PK			1.77 H	245	90.77	9.68
2	*5320.00	89.88 AV			1.77 H	245	80.20	9.68
3	5350.00	61.21 PK	74.00	-12.79	1.77 H	245	51.37	9.84
4	5350.00	48.24 AV	54.00	-5.76	1.77 H	245	38.40	9.84
5	10640.00	56.74 PK	74.00	-17.26	1.41 H	138	40.29	16.45
6	10640.00	43.63 AV	54.00	-10.37	1.41 H	138	27.18	16.45
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	110.46 PK			1.34 V	198	100.78	9.68
2	*5320.00	100.01 AV			1.34 V	198	90.33	9.68
3	5350.00	61.52 PK	74.00	-12.48	1.34 V	198	51.68	9.84
4	5350.00	48.47 AV	54.00	-5.53	1.34 V	198	38.63	9.84
5	10640.00	57.04 PK	74.00	-16.96	1.66 V	239	40.59	16.45
6	10640.00	44.08 AV	54.00	-9.92	1.66 V	239	27.63	16.45

REMARKS:

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

CHANNEL	TX Channel 100	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	5460.00	61.90 PK	74.00	-12.10	1.72 H	256	51.53	10.37
2	5460.00	47.97 AV	54.00	-6.03	1.72 H	256	37.60	10.37
3	#5470.00	61.31 PK	68.20	-6.89	1.72 H	256	50.89	10.42
4	*5500.00	102.16 PK			1.72 H	256	91.57	10.59
5	*5500.00	91.52 AV			1.72 H	256	80.93	10.59
6	11000.00	58.09 PK	74.00	-15.91	1.34 H	154	40.60	17.49
7	11000.00	45.08 AV	54.00	-8.92	1.34 H	154	27.59	17.49
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	62.35 PK	74.00	-11.65	1.22 V	199	51.98	10.37
2	5460.00	48.81 AV	54.00	-5.19	1.22 V	199	38.44	10.37
3	#5470.00	63.13 PK	68.20	-5.07	1.22 V	199	52.71	10.42
4	*5500.00	110.92 PK			1.22 V	199	100.33	10.59
5	*5500.00	100.36 AV			1.22 V	199	89.77	10.59
6	11000.00	58.34 PK	74.00	-15.66	1.82 V	237	40.85	17.49
7	11000.00	45.43 AV	54.00	-8.57	1.82 V	237	27.94	17.49

REMARKS:

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

CHANNEL	TX Channel 116	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	*5580.00	101.79 PK			1.69 H	253	91.62	10.17
2	*5580.00	91.20 AV			1.69 H	253	81.03	10.17
3	11160.00	57.56 PK	74.00	-16.44	1.31 H	157	40.52	17.04
4	11160.00	44.44 AV	54.00	-9.56	1.31 H	157	27.40	17.04
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5580.00	110.32 PK			1.24 V	196	100.15	10.17
2	*5580.00	99.75 AV			1.24 V	196	89.58	10.17
3	11160.00	57.80 PK	74.00	-16.20	1.80 V	241	40.76	17.04
4	11160.00	44.83 AV	54.00	-9.17	1.80 V	241	27.79	17.04

REMARKS:

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

CHANNEL	TX Channel 140	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	*5700.00	101.01 PK			1.73 H	255	91.39	9.62
2	*5700.00	90.37 AV			1.73 H	255	80.75	9.62
3	#5725.00	64.75 PK	68.20	-3.45	1.73 H	255	55.16	9.59
4	11400.00	58.30 PK	74.00	-15.70	1.33 H	157	40.48	17.82
5	11400.00	45.33 AV	54.00	-8.67	1.33 H	157	27.51	17.82
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	109.93 PK			1.37 V	198	100.31	9.62
2	*5700.00	99.38 AV			1.37 V	198	89.76	9.62
3	**#5725.00**	**66.68 PK**	**68.20**	**-1.52**	**1.37 V**	**198**	**57.09**	**9.59**
4	11400.00	58.45 PK	74.00	-15.55	1.93 V	237	40.63	17.82
5	11400.00	45.52 AV	54.00	-8.48	1.93 V	237	27.70	17.82

REMARKS:

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

CHANNEL	TX Channel 144	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	#5470.00	61.56 PK	68.20	-6.64	1.75 H	261	51.14	10.42
2	*5720.00	102.26 PK			1.75 H	261	92.67	9.59
3	*5720.00	91.88 AV			1.75 H	261	82.29	9.59
4	11440.00	58.34 PK	74.00	-15.66	1.36 H	152	40.57	17.77
5	11440.00	45.38 AV	54.00	-8.62	1.36 H	152	27.61	17.77
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5470.00	62.95 PK	68.20	-5.25	1.33 V	199	52.53	10.42
2	*5720.00	111.14 PK			1.33 V	199	101.55	9.59
3	*5720.00	100.78 AV			1.33 V	199	91.19	9.59
4	11440.00	58.58 PK	74.00	-15.42	1.89 V	236	40.81	17.77
5	11440.00	45.69 AV	54.00	-8.31	1.89 V	236	27.92	17.77

REMARKS:

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

802.11ac (20MHz)

CHANNEL	TX Channel 52	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	61.00 PK	74.00	-13.00	1.66 H	253	52.08	8.92
2	5150.00	48.45 AV	54.00	-5.55	1.66 H	253	39.53	8.92
3	*5260.00	100.13 PK			1.66 H	253	90.79	9.34
4	*5260.00	89.67 AV			1.66 H	253	80.33	9.34
5	#10520.00	57.01 PK	68.20	-11.19	1.30 H	159	40.52	16.49
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	61.59 PK	74.00	-12.41	1.44 V	329	52.67	8.92
2	5150.00	49.05 AV	54.00	-4.95	1.44 V	329	40.13	8.92
3	*5260.00	109.82 PK			1.44 V	329	100.48	9.34
4	*5260.00	98.15 AV			1.44 V	329	88.81	9.34
5	#10520.00	57.37 PK	68.20	-10.83	1.58 V	225	40.88	16.49

REMARKS:

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

CHANNEL	TX Channel 60	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	*5300.00	100.15 PK			1.58 H	249	90.57	9.58
2	*5300.00	89.60 AV			1.58 H	249	80.02	9.58
3	10600.00	56.90 PK	74.00	-17.10	1.33 H	154	40.37	16.53
4	10600.00	43.81 AV	54.00	-10.19	1.33 H	154	27.28	16.53
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	110.25 PK			1.45 V	330	100.67	9.58
2	*5300.00	99.76 AV			1.45 V	330	90.18	9.58
3	10600.00	57.16 PK	74.00	-16.84	1.72 V	235	40.63	16.53
4	10600.00	44.10 AV	54.00	-9.90	1.72 V	235	27.57	16.53

REMARKS:

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

CHANNEL	TX Channel 64	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	*5320.00	100.94 PK			1.72 H	250	91.26	9.68
2	*5320.00	90.36 AV			1.72 H	250	80.68	9.68
3	5350.00	61.47 PK	74.00	-12.53	1.72 H	250	51.63	9.84
4	5350.00	48.05 AV	54.00	-5.95	1.72 H	250	38.21	9.84
5	10640.00	57.04 PK	74.00	-16.96	1.35 H	154	40.59	16.45
6	10640.00	43.83 AV	54.00	-10.17	1.35 H	154	27.38	16.45
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	110.85 PK			1.32 V	331	101.17	9.68
2	*5320.00	99.27 AV			1.32 V	331	89.59	9.68
3	5350.00	62.28 PK	74.00	-11.72	1.32 V	331	52.44	9.84
4	5350.00	48.21 AV	54.00	-5.79	1.32 V	331	38.37	9.84
5	10640.00	57.30 PK	74.00	-16.70	1.69 V	228	40.85	16.45
6	10640.00	44.23 AV	54.00	-9.77	1.69 V	228	27.78	16.45

REMARKS:

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

CHANNEL	TX Channel 100	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	5460.00	61.76 PK	74.00	-12.24	1.70 H	261	51.39	10.37
2	5460.00	48.08 AV	54.00	-5.92	1.70 H	261	37.71	10.37
3	#5470.00	61.36 PK	68.20	-6.84	1.70 H	261	50.94	10.42
4	*5500.00	102.42 PK			1.70 H	261	91.83	10.59
5	*5500.00	91.53 AV			1.70 H	261	80.94	10.59
6	11000.00	58.01 PK	74.00	-15.99	1.32 H	158	40.52	17.49
7	11000.00	44.97 AV	54.00	-9.03	1.32 H	158	27.48	17.49
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	62.73 PK	74.00	-11.27	2.84 V	24	52.36	10.37
2	5460.00	48.84 AV	54.00	-5.16	2.84 V	24	38.47	10.37
3	#5470.00	62.84 PK	68.20	-5.36	2.84 V	24	52.42	10.42
4	*5500.00	112.10 PK			2.84 V	24	101.51	10.59
5	*5500.00	101.15 AV			2.84 V	24	90.56	10.59
6	11000.00	58.42 PK	74.00	-15.58	1.95 V	229	40.93	17.49
7	11000.00	45.38 AV	54.00	-8.62	1.95 V	229	27.89	17.49

REMARKS:

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

CHANNEL	TX Channel 116	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	*5580.00	100.91 PK			1.68 H	257	90.74	10.17
2	*5580.00	99.98 AV			1.68 H	257	89.81	10.17
3	11160.00	57.41 PK	74.00	-16.59	1.35 H	155	40.37	17.04
4	11160.00	44.33 AV	54.00	-9.67	1.35 H	155	27.29	17.04
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5580.00	111.12 PK			2.90 V	25	100.95	10.17
2	*5580.00	99.94 AV			2.90 V	25	89.77	10.17
3	11160.00	57.72 PK	74.00	-16.28	1.88 V	232	40.68	17.04
4	11160.00	44.74 AV	54.00	-9.26	1.88 V	232	27.70	17.04

REMARKS:

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

CHANNEL	TX Channel 140	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	*5700.00	102.46 PK			1.69 H	254	92.84	9.62
2	*5700.00	91.31 AV			1.69 H	254	81.69	9.62
3	#5725.00	61.52 PK	68.20	-6.68	1.69 H	254	51.93	9.59
4	11400.00	58.49 PK	74.00	-15.51	1.33 H	156	40.67	17.82
5	11400.00	45.55 AV	54.00	-8.45	1.33 H	156	27.73	17.82
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	112.17 PK			2.68 V	38	102.55	9.62
2	*5700.00	100.91 AV			2.68 V	38	91.29	9.62
3	#5725.00	62.40 PK	68.20	-5.80	2.68 V	38	52.81	9.59
4	11400.00	58.90 PK	74.00	-15.10	1.89 V	241	41.08	17.82
5	11400.00	45.95 AV	54.00	-8.05	1.89 V	241	28.13	17.82

REMARKS:

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

CHANNEL	TX Channel 144	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	#5470.00	61.70 PK	68.20	-6.50	1.63 H	259	51.28	10.42
2	*5720.00	101.90 PK			1.63 H	259	92.31	9.59
3	*5720.00	90.65 AV			1.63 H	259	81.06	9.59
4	11440.00	58.26 PK	74.00	-15.74	1.31 H	160	40.49	17.77
5	11440.00	45.32 AV	54.00	-8.68	1.31 H	160	27.55	17.77
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5470.00	63.03 PK	68.20	-5.17	2.73 V	34	52.61	10.42
2	*5720.00	111.45 PK			2.73 V	34	101.86	9.59
3	*5720.00	100.26 AV			2.73 V	34	90.67	9.59
4	11440.00	58.62 PK	74.00	-15.38	1.82 V	237	40.85	17.77
5	11440.00	45.65 AV	54.00	-8.35	1.82 V	237	27.88	17.77

REMARKS:

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

802.11ac (40MHz)

CHANNEL	TX Channel 54	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	60.79 PK	74.00	-13.21	1.58 H	245	51.87	8.92
2	5150.00	47.21 AV	54.00	-6.79	1.58 H	245	38.29	8.92
3	*5270.00	100.78 PK			1.58 H	245	91.38	9.40
4	*5270.00	90.89 AV			1.58 H	245	81.49	9.40
5	#10540.00	56.66 PK	68.20	-11.54	1.13 H	141	40.16	16.50
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	61.35 PK	74.00	-12.65	2.79 V	28	52.43	8.92
2	5150.00	47.97 AV	54.00	-6.03	2.79 V	28	39.05	8.92
3	*5270.00	110.90 PK			2.79 V	28	101.50	9.40
4	*5270.00	101.23 AV			2.79 V	28	91.83	9.40
5	#10540.00	56.89 PK	68.20	-11.31	1.35 V	164	40.39	16.50

REMARKS:

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

CHANNEL	TX Channel 62	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	*5310.00	100.82 PK			1.63 H	249	91.19	9.63
2	*5310.00	90.90 AV			1.63 H	249	81.27	9.63
3	5350.00	62.12 PK	74.00	-11.88	1.63 H	249	52.28	9.84
4	5350.00	48.03 AV	54.00	-5.97	1.63 H	249	38.19	9.84
5	10620.00	56.80 PK	74.00	-17.20	1.24 H	138	40.31	16.49
6	10620.00	43.95 AV	54.00	-10.05	1.24 H	138	27.46	16.49
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5310.00	111.01 PK			2.64 V	27	101.38	9.63
2	*5310.00	101.17 AV			2.64 V	27	91.54	9.63
3	5350.00	62.94 PK	74.00	-11.06	2.64 V	27	53.10	9.84
4	5350.00	49.51 AV	54.00	-4.49	2.64 V	27	39.67	9.84
5	10620.00	57.04 PK	74.00	-16.96	1.60 V	217	40.55	16.49
6	10620.00	44.18 AV	54.00	-9.82	1.60 V	217	27.69	16.49

REMARKS:

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

CHANNEL	TX Channel 102	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	5460.00	61.82 PK	74.00	-12.18	1.74 H	256	51.45	10.37
2	5460.00	48.19 AV	54.00	-5.81	1.74 H	256	37.82	10.37
3	#5470.00	61.64 PK	68.20	-6.56	1.74 H	256	51.22	10.42
4	*5510.00	100.77 PK			1.74 H	256	90.23	10.54
5	*5510.00	90.85 AV			1.74 H	256	80.31	10.54
6	11020.00	57.76 PK	74.00	-16.24	1.35 H	162	40.37	17.39
7	11020.00	44.79 AV	54.00	-9.21	1.35 H	162	27.40	17.39
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	62.54 PK	74.00	-11.46	3.38 V	13	52.17	10.37
2	5460.00	49.02 AV	54.00	-4.98	3.38 V	13	38.65	10.37
3	#5470.00	63.53 PK	68.20	-4.67	3.38 V	13	53.11	10.42
4	*5510.00	110.27 PK			3.38 V	13	99.73	10.54
5	*5510.00	100.28 AV			3.38 V	13	89.74	10.54
6	11020.00	58.04 PK	74.00	-15.96	1.87 V	225	40.65	17.39
7	11020.00	44.96 AV	54.00	-9.04	1.87 V	225	27.57	17.39

REMARKS:

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

CHANNEL	TX Channel 110	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	*5550.00	100.78 PK			1.71 H	262	90.46	10.32
2	*5550.00	90.90 AV			1.71 H	262	80.58	10.32
3	11100.00	57.49 PK	74.00	-16.51	1.29 H	154	40.50	16.99
4	11100.00	44.46 AV	54.00	-9.54	1.29 H	154	27.47	16.99
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5550.00	111.19 PK			3.06 V	18	100.87	10.32
2	*5550.00	101.28 AV			3.06 V	18	90.96	10.32
3	11100.00	57.74 PK	74.00	-16.26	1.92 V	231	40.75	16.99
4	11100.00	44.82 AV	54.00	-9.18	1.92 V	231	27.83	16.99

REMARKS:

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

CHANNEL	TX Channel 134	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	*5670.00	100.39 PK			1.77 H	263	90.62	9.77
2	*5670.00	90.54 AV			1.77 H	263	80.77	9.77
3	#5725.00	61.52 PK	68.20	-6.68	1.77 H	263	51.93	9.59
4	11340.00	57.94 PK	74.00	-16.06	1.31 H	165	40.52	17.42
5	11340.00	44.81 AV	54.00	-9.19	1.31 H	165	27.39	17.42
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5670.00	110.76 PK			3.09 V	23	100.99	9.77
2	*5670.00	100.62 AV			3.09 V	23	90.85	9.77
3	#5725.00	62.17 PK	68.20	-6.03	3.09 V	23	52.58	9.59
4	11340.00	58.13 PK	74.00	-15.87	1.84 V	227	40.71	17.42
5	11340.00	45.06 AV	54.00	-8.94	1.84 V	227	27.64	17.42

REMARKS:

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

CHANNEL	TX Channel 142	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	#5470.00	61.78 PK	68.20	-6.42	1.72 H	258	51.36	10.42
2	*5710.00	100.47 PK			1.72 H	258	90.85	9.62
3	*5710.00	90.56 AV			1.72 H	258	80.94	9.62
4	11420.00	58.33 PK	74.00	-15.67	1.28 H	159	40.54	17.79
5	11420.00	45.25 AV	54.00	-8.75	1.28 H	159	27.46	17.79
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5470.00	62.95 PK	68.20	-5.25	3.07 V	25	52.53	10.42
2	*5710.00	110.28 PK			3.07 V	25	100.66	9.62
3	*5710.00	100.35 AV			3.07 V	25	90.73	9.62
4	11420.00	58.55 PK	74.00	-15.45	1.88 V	230	40.76	17.79
5	11420.00	45.59 AV	54.00	-8.41	1.88 V	230	27.80	17.79

REMARKS:

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

802.11ac (80MHz)

CHANNEL	TX Channel 58	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	60.30 PK	74.00	-13.70	1.57 H	243	51.38	8.92
2	5150.00	47.42 AV	54.00	-6.58	1.57 H	243	38.50	8.92
3	*5290.00	97.99 PK			1.57 H	243	88.46	9.53
4	*5290.00	88.06 AV			1.57 H	243	78.53	9.53
5	5350.00	62.08 PK	74.00	-11.92	1.57 H	243	52.24	9.84
6	5350.00	49.45 AV	54.00	-4.55	1.57 H	243	39.61	9.84
7	#10580.00	56.72 PK	68.20	-11.48	1.30 H	142	40.21	16.51
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	61.11 PK	74.00	-12.89	2.65 V	31	52.19	8.92
2	5150.00	48.03 AV	54.00	-5.97	2.65 V	31	39.11	8.92
3	*5290.00	106.72 PK			2.65 V	31	97.19	9.53
4	*5290.00	96.77 AV			2.65 V	31	87.24	9.53
5	5350.00	63.70 PK	74.00	-10.30	2.65 V	31	53.86	9.84
6	5350.00	50.31 AV	54.00	-3.69	2.65 V	31	40.47	9.84
7	#10580.00	56.93 PK	68.20	-11.27	1.63 V	220	40.42	16.51

REMARKS:

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

CHANNEL	TX Channel 106	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	5460.00	62.85 PK	74.00	-11.15	1.69 H	253	52.48	10.37
2	5460.00	49.12 AV	54.00	-4.88	1.69 H	253	38.75	10.37
3	#5470.00	62.36 PK	68.20	-5.84	1.69 H	253	51.94	10.42
4	*5530.00	97.74 PK			1.69 H	253	87.31	10.43
5	*5530.00	87.92 AV			1.69 H	253	77.49	10.43
6	11060.00	57.47 PK	74.00	-16.53	1.33 H	167	40.28	17.19
7	11060.00	44.50 AV	54.00	-9.50	1.33 H	167	27.31	17.19
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	64.43 PK	74.00	-9.57	3.06 V	10	54.06	10.37
2	5460.00	51.54 AV	54.00	-2.46	3.06 V	10	41.17	10.37
3	#5470.00	63.84 PK	68.20	-4.36	3.06 V	10	53.42	10.42
4	*5530.00	105.56 PK			3.06 V	10	95.13	10.43
5	*5530.00	95.67 AV			3.06 V	10	85.24	10.43
6	11060.00	57.72 PK	74.00	-16.28	1.93 V	234	40.53	17.19
7	11060.00	44.68 AV	54.00	-9.32	1.93 V	234	27.49	17.19

REMARKS:

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

CHANNEL	TX Channel 138	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	#5470.00	62.03 PK	68.20	-6.17	1.68 H	264	51.61	10.42
2	*5690.00	99.32 PK			1.68 H	264	89.65	9.67
3	*5690.00	89.40 AV			1.68 H	264	79.73	9.67
4	#5850.00	60.03 PK	68.20	-8.17	1.68 H	264	50.39	9.64
5	11380.00	57.92 PK	74.00	-16.08	1.33 H	170	40.23	17.69
6	11380.00	45.11 AV	54.00	-8.89	1.33 H	170	27.42	17.69
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5470.00	63.25 PK	68.20	-4.95	3.08 V	29	52.83	10.42
2	*5690.00	108.41 PK			3.08 V	29	98.74	9.67
3	*5690.00	98.57 AV			3.08 V	29	88.90	9.67
4	#5850.00	61.58 PK	68.20	-6.62	3.08 V	29	51.94	9.64
5	11380.00	58.36 PK	74.00	-15.64	1.93 V	231	40.67	17.69
6	11380.00	45.27 AV	54.00	-8.73	1.93 V	231	27.58	17.69

REMARKS:

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

802.11ac (80MHz+80MHz)

CHANNEL	TX Channel 58+106	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	60.19 PK	74.00	-13.81	1.64 H	228	51.27	8.92
2	5150.00	47.25 AV	54.00	-6.75	1.64 H	228	38.33	8.92
3	*5290.00	96.54 PK			1.64 H	228	87.01	9.53
4	*5290.00	86.63 AV			1.64 H	228	77.10	9.53
5	5350.00	61.78 PK	74.00	-12.22	1.64 H	228	51.94	9.84
6	5350.00	49.16 AV	54.00	-4.84	1.64 H	228	39.32	9.84
7	5460.00	61.43 PK	74.00	-12.57	1.67 H	239	51.06	10.37
8	5460.00	48.76 AV	54.00	-5.24	1.67 H	239	38.39	10.37
9	#5470.00	61.94 PK	68.20	-6.26	1.67 H	239	51.52	10.42
10	*5530.00	96.42 PK			1.67 H	239	85.99	10.43
11	*5530.00	86.59 AV			1.67 H	239	76.16	10.43
12	#10580.00	56.66 PK	68.20	-11.54	1.45 H	158	40.15	16.51
13	11060.00	56.81 PK	74.00	-17.19	1.43 H	160	39.62	17.19
14	11060.00	44.42 AV	54.00	-9.58	1.43 H	160	27.23	17.19
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	60.75 PK	74.00	-13.25	2.78 V	29	51.83	8.92
2	5150.00	47.82 AV	54.00	-6.18	2.78 V	29	38.90	8.92
3	*5290.00	105.27 PK			2.78 V	29	95.74	9.53
4	*5290.00	95.33 AV			2.78 V	29	85.80	9.53
5	5350.00	62.91 PK	74.00	-11.09	2.78 V	29	53.07	9.84
6	5350.00	50.04 AV	54.00	-3.96	2.78 V	29	40.20	9.84
7	5460.00	63.68 PK	74.00	-10.32	2.97 V	23	53.31	10.37
8	5460.00	49.52 AV	54.00	-4.48	2.97 V	23	39.15	10.37
9	#5470.00	63.39 PK	68.20	-4.81	2.97 V	23	52.97	10.42
10	*5530.00	104.71 PK			2.97 V	23	94.28	10.43
11	*5530.00	94.80 AV			2.97 V	23	84.37	10.43
12	#10580.00	56.88 PK	68.20	-11.32	1.80 V	217	40.37	16.51
13	11060.00	56.94 PK	74.00	-17.06	1.96 V	227	39.75	17.19
14	11060.00	44.59 AV	54.00	-9.41	1.96 V	227	27.40	17.19

REMARKS:

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

4.2 Transmit Power Measurement

4.2.1 Limits of Transmit Power Measurement

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

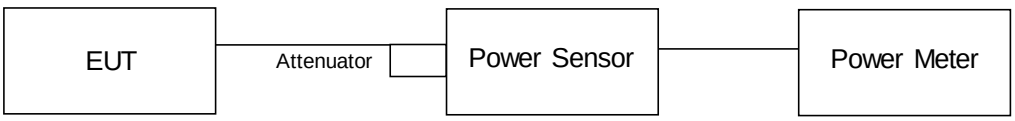
*B is the 26 dB emission bandwidth in megahertz

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

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

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

4.2.2 Test Setup



4.2.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.2.4 Test Procedure

For Average Power Measurement

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

4.2.5 Deviation from Test Standard

No deviation.

4.2.6 EUT Operating Condition

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

4.2.7 Test Result

Power Output:

802.11a

CHAN.	FREQ. (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass/Fail
52	5260	56.105	17.49	23.82	Pass
60	5300	54.828	17.39	23.82	Pass
64	5320	54.325	17.35	23.82	Pass
100	5500	53.333	17.27	23.82	Pass
116	5580	52	17.16	23.82	Pass
140	5700	42.267	16.26	23.82	Pass
144	5720 For U-NII-2C	29.535	14.70	23.82	Pass
144	5720 For U-NII-3	7.3	8.63	30	Pass

Note: Output Power Limit (dBm): 23.82dBm <24dBm (Reference to original test report)

802.11ac (20MHz)

CHAN.	FREQ. (MHz)	Maximum Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass/Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
52	5260	11.77	11.34	10.82	10.51	51.969	17.16	23.82	Pass
60	5300	12.16	11.80	10.63	11.10	56.023	17.48	23.82	Pass
64	5320	11.63	11.29	10.72	10.39	50.757	17.05	23.82	Pass
100	5500	10.92	10.21	10.93	9.94	45.105	16.54	23.82	Pass
116	5580	10.89	10.50	10.74	9.55	44.368	16.47	23.82	Pass
140	5700	11.21	11.35	10.80	10.98	51.413	17.11	23.82	Pass
144	5720 For U-NII-2C	8.12	8.04	7.61	7.58	24.35	13.86	23.82	Pass
144	5720 For U-NII-3	2.86	2.85	2.42	2.36	7.328	8.65	30	Pass

Note: Output Power Limit (dBm): 23.82dBm <24dBm (Reference to original test report)

802.11ac (40MHz)

CHAN.	FREQ. (MHz)	Maximum Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass/Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
54	5270	14.27	13.59	13.11	12.93	**89.684**	19.53	23.82	Pass
62	5310	14.12	13.53	12.54	13.08	86.636	19.38	23.82	Pass
102	5510	13.29	12.52	13.63	12.04	78.258	18.94	23.82	Pass
110	5550	13.72	12.73	13.85	12.16	**83.01**	19.19	23.82	Pass
134	5670	13.36	13.55	12.74	12.58	81.229	19.10	23.82	Pass
142	5710 For U-NII-2C	11.42	11.56	10.69	10.54	52.598	17.21	23.82	Pass
142	5710 For U-NII-3	1.28	1.44	0.59	0.38	5.105	7.08	30	Pass

Note: Output Power Limit (dBm): 23.82dBm<24dBm (Reference to original test report)

802.11ac (80MHz)

CHAN.	FREQ. (MHz)	Maximum Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass/Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
58	5290	12.63	11.85	11.06	11.13	59.37	17.74	23.82	Pass
106	5530	11.88	10.97	11.45	10.71	53.66	17.30	23.82	Pass
138	5690 For U-NII-2C	6.68	6.75	6.11	6.09	19.914	12.99	23.82	Pass
138	5690 For U-NII-3	-7.21	-7.19	-7.52	-7.79	0.8227	-0.85	30	Pass

Note: Output Power Limit (dBm): 23.82dBm<24dBm (Reference to original test report)

802.11ac (80MHz+80MHz)

CHAN.	FREQ. (MHz)	Maximum Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass/Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
58	5290	12.58	12.34			35.253	15.47	23.82	Pass
58	5290			12.01	11.94	31.516	14.99	23.82	Pass
106	5530	12.61	12.18			34.759	15.41	23.82	Pass
106	5530			12.04	12.02	31.918	15.04	23.82	Pass

Note: Output Power Limit (dBm): 23.82dBm<24dBm (Reference to original test report)

5 Pictures of Test Arrangements

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

Appendix – Information of the Testing Laboratories

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

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

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