FCC Test Report

Report No.:	RF160613C30C
FCC ID:	TVE-281BB022
Test Model:	FAP-U421EV, FAP-U423EV
Series Model:	FortiAP-U421EVxxxxxx, FAP-U421EVxxxxxx, FORTIAP-U421EVxxxxxx, FortiAP-U423EVxxxxxx, FAP-U423EVxxxxxx, FORTIAP-U423EVxxxxxx (where “x” can be used as “A-Z” or “0-9” or “-“ or blank for software changes or marketing purposes only) (refer to item 3.1 for more details)
Received Date:	Oct. 19, 2016
Test Date:	Oct. 20 ~ Nov. 28, 2016
Issued Date:	Nov. 30, 2016
Applicant:	Fortinet Inc.
Address:	899 Kifer Road Sunnyvale, CA 94086 USA
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.)

Testing Laboratory
2021

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Release Control Record

Issue No.	Description	Date Issued
RF160613C30C	Original release.	Nov. 30, 2016

1 Certificate of Conformity

Product:	Secured Wireless Access Point
Brand:	Fortinet Inc.
Test Model:	FAP-U421EV, FAP-U423EV
Series Model:	FortiAP-U421EVxxxxxx, FAP-U421EVxxxxxx, FORTIAP-U421EVxxxxxx, FortiAP-U423EVxxxxxx, FAP-U423EVxxxxxx, FORTIAP-U423EVxxxxxx (where "x" can be used as "A-Z" or "0-9" or "-" or blank for software changes or marketing purposes only) (refer to item 3.1 for more details)
Sample Status:	Engineering sample
Applicant:	Fortinet Inc.
Test Date:	Oct. 20 ~ Nov. 28, 2016
Standards:	47 CFR FCC Part 15, Subpart E (Section 15.407) ANSI C63.10:2013

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

Prepared by : _____ , **Date:** Nov. 30, 2016

Pettie Chen / Senior Specialist

Approved by : _____ , **Date:** Nov. 30, 2016

Ken Liu / Senior Manager

2 Summary of Test Results

47 CFR FCC Part 15, Subpart E (SECTION 15.407)			
FCC Clause	Test Item	Result	Remarks
15.407(b)(6)	AC Power Conducted Emissions	Pass	Meet the requirement of limit. Minimum passing margin is -5.32dB at 0.52544MHz.
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 -1.0dB at 5870.00MHz.
15.407(a) (1/2/3)	Max Average Transmit Power	Pass	Meet the requirement of limit.
15.407(a)(1/2/3)	Peak Power Spectral Density	Pass	Meet the requirement of limit.
15.407(g)	Frequency Stability	Pass	Meet the requirement of limit.
15.203	Antenna Requirement	Pass	Antenna connector is IPEX or RPSMA not a standard connector.

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	2.44 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	Secured Wireless Access Point
Brand	Fortinet Inc.
Test Model	FAP-U421EV, FAP-U423EV
Series Model	FortiAP-U421EVxxxxxx, FAP-U421EVxxxxxx, FORTIAP-U421EVxxxxxx, FortiAP-U423EVxxxxxx, FAP-U423EVxxxxxx, FORTIAP-U423EVxxxxxx (where "x" can be used as "A-Z" or "0-9" or "-" or blank for software changes or marketing purposes only) (refer to Note for more details)
Model Difference	Refer to Note
Status of EUT	Engineering sample
Power Supply Rating	12Vdc (adapter) 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 600Mbps 802.11ac: up to 1733Mbps
Operating Frequency	5260 ~ 5320MHz, 5500 ~ 5720MHz
Number of Channel	5260 ~ 5320MHz: 4 for 802.11a, 802.11n (HT20), 802.11ac (VHT20) 2 for 802.11n (HT40), 802.11ac (VHT40) 1 for 802.11ac (VHT80) 5500 ~ 5700MHz: 12 for 802.11a, 802.11n (HT20), 802.11ac (VHT20) 6 for 802.11n (HT40), 802.11ac (VHT40) 3 for 802.11ac (VHT80)
Output Power	CDD Mode: 5260 ~ 5320MHz: 234.005mW 5500 ~ 5700MHz: 183.486mW Beamforming Mode: 5260 ~ 5320MHz: 58.509mW 5500 ~ 5700MHz: 45.878mW
Antenna Type	Refer to Note 4
Antenna Connector	Refer to Note 4
Accessory Device	NA
Data Cable Supplied	NA

Note:

1. This report is prepared for FCC class II permissive change. This report is issued as a supplementary report of the original report no.: RF160613C30A-3. The difference compared with original report is adding 5.26GHz to 5.32GHz and 5.50GHz to 5.70GHz by software.

2. All models are listed as below (where "x" can be used as "A-Z" or "0-9" or "-" or blank for software changes or marketing purposes only). Models FAP-U421EV and FAP-U423EV are the representatives for final test.

Brand	Model	Difference
Fortinet Inc.	FortiAP-U421EVxxxxxx	Internal antenna
	FAP-U421EVxxxxxx	
	FORTIAP-U421EVxxxxxx	
	FortiAP-U423EVxxxxxx	External antenna
	FAP-U423EVxxxxxx	
	FORTIAP-U423EVxxxxx	

3. The EUT incorporates a MIMO function. Physically, the EUT provides 4 completed transmitters and 4 receivers.

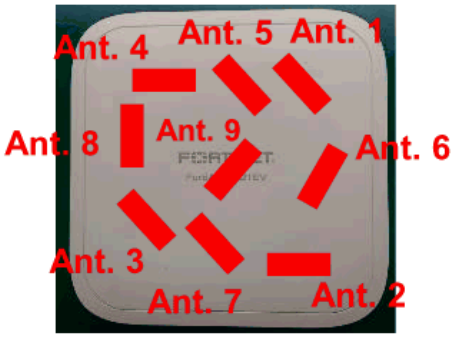
Modulation Mode	Beamforming Function	TX Function
802.11a	Not support	4TX
802.11n (HT20)	Support	4TX
802.11n (HT40)	Support	4TX
802.11ac (VHT20)	Support	4TX
802.11ac (VHT40)	Support	4TX
802.11ac (VHT80)	Support	4TX

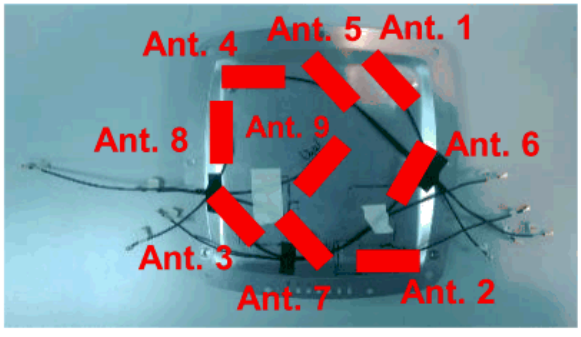
* The modulation and bandwidth are similar for 802.11n mode for HT20 / HT40 and 802.11ac mode for VHT20 / VHT40, therefore investigated worst case to representative mode in test report. (Final test mode refer section 3.2.1)

* CDD mode is the worst case for final radiated emission and power line conducted emission tests after pretesting CDD mode and beamforming mode.

4. The EUT uses following antennas.

Antenna Type	Printed	Antenna Connector	IPEX
Gain (dBi)	Frequency (MHz)		
	2400~2500	5150~5850	
WLAN Internal Ant. 1	3.81	-	
WLAN Internal Ant. 2	3.98	-	
WLAN Internal Ant. 3	3.47	-	
WLAN Internal Ant. 4	3.75	-	
WLAN Internal Ant. 5	-	5.65	
WLAN Internal Ant. 6	-	5.50	
WLAN Internal Ant. 7	-	5.84	
WLAN Internal Ant. 8	-	5.84	
Gain (dBi)	Frequency (MHz)		
	2400	2450	2500
BT Internal Ant. 9	2.56	2.91	2.62





Antenna Type	Dipole	Antenna Connector	RPSMA
Gain (dBi)	Frequency (MHz)		
	2400~2500	5150~5850	
WLAN External Ant.	4.42	3	

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

3.2 Description of Test Modes

FOR 5260 ~ 5320MHz:

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

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

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

Channel	Frequency	Channel	Frequency
54	5270 MHz	62	5310 MHz

1 channel is provided for 802.11ac (VHT80):

Channel	Frequency
58	5290 MHz

FOR 5500 ~ 5720MHz:

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

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 (HT40), 802.11ac (VHT40):

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 (VHT80):

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

3.2.1 Test Mode Applicability and Tested Channel Detail

EUT CONFIGURE MODE	APPLICABLE TO				DESCRIPTION
	RE≥1G	RE<1G	PLC	APCM	
A	√	√	√	√	Internal antenna, Power from adapter
B	-	√	√	-	Internal antenna, Power from POE
C	√	√	√	-	External antenna, Power from adapter
D	-	√	√	-	External antenna, Power from POE

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 Y-plane.
2. "-" means no effect.

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, C	802.11a	5260-5320	52 to 64	52, 60, 64	OFDM	6.0
A, C	802.11ac (VHT20)		52 to 64	52, 60, 64	OFDM	7.2
A, C	802.11ac (VHT40)		54 to 62	54, 62	OFDM	15.0
A, C	802.11ac (VHT80)		58	58	OFDM	130.0
A, C	802.11a	5500-5720	100 to 144	100, 116, 140, 144	OFDM	6.0
A, C	802.11ac (VHT20)		100 to 144	100, 116, 140, 144	OFDM	7.2
A, C	802.11ac (VHT40)		102 to 142	102, 110, 134, 142	OFDM	15.0
A, C	802.11ac (VHT80)		106 to 138	106, 138	OFDM	130.0

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, D	802.11a	5260-5320	52 to 64	52	OFDM	6
	802.11a	5500-5720	100 to 144		OFDM	6

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, D	802.11a	5260-5320	52 to 64	52	OFDM	6
	802.11a	5500-5720	100 to 144		OFDM	6

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	802.11a	5260-5320	52 to 64	52, 60, 64	OFDM	6.0
A	802.11ac (VHT20)		52 to 64	52, 60, 64	OFDM	7.2
A	802.11ac (VHT40)		54 to 62	54, 62	OFDM	15.0
A	802.11ac (VHT80)		58	58	OFDM	130.0
A	802.11a	5500-5720	100 to 144	100, 116, 140, 144	OFDM	6.0
A	802.11ac (VHT20)		100 to 144	100, 116, 140, 144	OFDM	7.2
A	802.11ac (VHT40)		102 to 142	102, 110, 134, 142	OFDM	15.0
A	802.11ac (VHT80)		106 to 138	106, 138	OFDM	130.0

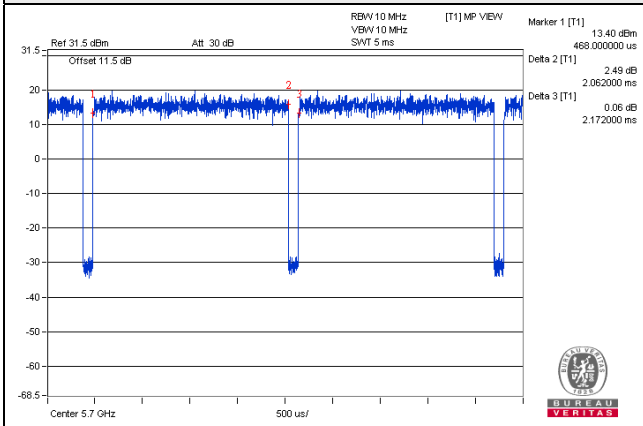
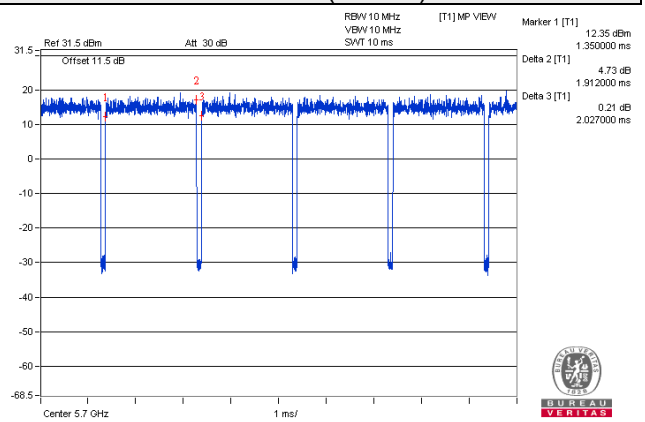
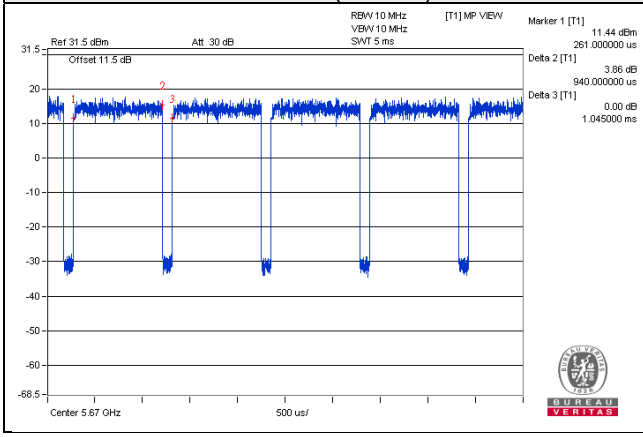
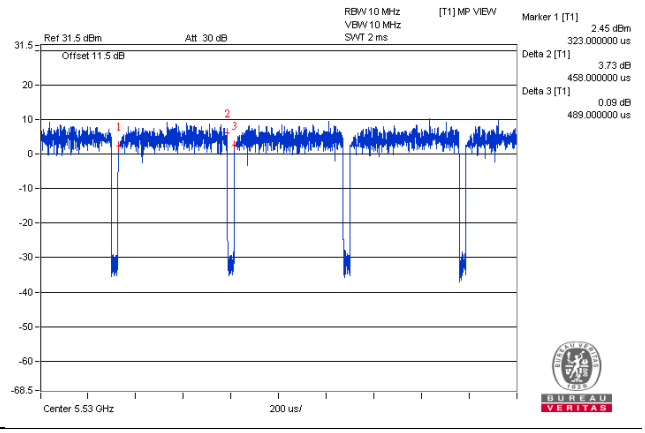
Test Condition:

APPLICABLE TO	ENVIRONMENTAL CONDITIONS	INPUT POWER	TESTED BY
RE≥1G	21deg. C, 71%RH	120Vac, 60Hz	Jones Chang
RE<1G	16deg. C, 70%RH	120Vac, 60Hz	Nick Hsu
PLC	23deg. C, 69%RH	120Vac, 60Hz	Jones Chang
APCM	25deg. C, 60%RH	120Vac, 60Hz	Cedric Wu

3.3 Duty Cycle of Test Signal

Duty cycle of test signal is < 98%, duty factor shall be considered.

802.11a: Duty cycle = 2.062/2.172 = 0.949, Duty factor = 10 * log(1/0.949) = 0.23
802.11ac (VHT20): Duty cycle = 1.912/2.027 = 0.943, Duty factor = 10 * log(1/0.943) = 0.25
802.11ac (VHT40): Duty cycle = 0.940/1.045 = 0.900, Duty factor = 10 * log(1/0.900) = 0.46
802.11ac (VHT80): Duty cycle = 0.458/0.489 = 0.937, Duty factor = 10 * log(1/0.937) = 0.28

802.11a	802.11ac (VHT20)
	
802.11ac (VHT40)	802.11ac (VHT80)
	

3.4 Description of Support Units

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

ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A.	Notebook	DELL	E5410	1HC2XM1	FCC DoC Approved	-
B.	Load	NA	NA	NA	NA	-
C.	Flash	Transcend	8GB	NA	NA	-
D.	Adapter	Asian Power Devices Inc.	WA-36A12R	NA	NA	Option of EUT I/P: 100-240Vac, 50-60Hz, 0.9A Max. O/P: 12Vdc, 3A 1.8m DC cable with 1 core
E.	POE	EnGenius	EPA5006GAT	NA	NA	Option of EUT I/P: 100-240Vac, 50-60Hz, 0.8A O/P: 54Vdc, 0.6A 0.5m power cable w/o core

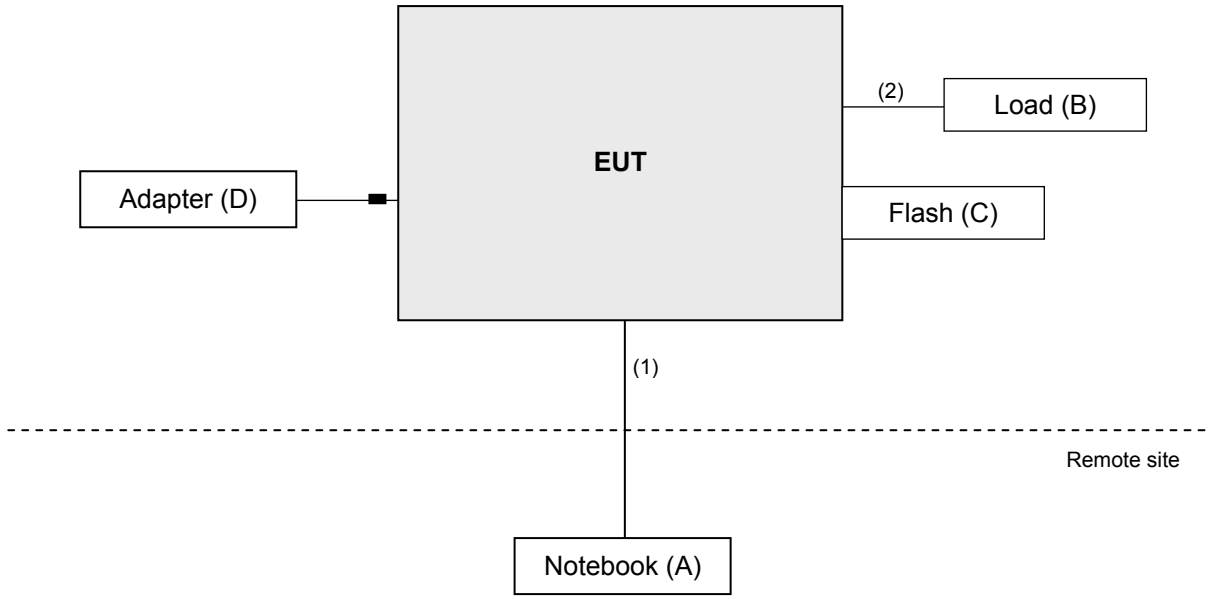
Note:

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.

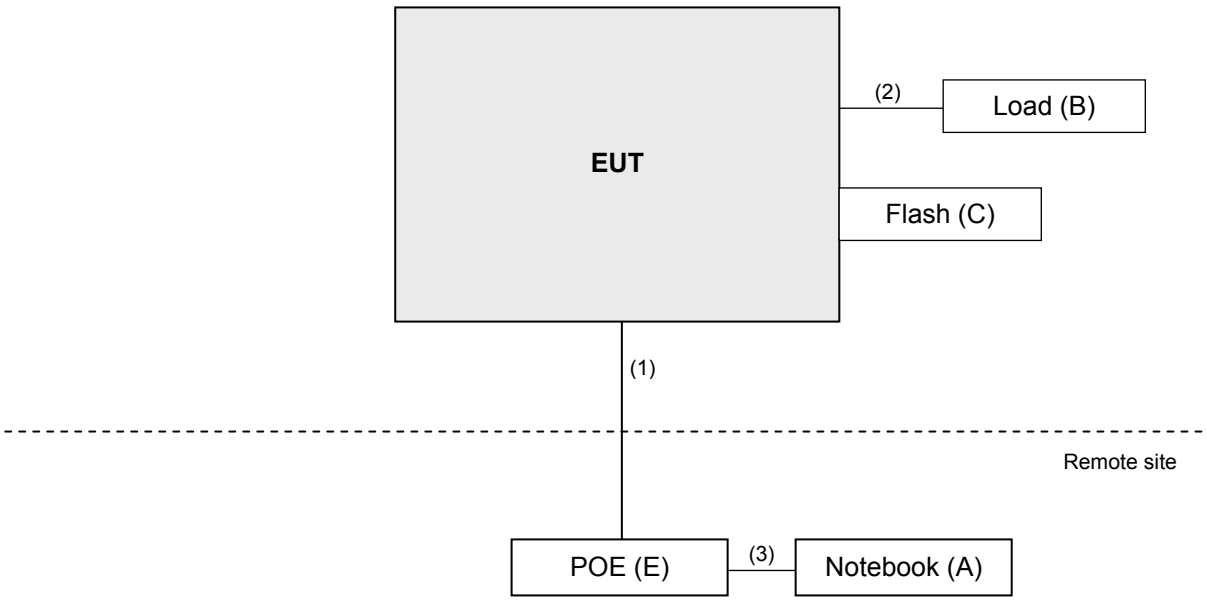
ID	Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	RJ45	1	5	N	0	-
2.	RJ45	2	1	N	0	-
3.	RJ45	1	1.8	N	0	-

3.4.1 Configuration of System under Test

Mode A, C



Mode B, D



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 Procedures New Rules v01r03

KDB 662911 D01 Multiple Transmitter Output v02r01

ANSI C63.10-2013

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

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

4 Test Types and Results

4.1 Radiated Emission and Bandedge Measurement

4.1.1 Limits of Radiated Emission and Bandedge Measurement

Radiated emissions which fall in the restricted bands must comply with the radiated emission limits specified as below table. Other emissions shall be at least 20dB below the highest level of the desired power:

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 v01r03</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.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
Test Receiver ROHDE & SCHWARZ	ESIB7	100187	Apr. 18, 2016	Apr. 17, 2017
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100041	Nov. 16, 2016	Nov. 15, 2017
BILOG Antenna SCHWARZBECK	VULB9168	9168-171	Jan. 07, 2016	Jan. 06, 2017
HORN Antenna SCHWARZBECK	9120D	209	Jan. 20, 2016	Jan. 19, 2017
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA9170241	Jan. 18, 2016	Jan. 17, 2017
Loop Antenna	EM-6879	269	Aug. 11, 2016	Aug. 10, 2017
Preamplifier Agilent	8447D	2944A10738	Aug. 22, 2016	Aug. 21, 2017
Preamplifier Agilent	8449B	3008A01964	Aug. 22, 2016	Aug. 21, 2017
RF signal cable HUBER+SUHNER	SUCOFLEX 104	Cable-CH3-03 (214378)	Aug. 22, 2016	Aug. 21, 2017
RF signal cable HUBER+SUHNER	SUCOFLEX 106	Cable-CH3-03 (309224+12738)	Aug. 22, 2016	Aug. 21, 2017
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
26GHz ~ 40GHz Amplifier	EM26400	815221	Oct. 17, 2016	Oct. 16, 2017
High Speed Peak Power Meter	ML2495A	0842014	Apr. 28, 2016	Apr. 27, 2017
Power Sensor	MA2411B	0738171	Aug. 11, 2016	Aug. 10, 2017

Note: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in HwaYa Chamber 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 Site Registration No. is 988962.
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. Both X and Y axes of the antenna are set to make the measurement.

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

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

NOTE:

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

For Radiated emission above 30MHz

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

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

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

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

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

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

Note:

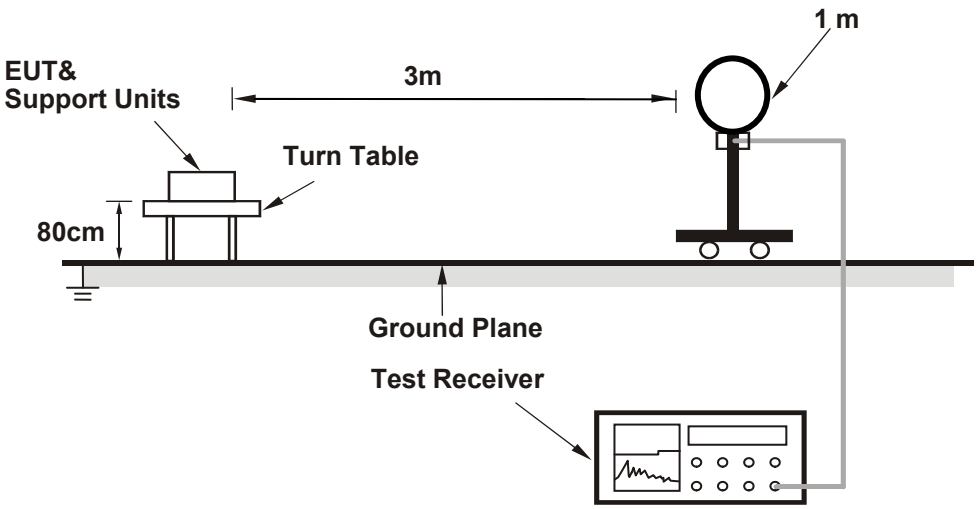
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.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

4.1.4 Deviation from Test Standard

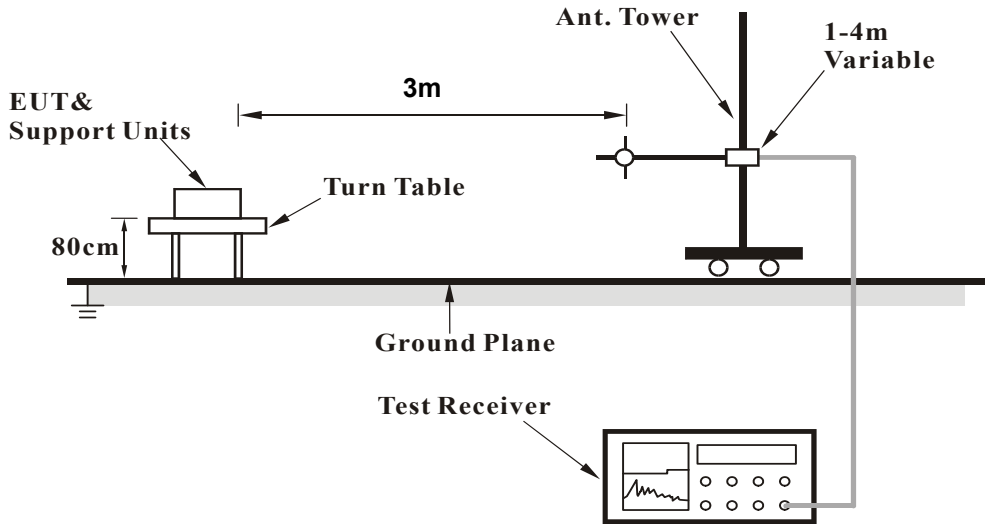
No deviation.

4.1.5 Test Setup

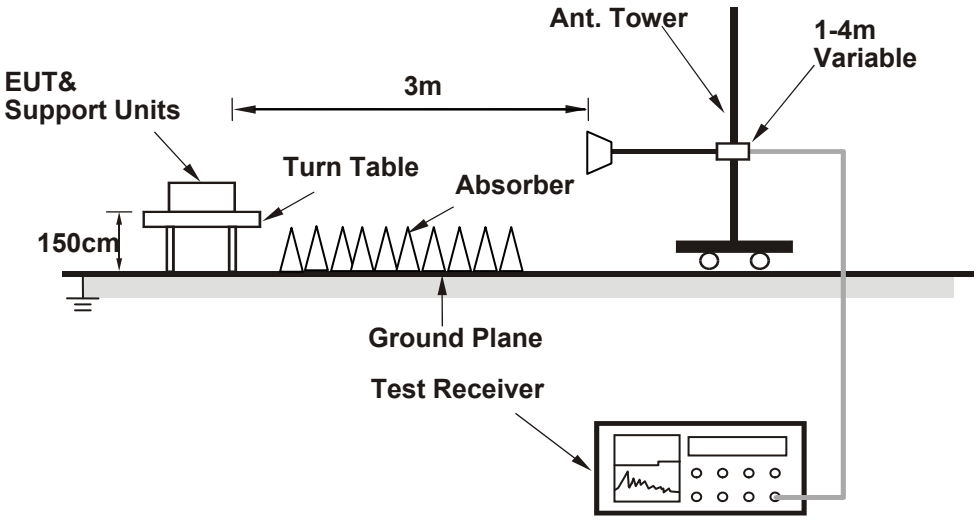
For Radiated emission below 30MHz



For Radiated emission 30MHz to 1GHz



For Radiated emission above 1GHz



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

4.1.6 EUT Operating Conditions

a. Placed the EUT on the testing table.
b. Prepared a notebook to act as a communication partner and placed it outside of testing area.
c. The communication partner connected with EUT via a RJ45 cable and ran a test program (provided by manufacturer) to enable EUT under transmission condition continuously at specific channel frequency.
d. The communication partner sent data to EUT by command "PING".

4.1.7 Test Results

Above 1GHz data:

Mode A

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	56.9 PK	74.0	-17.1	1.54 H	302	52.1	4.8
2	5150.00	44.3 AV	54.0	-9.7	1.54 H	302	39.5	4.8
3	*5260.00	118.6 PK			1.50 H	293	79.7	38.9
4	*5260.00	108.6 AV			1.50 H	293	69.7	38.9
5	#10520.00	65.6 PK	74.0	-8.4	1.60 H	284	47.0	18.6
6	#10520.00	52.8 AV	54.0	-1.2	1.60 H	284	34.2	18.6
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	55.8 PK	74.0	-18.2	1.87 V	345	51.0	4.8
2	5150.00	43.2 AV	54.0	-10.8	1.87 V	345	38.4	4.8
3	*5260.00	112.2 PK			1.59 V	347	73.3	38.9
4	*5260.00	102.9 AV			1.59 V	347	64.0	38.9
5	#10520.00	63.4 PK	74.0	-10.6	1.57 V	38	44.8	18.6
6	#10520.00	50.1 AV	54.0	-3.9	1.57 V	38	31.5	18.6

REMARKS:

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

CHANNEL	TX Channel 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	118.2 PK			1.37 H	293	79.1	39.1
2	*5300.00	108.6 AV			1.37 H	293	69.5	39.1
3	10600.00	65.8 PK	74.0	-8.2	1.34 H	273	47.3	18.5
4	10600.00	51.7 AV	54.0	-2.3	1.34 H	273	33.2	18.5
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	114.7 PK			1.59 V	338	75.6	39.1
2	*5300.00	104.7 AV			1.59 V	338	65.6	39.1
3	10600.00	65.1 PK	74.0	-8.9	2.46 V	25	46.6	18.5
4	10600.00	50.7 AV	54.0	-3.3	2.46 V	25	32.2	18.5

REMARKS:

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

CHANNEL	TX Channel 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	118.2 PK			1.38 H	294	79.1	39.1
2	*5320.00	108.6 AV			1.38 H	294	69.5	39.1
3	5399.00	63.3 PK	74.0	-10.7	1.56 H	57	57.8	5.5
4	5399.00	50.2 AV	54.0	-3.8	1.56 H	57	44.7	5.5
5	10640.00	63.9 PK	74.0	-10.1	1.40 H	268	45.4	18.5
6	10640.00	50.8 AV	54.0	-3.2	1.40 H	268	32.3	18.5
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	114.2 PK			3.08 V	349	75.1	39.1
2	*5320.00	104.5 AV			3.08 V	349	65.4	39.1
3	5350.00	62.0 PK	74.0	-12.0	2.36 V	0	56.5	5.5
4	5350.00	47.1 AV	54.0	-6.9	2.36 V	0	41.6	5.5
5	10640.00	63.0 PK	74.0	-11.0	2.45 V	25	44.5	18.5
6	10640.00	49.6 AV	54.0	-4.4	2.45 V	25	31.1	18.5

REMARKS:

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

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	#5338.00	65.7 PK	68.2	-2.5	1.64 H	54	60.3	5.4
2	5420.00	64.0 PK	74.0	-10.0	1.75 H	53	58.3	5.7
3	5420.00	50.4 AV	54.0	-3.6	1.75 H	53	44.7	5.7
4	#5470.00	66.0 PK	74.0	-8.0	1.78 H	57	60.3	5.7
5	#5470.00	49.9 AV	54.0	-4.1	1.78 H	57	44.2	5.7
6	*5500.00	120.3 PK			1.58 H	53	80.7	39.6
7	*5500.00	110.1 AV			1.58 H	53	70.5	39.6
8	#5738.00	64.0 PK	68.2	-4.2	1.64 H	52	57.7	6.3
9	11000.00	63.3 PK	74.0	-10.7	1.78 H	273	43.6	19.7
10	11000.00	50.4 AV	54.0	-3.6	1.78 H	273	30.7	19.7
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5338.00	61.9 PK	68.2	-6.3	3.97 V	313	56.5	5.4
2	5420.00	59.8 PK	74.0	-14.2	3.99 V	2	54.1	5.7
3	5420.00	47.5 AV	54.0	-6.5	3.99 V	2	41.8	5.7
4	#5470.00	66.5 PK	74.0	-7.5	4.00 V	342	60.8	5.7
5	#5470.00	49.1 AV	54.0	-4.9	4.00 V	342	43.4	5.7
6	*5500.00	116.1 PK			3.93 V	344	76.5	39.6
7	*5500.00	106.2 AV			3.93 V	344	66.6	39.6
8	#5738.00	61.9 PK	68.2	-6.3	4.00 V	351	55.6	6.3
9	11000.00	62.0 PK	74.0	-12.0	3.90 V	350	42.3	19.7
10	11000.00	49.1 AV	54.0	-4.9	3.90 V	350	29.4	19.7

REMARKS:

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

CHANNEL	TX Channel 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	5420.00	63.6 PK	74.0	-10.4	1.54 H	53	57.9	5.7
2	5420.00	52.8 AV	54.0	-1.2	1.54 H	53	47.1	5.7
3	*5580.00	119.9 PK			1.57 H	71	80.1	39.8
4	*5580.00	109.7 AV			1.57 H	71	69.9	39.8
5	#5740.00	66.8 PK	68.2	-1.4	1.62 H	48	60.5	6.3
6	11160.00	62.6 PK	74.0	-11.4	1.70 H	58	43.1	19.5
7	11160.00	49.6 AV	54.0	-4.4	1.70 H	58	30.1	19.5
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5420.00	61.7 PK	74.0	-12.3	3.97 V	7	56.0	5.7
2	5420.00	50.0 AV	54.0	-4.0	3.97 V	7	44.3	5.7
3	*5580.00	114.9 PK			3.98 V	345	75.1	39.8
4	*5580.00	105.2 AV			3.98 V	345	65.4	39.8
5	#5740.00	63.0 PK	68.2	-5.2	3.78 V	318	56.7	6.3
6	11160.00	60.3 PK	74.0	-13.7	3.85 V	317	40.8	19.5
7	11160.00	48.0 AV	54.0	-6.0	3.85 V	317	28.5	19.5

REMARKS:

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

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	5460.00	63.2 PK	74.0	-10.8	1.68 H	53	57.5	5.7
2	5460.00	51.7 AV	54.0	-2.3	1.68 H	53	46.0	5.7
3	*5700.00	119.9 PK			1.67 H	50	80.0	39.9
4	*5700.00	109.7 AV			1.67 H	50	69.8	39.9
5	#5860.00	66.6 PK	68.2	-1.6	1.72 H	49	60.1	6.5
6	11400.00	60.3 PK	74.0	-13.7	1.70 H	292	41.0	19.3
7	11400.00	48.4 AV	54.0	-5.6	1.70 H	292	29.1	19.3
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	59.5 PK	74.0	-14.5	4.00 V	9	53.8	5.7
2	5460.00	48.4 AV	54.0	-5.6	4.00 V	9	42.7	5.7
3	*5700.00	114.0 PK			4.00 V	342	74.1	39.9
4	*5700.00	104.2 AV			4.00 V	342	64.3	39.9
5	#5860.00	62.1 PK	68.2	-6.1	4.00 V	347	55.6	6.5
6	11400.00	61.3 PK	74.0	-12.7	3.71 V	312	42.0	19.3
7	11400.00	48.1 AV	54.0	-5.9	3.71 V	312	28.8	19.3

REMARKS:

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

CHANNEL	TX Channel 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	58.1 PK	68.2	-10.1	1.70 H	55	52.4	5.7
2	*5720.00	120.0 PK			1.60 H	49	80.0	40.0
3	*5720.00	110.2 AV			1.60 H	49	70.2	40.0
4	**#5870.00**	**67.2 PK**	**68.2**	**-1.0**	**2.71 H**	**292**	**60.7**	**6.5**
5	#6355.00	65.8 PK	68.2	-2.4	1.79 H	67	56.2	9.6
6	11440.00	61.5 PK	74.0	-12.5	2.37 H	355	42.2	19.3
7	11440.00	48.3 AV	54.0	-5.7	2.37 H	355	29.0	19.3
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5470.00	57.1 PK	68.2	-11.1	2.20 V	288	51.4	5.7
2	*5720.00	110.2 PK			1.84 V	0	70.2	40.0
3	*5720.00	100.5 AV			1.84 V	0	60.5	40.0
4	#5870.00	61.5 PK	68.2	-6.7	2.16 V	43	55.0	6.5
5	#6355.00	54.6 PK	68.2	-13.6	2.22 V	308	45.0	9.6
6	11440.00	60.9 PK	74.0	-13.1	2.40 V	82	41.6	19.3
7	11440.00	48.1 AV	54.0	-5.9	2.40 V	82	28.8	19.3

REMARKS:

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

802.11ac (VHT20)

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	58.3 PK	74.0	-15.7	1.23 H	292	53.5	4.8
2	5150.00	45.9 AV	54.0	-8.1	1.23 H	292	41.1	4.8
3	*5260.00	118.8 PK			1.30 H	291	79.9	38.9
4	*5260.00	108.9 AV			1.30 H	291	70.0	38.9
5	#10520.00	66.5 PK	74.0	-7.5	1.53 H	286	47.9	18.6
6	#10520.00	51.9 AV	54.0	-2.1	1.53 H	286	33.3	18.6
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	56.1 PK	74.0	-17.9	3.76 V	347	51.3	4.8
2	5150.00	44.1 AV	54.0	-9.9	3.76 V	347	39.3	4.8
3	*5260.00	115.8 PK			4.00 V	6	76.9	38.9
4	*5260.00	104.9 AV			4.00 V	6	66.0	38.9
5	#10520.00	63.1 PK	74.0	-10.9	3.69 V	357	44.5	18.6
6	#10520.00	49.6 AV	54.0	-4.4	3.69 V	357	31.0	18.6

REMARKS:

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

CHANNEL	TX Channel 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	118.6 PK			1.36 H	293	79.5	39.1
2	*5300.00	108.4 AV			1.36 H	293	69.3	39.1
3	10600.00	63.1 PK	74.0	-10.9	1.51 H	267	44.6	18.5
4	10600.00	50.3 AV	54.0	-3.7	1.51 H	267	31.8	18.5
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	115.6 PK			3.91 V	8	76.5	39.1
2	*5300.00	105.4 AV			3.91 V	8	66.3	39.1
3	10600.00	62.9 PK	74.0	-11.1	3.91 V	357	44.4	18.5
4	10600.00	49.6 AV	54.0	-4.4	3.91 V	357	31.1	18.5

REMARKS:

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

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	119.8 PK			1.97 H	44	80.7	39.1
2	*5320.00	108.7 AV			1.97 H	44	69.6	39.1
3	5350.00	72.2 PK	74.0	-1.8	2.09 H	48	66.7	5.5
4	5350.00	50.6 AV	54.0	-3.4	2.09 H	48	45.1	5.5
5	10640.00	63.2 PK	74.0	-10.8	1.96 H	270	44.7	18.5
6	10640.00	49.2 AV	54.0	-4.8	1.96 H	270	30.7	18.5
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	115.2 PK			3.84 V	10	76.1	39.1
2	*5320.00	104.1 AV			3.84 V	10	65.0	39.1
3	5350.00	65.1 PK	74.0	-8.9	3.66 V	14	59.6	5.5
4	5350.00	46.7 AV	54.0	-7.3	3.66 V	14	41.2	5.5
5	10640.00	60.5 PK	74.0	-13.5	3.59 V	324	42.0	18.5
6	10640.00	48.2 AV	54.0	-5.8	3.59 V	324	29.7	18.5

REMARKS:

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

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	5420.00	62.0 PK	74.0	-12.0	2.01 H	50	56.3	5.7
2	5420.00	49.7 AV	54.0	-4.3	2.01 H	50	44.0	5.7
3	#5470.00	72.2 PK	74.0	-1.8	1.91 H	50	66.5	5.7
4	#5470.00	50.8 AV	54.0	-3.2	1.91 H	50	45.1	5.7
5	*5500.00	117.6 PK			1.89 H	45	78.0	39.6
6	*5500.00	107.3 AV			1.89 H	45	67.7	39.6
7	#5736.00	65.8 PK	68.2	-2.4	1.62 H	54	59.5	6.3
8	11000.00	61.0 PK	74.0	-13.0	2.05 H	40	41.3	19.7
9	11000.00	48.6 AV	54.0	-5.4	2.05 H	40	28.9	19.7
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5420.00	60.1 PK	74.0	-13.9	4.00 V	9	54.4	5.7
2	5420.00	47.0 AV	54.0	-7.0	4.00 V	9	41.3	5.7
3	#5470.00	68.7 PK	74.0	-5.3	4.00 V	347	63.0	5.7
4	#5470.00	49.1 AV	54.0	-4.9	4.00 V	347	43.4	5.7
5	*5500.00	116.3 PK			3.94 V	343	76.7	39.6
6	*5500.00	105.4 AV			3.94 V	343	65.8	39.6
7	#5736.00	61.5 PK	68.2	-6.7	4.00 V	345	55.2	6.3
8	11000.00	61.1 PK	74.0	-12.9	4.00 V	333	41.4	19.7
9	11000.00	48.1 AV	54.0	-5.9	4.00 V	333	28.4	19.7

REMARKS:

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

CHANNEL	TX Channel 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	5420.00	63.3 PK	74.0	-10.7	1.47 H	57	57.6	5.7
2	5420.00	52.1 AV	54.0	-1.9	1.47 H	57	46.4	5.7
3	*5580.00	119.4 PK			1.55 H	51	79.6	39.8
4	*5580.00	108.8 AV			1.55 H	51	69.0	39.8
5	#5735.00	67.0 PK	68.2	-1.2	1.75 H	45	60.7	6.3
6	11160.00	61.8 PK	74.0	-12.2	1.68 H	60	42.3	19.5
7	11160.00	49.8 AV	54.0	-4.2	1.68 H	60	30.3	19.5
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5420.00	62.0 PK	74.0	-12.0	4.00 V	5	56.3	5.7
2	5420.00	50.5 AV	54.0	-3.5	4.00 V	5	44.8	5.7
3	*5580.00	115.7 PK			3.99 V	343	75.9	39.8
4	*5580.00	105.3 AV			3.99 V	343	65.5	39.8
5	#5735.00	62.9 PK	68.2	-5.3	4.00 V	346	56.6	6.3
6	11160.00	60.1 PK	74.0	-13.9	3.73 V	322	40.6	19.5
7	11160.00	48.1 AV	54.0	-5.9	3.73 V	322	28.6	19.5

REMARKS:

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

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	118.2 PK			1.90 H	45	78.3	39.9
2	*5700.00	107.9 AV			1.90 H	45	68.0	39.9
3	#5725.00	70.1 PK	74.0	-3.9	2.10 H	46	63.8	6.3
4	#5725.00	52.7 AV	54.0	-1.3	2.10 H	46	46.4	6.3
5	#5855.00	65.8 PK	68.2	-2.4	1.81 H	45	59.3	6.5
6	11400.00	61.3 PK	74.0	-12.7	1.99 H	44	42.0	19.3
7	11400.00	48.1 AV	54.0	-5.9	1.99 H	44	28.8	19.3
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	115.0 PK			4.00 V	342	75.1	39.9
2	*5700.00	103.7 AV			4.00 V	342	63.8	39.9
3	#5725.00	63.8 PK	74.0	-10.2	3.93 V	6	57.5	6.3
4	#5725.00	47.8 AV	54.0	-6.2	3.93 V	6	41.5	6.3
5	#5855.00	62.6 PK	68.2	-5.6	3.94 V	346	56.1	6.5
6	11400.00	60.9 PK	74.0	-13.1	3.68 V	7	41.6	19.3
7	11400.00	48.1 AV	54.0	-5.9	3.68 V	7	28.8	19.3

REMARKS:

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

CHANNEL	TX Channel 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	58.0 PK	74.0	-16.0	2.80 H	290	52.3	5.7
2	#5470.00	47.2 AV	54.0	-6.8	2.80 H	290	41.5	5.7
3	*5720.00	118.6 PK			2.82 H	54	78.6	40.0
4	*5720.00	108.3 AV			2.82 H	54	68.3	40.0
5	#5880.00	66.8 PK	68.2	-1.4	2.71 H	292	60.3	6.5
6	11440.00	61.8 PK	74.0	-12.2	2.33 H	330	42.5	19.3
7	11440.00	48.8 AV	54.0	-5.2	2.33 H	330	29.5	19.3
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5470.00	58.2 PK	74.0	-15.8	2.60 V	296	52.5	5.7
2	#5470.00	47.7 AV	54.0	-6.3	2.60 V	296	42.0	5.7
3	*5720.00	110.9 PK			2.38 V	0	70.9	40.0
4	*5720.00	100.6 AV			2.38 V	0	60.6	40.0
5	#5880.00	60.7 PK	68.2	-7.5	2.56 V	300	54.2	6.5
6	11440.00	61.4 PK	74.0	-12.6	1.87 V	97	42.1	19.3
7	11440.00	48.5 AV	54.0	-5.5	1.87 V	97	29.2	19.3

REMARKS:

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

802.11ac (VHT40)

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	5100.00	59.9 PK	74.0	-14.1	1.44 H	289	55.3	4.6
2	5100.00	48.2 AV	54.0	-5.8	1.44 H	289	43.6	4.6
3	*5270.00	115.2 PK			1.28 H	291	76.2	39.0
4	*5270.00	105.5 AV			1.28 H	291	66.5	39.0
5	5420.00	61.1 PK	74.0	-12.9	1.44 H	301	55.4	5.7
6	5420.00	50.0 AV	54.0	-4.0	1.44 H	301	44.3	5.7
7	#10540.00	63.0 PK	74.0	-11.0	1.63 H	286	44.4	18.6
8	#10540.00	50.2 AV	54.0	-3.8	1.63 H	286	31.6	18.6
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5100.00	58.7 PK	74.0	-15.3	3.99 V	5	54.1	4.6
2	5100.00	45.5 AV	54.0	-8.5	3.99 V	5	40.9	4.6
3	*5270.00	112.6 PK			3.91 V	5	73.6	39.0
4	*5270.00	102.1 AV			3.91 V	5	63.1	39.0
5	5420.00	60.5 PK	74.0	-13.5	3.95 V	1	54.8	5.7
6	5420.00	48.1 AV	54.0	-5.9	3.95 V	1	42.4	5.7
7	#10540.00	60.3 PK	74.0	-13.7	3.84 V	359	41.7	18.6
8	#10540.00	48.7 AV	54.0	-5.3	3.84 V	359	30.1	18.6

REMARKS:

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

CHANNEL	TX Channel 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	111.6 PK			1.48 H	297	72.5	39.1
2	*5310.00	100.5 AV			1.48 H	297	61.4	39.1
3	5350.00	72.7 PK	74.0	-1.3	1.53 H	291	67.2	5.5
4	5350.00	52.6 AV	54.0	-1.4	1.53 H	291	47.1	5.5
5	10620.00	60.2 PK	74.0	-13.8	1.62 H	269	41.7	18.5
6	10620.00	47.5 AV	54.0	-6.5	1.62 H	269	29.0	18.5
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5310.00	107.9 PK			3.91 V	7	68.8	39.1
2	*5310.00	97.3 AV			3.91 V	7	58.2	39.1
3	5350.00	67.9 PK	74.0	-6.1	3.90 V	10	62.4	5.5
4	5350.00	48.1 AV	54.0	-5.9	3.90 V	10	42.6	5.5
5	10620.00	59.8 PK	74.0	-14.2	3.63 V	0	41.3	18.5
6	10620.00	47.0 AV	54.0	-7.0	3.63 V	0	28.5	18.5

REMARKS:

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

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	5360.00	59.1 PK	74.0	-14.9	1.92 H	42	53.6	5.5
2	5360.00	47.7 AV	54.0	-6.3	1.92 H	42	42.2	5.5
3	#5470.00	70.2 PK	74.0	-3.8	2.02 H	49	64.5	5.7
4	#5470.00	52.3 AV	54.0	-1.7	2.02 H	49	46.6	5.7
5	*5510.00	111.2 PK			1.94 H	45	71.6	39.6
6	*5510.00	100.7 AV			1.94 H	45	61.1	39.6
7	11020.00	59.8 PK	74.0	-14.2	1.49 H	331	40.2	19.6
8	11020.00	47.6 AV	54.0	-6.4	1.49 H	331	28.0	19.6
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5360.00	57.3 PK	74.0	-16.7	3.98 V	337	51.8	5.5
2	5360.00	45.6 AV	54.0	-8.4	3.98 V	337	40.1	5.5
3	#5470.00	63.9 PK	74.0	-10.1	4.00 V	348	58.2	5.7
4	#5470.00	48.2 AV	54.0	-5.8	4.00 V	348	42.5	5.7
5	*5510.00	107.8 PK			3.94 V	343	68.2	39.6
6	*5510.00	97.0 AV			3.94 V	343	57.4	39.6
7	11020.00	59.7 PK	74.0	-14.3	3.42 V	244	40.1	19.6
8	11020.00	48.2 AV	54.0	-5.8	3.42 V	244	28.6	19.6

REMARKS:

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

CHANNEL	TX Channel 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	5400.00	64.0 PK	74.0	-10.0	2.02 H	45	58.5	5.5
2	5400.00	52.5 AV	54.0	-1.5	2.02 H	45	47.0	5.5
3	*5550.00	116.2 PK			1.71 H	45	76.6	39.6
4	*5550.00	106.3 AV			1.71 H	45	66.7	39.6
5	#5725.00	64.1 PK	68.2	-4.1	1.75 H	45	57.8	6.3
6	11100.00	60.7 PK	74.0	-13.3	2.04 H	281	41.5	19.2
7	11100.00	49.0 AV	54.0	-5.0	2.04 H	281	29.8	19.2
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5400.00	60.3 PK	74.0	-13.7	3.92 V	342	54.8	5.5
2	5400.00	48.9 AV	54.0	-5.1	3.92 V	342	43.4	5.5
3	*5550.00	113.3 PK			3.88 V	344	73.7	39.6
4	*5550.00	102.5 AV			3.88 V	344	62.9	39.6
5	#5725.00	59.5 PK	68.2	-8.7	3.92 V	7	53.2	6.3
6	11100.00	61.2 PK	74.0	-12.8	3.21 V	303	42.0	19.2
7	11100.00	48.2 AV	54.0	-5.8	3.21 V	303	29.0	19.2

REMARKS:

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

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	116.1 PK			1.84 H	42	76.3	39.8
2	*5670.00	106.1 AV			1.84 H	42	66.3	39.8
3	#5725.00	72.3 PK	74.0	-1.7	1.55 H	51	66.0	6.3
4	#5725.00	51.4 AV	54.0	-2.6	1.55 H	51	45.1	6.3
5	#5825.00	64.6 PK	68.2	-3.6	1.84 H	46	58.3	6.3
6	11340.00	60.7 PK	74.0	-13.3	1.73 H	59	41.2	19.5
7	11340.00	47.8 AV	54.0	-6.2	1.73 H	59	28.3	19.5
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5670.00	111.6 PK			3.99 V	7	71.8	39.8
2	*5670.00	101.4 AV			3.99 V	7	61.6	39.8
3	#5725.00	68.7 PK	74.0	-5.3	3.97 V	338	62.4	6.3
4	#5725.00	48.4 AV	54.0	-5.6	3.97 V	338	42.1	6.3
5	#5825.00	61.5 PK	68.2	-6.7	4.00 V	342	55.2	6.3
6	11340.00	47.9 PK	74.0	-26.1	3.61 V	241	28.4	19.5
7	11340.00	47.8 AV	54.0	-6.2	3.61 V	241	28.3	19.5

REMARKS:

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

CHANNEL	TX Channel 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	62.0 PK	68.2	-6.2	2.05 H	280	56.3	5.7
2	*5710.00	117.3 PK			1.96 H	44	77.3	40.0
3	*5710.00	107.0 AV			1.96 H	44	67.0	40.0
4	#5870.00	66.4 PK	68.2	-1.8	2.71 H	290	59.9	6.5
5	#6186.00	54.8 PK	68.2	-13.4	2.66 H	292	45.5	9.3
6	11420.00	62.4 PK	74.0	-11.6	2.22 H	249	43.1	19.3
7	11420.00	49.3 AV	54.0	-4.7	2.22 H	249	30.0	19.3
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5470.00	59.5 PK	68.2	-8.7	2.44 V	20	53.8	5.7
2	*5710.00	107.6 PK			2.62 V	19	67.6	40.0
3	*5710.00	97.9 AV			2.62 V	19	57.9	40.0
4	#5850.00	58.8 PK	68.2	-9.4	2.50 V	19	52.3	6.5
5	#6186.00	51.8 PK	68.2	-16.4	2.33 V	333	42.5	9.3
6	11420.00	61.8 PK	74.0	-12.2	1.90 V	55	42.5	19.3
7	11420.00	48.8 AV	54.0	-5.2	1.90 V	55	29.5	19.3

REMARKS:

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

802.11ac (VHT80)

CHANNEL	TX Channel 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	55.5 PK	74.0	-18.5	1.38 H	290	50.7	4.8
2	5150.00	44.5 AV	54.0	-9.5	1.38 H	290	39.7	4.8
3	*5290.00	105.1 PK			1.55 H	293	66.0	39.1
4	*5290.00	94.6 AV			1.55 H	293	55.5	39.1
5	5350.00	66.7 PK	74.0	-7.3	1.59 H	292	61.2	5.5
6	5350.00	52.2 AV	54.0	-1.8	1.59 H	292	46.7	5.5
7	#10580.00	59.4 PK	74.0	-14.6	1.55 H	308	40.8	18.6
8	#10580.00	47.7 AV	54.0	-6.3	1.55 H	308	29.1	18.6
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	55.2 PK	74.0	-18.8	3.82 V	357	50.4	4.8
2	5150.00	43.6 AV	54.0	-10.4	3.82 V	357	38.8	4.8
3	*5290.00	101.6 PK			3.91 V	345	62.5	39.1
4	*5290.00	91.5 AV			3.91 V	345	52.4	39.1
5	5350.00	63.0 PK	74.0	-11.0	4.00 V	10	57.5	5.5
6	5350.00	48.5 AV	54.0	-5.5	4.00 V	10	43.0	5.5
7	#10580.00	59.3 PK	74.0	-14.7	3.58 V	330	40.7	18.6
8	#10580.00	48.0 AV	54.0	-6.0	3.58 V	330	29.4	18.6

REMARKS:

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

CHANNEL	TX Channel 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	63.0 PK	74.0	-11.0	2.03 H	59	57.3	5.7
2	5460.00	51.7 AV	54.0	-2.3	2.03 H	59	46.0	5.7
3	#5470.00	68.4 PK	74.0	-5.6	2.11 H	48	62.7	5.7
4	#5470.00	52.4 AV	54.0	-1.6	2.11 H	48	46.7	5.7
5	*5530.00	104.8 PK			1.50 H	56	65.2	39.6
6	*5530.00	95.8 AV			1.50 H	56	56.2	39.6
7	#5725.00	58.8 PK	74.0	-15.2	1.59 H	49	52.5	6.3
8	#5725.00	46.9 AV	54.0	-7.1	1.59 H	49	40.6	6.3
9	11060.00	60.6 PK	74.0	-13.4	1.53 H	67	41.3	19.3
10	11060.00	48.0 AV	54.0	-6.0	1.53 H	67	28.7	19.3
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	59.8 PK	74.0	-14.2	3.62 V	6	54.1	5.7
2	5460.00	47.7 AV	54.0	-6.3	3.62 V	6	42.0	5.7
3	#5470.00	61.6 PK	74.0	-12.4	3.58 V	7	55.9	5.7
4	#5470.00	48.7 AV	54.0	-5.3	3.58 V	7	43.0	5.7
5	*5530.00	101.2 PK			3.91 V	349	61.6	39.6
6	*5530.00	90.9 AV			3.91 V	349	51.3	39.6
7	#5725.00	57.6 PK	74.0	-16.4	3.46 V	358	51.3	6.3
8	#5725.00	45.2 AV	54.0	-8.8	3.46 V	358	38.9	6.3
9	11060.00	60.1 PK	74.0	-13.9	3.35 V	307	40.8	19.3
10	11060.00	48.6 AV	54.0	-5.4	3.35 V	307	29.3	19.3

REMARKS:

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

CHANNEL	TX Channel 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	62.2 PK	68.2	-6.0	2.70 H	290	56.5	5.7
2	*5690.00	112.6 PK			1.94 H	46	72.7	39.9
3	*5690.00	103.5 AV			1.94 H	46	63.6	39.9
4	#5850.00	66.5 PK	68.2	-1.7	2.79 H	288	60.0	6.5
5	#6310.00	55.6 PK	68.2	-12.6	2.34 H	186	45.9	9.7
6	11380.00	62.1 PK	74.0	-11.9	2.42 H	250	42.8	19.3
7	11380.00	49.2 AV	54.0	-4.8	2.42 H	250	29.9	19.3
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5470.00	56.5 PK	68.2	-11.7	2.66 V	0	50.8	5.7
2	*5690.00	103.8 PK			2.76 V	25	63.9	39.9
3	*5690.00	94.9 AV			2.76 V	25	55.0	39.9
4	#5850.00	57.1 PK	68.2	-11.1	2.77 V	33	50.6	6.5
5	#6322.00	63.3 PK	68.2	-4.9	2.48 V	327	53.5	9.8
6	11380.00	61.7 PK	74.0	-12.3	4.00 V	37	42.4	19.3
7	11380.00	48.7 AV	54.0	-5.3	4.00 V	37	29.4	19.3

REMARKS:

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

Mode C

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	58.8 PK	74.0	-15.2	1.62 H	28	54.0	4.8
2	5150.00	46.1 AV	54.0	-7.9	1.62 H	28	41.3	4.8
3	*5260.00	119.1 PK			1.31 H	24	80.2	38.9
4	*5260.00	109.3 AV			1.31 H	24	70.4	38.9
5	#10520.00	64.1 PK	74.0	-9.9	2.46 H	345	45.5	18.6
6	#10520.00	51.9 AV	54.0	-2.1	2.46 H	345	33.3	18.6
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	56.6 PK	74.0	-17.4	3.66 V	278	51.8	4.8
2	5150.00	44.2 AV	54.0	-9.8	3.66 V	278	39.4	4.8
3	*5260.00	112.6 PK			3.71 V	292	73.7	38.9
4	*5260.00	102.4 AV			3.71 V	292	63.5	38.9
5	#10520.00	61.8 PK	74.0	-12.2	3.66 V	282	43.2	18.6
6	#10520.00	49.3 AV	54.0	-4.7	3.66 V	282	30.7	18.6

REMARKS:

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

CHANNEL	TX Channel 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	117.8 PK			1.61 H	318	78.7	39.1
2	*5300.00	108.8 AV			1.61 H	318	69.7	39.1
3	10600.00	63.4 PK	74.0	-10.6	2.46 H	346	44.9	18.5
4	10600.00	51.7 AV	54.0	-2.3	2.46 H	346	33.2	18.5
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	112.4 PK			3.90 V	36	73.3	39.1
2	*5300.00	102.8 AV			3.90 V	36	63.7	39.1
3	10600.00	62.2 PK	74.0	-11.8	3.51 V	66	43.7	18.5
4	10600.00	49.6 AV	54.0	-4.4	3.51 V	66	31.1	18.5

REMARKS:

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

CHANNEL	TX Channel 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	117.9 PK			1.26 H	23	78.8	39.1
2	*5320.00	108.1 AV			1.26 H	23	69.0	39.1
3	5350.00	64.7 PK	74.0	-9.3	1.09 H	12	59.2	5.5
4	5350.00	49.5 AV	54.0	-4.5	1.09 H	12	44.0	5.5
5	10640.00	63.4 PK	74.0	-10.6	2.53 H	346	44.9	18.5
6	10640.00	50.9 AV	54.0	-3.1	2.53 H	346	32.4	18.5
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	111.4 PK			3.67 V	37	72.3	39.1
2	*5320.00	102.1 AV			3.67 V	37	63.0	39.1
3	5350.00	62.5 PK	74.0	-11.5	3.65 V	37	57.0	5.5
4	5350.00	46.7 AV	54.0	-7.3	3.65 V	37	41.2	5.5
5	10640.00	61.4 PK	74.0	-12.6	3.53 V	65	42.9	18.5
6	10640.00	48.9 AV	54.0	-5.1	3.53 V	65	30.4	18.5

REMARKS:

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

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	59.4 PK	74.0	-14.6	1.50 H	157	53.7	5.7
2	5460.00	46.8 AV	54.0	-7.2	1.50 H	157	41.1	5.7
3	#5470.00	67.5 PK	74.0	-6.5	1.61 H	178	61.8	5.7
4	#5470.00	50.9 AV	54.0	-3.1	1.61 H	178	45.2	5.7
5	*5500.00	118.1 PK			2.40 H	27	78.5	39.6
6	*5500.00	109.0 AV			2.40 H	27	69.4	39.6
7	11000.00	62.1 PK	74.0	-11.9	2.44 H	355	42.4	19.7
8	11000.00	49.9 AV	54.0	-4.1	2.44 H	355	30.2	19.7
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	58.7 PK	74.0	-15.3	3.17 V	84	53.0	5.7
2	5460.00	45.3 AV	54.0	-8.7	3.17 V	84	39.6	5.7
3	#5470.00	63.9 PK	74.0	-10.1	3.29 V	85	58.2	5.7
4	#5470.00	48.7 AV	54.0	-5.3	3.29 V	85	43.0	5.7
5	*5500.00	114.1 PK			3.31 V	72	74.5	39.6
6	*5500.00	103.9 AV			3.31 V	72	64.3	39.6
7	11000.00	59.9 PK	74.0	-14.1	2.83 V	274	40.2	19.7
8	11000.00	48.1 AV	54.0	-5.9	2.83 V	274	28.4	19.7

REMARKS:

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

CHANNEL	TX Channel 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	122.1 PK			3.22 H	354	82.3	39.8
2	*5580.00	111.6 AV			3.22 H	354	71.8	39.8
3	11060.00	61.5 PK	74.0	-12.5	2.14 H	325	42.2	19.3
4	11060.00	48.2 AV	54.0	-5.8	2.14 H	325	28.9	19.3
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5580.00	114.0 PK			3.29 V	38	74.2	39.8
2	*5580.00	103.9 AV			3.29 V	38	64.1	39.8
3	11600.00	60.7 PK	74.0	-13.3	2.87 V	289	41.5	19.2
4	11600.00	47.5 AV	54.0	-6.5	2.87 V	289	28.3	19.2

REMARKS:

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

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	118.4 PK			2.36 H	22	78.5	39.9
2	*5700.00	107.8 AV			2.36 H	22	67.9	39.9
3	#5725.00	68.6 PK	74.0	-5.4	2.24 H	352	62.3	6.3
4	#5725.00	52.6 AV	54.0	-1.4	2.24 H	352	46.3	6.3
5	11400.00	61.8 PK	74.0	-12.2	2.26 H	358	42.5	19.3
6	11400.00	48.6 AV	54.0	-5.4	2.26 H	358	29.3	19.3
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	113.1 PK			3.25 V	85	73.2	39.9
2	*5700.00	102.7 AV			3.25 V	85	62.8	39.9
3	#5725.00	64.9 PK	74.0	-9.1	3.10 V	300	58.6	6.3
4	#5725.00	47.4 AV	54.0	-6.6	3.10 V	300	41.1	6.3
5	11400.00	60.8 PK	74.0	-13.2	2.83 V	249	41.5	19.3
6	11400.00	47.9 AV	54.0	-6.1	2.83 V	249	28.6	19.3

REMARKS:

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

CHANNEL	TX Channel 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	58.4 PK	68.2	-9.8	2.71 H	356	52.7	5.7
2	*5720.00	113.7 PK			1.42 H	303	73.7	40.0
3	*5720.00	103.5 AV			1.42 H	303	63.5	40.0
4	#5880.00	66.5 PK	68.2	-1.7	3.88 H	345	60.0	6.5
5	11440.00	61.8 PK	74.0	-12.2	1.76 H	305	42.5	19.3
6	11440.00	48.9 AV	54.0	-5.1	1.76 H	305	29.6	19.3
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5470.00	59.3 PK	68.2	-8.9	2.98 V	69	53.6	5.7
2	*5720.00	108.4 PK			2.84 V	41	68.4	40.0
3	*5720.00	98.7 AV			2.84 V	41	58.7	40.0
4	#5880.00	61.4 PK	68.2	-6.8	3.47 V	98	54.9	6.5
5	11440.00	61.2 PK	74.0	-12.8	2.56 V	212	41.9	19.3
6	11440.00	48.6 AV	54.0	-5.4	2.56 V	212	29.3	19.3

REMARKS:

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

802.11ac (VHT20)

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	56.6 PK	74.0	-17.4	1.34 H	22	51.8	4.8
2	5150.00	45.9 AV	54.0	-8.1	1.34 H	22	41.1	4.8
3	*5260.00	118.8 PK			1.22 H	23	79.9	38.9
4	*5260.00	107.9 AV			1.22 H	23	69.0	38.9
5	#10520.00	64.4 PK	74.0	-9.6	2.44 H	355	45.8	18.6
6	#10520.00	51.7 AV	54.0	-2.3	2.44 H	355	33.1	18.6
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	56.6 PK	74.0	-17.4	3.02 V	314	51.8	4.8
2	5150.00	42.9 AV	54.0	-11.1	3.02 V	314	38.1	4.8
3	*5260.00	110.0 PK			3.14 V	300	71.1	38.9
4	*5260.00	100.0 AV			3.14 V	300	61.1	38.9
5	#10520.00	60.2 PK	74.0	-13.8	1.29 V	309	41.6	18.6
6	#10520.00	47.8 AV	54.0	-6.2	1.29 V	309	29.2	18.6

REMARKS:

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

CHANNEL	TX Channel 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	118.2 PK			1.27 H	25	79.1	39.1
2	*5300.00	107.2 AV			1.27 H	25	68.1	39.1
3	10600.00	65.2 PK	74.0	-8.8	2.61 H	342	46.7	18.5
4	10600.00	51.5 AV	54.0	-2.5	2.61 H	342	33.0	18.5
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	109.7 PK			3.13 V	296	70.6	39.1
2	*5300.00	99.5 AV			3.13 V	296	60.4	39.1
3	10600.00	60.8 PK	74.0	-13.2	1.22 V	310	42.3	18.5
4	10600.00	48.5 AV	54.0	-5.5	1.22 V	310	30.0	18.5

REMARKS:

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

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	118.2 PK			1.13 H	24	79.1	39.1
2	*5320.00	107.8 AV			1.13 H	24	68.7	39.1
3	5350.00	72.6 PK	74.0	-1.4	1.22 H	24	67.1	5.5
4	5350.00	50.4 AV	54.0	-3.6	1.22 H	24	44.9	5.5
5	10640.00	63.5 PK	74.0	-10.5	2.41 H	354	45.0	18.5
6	10640.00	50.8 AV	54.0	-3.2	2.41 H	354	32.3	18.5
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	109.4 PK			3.13 V	300	70.3	39.1
2	*5320.00	99.8 AV			3.13 V	300	60.7	39.1
3	5350.00	65.9 PK	74.0	-8.1	3.22 V	299	60.4	5.5
4	5350.00	46.3 AV	54.0	-7.7	3.22 V	299	40.8	5.5
5	10640.00	60.4 PK	74.0	-13.6	2.00 V	35	41.9	18.5
6	10640.00	47.6 AV	54.0	-6.4	2.00 V	35	29.1	18.5

REMARKS:

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

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	63.9 PK	74.0	-10.1	2.37 H	345	58.2	5.7
2	5460.00	47.7 AV	54.0	-6.3	2.37 H	345	42.0	5.7
3	#5470.00	72.5 PK	74.0	-1.5	2.37 H	343	66.8	5.7
4	#5470.00	51.8 AV	54.0	-2.2	2.37 H	343	46.1	5.7
5	*5500.00	120.2 PK			2.74 H	354	80.6	39.6
6	*5500.00	109.9 AV			2.74 H	354	70.3	39.6
7	11000.00	61.8 PK	74.0	-12.2	2.72 H	352	42.1	19.7
8	11000.00	49.2 AV	54.0	-4.8	2.72 H	352	29.5	19.7
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	58.8 PK	74.0	-15.2	2.92 V	302	53.1	5.7
2	5460.00	45.3 AV	54.0	-8.7	2.92 V	302	39.6	5.7
3	#5470.00	55.8 PK	74.0	-18.2	3.07 V	295	50.1	5.7
4	#5470.00	46.3 AV	54.0	-7.7	3.07 V	295	40.6	5.7
5	*5500.00	112.2 PK			3.14 V	303	72.6	39.6
6	*5500.00	101.6 AV			3.14 V	303	62.0	39.6
7	11000.00	60.9 PK	74.0	-13.1	2.74 V	221	41.2	19.7
8	11000.00	47.2 AV	54.0	-6.8	2.74 V	221	27.5	19.7

REMARKS:

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

CHANNEL	TX Channel 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	119.8 PK			2.53 H	353	80.0	39.8
2	*5580.00	109.4 AV			2.53 H	353	69.6	39.8
3	11160.00	61.8 PK	74.0	-12.2	2.78 H	347	42.3	19.5
4	11160.00	49.4 AV	54.0	-4.6	2.78 H	347	29.9	19.5
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5580.00	111.8 PK			2.96 V	212	72.0	39.8
2	*5580.00	100.8 AV			2.96 V	212	61.0	39.8
3	11600.00	60.8 PK	74.0	-13.2	2.74 V	283	41.6	19.2
4	11600.00	47.8 AV	54.0	-6.2	2.74 V	283	28.6	19.2

REMARKS:

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

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	118.1 PK			2.84 H	353	78.2	39.9
2	*5700.00	107.9 AV			2.84 H	353	68.0	39.9
3	#5725.00	72.6 PK	74.0	-1.4	2.50 H	325	66.3	6.3
4	#5725.00	51.8 AV	54.0	-2.2	2.50 H	325	45.5	6.3
5	11400.00	61.1 PK	74.0	-12.9	3.02 H	333	41.8	19.3
6	11400.00	47.8 AV	54.0	-6.2	3.02 H	333	28.5	19.3
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	112.4 PK			3.48 V	251	72.5	39.9
2	*5700.00	101.7 AV			3.48 V	251	61.8	39.9
3	#5725.00	66.9 PK	74.0	-7.1	3.48 V	243	60.6	6.3
4	#5725.00	49.3 AV	54.0	-4.7	3.48 V	243	43.0	6.3
5	11400.00	60.5 PK	74.0	-13.5	3.02 V	311	41.2	19.3
6	11400.00	47.7 AV	54.0	-6.3	3.02 V	311	28.4	19.3

REMARKS:

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

CHANNEL	TX Channel 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	60.8 PK	68.2	-7.4	3.80 H	342	55.1	5.7
2	*5720.00	118.9 PK			3.06 H	351	78.9	40.0
3	*5720.00	108.8 AV			3.06 H	351	68.8	40.0
4	#5880.00	66.4 PK	68.2	-1.8	3.88 H	347	59.9	6.5
5	11440.00	62.3 PK	74.0	-11.7	2.88 H	269	43.0	19.3
6	11440.00	49.2 AV	54.0	-4.8	2.88 H	269	29.9	19.3
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5470.00	59.4 PK	68.2	-8.8	3.01 V	25	53.7	5.7
2	*5720.00	112.2 PK			3.46 V	80	72.2	40.0
3	*5720.00	102.7 AV			3.46 V	80	62.7	40.0
4	#5880.00	63.4 PK	68.2	-4.8	1.00 V	88	56.9	6.5
5	11440.00	61.3 PK	74.0	-12.7	2.65 V	277	42.0	19.3
6	11440.00	48.5 AV	54.0	-5.5	2.65 V	277	29.2	19.3

REMARKS:

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

802.11ac (VHT40)

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	5120.00	60.1 PK	74.0	-13.9	1.17 H	16	55.3	4.8
2	5120.00	49.3 AV	54.0	-4.7	1.17 H	16	44.5	4.8
3	*5270.00	114.6 PK			1.15 H	24	75.6	39.0
4	*5270.00	104.8 AV			1.15 H	24	65.8	39.0
5	#10540.00	62.0 PK	74.0	-12.0	1.95 H	352	43.4	18.6
6	#10540.00	49.6 AV	54.0	-4.4	1.95 H	352	31.0	18.6
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5120.00	55.8 PK	74.0	-18.2	3.12 V	295	51.0	4.8
2	5120.00	44.4 AV	54.0	-9.6	3.12 V	295	39.6	4.8
3	*5270.00	108.1 PK			3.14 V	298	69.1	39.0
4	*5270.00	98.0 AV			3.14 V	298	59.0	39.0
5	#10540.00	60.2 PK	74.0	-13.8	3.83 V	282	41.6	18.6
6	#10540.00	47.7 AV	54.0	-6.3	3.83 V	282	29.1	18.6

REMARKS:

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

CHANNEL	TX Channel 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	110.7 PK			1.21 H	24	71.6	39.1
2	*5310.00	100.1 AV			1.21 H	24	61.0	39.1
3	5350.00	72.2 PK	74.0	-1.8	1.32 H	20	66.7	5.5
4	5350.00	50.7 AV	54.0	-3.3	1.32 H	20	45.2	5.5
5	10620.00	60.0 PK	74.0	-14.0	2.24 H	325	41.5	18.5
6	10620.00	47.2 AV	54.0	-6.8	2.24 H	325	28.7	18.5
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5310.00	104.5 PK			3.59 V	299	65.4	39.1
2	*5310.00	93.9 AV			3.59 V	299	54.8	39.1
3	5350.00	68.4 PK	74.0	-5.6	3.54 V	301	62.9	5.5
4	5350.00	47.8 AV	54.0	-6.2	3.54 V	301	42.3	5.5
5	10620.00	59.8 PK	74.0	-14.2	3.28 V	274	41.3	18.5
6	10620.00	47.0 AV	54.0	-7.0	3.28 V	274	28.5	18.5

REMARKS:

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

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	65.6 PK	74.0	-8.4	1.19 H	350	59.9	5.7
2	5460.00	47.9 AV	54.0	-6.1	1.19 H	350	42.2	5.7
3	#5470.00	70.4 PK	74.0	-3.6	1.27 H	341	64.7	5.7
4	#5470.00	52.4 AV	54.0	-1.6	1.27 H	341	46.7	5.7
5	*5510.00	108.5 PK			1.62 H	171	68.9	39.6
6	*5510.00	98.6 AV			1.62 H	171	59.0	39.6
7	11020.00	61.1 PK	74.0	-12.9	2.44 H	350	41.5	19.6
8	11020.00	48.0 AV	54.0	-6.0	2.44 H	350	28.4	19.6
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	59.6 PK	74.0	-14.4	3.24 V	308	53.9	5.7
2	5460.00	45.8 AV	54.0	-8.2	3.24 V	308	40.1	5.7
3	#5470.00	68.7 PK	74.0	-5.3	3.11 V	304	63.0	5.7
4	#5470.00	49.5 AV	54.0	-4.5	3.11 V	304	43.8	5.7
5	*5510.00	104.8 PK			3.30 V	307	65.2	39.6
6	*5510.00	95.0 AV			3.30 V	307	55.4	39.6
7	11020.00	59.2 PK	74.0	-14.8	3.25 V	281	39.6	19.6
8	11020.00	47.7 AV	54.0	-6.3	3.25 V	281	28.1	19.6

REMARKS:

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

CHANNEL	TX Channel 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	5400.00	60.2 PK	74.0	-13.8	1.37 H	340	54.7	5.5
2	5400.00	49.0 AV	54.0	-5.0	1.37 H	340	43.5	5.5
3	*5550.00	112.0 PK			1.37 H	350	72.4	39.6
4	*5550.00	102.1 AV			1.37 H	350	62.5	39.6
5	11100.00	60.3 PK	74.0	-13.7	2.68 H	354	41.1	19.2
6	11100.00	48.0 AV	54.0	-6.0	2.68 H	354	28.8	19.2
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5400.00	58.2 PK	74.0	-15.8	3.63 V	307	52.7	5.5
2	5400.00	46.8 AV	54.0	-7.2	3.63 V	307	41.3	5.5
3	*5550.00	109.1 PK			3.60 V	319	69.5	39.6
4	*5550.00	99.3 AV			3.60 V	319	59.7	39.6
5	11100.00	60.1 PK	74.0	-13.9	3.41 V	295	40.9	19.2
6	11100.00	47.6 AV	54.0	-6.4	3.41 V	295	28.4	19.2

REMARKS:

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

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	111.1 PK			1.42 H	28	71.3	39.8
2	*5670.00	101.6 AV			1.42 H	28	61.8	39.8
3	#5725.00	72.3 PK	74.0	-1.7	1.09 H	309	66.0	6.3
4	#5725.00	49.6 AV	54.0	-4.4	1.09 H	309	43.3	6.3
5	11340.00	61.1 PK	74.0	-12.9	2.32 H	337	41.6	19.5
6	11340.00	48.1 AV	54.0	-5.9	2.32 H	337	28.6	19.5
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5670.00	106.4 PK			3.45 V	349	66.6	39.8
2	*5670.00	95.9 AV			3.45 V	349	56.1	39.8
3	#5725.00	68.6 PK	74.0	-5.4	3.68 V	308	62.3	6.3
4	#5725.00	46.9 AV	54.0	-7.1	3.68 V	308	40.6	6.3
5	11340.00	60.3 PK	74.0	-13.7	3.38 V	305	40.8	19.5
6	11340.00	47.6 AV	54.0	-6.4	3.38 V	305	28.1	19.5

REMARKS:

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

CHANNEL	TX Channel 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	62.5 PK	74.0	-11.5	2.50 H	26	56.8	5.7
2	#5470.00	49.7 AV	54.0	-4.3	2.50 H	26	44.0	5.7
3	*5710.00	115.9 PK			2.98 H	349	75.9	40.0
4	*5710.00	105.5 AV			2.98 H	349	65.5	40.0
5	#5870.00	66.6 PK	74.0	-7.4	2.51 H	22	60.1	6.5
6	#5870.00	52.3 AV	54.0	-1.7	2.51 H	22	45.8	6.5
7	11420.00	61.5 PK	74.0	-12.5	2.56 H	50	42.2	19.3
8	11420.00	48.5 AV	54.0	-5.5	2.56 H	50	29.2	19.3
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5470.00	57.9 PK	74.0	-16.1	3.00 V	43	52.2	5.7
2	#5470.00	47.2 AV	54.0	-6.8	3.00 V	43	41.5	5.7
3	*5710.00	108.5 PK			2.96 V	44	68.5	40.0
4	*5710.00	98.3 AV			2.96 V	44	58.3	40.0
5	#5850.00	61.3 PK	74.0	-12.7	2.85 V	45	54.8	6.5
6	#5850.00	49.1 AV	54.0	-4.9	2.85 V	45	42.6	6.5
7	11420.00	61.0 PK	74.0	-13.0	1.73 V	88	41.7	19.3
8	11420.00	48.0 AV	54.0	-6.0	1.73 V	88	28.7	19.3

REMARKS:

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

802.11ac (VHT80)

CHANNEL	TX Channel 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	55.9 PK	74.0	-18.1	1.23 H	14	51.1	4.8
2	5150.00	44.7 AV	54.0	-9.3	1.23 H	14	39.9	4.8
3	*5290.00	105.7 PK			1.20 H	24	66.6	39.1
4	*5290.00	95.9 AV			1.20 H	24	56.8	39.1
5	5350.00	65.8 PK	74.0	-8.2	1.17 H	21	60.3	5.5
6	5350.00	52.6 AV	54.0	-1.4	1.17 H	21	47.1	5.5
7	#10580.00	60.9 PK	74.0	-13.1	2.12 H	317	42.3	18.6
8	#10580.00	48.1 AV	54.0	-5.9	2.12 H	317	29.5	18.6
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	55.9 PK	74.0	-18.1	2.96 V	315	51.1	4.8
2	5150.00	43.5 AV	54.0	-10.5	2.96 V	315	38.7	4.8
3	*5290.00	97.9 PK			3.16 V	297	58.8	39.1
4	*5290.00	88.5 AV			3.16 V	297	49.4	39.1
5	5350.00	61.5 PK	74.0	-12.5	3.07 V	298	56.0	5.5
6	5350.00	47.4 AV	54.0	-6.6	3.07 V	298	41.9	5.5
7	#10580.00	59.7 PK	74.0	-14.3	3.21 V	286	41.1	18.6
8	#10580.00	48.1 AV	54.0	-5.9	3.21 V	286	29.5	18.6

REMARKS:

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

CHANNEL	TX Channel 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	65.2 PK	74.0	-8.8	1.08 H	347	59.5	5.7
2	5460.00	51.7 AV	54.0	-2.3	1.08 H	347	46.0	5.7
3	#5470.00	67.9 PK	74.0	-6.1	1.07 H	347	62.2	5.7
4	#5470.00	52.5 AV	54.0	-1.5	1.07 H	347	46.8	5.7
5	*5530.00	103.1 PK			1.54 H	171	63.5	39.6
6	*5530.00	93.6 AV			1.54 H	171	54.0	39.6
7	#5725.00	57.5 PK	74.0	-16.5	1.20 H	5	51.2	6.3
8	#5725.00	45.3 AV	54.0	-8.7	1.20 H	5	39.0	6.3
9	11060.00	60.9 PK	74.0	-13.1	1.94 H	324	41.6	19.3
10	11060.00	47.8 AV	54.0	-6.2	1.94 H	324	28.5	19.3
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	59.7 PK	74.0	-14.3	3.26 V	43	54.0	5.7
2	5460.00	47.5 AV	54.0	-6.5	3.26 V	43	41.8	5.7
3	#5470.00	60.8 PK	74.0	-13.2	3.17 V	38	55.1	5.7
4	#5470.00	48.6 AV	54.0	-5.4	3.17 V	38	42.9	5.7
5	*5530.00	100.6 PK			3.48 V	43	61.0	39.6
6	*5530.00	91.1 AV			3.48 V	43	51.5	39.6
7	#5725.00	56.8 PK	74.0	-17.2	3.06 V	63	50.5	6.3
8	#5725.00	45.1 AV	54.0	-8.9	3.06 V	63	38.8	6.3
9	11060.00	59.4 PK	74.0	-14.6	3.42 V	256	40.1	19.3
10	11060.00	49.0 AV	54.0	-5.0	3.42 V	256	29.7	19.3

REMARKS:

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

CHANNEL	TX Channel 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	61.3 PK	74.0	-12.7	2.42 H	19	55.6	5.7
2	#5470.00	49.0 AV	54.0	-5.0	2.42 H	19	43.3	5.7
3	*5690.00	112.1 PK			3.25 H	348	72.2	39.9
4	*5690.00	103.1 AV			3.25 H	348	63.2	39.9
5	#5850.00	68.1 PK	74.0	-5.9	2.49 H	16	61.6	6.5
6	#5850.00	52.6 AV	54.0	-1.4	2.49 H	16	46.1	6.5
7	11380.00	61.9 PK	74.0	-12.1	2.22 H	0	42.6	19.3
8	11380.00	48.7 AV	54.0	-5.3	2.22 H	0	29.4	19.3
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5470.00	58.7 PK	74.0	-15.3	3.50 V	345	53.0	5.7
2	#5470.00	47.2 AV	54.0	-6.8	3.50 V	345	41.5	5.7
3	*5690.00	106.4 PK			3.57 V	305	66.5	39.9
4	*5690.00	97.3 AV			3.57 V	305	57.4	39.9
5	#5850.00	61.3 PK	74.0	-12.7	3.21 V	288	54.8	6.5
6	#5850.00	49.4 AV	54.0	-4.6	3.21 V	288	42.9	6.5
7	11380.00	61.4 PK	74.0	-12.6	1.99 V	232	42.1	19.3
8	11380.00	48.3 AV	54.0	-5.7	1.99 V	232	29.0	19.3

REMARKS:

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

Below 1GHz worst-case data:

Mode A

802.11a

CHANNEL	TX Channel 52	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	30MHz ~ 1GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	57.07	27.5 QP	40.0	-12.5	2.00 H	239	42.1	-14.6
2	93.93	23.8 QP	43.5	-19.7	2.00 H	97	43.4	-19.6
3	157.97	24.9 QP	43.5	-18.6	1.50 H	238	38.6	-13.7
4	216.18	28.2 QP	46.0	-17.8	1.01 H	137	44.2	-16.0
5	305.44	25.8 QP	46.0	-20.2	1.01 H	141	37.8	-12.0
6	462.61	26.7 QP	46.0	-19.3	1.50 H	137	35.3	-8.6
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	37.66	34.0 QP	40.0	-6.0	1.00 V	193	49.3	-15.3
2	45.42	34.3 QP	40.0	-5.7	1.00 V	14	49.0	-14.7
3	103.64	23.4 QP	43.5	-20.1	1.00 V	119	41.6	-18.2
4	169.61	26.1 QP	43.5	-17.4	1.00 V	171	40.1	-14.0
5	214.24	26.3 QP	43.5	-17.2	1.00 V	153	42.4	-16.1
6	291.85	21.9 QP	46.0	-24.1	1.50 V	267	34.2	-12.3

REMARKS:

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

Mode B

802.11a

CHANNEL	TX Channel 52	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	30MHz ~ 1GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	57.07	28.0 QP	40.0	-12.0	2.00 H	258	42.6	-14.6
2	95.87	24.1 QP	43.5	-19.4	2.00 H	251	43.5	-19.4
3	111.40	23.1 QP	43.5	-20.4	1.50 H	96	40.3	-17.2
4	159.91	22.0 QP	43.5	-21.5	2.00 H	253	35.8	-13.8
5	214.24	28.2 QP	43.5	-15.3	1.00 H	244	44.3	-16.1
6	303.50	27.0 QP	46.0	-19.0	1.00 H	107	39.0	-12.0
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	39.60	37.3 QP	40.0	-2.7	1.00 V	51	52.5	-15.2
2	57.07	31.2 QP	40.0	-8.8	1.00 V	3	45.8	-14.6
3	107.52	22.7 QP	43.5	-20.8	1.00 V	94	40.3	-17.6
4	154.09	25.4 QP	43.5	-18.1	1.00 V	161	39.0	-13.6
5	206.48	27.1 QP	43.5	-16.4	1.00 V	294	43.6	-16.5
6	303.50	23.1 QP	46.0	-22.9	1.50 V	15	35.1	-12.0

REMARKS:

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

Mode C

802.11a

CHANNEL	TX Channel 52	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	30MHz ~ 1GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	57.07	28.7 QP	40.0	-11.3	2.00 H	235	43.3	-14.6
2	95.87	24.0 QP	43.5	-19.5	2.00 H	98	43.4	-19.4
3	150.20	26.7 QP	43.5	-16.8	1.00 H	145	40.4	-13.7
4	214.24	27.8 QP	43.5	-15.7	1.00 H	133	43.9	-16.1
5	305.44	26.4 QP	46.0	-19.6	1.00 H	129	38.4	-12.0
6	456.79	25.4 QP	46.0	-20.6	1.49 H	140	34.1	-8.7
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	37.66	37.3 QP	40.0	-2.7	1.00 V	229	52.6	-15.3
2	57.07	30.6 QP	40.0	-9.4	1.00 V	323	45.2	-14.6
3	70.65	27.0 QP	40.0	-13.0	1.99 V	125	43.4	-16.4
4	150.20	27.1 QP	43.5	-16.4	1.49 V	159	40.8	-13.7
5	214.24	25.1 QP	43.5	-18.4	1.49 V	184	41.2	-16.1
6	305.44	22.7 QP	46.0	-23.3	1.49 V	139	34.7	-12.0

REMARKS:

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

Mode D

802.11a

CHANNEL	TX Channel 52	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	30MHz ~ 1GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	57.07	28.1 QP	40.0	-11.9	2.00 H	86	42.7	-14.6
2	93.93	27.3 QP	43.5	-16.2	2.00 H	99	46.9	-19.6
3	154.09	24.2 QP	43.5	-19.3	2.00 H	103	37.8	-13.6
4	206.48	28.8 QP	43.5	-14.7	1.50 H	126	45.3	-16.5
5	278.27	23.3 QP	46.0	-22.7	1.00 H	85	36.0	-12.7
6	303.50	26.4 QP	46.0	-19.6	1.00 H	118	38.4	-12.0
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	37.66	37.9 QP	40.0	-2.1	1.00 V	356	53.2	-15.3
2	57.07	30.9 QP	40.0	-9.1	1.00 V	1	45.5	-14.6
3	107.52	20.9 QP	43.5	-22.6	1.50 V	35	38.5	-17.6
4	154.09	23.5 QP	43.5	-20.0	1.50 V	181	37.1	-13.6
5	206.48	26.9 QP	43.5	-16.6	1.00 V	89	43.4	-16.5
6	301.56	23.5 QP	46.0	-22.5	2.00 V	14	35.6	-12.1

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
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: Oct. 25, 2016

Description & Manufacturer	Model No.	Serial No.	Date Of Calibration	Due Date Of Calibration
Test Receiver ROHDE & SCHWARZ	ESCI	100424	Oct. 24, 2016	Oct. 23, 2017
RF signal cable (with 10dB PAD) Woken	5D-FB	Cable-cond1-01	Dec. 26, 2015	Dec. 25, 2016
LISN ROHDE & SCHWARZ (EUT)	ESH3-Z5	835239/001	Feb. 26, 2016	Feb. 25, 2017
LISN ROHDE & SCHWARZ (Peripheral)	ESH3-Z5	100311	Jul. 28, 2016	Jul. 27, 2017
Software ADT	BV ADT_Cond_ V7.3.7.3	NA	NA	NA

Note: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in HwaYa Shielded Room 1.
3. The VCCI Site Registration No. is C-2040.

4.2.3 Test Procedures

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.

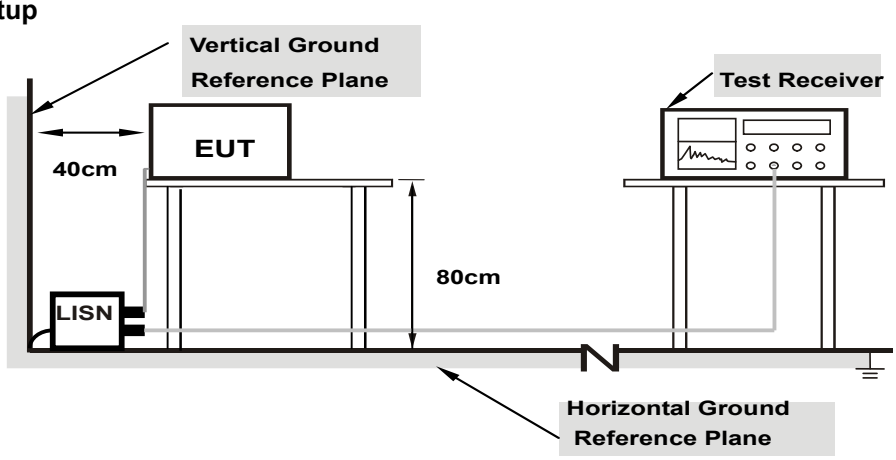
c. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

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.

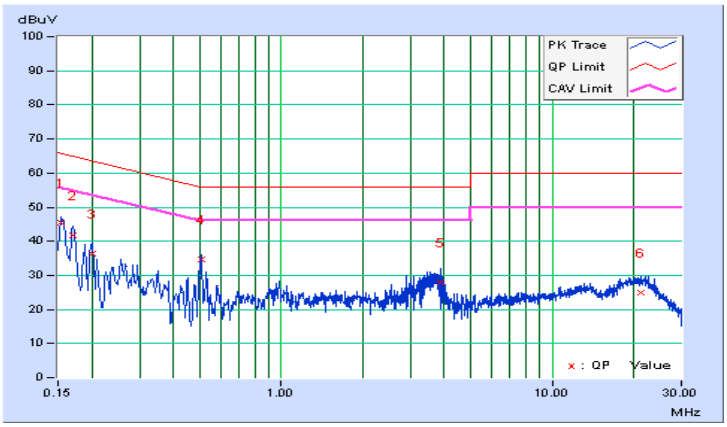
4.2.7 Test Results

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	0.15391	10.08	35.39	23.96	45.47	34.04	65.79	55.79	-20.32	-21.75
2	0.16967	10.08	31.77	21.25	41.85	31.33	64.98	54.98	-23.13	-23.65
3	0.20084	10.08	26.45	12.39	36.53	22.47	63.58	53.58	-27.05	-31.11
4	0.50641	10.19	24.56	20.15	34.75	30.34	56.00	46.00	-21.25	-15.66
5	3.88796	10.46	17.48	7.85	27.94	18.31	56.00	46.00	-28.06	-27.69
6	21.33829	11.50	13.58	8.58	25.08	20.08	60.00	50.00	-34.92	-29.92

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.

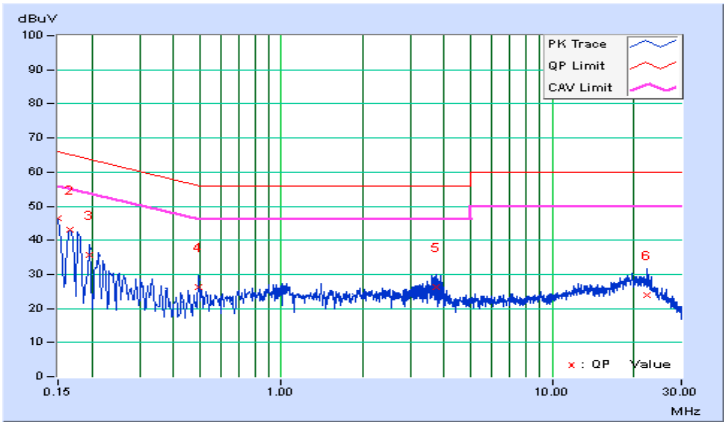


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	A		

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15000	10.08	36.50	23.37	46.58	33.45	66.00	56.00	-19.42	-22.55
2	0.16569	10.08	33.04	17.77	43.12	27.85	65.17	55.17	-22.05	-27.32
3	0.19692	10.08	25.71	13.53	35.79	23.61	63.74	53.74	-27.95	-30.13
4	0.49799	10.25	16.02	8.64	26.27	18.89	56.03	46.03	-29.76	-27.14
5	3.71983	10.56	15.55	7.28	26.11	17.84	56.00	46.00	-29.89	-28.16
6	22.50738	11.75	12.27	6.83	24.02	18.58	60.00	50.00	-35.98	-31.42

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.

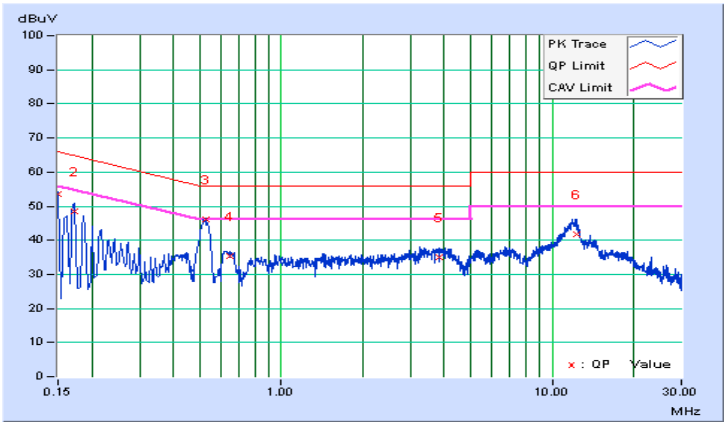


Phase	Line (L)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	B		

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15000	10.07	43.37	28.76	53.44	38.83	66.00	56.00	-12.56	-17.17
2	0.17147	10.08	38.39	25.28	48.47	35.36	64.89	54.89	-16.42	-19.53
3	**0.52544**	**10.20**	**35.92**	**30.48**	**46.12**	**40.68**	**56.00**	**46.00**	**-9.88**	**-5.32**
4	0.64362	10.22	25.09	20.64	35.31	30.86	56.00	46.00	-20.69	-15.14
5	3.83322	10.46	24.60	19.58	35.06	30.04	56.00	46.00	-20.94	-15.96
6	12.28664	10.90	30.82	26.04	41.72	36.94	60.00	50.00	-18.28	-13.06

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.

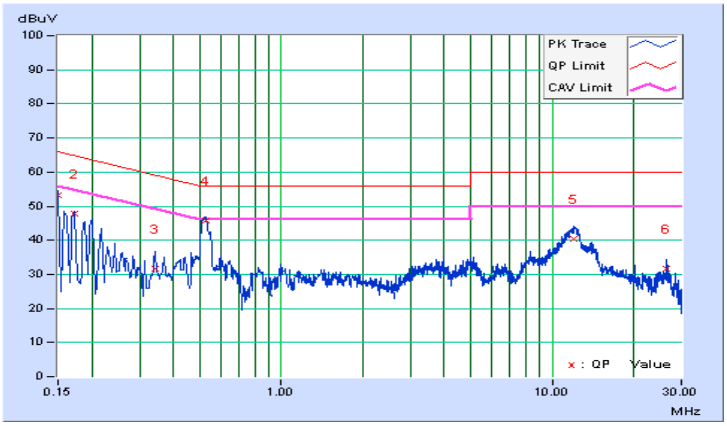


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	B		

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15000	10.08	43.06	28.78	53.14	38.86	66.00	56.00	-12.86	-17.14
2	0.17328	10.08	37.85	24.35	47.93	34.43	64.80	54.80	-16.87	-20.37
3	0.34159	10.19	21.35	13.32	31.54	23.51	59.16	49.16	-27.62	-25.65
4	0.52544	10.25	35.46	30.28	45.71	40.53	56.00	46.00	-10.29	-5.47
5	11.94256	10.98	29.50	24.48	40.48	35.46	60.00	50.00	-19.52	-14.54
6	26.48776	12.03	19.50	15.32	31.53	27.35	60.00	50.00	-28.47	-22.65

REMARKS:

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

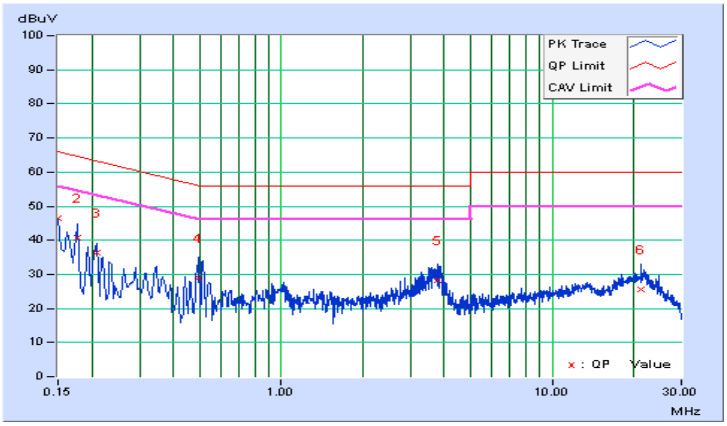


Phase	Line (L)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	C		

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15000	10.07	36.40	26.66	46.47	36.73	66.00	56.00	-19.53	-19.27
2	0.17737	10.08	30.81	20.41	40.89	30.49	64.61	54.61	-23.72	-24.12
3	0.20838	10.08	26.20	12.10	36.28	22.18	63.27	53.27	-26.99	-31.09
4	0.49799	10.19	18.75	8.56	28.94	18.75	56.03	46.03	-27.09	-27.28
5	3.79412	10.46	17.92	8.52	28.38	18.98	56.00	46.00	-27.62	-27.02
6	21.30701	11.50	14.07	8.97	25.57	20.47	60.00	50.00	-34.43	-29.53

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.

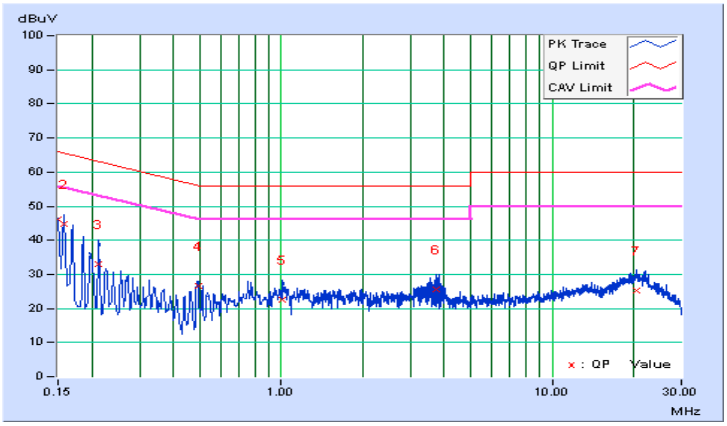


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	C		

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15000	10.08	36.05	24.28	46.13	34.36	66.00	56.00	-19.87	-21.64
2	0.15782	10.08	34.71	19.93	44.79	30.01	65.58	55.58	-20.79	-25.57
3	0.21256	10.09	23.05	11.19	33.14	21.28	63.10	53.10	-29.96	-31.82
4	0.49408	10.25	16.22	8.92	26.47	19.17	56.10	46.10	-29.63	-26.93
5	1.01411	10.29	12.42	6.73	22.71	17.02	56.00	46.00	-33.29	-28.98
6	3.72374	10.56	15.14	6.92	25.70	17.48	56.00	46.00	-30.30	-28.52
7	20.41162	11.61	13.77	8.59	25.38	20.20	60.00	50.00	-34.62	-29.80

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.

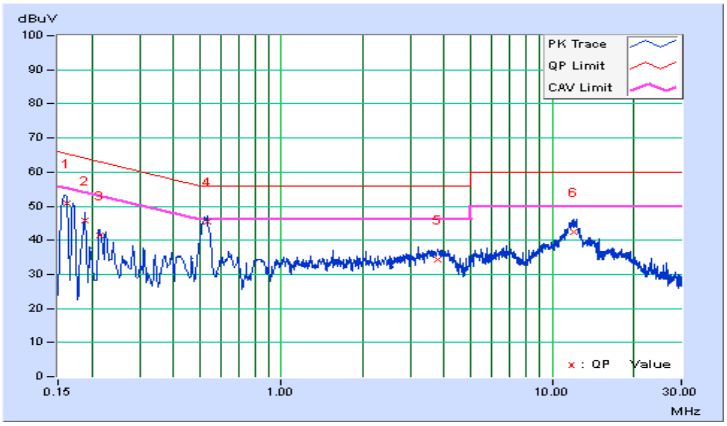


Phase	Line (L)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	D		

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	0.16173	10.08	40.66	24.80	50.74	34.88	65.37	55.37	-14.63	-20.49
2	0.18903	10.08	35.72	20.00	45.80	30.08	64.08	54.08	-18.28	-24.00
3	0.21282	10.09	31.48	17.31	41.57	27.40	63.09	53.09	-21.52	-25.69
4	0.53318	10.20	35.38	29.20	45.58	39.40	56.00	46.00	-10.42	-6.60
5	3.76284	10.46	24.02	19.12	34.48	29.58	56.00	46.00	-21.52	-16.42
6	12.05595	10.89	31.47	26.76	42.36	37.65	60.00	50.00	-17.64	-12.35

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.

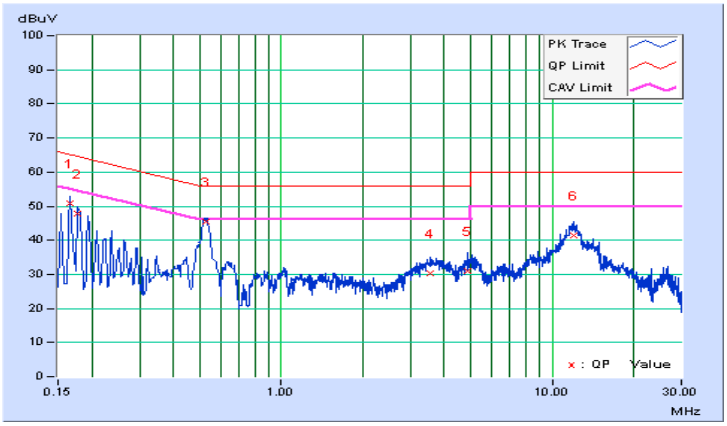


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	D		

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.16564	10.08	40.75	24.70	50.83	34.78	65.18	55.18	-14.35	-20.40
2	0.17744	10.08	37.87	22.52	47.95	32.60	64.60	54.60	-16.65	-22.00
3	0.52536	10.25	35.31	29.68	45.56	39.93	56.00	46.00	-10.44	-6.07
4	3.56343	10.55	19.69	14.24	30.24	24.79	56.00	46.00	-25.76	-21.21
5	4.88501	10.63	20.50	14.19	31.13	24.82	56.00	46.00	-24.87	-21.18
6	12.02467	10.99	30.30	25.33	41.29	36.32	60.00	50.00	-18.71	-13.68

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

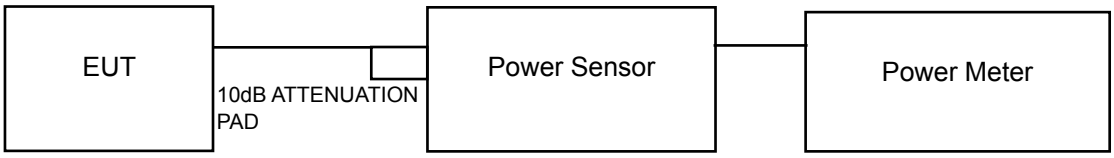
Per KDB 662911 Method of conducted output power measurement on IEEE 802.11 devices,

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 $N_{ANT} \geq 5$.

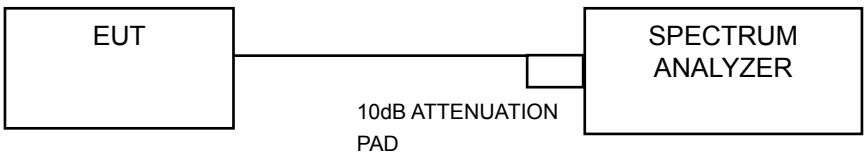
For power measurements on all other devices: Array Gain = 10 log(N_{ANT}/N_{SS}) dB.

4.3.2 Test Setup

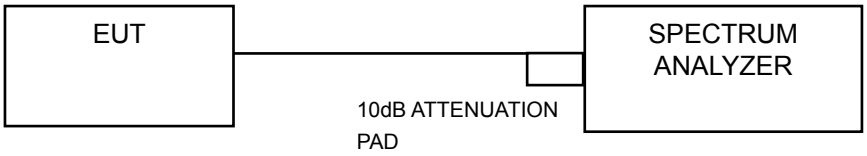
For Power Output Measurement
For 802.11a, 802.11ac (VHT20), 802.11ac (VHT40)



For 802.11ac (VHT80)



For 26dB and Occupied 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, 802.11ac (VHT20), 802.11ac (VHT40)

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)

1) Set span to encompass the entire 26 dB EBW (or, alternatively, the entire 99% occupied bandwidth) of the signal.
2) Set sweep trigger to “free run”.
3) Set RBW = 1 MHz.
4) Set VBW ≥ 3 MHz
5) Number of points in sweep ≥ 2 Span / RBW.
6) Sweep time ≤ (number of points in sweep) * T
7) Using emission bandwidth to determine the frequency span for integration the channel bandwidth.
8) Detector = RMS.
9) Trace mode = max hold.
10) Allow max hold to run for at least 60 seconds, or longer as needed to allow the trace to stabilize.

FOR 26dB BANDWIDTH

1) Set RBW = approximately 1% of the emission bandwidth.
2) Set the VBW > RBW.
3) Detector = Peak.
4) Trace mode = max hold.
5) 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%.

FOR OCCUPIED BANDWIDTH

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.

4.3.5 Deviation from Test Standard

No deviation.

4.3.6 EUT Operating Conditions

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

4.3.7 Test Result

POWER OUTPUT:

CDD Mode

802.11a

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	13.46	13.61	12.13	13.98	86.477	19.37	24.00	Pass
60	5300	13.89	13.65	12.43	13.85	89.429	19.51	24.00	Pass
64	5320	13.88	14.05	13.03	14.18	96.117	19.83	24.00	Pass
100	5500	13.53	13.11	12.71	12.92	81.258	19.10	24.00	Pass
116	5580	13.38	13.01	12.55	13.17	80.514	19.06	24.00	Pass
140	5700	13.18	13.09	12.74	14.12	85.783	19.33	24.00	Pass
144	5720 For U-NII-2C	9.74	9.42	9.50	10.37	40.012	16.02	23.01	Pass
144	5720 For U-NII-3	5.57	5.09	5.22	6.16	15.059	11.78	30.00	Pass

Note:
Chain 0
1. 11dBm + 10log(21.75) = 24.37 dBm > 24dBm.
2. 11dBm + 10log(21.81) = 24.39 dBm > 24dBm.
3. 11dBm + 10log(21.79) = 24.38 dBm > 24dBm.
4. 11dBm + 10log(21.73) = 24.37 dBm > 24dBm.
5. 11dBm + 10log(21.80) = 24.38 dBm > 24dBm.
6. 11dBm + 10log(21.83) = 24.39 dBm > 24dBm.
7. 11dBm + 10log(5725.00 - 5709.01) = 23.04 dBm < 24dBm.

Chain 1
1. 11dBm + 10log(21.75) = 24.37 dBm > 24dBm.
2. 11dBm + 10log(21.75) = 24.37 dBm > 24dBm.
3. 11dBm + 10log(21.67) = 24.36 dBm > 24dBm.
4. 11dBm + 10log(21.63) = 24.35 dBm > 24dBm.
5. 11dBm + 10log(21.66) = 24.36 dBm > 24dBm.
6. 11dBm + 10log(21.54) = 24.33 dBm > 24dBm.
7. 11dBm + 10log(5725.00 - 5709.10) = 23.01 dBm < 24dBm.

Chain 2
1. 11dBm + 10log(21.76) = 24.38 dBm > 24dBm.
2. 11dBm + 10log(21.76) = 24.38 dBm > 24dBm.
3. 11dBm + 10log(21.76) = 24.38 dBm > 24dBm.
4. 11dBm + 10log(21.91) = 24.41 dBm > 24dBm.
5. 11dBm + 10log(21.70) = 24.36 dBm > 24dBm.
6. 11dBm + 10log(21.69) = 24.36 dBm > 24dBm.
7. 11dBm + 10log(5725.00 - 5708.89) = 23.07 dBm < 24dBm.

Chain 3
1. 11dBm + 10log(21.87) = 24.40 dBm > 24dBm.
2. 11dBm + 10log(21.81) = 24.39 dBm > 24dBm.
3. 11dBm + 10log(21.73) = 24.37 dBm > 24dBm.
4. 11dBm + 10log(21.73) = 24.37 dBm > 24dBm.
5. 11dBm + 10log(21.83) = 24.39 dBm > 24dBm.
6. 11dBm + 10log(21.80) = 24.38 dBm > 24dBm.
7. 11dBm + 10log(5725.00 - 5708.97) = 23.05 dBm < 24dBm.

802.11ac (VHT20)

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	13.56	13.76	12.09	13.95	87.479	19.42	24.00	Pass
60	5300	13.71	13.58	12.24	14.05	88.458	19.47	24.00	Pass
64	5320	14.02	14.21	12.58	14.23	96.196	19.83	24.00	Pass
100	5500	13.53	13.25	12.56	13.15	82.361	19.16	24.00	Pass
116	5580	13.41	13.05	12.45	13.46	81.873	19.13	24.00	Pass
140	5700	13.24	12.94	12.91	14.09	85.953	19.34	24.00	Pass
144	5720 For U-NII-2C	10.30	8.81	9.06	9.95	38.450	15.85	23.69	Pass
144	5720 For U-NII-3	5.61	6.13	6.68	7.60	19.248	12.84	30.00	Pass

Note:
Chain 0
1. 11dBm + 10log(21.95) = 24.41 dBm > 24dBm.
2. 11dBm + 10log(22.93) = 24.60 dBm > 24dBm.
3. 11dBm + 10log(22.03) = 24.43 dBm > 24dBm.
4. 11dBm + 10log(22.03) = 24.43 dBm > 24dBm.
5. 11dBm + 10log(21.99) = 24.42 dBm > 24dBm.
6. 11dBm + 10log(22.00) = 24.42 dBm > 24dBm.
7. 11dBm + 10log(5725.00 - 5706.09) = 23.77 dBm < 24dBm.
Chain 1
1. 11dBm + 10log(21.88) = 24.40 dBm > 24dBm.
2. 11dBm + 10log(21.79) = 24.38 dBm > 24dBm.
3. 11dBm + 10log(22.13) = 24.45 dBm > 24dBm.
4. 11dBm + 10log(21.87) = 24.40 dBm > 24dBm.
5. 11dBm + 10log(21.72) = 24.37 dBm > 24dBm.
6. 11dBm + 10log(21.66) = 24.36 dBm > 24dBm.
7. 11dBm + 10log(5725.00 - 5706.42) = 23.69 dBm < 24dBm.
Chain 2
1. 11dBm + 10log(21.89) = 24.40 dBm > 24dBm.
2. 11dBm + 10log(21.70) = 24.36 dBm > 24dBm.
3. 11dBm + 10log(21.75) = 24.37 dBm > 24dBm.
4. 11dBm + 10log(22.10) = 24.44 dBm > 24dBm.
5. 11dBm + 10log(21.76) = 24.38 dBm > 24dBm.
6. 11dBm + 10log(21.92) = 24.41 dBm > 24dBm.
7. 11dBm + 10log(5725.00 - 5706.17) = 23.75 dBm < 24dBm.

Chain 3
1. 11dBm + 10log(21.82) = 24.39 dBm > 24dBm.
2. 11dBm + 10log(21.74) = 24.37 dBm > 24dBm.
3. 11dBm + 10log(21.86) = 24.40 dBm > 24dBm.
4. 11dBm + 10log(21.87) = 24.40 dBm > 24dBm.
5. 11dBm + 10log(21.66) = 24.36 dBm > 24dBm.
6. 11dBm + 10log(21.73) = 24.37 dBm > 24dBm.
7. 11dBm + 10log(5725.00 - 5703.39) = 24.35 dBm > 24dBm.

802.11ac (VHT40)

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	17.83	16.14	18.99	17.24	**234.005**	23.69	24.00	Pass
62	5310	13.76	10.33	14.58	13.53	85.807	19.34	24.00	Pass
102	5510	11.62	11.46	10.51	12.30	56.745	17.54	24.00	Pass
110	5550	17.17	16.11	15.99	17.06	**183.486**	22.64	24.00	Pass
134	5670	16.28	16.86	15.71	17.25	181.318	22.58	24.00	Pass
142	5710 For U-NII-2C	12.19	12.59	11.92	13.09	78.492	18.95	24.00	Pass
142	5710 For U-NII-3	8.93	9.35	8.53	9.77	36.710	15.65	30.00	Pass

Note:
Chain 0
1. 11dBm + 10log(29.68) = 27.20 dBm > 24dBm.
2. 11dBm + 10log(27.53) = 27.19 dBm > 24dBm.
3. 11dBm + 10log(27.18) = 27.21 dBm > 24dBm.
4. 11dBm + 10log(30.01) = 27.20 dBm > 24dBm.
5. 11dBm + 10log(29.41) = 27.20 dBm > 24dBm.
6. 11dBm + 10log(5725.00 - 5669.79) = 28.42 dBm > 24dBm.
Chain 1
1. 11dBm + 10log(30.05) = 27.20 dBm > 24dBm.
2. 11dBm + 10log(27.12) = 27.19 dBm > 24dBm.
3. 11dBm + 10log(27.13) = 27.21 dBm > 24dBm.
4. 11dBm + 10log(29.33) = 27.20 dBm > 24dBm.
5. 11dBm + 10log(29.28) = 27.20 dBm > 24dBm.
6. 11dBm + 10log(5725.00 - 5668.77) = 28.50 dBm > 24dBm.
Chain 2
1. 11dBm + 10log(29.71) = 27.20 dBm > 24dBm.
2. 11dBm + 10log(27.16) = 27.19 dBm > 24dBm.
3. 11dBm + 10log(27.13) = 27.21 dBm > 24dBm.
4. 11dBm + 10log(29.46) = 27.20 dBm > 24dBm.
5. 11dBm + 10log(29.05) = 27.20 dBm > 24dBm.
6. 11dBm + 10log(5725.00 - 5676.96) = 27.82 dBm > 24dBm.
Chain 3
1. 11dBm + 10log(29.17) = 27.20 dBm > 24dBm.
2. 11dBm + 10log(27.11) = 27.19 dBm > 24dBm.
3. 11dBm + 10log(27.14) = 27.21 dBm > 24dBm.
4. 11dBm + 10log(29.60) = 27.20 dBm > 24dBm.
5. 11dBm + 10log(29.86) = 27.20 dBm > 24dBm.
6. 11dBm + 10log(5725.00 - 5670.28) = 28.38 dBm > 24dBm.

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	Chain 2	Chain 3				
58	5290	11.71	11.98	12.04	11.25	59.932	17.78	24.00	Pass
106	5530	9.12	8.85	9.29	9.74	33.751	15.28	24.00	Pass
138	5690 For U-NII-2C	15.06	15.58	14.69	15.91	145.829	21.64	24.00	Pass
138	5690 For U-NII-3	11.33	10.56	9.89	11.21	51.144	17.09	30.00	Pass

Note:
Chain 0
1. 11dBm + 10log(83.05) = 30.19 dBm > 24dBm.
2. 11dBm + 10log(82.85) = 30.18 dBm > 24dBm.
3. 11dBm + 10log(5725.00 - 5620.61) = 31.19 dBm > 24dBm.
Chain 1
1. 11dBm + 10log(82.00) = 30.14 dBm > 24dBm.
2. 11dBm + 10log(81.95) = 30.14 dBm > 24dBm.
3. 11dBm + 10log(5725.00 - 5620.83) = 31.18 dBm > 24dBm.
Chain 2
1. 11dBm + 10log(82.23) = 30.15 dBm > 24dBm.
2. 11dBm + 10log(81.81) = 30.13 dBm > 24dBm.
3. 11dBm + 10log(5725.00 - 5639.39) = 30.33 dBm > 24dBm.
Chain 3
1. 11dBm + 10log(82.45) = 30.16 dBm > 24dBm.
2. 11dBm + 10log(82.48) = 30.16 dBm > 24dBm.
3. 11dBm + 10log(5725.00 - 5622.56) = 31.10 dBm > 24dBm.

Beamforming Mode

802.11ac (VHT20)

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	7.54	7.74	6.07	7.93	21.873	13.40	24.00	Pass
60	5300	7.69	7.56	6.22	8.03	22.118	13.45	24.00	Pass
64	5320	8.00	8.19	6.56	8.21	24.053	13.81	24.00	Pass
100	5500	7.51	7.23	6.54	7.13	20.592	13.14	24.00	Pass
116	5580	7.39	7.03	6.43	7.44	20.471	13.11	24.00	Pass
140	5700	7.22	6.92	6.89	8.07	21.491	13.32	24.00	Pass
144	5720 For U-NII-2C	4.28	2.79	3.04	3.93	9.614	9.83	23.69	Pass
144	5720 For U-NII-3	-0.41	0.11	0.66	1.58	4.813	6.82	30.00	Pass

Note:
Chain 0
1. 11dBm + 10log(21.95) = 24.41 dBm > 24dBm.
2. 11dBm + 10log(22.93) = 24.60 dBm > 24dBm.
3. 11dBm + 10log(22.03) = 24.43 dBm > 24dBm.
4. 11dBm + 10log(22.03) = 24.43 dBm > 24dBm.
5. 11dBm + 10log(21.99) = 24.42 dBm > 24dBm.
6. 11dBm + 10log(22.00) = 24.42 dBm > 24dBm.
7. 11dBm + 10log(5725.00 - 5706.09) = 23.77 dBm < 24dBm.
Chain 1
1. 11dBm + 10log(21.88) = 24.40 dBm > 24dBm.
2. 11dBm + 10log(21.79) = 24.38 dBm > 24dBm.
3. 11dBm + 10log(22.13) = 24.45 dBm > 24dBm.
4. 11dBm + 10log(21.87) = 24.40 dBm > 24dBm.
5. 11dBm + 10log(21.72) = 24.37 dBm > 24dBm.
6. 11dBm + 10log(21.66) = 24.36 dBm > 24dBm.
7. 11dBm + 10log(5725.00 - 5706.42) = 23.69 dBm < 24dBm.
Chain 2
1. 11dBm + 10log(21.89) = 24.40 dBm > 24dBm.
2. 11dBm + 10log(21.70) = 24.36 dBm > 24dBm.
3. 11dBm + 10log(21.75) = 24.37 dBm > 24dBm.
4. 11dBm + 10log(22.10) = 24.44 dBm > 24dBm.
5. 11dBm + 10log(21.76) = 24.38 dBm > 24dBm.
6. 11dBm + 10log(21.92) = 24.41 dBm > 24dBm.
7. 11dBm + 10log(5725.00 - 5706.17) = 23.75 dBm < 24dBm.

Chain 3
1. 11dBm + 10log(21.82) = 24.39 dBm > 24dBm.
2. 11dBm + 10log(21.74) = 24.37 dBm > 24dBm.
3. 11dBm + 10log(21.86) = 24.40 dBm > 24dBm.
4. 11dBm + 10log(21.87) = 24.40 dBm > 24dBm.
5. 11dBm + 10log(21.66) = 24.36 dBm > 24dBm.
6. 11dBm + 10log(21.73) = 24.37 dBm > 24dBm.
7. 11dBm + 10log(5725.00 - 5703.39) = 24.35 dBm > 24dBm.

802.11ac (VHT40)

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	11.81	10.12	12.97	11.22	**58.509**	17.67	24.00	Pass
62	5310	7.74	4.31	8.56	7.51	21.455	13.32	24.00	Pass
102	5510	5.60	5.44	4.49	6.28	14.188	11.52	24.00	Pass
110	5550	11.15	10.09	9.97	11.04	**45.878**	16.62	24.00	Pass
134	5670	10.26	10.84	9.69	11.23	45.336	16.56	24.00	Pass
142	5710 For U-NII-2C	6.17	6.57	5.90	7.07	19.624	12.93	24.00	Pass
142	5710 For U-NII-3	2.91	3.33	2.51	3.75	9.178	9.63	30.00	Pass

Note:
Chain 0
1. 11dBm + 10log(29.68) = 27.20 dBm > 24dBm.
2. 11dBm + 10log(27.53) = 27.19 dBm > 24dBm.
3. 11dBm + 10log(27.18) = 27.21 dBm > 24dBm.
4. 11dBm + 10log(30.01) = 27.20 dBm > 24dBm.
5. 11dBm + 10log(29.41) = 27.20 dBm > 24dBm.
6. 11dBm + 10log(5725.00 - 5669.79) = 28.42 dBm > 24dBm.
Chain 1
1. 11dBm + 10log(30.05) = 27.20 dBm > 24dBm.
2. 11dBm + 10log(27.12) = 27.19 dBm > 24dBm.
3. 11dBm + 10log(27.13) = 27.21 dBm > 24dBm.
4. 11dBm + 10log(29.33) = 27.20 dBm > 24dBm.
5. 11dBm + 10log(29.28) = 27.20 dBm > 24dBm.
6. 11dBm + 10log(5725.00 - 5668.77) = 28.50 dBm > 24dBm.
Chain 2
1. 11dBm + 10log(29.71) = 27.20 dBm > 24dBm.
2. 11dBm + 10log(27.16) = 27.19 dBm > 24dBm.
3. 11dBm + 10log(27.13) = 27.21 dBm > 24dBm.
4. 11dBm + 10log(29.46) = 27.20 dBm > 24dBm.
5. 11dBm + 10log(29.05) = 27.20 dBm > 24dBm.
6. 11dBm + 10log(5725.00 - 5676.96) = 27.82 dBm > 24dBm.
Chain 3
1. 11dBm + 10log(29.17) = 27.20 dBm > 24dBm.
2. 11dBm + 10log(27.11) = 27.19 dBm > 24dBm.
3. 11dBm + 10log(27.14) = 27.21 dBm > 24dBm.
4. 11dBm + 10log(29.60) = 27.20 dBm > 24dBm.
5. 11dBm + 10log(29.86) = 27.20 dBm > 24dBm.
6. 11dBm + 10log(5725.00 - 5670.28) = 28.38 dBm > 24dBm.

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	Chain 2	Chain 3				
58	5290	5.69	5.96	6.02	5.23	14.985	11.76	24.00	Pass
106	5530	3.10	2.83	3.27	3.72	8.439	9.26	24.00	Pass
138	5690 For U-NII-2C	9.04	9.56	8.67	9.89	36.462	15.62	24.00	Pass
138	5690 For U-NII-3	5.31	4.54	3.87	5.19	12.788	11.07	30.00	Pass

Note:
Chain 0
1. 11dBm + 10log(83.05) = 30.19 dBm > 24dBm.
2. 11dBm + 10log(82.85) = 30.18 dBm > 24dBm.
3. 11dBm + 10log(5725.00 - 5620.61) = 31.19 dBm > 24dBm.
Chain 1
1. 11dBm + 10log(82.00) = 30.14 dBm > 24dBm.
2. 11dBm + 10log(81.95) = 30.14 dBm > 24dBm.
3. 11dBm + 10log(5725.00 - 5620.83) = 31.18 dBm > 24dBm.
Chain 2
1. 11dBm + 10log(82.23) = 30.15 dBm > 24dBm.
2. 11dBm + 10log(81.81) = 30.13 dBm > 24dBm.
3. 11dBm + 10log(5725.00 - 5639.39) = 30.33 dBm > 24dBm.
Chain 3
1. 11dBm + 10log(82.45) = 30.16 dBm > 24dBm.
2. 11dBm + 10log(82.48) = 30.16 dBm > 24dBm.
3. 11dBm + 10log(5725.00 - 5622.56) = 31.10 dBm > 24dBm.

26dB BANDWIDTH:

802.11a

Chan.	Freq. (MHz)	26dBc Bandwidth (MHz)				Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3	
52	5260	21.75	21.75	21.76	21.87	Pass
60	5300	21.81	21.75	21.76	21.81	Pass
64	5320	21.79	21.67	21.76	21.73	Pass
100	5500	21.73	21.63	21.91	21.73	Pass
116	5580	21.80	21.66	21.70	21.83	Pass
140	5700	21.83	21.54	21.69	21.80	Pass
144	5720 For U-NII-2C	15.99	15.90	16.11	16.03	Pass

802.11ac (VHT20)

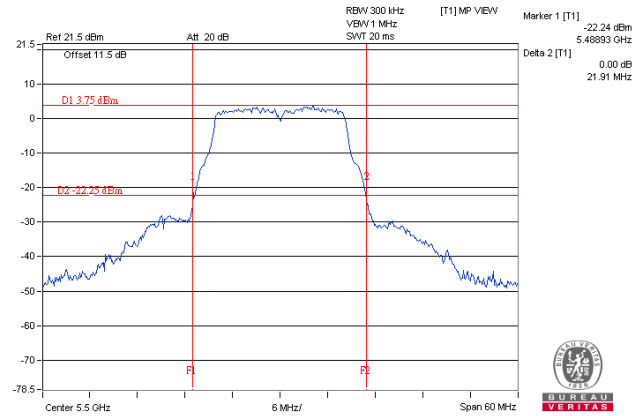
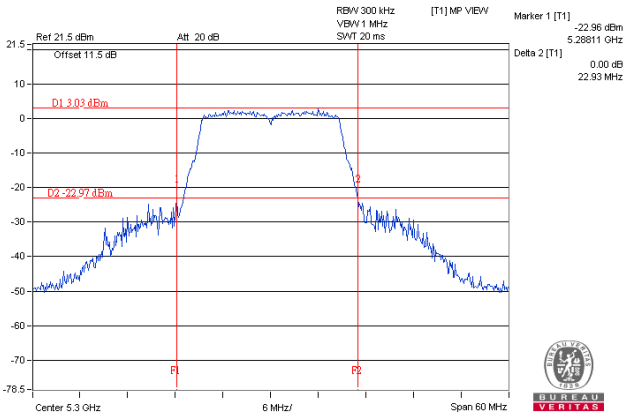
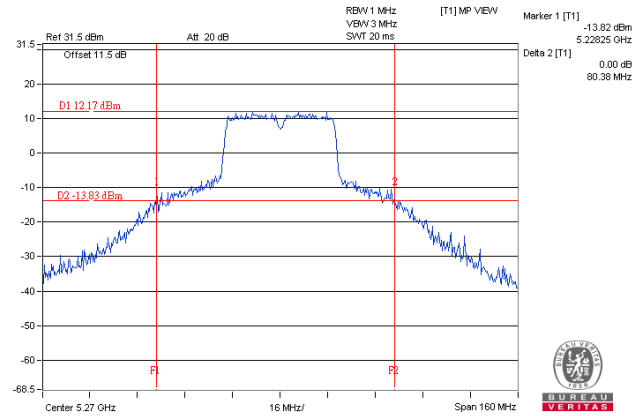
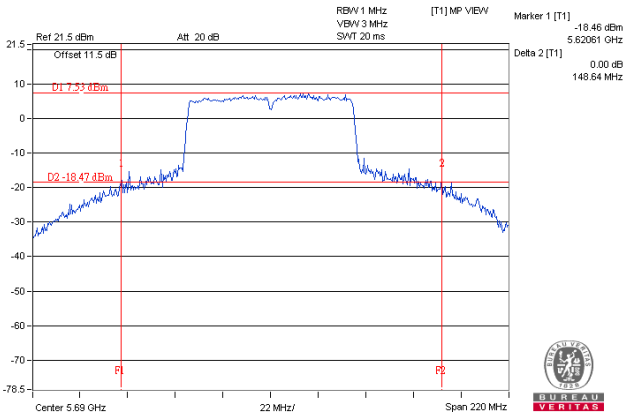
Chan.	Freq. (MHz)	26dBc Bandwidth (MHz)				Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3	
52	5260	21.95	21.88	21.89	21.82	Pass
60	5300	22.93	21.79	21.70	21.74	Pass
64	5320	22.03	22.13	21.75	21.86	Pass
100	5500	22.03	21.87	22.10	21.87	Pass
116	5580	21.99	21.72	21.76	21.66	Pass
140	5700	22.00	21.66	21.92	21.73	Pass
144	5720 For U-NII-2C	18.91	18.58	18.83	21.61	Pass

802.11ac (VHT40)

Chan.	Freq. (MHz)	26dBc Bandwidth (MHz)				Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3	
54	5270	73.77	80.38	74.34	65.64	Pass
62	5310	44.95	40.96	41.26	40.86	Pass
102	5510	41.50	41.05	41.05	41.08	Pass
110	5550	79.70	68.11	70.12	72.43	Pass
134	5670	69.42	67.30	63.83	76.99	Pass
142	5710 For U-NII-2C	55.21	56.23	48.04	54.72	Pass

802.11ac (VHT80)

Chan.	Freq. (MHz)	26dBc Bandwidth (MHz)				Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3	
58	5290	83.05	82.00	82.23	82.45	Pass
106	5530	82.85	81.95	81.81	82.48	Pass
138	5690 For U-NII-2C	104.39	104.17	85.61	102.44	Pass

Spectrum Plot of Worst Value	
802.11a	802.11ac (VHT20)
	
802.11ac (VHT40)	802.11ac (VHT80)
	

OCCUPIED BANDWIDTH:

802.11a

Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
52	5260	17.16	17.04	17.16	17.16
60	5300	17.16	17.04	17.16	17.16
64	5320	17.16	17.04	17.16	17.16
100	5500	17.16	16.92	17.16	17.16
116	5580	17.04	16.92	17.16	17.16
140	5700	17.04	17.04	17.16	17.16
144	5720 For U-NII-2C	13.28	13.28	13.28	13.40
144	5720 For U-NII-3	3.28	3.16	3.16	3.28

802.11ac (VHT20)

Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
52	5260	18.24	18.00	18.00	18.00
60	5300	18.12	18.12	18.00	18.00
64	5320	18.12	18.00	18.12	18.00
100	5500	18.12	18.00	18.00	18.00
116	5580	18.12	18.00	18.00	17.88
140	5700	18.24	18.00	18.00	18.00
144	5720 For U-NII-2C	13.28	14.00	14.00	14.00
144	5720 For U-NII-3	3.28	3.88	3.88	3.88

802.11ac (VHT40)

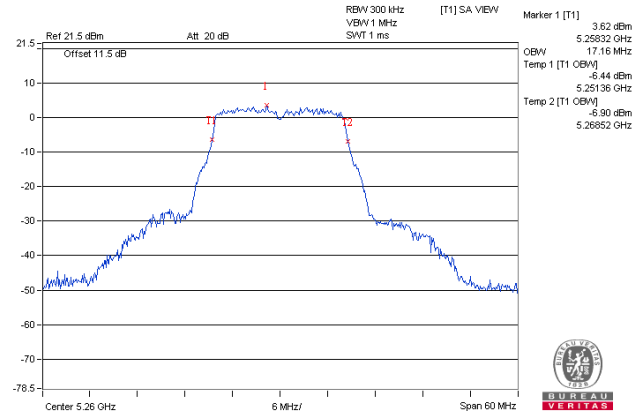
Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
54	5270	37.32	37.44	37.08	36.84
62	5310	36.96	36.72	36.72	36.60
102	5510	36.84	36.72	36.60	36.72
110	5550	37.08	37.08	36.96	37.08
134	5670	37.08	36.96	36.96	37.08
142	5710 For U-NII-2C	33.60	33.72	33.60	33.72
142	5710 For U-NII-3	3.60	3.60	3.60	3.72

802.11ac (VHT80)

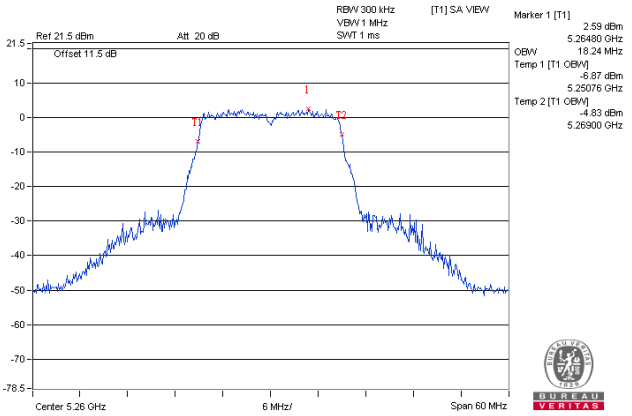
Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
58	5290	75.84	75.84	75.84	76.08
106	5530	76.08	76.08	76.08	75.84
138	5690 For U-NII-2C	73.16	73.16	73.16	73.16
138	5690 For U-NII-3	3.16	2.92	3.16	3.16

Spectrum Plot of Worst Value

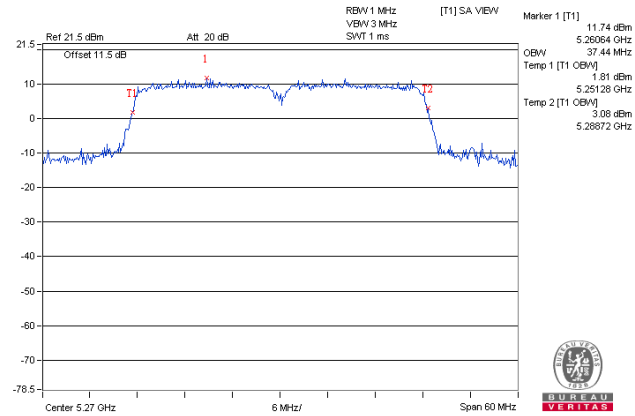
802.11a



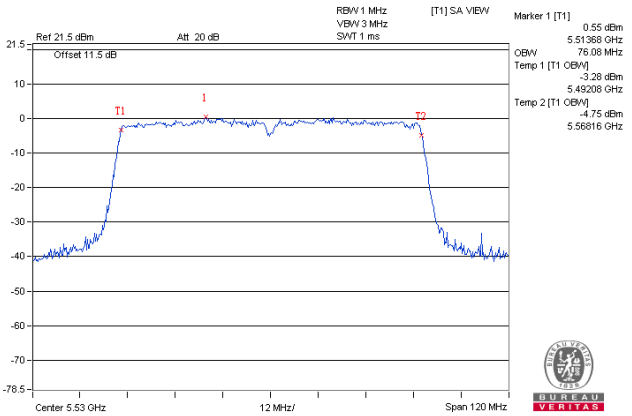
802.11ac (VHT20)



802.11ac (VHT40)



802.11ac (VHT80)



EUT MAXIMUM CONDUCTED POWER

CDD Mode

802.11a

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	96.117	19.83
5470~5725	85.783	19.33

Note: Manufacturer provides Transmit Power Control description to meet this requirement.

802.11ac (VHT20)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	96.196	19.83
5470~5725	85.953	19.34

Note: Manufacturer provides Transmit Power Control description to meet this requirement.

802.11ac (VHT40)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	234.005	23.69
5470~5725	183.486	22.64

Note: Manufacturer provides Transmit Power Control description to meet this requirement.

802.11ac (VHT80)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	59.932	17.78
5470~5725	72.038	18.58

Note: Manufacturer provides Transmit Power Control description to meet this requirement.

Beamforming Mode

802.11ac (VHT20)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	24.053	13.81
5470~5725	21.491	13.32

Note: Manufacturer provides Transmit Power Control description to meet this requirement.

802.11ac (VHT40)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	58.509	17.67
5470~5725	45.878	16.62

Note: Manufacturer provides Transmit Power Control description to meet this requirement.

802.11ac (VHT80)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	14.985	11.76
5470~5725	36.462	15.62

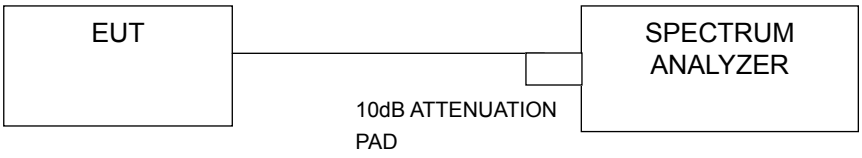
Note: Manufacturer provides Transmit Power Control description to meet this requirement.

4.4 Peak Power Spectral Density Measurement

4.4.1 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

4.4.2 Test Setup



4.4.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.4.4 Test Procedures

Without duty cycle (Using method SA-1):
1) Set span to encompass the entire emission bandwidth (EBW) of the signal.
2) Set RBW = 1MHz, Set VBW ≥ 3MHz, 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

With duty cycle (Using method SA-2):
1) Set span to encompass the entire emission bandwidth (EBW) of the signal.
2) Set RBW = 1MHz, Set VBW ≥ 3MHz, 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)

4.4.5 Deviation from Test Standard

No deviation.

4.4.6 EUT Operating Conditions

Same as Item 4.3.6.

4.4.7 Test Results

802.11a

Chan.	Freq. (MHz)	PSD (dBm)				Duty factor	Total PSD with duty factor (dBm)	Max. Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
52	5260	-1.86	-1.81	-3.41	-1.92	0.23	4.05	5.14	Pass
60	5300	-1.86	-1.80	-3.00	-2.08	0.23	4.09	5.14	Pass
64	5320	-1.47	-1.08	-0.98	-1.53	0.23	4.99	5.14	Pass
100	5500	-1.66	-1.94	-2.32	-1.64	0.23	4.37	5.14	Pass
116	5580	-1.42	-2.02	-2.37	-1.45	0.23	4.45	5.14	Pass
140	5700	-1.88	-2.37	-2.52	-1.77	0.23	4.12	5.14	Pass
144	5720 For U-NII-2C	-1.74	-2.53	-1.76	-0.82	0.23	4.58	5.14	Pass

Note:
1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = 5.84dBi + 10log(4) = 11.86dBi > 6dBi, so the limit shall be reduced to 11-(11.86-6) = 5.14dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11ac (VHT20)

Chan.	Freq. (MHz)	PSD (dBm)				Duty factor	Total PSD with duty factor (dBm)	Max. Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
52	5260	-1.94	-2.05	-3.69	-1.50	0.25	4.06	5.14	Pass
60	5300	-2.28	-2.05	-3.71	-1.64	0.25	3.92	5.14	Pass
64	5320	-1.81	-1.83	-2.79	-1.43	0.25	4.34	5.14	Pass
100	5500	-1.49	-1.98	-2.86	-2.25	0.25	4.16	5.14	Pass
116	5580	-2.01	-2.02	-2.63	-1.44	0.25	4.27	5.14	Pass
140	5700	-1.95	-2.10	-2.33	-1.30	0.25	4.37	5.14	Pass
144	5720 For U-NII-2C	-1.32	-2.81	-1.87	-1.05	0.25	4.56	5.14	Pass

Note:
1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = 5.84dBi + 10log(4) = 11.86dBi > 6dBi, so the limit shall be reduced to 11-(11.86-6) = 5.14dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11ac (VHT40)

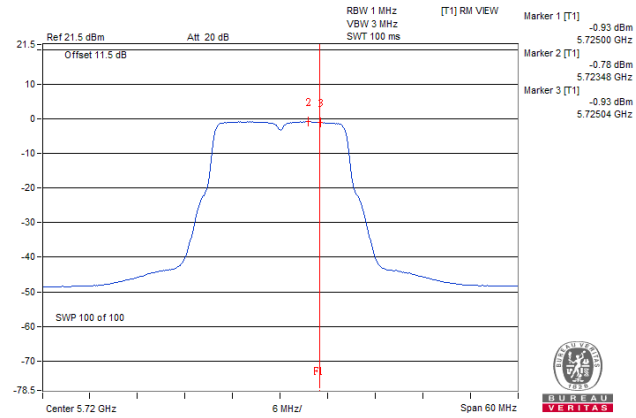
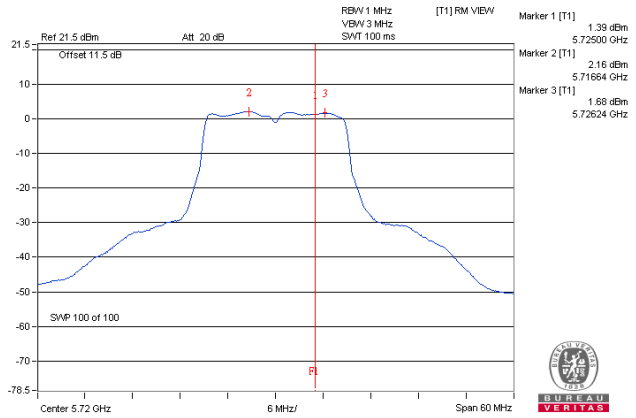
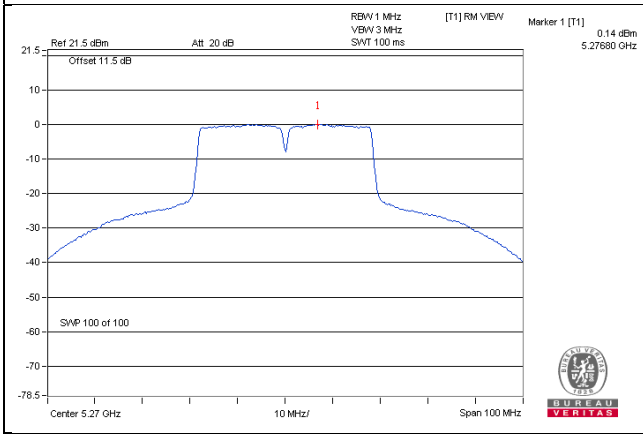
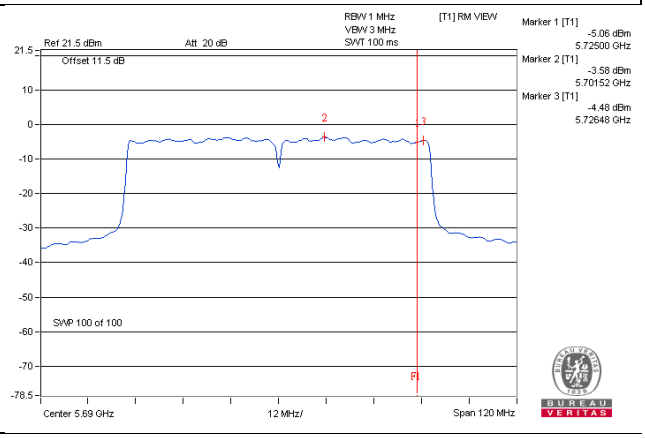
Chan.	Freq. (MHz)	PSD (dBm)				Duty factor	Total PSD with duty factor (dBm)	Max. Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
54	5270	-1.47	0.14	-2.28	-3.00	0.46	4.99	5.14	Pass
62	5310	-5.39	-4.42	-6.02	-9.13	0.46	0.55	5.14	Pass
102	5510	-5.34	-8.16	-6.38	-5.25	0.46	0.34	5.14	Pass
110	5550	-1.15	-2.11	-2.26	-1.41	0.46	4.77	5.14	Pass
134	5670	-2.25	-1.37	-2.85	-1.92	0.46	4.41	5.14	Pass
142	5710 For U-NII-2C	-2.15	-1.96	-2.57	-1.28	0.46	4.51	5.14	Pass

Note:
1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = 5.84dBi + 10log(4) = 11.86dBi > 6dBi, so the limit shall be reduced to 11-(11.86-6) = 5.14dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11ac (VHT80)

Chan.	Freq. (MHz)	PSD (dBm)				Duty factor	Total PSD with duty factor (dBm)	Max. Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
58	5290	-10.29	-10.16	-11.14	-10.28	0.28	-4.15	5.14	Pass
106	5530	-9.67	-10.60	-11.81	-10.99	0.28	-4.40	5.14	Pass
138	5690 For U-NII-2C	-3.96	-3.93	-5.08	-3.63	0.28	2.19	5.14	Pass

Note:
1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = 5.84dBi + 10log(4) = 11.86dBi > 6dBi, so the limit shall be reduced to 11-(11.86-6) = 5.14dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

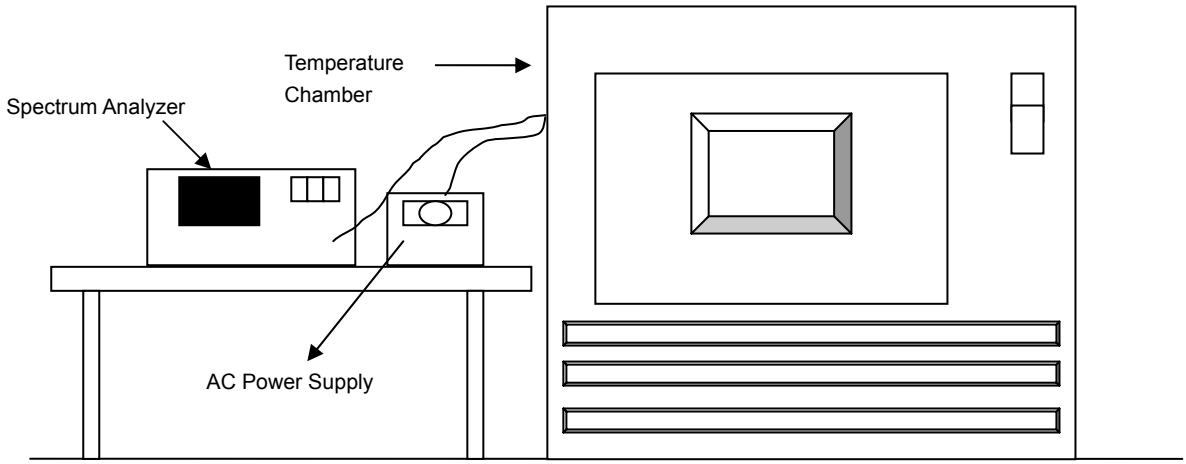
Spectrum Plot of Worst Value	
802.11a	802.11ac (VHT20)
Chain 3/Ch 144	Chain 3/Ch 144
	
802.11ac (VHT40)	802.11ac (VHT80)
Chain 1/Ch 54	Chain 3/Ch 138
	

4.5 Frequency Stability

4.5.1 Limits of Frequency Stability Measurement

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

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 Procedure

a. The EUT was placed inside the environmental test chamber and powered by nominal AC voltage.

b. Turn the EUT on and couple its output to a spectrum analyzer.

c. Turn the EUT off and set the chamber to the highest temperature specified.

d. Allow sufficient time (approximately 30 min) for the temperature of the chamber to stabilize, turn the EUT on and measure the operating frequency after 2, 5, and 10 minutes.

e. Repeat step 2 and 3 with the temperature chamber set to the lowest temperature.

f. The test chamber was allowed to stabilize at +20 degree C for a minimum of 30 minutes. The supply voltage was then adjusted on the EUT from 85% to 115% and the frequency record.

4.5.5 Deviation from Test Standard

No deviation.

4.5.6 EUT Operating Condition

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

4.5.7 Test Results

Frequency Stability Versus Temp.									
Operating Frequency: 5270MHz									
Temp. (℃)	Power Supply (Vac)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)
50	120	5270.0026	0.00005	5269.9994	-0.00001	5270.0005	0.00001	5270.0013	0.00002
40	120	5270.0178	0.00034	5270.0197	0.00037	5270.0168	0.00032	5270.0178	0.00034
30	120	5269.9959	-0.00008	5269.9987	-0.00002	5269.9952	-0.00009	5269.9981	-0.00004
20	120	5270.0206	0.00039	5270.0226	0.00043	5270.0217	0.00041	5270.0234	0.00044
10	120	5269.9795	-0.00039	5269.9809	-0.00036	5269.9810	-0.00036	5269.9775	-0.00043
0	120	5269.9838	-0.00031	5269.983	-0.00032	5269.9843	-0.00030	5269.9851	-0.00028
-10	120	5269.9757	-0.00046	5269.9794	-0.00039	5269.9747	-0.00048	5269.9775	-0.00043
-20	120	5269.9781	-0.00042	5269.9761	-0.00045	5269.9780	-0.00042	5269.9775	-0.00043
-30	120	5270.0043	0.00008	5270.0066	0.00013	5270.0093	0.00018	5270.0092	0.00017

Frequency Stability Versus Voltage									
Operating Frequency: 5270MHz									
Temp. (℃)	Power Supply (Vac)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)
20	138	5270.0207	0.00039	5270.0232	0.00044	5270.0221	0.00042	5270.0224	0.00043
	120	5270.0206	0.00039	5270.0226	0.00043	5270.0217	0.00041	5270.0234	0.00044
	102	5270.0207	0.00039	5270.0225	0.00043	5270.0218	0.00041	5270.0235	0.00045

5 Pictures of Test Arrangements

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

Appendix – Information on the Testing Laboratories

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

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

Linko EMC/RF Lab
Tel: 886-2-26052180
Fax: 886-2-26051924

Hsin Chu EMC/RF/Telecom Lab
Tel: 886-3-6668565
Fax: 886-3-6668323

Hwa Ya EMC/RF/Safety
Tel: 886-3-3183232
Fax: 886-3-3270892

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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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