FCC REPORT
(UNII)

Applicant:	HUNG WAI HOLDINGS LIMITED
Address of Applicant:	Unit 11, 12/F., New Commerce Centre, 19 On Sum Street, Shatin, Hong Kong

Equipment Under Test (EUT)

Product Name:	21.5" LCD touch screen android quad core player
Model No.:	DT215-AC4G1-1080-SL
FCC ID:	2AB6Z-DT215-AC4G1
Applicable standards:	FCC CFR Title 47 Part 15 Subpart E Section 15.407
Date of sample receipt:	28 Apr., 2018
Date of Test:	28 Apr., to 22 May., 2018
Date of report issued:	23 May., 2018
Test Result:	PASS*

* In the configuration tested, the EUT complied with the standards specified above.

Authorized Signature:

Bruce Zhang
Laboratory Manager

2 Version

Version No.	Date	Description
00	*23 May., 2018*	*Android player Main board with wireless module (FCC ID: 2AB6Z-A18RK31) and same antenna were used by the device, only AC Power Line Conducted Emission and Radiated emission were re-tested.*

Tested by: Carey Chen ***Date:*** *23 May., 2018*

Test Engineer

Reviewed by: Winner Zhang ***Date:*** *23 May., 2018*

Project Engineer

3 Contents

4 Test Summary

Test Item	Section in CFR 47	Test Result
Antenna requirement	15.203 & 15.407 (a)	Pass*
AC Power Line Conducted Emission	15.207	Pass
Conducted Peak Output Power	15.407 (a) (1) (iv) & (a) (3)	Pass*
26dB Occupied Bandwidth	15.407 (a) (5)	Pass*
6dB Emission Bandwidth	15.407(e)	Pass*
Power Spectral Density	15.407 (a) (1) (iv) & (a) (3)	Pass*
Band Edge	15.407(b)	Pass
Spurious Emission	15.407 (b) & 15.205 & 15.209	Pass
Frequency Stability	15.407(g)	Pass*

Pass: The EUT complies with the essential requirements in the standard.
N/A: Not Applicable.
Pass: The test data refer to FCC ID: 2AB6Z-A18RK31.*

5 General Information

5.1 Client Information

Applicant:	HUNG WAI HOLDINGS LIMITED
Address:	Unit 11, 12/F., New Commerce Centre, 19 On Sum Street, Shatin, Hong Kong
Manufacturer/ Factory:	HUNG WAI ELECTRONICS (HUIZHOU) LTD
Address:	3rd floor, NO. 1, Minfeng Road, Huinan High and New Technology Industry Park, Huiao Avenue, Huizhou City, Guangdong

5.2 General Description of E.U.T.

Product Name:	21.5" LCD touch screen android quad core player
Model No.:	DT215-AC4G1-1080-SL
Operation Frequency:	Band 1: 5180MHz-5240MHz, Band 4: 5745MHz-5825MHz
Channel numbers:	Band 1: 802.11a/802.11acH20/802.11n20: 4, 802.11n40/802.11acH40: 2, 802.11acH80: 1 Band 4: 802.11a/802.11acH20/802.11n20: 5, 802.11n40/802.11acH40: 2, 802.11acH80: 1
Channel separation:	802.11a/802.11n20: 20MHz, 802.11n40: 40MHz, 802.11ac: 20/40/80MHz
Modulation technology (IEEE 802.11a):	BPSK, QPSK, 16-QAM, 64-QAM
Modulation technology (IEEE 802.11n):	BPSK, QPSK, 16-QAM, 64-QAM
Modulation technology (IEEE 802.11ac):	BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM
Data speed (IEEE 802.11a):	6Mbps, 9Mbps,12Mbps,18Mbps, 24Mbps, 36Mbps, 48Mbps, 54Mbps
Data speed (IEEE 802.11n20):	MCS0: 6.5Mbps, MCS1:13Mbps,MCS2:19.5Mbps, MCS3:26Mbps, MCS4:39Mbps, MCS5:52Mbps, MCS6:58.5Mbps, MCS7:65Mbps
Data speed (IEEE 802.11n40):	MCS0:15Mbps, MCS1:30Mbps, MCS2:45Mbps, MCS3:60Mbps, MCS4:90Mbps, MCS5:120Mbps, MCS6:135Mbps, MCS7:150Mbps
Data speed (IEEE 802.11ac):	Up to 433.3Mbps
Antenna Type:	External Antenna
Antenna gain:	2.0 dBi
Power supply:	DC 12V
AC adapter:	Model No.:PS36A120Y3000S Input: AC100-240V, 50/60Hz, 1.0A Output: DC 12V, 3000mA

Operation Frequency each of channel					
Band 1					
802.11a/802.11n20/802.11ac20		802.11n40/802.11ac40		802.11ac80	
Channel	Frequency	Channel	Frequency	Channel	Frequency
36	5180MHz	38	5190MHz	42	5210MHz
40	5200MHz	46	5230MHz		
44	5220MHz				
48	5240MHz				
Band 4					
802.11a/802.11n20/802.11ac20		802.11n40/802.11ac40		802.11ac80	
Channel	Frequency	Channel	Frequency	Channel	Frequency
149	5745MHz	151	5755MHz	155	5775MHz
153	5765MHz	159	5795MHz		
157	5785MHz				
161	5805MHz				
165	5825MHz				

Note:
In section 15.31(m), regards to the operating frequency range over 10 MHz, the Lowest frequency, the middle frequency, and the highest frequency of channel were selected to perform the test, and the selected channel see below:

Band 1					
802.11a/802.11n20/802.11ac20		802.11n40/802.11ac40		802.11ac80	
Channel	Frequency	Channel	Frequency	Channel	Frequency
Lowest channel	5180MHz	Lowest channel	5190MHz	Middle channel	5210MHz
Middle channel	5200MHz	Highest channel	5230MHz		
Highest channel	5240MHz				
Band 4					
802.11a/802.11n20/802.11ac20		802.11n40/802.11ac40		802.11ac80	
Channel	Frequency	Channel	Frequency	Channel	Frequency
Lowest channel	5745MHz	Lowest channel	5755MHz	Middle channel	5775MHz
Middle channel	5785MHz	Highest channel	5795MHz		
Highest channel	5825MHz				

5.3 Test environment and test mode

Operating Environment:	
Temperature:	24.0 °C
Humidity:	54 % RH
Atmospheric Pressure:	1010 mbar
Test mode:	
Continuously transmitting mode	Keep the EUT in 100% duty cycle transmitting with modulation.
We have verified the construction and function in typical operation. All the test modes were carried out with the EUT in transmitting operation, which was shown in this test report and defined as follows:	
Per-scan all kind of data rate, and found the follow list were the worst case.	
Mode	Data rate
802.11a	6 Mbps
802.11n20	6.5 Mbps
802.11n40	13.5 Mbps
802.11ac	29.3 Mbps

5.4 Description of Support Units

The EUT has been tested as an independent unit.

5.5 Measurement Uncertainty

Parameters	Expanded Uncertainty (Confidence of 95%)
Conducted Emission (9kHz ~ 30MHz)	2.14 dB (k=2)
Radiated Emission (9kHz ~ 30MHz)	4.24 dB (k=2)
Radiated Emission (30MHz ~ 1000MHz)	4.35 dB (k=2)
Radiated Emission (1GHz ~ 18GHz)	4.44 dB (k=2)
Radiated Emission (18GHz ~ 40GHz)	4.56 dB (k=2)

5.6 Related Submittal(s) / Grant (s)

This is an original grant, no related submittals and grants.

5.7 Laboratory Facility

The test facility is recognized, certified, or accredited by the following organizations:

- **FCC - Registration No.: 727551**

Shenzhen Zhongjian Nanfang Testing Co., Ltd. has been accredited as a testing laboratory by FCC (Federal Communications Commission). The Registration No. is 727551.

- **IC - Registration No.: 10106A-1**

The 3m Semi-anechoic chamber of Shenzhen Zhongjian Nanfang Testing Co., Ltd. has been Registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 10106A-1.

- **CNAS - Registration No.: CNAS L6048**

Shenzhen Zhongjian Nanfang Testing Co., Ltd. is accredited to ISO/IEC 17025:2005 General Requirements for the Competence of Testing and Calibration laboratories for the competence of testing. The Registration No. is CNAS L6048.

- **A2LA - Registration No.: 4346.01**

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005 General requirements for the competence of testing and calibration laboratories. The test scope can be found as below link: https://portal.a2la.org/scopepdf/4346-01.pdf

5.8 Laboratory Location

Shenzhen Zhongjian Nanfang Testing Co., Ltd.
Address: No. B-C, 1/F., Building 2, Laodong No.2 Industrial Park, Xixiang Road,
Bao'an District, Shenzhen, Guangdong, China
Tel: +86-755-23118282, Fax: +86-755-23116366
Email: info@ccis-cb.com, Website: http://www.ccis-cb.com

5.9 Test Instruments list

Radiated Emission:					
Test Equipment	**Manufacturer**	**Model No.**	**Serial No.**	**Cal. Date (mm-dd-yy)**	**Cal. Due date (mm-dd-yy)**
3m SAC	SAEMC	9m*6m*6m	966	07-22-2017	07-21-2020
Loop Antenna	SCHWARZBECK	FMZB1519B	00044	02-25-2018	02-24-2019
BiConiLog Antenna	SCHWARZBECK	VULB9163	497	02-25-2018	02-24-2019
Horn Antenna	SCHWARZBECK	BBHA9120D	916	02-25-2018	02-24-2019
EMI Test Software	AUDIX	E3	6.110919b	N/A	N/A
Pre-amplifier	HP	8447D	2944A09358	03-07-2018	03-06-2019
Pre-amplifier	CD	PAP-1G18	11804	03-07-2018	03-06-2019
Spectrum analyzer	Rohde & Schwarz	FSP30	101454	03-07-2018	03-06-2019
EMI Test Receiver	Rohde & Schwarz	ESRP7	101070	03-07-2018	03-06-2019
Cable	ZDECL	Z108-NJ-NJ-81	1608458	03-07-2018	03-06-2019
Cable	MICRO-COAX	MFR64639	K10742-5	03-07-2018	03-06-2019
Cable	SUHNER	SUCOFLEX100	58193/4PE	03-07-2018	03-06-2019

Conducted Emission:					
Test Equipment	**Manufacturer**	**Model No.**	**Serial No.**	**Cal. Date (mm-dd-yy)**	**Cal. Due date (mm-dd-yy)**
EMI Test Receiver	Rohde & Schwarz	ESCI	101189	03-07-2018	03-06-2019
Pulse Limiter	SCHWARZBECK	OSRAM 2306	9731	03-07-2018	03-06-2019
LISN	CHASE	MN2050D	1447	02-25-2018	02-24-2019
LISN	Rohde & Schwarz	ESH3-Z5	8438621/010	07-21-2017	07-20-2018
Cable	HP	10503A	N/A	03-07-2018	03-06-2019
EMI Test Software	AUDIX	E3	6.110919b	N/A	N/A

6 Test results and Measurement Data

6.1 Antenna requirement

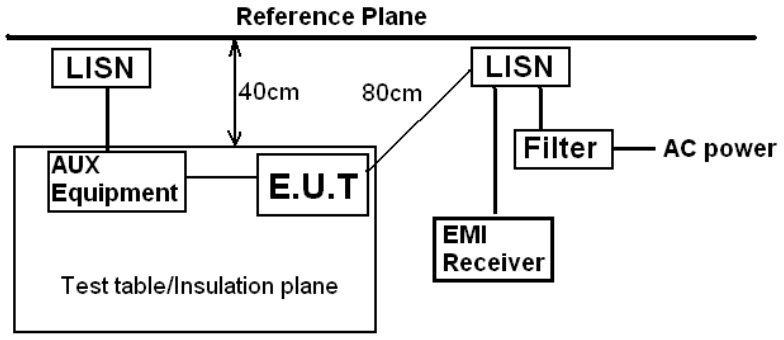
Standard requirement:	FCC Part15 E Section 15.203 /407(a)

15.203 requirement:
An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.
This requirement does not apply to carrier current devices or to devices operated under the provisions of §15.211, § 15.213, § 15.217, § 15.219, or § 15.221. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with § 15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this part are not exceeded.

E.U.T Antenna:	

The WiFi antenna is an External antenna which cannot replace by end-user, the best case gain of the antenna is 2.0 dBi.

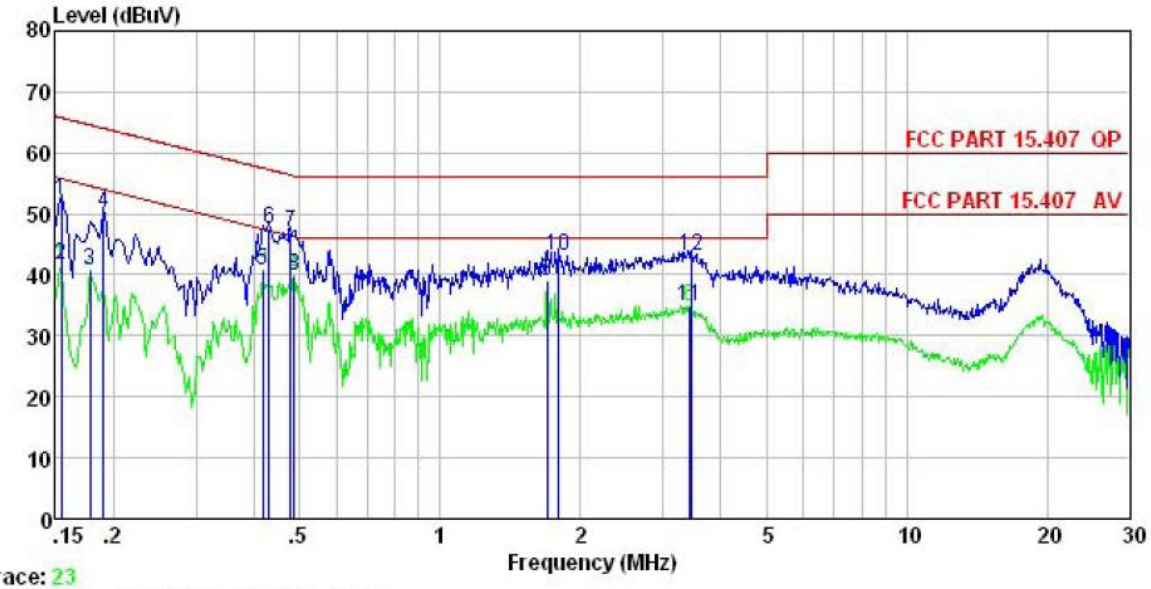
6.2 Conducted Emission

<table>
<tr><td>Test Requirement:</td><td colspan="3">FCC Part15 C Section 15.207</td></tr>
<tr><td>Test Method:</td><td colspan="3">ANSI C63.10: 2013</td></tr>
<tr><td>Test Frequency Range:</td><td colspan="3">150kHz to 30MHz</td></tr>
<tr><td>Class / Severity:</td><td colspan="3">Class B</td></tr>
<tr><td>Receiver setup:</td><td colspan="3">RBW=9kHz, VBW=30kHz</td></tr>
<tr><td>Limit:</td><td>Frequency range (MHz)</td><td colspan="2">Limit (dBuV)</td></tr>
<tr><td></td><td></td><td>Quasi-peak</td><td></td></tr>
<tr><td></td><td>0.15-0.5</td><td>66 to 56*</td><td>0.15-0.5</td></tr>
<tr><td></td><td>0.5-5</td><td>56</td><td>0.5-5</td></tr>
<tr><td></td><td>5-30</td><td>60</td><td>5-30</td></tr>
<tr><td></td><td colspan="3">* Decreases with the logarithm of the frequency.</td></tr>
<tr><td>Test procedure</td><td colspan="3">1. The E.U.T and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.). It provides a 50ohm/50uH coupling impedance for the measuring equipment.
2. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm/50uH coupling impedance with 50ohm termination. (Please refer to the block diagram of the test setup and photographs).
3. Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.10: 2013 on conducted measurement.</td></tr>
<tr><td>Test setup:</td><td colspan="3"> 

Remark:
E.U.T: Equipment Under Test
LISN: Line Impedence Stabilization Network
Test table height=0.8m</td></tr>
<tr><td>Test Instruments:</td><td colspan="3">Refer to section 5.9 for details</td></tr>
<tr><td>Test mode:</td><td colspan="3">Refer to section 5.3 for details.</td></tr>
<tr><td>Test results:</td><td colspan="3">Passed</td></tr>
</table>

Measurement Data:

Test Phase: Line



Trace: 23

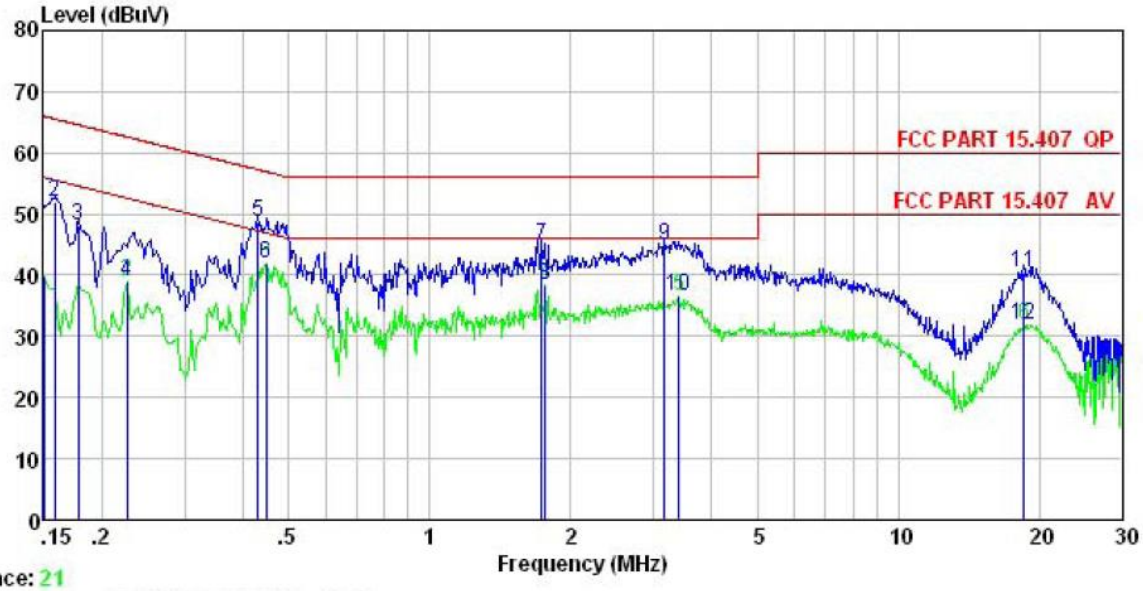
Site : CCIS Shielding Room
Condition : FCC PART 15.407 QP LISN LINE
EUT : 21.5" LCD touch screen android quad
: core player
Model : DT215-AC4G1-1080-SL
Test mode : 5GWIFI Mode
Power Rating : AC 230V/50Hz
Environment : Temp:25.5℃ Huni:55%
Test Engineer: Carey
Remark :

	Freq	Read Level	LISN Factor	Cable Loss	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dB	dBuV	dBuV	dB	
1	0.154	41.19	0.18	10.78	52.15	65.78	-13.63	QP
2	0.154	30.77	0.18	10.78	41.73	55.78	-14.05	Average
3	0.178	29.66	0.16	10.77	40.59	54.59	-14.00	Average
4	0.190	39.13	0.16	10.76	50.05	64.02	-13.97	QP
5	0.417	29.82	0.12	10.73	40.67	47.51	-6.84	Average
6	0.431	36.60	0.12	10.73	47.45	57.24	-9.79	QP
7	0.479	36.05	0.12	10.75	46.92	56.36	-9.44	QP
8	0.486	28.83	0.12	10.76	39.71	46.23	-6.52	Average
9	1.698	27.89	0.14	10.94	38.97	46.00	-7.03	Average
10	1.800	32.11	0.14	10.95	43.20	56.00	-12.80	QP
11	3.417	23.84	0.17	10.91	34.92	46.00	-11.08	Average
12	3.454	31.88	0.17	10.91	42.96	56.00	-13.04	QP

Notes:

1. *An initial pre-scan was performed on the live and neutral lines with peak detector.*
2. *Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission.*
3. *Final Level =Receiver Read level + LISN Factor + Cable Loss.*

Test Phase: Neutral



Trace: 21

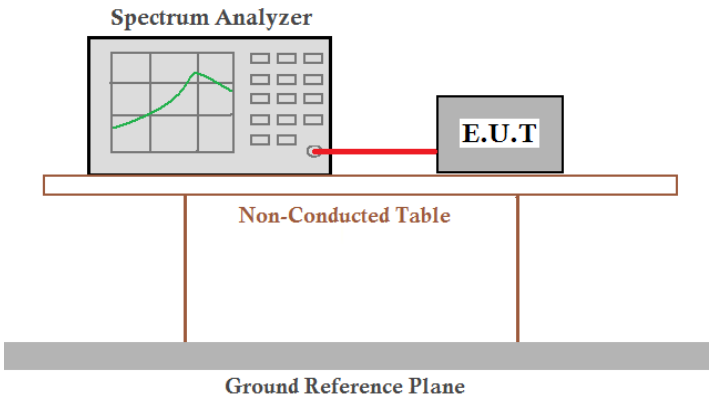
Site : CCIS Shielding Room
Condition : FCC PART 15.407 QP LISN NEUTRAL
EUT : 21.5" LCD touch screen android quad
: core player
Model : DT215-AC4G1-1080-SL
Test mode : 5GWIFI Mode
Power Rating : AC 230V/50Hz
Environment : Temp:25.5'C Huni:55%
Test Engineer: Carey
Remark :

	Freq	Read Level	LISN Factor	Cable Loss	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dB	dBuV	dBuV	dB	
1	0.150	27.98	0.99	10.78	39.75	56.00	-16.25	Average
2	0.158	40.13	0.98	10.77	51.88	65.56	-13.68	QP
3	0.178	36.43	0.95	10.77	48.15	64.59	-16.44	QP
4	0.226	27.37	0.94	10.75	39.06	52.61	-13.55	Average
5	0.431	36.90	0.97	10.73	48.60	57.24	-8.64	QP
6	0.447	30.32	0.97	10.74	42.03	46.93	-4.90	Average
7	1.734	32.81	0.98	10.94	44.73	56.00	-11.27	QP
8	1.762	26.33	0.98	10.94	38.25	46.00	-7.75	Average
9	3.173	32.94	0.99	10.91	44.84	56.00	-11.16	QP
10	3.399	24.64	1.00	10.91	36.55	46.00	-9.45	Average
11	18.524	28.89	0.74	10.92	40.55	60.00	-19.45	QP
12	18.524	20.31	0.74	10.92	31.97	50.00	-18.03	Average

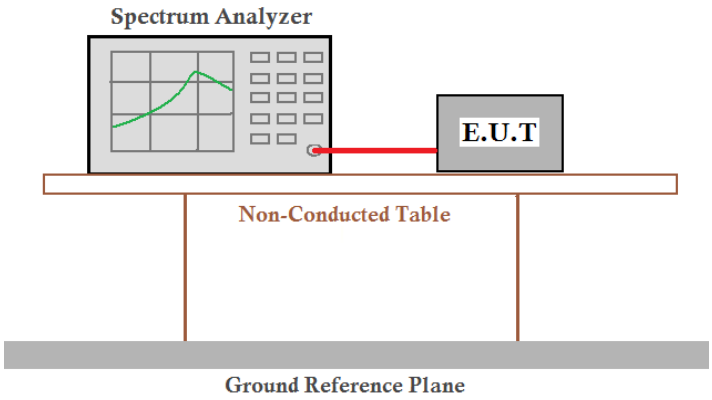
Notes:

1. *An initial pre-scan was performed on the live and neutral lines with peak detector.*
2. *Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission.*
3. *Final Level =Receiver Read level + LISN Factor + Cable Loss.*

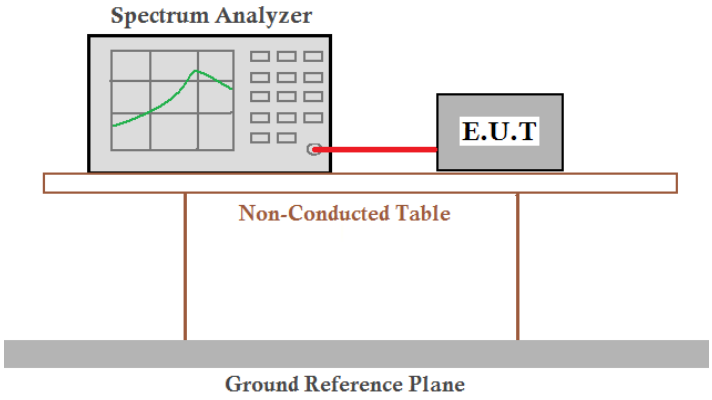
6.3 Conducted Output Power

Test Requirement:	FCC Part15 E Section 15.407 (a) (1) (iv) & (a) (3)
Test Method:	ANSI C63.10: 2013, KDB789033
Limit:	Band 1: 24dBm Band 4: 30dBm
Test setup:	
Test Instruments:	Refer to section 5.9 for details
Test mode:	Refer to section 5.3 for details
Test results:	Refer to FCC ID: 2AB6Z-A18RK31

6.4 Occupy Bandwidth

Test Requirement:	FCC Part15 E Section 15.407 (a) (5) and Section 15.407 (e)
Test Method:	ANSI C63.10:2013 and KDB 789033
Limit:	Band 1/2/3/4: N/A (26dB Emission Bandwidth and 99% Occupy Bandwidth) Band 4: >500kHz (6dB Bandwidth)
Test setup:	
Test Instruments:	Refer to section 5.9 for details
Test mode:	Refer to section 5.3 for details
Test results:	Refer to FCC ID: 2AB6Z-A18RK31

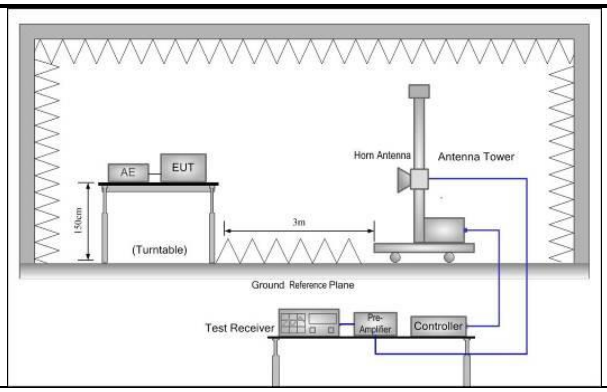
6.5 Power Spectral Density

Test Requirement:	FCC Part15 E Section 15.407 (a) (1) (iv) & (a)(3)
Test Method:	ANSI C63.10:2013, KDB 789033
Limit:	Band 1: 11 dBm/MHz Band 4: 30 dBm/500kHz
Test setup:	
Test Instruments:	Refer to section 5.9 for details
Test mode:	Refer to section 5.3 for details
Test results:	Refer to FCC ID: 2AB6Z-A18RK31

6.6 Band Edge

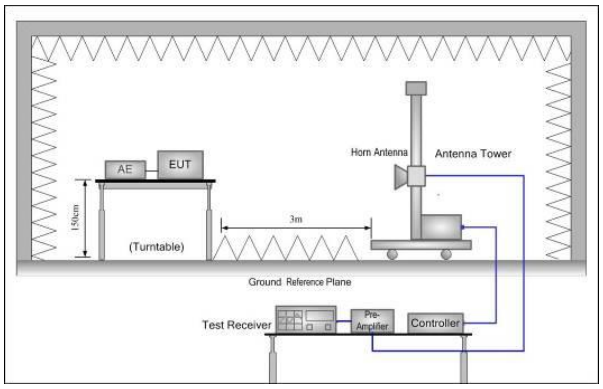
<table>
<tr><td>Test Requirement:</td><td colspan="4">FCC Part 15 E Section 15.407 (b)</td></tr>
<tr><td>Test Method:</td><td colspan="4">ANSI C63.10:2013 , KDB 789033</td></tr>
<tr><td>Receiver setup:</td><td>Detector</td><td>RBW</td><td>VBW</td><td>Remark</td></tr>
<tr><td></td><td>Quasi-peak</td><td>120kHz</td><td>300kHz</td><td>Quasi-peak Value</td></tr>
<tr><td></td><td>RMS</td><td>1MHz</td><td>3MHz</td><td>Average Value</td></tr>
<tr><td>Limit:</td><td colspan="4"><table>
<tr><td>Band</td><td>Limit (dBuV/m @3m)</td><td>Remark</td></tr>
<tr><td rowspan="2">Band 1</td><td>68.20</td><td>Peak Value</td></tr>
<tr><td>54.00</td><td>Average Value</td></tr>
<tr><td rowspan="2">Band 4</td><td>78.20</td><td>Peak Value</td></tr>
<tr><td>54.00</td><td>Average Value</td></tr>
</table>
Band 4 limit:
For transmitters operating in the 5.725-5.85 GHz band:
All emissions shall be limited to a level of −27 dBm/MHz at 75 MHz or more above or below the band edge increasinglinearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

Remark:
1. Band 1 limit:
E[dBμV/m] = EIRP[dBm] + 95.2=68.2 dBuV/m, for EIPR[dBm]=-27dBm.
2. Band 4 limit:
E[dBμV/m] = EIRP[dBm] + 95.2=68.2 dBuV/m, for EIPR[dBm]=-27dBm.
E[dBμV/m] = EIRP[dBm] + 95.2=105.2 dBuV/m, for EIPR[dBm]=10dBm.
E[dBμV/m] = EIRP[dBm] + 95.2=110.8 dBuV/m, for EIPR[dBm]=15.6dBm.
E[dBμV/m] = EIRP[dBm] + 95.2=122.2 dBuV/m, for EIPR[dBm]=27dBm.</td></tr>
<tr><td>Test Procedure:</td><td colspan="4">1. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter camber. The table was rotated 360 degrees to determine the position of the highest radiation.
2. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
3. The antenna height 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.
4. 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 was turned from 0 degrees to 360 degrees to find the maximum reading.
5. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
6. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.</td></tr>
</table>

Test setup:		
Test Instruments:	Refer to section 5.9 for details	
Test mode:	Refer to section 5.3 for details	
Test results:	Refer to FCC ID: 2AB6Z-A18RK31	

6.7 Spurious Emission

6.7.1 Restricted Band

<table>
<tr><td>Test Requirement:</td><td colspan="5">FCC Part15 E Section 15.407(b)</td></tr>
<tr><td>Test Method:</td><td colspan="5">ANSI C63.10: 2013</td></tr>
<tr><td>Test Frequency Range:</td><td colspan="5">4.5 GHz to 5.15 GHz and 5.35GHz to 5.46GHz</td></tr>
<tr><td>Test site:</td><td colspan="5">Measurement Distance: 3m</td></tr>
<tr><td rowspan="3">Receiver setup:</td><td>Frequency</td><td>Detector</td><td>RBW</td><td>VBW</td><td>Remark</td></tr>
<tr><td rowspan="2">Above 1GHz</td><td>Peak</td><td>1MHz</td><td>3MHz</td><td>Peak Value</td></tr>
<tr><td>RMS</td><td>1MHz</td><td>3MHz</td><td>Average Value</td></tr>
<tr><td rowspan="3">Limit:</td><td colspan="2">Frequency</td><td colspan="2">Limit (dBuV/m @3m)</td><td>Remark</td></tr>
<tr><td colspan="2" rowspan="2">Above 1GHz</td><td colspan="2">74.00</td><td>Peak Value</td></tr>
<tr><td colspan="2">54.00</td><td>Average Value</td></tr>
<tr><td>Test Procedure:</td><td colspan="5">1. The EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter camber. The table was rotated 360 degrees to determine the position of the highest radiation.
2. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
3. The antenna height 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.
4. 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 rota table was turned from 0 degrees to 360 degrees to find the maximum reading.
5. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
6. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.</td></tr>
<tr><td>Test setup:</td><td colspan="5"> 
</td></tr>
<tr><td>Test Instruments:</td><td colspan="5">Refer to section 5.9 for details</td></tr>
<tr><td>Test mode:</td><td colspan="5">Refer to section 5.3 for details</td></tr>
<tr><td>Test results:</td><td colspan="5">Passed</td></tr>
</table>

Measurement Data (worst case):

Band 1:

Band 1 – 802.11a								
Test channel: Lowest channel								
Detector: Peak Value								
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4500.00	47.41	29.30	6.80	42.05	41.46	74.00	-32.54	Horizontal
4500.00	46.66	29.30	6.80	42.05	40.71	74.00	-33.29	Vertical
Detector: Average Value								
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4500.00	37.49	29.30	6.80	42.05	31.54	54.00	-22.46	Horizontal
4500.00	36.91	29.30	6.80	42.05	30.96	54.00	-23.04	Vertical
Test channel: Highest channel								
Detector: Peak Value								
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5460.00	46.44	30.54	7.18	41.85	42.31	74.00	-31.69	Horizontal
5460.00	46.19	30.54	7.18	41.85	42.06	74.00	-31.94	Vertical
Detector: Average Value								
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5460.00	36.65	30.54	7.18	41.85	32.52	54.00	-21.48	Horizontal
5460.00	36.56	30.54	7.18	41.85	32.43	54.00	-21.57	Vertical

Remark:

1. *Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.*
2. *The emission levels of other frequencies are very lower than the limit and not show in test report.*

Band 1 – 802.11n(HT20)								
Test channel: Lowest channel								
Detector: Peak Value								
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4500.00	47.37	29.30	6.80	42.05	41.42	74.00	-32.58	Horizontal
4500.00	46.49	29.30	6.80	42.05	40.54	74.00	-33.46	Vertical
Detector: Average Value								
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4500.00	37.94	29.30	6.80	42.05	31.99	54.00	-22.01	Horizontal
4500.00	37.98	29.30	6.80	42.05	32.03	54.00	-21.97	Vertical
Test channel: Highest channel								
Detector: Peak Value								
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5460.00	47.99	30.54	7.18	41.85	43.86	74.00	-30.14	Horizontal
5460.00	47.94	30.54	7.18	41.85	43.81	74.00	-30.19	Vertical
Detector: Average Value								
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5460.00	37.52	30.54	7.18	41.85	33.39	54.00	-20.61	Horizontal
5460.00	37.32	30.54	7.18	41.85	33.19	54.00	-20.81	Vertical

Remark:

1. *Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.*
2. *The emission levels of other frequencies are very lower than the limit and not show in test report.*

Band 1 – 802.11n(HT40)								
Test channel: Lowest channel								
Detector: Peak Value								
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4500.00	47.44	29.30	6.80	42.05	41.49	74.00	-32.51	Horizontal
4500.00	46.56	29.30	6.80	42.05	40.61	74.00	-33.39	Vertical
Detector: Average Value								
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4500.00	37.38	29.30	6.80	42.05	31.43	54.00	-22.57	Horizontal
4500.00	36.49	29.30	6.80	42.05	30.54	54.00	-23.46	Vertical
Test channel: Highest channel								
Detector: Peak Value								
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5460.00	47.44	30.54	7.18	41.85	43.31	74.00	-30.69	Horizontal
5460.00	47.78	30.54	7.18	41.85	43.65	74.00	-30.35	Vertical
Detector: Average Value								
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5460.00	37.94	30.54	7.18	41.85	33.81	54.00	-20.19	Horizontal
5460.00	37.41	30.54	7.18	41.85	33.28	54.00	-20.72	Vertical

Remark:

1. *Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.*
2. *The emission levels of other frequencies are very lower than the limit and not show in test report.*

Band 1 – 802.11ac(HT20)								
Test channel: Lowest channel								
Detector: Peak Value								
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4500.00	47.90	29.30	6.80	42.05	41.95	74.00	-32.05	Horizontal
4500.00	46.88	29.30	6.80	42.05	40.93	74.00	-33.07	Vertical
Detector: Average Value								
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4500.00	37.45	29.30	6.80	42.05	31.50	54.00	-22.50	Horizontal
4500.00	36.59	29.30	6.80	42.05	30.64	54.00	-23.36	Vertical
Test channel: Highest channel								
Detector: Peak Value								
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5460.00	47.29	30.54	7.18	41.85	43.16	74.00	-30.84	Horizontal
5460.00	46.78	30.54	7.18	41.85	42.65	74.00	-31.35	Vertical
Detector: Average Value								
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5460.00	37.97	30.54	7.18	41.85	33.84	54.00	-20.16	Horizontal
5460.00	36.32	30.54	7.18	41.85	32.19	54.00	-21.81	Vertical

Remark:

1. *Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.*
2. *The emission levels of other frequencies are very lower than the limit and not show in test report.*

Band 1 – 802.11ac(HT40)								
Test channel: Lowest channel								
Detector: Peak Value								
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4500.00	46.36	29.30	6.80	42.05	40.41	74.00	-33.59	Horizontal
4500.00	47.69	29.30	6.80	42.05	41.74	74.00	-32.26	Vertical
Detector: Average Value								
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4500.00	36.59	29.30	6.80	42.05	30.64	54.00	-23.36	Horizontal
4500.00	37.17	29.30	6.80	42.05	31.22	54.00	-22.78	Vertical
Test channel: Highest channel								
Detector: Peak Value								
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5460.00	47.76	34.90	7.18	41.85	47.99	74.00	-26.01	Horizontal
5460.00	46.94	34.90	7.18	41.85	47.17	74.00	-26.83	Vertical
Detector: Average Value								
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5460.00	37.37	34.90	7.18	41.85	37.60	54.00	-16.40	Horizontal
5460.00	36.95	34.90	7.18	41.85	37.18	54.00	-16.82	Vertical

Remark:

1. *Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.*
2. *The emission levels of other frequencies are very lower than the limit and not show in test report.*

Band 1 – 802.11ac(HT80)								
Test channel: Lowest channel								
Detector: Peak Value								
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4500.00	47.42	29.30	6.80	42.05	41.47	74.00	-32.53	Horizontal
4500.00	46.91	29.30	6.80	42.05	40.96	74.00	-33.04	Vertical
Detector: Average Value								
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4500.00	37.11	29.30	6.80	42.05	31.16	54.00	-22.84	Horizontal
4500.00	37.49	29.30	6.80	42.05	31.54	54.00	-22.46	Vertical
Test channel: Highest channel								
Detector: Peak Value								
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5460.00	47.36	30.54	7.18	41.85	43.23	74.00	-30.77	Horizontal
5460.00	47.35	30.54	7.18	41.85	43.22	74.00	-30.78	Vertical
Detector: Average Value								
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5460.00	37.25	30.54	7.18	41.85	33.12	54.00	-20.88	Horizontal
5460.00	37.41	30.54	7.18	41.85	33.28	54.00	-20.72	Vertical

Remark:

1. *Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.*
2. *The emission levels of other frequencies are very lower than the limit and not show in test report.*

Band 4:

Band 4 – 802.11a								
Test channel: Lowest channel								
Detector: Peak Value								
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5350.00	47.54	30.82	7.11	41.89	43.58	74.00	-30.42	Horizontal
5350.00	47.27	30.82	7.11	41.89	43.31	74.00	-30.69	Vertical
Detector: Average Value								
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5350.00	37.22	30.82	7.11	41.89	33.26	54.00	-20.74	Horizontal
5350.00	37.19	30.82	7.11	41.89	33.23	54.00	-20.77	Vertical
Test channel: Highest channel								
Detector: Peak Value								
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5460.00	46.93	30.54	7.18	41.85	42.80	74.00	-31.20	Horizontal
5460.00	46.22	30.54	7.18	41.85	42.09	74.00	-31.91	Vertical
Detector: Average Value								
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5460.00	36.41	30.54	7.18	41.85	32.28	54.00	-21.72	Horizontal
5460.00	36.91	30.54	7.18	41.85	32.78	54.00	-21.22	Vertical

Remark:

1. *Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.*
2. *The emission levels of other frequencies are very lower than the limit and not show in test report.*

Band 4 – 802.11n(HT20)								
Test channel: Lowest channel								
Detector: Peak Value								
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5350.00	46.94	30.82	7.11	41.89	42.98	74.00	-31.02	Horizontal
5350.00	46.74	30.82	7.11	41.89	42.78	74.00	-31.22	Vertical
Detector: Average Value								
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5350.00	36.43	30.82	7.11	41.89	32.47	54.00	-21.53	Horizontal
5350.00	36.94	30.82	7.11	41.89	32.98	54.00	-21.02	Vertical
Test channel: Highest channel								
Detector: Peak Value								
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5460.00	47.28	30.54	7.18	41.85	43.15	74.00	-30.85	Horizontal
5460.00	47.17	30.54	7.18	41.85	43.04	74.00	-30.96	Vertical
Detector: Average Value								
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5460.00	37.14	30.54	7.18	41.85	33.01	54.00	-20.99	Horizontal
5460.00	37.29	30.54	7.18	41.85	33.16	54.00	-20.84	Vertical

Remark:

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.

2. *The emission levels of other frequencies are very lower than the limit and not show in test report.*

Band 4 – 802.11n(HT40)								
Test channel: Lowest channel								
Detector: Peak Value								
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5350.00	46.56	30.82	7.11	41.89	42.60	74.00	-31.40	Horizontal
5350.00	47.76	30.82	7.11	41.89	43.80	74.00	-30.20	Vertical
Detector: Average Value								
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5350.00	36.42	30.82	7.11	41.89	32.46	54.00	-21.54	Horizontal
5350.00	37.13	30.82	7.11	41.89	33.17	54.00	-20.83	Vertical
Test channel: Highest channel								
Detector: Peak Value								
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5460.00	47.55	30.54	7.18	41.85	43.42	74.00	-30.58	Horizontal
5460.00	47.43	30.54	7.18	41.85	43.30	74.00	-30.70	Vertical
Detector: Average Value								
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5460.00	37.39	30.54	7.18	41.85	33.26	54.00	-20.74	Horizontal
5460.00	37.41	30.54	7.18	41.85	33.28	54.00	-20.72	Vertical

Remark:

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.

2. *The emission levels of other frequencies are very lower than the limit and not show in test report.*

Band 4 – 802.11ac(HT20)								
Test channel: Lowest channel								
Detector: Peak Value								
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5350.00	46.18	30.82	7.11	41.89	42.22	74.00	-31.78	Horizontal
5350.00	46.53	30.82	7.11	41.89	42.57	74.00	-31.43	Vertical
Detector: Average Value								
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5350.00	36.42	30.82	7.11	41.89	32.46	54.00	-21.54	Horizontal
5350.00	36.27	30.82	7.11	41.89	32.31	54.00	-21.69	Vertical
Test channel: Highest channel								
Detector: Peak Value								
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5460.00	47.24	30.54	7.18	41.85	43.11	74.00	-30.89	Horizontal
5460.00	47.36	30.54	7.18	41.85	43.23	74.00	-30.77	Vertical
Detector: Average Value								
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5460.00	37.94	30.54	7.18	41.85	33.81	54.00	-20.19	Horizontal
5460.00	37.27	30.54	7.18	41.85	33.14	54.00	-20.86	Vertical

Remark:

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.

2. *The emission levels of other frequencies are very lower than the limit and not show in test report.*

Band 4 – 802.11ac(HT40)								
Test channel: Lowest channel								
Detector: Peak Value								
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5350.00	47.93	30.82	7.11	41.89	43.97	74.00	-30.03	Horizontal
5350.00	46.94	30.82	7.11	41.89	42.98	74.00	-31.02	Vertical
Detector: Average Value								
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5350.00	37.12	30.82	7.11	41.89	33.16	54.00	-20.84	Horizontal
5350.00	36.98	30.82	7.11	41.89	33.02	54.00	-20.98	Vertical
Test channel: Highest channel								
Detector: Peak Value								
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5460.00	47.94	30.54	7.18	41.85	43.81	74.00	-30.19	Horizontal
5460.00	47.63	30.54	7.18	41.85	43.50	74.00	-30.50	Vertical
Detector: Average Value								
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5460.00	37.47	30.54	7.18	41.85	33.34	54.00	-20.66	Horizontal
5460.00	37.64	30.54	7.18	41.85	33.51	54.00	-20.49	Vertical

Remark:

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.

2. The emission levels of other frequencies are very lower than the limit and not show in test report.

Band 4 – 802.11ac(HT80)								
Test channel: Middle channel								
Detector: Peak Value								
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5350.00	47.24	30.82	7.11	41.89	43.28	74.00	-30.72	Horizontal
5350.00	47.94	30.82	7.11	41.89	43.98	74.00	-30.02	Vertical
Detector: Average Value								
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5350.00	37.94	30.82	7.11	41.89	33.98	54.00	-20.02	Horizontal
5350.00	37.28	30.82	7.11	41.89	33.32	54.00	-20.68	Vertical
Test channel: Middle channel								
Detector: Peak Value								
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5460.00	47.31	30.54	7.18	41.85	43.18	74.00	-30.82	Horizontal
5460.00	47.29	30.54	7.18	41.85	43.16	74.00	-30.84	Vertical
Detector: Average Value								
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5460.00	37.63	30.54	7.18	41.85	33.50	54.00	-20.50	Horizontal
5460.00	37.23	30.54	7.18	41.85	33.10	54.00	-20.90	Vertical

Remark:

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.

2. The emission levels of other frequencies are very lower than the limit and not show in test report.

6.7.2 Unwanted Emissions out of the Restricted Bands

Test Requirement:	FCC Part15 C Section 15.209 and 15.205
Test Method:	ANSI C63.10: 2013
Test Frequency Range:	30MHz to 40GHz
Test site:	Measurement Distance: 3m

Receiver setup:

Frequency	Detector	RBW	VBW	Remark
30MHz-1GHz	Quasi-peak	100kHz	300kHz	Quasi-peak Value
Above 1GHz	Peak	1MHz	3MHz	Peak Value
	RMS	1MHz	3MHz	Average Value

Limit:

Frequency	Limit (dBuV/m @3m)	Remark
30MHz-88MHz	40.0	Quasi-peak Value
88MHz-216MHz	43.5	Quasi-peak Value
216MHz-960MHz	46.0	Quasi-peak Value
960MHz-1GHz	54.0	Quasi-peak Value
Above 1GHz	68.20	Peak Value
	54.00	Average Value

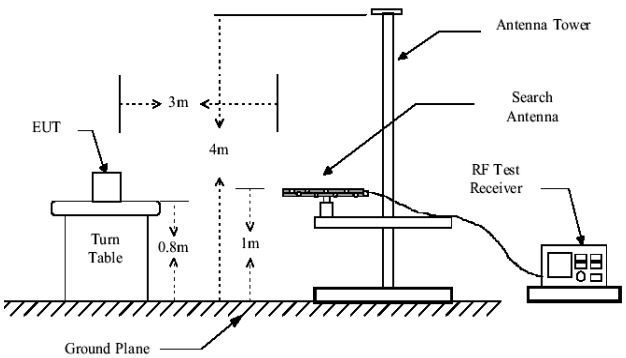
Remark:
Above 1GHz limit:
E[dBμV/m] = EIRP[dBm] + 95.2=68.2 dBuV/m, for EIPR[dBm]=-27dBm.

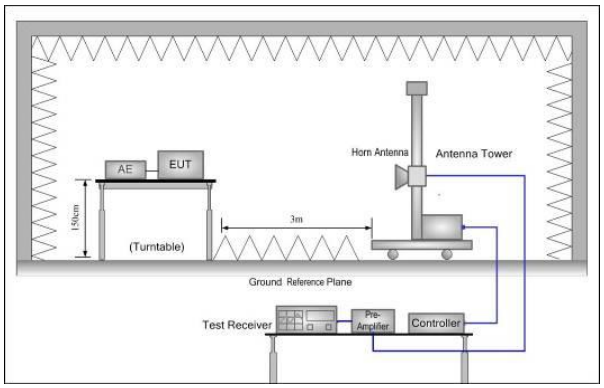
Test Procedure:

1. The EUT was placed on the top of a rotating table 0.8m(below 1GHz)/1.5m(above 1GHz) above the ground at a 3 meter camber. The table was rotated 360 degrees to determine the position of the highest radiation.
2. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
3. The antenna height 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.
4. 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 rota table was turned from 0 degrees to 360 degrees to find the maximum reading.
5. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
6. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

Test setup:

Below 1GHz

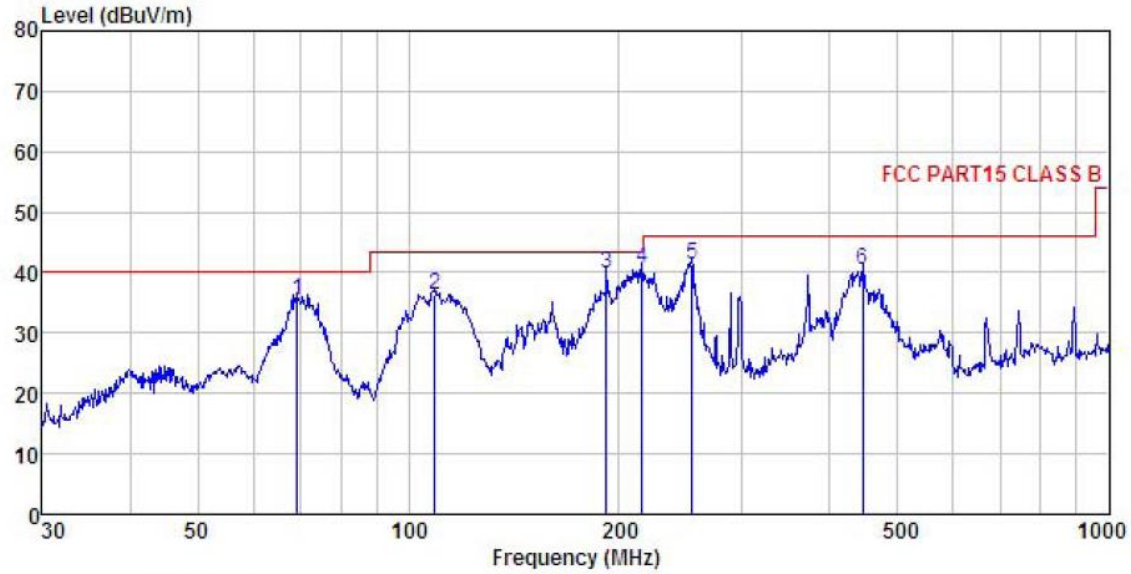


	Above 1GHz 
Test Instruments:	Refer to section 5.9 for details
Test mode:	Refer to section 5.3 for details
Test results:	Passed

Measurement Data (worst case):

Below 1GHz

Test Polarization: Horizontal



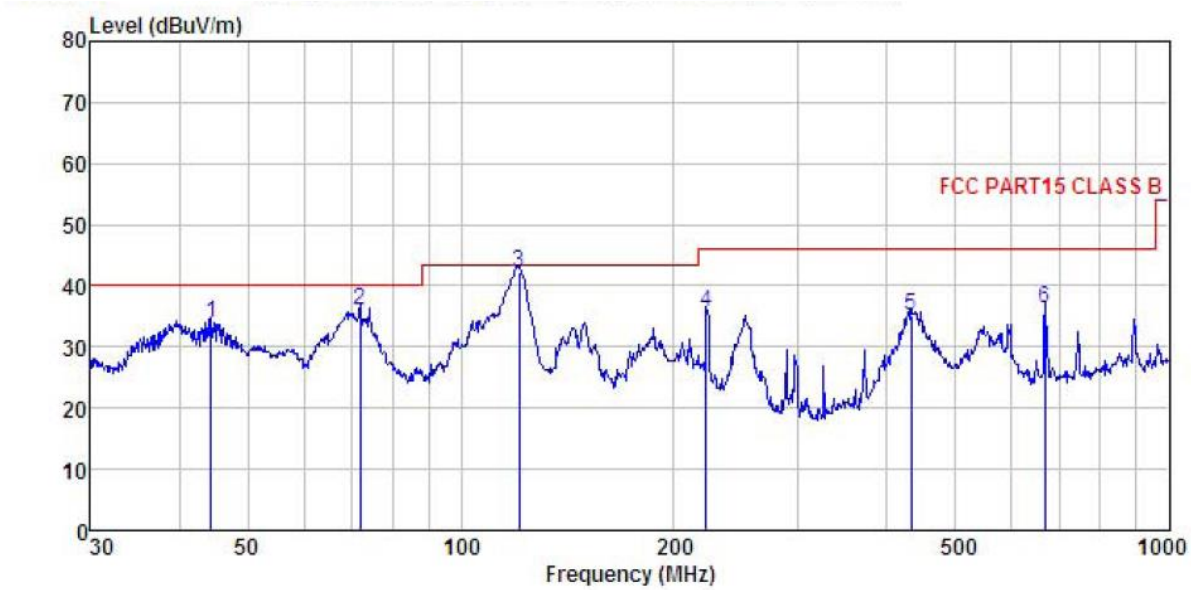
Site : 3m chamber
Condition : FCC PART15 CLASS B 3m VULB9163(30M2G) HORIZONTAL
EUT : 21.5" LCD touch screen android
: quad core player
Model : DT215-AC4G1-1080-SL
Test mode : 5GWIFI mode
Power Rating : AC 120V60Hz
Environment : Temp:25.5'C Huni:55%
Test Engineer: Yaro
Remark :

	Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	69.357	54.43	9.30	1.49	29.73	35.49	40.00	-4.51	QP
2	109.029	51.44	12.24	2.04	29.46	36.26	43.50	-7.24	QP
3	191.745	54.54	11.25	2.81	28.89	39.71	43.50	-3.79	QP
4	215.268	54.38	12.09	2.85	28.73	40.59	43.50	-2.91	QP
5	253.837	53.78	13.33	2.82	28.53	41.40	46.00	-4.60	QP
6	444.851	50.14	16.04	3.19	28.86	40.51	46.00	-5.49	QP

Remark:

1. *Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.*
2. *The emission levels of other frequencies are very lower than the limit and not show in test report.*

Test Polarization: Vertical



Site : 3m chamber
Condition : FCC PART15 CLASS B 3m VULB9163(30M2G) VERTICAL
EUT : 21.5" LCD touch screen android
: quad core player
Model : DT215-AC4G1-1080-SL
Test mode : 5GWIFI mode
Power Rating : AC 120V60Hz
Environment : Temp:25.5℃ Huni:55%
Test Engineer: Yaro
Remark :

	Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	44.431	48.90	13.60	1.28	29.86	33.92	40.00	-6.08	QP
2	72.084	55.21	8.88	1.56	29.70	35.95	40.00	-4.05	QP
3	120.699	59.27	10.09	2.18	29.39	42.15	43.50	-1.35	QP
4	222.170	49.12	12.35	2.84	28.69	35.62	46.00	-10.38	QP
5	432.546	44.87	15.90	3.16	28.84	35.09	46.00	-10.91	QP
6	668.142	41.42	19.80	3.97	28.74	36.45	46.00	-9.55	QP

Remark:

1. *Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.*
2. *The emission levels of other frequencies are very lower than the limit and not show in test report.*

Above 1GHz:
Band 1:

Band 1 – 802.11a								
Test channel: Lowest channel								
Detector: Peak Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10360.00	47.17	36.94	9.75	42.02	51.84	68.20	-16.36	Vertical
10360.00	47.44	36.94	9.75	42.02	52.11	68.20	-16.09	Horizontal
Detector: Average Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10360.00	37.94	36.94	9.75	42.02	42.61	54.00	-11.39	Vertical
10360.00	37.31	36.94	9.75	42.02	41.98	54.00	-12.02	Horizontal
Test channel: Middle channel								
Detector: Peak Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10400.00	47.52	36.96	9.85	41.95	52.38	68.20	-15.82	Vertical
10400.00	47.89	36.96	9.85	41.95	52.75	68.20	-15.45	Horizontal
Detector: Average Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10400.00	37.92	36.96	9.85	41.95	42.78	54.00	-11.22	Vertical
10400.00	37.48	36.96	9.85	41.95	42.34	54.00	-11.66	Horizontal
Test channel: Highest channel								
Detector: Peak Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10480.00	47.77	37.49	10.81	42.29	53.78	68.20	-14.42	Vertical
10480.00	47.94	37.49	10.81	42.29	53.95	68.20	-14.25	Horizontal
Detector: Average Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10480.00	37.18	37.49	10.81	42.29	43.19	54.00	-10.81	Vertical
10480.00	37.42	37.49	10.81	42.29	43.43	54.00	-10.57	Horizontal

Remark:
1. *Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.*
2. *The emission levels of other frequencies are very lower than the limit and not show in test report.*

Band 1 – 802.11n(HT20)								
Test channel: Lowest channel								
Detector: Peak Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10360.00	47.15	36.94	9.75	42.02	51.82	68.20	-16.38	Vertical
10360.00	47.36	36.94	9.75	42.02	52.03	68.20	-16.17	Horizontal
Detector: Average Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10360.00	37.24	36.94	9.75	42.02	41.91	54.00	-12.09	Vertical
10360.00	37.94	36.94	9.75	42.02	42.61	54.00	-11.39	Horizontal
Test channel: Middle channel								
Detector: Peak Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10400.00	47.47	36.96	9.85	41.95	52.33	68.20	-15.87	Vertical
10400.00	47.31	36.96	9.85	41.95	52.17	68.20	-16.03	Horizontal
Detector: Average Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10400.00	37.31	36.96	9.85	41.95	42.17	54.00	-11.83	Vertical
10400.00	37.18	36.96	9.85	41.95	42.04	54.00	-11.96	Horizontal
Test channel: Highest channel								
Detector: Peak Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10480.00	47.89	37.49	10.81	42.29	53.90	68.20	-14.30	Vertical
10480.00	47.98	37.49	10.81	42.29	53.99	68.20	-14.21	Horizontal
Detector: Average Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10480.00	37.94	37.49	10.81	42.29	43.95	54.00	-10.05	Vertical
10480.00	37.36	37.49	10.81	42.29	43.37	54.00	-10.63	Horizontal

Remark:
1. *Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.*
2. *The emission levels of other frequencies are very lower than the limit and not show in test report.*

Band 1 – 802.11n(HT40)								
Test channel: Lowest channel								
Detector: Peak Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10380.00	46.75	36.94	9.75	42.02	51.42	68.20	-16.78	Vertical
10380.00	46.39	36.94	9.75	42.02	51.06	68.20	-17.14	Horizontal
Detector: Average Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10380.00	36.93	36.94	9.75	42.02	41.60	54.00	-12.40	Vertical
10380.00	36.84	36.94	9.75	42.02	41.51	54.00	-12.49	Horizontal
Test channel: Highest channel								
Detector: Peak Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10460.00	47.39	37.49	10.81	42.29	53.40	68.20	-14.80	Vertical
10460.00	47.55	37.49	10.81	42.29	53.56	68.20	-14.64	Horizontal
Detector: Average Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10460.00	36.97	37.49	10.81	42.29	42.98	54.00	-11.02	Vertical
10460.00	37.65	37.49	10.81	42.29	43.66	54.00	-10.34	Horizontal

Remark:

1. *Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.*
2. *The emission levels of other frequencies are very lower than the limit and not show in test report.*

Band 1 – 802.11ac(HT20)								
Test channel: Lowest channel								
Detector: Peak Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10360.00	47.64	36.94	9.75	42.02	52.31	68.20	-15.89	Vertical
10360.00	47.39	36.94	9.75	42.02	52.06	68.20	-16.14	Horizontal
Detector: Average Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10360.00	37.98	36.94	9.75	42.02	42.65	54.00	-11.35	Vertical
10360.00	37.95	36.94	9.75	42.02	42.62	54.00	-11.38	Horizontal
Test channel: Middle channel								
Detector: Peak Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10400.00	47.27	36.96	9.85	41.95	52.13	68.20	-16.07	Vertical
10400.00	47.97	36.96	9.85	41.95	52.83	68.20	-15.37	Horizontal
Detector: Average Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10400.00	37.19	36.96	9.85	41.95	42.05	54.00	-11.95	Vertical
10400.00	37.32	36.96	9.85	41.95	42.18	54.00	-11.82	Horizontal
Test channel: Highest channel								
Detector: Peak Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10480.00	47.15	37.49	10.81	42.29	53.16	68.20	-15.04	Vertical
10480.00	47.89	37.49	10.81	42.29	53.90	68.20	-14.30	Horizontal
Detector: Average Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10480.00	37.52	37.49	10.81	42.29	43.53	54.00	-10.47	Vertical
10480.00	37.48	37.49	10.81	42.29	43.49	54.00	-10.51	Horizontal

Remark:
1. *Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.*
2. *The emission levels of other frequencies are very lower than the limit and not show in test report.*

Band 1 – 802.11ac(HT40)								
Test channel: Lowest channel								
Detector: Peak Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10380.00	47.98	36.94	9.75	42.02	52.65	68.20	-15.55	Vertical
10380.00	47.28	36.94	9.75	42.02	51.95	68.20	-16.25	Horizontal
Detector: Average Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10380.00	37.22	36.94	9.75	42.02	41.89	54.00	-12.11	Vertical
10380.00	37.17	36.94	9.75	42.02	41.84	54.00	-12.16	Horizontal
Test channel: Highest channel								
Detector: Peak Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10460.00	46.56	37.49	10.81	42.29	52.57	68.20	-15.63	Vertical
10460.00	46.91	37.49	10.81	42.29	52.92	68.20	-15.28	Horizontal
Detector: Average Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10460.00	36.94	37.49	10.81	42.29	42.95	54.00	-11.05	Vertical
10460.00	37.67	37.49	10.81	42.29	43.68	54.00	-10.32	Horizontal

Remark:

1. *Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.*
2. *The emission levels of other frequencies are very lower than the limit and not show in test report.*

Band 1 – 802.11ac(HT80)								
Test channel: Middle channel								
Detector: Peak Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10420.00	46.39	36.96	9.85	41.95	51.25	68.20	-16.95	Vertical
10420.00	47.19	36.96	9.85	41.95	52.05	68.20	-16.15	Horizontal
Detector: Average Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10420.00	36.93	36.96	9.85	41.95	41.79	54.00	-12.21	Vertical
10420.00	37.60	36.96	9.85	41.95	42.46	54.00	-11.54	Horizontal

Remark:

1. *Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.*
2. *The emission levels of other frequencies are very lower than the limit and not show in test report.*

Band 4:

Band 4 – 802.11a								
Test channel: Lowest channel								
Detector: Peak Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
11490.00	47.54	37.49	10.81	42.29	53.55	74.00	-20.45	Vertical
11490.00	47.78	37.49	10.81	42.29	53.79	74.00	-20.21	Horizontal
Detector: Average Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
11490.00	37.90	37.49	10.81	42.29	43.91	54.00	-10.09	Vertical
11490.00	37.89	37.49	10.81	42.29	43.90	54.00	-10.10	Horizontal
Test channel: Middle channel								
Detector: Peak Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
11570.00	46.78	37.55	10.78	42.27	52.84	74.00	-21.16	Vertical
11570.00	47.56	37.55	10.78	42.27	53.62	74.00	-20.38	Horizontal
Detector: Average Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
11570.00	37.88	37.55	10.78	42.27	43.94	54.00	-10.06	Vertical
11570.00	37.14	37.55	10.78	42.27	43.20	54.00	-10.80	Horizontal
Test channel: Highest channel								
Detector: Peak Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
11650.00	47.54	37.60	10.76	42.26	53.64	74.00	-20.36	Vertical
11650.00	47.18	37.60	10.76	42.26	53.28	74.00	-20.72	Horizontal
Detector: Average Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
11650.00	37.19	37.60	10.76	42.26	43.29	54.00	-10.71	Vertical
11650.00	37.41	37.60	10.76	42.26	43.51	54.00	-10.49	Horizontal

Remark:

1. *Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.*
2. *The emission levels of other frequencies are very lower than the limit and not show in test report.*

Band 4 – 802.11n(HT20)								
Test channel: Lowest channel								
Detector: Peak Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
11490.00	47.52	37.49	10.81	42.29	53.53	74.00	-20.47	Vertical
11490.00	47.56	37.49	10.81	42.29	53.57	74.00	-20.43	Horizontal
Detector: Average Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
11490.00	37.94	37.49	10.81	42.29	43.95	54.00	-10.05	Vertical
11490.00	37.17	37.49	10.81	42.29	43.18	54.00	-10.82	Horizontal
Test channel: Middle channel								
Detector: Peak Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
11570.00	47.23	37.55	10.78	42.27	53.29	74.00	-20.71	Vertical
11570.00	47.95	37.55	10.78	42.27	54.01	74.00	-19.99	Horizontal
Detector: Average Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
11570.00	37.14	37.55	10.78	42.27	43.20	54.00	-10.80	Vertical
11570.00	37.82	37.55	10.78	42.27	43.88	54.00	-10.12	Horizontal
Test channel: Highest channel								
Detector: Peak Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
11650.00	47.39	37.60	10.76	42.26	53.49	74.00	-20.51	Vertical
11650.00	47.28	37.60	10.76	42.26	53.38	74.00	-20.62	Horizontal
Detector: Average Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
11650.00	37.17	37.60	10.76	42.26	43.27	54.00	-10.73	Vertical
11650.00	37.82	37.60	10.76	42.26	43.92	54.00	-10.08	Horizontal

Remark:

1. *Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.*
2. *The emission levels of other frequencies are very lower than the limit and not show in test report.*

Band 4 – 802.11n(HT40)								
Test channel: Lowest channel								
Detector: Peak Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
11510.00	47.56	37.50	10.81	42.29	53.58	74.00	-20.42	Vertical
11510.00	47.67	37.50	10.81	42.29	53.69	74.00	-20.31	Horizontal
Detector: Average Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
11510.00	37.94	37.50	10.81	42.29	43.96	54.00	-10.04	Vertical
11510.00	37.65	37.50	10.81	42.29	43.67	54.00	-10.33	Horizontal
Test channel: Highest channel								
Detector: Peak Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
11590.00	46.71	37.56	10.77	42.27	52.77	74.00	-21.23	Vertical
11590.00	46.75	37.56	10.77	42.27	52.81	74.00	-21.19	Horizontal
Detector: Average Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
11590.00	36.54	37.56	10.77	42.27	42.60	54.00	-11.40	Vertical
11590.00	36.17	37.56	10.77	42.27	42.23	54.00	-11.77	Horizontal

Remark:

1. *Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.*
2. *The emission levels of other frequencies are very lower than the limit and not show in test report.*

Band 4 – 802.11ac(HT20)								
Test channel: Lowest channel								
Detector: Peak Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
11490.00	47.36	37.49	10.81	42.29	53.37	74.00	-20.63	Vertical
11490.00	47.79	37.49	10.81	42.29	53.80	74.00	-20.20	Horizontal
Detector: Average Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
11490.00	37.69	37.49	10.81	42.29	43.70	54.00	-10.30	Vertical
11490.00	37.81	37.49	10.81	42.29	43.82	54.00	-10.18	Horizontal
Test channel: Middle channel								
Detector: Peak Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
11570.00	47.71	37.55	10.78	42.27	53.77	74.00	-20.23	Vertical
11570.00	47.57	37.55	10.78	42.27	53.63	74.00	-20.37	Horizontal
Detector: Average Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
11570.00	37.31	37.55	10.78	42.27	43.37	54.00	-10.63	Vertical
11570.00	37.45	37.55	10.78	42.27	43.51	54.00	-10.49	Horizontal
Test channel: Highest channel								
Detector: Peak Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
11650.00	47.19	37.60	10.76	42.26	53.29	74.00	-20.71	Vertical
11650.00	47.76	37.60	10.76	42.26	53.86	74.00	-20.14	Horizontal
Detector: Average Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
11650.00	37.12	37.60	10.76	42.26	43.22	54.00	-10.78	Vertical
11650.00	37.89	37.60	10.76	42.26	43.99	54.00	-10.01	Horizontal

Remark:

1. *Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.*
2. *The emission levels of other frequencies are very lower than the limit and not show in test report.*

Band 4 – 802.11ac(HT40)								
Test channel: Lowest channel								
Detector: Peak Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
11510.00	46.25	37.50	10.81	42.29	52.27	74.00	-21.73	Vertical
11510.00	46.54	37.50	10.81	42.29	52.56	74.00	-21.44	Horizontal
Detector: Average Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
11510.00	36.66	37.50	10.81	42.29	42.68	54.00	-11.32	Vertical
11510.00	36.95	37.50	10.81	42.29	42.97	54.00	-11.03	Horizontal
Test channel: Highest channel								
Detector: Peak Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
11590.00	47.77	37.56	10.77	42.27	53.83	74.00	-20.17	Vertical
11590.00	47.52	37.56	10.77	42.27	53.58	74.00	-20.42	Horizontal
Detector: Average Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
11590.00	37.64	37.56	10.77	42.27	43.70	54.00	-10.30	Vertical
11590.00	37.97	37.56	10.77	42.27	44.03	54.00	-9.97	Horizontal

Remark:

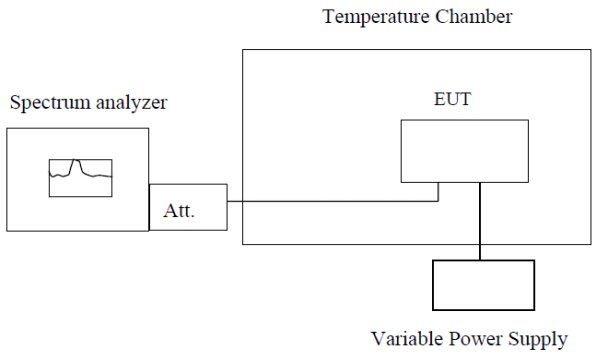
1. *Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.*
2. *The emission levels of other frequencies are very lower than the limit and not show in test report.*

Band 4 – 802.11ac(HT80)								
Test channel: Middle channel								
Detector: Peak Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
11550.00	47.19	37.54	10.81	42.29	53.25	74.00	-20.75	Vertical
11550.00	47.75	37.54	10.81	42.29	53.81	74.00	-20.19	Horizontal
Detector: Average Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
11550.00	37.11	37.54	10.81	42.29	43.17	54.00	-10.83	Vertical
11550.00	37.94	37.54	10.81	42.29	44.00	54.00	-10.00	Horizontal

Remark:

1. *Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.*
2. *The emission levels of other frequencies are very lower than the limit and not show in test report.*

6.8 Frequency stability

Test Requirement:	FCC Part15 E Section 15.407 (g)
Limit:	Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the user's manual.
Test setup:	 **Note :** Measurement setup for testing on Antenna connector
Test procedure:	1. The EUT is installed in an environment test chamber with external power source. 2. Set the chamber to operate at 50 centigrade and external power source to output at nominal voltage ofEUT. 3. A sufficient stabilization period at each temperature is used prior to each frequency measurement. 4. When temperature is stabled, measure the frequency stability. 5. The test shall be performed under -30 to 50 centigrade and 85 to 115 percent of the nominal voltage.Change setting of chamber and external power source to complete all conditions.
Test Instruments:	Refer to section 5.9 for details
Test mode:	Refer to section 5.3 for details
Test results:	Refer to FCC ID: 2AB6Z-A18RK31