

Shenzhen Zhongjian Nanfang Testing Co., Ltd.

Report No: CCIS15040027503

FCC REPORT (WIFI)

Applicant: Shenzhen Wanchuangbo Industry Development Co., Ltd.

Address of Applicant:

Building 4, Dezhong Industry Park, No.7 Lipu Street,

Bantian, Longgang District Shenzhen, China

Equipment Under Test (EUT)

Product Name: Tablet PC

Model No.: CT1080, CT1080X(X=A-Z), 8050, 8050X(X=A-Z)

Trade mark: iDeaUSA, VENSTAR

FCC ID: 2AAGR15M-01

Applicable standards: FCC CFR Title 47 Part 15.247

Date of sample receipt: 30 Apr., 2015

Date of Test: 30 Apr., 2015 to 21 May., 2015

Date of report issued: 22 May., 2015

Test Result: PASS*

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

Authorized Signature:



Bruce Zhang Laboratory Manager

This report details the results of the testing carried out on one sample. The results contained in this test report do not relate to other samples of the same product and does not permit the use of the CCIS product certification mark. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report.

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2 Version

Version No.	Date	Description
00	22 May., 2015	Original

Prepared by: 22 May., 2015

Report Clerk

Reviewed by: GUVW W Date: 22 May., 2015

Project Engineer



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4 Test Summary

Test Item	Section in CFR 47	Result
Antenna requirement	15.203/15.247 (c)	Pass
AC Power Line Conducted Emission	15.207	Pass
Conducted Peak Output Power	15.247 (b)(3)	Pass
6dB Emission Bandwidth 99% Occupied Bandwidth	15.247 (a)(2)	Pass
Power Spectral Density	15.247 (e)	Pass
Band Edge	15.247(d)	Pass
Spurious Emission	15.205/15.209	Pass

Pass: The EUT complies with the essential requirements in the standard.



5 General Information

5.1 Client Information

Applicant:	Shenzhen Wanchuangbo Industry Development Co., Ltd.
Address of Applicant:	Building 4, Dezhong Industry Park, No.7 Lipu Street, Bantian, Longgang District Shenzhen, China
Manufacturer:	Shenzhen Wanchuangbo Industry Development Co., Ltd.
Address of Manufacturer:	Building 4, Dezhong Industry Park, No.7 Lipu Street, Bantian, Longgang District Shenzhen, China

5.2 General Description of E.U.T.

Draduct Names	Tablet PC
Product Name:	
Model No.:	CT1080, CT1080X(X=A-Z), 8050, 8050X(X=A-Z)
Operation Frequency:	2412MHz~2462MHz (802.11b/802.11g/802.11n(H20)) 2422MHz~2452MHz (802.11n(H40))
Channel numbers:	11 for 802.11b/802.11g/802.11(H20) 7 for 802.11n(H40)
Channel separation:	5MHz
Modulation technology: (IEEE 802.11b)	Direct Sequence Spread Spectrum (DSSS)
Modulation technology: (IEEE 802.11g/802.11n)	Orthogonal Frequency Division Multiplexing(OFDM)
Data speed (IEEE 802.11b):	1Mbps, 2Mbps, 5.5Mbps, 11Mbps
Data speed (IEEE 802.11g):	6Mbps, 9Mbps, 12Mbps, 18Mbps, 24Mbps, 36Mbps, 48Mbps,54Mbps
Data speed (IEEE 802.11n):	Up to 150Mbps
Antenna Type:	Internal Antenna
Antenna gain:	2.0 dBi
AC adapter:	Model: AW010WR-0500200UU Input:100-240V AC,50/60Hz 0.4A Output:5V DC MAX 2.0A
Power supply:	Rechargeable Li-ion Battery DC3.7V-5500mAh
Remark	Model No.: CT1080, CT1080X(X=A-Z), 8050, 8050X(X=A-Z) were identical inside, the electrical circuit design, layout, components used and internal wiring, with only difference being color and label.





Operation Frequency each of channel For 802.11b/g/n(H20)							
Channel Frequency Channel Frequency Channel Frequency Channel Frequency							
1	2412MHz	4	2427MHz	7	2442MHz	10	2457MHz
2	2417MHz	5	2432MHz	8	2447MHz	11	2462MHz
3	2422MHz	6	2437MHz	9	2452MHz		

Operation Frequency each of channel For 802.11n(H40)							
Channel Frequency Channel Frequency Channel Frequency Channel Frequency							
		4	2427MHz	7	2442MHz		
		5	2432MHz	8	2447MHz		
3	2422MHz	6	2437MHz	9	2452MHz		

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:

802.11b/802.11g/802.11n (H20)

Channel	Frequency		
The lowest channel	2412MHz		
The middle channel	2437MHz		
The Highest channel	2462MHz		

802.11n (H40)

Channel	Frequency		
The lowest channel	2422MHz		
The middle channel	2437MHz		
The Highest channel	2452MHz		



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5.3 Test environment and mode

Operating Environment:				
Temperature:	24.0 °C			
Humidity:	54 % RH			
Atmospheric Pressure:	1010 mbar			
Test mode:				
Operation mode	Keep the EUT in continuous transmitting with modulation			

The sample was placed 0.8m above the ground plane of 3m chamber. Measurements in both horizontal and vertical polarities were performed. During the test, each emission was maximized by: having the EUT continuously working, investigated all operating modes, rotated about all 3 axis (X, Y & Z) and considered typical configuration to obtain worst position, manipulating interconnecting cables, rotating the turntable, varying antenna height from 1m to 4m in both horizontal and vertical polarizations. The emissions worst-case are shown in Test Results of the following pages.

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 in lowest channel, and found the follow list which it was worst case.

Mode	Data rate	
802.11b	1Mbps	
802.11g	6Mbps	
802.11n(H20)	6.5Mbps	
802.11n(H40)	13.5Mbps	

Final Test Mode:

According to ANSI C63.4 standards, the test results are both the "worst case" and "worst setup" 1Mbps for 802.11b, 6Mbps for 802.11g, 6.5Mbps for 802.11n(H20) and 13.5 Mbps for 802.11n(H40). Duty cycle setting during the transmission is 100% with maximum power setting for all modulations.



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5.4 Laboratory Facility

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

• FCC - Registration No.: 817957

Shenzhen Zhongjian Nanfang Testing Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in out files. Registration 817957, February 27, 2012.

• 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.

5.5 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



5.6 Test Instruments list

Radiated Emission:							
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal. Date (mm-dd-yy)	Cal. Due date (mm-dd-yy)	
1	3m Semi- Anechoic Chamber	SAEMC	9(L)*6(W)* 6(H)	CCIS0001	08-23-2014	08-22-2017	
2	BiConiLog Antenna	SCHWARZBECK MESS-ELEKTRONIK	VULB9163	CCIS0005	03-28-2015	03-28-2016	
3	Double -ridged waveguide horn	SCHWARZBECK MESS-ELEKTRONIK	BBHA9120D	CCIS0006	03-28-2015	03-28-2016	
4	EMI Test Software	AUDIX	E3	N/A	N/A	N/A	
5	Amplifier (10kHz-1.3GHz)	HP	8447D	CCIS0003	04-01-2015	03-31-2016	
6	Amplifier (1GHz-18GHz)	Compliance Direction Systems Inc.	PAP-1G18	CCIS0011	04-01-2015	03-31-2016	
7	Pre-amplifier (18-26GHz)	Rohde & Schwarz	AFS33-18002 650-30-8P-44	GTS218	04-01-2015	03-31-2016	
8	Horn Antenna	ETS-LINDGREN	3160	GTS217	04-01-2015	03-31-2016	
9	Printer	HP	HP LaserJet P1007	N/A	N/A	N/A	
10	Positioning Controller	UC	UC3000	CCIS0015	N/A	N/A	
11	Spectrum analyzer 9k-30GHz	Rohde & Schwarz	FSP	CCIS0023	03-28-2015	03-28-2016	
12	EMI Test Receiver	Rohde & Schwarz	ESPI	CCIS0022	03-28-2015	03-28-2016	
13	Loop antenna	Laplace instrument	RF300	EMC0701	04-01-2015	03-31-2016	
14	Universal radio communication tester	Rhode & Schwarz	CMU200	CCIS0069	03-28-2015	03-28-2016	
15	Signal Analyzer	Rohde & Schwarz	FSIQ3	CCIS0088	04-08-2015	04-08-2016	

Cond	Conducted Emission:						
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal. Date (mm-dd-yy)	Cal. Due date (mm-dd-yy)	
1	Shielding Room	ZhongShuo Electron	11.0(L)x4.0(W)x3.0(H)	CCIS0061	11-10-2012	11-09-2015	
2	EMI Test Receiver	Rohde & Schwarz	ESCI	CCIS0002	03-28-2015	03-28-2016	
3	LISN	CHASE	MN2050D	CCIS0074	03-28-2015	03-28-2016	
4	Coaxial Cable	CCIS	N/A	CCIS0086	04-01-2015	03-31-2016	
5	EMI Test Software	AUDIX	E3	N/A	N/A	N/A	



6 Test results and Measurement Data

6.1 Antenna requirement:

Standard requirement: FCC Part 15 C Section 15.203 /247(c)

15.203 requirement:

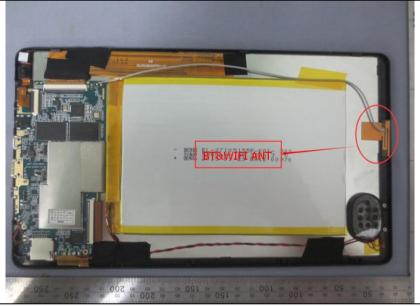
An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

15.247(c) (1)(i) requirement:

(i) Systems operating in the 2400-2483.5 MHz band that is used exclusively for fixed. Point-to-point operations may employ transmitting antennas with directional gain greater than 6dBi provided the maximum conducted output power of the intentional radiator is reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6dBi.

E.U.T Antenna:

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







6.2 Conducted Emission

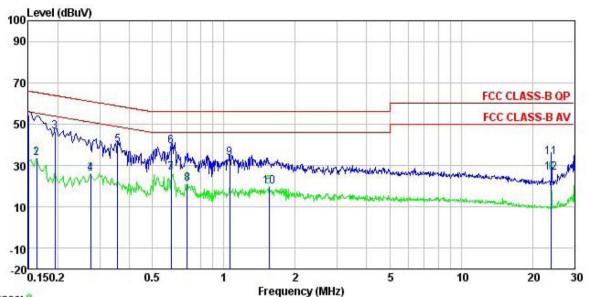
a line impedance stabilization network (L.I.S.N.), which provides a 500hm/50uH coupling impedance for the measuring equipment. 2. The peripheral devices are also connected to the main power through a LISN that provides a 500hm/50uH coupling impedance with 50ohm termination. (Please refer to the block 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 C63.4: 2009 on conducted measurement. Test setup: Reference Plane Reference Plane Remark E.U.T. Equipment Under Test LISN Line impedance Stabilization Network Test table height=0.8m Measurement Record: Refer to section 5.6 for details Test mode: Refer to section 5.3 for details							
Test Frequency Range: 150 kHz to 30 MHz Class / Severity: Class B Receiver setup: RBW=9 kHz, VBW=30 kHz Limit: Frequency range (MHz) Quasi-peak Average 0.15-0.5 66 to 56* 56 to 46* 0.5-5 56 46 5-30 60 50 * Decreases with the logarithm of the frequency. 1. The E.U.T and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.), which provides a 500hm/50UH coupling impedance for the measuring equipment. 2. The peripheral devices are also connected to the main power through a LISN that provides a 500hm/50UH coupling impedance with 500hm 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 C63.4: 2009 on conducted measurement. Test setup: Reference Plane LISN	Test Requirement:	FCC Part 15 C Section 15.207					
Class / Severity: Receiver setup: RBW=9 kHz, VBW=30 kHz Limit: Frequency range (MHz) Quasi-peak Average 0.15-0.5 66 to 56° 56 to 46° 0.5-5 56 46 5-30 60 50 *Decreases with the logarithm of the frequency. 1. The E.U.T and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.), which provides a 500hm/50UH coupling impedance for the measuring equipment. 2. The peripheral devices are also connected to the main power through a LISN that provides a 500hm/50UH coupling impedance with 500hm 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 C63.4: 2009 on conducted measurement. Test setup: Reference Plane LISN Ac power LISN LISN Line impedence Stabilization Network Test table height=0.8m Measurement Record: Uncertainty: 3.28dB Test Instruments: Refer to section 5.6 for details Test mode: Refer to section 5.3 for details	Test Method:	ANSI C63.4: 2009					
Receiver setup: RBW=9 kHz, VBW=30 kHz	Test Frequency Range:	150 kHz to 30 MHz	150 kHz to 30 MHz				
Limit: Frequency range (MHz)	Class / Severity:	Class B					
Test setup: Frequency range (MHz)	Receiver setup:	RBW=9 kHz, VBW=30 kHz					
Test procedure 1. The E.U.T and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.), which provides a 500nm/50uH coupling impedance for the measuring equipment. 2. The peripheral devices are also connected to the main power through a LISN that provides a 500nm/50uH coupling impedance for the measuring equipment. 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 C63.4: 2009 on conducted measurement. Test setup: Reference Plane Comparison of the interface cables must be changed according to ANSI C63.4: 2009 on conducted measurement. Test setup: Reference Plane LISN Line impedence Stabilization Network Test table height=0.8m Lisn Line impedence Stabilization Network Test table height=0.8m Lisn Line impedence Stabilization Network Test stable height=0.8m Lisn Line Impedence Stabilization Network Test Lisn Line Impedence Stabilization Network Test stable height=0.8m Lisn Line Impedence Stabilization Network Test Lisn Line Impe	Limit:	Fraguera estrapa de (MILE)	Limit (d	dBuV)			
Decreases with the logarithm of the frequency.		, , ,					
Test procedure 1. The E.U.T and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.), which 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 C63.4: 2009 on conducted measurement. Test setup: Reference Plane Reference Plane LISN 40cm 80cm Filter AC power Remark E.U.T. Equipment Under Test LISN Line impedence Stabilization Network Test table height=0.8m Measurement Record: Test Instruments: Refer to section 5.6 for details Test mode: Refer to section 5.3 for details							
Test procedure 1. The E.U.T and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.), which provides a 500hm/50uH coupling impedance for the measuring equipment. 2. The peripheral devices are also connected to the main power through a LISN that provides a 500hm/50uH coupling impedance with 500hm 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 C63.4: 2009 on conducted measurement. Test setup: Reference Plane LISN 40cm 80cm Filter AC power LISN List pupment Under Test LISN Line impedence Stabilization Network Test table height=0.8m Measurement Record: Uncertainty: 3.28dB Test Instruments: Refer to section 5.6 for details Test mode: Refer to section 5.3 for details							
1. The E.U.T and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.), which provides a 500hm/50uH coupling impedance for the measuring equipment. 2. The peripheral devices are also connected to the main power through a LISN that provides a 500hm/50uH coupling impedance with 500hm 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 C63.4: 2009 on conducted measurement. Test setup: Reference Plane Remark E.U.T. LISN AUX E.U.T. EMI Receiver AC power LISN Line impedance Stabilization Network Test table height=0 8m Measurement Record: Refer to section 5.6 for details Refer to section 5.3 for details				50			
LISN 40cm 80cm Filter AC power Remark E.U.T Equipment Under Test LISN Line Impedence Stabilization Network Test table height=0.8m Measurement Record: Test Instruments: Refer to section 5.6 for details Test mode: Refer to section 5.3 for details		 The E.U.T and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.), which provides a 50ohm/50uH coupling impedance for the measuring equipment. 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). 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 C63.4: 2009 on conducted 					
Test Instruments: Refer to section 5.6 for details Test mode: Refer to section 5.3 for details	rost sotup.	AUX Equipment Test table/Insulation pla Remark: E.U.T. Equipment Under Test LISN: Line Impedence Stabilization	U.T EMI Receiver	er — AC power			
Test mode: Refer to section 5.3 for details	Measurement Record:	Uncertainty: 3.28dB					
	Test Instruments:						
Test results: Passed	Test mode:	Refer to section 5.3 for details	;				
1 2000	Test results:	Passed					

Measurement Data





Neutral:



Trace: 9

Site

: CCIS Shielding Room : FCC CLASS-B QP LISN NEUTRAL : Tablet PC Condition

EUT Model : CT1080
Test Mode : WIFI mode
Power Rating : AC120/60Hz
Environment : Temp: 23 °C Huni:56% Atmos:101KPa

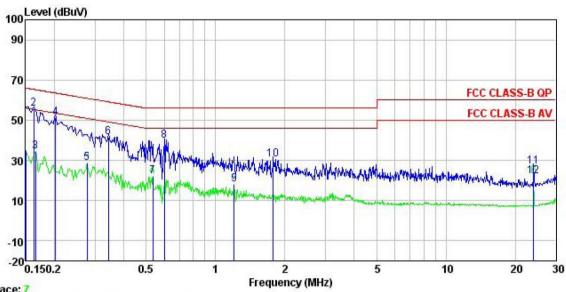
Test Engineer: Garen

vemark.	Freq	Read Level	LISN Factor	Cable Loss	Level	Limit Line	Over Limit	Remark
	MHz	dBu₹	<u>dB</u>	<u>d</u> B	dBu∜	dBu₹	<u>dB</u>	
1	0.150	43.17	0.25	10.78	54.20	66.00	-11.80	QP
2	0.162	22.67	0.25	10.77	33.69	55.34	-21.65	Average
3	0.194	35.24	0.25	10.76	46.25	63.84	-17.59	QP
1 2 3 4 5 6 7 8 9	0.274	15.12	0.26	10.74	26.12	50.98	-24.86	Average
5	0.358	28.83	0.25	10.73	39.81	58.78	-18.97	QP
6	0.601	28.18	0.23	10.77	39.18	56.00	-16.82	QP
7	0.601	15.30	0.23	10.77	26.30	46.00	-19.70	Average
8	0.701	10.03	0.18	10.77	20.98	46.00	-25.02	Average
	1.060	22.44	0.23	10.88	33.55	56.00	-22.45	QP
10	1.552	8.65	0.26	10.93	19.84	46.00	-26.16	Average
11	24.015	22.86	0.48	10.88	34.22	60.00	-25.78	QP
12	24.015	15.13	0.48	10.88	26.49	50.00	-23.51	Average





Line:



Trace: 7 Site

CCIS Shielding Room FCC CLASS-B QP LISN LINE Tablet PC Condition

EUT CT1080 Model Test Mode: WIFI mode
Power Rating: AC120/60Hz
Environment: Temp: 23 °C Huni:56% Atmos:101KPa Test Mode

Test Engineer: Garen

Remark

Freq	Read Level	LISN Factor	Cable Loss	Level	Limit Line	Over Limit	Remark
MHz	dBu₹	<u>dB</u>	₫B	dBu₹	dBu₹	<u>db</u>	
0.150	23.81	0.27	10.78	34.86	56.00	-21.14	Average
0.162	44.60	0.27	10.77	55.64	65.34	-9.70	QP
0.166	23.50	0.27	10.77	34.54	55.16	-20.62	Average
0.202	40.43	0.28	10.76	51.47	63.54	-12.07	QP
0.277	17.66	0.26	10.74	28.66	50.90	-22.24	Average
0.343	30.70	0.27	10.73	41.70	59.13	-17.43	QP
0.535	11.13	0.28	10.76	22.17	46.00	-23.83	Average
0.601	28.56	0.25	10.77	39.58	56.00	-16.42	QP
1.203	6.76	0.25	10.89	17.90	46.00	-28.10	Average
1.781	19.42	0.26	10.95	30.63	56.00	-25.37	QP
24.015	15.78	0.49	10.88	27.15	60.00	-32.85	QP
24.015	10.72	0.49	10.88	22.09	50.00	-27.91	Average
	Freq 0.150 0.162 0.166 0.202 0.277 0.343 0.535 0.601 1.203 1.781 24.015	Read Level MHz dBuV 0.150 23.81 0.162 44.60 0.166 23.50 0.202 40.43 0.277 17.66 0.343 30.70 0.535 11.13 0.601 28.56 1.203 6.76 1.781 19.42 24.015 15.78	Read LISN Level Factor MHz dBuV dB 0.150 23.81 0.27 0.162 44.60 0.27 0.166 23.50 0.27 0.202 40.43 0.28 0.277 17.66 0.26 0.343 30.70 0.27 0.535 11.13 0.28 0.601 28.56 0.25 1.203 6.76 0.25 1.781 19.42 0.26 24.015 15.78 0.49	Read LISN Cable Level Factor Loss MHz dBuV dB dB 0.150 23.81 0.27 10.78 0.162 44.60 0.27 10.77 0.166 23.50 0.27 10.77 0.202 40.43 0.28 10.76 0.277 17.66 0.26 10.74 0.343 30.70 0.27 10.73 0.535 11.13 0.28 10.76 0.601 28.56 0.25 10.89 1.781 19.42 0.26 10.95 24.015 15.78 0.49 10.88	Read LISN Cable Level Factor Loss Level MHz dBuV dB dB dB dBuV 0.150 23.81 0.27 10.78 34.86 0.162 44.60 0.27 10.77 55.64 0.166 23.50 0.27 10.77 34.54 0.202 40.43 0.28 10.76 51.47 0.277 17.66 0.26 10.74 28.66 0.343 30.70 0.27 10.73 41.70 0.535 11.13 0.28 10.76 22.17 0.601 28.56 0.25 10.77 39.58 1.203 6.76 0.25 10.89 17.90 1.781 19.42 0.26 10.95 30.63 24.015 15.78 0.49 10.88 27.15	Read LISN Cable Limit Line MHz dBuV dB dB dB dBuV dBuV 0.150 23.81 0.27 10.78 34.86 56.00 0.162 44.60 0.27 10.77 55.64 65.34 0.166 23.50 0.27 10.77 34.54 55.16 0.202 40.43 0.28 10.76 51.47 63.54 0.277 17.66 0.26 10.74 28.66 50.90 0.343 30.70 0.27 10.73 41.70 59.13 0.535 11.13 0.28 10.76 22.17 46.00 0.601 28.56 0.25 10.77 39.58 56.00 1.203 6.76 0.25 10.77 39.58 56.00 1.203 6.76 0.25 10.89 17.90 46.00 1.781 19.42 0.26 10.95 30.63 56.00 24.015 15.78 0.49 10.88 27.15 60.00	Read LISN Cable Level Limit Over Loss Level Line Limit MHz dBuV dB dB dB dBuV dBuV dB 0.150 23.81 0.27 10.78 34.86 56.00 -21.14 0.162 44.60 0.27 10.77 55.64 65.34 -9.70 0.166 23.50 0.27 10.77 34.54 55.16 -20.62 0.202 40.43 0.28 10.76 51.47 63.54 -12.07 0.277 17.66 0.26 10.74 28.66 50.90 -22.24 0.343 30.70 0.27 10.73 41.70 59.13 -17.43 0.535 11.13 0.28 10.76 22.17 46.00 -23.83 0.601 28.56 0.25 10.77 39.58 56.00 -16.42 1.203 6.76 0.25 10.89 17.90 46.00 -28.10 1.781 19.42 0.26 10.95 30.63 56.00 -25.37 24.015 15.78 0.49 10.88 27.15 60.00 -32.85

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 Part 15 C Section 15.247 (b)(3)			
Test Method:	ANSI C63.4:2009 and KDB558074			
Limit:	30dBm			
Test setup:	Spectrum Analyzer E.U.T Non-Conducted Table Ground Reference Plane			
Test Instruments:	Refer to section 5.6 for details			
Test mode:	Refer to section 5.3 for details			
Test results:	Passed			
Remark:	Test method refer to KDB558074 (DTS Measure Guidance) section 8.2, option 1.			

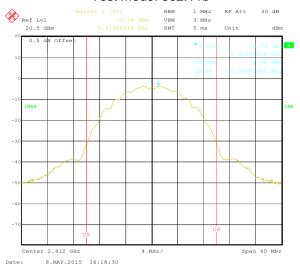
Measurement Data

	Ma	ximum Conduct		5		
Test CH	802.11b	802.11g	802.11n(H20)	802.11n(H40)	Limit(dBm)	Result
Lowest	4.50	4.46	3.73	3.95		
Middle	4.13	4.10	4.13	4.18	30.00	Pass
Highest	4.09	4.17	4.28	4.25		

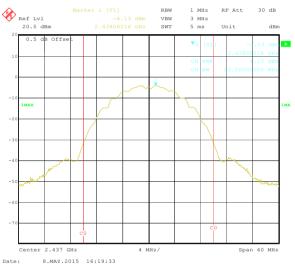
Test plot as follows:



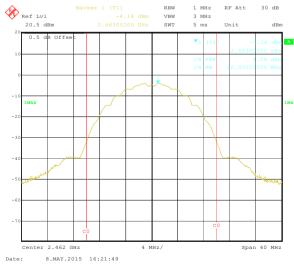
Test mode: 802.11b



Lowest channel

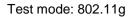


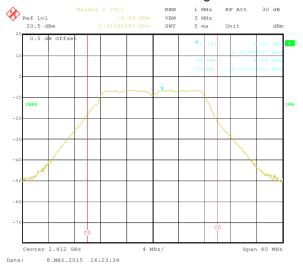
Middle channel



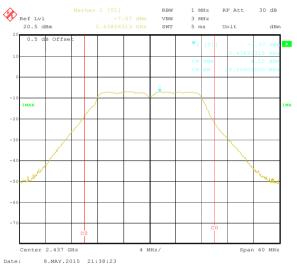
Highest channel



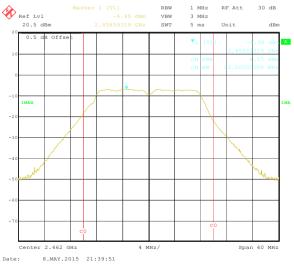




Lowest channel



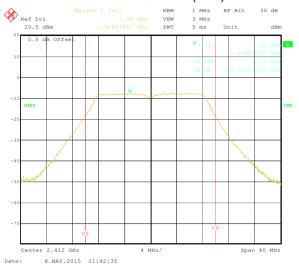
Middle channel



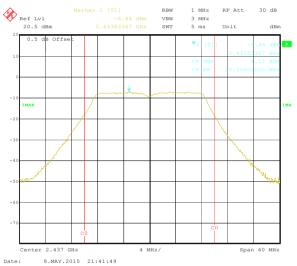
Highest channel



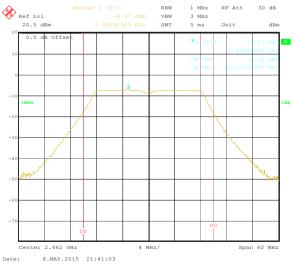
Test mode: 802.11n(H20)



Lowest channel



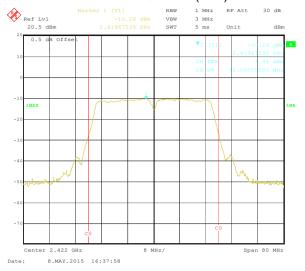
Middle channel



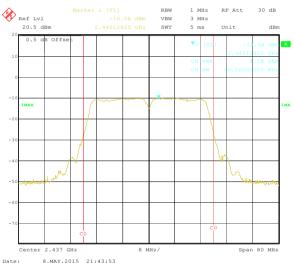
Highest channel



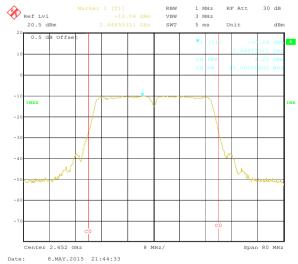
Test mode: 802.11n(H40)



Lowest channel



Middle channel



Highest channel



6.4 Occupy Bandwidth

Test Requirement:	FCC Part 15 C Section 15.247 (a)(2)		
Test Method:	ANSI C63.4:2003 and KDB558074		
Limit:	>500kHz		
Test setup:	Spectrum Analyzer E.U.T Non-Conducted Table Ground Reference Plane		
Test Instruments:	Refer to section 5.6 for details		
Test mode:	Refer to section 5.3 for details		
Test results:	Passed		

Measurement Data

		6dB Emission		_		
Test CH	802.11b	802.11g	802.11n(H20)	802.11n(H40)	Limit(kHz)	Result
Lowest	10.26	16.75	18.04	36.39		
Middle	10.26	16.67	18.04	36.39	>500	Pass
Highest	10.26	16.75	18.04	36.39		

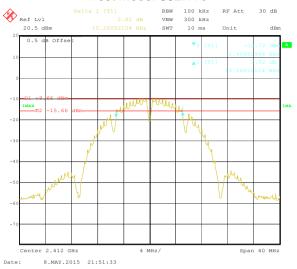
-		99% Occupy				
Test CH	802.11b	802.11g	802.11n(H20)	802.11n(H40)	Limit(kHz)	Result
Lowest	15.15	16.59	17.88	36.23		
Middle	15.15	16.59	17.88	36.23	N/A	N/A
Highest	15.15	16.67	17.88	36.07		

Test plot as follows:

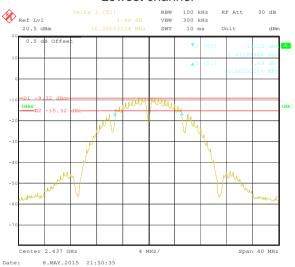


6dB EBW

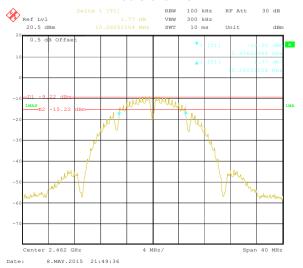
Test mode: 802.11b



Lowest channel

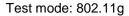


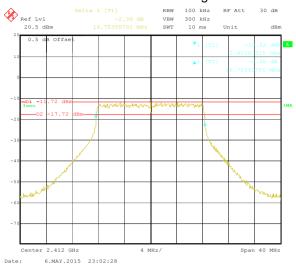
Middle channel



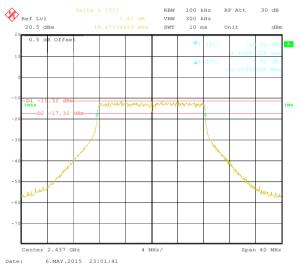
Highest channel



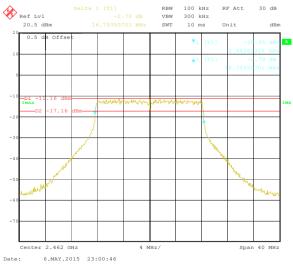




Lowest channel



Middle channel

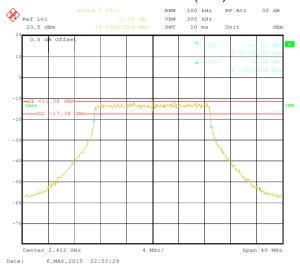


Highest channel

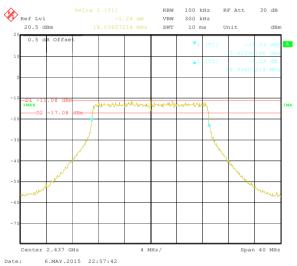
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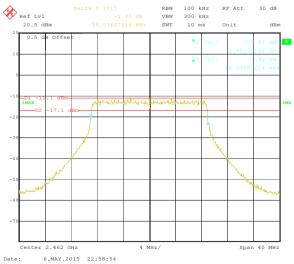
Test mode: 802.11n(H20)



Lowest channel



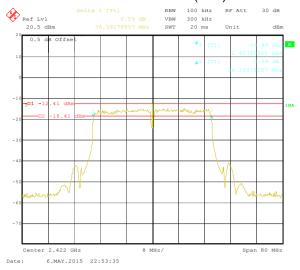
Middle channel



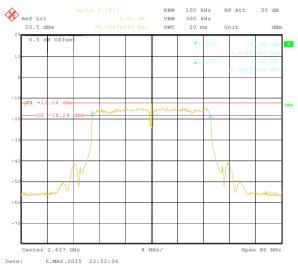
Highest channel



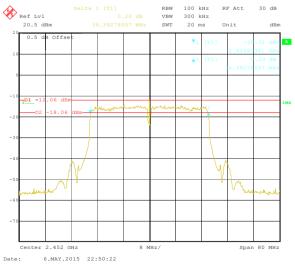
Test mode: 802.11n(H40)



Lowest channel



Middle channel

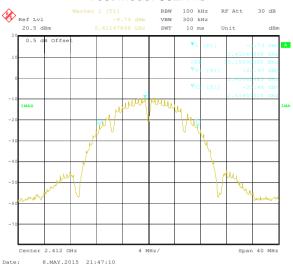


Highest channel

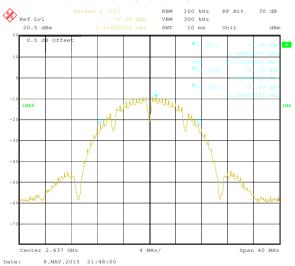


99% **OBW**

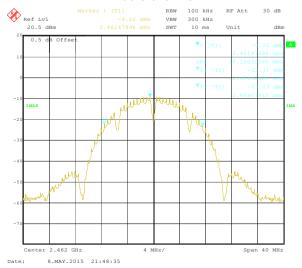
Test mode: 802.11b



Lowest channel

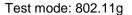


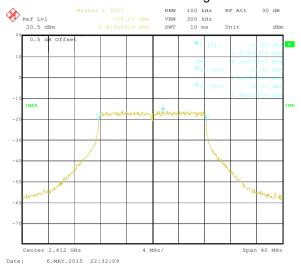
Middle channel



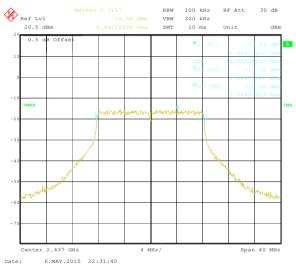
Highest channel



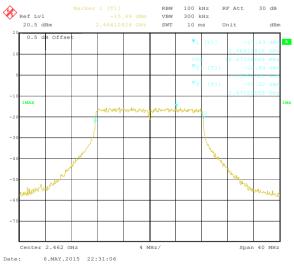




Lowest channel



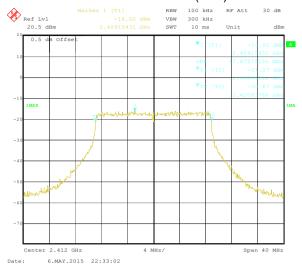
Middle channel



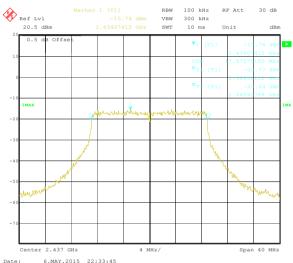
Highest channel



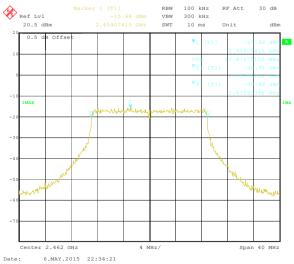
Test mode: 802.11n(H20)



Lowest channel



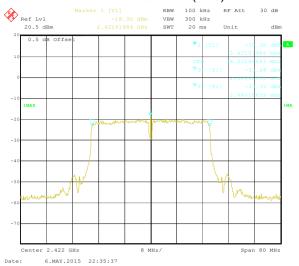
Middle channel



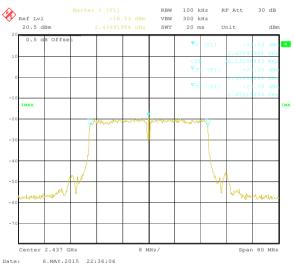
Highest channel



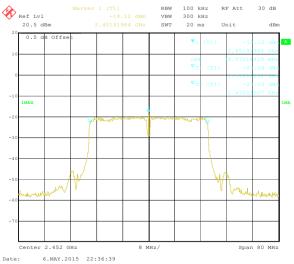
Test mode: 802.11n(H40)



Lowest channel



Middle channel



Highest channel



6.5 Power Spectral Density

Test Requirement:	FCC Part 15 C Section 15.247 (e)		
Test Method:	ANSI C63.4:2009 and KDB558074		
Limit:	8dBm		
Test setup:	Spectrum Analyzer E.U.T Non-Conducted Table Ground Reference Plane		
Test Instruments:	Refer to section 5.6 for details		
Test mode:	Refer to section 5.3 for details		
Test results:	Passed		

Measurement Data

T O		Power Spec		5 "		
Test CH	802.11b	802.11g	802.11n(H20)	802.11n(H40)	Limit(dBm)	Result
Lowest	-9.94	-16.86	-17.09	-19.46		
Middle	-9.95	-16.54	-16.69	-19.04	8.00	Pass
Highest	-9.46	-16.58	-16.58	-19.16		

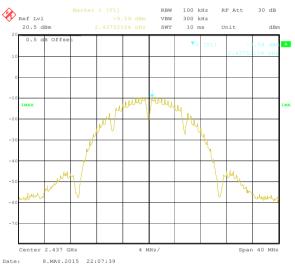
Test plot as follows:



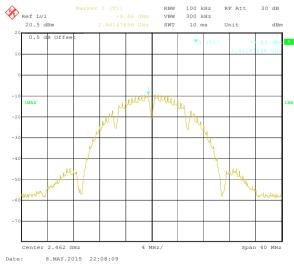
Test mode: 802.11b



Lowest channel

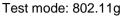


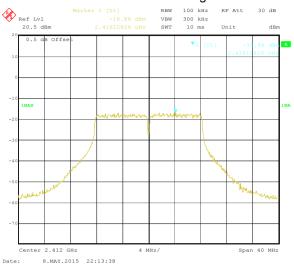
Middle channel



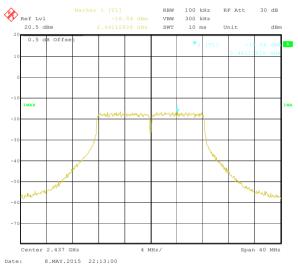
Highest channel



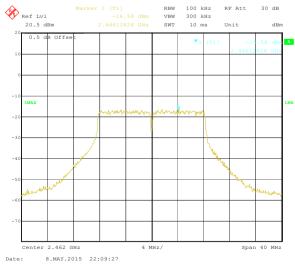




Lowest channel



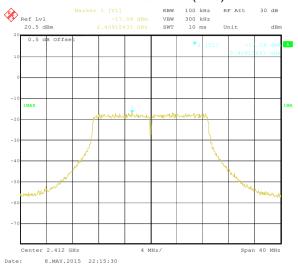
Middle channel



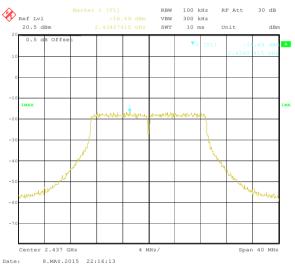
Highest channel



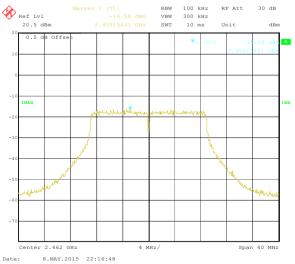
Test mode: 802.11n(H20)



Lowest channel



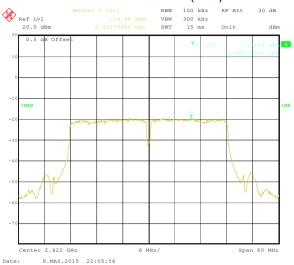
Middle channel



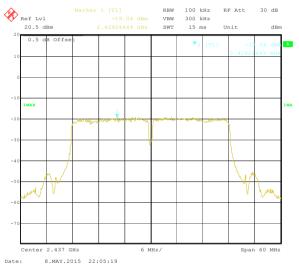
Highest channel



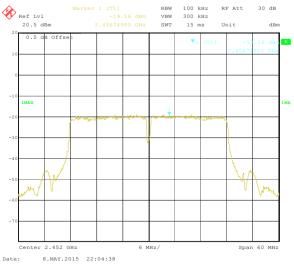
Test mode: 802.11n(H40)



Lowest channel



Middle channel



Highest channel





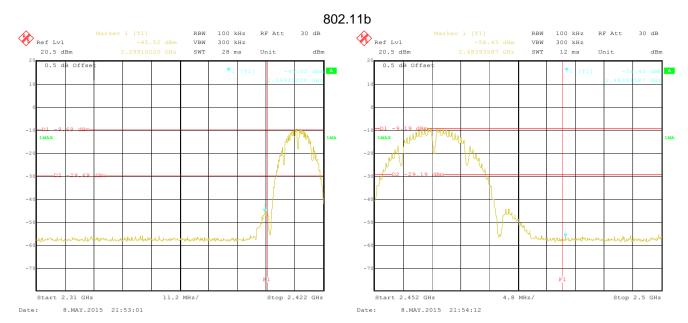
6.6 Band Edge

6.6.1 Conducted Emission Method

Test Requirement:	FCC Part 15 C Section 15.247 (d)		
Test Method:	ANSI C63.4:2009 and KDB558074		
Limit:	In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 30 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.		
Test setup:			
	Spectrum Analyzer E.U.T Non-Conducted Table		
Test Instruments:	Ground Reference Plane Refer to section 5.6 for details		
Test mode:	Refer to section 5.3 for details		
Test results:	Passed		

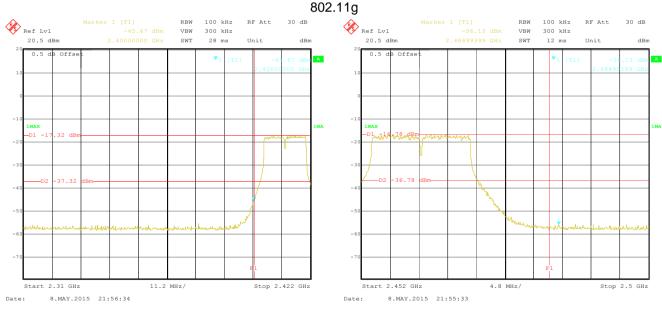
Test plot as follows:





Lowest channel

Highest channel



Lowest channel

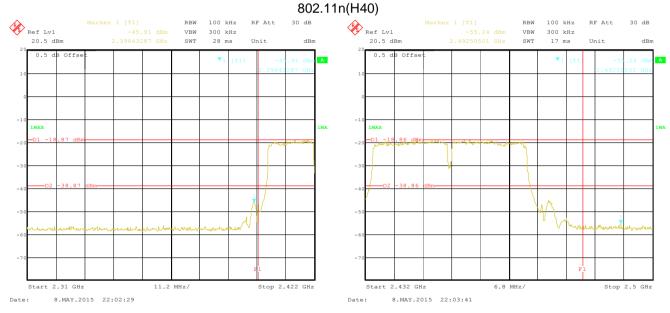
Highest channel





Lowest channel

Highest channel



Lowest channel

Highest channel



6.6.2 Radiated Emission Method

Test Requirement:	FCC Part 15 C Section 15.209 and 15.205				
Test Method:	ANSI C63.4: 2009				
Test Frequency Range:	2.3GHz to 2.5GHz				
Test site:	Measurement Distance: 3m				
Receiver setup:	Frequency Above 1GHz	Detector Peak	RBW 1MHz	VBW 3MHz 3MHz	Remark Peak Value
Limit:	RMS 1MHz 3M				Average Value
Littiit.	Frequency Above 1GHz 1. The EUT was placed or		Limit (dBuV/m @3m)		Remark
			54.00		Average Value
			74.00 the top of a rotating table		Peak Value
Test setup:	 the ground at a 3 meter camber. The table was rotated 360 degrees to determine the position of the highest radiation. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. 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. 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. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode. 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, quasipeak or average method as specified and then reported in a data sheet. 				
	Antenna Tower Horn Antenna Turn O,8m Im Table Amplifier				
Test Instruments:	Refer to section 5.6 for details				
Test mode:	Refer to section 5.3 for details				
Test results:	Passed				

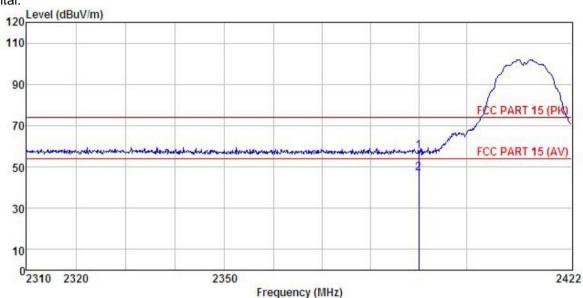




802.11b

Test channel: Lowest

Horizontal:



Site

: 3m chamber : FCC PART 15 (PK) 3m BBHA9120(1G18) HORIZONTAL : Tablet PC Condition

EUT : CT1080 Model

: Wifi-TX(B-L) Mode Test mode Power Rating: AC 120V/60Hz Environment: Temp:25.5°C Huni:55%

Test Engineer: GAREN REMARK :

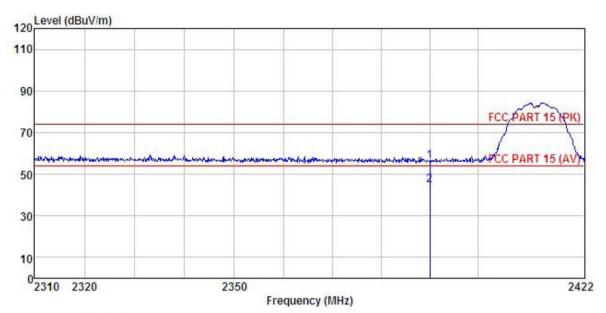
шини									
	_		Antenna						
	Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Kemark
	MHz	dBu₹	dB/m	₫B	₫B	dBuV/m	dBuV/m	−−−−dB	
1	2390.000	24.38	27.58	5.67	0.00	57.63	74.00	-16.37	Peak
2	2390, 000	13, 90	27, 58	5, 67	0.00	47, 15	54,00	-6.85	Average

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.

Shenzhen Zhongjian Nanfang Testing Co., Ltd. No. B-C, 1/F., Building 2, Laodong No.2 Industrial Park, Xixiang Road, Bao'an District, Shenzhen, Guangdong, China Telephone: +86 (0) 755 23118282 Fax: +86 (0) 755 23116366





Site

: 3m chamber : FCC PART 15 (PK) 3m BBHA9120(1G18) VERTICAL : Tablet PC Condition

EUT Model : CT1080

Test mode : Wifi-TX(B-L) Mode Power Rating : AC 120V/60Hz

Environment : Temp: 25.5°C Huni: 55%

Test Engineer: GAREN

REMARK

	Freq		Antenna Factor						
	MHz	dBu₹	<u>dB</u> /m	<u>dB</u>	<u>dB</u>	dBuV/m	dBuV/m	<u>dB</u>	
1	2390.000	22.90	27.58	5.67	0.00	56.15	74.00	-17.85	Peak
2	2390.000	11.67	27.58	5.67	0.00	44.92	54.00	-9.08	Average

Remark:

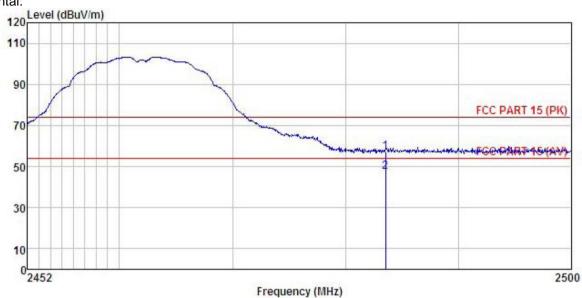
- Final Level = Receiver Read level + Antenna Factor + Cable Loss Preamplifier Factor
- 2. The emission levels of other frequencies are very lower than the limit and not show in test report.





Test channel: Highest

Horizontal:



Site : 3m chamber

: FCC PART 15 (PK) 3m BBHA9120(1G18) HORIZONTAL : Tablet PC Condition

EUT : CT1080 Model

Test mode : Wifi-TX(B-H) Mode Power Rating : AC 120V/60Hz Environment : Temp: 25.5°C Huni:

Huni:55%

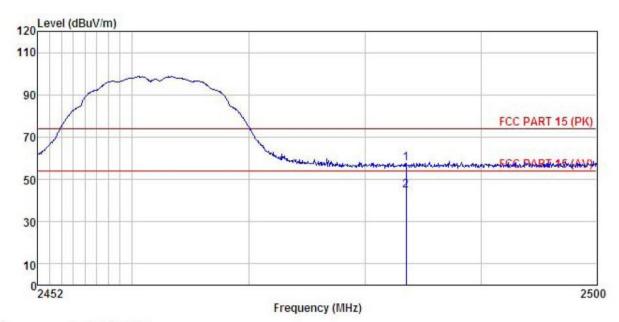
Test Engineer: GAREN REMARK

		Read	Antenna	Cable	Preamp		Limit	Over	
	Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Remark
	MHz	dBu∜	—dB/m	dB	dB	dBuV/m	dBu√/m	dB	
1	2483.500	24.03	27.52	5.70	0.00	57.25	74.00	-16.75	Peak
2	2483 500	14 16	27 52	5 70	0.00	47 38	54 00	-6 62	Average

Remark:

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





Site

: 3m chamber : FCC PART 15 (PK) 3m BBHA9120(1G18) VERTICAL : Tablet PC Condition

EUT

Test mode : Wifi-TX(B-H) Mode
Power Rating : AC 120V/60Hz
Environment : Temp:25.5°C Huni:55%
Test Engineer: GAREN
REMARK :

MI	K :								
		Read	Ant enna	Cable	Preamp		Limit	Over	
	Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Remark
	MHz	dBu₹	dB/m	dB	dB	dBuV/m	dBuV/m	<u>dB</u>	
	2483.500	24.29	27.52	5.70	0.00	57.51	74.00	-16.49	Peak
1	2483 500	11 64	27 52	5 70	0.00	44 86	54 00	-0 1/	Amerage

Remark:

- 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.

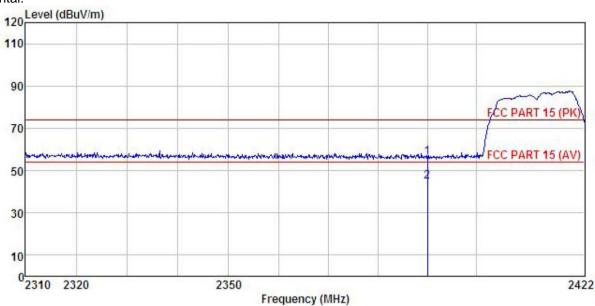




802.11g

Test channel: Lowest

Horizontal:



Site

: 3m chamber : FCC PART 15 (PK) 3m BBHA9120(1G18) HORIZONTAL : Tablet PC Condition

EUT Model : CT1080

Test mode : Wifi-TX(G-L) Mode Power Rating : AC 120V/60Hz

Environment : Temp: 25.5°C Huni: 55%

Test Engineer: REMARK :

_		Read	Antenna	Cable	Preamp		Limit	Over		
	Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Remark	
	MHz	—dBuV	dB/m	dB	<u>d</u> B	$\overline{dBuV/m}$	dBuV/m	<u>dB</u>		
	2390.000	22.85	27.58	5.67	0.00	56.10	74.00	-17.90	Peak	
	2390.000	11.68	27.58	5.67	0.00	44.93	54.00	-9.07	Average	

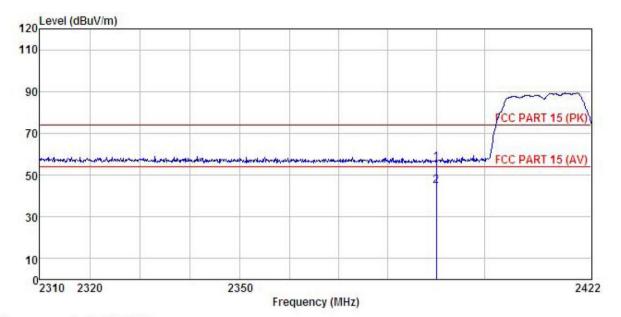
Remark:

1 2

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







: 3m chamber : FCC PART 15 (PK) 3m BBHA9120(1G18) VERTICAL : Tablet PC Condition

EUT Model : CT1080

Test mode : Wifi-TX(G-L) Mode Power Rating : AC 120V/60Hz

Environment : Temp: 25.5°C Huni: 55%

Test Engineer: REMARK

III WILL	r :				
	Freq	Antenna Factor			Remark
	MHz	 <u>d</u> B/m	 <u>d</u> B	 	
1	2390.000				Peak

Remark:

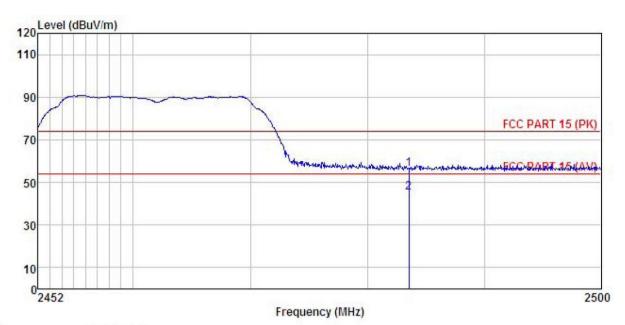
- Final Level = Receiver Read level + Antenna Factor + Cable Loss Preamplifier Factor
- 2. The emission levels of other frequencies are very lower than the limit and not show in test report.





Test channel: Highest

Horizontal:



: 3m chamber Site

Condition : FCC PART 15 (PK) 3m BBHA9120(1G18) HORIZONTAL

: Tablet PC : CT1080 EUT Model

: Wifi-TX(G-H) Mode Test mode

Power Rating : AC 120V/60Hz Environment : Temp:25.5°C Huni:55%

Test Engineer:

REMARK

Freq		Antenna Factor						
MHz	dBu₹	$-\overline{dB}/\overline{m}$	<u>d</u> B	<u>dB</u>	$\overline{dBuV/m}$	$\overline{dBuV/m}$	<u>d</u> B	 -
2483,500 2483,500								

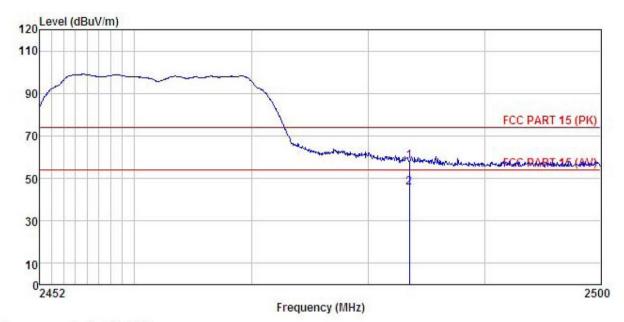
Remark:

1 2

- 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.







Site

: 3m chamber : FCC PART 15 (PK) 3m BBHA9120(1G18) VERTICAL : Tablet PC Condition

EUT Model : CT1080

Test mode : Wifi-TX(G-H) Mode
Power Rating : AC 120V/60Hz
Environment : Temp:25.5°C Huni:55%

Test Engineer: REMARK :

LIMIL										
	Freq		Antenna Factor							
_	MHz	dBu∜	<u>dB</u> /m		<u>ab</u>	$\overline{dBuV/m}$	$\overline{dBuV/m}$	<u>dB</u>		-
100	2483.500								ALDERY TOWNS OF THE STATE OF TH	
2	2483,500	12, 51	27. 52	5, 70	0.00	45, 73	54, 00	-8.27	Average	

Remark:

- 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.

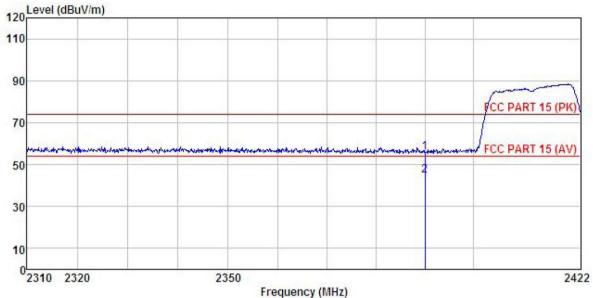




802.11n (H20)

Test channel: Lowest

Horizontal:



Site

: 3m chamber : FCC PART 15 (PK) 3m BBHA9120(1G18) HORIZONTAL Condition

: Tablet PC : CT1080 EUT Model

Test mode : Wifi-TX(N20-L) Mode Power Rating : AC 120V/60Hz Environment : Temp:25.5°C Huni:55%

Test Engineer: REMARK :

 -		Antenna Factor						Remark	
MHz	dBu∇	<u>dB</u> /m	d <u>B</u>	<u>dB</u>	dBuV/m	dBuV/m	<u>dB</u>		-
2390.000 2390.000					55.98 44.88				

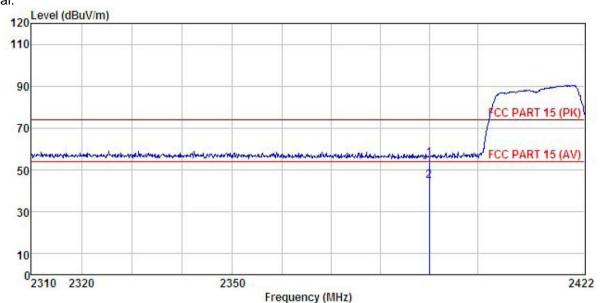
Remark:

- 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.









: 3m chamber : FCC PART 15 (PK) 3m BBHA9120(1G18) VERTICAL : Tablet PC Condition

EUT : CT1080 Model

Test mode : Wifi-TX(N20-L) Mode Power Rating : AC 120V/60Hz

Environment : Temp: 25.5°C Huni: 55%

Test Engineer: REMARK :

		Read	Antenna	Cable	Preamp		Limit	Over	
	Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Remark
-	MHz	dBu∇			<u>dB</u>	$\overline{dBuV/m}$	$\overline{dBuV/m}$	<u>dB</u>	
1	2390.000	22.29	27.58	5.67	0.00	55.54	74.00	-18.46	Peak
2	2390, 000	11.64	27, 58	5, 67	0.00	44.89	54,00	-9.11	Average

Remark:

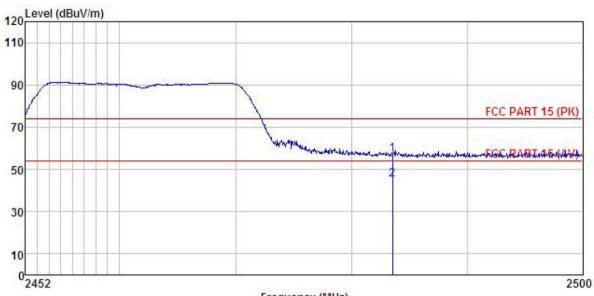
- Final Level = Receiver Read level + Antenna Factor + Cable Loss Preamplifier Factor
- 2. The emission levels of other frequencies are very lower than the limit and not show in test report.





Test channel: Highest

Horizontal:



Frequency (MHz)

Site

: 3m chamber : FCC PART 15 (PK) 3m BBHA9120(1G18) HORIZONTAL : Tablet PC Condition

EUT : CT1080 Model

Test mode : Wifi-TX(N20-H) Mode Power Rating : AC 120V/60Hz

Environment : Temp: 25.5°C Huni: 55%

Test Engineer: REMARK :

T	v :	Read	Antenna	Cable	Preamn		Limit	Over	
	Freq		Factor						
	MHz	dBu₹	$\overline{dB/m}$	<u>d</u> B	<u>d</u> B	dBu√/m	dBu√/m	<u>d</u> B	
	2483.500								

Remark:

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

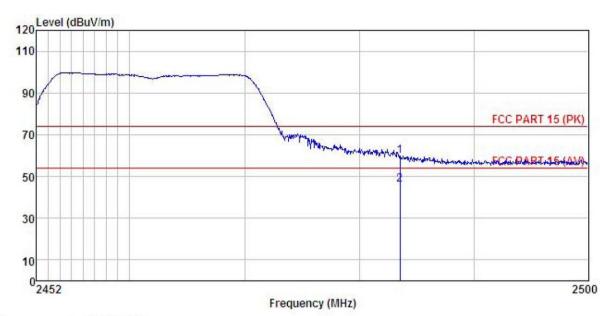
Shenzhen Zhongjian Nanfang Testing Co., Ltd. No. B-C, 1/F., Building 2, Laodong No.2 Industrial Park, Xixiang Road, Bao'an District, Shenzhen, Guangdong, China Telephone: +86 (0) 755 23118282 Fax: +86 (0) 755 23116366

Project No.: CCIS150400275RF

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: 3m chamber : FCC PART 15 (PK) 3m BBHA9120(1G18) VERTICAL : Tablet PC : CTION OF TWO WAY Condition

EUT Model

Test mode : Wifi-TX(N20-H) Mode Power Rating : AC 120V/60Hz

Environment : Temp: 25.5°C Huni: 55%

Test Engineer: REMARK :

	Freq		Antenna Factor						
	MHz	dBu∜		dB	<u>ab</u>	$\overline{dBuV/m}$	dBu√/m	<u>dB</u>	
1 2	2483.500 2483.500								

Remark:

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

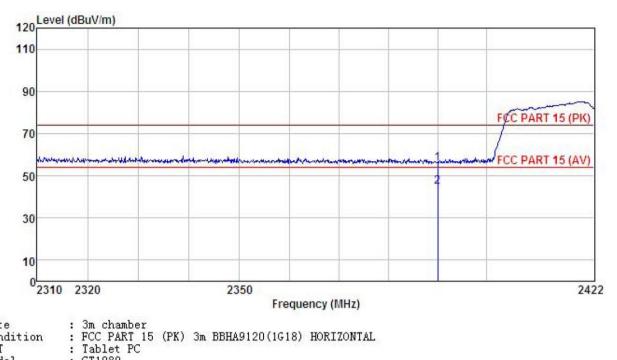




802.11n (H40)

Test channel: Lowest

Horizontal:



Site

Condition

EUT : CT1080 Model

Test mode : Wifi-TX(N40-L) Mode Power Rating : AC 120V/60Hz

Environment : Temp: 25.5°C Huni: 55%

Test Engineer:

REMARK

Freq		Antenna Factor				Limit Line		
MHz	dBu∜		<u>d</u> B	<u>ab</u>	$\overline{dB} \overline{uV/m}$	dBuV/m	 	
2390.000 2390.000				0.00 0.00				

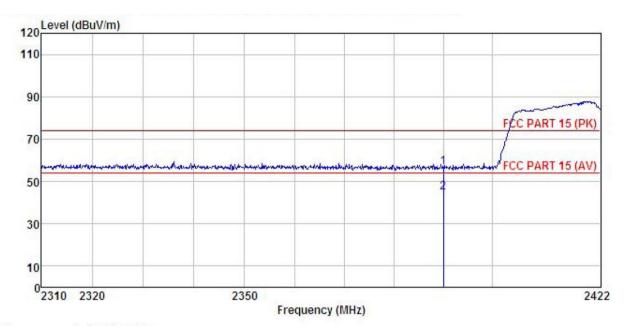
Remark:

1 2

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







Site

: 3m chamber : FCC PART 15 (PK) 3m BBHA9120(1G18) VERTICAL : Tablet PC Condition

EUT : CT1080 Model

Test mode : Wifi-TX(N40-L) Mode Power Rating : AC 120V/60Hz Environment : Temp:25.5°C Huni:55%

Test Engineer: REMARK

יווניזוני	н .	Read	Ant enna	Cable	Preamn		Limit	Over	
	Freq		Factor						
	MHz	dBuV	<u>dB</u> /m	dB	<u>dB</u>	dBuV/m	dBuV/m	dB	
1	2390.000	23.25	27.58	5.67	0.00	56.50	74.00	-17.50	Peak
2	2390 000	11 63	27 58	5 67	0.00	44 88	54 00	-9 12	Average

Remark:

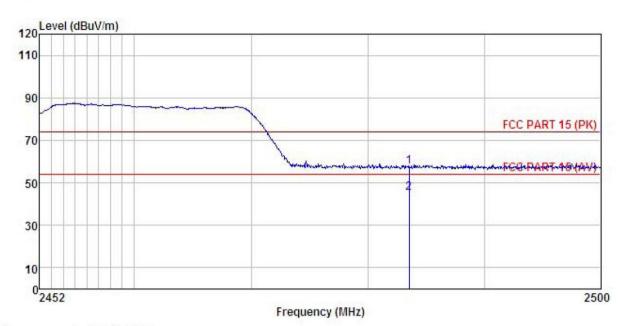
- Final Level = Receiver Read level + Antenna Factor + Cable Loss Preamplifier Factor 1.
- The emission levels of other frequencies are very lower than the limit and not show in test report.





Test channel: Highest

Horizontal:



Site

: 3m chamber : FCC PART 15 (PK) 3m BBHA9120(1G18) HORIZONTAL Condition

: Tablet PC EUT : CT1080 Model

Test mode : Wifi-TX(N40-H) Mode Power Rating : AC 120V/60Hz Environment : Temp:25.5°C Huni:55%

Test Engineer:

REMARK

	Freq		Antenna Factor						
	MHz	dBu∇	$-\overline{dB}/\overline{m}$	<u>d</u> B	<u>d</u> B	dBuV/m	dBu√/m	<u>d</u> B	
1	2483.500 2483.500								Peak Average

Remark:

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

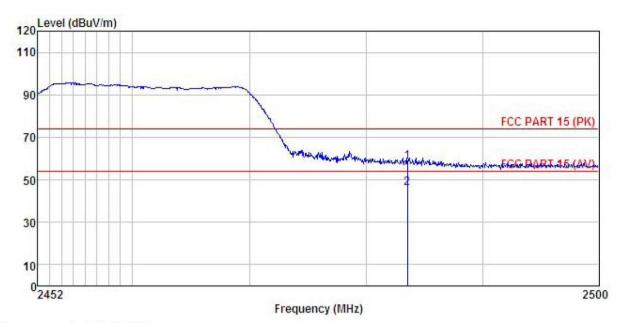
Shenzhen Zhongjian Nanfang Testing Co., Ltd. No. B-C, 1/F., Building 2, Laodong No.2 Industrial Park, Xixiang Road, Bao'an District, Shenzhen, Guangdong, China Telephone: +86 (0) 755 23118282 Fax: +86 (0) 755 23116366

Project No.: CCIS150400275RF

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Site

3m chamber FCC PART 15 (PK) 3m BBHA9120(1G18) VERTICAL Condition

Tablet PC EUT Model CT1080

: Wifi-TX(N40-H) Mode Test mode

Power Rating : AC 120V/60Hz

Environment: Temp: 25.5°C Huni: 55%

Test Engineer: REMARK

> ReadAntenna Cable Preamp Limit Over Freq Level Factor Loss Factor Level Line Limit Remark MHz dBuV dB/m ďΒ dB dBuV/m dBuV/m 碅 5.70 2483.500 25.15 0.00 58.37 74.00 -15.63 Peak 2483,500 12.66 27.52 5.70 0.00 45.88 54.00 -8.12 Average

Remark:

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



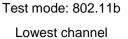
6.7 Spurious Emission

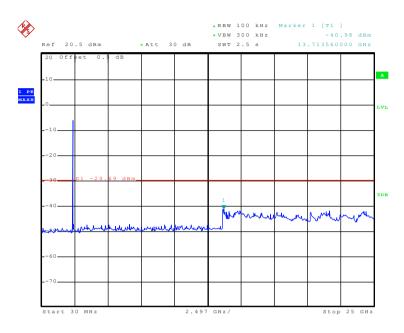
6.7.1 Conducted Emission Method

Test Requirement:	FCC Part 15 C Section 15.247 (d)						
Test Method:	ANSI C63.4:2009 and KDB558074						
Limit:	In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.						
Test setup:							
	Spectrum Analyzer						
	E.U.T						
	Non-Conducted Table						
	Ground Reference Plane						
Test Instruments:	Refer to section 5.6 for details						
Test mode:	Refer to section 5.3 for details						
Test results:	Passed						

Test plot as follows:



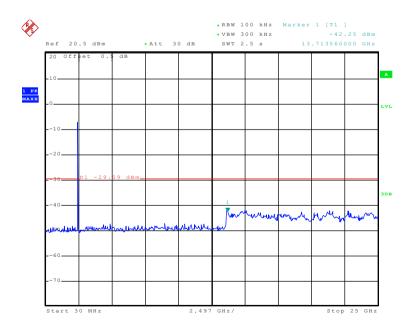




Date: 21.MAY.2015 15:34:07

30MHz~25GHz

Middle channel

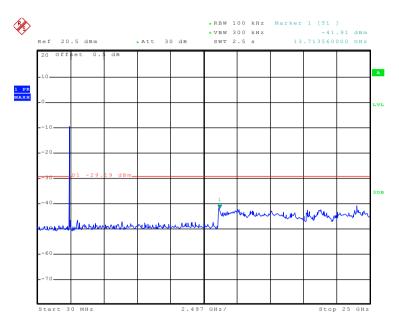


Date: 21.MAY.2015 15:34:42

30MHz~25GHz



Highest channel

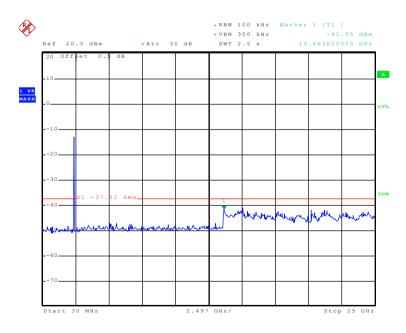


Date: 21.MAY.2015 15:35:17

30MHz~25GHz

Test mode: 802.11g

Lowest channel

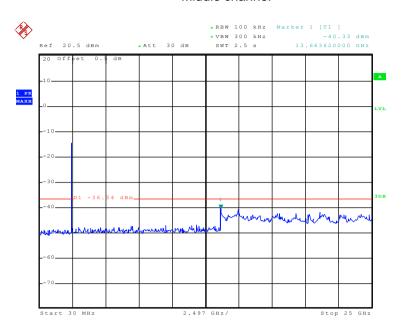


Date: 21.MAY.2015 15:37:14

30MHz~25GHz



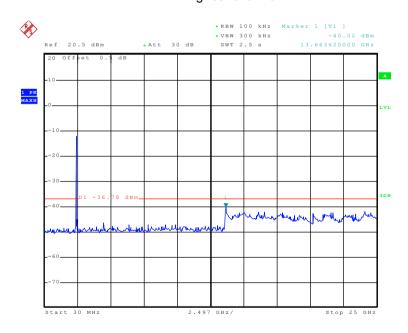
Middle channel



Date: 21.MAY.2015 15:36:37

30MHz~25GHz

Highest channel

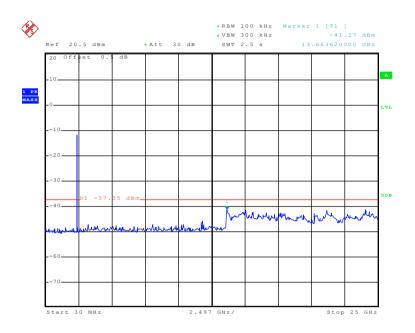


Date: 21.MAY.2015 15:35:59

30MHz~25GHz



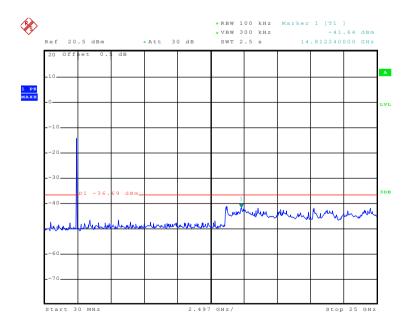
Test mode: 802.11n(H20) Lowest channel



Date: 21.MAY.2015 15:37:51

30MHz~25GHz

Middle channel

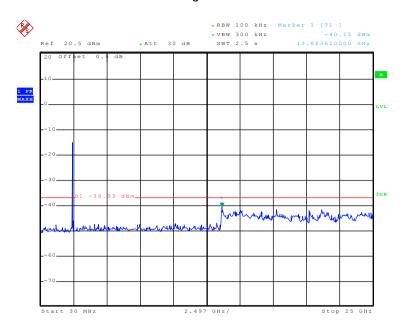


Date: 21.MAY.2015 15:38:22

30MHz~25GHz



Highest channel

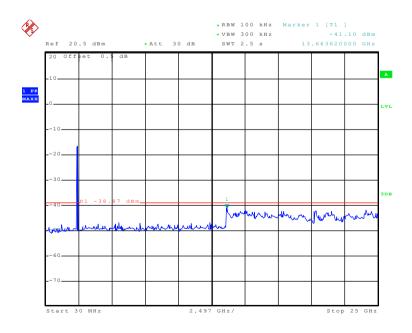


Date: 21.MAY.2015 15:39:00

30MHz~25GHz

Test mode: 802.11n(H40)

Lowest channel

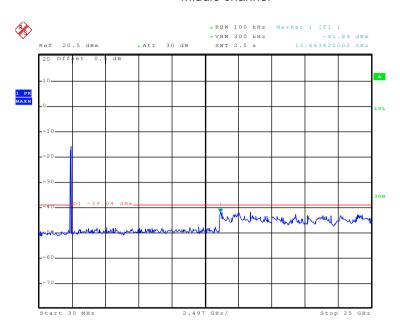


Date: 21.MAY.2015 15:39:38

30MHz~25GHz



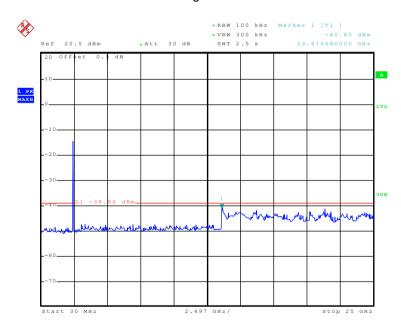
Middle channel



Date: 21.MAY.2015 15:40:24

30MHz~25GHz

Highest channel



Date: 21.MAY.2015 15:40:54

30MHz~25GHz



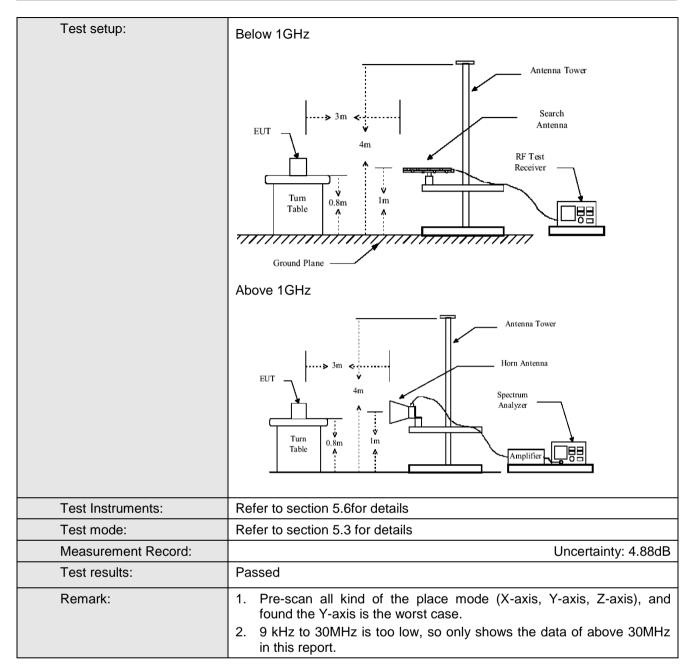


6.7.2 Radiated Emission Method

Test Requirement:	FCC Part 15 C Section 15.209 and 15.205									
Test Method:	ANSI C63.4:200	ANSI C63.4:2009								
Test Frequency Range:	9KHz to 25GHz									
Test site:	Measurement D	istance: 3m								
Receiver setup:										
·	Frequency Detector RBW VBW Remark									
	30MHz-1GHz Quasi-peak 120KHz 300KHz Quasi-peak Value									
	Above 1GHz	Peak	1MHz	3MHz	Peak Value					
	RMS 1MHz 3MHz Average Value									
Limit:										
	Frequency Limit (dBuV/m @3m) Remark									
	30MHz-8		40.0		Quasi-peak Value					
	88MHz-21		43.5 46.0		Quasi-peak Value					
	216MHz-9 960MHz-		46. 0		Quasi-peak Value Quasi-peak Value					
			54.0		Average Value					
	Above 1	GHz	74.0		Peak Value					
Test Procedure:	the ground to determin 2. The EUT wantenna, wantenna, wantenna and the ground Both horizon make the numbers and to find the number should be specified E for the limit spoof the EUT have 10dB	at a 3 meter come the position was set 3 meter which was mount a height is varied to determine to the and vertical and vertical and vertical and vertical and vertical and vertical easurement. If the rota table maximum read ceiver system and width with sion level of the ecified, then te would be reported to the position of the	amber. The tof the highests away from the on the tried from one he maximum al polarizations in the EU a was turned was turned was set to Paximum He EUT in peasing could butted. Otherwise re-tested	able was ro st radiation. the interfer op of a varia e meter to for a value of the ons of the an T was arran to heights if from 0 degr eak Detect old Mode. ak mode wa be stopped a vise the emi one by one	e 0.8 meters above tated 360 degrees rence-receiving able-height antenna our meters above e field strength. Intenna are set to reged to its worst from 1 meter to 4 rees to 360 degrees renction and s 10dB lower than and the peak values ssions that did not e using peak, quasi-ported in a data					





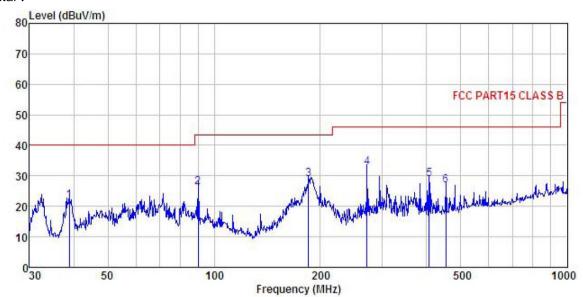






Below 1GHz

Horizontal:



: 3m chamber : FCC PART15 CLASS B 3m VULB9163(30M1G) HORIZONTAL : Tablet PC Condition

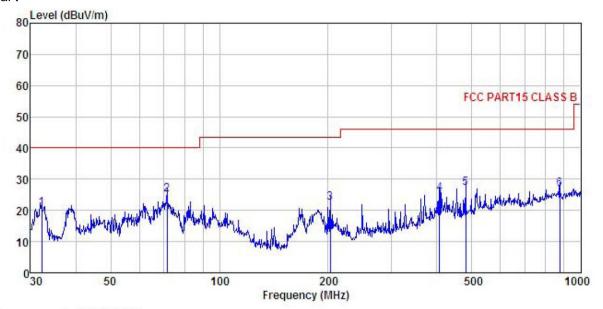
EUT Model : CT1080
Test mode : WIFI mode
Power Rating : AC120V/60Hz
Environment : Temp:25.5°C Huni:55%

Test Engineer: Garen REMARK :

	Freq		Antenna Factor					Over Limit	Remark
-	MHz	dBu∇		<u>d</u> B	<u>d</u> B	$\overline{dBuV/m}$	$\overline{dBuV/m}$	<u>db</u>	
1	38.888	38.03	13.30	0.51	29.91	21.93	40.00	-18.07	QP
2	90.220	42.90	11.99	0.91	29.57	26.23	43.50	-17.27	QP
2	185.138	46.30	10.16	1.36	28.93	28.89	43.50	-14.61	QP
4	271.325	47.03	12.42	1.69	28.50	32.64	46.00	-13.36	QP
5	406.088	40.45	15.18	2.14	28.79	28.98	46.00	-17.02	QP
6	452.720	38.00	15.58	2.26	28.88	26.96	46.00	-19.04	QP







Site

: 3m chamber : FCC PART15 CLASS B 3m VULB9163(30M1G) VERTICAL Condition

: Tablet PC EUT Model : CT1080 Test mode : WIFI mode
Power Rating : AC120V/60Hz
Environment : Temp:25.5°C Huni:55%

Test Engineer: Garen REMARK :

Januar III	100	-	· North Control of the Control					0.2000.000000	
		Kead	Ant enna	Cable	Preamp		Limit	Over	
	Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Remark
_	MHz	dBu₹	<u>dB</u> /m	dB	<u>dB</u>	dBuV/m	dBuV/m	dB	
1	32.179	37.86	12.32	0.45	29.97	20.66	40.00	-19.34	QP
2	71.581	45.57	8.39	0.80	29.71	25.05	40.00	-14.95	QP
3	202.810	39.15	10.64	1.39	28.81	22.37	43.50	-21.13	QP
2 3 4 5	406.088	36.88	15.18	2.14	28.79	25.41	46.00	-20.59	QP
5	480.528	37.69	16.07	2.35	28.92	27.19	46.00	-18.81	QP
	875.247	30.74	20.87	3.30	27.94	26.97	46.00	-19.03	QP





Above 1GHz

Test mode: 80	02.11b		Test char	Test channel: Lowest			Remark: Peak			
Frequency	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Level	Limit Line	Over Limit	Polar.		
(MHz)	(dBuV)	(dB/m)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	i olar.		
4824.00	47.95	31.53	8.90	40.24	48.14	74.00	-25.86	Vertical		
4824.00	49.17	31.53	8.90	40.24	49.36	74.00	-24.64	Horizontal		
Test mode: 80	02.11b		Test char	nnel: Lowest		Remark: Ave	erage			
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)	Polar.		
		0.4.=0	0.00	40.04	27.70	E4.00	40.00	Vertical		
4824.00	37.59	31.53	8.90	40.24	37.78	54.00	-16.22	Vertical		

Test mode: 8	02.11b		Test channel: Middle			Remark: Peak		
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)	Polar.
4874.00	47.07	31.58	8.98	40.15	47.48	74.00	-26.52	Vertical
4874.00	47.78	31.58	8.98	40.15	48.19	74.00	-25.81	Horizontal
Test mode: 80	02.11b		Test channel: Middle			Remark: Ave	rage	
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)	Polar.
4874.00	37.19	31.58	8.98	40.15	37.60	54.00	-16.40	Vertical
4874.00	37.86	31.58	8.98	40.15	38.27	54.00	-15.73	Horizontal

Test mode: 80	02.11b		Test char	Test channel: Highest			Remark: Peak		
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)	Polar.	
4924.00	47.52	31.69	9.08	40.03	48.26	74.00	-25.74	Vertical	
4924.00	46.09	31.69	9.08	40.03	46.83	74.00	-27.17	Horizontal	
Test mode: 80	02.11b		Test char	nnel: Highest		Remark: Ave	rage		
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)	Polar.	
4924.00	37.34	31.69	9.08	40.03	38.08	54.00	-15.92	Vertical	
4924.00	35.79	31.69	9.08	40.03	36.53	54.00	-17.47	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.

Shenzhen Zhongjian Nanfang Testing Co., Ltd.
No. B-C, 1/F., Building 2, Laodong No.2 Industrial Park, Xixiang Road, Bao'an District, Shenzhen, Guangdong, China
Telephone: +86 (0) 755 23118282 Fax: +86 (0) 755 23116366





Test mode: 80	02.11g		Test channel: Lowest			Remark: Peak			
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/)	Limit Line (dBuV/m)	Over Limit (dB)	Polar.	
4824.00	46.43	31.53	8.90	40.24	46.62	74.00	-27.38	Vertical	
4824.00	47.27	31.53	8.90	40.24	47.46	74.00	-26.54	Horizontal	
Test mode: 80	02.11g		Test char	nel: Lowest		Remark: Ave	rage		
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/)	Limit Line (dBuV/m)	Over Limit (dB)	Polar.	
4824.00	36.59	31.53	8.90	40.24	36.78	54.00	-17.22	Vertical	
4824.00	38.09	31.53	8.90	40.24	38.28	54.00	-15.72	Horizontal	

Test mode: 80	Test mode: 802.11g			nel: Middle		Remark: Peak			
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/)	Limit Line (dBuV/m)	Over Limit (dB)	Polar.	
4874.00	47.31	31.58	8.98	40.15	47.72	74.00	-26.28	Vertical	
4874.00	46.07	31.58	8.98	40.15	46.48	74.00	-27.52	Horizontal	
Test mode: 80)2.11g		Test char	nel: Middle		Remark: Ave	rage		
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/)	Limit Line (dBuV/m)	Over Limit (dB)	Polar.	
4874.00	37.25	31.58	8.98	40.15	37.66	54.00	-16.34	Vertical	
4874.00	35.66	31.58	8.98	40.15	36.07	54.00	-17.93	Horizontal	

Test mode: 802.11g		Test channel: Highest			Remark: Peak				
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)	Polar.	
4924.00	45.98	31.69	9.08	40.03	46.72	74.00	-27.28	Vertical	
4924.00	45.63	31.69	9.08	40.03	46.37	74.00	-27.63	Horizontal	
Test mode: 8	02.11g		Test channel: Highest			Remark: Average			
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)	Polar.	
4924.00	36.56	31.69	9.08	40.03	37.30	54.00	-16.70	Vertical	
4924.00	36.21	31.69	9.08	40.03	36.95	54.00	-17.05	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.





Test mode: 802.11n(H20)			Test channel: Lowest			Remark: Peak			
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)	Polar.	
4824.00	46.48	31.53	8.90	40.24	46.67	74.00	-27.33	Vertical	
4824.00	46.78	31.53	8.90	40.24	46.97	74.00	-27.03	Horizontal	
Test mode: 80	02.11n(H20)		Test channel: Lowest			Remark: Average			
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)	Polar.	
4824.00	36.92	31.53	8.90	40.24	37.11	54.00	-16.89	Vertical	
4824.00	36.71	31.53	8.90	40.24	36.90	54.00	-17.10	Horizontal	

Test mode: 802.11n(H20)			Test channel: Middle			Remark: Peak			
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)	Polar.	
4874.00	46.32	31.58	8.98	40.15	46.73	74.00	-27.27	Vertical	
4874.00	46.62	31.58	8.98	40.15	47.03	74.00	-26.97	Horizontal	
Test mode: 80	02.11n(H20)		Test channel: Middle			Remark: Average			
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)	Polar.	
4874.00	35.89	31.58	8.98	40.15	36.30	54.00	-17.70	Vertical	
4874.00	37.04	31.58	8.98	40.15	37.45	54.00	-16.55	Horizontal	

Test mode: 802.11n(H20)			Test channel: Highest			Remark: Peak			
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)	Polar.	
4924.00	47.21	31.69	9.08	40.03	47.95	74.00	-26.05	Vertical	
4924.00	46.35	31.69	9.08	40.03	47.09	74.00	-26.91	Horizontal	
Test mode: 80	02.11n(H20)		Test channel: Highest			Remark: Average			
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)	Polar.	
4924.00	37.34	31.69	9.08	40.03	38.08	54.00	-15.92	Vertical	
4924.00	36.42	31.69	9.08	40.03	37.16	54.00	-16.84	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.





Test mode: 802.11n(H40)			Test channel: Lowest			Remark: Peak			
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)	Polar.	
4844.00	45.76	31.53	8.90	40.24	45.95	74.00	-28.05	Vertical	
4844.00	45.82	31.53	8.90	40.24	46.01	74.00	-27.99	Horizontal	
Test mode: 80	02.11n(H40)		Test channel: Lowest			Remark: Average			
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)	Polar.	
4844.00	35.73	31.53	8.90	40.24	35.92	54.00	-18.08	Vertical	
4844.00	35.89	31.53	8.90	40.24	36.08	54.00	-17.92	Horizontal	

Test mode: 802.11n(H40)			Test channel: Middle			Remark: Peak			
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)	Polar.	
4874.00	46.41	31.58	8.98	40.15	46.82	74.00	-27.18	Vertical	
4874.00	45.62	31.58	8.98	40.15	46.03	74.00	-27.97	Horizontal	
Test mode: 80	02.11n(H40)		Test channel: Middle			Remark: Average			
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)	Polar.	
4874.00	36.81	31.58	8.98	40.15	37.22	54.00	-16.78	Vertical	
4874.00	35.78	31.58	8.98	40.15	36.19	54.00	-17.81	Horizontal	

Test mode: 802.11n(H40)			Test channel: Highest			Remark: Peak			
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)	Polar.	
4904.00	45.70	31.69	9.08	40.03	46.44	74.00	-27.56	Vertical	
4904.00	45.60	31.69	9.08	40.03	46.34	74.00	-27.66	Horizontal	
Test mode: 80	02.11n(H40)		Test channel: Highest			Remark: Average			
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)	Polar.	
4904.00	35.67	31.69	9.08	40.03	36.41	54.00	-17.59	Vertical	
4904.00	35.75	31.69	9.08	40.03	36.49	54.00	-17.51	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.