

🧲 Shenzhen Zhongjian Nanfang Testing Co., Ltd.

Report No: CCISE190607203

FCC REPORT

Applicant: Evertrons Technology Co., Limited

Address of Applicant: Flat/RM 1605E, Ho King Commercial Center, 2-16 FA Yuen

Street, Mongkok KL, Hong Kong

Equipment Under Test (EUT)

Product Name: Mobile Phone

Model No.: 5500

Trade mark: SIMTEL

FCC ID: 2AI3SSIMTEL5500

Applicable standards: FCC CFR Title 47 Part 15 Subpart C Section 15.247

Date of sample receipt: 20 Jun., 2019

Date of Test: 21 Jun., to 15 Jul., 2019

Date of report issued: 16 Jul., 2019

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	16 Jul., 2019	Original

Tested by: Mike. DU Date: 16 Jul., 2019

Test Engineer

Reviewed by: Winner Thang Date: 16 Jul., 2019

Project Engineer



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4 Test Summary

Test Items	Section in CFR 47	Result
Antenna requirement	15.203 & 15.247 (b)	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

All measurement data were performed in accordance with ANSI C63.10: 2013 and KDB 558074 D01 15.247 Meas Guidance v05r02 of test method.

Remark

- 1. Pass: The EUT complies with the essential requirements in the standard.
- 2. N/A: Not Applicable.



5 General Information

5.1 Client Information

Applicant:	Evertrons Technology Co., Limited	
Address:	Flat/RM 1605E, Ho King Commercial Center, 2-16 FA Yuen Street, Mongkok KL, Hong Kong	
Manufacturer/ Factory:	Shenzhen HengXiang Century Technology Co.,Ltd	
Address:	2303, Block A, Galaxey World, No.1 YaBao Road, LongGang Dist., Shenzhen, GuangDong, China	

5.2 General Description of E.U.T.

Product Name:	Mobile Phone
Model No.:	5500
Operation Frequency:	2412MHz~2462MHz (802.11b/802.11g/802.11n(HT20))
Channel numbers:	11 for 802.11b/802.11g/802.11(HT20)
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 72.2Mbps
Antenna Type:	Internal Antenna
Antenna gain:	0.9 dBi
Power supply:	Rechargeable Li-ion Battery DC3.7V-950mAh
AC adapter:	Model: 5500 Input: AC100-240V, 50/60Hz, 0.15A Output: DC 5.0V, 500mA
Test Sample Condition:	The test samples were provided in good working order with no visible defects.

Operation Fr	Operation Frequency each of channel for 802.11b/g/n(HT20)						
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		

Note:

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

^{1.} For 802.11n-HT40 mode, the channel number is from 3 to 9;

^{2.} Channel 1, 6 & 11 selected for 802.11b/g/n-HT20 as Lowest, Middle and Highest channel.

Transmitting mode

Report No: CCISE170709403

5.3 Test environment and test mode

Operating Environment:		
Temperature:	24.0 °C	
Humidity:	54 % RH	
Atmospheric Pressure:	1010 mbar	
Test mode:		

The sample was placed 0.8m (below 1GHz)/1.5m (above 1GHz) 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.

Keep the EUT in continuous 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, the follow list were the worst case.			
Mode	Data rate		
802.11b	1Mbps		
802.11g	6Mbps		
802.11n(HT20)	6.5Mbps		

5.4 Description of Support Units

The EUT has been tested as an independent unit.

5.5 Measurement Uncertainty

Parameters	Expanded Uncertainty
Conducted Emission (9kHz ~ 30MHz)	±1.60 dB (k=2)
Radiated Emission (9kHz ~ 30MHz)	±3.12 dB (k=2)
Radiated Emission (30MHz ~ 1000MHz)	±4.32 dB (k=2)
Radiated Emission (1GHz ~ 18GHz)	±5.38 dB (k=2)
Radiated Emission (18GHz ~ 40GHz)	±3.36 dB (k=2)

5.6 Laboratory Facility

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

● FCC - Designation No.: CN1211

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

● ISED - CAB identifier.: CN0021

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

Shenzhen Zhongjian Nanfang Testing Co., Ltd.
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5.7 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

5.8 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	03-18-2019	03-17-2020
BiConiLog Antenna	SCHWARZBECK	VULB9163	497	03-18-2019	03-17-2020
Horn Antenna	SCHWARZBECK	BBHA9120D	916	03-18-2019	03-17-2020
Horn Antenna	SCHWARZBECK	BBHA9120D	1805	06-22-2017	06-21-2020
Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170582	11-21-2018	11-20-2019
EMI Test Software	AUDIX	E3	\	Version: 6.110919b	
Pre-amplifier	HP	8447D	2944A09358	03-18-2019	03-17-2020
Pre-amplifier	CD	PAP-1G18	11804	03-18-2019	03-17-2020
Spectrum analyzer	Rohde & Schwarz	FSP30	101454	03-18-2019	03-17-2020
Spectrum analyzer	Rohde & Schwarz	FSP40	100363	11-21-2018	11-20-2019
EMI Test Receiver	Rohde & Schwarz	ESRP7	101070	03-18-2019	03-17-2020
Cable	ZDECL	Z108-NJ-NJ-81	1608458	03-18-2019	03-17-2020
Cable	MICRO-COAX	MFR64639	K10742-5	03-18-2019	03-17-2020
Cable	SUHNER	SUCOFLEX100	58193/4PE	03-18-2019	03-17-2020
RF Switch Unit	MWRFTEST	MW200	N/A	N/A	N/A
Test Software	MWRFTEST	MTS8200		Version: 2.0.0.0	

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	03-18-2019	03-17-2020	
Pulse Limiter	SCHWARZBECK	OSRAM 2306	9731	03-18-2019	03-17-2020	
LISN	CHASE	MN2050D	1447	03-18-2019	03-17-2020	
LISN	Rohde & Schwarz	ESH3-Z5	8438621/010	07-21-2018	07-20-2019	
Cable	HP	10503A	N/A	03-18-2019	03-17-2020	
EMI Test Software	AUDIX	E3	Version: 6.110919b			



6 Test results and Measurement Data

6.1 Antenna requirement

Standard requirement:

FCC Part 15 C Section 15.203 /247(b)

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(b) (4) requirement:

(4) The conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1), (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

E.U.T Antenna:

The Wi-Fi antenna is an Internal antenna which cannot replace by end-user, the best case gain of the antenna is 0.9 dBi.





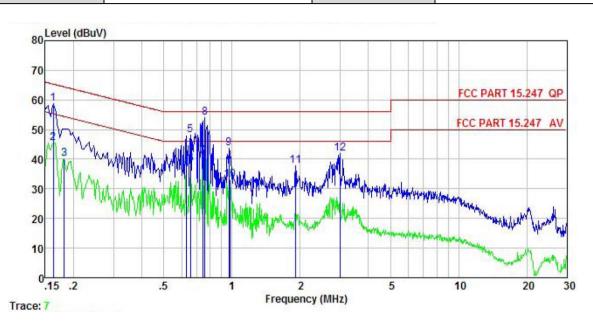
6.2 Conducted Emission

T. (D	E00 De (45 0 0 e)	5.007		
Test Requirement:	FCC Part 15 C Section 15.207			
Test Frequency Range:	150 kHz to 30 MHz			
Class / Severity:	Class B			
Receiver setup:	RBW=9 kHz, VBW=30 k	Hz		
Limit:	Frequency range	Limit (d	dBuV)	
	(MHz)	Quasi-peak	Average	
	0.15-0.5	66 to 56*	56 to 46*	
	0.5-5	56	46	
	5-30	60	50	
Test procedure	* Decreases with the logarity 1. The E.U.T and simulations	arithm of the frequency. Ilators are connected to the		
	 line impedance stabilization network (L.I.S.N.), which provides a 500hm/50uH coupling impedance for the measuring equipment. 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). 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. 			
Test setup:	Reference Plane			
	AUX Equipment Test table/Insulat Remark E.U.T: Equipment Under T LISN: Line Impedence Sta	E.U.T EMI Receiver	I Her — AC power	
Test Instruments:	Refer to section 5.8 for details			
Test mode:	Refer to section 5.3 for details			
Test results:	Passed			



Measurement Data:

Product name:	Mobile Phone	Product model:	5500
Test by:	Mike	Test mode:	Wi-Fi Tx mode
Test frequency:	150 kHz ~ 30 MHz	Phase:	Line
Test voltage:	AC 120 V/60 Hz	Environment:	Temp: 22.5℃ Huni: 55%



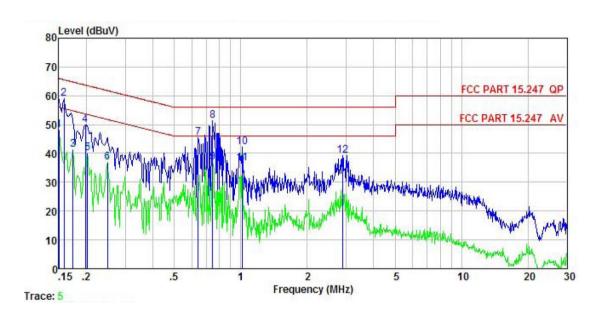
	Freq	Read Level	LISN Factor	Cable Loss	Level	Limit Line	Over Limit	Remark
	MHz	dBu∜	₫B	₫B	dBu₹	dBu∜	<u>d</u> B	
1 2 3 4 5 6 7 8 9	0.162	48.27	-0.44	10.77	58.60	65.34		1 (3) E (4)
2	0.162	35.25	-0.44	10.77	45.58	55.34	-9.76	Average
3	0.182	29.71	-0.42	10.77	40.06	54.42	-14.36	Average
4	0.627	26.08	-0.38	10.77	36.47	46.00	-9.53	Average
5	0.654	37.77	-0.38	10.77	48.16	56.00	-7.84	QP
6	0.658	27.90	-0.38	10.77	38.29	46.00	-7.71	Average
7	0.743	30.54	-0.38	10.79	40.95	46.00		Average
8	0.759	43.46	-0.38	10.80	53.88	56.00	-2.12	
9	0.968	33.27	-0.38	10.86	43.75	56.00	-12.25	
10	0.984	22.57	-0.38	10.87	33.06			Average
11	1.908	27.25	-0.41	10.95	37.79		-18.21	
12	2.993	31.33	-0.44	10.92	41.81		-14.19	

Notes:

- 1. An initial pre-scan was performed on the line 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.



Product name:	Mobile Phone	Product model:	5500
Test by:	Mike	Test mode:	Wi-Fi Tx mode
Test frequency:	150 kHz ~ 30 MHz	Phase:	Neutral
Test voltage:	AC 120 V/60 Hz	Environment:	Temp: 22.5℃ Huni: 55%



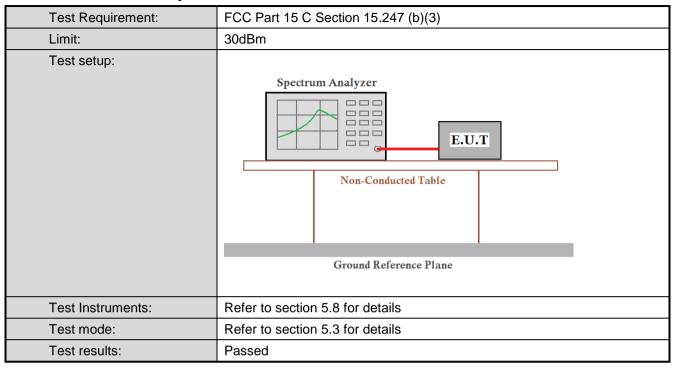
	Freq	Read Level	LISN Factor	Cable Loss	Level	Limit Line	Over Limit	Remark
	MHz	dBu∜	<u>dB</u>	<u>d</u> B	—dBu∀	dBu∜	<u>d</u> B	
1	0.150	38.11	-0.68	10.78	48.21	56.00	-7.79	Average
2	0.158	48.98	-0.68	10.77	59.07	65.56	-6.49	QP
3	0.174	31.16	-0.69	10.77	41.24	54.77	-13.53	Average
1 2 3 4 5 6 7 8 9	0.198	39.80	-0.69	10.76	49.87	63.71	-13.84	QP
5	0.202	29.94	-0.69	10.76	40.01	53.54	-13.53	Average
6	0.249	26.67	-0.66	10.75	36.76			Average
7	0.641	35.33	-0.64	10.77	45.46		-10.54	
8	0.747	41.26	-0.64	10.79	51.41	56.00	-4.59	QP
9	0.747	26.74	-0.64	10.79	36.89	46.00	-9.11	Average
10	1.016	31.90	-0.63	10.87	42.14	56.00	-13.86	
11	1.016	26.49	-0.63	10.87	36.73	46.00		Average
12	2.884	29.00	-0.67	10.92	39.25		-16.75	

Notes:

- 1. An initial pre-scan was performed on the line 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

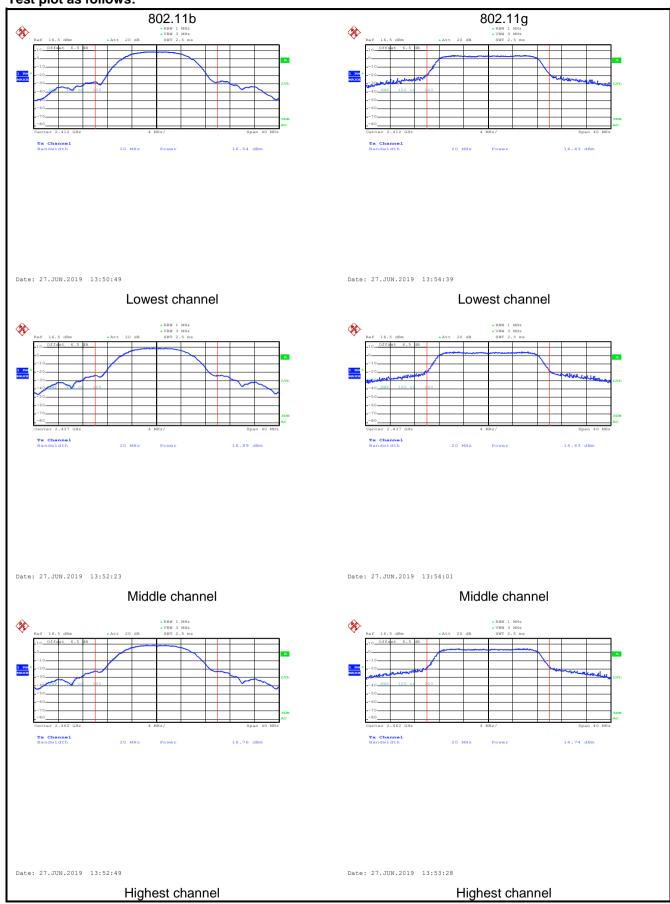


Measurement Data:

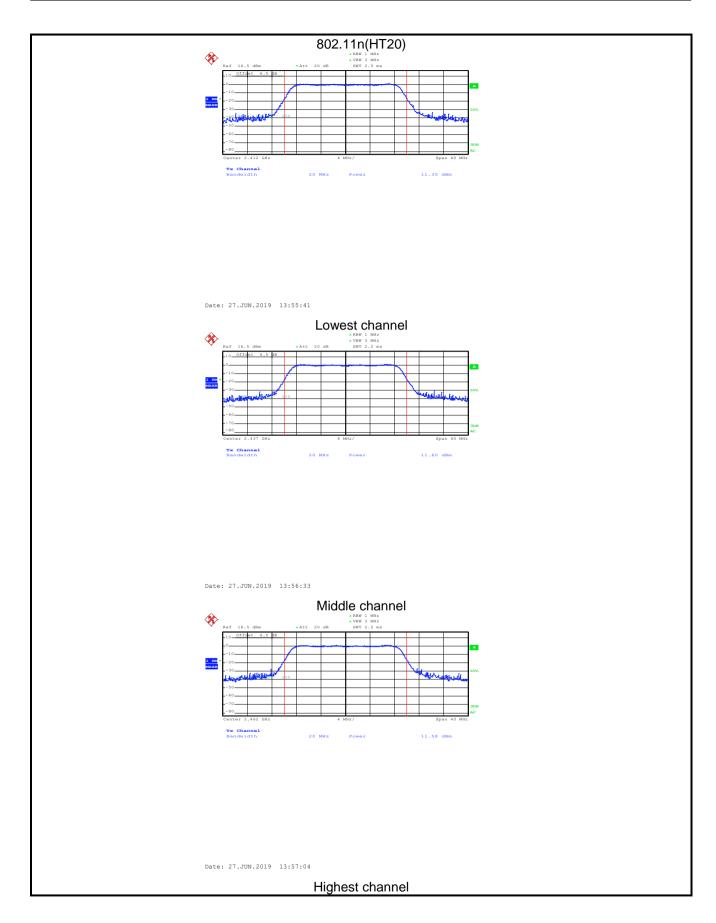
Test CH	Maximum	Limit(dBm)	Popult			
Test CH	802.11b	Limit(ubin)	Result			
Lowest	16.54	14.43	11.35		Pass	
Middle	16.89	14.63	11.60	30.00		
Highest	16.76	14.74	11.58			



Test plot as follows:

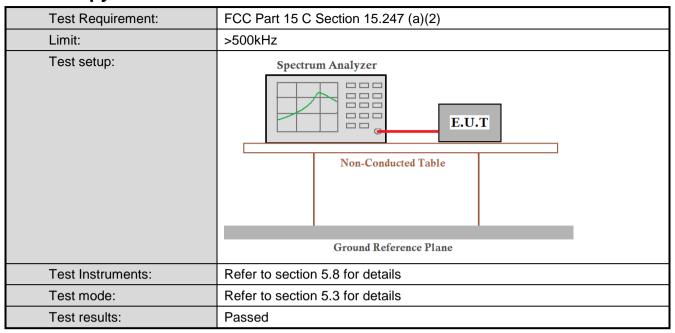








6.4 Occupy Bandwidth

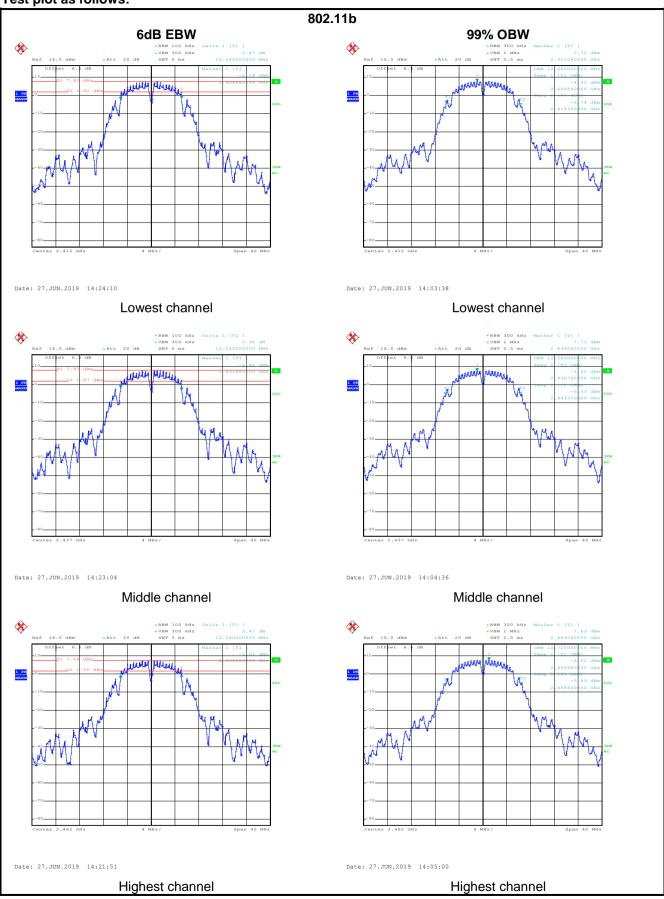


Measurement Data:

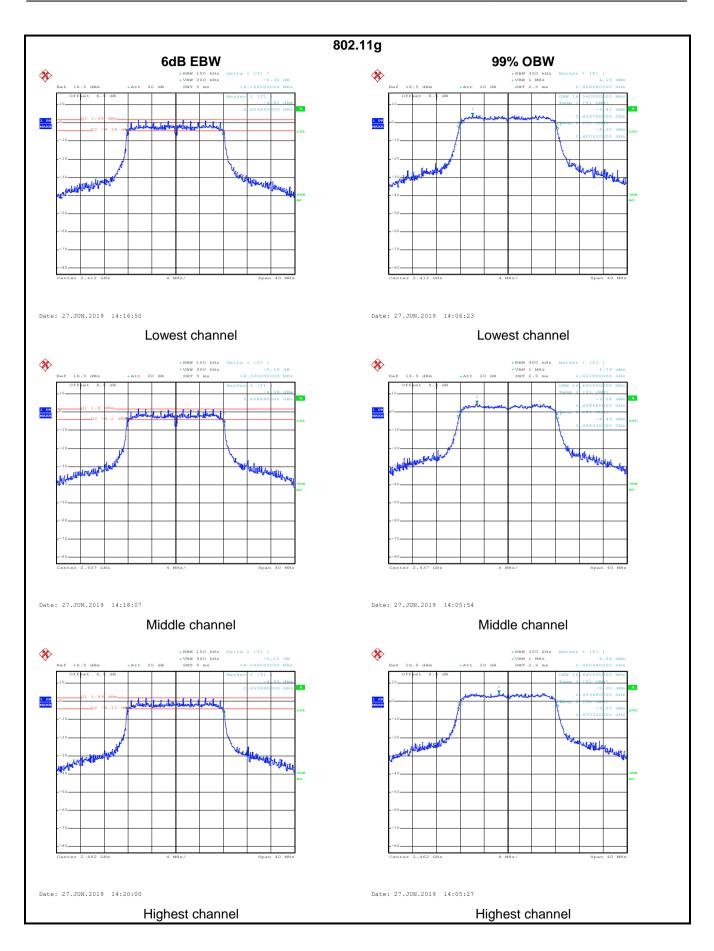
Test CH	6dB	Limit(k∐z)	Result						
Test CH	802.11b 802.11g 802.11n(HT20)		Limit(kHz)	Result					
Lowest	10.24	16.16	17.28		Pass				
Middle	10.24	16.32	17.36	>500					
Highest	10.24	16.24	17.28						
Test CH	99%	Limit/kU=\	Result						
Test CH	802.11b	802.11g	802.11n(HT20)	Limit(kHz)	Result				
Lowest	12.48	16.56	17.76		N/A				
Middle	12.56	16.64	17.68	N/A					
Highest	12.72	16.64	17.68						



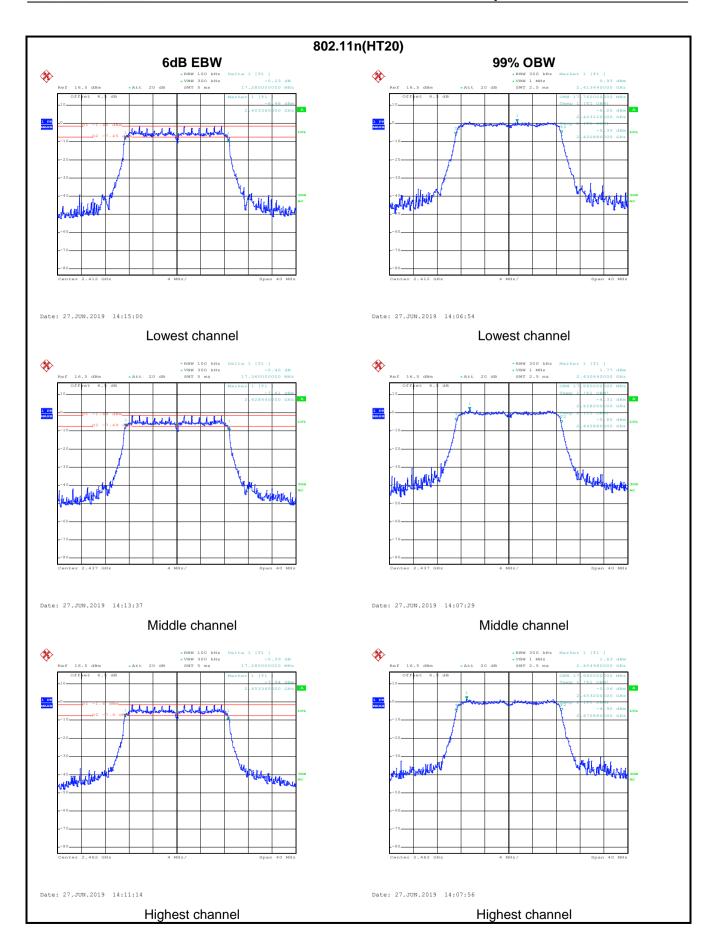
Test plot as follows:





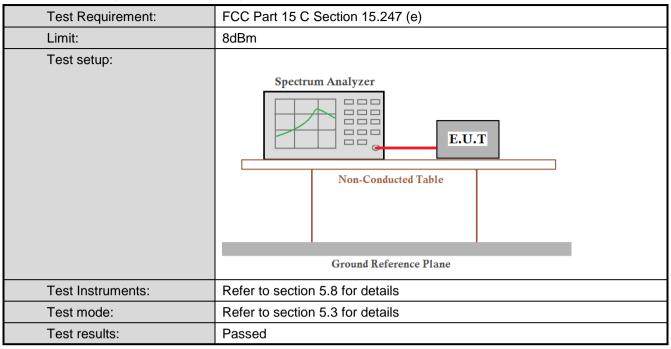








6.5 Power Spectral Density

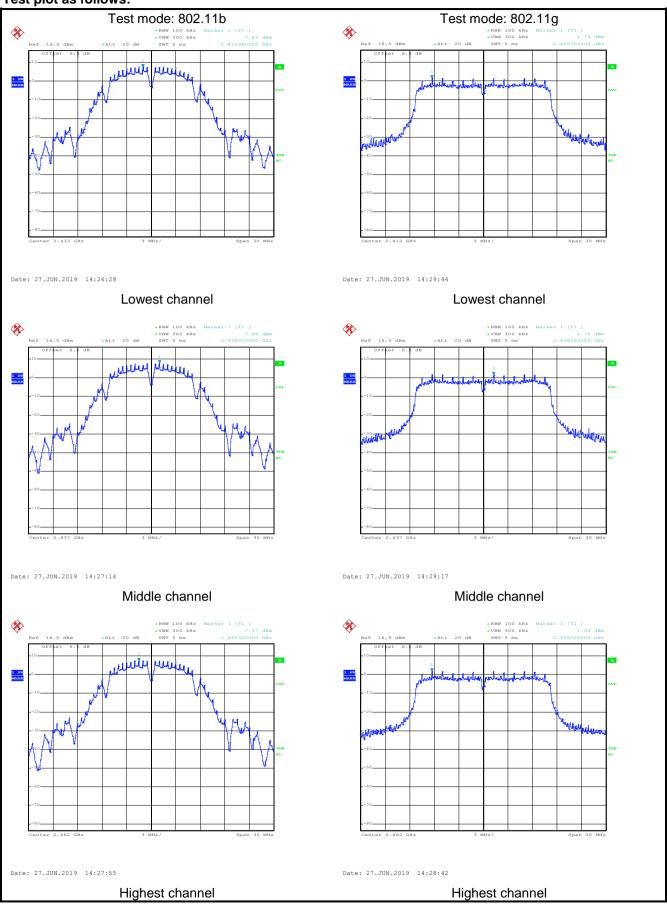


Measurement Data:

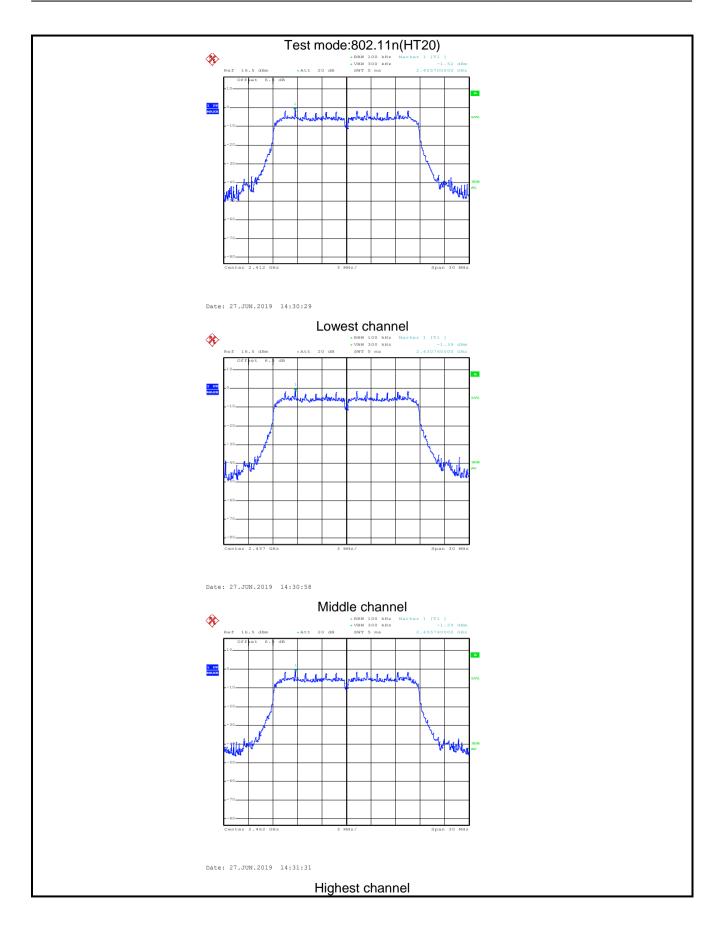
Tost C⊔	Pov	Limit(dRm)	Result			
Test CH	802.11b	Limit(dBm)	Result			
Lowest	7.83	1.73	-1.52		Pass	
Middle	7.89	1.70	-1.39	8.00		
Highest	7.57	1.94	-1.29			



Test plot as follows:









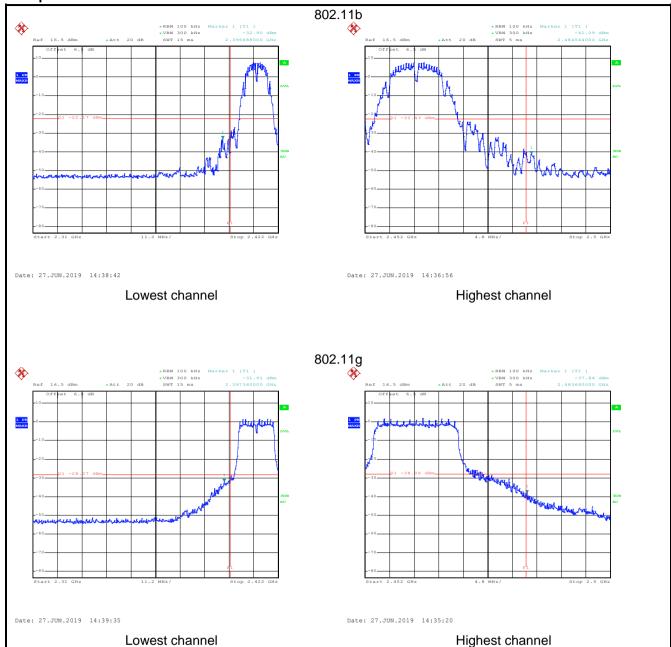
6.6 Band Edge

6.6.1 Conducted Emission Method

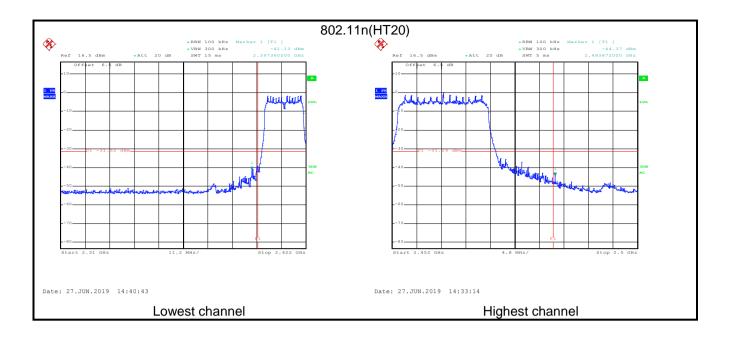
Test Requirement:	FCC Part 15 C Section 15.247 (d)				
Limit:	In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 30 dB below that in the 100 kHz bandwidth 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 Ground Reference Plane				
Test Instruments:	Refer to section 5.8 for details				
Test mode:	Refer to section 5.3 for details				
Test results:	Passed				



Test plot as follows:









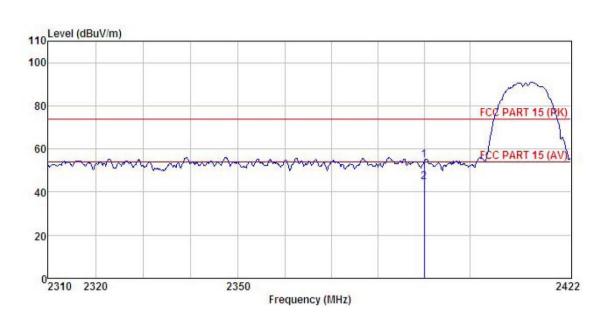
6.6.2 Radiated Emission Method

0.0.2	Z Radiated Emission Method								
	Test Requirement:	FCC Part 15 C	Section 15.2	209 and 15.205					
	Test Frequency Range:	2.3GHz to 2.5G	Hz						
	Test Distance:	3m							
	Receiver setup:	Frequency	Detector		VBW	Remark			
		Above 1GHz	Peak	1MHz	3MHz	Peak Value			
	129	Eroguana	RMS	1MHz _imit (dBuV/m @	3MHz	Average Value Remark			
	Limit:	Frequenc	у г	54.00		Average Value			
		Above 1GH	Hz —	74.00		Peak Value			
	Test Procedure:	 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. 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. 							
	Test setup:	150cm	AE EUT (Turntable)	Ground Reference Plane Test Receiver	orn Antenna Antenna Pre- Amptitier Controller	Tower			
	Test Instruments:	Refer to section	5.8 for deta	ails					
	Test mode:	Refer to section							
	Test results:	Passed							



802.11b mode:

Product Name:	Mobile Phone	Product Model:	5500
Test By:	Mike	Test mode:	802.11b Tx mode
Test Channel:	Lowest channel	Polarization:	Vertical
Test Voltage:	AC 120/60Hz	Environment:	Temp: 24℃ Huni: 57%



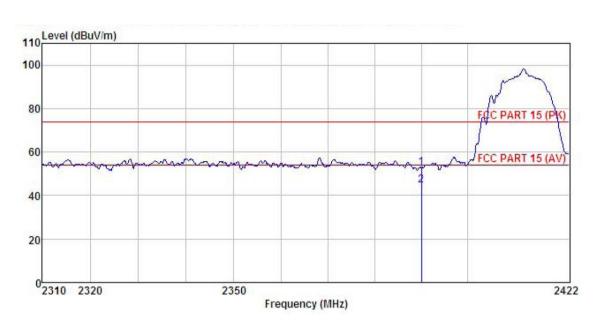
	Freq		Antenna Factor						
	MHz	dBu∜	dB/m	<u>d</u> B	<u>dB</u>	$\overline{dBuV/m}$	dBuV/m	<u>db</u>	
1 2	2390.000 2390.000					54.67 44.63			

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.



Product Name:	Mobile Phone	Product Model:	5500
Test By:	Mike	Test mode:	802.11b Tx mode
Test Channel:	Lowest channel	Polarization:	Horizontal
Test Voltage:	AC 120/60Hz	Environment:	Temp: 24°C Huni: 57%

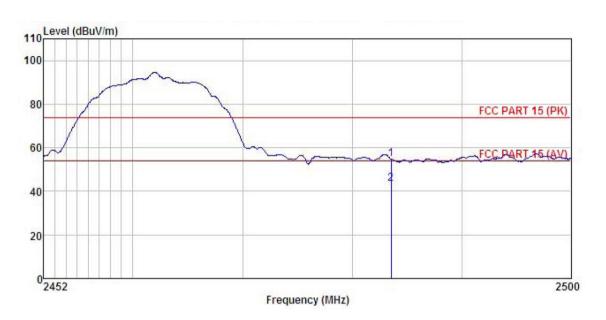


	Freq		Antenna Factor						
	MHz	dBu₹	dB/m	<u>d</u> B	<u>ab</u>	dBu√/m	dBuV/m	<u>d</u> B	
1 2	2390.000 2390.000								

- 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.



Product Name:	Mobile Phone	Product Model:	5500
Test By:	Mike	Test mode:	802.11b Tx mode
Test Channel:	Highest channel	Polarization:	Vertical
Test Voltage:	AC 120/60Hz	Environment:	Temp: 24°C Huni: 57%

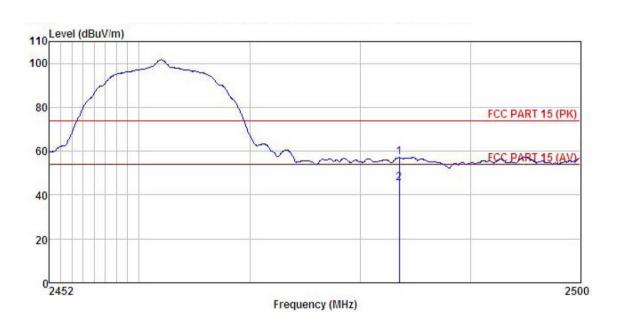


	Freq					Dimit Over E Level Line Limit R			
	MHz	dBu∜	dB/m	dB	<u>d</u> B	$\overline{dBuV/m}$	dBuV/m	<u>dB</u>	
1 2	2483.500 2483.500								

- 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.



Product Name:	Mobile Phone	5500		
Test By:	Mike	Test mode: 802.11b Tx n		
Test Channel:	Highest channel	Polarization:	Horizontal	
Test Voltage:	AC 120/60Hz	Environment:	Temp: 24℃ Huni: 57%	



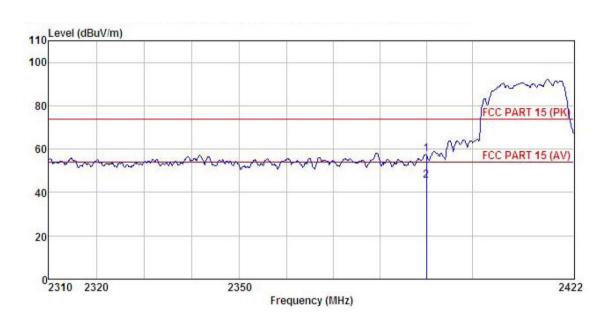
Freq		Antenna Factor						
MHz	dBu∜		<u>d</u> B	<u>d</u> B	dBu√/m	$\overline{dBuV/m}$	<u>d</u> B	
2483.500 2483.500								

- 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.



802.11g mode:

Product Name:	Mobile Phone	Product Model:	5500
Test By:	Mike	Test mode:	802.11g Tx mode
Test Channel:	Lowest channel	Polarization:	Vertical
Test Voltage:	AC 120/60Hz	Environment:	Temp: 24°C Huni: 57%



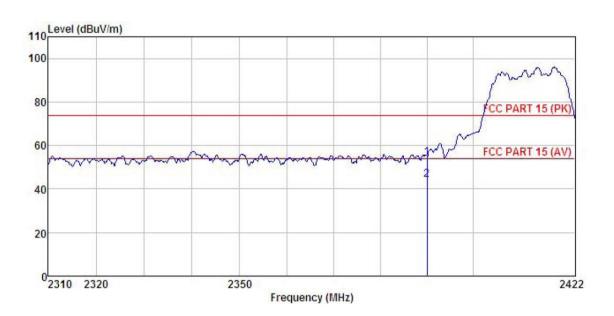
	Freq	ReadAntenna Level Factor							
	MHz	dBu∜	dB/m	dB	<u>d</u> B	$\overline{dBuV/m}$	$\overline{dBuV/m}$	<u>dB</u>	
1 2	2390.000 2390.000					57.51 45.32			

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.



Product Name:	Mobile Phone	Product Model:	5500	
Test By:	Mike	Test mode: 802.11g Tx mode		
Test Channel:	Lowest channel	Polarization:	Horizontal	
Test Voltage:	AC 120/60Hz	Environment:	Temp: 24°C Huni: 57%	

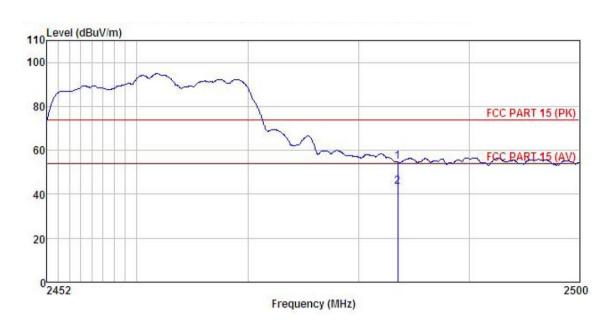


	Freq		Antenna Factor						
	MHz	dBu∇	dB/m	<u>dB</u>	<u>dB</u>	$\overline{dBuV/m}$	$\overline{\mathtt{dBuV/m}}$	<u>dB</u>	
1 2	2390.000 2390.000								

- 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.



Product Name:	Mobile Phone	Product Model:	5500
Test By:	Mike	Test mode:	802.11g Tx mode
Test Channel:	Highest channel	Polarization:	Vertical
Test Voltage:	AC 120/60Hz	Environment:	Temp: 24°C Huni: 57%

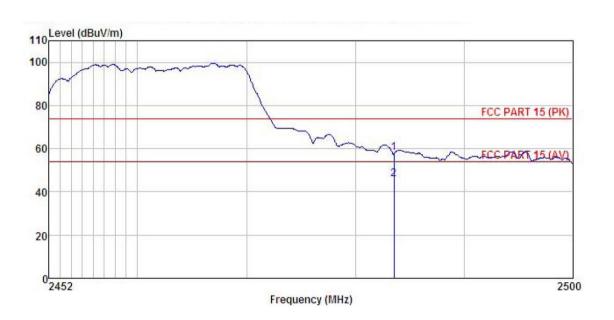


		Read	Ant enna	Cable	Preamp		Limit	Over	
	Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Remark
	MHz	—dBu∀	dB/m	<u>dB</u>	<u>d</u> B	$\overline{dBuV/m}$	dBuV/m	<u>db</u>	
1 2	2483.500 2483.500								

- 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.



Product Name:	Mobile Phone	Product Model:	5500		
Test By:	Mike	Test mode:	802.11g Tx mode		
Test Channel:	Highest channel	Polarization:	Horizontal		
Test Voltage:	AC 120/60Hz	Environment:	Temp: 24℃ Huni: 57%		



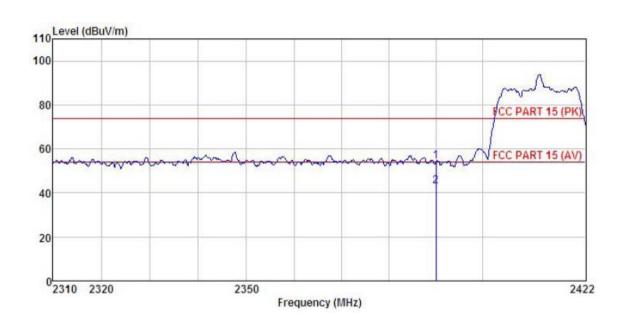
	Freq		Antenna Factor						
	MHz	—dBu∜	<u>dB</u> /m	<u>d</u> B	<u>ab</u>	$\overline{dBuV/m}$	dBuV/m	<u>dB</u>	
1 2	2483.500 2483.500								

- 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.



802.11n(HT20):

· · · · · · · · · · · · · · · · · · ·						
Product Name:	Mobile Phone	Product Model:	5500			
Test By:	Mike	Test mode:				
Test Channel:	Lowest channel	Polarization:	Vertical			
Test Voltage:	AC 120/60Hz	Environment:	Temp: 24°C Huni: 57%			



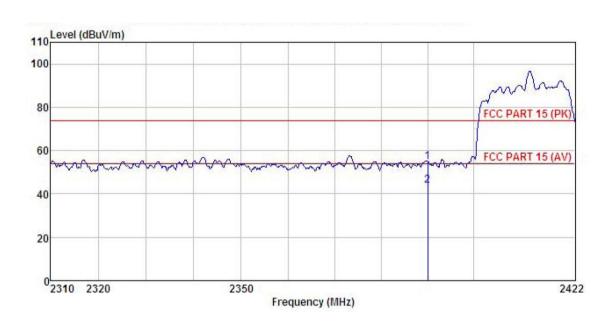
	Freq		Antenna Factor						Remark
	MHz	dBu∜	dB/m	d <u>B</u>	<u>dB</u>	dBuV/m	dBuV/m	<u>db</u>	
1 2	2390.000 2390.000								

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.



Product Name:	Mobile Phone	Product Model:	5500		
Test By:	Mike	Test mode:	802.11n(HT20) Tx mode		
Test Channel:	Lowest channel	Polarization:	Horizontal		
Test Voltage:	AC 120/60Hz	Environment:	Temp: 24°C Huni: 57%		

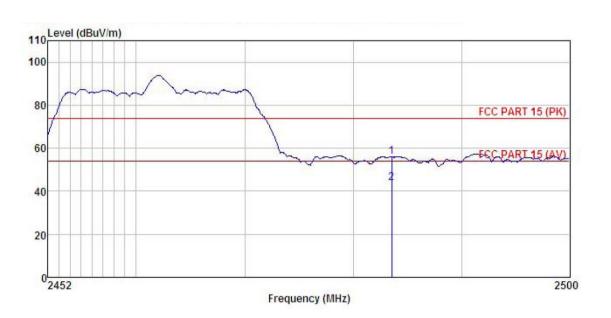


	Freq		Antenna Factor						
	MHz	dBu∇	$\overline{dB/m}$	<u>d</u> B	<u>d</u> B	$\overline{dBuV/m}$	$\overline{dBuV/m}$	<u>dB</u>	
1 2	2390.000 2390.000					54.80 43.69			

- 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.



Product Name:	Mobile Phone	Product Model:	5500
Test By:	Mike	Test mode:	802.11n(HT20) Tx mode
Test Channel:	Highest channel	Polarization:	Vertical
Test Voltage:	AC 120/60Hz	Environment:	Temp: 24°C Huni: 57%

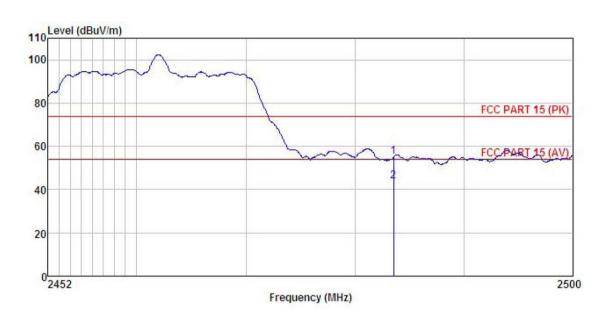


	Freq		Antenna Factor						
	MHz	dBu₹	<u>dB</u> /m	<u>d</u> B	<u>d</u> B	$\overline{dBuV/m}$	$\overline{dBuV/m}$	<u>dB</u>	
1 2									

- 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.



Product Name:	Mobile Phone	Product Model:	5500
Test By:	Mike	Test mode:	802.11n(HT20) Tx mode
Test Channel:	Highest channel	Polarization:	Horizontal
Test Voltage:	AC 120/60Hz	Environment:	Temp: 24°C Huni: 57%



Freq		Antenna Factor					
MHz	dBu₹	dB/m	 <u>d</u> B	$\overline{dBuV/m}$	dBuV/m	<u>dB</u>	
2483.500 2483.500							

- 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.



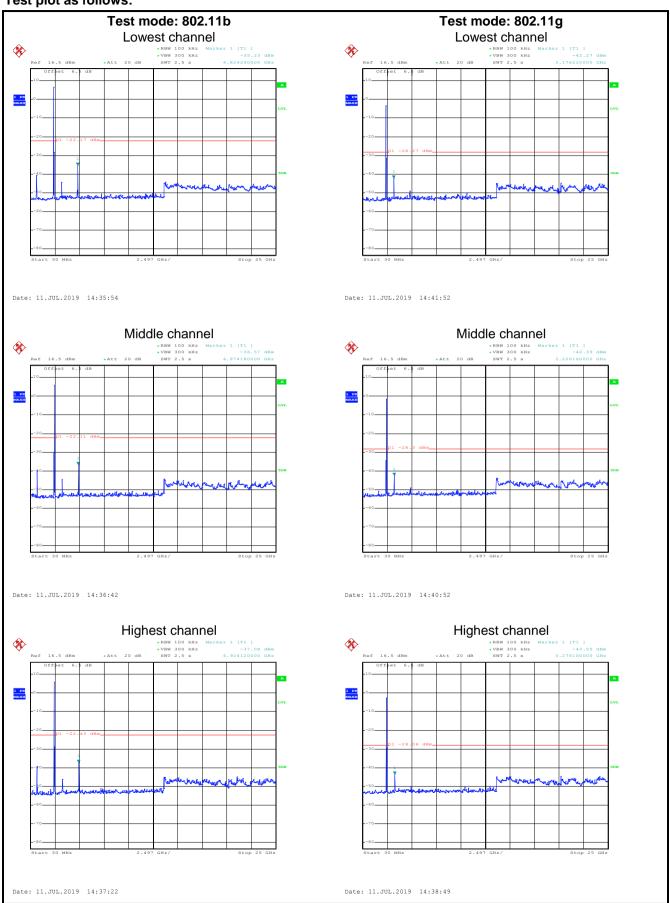
6.7 Spurious Emission

6.7.1 Conducted Emission Method

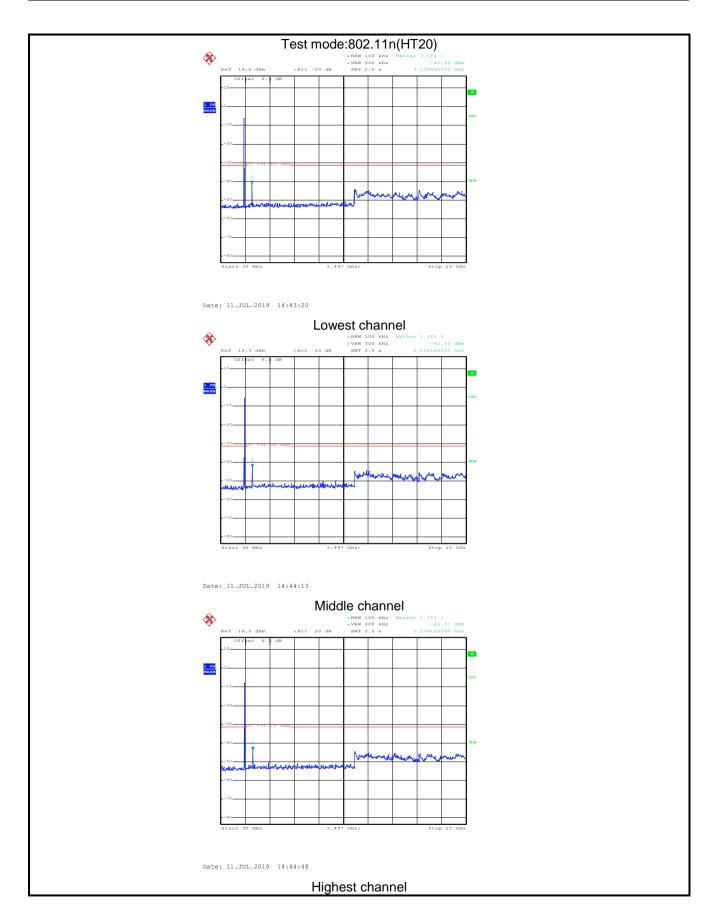
6.7.1 Conducted Ellission	Wethod
Test Requirement:	FCC Part 15 C Section 15.247 (d)
Limit:	In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB 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. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph(b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB.
Test setup:	
	Spectrum Analyzer E.U.T Non-Conducted Table Ground Reference Plane
Test Instruments:	Refer to section 5.8 for details
Test mode:	Refer to section 5.3 for details
Test results:	Passed



Test plot as follows:





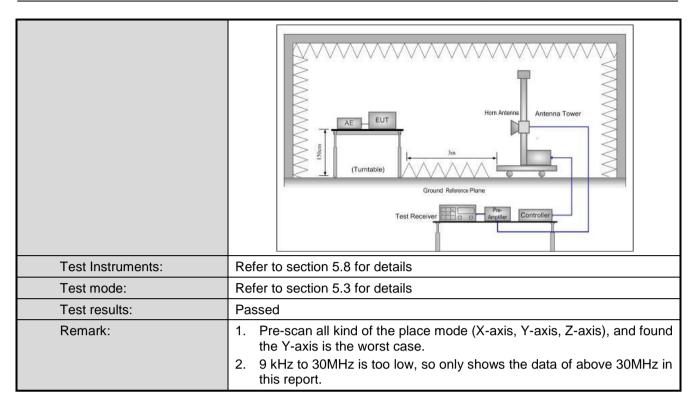




6.7.2 Radiated Emission Method

6.7.2 I	2 Radiated Emission Method								
T	est Requirement:	FCC Part 15 C S	ection 1	5.209 a	and 15.205				
Т	est Frequency Range:	9kHz to 25GHz							
T	est Distance:	3m							
R	eceiver setup:	Frequency	Detec	ctor	r RBW		BW	Remark	
	·	30MHz-1GHz	Quasi-	peak	120KHz)KHz	Quasi-peak Value	
		Above 1GHz	Pea		1MHz		ИHz	Peak Value	
			RM	-	1MHz		ЛHz	Average Value	
Li	imit:	Frequency		Limit	(dBuV/m @3i	m)		Remark	
		30MHz-88MH			40.0			Quasi-peak Value	
		88MHz-216MH 216MHz-960MI			43.5 46.0			uasi-peak Value uasi-peak Value	
							uasi-peak Value		
					54.0			Average Value	
		Above 1GHz			74.0		,	Peak Value	
		 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 chamber. 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 							
Т	est setup:	Below 1GHz EUT Tum Table Ground F	0.8m	4m					



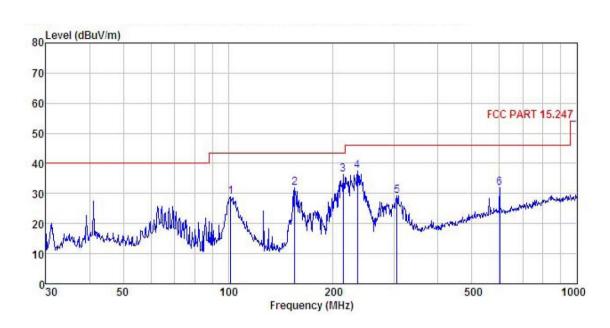




Measurement Data (worst case):

Below 1GHz:

Product Name:	Mobile Phone	Product Model:	5500
Test By:	Mike	Test mode:	Wi-Fi Tx mode
Test Frequency:	30 MHz ~ 1 GHz	Polarization:	Vertical
Test Voltage:	AC 120/60Hz	Environment:	Temp: 24℃ Huni: 57%



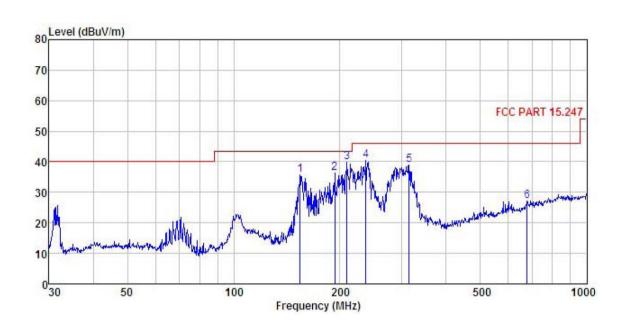
	Freq		intenna Factor				Limit Line		Remark
-	MHz	dBu∇	<u>dB</u> /m	<u>d</u> B	<u>ab</u>	$\overline{dBuV/m}$	dBuV/m	<u>dB</u>	
1	101.644	44.28	12.35	1.95	29.52	29.06	43.50	-14.44	QP
2 3 4 5	155.364	49.40	9.12	2.55	29.17	31.90	43.50	-11.60	QP
3	213.763	50.88	11.23	2.85	28.74	36.22	43.50	-7.28	QP
4	234.991	51.31	12.11	2.83	28.62	37.63	46.00	-8.37	QP
5	304.610	41.06	13.71	2.95	28.46	29.26	46.00	-16.74	QP
6	601.427	37.43	19.51	3.94	28.93	31.95	46.00	-14.05	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.



Product Name:	Mobile Phone	Product Model:	5500
Test By:	Mike	Test mode:	Wi-Fi Tx mode
Test Frequency:	30 MHz ~ 1 GHz	Polarization:	Horizontal
Test Voltage:	AC 120/60Hz	Environment:	Temp: 24℃ Huni: 57%



	Freq		Antenna Factor						Remark
	MHz	dBu∜	dB/m	<u>dB</u>	<u>d</u> B	dBu√/m	dBu√/m	<u>dB</u>	
1	154.279	53.25	9.07	2.55	29.18	35.69	43.50	-7.81	QP
2	193.095	51.88	10.38	2.82	28.88	36.20	43.50	-7.30	QP
2	209.313	54.83	11.04	2.86	28.77	39.96	43.50	-3.54	QP
4	236.645	54.12	12.18	2.83	28.61	40.52	46.00	-5.48	QP
4 5	314.377	50.53	13.90	2.98	28.48	38.93	46.00	-7.07	QP
6	677.580	31.85	20.09	4.04	28.72	27.26	46.00	-18.74	QP

- 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

Above 1GHz				0.00				
				802.11b				
				nannel: Lowe				
		T T	De	tector: Peak	Value		T	
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
4824.00	46.48	30.94	6.81	41.82	42.41	74.00	-31.59	Vertical
4824.00	48.01	30.94	6.81	41.82	43.94	74.00	-30.06	Horizontal
			Dete	ector: Avera	ge 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
4824.00	38.49	30.94	6.81	41.82	34.42	54.00	-19.58	Vertical
4824.00	39.21	30.94	6.81	41.82	35.14	54.00	-18.86	Horizontal
			Test ch	nannel: Mido	dle channel			
			De	tector: Peak	v 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
4874.00	47.64	31.20	6.85	41.84	43.85	74.00	-30.15	Vertical
4874.00	48.83	31.20	6.85	41.84	45.04	74.00	-28.96	Horizontal
			Dete	ector: Avera	ge 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
4874.00	37.46	31.20	6.85	41.84	33.67	54.00	-20.33	Vertical
4874.00	38.29	31.20	6.85	41.84	34.50	54.00	-19.50	Horizontal
			Test ch	annel: High	est channel			
				tector: 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)	Polarization
4924.00	46.82	31.46	6.89	41.86	43.31	74.00	-30.69	Vertical
4924.00	47.62	31.46	6.89	41.86	44.11	74.00	-29.89	Horizontal
			Dete	ector: Avera	ge 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
4924.00	38.46	31.46	6.89	41.86	34.95	54.00	-19.05	Vertical
4924.00	38.69	31.46	6.89	41.86	35.18	54.00	-18.82	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.





802.11g										
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		
4824.00	47.89	30.94	6.81	41.82	43.82	74.00	-30.18	Vertical		
4824.00	47.61	30.94	6.81	41.82	43.54	74.00	-30.46	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		
4824.00	37.58	30.94	6.81	41.82	33.51	54.00	-20.49	Vertical		
4824.00	37.46	30.94	6.81	41.82	33.39	54.00	-20.61	Horizontal		
	Test channel: Middle channel									
			De	tector: 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		
4874.00	47.82	31.20	6.85	41.84	44.03	74.00	-29.97	Vertical		
4874.00	48.61	31.20	6.85	41.84	44.82	74.00	-29.18	Horizontal		
			Dete	ector: Avera	ge 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		
4874.00	37.91	31.20	6.85	41.84	34.12	54.00	-19.88	Vertical		
4874.00	38.43	31.20	6.85	41.84	34.64	54.00	-19.36	Horizontal		
			Test ch	annel: High	est channel					
		T T		tector: Peal	v Value		T			
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		
4924.00	48.23	31.46	6.89	41.86	44.72	74.00	-29.28	Vertical		
4924.00	47.91	31.46	6.89	41.86	44.40	74.00	-29.60	Horizontal		
			Dete	ector: Avera	ge 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		
4924.00	38.51	31.46	6.89	41.86	35.00	54.00	-19.00	Vertical		
4924.00	37.79	31.46	6.89	41.86	34.28	54.00	-19.72	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.





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		
4824.00	47.86	36.06	6.81	41.82	48.91	74.00	-25.09	Vertical		
4824.00	47.38	36.06	6.81	41.82	48.43	74.00	-25.57	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		
4824.00	38.06	36.06	6.81	41.82	39.11	54.00	-14.89	Vertical		
4824.00	37.51	36.06	6.81	41.82	38.56	54.00	-15.44	Horizontal		
				nannel: Midd						
		T		tector: Peal	Value		T			
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		
4874.00	47.57	36.32	6.85	41.84	48.90	74.00	-25.10	Vertical		
4874.00	48.23	36.32	6.85	41.84	49.56	74.00	-24.44	Horizontal		
			Dete	ector: Avera	ge 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		
4874.00	37.81	36.32	6.85	41.84	39.14	54.00	-14.86	Vertical		
4874.00	37.72	36.32	6.85	41.84	39.05	54.00	-14.95	Horizontal		
			Tost ch	annel: High	ost channol					
				tector: Peal						
	Read	Antenna	Cable		value					
Frequency (MHz)	Level (dBuV)	Factor (dB/m)	Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization		
4924.00	48.53	36.58	6.89	41.86	50.14	74.00	-23.86	Vertical		
4924.00	47.49	36.58	6.89	41.86	49.10	74.00	-24.90	Horizontal		
			Dete	ector: Avera	ge 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		
4924.00	38.43	36.58	6.89	41.86	40.04	54.00	-13.96	Vertical		
4924.00	37.52	36.58	6.89	41.86	39.13	54.00	-14.87	Horizontal		
Remark:										
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^{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.