

FCC REPORT

(WIFI)

Applicant: REACH Tech (Xiamen) Co., Ltd.

Address of Applicant: RM.303,#18,Guanri Road, Software Park II, Xiamen, 361008, China

Equipment Under Test (EUT)

Product Name: Smart Phone

Model No.: Q882

FCC ID: Z5JREACH-Q882

Applicable standards: FCC CFR Title 47 Part 15 Subpart C Section 15.247:2011

Date of sample receipt: 01 Nov., 2013

Date of Test: 02 Nov., to 22 Nov., 2013

Date of report issued: 22 Nov., 2013

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.

This report may only be reproduced and distributed in full. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards.

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2 Version

Version No.	Date	Description
00	22 Nov., 2013	Original

Prepared by:

Sera Xiang

Date:

25 Nov., 2013

Report Clerk

Reviewed by:

Abimb Yang

Date:

25 Nov., 2013

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/99%dB Emission 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:	REACH Tech (Xiamen) Co., Ltd.
Address of Applicant:	RM.303,#18,Guanri Road, Software Park II, Xiamen, 361008, China
Manufacturer:	REACH Tech (Xiamen) Co., Ltd.
Address of Manufacturer:	RM.303,#18,Guanri Road, Software Park II, Xiamen, 361008,China
Factory:	REACH Tech (Xiamen) Co., Ltd.
Address of Factory:	5/F,#51,Wanghai Road, Software Park II,Xiamen, 361008, China

5.2 General Description of E.U.T.

Product Name:	Smart Phone
Model No.:	Q882
Operation Frequency:	2412MHz~2462MHz (802.11b/802.11g/802.11n(H20))
Channel numbers:	11 for 802.11b/802.11g/802.11n(H20)
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:	Integral Antenna
Antenna gain:	-3.58 dBi
Power supply:	Rechargeable Li-ion Battery DC3.8V/ 1900 mAh
AC Adapter:	Model:TS22-500550U Input: AC 100-240V,50/60Hz 0.2A Output: DC 5.0V/550mA

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		

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

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.								
<table border="1"><thead><tr><th>Mode</th><th>Data rate</th></tr></thead><tbody><tr><td>802.11b</td><td>1Mbps</td></tr><tr><td>802.11g</td><td>6Mbps</td></tr><tr><td>802.11n(H20)</td><td>6.5Mbps</td></tr></tbody></table>	Mode	Data rate	802.11b	1Mbps	802.11g	6Mbps	802.11n(H20)	6.5Mbps
Mode	Data rate							
802.11b	1Mbps							
802.11g	6Mbps							
802.11n(H20)	6.5Mbps							
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). Duty cycle setting during the transmission is 100% with maximum power setting for all modulations.								

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: 0755-23118282

Fax: 0755-23116366

5.6 Test Instruments list

Radiated Emission:						
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal. Date (dd-mm-yy)	Cal. Due date (dd-mm-yy)
1	3m Semi- Anechoic Chamber	SAEMC	9(L)*6(W)* 6(H)	CCIS0001	June 09 2013	June 08 2014
2	Control Room	ZhongYu Electron	6.2(L)*2.5(W)* 2.4(H)	CCIS0002	N/A	N/A
3	BiConiLog Antenna	SCHWARZBECK MESS-ELEKTRONIK	VULB9163	CCIS0005	June 04 2013	June 03 2014
4	Double -ridged waveguide horn	SCHWARZBECK MESS-ELEKTRONIK	BBHA9120D	CCIS0006	May 30 2013	May 29 2014
5	EMI Test Software	AUDIX	E3	N/A	N/A	N/A
6	Coaxial Cable	CCIS	N/A	CCIS0016	Apr. 01 2013	Mar. 31 2014
7	Coaxial Cable	CCIS	N/A	CCIS0017	Apr. 01 2013	Mar. 31 2014
8	Coaxial cable	CCIS	N/A	CCIS0018	Apr. 01 2013	Mar. 31 2014
9	Coaxial Cable	CCIS	N/A	CCIS0019	Apr. 01 2013	Mar. 31 2014
10	Coaxial Cable	CCIS	N/A	CCIS0087	Apr. 01 2013	Mar. 31 2014
11	Amplifier(10kHz-1.3GHz)	HP	8447D	CCIS0003	Apr. 01 2013	Mar. 31 2014
12	Amplifier(1GHz-18GHz)	Compliance Direction Systems Inc.	PAP-1G18	CCIS0011	June 09 2013	June 08 2014
13	Pre-amplifier (18-26GHz)	Rohde & Schwarz	AFS33-18002 650-30-8P-44	GTS218	Apr. 01 2013	Mar. 31 2014
14	Horn Antenna	ETS-LINDGREN	3160	GTS217	Mar. 30 2013	Mar. 29 2014
15	Printer	HP	HP LaserJet P1007	N/A	N/A	N/A
16	Positioning Controller	UC	UC3000	CCIS0015	N/A	N/A
17	Spectrum analyzer 9k-30GHz	Rohde & Schwarz	FSP	CCIS0023	May. 29 2013	May. 28 2014
18	Loop antenna	Laplace instrument	RF300	EMC0701	Aug. 12 2013	Aug. 11 2014
19	EMI Test Receiver	Rohde & Schwarz	ESCI	CCIS0002	May 25 2013	May 24 2014
20	Signal Analyzer	Rohde & Schwarz	FSIQ3	CCIS0088	May 29 2013	May 28 2014

Conducted Emission:						
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal. Date (dd-mm-yy)	Cal. Due date (dd-mm-yy)
1	Shielding Room	ZhongShuo Electron	11.0(L)x4.0(W)x3.0(H)	CCIS0061	June 09 2013	June 08 2014
2	EMI Test Receiver	Rohde & Schwarz	ESCI	CCIS0002	May 25 2013	May. 24 2014
3	LISN	CHASE	MN2050D	CCIS0074	Apr. 01 2013	Mar. 31 2014
4	Coaxial Cable	CCIS	N/A	CCIS0086	Apr. 01 2013	Mar. 31 2014

6 Test results and Measurement Data

6.1 Antenna requirement:

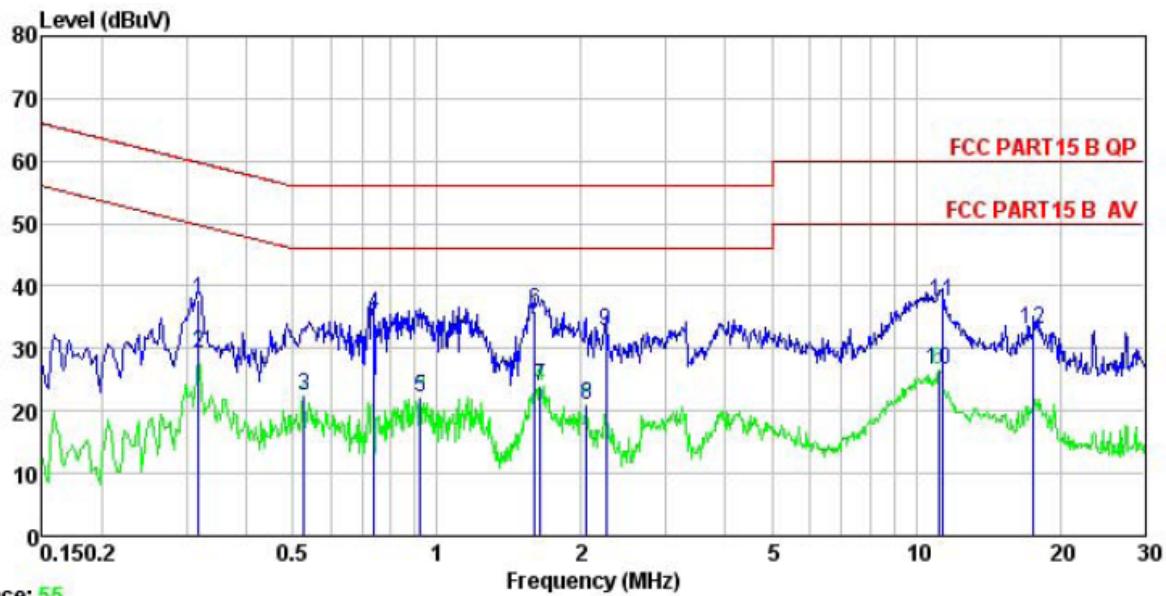
Standard requirement:	FCC Part15 C Section 15.203 /247(c)
15.203 requirement:	<p>An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a 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.</p>
15.247(c) (1)(i) requirement:	<p>(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.</p>
E.U.T Antenna:	<p>The antenna is an internal antenna which cannot replace by end-user, the best case gain of the WiFi antenna is -3.58 dBi.</p> 

6.2 Conducted Emissions

Test Requirement:	FCC Part15 C Section 15.207																
Test Method:	ANSI C63.4: 2003																
Test Frequency Range:	150kHz to 30MHz																
Class / Severity:	Class B																
Receiver setup:	RBW=9kHz, VBW=30kHz																
Limit:	<table border="1"> <thead> <tr> <th rowspan="2">Frequency range (MHz)</th> <th colspan="2">Limit (dBuV)</th> </tr> <tr> <th>Quasi-peak</th> <th>Average</th> </tr> </thead> <tbody> <tr> <td>0.15-0.5</td> <td>66 to 56*</td> <td>56 to 46*</td> </tr> <tr> <td>0.5-5</td> <td>56</td> <td>46</td> </tr> <tr> <td>5-30</td> <td>60</td> <td>50</td> </tr> </tbody> </table>			Frequency range (MHz)	Limit (dBuV)		Quasi-peak	Average	0.15-0.5	66 to 56*	56 to 46*	0.5-5	56	46	5-30	60	50
Frequency range (MHz)	Limit (dBuV)																
	Quasi-peak	Average															
0.15-0.5	66 to 56*	56 to 46*															
0.5-5	56	46															
5-30	60	50															
	<p>* Decreases with the logarithm of the frequency.</p>																
Test procedure	<ol style="list-style-type: none"> The E.U.T and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.). They provide 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: 2003 on conducted measurement. 																
Test setup:	<p>Reference Plane</p> <p>LISN</p> <p>40cm</p> <p>80cm</p> <p>AUX Equipment</p> <p>E.U.T</p> <p>Test table/Insulation plane</p> <p>Filter</p> <p>AC power</p> <p>EMI Receiver</p> <p>Remark: E.U.T: Equipment Under Test LISN: Line Impedance Stabilization Network Test table height=0.8m</p>																
Test Instruments:	Refer to section 5.7 for details																
Test mode:	Refer to section 5.3 for details																
Test results:	Passed																

Measurement Data

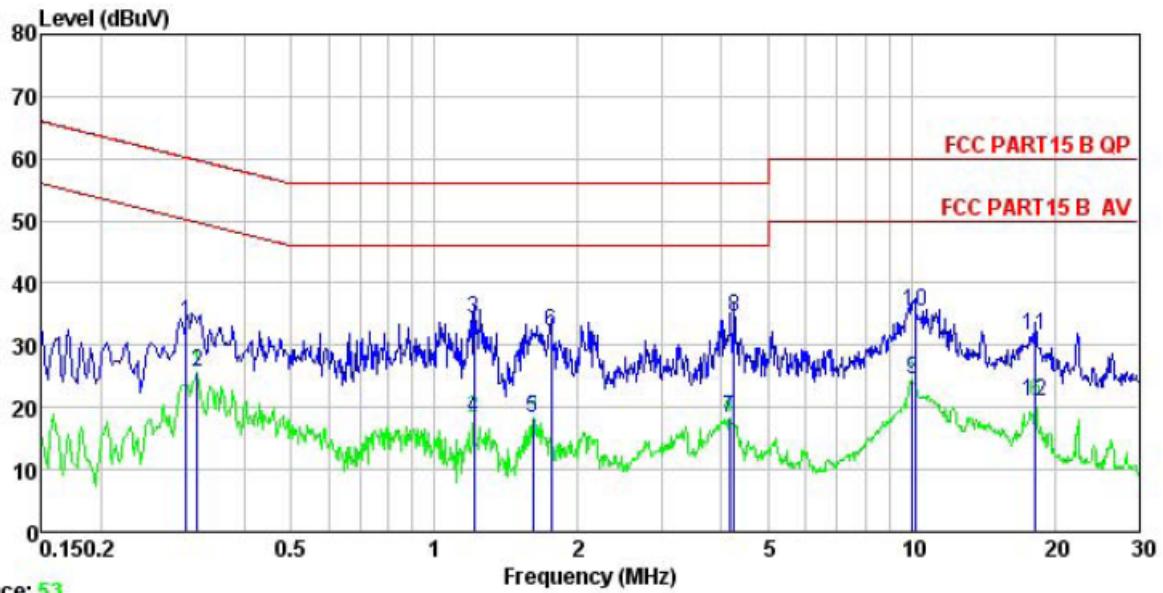
Neutral:



Site : CCIS Conducted test Site
 Condition : FCC PART15 B QP LISN NEUTRAL
 Job No. : 456RF
 EUT : Mobile phone
 Model : Q882
 Test Mode : WIFI mode
 Power Rating : AC 120V/ 60 Hz
 Environment : Temp: 23 °C Huni:56% Atmos:101KPa
 Test Engineer: A-bomb

Freq	Read	LISN	Cable	Limit	Over	Remark
	MHz	dBuV	dB	dB	dBuV	
1	0.318	26.71	10.24	0.74	37.69	59.75 -22.06 QP
2	0.318	18.17	10.24	0.74	29.15	49.75 -20.60 Average
3	0.527	11.47	10.26	0.76	22.49	46.00 -23.51 Average
4	0.739	24.56	10.17	0.78	35.51	56.00 -20.49 QP
5	0.923	11.08	10.19	0.85	22.12	46.00 -23.88 Average
6	1.602	24.85	10.25	0.93	36.03	56.00 -19.97 QP
7	1.645	12.75	10.25	0.93	23.93	46.00 -22.07 Average
8	2.055	9.68	10.27	0.96	20.91	46.00 -25.09 Average
9	2.249	21.47	10.27	0.95	32.69	56.00 -23.31 QP
10	11.139	15.38	10.22	0.93	26.53	50.00 -23.47 Average
11	11.317	26.36	10.22	0.93	37.51	60.00 -22.49 QP
12	17.568	21.97	10.29	0.92	33.18	60.00 -26.82 QP

Line:



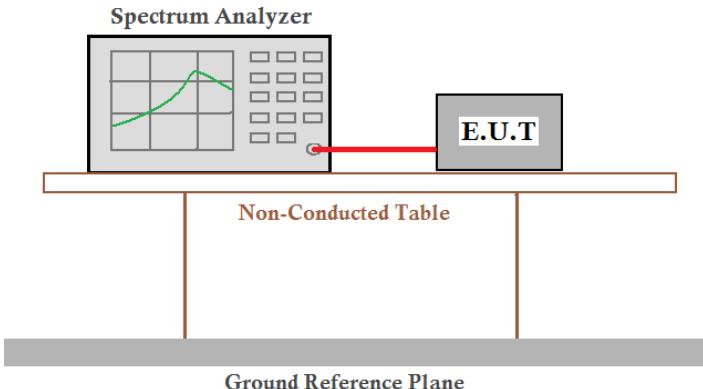
Site : CCIS Conducted test Site
 Condition : FCC PART15 B QP LISN LINE
 Job No. : 456RF
 EUT : Mobile phone
 Model : Q882
 Test Mode : WIFI mode
 Power Rating : AC 120V/ 60 Hz
 Environment : Temp: 23 °C Huni:56% Atmos:101KPa
 Test Engineer: A-bomb

	Read Freq	LISN Level	Cable Factor	Limit Loss	Over Line Level	Over Limit	Remark
	MHz	dBuV	dB	dB	dBuV	dBuV	dB
1	0.302	22.58	10.26	0.74	33.58	60.19	-26.61 QP
2	0.318	14.72	10.26	0.74	25.72	49.75	-24.03 Average
3	1.210	23.27	10.23	0.89	34.39	56.00	-21.61 QP
4	1.210	7.19	10.23	0.89	18.31	46.00	-27.69 Average
5	1.610	7.04	10.26	0.93	18.23	46.00	-27.77 Average
6	1.753	20.98	10.27	0.94	32.19	56.00	-23.81 QP
7	4.158	7.16	10.29	0.88	18.33	46.00	-27.67 Average
8	4.247	23.47	10.29	0.88	34.64	56.00	-21.36 QP
9	10.072	13.21	10.25	0.94	24.40	50.00	-25.60 Average
10	10.179	24.32	10.25	0.94	35.51	60.00	-24.49 QP
11	18.232	20.42	10.30	0.92	31.64	60.00	-28.36 QP
12	18.232	9.88	10.30	0.92	21.10	50.00	-28.90 Average

Notes:

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

6.3 Conducted Output Power

Test Requirement:	FCC Part15 C Section 15.247 (b)(3)
Test Method:	ANSI C63.4:2003 and KDB558074
Limit:	30dBm
Test setup:	 <p>The diagram illustrates the test setup for conducted output power. A Spectrum Analyzer is connected to the E.U.T (Equipment Under Test) via a cable. The E.U.T is placed on a Non-Conducted Table. The entire assembly sits on a Ground Reference Plane.</p>
Test Instruments:	Refer to section 5.7 for details
Test mode:	Refer to section 5.3 for details
Test results:	Passed
Remark:	Test method refers to KDB558074 (DTS Measure Guidance). AVGSA-1 method was used.

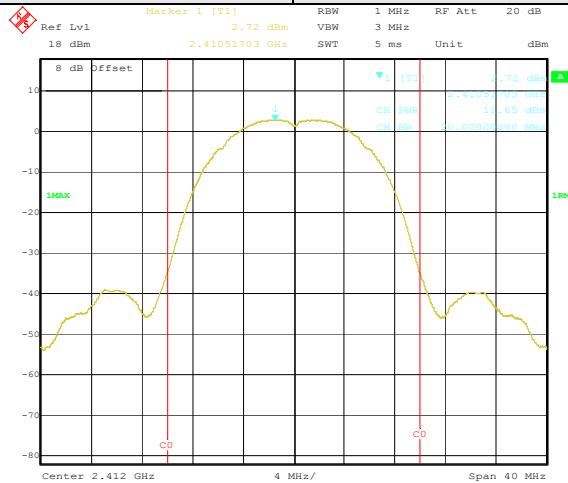
Measurement Data

Test CH	Maximum Conducted Output Power (dBm)			Limit(dBm)	Result
	802.11b	802.11g	802.11n(H20)		
Lowest	11.65	8.85	7.92	30.00	Pass
Middle	12.00	10.73	10.72		
Highest	12.28	11.13	11.10		

Test plot as follows:

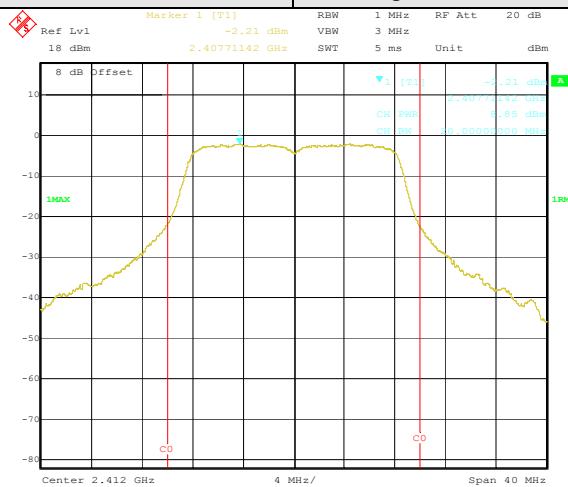
Test mode:

802.11b



Test mode:

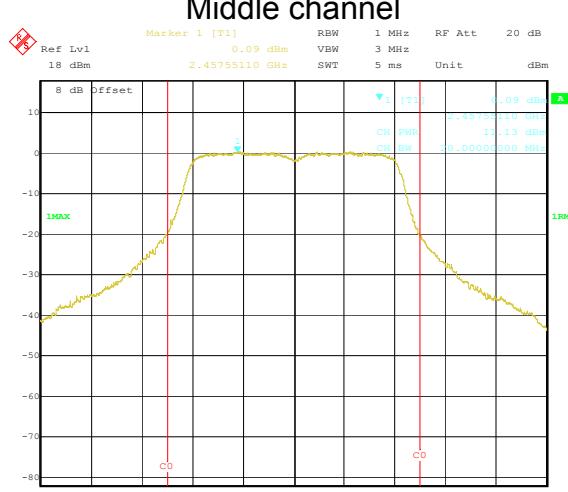
802.11g



Lowest channel



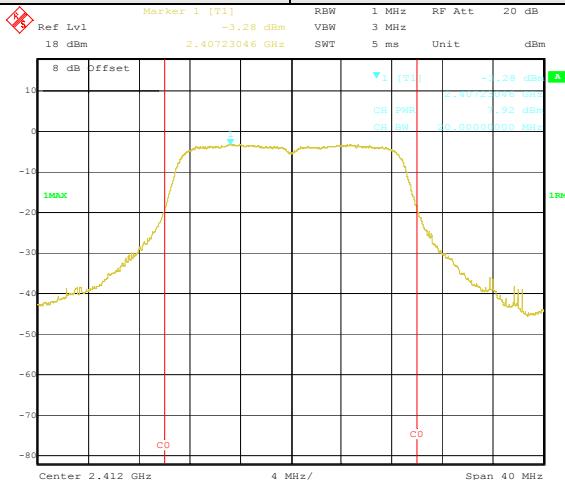
Middle channel



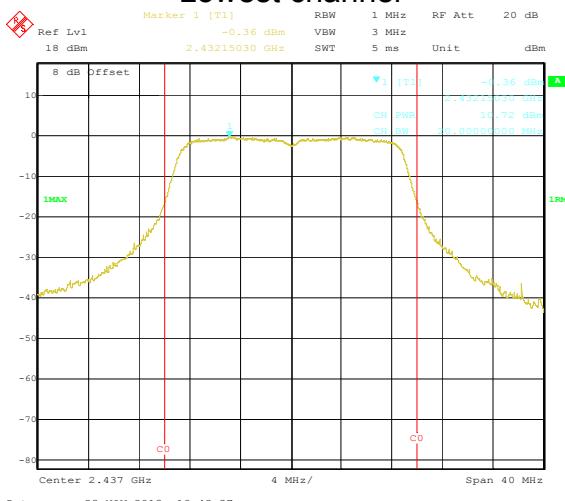
Highest channel

Test mode:

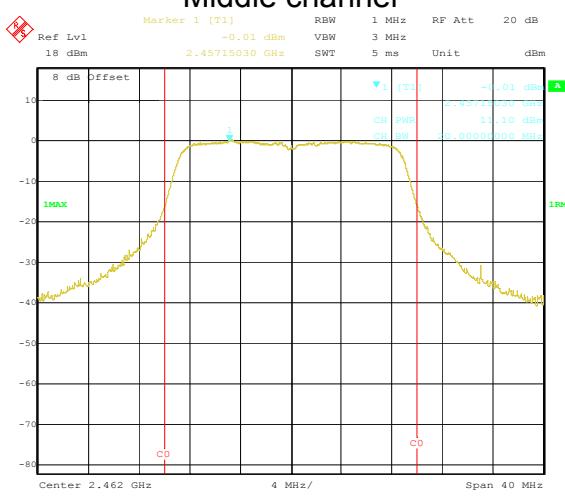
802.11n(H20)



Lowest channel

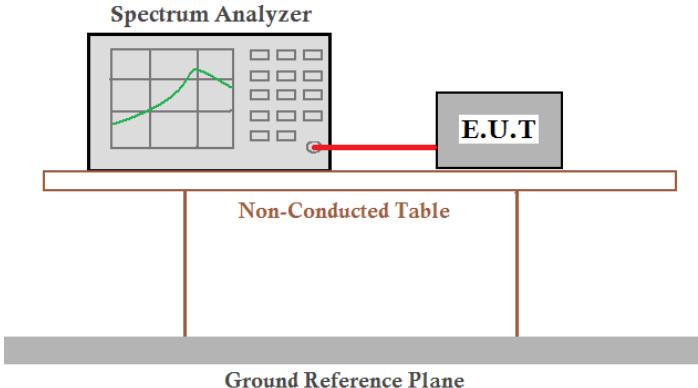


Middle channel



Highest channel

6.4 Occupy Bandwidth

Test Requirement:	FCC Part15 C Section 15.247 (a)(2)
Test Method:	ANSI C63.4:2003 and KDB558074
Limit:	>500kHz
Test setup:	
Test Instruments:	Refer to section 5.7 for details
Test mode:	Refer to section 5.3 for details
Test results:	Passed

Measurement Data

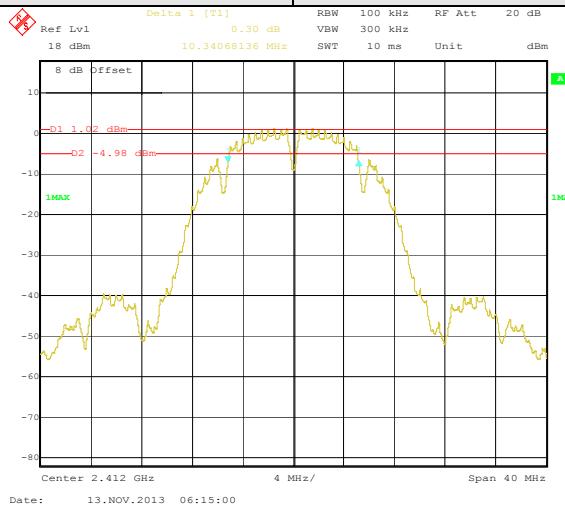
Test CH	6dB Occupy Bandwidth (MHz)			Limit(kHz)	Result
	802.11b	802.11g	802.11n(H20)		
Lowest	10.34	16.59	17.80	>500	Pass
Middle	10.34	16.59	17.72		
Highest	10.34	16.51	17.72		

Test CH	99%dB Occupy Bandwidth (MHz)			Limit(kHz)	Result
	802.11b	802.11g	802.11n(H20)		
Lowest	14.03	16.43	17.72	N/A	N/A
Middle	13.95	16.43	17.72		
Highest	13.95	16.59	17.72		

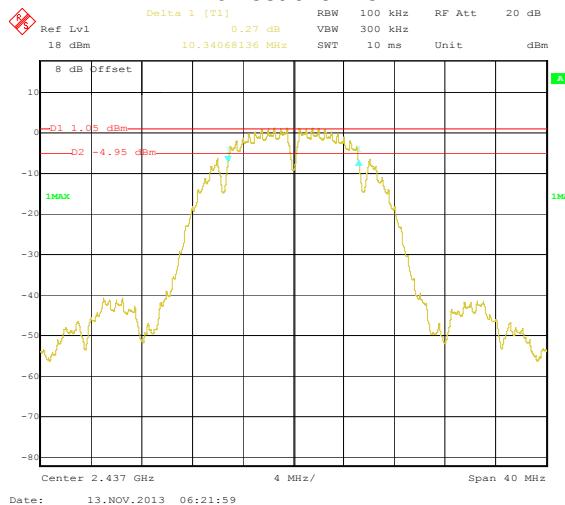
Test plot as follows:

Test mode:6dB BW

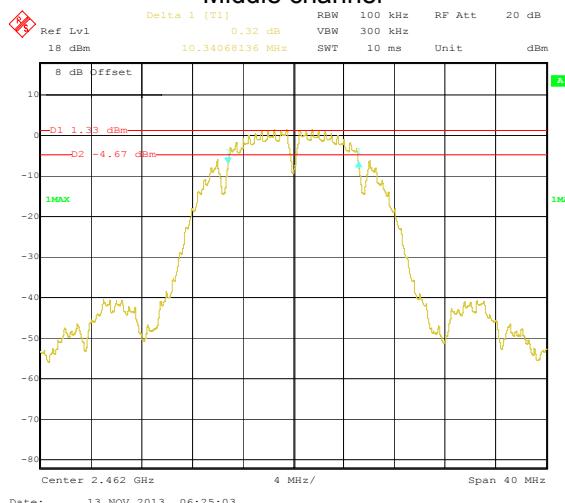
802.11b



Lowest channel



Middle channel



Highest channel

Shenzhen Zhongjian Nanfang Testing Co., Ltd.
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Bao'an District, Shenzhen, Guangdong, China

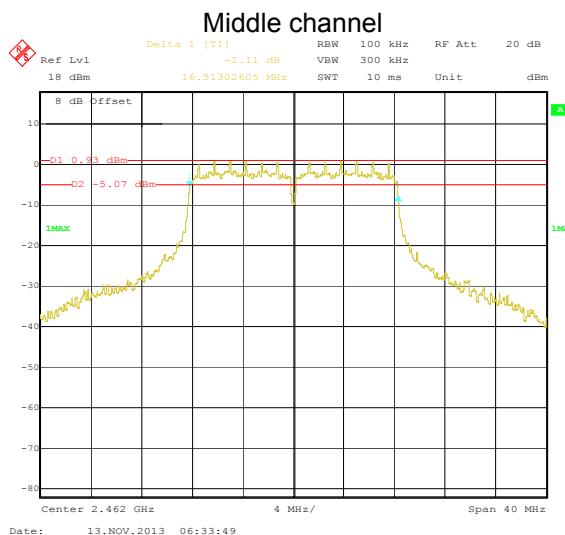
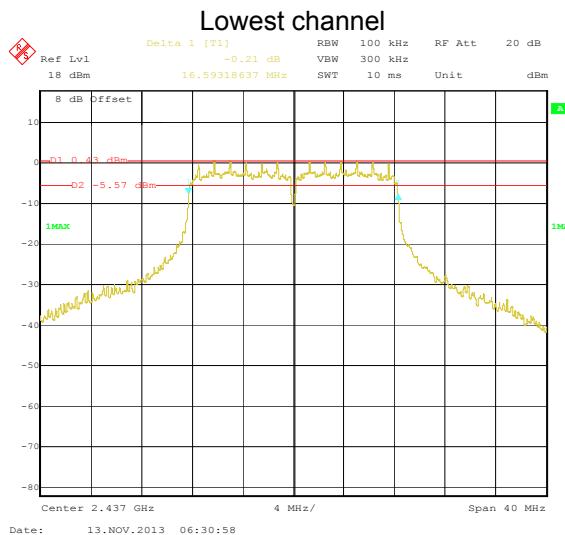
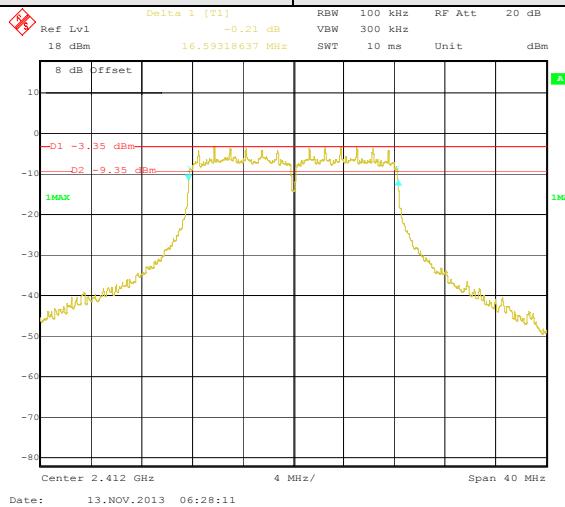
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Test mode:6dB BW

802.11g



Highest channel

Shenzhen Zhongjian Nanfang Testing Co., Ltd.
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Bao'an District, Shenzhen, Guangdong, China

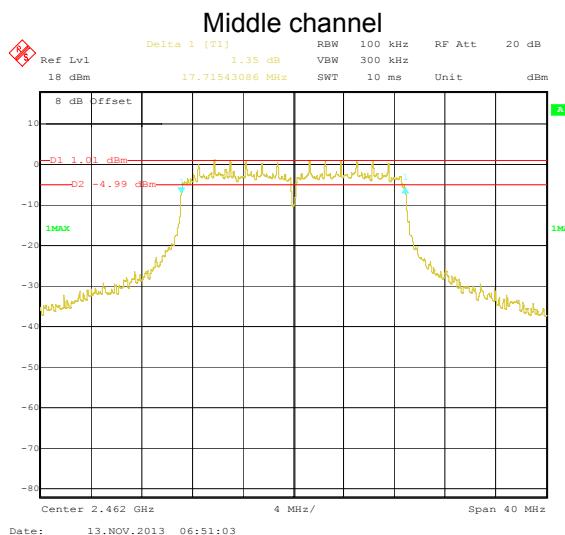
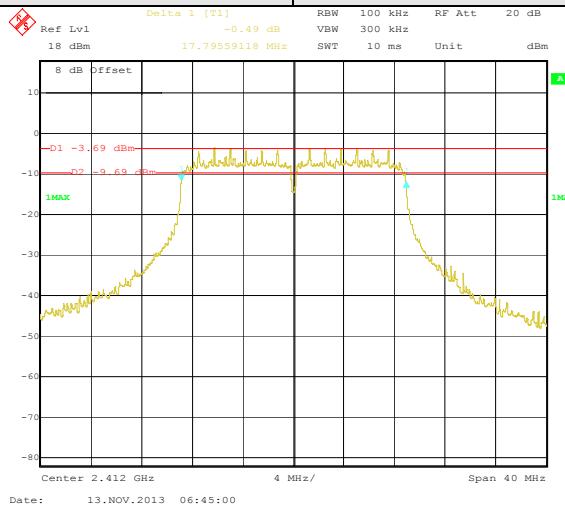
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Test mode:6dB BW

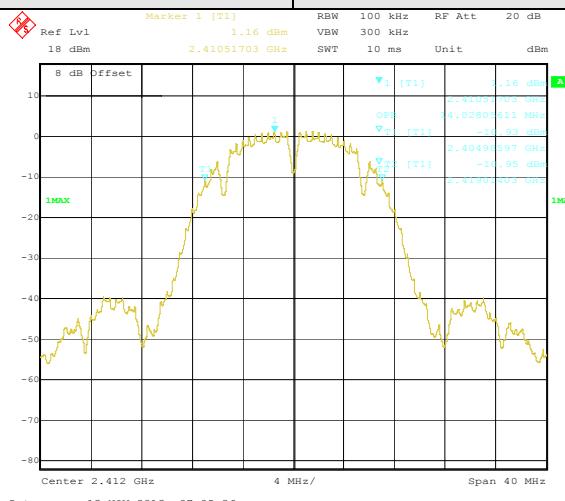
802.11n(H20)



Highest channel

Test mode: 99%dB Occupy Bandwidth

802.11b



Lowest channel



Middle channel



Highest channel

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

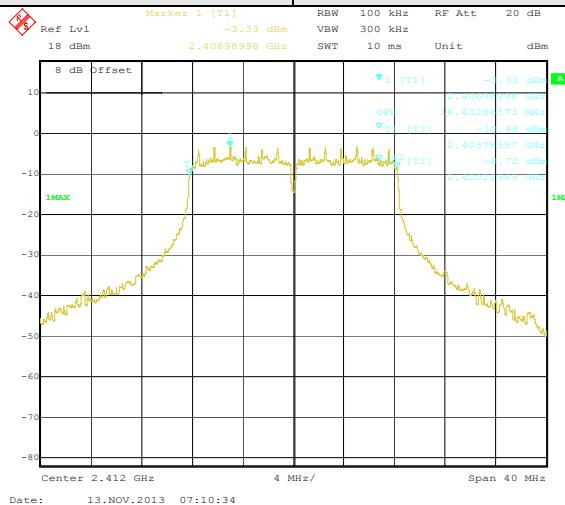
Project No.: CCIS131100456RF

Telephone: +86 (0) 755 23118282 Fax: +86 (0) 755 23116366

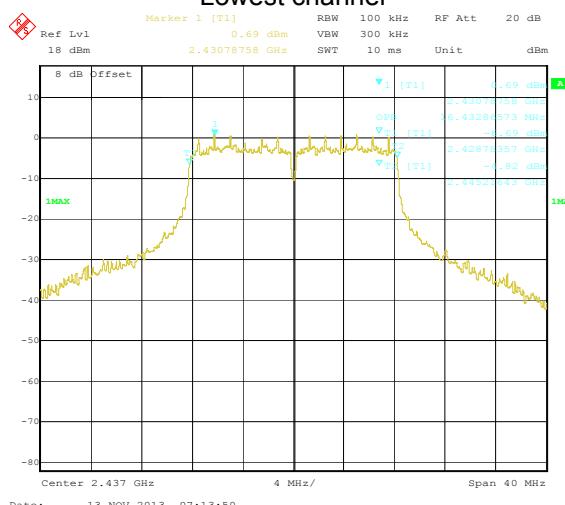
Page 22 of 65

Test mode: 99%dB Occupy Bandwidth

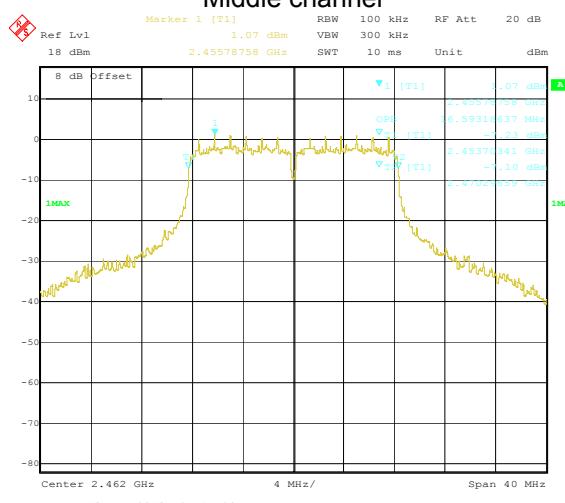
802.11g



Lowest channel



Middle channel



Highest channel

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

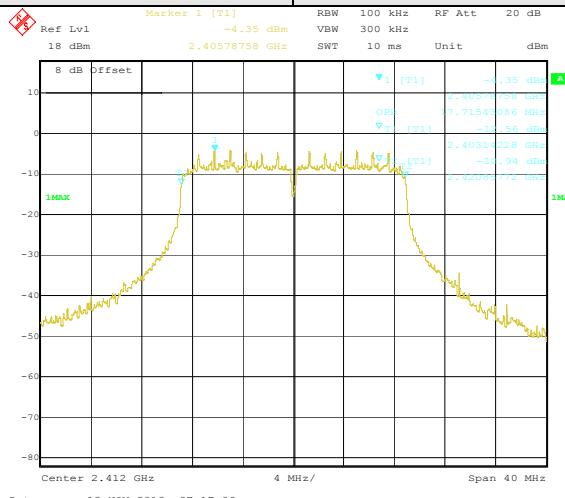
Project No.: CCIS131100456RF

Telephone: +86 (0) 755 23118282 Fax: +86 (0) 755 23116366

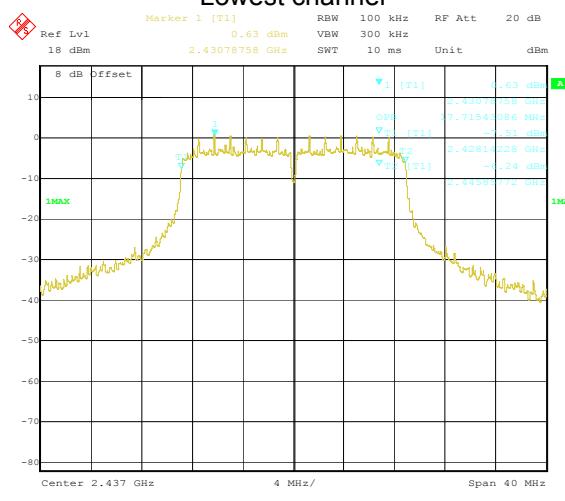
Page 23 of 65

Test mode: 99%dB Occupy Bandwidth

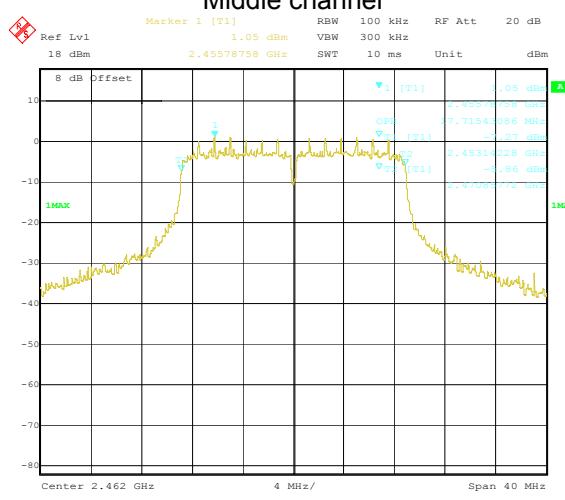
802.11n(H20)



Lowest channel



Middle channel



Highest channel

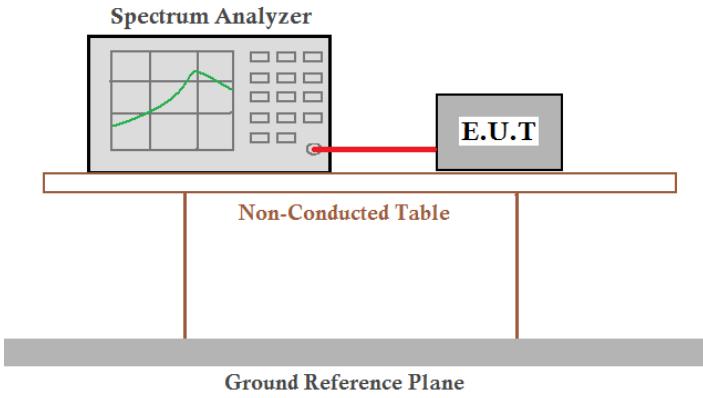
Shenzhen Zhongjian Nanfang Testing Co., Ltd.
No.B-C, 1/F., Building 2, Laodong No.2 Industrial Park, Xixiang Road,
Bao'an District, Shenzhen, Guangdong, China

Project No.: CCIS131100456RF

Telephone: +86 (0) 755 23118282 Fax: +86 (0) 755 23116366

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6.5 Power Spectral Density

Test Requirement:	FCC Part15 C Section 15.247 (e)
Test Method:	ANSI C63.4:2003 and KDB558074
Limit:	8dBm
Test setup:	
Test Instruments:	Refer to section 5.7 for details
Test mode:	Refer to section 5.3 for details
Test results:	Passed

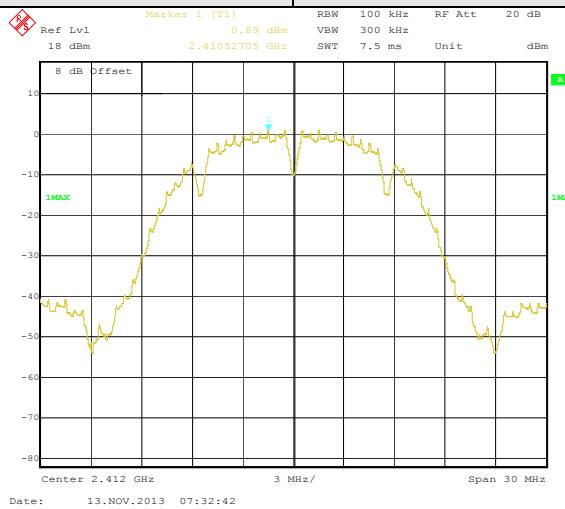
Measurement Data

Test CH	Power Spectral Density (dBm)			Limit(dBm)	Result
	802.11b	802.11g	802.11n(H20)		
Lowest	0.89	-3.23	-4.28	8.00	Pass
Middle	1.63	0.47	0.38		
Highest	1.41	0.82	0.71		

Test plot as follows:

Test mode:

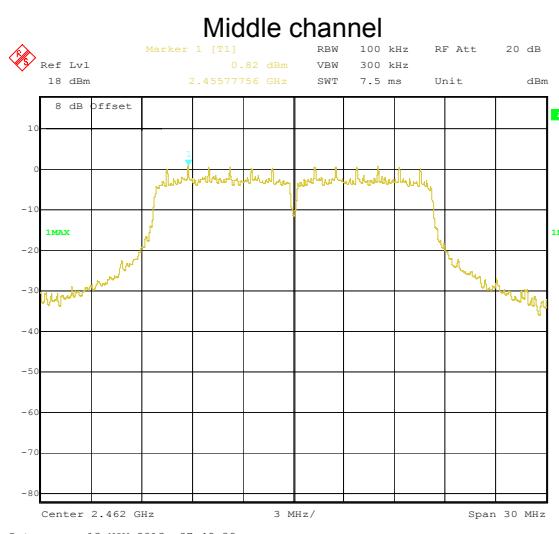
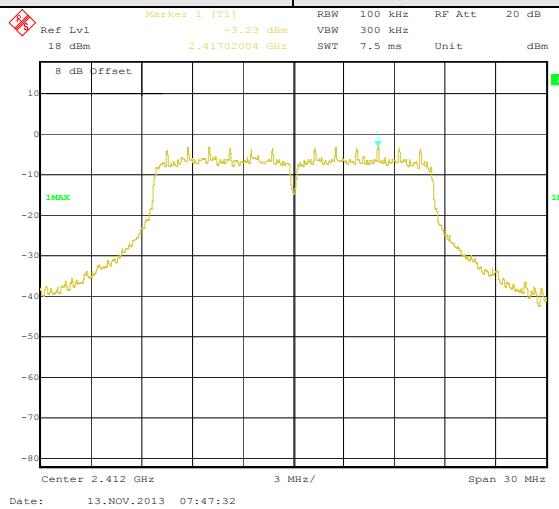
802.11b



Highest channel

Test mode:

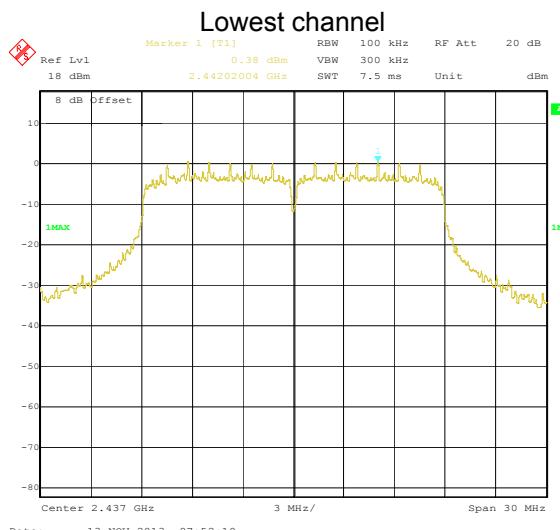
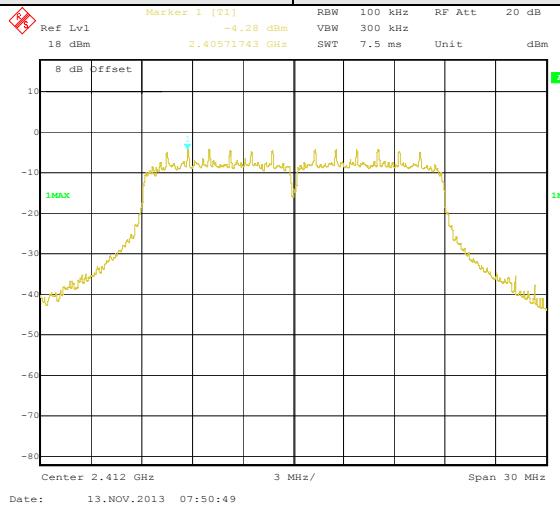
802.11g



Highest channel

Test mode:

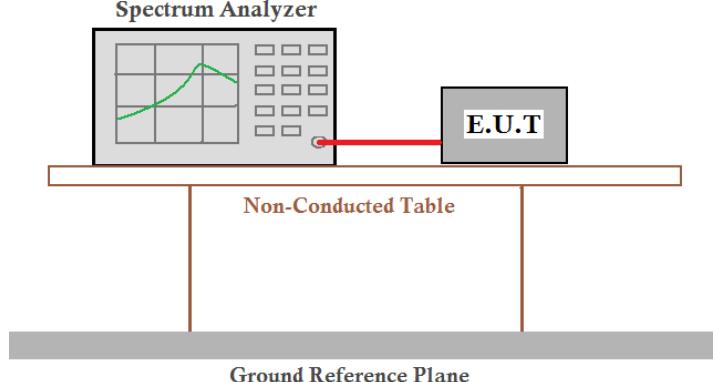
802.11n(H20)



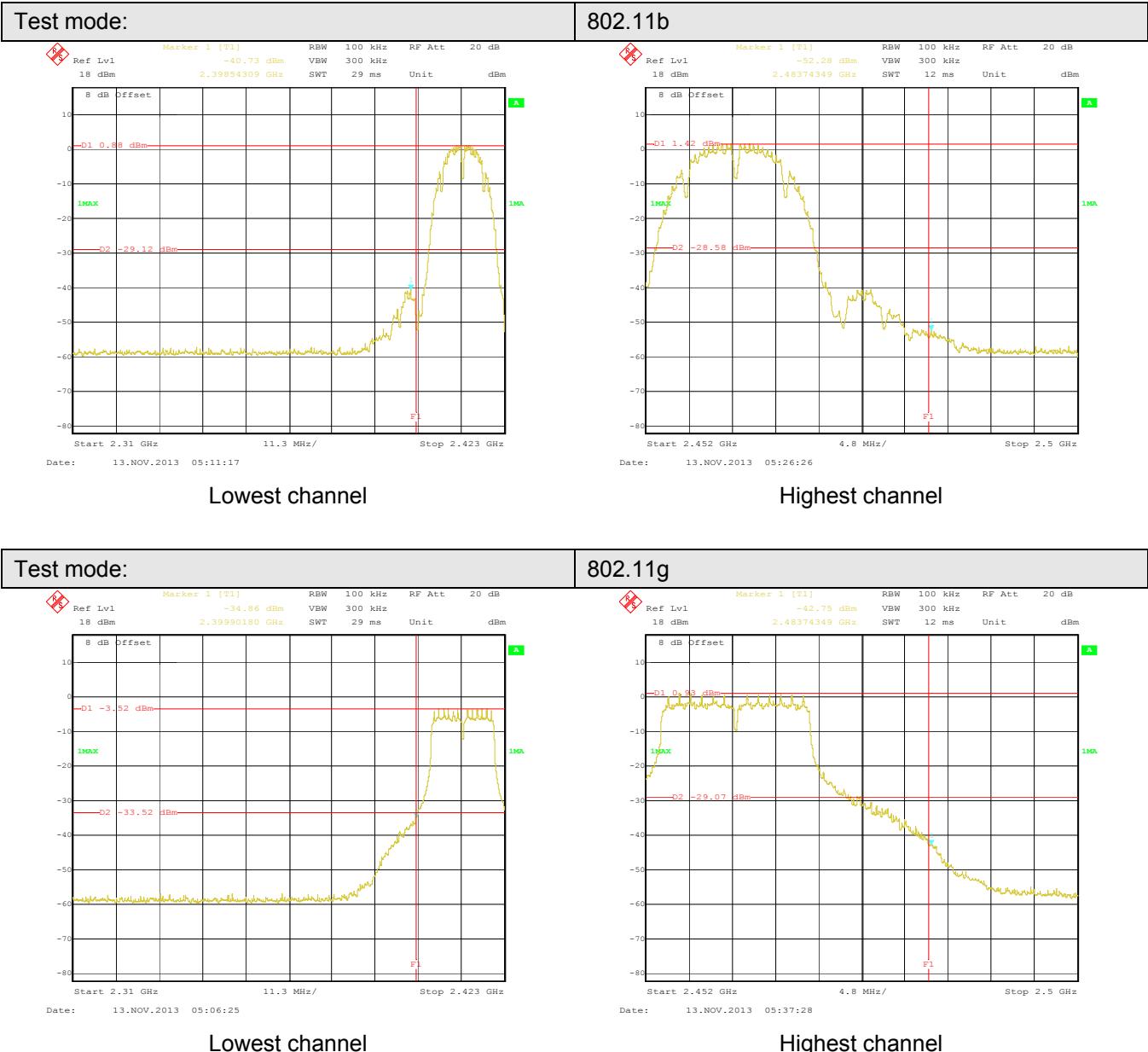
Highest channel

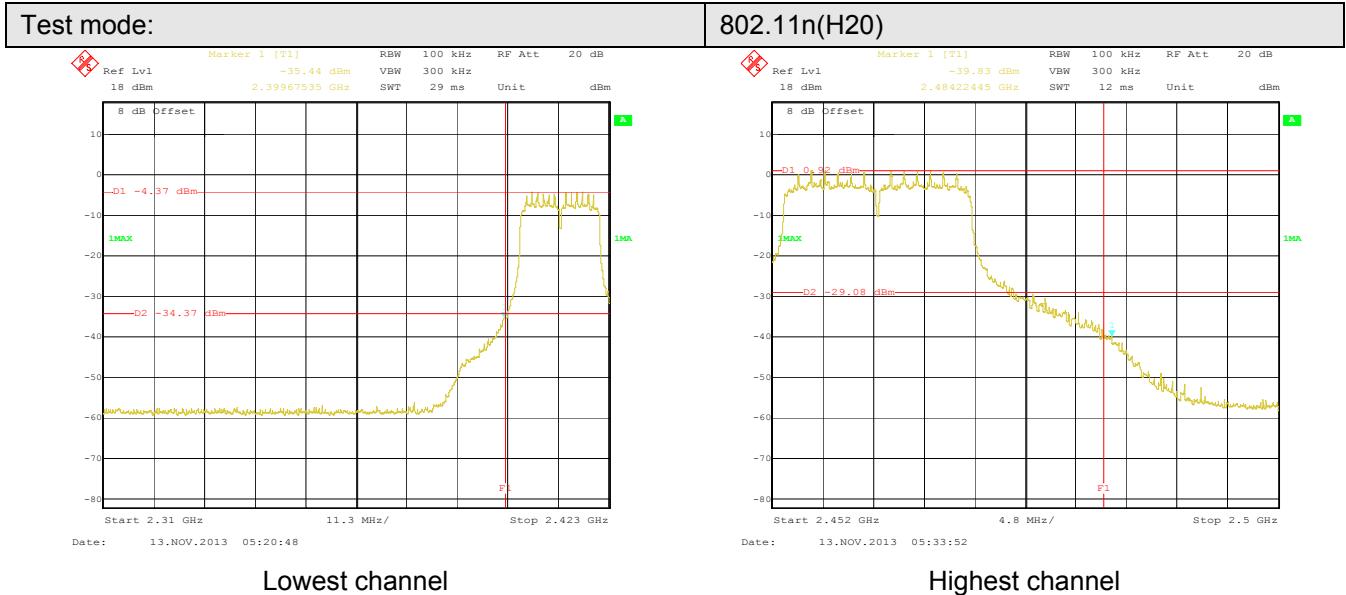
6.6 Band Edge

6.6.1 Conducted Emission Method

Test Requirement:	FCC Part15 C Section 15.247 (d)
Test Method:	ANSI C63.4:2003 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:	 <p>The diagram illustrates the test setup for conducted emission testing. A Spectrum Analyzer is connected to the Equipment Under Test (E.U.T) via a cable. The entire setup is placed on a Non-Conducted Table, which sits above a Ground Reference Plane. The Spectrum Analyzer displays a green waveform on its screen.</p>
Test Instruments:	Refer to section 5.7 for details
Test mode:	Refer to section 5.3 for details
Test results:	Passed

Test plot as follows:





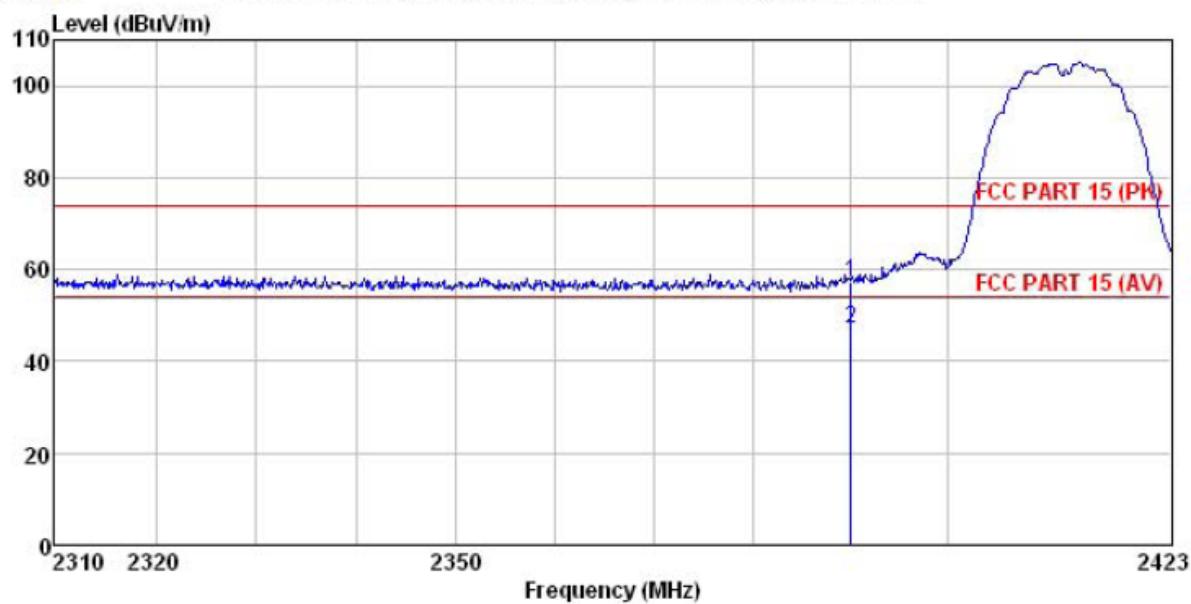
6.6.2 Radiated Emission Method

Test Requirement:	FCC Part15 C Section 15.209 and 15.205																			
Test Method:	ANSI C63.4: 2003																			
Test Frequency Range:	2.3GHz to 2.5GHz																			
Test site:	Measurement Distance: 3m																			
Receiver setup:	<table border="1"> <thead> <tr> <th>Frequency</th><th>Detector</th><th>RBW</th><th>VBW</th><th>Remark</th></tr> </thead> <tbody> <tr> <td>Above 1GHz</td><td>Peak</td><td>1MHz</td><td>3MHz</td><td>Peak Value</td></tr> <tr> <td></td><td>Peak</td><td>1MHz</td><td>10Hz</td><td>Average Value</td></tr> </tbody> </table>					Frequency	Detector	RBW	VBW	Remark	Above 1GHz	Peak	1MHz	3MHz	Peak Value		Peak	1MHz	10Hz	Average Value
Frequency	Detector	RBW	VBW	Remark																
Above 1GHz	Peak	1MHz	3MHz	Peak Value																
	Peak	1MHz	10Hz	Average Value																
Limit:	<table border="1"> <thead> <tr> <th>Frequency</th><th>Limit (dBuV/m @3m)</th><th>Remark</th></tr> </thead> <tbody> <tr> <td>Above 1GHz</td><td>54.00</td><td>Average Value</td></tr> <tr> <td></td><td>74.00</td><td>Peak Value</td></tr> </tbody> </table>					Frequency	Limit (dBuV/m @3m)	Remark	Above 1GHz	54.00	Average Value		74.00	Peak Value						
Frequency	Limit (dBuV/m @3m)	Remark																		
Above 1GHz	54.00	Average Value																		
	74.00	Peak Value																		
Test Procedure:	<ol style="list-style-type: none"> The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter camber. The table was rotated 360 degrees to determine the position of the highest radiation. 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, quasi-peak or average method as specified and then reported in a data sheet. 																			
Test setup:																				
Test Instruments:	Refer to section 5.7 for details																			
Test mode:	Refer to section 5.3 for details																			
Test results:	Passed																			

802.11b

Test channel: Lowest

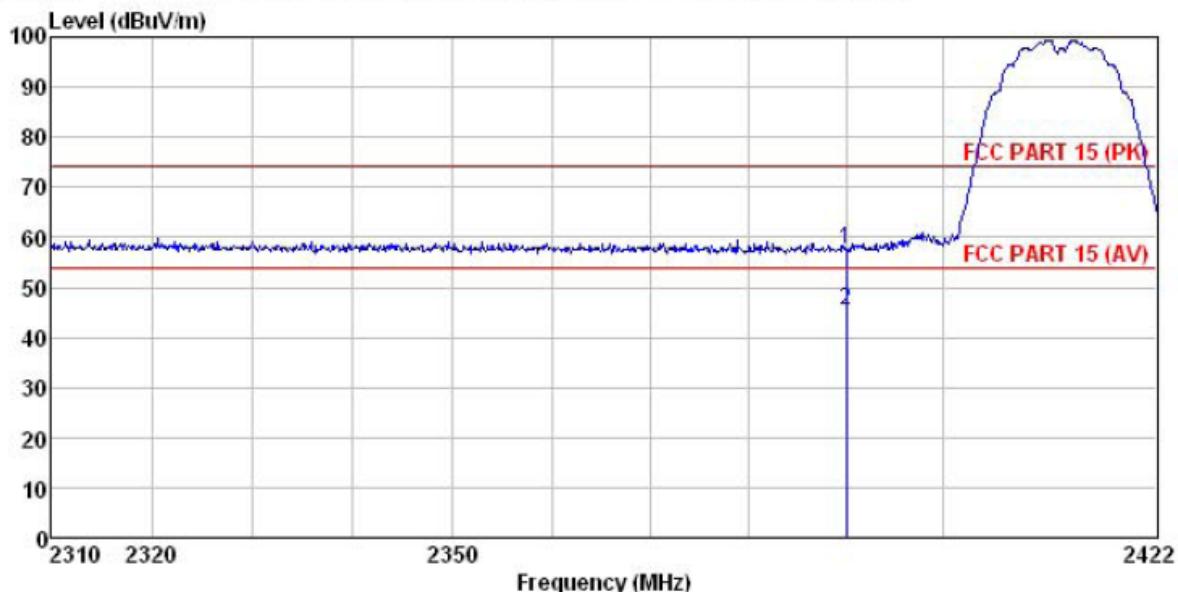
Horizontal:



Site : 3m chamber
Condition : FCC PART 15 (PK) 3m BBHA9120(1G18) HORIZONTAL
Job NO. : 456RF
EUT : Smart phone
Model : Q882
Test mode : WIFI mode BE-B-L
Power Rating : AC120V/60Hz
Environment : Temp:25.5°C Huni:55%
Test Engineer: A-bomb

	ReadAntenna	Cable	Preamp	Limit	Over	
Freq	Level	Factor	Loss	Level	Line	Limit
MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m
1	2390.000	24.06	27.58	5.67	0.00	57.31
2	2390.000	13.81	27.58	5.67	0.00	47.06
					74.00	-16.69 Peak
					54.00	-6.94 Average

Vertical:

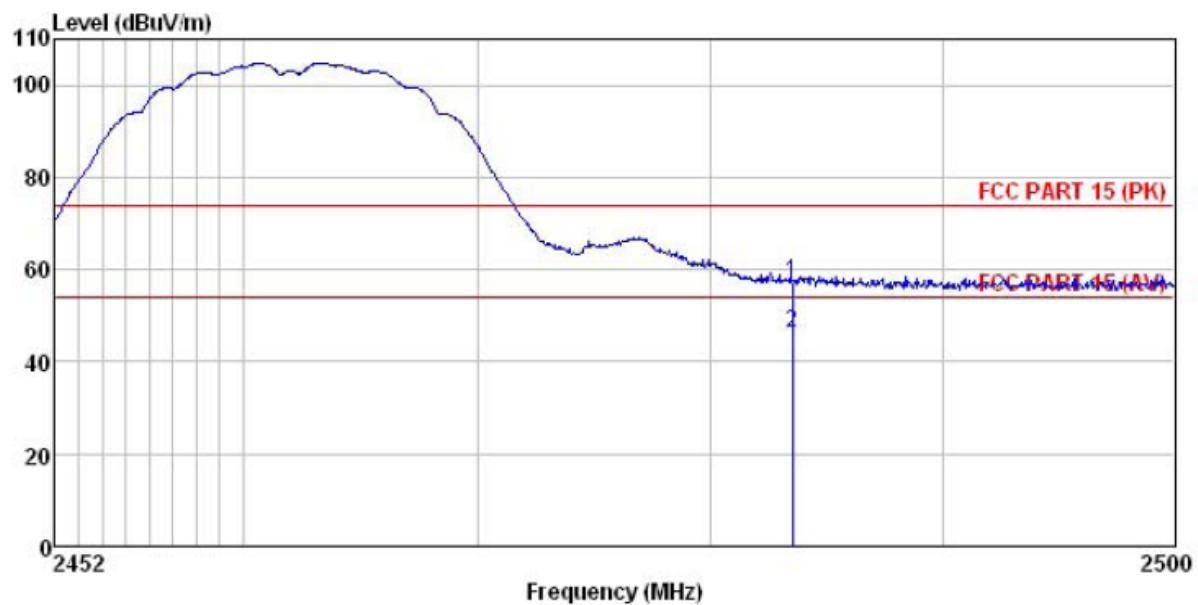


Site : 3m chamber
Condition : FCC PART 15 (PK) 3m BBHA9120(1G18) VERTICAL
Job NO. : 456RF
EUT : Smart phone
Model : Q882
Test mode : WIFI mode BE-B-L
Power Rating : AC120V/60Hz
Environment : Temp:25.5°C Huni:55%
Test Engineer: A-bomb

Freq	ReadAntenna		Cable	Preamp	Limit		Over	Remark
	Freq	Level	Antenna Factor	Loss Factor	Level	Line	Limit	
MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	2390.000	24.18	27.58	5.67	0.00	57.43	74.00	-16.57 Peak
2	2390.000	12.18	27.58	5.67	0.00	45.43	54.00	-8.57 Average

Test channel: Highest

Horizontal:

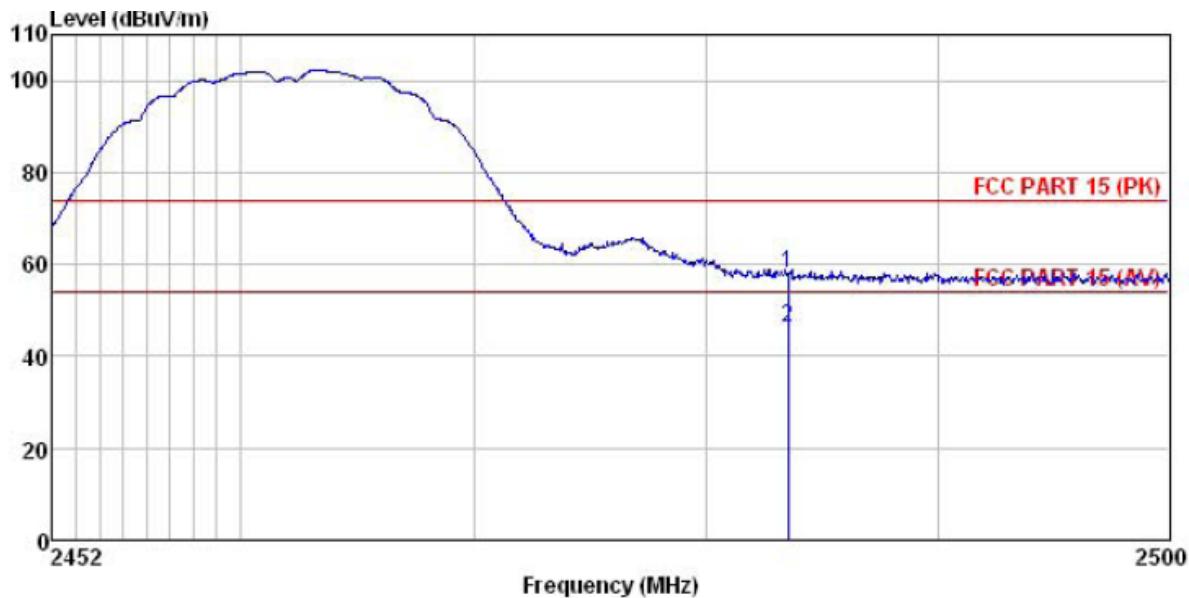


Site : 3m chamber
 Condition : FCC PART 15 (PK) 3m BBHA9120(1G18) HORIZONTAL
 Job NO. : 456RF
 EUT : Smart phone
 Model : Q882
 Test mode : WIFI mode BE-B-H
 Power Rating : AC120V/60Hz
 Environment : Temp:25.5°C Huni:55%

Test Engineer: A-bomb

	ReadAntenna	Cable	Preamp	Limit	Over			
Freq	Level	Factor	Loss Factor	Level	Line	Limit	Remark	
-----	MHz	dBuV	dB/m	-----	dB	dBuV/m	dBuV/m	-----
1	2483.500	23.88	27.52	5.70	0.00	57.10	74.00	-16.90 Peak
2	2483.500	13.10	27.52	5.70	0.00	46.32	54.00	-7.68 Average

Vertical:



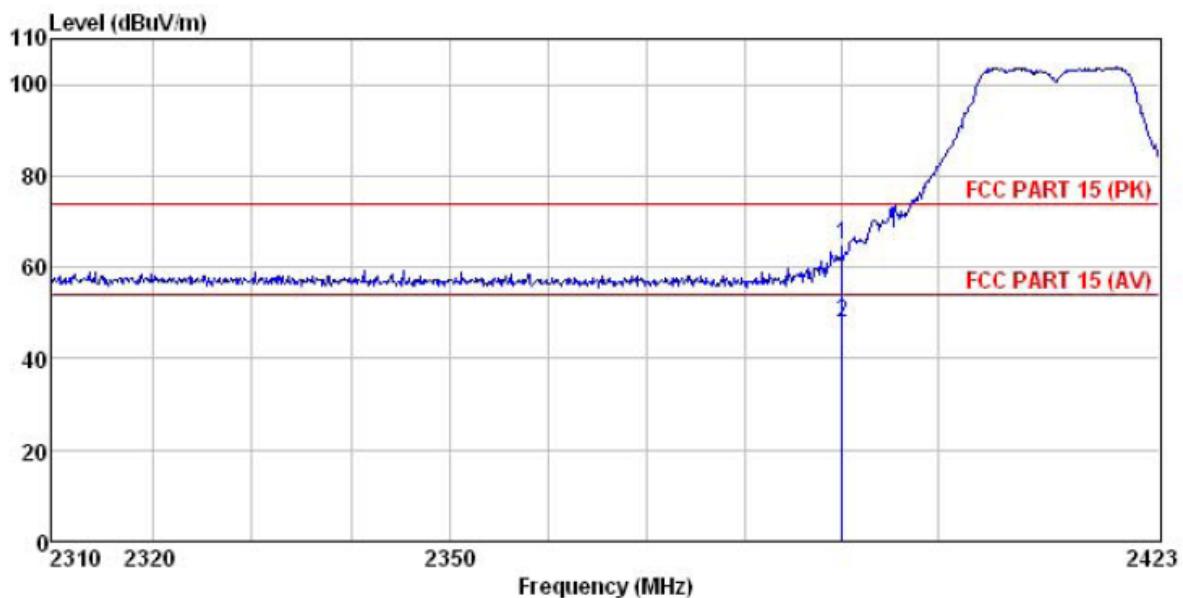
Site : 3m chamber
 Condition : FCC PART 15 (PK) 3m BBHA9120(1G18) VERTICAL
 Job NO. : 456RF
 EUT : Smart phone
 Model : Q882
 Test mode : WIFI mode BE-B-H
 Power Rating : AC120V/60Hz
 Environment : Temp:25.5°C Huni:55%
 Test Engineer: A-bomb

	Read	Antenna	Cable	Preamp	Limit	Over	Limit	Remark
Freq	Level	Factor	Loss	Factor	Level	Line	Line	
MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	2483.500	24.66	27.52	5.70	0.00	57.88	74.00	-16.12 Peak
2	2483.500	12.87	27.52	5.70	0.00	46.09	54.00	-7.91 Average

802.11g

Test channel: Lowest

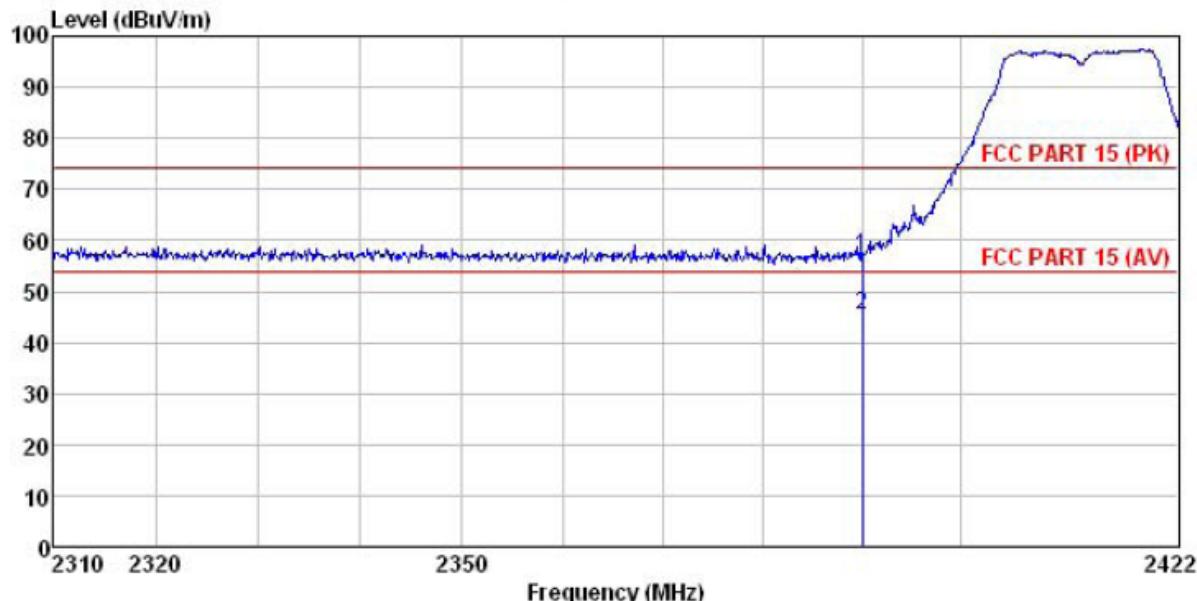
Horizontal:



Site : 3m chamber
Condition : FCC PART 15 (PK) 3m BBHA9120(1G18) HORIZONTAL
Job NO. : 456RF
EUT : Smart phone
Model : Q882
Test mode : WIFI mode BE-G-L
Power Rating : AC120V/60Hz
Environment : Temp:25.5°C Huni:55%
Test Engineer: A-bomb

	ReadAntenna	Cable	Preamp	Limit	Over	
Freq	Level	Factor	Loss	Level	Line	Limit
MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m
1	2390.000	31.75	27.58	5.67	0.00	65.00
2	2390.000	14.45	27.58	5.67	0.00	47.70
					74.00	-9.00 Peak
					54.00	-6.30 Average

Vertical:

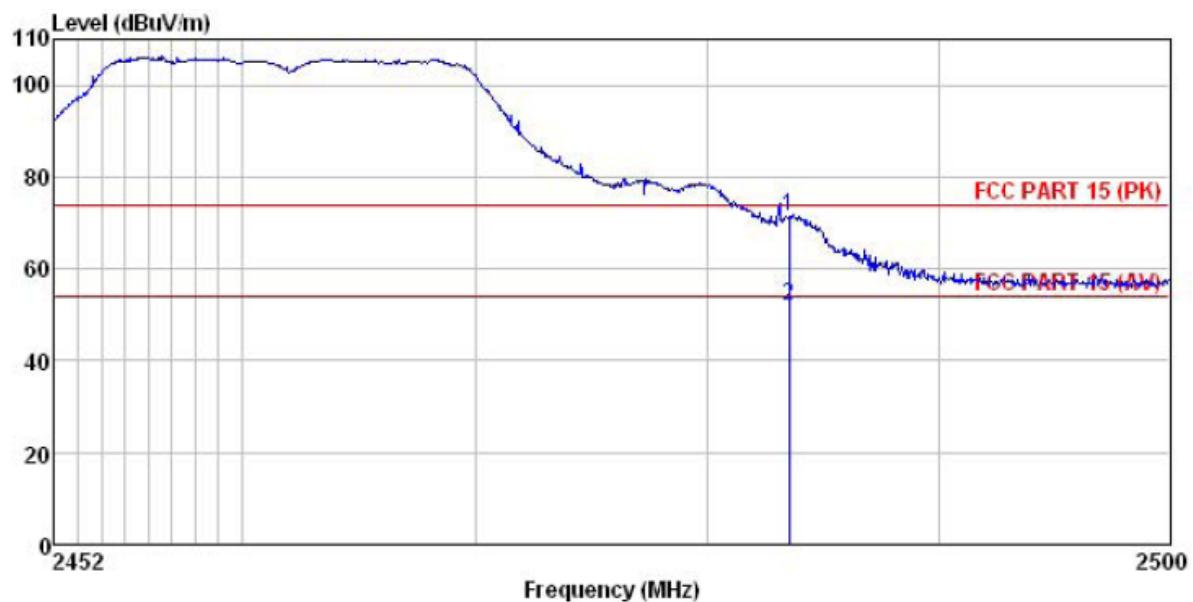


Site : 3m chamber
 Condition : FCC PART 15 (PK) 3m BBHA9120(1G18) VERTICAL
 Job NO. : 456RF
 EUT : Smart phone
 Model : Q882
 Test mode : WIFI mode BE-G-L
 Power Rating : AC120V/60Hz
 Environment : Temp:25.5°C Huni:55%
 Test Engineer: A-bomb

	Read	Antenna	Cable	Preamp	Limit	Over		
Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Remark
MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	2390.000	23.75	27.58	5.67	0.00	57.00	74.00	-17.00 Peak
2	2390.000	12.24	27.58	5.67	0.00	45.49	54.00	-8.51 Average

Test channel: Highest

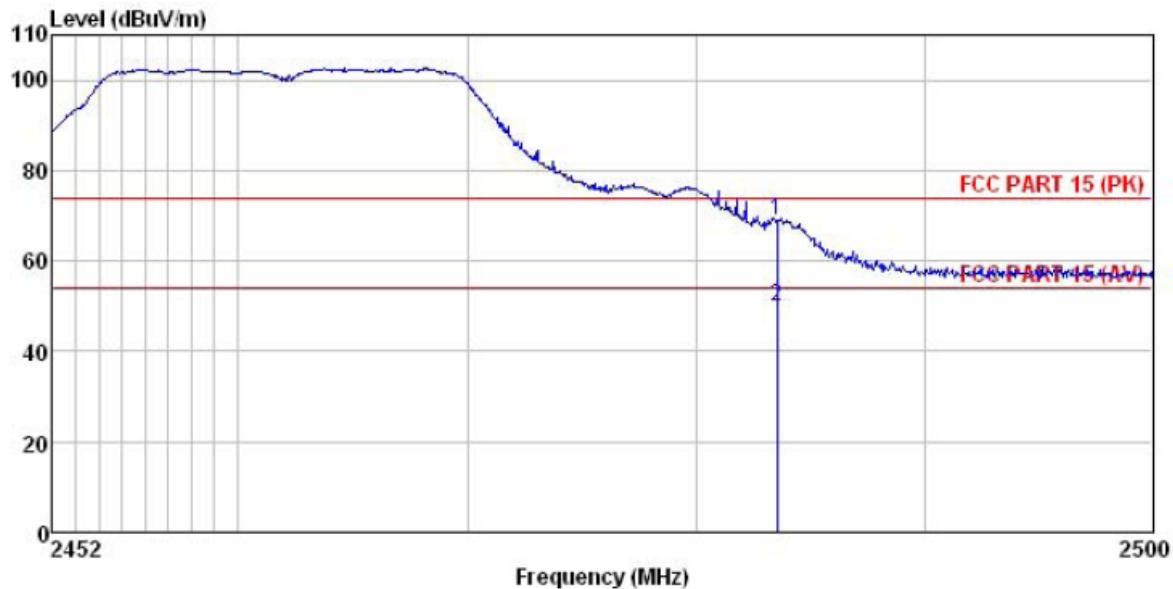
Horizontal:



Site : 3m chamber
 Condition : FCC PART 15 (PK) 3m BBHA9120(1G18) HORIZONTAL
 Job NO. : 456RF
 EUT : Smart phone
 Model : Q882
 Test mode : WIFI mode BE-G-H
 Power Rating : AC120V/60Hz
 Environment : Temp:25.5°C Huni:55%
 Test Engineer: A-bomb

	Read	Antenna	Cable	Preamp	Limit	Over		
Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Remark
MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	2483.500	38.26	27.52	5.70	0.00	71.48	74.00	-2.52 Peak
2	2483.500	18.61	27.52	5.70	0.00	51.83	54.00	-2.17 Average

Vertical;



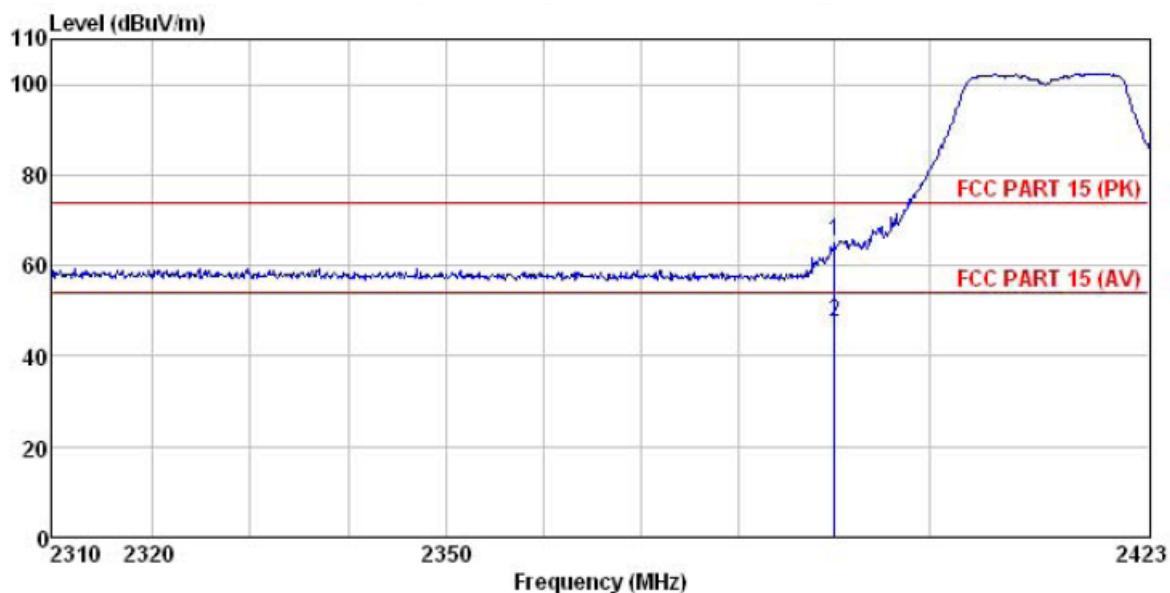
Site : 3m chamber
Condition : FCC PART 15 (PK) 3m BBHA9120(1G18) VERTICAL
Job NO. : 456RF
EUT : Smart phone
Model : Q882
Test mode : WIFI mode BE-G-H
Power Rating : AC120W/60Hz
Environment : Temp:25.5°C Huni:55%
Test Engineer: A-bomb

	Read	Antenna	Cable	Preamp	Limit	Over	
Freq	Level	Factor	Loss	Factor	Level	Line	Limit
MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB
1	2483.500	35.77	27.52	5.70	0.00	68.99	74.00
2	2483.500	16.71	27.52	5.70	0.00	49.93	54.00

802.11n (H20)

Test channel: Lowest

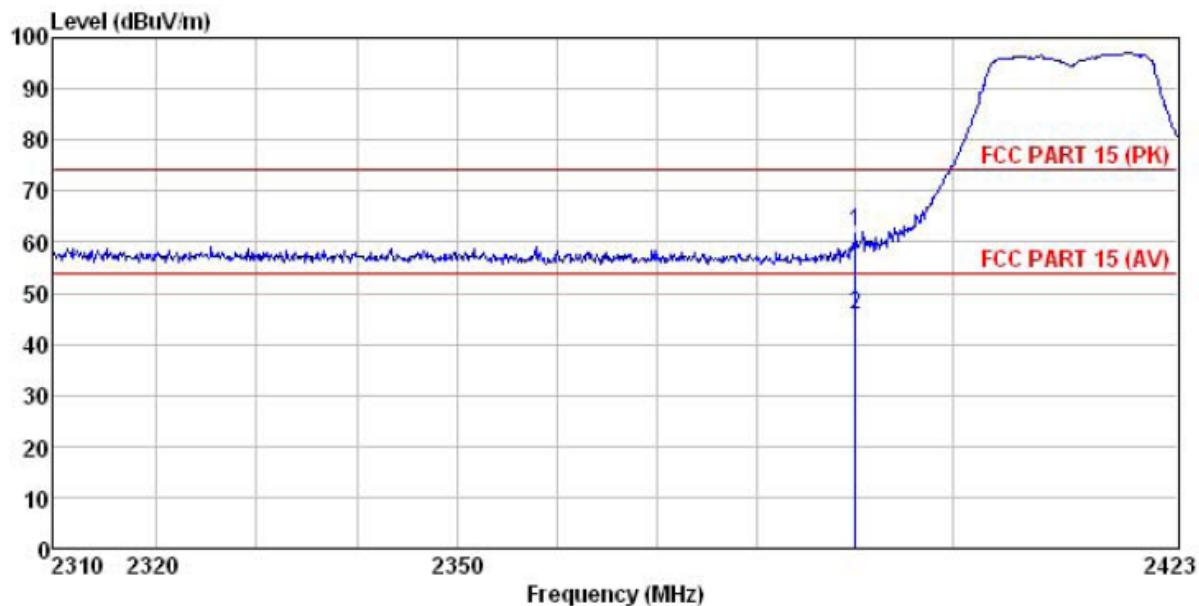
Horizontal:



Site : 3m chamber
Condition : FCC PART 15 (PK) 3m BBHA9120(1G18) HORIZONTAL
Job NO. : 456RF
EUT : Smart phone
Model : Q882
Test mode : WIFI mode BE-N20-L
Power Rating : AC120V/60Hz
Environment : Temp:25.5°C Huni:55%
Test Engineer: A-bomb

	Read	Antenna	Cable	Preamp	Limit	Over		
Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Remark
MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	2390.000	32.16	27.58	5.67	0.00	65.41	74.00	-8.59 Peak
2	2390.000	14.10	27.58	5.67	0.00	47.35	54.00	-6.65 Average

Vertical:

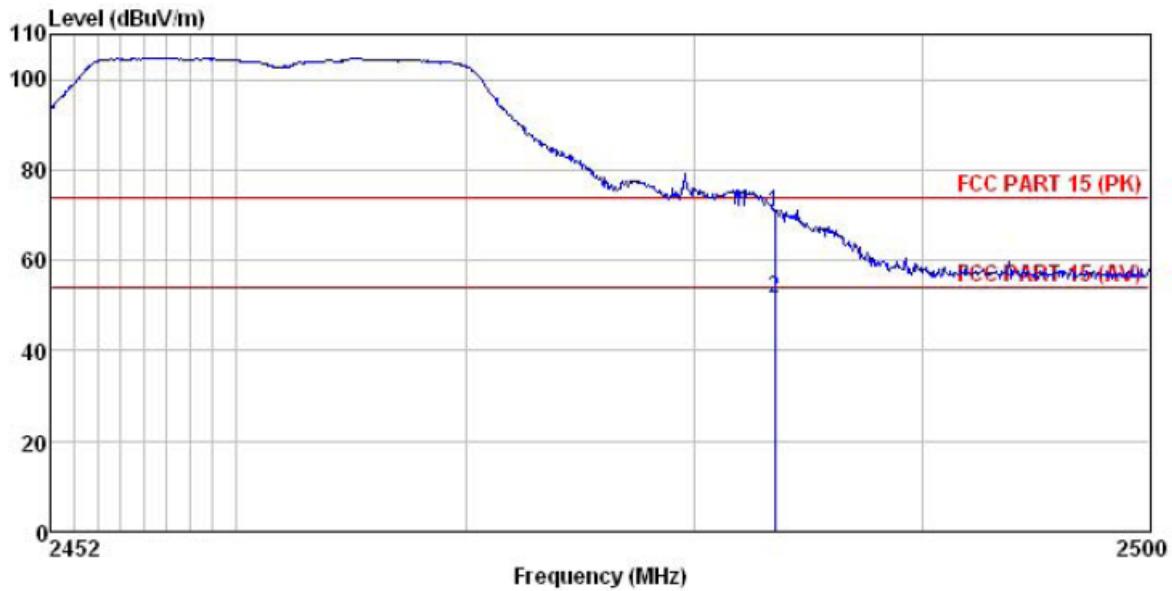


Site : 3m chamber
Condition : FCC PART 15 (PK) 3m BBHA9120(1G18) VERTICAL
Job NO. : 456RF
EUT : Smart phone
Model : Q882
Test mode : WIFI mode BE-N20-L
Power Rating : AC120V/60Hz
Environment : Temp:25.5°C Humi:55%
Test Engineer: A-bomb

	ReadAntenna	Cable	Preamp	Limit	Over		
Freq	Level	Factor	Loss Factor	Level	Line	Limit Remark	
MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB
1	2390.000	28.59	27.58	5.67	0.00	61.84	74.00 -12.16 Peak
2	2390.000	12.50	27.58	5.67	0.00	45.75	54.00 -8.25 Average

Test channel: Highest

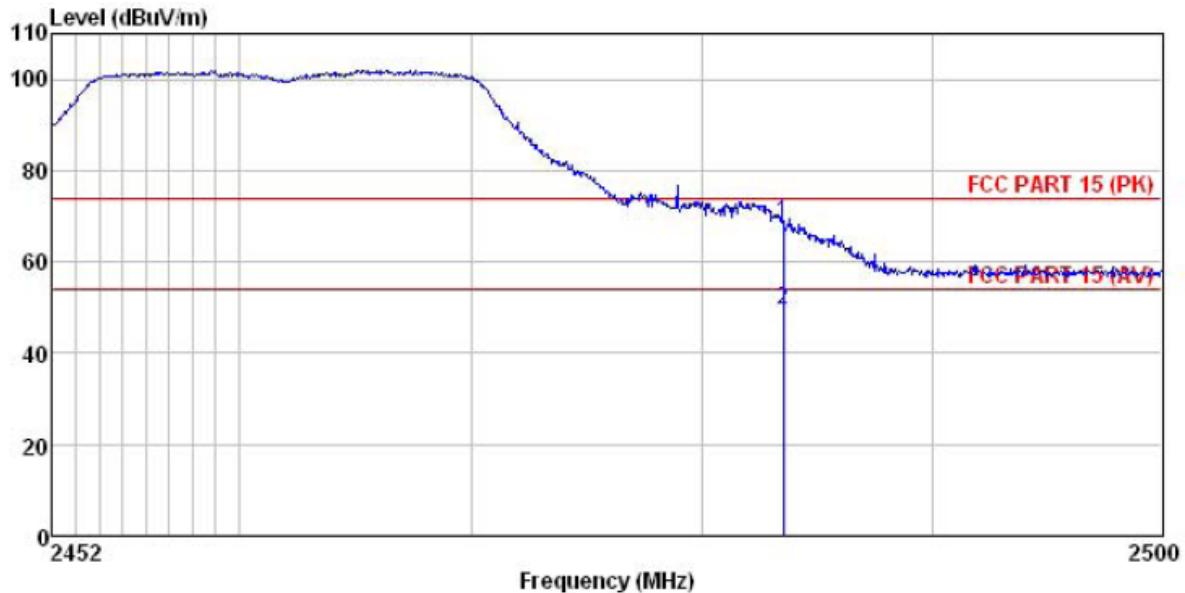
Horizontal:



Site : 3m chamber
Condition : FCC PART 15 (PK) 3m BBHA9120(1G18) HORIZONTAL
Job NO. : 456RF
EUT : Smart phone
Model : Q882
Test mode : WIFI mode BE-N20-H
Power Rating : AC120V/60Hz
Environment : Temp:25.5°C Huni:55%
Test Engineer: A-bomb

	Read	Antenna	Cable	Preamp	Limit	Over	
Freq	Level	Factor	Loss	Factor	Level	Line	Limit
MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB
1	2483.500	37.55	27.52	5.70	0.00	70.77	74.00
2	2483.500	18.32	27.52	5.70	0.00	51.54	54.00

Vertical:

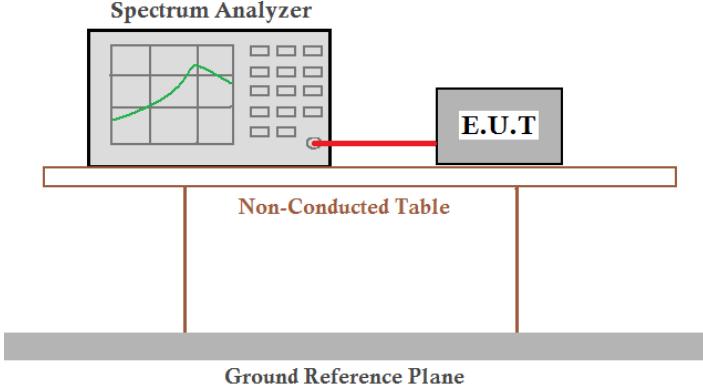


Site : 3m chamber
 Condition : FCC PART 15 (PK) 3m BBHA9120(1G18) VERTICAL
 Job NO. : 456RF
 EUT : Smart phone
 Model : Q882
 Test mode : WIFI mode BE-N20-H
 Power Rating : AC120V/60Hz
 Environment : Temp:25.5°C Huni:55%
 Test Engineer: A-bomb

Freq	Read	Antenna	Cable	Preamp	Limit	Over	Remark	
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB
1	2483.500	35.56	27.52	5.70	0.00	68.78	74.00	-5.22 Peak
2	2483.500	16.44	27.52	5.70	0.00	49.66	54.00	-4.34 Average

6.7 Spurious Emission

6.7.1 Conducted Emission Method

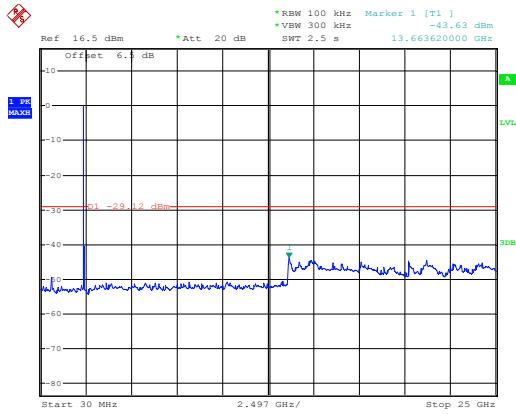
Test Requirement:	FCC Part15 C Section 15.247 (d)
Test Method:	ANSI C63.4:2003 and KDB558074
Limit:	In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 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:	
Test Instruments:	Refer to section 5.7 for details
Test mode:	Refer to section 5.3 for details
Test results:	Passed

Test plot as follows:

Test mode:

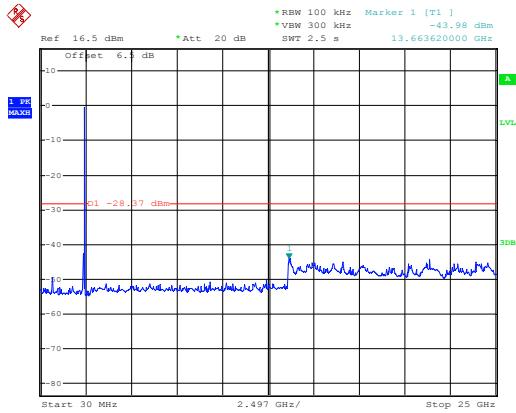
802.11b

Lowest channel

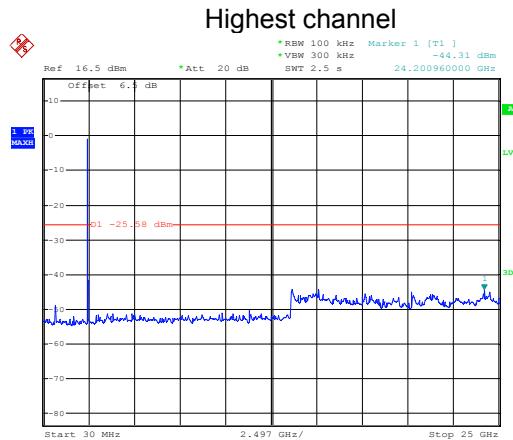


30MHz~25GHz

Middle channel

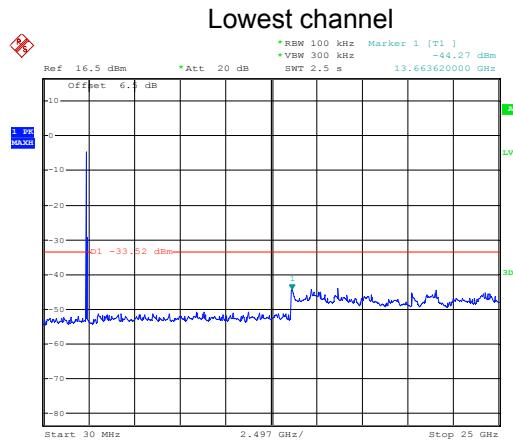


30MHz~25GHz



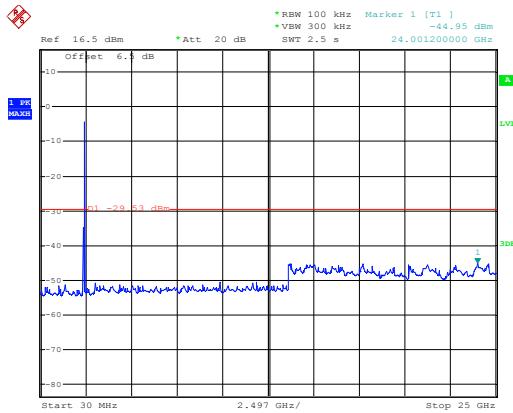
30MHz~25GHz

Test mode:	802.11g
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30MHz~25GHz

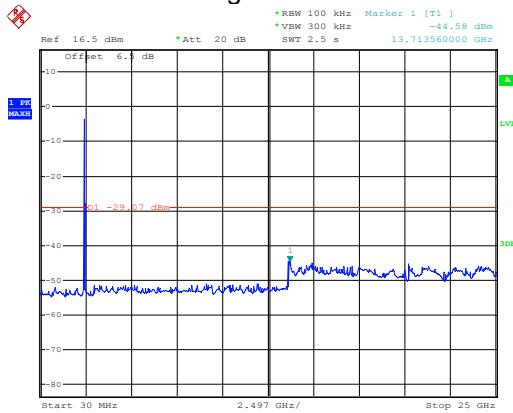
Middle channel



Date: 13.NOV.2013 19:00:51

30MHz~25GHz

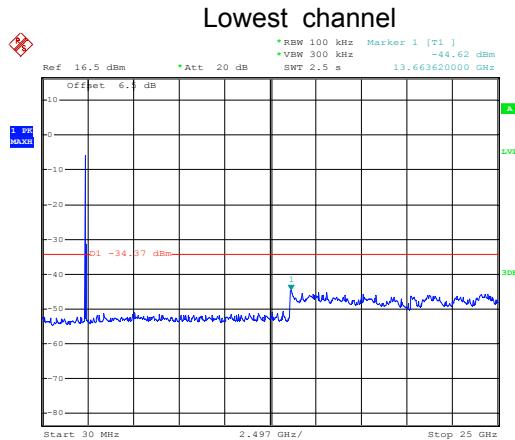
Highest channel



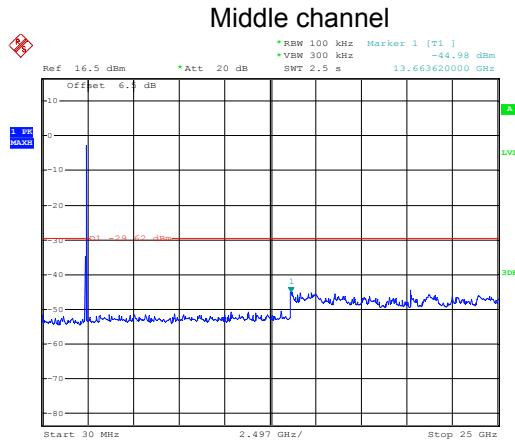
Date: 13.NOV.2013 19:02:06

30MHz~25GHz

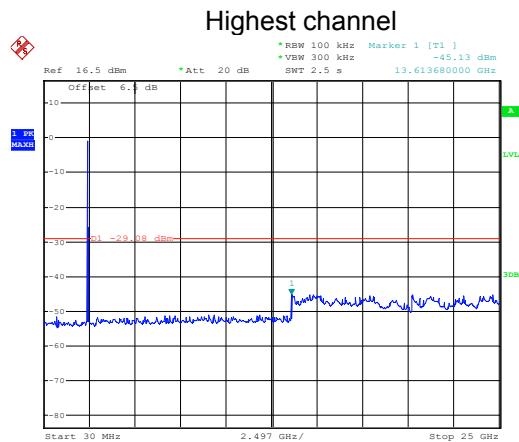
Test mode:	802.11n(H20)
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30MHz~25GHz

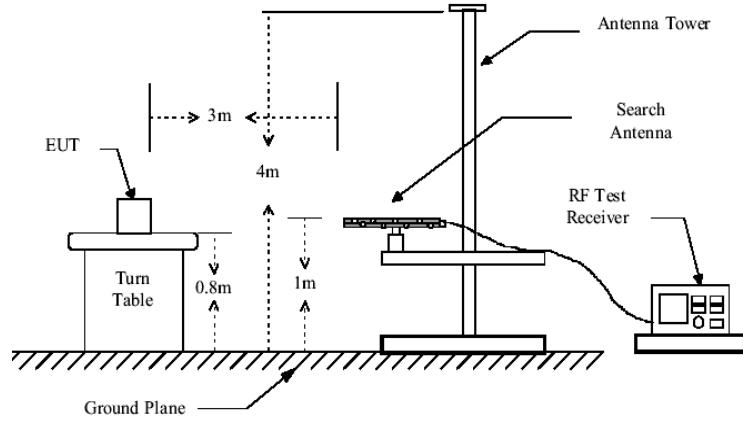
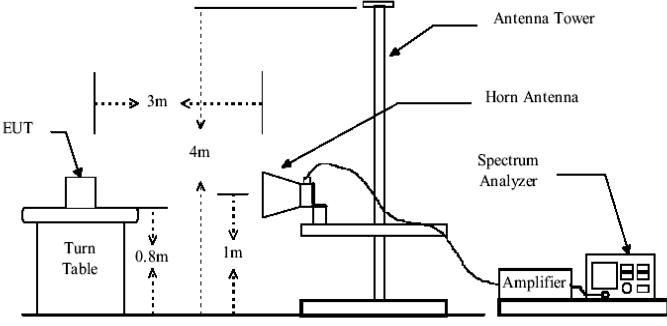


30MHz~25GHz



6.7.2 Radiated Emission Method

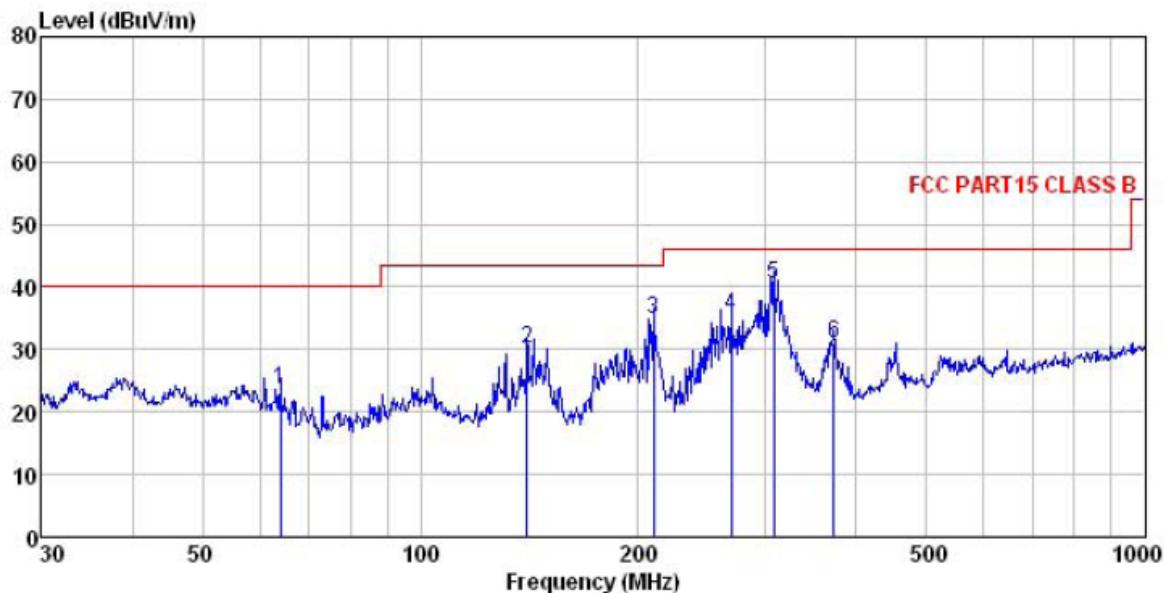
Test Requirement:	FCC Part15 C Section 15.209 and 15.205																									
Test Method:	ANSI C63.4:2003																									
Test Frequency Range:	9KHz to 25GHz																									
Test site:	Measurement Distance: 3m																									
Receiver setup:	<table border="1"> <thead> <tr> <th>Frequency</th><th>Detector</th><th>RBW</th><th>VBW</th><th>Remark</th></tr> </thead> <tbody> <tr> <td>30MHz-1GHz</td><td>Quasi-peak</td><td>100KHz</td><td>300KHz</td><td>Quasi-peak Value</td></tr> <tr> <td>Above 1GHz</td><td>Peak</td><td>1MHz</td><td>3MHz</td><td>Peak Value</td></tr> <tr> <td></td><td>Peak</td><td>1MHz</td><td>10Hz</td><td>Average Value</td></tr> </tbody> </table>					Frequency	Detector	RBW	VBW	Remark	30MHz-1GHz	Quasi-peak	100KHz	300KHz	Quasi-peak Value	Above 1GHz	Peak	1MHz	3MHz	Peak Value		Peak	1MHz	10Hz	Average Value	
Frequency	Detector	RBW	VBW	Remark																						
30MHz-1GHz	Quasi-peak	100KHz	300KHz	Quasi-peak Value																						
Above 1GHz	Peak	1MHz	3MHz	Peak Value																						
	Peak	1MHz	10Hz	Average Value																						
Limit:	<table border="1"> <thead> <tr> <th>Frequency</th><th>Limit (dBuV/m @3m)</th><th>Remark</th></tr> </thead> <tbody> <tr> <td>30MHz-88MHz</td><td>40.0</td><td>Quasi-peak Value</td></tr> <tr> <td>88MHz-216MHz</td><td>43.5</td><td>Quasi-peak Value</td></tr> <tr> <td>216MHz-960MHz</td><td>46.0</td><td>Quasi-peak Value</td></tr> <tr> <td>960MHz-1GHz</td><td>54.0</td><td>Quasi-peak Value</td></tr> <tr> <td>Above 1GHz</td><td>54.0</td><td>Average Value</td></tr> <tr> <td></td><td>74.0</td><td>Peak Value</td></tr> </tbody> </table>					Frequency	Limit (dBuV/m @3m)	Remark	30MHz-88MHz	40.0	Quasi-peak Value	88MHz-216MHz	43.5	Quasi-peak Value	216MHz-960MHz	46.0	Quasi-peak Value	960MHz-1GHz	54.0	Quasi-peak Value	Above 1GHz	54.0	Average Value		74.0	Peak Value
Frequency	Limit (dBuV/m @3m)	Remark																								
30MHz-88MHz	40.0	Quasi-peak Value																								
88MHz-216MHz	43.5	Quasi-peak Value																								
216MHz-960MHz	46.0	Quasi-peak Value																								
960MHz-1GHz	54.0	Quasi-peak Value																								
Above 1GHz	54.0	Average Value																								
	74.0	Peak Value																								
Test Procedure:	<ol style="list-style-type: none"> The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter camber. The table was rotated 360 degrees to determine the position of the highest radiation. 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, quasi-peak or average method as specified and then reported in a data sheet. 																									

Test setup:	<p>Below 1GHz</p>  <p>Above 1GHz</p> 
Test Instruments:	Refer to section 5.7 for details
Test mode:	Refer to section 5.3 for details
Test results:	Passed
Remark:	<ol style="list-style-type: none"> 1. Pre-scan all kind of the place mode (X-axis, Y-axis, Z-axis), and found the Y-axis is the worst case. 2. 9 kHz to 30MHz is too low, so only shows the data of above 30MHz in this report.

Below 1GHz

Measurement Data

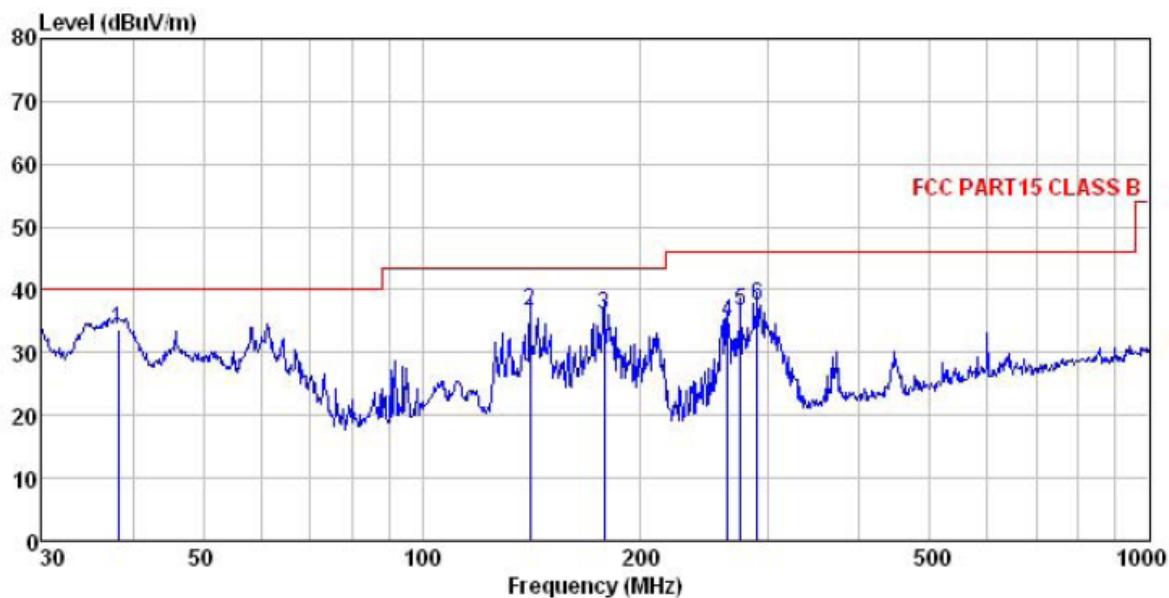
Horizontal:



Site : 3m chamber
 Condition : FCC PART15 CLASS B 3m VULB9163(30M1G) HORIZONTAL
 Job NO. : 456RF
 EUT : Smart phone
 Model : Q882
 Test mode : WIFI mode
 Power Rating : AC120V/60Hz
 Environment : Temp:25.5°C Huni:55%
 Test Engineer: A-bomb

	Read	Antenna	Cable	Preamp	Limit	Over		
Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Remark
MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	63.983	40.59	11.11	1.38	29.59	23.49	40.00	-16.51 QP
2	140.342	48.76	8.19	2.41	29.37	29.99	43.50	-13.51 QP
3	210.048	50.76	10.87	2.86	29.77	34.72	43.50	-8.78 QP
4	268.485	49.85	12.34	2.86	29.53	35.52	46.00	-10.48 QP
5	307.831	53.73	13.17	2.97	29.47	40.40	46.00	-5.60 QP
6	372.005	43.22	14.53	3.09	29.78	31.06	46.00	-14.94 QP

Vertical:



Site : 3m chamber
 Condition : FCC PART15 CLASS B 3m VULB9163(30M1G) VERTICAL
 Job NO. : 456RF
 EUT : Smart phone
 Model : Q882
 Test mode : WIFI mode
 Power Rating : AC120V/60Hz
 Environment : Temp:25.5°C Huni:55%
 Test Engineer: A-bomb

	ReadAntenna	Cable	Preamp	Limit	Over		
Freq	Level	Factor	Loss	Level	Line	Limit	Remark
MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB
1	38.212	46.29	13.15	1.18	27.09	33.53	40.00
2	140.835	55.26	8.20	2.41	29.36	36.51	43.50
3	178.133	50.68	9.55	2.71	26.96	35.98	43.50
4	262.896	49.26	12.17	2.84	29.56	34.71	46.00
5	274.194	50.74	12.50	2.87	29.51	36.60	46.00
6	289.002	51.13	12.84	2.91	29.46	37.42	46.00
							-8.58 QP

Above 1GHz

Test mode: 802.11b			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)	polarization
4824.00	48.21	31.53	8.90	40.24	48.40	74.00	-25.60	Vertical
7236.00	--	--	--	--	--	--	--	Vertical
4824.00	47.84	31.53	8.90	40.24	48.03	74.00	-25.97	Horizontal
7236.00	--	--	--	--	--	--	--	Horizontal

Test mode: 802.11b			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)	polarization
4824.00	39.67	31.53	8.90	40.24	39.86	54.00	-14.14	Vertical
7236.00	--	--	--	--	--	--	--	Vertical
4824.00	38.24	31.53	8.90	40.24	38.43	54.00	-15.57	Horizontal
7236.00	--	--	--	--	--	--	--	Horizontal

Remark:

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor
2. “**”, means this data is the too weak instrument of signal is unable to test.
3. The emission levels of other frequencies are very lower than the limit and not show in test report.

Test mode: 802.11b			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)	polarization
4874.00	47.88	31.58	8.98	40.15	48.29	74.00	-25.71	Vertical
7311.00	--	--	--	--	--	--	--	Vertical
4874.00	46.21	31.58	8.98	40.15	46.62	74.00	-27.38	Horizontal
7311.00	--	--	--	--	--	--	--	Horizontal

Test mode: 802.11b			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)	polarization	
4874.00	38.37	31.58	8.98	40.15	38.78	54.00	-15.22	Vertical	
7311.00	--	--	--	--	--	--	--	Vertical	
4874.00	37.56	31.58	8.98	40.15	37.97	54.00	-16.03	Horizontal	
7311.00	--	--	--	--	--	--	--	Horizontal	

Remark:

1. Final Level =Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor
2. “**”, means this data is the too weak instrument of signal is unable to test.
3. The emission levels of other frequencies are very lower than the limit and not show in test report.

Test mode: 802.11b			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)	polarization
4924.00	46.93	31.69	9.08	40.03	47.67	74.00	-26.33	Vertical
7386.00	--	--	--	--	--	--	--	Vertical
4924.00	49.35	31.69	9.08	40.03	50.09	74.00	-23.91	Horizontal
7386.00	--	--	--	--	--	--	--	Horizontal

Test mode: 802.11b			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)	polarization
4924.00	37.86	31.69	9.08	40.03	38.60	54.00	-15.40	Vertical
7386.00	--	--	--	--	--	--	--	Vertical
4924.00	38.90	31.69	9.08	40.03	39.64	54.00	-14.36	Horizontal
7386.00	--	--	--	--	--	--	--	Horizontal

Remark:

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor
2. “*”, means this data is the too weak instrument of signal is unable to test.
3. The emission levels of other frequencies are very lower than the limit and not show in test report.

Test mode:	802.11g		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)	polarization
4824.00	47.62	31.53	8.90	40.24	47.81	74.00	-26.19	Vertical
7236.00	--	--	--	--	--	--	--	Vertical
4824.00	47.54	31.53	8.90	40.24	47.73	74.00	-26.27	Horizontal
7236.00	--	--	--	--	--	--	--	Horizontal

Test mode:	802.11g		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)	polarization
4824.00	38.35	31.53	8.90	40.24	38.54	54.00	-15.46	Vertical
7236.00	--	--	--	--	--	--	--	Vertical
4824.00	36.54	31.53	8.90	40.24	36.73	54.00	-17.27	Horizontal
7236.00	--	--	--	--	--	--	--	Horizontal

Remark:

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor
2. “**”, means this data is the too weak instrument of signal is unable to test.
3. The emission levels of other frequencies are very lower than the limit and not show in test report.

Test mode: 802.11g			Test channel: Middle			Remark: Peak		
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
4874.00	44.91	31.58	8.98	40.15	45.32	74.00	-28.68	Vertical
7311.00	--	--	--	--	--	--	--	Vertical
4874.00	46.13	31.58	8.98	40.15	46.54	74.00	-27.46	Horizontal
7311.00	--	--	--	--	--	--	--	Horizontal

Test mode:	802.11g		Test channel:	Middle		Remark:		Average
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
4874.00	35.21	31.58	8.98	40.15	35.62	54.00	-18.38	Vertical
7311.00	--	--	--	--	--	--	--	Vertical
4874.00	36.25	31.58	8.98	40.15	36.66	54.00	-17.34	Horizontal
7311.00	--	--	--	--	--	--	--	Horizontal

Remark:

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor
2. **, means this data is the too weak instrument of signal is unable to test.
3. The emission levels of other frequencies are very lower than the limit and not show in test report.

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)	polarization
4924.00	48.36	31.69	9.08	40.03	49.10	74.00	-24.90	Vertical
7386.00	--	--	--	--	--	--	--	Vertical
4924.00	48.64	31.69	9.08	40.03	49.38	74.00	-24.62	Horizontal
7386.00	--	--	--	--	--	--	--	Horizontal

Test mode: 802.11g			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)	polarization
4924.00	39.27	31.69	9.08	40.03	40.01	54.00	-13.99	Vertical
7386.00	--	--	--	--	--	--	--	Vertical
4924.00	37.85	31.69	9.08	40.03	38.59	54.00	-15.41	Horizontal
7386.00	--	--	--	--	--	--	--	Horizontal

Remark:

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor
2. **, means this data is the too weak instrument of signal is unable to test.
3. 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)	polarization
4824.00	47.34	31.53	8.90	40.24	47.53	74.00	-26.47	Vertical
7236.00	--	--	--	--	--	--	--	Vertical
4824.00	45.06	31.53	8.90	40.24	45.25	74.00	-28.75	Horizontal
7236.00	--	--	--	--	--	--	--	Horizontal

Test mode: 802.11n(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)	polarization
4824.00	37.85	31.53	8.90	40.24	38.04	54.00	-15.96	Vertical
7236.00	--	--	--	--	--	--	--	Vertical
4824.00	35.25	31.53	8.90	40.24	35.44	54.00	-18.56	Horizontal
7236.00	--	--	--	--	--	--	--	Horizontal

Remark:

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor
2. “**”, means this data is the too weak instrument of signal is unable to test.
3. 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: 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)	polarization
4874.00	44.22	31.58	8.98	40.15	44.63	74.00	-29.37	Vertical
7311.00	--	--	--	--	--	--	--	Vertical
4874.00	46.83	31.58	8.98	40.15	47.24	74.00	-26.76	Horizontal
7311.00	--	--	--	--	--	--	--	Horizontal

Test mode: 802.11n(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)	polarization
4874.00	34.59	31.58	8.98	40.15	35.00	54.00	-19.00	Vertical
7311.00	--	--	--	--	--	--	--	Vertical
4874.00	36.59	31.58	8.98	40.15	37.00	54.00	-17.00	Horizontal
7311.00	--	--	--	--	--	--	--	Horizontal

Remark:

1. Final Level =Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor
2. “**”, means this data is the too weak instrument of signal is unable to test.
3. 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: 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)	polarization
4924.00	47.60	31.69	9.08	40.03	48.34	74.00	-25.66	Vertical
7386.00	--	--	--	--	--	--	--	Vertical
4924.00	48.77	31.69	9.08	40.03	49.51	74.00	-24.49	Horizontal
7386.00	--	--	--	--	--	--	--	Horizontal

Test mode: 802.11n(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)	polarization
4924.00	37.90	31.69	9.08	40.03	38.64	54.00	-15.36	Vertical
7386.00	--	--	--	--	--	--	--	Vertical
4924.00	39.29	31.69	9.08	40.03	40.03	54.00	-13.97	Horizontal
7386.00	--	--	--	--	--	--	--	Horizontal

Remark:

1. Final Level =Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor
2. “**”, means this data is the too weak instrument of signal is unable to test.
3. The emission levels of other frequencies are very lower than the limit and not show in test report.