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Report No.: FCC11-RTE070503

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# FCC REPORT (WIFI)

Applicant: XPX Technology Limited

Address of Applicant: Flat B8 F8, Kin Tak Fung Ind Bldg,174 Wai Yip St,

Kwun Tong Kowloon, HongKong.

**Equipment Under Test (EUT)** 

Product Name: mobile phone

Model No.: X85

Trade mark: XPX mobile phone

FCC ID: ZO6FCCX85001

Applicable standards: FCC CFR Title 47 Part 15 Subpart C Section 15.247:2010

Date of sample receipt: 16 Jun., 2011

**Date of Test:** 17-30 Jun., 2011

Date of report issued: 05 Jul., 2011

Test Result: PASS \*

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

Authorized Signature:

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 EBO 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. Any mention of EBO International Electrical Approvals or testing done by EBO International Electrical Approvals in connection with, distribution or use of the product described in this report must be approved by EBO International Electrical Approvals in writing.

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### 2 Version

Version No.	Date	Description
00	2011-07-05	Original

Prepared By:	Collin. He	Date:	2011-07-05	
	Project Engineer			
Check By:	Hans. Hu	Date:	2011-07-05	
	Reviewer			



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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 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

Remark:

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



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### 5 General Information

### 5.1 Client Information

Applicant:	XPX Technology Limited
Address of Applicant:	Flat B8 F8, Kin Tak Fung Ind Bldg,174 Wai Yip St, Kwun Tong Kowloon, HongKong.
Manufacturer/Factory:	Yuanfenn Industrial Dalang Lonhua
Address of Manufacturer/Factory:	4&5 FL Area B, Yuanfenn Industrial Zone, Dalang Lonhua

# 5.2 General Description of E.U.T.

Product Name:	mobile phone
Model No.:	X85
Operation Frequency:	2412MHz~2462MHz
Channel numbers:	11
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)
Antenna Type:	Integral
Antenna gain:	2dBi (declare by Applicant)
Power supply:	Input: AC 90-240V 50/60Hz 0.2A Output: DC 5V 500mA



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Operation Frequency each of channel								
Channel Frequency Channel Frequency Channel Frequency								
1	2412MHz	5	2432MHz	9	2452MHz			
2	2417MHz	6	2437MHz	10	2457MHz			
3	2422MHz	7	2442MHz	11	2462MHz			
4	2427MHz	8	2447MHz					

#### 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:

Channel	Frequency
The lowest channel	2412MHz
The middle channel	2442MHz
The Highest channel	2462MHz



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#### 5.3 Test environment and mode

Operating Environment:	Operating Environment:				
Temperature:	24.0 °C				
Humidity:	54 % RH				
Atmospheric Pressure:	1010 mbar				
Test mode:					
Operation mode Keep the EUT in operating status with full load					

We have verified the construction and function in typical operation. All the test modes were carried out with the EUT in transmitting operation, which was shown in this test report and defined as follows:

#### Per-scan all kind of data rate in lowest channel, and found the follow list which it was worst case.

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

#### **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)

# 5.4 Test Facility

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

### ● FCC —Registration No.: 600491

Global United Technology Services Co., Ltd., Shenzhen 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 files. Registration 600491, July 20, 2010.

#### Industry Canada (IC)

The 3m Semi-anechoic chamber of Global United Technology Services Co., Ltd. has been Registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 9079A-1.

#### 5.5 Test Location

All tests were performed at:

Global United Technology Services Co., Ltd.

Address: 2nd Floor, Block No.2, Laodong Industrial Zone, Xixiang Road Baoan District, Shenzhen,

China

Tel: 0755-27798480 Fax: 0755-27798960



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# 5.6 Other Information Requested by the Customer

None.

### 5.7 Test Instruments list

Radi	Radiated Emission:							
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)		
1	3m Semi- Anechoic Chamber	ZhongYu Electron	9.2(L)*6.2(W)* 6.4(H)	GTS250	Mar. 30 2011	Mar. 29 2012		
2	Control Room	ZhongYu Electron	6.2(L)*2.5(W)* 2.4(H)	GTS251	N/A	N/A		
3	EMI Test Receiver	Rohde & Schwarz	ESU26	GTS203	Sept. 10 2010	Sept. 09 2011		
4	BiConiLog Antenna	SCHWARZBECK MESS-ELEKTRONIK	VULB9163	GTS214	Feb. 26 2011	Feb. 25 2012		
5	Double -ridged waveguide horn	SCHWARZBECK MESS-ELEKTRONIK	9120D-829	GTS208	Aug. 03 2010	Aug. 02 2011		
6	Horn Antenna	ETS-LINDGREN	3160	GTS217	Aug. 03 2010	Aug. 02 2011		
7	EMI Test Software	AUDIX	E3	N/A	N/A	N/A		
8	Coaxial Cable	GTS	N/A	GTS213	Apr. 01 2011	Mar. 31 2012		
9	Coaxial Cable	GTS	N/A	GTS211	Apr. 01 2011	Mar. 31 2012		
9	Coaxial cable	GTS	N/A	GTS210	Apr. 01 2011	Mar. 31 2012		
11	Coaxial Cable	GTS	N/A	GTS212	Apr. 01 2011	Mar. 31 2012		
12	Amplifier(100kHz-3GHz)	HP	8347A	GTS204	Aug. 03 2010	Aug. 02 2011		
13	Amplifier(2GHz-20GHz)	HP	8349B	GTS206	Aug. 03 2010	Aug. 02 2011		
14	Pre-amplifier (18-26GHz)	Rohde & Schwarz	AFS33-18002 650-30-8P-44	GTS218	Aug. 03 2010	Aug. 02 2011		
15	Band filter	Amindeon	82346	GTS219	Aug. 03 2010	Aug. 02 2011		

Cond	Conducted Emission:								
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)			
1	Shielding Room	ZhongYu Electron	7.0(L)x3.0(W)x3.0(H)	GTS206	Apr. 10 2011	Apr. 10 2012			
2	EMI Test Receiver	Rohde & Schwarz	ESCS30	GTS208	Sept. 14 2010	Sept. 14 2011			
3	10dB Pulse Limita	Rohde & Schwarz	N/A	GTS209	Sept. 14 2010	Sept. 14 2011			
4	LISN	SCHWARZBECK MESS-ELEKTRONIK	NSLK 8127	GTS207	Apr. 14 2011	Apr. 14 2012			
5	Coaxial Cable	GTS	N/A	GTS406	Apr. 01 2011	Apr. 01 2012			
6	EMI Test Software	AUDIX	E3	N/A	N/A	N/A			



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### 6 Test results and Measurement Data

# 6.1 Antenna requirement:

**Standard requirement:** FCC Part15 C Section 15.203 /247(c)

15.203 requirement:

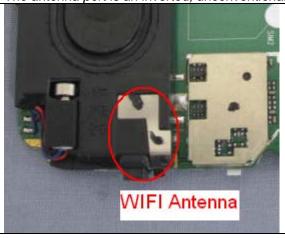
An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit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

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

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

#### E.U.T Antenna:

The antenna port is an inverted, unconventional port; the best case gain of the antenna is 2.0dBi.





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### 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:	Frequency range (MHz)					
'	Quasi-peak Average					
	0.15-0.5 66 to 56* 56 to 46*					
	0.5-5	56	46			
	5-30	60	50			
	* Decreases with the logarithm	· · · · · ·	4 1 1			
Test procedure	The E.U.T and simulators are connected to the main power through a line impedance stabilization network(L.I.S.N.). The 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 refers 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:	Refere	ence Plane				
	AUX Equipment  Test table/Insulation place  Remark E.U.T. Equipment Under Test LISN Line Impedence Stabilization Test table height=0.8m	U.T EMI Receiver	—— AC power			
Test Instruments:	Refer to section 5.7 for details					
Test mode:	Refer to section 5.3 for details					
Test results:	Pass					

#### **Measurement Data**

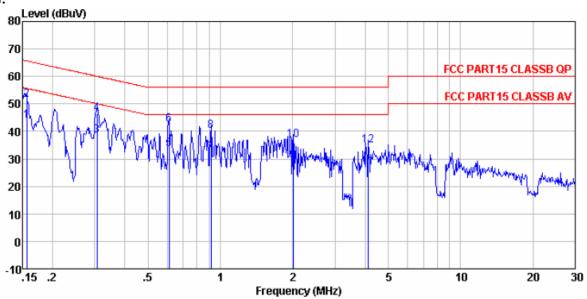
An initial pre-scan was performed on the live and neutral lines with peak detector. Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission were detected.



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#### Live Line:



Condition : FCC PART15 CLASSB QP LISN(2011) LINE

Job No. : 489RF Test Mode : WIFI mode Test Engineer: Dick

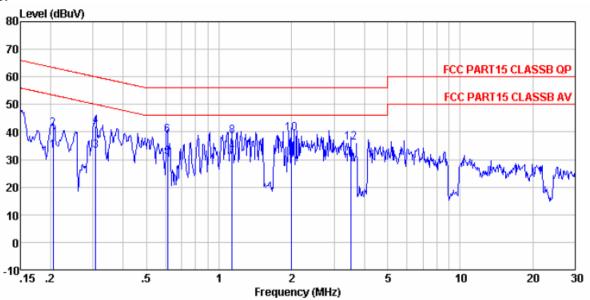
	Freq	Read Level	LISN Factor	Cable Loss	Level	Limit Line	Over Limit	Remark
	MHz	dBu₹	dB	dB	dBuV	dBuV	dB	
1 2	0.156 0.156	42.89 50.60	0.68 0.68	0.10 0.10	43.67 51.38		-11.98 -14.27	Average QP
2 3 4	0.307 0.307	37.94 45.68	0.61 0.61	0.10 0.10	38.65 46.39	50.06		Average
4 5 6	0.611 0.611	32.89 41.80	0.53 0.53	0.10 0.10	33. 52 42. 43		-12.48 -13.57	Average QP
7 8 9	0.914 0.914	31.65 39.46	0.49 0.49	0.10 0.10	32. 24 40. 05	56.00	-15.95	
10	2. 012 2. 012	28. 67 36. 17	0. 40 0. 40	0.10 0.10	29.17 36.67	56.00	-19.33	
11 12	4.136 4.136	26. 43 34. 57	0.32 0.32	0.10 0.10	26.85 34.99		-19.15 -21.01	Average QP



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#### **Neutral Line:**



Condition : FCC PART15 CLASSB QP LISN(2011) NEUTRAL

Job No. : 489RF Test Mode : WIFI mode Test Engineer: Dick

	Freq	Read Level	LISN Factor	Cable Loss	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	d₿	dBuV	dBuV	dB	
1 2 3 4 5 6 7 8 9	0.205 0.205 0.308 0.308 0.611 0.611 1.135 1.135	32. 46 40. 55 32. 34 41. 43 30. 23 38. 34 30. 15 38. 07	0.65 0.65 0.61 0.61 0.53 0.53 0.46	0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10	33. 21 41. 30 33. 05 42. 14 30. 86 38. 97 30. 71 38. 63	63. 40 50. 02 60. 02 46. 00 56. 00 46. 00 56. 00	-22.10 -16.97 -17.88 -15.14 -17.03 -15.29 -17.37	Average QP Average QP Average QP
10	2.001 2.001	31.51 39.06	0.40 0.40	0.10 0.10	32. 01 39. 56	56.00	-16.44	
11 12	3.509 3.509	27. 77 35. 68	0.34 0.34	0.10 0.10	28. 21 36. 12		-17. 79 -19. 88	Average QP

#### Notes:

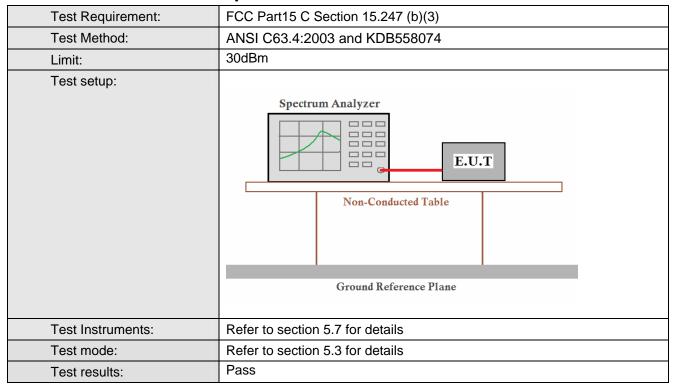
- 1. The following Quasi-Peak and Average measurements were performed on the EUT:
- 2. Final Test Level = Receiver Reading + LISN Factor + Cable Loss.



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### 6.3 Conducted Peak Output Power





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#### **Measurement Data**

Measurement Data							
802.11b mode							
Test channel	Peak Output Power (dBm)	Limit (dBm)	Result				
Lowest	21.87	30.00	Pass				
Middle	22.95	30.00	Pass				
Highest	22.78	30.00	Pass				
	802.11g mo	ode					
Test channel	Peak Output Power (dBm)	Limit (dBm)	Result				
Lowest	20.19	30.00	Pass				
Middle	21.39	30.00	Pass				
Highest	22.93	30.00	Pass				
802.11n-H20 mode							
Test channel	Peak Output Power (dBm)	Limit (dBm)	Result				
Lowest	20.84	30.00	Pass				
Middle	21.17	30.00	Pass				
Highest	22.62	30.00	Pass				

### Test plot as follows:



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Test mode:

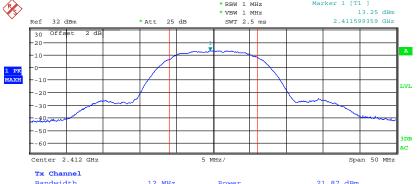
802.11b

Test channel:

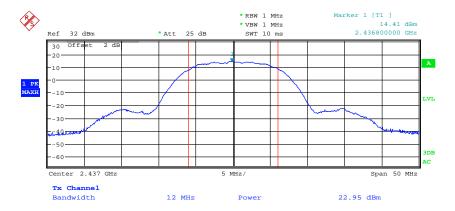
\*RBW 1 MHz

\*RBW 1 MHz

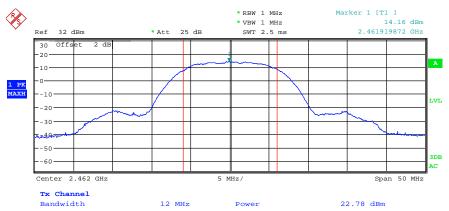
\*Marker 1 [T1 ]



Test mode: 802.11b Test channel: Middle









Tx Channel
Bandwidth

# Shenzhen EBO Technology Co., Ltd.

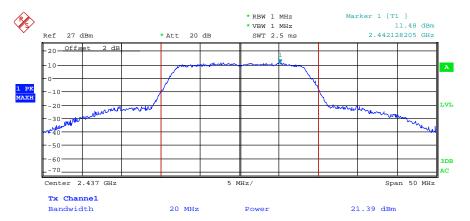
20.19 dBm

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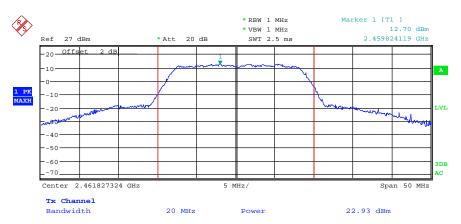
Test mode: 802.11g Test channel: Lowest RBW 1 MHz \* VBW 1 MHz SWT 10 ms 10.13 dBm 2.417240000 GHz 27 dBm 20 dB Offse -20-10 A .VI -30 -50 Center 2.412 GHz MHz Span 50 MHz

Test mode: 802.11g Test channel: Middle

Power









Bandwidth

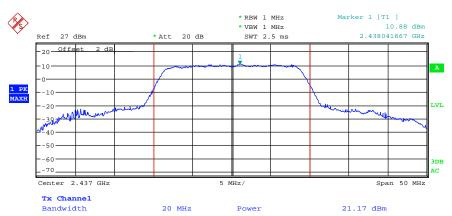
# Shenzhen EBO Technology Co., Ltd.

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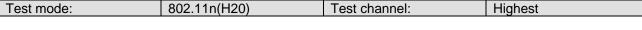


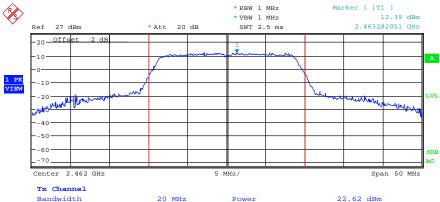
20.84 dBm

Power



20 MHz



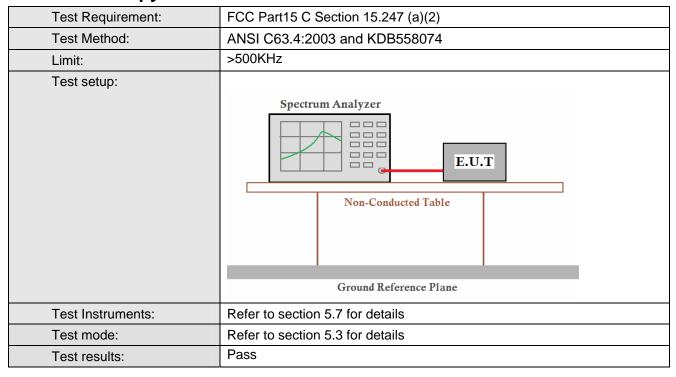




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### 6.4 6dB Occupy Bandwidth





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#### **Measurement Data**

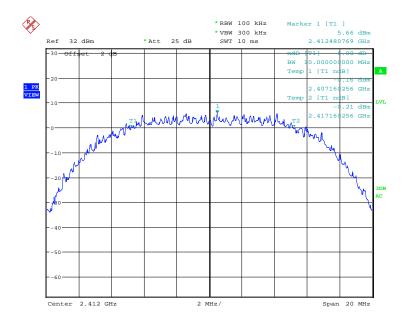
weasurement Data							
802.11b mode							
Test channel	6dB Occupy Bandwidth (MHz)	Limit (KHz)	Result				
Lowest	10.000	>500	Pass				
Middle	9.775	>500	Pass				
Highest	8.846	>500	Pass				
	802.11g mode						
Test channel	6dB Occupy Bandwidth (MHz)	Limit (KHz)	Result				
Lowest	16.474	>500	Pass				
Middle	16.474	>500	Pass				
Highest	16.506	>500	Pass				
	802.11n-H20 mode						
Test channel	6dB Occupy Bandwidth (MHz)	Limit (KHz)	Result				
Lowest	17.660	>500	Pass				
Middle	17.660	>500	Pass				
Highest	17.628	>500	Pass				

### Test plot as follows:

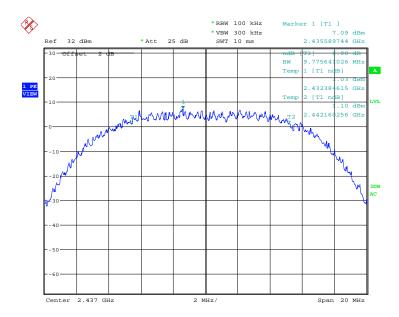


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Test mode: 802.11b Test channel: Lowest



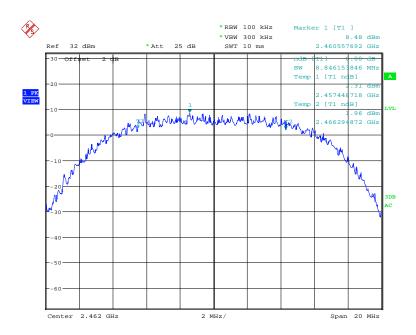
Test mode: 802.11b Test channel: Middle



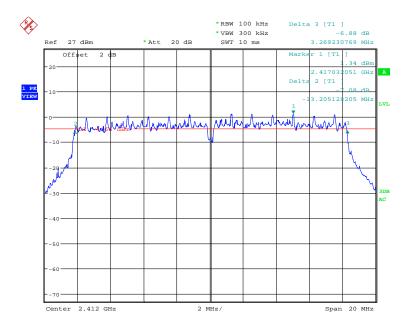


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Test mode: 802.11b Test channel: Highest



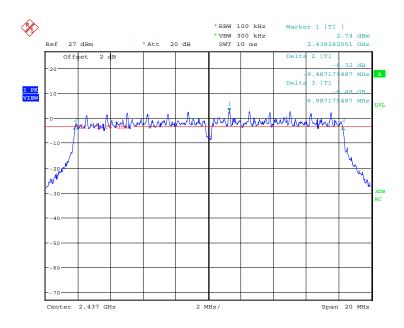
Test mode: 802.11g Test channel: Lowest



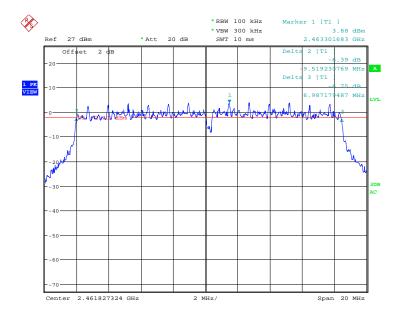


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Test mode: 802.11g Test channel: Middle



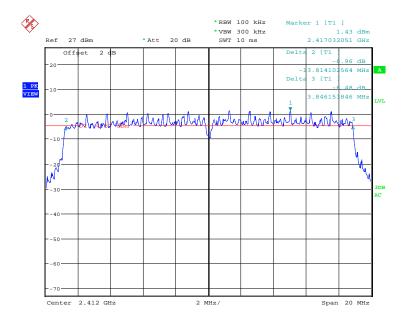
Test mode: 802.11g Test channel: Highest



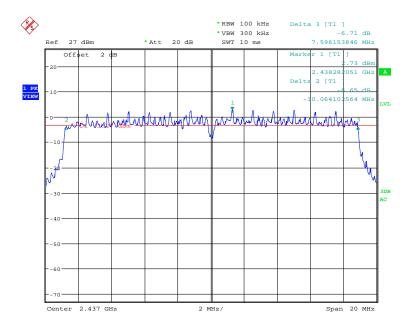


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Test mode: 802.11n-H20 Test channel: Lowest



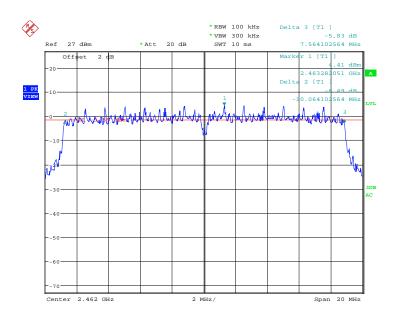
Test mode: 802.11n-H20 Test channel: Middle





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Test mode: 802.11n-H20 Test channel: Highest

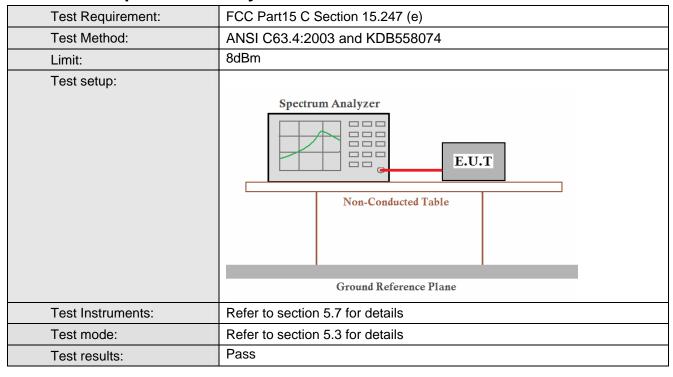




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### 6.5 Power Spectral Density





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#### **Measurement Data**

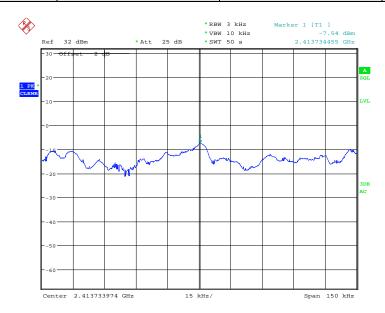
modean omioni Data	Measurement Data							
802.11b mode								
Test channel	Power Spectral Density (dBm)	Limit (dBm)	Result					
Lowest	-7.54	8.00	Pass					
Middle	-6.07	8.00	Pass					
Highest	-7.43	8.00	Pass					
	802.11g mode							
Test channel	Power Spectral Density (dBm)	Limit (dBm)	Result					
Lowest	-14.63	8.00	Pass					
Middle	-14.04	8.00	Pass					
Highest	-12.03	8.00	Pass					
	802.11n-H20 mode							
Test channel	Power Spectral Density (dBm)	Limit (dBm)	Result					
Lowest	-13.19	8.00	Pass					
Middle	-13.46	8.00	Pass					
Highest	-11.06	8.00	Pass					

### Test plot as follows:

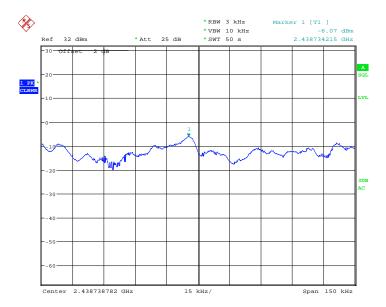


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Test mode: 802.11b Test channel: Lowest



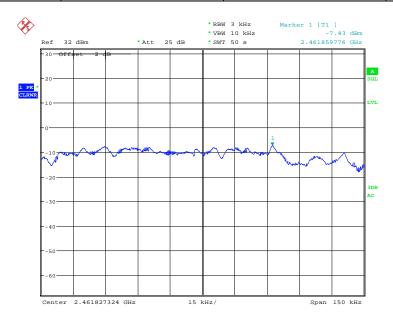
Test mode: 802.11b Test channel: Middle



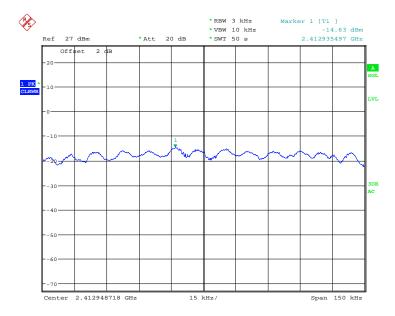


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Test mode: 802.11b Test channel: Highest



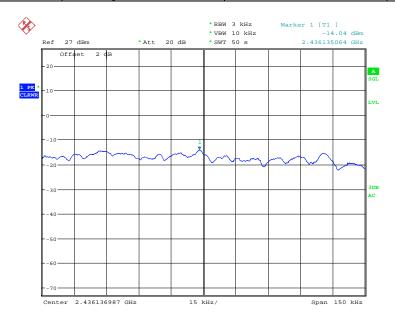




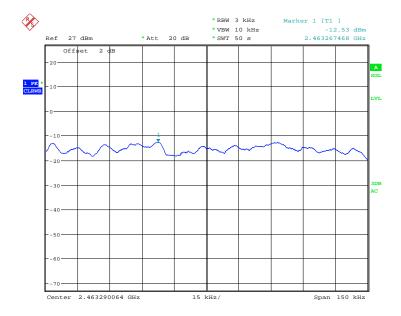


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Test mode: 802.11g Test channel: Middle



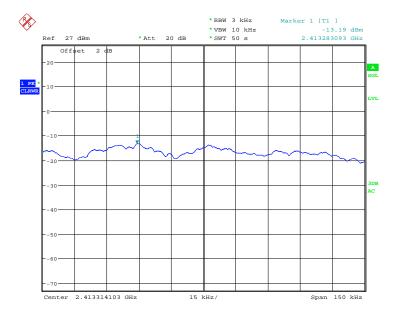
Test mode: 802.11g Test channel: Highest



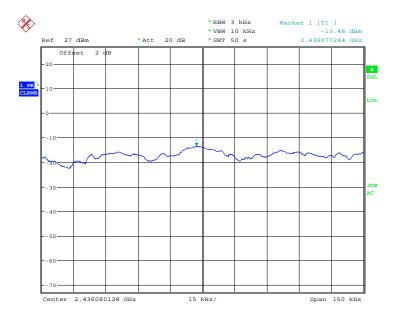


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Test mode: 802.11n-H20 Test channel: Lowest



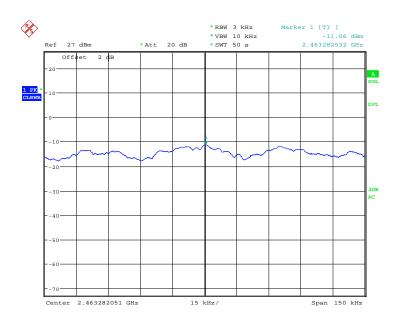
Test mode: 802.11n-H20 Test channel: Middle





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Test mode: 802.11n-H20 Test channel: Highest





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# 6.6 Band Edge

### 6.6.1 Conducted Emission Method

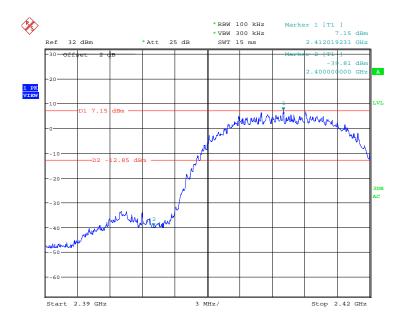
Test Requirement:	FCC Part15 C Section 15.247 (d)			
Test Method:	ANSI C63.4:2003 and KDB558074			
Limit:	In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.			
Test setup:				
	Spectrum Analyzer  E.U.T  Non-Conducted Table  Ground Reference Plane			
Test Instruments:	Refer to section 5.7 for details			
Test mode:	Refer to section 5.3 for details			
Test results:	Pass			

### Test plot as follows:

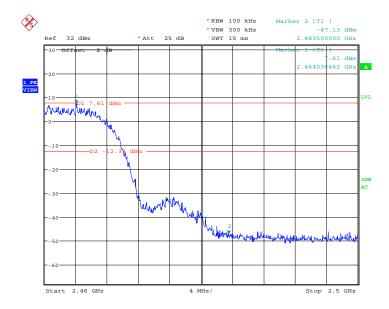


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Test mode: 802.11b Test channel: Lowest



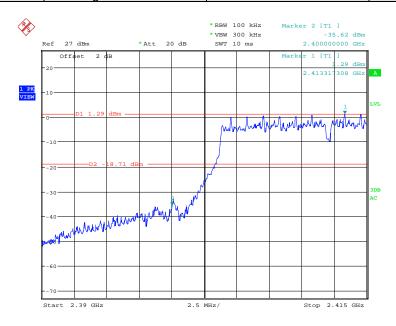




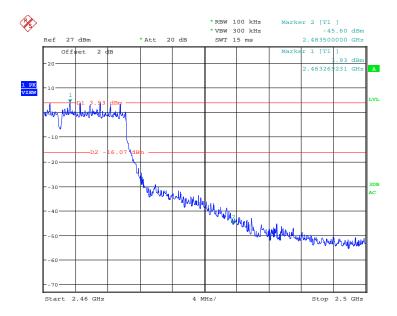


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Test mode: 802.11g Test channel: Lowest



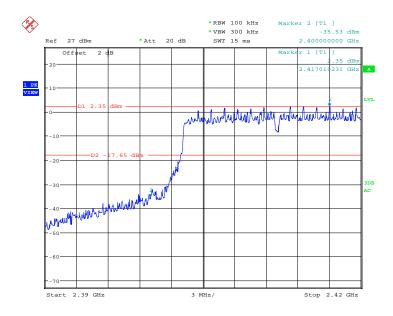




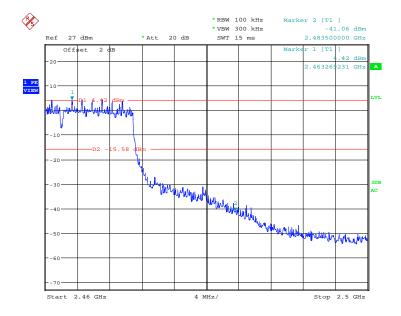


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Test mode: 802.11n (H20) Test channel: Lowest



Test mode: 802.11n (H20) Test channel: Highest





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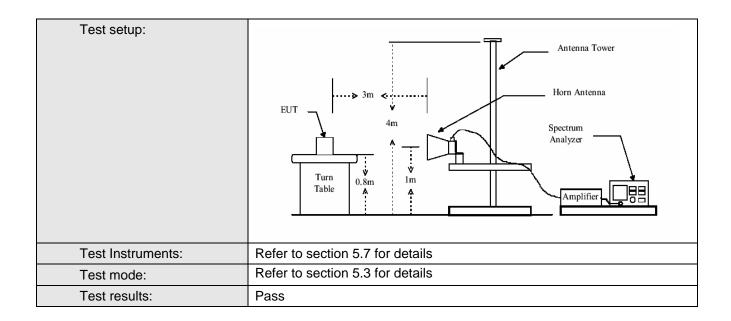
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### 6.6.2 Radiated Emission Method

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 (Semi-Anechoic Chamber)					
Receiver setup:	,					
·	Frequency	Detector	RBW	VBW	Remark	
	Above 1GHz	Peak	1MHz	3MHz	Peak Value	
	Above IGI12	Peak	1MHz	10Hz	Average Value	
Limit:						
	Freque	ncy	Limit (dBuV/		Remark	
	Above 1	GHz –				
Test Procedure:	Above 1GHz  54.0  Average Value  74.0  Peak Value  a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic camber. The table was rotated 360 degrees to determine the position of the highest radiation.  b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.  c. The 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.  d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotable table was turned from 0 degrees to 360 degrees to find the maximum reading.  e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.  f. 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.					



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#### Note:

The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

Final Test Level =Receiver Reading + Antenna Factor + Cable Factor - Preamplifier Factor



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#### Measurement data:

Test mode:	802.1	1b	Test channel:		Lowest		Remark:	Peal		<
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)		amp or (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Li	ver mit IB)	polarization
2390	51.94	27.59	3.33	30	.10	52.76	74.00	-21	1.24	Vertical
2400	57.27	27.58	3.37	30	.10	58.12	74.00	-15	88.5	Vertical
2390	53.11	27.59	3.33	30	.10	53.93	74.00	-20	0.07	Horizontal
2400	58.16	27.58	3.37	30.10		59.01	74.00	-14	1.99	Horizontal

Test mode:	802.1	1b	Test channel:		Lowest		Remark:		Average	
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)		amp or (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization	
2390	34.60	27.59	3.33	30	.10	35.42	54.00	-18.58	Vertical	
2400	38.26	27.58	3.37	30	.10	39.11	54.00	-14.89	Vertical	
2390	35.65	27.59	3.33	30	.10	36.47	54.00	-17.53	Horizontal	
2400	39.34	27.58	3.37	30	.10	40.19	54.00	-13.81	Horizontal	

Test mode:	802.1	1b	Test channel: High		Highe	hest Remark		Pea	k
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Prea Factor		Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
2483.5	51.50	27.53	3.49	29.9	93	52.59	74.00	-21.41	Vertical
2500	55.55	27.55	3.52	30.7	70	55.92	74.00	-18.08	Vertical
2483.5	52.60	27.53	3.49	29.9	93	53.69	74.00	-20.31	Horizontal
2500	56.73	27.55	3.52	30.7	70	57.10	74.00	-16.90	Horizontal

Test mode:	802.1	1b	Test channel: High		Highe	est	Remark:		Average	
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)		amp or (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Li	ver mit dB)	polarization
2483.5	39.34	27.53	3.49	29	.93	40.43	54.00	-13	3.57	Vertical
2500	35.44	27.55	3.52	30	.70	35.81	54.00	-18	3.19	Vertical
2483.5	40.56	27.53	3.49	29	.93	41.65	54.00	-12	2.35	Horizontal
2500	36.83	27.55	3.52	30	.70	37.20	54.00	-16	6.80	Horizontal



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Test mode:	802.1	1g	Test chann	el:	l: Lowest		Remark: Pea		K
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Prea Factor	•	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
2390	51.06	27.59	3.33	30.1	10	51.88	74.00	-22.12	Vertical
2400	56.66	27.58	3.37	30.1	10	57.51	74.00	-16.49	Vertical
2390	53.41	27.59	3.33	30.1	10	54.23	74.00	-19.77	Horizontal
2400	58.97	27.58	3.37	30.1	10	59.82	74.00	-14.18	Horizontal

Test mode:	802.1	1g	Test channel:		Lowest		Remark: Ave		rage
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Prea Factor		Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
2390	36.32	27.59	3.33	30.1	10	37.14	54.00	-16.86	Vertical
2400	41.75	27.58	3.37	30.1	10	42.60	54.00	-11.40	Vertical
2390	39.11	27.59	3.33	30.1	10	39.93	54.00	-14.07	Horizontal
2400	44.59	27.58	3.37	30.1	10	45.44	54.00	-8.56	Horizontal

Test mode:	802.1	1g	Test channel:		ghest	Remark: Po		k
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (d		Limit Line (dBuV/m)	Over Limit (dB)	polarization
2483.5	51.89	27.53	3.49	29.93	52.98	74.00	-21.02	Vertical
2500	57.35	27.55	3.52	30.70	57.72	74.00	-16.28	Vertical
2483.5	54.30	27.53	3.49	29.93	55.39	74.00	-18.61	Horizontal
2500	59.64	27.55	3.52	30.70	60.01	74.00	-13.99	Horizontal

Test mode:	802.1	1g	Test channel: Highe		est Remark:			Average		
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)		amp or (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Li	ver mit dB)	polarization
2483.5	41.43	27.53	3.49	29	.93	42.52	54.00	-11	1.48	Vertical
2500	38.68	27.55	3.52	30	.70	39.05	54.00	-14	4.95	Vertical
2483.5	42.55	27.53	3.49	29	.93	43.64	54.00	-10	0.36	Horizontal
2500	39.85	27.55	3.52	30	.70	40.22	54.00	-13	3.78	Horizontal



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Test mode:	802.1	1n(H20)	Test channel:		Lowest		Remark: Pea		k
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Prear Factor	•	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
2390	37.28	27.59	3.33	30.1	0	38.10	74.00	-35.90	Vertical
2400	50.90	27.58	3.37	30.1	0	51.75	74.00	-22.25	Vertical
2390	52.06	27.59	3.33	30.1	0	52.88	74.00	-21.12	Horizontal
2400	57.28	27.58	3.37	30.1	0	58.13	74.00	-15.87	Horizontal

Test mode:	802.1	1n(H20)	Test channel:		Lowest		Remark:		Average	
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Prea Facto		Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)		
2390	37.44	27.59	3.33	30.	.10	38.26	54.00	-15.7	4 Vertical	
2400	42.64	27.58	3.37	30.	.10	43.49	54.00	-10.5	1 Vertical	
2390	37.39	27.59	3.33	30.	.10	38.21	54.00	-15.7	9 Horizontal	
2400	38.53	27.58	3.37	30.	.10	39.38	54.00	-14.6	2 Horizontal	

Test mode:	802.1	1n(H20)	Test channel:		Highest		Remark: P		Peak
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Prea Factor		Level (dBuV/m)	Limit Line (dBuV/m)	Ove Limi (dB)	it polarization
2483.5	41.43	27.53	3.49	29.	93	42.52	74.00	-31.4	8 Vertical
2500	51.50	27.55	3.52	30.	70	51.87	74.00	-22.1	3 Vertical
2483.5	52.82	27.53	3.49	29.	93	53.91	74.00	-20.0	9 Horizontal
2500	57.77	27.55	3.52	30.	70	58.14	74.00	-15.8	6 Horizontal

Test mode:	802.1	1n(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)	Li	ver imit dB)	polarization
2483.5	41.52	27.53	3.49	29	.93	42.61	54.00	-1	1.39	Vertical
2500	41.30	27.55	3.52	30	.70	41.67	54.00	-12	2.33	Vertical
2483.5	40.06	27.53	3.49	29	.93	41.15	54.00	-12	2.85	Horizontal
2500	36.82	27.55	3.52	30	.70	37.19	54.00	-16	6.81	Horizontal



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# 6.7 Spurious Emission

### 6.7.1 Conducted Emission Method

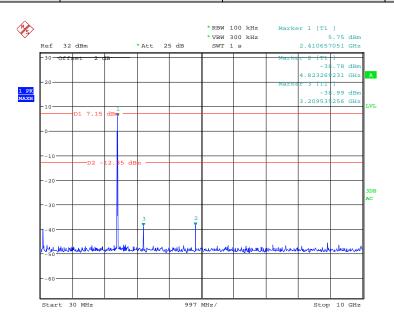
Test Requirement:	FCC Part15 C Section 15.247 (d)								
Test Method:	ANSI C63.4:2003 and KDB558074								
Limit:	In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.								
Test setup:									
	Spectrum Analyzer  E.U.T  Non-Conducted Table								
	Ground Reference Plane								
Test Instruments:	Refer to section 5.7 for details								
Test mode:	Refer to section 5.3 for details								
Test results:	Pass								

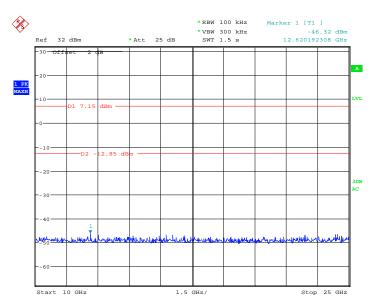
### Test plot as follows:



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Test mode: 802.11b Test channel: Lowest

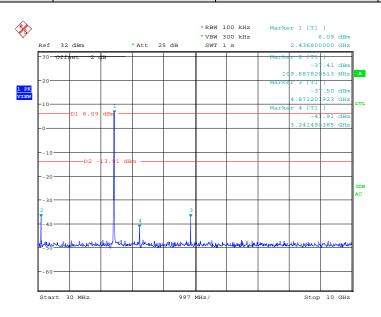


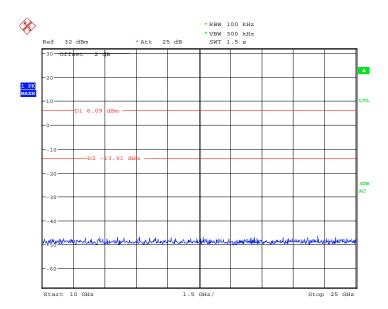




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Test mode: 802.11b Test channel: Middle

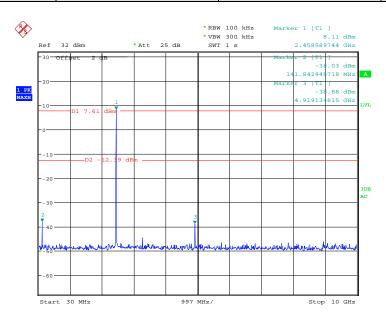


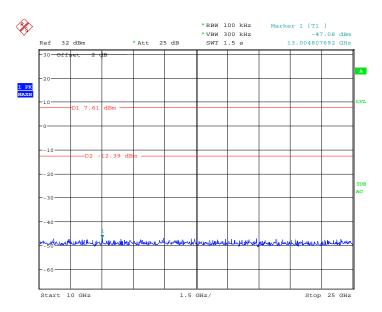




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Test mode: 802.11b Test channel: Highest

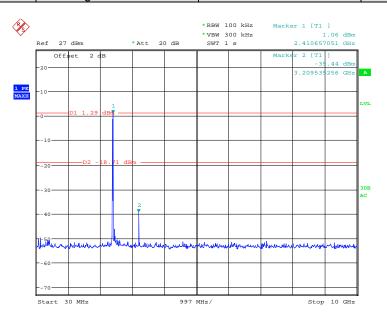


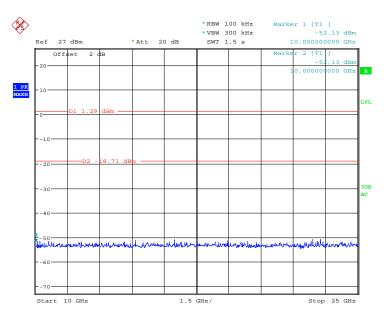




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Test mode: 802.11g Test channel: Lowest

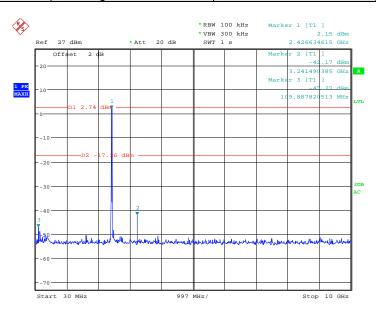


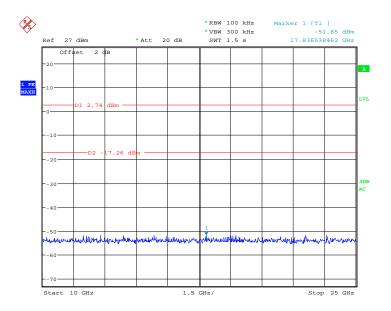




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Test mode: 802.11g Test channel: Middle

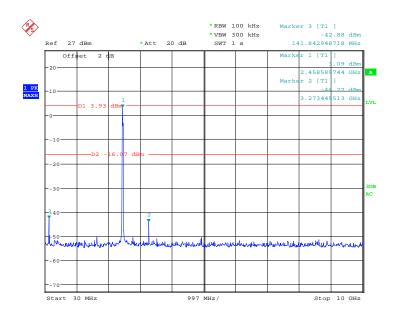


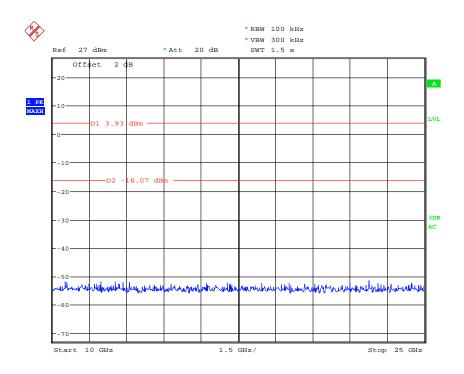




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Test mode: 802.11g Test channel: Highest

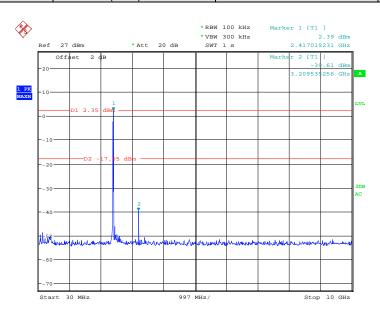


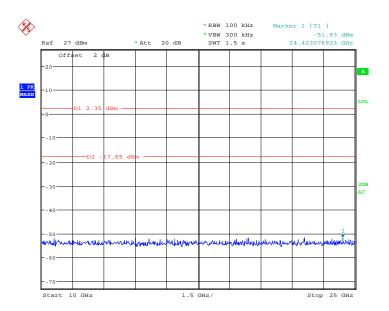




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Test mode: 802.11n(H20) Test channel: Lowest

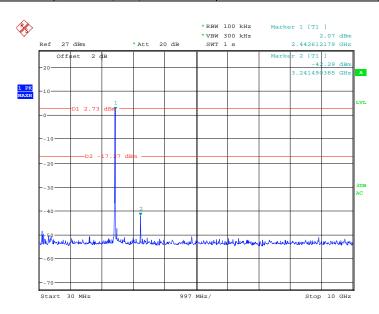


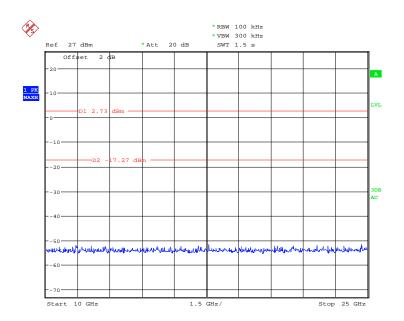




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Test mode: 802.11n(H20) Test channel: Middle

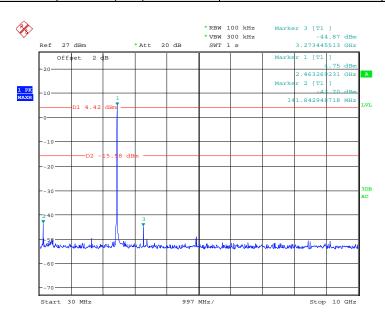


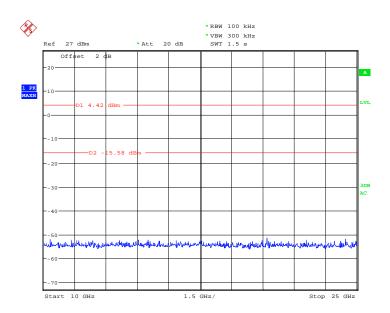




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Test mode: 802.11n(H20) Test channel: Highest







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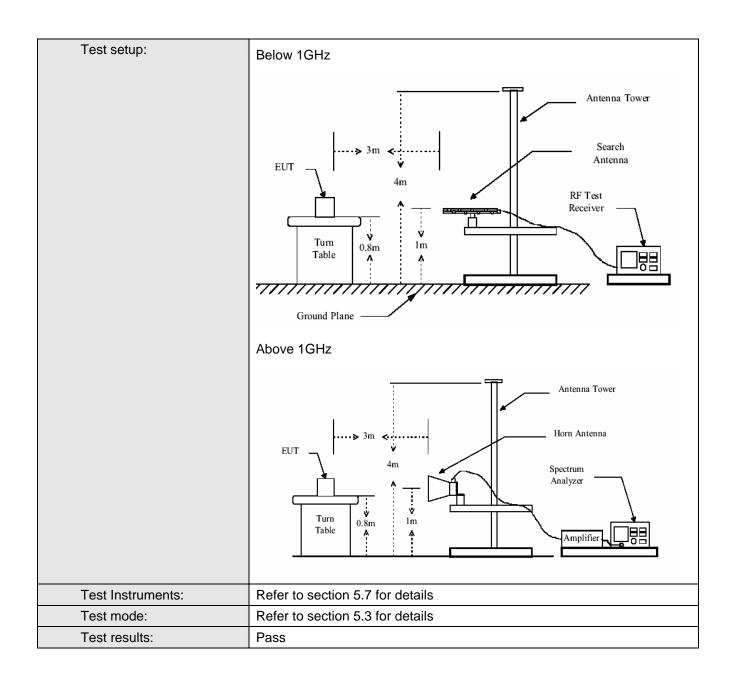
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### 6.7.2 Radiated Emission Method

Test Requirement:	FCC Part15 C Section 15.209 and 15.205										
Test Method:	ANSI C63.4:2003										
Test Frequency Range:	30MHz to 25GHz										
Test site:	Measurement Distance: 3m (Semi-Anechoic Chamber)										
Receiver setup:  Limit:	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.	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:	<ul> <li>a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic camber. The table was rotated 360 degrees to determine the position of the highest radiation.</li> <li>b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.</li> <li>c. 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.</li> <li>d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotable table was turned from 0 degrees to 360 degrees to find the maximum reading.</li> <li>e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.</li> <li>f. 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.</li> </ul>										



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### Note:

The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

Final Test Level =Receiver Reading + Antenna Factor + Cable Factor - Preamplifier Factor



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### **Below 1GHz**

#### Test in WIFI mode.

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
32.07	47.51	14.60	0.61	32.23	30.49	40.00	-9.51	Vertical
71.33	45.25	13.23	0.86	31.87	27.47	40.00	-12.53	Vertical
156.46	50.20	10.02	1.56	32.01	29.77	43.50	-13.73	Vertical
230.91	48.15	10.86	1.90	32.28	28.63	46.00	-17.37	Vertical
400.43	51.68	14.22	2.26	32.32	35.84	46.00	-10.16	Vertical
699.31	48.24	20.27	2.94	31.70	39.75	46.00	-6.25	Vertical
49.71	39.47	14.80	0.67	32.01	22.93	40.00	-17.07	Horizontal
166.65	52.42	11.53	1.61	32.08	33.48	43.50	-10.02	Horizontal
232.53	53.77	11.98	1.91	32.28	35.38	46.00	-10.62	Horizontal
349.25	55.08	13.84	2.17	32.31	38.78	46.00	-7.22	Horizontal
400.43	54.74	15.64	2.26	32.32	40.32	46.00	-5.68	Horizontal
701.76	47.34	23.19	2.94	31.69	41.78	46.00	-4.22	Horizontal



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#### **Above 1GHz**

Test mode:	802.1	1b	Test chann	el: Lowest		Remark:		Peal	k	
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)		Level (dBuV/m)	Limit Line (dBuV/m)	Li	ver mit dB)	polarization
4824	43.71	31.79	5.34	24.0	)7	56.77	74.00	-17	7.23	Vertical
7236	33.72	36.19	6.88	26.4	14	50.35	74.00	-23	3.65	Vertical
9648	31.99	38.07	8.96	25.3	36	53.66	74.00	-20	0.34	Vertical
12060	30.50	39.05	10.35	25.1	15	54.75	74.00	-19	9.25	Vertical
14472							74.00			Vertical
16884							74.00			Vertical
4824	45.05	31.79	5.34	24.0	70	58.11	74.00	-18	5.89	Horizontal
7236	35.11	36.19	6.88	26.4	14	51.74	74.00	-22	2.26	Horizontal
9648	33.43	38.07	8.96	25.3	36	55.10	74.00	-18	3.90	Horizontal
12060	31.99	39.05	10.35	25.1	15	56.24	74.00	-17	7.76	Horizontal
14472							74.00			Horizontal
16884						•	74.00			Horizontal

Test mode:	802.1	1b	Test chann	el: Lowest		Remark:	Remark:		rage	
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)		amp or (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Li	ver mit dB)	polarization
4824	24.96	31.79	5.34	24	.07	38.02	54.00	-1	5.98	Vertical
7236	18.75	36.19	6.88	26	.44	35.38	54.00	-18	3.62	Vertical
9648	16.50	38.07	8.96	25	.36	38.17	54.00	-1	5.83	Vertical
12060	15.18	39.05	10.35	25	.15	39.43	54.00	-14	4.57	Vertical
14472							54.00			Vertical
16884							54.00			Vertical
4824	26.27	31.79	5.34	24	.07	39.33	54.00	-14	4.67	Horizontal
7236	20.11	36.19	6.88	26	.44	36.74	54.00	-17	7.26	Horizontal
9648	17.91	38.07	8.96	25	.36	39.58	54.00	-14	4.42	Horizontal
12060	16.64	39.05	10.35	25	.15	40.89	54.00	-13	3.11	Horizontal
14472							54.00			Horizontal
16884							54.00			Horizontal

#### Remark

<sup>&</sup>quot;---" means that the emission level is too low to be measured



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Test mode:	802.1	1b	Test chann	el:	el: Middle		Middle		Middle		Middle F		Remark:		Peal	<
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	SS Factor		Level (dBuV/m)	Limit Line (dBuV/m)	L	ver imit dB)	polarization						
4824	44.00	31.85	5.40	24.0	)1	57.24	74.00	-10	6.76	Vertical						
7236	32.20	36.37	6.90	26.5	58	48.89	74.00	-2	5.11	Vertical						
9648	31.24	38.13	8.98	25.3	34	53.01	74.00	-20	0.99	Vertical						
12060	29.06	38.92	10.38	25.0	)4	53.32	74.00	-2	3.68	Vertical						
14472							74.00			Vertical						
16884							74.00			Vertical						
4824	45.84	31.85	5.40	24.0	)1	59.08	74.00	-1	4.92	Horizontal						
7236	34.13	36.37	6.90	26.5	58	50.82	74.00	-2	3.18	Horizontal						
9648	33.26	38.13	8.98	25.3	34	55.03	74.00	-18	3.97	Horizontal						
12060	31.17	38.92	10.38	25.0	)4	55.43	74.00	-18	3.57	Horizontal						
14472							74.00			Horizontal						
16884							74.00		, and the second	Horizontal						

Test mode:	802.1	1b	Test chann	el: Mide	dle	Remark:	Ave	rage
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
4874	26.38	31.85	5.40	24.01	39.62	54.00	-14.38	Vertical
7311	19.25	36.37	6.90	26.58	35.94	54.00	-18.06	Vertical
9688	15.21	38.13	8.98	25.34	36.98	54.00	-17.02	Vertical
12185	16.19	38.92	10.38	25.04	40.45	54.00	-13.55	Vertical
14682						54.00		Vertical
17179						54.00		Vertical
4874	28.12	31.85	5.40	24.01	41.36	54.00	-12.64	Horizontal
7311	21.03	36.37	6.90	26.58	37.72	54.00	-16.28	Horizontal
9688	17.03	38.13	8.98	25.34	38.80	54.00	-15.20	Horizontal
12185	18.05	38.92	10.38	25.04	42.31	54.00	-11.69	Horizontal
14682						54.00		Horizontal
17179						54.00		Horizontal

#### Remark

"---" means that the emission level is too low to be measured



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Test mode:	802.1	1b	Test chann	el: Highest		est channel: Highest Remark: Peak		Remark:		<
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB		Level (dBuV/m)	Limit Line (dBuV/m)	Li	ver mit IB)	polarization
4924	43.15	31.89	5.46	23.96	;	56.54	74.00	-17	'.46	Vertical
7386	34.40	36.49	6.93	26.79	)	51.03	74.00	-22	2.97	Vertical
9848	30.73	38.24	9.05	25.30		52.72	74.00	-21	.28	Vertical
12310	29.07	38.83	10.41	24.90		53.41	74.00	-20	).59	Vertical
14772							74.00			Vertical
17234							74.00			Vertical
4924	44.89	31.89	5.46	23.96	;	58.28	74.00	-15	5.72	Horizontal
7386	36.25	36.49	6.93	26.79	)	52.88	74.00	-21	.12	Horizontal
9848	32.69	38.24	9.05	25.30	)	54.68	74.00	-19	9.32	Horizontal
12310	31.14	38.83	10.41	24.90	)	55.48	74.00	-18	3.52	Horizontal
14772							74.00			Horizontal
17234							74.00		, and the second	Horizontal

Test mode:	802.1	1b	Test chann	est channel: Highest		Remark:	Aver	age
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	26.49	31.89	5.46	23.96	39.88	54.00	-14.12	Vertical
7386	20.44	36.49	6.93	26.79	37.07	54.00	-16.93	Vertical
9848	20.97	38.24	9.05	25.30	42.96	54.00	-11.04	Vertical
12310	17.38	38.83	10.41	24.90	41.72	54.00	-12.28	Vertical
14772						54.00		Vertical
17234						54.00		Vertical
4924	28.15	31.89	5.46	23.96	41.54	54.00	-12.46	Horizontal
7386	22.13	36.49	6.93	26.79	38.76	54.00	-15.24	Horizontal
9848	22.69	38.24	9.05	25.30	44.68	54.00	-9.32	Horizontal
12310	19.13	38.83	10.41	24.90	43.47	54.00	-10.53	Horizontal
14772						54.00		Horizontal
17234						54.00		Horizontal

### Remark

"---" means that the emission level is too low to be measured



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Test mode:	802.1	1g	Test chann	el: Lowest		Remark:		Peal	K	
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)		amp or (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	L	ver imit dB)	polarization
4824	42.21	31.79	5.34	24	.07	55.27	74.00	-18	3.73	Vertical
7236	35.50	36.19	6.88	26	5.44	52.13	74.00	-2	1.87	Vertical
9648	31.12	38.07	8.96	25	.36	52.79	74.00	-2	1.21	Vertical
12060	29.41	39.05	10.35	25	5.15	53.66	74.00	-20	0.34	Vertical
14472							74.00			Vertical
16884							74.00			Vertical
4824	42.32	31.79	5.34	24	.07	55.38	74.00	-18	3.62	Horizontal
7236	34.76	36.19	6.88	26	.44	51.39	74.00	-2	2.61	Horizontal
9648	32.32	38.07	8.96	25	.36	53.99	74.00	-2	0.01	Horizontal
12060	30.55	39.05	10.35	25	5.15	54.80	74.00	-19	9.20	Horizontal
14472							74.00		, and the second	Horizontal
16884							74.00			Horizontal

Test mode:	802.1	1g	Test chann	nel: Lowest		Remark:	P	∖ver	age	
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)		amp or (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Ove Lim (dB	it	polarization
4824	28.91	31.79	5.34	24	.07	41.97	54.00	-12.0	03	Vertical
7236	22.77	36.19	6.88	26	.44	39.40	54.00	-14.6	60	Vertical
9648	17.44	38.07	8.96	25	.36	39.11	54.00	-14.8	39	Vertical
12060	15.98	39.05	10.35	25	.15	40.23	54.00	-13.7	77	Vertical
14472							54.00			Vertical
16884							54.00			Vertical
4824	30.22	31.79	5.34	24	.07	43.28	54.00	-10.7	72	Horizontal
7236	24.13	36.19	6.88	26	.44	40.76	54.00	-13.2	24	Horizontal
9648	18.85	38.07	8.96	25	.36	40.52	54.00	-13.4	48	Horizontal
12060	17.44	39.05	10.35	25	.15	41.69	54.00	-12.3	31	Horizontal
14472							54.00			Horizontal
16884							54.00			Horizontal

### Remark

"---" means that the emission level is too low to be measured



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Test mode:	802.1	1g	Test chann	iel:	el: Middle		Remark:		Pea	k
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	SS Factor		Level (dBuV/m)	Limit Line (dBuV/m)	Li	ver mit fB)	polarization
4874	40.02	31.85	5.40	24.	01	53.26	74.00	-20	0.74	Vertical
7311	32.94	36.37	6.90	26.	58	49.63	74.00	-24	1.37	Vertical
9688	28.64	38.13	8.98	25.	34	50.41	74.00	-23.59		Vertical
12185	29.50	38.92	10.38	8 25.0		53.76	74.00	-20	0.24	Vertical
14472							74.00			Vertical
16884							74.00			Vertical
4874	41.85	31.85	5.40	24.	01	55.09	74.00	-18	3.91	Horizontal
7311	34.17	36.37	6.90	26.	58	50.86	74.00	-23	3.14	Horizontal
9688	28.88	38.13	8.98	25.	34	50.65	74.00	-23	3.35	Horizontal
12185	29.75	38.92	10.38	25.	04	54.01	74.00	-19	9.99	Horizontal
14472							74.00			Horizontal
16884					•		74.00			Horizontal

Test mode:	802.1	1g	Test chann	channel: Middle		Remark: Aver		age
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	26.33	31.85	5.40	24.01	39.57	54.00	-14.43	Vertical
7311	22.65	36.37	6.90	26.58	39.34	54.00	-14.66	Vertical
9688	17.46	38.13	8.98	25.34	39.23	54.00	-14.77	Vertical
12185	16.25	38.92	10.38	25.04	40.51	54.00	-13.49	Vertical
14472						54.00		Vertical
16884						54.00		Vertical
4874	28.07	31.85	5.40	24.01	41.31	54.00	-12.69	Horizontal
7311	24.43	36.37	6.90	26.58	41.12	54.00	-12.88	Horizontal
9688	19.28	38.13	8.98	25.34	41.05	54.00	-12.95	Horizontal
12185	18.11	38.92	10.38	25.04	42.37	54.00	-11.63	Horizontal
14472						54.00		Horizontal
16884						54.00		Horizontal

#### Remark

"---" means that the emission level is too low to be measured



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Test mode:	802.1	1g	Test chann	el: Hi	el: Highest		Pea	k
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (d		Limit Line (dBuV/m)	Over Limit (dB)	polarization
4924	41.70	31.89	5.46	23.96	55.09	74.00	-18.91	Vertical
7386	35.65	36.49	6.93	26.79	52.28	74.00	-21.72	Vertical
9848	32.10	38.24	9.05	25.30	54.09	74.00	-19.91	Vertical
12310	29.13	38.83	10.41	24.90	53.47	74.00	-20.53	Vertical
14772						74.00		Vertical
17234						74.00		Vertical
4924	44.12	31.89	5.46	23.96	57.51	74.00	-16.49	Horizontal
7386	35.73	36.49	6.93	26.79	52.36	74.00	-21.64	Horizontal
9848	32.10	38.24	9.05	25.30	54.09	74.00	-19.91	Horizontal
12310	29.07	38.83	10.41	24.90	53.41	74.00	-20.59	Horizontal
14772						74.00		Horizontal
17234						74.00		Horizontal

Test mode:	802.1	1g	Test chann	nnel: Highest		Remark: Aver		age
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	26.80	31.89	5.46	23.96	40.19	54.00	-13.81	Vertical
7386	22.96	36.49	6.93	26.79	39.59	54.00	-14.41	Vertical
9848	18.70	38.24	9.05	25.30	40.69	54.00	-13.31	Vertical
12310	16.96	38.83	10.41	24.90	41.30	54.00	-12.70	Vertical
14772						54.00		Vertical
17234						54.00		Vertical
4924	28.46	31.89	5.46	23.96	41.85	54.00	-12.15	Horizontal
7386	24.65	36.49	6.93	26.79	41.28	54.00	-12.72	Horizontal
9848	20.42	38.24	9.05	25.30	42.41	54.00	-11.59	Horizontal
12310	18.71	38.83	10.41	24.90	43.05	54.00	-10.95	Horizontal
14772						54.00		Horizontal
17234						54.00		Horizontal

### Remark

"---" means that the emission level is too low to be measured



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Test mode:	802.1	1n(H20)	Test chann	el: Lowe	el: Lowest		Peal	K
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	35.40	31.79	5.34	24.07	48.46	74.00	-25.54	Vertical
7236	31.62	36.19	6.88	26.44	48.25	74.00	-25.75	Vertical
9648	30.13	38.07	8.96	25.36	51.80	74.00	-22.20	Vertical
12060	28.79	39.05	10.35	25.15	53.04	74.00	-20.96	Vertical
14472						74.00		Vertical
16884						74.00		Vertical
4824	36.71	31.79	5.34	24.07	49.77	74.00	-24.23	Horizontal
7236	32.98	36.19	6.88	26.44	49.61	74.00	-24.39	Horizontal
9648	31.54	38.07	8.96	25.36	53.21	74.00	-20.79	Horizontal
12060	30.25	39.05	10.35	25.15	54.50	74.00	-19.50	Horizontal
14472						74.00		Horizontal
16884						74.00		Horizontal

Test mode:	802.1	1n(H20)	Test chann	el:	el: Lowest		Remark: Ave		Aver	age
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)		Level (dBuV/m)	Limit Line (dBuV/m)	L	ver imit dB)	polarization
4824	24.26	31.79	5.34	24	.07	37.32	54.00	-1	6.68	Vertical
7236	22.82	36.19	6.88	26	.44	39.45	54.00	-1	4.55	Vertical
9648	18.67	38.07	8.96	25.36		40.34	54.00	-1	3.66	Vertical
12060	16.13	39.05	10.35	25.15		40.38	54.00	-1	3.62	Vertical
14472							54.00			Vertical
16884							54.00			Vertical
4824	25.57	31.79	5.34	24	.07	38.63	54.00	-1:	5.37	Horizontal
7236	24.18	36.19	6.88	26	.44	40.81	54.00	-1	3.19	Horizontal
9648	20.08	38.07	8.96	25	.36	41.75	54.00	-1:	2.25	Horizontal
12060	17.59	39.05	10.35	25	.15	41.84	54.00	-1:	2.16	Horizontal
14472							54.00			Horizontal
16884							54.00			Horizontal

#### Remark

"---" means that the emission level is too low to be measured



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74.00

Horizontal

Test mode:	802.1	1n(H20)	Test chann	hannel: Middle		Remark:	Pea	k
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	38.17	31.85	5.40	24.01	51.41	74.00	-22.59	Vertical
7311	31.91	36.37	6.90	26.58	48.60	74.00	-25.40	Vertical
9688	27.69	38.13	8.98	25.34	49.46	74.00	-24.54	Vertical
12185	27.63	38.92	10.38	25.04	51.89	74.00	-22.11	Vertical
14472						74.00		Vertical
16884						74.00		Vertical
4874	39.91	31.85	5.40	24.01	53.15	74.00	-20.85	Horizontal
7311	33.69	36.37	6.90	26.58	50.38	74.00	-23.62	Horizontal
9688	29.51	38.13	8.98	25.34	51.28	74.00	-22.72	Horizontal
12185	29.49	38.92	10.38	25.04	53.75	74.00	-20.25	Horizontal
14472						74.00		Horizontal

Test mode:	802.1	1n(H20)	Test chann	el: Middle		Remark:	Aver	age
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	25.64	31.85	5.40	24.01	38.88	54.00	-15.12	Vertical
7311	23.79	36.37	6.90	26.58	40.48	54.00	-13.52	Vertical
9688	19.54	38.13	8.98	25.34	41.31	54.00	-12.69	Vertical
12185	17.61	38.92	10.38	25.04	41.87	54.00	-12.13	Vertical
14472						54.00		Vertical
16884						54.00		Vertical
4874	27.38	31.85	5.40	24.01	40.62	54.00	-13.38	Horizontal
7311	25.57	36.37	6.90	26.58	42.26	54.00	-11.74	Horizontal
9688	21.36	38.13	8.98	25.34	43.13	54.00	-10.87	Horizontal
12185	19.47	38.92	10.38	25.04	43.73	54.00	-10.27	Horizontal
14472						54.00		Horizontal
16884						54.00		Horizontal

#### Remark

16884

"---" means that the emission level is too low to be measured



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Test mode:	802.1	1n(H20)	Test chann	annel: Highest		Remark:	Pea	k
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	38.10	31.89	5.46	23.96	51.49	74.00	-22.51	Vertical
7386	34.18	36.49	6.93	26.79	50.81	74.00	-23.19	Vertical
9848	31.30	38.24	9.05	25.30	53.29	74.00	-20.71	Vertical
12310	28.37	38.83	10.41	24.90	52.71	74.00	-21.29	Vertical
14772						74.00		Vertical
17234						74.00		Vertical
4924	39.76	31.89	5.46	23.96	53.15	74.00	-20.85	Horizontal
7386	35.87	36.49	6.93	26.79	52.50	74.00	-21.50	Horizontal
9848	33.02	38.24	9.05	25.30	55.01	74.00	-18.99	Horizontal
12310	30.12	38.83	10.41	24.90	54.46	74.00	-19.54	Horizontal
14772						74.00		Horizontal
17234						74.00		Horizontal

Test mode:	802.1	1n(H20)	Test chann	nel: Highest		Remark:	Avera		age	
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB		Level (dBuV/m)	Limit Line (dBuV/m)	L	over imit dB)	polarization
4924	26.14	31.89	5.46	23	.96	39.53	54.00	-1	4.47	Vertical
7386	23.30	36.49	6.93	26	.79	39.93	54.00	-1	4.07	Vertical
9848	20.04	38.24	9.05	25	.30	42.03	74.00	-3	1.97	Vertical
12310	18.60	38.83	10.41	24.90		42.94	54.00	-1	1.06	Vertical
14772							54.00			Vertical
17234							54.00			Vertical
4924	27.80	31.89	5.46	23	.96	41.19	54.00	-1	2.81	Horizontal
7386	24.99	36.49	6.93	26	.79	41.62	54.00	-1	2.38	Horizontal
9848	21.76	38.24	9.05	25	.30	43.75	54.00	-1	0.25	Horizontal
12310	20.35	38.83	10.41	24	.90	44.69	54.00	-6	9.31	Horizontal
14772							54.00		•	Horizontal
17234							54.00			Horizontal

### Remark

"---" means that the emission level is too low to be measured