

Report No.: EF/2009/90003 **Issue Date: Sep. 25, 2009** 

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# ELECTROMAGNETIC EMISSIONS COMPLIANCE REPORT

# INTENTIONAL RADIATOR CERTIFICATION TO FCC PART 15 SUBPART C REQUIREMENT AND INDUSTRY CANADA RSS 210

**Product Name: Notebook Computer** 

**Brand Name: FUJITSU** 

FCC: LifeBook P3010, P30XX(0-9,A-Z or blank)

**Model Name:** IC: P3010

Difference model for difference market **Model Different:** 

FCC ID: **EJE-WB0079** 

IC: 337J-WB0079

Report No.: EF/2009/90003

**Issue Date:** Sep. 25, 2009

**FCC Rule Part:** §15.247, Cat: DTS

IC Rule Part: RSS-210 issue 7:2007, Annex 8

**Prepared for: Fujitsu Limited** 

4-1-1 Kamikodanaka, Nakahara-ku Kawa-

saki-shi, Kanagawa, 211-8588 JAPAN

Prepared by: SGS Taiwan Ltd.

**Electronics & Communication Laboratory** 

No. 134, Wu Kung Rd., Wuku Industrial Zone,

Taipei County, Taiwan.



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Report No.: EF/2009/90003 Issue Date: Sep. 25, 2009

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# VERIFICATION OF COMPLIANCE

Fujitsu Limited **Applicant:** 

4-1-1 Kamikodanaka, Nakahara-ku Kawasaki-shi, Kanagawa,

211-8588 JAPAN

**Product Name:** Notebook Computer

**Brand Name: FUJITSU** 

FCC ID: **EJE-WB0079** 

IC: 337J-WB0079

FCC: LifeBook P3010, P30XX(0-9,A-Z or blank) Model No.:

IC: P3010

**Model Difference:** Difference model for difference market

File Number: EF/2009/90003

**Date of test:** Sep. 10, 2009 ~ Sep. 22, 2009

**Date of EUT Received:** Sep. 10, 2009

# We hereby certify that:

The above equipment was tested by SGS Taiwan Ltd. Electronics & Communication Laboratory The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.4 (2003) and the energy emitted by the sample EUT tested as described in this report is in compliance with conducted and radiated emission limits of FCC Rules Part 15.247 and IC RSS 210 issue 7: 2007 Annex 8.

The test results of this report relate only to the tested sample identified in this report.

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Test By:	Sky Wang	Date:	Sep. 25, 2009	
_	Sky Wang / Asst. Supervisor			
Prepared By:	Gigi yeh	Date:	Sep. 25, 2009	
Approved By:	Gigi Yeh/Clerk	Date:	Sep. 25, 2009	
_	Vincent Su / Manager		1 /	

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# Version

Version No.	Date	Description
00	Sep. 25, 2009	Initial creation of document

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## **GENERAL INFORMATION**

# 1.1 Product Description

## General:

Product Name:	Notebook Computer			
Brand Name:	FUJITSU			
Model Name:	FCC: LifeBook P3010, P30XX(0-9,A-Z or blank) IC: P3010			
Model Difference:	Difference model for difference market			
	19Vdc by AC	DC power adapter		
Power Supply	Battery:	Model: FP130226, Supplier: SANYO		
	Adapter:	Model: ADP-60ZH A, Supplier: FUJITSU		

#### WLAN:

WLAN:	
Frequency Range & Channel number:	802.11 b/g: 2412 – 2462 MHz, 11 channels 802.11 n_20MHz: 2412 – 2462 MHz, 11 channels 802.11 n_40MHz: 2422 – 2452 MHz, 9 channels
Max Measured Power:	802.11 b: 18.97 dBm 802.11 g: 19.27 dBm 802.11 n_20MHz: 19.19 dBm 802.11 n_40MHz: 17.85 dBm
Modulation type:	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM
Transmission Rate:	802.11 b: 1/2/5.5/11 Mbps; 802.11 g: 6/9/12/18/24/36/48/54 Mbps 802.11 n_20MHz: 6.5 – 144.44Mbps 802.11 n_40MHz: 13.5 - 300Mbps
Antenna Designation:	TX1 Model No.: DQ6520xxx00(C680-520204-A) : PIFA Antenna / -5.37dBi. TX2 Model No.: DQ6520xxx00(C680-520204-A): PIFA Antenna / -1.42dBi.
WLAN module FCC ID	PPD-AR5B95
WLAN module IC ID	4104A-AR5B95
Type of Emission	802.11 b: 15M8D4D 802.11 g: 17M2D9D 802.11 n_20MHz: 18M2D5D 802.11 n_40MHz: 36M5G7D

## The EUT is compliance with IEEE 802.11 b/g/n Standard.

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В	luetooth	•

Bluetooth Version	<ul> <li>V1.1 (GFSK)</li> <li>V1.2 (GFSK)</li> <li>V2.0 (GFSK)</li> <li>V2.0 + EDR (GFSK + /4DQPSK + 8DPSK)</li> <li>V2.1 + EDR (GFSK + /4DQPSK + 8DPSK)</li> </ul>			
Frequency Range	2402 – 2480MHz			
Channel number	79 channels max.			
Max Measured Power:	1.96 dBm (Peak)			
Modulation type	Frequency Hopping Spread Spectrum			
Antenna Designation	Chip antenna, 2dBi			
Type of Emission	1M17FXD			
BT module FCC ID	PIWBSMAN			
BT module IC ID	5255A-BSMAN			

The EUT is compliance with Bluetooth V2.1+EDR Standard.

This test report applies for 802.11b/g WLAN.

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#### 1.2 **Related Submittal(s) / Grant (s)**

This submittal(s) (test report) is intended for FCC ID: EJE-WB0079 filing to comply with Section 15.247 of the FCC Part 15, Subpart C Rules and IC: 337J-WB0079 filing to comply with Industry Canada RSS-210 issue 7: 2007 Annex 8. The composite system (digital device) is compliance with Subpart B is authorized under a DoC procedure.

#### 1.3 **Test Methodology**

Both conducted and radiated testing were performed according to the procedures in ANSI C63.4 (2003) and RSS-Gen: 2007.. Radiated testing was performed at an antenna to EUT distance 3 meters.

#### 1.4 **Test Facility**

The measurement facilities used to collect the 3m Radiated Emission and AC power line conducted data are located on the address of SGS Taiwan Ltd. Electronics & Communication Laboratory No. 134, Wu Kung Rd., Wuku Industrial Zone, Taipei Country, Taiwan which are constructed and calibrated to meet the FCC requirements in documents ANSI C63.4: 2003. FCC Registration Number are: 990257 and 236194, Canada Registration Number: 4620A-1.

The 10 m Open Area Test Sites located on the address of SGS Taiwan Ltd. Electronics & Communication Laboratory No. 29, Pau-Tou-Tsuo Valley Chia-Pau Tsuen, Linkou Hsiang, Taipei county, which is constructed and calibrated to meet the CISPR 22/EN 55022 requirements. SGS Site No. 1(3 &10 meters) and FCC Registration Number: 94644.

#### 1.5 **Special Accessories**

Not available for this EUT intended for grant.

#### 1.6 **Equipment Modifications**

Not available for this EUT intended for grant.

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## SYSTEM TEST CONFIGURATION

#### 2.1 **EUT Configuration**

The EUT configuration for testing is installed on RF field strength measurement to meet the Commissions requirement and operating in a manner which intends to maximize its emission characteristics in a continuous normal application.

#### 2.2 **EUT Exercise**

The EUT (Transmitter) was operated in the engineering mode to fix the Tx frequency that was for the purpose of the measurements.

#### 2.3 **Test Procedure**

#### 2.3.1 Conducted Emissions

The EUT is a placed on as turn table which is 0.8 m above ground plane. According to the requirements in Section 7 and 13 of ANSI C63.4-2003. Conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30MHz using CISPR Quasi-Peak and Average detector mode.

#### 2.3.2 Radiated Emissions

The EUT is a placed on as turn table which is 0.8 m above ground plane. The turn table shall rotate 360 degrees to determine the position of maximum emission level. EUT is set 3m away from the receiving antenna which varied from 1m to 4m to find out the highest emission. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical. In order to find out the max, emission, the relative positions of this hand-held transmitter(EUT) was rotated through three orthogonal axes and measurement procedures for electric field radiated emissions above 1 GHz the EUT measurement is to be made "while keeping the antenna in the 'cone of radiation' from that area and pointed at the area both in azimuth and elevation, with polarization oriented for maximum response." is still within the 3dB illumination BW of the measurement antenna. according to the requirements in Section 8 and 13 of ANSI C63.4-2003.

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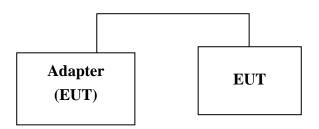


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# **Configuration of Tested System**

Fig. 2-1 AC Power line and Radiated Emission Configuration



**Table 2-1 Equipment Used in Tested System** 

Iten	n Equipment	Mfr/Brand	Model/ Type No.	Series No.	Data Cable	Power Cord
1.	WiFi Software	N/A	WLAN eMapi	N/A	N/A	N/A
2.	AC Adaptor	FUJITSU	ADP-60ZH A	N/A	N/A	180cm, Un-shielded

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### SUMMARY OF TEST RESULTS

FCC Rules	<b>Description Of Test</b>	Result
§15.207(a)/	AC Power Line Conducted Emis-	Compliant
RSS-Gen §7.2.2	sion	
§15.247(b)/	Peak Output Power	Compliant
§A8.4(2)		
§15.247(b)/	6dB Bandwidth	Compliant
§A8.2		
§15.247(c)/	100 KHz Bandwidth Of	Compliant
§A8.5	Frequency Band Edges	
§15.247(c)/	Spurious Emission	N/A
§A8.5		
§15.247/,§A8.3(2)	Peak Power Density	N/A
§15.203/	Antenna Requirement	Compliant
RSS-GEN 7.1.4,		
RSS-210 issue 7,§A8.4		
RSS-Gen §4.4.1	99% Power Bandwidth	N/A

## DESCRIPTION OF TEST MODES

The EUT has been tested under operating condition.

Test program used to control the EUT for staying in continuous transmitting and receiving mode is programmed.

802.11 b mode: Channel low (2412MHz) · mid (2437MHz) and high (2462MHz) with 1Mbps highest data rate are chosen for above testing.

802.11 g mode: Channel low (2412MHz) · mid (2437MHz) and high (2462MHz) with 6Mbps highest data rate are chosen for above testing.

802.11 n\_20MHz: Lowest (2412MHz), Mid (2437MHz) and high (2462MHz) with 6.5 Mbps highest data rate are chosen for above testing.

802.11 n\_40MHz: Lowest (2422MHz), Mid(2437MHz) and high (2452MHz) with 13.5 Mbps highest data rate are chosen for above testing.

Please refer to Compliance Certification Services Inc. Test report No.: 81029005. for more detail test data

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## CONDUCTED EMISSION TEST

#### **5.1. Standard Applicable:**

According to §15.207 and RSS-Gen §7.2.2, frequency range within 150KHz to 30MHz shall not exceed the Limit table as below.

Frequency range		mits (uV)
MHz	Quasi-peak	Average
0.15 to 0.50	66 to 56	56 to 46
0.50 to 5	56	46
5 to 30	60	50

#### Note

## **5.2.** Measurement Equipment Used:

AC Power Line Conducted Emission Test Site							
EQUIPMENT	EQUIPMENT MFR MODEL SERIAL LAST CAL DUE.						
TYPE		NUMBER	NUMBER	CAL.			
EMI Test Receiver	R&S	ESCS30	828985/004	09/15/2009	09/14/2010		
LISN	Rolf-Heine	NNB-2/16Z	99012	02/18/2009	02/17/2010		
LISN	FCC	FCC-LISN-50/250-25-2-01	04034	02/18/2009	02/17/2010		
Coaxial Cables	N/A	WK CE Cable	N/A	10/30/2008	10/29/2009		

## 5.3. EUT Setup:

- 1. The conducted emission tests were performed in the test site, using the setup in accordance with the ANSI C63.4-2003.
- 2. The AC/DC Power adaptor of EUT was plug-in LISN. The EUT was placed flushed with the rear of the table.
- 3. The LISN was connected with 120Vac/60Hz power source.

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<sup>1.</sup> The lower limit shall apply at the transition frequencies

<sup>2.</sup> The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz.



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### **5.4.** Measurement Procedure:

- 1. The EUT was placed on a table which is 0.8m above ground plane.
- 2. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
- 3. Repeat above procedures until all frequency measured were complete.

## 5.5. Measurement Result:

The initial step in collecting conducted data is a spectrum analyzer peak scan of the measurement range. Significant peaks are then marked as shown on the following data page, and these signals are then quasi-peaked.

Note: Refer to next page for measurement data and plots.

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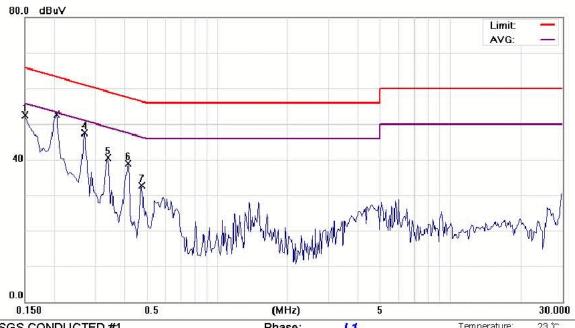


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## AC POWER LINE CONDUCTED EMISSION TEST DATA

Operation Mode:	WLAN Link			Test Date:	Sep. 15, 2009
Temperature:	23 ℃	Humidity:	59 %	Test By:	Sky



Site SGS CONDUCTED #1

Limit: CISPR22 Class B Conduction(QP)

**EUT: Notebook Computer** M/N: LifeBook P3010(JR6) Note: WLAN + Bluetooth Mode

- 6	riiase.	<u></u>	ramparature.	20 C
F	ower:	AC 120V/60Hz	Humidity:	59 %
E	Distance:		Air Pressure:	hpa

No. Mk.	Freq.	Reading Level	Factor	Measure- ment	Limit	Over		
	MHz	dBu∀	dB	dBu∀	dBu∀	dB	Detector	Comment
1	0.1500	51.72	0.75	52.47	66.00	-13.53	peak	
2	0.2025	51.17	0.37	51.54	63.51	-11.97	QP	
3 *	0.2025	41.24	0.37	41.61	53.51	-11.90	AVG	
4	0.2700	47.10	0.33	47.43	61.12	-13.69	peak	
5	0.3400	40.18	0.29	40.47	59.20	-18.73	peak	
6	0.4150	38.56	0.25	38.81	57.55	-18.74	peak	
7	0.4750	32.49	0.24	32.73	56.43	-23.70	peak	

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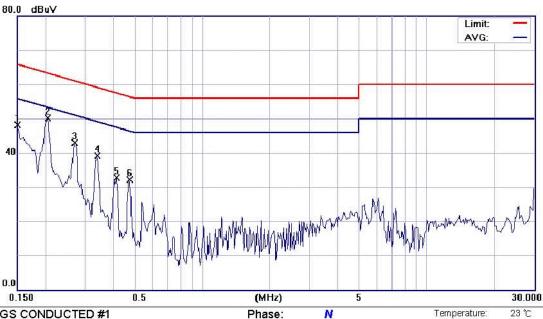
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Site SGS CONDUCTED #1

Limit: CISPR22 Class B Conduction(QP)

**EUT: Notebook Computer** M/N: LifeBook P3010(JR6) Note: WLAN + Bluetooth Mode

Power:	AC 120V/60Hz	Humidity:	59 %
Distance		Air Pressure:	hpa

No. Mk.	Freq.	Reading Level	Factor	Measure- ment	Limit	Over		
	MHz	dBu∀	dB	dBu∀	dBu∀	dB	Detector	Comment
1	0.1500	47.39	0.75	48.14	66.00	-17.86	peak	
2 *	0.2050	49.73	0.37	50.10	63.41	-13.31	peak	
3	0.2700	42.56	0.33	42.89	61.12	-18.23	peak	
4	0.3400	38.88	0.29	39.17	59.20	-20.03	peak	
5	0.4150	32.47	0.25	32.72	57.55	-24.83	peak	
6	0.4750	31.90	0.24	32.14	56.43	-24.29	peak	

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## PEAK OUTPUT POWER MEASUREMENT

# **6.1 Standard Applicable:**

According to  $\S15.247(a)(2)$ , (b)

5725-5850 MHz bands: 1 Watt. As an alternative to a peak power measurement, compliance with the

(3) For systems using digital modulation in the 902-928 MHz, 2400-2483.5 MHz, and

one Watt limit can be based on a measurement of the maximum conducted output power. Maximum Conducted Output Power is defined as the total transmit power delivered to all antennas and antenna

elements averaged across all symbols in the signaling alphabet when the transmitter is operating at its

maximum power control level. Power must be summed across all antennas and antenna elements. The

average must not include any time intervals during which the transmitter is off or is transmitting at a

reduced power level. If multiple modes of operation are possible (e.g., alternative modulation methods),

the maximum conducted output power is the highest total transmit power occurring in any mode.

(4) The conducted output power limit specified in paragraph (b) of this section is based

on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (c)

of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted

output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1),

(b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the

antenna exceeds 6 dBi.

- (c) Operation with directional antenna gains greater than 6 dBi.
- (1) Fixed point-to-point operation:
- (i) Systems operating in the 2400-2483.5 MHz band that are used exclusively for

fixed, point-to-point operations may employ transmitting antennas with directional gain greater than 6

dBi 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 6 dBi.

(ii) Systems operating in the 5725-5850 MHz band that are used exclusively for

fixed, point-to-point operations may employ transmitting antennas with directional gain greater than 6

dBi without any corresponding reduction in transmitter conducted output power.

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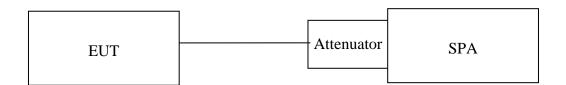
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According to RSS-210 issue 7,§A8.4(2), For frequency hopping systems operating in the 2400-2483.5 MHz band employing at least 75 hopping channels, the maximum conducted output power shall not exceed 1 W. For all other frequency hopping systems, the maximum peak conducted output power shall not exceed 0.125 W.

**6.2** Measurement Equipment Used:

1 T T								
Conducted Emission Test Site								
EQUIPMENT	MFR	MODEL	SERIAL	LAST	CAL DUE.			
ТҮРЕ		NUMBER	NUMBER	CAL.				
Spectrum Analyzer	Agilent	E4446A	MY43360126	04/19/2008	04/18/2010			
Spectrum Analyzer	Agilent	E7405A	US41160416	07/04/2009	07/03/2010			
Spectrum Analyzer	R&S	FSP 40	100034	02/22/2009	02/21/2010			
Low Loss Cable	HUBER+SUHNER	SUCOFLEX 104PEA	N/A	01/05/2009	01/04/2010			
Attenuator	Mini-Circuit	BW-S6W5	N/A	07/05/2009	07/04/2010			

# 6.3 .Test Set-up:



### **6.4 Measurement Procedure:**

- 1. Place the EUT on the table and set it in transmitting mode.
- 2. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the power meter or spectrum. (Channel power function, RBW, VBW = 1MHz, Bandwidth=26dB occupied Bandwidth)
- 3. Record the max. reading.
- 4. Repeat above procedures until all frequency measured were complete.

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## **6.5 Measurement Result:**

802.11b

Frequency (MHz)	Reading Power (dBm)	Cable Loss	Output Power (dBm)	Output Power (W)	Limit (W)
2412.00	18.58	0.00	18.58	0.07211	1
2437.00	18.74	0.00	18.74	0.07482	1
2462.00	18.97	0.00	18.97	0.07889	1

802.11g

Frequency (MHz)	Reading Power (dBm)	Cable Loss	Output Power (dBm)	Output Power (W)	Limit (W)
2412.00	19.08	0.00	19.08	0.08091	1
2437.00	19.18	0.00	19.18	0.08279	1
2462.00	19.27	0.00	19.27	0.08453	1

802.11n 20M

Frequency (MHz)	Reading Power (dBm)	Cable Loss	Output Power (dBm)	Output Power (W)	Limit (W)
2412.00	18.91	0.00	18.91	0.07780	1
2437.00	19.07	0.00	19.07	0.08072	1
2462.00	19.19	0.00	19.19	0.08299	1

802.11n\_40M

Frequency (MHz)	Reading Power (dBm)	Cable Loss	Output Power (dBm)	Output Power (W)	Limit (W)
2422.00	17.51	0.00	17.51	0.05636	1
2437.00	17.72	0.00	17.72	0.05916	1
2452.00	17.85	0.00	17.85	0.06095	1

\*Note: Offset 10.4dB

Note: Refer to next page for plots.

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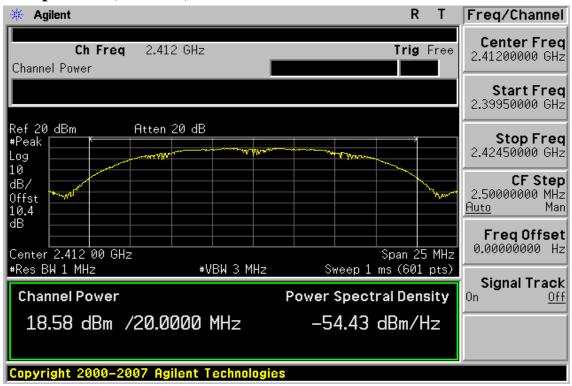


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# 802.11b, 1Mbps

# **Power Output Plot (CH Low)**



# **Power Output Plot (CH Mid)**



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# **Power Output Plot (CH High)**



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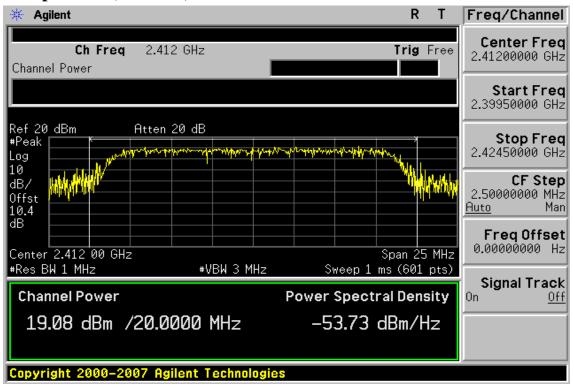


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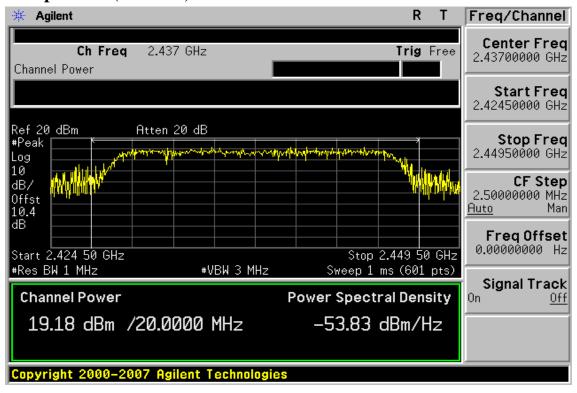
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# 802.11g, 6Mbps

# **Power Output Plot (CH Low)**



# **Power Output Plot (CH Mid)**



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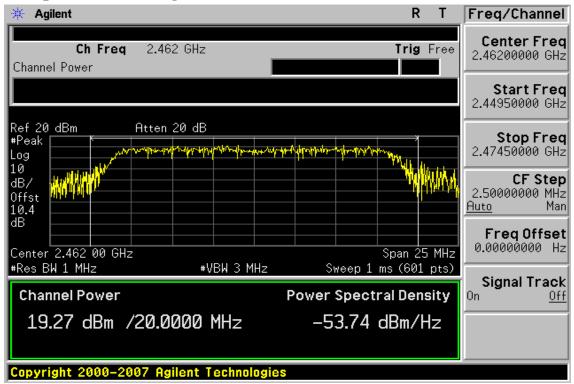
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# **Power Output Plot (CH High)**



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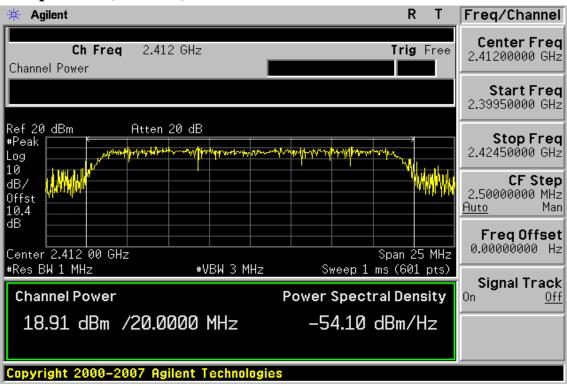
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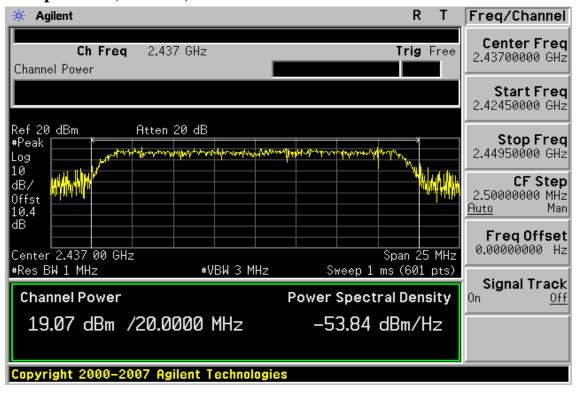
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# 802.11n\_20M, 6.5Mbps **Power Output Plot (CH Low)**



# **Power Output Plot (CH Mid)**



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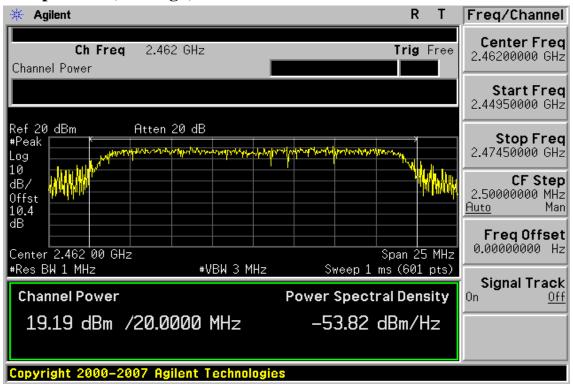
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# **Power Output Plot (CH High)**



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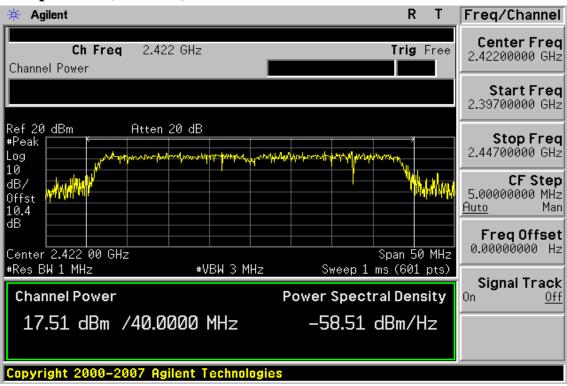
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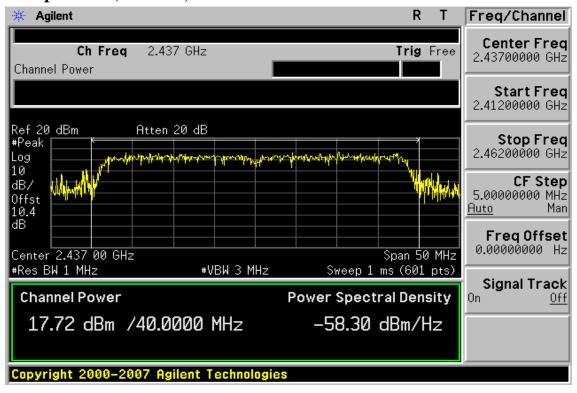
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# 802.11n\_40M, 13.5Mbps **Power Output Plot (CH Low)**



# **Power Output Plot (CH Mid)**



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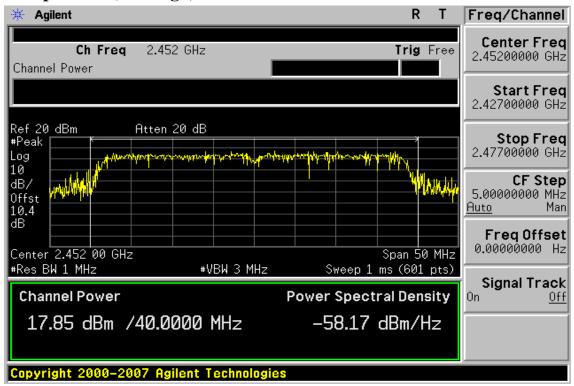
f (886-2) 2298-0488



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# **Power Output Plot (CH High)**



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### 100KHz BANDWIDTH OF BAND EDGES MEASUREMENT

# 7.1 Standard Applicable:

According to §15.247(c), in any 100 KHz bandwidth outside the frequency bands in which the spread spectrum intentional radiator in operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100KHz bandwidth within the band that contains the highest level of the desired power, In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in 15.209(a).

According to RSS-210 issue 7,§A8.5, In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated device is operating, the radio frequency power that is produced 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, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under section A8.4(4), the attenuation required shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in Tables 2 and 3 is not required. In addition, radiated emissions which fall in the restricted bands of Table 1 must also comply with the radiated emission limits specified in Tables 2 and 3.

## 7.2 Measurement Equipment Used:

### 8.2.1. Conducted Emission at antenna port:

Refer to section 6.2 for details.

### 8.2.2. Radiated emission:

Conducted Emission Test Site								
EQUIPMENT	MFR	MODEL	SERIAL	LAST	CAL DUE.			
TYPE		NUMBER	NUMBER	CAL.				
Spectrum Analyzer	Agilent	E4446A	MY43360126	04/19/2008	04/18/2010			
Spectrum Analyzer	Agilent	E7405A	US41160416	07/04/2009	07/03/2010			
Spectrum Analyzer	R&S	FSP 40	100034	02/22/2009	02/21/2010			
Low Loss Cable	HUBER+SUHNER	SUCOFLEX 104PEA	N/A	01/05/2009	01/04/2010			
Attenuator	Mini-Circuit	BW-S6W5	N/A	07/05/2009	07/04/2010			

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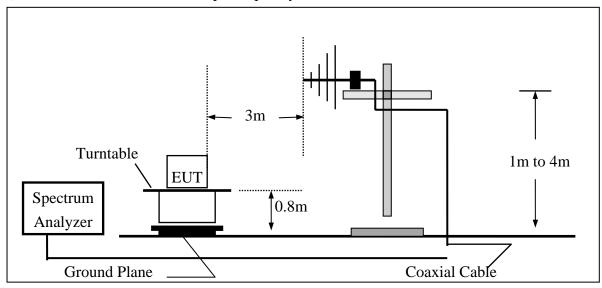
### 7.3 Test SET-UP:

# 7.3.1 Conducted Emission at antenna port:

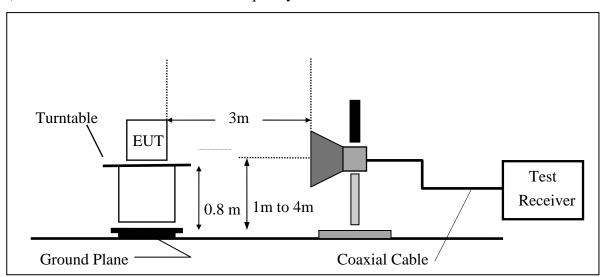
Refer to section 6.3 for details.

#### 7.3.2 Radiated emission:

(A) Radiated Emission Test Set-Up, Frequency Below 1000MHz



## (B) Radiated Emission Test Set-UP Frequency Over 1 GHz



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### 7.4 Measurement Procedure:

- 1. Place the EUT on the table and set it in transmitting mode.
- 2. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.
- 3. Set center frequency of spectrum analyzer = operating frequency.
- 4. Set the spectrum analyzer as RBW, VBW=100KHz, Span=25MHz, Sweep = auto
- 5. Mark Peak, 2.390GHz and 2.4835GHz and record the max. level.
- 6. Repeat above procedures until all frequency measured were complete.

# 7.5 Field Strength Calculation:

The field strength is calculated by adding the Antenna Factor and Cable Factor and subtracting the Amplifier Gain and Duty Cycle Correction Factor(if any) from the measured reading. The basic equation with a sample calculation is as follows:

$$FS = RA + AF + CL - AG$$

Where	FS = Field Strength	CL = Cable Attenuation Factor (Cable Loss)
	RA = Reading Amplitude	AG = Amplifier Gain
	AF = Antenna Factor	

#### 7.6 Measurement Result:

Note: Refer to next page spectrum analyzer data chart and tabular data sheets.

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Radiated Emission: 802.11 b mode

TX CH Low Operation Mode Test Date Sep. 18, 2009

Fundamental Frequency 2412 MHz Test By Sky Temperature Pol Ver. 25

Humidity 65 %

	Peak	$\mathbf{AV}$		Actu	al FS	Peak	$\mathbf{AV}$		
Freq.	Reading	Reading	Ant./CL	Peak	$\mathbf{AV}$	Limit	Limit	Margin	Remark
(MHz)	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/n	<b>n</b> ) ( <b>dB</b> )	
2383.70	62.48		-10.82	51.66		74.00	54.00	-2.34	Peak
2390.00	60.57		-10.76	49.81		74.00	54.00	-4.19	Peak
1			CH Low MHz					Sep. 18, 20 Sky	009
Temperat		25	MITIZ			Pol	-	Hor.	
Humidity		65 %				101			

	Peak	$\mathbf{AV}$		Actu	al FS	Peak	$\mathbf{AV}$		
Freq.	Reading	Reading	Ant./CL	Peak	$\mathbf{AV}$	Limit	Limit	Margin	Remark
(MHz)	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dB)	
2385.85	64.70	57.18	-10.76	53.94	46.42	74.00	54.00	-7.58	ΑV
2390.00	62.48		-10.76	51.72		74.00	54.00	-2.28	Peak

#### Remark:

- Data of measurement within this frequency range shown "-" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (2) Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
- (3) Spectrum Peak Setting: 1GHz- 40GHz, RBW= 1MHz, VBW= 3MHz, Sweep time= 200 ms.
- (4) Spectrum AV Setting: 1GHz-40GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

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## Radiated Emission: 802.11 b mode

TX CH High Operation Mode Test Date Sep. 18, 2009 Fundamental Frequency 2462 MHz Test By Sky Temperature Pol Ver.

25 Humidity 65 %

	Peak	$\mathbf{AV}$		Actu	al FS	Peak	$\mathbf{AV}$		
Freq.	Reading	Reading	Ant./CL	Peak	$\mathbf{AV}$	Limit	Limit	Margin	Remark
(MHz)	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/n	n) (dB)	
2483.56	63.63	56.23	-10.46	53.17	45.77	74.00	54.00	-8.23	AV
2488.26	64.42	56.88	-10.40	54.02	46.48	74.00	54.00	-7.52	AV
Operation :			CH High MHz				t Date t By	Sep. 18, 20 Sky	009
Temperatu	re	25				Pol	-	Hor.	
Humidity		65 %							

	Peak	$\mathbf{AV}$		Actu	al FS	Peak	$\mathbf{AV}$		
Freq.	Reading	Reading	Ant./CL	Peak	$\mathbf{AV}$	Limit	Limit	Margin	Remark
(MHz)	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dB)	
2483.56	64.66	56.32	-10.46	54.20	45.86	74.00	54.00	-8.14	ΑV
2485.96	65.65	56.09	-10.46	55.19	45.63	74.00	54.00	-8.37	ΑV

#### Remark:

- Data of measurement within this frequency range shown "-" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (2) Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
- (3) Spectrum Peak Setting: 1GHz- 40GHz, RBW= 1MHz, VBW= 3MHz, Sweep time= 200 ms.
- (4) Spectrum AV Setting: 1GHz-40GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

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Radiated Emission: 802.11 g mode

Operation Mode TX CH Low Test Date Sep. 18, 2009

Fundamental Frequency 2412 MHz Test By Sky Temperature Pol Ver. 25

Humidity 65 %

	Peak	$\mathbf{AV}$		Actu	ıal FS	Peak	$\mathbf{AV}$		
Freq.	Reading	Reading	Ant./CL	Peak	$\mathbf{AV}$	Limit	Limit	Margin	Remark
(MHz)	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m	( <b>dB</b> )	
2390.00	72.26	58.13	-10.76	61.50	47.37	74.00	54.00	-6.63	AV
Operation 1	Mode	TX C	H Low			Test	Date	Sep. 18, 20	009
Fundament	tal Frequer	ncy 2412	MHz			Test	By	Sky	
Temperatu	re	25				Pol		Hor.	
Humidity		65 %							

		Peak	$\mathbf{AV}$		Actu	al FS	Peak	$\mathbf{AV}$		
	Freq.	Reading	Reading	Ant./CL	Peak	$\mathbf{AV}$	Limit	Limit	Margin	Remark
	(MHz)	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	)(dBuV/m)	(dB)	
•	2390.00	74.00	58.49	-10.76	63.24	47.73	74.00	54.00	-6.27	ΑV

### Remark:

- Data of measurement within this frequency range shown "-" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
- (3) Spectrum Peak Setting: 1GHz- 40GHz, RBW= 1MHz, VBW= 3MHz, Sweep time= 200 ms.
- (4) Spectrum AV Setting: 1GHz-40GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

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Radiated Emission: 802.11 g mode

Operation Mode TX CH High Test Date Sep. 18, 2009

Fundamental Frequency 2462 MHz Test By Sky Temperature Pol Ver. 25

Humidity 65 %

	Peak	$\mathbf{AV}$		Actu	ıal FS	Peak	$\mathbf{AV}$		
Freq.	Reading	Reading	Ant./CL	Peak	$\mathbf{AV}$	Limit	Limit	Margin	Remark
(MHz)	(dBuV)	(dBuV)	CF(dB)	(dBuV/m	) (dBuV/m)	(dBuV/m)	(dBuV/n	n) (dB)	
2483.50	75.87	60.27	-10.46	65.41	49.81	74.00	54.00	-4.19	AV
Operation 1			CH High					Sep. 18, 20	009
Fundament		ncy 2462	MHz			Test	t By	Sky	
Temperatu	re	25				Pol		Hor.	
Humidity		65 %							

		Peak	$\mathbf{AV}$		Actu	al FS	Peak	$\mathbf{AV}$		
	Freq.	Reading	Reading	Ant./CL	Peak	$\mathbf{AV}$	Limit	Limit	Margin	Remark
	(MHz)	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	)(dBuV/m)	(dB)	
_	2483.56	80.63	63.31	-10.46	70.17	52.85	74.00	54.00	-1.15	ΑV

### Remark:

- Data of measurement within this frequency range shown "-" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
- (3) Spectrum Peak Setting: 1GHz- 40GHz, RBW= 1MHz, VBW= 3MHz, Sweep time= 200 ms.
- (4) Spectrum AV Setting: 1GHz-40GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

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Radiated Emission: 802.11 n 20M mode

Operation Mode TX CH Low Test Date Sep. 18, 2009

Fundamental Frequency 2412 MHz Test By Sky Temperature Pol Ver. 25

Humidity 65 %

	Peak	$\mathbf{AV}$		Actu	ıal FS	Peak	$\mathbf{AV}$		
Freq.	Reading	Reading	Ant./CL	Peak	$\mathbf{AV}$	Limit	Limit	Margin	Remark
(MHz)	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBu V/n	<b>1</b> ) ( <b>dB</b> )	
2390.00	72.04	58.19	-10.76	61.28	47.43	74.00	54.00	-6.57	AV
Operation 1	Mode	TX C	H Low			Test	Date	Sep. 18, 20	009
Fundament	tal Frequer	ncy 2412	MHz			Test	Ву	Sky	
Temperatu	re	25				Pol		Hor.	
Humidity		65 %							

		Peak	$\mathbf{AV}$		Actu	ıal FS	Peak	$\mathbf{AV}$		
	Freq.	Reading	Reading	Ant./CL	Peak	$\mathbf{AV}$	Limit	Limit	Margin	Remark
	(MHz)	(dBuV)	(dBuV)	CF(dB)	(dBuV/m	) (d Bu V/m)	(dBuV/m	(dBuV/m)	( <b>dB</b> )	
2	2390.00	75.67	60.74	-10.76	64.91	49.98	74.00	54.00	-4.02	AV

### Remark:

- Data of measurement within this frequency range shown "-" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
- (3) Spectrum Peak Setting: 1GHz- 40GHz, RBW= 1MHz, VBW= 3MHz, Sweep time= 200 ms.
- (4) Spectrum AV Setting: 1GHz-40GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

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Radiated Emission: 802.11 n 20M mode

Operation Mode TX CH High Test Date Sep. 18, 2009

Fundamental Frequency 2462 MHz Test By Sky
Temperature 25 Pol Ver.

Humidity 65 %

	Peak	$\mathbf{AV}$		Actı	ıal FS	Peak	$\mathbf{AV}$		
Freq.	Reading	Reading	Ant./CL	Peak	$\mathbf{AV}$	Limit	Limit	Margin	Remark
(MHz)	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBu V/n	n) (dB)	
2483.56	4.38	60.87	-10.46	-6.08	50.41	74.00	54.00	-3.59	AV
Operation 1			H High				Date	Sep. 18, 20	009
Fundament		ncy 2462	MHz			Test	Ву	Sky	
Temperatu	re	25				Pol		Hor.	
Humidity		65 %							

		Peak	$\mathbf{AV}$		Actu	al FS	Peak	$\mathbf{AV}$		
	Freq.	Reading	Reading	Ant./CL	Peak	$\mathbf{AV}$	Limit	Limit	Margin	Remark
	(MHz)	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dB)	
,	2483 56	76 22	61 18	-1046	65.76	50.72	74 00	54 00	-3 28	ΑV

### Remark:

- (1) Data of measurement within this frequency range shown "-" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (2) Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
- (3) Spectrum Peak Setting: 1GHz- 40GHz, RBW= 1MHz, VBW= 3MHz, Sweep time= 200 ms.
- (4) Spectrum AV Setting: 1GHz-40GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

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Radiated Emission: 802.11 n 40M mode

Operation Mode TX CH Low Sep. 18, 2009 **Test Date** 

Fundamental Frequency 2422 MHz Test By Sky Pol Ver. Temperature 25

Humidity 65 %

	Peak	$\mathbf{AV}$		Actu	ıal FS	Peak	$\mathbf{AV}$		
Freq.	Reading	Reading	Ant./CL	Peak	$\mathbf{AV}$	Limit	Limit	Margin	Remark
(MHz)	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBu V/n	<b>a</b> ) ( <b>dB</b> )	
2390.00	74.89	63.49	-10.76	64.13	52.73	74.00	54.00	-1.27	AV
Operation Mode TX CH Low					Test	Date	Sep. 18, 20	009	
Fundamental Frequency 244			MHz			Test	By	Sky	
Temperatu	re	25				Pol		Hor.	
Humidity		65 %							

Peak  $\mathbf{AV}$ **Actual FS** Peak AVReading Reading Ant./CL  $\mathbf{AV}$ Freq. **Peak** Limit Limit Margin Remark (MHz)(dBuV) (dBuV) CF(dB) (dBuV/m) (dBuV/m) (dBuV/m) (dBuV/m)(dB)

2390.00 52.82 75.77 63.58 -10.7665.01 74.00 54.00 -1.18AV

### Remark:

- Data of measurement within this frequency range shown "-" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
- (3) Spectrum Peak Setting: 1GHz- 40GHz, RBW= 1MHz, VBW= 3MHz, Sweep time= 200 ms.
- (4) Spectrum AV Setting: 1GHz-40GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

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Radiated Emission: 802.11 n 40M mode

Operation Mode TX CH High Test Date Sep. 18, 2009

Fundamental Frequency 2452 MHz Test By Sky Temperature Pol Ver. 25

Humidity 65 %

	Peak	$\mathbf{AV}$		Actu	al FS	Peak	$\mathbf{AV}$		
Freq.	Reading	Reading	Ant./CL	Peak	$\mathbf{AV}$	Limit	Limit	Margin	Remark
(MHz)	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m	( <b>dB</b> )	
2483.56	74.50	62.18	-10.46	64.04	51.72	74.00	54.00	-2.28	AV
Operation 1	Mode	TX C	H High			Test	Date	Sep. 18, 20	009
Fundament	al Frequer	ncy 2452	MHz			Test	Ву	Sky	
Temperatur	re	25				Pol		Hor.	
Humidity		65 %							

	Peak	$\mathbf{AV}$		Actu	al FS	Peak	$\mathbf{AV}$		
Freq.	Reading	Reading	Ant./CL	Peak	$\mathbf{AV}$	Limit	Limit	Margin	Remark
(MHz)	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m	) ( <b>dB</b> )	
2483.56	76.48	63.84	-10.46	66.02	53.38	74.00	54.00	-0.62	ΑV

# Remark:

- (1) Data of measurement within this frequency range shown "-" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (2) Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS col-
- (3) Spectrum Peak Setting: 1GHz- 40GHz, RBW= 1MHz, VBW= 3MHz, Sweep time= 200 ms.
- (4) Spectrum AV Setting: 1GHz-40GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

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## 8 SPURIOUS RADIATED EMISSION TEST

# 8.1 Standard Applicable

According to §15.247(c), all other emissions outside these bands shall not exceed the general radiated emission limits specified in §15.209(a). And according to §15.33(a)(1), for an intentional radiator operates below 10GHz, the frequency range of measurements: to the tenth harmonic of the highest fundamental frequency or to 40GHz, whichever is lower.

According to RSS-210 issue 7,§A8.5, In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated device is operating, the radio frequency power that is produced 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, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under section A8.4(4), the attenuation required shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in Tables 2 and 3 is not required. In addition, radiated emissions which fall in the restricted bands of Table 1 must also comply with the radiated emission limits specified in Tables 2 and 3.

#### 8.2 **Measurement Equipment Used:**

## 8.2.1. Conducted Emission at antenna port:

Refer to section 6.2 for details.

# 8.2.2. Radiated emission:

Refer to section 7.2 for details.

#### 8.3 **Test SET-UP:**

#### 8.3.1. Conducted Emission at antenna port:

Refer to section 6.3 for details.

#### 8.3.2. Radiated emission:

Refer to section 7.3 for details.

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#### 8.4 **Measurement Procedure:**

- 1. The EUT was placed on a turn table which is 0.8m above ground plane.
- 2. The turn table shall rotate 360 degrees to determine the position of maximum emission level.
- 3. EUT is set 3m away from the receiving antenna which varied from 1m to 4m to find out the highest emissions.
- 4. When measurement procedures for electric field radiated emissions above 1 GHz the EUT measurement is to be made "while keeping the antenna in the 'cone of radiation' from that area and pointed at the area both in azimuth and elevation, with polarization oriented for maximum response." is still within the 3dB illumination BW of the measurement antenna.
- 5. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
- 6. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
- 7. Repeat above procedures until all frequency measured were complete.

#### 8.5 **Field Strength Calculation**

The field strength is calculated by adding the Antenna Factor and Cable Factor and subtracting the Amplifier Gain and Duty Cycle Correction Factor(if any) from the measured reading. The basic equation with a sample calculation is as follows:

$$FS = RA + AF + CL - AG$$

Where	FS = Field Strength	CL = Cable Attenuation Factor (Cable Loss)
	RA = Reading Amplitude	AG = Amplifier Gain
	AF = Antenna Factor	

#### **Measurement Result:** 8.6

Note: Refer to next page spectrum analyzer data chart and tabular data sheets.

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# Radiated Spurious Emission Measurement Result (below 1GHz) (802.11b)

Operation Mode 802.11b TX CH Low Test Date Sep. 18, 2009

Fundamental Frequency 2412MHz Test By Sky Pol Ver./Hor Temperature 25

Humidity 65 %

Freq.	Ant.Pol.	Detector Mode	Reading	Factor	Actual FS	Limit3m	Safe Margin
(MHz)	H/V	(PK/QP)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)
104.69	V	Peak	62.38	-29.90	32.48	43.50	-11.02
167.74	V	Peak	55.71	-27.76	27.95	43.50	-15.55
800.18	V	Peak	52.43	-20.20	32.23	46.00	-13.77
911.73	V	Peak	51.24	-18.85	32.39	46.00	-13.61
960.23	V	Peak	51.98	-18.36	33.62	54.00	-20.38
984.48	V	Peak	52.47	-18.36	34.11	54.00	-19.89
300.63	Н	Peak	58.37	-28.49	29.88	46.00	-16.12
499.48	Н	Peak	53.86	-24.78	29.08	46.00	-16.92
800.18	Н	Peak	53.22	-20.20	33.02	46.00	-12.98
834.13	Н	Peak	51.72	-19.83	31.89	46.00	-14.11
935.98	Н	Peak	49.95	-18.64	31.31	46.00	-14.69
960.23	Н	Peak	51.59	-18.36	33.23	54.00	-20.77

#### Remark:

- 1 Measuring frequencies from 30 MHz to the 1GHz<sub>o</sub>
- 2 Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument using Peak/QP detector mode.
- 3 Data of measurement within this frequency range shown " " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 4 The IF bandwidth of SPA between 30MHz to 1GHz was 100KHz.

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# Radiated Spurious Emission Measurement Result (below 1GHz) (802.11b)

Operation Mode 802.11b TX CH Mid Test Date Sep. 18, 2009

Fundamental Frequency 2437MHz Test By Sky Pol Ver./Hor Temperature 25

Humidity 65 %

Freq.	Ant.Pol.	Detector Mode	Reading	Factor	Actual FS	Limit3m	Safe Margin
(MHz)	H/V	(PK/QP)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)
104.69	V	Peak	62.19	-29.90	32.29	43.50	-11.21
167.74	V	Peak	56.18	-27.76	28.42	43.50	-15.08
766.23	V	Peak	50.21	-20.51	29.70	46.00	-16.30
800.18	V	Peak	52.57	-20.20	32.37	46.00	-13.63
900.09	V	Peak	51.83	-19.00	32.83	46.00	-13.17
960.23	V	Peak	52.85	-18.36	34.49	54.00	-19.51
300.63	Н	Peak	58.74	-28.49	30.25	46.00	-15.75
499.48	Н	Peak	55.66	-24.78	30.88	46.00	-15.12
800.18	Н	Peak	52.55	-20.20	32.35	46.00	-13.65
834.13	Н	Peak	51.69	-19.83	31.86	46.00	-14.14
911.73	Н	Peak	51.20	-18.85	32.35	46.00	-13.65
960.23	Н	Peak	52.41	-18.36	34.05	54.00	-19.95

#### Remark:

- 1 Measuring frequencies from 30 MHz to the 1GHz<sub>o</sub>
- 2 Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument using Peak/QP detector mode.
- 3 Data of measurement within this frequency range shown " " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 4 The IF bandwidth of SPA between 30MHz to 1GHz was 100KHz.

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# Radiated Spurious Emission Measurement Result (below 1GHz) (802.11b)

Operation Mode 802.11b TX CH High Test Date Sep. 18, 2009

Fundamental Frequency 2462MHz Test By Sky Pol Ver./Hor Temperature 25

Humidity 65 %

Freq.	Ant.Pol.	Detector Mode	Reading	Factor	Actual FS	Limit3m	Safe Margin
(MHz)	H/V	(PK/QP)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)
104.69	V	Peak	62.04	-29.90	32.14	43.50	-11.36
167.74	V	Peak	56.70	-27.76	28.94	43.50	-14.56
800.18	V	Peak	52.72	-20.20	32.52	46.00	-13.48
911.98	V	Peak	51.99	-18.85	33.14	46.00	-12.86
935.98	V	Peak	53.13	-18.64	34.49	46.00	-11.51
960.23	V	Peak	52.70	-18.36	34.34	54.00	-19.66
300.63	Н	Peak	58.23	-28.49	29.74	46.00	-16.26
499.48	Н	Peak	54.17	-24.78	29.39	46.00	-16.61
800.18	Н	Peak	52.42	-20.20	32.22	46.00	-13.78
834.13	Н	Peak	51.76	-19.83	31.93	46.00	-14.07
935.98	Н	Peak	50.16	-18.64	31.52	46.00	-14.48
960.23	Н	Peak	52.01	-18.36	33.65	54.00	-20.35

#### Remark:

- 1 Measuring frequencies from 30 MHz to the 1GHz<sub>o</sub>
- 2 Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument using Peak/QP detector mode.
- 3 Data of measurement within this frequency range shown " " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 4 The IF bandwidth of SPA between 30MHz to 1GHz was 100KHz.

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# Radiated Spurious Emission Measurement Result (below 1GHz) (802.11g)

Operation Mode 802.11g TX CH Low Test Date Sep. 18, 2009

Fundamental Frequency 2412MHz Test By Sky Pol Ver./Hor Temperature 25

Humidity 65 %

Freq.	Ant.Pol.	Detector Mode	Reading	Factor	Actual FS	Limit3m	Safe Margin
(MHz)	H/V	(PK/QP)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)
104.69	V	Peak	62.25	-29.90	32.35	43.50	-11.15
300.63	V	Peak	58.22	-28.49	29.73	46.00	-16.27
499.48	V	Peak	54.13	-24.78	29.35	46.00	-16.65
800.18	V	Peak	52.86	-20.20	32.66	46.00	-13.34
834.13	V	Peak	52.11	-19.83	32.28	46.00	-13.72
960.23	V	Peak	51.74	-18.36	33.38	54.00	-20.62
266.68	Н	Peak	56.62	-29.41	27.21	46.00	-18.79
300.63	Н	Peak	58.54	-28.49	30.05	46.00	-15.95
499.48	Н	Peak	53.74	-24.78	28.96	46.00	-17.04
800.18	Н	Peak	51.28	-20.20	31.08	46.00	-14.92
834.13	Н	Peak	51.82	-19.83	31.99	46.00	-14.01
960.23	Н	Peak	52.84	-18.36	34.48	54.00	-19.52

#### Remark:

- 1 Measuring frequencies from 30 MHz to the 1GHz<sub>o</sub>
- 2 Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument using Peak/QP detector mode.
- 3 Data of measurement within this frequency range shown " " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 4 The IF bandwidth of SPA between 30MHz to 1GHz was 100KHz.

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# Radiated Spurious Emission Measurement Result (below 1GHz) (802.11g)

Operation Mode 802.11g TX CH Mid Test Date Sep. 18, 2009

Fundamental Frequency 2437MHz Test By Sky Pol Ver./Hor Temperature 25

Humidity 65 %

Freq.	Ant.Pol.	Detector Mode	Reading	Factor	Actual FS	Limit3m	Safe Margin
(MHz)	H/V	(PK/QP)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)
104.72	V	Peak	62.23	-30.10	32.13	43.50	-11.37
167.74	V	Peak	55.83	-27.76	28.07	43.50	-15.43
800.18	V	Peak	52.64	-20.20	32.44	46.00	-13.56
900.09	V	Peak	52.04	-19.00	33.04	46.00	-12.96
935.98	V	Peak	52.00	-18.64	33.36	46.00	-12.64
960.23	V	Peak	51.98	-18.36	33.62	54.00	-20.38
300.63	Н	Peak	58.09	-28.49	29.60	46.00	-16.40
499.48	Н	Peak	55.35	-24.78	30.57	46.00	-15.43
800.18	Н	Peak	52.30	-20.20	32.10	46.00	-13.90
834.13	Н	Peak	52.18	-19.83	32.35	46.00	-13.65
935.98	Н	Peak	52.64	-18.64	34.00	46.00	-12.00
960.23	Н	Peak	52.65	-18.36	34.29	54.00	-19.71

#### Remark:

- 1 Measuring frequencies from 30 MHz to the 1GHz<sub>o</sub>
- 2 Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument using Peak/QP detector mode.
- 3 Data of measurement within this frequency range shown " " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 4 The IF bandwidth of SPA between 30MHz to 1GHz was 100KHz.

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# Radiated Spurious Emission Measurement Result (below 1GHz) (802.11g)

Operation Mode 802.11g TX CH High Test Date Sep. 18, 2009

Fundamental Frequency 2462MHz Test By Sky Pol Ver./Hor Temperature 25

Humidity 65 %

Freq.	Ant.Pol.	Detector Mode	Reading	Factor	Actual FS	Limit3m	Safe Margin
(MHz)	H/V	(PK/QP)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)
104.69	V	Peak	62.78	-29.90	32.88	43.50	-10.62
766.23	V	Peak	49.34	-20.51	28.83	46.00	-17.17
800.18	V	Peak	52.94	-20.20	32.74	46.00	-13.26
911.73	V	Peak	51.11	-18.85	32.26	46.00	-13.74
960.23	V	Peak	53.26	-18.36	34.90	54.00	-19.10
984.48	V	Peak	52.08	-18.36	33.72	54.00	-20.28
300.63	Н	Peak	58.13	-28.49	29.64	46.00	-16.36
499.48	Н	Peak	53.98	-24.78	29.20	46.00	-16.80
800.18	Н	Peak	53.23	-20.20	33.03	46.00	-12.97
834.13	Н	Peak	52.07	-19.83	32.24	46.00	-13.76
911.73	Н	Peak	53.44	-18.85	34.59	46.00	-11.41
960.23	Н	Peak	53.84	-18.36	35.48	54.00	-18.52

#### Remark:

- 1 Measuring frequencies from 30 MHz to the 1GHz<sub>o</sub>
- 2 Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument using Peak/QP detector mode.
- 3 Data of measurement within this frequency range shown " " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 4 The IF bandwidth of SPA between 30MHz to 1GHz was 100KHz.

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# Radiated Spurious Emission Measurement Result (below 1GHz) (802.11n 20M)

Operation Mode 802.11n\_20M TX CH Low Test Date Sep. 18, 2009

Fundamental Frequency 2412MHz Test By Sky Pol Ver./Hor Temperature 25

Humidity 65 %

Freq.	Ant.Pol.	Detector Mode	Reading	Factor	Actual FS	Limit3m	Safe Margin
(MHz)	H/V	(PK/QP)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)
103.72	V	Peak	61.19	-30.10	31.09	43.50	-12.41
300.63	V	Peak	58.67	-28.49	30.18	46.00	-15.82
499.48	V	Peak	53.61	-24.78	28.83	46.00	-17.17
834.13	V	Peak	52.20	-19.83	32.37	46.00	-13.63
911.73	V	Peak	51.81	-18.85	32.96	46.00	-13.04
960.23	V	Peak	51.23	-18.36	32.87	54.00	-21.13
300.63	Н	Peak	58.57	-28.49	30.08	46.00	-15.92
640.13	Н	Peak	52.95	-22.16	30.79	46.00	-15.21
800.18	Н	Peak	52.60	-20.20	32.40	46.00	-13.60
834.13	Н	Peak	51.95	-19.83	32.12	46.00	-13.88
911.73	Н	Peak	51.55	-18.85	32.70	46.00	-13.30
960.23	Н	Peak	51.05	-18.36	32.69	54.00	-21.31

#### Remark:

- 1 Measuring frequencies from 30 MHz to the 1GHz<sub>o</sub>
- 2 Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument using Peak/QP detector mode.
- 3 Data of measurement within this frequency range shown " " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 4 The IF bandwidth of SPA between 30MHz to 1GHz was 100KHz.

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# Radiated Spurious Emission Measurement Result (below 1GHz) (802.11n\_20M)

Operation Mode 802.11n\_20M TX CH Mid Test Date Sep. 18, 2009

Fundamental Frequency 2437MHz Test By Sky Pol Ver./Hor Temperature 25

Humidity 65 %

Freq.	Ant.Pol.	Detector Mode	Reading	Factor	Actual FS	Limit3m	Safe Margin
(MHz)	H/V	(PK/QP)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)
103.72	V	Peak	61.83	-30.10	31.73	43.50	-11.77
167.74	V	Peak	55.64	-27.76	27.88	43.50	-15.62
800.18	V	Peak	51.92	-20.20	31.72	46.00	-14.28
866.14	V	Peak	49.71	-19.50	30.21	46.00	-15.79
900.09	V	Peak	51.04	-19.00	32.04	46.00	-13.96
960.23	V	Peak	50.72	-18.36	32.36	54.00	-21.64
300.63	Н	Peak	58.56	-28.49	30.07	46.00	-15.93
499.48	Н	Peak	54.04	-24.78	29.26	46.00	-16.74
800.18	Н	Peak	52.42	-20.20	32.22	46.00	-13.78
911.73	Н	Peak	51.67	-18.85	32.82	46.00	-13.18
935.98	Н	Peak	52.07	-18.64	33.43	46.00	-12.57
960.23	Н	Peak	51.40	-18.36	33.04	54.00	-20.96

#### Remark:

- 1 Measuring frequencies from 30 MHz to the 1GHz<sub>o</sub>
- 2 Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument using Peak/QP detector mode.
- 3 Data of measurement within this frequency range shown " " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 4 The IF bandwidth of SPA between 30MHz to 1GHz was 100KHz.

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# Radiated Spurious Emission Measurement Result (below 1GHz) (802.11n 20M)

Operation Mode 802.11n\_20M TX CH High Test Date Sep. 18, 2009

Fundamental Frequency 2462MHz Test By Sky Pol Ver./Hor Temperature 25

Humidity 65 %

Freq.	Ant.Pol.	Detector Mode	Reading	Factor	Actual FS	Limit3m	Safe Margin
(MHz)	H/V	(PK/QP)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)
103.72	V	Peak	61.89	-30.10	31.79	43.50	-11.71
167.74	V	Peak	56.24	-27.76	28.48	43.50	-15.02
800.18	V	Peak	51.62	-20.20	31.42	46.00	-14.58
911.73	V	Peak	51.21	-18.85	32.36	46.00	-13.64
948.59	V	Peak	51.82	-18.40	33.42	46.00	-12.58
972.84	V	Peak	51.85	-18.38	33.47	54.00	-20.53
300.63	Н	Peak	58.82	-28.49	30.33	46.00	-15.67
499.48	Н	Peak	53.98	-24.78	29.20	46.00	-16.80
800.18	Н	Peak	51.99	-20.20	31.79	46.00	-14.21
834.13	Н	Peak	51.75	-19.83	31.92	46.00	-14.08
935.98	Н	Peak	50.58	-18.64	31.94	46.00	-14.06
960.23	Н	Peak	51.43	-18.36	33.07	54.00	-20.93

#### Remark:

- 1 Measuring frequencies from 30 MHz to the 1GHz<sub>o</sub>
- 2 Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument using Peak/QP detector mode.
- 3 Data of measurement within this frequency range shown " " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 4 The IF bandwidth of SPA between 30MHz to 1GHz was 100KHz.

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# Radiated Spurious Emission Measurement Result (below 1GHz) (802.11n\_40M)

Operation Mode 802.11n\_40M TX CH Low Test Date Sep. 18, 2009

Fundamental Frequency 2422MHz Test By Sky Pol Ver./Hor Temperature 25

Humidity 65 %

Freq.	Ant.Pol.	Detector Mode	Reading	Factor	Actual FS	Limit3m	Safe Margin
(MHz)	H/V	(PK/QP)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)
104.69	V	Peak	60.25	-29.90	30.35	43.50	-13.15
640.13	V	Peak	51.24	-22.16	29.08	46.00	-16.92
800.18	V	Peak	51.78	-20.20	31.58	46.00	-14.42
900.09	V	Peak	50.87	-19.00	31.87	46.00	-14.13
911.73	V	Peak	51.62	-18.85	32.77	46.00	-13.23
960.23	V	Peak	50.68	-18.36	32.32	54.00	-21.68
300.63	Н	Peak	57.24	-28.49	28.75	46.00	-17.25
499.48	Н	Peak	54.37	-24.78	29.59	46.00	-16.41
800.18	Н	Peak	52.25	-20.20	32.05	46.00	-13.95
834.13	Н	Peak	52.16	-19.83	32.33	46.00	-13.67
935.98	Н	Peak	51.60	-18.64	32.96	46.00	-13.04
984.48	Н	Peak	50.63	-18.36	32.27	54.00	-21.73

#### Remark:

- 1 Measuring frequencies from 30 MHz to the 1GHz<sub>o</sub>
- 2 Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument using Peak/QP detector mode.
- 3 Data of measurement within this frequency range shown " " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 4 The IF bandwidth of SPA between 30MHz to 1GHz was 100KHz.

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# Radiated Spurious Emission Measurement Result (below 1GHz) (802.11n\_40M)

Operation Mode 802.11n\_40M TX CH Mid Test Date Sep. 18, 2009

Fundamental Frequency 2437MHz Test By Sky Pol Ver./Hor Temperature 25

Humidity 65 %

Freq.	Ant.Pol.	Detector Mode	Reading	Factor	Actual FS	Limit3m	Safe Margin
(MHz)	H/V	(PK/QP)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)
104.69	V	Peak	60.29	-29.90	30.39	43.50	-13.11
640.13	V	Peak	51.44	-22.16	29.28	46.00	-16.72
800.18	V	Peak	51.90	-20.20	31.70	46.00	-14.30
911.73	V	Peak	51.43	-18.85	32.58	46.00	-13.42
935.98	V	Peak	51.59	-18.64	32.95	46.00	-13.05
960.23	V	Peak	51.57	-18.36	33.21	54.00	-20.79
300.63	Н	Peak	52.71	-28.49	24.22	46.00	-21.78
499.48	Н	Peak	54.26	-24.78	29.48	46.00	-16.52
800.18	Н	Peak	52.53	-20.20	32.33	46.00	-13.67
834.13	Н	Peak	51.81	-19.83	31.98	46.00	-14.02
911.73	Н	Peak	51.47	-18.85	32.62	46.00	-13.38
960.23	Н	Peak	51.21	-18.36	32.85	54.00	-21.15

#### Remark:

- 1 Measuring frequencies from 30 MHz to the 1GHz<sub>o</sub>
- 2 Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument using Peak/QP detector mode.
- 3 Data of measurement within this frequency range shown " " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 4 The IF bandwidth of SPA between 30MHz to 1GHz was 100KHz.

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# Radiated Spurious Emission Measurement Result (below 1GHz) (802.11n 40M)

Operation Mode 802.11n\_40M TX CH High Test Date Sep. 18, 2009

Fundamental Frequency 2452MHz Test By Sky Pol Ver./Hor Temperature 25

Humidity 65 %

Freq.	Ant.Pol.	Detector Mode	Reading	Factor	Actual FS	Limit3m	Safe Margin
(MHz)	H/V	(PK/QP)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)
103.72	V	Peak	60.63	-30.10	30.53	43.50	-12.97
800.18	V	Peak	51.77	-20.20	31.57	46.00	-14.43
834.13	V	Peak	50.77	-19.83	30.94	46.00	-15.06
911.73	V	Peak	50.98	-18.85	32.13	46.00	-13.87
960.23	V	Peak	51.25	-18.36	32.89	54.00	-21.11
984.48	V	Peak	50.69	-18.36	32.33	54.00	-21.67
300.63	Н	Peak	58.13	-28.49	29.64	46.00	-16.36
800.18	Н	Peak	52.44	-20.20	32.24	46.00	-13.76
834.13	Н	Peak	52.03	-19.83	32.20	46.00	-13.80
935.98	Н	Peak	51.42	-18.64	32.78	46.00	-13.22
960.23	Н	Peak	51.16	-18.36	32.80	54.00	-21.20
984.48	Н	Peak	51.76	-18.36	33.40	54.00	-20.60

#### Remark:

- 1 Measuring frequencies from 30 MHz to the 1GHz<sub>o</sub>
- 2 Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument using Peak/QP detector mode.
- 3 Data of measurement within this frequency range shown " " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 4 The IF bandwidth of SPA between 30MHz to 1GHz was 100KHz.

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# Radiated Spurious Emission Measurement Result (above 1GHz) (802.11b)

Operation Mode 802.11b TX CH Low Test Date Sep. 18, 2009

Fundamental Frequency 2412MHz Test By Sky Pol Ver. Temperature 25

Humidity 65 %

	Peak	$\mathbf{AV}$		Actu	al FS	Peak	$\mathbf{AV}$		
Freq.	Reading	Reading	Ant./CL	Peak	$\mathbf{AV}$	Limit	Limit	Margin	Remark
(MHz)	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dB)	
1598.0	56.77		-13.95	42.82		74.00	54.00	-11.18	Peak
4824.0	42.42		-5.98	36.44		74.00	54.00	-17.56	Peak
7236.0						74.00	54.00		
9648.0						74.00	54.00		
12060.0						74.00	54.00		
14472.0						74.00	54.00		
16884.0						74.00	54.00		
19296.0						74.00	54.00		
21708.0						74.00	54.00		
24120.0						74.00	54.00		

#### Remark:

- 1 Measuring frequencies from 1GHz to the 10th harmonic of highest fundamental frequency.
- 2 Data of measurement within this frequency range shown " " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 3 Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
- 4 Spectrum Peak Setting: 1GHz-26GHz, RBW=1MHz, VBW=3MHz, Sweep time=200
- 5 Spectrum AV Setting: 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

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# Radiated Spurious Emission Measurement Result (above 1GHz) (802.11b)

Operation Mode 802.11b TX CH Low Test Date Sep. 18, 2009

Fundamental Frequency 2412MHz Test By Sky Pol Temperature 25 Hor

Humidity 65 %

	Peak	$\mathbf{AV}$		Actu	al FS	Peak	$\mathbf{AV}$		
Freq.	Reading	Reading	Ant./CL	Peak	$\mathbf{AV}$	Limit	Limit	Margin	Remark
(MHz)	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dB)	
1598.0	56.00		-13.95	42.05		74.00	54.00	-11.95	Peak
4824.0	42.01		-5.98	36.03		74.00	54.00	-17.97	Peak
7236.0						74.00	54.00		
9648.0						74.00	54.00		
12060.0						74.00	54.00		
14472.0						74.00	54.00		
16884.0						74.00	54.00		
19296.0						74.00	54.00		
21708.0						74.00	54.00		
24120.0						74.00	54.00		

## Remark:

- 1 Measuring frequencies from 1GHz to the 10th harmonic of highest fundamental frequency.
- 2 Data of measurement within this frequency range shown " " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 3 Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
- 4 Spectrum Peak Setting: 1GHz-26GHz, RBW=1MHz, VBW=3MHz, Sweep time=200
- 5 Spectrum AV Setting: 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

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### Radiated Spurious Emission Measurement Result (above 1GHz) (802.11b)

Operation Mode 802.11b TX CH Mid Test Date Sep. 18, 2009

Fundamental Frequency 2437MHz Test By Sky Pol Ver Temperature 25

Humidity 65 %

	Peak	$\mathbf{AV}$		Actu	al FS	Peak	$\mathbf{AV}$		
Freq.	Reading	Reading	Ant./CL	Peak	$\mathbf{AV}$	Limit	Limit	Margin	Remark
(MHz)	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dB)	
1598.0	55.15		-13.95	41.20		74.00	54.00	-12.80	Peak
4874.0	49.51		-5.97	43.54		74.00	54.00	-10.46	Peak
7311.0						74.00	54.00		
9748.0						74.00	54.00		
12185.0						74.00	54.00		
14622.0						74.00	54.00		
17059.0						74.00	54.00		
19496.0						74.00	54.00		
21933.0						74.00	54.00		
24370.0						74.00	54.00		

## Remark:

- 1 Measuring frequencies from 1GHz to the 10th harmonic of highest fundamental frequency.
- 2 Data of measurement within this frequency range shown " " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 3 Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
- 4 Spectrum Peak Setting: 1GHz-26GHz, RBW=1MHz, VBW=3MHz, Sweep time=200
- 5 Spectrum AV Setting: 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

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# Radiated Spurious Emission Measurement Result (above 1GHz) (802.11b)

Operation Mode 802.11b TX CH Mid Test Date Sep. 18, 2009

Fundamental Frequency 2437MHz Test By Sky Pol Temperature 25 Hor

Humidity 65 %

	Peak	$\mathbf{AV}$		Actu	al FS	Peak	$\mathbf{AV}$		
Freq.	Reading	Reading	Ant./CL	Peak	$\mathbf{AV}$	Limit	Limit	Margin	Remark
(MHz)	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dB)	
1598.0	55.39		-13.95	41.44		74.00	54.00	-12.56	Peak
4874.0	45.55		-5.97	39.58		74.00	54.00	-14.42	Peak
7311.0						74.00	54.00		
9748.0						74.00	54.00		
12185.0						74.00	54.00		
14622.0						74.00	54.00		
17059.0						74.00	54.00		
19496.0						74.00	54.00		
21933.0						74.00	54.00		
24370.0						74.00	54.00		

## Remark:

- 1 Measuring frequencies from 1GHz to the 10th harmonic of highest fundamental frequency.
- 2 Data of measurement within this frequency range shown " " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 3 Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
- 4 Spectrum Peak Setting: 1GHz-26GHz, RBW=1MHz, VBW=3MHz, Sweep time=200
- 5 Spectrum AV Setting: 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

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# Radiated Spurious Emission Measurement Result (above 1GHz) (802.11b)

Operation Mode 802.11b TX CH High Test Date Sep. 18, 2009

Fundamental Frequency 2462MHz Test By Sky Pol Ver Temperature 25

Humidity 65 %

	Peak	$\mathbf{AV}$		Actu	al FS	Peak	$\mathbf{AV}$		
Freq.	Reading	Reading	Ant./CL	Peak	$\mathbf{AV}$	Limit	Limit	Margin	Remark
(MHz)	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dB)	
1598.0	54.88		-13.95	40.93		74.00	54.00	-13.07	Peak
4924.0	48.62		-5.91	42.71		74.00	54.00	-11.29	Peak
7386.0						74.00	54.00		
9848.0						74.00	54.00		
12310.0						74.00	54.00		
14772.0						74.00	54.00		
17234.0						74.00	54.00		
19696.0						74.00	54.00		
22158.0						74.00	54.00		
24620.0						74.00	54.00		

## Remark:

- 1 Measuring frequencies from 1GHz to the 10th harmonic of highest fundamental frequency.
- 2 Data of measurement within this frequency range shown " " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 3 Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
- 4 Spectrum Peak Setting: 1GHz-26GHz, RBW=1MHz, VBW=3MHz, Sweep time=200
- 5 Spectrum AV Setting: 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

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# Radiated Spurious Emission Measurement Result (above 1GHz) (802.11b)

Operation Mode 802.11b TX CH High Test Date Sep. 18, 2009

Fundamental Frequency 2462MHz Test By Sky Pol Temperature 25 Hor

Humidity 65 %

	Peak	$\mathbf{AV}$		Actu	al FS	Peak	$\mathbf{AV}$		
Freq.	Reading	Reading	Ant./CL	Peak	$\mathbf{AV}$	Limit	Limit	Margin	Remark
(MHz)	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dB)	
1598.0	56.09		-13.95	42.14		74.00	54.00	-11.86	Peak
4924.0	43.11		-5.91	37.20		74.00	54.00	-16.80	Peak
7386.0						74.00	54.00		
9848.0						74.00	54.00		
12310.0						74.00	54.00		
14772.0						74.00	54.00		
17234.0						74.00	54.00		
19696.0						74.00	54.00		
22158.0						74.00	54.00		
24620.0						74.00	54.00		

#### Remark:

- 1 Measuring frequencies from 1GHz to the 10th harmonic of highest fundamental frequency.
- 2 Data of measurement within this frequency range shown " " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 3 Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
- 4 Spectrum Peak Setting: 1GHz-26GHz, RBW=1MHz, VBW=3MHz, Sweep time=200
- 5 Spectrum AV Setting: 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

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# Radiated Spurious Emission Measurement Result (above 1GHz) (802.11g)

Operation Mode 802.11g TX CH Low Test Date Sep. 18, 2009

Fundamental Frequency 2412MHz Test By Sky Pol Ver. Temperature 25

Humidity 65 %

	Peak	$\mathbf{AV}$		Actu	al FS	Peak	$\mathbf{AV}$		
Freq.	Reading	Reading	Ant./CL	Peak	$\mathbf{AV}$	Limit	Limit	Margin	Remark
(MHz)	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dB)	
1598.0	55.55		-13.95	41.60		74.00	54.00	-12.40	Peak
4824.0	42.28		-5.98	36.30		74.00	54.00	-17.70	Peak
7236.0						74.00	54.00		
9648.0						74.00	54.00		
12060.0						74.00	54.00		
14472.0						74.00	54.00		
16884.0						74.00	54.00		
19296.0						74.00	54.00		
21708.0						74.00	54.00		
24120.0						74.00	54.00		

#### Remark:

- 1 Measuring frequencies from 1GHz to the 10th harmonic of highest fundamental frequency.
- 2 Data of measurement within this frequency range shown " " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 3 Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
- 4 Spectrum Peak Setting: 1GHz-26GHz, RBW=1MHz, VBW=3MHz, Sweep time=200
- 5 Spectrum AV Setting: 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

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# Radiated Spurious Emission Measurement Result (above 1GHz) (802.11g)

Operation Mode 802.11g TX CH Low Test Date Sep. 18, 2009

Fundamental Frequency 2412MHz Test By Sky Pol Hor Temperature 25

Humidity 65 %

	Peak	$\mathbf{AV}$		Actu	al FS	Peak	$\mathbf{AV}$		
Freq.	Reading	Reading	Ant./CL	Peak	$\mathbf{AV}$	Limit	Limit	Margin	Remark
(MHz)	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dB)	
4824.0	42.79		-5.98	36.81		74.00	54.00	-17.19	Peak
7236.0						74.00	54.00		
9648.0						74.00	54.00		
12060.0						74.00	54.00		
14472.0						74.00	54.00		
16884.0						74.00	54.00		
19296.0						74.00	54.00		
21708.0						74.00	54.00		
24120.0						74.00	54.00		

#### Remark:

- 1 Measuring frequencies from 1GHz to the 10th harmonic of highest fundamental frequency.
- 2 Data of measurement within this frequency range shown " " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 3 Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
- 4 Spectrum Peak Setting: 1GHz-26GHz, RBW=1MHz, VBW=3MHz, Sweep time=200
- 5 Spectrum AV Setting: 1GHz-26GHz, RBW=1MHz, VBW=10Hz, Sweep time=200 ms.

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### Radiated Spurious Emission Measurement Result (above 1GHz) (802.11g)

Operation Mode 802.11g TX CH Mid Test Date Sep. 18, 2009

Fundamental Frequency 2437MHz Test By Sky Pol Ver Temperature 25

Humidity 65 %

	Peak	$\mathbf{AV}$		Actu	al FS	Peak	$\mathbf{AV}$		
Freq.	Reading	Reading	Ant./CL	Peak	$\mathbf{AV}$	Limit	Limit	Margin	Remark
(MHz)	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dB)	
1598.0	55.87		-13.95	41.92		74.00	54.00	-12.08	Peak
4874.0	44.00		-5.93	38.07		74.00	54.00	-15.93	Peak
7311.0						74.00	54.00		
9748.0						74.00	54.00		
12185.0						74.00	54.00		
14622.0						74.00	54.00		
17059.0						74.00	54.00		
19496.0						74.00	54.00		
21933.0						74.00	54.00		
24370.0						74.00	54.00		

## Remark:

- 1 Measuring frequencies from 1GHz to the 10th harmonic of highest fundamental frequency.
- 2 Data of measurement within this frequency range shown " " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 3 Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
- 4 Spectrum Peak Setting: 1GHz-26GHz, RBW=1MHz, VBW=3MHz, Sweep time=200
- 5 Spectrum AV Setting: 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

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# Radiated Spurious Emission Measurement Result (above 1GHz) (802.11g)

Operation Mode 802.11g TX CH Mid Test Date Sep. 18, 2009

Fundamental Frequency 2437MHz Test By Sky Pol Temperature 25 Hor

Humidity 65 %

	Peak	$\mathbf{AV}$		Actu	al FS	Peak	$\mathbf{AV}$		
Freq.	Reading	Reading	Ant./CL	Peak	$\mathbf{AV}$	Limit	Limit	Margin	Remark
(MHz)	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dB)	
1598.0	55.18		-13.95	41.23		74.00	54.00	-12.77	Peak
4874.0	41.89		-5.93	35.96		74.00	54.00	-18.04	Peak
7311.0						74.00	54.00		
9748.0						74.00	54.00		
12185.0						74.00	54.00		
14622.0						74.00	54.00		
17059.0						74.00	54.00		
19496.0						74.00	54.00		
21933.0						74.00	54.00		
24370.0						74.00	54.00		

#### Remark:

- 1 Measuring frequencies from 1GHz to the 10th harmonic of highest fundamental frequency.
- 2 Data of measurement within this frequency range shown " " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
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- 5 Spectrum AV Setting: 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

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# Radiated Spurious Emission Measurement Result (above 1GHz) (802.11g)

Operation Mode 802.11g TX CH High Test Date Sep. 18, 2009

Fundamental Frequency 2462MHz Test By Sky Pol Ver Temperature 25

Humidity 65 %

	Peak	$\mathbf{AV}$		Actu	al FS	Peak	$\mathbf{AV}$		
Freq.	Reading	Reading	Ant./CL	Peak	$\mathbf{AV}$	Limit	Limit	Margin	Remark
(MHz)	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dB)	
1598.0	54.77		-13.95	40.82		74.00	54.00	-13.18	Peak
4924.0	42.75		-5.91	36.84		74.00	54.00	-17.16	Peak
7386.0						74.00	54.00		
9848.0						74.00	54.00		
12310.0						74.00	54.00		
14772.0						74.00	54.00		
17234.0						74.00	54.00		
19696.0						74.00	54.00		
22158.0						74.00	54.00		
24620.0						74.00	54.00		

## Remark:

- 1 Measuring frequencies from 1GHz to the 10th harmonic of highest fundamental frequency.
- 2 Data of measurement within this frequency range shown " " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 3 Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
- 4 Spectrum Peak Setting: 1GHz-26GHz, RBW=1MHz, VBW=3MHz, Sweep time=200
- 5 Spectrum AV Setting: 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

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# Radiated Spurious Emission Measurement Result (above 1GHz) (802.11g)

Operation Mode 802.11g TX CH High Test Date Sep. 18, 2009

Fundamental Frequency 2462MHz Test By Sky Pol Temperature 25 Hor

Humidity 65 %

	Peak	$\mathbf{AV}$		Actu	al FS	Peak	$\mathbf{AV}$		
Freq.	Reading	Reading	Ant./CL	Peak	$\mathbf{AV}$	Limit	Limit	Margin	Remark
(MHz)	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dB)	
1598.0	49.35		-13.95	35.40		74.00	54.00	-18.60	Peak
4924.0	41.55		-5.91	35.64		74.00	54.00	-18.36	Peak
7386.0						74.00	54.00		
9848.0						74.00	54.00		
12310.0						74.00	54.00		
14772.0						74.00	54.00		
17234.0						74.00	54.00		
19696.0						74.00	54.00		
22158.0						74.00	54.00		
24620.0						74.00	54.00		

#### Remark:

- 1 Measuring frequencies from 1GHz to the 10th harmonic of highest fundamental frequency.
- 2 Data of measurement within this frequency range shown " " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 3 Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
- 4 Spectrum Peak Setting: 1GHz-26GHz, RBW=1MHz, VBW=3MHz, Sweep time=200
- 5 Spectrum AV Setting: 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

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### Radiated Spurious Emission Measurement Result (above 1GHz) (802.11n 20M)

Operation Mode 802.11n\_20M TX CH Low Test Date Sep. 18, 2009

Fundamental Frequency 2412MHz Test By Sky Pol Ver. Temperature 25

Humidity 65 %

	Peak	$\mathbf{AV}$		Actu	al FS	Peak	$\mathbf{AV}$		
Freq.	Reading	Reading	Ant./CL	Peak	$\mathbf{AV}$	Limit	Limit	Margin	Remark
(MHz)	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dB)	
1598.0	55.88		-13.95	41.93		74.00	54.00	-12.07	Peak
4824.0	43.17		-5.98	37.19		74.00	54.00	-16.81	Peak
7236.0						74.00	54.00		
9648.0						74.00	54.00		
12060.0						74.00	54.00		
14472.0						74.00	54.00		
16884.0						74.00	54.00		
19296.0						74.00	54.00		
21708.0						74.00	54.00		
24120.0						74.00	54.00		

#### Remark:

- 1 Measuring frequencies from 1GHz to the 10th harmonic of highest fundamental frequency.
- 2 Data of measurement within this frequency range shown " " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 3 Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
- 4 Spectrum Peak Setting: 1GHz-26GHz, RBW=1MHz, VBW=3MHz, Sweep time=200
- 5 Spectrum AV Setting: 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

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# Radiated Spurious Emission Measurement Result (above 1GHz) (802.11n 20M)

Operation Mode 802.11n\_20M TX CH Low Test Date Sep. 18, 2009

Fundamental Frequency 2412MHz Test By Sky Pol Temperature 25 Hor

Humidity 65 %

	Peak	$\mathbf{AV}$		Actu	al FS	Peak	$\mathbf{AV}$		
Freq.	Reading	Reading	Ant./CL	Peak	$\mathbf{AV}$	Limit	Limit	Margin	Remark
(MHz)	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dB)	
1598.0	54.93		-13.95	40.98		74.00	54.00	-13.02	Peak
4824.0	42.61		-5.98	36.63		74.00	54.00	-17.37	Peak
7236.0						74.00	54.00		
9648.0						74.00	54.00		
12060.0						74.00	54.00		
14472.0						74.00	54.00		
16884.0						74.00	54.00		
19296.0						74.00	54.00		
21708.0						74.00	54.00		
24120.0						74.00	54.00		

#### Remark:

- 1 Measuring frequencies from 1GHz to the 10th harmonic of highest fundamental frequency.
- 2 Data of measurement within this frequency range shown " " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 3 Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
- 4 Spectrum Peak Setting: 1GHz-26GHz, RBW=1MHz, VBW=3MHz, Sweep time=200
- 5 Spectrum AV Setting: 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

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# Radiated Spurious Emission Measurement Result (above 1GHz) (802.11n 20M)

Operation Mode 802.11n\_20M TX CH Mid Test Date Sep. 18, 2009

Fundamental Frequency 2437MHz Test By Sky Pol Ver Temperature 25

Humidity 65 %

	Peak	$\mathbf{AV}$		Actu	al FS	Peak	$\mathbf{AV}$		
Freq.	Reading	Reading	Ant./CL	Peak	$\mathbf{AV}$	Limit	Limit	Margin	Remark
(MHz)	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dB)	
1598.0	55.05		-13.95	41.10		74.00	54.00	-12.90	Peak
4874.0	42.63		-5.93	36.70		74.00	54.00	-17.30	Peak
7311.0						74.00	54.00		
9748.0						74.00	54.00		
12185.0						74.00	54.00		
14622.0						74.00	54.00		
17059.0						74.00	54.00		
19496.0						74.00	54.00		
21933.0						74.00	54.00		
24370.0						74.00	54.00		

#### Remark:

- 1 Measuring frequencies from 1GHz to the 10th harmonic of highest fundamental frequency.
- 2 Data of measurement within this frequency range shown " " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 3 Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
- 4 Spectrum Peak Setting: 1GHz-26GHz, RBW=1MHz, VBW=3MHz, Sweep time=200
- 5 Spectrum AV Setting: 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

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# Radiated Spurious Emission Measurement Result (above 1GHz) (802.11n 20M)

Operation Mode 802.11n\_20M TX CH Mid Test Date Sep. 18, 2009

Fundamental Frequency 2437MHz Test By Sky Pol Temperature 25 Hor

Humidity 65 %

	Peak	$\mathbf{AV}$		Actu	al FS	Peak	$\mathbf{AV}$		
Freq.	Reading	Reading	Ant./CL	Peak	$\mathbf{AV}$	Limit	Limit	Margin	Remark
(MHz)	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dB)	
1598.0	56.09		-13.95	42.14		74.00	54.00	-11.86	Peak
4874.0	42.81		-5.93	36.88		74.00	54.00	-17.12	Peak
7311.0						74.00	54.00		
9748.0						74.00	54.00		
12185.0						74.00	54.00		
14622.0						74.00	54.00		
17059.0						74.00	54.00		
19496.0						74.00	54.00		
21933.0						74.00	54.00		
24370.0						74.00	54.00		

#### Remark:

- 1 Measuring frequencies from 1GHz to the 10th harmonic of highest fundamental frequency.
- 2 Data of measurement within this frequency range shown " " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 3 Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
- 4 Spectrum Peak Setting: 1GHz-26GHz, RBW=1MHz, VBW=3MHz, Sweep time=200
- 5 Spectrum AV Setting: 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

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# Radiated Spurious Emission Measurement Result (above 1GHz) (802.11n 20M)

Operation Mode 802.11n\_20M TX CH High Test Date Sep. 18, 2009

Fundamental Frequency 2462MHz Test By Sky Pol Ver Temperature 25

Humidity 65 %

	Peak	$\mathbf{AV}$		Actu	al FS	Peak	$\mathbf{AV}$		
Freq.	Reading	Reading	Ant./CL	Peak	$\mathbf{AV}$	Limit	Limit	Margin	Remark
(MHz)	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dB)	
1598.0	59.50		-13.95	45.55		74.00	54.00	-8.45	Peak
4924.0	41.40		-5.91	35.49		74.00	54.00	-18.51	Peak
7386.0						74.00	54.00		
9848.0						74.00	54.00		
12310.0						74.00	54.00		
14772.0						74.00	54.00		
17234.0						74.00	54.00		
19696.0						74.00	54.00		
22158.0						74.00	54.00		
24620.0						74.00	54.00		

#### Remark:

- 1 Measuring frequencies from 1GHz to the 10th harmonic of highest fundamental frequency.
- 2 Data of measurement within this frequency range shown " " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 3 Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
- 4 Spectrum Peak Setting: 1GHz-26GHz, RBW=1MHz, VBW=3MHz, Sweep time=200
- 5 Spectrum AV Setting: 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

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# Radiated Spurious Emission Measurement Result (above 1GHz) (802.11n 20M)

Operation Mode 802.11n\_20M TX CH High Test Date Sep. 18, 2009

Fundamental Frequency 2462MHz Test By Sky Pol Temperature 25 Hor

Humidity 65 %

	Peak	$\mathbf{AV}$		Actu	al FS	Peak	$\mathbf{AV}$		
Freq.	Reading	Reading	Ant./CL	Peak	$\mathbf{AV}$	Limit	Limit	Margin	Remark
(MHz)	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dB)	
1598.0	54.70		-13.95	40.75		74.00	54.00	-13.25	Peak
4924.0	42.26		-5.91	36.35		74.00	54.00	-17.65	Peak
7386.0						74.00	54.00		
9848.0						74.00	54.00		
12310.0						74.00	54.00		
14772.0						74.00	54.00		
17234.0						74.00	54.00		
19696.0						74.00	54.00		
22158.0						74.00	54.00		
24620.0						74.00	54.00		

#### Remark:

- 1 Measuring frequencies from 1GHz to the 10th harmonic of highest fundamental frequency.
- 2 Data of measurement within this frequency range shown " " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 3 Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
- 4 Spectrum Peak Setting: 1GHz-26GHz, RBW=1MHz, VBW=3MHz, Sweep time=200
- 5 Spectrum AV Setting: 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

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# Radiated Spurious Emission Measurement Result (above 1GHz) (802.11n 40M)

Operation Mode 802.11n\_40M TX CH Low Test Date Sep. 18, 2009

Fundamental Frequency 2422MHz Test By Sky Pol Ver. Temperature 25

Humidity 65 %

	Peak	$\mathbf{AV}$		Actu	al FS	Peak	$\mathbf{AV}$		
Freq.	Reading	Reading	Ant./CL	Peak	$\mathbf{AV}$	Limit	Limit	Margin	Remark
(MHz)	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dB)	
1598.0	56.64		-13.95	42.69		74.00	54.00	-11.31	Peak
4844.0	43.07		-5.98	37.09		74.00	54.00	-16.91	Peak
7266.0						74.00	54.00		
9688.0						74.00	54.00		
12110.0						74.00	54.00		
14532.0						74.00	54.00		
16954.0						74.00	54.00		
19376.0						74.00	54.00		
21798.0						74.00	54.00		
24220.0						74.00	54.00		

#### Remark:

- 1 Measuring frequencies from 1GHz to the 10th harmonic of highest fundamental frequency.
- 2 Data of measurement within this frequency range shown " " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 3 Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
- 4 Spectrum Peak Setting: 1GHz-26GHz, RBW=1MHz, VBW=3MHz, Sweep time=200
- 5 Spectrum AV Setting: 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

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# Radiated Spurious Emission Measurement Result (above 1GHz) (802.11n 40M)

Operation Mode 802.11n\_40M TX CH Low Test Date Sep. 18, 2009

Fundamental Frequency 2422MHz Test By Sky Pol Temperature 25 Hor

Humidity 65 %

	Peak	$\mathbf{AV}$		Actu	al FS	Peak	$\mathbf{AV}$		
Freq.	Reading	Reading	Ant./CL	Peak	$\mathbf{AV}$	Limit	Limit	Margin	Remark
(MHz)	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dB)	
1598.0	55.38		-13.95	41.43		74.00	54.00	-12.57	Peak
4844.0	42.36		-5.98	36.38		74.00	54.00	-17.62	Peak
7266.0						74.00	54.00		
9688.0						74.00	54.00		
12110.0						74.00	54.00		
14532.0						74.00	54.00		
16954.0						74.00	54.00		
19376.0						74.00	54.00		
21798.0						74.00	54.00		
24220.0						74.00	54.00		

#### Remark:

- 1 Measuring frequencies from 1GHz to the 10th harmonic of highest fundamental frequency.
- 2 Data of measurement within this frequency range shown " " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 3 Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
- 4 Spectrum Peak Setting: 1GHz-26GHz, RBW=1MHz, VBW=3MHz, Sweep time=200
- 5 Spectrum AV Setting: 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

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# Radiated Spurious Emission Measurement Result (above 1GHz) (802.11n 40M)

Operation Mode 802.11n\_40M TX CH Mid Test Date Sep. 18, 2009

Fundamental Frequency 2437MHz Test By Sky Pol Ver Temperature 25

Humidity 65 %

	Peak	$\mathbf{AV}$		Actu	al FS	Peak	$\mathbf{AV}$		
Freq.	Reading	Reading	Ant./CL	Peak	$\mathbf{AV}$	Limit	Limit	Margin	Remark
(MHz)	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dB)	
1598.0	54.78		-13.95	40.83		74.00	54.00	-13.17	Peak
4874.0	41.65		-5.93	35.72		74.00	54.00	-18.28	Peak
7311.0						74.00	54.00		
9748.0						74.00	54.00		
12185.0						74.00	54.00		
14622.0						74.00	54.00		
17059.0						74.00	54.00		
19496.0						74.00	54.00		
21933.0						74.00	54.00		
24370.0						74.00	54.00		

## Remark:

- 1 Measuring frequencies from 1GHz to the 10th harmonic of highest fundamental frequency.
- 2 Data of measurement within this frequency range shown " " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 3 Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
- 4 Spectrum Peak Setting: 1GHz-26GHz, RBW=1MHz, VBW=3MHz, Sweep time=200
- 5 Spectrum AV Setting: 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

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# Radiated Spurious Emission Measurement Result (above 1GHz) (802.11n 40M)

Operation Mode 802.11n\_40M TX CH Mid Test Date Sep. 18, 2009

Fundamental Frequency 2437MHz Test By Sky Pol Temperature 25 Hor

Humidity 65 %

	Peak	$\mathbf{AV}$		Actu	al FS	Peak	$\mathbf{AV}$		
Freq.	Reading	Reading	Ant./CL	Peak	$\mathbf{AV}$	Limit	Limit	Margin	Remark
(MHz)	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dB)	
1598.0	56.07		-13.95	42.12		74.00	54.00	-11.88	Peak
4874.0	42.32		-5.93	36.39		74.00	54.00	-17.61	Peak
7311.0						74.00	54.00		
9748.0						74.00	54.00		
12185.0						74.00	54.00		
14622.0						74.00	54.00		
17059.0						74.00	54.00		
19496.0						74.00	54.00		
21933.0						74.00	54.00		
24370.0						74.00	54.00		

#### Remark:

- 1 Measuring frequencies from 1GHz to the 10th harmonic of highest fundamental frequency.
- 2 Data of measurement within this frequency range shown " " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 3 Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
- 4 Spectrum Peak Setting: 1GHz-26GHz, RBW=1MHz, VBW=3MHz, Sweep time=200
- 5 Spectrum AV Setting: 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

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# Radiated Spurious Emission Measurement Result (above 1GHz) (802.11n 40M)

Operation Mode 802.11n\_40M TX CH High Test Date Sep. 18, 2009

Fundamental Frequency 2452MHz Test By Sky Pol Ver Temperature 25

Humidity 65 %

	Peak	$\mathbf{AV}$		Actu	al FS	Peak	$\mathbf{AV}$		
Freq.	Reading	Reading	Ant./CL	Peak	$\mathbf{AV}$	Limit	Limit	Margin	Remark
(MHz)	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dB)	
1598.0	57.58		-13.95	43.63		74.00	54.00	-10.37	Peak
4904.0	42.07		-5.91	36.16		74.00	54.00	-17.84	Peak
7356.0						74.00	54.00		
9808.0						74.00	54.00		
12260.0						74.00	54.00		
14712.0						74.00	54.00		
17164.0						74.00	54.00		
19616.0						74.00	54.00		
22068.0						74.00	54.00		
24520.0						74.00	54.00		

### Remark:

- 1 Measuring frequencies from 1GHz to the 10th harmonic of highest fundamental frequency.
- 2 Data of measurement within this frequency range shown " " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 3 Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
- 4 Spectrum Peak Setting: 1GHz-26GHz, RBW=1MHz, VBW=3MHz, Sweep time=200
- 5 Spectrum AV Setting: 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

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# Radiated Spurious Emission Measurement Result (above 1GHz) (802.11n 40M)

Operation Mode 802.11n\_40M TX CH High Test Date Sep. 18, 2009

Fundamental Frequency 2452MHz Test By Sky Pol Temperature 25 Hor

Humidity 65 %

	Peak	$\mathbf{AV}$		Actu	al FS	Peak	$\mathbf{AV}$		
Freq.	Reading	Reading	Ant./CL	Peak	$\mathbf{AV}$	Limit	Limit	Margin	Remark
(MHz)	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dB)	
1598.0	55.79		-13.95	41.84		74.00	54.00	-12.16	Peak
4904.0	41.71		-5.91	35.80		74.00	54.00	-18.20	Peak
7356.0						74.00	54.00		
9808.0						74.00	54.00		
12260.0						74.00	54.00		
14712.0						74.00	54.00		
17164.0						74.00	54.00		
19616.0						74.00	54.00		
22068.0						74.00	54.00		
24520.0						74.00	54.00		

### Remark:

- 1 Measuring frequencies from 1GHz to the 10th harmonic of highest fundamental frequency.
- 2 Data of measurement within this frequency range shown " " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 3 Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
- 4 Spectrum Peak Setting: 1GHz-26GHz, RBW=1MHz, VBW=3MHz, Sweep time=200
- 5 Spectrum AV Setting: 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

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# Radiated Spurious Emission Measurement Result (below 1GHz)

Operation Mode 802.11b RX CH Low Sep. 18, 2009 Test Date

Fundamental Frequency 2412MHz Test By Sky Pol Ver./Hor Temperature 25

Humidity 65 %

Freq.	Ant.Pol.	Detector Mode	Reading	Factor	Actual FS	Limit3m	Safe Margin
(MHz)	H/V	(PK/QP)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)
102.75	V	Peak	61.96	-30.10	31.86	43.50	-11.64
167.74	V	Peak	56.59	-27.76	28.83	43.50	-14.67
800.18	V	Peak	52.08	-20.20	31.88	46.00	-14.12
900.09	V	Peak	52.00	-19.00	33.00	46.00	-13.00
935.98	V	Peak	49.94	-18.64	31.30	46.00	-14.70
960.23	V	Peak	51.83	-18.36	33.47	54.00	-20.53
300.63	Н	Peak	58.69	-28.49	30.20	46.00	-15.80
499.48	Н	Peak	54.27	-24.78	29.49	46.00	-16.51
800.18	Н	Peak	52.50	-20.20	32.30	46.00	-13.70
834.13	Н	Peak	52.61	-19.83	32.78	46.00	-13.22
887.48	Н	Peak	50.95	-19.16	31.79	46.00	-14.21
935.98	Н	Peak	50.53	-18.64	31.89	46.00	-14.11

#### Remark:

- 1 Measuring frequencies from 30 MHz to the 1GHz<sub>o</sub>
- 2 Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument using Peak/QP detector mode.
- 3 Data of measurement within this frequency range shown " " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 4 The IF bandwidth of SPA between 30MHz to 1GHz was 100KHz.

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# Radiated Spurious Emission Measurement Result (below 1GHz) (802.11b)

Operation Mode 802.11b RX CH Mid Test Date Sep. 18, 2009

Fundamental Frequency 2437MHz Test By Sky Pol Ver./Hor Temperature 25

Humidity 65 %

Freq.	Ant.Pol.	Detector Mode	Reading	Factor	Actual FS	Limit3m	Safe Margin
(MHz)	H/V	(PK/QP)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)
103.72	V	Peak	62.05	-30.10	31.95	43.50	-11.55
167.74	V	Peak	55.99	-27.76	28.23	43.50	-15.27
766.23	V	Peak	49.48	-20.51	28.97	46.00	-17.03
800.18	V	Peak	52.67	-20.20	32.47	46.00	-13.53
900.09	V	Peak	50.75	-19.00	31.75	46.00	-14.25
960.23	V	Peak	51.10	-18.36	32.74	54.00	-21.26
300.63	Н	Peak	58.88	-28.49	30.39	46.00	-15.61
800.18	Н	Peak	52.61	-20.20	32.41	46.00	-13.59
834.13	Н	Peak	51.96	-19.83	32.13	46.00	-13.87
911.73	Н	Peak	51.61	-18.85	32.76	46.00	-13.24
935.98	Н	Peak	51.66	-18.64	33.02	46.00	-12.98
960.23	Н	Peak	51.27	-18.36	32.91	54.00	-21.09

#### Remark:

- 1 Measuring frequencies from 30 MHz to the 1GHz<sub>o</sub>
- 2 Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument using Peak/QP detector mode.
- 3 Data of measurement within this frequency range shown " " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 4 The IF bandwidth of SPA between 30MHz to 1GHz was 100KHz.

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# Radiated Spurious Emission Measurement Result (below 1GHz) (802.11b)

Operation Mode 802.11b RX CH High Test Date Sep. 18, 2009

Fundamental Frequency 2462MHz Test By Sky Pol Ver./Hor Temperature 25

Humidity 65 %

Freq.	Ant.Pol.	Detector Mode	Reading	Factor	Actual FS	Limit3m	Safe Margin
(MHz)	H/V	(PK/QP)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)
104.69	V	Peak	61.61	-29.90	31.71	43.50	-11.79
766.23	V	Peak	50.06	-20.51	29.55	46.00	-16.45
800.18	V	Peak	51.54	-20.20	31.34	46.00	-14.66
900.09	V	Peak	51.06	-19.00	32.06	46.00	-13.94
960.23	V	Peak	51.21	-18.36	32.85	54.00	-21.15
984.48	V	Peak	50.99	-18.38	32.61	54.00	-21.39
300.63	Н	Peak	58.67	-28.49	30.18	46.00	-15.82
499.48	Н	Peak	53.61	-24.78	28.83	46.00	-17.17
800.18	Н	Peak	52.62	-20.20	32.42	46.00	-13.58
834.13	Н	Peak	52.20	-19.83	32.37	46.00	-13.63
911.73	Н	Peak	51.81	-18.85	32.96	46.00	-13.04
960.23	Н	Peak	51.23	-18.36	32.87	54.00	-21.13

#### Remark:

- 1 Measuring frequencies from 30 MHz to the 1GHz<sub>o</sub>
- 2 Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument using Peak/QP detector mode.
- 3 Data of measurement within this frequency range shown " " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 4 The IF bandwidth of SPA between 30MHz to 1GHz was 100KHz.

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# Radiated Spurious Emission Measurement Result (below 1GHz) (802.11g)

Operation Mode 802.11g RX CH Low Test Date Sep. 18, 2009

Fundamental Frequency 2412MHz Test By Sky Temperature Pol Ver./Hor 25

Humidity 65 %

Freq.	Ant.Pol.	Detector Mode	Reading	Factor	Actual FS	Limit3m	Safe Margin
(MHz)	H/V	(PK/QP)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)
103.72	V	Peak	63.18	-30.10	33.08	43.50	-10.42
640.13	V	Peak	50.91	-22.16	28.75	46.00	-17.25
800.18	V	Peak	52.95	-20.20	32.75	46.00	-13.25
900.09	V	Peak	51.66	-19.00	32.66	46.00	-13.34
960.23	V	Peak	52.14	-18.36	33.78	54.00	-20.22
984.48	V	Peak	51.33	-18.36	32.97	54.00	-21.03
300.63	Н	Peak	58.29	-28.49	29.80	46.00	-16.20
499.48	Н	Peak	55.20	-24.78	30.42	46.00	-15.58
800.18	Н	Peak	52.34	-20.20	32.14	46.00	-13.86
834.13	Н	Peak	51.52	-19.83	31.69	46.00	-14.31
911.73	Н	Peak	52.05	-18.85	33.20	46.00	-12.80
960.23	Н	Peak	52.44	-18.36	34.08	54.00	-19.92

#### Remark:

- 1 Measuring frequencies from 30 MHz to the 1GHz<sub>o</sub>
- 2 Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument using Peak/QP detector mode.
- 3 Data of measurement within this frequency range shown " " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 4 The IF bandwidth of SPA between 30MHz to 1GHz was 100KHz.

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# Radiated Spurious Emission Measurement Result (below 1GHz) (802.11g)

Operation Mode 802.11g RX CH Mid Test Date Sep. 18, 2009

Fundamental Frequency 2437MHz Test By Sky Temperature Pol Ver./Hor 25

Humidity 65 %

Freq.	Ant.Pol.	Detector Mode	Reading	Factor	<b>Actual FS</b>	Limit3m	Safe Margin
(MHz)	H/V	(PK/QP)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)
104.69	V	Peak	63.09	-29.90	33.19	43.50	-10.31
766.23	V	Peak	49.29	-20.51	28.78	46.00	-17.22
800.18	V	Peak	53.00	-20.20	32.80	46.00	-13.20
900.09	V	Peak	52.45	-19.00	33.45	46.00	-12.55
934.04	V	Peak	50.22	-18.65	31.57	46.00	-14.43
960.23	V	Peak	52.60	-18.36	34.24	54.00	-19.76
300.63	Н	Peak	58.18	-28.49	29.69	46.00	-16.31
499.48	Н	Peak	54.02	-24.78	29.24	46.00	-16.76
800.18	Н	Peak	53.62	-20.20	33.42	46.00	-12.58
834.13	Н	Peak	52.29	-19.83	32.46	46.00	-13.54
935.98	Н	Peak	51.50	-18.64	32.86	46.00	-13.14
960.23	Н	Peak	52.06	-18.36	33.70	54.00	-20.30

#### Remark:

- 1 Measuring frequencies from 30 MHz to the 1GHz<sub>o</sub>
- 2 Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument using Peak/QP detector mode.
- 3 Data of measurement within this frequency range shown " " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 4 The IF bandwidth of SPA between 30MHz to 1GHz was 100KHz.

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# Radiated Spurious Emission Measurement Result (below 1GHz) (802.11g)

802.11g RX CH High Operation Mode Test Date Sep. 18, 2009

Fundamental Frequency 2462MHz Test By Sky Temperature Pol Ver./Hor 25

Humidity 65 %

Freq.	Ant.Pol.	Detector Mode	Reading	Factor	Actual FS	Limit3m	Safe Margin
(MHz)	H/V	(PK/QP)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)
104.69	V	Peak	63.61	-29.90	33.71	43.50	-9.79
119.24	V	Peak	57.85	-28.89	28.96	43.50	-14.54
167.74	V	Peak	56.45	-27.76	28.69	43.50	-14.81
800.18	V	Peak	53.54	-20.20	33.34	46.00	-12.66
900.09	V	Peak	51.42	-19.00	32.42	46.00	-13.58
960.23	V	Peak	52.08	-18.36	33.72	54.00	-20.28
300.63	Н	Peak	58.25	-28.49	29.76	46.00	-16.24
499.48	Н	Peak	55.15	-24.78	30.37	46.00	-15.63
640.13	Н	Peak	52.08	-22.16	29.92	46.00	-16.08
800.18	Н	Peak	52.50	-20.20	32.30	46.00	-13.70
935.98	Н	Peak	52.35	-18.64	33.71	46.00	-12.29
960.23	Н	Peak	52.62	-18.36	34.26	54.00	-19.74

#### Remark:

- 1 Measuring frequencies from 30 MHz to the 1GHz<sub>o</sub>
- 2 Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument using Peak/QP detector mode.
- 3 Data of measurement within this frequency range shown " " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 4 The IF bandwidth of SPA between 30MHz to 1GHz was 100KHz.

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# Radiated Spurious Emission Measurement Result (below 1GHz) (802.11n 20M)

Operation Mode 802.11n\_20M RX CH Low Test Date Sep. 18, 2009

Fundamental Frequency 2412MHz Test By Sky Pol Ver./Hor Temperature 25

Humidity 65 %

Freq.	Ant.Pol.	Detector Mode	Reading	Factor	Actual FS	Limit3m	Safe Margin
(MHz)	H/V	(PK/QP)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)
104.69	V	Peak	62.65	-29.90	32.75	43.50	-10.75
640.13	V	Peak	50.32	-22.16	28.16	46.00	-17.84
800.18	V	Peak	51.73	-20.20	31.53	46.00	-14.47
900.09	V	Peak	51.22	-19.00	32.22	46.00	-13.78
935.98	V	Peak	51.67	-18.64	33.03	46.00	-12.97
960.23	V	Peak	51.35	-18.36	32.99	54.00	-21.01
300.63	Н	Peak	58.83	-28.49	30.34	46.00	-15.66
800.18	Н	Peak	51.55	-20.20	31.35	46.00	-14.65
834.13	Н	Peak	52.27	-19.83	32.44	46.00	-13.56
911.73	Н	Peak	52.55	-18.85	33.70	46.00	-12.30
961.20	Н	Peak	52.48	-18.36	34.12	54.00	-19.88
984.48	Н	Peak	52.53	-18.36	34.17	54.00	-19.83

#### Remark:

- 1 Measuring frequencies from 30 MHz to the 1GHz<sub>o</sub>
- 2 Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument using Peak/QP detector mode.
- 3 Data of measurement within this frequency range shown " " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 4 The IF bandwidth of SPA between 30MHz to 1GHz was 100KHz.

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# Radiated Spurious Emission Measurement Result (below 1GHz) (802.11n 20M)

Operation Mode 802.11n\_20M RX CH Mid Test Date Sep. 18, 2009

Fundamental Frequency 2437MHz Test By Sky Pol Ver./Hor Temperature 25

Humidity 65 %

Freq.	Ant.Pol.	Detector Mode	Reading	Factor	Actual FS	Limit3m	Safe Margin
(MHz)	H/V	(PK/QP)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)
104.69	V	Peak	61.81	-29.90	31.91	43.50	-11.59
766.23	V	Peak	50.00	-20.51	29.49	46.00	-16.51
800.18	V	Peak	51.79	-20.20	31.59	46.00	-14.41
900.09	V	Peak	51.55	-19.00	32.55	46.00	-13.45
960.23	V	Peak	51.18	-18.36	32.82	54.00	-21.18
984.48	V	Peak	51.84	-18.36	33.48	54.00	-20.52
300.63	Н	Peak	58.22	-28.49	29.73	46.00	-16.27
499.48	Н	Peak	54.37	-24.78	29.59	46.00	-16.41
800.18	Н	Peak	50.28	-20.51	29.77	46.00	-16.23
834.13	Н	Peak	52.23	-20.20	32.03	46.00	-13.97
911.73	Н	Peak	50.58	-18.85	31.73	46.00	-14.27
960.23	Н	Peak	50.97	-18.36	32.61	54.00	-21.39

#### Remark:

- 1 Measuring frequencies from 30 MHz to the 1GHz<sub>o</sub>
- 2 Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument using Peak/QP detector mode.
- 3 Data of measurement within this frequency range shown " " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 4 The IF bandwidth of SPA between 30MHz to 1GHz was 100KHz.

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# Radiated Spurious Emission Measurement Result (below 1GHz) (802.11n 20M)

Operation Mode 802.11n\_20M RX CH High Test Date Sep. 18, 2009

Fundamental Frequency 2462MHz Test By Sky Pol Ver./Hor Temperature 25

Humidity 65 %

Freq.	Ant.Pol.	Detector Mode	Reading	Factor	Actual FS	Limit3m	Safe Margin
(MHz)	H/V	(PK/QP)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)
103.72	V	Peak	61.85	-30.10	31.75	43.50	-11.75
167.74	V	Peak	55.87	-27.76	28.11	43.50	-15.39
800.18	V	Peak	51.62	-20.20	31.42	46.00	-14.58
900.09	V	Peak	50.33	-19.00	31.33	46.00	-14.67
935.98	V	Peak	50.90	-18.64	32.26	46.00	-13.74
960.23	V	Peak	50.82	-18.36	32.46	54.00	-21.54
300.63	Н	Peak	58.48	-28.49	29.99	46.00	-16.01
499.48	Н	Peak	53.99	-24.78	29.21	46.00	-16.79
800.18	Н	Peak	51.73	-20.20	31.53	46.00	-14.47
834.13	Н	Peak	50.17	-19.83	30.34	46.00	-15.66
911.73	Н	Peak	50.22	-18.85	31.37	46.00	-14.63
960.23	Н	Peak	50.36	-18.36	32.00	54.00	-22.00

#### Remark:

- 1 Measuring frequencies from 30 MHz to the 1GHz<sub>o</sub>
- 2 Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument using Peak/QP detector mode.
- 3 Data of measurement within this frequency range shown " " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 4 The IF bandwidth of SPA between 30MHz to 1GHz was 100KHz.

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## Radiated Spurious Emission Measurement Result (below 1GHz) (802.11n\_40M)

Operation Mode 802.11n\_40M RX CH Low Test Date Sep. 18, 2009

Fundamental Frequency 2422MHz Test By Sky Pol Ver./Hor Temperature 25

Humidity 65 %

Freq.	Ant.Pol.	Detector Mode	Reading	Factor	Actual FS	Limit3m	Safe Margin
(MHz)	H/V	(PK/QP)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)
104.69	V	Peak	60.85	-29.90	30.95	43.50	-12.55
766.23	V	Peak	50.43	-20.51	29.92	46.00	-16.08
800.18	V	Peak	52.75	-20.20	32.55	46.00	-13.45
911.73	V	Peak	51.74	-18.85	32.89	46.00	-13.11
948.59	V	Peak	51.06	-18.40	32.66	46.00	-13.34
960.23	V	Peak	51.53	-18.36	33.17	54.00	-20.83
300.63	Н	Peak	57.93	-28.49	29.44	46.00	-16.56
499.48	Н	Peak	54.38	-24.78	29.60	46.00	-16.40
800.18	Н	Peak	52.20	-20.20	32.00	46.00	-14.00
935.98	Н	Peak	51.10	-18.64	32.46	46.00	-13.54
960.23	Н	Peak	51.15	-18.36	32.79	54.00	-21.21
984.48	Н	Peak	50.91	-18.36	32.55	54.00	-21.45

#### Remark:

- 1 Measuring frequencies from 30 MHz to the 1GHz<sub>o</sub>
- 2 Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument using Peak/QP detector mode.
- 3 Data of measurement within this frequency range shown " " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 4 The IF bandwidth of SPA between 30MHz to 1GHz was 100KHz.

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# Radiated Spurious Emission Measurement Result (below 1GHz) (802.11n\_40M)

Operation Mode 802.11n\_40M RX CH Mid Test Date Sep. 18, 2009

Fundamental Frequency 2437MHz Test By Sky Pol Ver./Hor Temperature 25

Humidity 65 %

Freq.	Ant.Pol.	Detector Mode	Reading	Factor	Actual FS	Limit3m	Safe Margin
(MHz)	H/V	(PK/QP)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)
103.72	V	Peak	60.36	-30.10	30.26	43.50	-13.24
640.13	V	Peak	51.36	-22.16	29.20	46.00	-16.80
800.18	V	Peak	52.14	-20.20	31.94	46.00	-14.06
911.73	V	Peak	51.01	-18.85	32.16	46.00	-13.84
924.34	V	Peak	51.76	-18.72	33.04	46.00	-12.96
960.23	V	Peak	51.68	-18.36	33.32	54.00	-20.68
300.63	Н	Peak	57.91	-28.49	29.42	46.00	-16.58
499.48	Н	Peak	54.55	-24.78	29.77	46.00	-16.23
800.18	Н	Peak	51.62	-20.20	31.42	46.00	-14.58
834.13	Н	Peak	51.77	-19.83	31.94	46.00	-14.06
911.73	Н	Peak	51.62	-18.85	32.77	46.00	-13.23
960.23	Н	Peak	51.13	-18.36	32.77	54.00	-21.23

#### Remark:

- 1 Measuring frequencies from 30 MHz to the 1GHz<sub>o</sub>
- 2 Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument using Peak/QP detector mode.
- 3 Data of measurement within this frequency range shown " " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 4 The IF bandwidth of SPA between 30MHz to 1GHz was 100KHz.

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# Radiated Spurious Emission Measurement Result (below 1GHz) (802.11n\_40M)

802.11n\_40M RX CH High Operation Mode Test Date Sep. 18, 2009

Fundamental Frequency 2452MHz Test By Sky Pol Ver./Hor Temperature 25

Humidity 65 %

Freq.	Ant.Pol.	Detector Mode	Reading	Factor	Actual FS	Limit3m	Safe Margin
(MHz)	H/V	(PK/QP)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)
104.69	V	Peak	60.10	-29.90	30.20	43.50	-13.30
300.63	V	Peak	57.91	-28.49	29.42	46.00	-16.58
499.48	V	Peak	54.55	-24.78	29.77	46.00	-16.23
800.18	V	Peak	52.62	-20.20	32.42	46.00	-13.58
911.73	V	Peak	51.62	-18.85	32.77	46.00	-13.23
960.23	V	Peak	51.13	-18.36	32.77	54.00	-21.23
300.63	Н	Peak	57.81	-28.49	29.32	46.00	-16.68
499.48	Н	Peak	55.35	-24.78	30.57	46.00	-15.43
800.18	Н	Peak	52.47	-20.20	32.27	46.00	-13.73
834.13	Н	Peak	52.19	-19.83	32.36	46.00	-13.64
935.98	Н	Peak	51.49	-18.64	32.85	46.00	-13.15
960.23	Н	Peak	52.28	-18.36	33.92	54.00	-20.08

#### Remark:

- 1 Measuring frequencies from 30 MHz to the 1GHz<sub>o</sub>
- 2 Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument using Peak/QP detector mode.
- 3 Data of measurement within this frequency range shown " " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 4 The IF bandwidth of SPA between 30MHz to 1GHz was 100KHz.

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#### Radiated Spurious Emission Measurement Result (above 1GHz) (802.11b)

Operation Mode 802.11b RX CH Low Test Date Sep. 18, 2009

Fundamental Frequency 2412MHz Test By Sky Pol Ver. Temperature 25

Humidity 65 %

	Peak	$\mathbf{AV}$		Actu	al FS	Peak	$\mathbf{AV}$		
Freq.	Reading	Reading	Ant./CL	Peak	$\mathbf{AV}$	Limit	Limit	Margin	Remark
(MHz)	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dB)	
1598.0	52.76		-13.95	38.81		74.00	54.00	-15.19	Peak
4824.0						74.00	54.00		
7236.0						74.00	54.00		
9648.0						74.00	54.00		
12060.0						74.00	54.00		
14472.0						74.00	54.00		
16884.0						74.00	54.00		
19296.0						74.00	54.00		
21708.0						74.00	54.00		
24120.0						74.00	54.00		

#### Remark:

- 1 Measuring frequencies from 1GHz to the 10th harmonic of highest fundamental frequency.
- 2 Data of measurement within this frequency range shown " " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 3 Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
- 4 Spectrum Peak Setting: 1GHz-26GHz, RBW=1MHz, VBW=3MHz, Sweep time=200
- 5 Spectrum AV Setting: 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

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# Radiated Spurious Emission Measurement Result (above 1GHz) (802.11b)

Operation Mode 802.11b RX CH Low Test Date Sep. 18, 2009

Fundamental Frequency 2412MHz Test By Sky Pol Temperature 25 Hor

Humidity 65 %

	Peak	$\mathbf{AV}$		Actu	al FS	Peak	$\mathbf{AV}$		
Freq.	Reading	Reading	Ant./CL	Peak	$\mathbf{AV}$	Limit	Limit	Margin	Remark
(MHz)	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dB)	
1598.0	49.79		-13.95	35.84		74.00	54.00	-18.16	Peak
4824.0						74.00	54.00		
7236.0						74.00	54.00		
9648.0						74.00	54.00		
12060.0						74.00	54.00		
14472.0						74.00	54.00		
16884.0						74.00	54.00		
19296.0						74.00	54.00		
21708.0						74.00	54.00		
24120.0						74.00	54.00		

### Remark:

- 1 Measuring frequencies from 1GHz to the 10th harmonic of highest fundamental frequency.
- 2 Data of measurement within this frequency range shown " " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 3 Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
- 4 Spectrum Peak Setting: 1GHz-26GHz, RBW=1MHz, VBW=3MHz, Sweep time=200
- 5 Spectrum AV Setting: 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

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#### Radiated Spurious Emission Measurement Result (above 1GHz) (802.11b)

Operation Mode 802.11b RX CH Mid Test Date Sep. 18, 2009

Fundamental Frequency 2437MHz Test By Sky Pol Ver Temperature 25

Humidity 65 %

	Peak	$\mathbf{AV}$		Actu	al FS	Peak	$\mathbf{AV}$		
Freq.	Reading	Reading	Ant./CL	Peak	$\mathbf{AV}$	Limit	Limit	Margin	Remark
(MHz)	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dB)	
1598.0	52.23		-13.95	38.28		74.00	54.00	-15.72	Peak
4874.0						74.00	54.00		
7311.0						74.00	54.00		
9748.0						74.00	54.00		
12185.0						74.00	54.00		
14622.0						74.00	54.00		
17059.0						74.00	54.00		
19496.0						74.00	54.00		
21933.0						74.00	54.00		
24370.0						74.00	54.00		

### Remark:

- 1 Measuring frequencies from 1GHz to the 10th harmonic of highest fundamental frequency.
- 2 Data of measurement within this frequency range shown " " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 3 Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
- 4 Spectrum Peak Setting: 1GHz-26GHz, RBW=1MHz, VBW=3MHz, Sweep time=200
- 5 Spectrum AV Setting: 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

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#### Radiated Spurious Emission Measurement Result (above 1GHz) (802.11b)

Operation Mode 802.11b RX CH Mid Test Date Sep. 18, 2009

Fundamental Frequency 2437MHz Test By Sky Pol Temperature 25 Hor

Humidity 65 %

	Peak	$\mathbf{AV}$		Actu	al FS	Peak	$\mathbf{AV}$		
Freq.	Reading	Reading	Ant./CL	Peak	$\mathbf{AV}$	Limit	Limit	Margin	Remark
(MHz)	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dB)	
1598.0	48.97		-13.95	35.02		74.00	54.00	-18.98	Peak
4874.0						74.00	54.00		
7311.0						74.00	54.00		
9748.0						74.00	54.00		
12185.0						74.00	54.00		
14622.0						74.00	54.00		
17059.0						74.00	54.00		
19496.0						74.00	54.00		
21933.0						74.00	54.00		
24370.0						74.00	54.00		

### Remark:

- 1 Measuring frequencies from 1GHz to the 10th harmonic of highest fundamental frequency.
- 2 Data of measurement within this frequency range shown " " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 3 Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
- 4 Spectrum Peak Setting: 1GHz-26GHz, RBW=1MHz, VBW=3MHz, Sweep time=200
- 5 Spectrum AV Setting: 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

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#### Radiated Spurious Emission Measurement Result (above 1GHz) (802.11b)

Operation Mode 802.11b RX CH High Test Date Sep. 18, 2009

Fundamental Frequency 2462MHz Test By Sky Pol Ver Temperature 25

Humidity 65 %

	Peak	$\mathbf{AV}$		Actu	al FS	Peak	$\mathbf{AV}$		
Freq.	Reading	Reading	Ant./CL	Peak	$\mathbf{AV}$	Limit	Limit	Margin	Remark
(MHz)	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dB)	
1598.0	53.98		-13.95	40.03		74.00	54.00	-13.97	Peak
4926.0						74.00	54.00		
7386.0						74.00	54.00		
9848.0						74.00	54.00		
12310.0						74.00	54.00		
14772.0						74.00	54.00		
17234.0						74.00	54.00		
19696.0						74.00	54.00		
22158.0						74.00	54.00		
24620.0						74.00	54.00		

### Remark:

- 1 Measuring frequencies from 1GHz to the 10th harmonic of highest fundamental frequency.
- 2 Data of measurement within this frequency range shown " " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 3 Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
- 4 Spectrum Peak Setting: 1GHz-26GHz, RBW=1MHz, VBW=3MHz, Sweep time=200
- 5 Spectrum AV Setting: 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

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#### Radiated Spurious Emission Measurement Result (above 1GHz) (802.11b)

Operation Mode 802.11b RX CH High Test Date Sep. 18, 2009

Fundamental Frequency 2462MHz Test By Sky Pol Temperature 25 Hor

Humidity 65 %

	Peak	$\mathbf{AV}$		Actu	al FS	Peak	$\mathbf{AV}$		
Freq.	Reading	Reading	Ant./CL	Peak	$\mathbf{AV}$	Limit	Limit	Margin	Remark
(MHz)	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dB)	
1598.0	48.66		-13.95	34.71		74.00	54.00	-19.29	Peak
4924.0						74.00	54.00		
7386.0						74.00	54.00		
9848.0						74.00	54.00		
12310.0						74.00	54.00		
14772.0						74.00	54.00		
17234.0						74.00	54.00		
19696.0						74.00	54.00		
22158.0						74.00	54.00		
24620.0						74.00	54.00		

### Remark:

- 1 Measuring frequencies from 1GHz to the 10th harmonic of highest fundamental frequency.
- 2 Data of measurement within this frequency range shown " " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 3 Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
- 4 Spectrum Peak Setting: 1GHz-26GHz, RBW=1MHz, VBW=3MHz, Sweep time=200
- 5 Spectrum AV Setting: 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

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# Radiated Spurious Emission Measurement Result (above 1GHz) (802.11g)

Operation Mode 802.11g RX CH Low Test Date Sep. 18, 2009

Fundamental Frequency 2412MHz Test By Sky Pol Ver. Temperature 25

Humidity 65 %

	Peak	$\mathbf{AV}$		Actu	al FS	Peak	$\mathbf{AV}$		
Freq.	Reading	Reading	Ant./CL	Peak	$\mathbf{AV}$	Limit	Limit	Margin	Remark
(MHz)	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dB)	
1598.0	53.26		-13.95	39.31		74.00	54.00	-14.69	Peak
4824.0						74.00	54.00		
7236.0						74.00	54.00		
9648.0						74.00	54.00		
12060.0						74.00	54.00		
14472.0						74.00	54.00		
16884.0						74.00	54.00		
19296.0						74.00	54.00		
21708.0						74.00	54.00		
24120.0						74.00	54.00		

#### Remark:

- 1 Measuring frequencies from 1GHz to the 10th harmonic of highest fundamental frequency.
- 2 Data of measurement within this frequency range shown " " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 3 Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
- 4 Spectrum Peak Setting: 1GHz-26GHz, RBW=1MHz, VBW=3MHz, Sweep time=200
- 5 Spectrum AV Setting: 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

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#### Radiated Spurious Emission Measurement Result (above 1GHz) (802.11g)

Operation Mode 802.11g RX CH Low Test Date Sep. 18, 2009

Fundamental Frequency 2412MHz Test By Sky Pol Temperature 25 Hor

Humidity 65 %

	Peak	$\mathbf{AV}$		Actu	al FS	Peak	$\mathbf{AV}$		
Freq.	Reading	Reading	Ant./CL	Peak	$\mathbf{AV}$	Limit	Limit	Margin	Remark
(MHz)	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dB)	
1598.0	48.16		-13.95	34.21		74.00	54.00	-19.79	Peak
4824.0						74.00	54.00		
7236.0						74.00	54.00		
9648.0						74.00	54.00		
12060.0						74.00	54.00		
14472.0						74.00	54.00		
16884.0						74.00	54.00		
19296.0						74.00	54.00		
21708.0						74.00	54.00		
24120.0						74.00	54.00		

#### Remark:

- 1 Measuring frequencies from 1GHz to the 10th harmonic of highest fundamental frequency.
- 2 Data of measurement within this frequency range shown " " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 3 Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
- 4 Spectrum Peak Setting: 1GHz-26GHz, RBW=1MHz, VBW=3MHz, Sweep time=200
- 5 Spectrum AV Setting: 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

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# Radiated Spurious Emission Measurement Result (above 1GHz) (802.11g)

Operation Mode 802.11g RX CH Mid Test Date Sep. 18, 2009

Fundamental Frequency 2437MHz Test By Sky Pol Ver Temperature 25

Humidity 65 %

	Peak	$\mathbf{AV}$		Actu	al FS	Peak	$\mathbf{AV}$		
Freq.	Reading	Reading	Ant./CL	Peak	$\mathbf{AV}$	Limit	Limit	Margin	Remark
(MHz)	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dB)	
1598.0	52.69		-13.95	38.74		74.00	54.00	-15.26	Peak
4874.0						74.00	54.00		
7311.0						74.00	54.00		
9748.0						74.00	54.00		
12185.0						74.00	54.00		
14622.0						74.00	54.00		
17059.0						74.00	54.00		
19496.0						74.00	54.00		
21933.0						74.00	54.00		
24370.0						74.00	54.00		

# Remark:

- 1 Measuring frequencies from 1GHz to the 10th harmonic of highest fundamental frequency.
- 2 Data of measurement within this frequency range shown " " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 3 Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
- 4 Spectrum Peak Setting: 1GHz-26GHz, RBW=1MHz, VBW=3MHz, Sweep time=200
- 5 Spectrum AV Setting: 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

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# Radiated Spurious Emission Measurement Result (above 1GHz) (802.11g)

Operation Mode 802.11g RX CH Mid Test Date Sep. 18, 2009

Fundamental Frequency 2437MHz Test By Sky Pol Temperature 25 Hor

Humidity 65 %

	Peak	$\mathbf{AV}$		Actu	al FS	Peak	$\mathbf{AV}$		
Freq.	Reading	Reading	Ant./CL	Peak	$\mathbf{AV}$	Limit	Limit	Margin	Remark
(MHz)	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dB)	
1598.0	50.30		-13.95	36.35		74.00	54.00	-17.65	Peak
4874.0						74.00	54.00		
7311.0						74.00	54.00		
9748.0						74.00	54.00		
12185.0						74.00	54.00		
14622.0						74.00	54.00		
17059.0						74.00	54.00		
19496.0						74.00	54.00		
21933.0						74.00	54.00		
24370.0						74.00	54.00		

### Remark:

- 1 Measuring frequencies from 1GHz to the 10th harmonic of highest fundamental frequency.
- 2 Data of measurement within this frequency range shown " " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 3 Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
- 4 Spectrum Peak Setting: 1GHz-26GHz, RBW=1MHz, VBW=3MHz, Sweep time=200
- 5 Spectrum AV Setting: 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

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#### Radiated Spurious Emission Measurement Result (above 1GHz) (802.11g)

Operation Mode 802.11g RX CH High Test Date Sep. 18, 2009

Fundamental Frequency 2462MHz Test By Sky Pol Ver Temperature 25

Humidity 65 %

	Peak	$\mathbf{AV}$		Actu	al FS	Peak	$\mathbf{AV}$		
Freq.	Reading	Reading	Ant./CL	Peak	$\mathbf{AV}$	Limit	Limit	Margin	Remark
(MHz)	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dB)	
1598.0	53.06		-13.95	39.11		74.00	54.00	-14.89	Peak
4924.0						74.00	54.00		
7386.0						74.00	54.00		
9848.0						74.00	54.00		
12310.0						74.00	54.00		
14772.0						74.00	54.00		
17234.0						74.00	54.00		
19696.0						74.00	54.00		
22158.0						74.00	54.00		
24620.0						74.00	54.00		

#### Remark:

- 1 Measuring frequencies from 1GHz to the 10th harmonic of highest fundamental frequency.
- 2 Data of measurement within this frequency range shown " " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 3 Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
- 4 Spectrum Peak Setting: 1GHz-26GHz, RBW=1MHz, VBW=3MHz, Sweep time=200
- 5 Spectrum AV Setting: 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

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#### Radiated Spurious Emission Measurement Result (above 1GHz) (802.11g)

Operation Mode 802.11g RX CH High Test Date Sep. 18, 2009

Fundamental Frequency 2462MHz Test By Sky Pol Temperature 25 Hor

Humidity 65 %

	Peak	$\mathbf{AV}$		Actu	al FS	Peak	$\mathbf{AV}$		
Freq.	Reading	Reading	Ant./CL	Peak	$\mathbf{AV}$	Limit	Limit	Margin	Remark
(MHz)	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dB)	
1598.0	48.06		-13.95	34.11		74.00	54.00	-19.89	Peak
4924.0						74.00	54.00		
7386.0						74.00	54.00		
9848.0						74.00	54.00		
12310.0						74.00	54.00		
14772.0						74.00	54.00		
17234.0						74.00	54.00		
19696.0						74.00	54.00		
22158.0						74.00	54.00		
24620.0						74.00	54.00		

#### Remark:

- 1 Measuring frequencies from 1GHz to the 10th harmonic of highest fundamental frequency.
- 2 Data of measurement within this frequency range shown " " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 3 Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
- 4 Spectrum Peak Setting: 1GHz-26GHz, RBW=1MHz, VBW=3MHz, Sweep time=200
- 5 Spectrum AV Setting: 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

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#### Radiated Spurious Emission Measurement Result (above 1GHz) (802.11n 20M)

Operation Mode 802.11n\_20M RX CH Low Test Date Sep. 18, 2009

Fundamental Frequency 2412MHz Test By Sky Pol Ver. Temperature 25

Humidity 65 %

	Peak	$\mathbf{AV}$		Actu	al FS	Peak	$\mathbf{AV}$		
Freq.	Reading	Reading	Ant./CL	Peak	$\mathbf{AV}$	Limit	Limit	Margin	Remark
(MHz)	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dB)	
1598.0	51.12		-13.95	37.17		74.00	54.00	-16.83	Peak
4824.0						74.00	54.00		
7236.0						74.00	54.00		
9648.0						74.00	54.00		
12060.0						74.00	54.00		
14472.0						74.00	54.00		
16884.0						74.00	54.00		
19296.0						74.00	54.00		
21708.0						74.00	54.00		
24120.0						74.00	54.00		

#### Remark:

- 1 Measuring frequencies from 1GHz to the 10th harmonic of highest fundamental frequency.
- 2 Data of measurement within this frequency range shown " " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 3 Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
- 4 Spectrum Peak Setting: 1GHz-26GHz, RBW=1MHz, VBW=3MHz, Sweep time=200
- 5 Spectrum AV Setting: 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

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# Radiated Spurious Emission Measurement Result (above 1GHz) (802.11n 20M)

Operation Mode 802.11n\_20M RX CH Low Test Date Sep. 18, 2009

Fundamental Frequency 2412MHz Test By Sky Pol Temperature 25 Hor

Humidity 65 %

	Peak	$\mathbf{AV}$		Actu	al FS	Peak	$\mathbf{AV}$		
Freq.	Reading	Reading	Ant./CL	Peak	$\mathbf{AV}$	Limit	Limit	Margin	Remark
(MHz)	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dB)	
1598.0	48.08		-13.95	34.13		74.00	54.00	-19.87	Peak
4824.0						74.00	54.00		
7236.0						74.00	54.00		
9648.0						74.00	54.00		
12060.0						74.00	54.00		
14472.0						74.00	54.00		
16884.0						74.00	54.00		
19296.0						74.00	54.00		
21708.0						74.00	54.00		
24120.0						74.00	54.00		

### Remark:

- 1 Measuring frequencies from 1GHz to the 10th harmonic of highest fundamental frequency.
- 2 Data of measurement within this frequency range shown " " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 3 Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
- 4 Spectrum Peak Setting: 1GHz-26GHz, RBW=1MHz, VBW=3MHz, Sweep time=200
- 5 Spectrum AV Setting: 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

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# Radiated Spurious Emission Measurement Result (above 1GHz) (802.11n 20M)

Operation Mode 802.11n\_20M RX CH Mid Test Date Sep. 18, 2009

Fundamental Frequency 2437MHz Test By Sky Pol Ver Temperature 25

Humidity 65 %

	Peak	$\mathbf{AV}$		Actu	al FS	Peak	$\mathbf{AV}$		
Freq.	Reading	Reading	Ant./CL	Peak	$\mathbf{AV}$	Limit	Limit	Margin	Remark
(MHz)	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dB)	
1598.0	52.61		-13.95	38.66		74.00	54.00	-15.34	Peak
4874.0						74.00	54.00		
7311.0						74.00	54.00		
9748.0						74.00	54.00		
12185.0						74.00	54.00		
14622.0						74.00	54.00		
17059.0						74.00	54.00		
19496.0						74.00	54.00		
21933.0						74.00	54.00		
24370.0						74.00	54.00		

### Remark:

- 1 Measuring frequencies from 1GHz to the 10th harmonic of highest fundamental frequency.
- 2 Data of measurement within this frequency range shown " " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 3 Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
- 4 Spectrum Peak Setting: 1GHz-26GHz, RBW=1MHz, VBW=3MHz, Sweep time=200
- 5 Spectrum AV Setting: 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

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# Radiated Spurious Emission Measurement Result (above 1GHz) (802.11n 20M)

Operation Mode 802.11n\_20M RX CH Mid Test Date Sep. 18, 2009

Fundamental Frequency 2437MHz Test By Sky Pol Temperature 25 Hor

Humidity 65 %

	Peak	$\mathbf{AV}$		Actu	al FS	Peak	$\mathbf{AV}$		
Freq.	Reading	Reading	Ant./CL	Peak	$\mathbf{AV}$	Limit	Limit	Margin	Remark
(MHz)	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dB)	
1598.0	46.65		-13.95	32.70		74.00	54.00	-21.30	Peak
4874.0						74.00	54.00		
7311.0						74.00	54.00		
9748.0						74.00	54.00		
12185.0						74.00	54.00		
14622.0						74.00	54.00		
17059.0						74.00	54.00		
19496.0						74.00	54.00		
21933.0						74.00	54.00		
24370.0						74.00	54.00		

### Remark:

- 1 Measuring frequencies from 1GHz to the 10th harmonic of highest fundamental frequency.
- 2 Data of measurement within this frequency range shown " " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 3 Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
- 4 Spectrum Peak Setting: 1GHz-26GHz, RBW=1MHz, VBW=3MHz, Sweep time=200
- 5 Spectrum AV Setting: 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

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#### Radiated Spurious Emission Measurement Result (above 1GHz) (802.11n 20M)

Operation Mode 802.11n\_20M RX CH High Test Date Sep. 18, 2009

Fundamental Frequency 2462MHz Test By Sky Pol Ver Temperature 25

Humidity 65 %

	Peak	$\mathbf{AV}$		Actu	al FS	Peak	$\mathbf{AV}$		
Freq.	Reading	Reading	Ant./CL	Peak	$\mathbf{AV}$	Limit	Limit	Margin	Remark
(MHz)	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dB)	
1598.0	53.13		-13.95	39.18		74.00	54.00	-14.82	Peak
4924.0						74.00	54.00		
7386.0						74.00	54.00		
9848.0						74.00	54.00		
12310.0						74.00	54.00		
14772.0						74.00	54.00		
17234.0						74.00	54.00		
19696.0						74.00	54.00		
22158.0						74.00	54.00		
24620.0						74.00	54.00		

#### Remark:

- 1 Measuring frequencies from 1GHz to the 10th harmonic of highest fundamental frequency.
- 2 Data of measurement within this frequency range shown " " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 3 Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
- 4 Spectrum Peak Setting: 1GHz-26GHz, RBW=1MHz, VBW=3MHz, Sweep time=200
- 5 Spectrum AV Setting: 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

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# Radiated Spurious Emission Measurement Result (above 1GHz) (802.11n 20M)

Operation Mode 802.11n\_20M RX CH High Test Date Sep. 18, 2009

Fundamental Frequency 2462MHz Test By Sky Pol Temperature 25 Hor

Humidity 65 %

	Peak	$\mathbf{AV}$		Actu	al FS	Peak	$\mathbf{AV}$		
Freq.	Reading	Reading	Ant./CL	Peak	$\mathbf{AV}$	Limit	Limit	Margin	Remark
(MHz)	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dB)	
1598.0	47.22		-13.95	33.27		74.00	54.00	-20.73	Peak
4924.0						74.00	54.00		
7386.0						74.00	54.00		
9848.0						74.00	54.00		
12310.0						74.00	54.00		
14772.0						74.00	54.00		
17234.0						74.00	54.00		
19696.0						74.00	54.00		
22158.0						74.00	54.00		
24620.0						74.00	54.00		

#### Remark:

- 1 Measuring frequencies from 1GHz to the 10th harmonic of highest fundamental frequency.
- 2 Data of measurement within this frequency range shown " " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 3 Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
- 4 Spectrum Peak Setting: 1GHz-26GHz, RBW=1MHz, VBW=3MHz, Sweep time=200
- 5 Spectrum AV Setting: 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

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# Radiated Spurious Emission Measurement Result (above 1GHz) (802.11n 40M)

Operation Mode 802.11n\_40M RX CH Low Test Date Sep. 18, 2009

Fundamental Frequency 2422MHz Test By Sky Pol Ver. Temperature 25

Humidity 65 %

	Peak	$\mathbf{AV}$		Actu	al FS	Peak	$\mathbf{AV}$		
Freq.	Reading	Reading	Ant./CL	Peak	$\mathbf{AV}$	Limit	Limit	Margin	Remark
(MHz)	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dB)	
1598.0	53.09		-13.95	39.14		74.00	54.00	-14.86	Peak
4844.0						74.00	54.00		
7266.0						74.00	54.00		
9688.0						74.00	54.00		
12110.0						74.00	54.00		
14532.0						74.00	54.00		
16954.0						74.00	54.00		
19376.0						74.00	54.00		
21798.0						74.00	54.00		
24220.0						74.00	54.00		

#### Remark:

- 1 Measuring frequencies from 1GHz to the 10th harmonic of highest fundamental frequency.
- 2 Data of measurement within this frequency range shown " " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 3 Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
- 4 Spectrum Peak Setting: 1GHz-26GHz, RBW=1MHz, VBW=3MHz, Sweep time=200
- 5 Spectrum AV Setting: 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

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# Radiated Spurious Emission Measurement Result (above 1GHz) (802.11n 40M)

Operation Mode 802.11n\_40M RX CH Low Test Date Sep. 18, 2009

Fundamental Frequency 2422MHz Test By Sky Pol Temperature 25 Hor

Humidity 65 %

	Peak	$\mathbf{AV}$		Actu	al FS	Peak	$\mathbf{AV}$		
Freq.	Reading	Reading	Ant./CL	Peak	$\mathbf{AV}$	Limit	Limit	Margin	Remark
(MHz)	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dB)	
1565.5	45.09		-14.09	31.00		74.00	54.00	-23.00	Peak
4844.0						74.00	54.00		
7266.0						74.00	54.00		
9688.0						74.00	54.00		
12110.0						74.00	54.00		
14532.0						74.00	54.00		
16954.0						74.00	54.00		
19376.0						74.00	54.00		
21798.0						74.00	54.00		
24220.0						74.00	54.00		

#### Remark:

- 1 Measuring frequencies from 1GHz to the 10th harmonic of highest fundamental frequency.
- 2 Data of measurement within this frequency range shown " " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 3 Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
- 4 Spectrum Peak Setting: 1GHz-26GHz, RBW=1MHz, VBW=3MHz, Sweep time=200
- 5 Spectrum AV Setting: 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

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# Radiated Spurious Emission Measurement Result (above 1GHz) (802.11n 40M)

Operation Mode 802.11n\_40M RX CH Mid Test Date Sep. 18, 2009

Fundamental Frequency 2437MHz Test By Sky Pol Ver Temperature 25

Humidity 65 %

	Peak	$\mathbf{AV}$		Actu	al FS	Peak	$\mathbf{AV}$		
Freq.	Reading	Reading	Ant./CL	Peak	$\mathbf{AV}$	Limit	Limit	Margin	Remark
(MHz)	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dB)	
1598.0	53.52		-13.95	39.57		74.00	54.00	-14.43	Peak
4874.0						74.00	54.00		
7311.0						74.00	54.00		
9748.0						74.00	54.00		
12185.0						74.00	54.00		
14622.0						74.00	54.00		
17059.0						74.00	54.00		
19496.0						74.00	54.00		
21933.0						74.00	54.00		
24370.0						74.00	54.00		

### Remark:

- 1 Measuring frequencies from 1GHz to the 10th harmonic of highest fundamental frequency.
- 2 Data of measurement within this frequency range shown " " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 3 Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
- 4 Spectrum Peak Setting: 1GHz-26GHz, RBW=1MHz, VBW=3MHz, Sweep time=200
- 5 Spectrum AV Setting: 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

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# Radiated Spurious Emission Measurement Result (above 1GHz) (802.11n 40M)

Operation Mode 802.11n\_40M RX CH Mid Test Date Sep. 18, 2009

Fundamental Frequency 2437MHz Test By Sky Pol Temperature 25 Hor

Humidity 65 %

	Peak	$\mathbf{AV}$		<b>Actual FS</b>		Peak	$\mathbf{AV}$		
Freq.	Reading	Reading	Ant./CL	Peak	$\mathbf{AV}$	Limit	Limit	Margin	Remark
(MHz)	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dB)	
1598.0	47.31		-13.95	33.36		74.00	54.00	-20.64	Peak
4874.0						74.00	54.00		
7311.0						74.00	54.00		
9748.0						74.00	54.00		
12185.0						74.00	54.00		
14622.0						74.00	54.00		
17059.0						74.00	54.00		
19496.0						74.00	54.00		
21933.0						74.00	54.00		
24370.0						74.00	54.00		

### Remark:

- 1 Measuring frequencies from 1GHz to the 10th harmonic of highest fundamental frequency.
- 2 Data of measurement within this frequency range shown " " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 3 Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
- 4 Spectrum Peak Setting: 1GHz-26GHz, RBW=1MHz, VBW=3MHz, Sweep time=200
- 5 Spectrum AV Setting: 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

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#### Radiated Spurious Emission Measurement Result (above 1GHz) (802.11n 40M)

Operation Mode 802.11n\_40M RX CH High Test Date Sep. 18, 2009

Fundamental Frequency 2452MHz Test By Sky Pol Ver Temperature 25

Humidity 65 %

	Peak	$\mathbf{AV}$		<b>Actual FS</b>		Peak	$\mathbf{AV}$		
Freq.	Reading	Reading	Ant./CL	Peak	$\mathbf{AV}$	Limit	Limit	Margin	Remark
(MHz)	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dB)	
1598.0	53.02		-13.95	39.07		74.00	54.00	-14.93	Peak
4904.0						74.00	54.00		
7356.0						74.00	54.00		
9808.0						74.00	54.00		
12260.0						74.00	54.00		
14712.0						74.00	54.00		
17164.0						74.00	54.00		
19616.0						74.00	54.00		
22068.0						74.00	54.00		
24520.0						74.00	54.00		

### Remark:

- 1 Measuring frequencies from 1GHz to the 10th harmonic of highest fundamental frequency.
- 2 Data of measurement within this frequency range shown " " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 3 Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
- 4 Spectrum Peak Setting: 1GHz-26GHz, RBW=1MHz, VBW=3MHz, Sweep time=200
- 5 Spectrum AV Setting: 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

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# Radiated Spurious Emission Measurement Result (above 1GHz) (802.11n 40M)

Operation Mode 802.11n\_40M RX CH High Test Date Sep. 18, 2009

Fundamental Frequency 2452MHz Test By Sky Pol Temperature 25 Hor

Humidity 65 %

	Peak	$\mathbf{AV}$		<b>Actual FS</b>		Peak	$\mathbf{AV}$		
Freq.	Reading	Reading	Ant./CL	Peak	$\mathbf{AV}$	Limit	Limit	Margin	Remark
(MHz)	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dB)	
1598.0	48.38		-13.95	34.43		74.00	54.00	-19.57	Peak
4904.0						74.00	54.00		
7356.0						74.00	54.00		
9808.0						74.00	54.00		
12260.0						74.00	54.00		
14712.0						74.00	54.00		
17164.0						74.00	54.00		
19616.0						74.00	54.00		
22068.0						74.00	54.00		
24520.0						74.00	54.00		

#### Remark:

- 1 Measuring frequencies from 1GHz to the 10th harmonic of highest fundamental frequency.
- 2 Data of measurement within this frequency range shown " " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 3 Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
- 4 Spectrum Peak Setting: 1GHz-26GHz, RBW=1MHz, VBW=3MHz, Sweep time=200
- 5 Spectrum AV Setting: 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

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# ANTENNA REQUIREMENT

#### 9.1. **Standard Applicable:**

According to §15.203, Antenna 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 shall be considered sufficient to comply with the provisions of this Section. The manufacturer may design the unit so that a broken antenna can

replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. This requirement does not apply to carrier current devices or to devices operated under the provisions of Sections 15.211, 15.213, 15.217, 15.219, or 15.221. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some

field disturbance sensors, or to other intentional radiators which, in accordance with Section 15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that

proper antenna is employed so that the limits in this Part are not exceeded.

According to RSS-GEN 7.1.4, a transmitter can only be sold or operated with antennas with which it was certified. A transmitter may be certified with multiple antenna types. An antenna type comprises antennas having similar in-band and out-of-band radiation patterns. Testing shall be performed using the highest-gain antenna of each combination of transmitter and antenna type for which certification is being sought, with the transmitter output power set at the maximum level. Any antenna of the same type and having equal or lesser gain as an antenna that had been successfully tested for certification with the transmitter, will also be considered certified with the transmitter, and may be used and marketed with the transmitter. The manufacturer shall include with the application for certification a list of acceptable antenna types to be used with the transmitter.

When a measurement at the antenna connector is used to determine RF output power, the effective gain of the device's antenna shall be stated, based on measurement or on data from the antenna manufacturer. Any antenna gain in excess of 6 dBi (6 dB above isotropic gain) shall be added to the measured RF output power before using the power limits specified in RSS-210 or RSS-310 for devices of RF output powers of 10 milliwatts or less. For devices of output powers greater than 10 milliwatts, except devices subject to RSS-210 Annex 8 (Frequency Hopping and Digital Modulation Systems Operating in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz Bands) or RSS-210 Annex 9 (Local Area Network Devices), the total antenna gain shall be added to the measured RF output power before using

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the specified power limits. For devices subject to RSS-210 Annex 8 or Annex 9, the antenna gain shall not be added.

#### 9.2. **Antenna Connected Construction:**

The directional gains of antenna used for transmitting is -1.42dBi and -5.37dBi, and the antenna connector is designed with permanent attachment and no consideration of replacement. Please see EUT photo for details.

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