

Report No.: ER/2010/90123 **Issue Date: Oct. 08, 2010**

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ELECTROMAGNETIC EMISSIONS COMPLIANCE REPORT

INTENTIONAL RADIATOR CERTIFICATION TO FCC PART 15 SUBPART C REQUIREMENT

OF

HTC Media Link Product Name:

HTC **Brand Name:**

DG H100 Model Name:

Model Different: N/A

NM8DGH100 FCC ID:

ER/2010/90123 **Report No.:**

Issue Date: Oct. 08, 2010

FCC Rule Part: §15.247

Prepared for: HTC Corporation.

No.23, Xinghua Rd., Taoyuan City, Taoyuan

County 330, Taiwan

Prepared by: SGS Taiwan Ltd.

> **Electronics & Communication Laboratory** No. 134, Wu Kung Rd., Wuku Industrial

Zone, Taipei County, Taiwan.



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VERIFICATION OF COMPLIANCE

HTC Corporation. **Applicant:**

No.23, Xinghua Rd., Taoyuan City, Taoyuan County 330, Taiwan

Product Name: HTC Media Link

Brand Name: HTC

FCC ID: NM8DGH100

Model No.: DG H100

Model Difference: N/A

File Number: ER/2010/90123

Date of test: Sep. 23, 2010 ~ Oct. 07, 2010

Date of EUT Received: Sep. 23, 2010

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.

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

Test By:	Sky Wong	Date:	Oct. 08, 2010
Prepared By:	Sky Wang / Asst. Supervisor Tiffany Kao	Date:	Oct. 08, 2010
Approved By:	ALW HSICH	Date:	Oct. 08, 2010

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Arno Hsieh / Asst. Supervisor

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Version

Version No.	Date	Description
00	Oct. 08, 2010	Initial creation of document

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GENERAL INFORMATION

1.1 Product Description

General:

Product Name:	HTC Media Link				
Brand Name:	HTC				
Model Name:	DG H100				
Model Difference:	N/A				
Data Cable:	Model: DC M410, Supplier: Coxoc/ Foxlink/ MEC				
HDMI Cable:	Model: CF1613B02G75C, Supplier: COXOC				
Hardware Version:	XB02				
Software Version:	0.13.0.0				
	100~240VAC form AC/DC Adapter				
Power Supply	Adaptor: 1. Model: TC P300, Supplier: Foxlink 2. Model: TC U250, Supplier: Emerson				

WLAN: 802.11 a/b/g/n

Wi-Fi	Frequency Range	Channels	Rated Power	Modulation Technology	Type of Emission
11b/g	2412-2462	11	b: 15.25dBm g: 16.38dBm	DSSS, OFDM	b : 11M2G1D g : 16M3G1D
11n (2.4GHz)	HT20 2412-2462	11	n : 15.20dBm	OFDM	17M5G1D

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Wi-Fi	Frequency Range	Channels	Rated Power	Modulation Technology	Type of Emission
	5150~5250	4	13.18dBm		16M3G1D
11a	5250~5350	4	13.22 dBm	OFDM	16M3G1D
	5470~5725	8	12.76dBm		16M3G1D
	HT20 5150~5250	4	HT20:13.45dBm		17M6G1D
11n	HT20 5250~5350	4	HT20:13.82dBm	OFDM	17M6G1D
	HT20 5470~5725	8	HT20:12.63dBm		17M6G1D
11a	5725-5850	5	a: 13.18 dBm		16M3G1D
11n (5GHz)	HT20 5725-5850	5	HT20: 13.33 dBm	OFDM	17M5G1D
Antenna Designation		PIFA Antenna 2.4G: 1.0dBi 5G: 2.0dBi			
Modulation type			CCK, DQPSK, DBPSK for DSSS 64QAM. 16QAM, QPSK, BPSK for OFDM		
Transition Rate:			802.11 a: 6/9/12/18/24/36/48/54 Mbps; 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 – 72.2Mbps		

The 2.4G max antenna gain is 1.90dBi which was choosing for Radiated Spurious Emission test.

The 5G max antenna gain is 3.0dBi which was choosing for Radiated Spurious Emission test.

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

This report applies for frequency bands 2412MHz – 2462MHz; 5725MHz – 5850MHz.

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1.2 Related Submittal(s) / Grant (s)

This submittal(s) (test report) is intended for **FCC ID:** <u>NM8DGH100</u> filing to comply with Section 15.247 of the FCC Part 15, Subpart E Rules 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). 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-4.

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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2 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 30 MHz 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 and Subclause 8.3.1.2 of ANSI C63.4-2003.

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Configuration of Tested System

Fig. 2-1 Configuration of Tested System

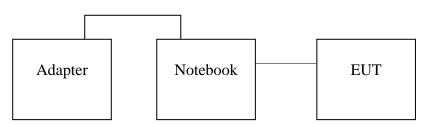


Table 2-1 Equipment Used in Tested System

Item	Equipment	Mfr/Brand	Model/ Type No.	Series No.
1.	Notebook	HP	ProBook4411s	CNU9316C47

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SUMMARY OF TEST RESULTS

FCC Rules	Description Of Test	Result
§15.207(a)	AC Power Line Conducted Emis-	Compliant
	sion	
§15.247(b)	Peak Output Power	Compliant
§15.247(b)	6dB Bandwidth	Compliant
§15.247(c)	100 KHz Bandwidth Of	Compliant
	Frequency Band Edges	
§15.247(c)	Spurious Emission	Compliant
§15.247	Peak Power Density	Compliant
§15.203	Antenna Requirement	Compliant

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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 full testing.

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

802.11 n (2.4GHz) _20MHz: Lowest (2412MHz), Mid (2437MHz) and high (2462MHz) with 6.5 Mbps

highest data rate are chosen for above testing.

802.11 a mode: Channel low (5745MHz) · mid (5785MHz) and high (5825MHz) with 6Mbps highest data rate are chosen for full testing.

802.11 n (5GHz) _20MHz: Lowest (5745MHz), Mid (5785MHz) and high (5825MHz) with 6.5 Mbps

highest data rate are chosen for above testing.

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CONDUCTED EMISSION TEST

Standard Applicable

According to §15.207 frequency range within 150 KHz to 30 MHz shall not exceed the Limit table as below.

_	Limits			
Frequency range	dB(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 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 rear of the EUT and peripherals were placed flushed with the rear of the tabletop.
- 3. The LISN was connected with 120Vac/60Hz power source.

5.3 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.

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^{1.} The lower limit shall apply at the transition frequencies

^{2.} 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 Equipment Used:

Conducted Emission Test Site							
EQUIPMENT	MFR	MODEL	SERIAL	LAST	CAL DUE.		
TYPE		NUMBER	NUMBER	CAL.			
EMI Test Receiver	R&S	ESCS30	828985/004	09/15/2010	09/14/2011		
LISN	Rolf-Heine	NNB-2/16Z	99012	02/02/2010	02/01/2011		
LISN	FCC	FCC-LISN-50/250-25-2-01	04034	02/02/2010	02/01/2011		
Coaxial Cables	N/A	WK CE Cable	N/A	11/28/2009	11/27/2010		

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.



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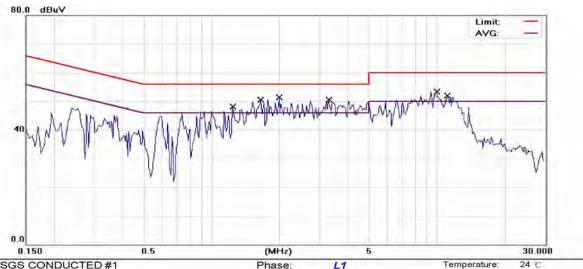
Page: 15 of 150

Humidity:

55 %

AC POWER LINE CONDUCTED EMISSION TEST DATA

Operation Mode:	WLAN Link			Test Date:	Oct. 11, 2010
Temperature:	23 °C	Humidity:	58 %	Test By:	Sky



AC 120V/60Hz

Site SGS CONDUCTED #1

Limit: CISPR22/11/EN55022 Class B

EUT: Wireless Product

M/N: Router

Note: Operation mode: Play movies (Adapter: EMERSON)

Adapter model :TC U250 P/N 79H00095-01M HDMI Cable 183CM

No.	Mk.	Freq.	Reading Level	Factor	Measure- ment	Limit	Over			
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment	
-1		1.2499	40.40	0.13	40.53	56.00	-15.47	QP		
2		1.2499	25,60	0.13	25.73	46.00	-20.27	AVG		
3	•	1.6457	45.00	0.15	45.15	56.00	-10.85	QP		
4		1.6457	31.30	0.15	31.45	46,00	-14.55	AVG		
5	-	1.9990	42.80	0.16	42.96	56.00	-13.04	QP		
6		1.9990	29.80	0.16	29.96	46.00	-16.04	AVG		
7		3.3092	42.40	0.19	42.59	56.00	-13.41	QP		
8		3.3092	30.90	0.19	31.09	46.00	-14.91	AVG		
9		9.9203	45.60	0.52	46.12	60.00	-13.88	QP		
10		9.9203	35.80	0.52	36.32	50.00	-13.68	AVG		
11		11.1158	44.20	0.54	44.74	60.00	-15.26	QP		
12		11.1158	36.00	0.54	36.54	50.00	-13.46	AVG		

Power:

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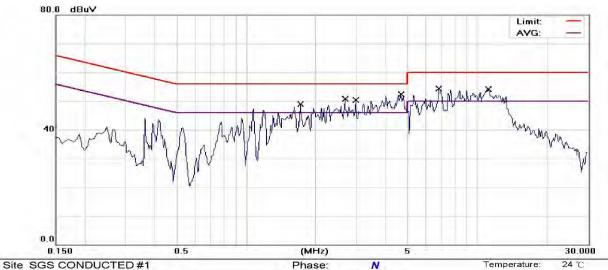
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Limit: CISPR22/11/EN55022 Class B

AC 120V/60Hz Power:

Humidity: 55 %

EUT: Wireless Product

M/N: Router

Note: Operatiom mdoe: Play movies (Adapter: EMERSON)

Adapter mode :TC U250 P/N 79H00095-01 HDMI Cable 75CM

No.	Mk.	Freq.	Reading Level	Factor	Measure- ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		1.7223	44.30	0.15	44.45	56.00	-11.55	QP	
2		1.7223	34.20	0.15	34.35	46.00	-11.65	AVG	
3		2.6938	46.90	0.17	47.07	56.00	-8.93	QP	
4		2.6938	36.30	0.17	36.47	46.00	-9.53	AVG	
5		2.9957	44.00	0.18	44.18	56.00	-11.82	QP	
6		2.9957	33.90	0.18	34.08	46.00	-11.92	AVG	
7	*	4.6867	47.80	0.21	48.01	56.00	-7.99	QP	
8		4.6867	35.60	0.21	35.81	46.00	-10.19	AVG	
9		6.8385	47.30	0.31	47.61	60.00	-12.39	QP	
10		6.8385	36.60	0.31	36.91	50.00	-13.09	AVG	
11		11.1746	47.30	0.51	47.81	60.00	-12.19	QP	
12		11.1746	38.60	0.51	39.11	50.00	-10.89	AVG	

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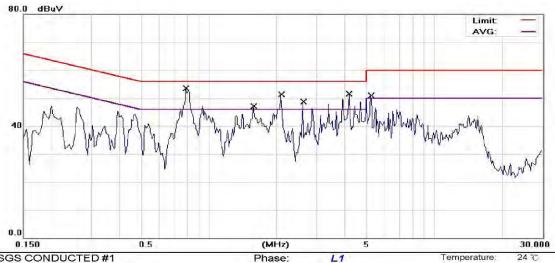
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Humidity:

Air Pressure:

hpa

Operation Mode:	WLAN Link			Test Date:	Oct. 11, 2010
Temperature:	23 °C	Humidity:	58 %	Test By:	Sky



Power:

Distance:

AC 120V/60Hz

Site SGS CONDUCTED #1

Limit: CISPR22/11/EN55022 Class B

EUT: Wireless Product

M/N: Router

Note: Operation mode: Play movies (New Adapter) S/N:13TA2017107739 Adapter model :TC P300 P/N 79H00082-00M HDMI Cable 183CM

No. Mi	. Freq.	Reading Level	Factor	Measure- ment	Limit	Over		
	MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1 *	0.7836	52.30	0.12	52.42	56.00	-3.58	QP	
2	0.7836	42.20	0.12	42.32	46.00	-3.68	AVG	
3	1.5747	41.20	0.14	41.34	56.00	-14.66	QP	
4	1.5747	30.30	0.14	30.44	46.00	-15.56	AVG	
5	2.0988	49.60	0.16	49.76	56.00	-6.24	QP	
6	2.0988	38.20	0.16	38.36	46.00	-7.64	AVG	
7	2.6224	45.60	0.17	45.77	56.00	-10.23	QP	
8	2.6224	40.60	0.17	40.77	46.00	-5.23	AVG	
9	4.1922	45.60	0.20	45.80	56.00	-10.20	QP	
10	4.1922	32.50	0.20	32.70	46.00	-13.30	AVG	
11	5.2394	49.20	0.23	49.43	60.00	-10.57	QP	
12	5.2394	34.50	0.23	34.73	50.00	-15.27	AVG	

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Temperature:

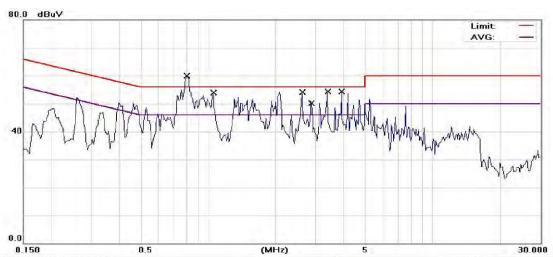
Air Pressure:

Humidity:

24 %

hba

57 %



Phase:

Power:

Distance:

AC 120V/60Hz

Site SGS CONDUCTED #1

Limit: CISPR22/11/EN55022 Class B

EUT: Wireless Product

M/N: Router

Note: Operation mode: Play movies (New Adapter) S/N:13TA2017107739 Adapter model: TC P300 P/N 79H00082-00M HDMI Cable 183CM

No.	Mk.	Freq.	Reading Level	Factor	Measure- ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.8015	53.20	0.13	53.33	56.00	-2.67	QP	
2	*	0.8015	43.80	0.13	43.93	46.00	-2.07	AVG	
3		1.0450	45.30	0.13	45.43	56.00	-10.57	QP	
4		1.0450	32.60	0.13	32.73	46.00	-13.27	AVG	
5		2.6223	51.40	0.17	51.57	56.00	-4.43	QP	
6		2.6223	39.60	0.17	39.77	46.00	-6.23	AVG	
7		2.9010	52.50	0.18	52.68	56.00	-3.32	QP	
8		2.9010	42.50	0.18	42.68	46.00	-3.32	AVG	
9		3.4059	51.50	0.19	51.69	56.00	-4.31	QP	
10		3.4059	40.30	0.19	40.49	46.00	-5.51	AVG	
11		3.9205	32.70	0.20	32.90	56.00	-23.10	QP	
12		3.9205	25.60	0.20	25.80	46.00	-20.20	AVG	

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PEAK OUTPUT POWER MEASUREMENT

6.1 Standard Applicable

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

- (3) For systems using digital modulation in the 902-928 MHz, 2400-2483.5 MHz, and
- 5725-5850 MHz bands: 1 Watt. As an alternative to a peak power measurement, compliance with the 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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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.

6.3 Measurement Equipment Used:

0.5 Measurement Equipment escu.													
	Conducted Emission Test Site												
EQUIPMENT	MFR	MODEL	SERIAL	LAST	CAL DUE.								
TYPE		NUMBER	NUMBER	CAL.									
Spectrum Analyzer	Agilent	E4446A	MY43360126	04/19/2010	04/18/2012								
Spectrum Analyzer	Agilent	E4440A	MY45304525	01/25/2010	01/24/2011								
DC Block	Agilent	BLK-18	155452	07/05/2010	07/04/2011								
Low Loss Cable	HUBER+SUHNER	SUCOFLEX 104PEA	N/A	01/05/2010	01/04/2011								
Attenuator	Mini-Circuit	BW-S6W5	001	07/05/2010	07/04/2011								
Attenuator	Mini-Circuit	BW-S10W5	001	07/05/2010	07/04/2011								
Attenuator	Mini-Circuit	BW-S20W5	001	07/05/2010	07/04/2011								
Splitter	Agilent	11636B	N/A	07/05/2010	07/04/2011								



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6.4 Measurement Result

802.11b

	Cable loss = 0		Peak Power Output							
СН	Frequency (MHz)		Data	Required Limit						
		1	2	5.5	11	Kequirea Limit				
1	2412	15.25	15.21	15.19	15.14	1 Watt = 30 dBm				
6	2437	14.57	14.52	15.20	15.17	1 Watt = 30 dBm				
11	2462	14.90	14.85	14.81	14.82	1 Watt = 30 dBm				

802.11g

	02.11g												
Cat	ole $loss = 0$		Peak Power Output										
СН	Frequency (MHz)		Required Limit										
	(171112)	6	9	12	18	24	36	48	54	required Elline			
1	2412	16.09	16.01	15.98	15.89	15.75	15.62	15.54	15.44	1 Watt = 30 dBm			
6	2437	15.8	15.73	15.7	15.61	15.49	15.34	15.27	15.16	1 Watt = 30 dBm			
11	2462	16.38	16.32	16.28	16.18	16.05	15.91	15.84	15.72	1 Watt = 30 dBm			

802.11n(2.4GHz) 20M

	02.11II(2.4G1	<i>12)_</i> 20111	_20141										
Cat	able loss = 0 Peak Power Output												
СН	Frequency (MHz)		Data Rate										
	(11112)	6.5	13	19.5	26	39	52	58.5	65	72	Limit		
1	2412	15.20	15.03	14.88	14.71	14.49	14.28	14.23	14.15	14.13	1 Watt = 30 dBm		
6	2437	14.95	14.76	14.62	14.44	14.23	14.02	13.96	13.89	13.87	1 Watt = 30 dBm		
11	2462	15.19	15.01	14.85	14.66	14.45	14.25	14.19	14.12	14.10	1 Watt = 30 dBm		

*Note: Offset 0.6dB

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802.11a

Cat	ole $loss = 0$				Pe	ak Pow	er Out	put				
СН	Frequency (MHz)		Data Rate									
	(11112)	6	9	12	18	24	36	48	54	Required Limit		
149	5745	13.05	12.88	12.86	12.75	12.58	12.44	12.37	12.18	1 Watt = 30 dBm		
157	5785	12.89	12.81	12.77	12.67	12.51	12.37	12.28	12.17	1 Watt = 30 dBm		
165	5825	13.18	13.12	13.08	12.99	12.83	12.68	12.6	12.49	1 Watt = 30 dBm		

802.11n(5GHz) 20M

	ole loss = 0	Peak Power Output									
СН	Frequency (MHz)		Data Rate								
	(1,112)	6.5	13	19.5	26	39	52	58.5	65	72	Limit
149	5745	13.33	13.16	13.02	12.84	12.65	12.45	12.40	12.33	12.30	1 Watt = 30 dBm
157	5785	12.97	12.80	12.66	12.49	12.30	12.12	12.07	11.99	11.87	1 Watt = 30 dBm
165	5825	13.13	12.95	12.81	12.63	12.43	12.24	12.18	12.10	11.92	1 Watt = 30 dBm

*Note: Offset 0.6dB

Note: Refer to next page for plots.

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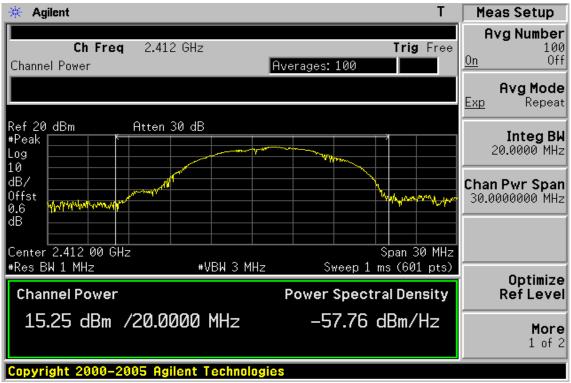


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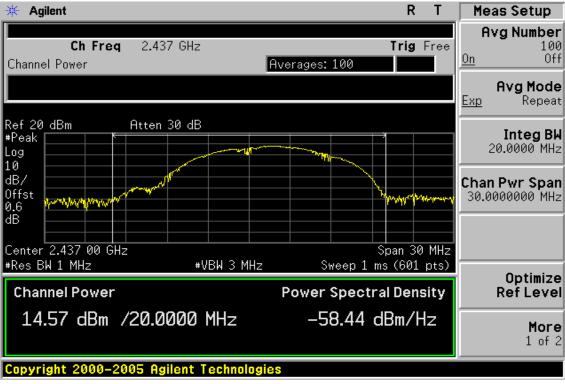
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802.11b, 1Mbps

Power Output Plot (CH Low)



Power Output Plot (CH Mid)



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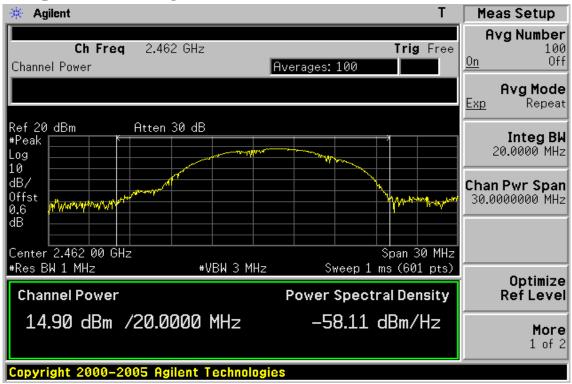
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Power Output Plot (CH High)



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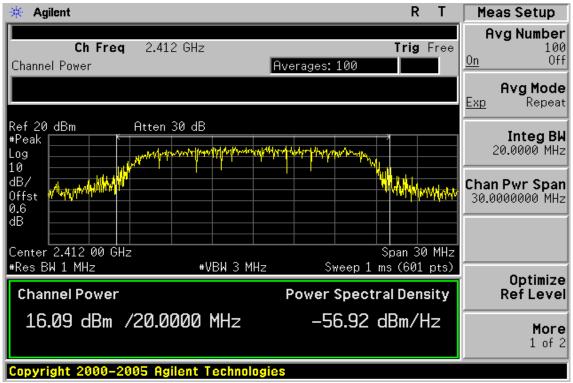


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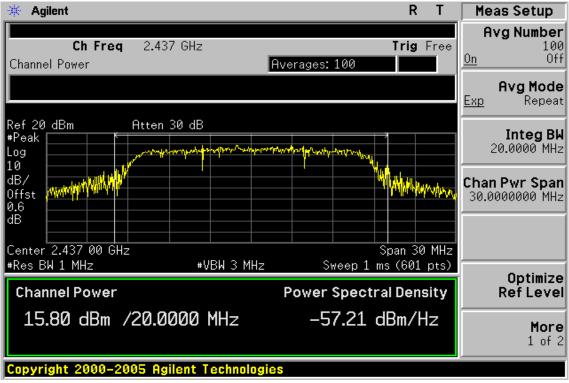
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802.11g, 6Mbps

Power Output Plot (CH Low)



Power Output Plot (CH Mid)



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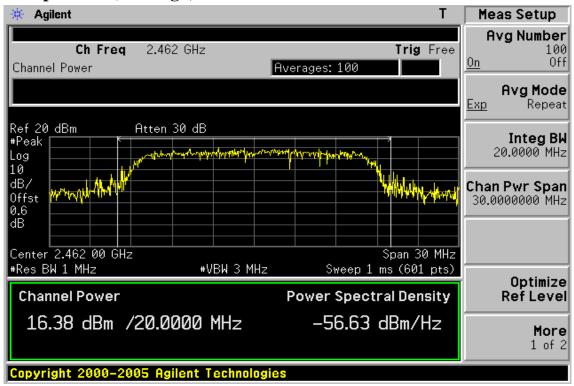
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Power Output Plot (CH High)



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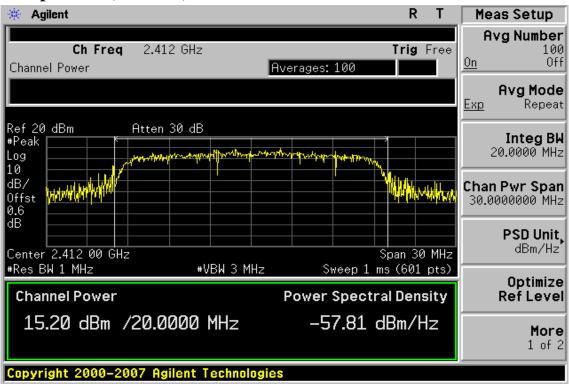
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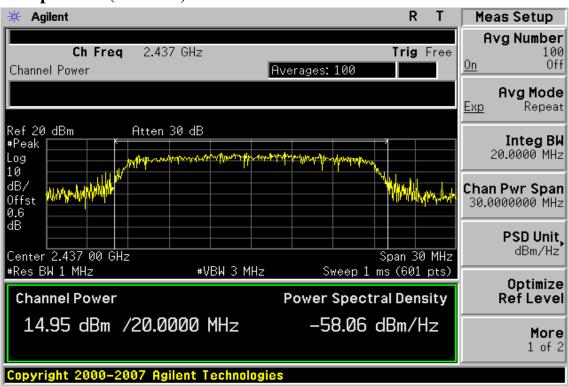
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802.11n(2.4GHz)_20M, 6.5Mbps Power Output Plot (CH Low)



Power Output Plot (CH Mid)



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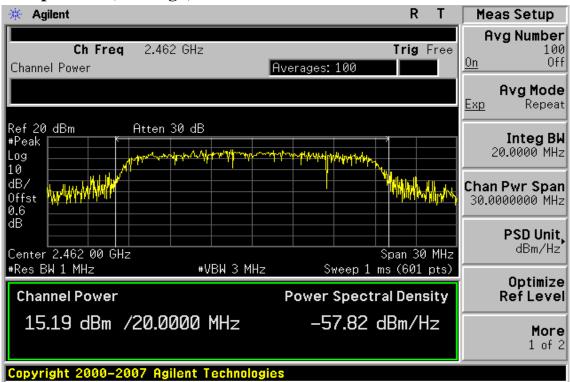
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Power Output Plot (CH High)



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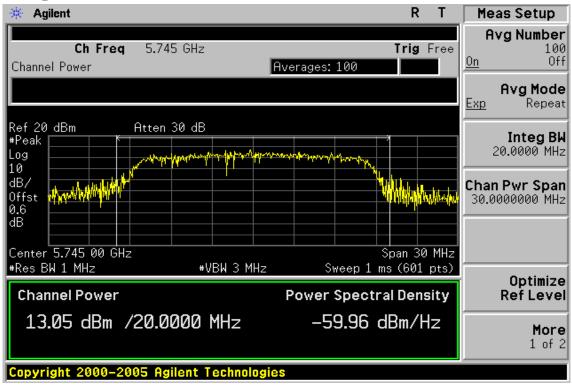


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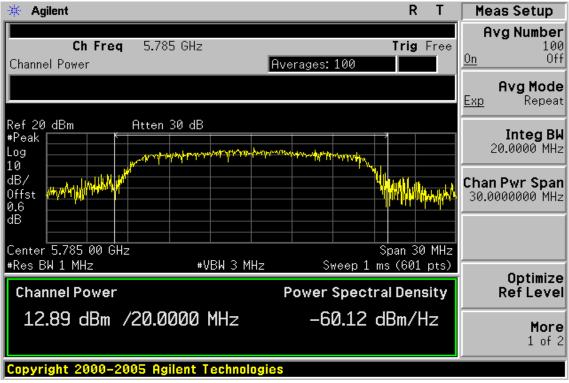
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802.11a, 6Mbps

Power Output Plot (CH Low)



Power Output Plot (CH Mid)



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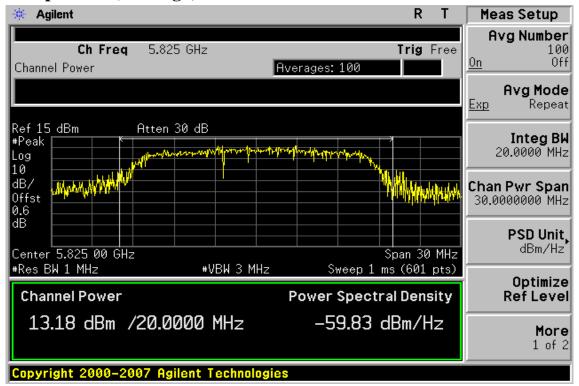
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Power Output Plot (CH High)



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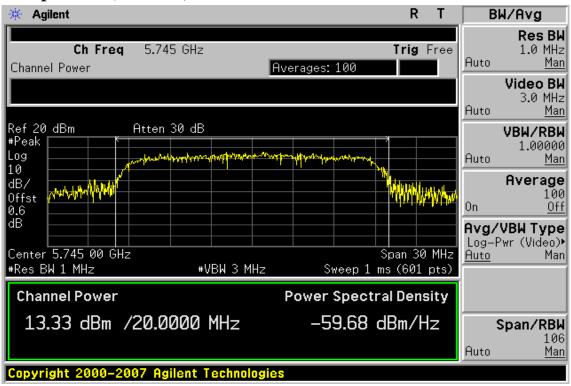
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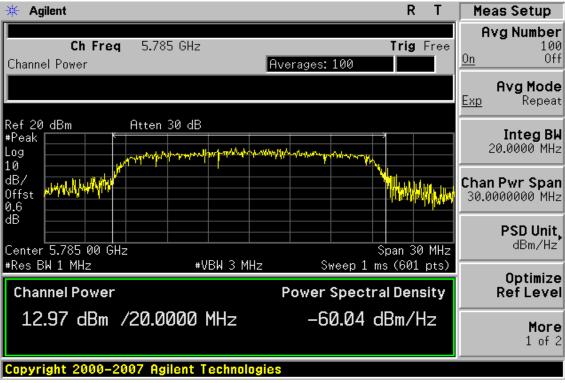
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802.11n(5GHz)_20M, 6.5Mbps Power Output Plot (CH Low)



Power Output Plot (CH Mid)



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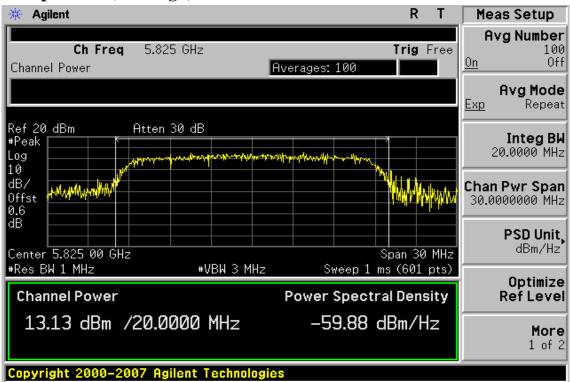
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Power Output Plot (CH High)



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6dB Bandwidth

7.1 Standard Applicable

According to §15.247(a)(2), Systems using digital modulation techniques may operate in the 902 - 928 MHz,2400 - 2483.5 MHz, and 5725 - 5850 MHz bands. The minimum 6 dB bandwidth shall be at least 500kHz.

7.2 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 3.antenna port to the spectrum analyzer.
- 3.Set the spectrum analyzer as RBW=100KHz, VBW = 3*RBW, Span= 50MHz, Sweep=auto
- 4. Mark the peak frequency and –6dB (upper and lower) frequency.
- 5. Repeat above procedures until all frequency measured were complete.

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7.3 Measurement Equipment Used:

Conducted Emission Test Site											
EQUIPMENT	MFR	MODEL	SERIAL	LAST	CAL DUE.						
TYPE		NUMBER	NUMBER	CAL.							
Spectrum Analyzer	Agilent	E4446A	MY43360126	04/19/2010	04/18/2012						
Spectrum Analyzer	Agilent	E4440A	US41160416	01/25/2010	01/24/2011						
Radio Communication Analyzer	R&S	CMU200	111787	10/31/2008	10/30/2010						
800 – 1000MHz Filter	Micro-Tronics	BRM13462	001	01/05/2010	01/04/2011						
1800 – 2000MHz Filter	Micro-Tronics	BRM13463	001	01/05/2010	01/04/2011						
Temperature Chamber	TERCHY	MHG-120LF	911009	04/30/2010	04/29/2012						
Temperature Chamber	GIANT FORCE	GTH-150-40-C P-AR	MAA0512-018	02/24/2010	02/23/2012						
DC Block	Agilent	BLK-18	155452	07/05/2010	07/04/2011						
Attenuator	Mini-Circuit	BW-S20W5	N/A	07/05/2010	07/04/2011						
Attenuator	Mini-Circuit	BW-S10W5	N/A	07/05/2010	07/04/2011						
Attenuator	Mini-Circuit	BW-S6W5	N/A	07/05/2010	07/04/2011						
Splitter	Agilent	11636B	N/A	07/05/2010	07/04/2011						
DC Power Supply	НР	6038A	2929A-07548	04/15/2010	04/14/2012						
DC Power Supply	Topward	3303D	981327	07/05/2010	07/04/2011						



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7.4 Measurement Result

802.11b

002:110			
Frequency	Bandwidth	Bandwidth	Result
(MHz)	(MHz)	(KHz)	
2412	7.135	> 500	PASS
2437	7.548	> 500	PASS
2462	7.148	> 500	PASS

802.11g

0021115			
Frequency	Bandwidth	Bandwidth	Result
(MHz)	(MHz)	(KHz)	
2412	15.209	> 500	PASS
2437	15.263	> 500	PASS
2462	15.257	> 500	PASS

802.11n(2.4GHz) 20M

00202111(2010212)_2011			
Frequency	Bandwidth	Bandwidth	Result
(MHz)	(MHz)	(KHz)	
2412	15.184	> 500	PASS
2437	15.177	> 500	PASS
2462	15.238	> 500	PASS

offset: 0.6dB



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802.11a

Frequency	Bandwidth (MHz)	Bandwidth (KHz)	Result
5745	15.239	> 500	PASS
5785	15.208	> 500	PASS
5825	15.150	> 500	PASS

802.11n(5GHz) 20M

Frequency	Bandwidth (MHz)	Bandwidth (KHz)	Result
5745	15.155	> 500	PASS
5785	15.257	> 500	PASS
5825	15.231	> 500	PASS

offset: 0.6dB

Note: Refer to next page for plots.

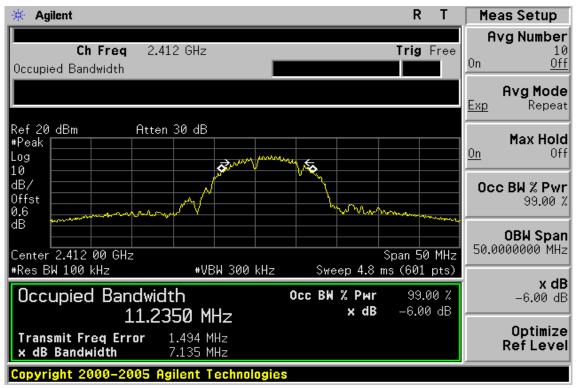


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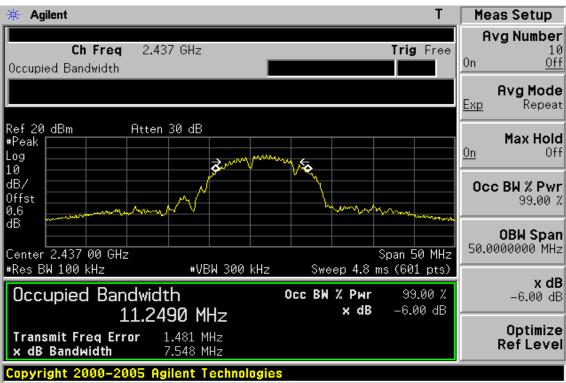
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802.11b

6dB Band Width Test Data CH-Low



6dB Band Width Test Data CH-Mid



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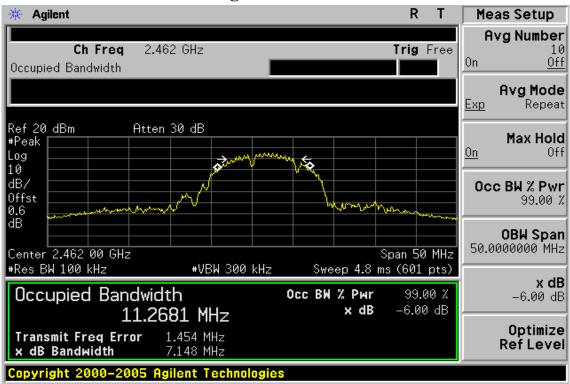
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6dB Band Width Test Data CH-High



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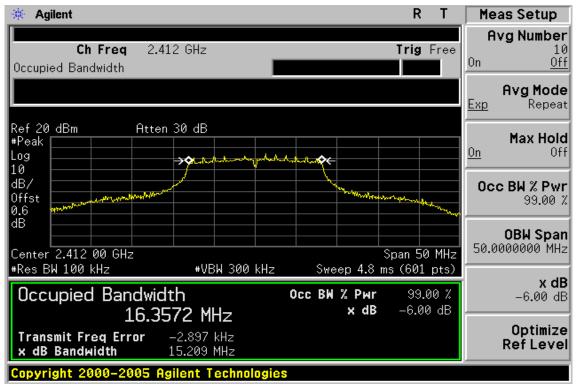
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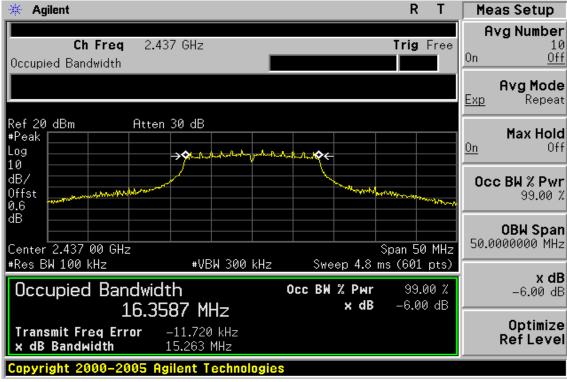
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802.11g 6dB Band Width Test Data CH-Low



6dB Band Width Test Data CH-Mid



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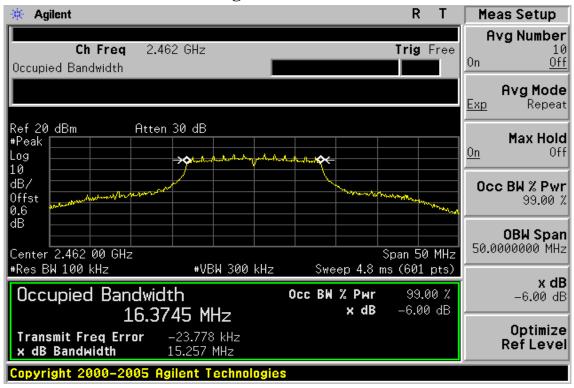
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6dB Band Width Test Data CH-High



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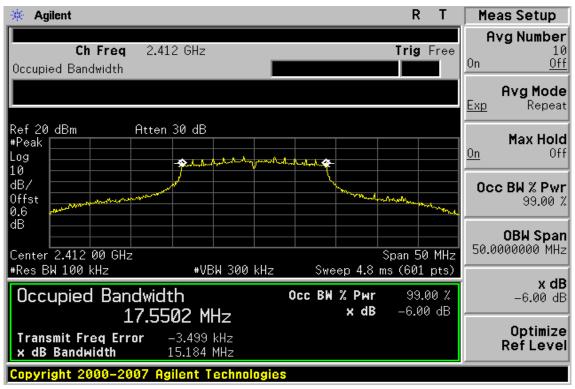
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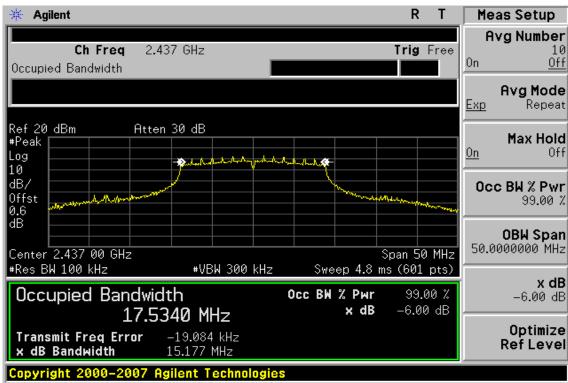
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802.11n(2.4Ghz)_20M 6dB Band Width Test Data CH-Low



6dB Band Width Test Data CH-Mid



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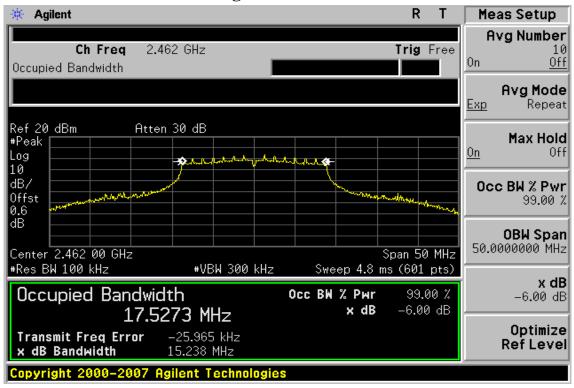
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6dB Band Width Test Data CH-High



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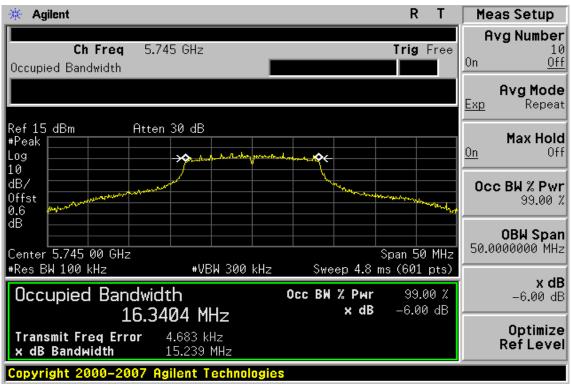
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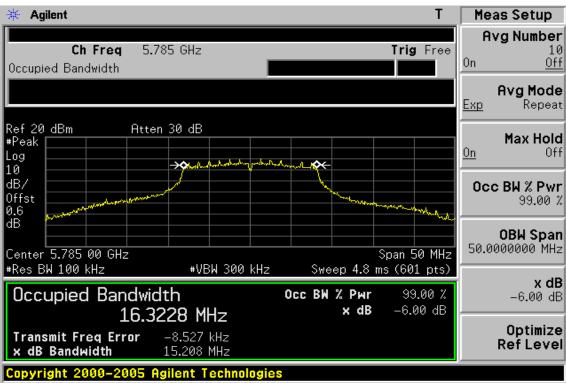
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802.11a 6dB Band Width Test Data CH-Low



6dB Band Width Test Data CH-Mid



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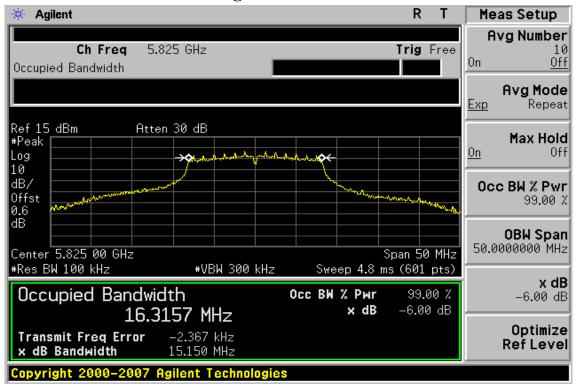
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6dB Band Width Test Data CH-High



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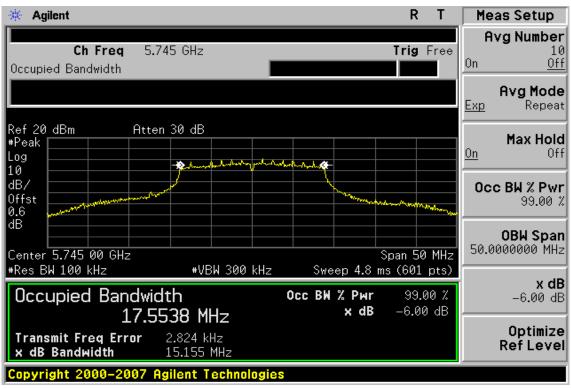
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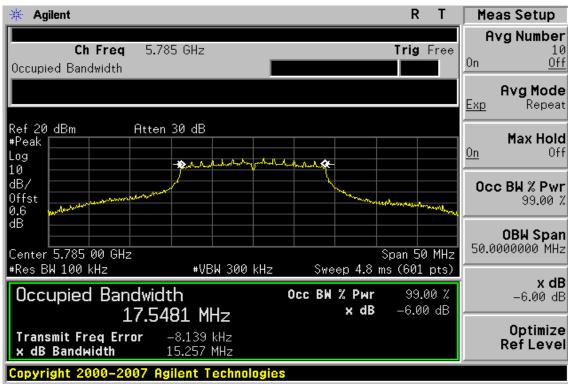
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802.11n(5Ghz)_20M 6dB Band Width Test Data CH-Low



6dB Band Width Test Data CH-Mid



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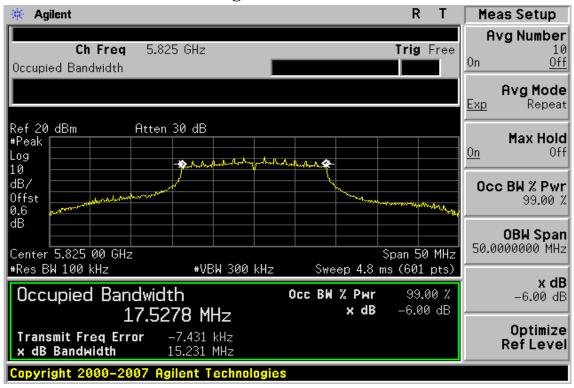
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6dB Band Width Test Data CH-High



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100KHz BANDWIDTH OF BAND EDGES MEASUREMENT

8.1 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).

8.2 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=100KHz, VBW=300KHz, Span=25MHz, Sweep = auto
- 5. Mark Peak, 2.390GHz and 2.488GHz and record the max. level.
- 6. Repeat above procedures until all frequency measured were complete.

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8.3 Measurement Equipment Used:

Conducted Emission Test Site												
EQUIPMENT	MFR MODEL SERIAL			LAST	CAL DUE.							
TYPE		NUMBER	NUMBER	CAL.								
Spectrum Analyzer	Agilent	E4446A	MY43360126	04/19/2010	04/18/2012							
Spectrum Analyzer	Agilent	E4440A	MY45304525	01/25/2010	01/24/2011							
DC Block	Agilent	BLK-18	155452	07/05/2010	07/04/2011							
Low Loss Cable	HUBER+SUHNER	SUCOFLEX 104PEA	N/A	01/05/2010	01/04/2011							
Attenuator	Mini-Circuit	BW-S6W5	001	07/05/2010	07/04/2011							
Attenuator	Mini-Circuit	BW-S10W5	001	07/05/2010	07/04/2011							
Attenuator	Mini-Circuit	BW-S20W5	001	07/05/2010	07/04/2011							
Splitter	Agilent	11636B	N/A	07/05/2010	07/04/2011							

8.4 Measurement Result

Refer to attach spectrum analyzer data chart.

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802.11b Band Edges Test Data CH-Low



Band Edges Test Data CH-High



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Radiated Emission: 802.11 b mode

TX CH Low Test Date Oct. 06, 2010 Operation Mode

Fundamental Frequency 2412 MHz Test By Sky **Tmperature** Pol Ver. 25 °C

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	59.02		-10.76	48.26		74.00	54.00	-5.74	Peak
Operation	Mode	TX (CH Low			Te	st Date	Oct. 06,	2010
Fundamen	tal Freque	ncy 2412	MHz			Te	st By	Sky	
Temperatu	re	25 °C	\mathbb{C}			Po	l	Hor.	
Humidity		65 %)						

	Peak	\mathbf{AV}		Actu	al FS	Peak	\mathbf{AV}		
Freq.	Reading	Reading	Ant./CL	Pea k	\mathbf{AV}	Limit	Limit	Margin	Remark
(MHz)	(dBuV)	(dB uV)	CF(dB)	(dBuV/m)	(dB uV/m)	(dBuV/m)	(dBuV/m)	(dB)	
2390.00	60.76		-10.66	50.10		74.00	54.00	-3.90	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 Oct. 06, 2010

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

Humidity 65 %

	Peak	\mathbf{AV}		Actu	al FS	Peak	\mathbf{AV}		
Freq.	Reading	Reading	Ant./CL	Pea k	\mathbf{AV}	Limit	Limit	Margin	Remark
(MHz)	(dBuV)	(dB uV)	CF(dB)	(dBuV/m)	(dB uV/m)	(dBuV/m)	(dBuV/m	(dB)	
2483.50	59.39		-10.36	49.03		74.00	54.00	-4.97	Peak
Operation 1	Mode	TX C	'H High			Test	Date (Oct. 06, 20	010
Fundamen	tal Frequer	ncy 2462	MHz			Test	By S	Sky	
Temperatu	re	25 °C	2			Pol	I	Hor.	
Humidity		65 %							

	Peak	\mathbf{AV}		Actu	al FS	Peak	\mathbf{AV}		
Freq.	Reading	Reading	Ant./CL	Pea k	\mathbf{AV}	Limit	Limit	Margin	Remark
(MHz)	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dB uV/m)	(dBuV/m)	(dBuV/m)	(dB)	
2483.50	61.68		-10.36	51.32		74.00	54.00	-2.68	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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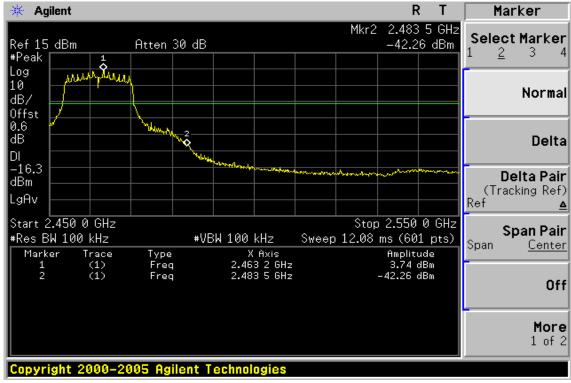
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802.11g Band Edges Test Data CH-Low



Band Edges Test Data CH-High



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Radiated Emission: 802.11 g mode

Operation Mode TX CH Low Test Date Oct. 06, 2010

Fundamental Frequency 2412 MHz Test By Sky **Tmperature** Pol Ver. 25 °C

Humidity 65 %

	Peak	\mathbf{AV}		Actu	al FS	Peak	\mathbf{AV}		
Freq.	Reading	Reading	Ant./CL	Pea k	\mathbf{AV}	Limit	Limit	Margin	Remark
(MHz)	(dBuV)	(dB uV)	CF(dB)	(dBuV/m)	(dB uV/m)	(dBuV/m)	dBuV/m	(dB)	
2390.00	60.07		-10.66	49.41		74.00	54.00	-4.59	Peak
Operation 1	Mode	TX C	H Low			Test	Date (Oct. 06, 20	10
Fundament	tal Frequer	ncy 2412	MHz			Test	By S	Sky	
Temperatu	re	25 °C				Pol	I	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	65.65	52.39	-10.66	54.99	41.73	74.00	54.00	-12.27	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.
- (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 High Test Date Oct. 06, 2010

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

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)	_
2483.50	70.98	54.74	-10.36	60.62	44.38	74.00	54.00	-9.62	AV
Operation	Mode	TX C	H High			Test	Date	Oct. 06, 20	010
Fundamen	tal Frequer	ncy 2462	MHz			Test	By	Sky	
Temperatu	re	25 °C				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)	
2483.50	79.51	61.11	-10.36	69.15	50.75	74.00	54.00	-3.25	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.
- (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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802.11n(2.4Ghz)_20M Band Edges Test Data CH-Low



Band Edges Test Data CH-High



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Radiated Emission: 802.11n(2.4GHz) 20M mode

Operation Mode TX CH Low Test Date Oct. 06, 2010

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

Humidity 65 %

	Peak	\mathbf{AV}		Actu	al FS	Peak	\mathbf{AV}		
Freq.	U	Reading			AV	Limit	Limit	O	Remark
(MHz)	(dBuV)	(aBuv)	CF(ab)	(aBuv/m)	(dB uV/m)	(aBuv/m)	(abu v/m	(dB)	
2390.00	59.32		-10.66	48.66		74.00	54.00	-5.34	Peak
Operation	Mode	TX C	H Low			Test	Date 0	Oct. 06, 20	010
Fundamen	tal Frequei	ncy 2412	MHz			Test	By S	Sky	
Temperatu	re	25 ℃				Pol]	Hor.	
Humidity		65 %							

	Peak	$\mathbf{A}\mathbf{V}$		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	64.85	51.88	-10.66	54.19	41.22	74.00	54.00	-12.78	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.
- (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: 802.11n(2.4Ghz) 20M mode

Operation Mode TX CH High Test Date Oct. 06, 2010

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

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)	
2483.50	66.42	52.43	-10.36	56.06	42.07	74.00	54.00	-11.93	AV

Operation Mode TX CH High Test Date Oct. 06, 2010

Fundamental Frequency 2462 MHz Test By Sky Temperature 25 °C 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)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dB)	
_	2483.50	76.49	59.54	-10.36	66.13	49.18	74.00	54.00	-4.82	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.
- (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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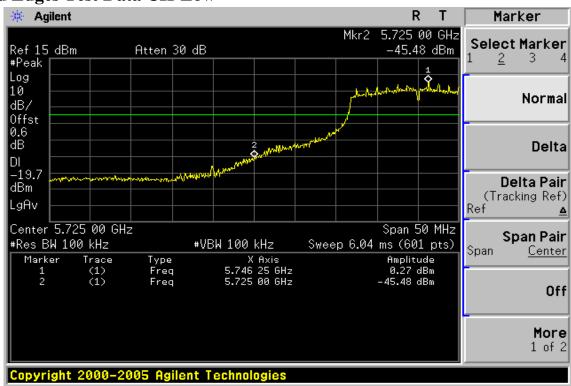
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802.11a Band Edges Test Data CH-Low



Band Edges Test Data CH-High



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Radiated Emission: 802.11 a mode

TX CH Low Operation Mode Test Date Oct. 06, 2010

Fundamental Frequency 5745 MHz Test By Sky **Tmperature** Pol Ver. 25 °C

Humidity 65 %

	Peak	\mathbf{AV}		Actu	al FS	Peak	\mathbf{AV}		
Freq. (MHz)	Reading (dBuV)	Reading (dBuV)		Peak (dBuV/m)	$\begin{array}{c} AV \\ (dBuV/m) \end{array}$	Limit (dBuV/m)	Limit dBuV/m		Remark
5725.00	59.41	45.73	-4.33	55.08	41.40	74.00	54.00	-12.60	AV
Operation 1	Mode	TX C	H Low			Test	Date (Oct. 06, 20	10
Fundament	tal Frequer	ncy 5745	MHz			Test	By S	Sky	
Temperatu	re	25 °C				Pol	I	lor.	
Humidity		65 %							

		Peak	\mathbf{AV}		Actu	ıal FS	Peak	\mathbf{AV}		
	Freq.	Reading	Reading	Ant./CL	Pea k	\mathbf{AV}	Limit	Limit	Margin	Remark
	(MHz)	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dB uV/m)	(dBuV/m)	(dBuV/m	(dB)	
5	725.00	60.79	47.06	-4.33	56.46	42.73	74.00	54.00	-11.27	AV

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 a mode

TX CH High Operation Mode Test Date Oct. 06, 2010

Fundamental Frequency 5825 MHz Test By Sky Temperature Pol Ver. 25 °C

Humidity 65 %

	Peak	\mathbf{AV}		Actu	al FS	Peak	\mathbf{AV}		
Freq.	U	Reading			AV	Limit	Limit	O	Remark
(MHz)	(dBuV)	(aBuv)	CF(dB)	(dBuV/m)	(dB uV/m)	(dBuV/m)	(aBuv/m	(\mathbf{dB})	
5850.00	52.99		-3.89	49.10		74.00	54.00	-4.90	Peak
Operation	Mode	TX C	H High			Test	Date 0	Oct. 06, 20	10
Fundamen	tal Frequei	ncy 5825	MHz			Test	By S	Sky	
Temperatu	re	25 °C				Pol	Ī	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)	(dB uV/m)	(dBuV/m)	(dBuV/m)	(dB)	

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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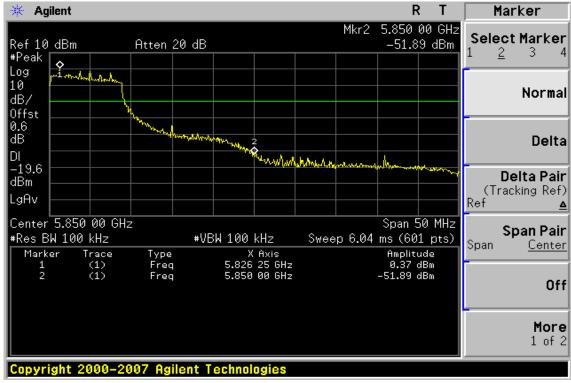
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802.11a/n_20M

Band Edges Test Data CH-Low



Band Edges Test Data CH-High



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Report No.: ER/2010/90123 **Issue Date: Oct. 08, 2010**

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Radiated Emission: 802.11n(5Ghz) 20M mode

Operation Mode TX CH Low Test Date Oct. 06, 2010

Fundamental Frequency 5745 MHz Test By Sky Temperature Pol Ver. 25 °C

Humidity 65 %

	Peak	\mathbf{AV}		Actu	al FS	Peak	\mathbf{AV}		
Freq.	Reading	Reading	Ant./CL	Pea k	\mathbf{AV}	Limit	Limit	Margin	Remark
(MHz)	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dB uV/m)	(dBuV/m)	dBuV/m	(dB)	
5725.00	61.19	47.54	-4.33	56.86	43.21	74.00	54.00	-10.79	AV
Operation 1	Mode	TX C	H Low			Test	Date (Oct. 06, 20	010
Fundamen	tal Frequei	ncy 5745	MHz			Test	By S	Sky	
Temperatu	re	25 ℃				Pol	I	Hor.	
Humidity		65 %							

	Peak	\mathbf{AV}		Actu	al FS	Peak	\mathbf{AV}		
Freq.	Reading	Reading	Ant./CL	Pea k	\mathbf{AV}	Limit	Limit	Margin	Remark
(MHz)	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dB)	
5725.00	61.95	48.12	-4.33	57.62	43.79	74.00	54.00	-10.21	AV

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: 802.11n(5Ghz) 20M mode

Operation Mode TX CH High Test Date Oct. 06, 2010

Fundamental Frequency 5825 MHz Test By Sky Temperature Pol Ver. 25 ℃

Humidity 65 %

	Peak	\mathbf{AV}		Actu	al FS	Peak	\mathbf{AV}		
Freq.	Reading	Reading	Ant./CL	Pea k	\mathbf{AV}	Limit	Limit	Margin	Remark
(MHz)	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dB)	
5850.00	52.32		-3.89	48.43		74.00	54.00	-5.57	Peak

Operation Mode TX CH High **Test Date** Oct. 06, 2010

Fundamental Frequency 5825 MHz Test By Sky Temperature Pol Hor. 25 °C

Humidity 65 %

	Peak	$\mathbf{A}\mathbf{V}$		Actu	al FS	Peak	$\mathbf{A}\mathbf{V}$		
Freq.	Reading	Reading	Ant./CL	Pea k	\mathbf{AV}	Limit	Limit	Margin	Remark
(MHz)	(dBuV)	(dB uV)	CF(dB)	(dBuV/m)	(dB uV/m)	(dBuV/m)(dBuV/m)	(dB)	
5850.00	53.01		-3.89	49.12		74.00	54.00	-4.88	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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SPURIOUS RADIATED EMISSION TEST

9.1 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.

9.2 EUT Setup

- The radiated emission tests were performed in the 3 meter open-test site, using the setup in accordance with the ANSI C63.4-2003.
- The EUT was put in the front of the test table. The rear of the EUT and peripherals were placed flushed with the rear of the tabletop.
- The spacing between the peripherals was 10 centimeters.
- External I/O cables were draped along the edge of the test table and bundle when necessary.

9.3 Measurement Procedure

- 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.
- EUT is set 3m away from the receiving antenna which varied from 1m to 4m to find out the highest emissions.
- 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.
- 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.

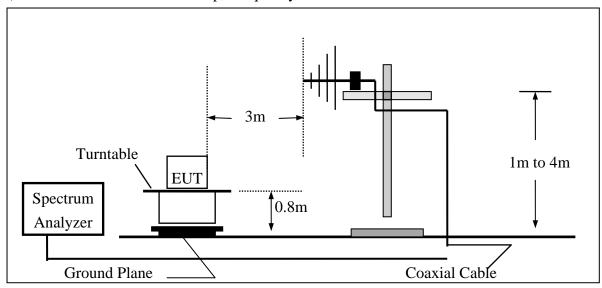


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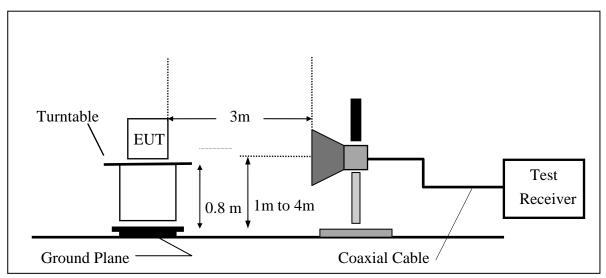
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9.4 Test SET-UP (Block Diagram of Configuration)

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



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



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Measurement Equipment Used:

7.5 Wedsuremen	966 Chamber											
EQUIPMENT	EQUIPMENT MFR MODEL SERIAL LAST CAL DUE.											
TYPE		NUMBER	NUMBER	CAL.								
Spectrum Analyzer	R&S	FSP 40	100034	02/12/2010	02/11/2011							
Loop antenna	MESSTEC	FLA30	03/10086	07/08/2009	07/07/2011							
Bilog Antenna	SCHWAZBECK	VULB9160	3136	11/19/2009	11/18/2010							
Horn antenna	SCHWAZBECK	BBHA 9120D	9120D-673	03/09/2009	03/08/2011							
Pre-Amplifier	Agilent	8447D	1937A02834	11/28/2009	11/28/2010							
Pre-Amplifier	Agilent	8449B	3008A01973	01/05/2010	01/04/2011							
Turn Table	HD	DT420	N/A	N.C.R	N.C.R							
Antenna Tower	HD	MA240-N	240/657	N.C.R	N.C.R							
Controller	HD	HD100	N/A	N.C.R	N.C.R							
Low Loss Cable	HUBER+SUHNER	SUCOFLEX 104PEA-10M	10m	01/05/2010	01/04/2011							
Low Loss Cable	HUBER+SUHNER	SUCOFLEX 104PEA-3M	3m	01/05/2010	01/04/2011							
3m Site	SGS	966 chamber	N/A	11/08/2009	11/09/2010							

9.6 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	

9.7 Measurement Result

Refer to attach tabular data sheets.

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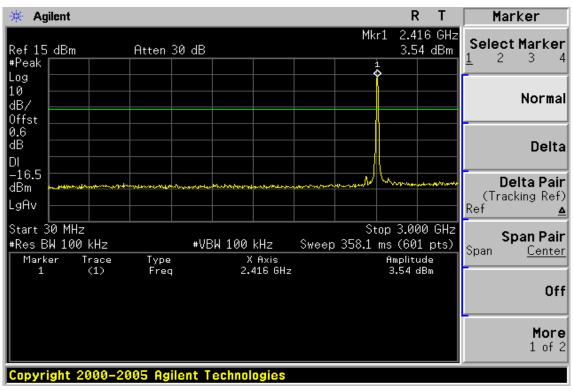
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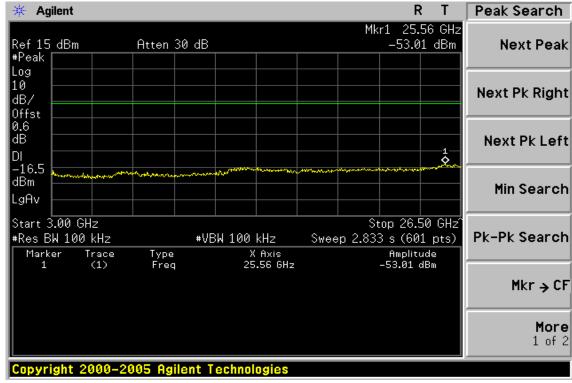
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Conducted Spurious Emission Measurement Result (802.11b) Ch Low 30MHz – 3GHz



Ch Low 3GHz – 26.5GHz



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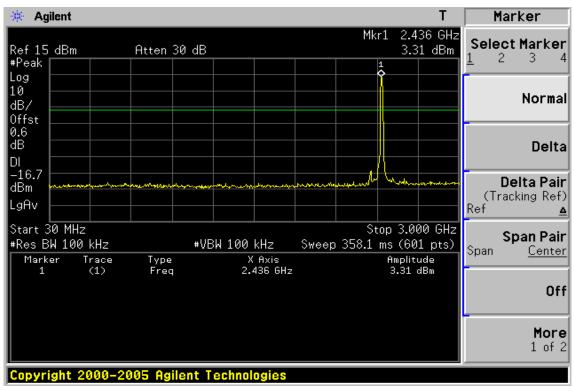
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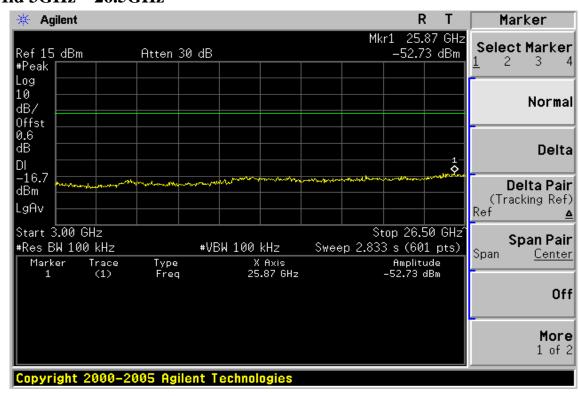
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Ch Mid 30MHz - 3GHz



Ch Mid 3GHz – 26.5GHz



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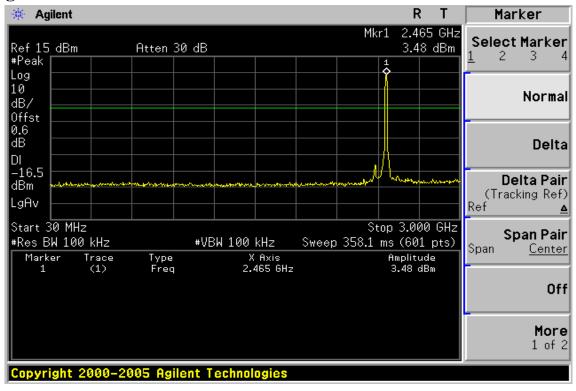
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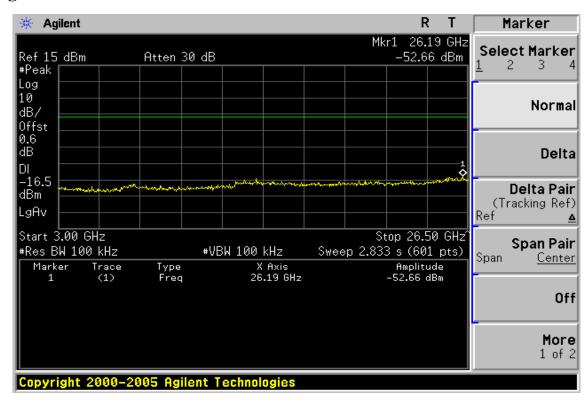
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Ch High 30MHz - 3GHz



Ch High 3GHz – 26.5GHz



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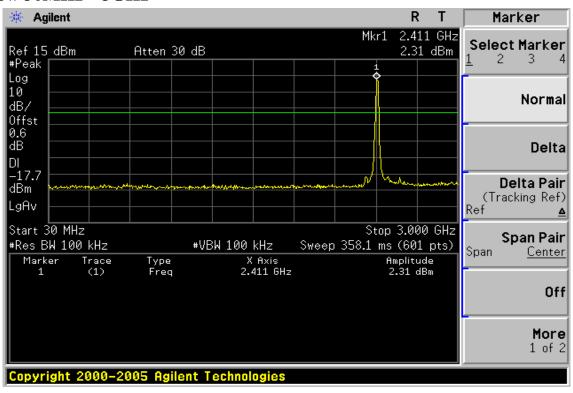
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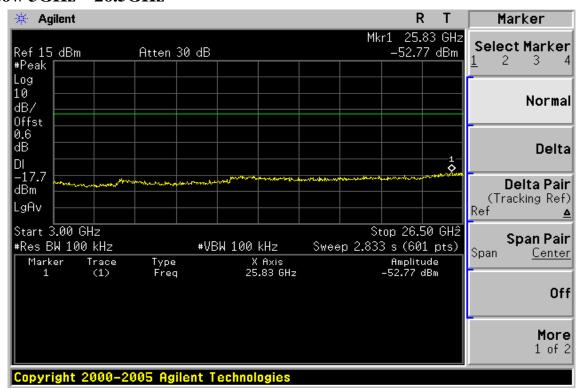
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Conducted Spurious Emission Measurement Result (802.11g) Ch Low 30MHz – 3GHz



Ch Low 3GHz - 26.5GHz



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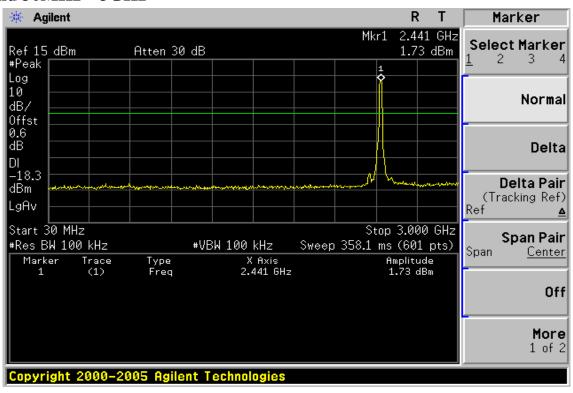
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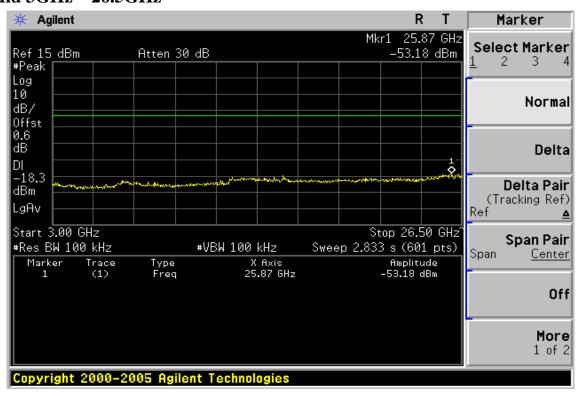
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Ch Mid 30MHz - 3GHz



Ch Mid 3GHz – 26.5GHz



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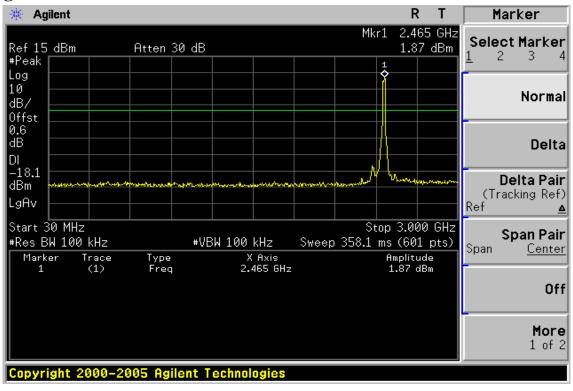
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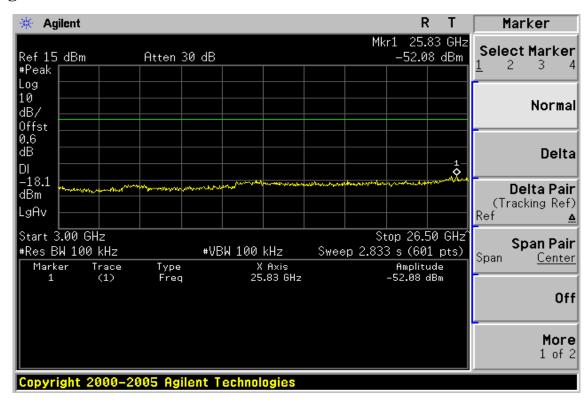
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Ch High 30MHz - 3GHz



Ch High 3GHz – 26.5GHz



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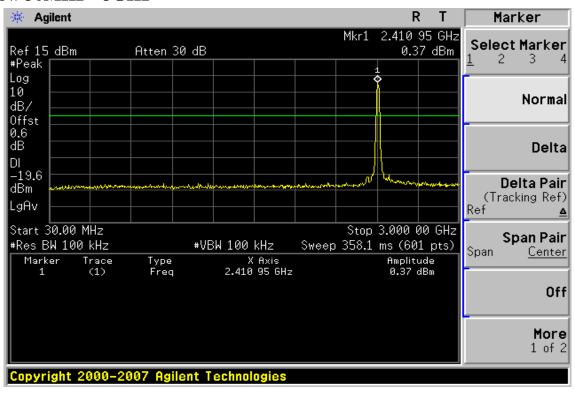
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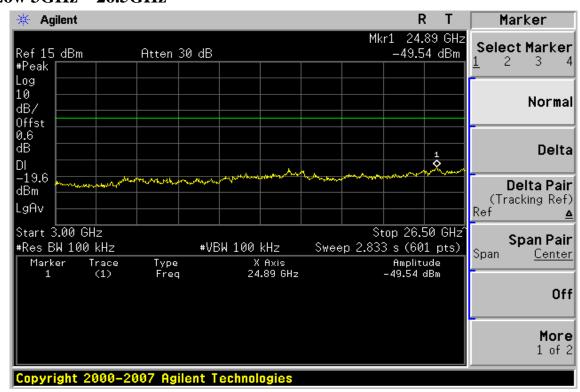
Report No.: ER/2010/90123 Issue Date: Oct. 08, 2010

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Conducted Spurious Emission Measurement Result (802.11n(2.4GHz)_20M) Ch Low 30MHz – 3GHz



Ch Low 3GHz – 26.5GHz



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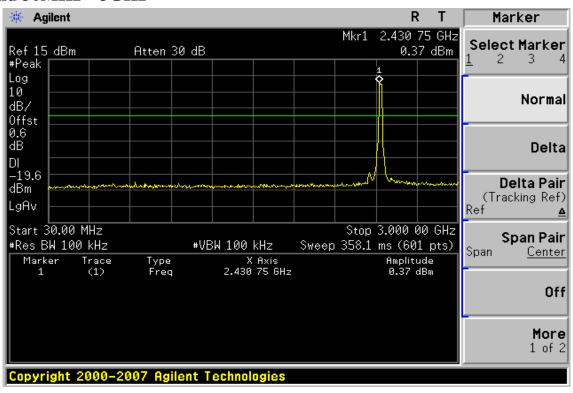
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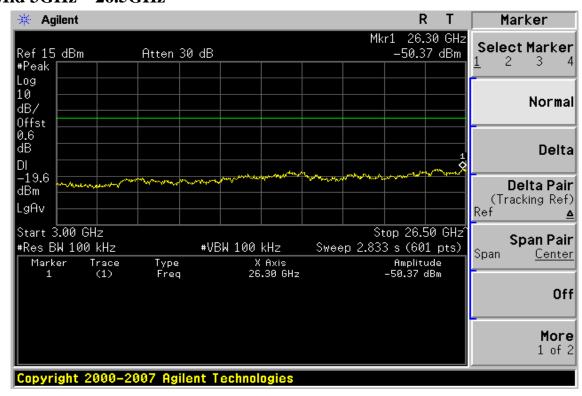
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Ch Mid 30MHz - 3GHz



Ch Mid 3GHz – 26.5GHz



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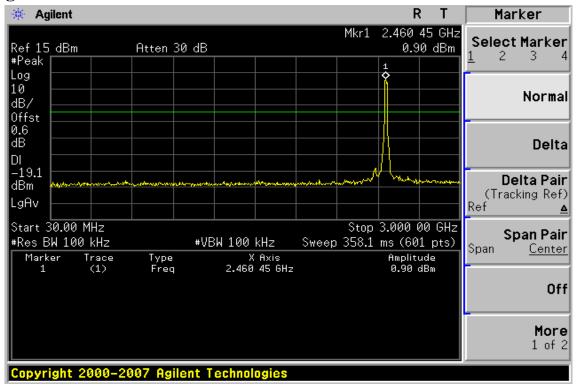
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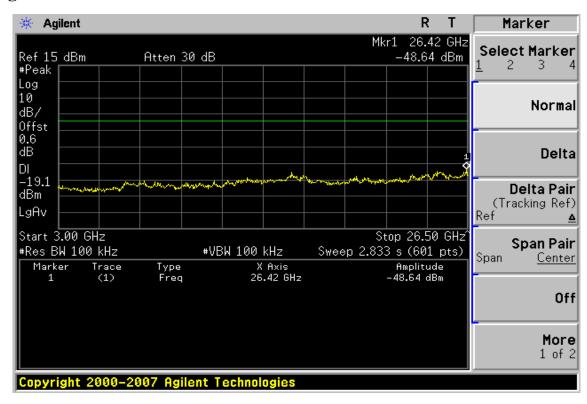
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Ch High 30MHz - 3GHz



Ch High 3GHz – 26.5GHz



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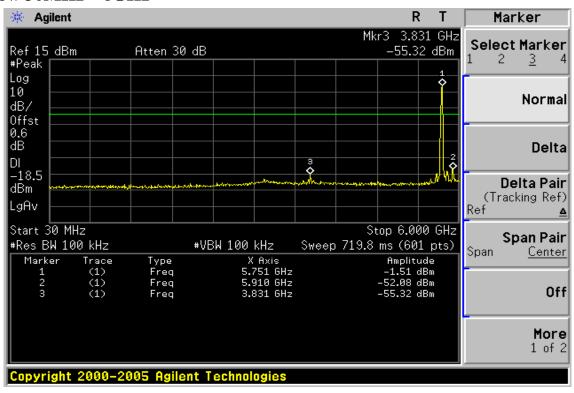
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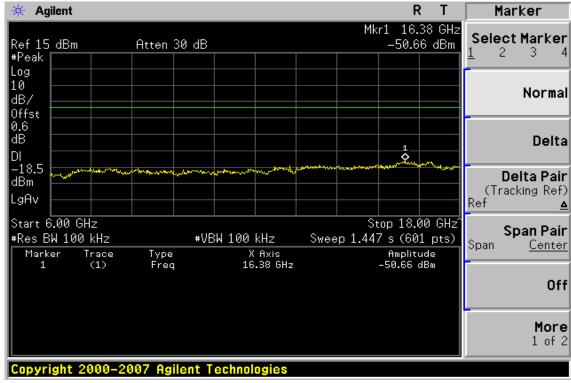
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Conducted Spurious Emission Measurement Result (802.11a) Ch Low 30MHz – 6GHz



Ch Low 6GHz - 18GHz



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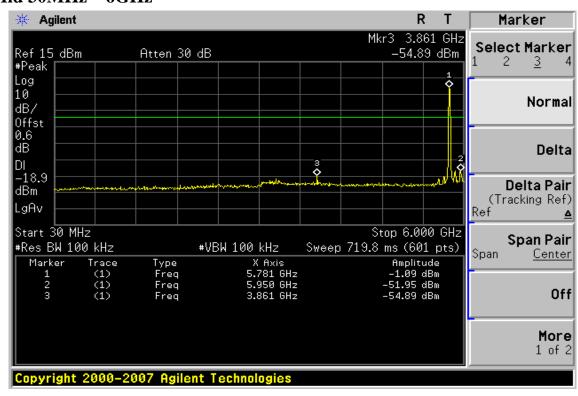
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Ch Low 18GHz - 40GHz



Ch Mid 30MHz – 6GHz



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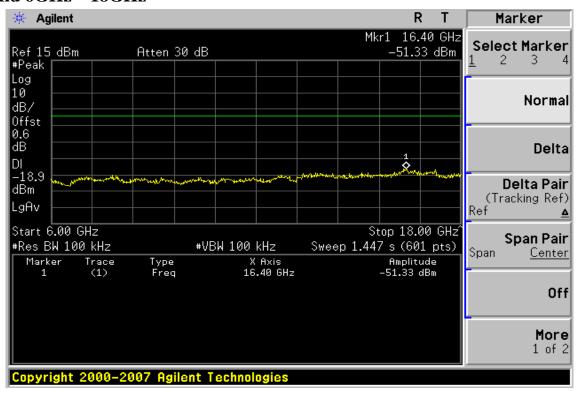
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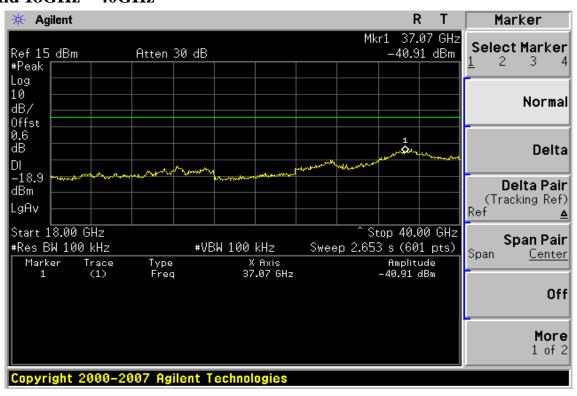
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Ch Mid 6GHz - 18GHz



Ch Mid 18GHz – 40GHz



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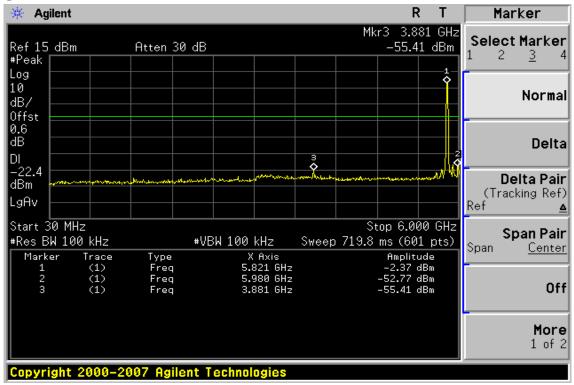
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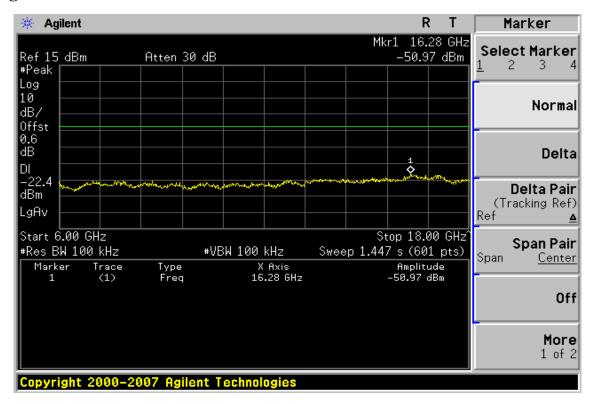
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Ch High 30MHz - 6GHz



Ch High 6GHz – 18GHz



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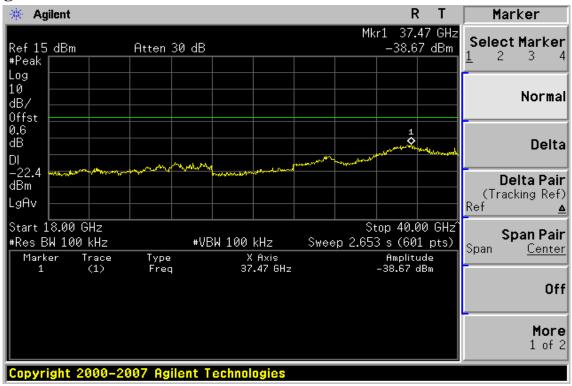
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Ch High 18GHz – 40GHz



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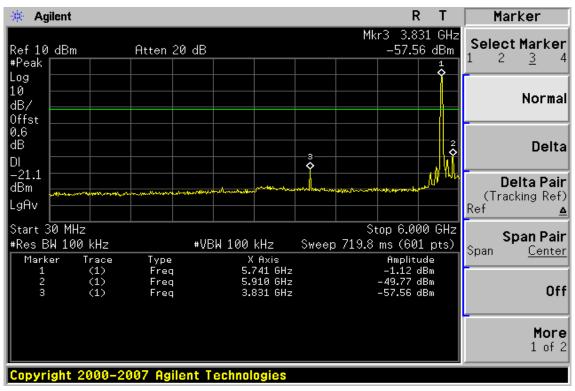
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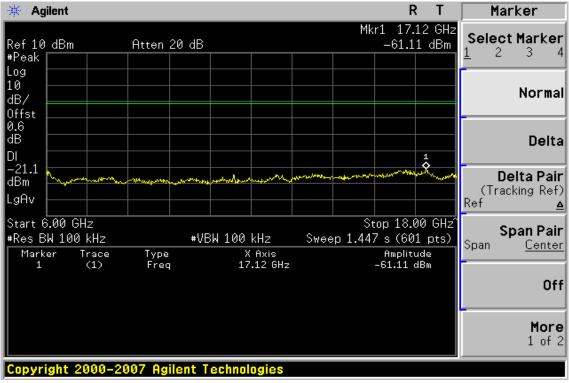
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Conducted Spurious Emission Measurement Result (802.11n(5GHz)_20M) Ch Low 30MHz – 6GHz



Ch Low 6GHz - 18GHz



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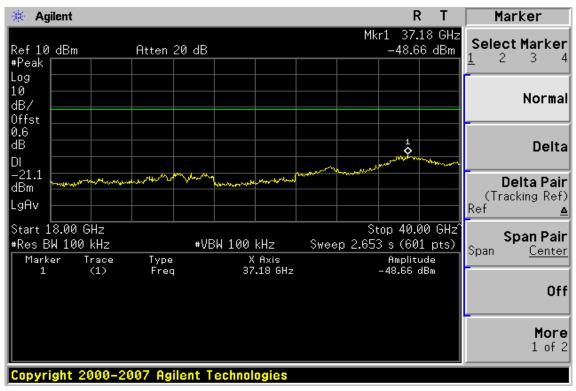
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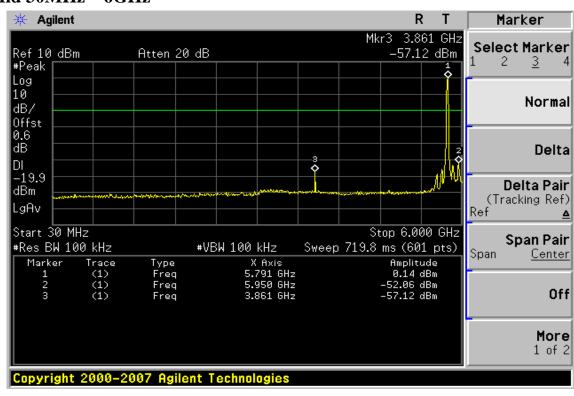
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Ch Low 18GHz - 40GHz



Ch Mid 30MHz – 6GHz



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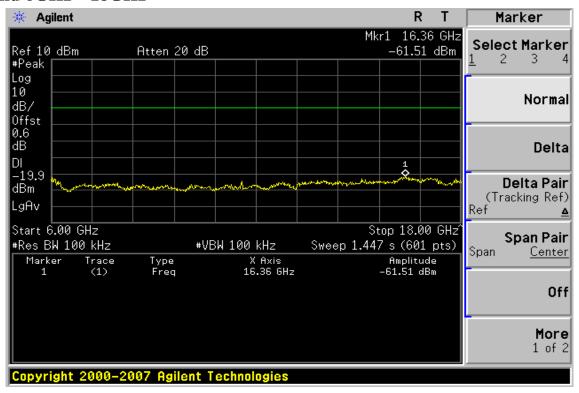
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Ch Mid 6GHz - 18GHz



Ch Mid 18GHz – 40GHz



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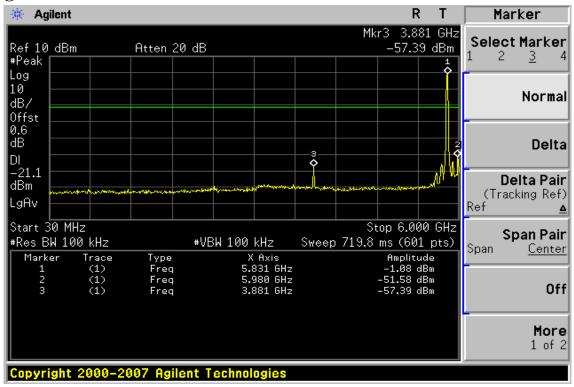
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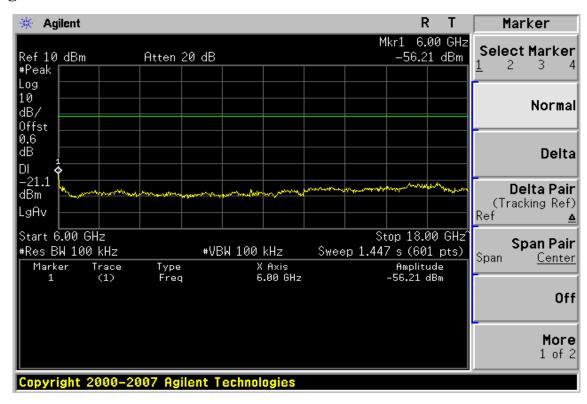
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Ch High 30MHz - 6GHz



Ch High 6GHz – 18GHz



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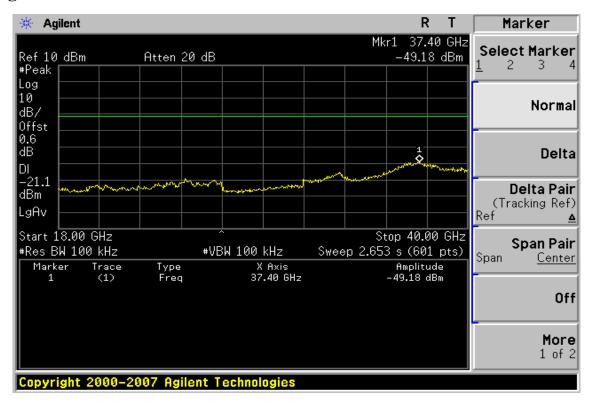
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Ch High 18GHz – 40GHz



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

Operation Mode 802.11b TX CH Low Test Date Oct. 06, 2010

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

Humidity 65 %

Freq.	Ant.Pol.	Detector Mode	Reading	Factor	Actual FS	Limit3m	Safe Mar- gin
(MHz)	H/V	(PK/QP)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)
61.04	V	Peak	56.72	-26.90	29.82	40.00	-10.18
143.49	V	Peak	50.98	-27.19	23.79	43.50	-19.71
191.99	V	Peak	51.73	-30.89	20.84	43.50	-22.66
308.39	V	Peak	47.38	-28.16	19.22	46.00	-26.78
455.83	V	Peak	45.30	-24.85	20.45	46.00	-25.55
780.78	V	Peak	44.54	-20.08	24.46	46.00	-21.54
62.98	Н	Peak	55.36	-27.28	28.08	40.00	-11.92
143.49	Н	Peak	52.72	-27.19	25.53	43.50	-17.97
240.49	Н	Peak	54.56	-29.91	24.65	46.00	-21.35
400.54	Н	Peak	44.81	-26.02	18.79	46.00	-27.21
609.09	Н	Peak	43.88	-22.52	21.36	46.00	-24.64
722.58	Н	Peak	44.75	-20.85	23.90	46.00	-22.10

Remark:

- (1) Measuring frequencies from 30 MHz to the 1GHz •
- (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 Oct. 06, 2010

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

Humidity 65 %

Freq.	Ant.Pol.	Detector Mode	Reading	Factor	Actual FS	Limit3m	Safe Mar- gin
(MHz)	H/V	(PK/QP)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)
58.13	V	Peak	56.16	-26.35	29.81	40.00	-10.19
85.29	V	Peak	55.41	-30.61	24.80	40.00	-15.20
119.24	V	Peak	52.66	-28.77	23.89	43.50	-19.61
191.99	V	Peak	51.73	-30.89	20.84	43.50	-22.66
300.63	V	Peak	49.49	-28.46	21.03	46.00	-24.97
400.54	V	Peak	45.90	-26.02	19.88	46.00	-26.12
61.04	Н	Peak	54.45	-26.90	27.55	40.00	-12.45
148.34	Н	Peak	51.37	-27.12	24.25	43.50	-19.25
250.19	Н	Peak	54.63	-29.83	24.80	46.00	-21.20
400.54	Н	Peak	44.98	-26.02	18.96	46.00	-27.04
611.03	Н	Peak	44.34	-22.52	21.82	46.00	-24.18
720.64	Н	Peak	45.49	-20.87	24.62	46.00	-21.38

Remark:

- (1) Measuring frequencies from 30 MHz to the 1GHz •
- (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)

802.11b TX CH High Operation Mode Test Date Oct. 06, 2010

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

Humidity 65 %

Freq.	Ant.Pol.	Detector Mode	Reading	Factor	Actual FS	Limit3m	Safe Mar- gin
(MHz)	H/V	(PK/QP)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)
58.13	V	Peak	56.21	-26.35	29.86	40.00	-10.14
121.18	V	Peak	52.19	-28.59	23.60	43.50	-19.90
191.99	V	Peak	52.46	-30.89	21.57	43.50	-21.93
300.63	V	Peak	47.20	-28.46	18.74	46.00	-27.26
405.39	V	Peak	45.10	-25.87	19.23	46.00	-26.77
722.58	V	Peak	44.12	-20.85	23.27	46.00	-22.73
61.04	Н	Peak	54.37	-26.90	27.47	40.00	-12.53
153.19	Н	Peak	52.14	-26.99	25.15	43.50	-18.35
250.19	Н	Peak	54.64	-29.83	24.81	46.00	-21.19
400.54	Н	Peak	44.86	-26.02	18.84	46.00	-27.16
615.88	Н	Peak	45.19	-22.40	22.79	46.00	-23.21
720.64	Н	Peak	45.19	-20.87	24.32	46.00	-21.68

Remark:

- (1) Measuring frequencies from 30 MHz to the 1GHz •
- (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 TX CH Low Operation Mode Test Date Oct. 06, 2010

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

Humidity 65 %

Freq.	Ant.Pol.	Detector Mode	Reading	Factor	Actual FS	Limit3m	Safe Mar- gin
(MHz)	H/V	(PK/QP)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)
61.04	V	Peak	57.21	-26.90	30.31	40.00	-9.69
114.39	V	Peak	53.06	-28.82	24.24	43.50	-19.26
191.99	V	Peak	52.13	-30.89	21.24	43.50	-22.26
288.99	V	Peak	47.68	-28.73	18.95	46.00	-27.05
609.09	V	Peak	45.03	-22.52	22.51	46.00	-23.49
780.78	V	Peak	45.64	-20.08	25.56	46.00	-20.44
61.04	Н	Peak	55.16	-26.90	28.26	40.00	-11.74
128.94	Н	Peak	52.82	-28.15	24.67	43.50	-18.83
250.19	Н	Peak	55.56	-29.83	25.73	46.00	-20.27
400.54	Н	Peak	45.10	-26.02	19.08	46.00	-26.92
609.09	Н	Peak	43.80	-22.52	21.28	46.00	-24.72
725.49	Н	Peak	44.94	-20.82	24.12	46.00	-21.88

Remark:

- (1) Measuring frequencies from 30 MHz to the 1GHz •
- (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 TX CH Mid Operation Mode Test Date Oct. 06, 2010

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

Humidity 65 %

Freq.	Ant.Pol.	Detector Mode	Reading	Factor	Actual FS	Limit3m	Safe Mar- gin
(MHz)	H/V	(PK/QP)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)
61.04	V	Peak	56.21	-26.90	29.31	40.00	-10.69
128.94	V	Peak	52.96	-28.15	24.81	43.50	-18.69
191.99	V	Peak	52.20	-30.89	21.31	43.50	-22.19
305.48	V	Peak	47.96	-28.25	19.71	46.00	-26.29
400.54	V	Peak	46.03	-26.02	20.01	46.00	-25.99
609.09	V	Peak	44.48	-22.52	21.96	46.00	-24.04
62.98	Н	Peak	56.61	-27.28	29.33	40.00	-10.67
143.49	H	Peak	52.79	-27.19	25.60	43.50	-17.90
245.34	Н	Peak	55.97	-29.84	26.13	46.00	-19.87
397.63	Н	Peak	45.17	-26.05	19.12	46.00	-26.88
664.38	Н	Peak	45.13	-21.64	23.49	46.00	-22.51
720.64	Н	Peak	45.28	-20.87	24.41	46.00	-21.59

Remark:

- (1) Measuring frequencies from 30 MHz to the 1GHz •
- (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 TX CH High Operation Mode Test Date Oct. 06, 2010

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

Humidity 65 %

Freq.	Ant.Pol.	Detector Mode	Reading	Factor	Actual FS	Limit3m	Safe Mar- gin
(MHz)	H/V	(PK/QP)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)
61.04	V	Peak	56.25	-26.90	29.35	40.00	-10.65
143.49	V	Peak	50.84	-27.19	23.65	43.50	-19.85
191.99	V	Peak	52.24	-30.89	21.35	43.50	-22.15
250.19	V	Peak	50.32	-29.83	20.49	46.00	-25.51
397.63	V	Peak	45.17	-26.05	19.12	46.00	-26.88
625.58	V	Peak	43.89	-22.18	21.71	46.00	-24.29
61.04	Н	Peak	53.82	-26.90	26.92	40.00	-13.08
143.49	Н	Peak	51.64	-27.19	24.45	43.50	-19.05
240.49	Н	Peak	55.05	-29.91	25.14	46.00	-20.86
397.63	Н	Peak	45.46	-26.05	19.41	46.00	-26.59
623.64	Н	Peak	44.16	-22.22	21.94	46.00	-24.06
717.73	Н	Peak	45.46	-20.92	24.54	46.00	-21.46

Remark:

- (1) Measuring frequencies from 30 MHz to the 1GHz •
- (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 (2.4GHz) 20M)

Operation Mode 802.11n_20M TX CH Low Test Date Oct. 06, 2010

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

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)
61.04	V	Peak	56.34	-26.90	29.44	40.00	-10.56
114.39	V	Peak	52.62	-28.82	23.80	43.50	-19.70
191.99	V	Peak	52.44	-30.89	21.55	43.50	-21.95
266.68	V	Peak	49.62	-29.37	20.25	46.00	-25.75
400.54	V	Peak	45.74	-26.02	19.72	46.00	-26.28
562.53	V	Peak	44.37	-23.50	20.87	46.00	-25.13
62.98	Н	Peak	54.63	-27.28	27.35	40.00	-12.65
143.49	Н	Peak	51.64	-27.19	24.45	43.50	-19.05
240.49	Н	Peak	56.33	-29.91	26.42	46.00	-19.58
400.54	Н	Peak	46.09	-26.02	20.07	46.00	-25.93
615.88	Н	Peak	44.01	-22.40	21.61	46.00	-24.39
720.64	Н	Peak	44.62	-20.87	23.75	46.00	-22.25

Remark:

- 1 Measuring frequencies from 30 MHz to the 1GHz •
- 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(2.4GHz) 20M)

Operation Mode 802.11n_20M TX CH Mid Test Date Oct. 06, 2010

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

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)
58.13	V	Peak	55.52	-26.35	29.17	40.00	-10.83
121.18	V	Peak	52.02	-28.59	23.43	43.50	-20.07
264.74	V	Peak	49.17	-29.44	19.73	46.00	-26.27
397.63	V	Peak	45.51	-26.05	19.46	46.00	-26.54
584.84	V	Peak	44.66	-23.03	21.63	46.00	-24.37
793.39	V	Peak	43.63	-20.00	23.63	46.00	-22.37
61.04	Н	Peak	54.53	-26.90	27.63	40.00	-12.37
128.94	Н	Peak	52.97	-28.15	24.82	43.50	-18.68
240.49	Н	Peak	53.89	-29.91	23.98	46.00	-22.02
397.63	Н	Peak	45.51	-26.05	19.46	46.00	-26.54
613.94	Н	Peak	44.02	-22.44	21.58	46.00	-24.42
722.58	Н	Peak	44.90	-20.85	24.05	46.00	-21.95

Remark:

- 1 Measuring frequencies from 30 MHz to the 1GHz •
- 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(2.4Ghz) 20M)

802.11n_20M TX CH High Operation Mode Test Date Oct. 06, 2010

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

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)
59.10	V	Peak	56.50	-26.51	29.99	40.00	-10.01
114.39	V	Peak	53.65	-28.82	24.83	43.50	-18.67
191.99	V	Peak	52.16	-30.89	21.27	43.50	-22.23
284.14	V	Peak	48.80	-28.86	19.94	46.00	-26.06
397.63	V	Peak	45.80	-26.05	19.75	46.00	-26.25
749.74	V	Peak	43.86	-20.52	23.34	46.00	-22.66
61.04	Н	Peak	54.63	-26.90	27.73	40.00	-12.27
143.49	Н	Peak	52.29	-27.19	25.10	43.50	-18.40
242.43	Н	Peak	54.38	-29.89	24.49	46.00	-21.51
400.54	Н	Peak	45.65	-26.02	19.63	46.00	-26.37
720.64	Н	Peak	44.98	-20.87	24.11	46.00	-21.89
916.58	Н	Peak	43.40	-18.49	24.91	46.00	-21.09

Remark:

- 1 Measuring frequencies from 30 MHz to the 1GHz •
- 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) (802.11a)

Operation Mode 802.11a TX CH Low Test Date Oct. 06, 2010

Fundamental Frequency 5745MHz Test By Sky **Temperature** Pol Ver./Hor 25 °C

Humidity 65 %

Freq.	Ant.Pol.	Detector Mode	Reading	Factor	Actual FS	Limit3m	Safe Mar- gin
(MHz)	H/V	(PK/QP)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)
58.13	V	Peak	56.17	-26.35	29.82	40.00	-10.18
143.49	V	Peak	51.17	-27.19	23.98	43.50	-19.52
191.99	V	Peak	51.33	-30.89	20.44	43.50	-23.06
279.29	V	Peak	48.05	-28.94	19.11	46.00	-26.89
397.63	V	Peak	46.33	-26.05	20.28	46.00	-25.72
897.18	V	Peak	44.08	-18.73	25.35	46.00	-20.65
61.04	Н	Peak	54.14	-26.90	27.24	40.00	-12.76
143.49	Н	Peak	51.59	-27.19	24.40	43.50	-19.10
247.28	Н	Peak	54.09	-29.81	24.28	46.00	-21.72
397.63	Н	Peak	46.00	-26.05	19.95	46.00	-26.05
618.79	Н	Peak	43.66	-22.37	21.29	46.00	-24.71
720.64	Н	Peak	44.15	-20.87	23.28	46.00	-22.72

Remark:

- (1) Measuring frequencies from 30 MHz to the 1GHz •
- (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) (802.11a)

Operation Mode 802.11a TX CH Mid Test Date Oct. 06, 2010

Fundamental Frequency 5785MHz Test By Sky Pol Ver./Hor **Temperature** 25 °C

Humidity 65 %

Freq.	Ant.Pol.	Detector Mode	Reading	Factor	Actual FS	Limit3m	Safe Mar- gin
(MHz)	H/V	(PK/QP)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)
58.13	V	Peak	56.39	-26.35	30.04	40.00	-9.96
114.39	V	Peak	53.67	-28.82	24.85	43.50	-18.65
191.99	V	Peak	51.61	-30.89	20.72	43.50	-22.78
286.08	V	Peak	48.56	-28.81	19.75	46.00	-26.25
400.54	V	Peak	46.57	-26.02	20.55	46.00	-25.45
929.19	V	Peak	44.39	-18.36	26.03	46.00	-19.97
61.04	Н	Peak	54.39	-26.90	27.49	40.00	-12.51
143.49	Н	Peak	51.87	-27.19	24.68	43.50	-18.82
240.49	Н	Peak	54.38	-29.91	24.47	46.00	-21.53
400.54	Н	Peak	45.23	-26.02	19.21	46.00	-26.79
720.64	Н	Peak	44.43	-20.87	23.56	46.00	-22.44
934.04	Н	Peak	43.70	-18.32	25.38	46.00	-20.62

Remark:

- (1) Measuring frequencies from 30 MHz to the 1GHz •
- (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) (802.11a)

Operation Mode 802.11a TX CH High Test Date Oct. 06, 2010

Fundamental Frequency 5825MHz Test By Sky Pol Ver./Hor **Temperature** 25 °C

Humidity 65 %

Freq.	Ant.Pol.	Detector Mode	Reading	Factor	Actual FS	Limit3m	Safe Mar- gin
(MHz)	H/V	(PK/QP)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)
58.13	V	Peak	57.08	-26.35	30.73	40.00	-9.27
121.18	V	Peak	52.93	-28.59	24.34	43.50	-19.16
191.99	V	Peak	51.72	-30.89	20.83	43.50	-22.67
286.08	V	Peak	49.08	-28.81	20.27	46.00	-25.73
715.79	V	Peak	44.93	-20.95	23.98	46.00	-22.02
942.77	V	Peak	43.08	-18.14	24.94	46.00	-21.06
61.04	Н	Peak	54.75	-26.90	27.85	40.00	-12.15
130.88	Н	Peak	52.20	-28.04	24.16	43.50	-19.34
240.49	Н	Peak	54.76	-29.91	24.85	46.00	-21.15
400.54	Н	Peak	45.17	-26.02	19.15	46.00	-26.85
761.38	Н	Peak	44.02	-20.37	23.65	46.00	-22.35
929.19	Н	Peak	44.96	-18.36	26.60	46.00	-19.40

Remark:

- (1) Measuring frequencies from 30 MHz to the 1GHz •
- (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(5GHz) 20M)

Operation Mode 802.11a/n_20M TX CH Low Test Date Oct. 06, 2010

Fundamental Frequency 5745MHz Test By Sky Temperature Pol Ver./Hor 25 °C

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)
56.19	V	Peak	56.65	-26.19	30.46	40.00	-9.54
114.39	V	Peak	53.59	-28.82	24.77	43.50	-18.73
191.99	V	Peak	52.33	-30.89	21.44	43.50	-22.06
276.38	V	Peak	48.49	-29.14	19.35	46.00	-26.65
400.54	V	Peak	46.18	-26.02	20.16	46.00	-25.84
773.99	V	Peak	44.50	-20.21	24.29	46.00	-21.71
61.04	Н	Peak	54.00	-26.90	27.10	40.00	-12.90
143.49	Н	Peak	51.91	-27.19	24.72	43.50	-18.78
240.49	Н	Peak	55.18	-29.91	25.27	46.00	-20.73
397.63	Н	Peak	45.31	-26.05	19.26	46.00	-26.74
759.44	Н	Peak	44.34	-20.39	23.95	46.00	-22.05
960.23	Н	Peak	43.67	-18.06	25.61	54.00	-28.39

Remark:

- 1 Measuring frequencies from 30 MHz to the 1GHz •
- 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(5GHz) 20M)

Operation Mode 802.11a/n_20M TX CH Mid Test Date Oct. 06, 2010

Fundamental Frequency 5785MHz Test By Sky Temperature Pol Ver./Hor 25 °C

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)
59.10	V	Peak	56.19	-26.51	29.68	40.00	-10.32
121.18	V	Peak	52.61	-28.59	24.02	43.50	-19.48
191.99	V	Peak	52.29	-30.89	21.40	43.50	-22.10
276.38	V	Peak	48.38	-29.14	19.24	46.00	-26.76
397.63	V	Peak	46.15	-26.05	20.10	46.00	-25.90
581.93	V	Peak	45.26	-23.07	22.19	46.00	-23.81
61.04	Н	Peak	54.59	-26.90	27.69	40.00	-12.31
143.49	Н	Peak	51.70	-27.19	24.51	43.50	-18.99
247.28	Н	Peak	54.18	-29.81	24.37	46.00	-21.63
400.54	Н	Peak	45.85	-26.02	19.83	46.00	-26.17
715.79	Н	Peak	45.27	-20.95	24.32	46.00	-21.68
935.98	Н	Peak	43.68	-18.31	25.37	46.00	-20.63

Remark:

- 1 Measuring frequencies from 30 MHz to the 1GHz •
- 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(5GHz) 20M)

802.11a/n_20M TX CH High Operation Mode Test Date Oct. 06, 2010

Fundamental Frequency 5825MHz 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)
61.04	V	Peak	56.49	-26.90	29.59	40.00	-10.41
119.24	V	Peak	53.93	-28.77	25.16	43.50	-18.34
191.99	V	Peak	52.66	-30.89	21.77	43.50	-21.73
310.33	V	Peak	47.11	-28.11	19.00	46.00	-27.00
400.54	V	Peak	45.28	-26.02	19.26	46.00	-26.74
722.58	V	Peak	43.81	-20.85	22.96	46.00	-23.04
61.04	Н	Peak	54.19	-26.90	27.29	40.00	-12.71
143.49	Н	Peak	51.67	-27.19	24.48	43.50	-19.02
240.49	Н	Peak	54.69	-29.91	24.78	46.00	-21.22
400.54	Н	Peak	45.80	-26.02	19.78	46.00	-26.22
717.73	Н	Peak	44.26	-20.92	23.34	46.00	-22.66
943.74	Н	Peak	44.03	-18.13	25.90	46.00	-20.10

Remark:

- 1 Measuring frequencies from 30 MHz to the 1GHz •
- 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 Oct. 06, 2010

Fundamental Frequency 2412MHz Test By Sky Pol Ver Temperature 25 °C

Humidity 65 %

	Peak	\mathbf{AV}		Actu	al FS	Peak	\mathbf{AV}		
Freq.	Reading	Reading	Ant./CL	Peak	\mathbf{AV}	Limit	Limit	Margin	
(MHz)	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dB)	_
4824.0	44.22		-5.92	38.30		74.00	54.00	-15.70	4824.0
7236.0						74.00	54.00		7236.0
9648.0						74.00	54.00		9648.0
12060.0						74.00	54.00		12060.0
14472.0						74.00	54.00		14472.0
16884.0						74.00	54.00		16884.0
19296.0						74.00	54.00		19296.0
21708.0						74.00	54.00		21708.0
24120.0						74.00	54.00		24120.0

Remark:

- (1) Measuring frequencies scanned from 1GHz to the 10th harmonic of highest fundamental frequency_o
- (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_o
- (4) Spectrum Peak Setting: 1GHz-40GHz, RBW=1MHz, VBW=3MHz, Sweep time=200 ms.
- (5) Spectrum AV Setting: 1GHz-40GHz, 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 Oct. 06, 2010

Fundamental Frequency 2412MHz Test By Sky Pol Temperature 25 °C Hor

Humidity 65 %

	Peak	\mathbf{AV}		Actu	al FS	Peak	\mathbf{AV}		
Freq.	Reading	Reading	Ant./CL	Peak	\mathbf{AV}	Limit	Limit	Margin	
(MHz)	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dB)	
4824.0						74.00	54.00		
5173.0	43.89		-5.19	38.70		74.00	54.00	-15.30	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 scanned from 1GHz to the 10th harmonic of highest fundamental frequency_o
- (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_o
- (4) Spectrum Peak Setting: 1GHz-40GHz, RBW=1MHz, VBW=3MHz, Sweep time=200 ms.
- (5) Spectrum AV Setting: 1GHz-40GHz, 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 Oct. 06, 2010

Fundamental Frequency 2437MHz Test By Sky Pol Ver Temperature 25 °C

Humidity 65 %

	Peak	\mathbf{AV}		Actu	al FS	Peak	\mathbf{AV}		
Freq.	Reading	Reading	Ant./CL	Peak	\mathbf{AV}	Limit	Limit	Margin	
(MHz)	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dB)	
4874.0	45.07		-6.19	38.88		74.00	54.00	-15.12	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 scanned from 1GHz to the 10th harmonic of highest fundamental frequency_o
- (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_o
- (4) Spectrum Peak Setting: 1GHz-40GHz, RBW=1MHz, VBW=3MHz, Sweep time=200 ms.
- (5) Spectrum AV Setting: 1GHz-40GHz, 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 Oct. 06, 2010

Fundamental Frequency 2437MHz Test By Sky Temperature 25 °C Pol Hor

Humidity 65 %

	Peak	\mathbf{AV}		Actu	al FS	Peak	\mathbf{AV}		
Freq.	Reading	Reading	Ant./CL	Peak	\mathbf{AV}	Limit	Limit	Margin	
(MHz)	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dB)	
4874.0	43.60		-5.76	37.84		74.00	54.00	-16.16	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 scanned from 1GHz to the 10th harmonic of highest fundamental frequency_o
- (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_o
- (4) Spectrum Peak Setting: 1GHz-40GHz, RBW=1MHz, VBW=3MHz, Sweep time=200 ms.
- (5) Spectrum AV Setting: 1GHz-40GHz, 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 Oct. 06, 2010

Fundamental Frequency 2462MHz Test By Sky Temperature 25 °C Pol Ver

Humidity 65 %

	Peak	\mathbf{AV}		Actu	al FS	Peak	\mathbf{AV}		
Freq.	Reading	Reading	Ant./CL	Peak	\mathbf{AV}	Limit	Limit	Margin	
(MHz)	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dB)	-
4924.0	43.98		-5.04	38.94		74.00	54.00	-15.06	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 scanned from 1GHz to the 10th harmonic of highest fundamental frequency_o
- (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_o
- (4) Spectrum Peak Setting: 1GHz-40GHz, RBW=1MHz, VBW=3MHz, Sweep time=200 ms.
- (5) Spectrum AV Setting: 1GHz-40GHz, 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 Oct. 06, 2010

Fundamental Frequency 2462 MHz Test By Sky Temperature $25 \,^{\circ}\text{C}$ Pol Hor

Humidity 65 %

	Peak	\mathbf{AV}		Actu	al FS	Peak	\mathbf{AV}		
Freq.	Reading	Reading	Ant./CL	Peak	\mathbf{AV}	Limit	Limit	Margin	
(MHz)	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dB)	
4924.0	43.91		-6.02	37.89		74.00	54.00	-16.11	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 scanned from 1GHz to the 10th harmonic of highest fundamental frequency_o
- (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_o
- (4) Spectrum Peak Setting: 1GHz-40GHz, RBW=1MHz, VBW=3MHz, Sweep time=200 ms.
- (5) Spectrum AV Setting: 1GHz-40GHz, 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 Oct. 06, 2010

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

Humidity 65 %

	Peak	\mathbf{AV}		Actu	al FS	Peak	\mathbf{AV}		
Freq.	Reading	Reading	Ant./CL	Peak	\mathbf{AV}	Limit	Limit	Margin	
(MHz)	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dB)	
4824.0	43.88		-5.97	37.91		74.00	54.00	-16.09	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 scanned from 1GHz to the 10th harmonic of highest fundamental frequency_o
- (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_o
- (4) Spectrum Peak Setting: 1GHz-40GHz, RBW=1MHz, VBW=3MHz, Sweep time=200 ms.
- (5) Spectrum AV Setting: 1GHz-40GHz, 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 Oct. 06, 2010

Fundamental Frequency 2412MHz Test By Sky Pol Temperature 25 °C Hor

Humidity 65 %

	Peak	\mathbf{AV}		Actu	al FS	Peak	\mathbf{AV}		
Freq.	Reading	Reading	Ant./CL	Peak	\mathbf{AV}	Limit	Limit	Margin	
(MHz)	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dB)	
4824.0	44.22		-6.43	37.79		74.00	54.00	-16.21	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 scanned from 1GHz to the 10th harmonic of highest fundamental frequency_o
- (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_o
- (4) Spectrum Peak Setting: 1GHz-40GHz, RBW=1MHz, VBW=3MHz, Sweep time=200 ms.
- (5) Spectrum AV Setting: 1GHz-40GHz, 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 Oct. 06, 2010

Fundamental Frequency 2437MHz Test By Sky Pol Ver Temperature 25 °C

Humidity 65 %

	Peak	\mathbf{AV}		Actu	al FS	Peak	\mathbf{AV}		
Freq.	Reading	Reading	Ant./CL	Peak	\mathbf{AV}	Limit	Limit	Margin	
(MHz)	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dB)	i
4874.0	43.71		-5.96	37.75		74.00	54.00	-16.25	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 scanned from 1GHz to the 10th harmonic of highest fundamental frequency_o
- (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_o
- (4) Spectrum Peak Setting: 1GHz-40GHz, RBW=1MHz, VBW=3MHz, Sweep time=200 ms.
- (5) Spectrum AV Setting: 1GHz-40GHz, 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 Oct. 06, 2010

Fundamental Frequency 2437MHz Test By Sky Pol Temperature 25 °C Hor

Humidity 65 %

	Peak	\mathbf{AV}		Actu	al FS	Peak	\mathbf{AV}		
Freq.	Reading	Reading	Ant./CL	Peak	\mathbf{AV}	Limit	Limit	Margin	
(MHz)	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dB)	-
4308.5	44.88		-7.47	37.41		74.00	54.00	-16.59	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 scanned from 1GHz to the 10th harmonic of highest fundamental frequency_o
- (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_o
- (4) Spectrum Peak Setting: 1GHz-40GHz, RBW=1MHz, VBW=3MHz, Sweep time=200 ms.
- (5) Spectrum AV Setting: 1GHz-40GHz, 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 Oct. 06, 2010

Fundamental Frequency 2462MHz Test By Sky Pol Ver Temperature 25 °C

Humidity 65 %

	Peak	\mathbf{AV}		Actu	al FS	Peak	\mathbf{AV}		
Freq.	Reading	Reading	Ant./CL	Peak	\mathbf{AV}	Limit	Limit	Margin	
(MHz)	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dB)	
4924.0	44.88		-6.19	38.69		74.00	54.00	-15.31	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 scanned from 1GHz to the 10th harmonic of highest fundamental frequency_o
- (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_o
- (4) Spectrum Peak Setting: 1GHz-40GHz, RBW=1MHz, VBW=3MHz, Sweep time=200 ms.
- (5) Spectrum AV Setting: 1GHz-40GHz, 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 Oct. 06, 2010

Fundamental Frequency 2462 MHz Test By Sky Temperature $25 \,^{\circ}\text{C}$ Pol Hor

Humidity 65 %

	Peak	\mathbf{AV}		Actu	al FS	Peak	\mathbf{AV}		
Freq.	Reading	Reading	Ant./CL	Peak	\mathbf{AV}	Limit	Limit	Margin	
(MHz)	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dB)	_
4146.0	45.06		-8.12	36.94		74.00	54.00	-17.06	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 scanned from 1GHz to the 10th harmonic of highest fundamental frequency_o
- (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_o
- (4) Spectrum Peak Setting: 1GHz-40GHz, RBW=1MHz, VBW=3MHz, Sweep time=200 ms.
- (5) Spectrum AV Setting: 1GHz-40GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

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Radiated Spurious Emission Measurement Result (above 1GHz) (802.11n(2.4GHz) 20M)

Operation Mode 802.11n_20M TX CH Low Test Date Oct. 06, 2010

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

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	44.51		-6.04	38.47		74.00	54.00	-15.53	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(2.4Ghz) 20M)

Operation Mode 802.11n_20M TX CH Low Test Date Oct. 06, 2010

Fundamental Frequency 2412MHz Test By Sky Pol Temperature 25 °C 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)	
4824.0	45.20		-5.76	39.44		74.00	54.00	-14.56	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) (802.11n(2.4GHz)_20M)

Operation Mode 802.11n_20M TX CH Mid Test Date Oct. 06, 2010

Fundamental Frequency 2437MHz Test By Sky Temperature 25 °C Pol Ver

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)	
4874.0	43.92		-5.90	38.02		74.00	54.00	-15.98	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 ms.
- 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(2.4GHz)_20M)

Operation Mode 802.11n_20M TX CH Mid Test Date Oct. 06, 2010

Fundamental Frequency 2437MHz Test By Sky Temperature 25 °C 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)	
3970.5	45.94		-8.71	37.23		74.00	54.00	-16.77	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 ms.
- 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(2.4GHz)_20M)

Operation Mode 802.11n_20M TX CH High Test Date Oct. 06, 2010

Fundamental Frequency 2462 MHz Test By Sky Temperature $25 \,^{\circ}\text{C}$ Pol Ver

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)	
4924.0	44.35		-6.28	38.07		74.00	54.00	-15.93	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 ms.
- 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(2.4GHz) 20M)

Operation Mode 802.11n_20M TX CH High Test Date Oct. 06, 2010

Fundamental Frequency 2462MHz Test By Sky Pol Temperature 25 °C 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)	
4924.0						74.00	54.00		
5511.0	43.95		-4.45	39.50		74.00	54.00	-14.50	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) (802.11a)

Operation Mode 802.11a TX CH Low Test Date Oct. 06, 2010

Fundamental Frequency 5745MHz Test By Sky Pol Ver. Temperature 25 °C

Humidity 65 %

	Peak	\mathbf{AV}		Actu	al FS	Peak	\mathbf{AV}		
Freq.	Reading	Reading	Ant./CL	Peak	\mathbf{AV}	Limit	Limit	Margin	
(MHz)	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dB)	-
6973.5	42.70		1.40	44.10		74.00	54.00	-9.90	Peak
11490.0						74.00	54.00		
17235.0						74.00	54.00		
22980.0						74.00	54.00		
28725.0						74.00	54.00		
34470.0						74.00	54.00		
40215.0						74.00	54.00		
45960.0						74.00	54.00		
51705.0						74.00	54.00		
57450.0						74.00	54.00		

Remark:

- (1) Measuring frequencies scanned from 1GHz to the 10th harmonic of highest fundamental frequency_o
- (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_o
- (4) Spectrum Peak Setting: 1GHz-40GHz, RBW=1MHz, VBW=3MHz, Sweep time=200 ms.
- (5) Spectrum AV Setting: 1GHz-40GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

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Radiated Spurious Emission Measurement Result (above 1GHz) (802.11a)

Operation Mode 802.11a TX CH Low Test Date Oct. 06, 2010

Fundamental Frequency 5745MHz Test By Sky Pol Temperature 25 °C Hor

Humidity 65 %

	Peak	\mathbf{AV}		Actu	al FS	Peak	\mathbf{AV}		
Freq.	Reading	Reading	Ant./CL	Peak	\mathbf{AV}	Limit	Limit	Margin	
(MHz)	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dB)	-
1955.5	47.50		-12.80	34.70		74.00	54.00	-19.30	Peak
11490.0						74.00	54.00		
17235.0						74.00	54.00		
22980.0						74.00	54.00		
28725.0						74.00	54.00		
34470.0						74.00	54.00		
40215.0						74.00	54.00		
45960.0						74.00	54.00		
51705.0						74.00	54.00		
57450.0						74.00	54.00		

Remark:

- (1) Measuring frequencies scanned from 1GHz to the 10th harmonic of highest fundamental frequency_o
- (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_o
- (4) Spectrum Peak Setting: 1GHz-40GHz, RBW=1MHz, VBW=3MHz, Sweep time=200 ms.
- (5) Spectrum AV Setting: 1GHz-40GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

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Radiated Spurious Emission Measurement Result (above 1GHz) (802.11a)

Operation Mode 802.11a TX CH Mid Test Date Oct. 06, 2010

Fundamental Frequency 5785MHz Test By Sky Temperature 25 $^{\circ}$ C Pol Ver

Humidity 65 %

	Peak	\mathbf{AV}		Actu	al FS	Peak	\mathbf{AV}		
Freq.	Reading	Reading	Ant./CL	Peak	\mathbf{AV}	Limit	Limit	Margin	
(MHz)	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dB)	
6765.5	43.65		0.53	44.18		74.00	54.00	-9.82	Peak
11570.0						74.00	54.00		
17355.0						74.00	54.00		
23140.0						74.00	54.00		
28925.0						74.00	54.00		
34710.0						74.00	54.00		
40495.0						74.00	54.00		
46280.0						74.00	54.00		
52065.0						74.00	54.00		
57850.0						74.00	54.00		

Remark:

- (1) Measuring frequencies scanned from 1GHz to the 10th harmonic of highest fundamental frequency_o
- (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_o
- (4) Spectrum Peak Setting: 1GHz-40GHz, RBW=1MHz, VBW=3MHz, Sweep time=200 ms.
- (5) Spectrum AV Setting: 1GHz-40GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

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Radiated Spurious Emission Measurement Result (above 1GHz) (802.11a)

Operation Mode 802.11a TX CH Mid Test Date Oct. 06, 2010

Fundamental Frequency 5785MHz Test By Sky Temperature 25 $^{\circ}$ C Pol Hor

Humidity 65 %

	Peak	\mathbf{AV}		Actu	al FS	Peak	\mathbf{AV}		
Freq.	Reading	Reading	Ant./CL	Peak	\mathbf{AV}	Limit	Limit	Margin	
(MHz)	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dB)	-
7168.5	41.81		1.73	43.54		74.00	54.00	-10.46	Peak
11570.0						74.00	54.00		
17355.0						74.00	54.00		
23140.0						74.00	54.00		
28925.0						74.00	54.00		
34710.0						74.00	54.00		
40495.0						74.00	54.00		
46280.0						74.00	54.00		
52065.0						74.00	54.00		
57850.0						74.00	54.00		

Remark:

- (1) Measuring frequencies scanned from 1GHz to the 10th harmonic of highest fundamental frequency_o
- (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_o
- (4) Spectrum Peak Setting: 1GHz-40GHz, RBW=1MHz, VBW=3MHz, Sweep time=200 ms.
- (5) Spectrum AV Setting: 1GHz-40GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

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Radiated Spurious Emission Measurement Result (above 1GHz) (802.11a)

Operation Mode 802.11a TX CH High Test Date Oct. 06, 2010

Fundamental Frequency $5825 \mathrm{MHz}$ Test By Sky Temperature $25~\mathrm{^{\circ}C}$ Pol Ver

Humidity 65 %

	Peak	\mathbf{AV}		Actu	al FS	Peak	\mathbf{AV}		
Freq.	Reading	Reading	Ant./CL	Peak	\mathbf{AV}	Limit	Limit	Margin	
(MHz)	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dB)	-
4685.5	44.46		-6.14	38.32		74.00	54.00	-15.68	Peak
11650.0						74.00	54.00		
17475.0						74.00	54.00		
23300.0						74.00	54.00		
29125.0						74.00	54.00		
34950.0						74.00	54.00		
40775.0						74.00	54.00		
46600.0						74.00	54.00		
52425.0						74.00	54.00		
58250.0						74.00	54.00		

Remark:

- (1) Measuring frequencies scanned from 1GHz to the 10th harmonic of highest fundamental frequency_o
- (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_o
- (4) Spectrum Peak Setting: 1GHz-40GHz, RBW=1MHz, VBW=3MHz, Sweep time=200 ms.
- (5) Spectrum AV Setting: 1GHz-40GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

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Radiated Spurious Emission Measurement Result (above 1GHz) (802.11a)

Operation Mode 802.11a TX CH High Test Date Oct. 06, 2010

Fundamental Frequency $5825 \mathrm{MHz}$ Test By Sky Temperature $25~\mathrm{^{\circ}C}$ Pol Hor

Humidity 65 %

	Peak	\mathbf{AV}		Actu	al FS	Peak	\mathbf{AV}		
Freq.	Reading	Reading	Ant./CL	Peak	\mathbf{AV}	Limit	Limit	Margin	
(MHz)	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dB)	-
6960.5	41.88		1.35	43.23		74.00	54.00	-10.77	Peak
11650.0						74.00	54.00		
17475.0						74.00	54.00		
23300.0						74.00	54.00		
29125.0						74.00	54.00		
34950.0						74.00	54.00		
40775.0						74.00	54.00		
46600.0						74.00	54.00		
52425.0						74.00	54.00		
58250.0						74.00	54.00		

Remark:

- (1) Measuring frequencies scanned from 1GHz to the 10th harmonic of highest fundamental frequency_o
- (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_o
- (4) Spectrum Peak Setting: 1GHz-40GHz, RBW=1MHz, VBW=3MHz, Sweep time=200 ms.
- (5) Spectrum AV Setting: 1GHz-40GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

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Radiated Spurious Emission Measurement Result (above 1GHz) (802.11n(5GHz)_20M)

Operation Mode 802.11a/n_20M TX CH Low Test Date Oct. 06, 2010

Fundamental Frequency 5745MHz Test By Sky Temperature 25 $^{\circ}$ C Pol Ver.

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)	
6960.5	42.30		1.40	43.70		74.00	54.00	-10.30	Peak
11490.0						74.00	54.00		
17235.0						74.00	54.00		
22980.0						74.00	54.00		
28725.0						74.00	54.00		
34470.0						74.00	54.00		
40215.0						74.00	54.00		
45960.0						74.00	54.00		
51705.0						74.00	54.00		
57450.0						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 ms.
- 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(5Ghz) 20M)

Operation Mode 802.11a/n_20M TX CH Low Test Date Oct. 06, 2010

Fundamental Frequency 5745MHz Test By Sky Pol Temperature 25 °C 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)	
3821.0	45.70		-9.00	36.70		74.00	54.00	-17.30	Peak
11490.0						74.00	54.00		
17235.0						74.00	54.00		
22980.0						74.00	54.00		
28725.0						74.00	54.00		
34470.0						74.00	54.00		
40215.0						74.00	54.00		
45960.0						74.00	54.00		
51705.0						74.00	54.00		
57450.0						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(5Ghz)_20M)

Operation Mode 802.11a/n_20M TX CH Mid Test Date Oct. 06, 2010

Fundamental Frequency 5785MHz

Test By Sky
Temperature 25 °C

Pol Ver

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)	
7155.5	42.10		1.70	43.80		74.00	54.00	-10.20	Peak
11570.0						74.00	54.00		
17355.0						74.00	54.00		
23140.0						74.00	54.00		
28925.0						74.00	54.00		
34710.0						74.00	54.00		
40495.0						74.00	54.00		
46280.0						74.00	54.00		
52065.0						74.00	54.00		
57850.0						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 ms
- 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(5GHz)_20M)

Operation Mode 802.11a/n_20M TX CH Mid Test Date Oct. 06, 2010

Fundamental Frequency 5785MHz Test By Sky Temperature 25 °C 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)	
7318.0	42.44		1.97	44.41		74.00	54.00	-9.59	Peak
11570.0						74.00	54.00		
17355.0						74.00	54.00		
23140.0						74.00	54.00		
28925.0						74.00	54.00		
34710.0						74.00	54.00		
40495.0						74.00	54.00		
46280.0						74.00	54.00		
52065.0						74.00	54.00		
57850.0						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 ms.
- 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(5Ghz)_20M)

Operation Mode 802.11a/n_20M TX CH High Test Date Oct. 06, 2010

Fundamental Frequency $5825 \mathrm{MHz}$ Test By Sky Temperature $25~\mathrm{^{\circ}C}$ Pol Ver

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)	
7155.5	42.12		1.70	43.82		74.00	54.00	-10.18	Peak
11650.0						74.00	54.00		
17475.0						74.00	54.00		
23300.0						74.00	54.00		
29125.0						74.00	54.00		
34950.0						74.00	54.00		
40775.0						74.00	54.00		
46600.0						74.00	54.00		
52425.0						74.00	54.00		
58250.0						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 ms.
- 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(5GHz)_20M)

Operation Mode 802.11a/n_20M TX CH High Test Date Oct. 06, 2010

Fundamental Frequency $5825 \mathrm{MHz}$ Test By Sky Temperature $25~\mathrm{^{\circ}C}$ 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)	
6941.0	42.60		1.22	43.82		74.00	54.00	-10.18	Peak
11650.0						74.00	54.00		
17475.0						74.00	54.00		
23300.0						74.00	54.00		
29125.0						74.00	54.00		
34950.0						74.00	54.00		
40775.0						74.00	54.00		
46600.0						74.00	54.00		
52425.0						74.00	54.00		
58250.0						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 ms.
- 5 Spectrum AV Setting: 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

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10 Peak Power Spectral Density

Standard Applicable

According to §15.247(e) For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission. This power spectral density shall be determined in accordance with the provisions of paragraph (b) of this section. The same method of determining the conducted output power shall be used to determine the power spectral density.

10.2 **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 the spectrum analyzer as RBW = 3KHz, VBW = 10KHz, Span = 1.5MHz, Sweep=100s
- 4. Record the max. reading.
- 5. Repeat above procedures until all frequency measured were complete.

Measurement Equipment Used: 10.3

Conducted Emission Test Site										
EQUIPMENT	MFR	MODEL	SERIAL	LAST	CAL DUE.					
ТҮРЕ		NUMBER	NUMBER	CAL.						
Spectrum Analyzer	Agilent	E4446A	MY43360126	04/19/2010	04/18/2012					
Spectrum Analyzer	Agilent	E4440A	MY45304525	01/25/2010	01/24/2011					
DC Block	Agilent	BLK-18	155452	07/05/2010	07/04/2011					
Low Loss Cable	HUBER+SUHNER	SUCOFLEX 104PEA	N/A	01/05/2010	01/04/2011					
Attenuator	Mini-Circuit	BW-S6W5	001	07/05/2010	07/04/2011					
Attenuator	Mini-Circuit	BW-S10W5	001	07/05/2010	07/04/2011					
Attenuator	Mini-Circuit	BW-S20W5	001	07/05/2010	07/04/2011					
Splitter	Agilent	11636B	N/A	07/05/2010	07/04/2011					



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10.4 **Measurement Result**

802.11b

Frequency	RF Power Density	Cable loss	RF Power Density	Maximum Limit
MHz	Reading (dBm)	(dB)	Level (dBm)	(dBm)
2412	-8.48	0.00	-8.48	8
2437	-7.70	0.00	-7.70	8
2462	-7.91	0.00	-7.91	8

802.11g

Frequency			,		RF Power Density	Maximum Limit
MHz	Reading (dBm)	(dB)	Level (dBm)	(dBm)		
2412	-10.94	0.00	-10.94	8		
2437	-11.60	0.00	-11.60	8		
2462	-11.57	0.00	-11.57	8		

802.11n(2.4GHz)_20M

Frequency MHz	RF Power Density Cable loss Reading (dBm) (dB)		RF Power Density Level (dBm)	Maximum Limit (dBm)	
2412	-12.03	0.00	-12.03	8	
2437	-11.09	0.00	-11.09	8	
2462	-11.57	0.00	-11.57	8	

*Offset: 0.6dB

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802.11a

Frequency	RF Power Density	RF Power Density Cable loss RF Power Density		Maximum Limit
MHz	Reading (dBm)	(dB)	Level (dBm)	(dBm)
5745	-13.72	0.00	-13.72	8
5785	-14.01	0.00	-14.01	8
5825	-13.03	0.00	-13.03	8

802.11n(5GHz) 20M

Frequency MHz	RF Power Density Reading (dBm)	Cable loss (dB)	RF Power Density Level (dBm)	Maximum Limit (dBm)
5745	-13.79	0.00	-13.79	8
5785	-13.82	0.00	-13.82	8
5825	-13.85	0.00	-13.85	8

*Offset: 0.6dB

Note: Refer to next page for plots.

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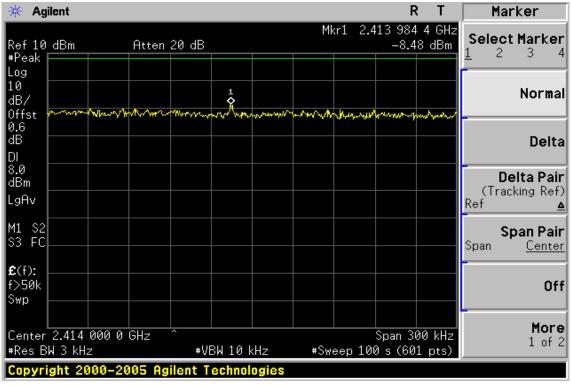
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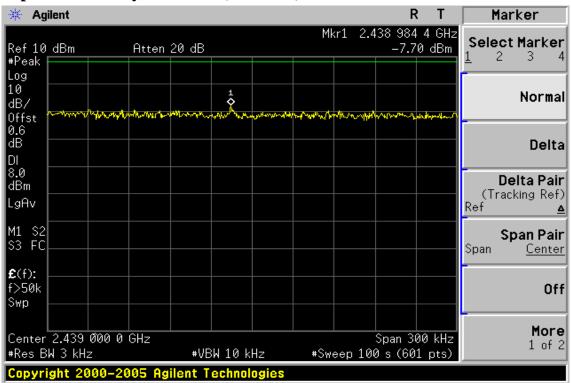
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802.11b Power Spectral Density Test Plot (CH-Low)



Power Spectral Density Test Plot (CH-Mid)



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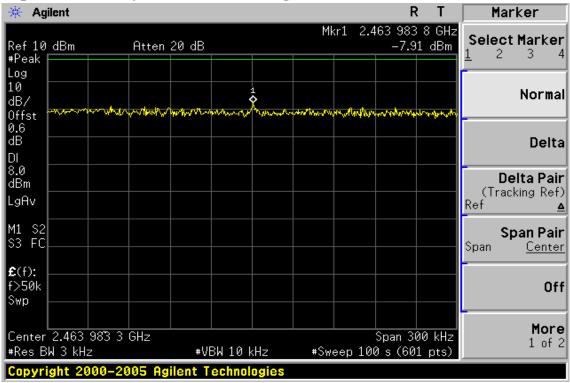
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Power Spectral Density Test Plot (CH-High)



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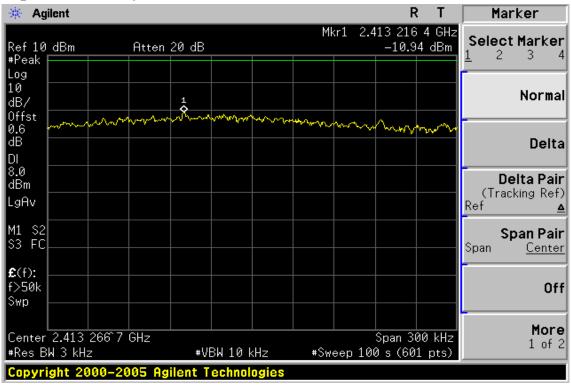
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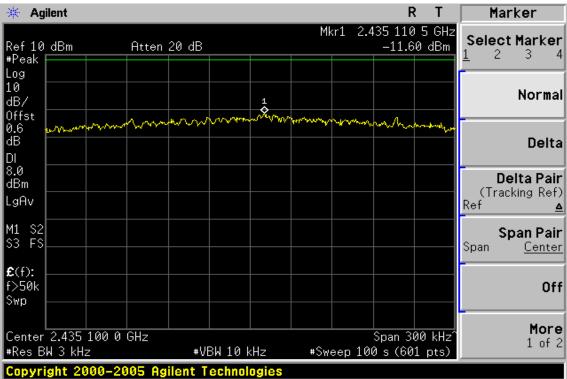
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802.11g Power Spectral Density Test Plot (CH-Low)



Power Spectral Density Test Plot (CH-Mid)



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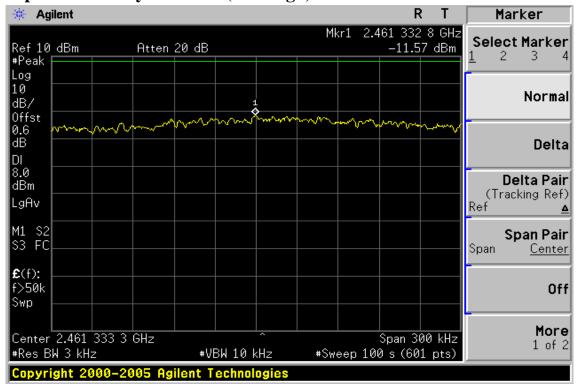
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Power Spectral Density Test Plot (CH-High)



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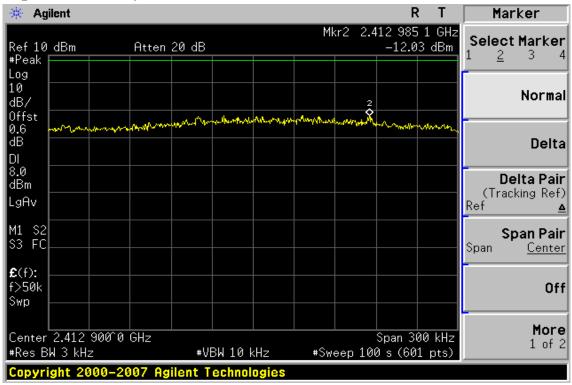


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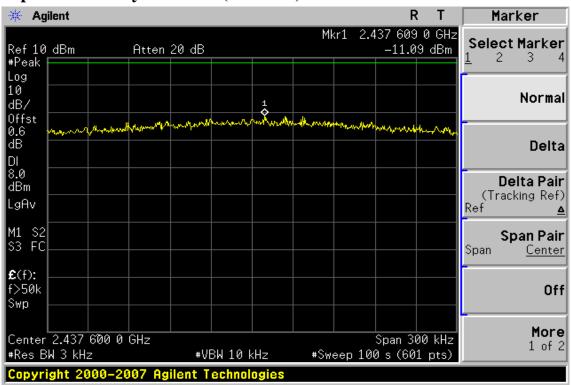
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802.11n(2.4GHz) 20M

Power Spectral Density Test Plot (CH-Low)



Power Spectral Density Test Plot (CH-Mid)



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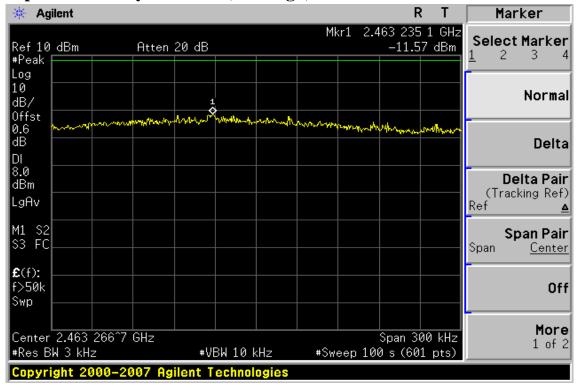
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Power Spectral Density Test Plot (CH-High)



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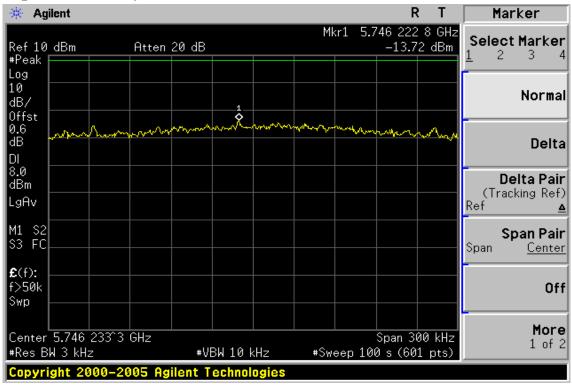
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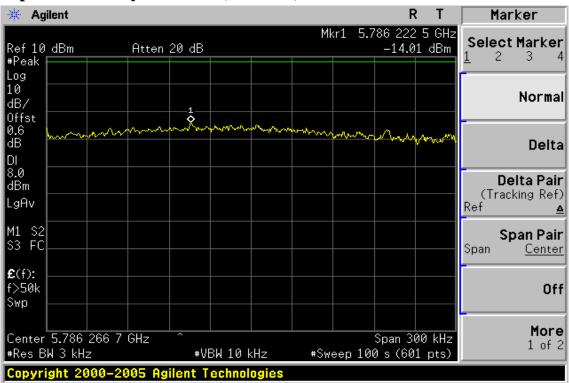
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802.11a **Power Spectral Density Test Plot (CH-Low)**



Power Spectral Density Test Plot (CH-Mid)



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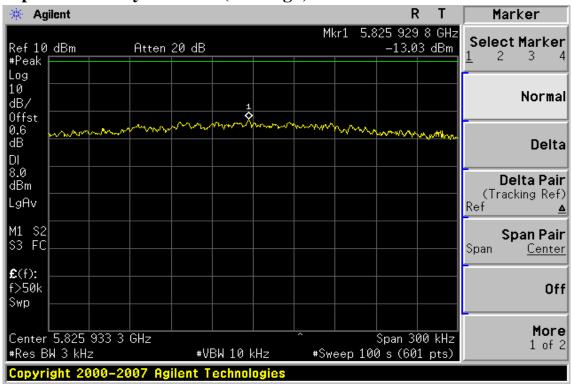
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Power Spectral Density Test Plot (CH-High)



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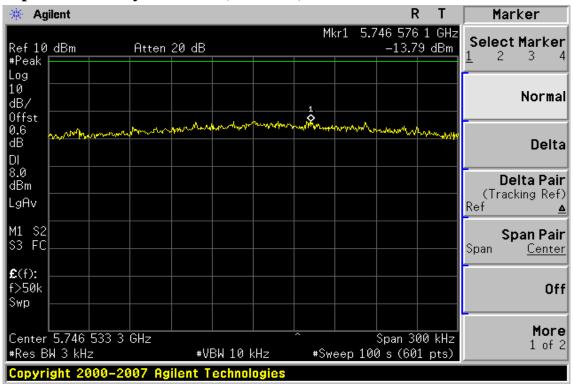


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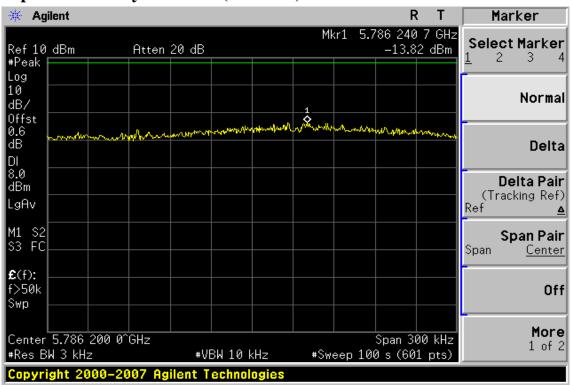
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802.11n(5GHz)_20M

Power Spectral Density Test Plot (CH-Low)



Power Spectral Density Test Plot (CH-Mid)



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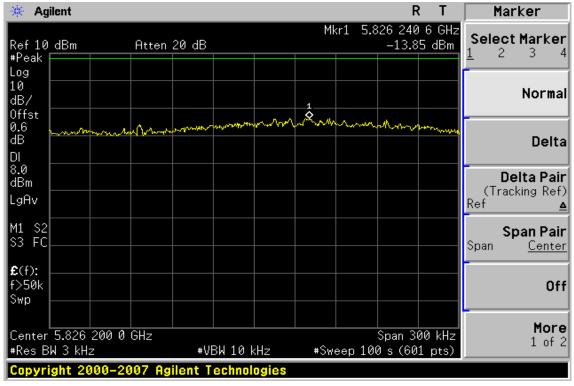
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Power Spectral Density Test Plot (CH-High)



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11 ANTENNA REQUIREMENT

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

11.2 Antenna Connected Construction

The directional gins of antenna used for transmitting is 1.90dBi for 2.4GHz, 3.0dBi for 5GHz, and the antenna connector is designed with unique type RF connector and no consideration of replacement. Please see EUT photo and antenna spec.for details.

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12 Maximum Permissible Exposure (MPE)

12.1 Standard Applicable

According to §1.1307(b)(1), systems operating under the provisions of this section shall be operated in a manner that ensure that the public is not exposed to radio frequency energy level in excess of the Commission's guideline.

This is a Mobile device, the MPE is required.

According to §1.1310 and §2.1093 RF exposure is calculated.

Limits for Maximum Permissive Exposure (MPE)

Frequency Range	Electric Field	Magnetic Field	Power Density	Averaging Time						
(MHz)	Strength (V/m)	Strength (A/m)	(mW/cm^2)	(minute)						
Limits for General Population/Uncontrolled Exposure										
0.3-1.34	614	1.63	*(100)	30						
1.34-30	824/f	2.19/f	$*(180/f^2)$	30						
30-300	27.5	0.073	0.2	30						
300-1500	300-1500 /		F/1500	30						
1500-15000	/	/	1.0	30						

F = frequency in MHz

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^{* =} Plane-wave equipment power density



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12.2 Maximum Permissible Exposure (MPE) Evaluation

802.11b Power Table

(Cable loss = 0	Peak Power Output							
СН	Frequency		Data Rate						
	(MHz)	1	2	5.5	11				
1	2412	15.25	15.21	15.19	15.14				
6	2437	14.57	14.52	15.20	15.17				
11	2462	14.90	14.85	14.81	14.82				

MPE Prediction (802.11b)

Prediction of MPE limit at a given distance

Equation from page 18 of OET Bulletin 65, Edition 97-01

 $S=PG/4 \pi R^2$

Where: S = Power density

P = Power input to antenna

G = Power gain of the antenna in the direction of interest relative to an isotropic radiator

R = Distance to the center of radiation of the antenna

Maximum peak output power at antenna input terminal:	15.25	(dBm)
Maximum peak output power at antenna input terminal:	33.49654392	(mW)
Duty cycle:	100	(%)
Maximum Pav :	33.49654392	(mW)
Antenna gain (typical):	1.9	(dBi)
Maximum antenna gain:	1.548816619	(numeric)
Prediction distance:	20	(cm)
Prediction frequency:	2437	(MHz)
MPE limit for uncontrolled exposure at prediction	1	(mW/cm2)
Power density at predication frequency at 20 (cm)	0.0103264	(mW/cm^2)

Measurement Result

The predicted power density level at 20 cm is 0.00103264 mW/cm². This is below the uncontrolled exposure limit of 1 mW/cm² at 2412MHz.

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802.11g Power Table

Cal	ble $loss = 0$		Peak Power Output						
СН	Frequency	Data Rate							
CII	(MHz)	6	9	12	18	24	36	48	54
1	2412	16.09	16.01	15.98	15.89	15.75	15.62	15.54	15.44
6	2437	15.8	15.73	15.7	15.61	15.49	15.34	15.27	15.16
11	2462	16.38	16.32	16.28	16.18	16.05	15.91	15.84	15.72

MPE Prediction (802.11g)

Prediction of MPE limit at a given distance

Equation from page 18 of OET Bulletin 65, Edition 97-01

 $S=PG/4 \pi R^2$

Where: S = Power density

P = Power input to antenna

G = Power gain of the antenna in the direction of interest relative to an isotropic radiator

R = Distance to the center of radiation of the antenna

Maximum peak output power at antenna input terminal:	16.38	(dBm)
Maximum peak output power at antenna input terminal:	43.45102242	(mW)
Duty cycle:	100	(%)
Maximum Pav :	43.45102242	(mW)
Antenna gain (typical):	1.9	(dBi)
Maximum antenna gain:	1.548816619	(numeric)
Prediction distance:	20	(cm)
Prediction frequency:	2462	(MHz)
MPE limit for uncontrolled exposure at prediction	1	(mW/cm2)
Power density at predication frequency at 20 (cm)	0.0133952	(mW/cm^2)

Measurement Result

The predicted power density level at 20 cm is 0.0133952 mW/cm2. This is below the uncontrolled exposure limit of 1 mW/cm2 at 2462.

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802.11n(2.4GHz)_20M Power Table

Cal	ble $loss = 0$	Peak Power Output									
СН	Frequency				1	Data Rate					
Сп	(MHz)	6.5	13	19.5	26	39	52	58.5	65	72	
1	2412	15.20	15.03	14.88	14.71	14.49	14.28	14.23	14.15	14.13	
6	2437	14.95	14.76	14.62	14.44	14.23	14.02	13.96	13.89	13.87	
11	2462	15.19	15.01	14.85	14.66	14.45	14.25	14.19	14.12	14.10	

MPE Prediction (802.11n(2.4GHz)_20M)

Prediction of MPE limit at a given distance

Equation from page 18 of OET Bulletin 65, Edition 97-01

 $S=PG/4 \pi R^2$

Where: S = Power density

P = Power input to antenna

G = Power gain of the antenna in the direction of interest relative to an isotropic radiator

R = Distance to the center of radiation of the antenna

Maximum peak output power at antenna input terminal:	15.2	(dBm)
Maximum peak output power at antenna input terminal:	33.11311215	(mW)
Duty cycle:	100	(%)
Maximum Pav :	33.11311215	(mW)
Antenna gain (typical):	1.9	(dBi)
Maximum antenna gain:	1.548816619	(numeric)
Prediction distance:	20	(cm)
Prediction frequency:	2412	(MHz)
MPE limit for uncontrolled exposure at prediction	1	(mW/cm2)
Power density at predication frequency at 20 (cm)	0.0102082	(mW/cm^2)

Measurement Result

The predicted power density level at 20 cm is 0.0102082 mW/cm2. This is below the uncontrolled exposure limit of 1 mW/cm2 at 2412.

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802.11a Power Table

Cal	ble $loss = 0$		Peak Power Output								
CII	Frequency		Data Rate								
СН	(MHz)	6	9	12	18	24	36	48	54		
149	5745	13.05	12.88	12.86	12.75	12.58	12.44	12.37	12.18		
157	5785	12.89	12.81	12.77	12.67	12.51	12.37	12.28	12.17		
165	5825	13.18	13.12	13.08	12.99	12.83	12.68	12.60	12.49		

MPE Prediction (802.11a)

Prediction of MPE limit at a given distance

Equation from page 18 of OET Bulletin 65, Edition 97-01

 $S=PG/4 \pi R^2$

Where: S = Power density

P = Power input to antenna

G = Power gain of the antenna in the direction of interest relative to an isotropic radiator

R = Distance to the center of radiation of the antenna

Maximum peak output power at antenna input terminal:	13.18	(dBm)
Maximum peak output power at antenna input terminal:	20.79696687	(mW)
Duty cycle:	100	(%)
Maximum Pav :	20.79696687	(mW)
Antenna gain (typical):	3.00	(dBi)
Maximum antenna gain:	1.995262315	(numeric)
Prediction distance:	20	(cm)
Prediction frequency:	5825	(MHz)
MPE limit for uncontrolled exposure at prediction	1	(mW/cm2)
Power density at predication frequency at 20 (cm)	0.0082594	(mW/cm^2)

Measurement Result

The predicted power density level at 20 cm is 0.0082594 mW/cm2. This is below the uncontrolled exposure limit of 1 mW/cm2 at 5825.

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802.11 n(5GHz)_20M Power Table

Cal	ble $loss = 0$	Peak Power Output								
CII	Frequency (MHz)		Data Rate							
СН		6.5	13	19.5	26	39	52	58.5	65	72
149	5745	13.33	13.16	13.02	12.84	12.65	12.45	12.40	12.33	12.30
157	5785	12.97	12.80	12.66	12.49	12.30	12.12	12.07	11.99	11.87
165	5825	13.13	12.95	12.81	12.63	12.43	12.24	12.18	12.10	11.92

MPE Prediction (802.11n(5GHz)_20M)

Prediction of MPE limit at a given distance

Equation from page 18 of OET Bulletin 65, Edition 97-01

 $S=PG/4 \pi R^2$

Where: S = Power density

P = Power input to antenna

G = Power gain of the antenna in the direction of interest relative to an isotropic radiator

R = Distance to the center of radiation of the antenna

Maximum peak output power at antenna input terminal:	13.33	(dBm)
Maximum peak output power at antenna input terminal:	21.52781735	(mW)
Duty cycle:	100	(%)
Maximum Pav :	21.52781735	(mW)
Antenna gain (typical):	3.00	(dBi)
Maximum antenna gain:	1.995262315	(numeric)
Prediction distance:	20	(cm)
Prediction frequency:	5745	(MHz)
MPE limit for uncontrolled exposure at prediction	1	(mW/cm2)
Power density at predication frequency at 20 (cm)	0.0085497	(mW/cm^2)

Measurement Result

The predicted power density level at 20 cm is 0.0085497 mW/cm2. This is below the uncontrolled exposure limit of 1 mW/cm2 at 5745.

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