NVLAP LAB CODE 200707-0

FCC PART 15.247

MEASUREMENT AND TEST REPORT

For

Storage Appliance Corporation

Suite 115 115-30 West Beaver Creek Road,

Toronto, ON, Canada, L4B 3K1

FCC ID: YK3SACMALATA

Report Type:	Product Type:
Original Report	Clickfree C3 2.5

Test Engineer:	Cookies Bu
Report Number:	RXM10062552
Report Date:	2010-08-25
Reviewed By:	Merry Zhao EMC Engineer
Prepared By:	Bay Area Compliance Laboratories Corp. (Shenzhen) 6/F, the 3rd Phase of WanLi Industrial Building, ShiHua Road, FuTian Free Trade Zone Shenzhen, Guangdong, China Tel: +86-755-33320018 Fax: +86-755-33320008

TABLE OF CONTENTS

GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

The *Storage Appliance Corporation 's* product, model number: *628wi (FCC ID: YK3SACMALATA) o*r the "EUT" as referred to in this report is a *Clickfree C3 2.5*, which measures approximately: 20.2 cm L x 20.2 cm W x 2.0 cm H, rated input voltage: DC 12V adapter.

Adapter information:
Model: KSAS0101200100HU;
Input: 100-240VAC 50/60 Hz 0.4A;
Output: 1.2VDC 1.0A.

Note: The series product, models 528wi, 428wi, 328wi, 228wi, 128wi and 628wi have the same circuit and PCB layout, the differences between them are the model name and capability, we select 628wi to test, wich was explained in detail in the attached declaration letter.

** All measurement and test data in this report was gathered from production sample serial number: 1005026 (Assigned by BACL, Shenzhen). The EUT was received on 2010-06-25.*

Objective

This Type approval report is prepared on behalf of *Storage Appliance Corporation in* accordance with Part 2, Subpart J, Part 15, Subparts A, B and C of the Federal Communication Commissions rules.

The tests were performed in order to determine compliance with FCC Part 15, Subpart C, and section 15.203, 15.205, 15.207, 15.209 and 15.247 rules.

Related Submittal(s)/Grant(s)

N/A

Test Methodology

All measurements contained in this report were conducted with ANSI C63.4-2003, American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the range of 9 kHz to 40 GHz.

All emissions measurement was performed and Bay Area Compliance Laboratories Corp. (Shenzhen). The radiated testing was performed at an antenna-to-EUT distance of 3 meters.

Test Facility

The Test site used by Bay Area Compliance Laboratories Corp. (Shenzhen) to collect test data is located in the 6/F, the 3rd Phase of WanLi Industrial Building, ShiHua Road, FuTian Free Trade Zone Shenzhen, Guangdong, China.

Test site at Bay Area Compliance Laboratories Corp. (Shenzhen) has been fully described in reports submitted to the Federal Communication Commission (FCC). The details of these reports have been found to be in compliance with the requirements of Section 2.948 of the FCC Rules on November 21, 2007. The facility also complies with the radiated and AC line conducted test site criteria set forth in ANSI C63.4-2003.

The Federal Communications Commission has the reports on file and is listed under FCC Registration No.: 382179. The test site has been approved by the FCC for public use and is listed in the FCC Public Access Link (PAL) database.

Additionally, Bay Area Compliance Laboratories Corp. (Shenzhen) is a National Institute of Standards and Technology (NIST) accredited laboratory, under the National Voluntary Laboratory Accredited Program (Lab Code 200707-0).

NVLAP LAB CODE 200707-0

The current scope of accreditations can be found at http://ts.nist.gov/Standards/scopes/2007070.htm

SYSTEM TEST CONFIGURATION

Description of Test Configuration

For 802.11b and 802.11g and 802.11n20 mode, 11 channels are provided to testing:

Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	2412	7	2442
2	2417	8	2447
3	2422	9	2452
4	2427	10	2457
5	2432	11	2462
6	2437	/	/

EUT was tested with Channel 1, 6 and 11.

For 802.11n40 mode, EUT was tested with Channel 1, 6 and 9.

EUT Exercise Software

The test was performed under RT3X9XQA about power:
802.11b: TX Power level 1A, data rate: 1 Mbps.
802.11g: TX Power level 1A, data rate: 6 Mbps.
802.11n20: TX Power level 1A, data rate: 6.5 Mbps.
802.11 n40: TX Power17 level 1A, data rate: 6.5 Mbps.

Equipment Modifications

No modification was made to the unit tested.

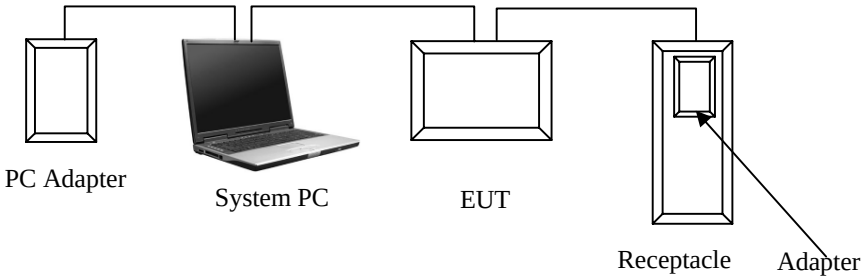
Local Support Equipment List and Details

Manufacturer	Description	Model	Serial Number	FCC ID
Compaq	System PC	PP2040	N/A	N/A

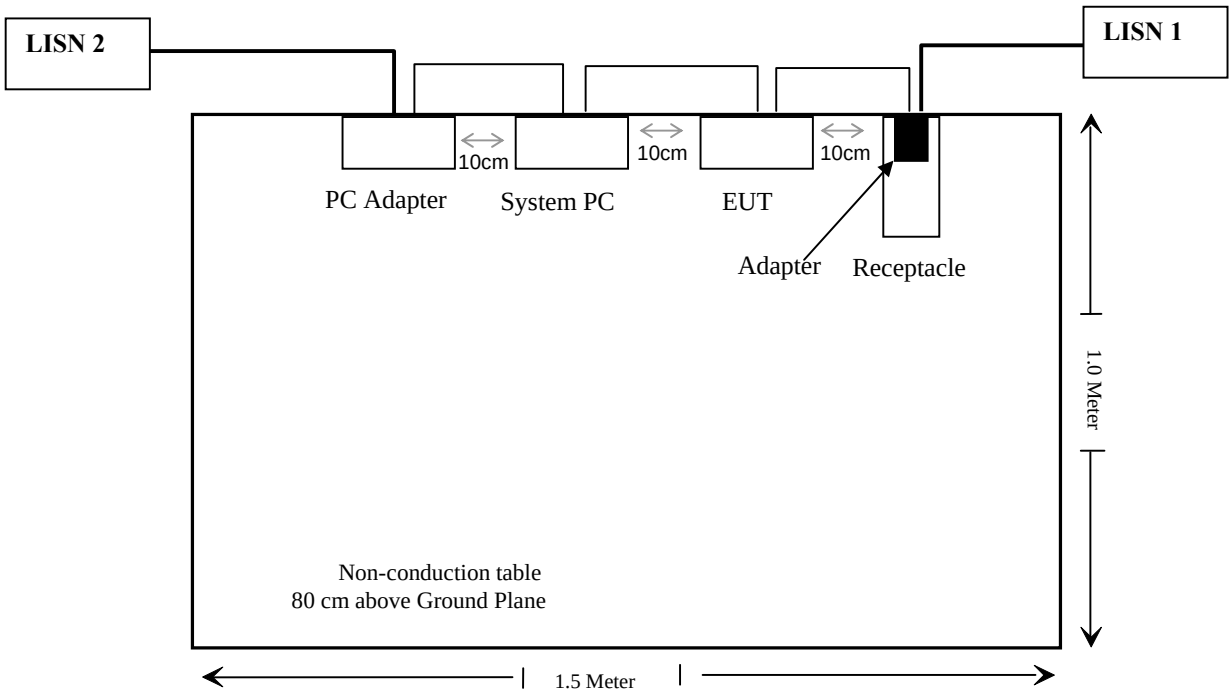
External I/O Cable

Cable Description	Length (m)	From/Port	To
Unshielded Detachable RJ45 Cable	1.8	EUT	PC

Configuration of Test Setup



Block Diagram of Test Setup



SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Result
§15.247(i), §2.1091	Maximum Permissible exposure (MPE)	Compliance
§15.203	Antenna Requirement	Compliance
§15.207 (a),	Conducted Emissions	Compliance
§15.247(d)	Spurious Emissions at Antenna Port	Compliance
§15.205, §15.209, §15.247(d)	Spurious Emissions	Compliance
§15.247 (a)(2)	6 dB Bandwidth	Compliance
§15.247(b)(3)	Maximum Peak Output Power	Compliance
§15.247(d)	100kHz Bandwidth of Frequency Band Edge	Compliance
§15.247(e)	Power Spectral Density	Compliance

FCC §15.247(i) & §2.1091- MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Applicable Standard

According to subpart 15.247 (i) and subpart 1.1307 (b)(1), 2.1091 systems operating under the provisions of this section shall be operated in a manner that ensures the public is not exposed to RF energy level in excess of the communication guidelines.

Limits for Maximum Permissible Exposure (MPE)

(B) Limits for General Population/Uncontrolled Exposure				
Frequency Range (MHz)	**Electric Field Strength (V/m)**	**Magnetic Field Strength (A/m)**	**Power Density (mW/cm^2)**	**Averaging Time (minutes)**
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	/	/	f/1500	30
1500–100,000	/	/	1.0	30

f = frequency in MHz * = Plane-wave equivalent power density

Test Data

Predication of MPE limit at a given distance

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

Where:

S = power density (in appropriate units, e.g. mW/cm^2)
P = power input to the antenna (in appropriate units, e.g., mW).
G = power gain of the antenna in the direction of interest relative to an isotropic radiator, the power gain factor, is normally ***numeric*** gain.
R = distance to the center of radiation of the antenna (appropriate units, e.g., cm)

Radio Mode	**Frequency (MHz)**	**Antenna Gain**		**Conducted Output Power**		**Evaluation Distance (cm)**	**Power Density (mW/cm^2)**	**MPE Limit (mW/cm^2)**
		(dBi)	**(numeric)**	**(dBm)**	**(mW)**			
802.11b	2412	2	1.5849	17.04	50.5824	20	0.01595	1.0
802.11g	2412	2	1.5849	13.69	23.3884	20	0.00737	1.0
802.11n20	2412	2	1.5849	13.66	23.2274	20	0.00732	1.0
802.11n40	2422	2	1.5849	13.71	23.4963	20	0.00741	1.0

Result

Compliance

FCC §15.203 - ANTENNA REQUIREMENT

Applicable Standard

According to FCC §15.203, 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 user of a standard antenna jack or electrical connector is prohibited. The structure and application of the EUT were analyzed to determine compliance with section §15.203 of the rules. §15.203 state that the subject device must meet the following criteria:

a. Antenna must be permanently attached to the unit.
b. Antenna must use a unique type of connector to attach to the EUT.

Unit must be professionally installed, and installer shall be responsible for verifying that the correct antenna is employed with the unit.

And according to FCC §15.247 (b), if the transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

Antenna Connector Construction

The EUT used a PCB antenna, which in accordance to section 15.203, the maximum gain is 2 dBi; please refer to the internal photos.

Result: Compliant.

FCC §15.207 (a) - CONDUCTED EMISSIONS

Applicable Standard

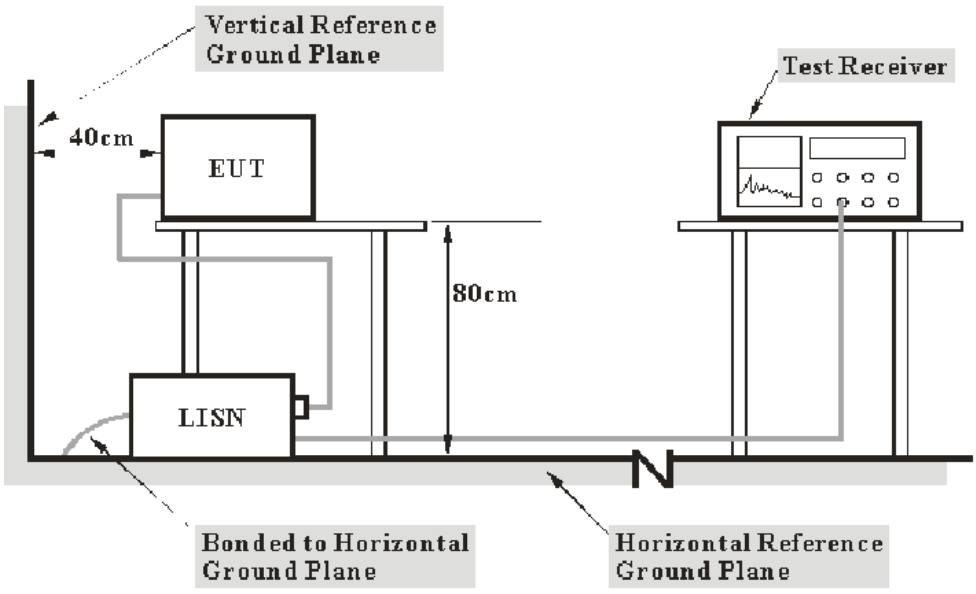
FCC §15.207

Measurement Uncertainty

All measurements involve certain levels of uncertainties, especially in field of EMC. The factors contributing to uncertainties are spectrum analyzer, cable loss, and LISN.

Based on NIS 81, The Treatment of Uncertainty in EMC Measurements, the best estimate of the uncertainty of any conducted emissions measurement at Bay Area Compliance Laboratory Corp. (Shenzhen) is ±2.4 dB.

EUT Setup



Note: 1. Support units were connected to second LISN.
2. Both of LISNs (AMN) 80 cm from EUT and at the least 80 cm from other units and other metal planes support units.

The setup of EUT is according with per ANSI C63.4-2003 measurement procedure. The specification used was with the FCC Part 15.207 limits.

The spacing between the peripherals was 10 cm.

The adapter was connected to a 120 VAC/60 Hz power source.

EMI Test Receiver Setup

The EMI test receiver was set to investigate the spectrum from 150 kHz to 30 MHz.

During the conducted emission test, the EMI test receiver was set with the following configurations:

Frequency Range	***IF B/W***
150 kHz – 30 MHz	9 kHz

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Rohde & Schwarz	EMI Test Receiver	ESCS30	830245	2010-03-03	2011-03-02
Rohde & Schwarz	L.I.S.N.	ESH2-Z5	892107/021	2010-03-09	2011-03-08

*** Statement of Traceability:** Bay Area Compliance Laboratory Corp. (Shenzhen) attests that all calibrations have been performed in accordance to NVLAP requirements, traceable to the NIST.

Test Procedure

During the conducted emission test, the adapter was inserted to the receptacle and the receptacle was connected to the first LISN, the PC adapter was connected to the second LISN.

Maximizing procedure was performed on the six (6) highest emissions of the EUT.

All data was recorded in the Quasi-peak and average detection mode.

Test Results Summary

According to the recorded data in following table, the EUT complied with the FCC Part 15.207, with the worst margin reading of:

16.24 dB at **17.300 MHz** in the **Line** conductor mode
11.99 dB at **17.390 MHz** in the **Neutral** conductor mode

Test Data

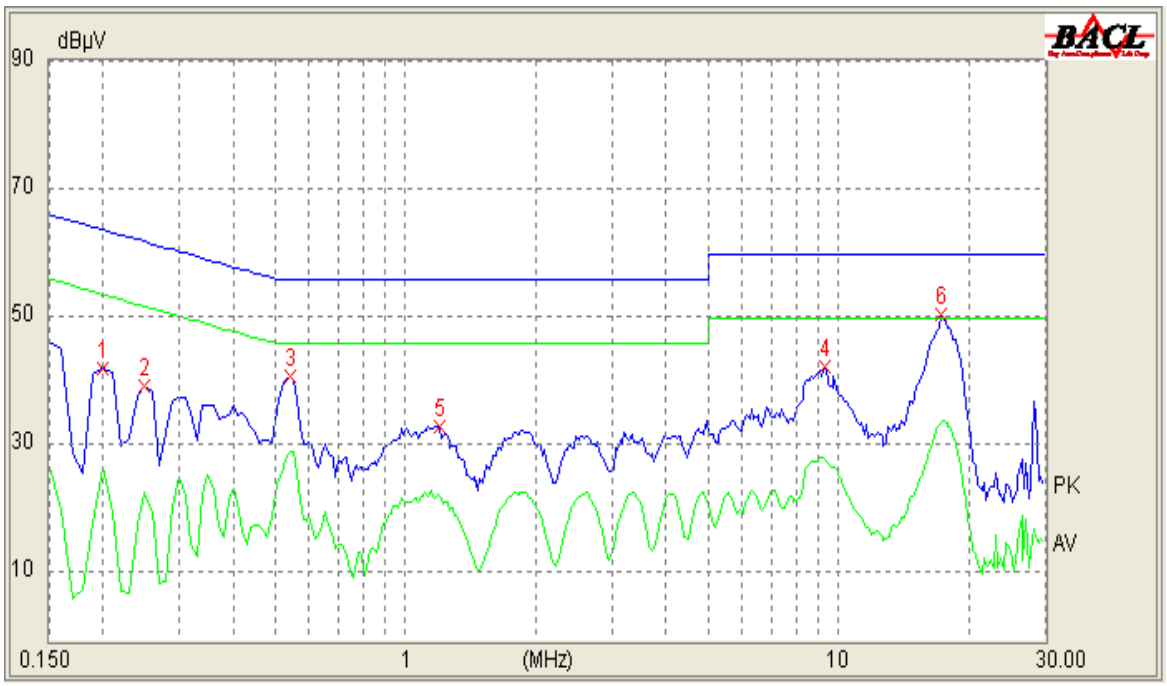
Environmental Conditions

Temperature:	25 ° C
Relative Humidity:	56 %
ATM Pressure:	100.0 kPa

The testing was performed by Cookies Bu on 2010-07-16.

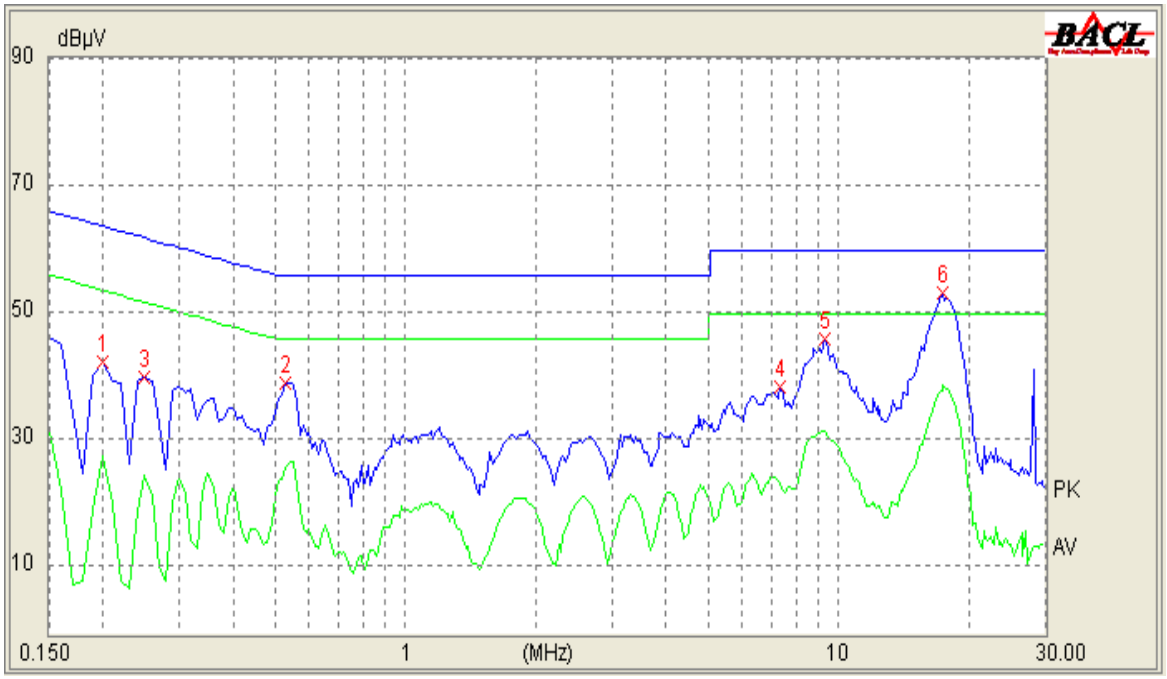
Test Mode: Transmitting (worse case)

120 V/60 Hz, Line:



Conducted Emissions			FCC Part 15.207		
Frequency (MHz)	**Correction Factor (dB)**	**Cord. Result (dBµV)**	**Limit (dBµV)**	**Margin (dB)**	**Detector (PK /QP/Ave)**
17.300	10.30	33.76	50.00	16.24	Ave
0.540	10.10	29.24	46.00	16.76	Ave
17.300	10.30	42.43	60.00	17.57	QP
0.540	10.10	36.89	56.00	19.11	QP
9.230	10.20	28.36	50.00	21.64	Ave
1.190	10.10	22.59	46.00	23.41	Avev
0.200	10.10	38.90	63.69	24.79	QP
0.250	10.10	35.97	61.82	25.85	QP
9.300	10.20	34.13	60.00	25.87	QP
0.200	10.10	26.93	53.69	26.76	Ave
1.200	10.10	28.51	56.00	27.49	QP
0.250	10.10	23.09	51.82	28.73	Ave

120 V/60 Hz, Neutral:



Conducted Emissions			FCC Part 15.207		
Frequency (MHz)	**Correction Factor (dB)**	**Cord. Result (dBµV)**	**Limit (dBµV)**	**Margin (dB)**	**Detector (PK /QP/Ave)**
17.390	10.30	38.01	50.00	11.99	Ave
17.420	10.30	45.75	60.00	14.25	QP
9.230	10.20	31.66	50.00	18.34	Ave
0.530	10.10	26.07	46.00	19.93	Ave
0.530	10.10	35.57	56.00	20.43	QP
9.320	10.20	38.41	60.00	21.59	QP
0.200	10.10	39.38	63.69	24.31	QP
0.250	10.10	36.08	61.82	25.74	QP
0.200	10.10	27.87	53.69	25.82	Ave
7.310	10.20	23.43	50.00	26.57	Ave
0.250	10.10	24.84	51.82	26.98	Ave
7.310	10.20	30.35	60.00	29.65	QP

FCC §15.209, §15.205 & §15.247(d) - SPURIOUS EMISSIONS

Applicable Standard

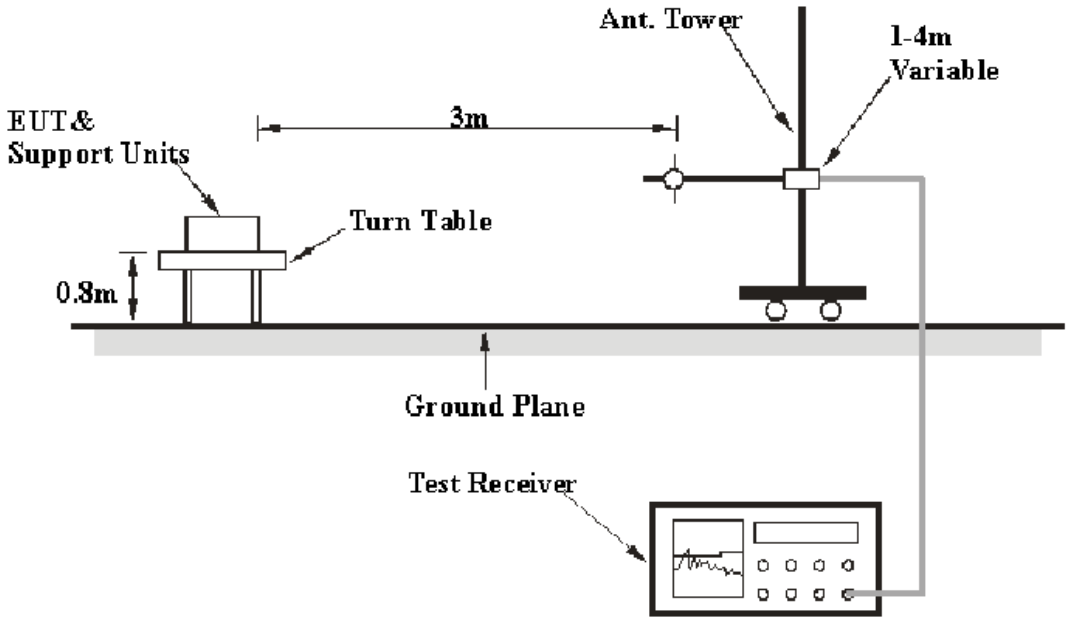
FCC §15.247 (d); §15.209; §15.205;

Measurement Uncertainty

All measurements involve certain levels of uncertainties, especially in field of EMC. The factors contributing to uncertainties are spectrum analyzer, cable loss, antenna factor calibration, antenna directivity, antenna factor variation with height, antenna phase center variation, antenna factor frequency interpolation, measurement distance variation, site imperfections, mismatch (average), and system repeatability.

Based on NIS 81, The Treatment of Uncertainty in EMC Measurements, the best estimate of the uncertainty of a radiation emissions measurement at Bay Area Compliance Laboratories Corp. (Shenzhen) is ±4.0 dB.

EUT Setup



The radiated emission tests were performed in the 3 meters chamber B test site, using the setup accordance with the ANSI C63.4-2003. The specification used was the FCC 15.209, and FCC 15.247 limits.

The external I/O cables were draped along the test table and formed a bundle 30 to 40 cm long in the middle.

The spacing between the peripherals was 10 cm.

The adapter was connected to a 120 VAC/60 Hz power source.

EMI Test Receiver & Spectrum Analyzer Setup

The system was investigated from 30 MHz to 25 GHz.

During the radiated emission test, the EMI test receiver & Spectrum Analyzer Setup were set with the following configurations:

Frequency Range	***RBW***	***Video B/W***	***Detector***
30MHz – 1000 MHz	100 kHz	300 kHz	QP
1000 MHz – 25 GHz	1 MHz	3 MHz	PK
1000 MHz – 25 GHz	1 MHz	10 Hz	AV

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
HP	Amplifier	HP8447D	2944A09795	2009-08-02	2010-08-02
Rohde & Schwarz	EMI Test Receiver	ESCI	100035	2008-11-07	2009-11-06
Sunol Sciences	Broadband Antenna	At1080	301902	2010-03-11	2011-03-11
HP	Amplifier	2VA-213+	T-E27H	2010-03-08	2011-03-08
Sunol Sciences	Horn Antenna	DRH-118	A052604	2008-09-25	2009-09-25
Rohde & Schwarz	Spectrum Analyzer	FSEM30	849720/019	2010-07-08	2011-07-08

*** Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Shenzhen) attests that all calibrations have been performed in accordance to NVLAP requirements, traceable to the NIST.

Test Procedure

For the radiated emissions test, the adapter and other relevant support equipment were connected to the AC floor outlet.

Maximizing procedure was performed on the highest emissions to ensure that the EUT complied with all installation combinations.

Data was recorded in Quasi-peak detection mode for frequency range of 30 MHz-1GHz and peak and Average detection modes for frequencies above 1GHz.

Corrected Amplitude & Margin Calculation

The Corrected Amplitude is calculated by adding the Antenna Factor and Cable Loss, and subtracting the Amplifier Gain from the Meter Reading. The basic equation is as follows:

Corrected Amplitude = Meter Reading + Antenna Factor + Cable Loss - Amplifier Gain

The "**Margin**" column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of 7 dB means the emission is 7 dB below the limit. The equation for margin calculation is as follows:

Margin = Limit – Corrected Amplitude

Test Results Summary

According to the recorded data in following table, the EUT complied with the FCC Title 47, Part 15, Subpart C, section 15.205, 15.209 and 15.247, with the worst margin reading of:

30 -1000 MHz:

802.11b (wost case): **5.2 dB** at **320.005250 MHz** in the **Horizontal** polarization
802.11g (wost case): **6.3 dB** at **320.025250/500.008500 MHz** in the **Horizontal** polarization
802.11n20 (wost case): **5.7 dB** at **319.995750 MHz** in the **Horizontal** polarization
802.11n40 (wost case): **6.4 dB** at **729.127500 MHz** in the **Horizontal** polarization

Above 1 GHz:

802.11b (Low Channel): **0.38 dB** at **4824.00 MHz** in the **Horizontal** polarization
802.11b (Middle Channel): **0.17 dB** at **4874.00 MHz** in the **Horizontal** polarization
802.11b (High Channel): **2.75 dB** at **4924.00 MHz** in the **Vertical** polarization

802.11g (Low Channel): **9.41 dB** at **4824.00 MHz** in the **Vertical** polarization
802.11g (Middle Channel): **10.53 dB** at **4874.00 MHz** in the **Vertical** polarization
802.11g (High Channel): **9.37 dB** at **2514.84 MHz** in the **Horizontal** polarization

802.11n20 (Low Channel): **4.49 dB** at **2398.87 MHz** in the **Horizontal** polarization
802.11n20 (Middle Channel): **10.79 dB** at **4874.00 MHz** in the **Horizontal** polarization
802.11n20 (High Channel): **3.46 dB** at **2485.33 MHz** in the **Horizontal** polarization

802.11n40 (Low Channel): **3.73 dB** at **2485.84 MHz** in the **Vertical** polarization
802.11n40 (Middle Channel): **15.46 dB** at **4874.00 MHz** in **Vertical** the polarization
802.11n40 (High Channel): **3.46 dB** at **4904.00 MHz** in the **Horizontal** polarization

Test Data

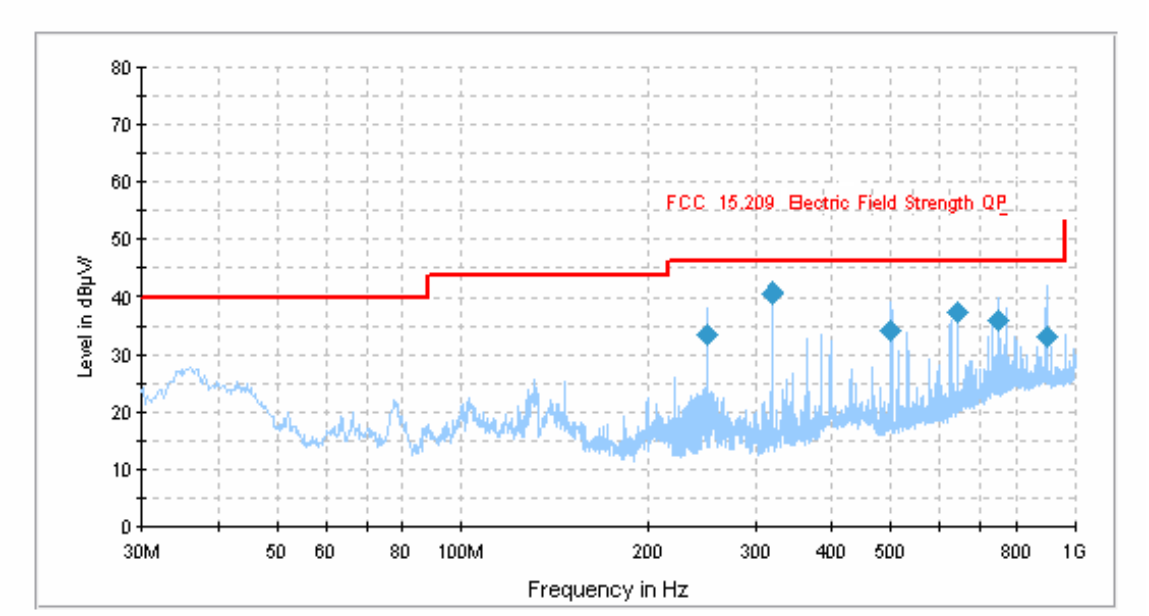
Environmental Conditions

Temperature:	25 ° C
Relative Humidity:	56 %
ATM Pressure:	100.0 kPa

The testing was performed by Cookies Bu on 2010-07-15.

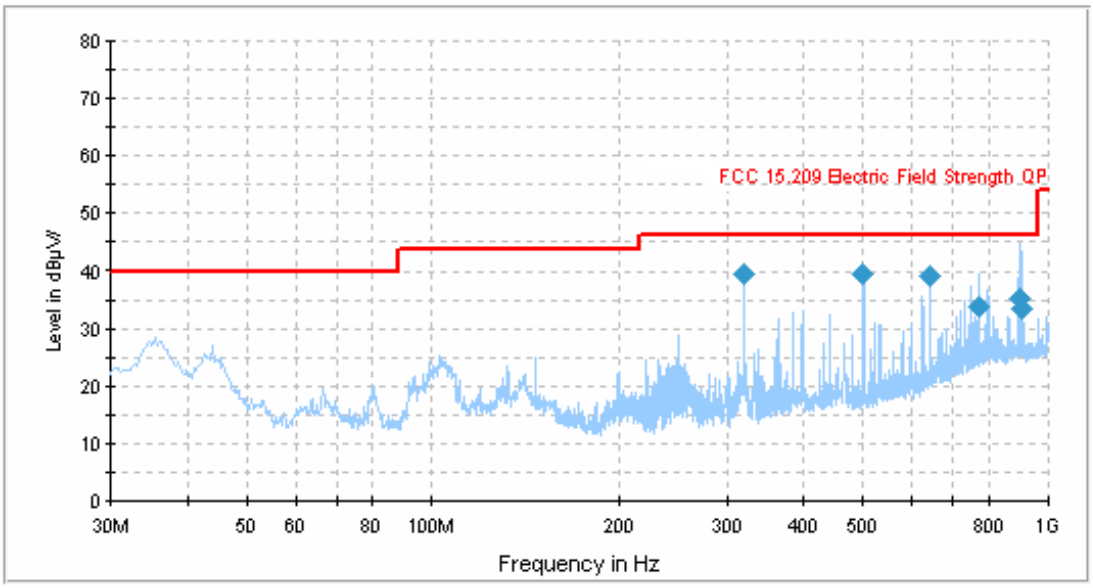
30-1000 MHz:

Test Mode: Transmitting (802.11b wost case)



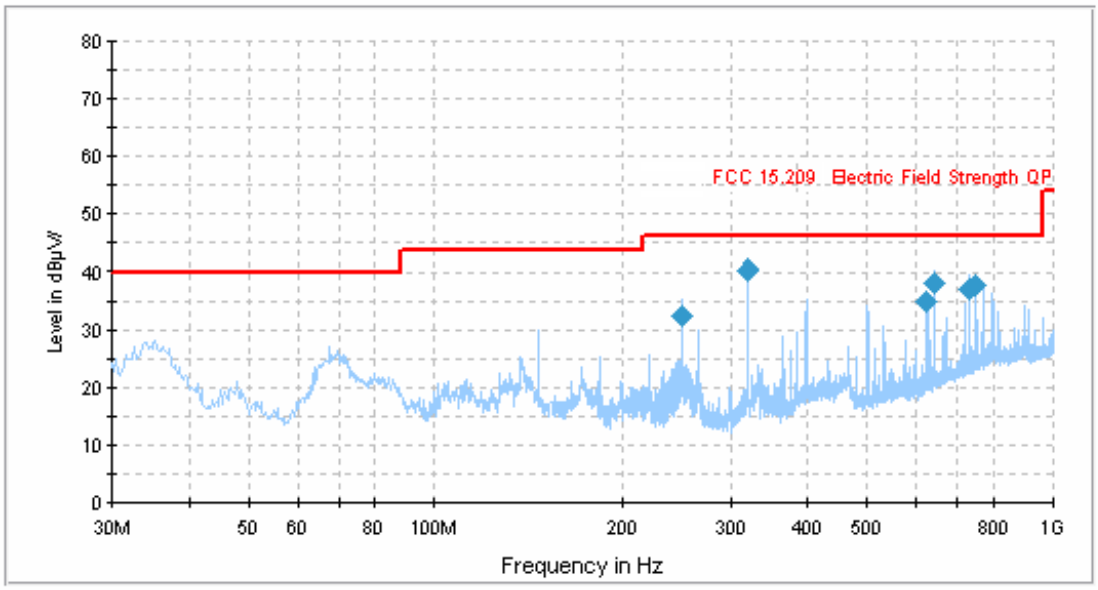
Frequency (MHz)	Corrected Amplitude (dBµV/m)	Antenna Height (cm)	Antenna Polarity (H/V)	Turntable Position (degree)	Correction Factor (dB)	Limit (dBµV/m)	Margin (dB)
320.005250	40.8	123.0	H	94.0	-14.1	46.0	5.2
639.996250	37.6	124.0	H	227.0	-6.8	46.0	8.4
750.013000	36.0	104.0	H	7.0	-2.9	46.0	10.0
500.010000	34.2	195.0	H	25.0	-10.3	46.0	11.8
250.003000	33.5	102.0	H	61.0	-15.6	46.0	12.5
897.089250	33.1	104.0	H	359.0	-0.3	46.0	12.9

Test Mode: Transmitting (802.11g wost case)



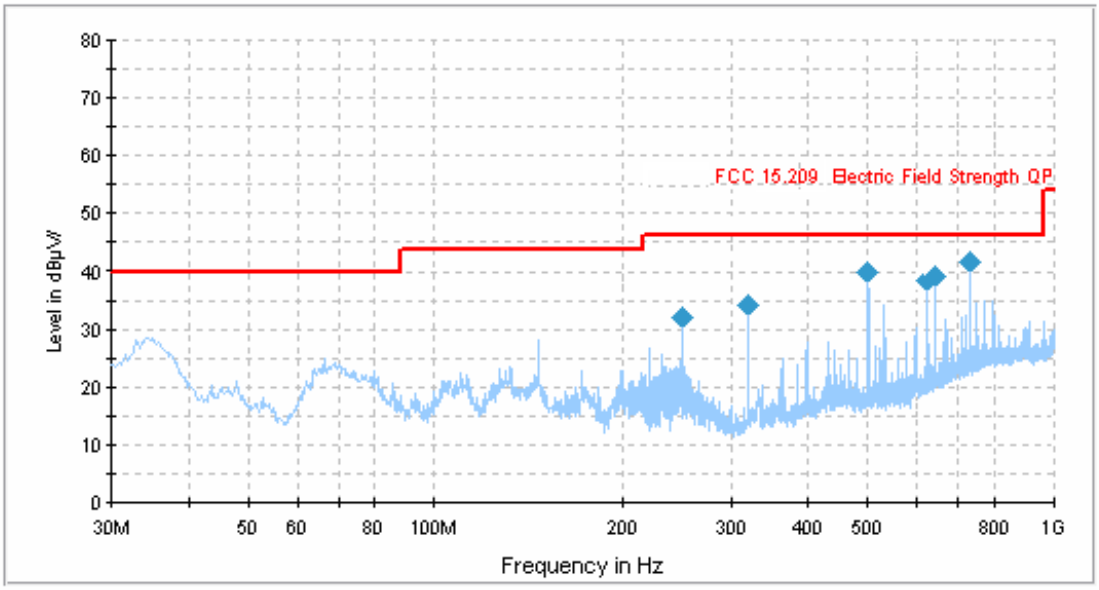
Frequency (MHz)	Corrected Amplitude (dBµV/m)	Antenna Height (cm)	Antenna Polarity (H/V)	Turntable Position (degree)	Correction Factor (dB)	Limit (dBµV/m)	Margin (dB)
320.025250	39.7	102.0	H	95.0	-14.1	46.0	6.3
500.008500	39.7	195.0	H	8.0	-10.3	46.0	6.3
639.991000	39.2	141.0	H	26.0	-6.8	46.0	6.8
897.212750	35.2	258.0	V	309.0	-0.3	46.0	10.8
767.999250	33.9	104.0	H	59.0	-2.3	46.0	12.1
907.355250	33.5	395.0	V	24.0	-0.6	46.0	12.5

Test Mode: Transmitting (802.11n20 wost case)



Frequency (MHz)	Corrected Amplitude (dBµV/m)	Antenna Height (cm)	Antenna Polarity (H/V)	Turntable Position (deg)	Correction Factor (dB)	Limit (dBµV/m)	Margin (dB)
319.995750	40.3	102.0	H	313.0	-14.1	46.0	5.7
640.018250	38.3	159.0	H	230.0	-6.8	46.0	7.7
750.004750	38.0	104.0	H	240.0	-2.9	46.0	8.0
729.000500	37.1	104.0	V	304.0	-3.6	46.0	8.9
624.089500	34.9	103.0	V	270.0	-7.4	46.0	11.1
250.014500	32.5	103.0	H	24.0	-15.6	46.0	13.5

Test Mode: Transmitting (802.11n40 wost case)



Frequency (MHz)	Corrected Amplitude (dBµV/m)	Antenna Height (cm)	Antenna Polarity (H/V)	Turntable Position (deg)	Correction Factor (dB)	Limit (dBµV/m)	Margin (dB)
729.127500	39.6	104.0	H	314.0	-3.6	46.0	6.4
499.965000	38.3	101.0	H	156.0	-10.3	46.0	7.7
640.018250	37.1	148.0	H	330.0	-6.8	46.0	8.9
624.125000	36.8	103.0	H	275.0	-7.4	46.0	9.2
320.030000	32.6	102.0	H	233.0	-14.1	46.0	13.4
250.014500	30.5	103.0	H	84.0	-15.6	46.0	15.5

Above 1 GHz:

802.11b Mode:

Indicated		Detector (PK/AV)	Table Angle Degree	Test Antenna		Correction Factor			FCC Part 15.247/15.209			
Frequency (MHz)	S.A. Reading (dBµV)			Height (m)	Polar (H/V)	Ant. Factor (dB/m)	Cable Loss (dB)	Pre-Amp. Gain (dB)	Cord. Amp. (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Comment
Low Channel (2412 MHz)												
4824.00	40.53	AV	320	1.1	H	36.30	4.30	27.51	53.62	54	0.38*	harmonic
4824.00	40.71	AV	210	1.0	V	35.00	4.30	27.51	52.50	54	1.50*	harmonic
2330.68	37.85	AV	145	1.0	H	30.90	3.03	27.54	44.24	54	9.76	spurious
1408.81	37.00	AV	133	1.1	H	28.30	2.53	26.83	41.00	54	13.00	spurious
4824.00	47.86	PK	320	1.1	H	36.30	4.30	27.51	60.95	74	13.05	harmonic
2335.81	33.48	AV	334	1.0	V	30.30	3.03	27.54	39.27	54	14.73	spurious
4824.00	46.95	PK	210	1.0	V	35.00	4.30	27.51	58.74	74	15.26	harmonic
1408.81	53.01	PK	133	1.1	H	28.30	2.53	26.83	57.01	74	16.99	spurious
2330.68	50.08	PK	145	1.0	H	30.90	3.03	27.54	56.47	74	17.53	spurious
2335.81	45.22	PK	334	1.0	V	30.30	3.03	27.54	51.01	74	22.99	spurious
Middle Channel (2437 MHz)												
4874.00	40.74	AV	340	1.1	H	36.30	4.3	27.51	53.83	54	0.17	harmonic
4874.00	41.12	AV	310	1.0	V	35.00	4.3	27.51	52.91	54	1.09	harmonic
1152.30	36.20	AV	89	1.0	V	26.83	2.04	24.80	40.27	54	13.73	spurious
1408.85	33.56	AV	156	1.0	H	28.30	2.53	26.83	37.56	54	16.44	spurious
4874.00	43.98	PK	340	1.1	H	36.30	4.3	27.51	57.07	74	16.93	harmonic
4874.00	43.37	PK	310	1.0	V	35.00	4.3	27.51	55.16	74	18.84	harmonic
1152.30	49.30	PK	89	1.0	V	26.83	2.04	24.80	53.37	74	20.63	spurious
1408.85	46.61	PK	156	1.0	H	28.30	2.53	26.83	50.61	74	23.39	spurious
HighChannel (2462 MHz)												
4924.00	39.46	AV	35	1.3	V	35.00	4.30	27.51	51.25	54	2.75*	harmonic
4924.00	36.54	AV	253	1.4	H	36.3	4.30	27.51	49.63	54	4.37	harmonic
2489.51	38.58	AV	130	1.0	H	30.9	3.03	27.54	44.97	54	9.03	spurious
1409.47	36.58	AV	253	1.1	H	28.30	2.53	26.83	40.58	54	13.42	spurious
2499.60	33.18	AV	145	1.0	V	30.30	3.03	27.54	38.97	54	15.03	spurious
2498.51	50.79	PK	130	1.0	H	30.9	3.03	27.54	57.18	74	16.82	spurious
1409.47	52.09	PK	253	1.1	H	28.30	2.53	26.83	56.09	74	17.91	spurious
4924.00	42.22	PK	35	1.3	V	35.00	4.30	27.51	54.01	74	19.99	harmonic
4924.00	40.18	PK	253	1.4	H	36.3	4.30	27.51	53.27	74	20.73	harmonic
2499.60	45.69	PK	145	1.0	V	30.30	3.03	27.54	51.48	74	22.52	spurious

** Within measurement uncertainty.*

802.11g Mode:

Indicated		Detector (PK/AV)	Table Angle Degree	Test Antenna		Correction Factor			FCC Part 15.247/15.209			
Frequency (MHz)	S.A. Reading (dBµV)			Height (m)	Polar (H/V)	Ant. Factor (dB/m)	Cable Loss (dB)	Pre-Amp. Gain (dB)	Cord. Amp. (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Comment
Low Channel (2412 MHz)												
4824.00	32.80	AV	160	1.0	V	35.00	4.30	27.51	44.59	54	9.41	harmonic
4824.00	29.04	AV	240	1.1	H	36.30	4.30	27.51	42.13	54	11.87	harmonic
1406.91	37.14	AV	123	1.1	H	28.30	2.53	26.83	41.14	54	12.86	spurious
2359.53	31.80	AV	180	1.0	H	30.90	3.03	27.54	38.19	54	15.81	spurious
4824.00	46.35	PK	160	1.0	V	35.00	4.30	27.51	58.14	74	15.86	harmonic
2389.83	32.06	AV	60	1.0	V	30.30	3.03	27.54	37.85	54	16.15	spurious
4824.00	43.85	PK	240	1.1	H	36.30	4.30	27.51	56.94	74	17.06	harmonic
1406.91	52.55	PK	123	1.1	H	28.30	2.53	26.83	56.55	74	17.45	spurious
2359.53	48.93	PK	180	1.0	H	30.90	3.03	27.54	55.32	74	18.68	spurious
2389.83	46.37	PK	60	1.0	V	30.30	3.03	27.54	52.16	74	21.84	spurious
Middle Channel (2437 MHz)												
4874.00	31.68	AV	256	1.0	V	35.00	4.30	27.51	43.47	54	10.53	harmonic
4874.00	28.45	AV	40	1.1	H	36.30	4.30	27.51	41.54	54	12.46	harmonic
1406.81	37.12	AV	125	1.0	H	28.30	2.18	26.83	41.12	54	12.88	spurious
4874.00	45.10	PK	256	1.0	V	35.00	4.30	27.51	56.89	74	17.11	harmonic
1406.81	52.56	PK	125	1.0	H	28.30	2.18	26.83	56.56	74	17.44	spurious
1594.78	35.12	AV	78	1.0	V	26.83	2.33	27.80	36.48	54	17.52	spurious
4874.00	42.08	PK	40	1.1	H	36.30	4.30	27.51	55.17	74	18.83	harmonic
1594.78	49.39	PK	78	1.0	V	26.83	2.33	27.80	50.75	74	23.25	spurious
HighChannel (2462 MHz)												
2514.84	38.24	AV	180	1.0	H	30.90	3.03	27.54	44.63	54	9.37	spurious
4924.00	29.17	AV	57	1.3	V	35.00	4.30	27.51	40.96	54	13.04	harmonic
4924.00	27.02	AV	243	1.4	H	36.30	4.30	27.51	40.11	54	13.89	harmonic
2514.84	53.71	PK	180	1.0	H	30.90	3.03	27.54	60.10	74	13.90	spurious
1409.61	36.01	AV	250	1.1	H	28.30	2.53	26.83	40.01	54	13.99	spurious
2514.42	32.80	AV	225	1.0	V	30.30	3.03	27.54	38.59	54	15.41	spurious
1409.61	51.75	PK	250	1.1	H	28.30	2.53	26.83	55.75	74	18.25	spurious
2514.42	49.66	PK	225	1.0	V	30.30	3.03	27.54	55.45	74	18.55	spurious
4924.00	42.65	PK	57	1.3	V	35.00	4.30	27.51	54.44	74	19.56	harmonic
4924.00	40.46	PK	243	1.4	H	36.30	4.30	27.51	53.55	74	20.45	harmonic

802.11n 20:

Indicated		Detector (PK/AV)	Table Angle Degree	Test Antenna		Correction Factor			FCC Part 15.247/15.209			
Frequency (MHz)	S.A. Reading (dBµV)			Height (m)	Polar (H/V)	Ant. Factor (dB/m)	Cable Loss (dB)	Pre-Amp. Gain (dB)	Cord. Amp. (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Comment
Low Channel (2412 MHz)												
2398.87	63.12	PK	123	1.1	H	30.90	3.03	27.54	69.51	74	4.49	spurious
2398.87	42.87	AV	123	1.1	H	30.90	3.03	27.54	49.26	54	4.74	spurious
2398.65	43.02	AV	145	1.2	V	30.30	3.03	27.54	48.81	54	5.19	spurious
2398.65	61.77	PK	145	1.2	V	30.30	3.03	27.54	67.56	74	6.44	spurious
2388.87	61.70	PK	332	1.0	V	30.30	3.03	27.54	67.49	74	6.51	spurious
2388.87	40.71	AV	332	1.0	V	30.30	3.03	27.54	46.50	54	7.50	spurious
2388.71	40.06	AV	180	1.0	H	30.90	3.03	27.54	46.45	54	7.55	spurious
2388.71	58.70	PK	180	1.0	H	30.90	3.03	27.54	65.09	74	8.91	spurious
4824.00	31.26	AV	160	1.0	V	35.00	4.30	27.51	43.05	54	10.95	harmonic
4824.00	29.73	AV	240	1.1	H	36.30	4.30	27.51	42.82	54	11.18	harmonic
4824.00	47.73	PK	160	1.0	V	35.00	4.30	27.51	59.52	74	14.48	harmonic
4824.00	45.35	PK	240	1.1	H	36.30	4.30	27.51	58.44	74	15.56	harmonic
Middle Channel (2437 MHz)												
4874.00	30.12	AV	240	1.1	H	36.30	4.30	27.51	43.21	54	10.79	harmonic
2485.33	38.56	AV	180	1.0	H	28.30	2.53	26.83	42.56	54	11.44	spurious
2485.33	58.21	PK	180	1.0	H	28.30	2.53	26.83	62.21	74	11.79	spurious
4874.00	45.84	PK	240	1.1	H	36.30	4.30	27.51	58.93	74	15.07	harmonic
4874.00	27.01	AV	56	1.0	V	35.00	4.30	27.51	38.80	54	15.20	harmonic
2487.17	32.45	AV	60	1.0	V	30.30	3.03	27.54	38.24	54	15.76	spurious
2369.13	31.26	AV	322	1.2	H	30.90	3.03	27.54	37.65	54	16.35	spurious
2369.13	50.76	PK	322	1.2	H	30.90	3.03	27.54	57.15	74	16.85	spurious
2487.17	51.25	PK	60	1.0	V	30.30	3.03	27.54	57.04	74	16.96	spurious
4874.00	42.28	PK	56	1.0	V	35.00	4.30	27.51	54.07	74	19.93	harmonic
HighChannel (2462 MHz)												
2485.33	44.15	AV	322	1.2	H	30.90	3.03	27.54	50.54	54	3.46*	spurious
2485.33	62.57	PK	322	1.2	H	30.90	3.03	27.54	68.96	74	5.04	spurious
2490.84	36.58	AV	60	1.0	V	30.30	3.03	27.54	42.37	54	11.63	spurious
2490.84	55.56	PK	60	1.0	V	30.30	3.03	27.54	61.35	74	12.65	spurious
4924.00	29.48	AV	57	1.3	V	35.00	4.30	27.51	41.27	54	12.73	harmonic
4924.00	26.34	AV	243	1.4	H	36.30	4.30	27.51	39.43	54	14.57	harmonic
1409.61	34.53	AV	250	1.1	H	28.30	2.53	26.83	38.53	54	15.47	spurious
4924.00	44.56	PK	57	1.3	V	35.00	4.30	27.51	56.35	74	17.65	harmonic
4924.00	41.26	PK	243	1.4	H	36.30	4.30	27.51	54.35	74	19.65	harmonic
1409.61	50.25	PK	250	1.1	H	28.30	2.53	26.83	54.25	74	19.75	spurious

** Within measurement uncertainty.*

802.11n 40:

Indicated		Detector (PK/AV)	Table Angle Degree	Test Antenna		Correction Factor			FCC Part 15.247/15.209			
Frequency (MHz)	S.A. Reading (dBµV)			Height (m)	Polar (H/V)	Ant. Factor (dB/m)	Cable Loss (dB)	Pre-Amp. Gain (dB)	Cord. Amp. (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Comment
Low Channel (2422 MHz)												
2485.84	64.11	PK	60	1.0	V	30.60	3.10	27.54	70.27	74	3.73*	spurious
2389.91	43.16	AV	120	1.0	H	30.90	3.03	27.54	49.55	54	4.45	spurious
2389.91	60.34	PK	120	1.0	H	30.90	3.03	27.54	66.73	74	7.27	spurious
2485.84	38.08	AV	60	1.0	V	30.60	3.10	27.54	44.24	54	9.76	spurious
2389.45	35.15	AV	112	1.5	V	30.30	3.03	27.54	40.94	54	13.06	spurious
4844.00	27.52	AV	308	1.0	V	35.00	4.30	27.51	39.31	54	14.69	harmonic
4844.00	25.46	AV	120	1.0	H	36.30	4.30	27.51	38.55	54	15.45	harmonic
2389.45	51.00	PK	112	1.5	V	30.30	3.03	27.54	56.79	74	17.21	spurious
4844.00	42.44	PK	308	1.0	V	35.00	4.30	27.51	54.23	74	19.77	harmonic
4844.00	40.91	PK	120	1.0	H	36.30	4.30	27.51	54.00	74	20.00	harmonic
Middle Channel (2437 MHz)												
4874.00	26.75	AV	307	1.0	V	35.00	4.30	27.51	38.54	54	15.46	harmonic
4874.00	25.01	AV	85	1.0	H	36.30	4.30	27.51	38.10	54	15.90	harmonic
1406.81	34.86	AV	120	1.0	H	26.70	2.53	26.83	37.26	54	16.74	spurious
1406.81	34.12	AV	60	1.0	V	25.80	2.53	26.83	35.62	54	18.38	spurious
4874.00	41.57	PK	307	1.0	V	35.00	4.30	27.51	53.36	74	20.64	harmonic
4874.00	40.14	PK	85	1.0	H	36.30	4.30	27.51	53.23	74	20.77	harmonic
1406.81	50.31	PK	120	1.0	H	26.70	2.53	26.83	52.71	74	21.29	spurious
1406.81	49.34	PK	60	1.0	V	25.80	2.53	26.83	50.84	74	23.16	spurious
HighChannel (2452 MHz)												
4904.00	37.45	AV	120	1.0	H	36.30	4.30	27.51	50.54	54	3.46*	harmonic
2483.50	62.70	PK	120	1.0	H	30.90	3.03	27.54	69.09	74	4.91	spurious
2485.58	61.10	PK	120	1.0	V	30.30	3.03	27.54	66.89	74	7.11	spurious
2483.50	36.85	AV	120	1.0	H	30.90	3.03	27.54	43.24	54	10.76	spurious
2485.58	35.06	AV	120	1.0	V	30.30	3.03	27.54	40.85	54	13.15	spurious
4904.00	25.46	AV	307	1.0	V	35.00	4.30	27.51	37.25	54	16.75	harmonic
4904.00	42.74	PK	120	1.0	H	36.30	4.30	27.51	55.83	74	18.17	harmonic
4904.00	40.14	PK	307	1.0	V	35.00	4.30	27.51	51.93	74	22.07	harmonic

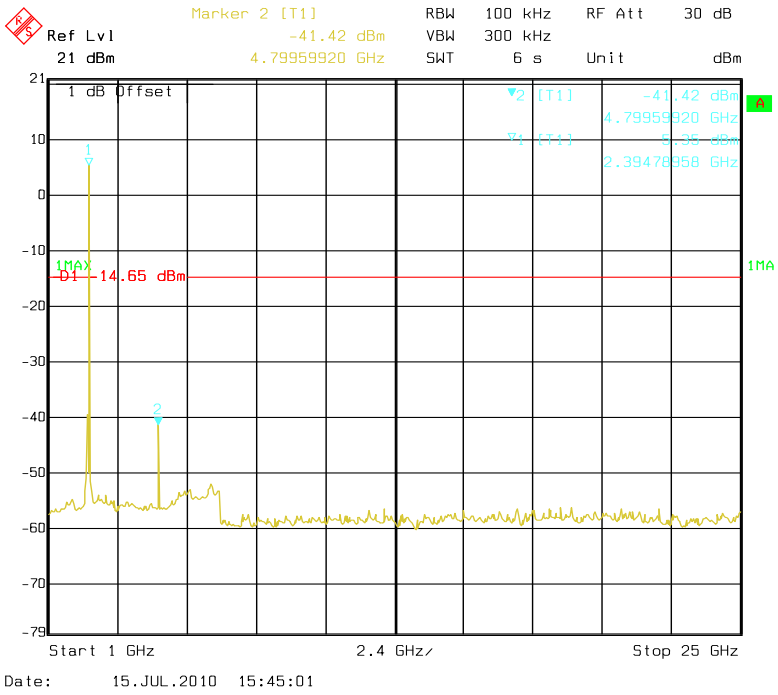
* Within measurement uncertainty.

Antenna Port Conducted Spurious Emissions

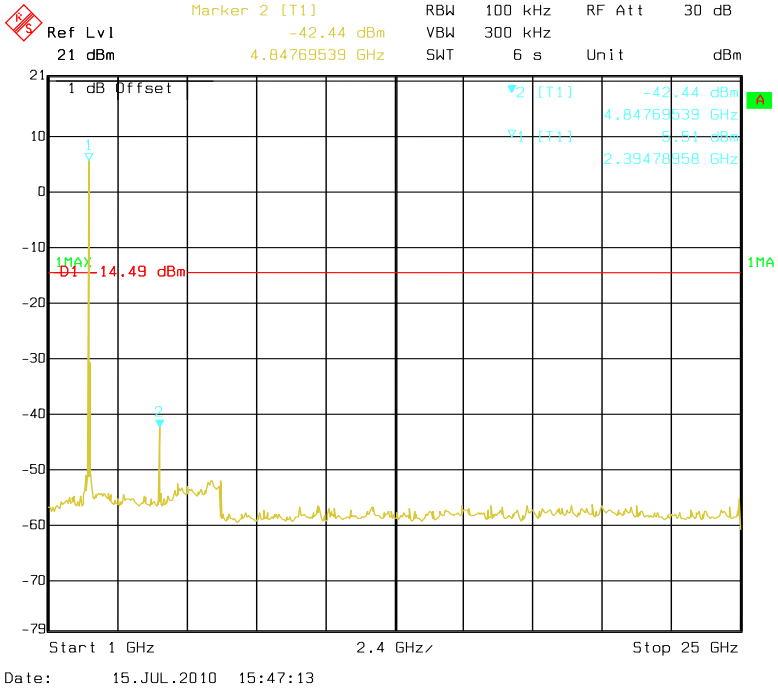
Channel Frequency (MHz)	Data Rate (Mbps)	Delta Value (dBc)	Limit (dBc)	Ref. Plot	Result
802.11b mode					
2412	1	46.77	20	B-L	Pass
2437	1	47.95	20	B-M	Pass
2462	1	48.79	20	B-H	Pass
802.11g mode					
2412	6	55.70	20	G-L	Pass
2437	6	55.96	20	G-M	Pass
2462	6	57.36	20	G-H	Pass
802.11n-20 mode					
2412	6.5	55.65	20	N20-L	Pass
2437	6.5	56.70	20	N20-M	Pass
2462	6.5	60.44	20	N20-H	Pass
802.11n-40 mode					
2422	6.5	54.26	20	N40-L	Pass
2437	6.5	53.86	20	N40-M	Pass
2452	6.5	55.90	20	N40-H	Pass

Please refer to the following plots.

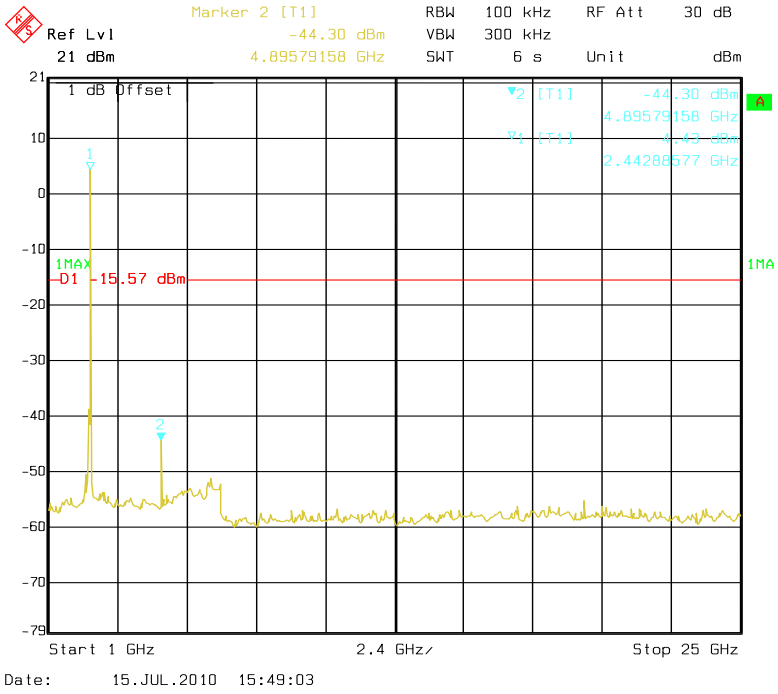
802.11b Low Channel



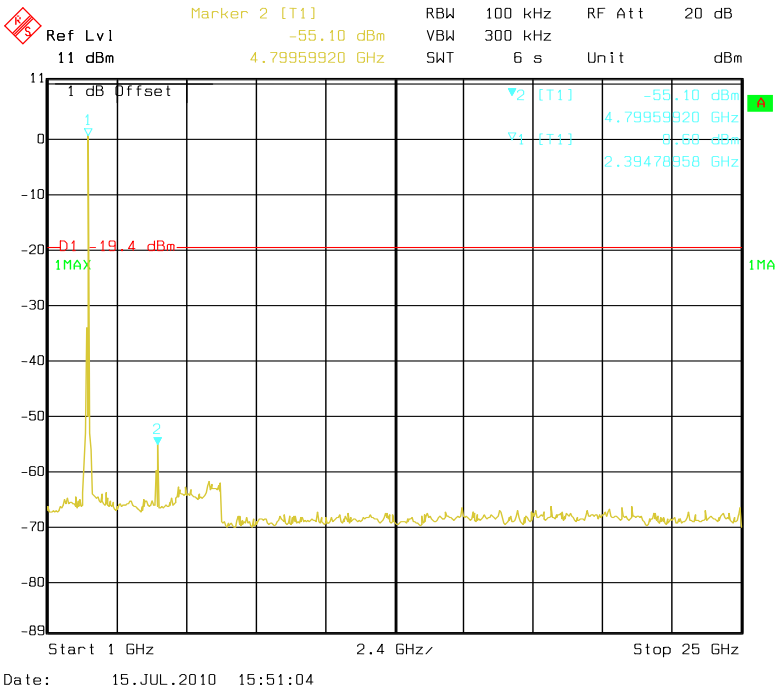
802.11b Middle Channel



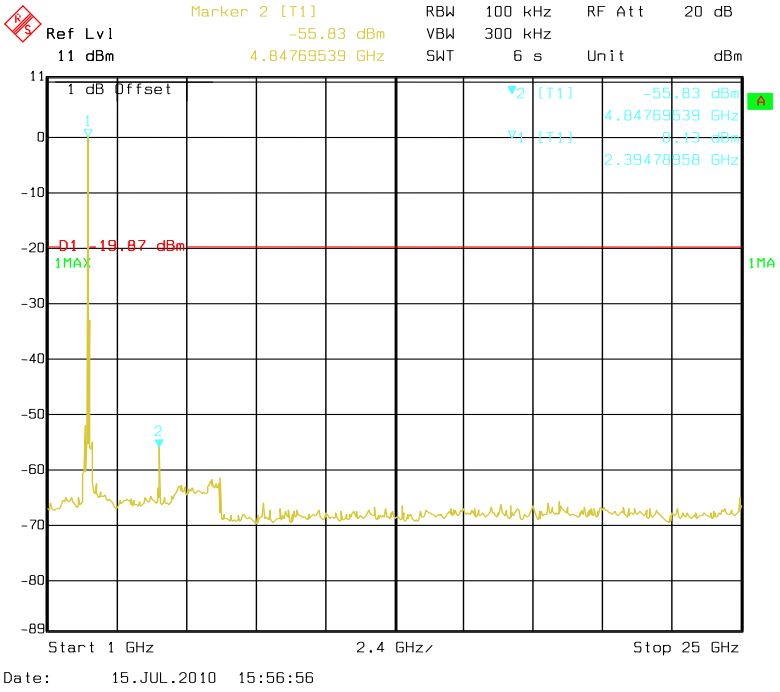
802.11b High Channel



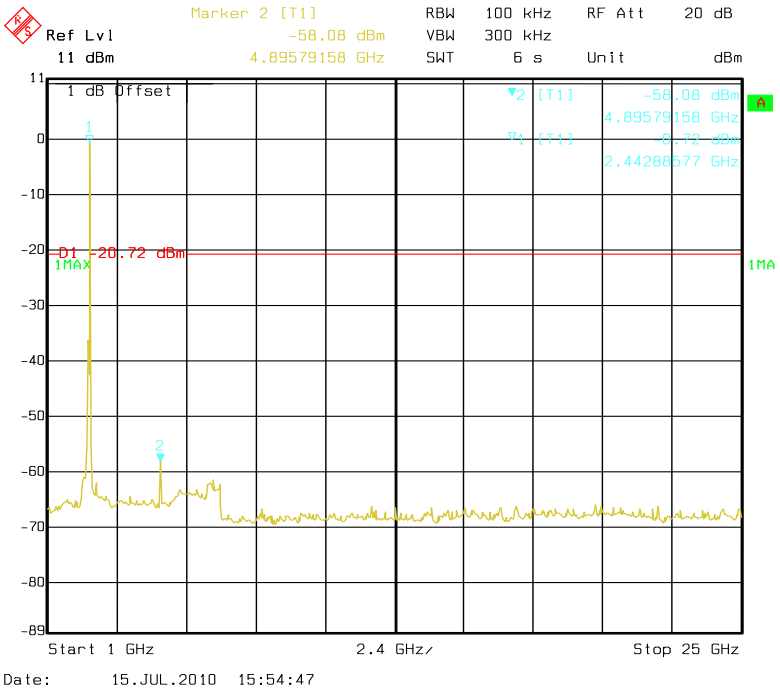
802.11g Low Channel



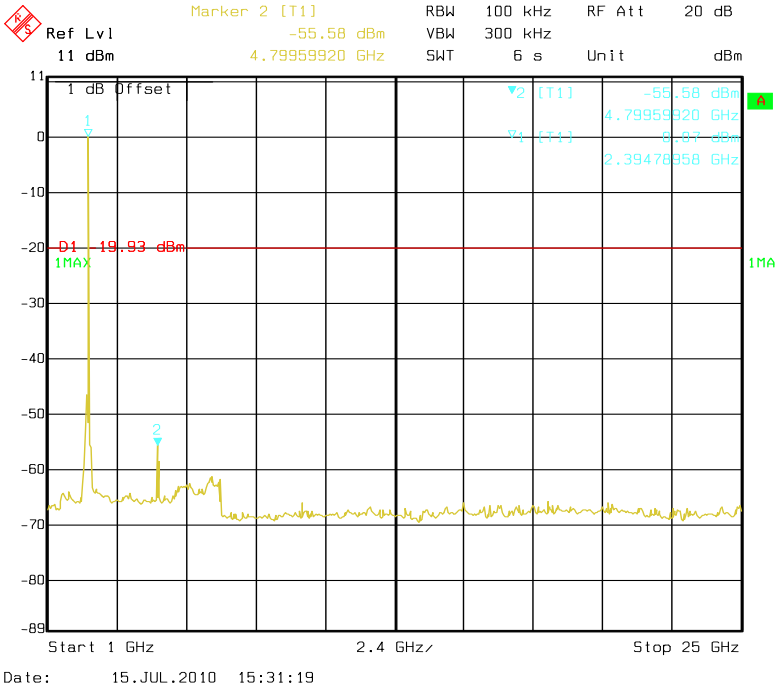
802.11g Middle Channel



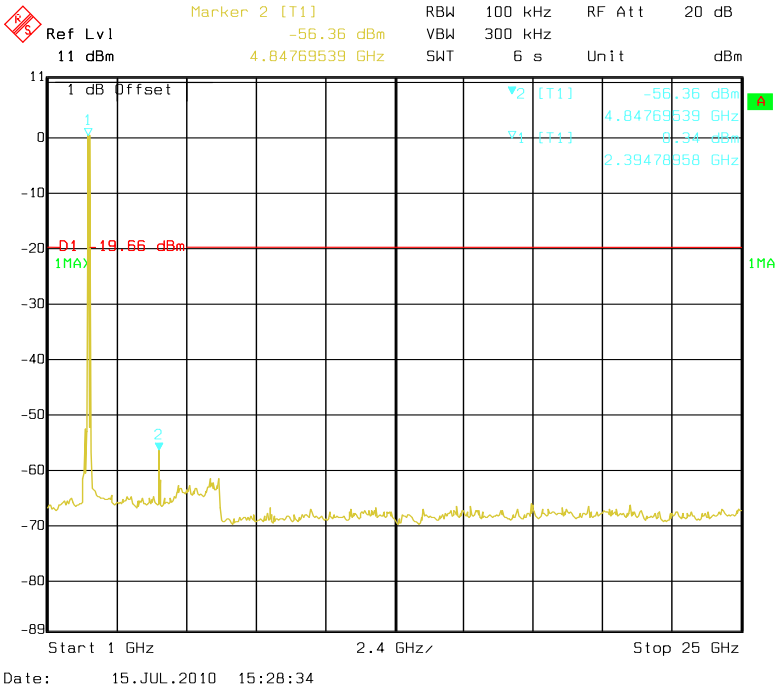
802.11g High Channel



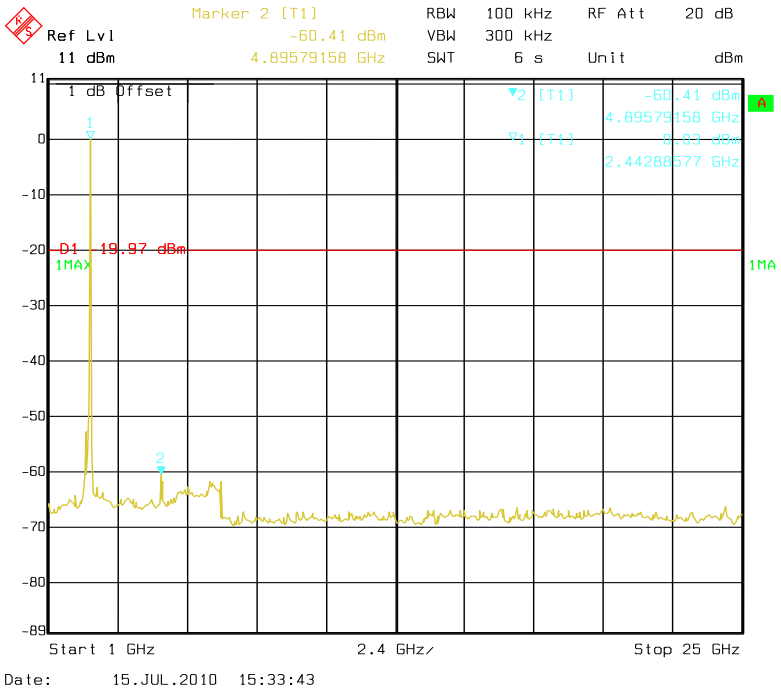
802.11n20 Low Channel



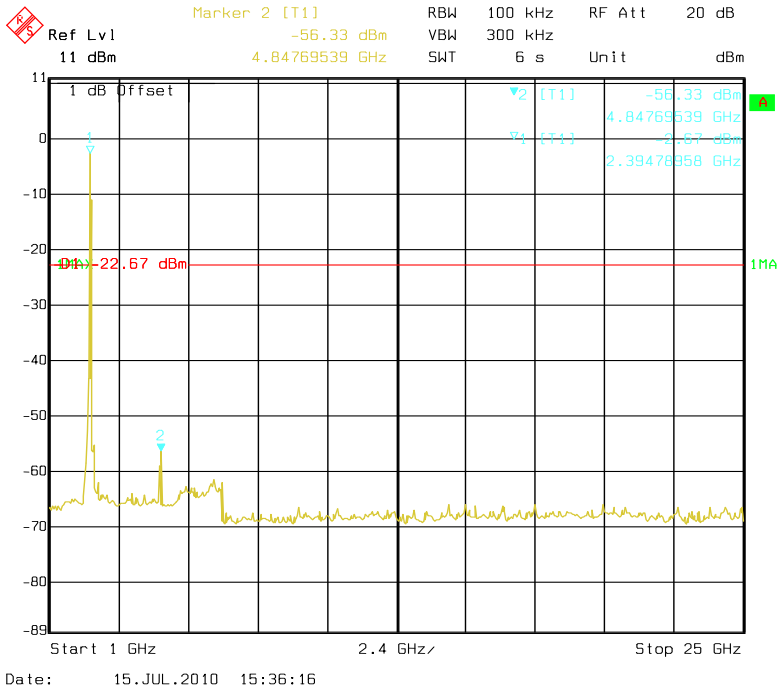
802.11n20 Middle Channel



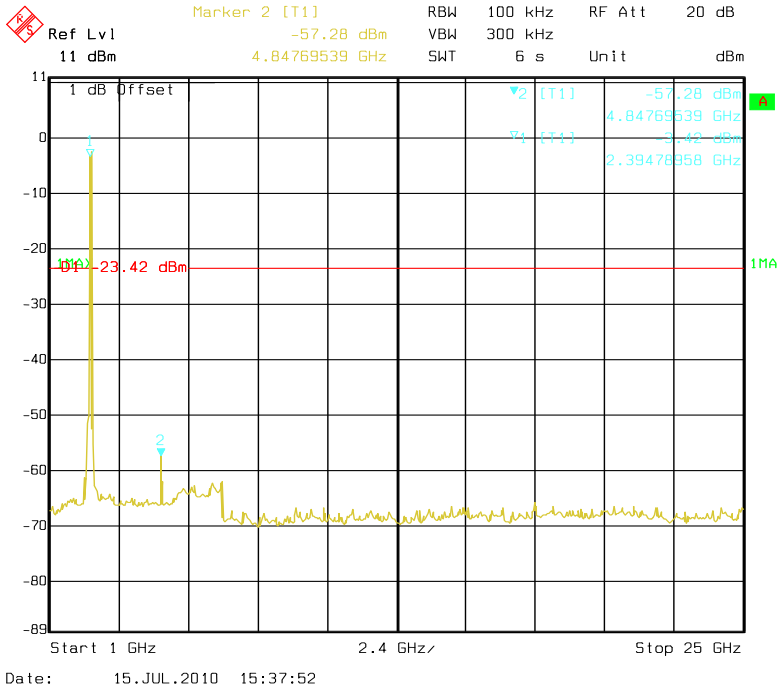
802.11n20 High Channel



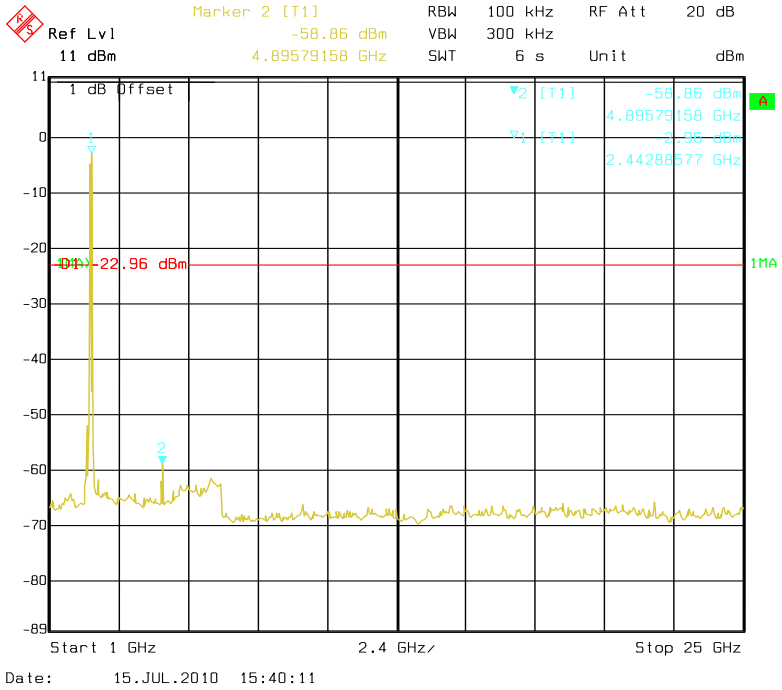
802.11n40 Low Channel



802.11n40 Middle Channel



802.11n40 High Channel



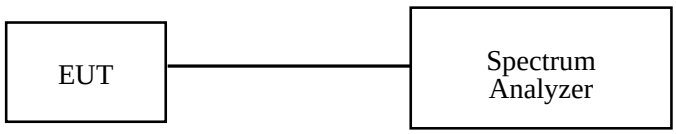
FCC §15.247(a) (2) – 6 dB BANDWIDTH TESTING

Applicable Standard

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 500 kHz.

Test Procedure

1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
2. Position the EUT without connection to measurement instrument. Turn on the EUT and connect it to measurement instrument. Then set it to any one convenient frequency within its operating range. Set a reference level on the measuring instrument equal to the highest peak value.
3. Measure the frequency difference of two frequencies that were attenuated 6 dB from the reference level. Record the frequency difference as the emission bandwidth.
4. Repeat above procedures until all frequencies measured were complete.



Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Rohde & Schwarz	EMI Test Receiver	ESCI	100035	2009-11-24	2010-11-24

*** Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Shenzhen) attests that all calibrations have been performed in accordance to NVLAP requirements, traceable to the NIST.

Test Data

Environmental Conditions

Temperature:	25 °C
Relative Humidity:	56%
ATM Pressure:	100.0kPa

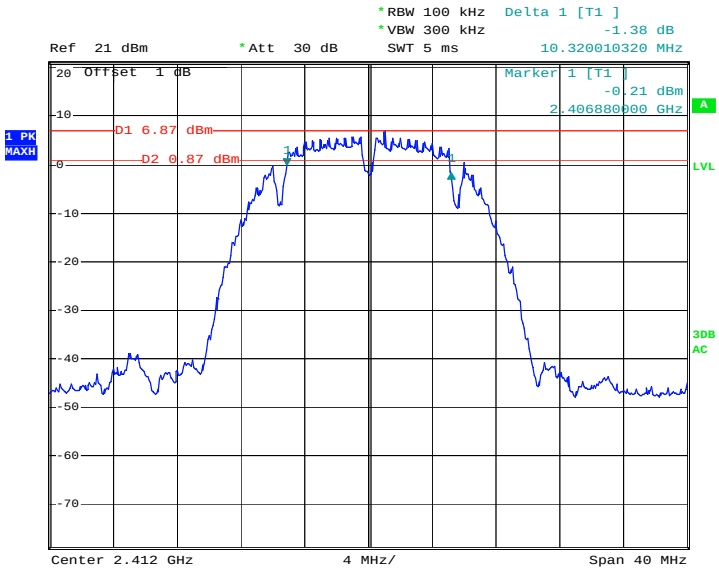
The testing was performed by Cookies Bu on 2010-07-06.

Test Result: Pass.

Please refer to the following tables and plots.

Channel	Frequency (MHz)	Data Rate (Mbps)	6 dB Bandwidth (MHz)	Part 15.247 Limit (kHz)
Low	2412	1	10.32	>500
Middle	2437	1	10.32	>500
High	2462	1	10.32	>500
802.11g mode				
Low	2412	6	16.48	>500
Middle	2437	6	16.48	>500
High	2462	6	16.48	>500
802.11n-20 mode				
Low	2412	6.5	16.96	>500
Middle	2437	6.5	16.72	>500
High	2462	6.5	17.12	>500
802.11n-40 mode				
Low	2422	6.5	35.52	>500
Middle	2437	6.5	35.64	>500
High	2452	6.5	35.52	>500

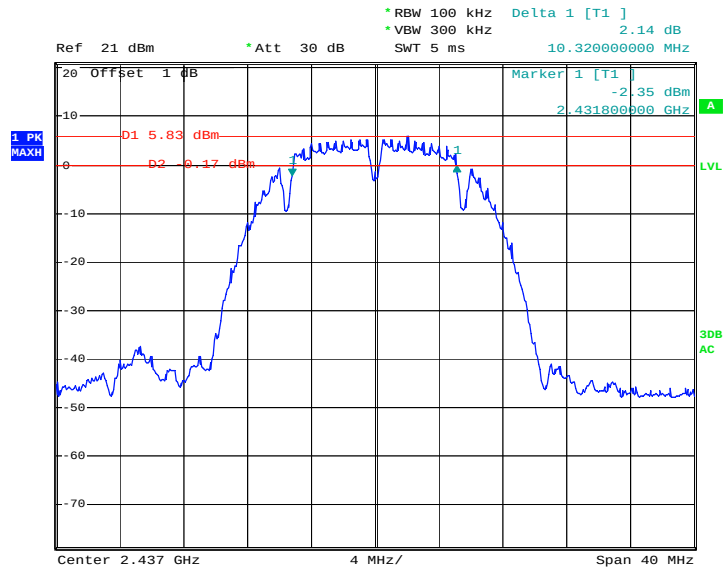
802.11b Low Channel



PHONE-LINE

Date: 6.JUL.2010 15:58:19

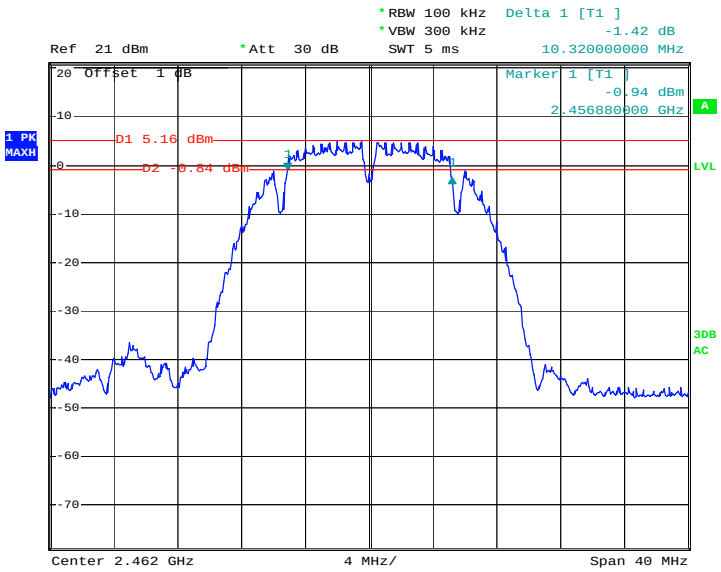
802.11b Middle Channel



PHONE-LINE

Date: 6.JUL.2010 16:03:43

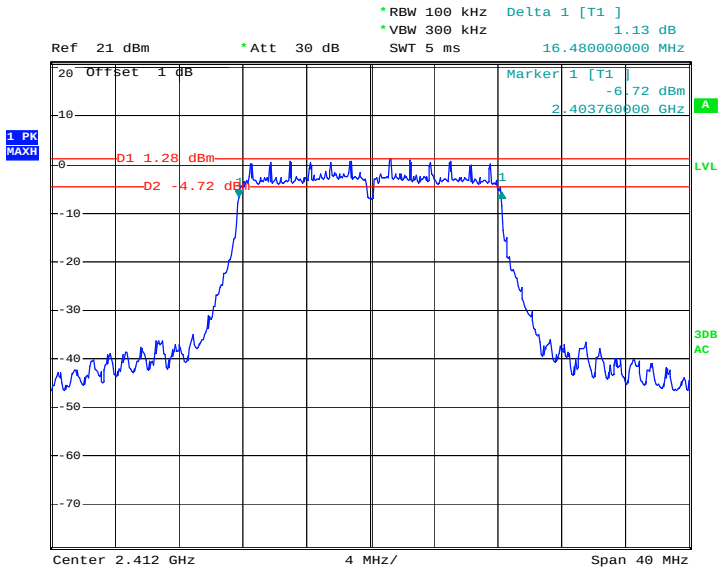
802.11b High Channel



PHONE-LINE

Date: 6.JUL.2010 15:55:53

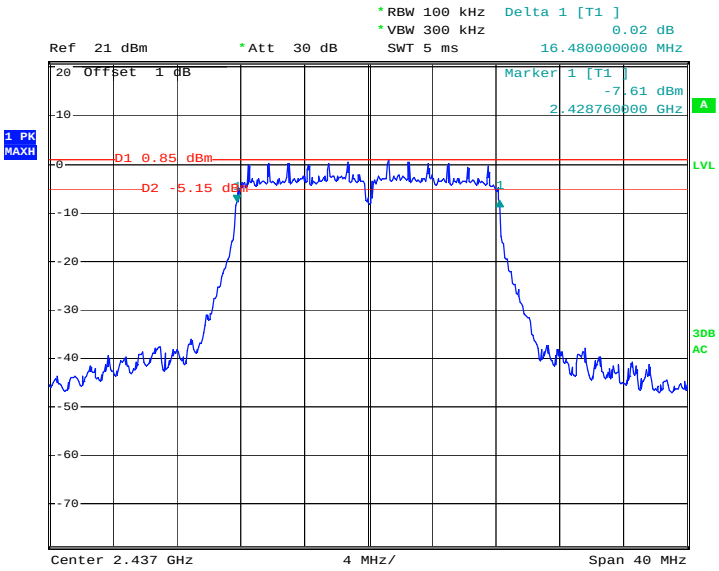
802.11g Low Channel



PHONE-LINE

Date: 6.JUL.2010 14:59:14

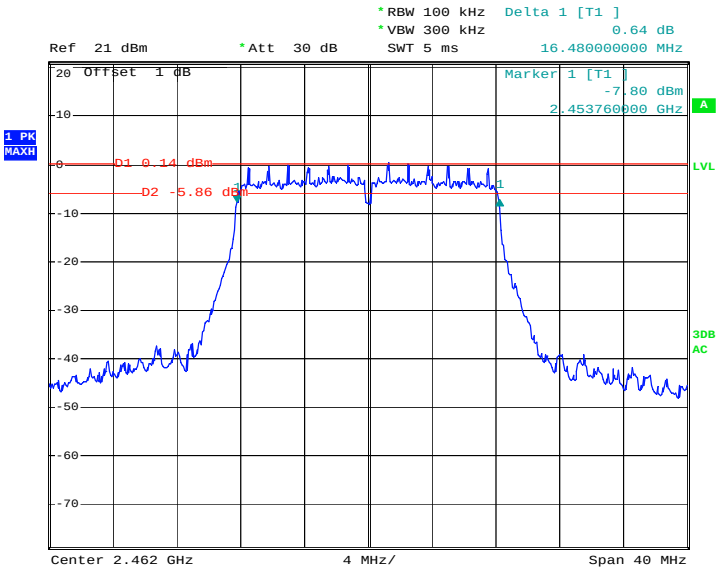
802.11g Middle Channel



PHONE-LINE

Date: 6.JUL.2010 14:58:07

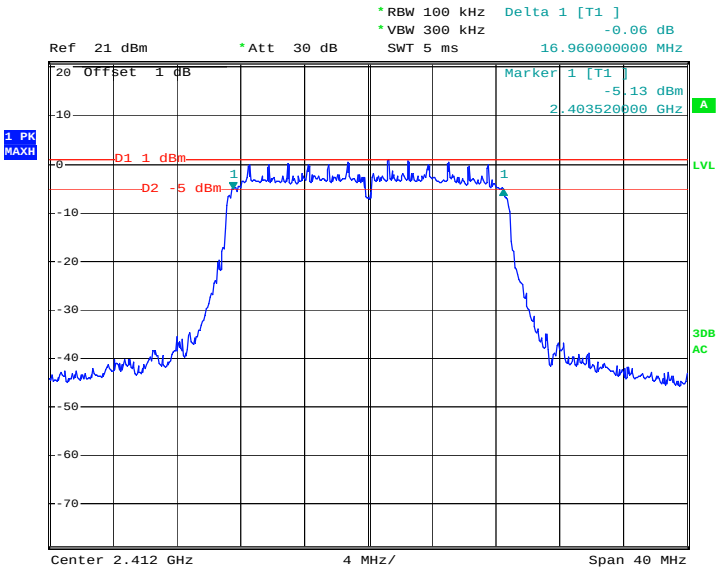
802.11g High Channel



PHONE-LINE

Date: 6.JUL.2010 15:02:16

802.11n20 Low Channel



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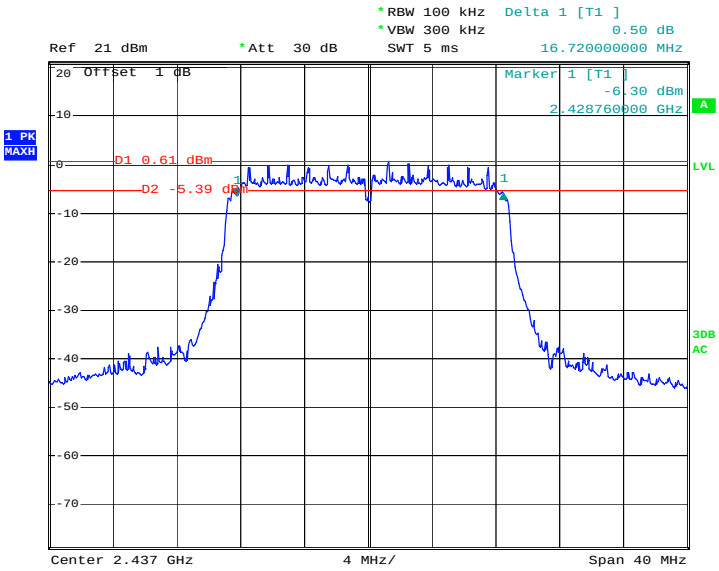
Date: 6.JUL.2010 16:06:53

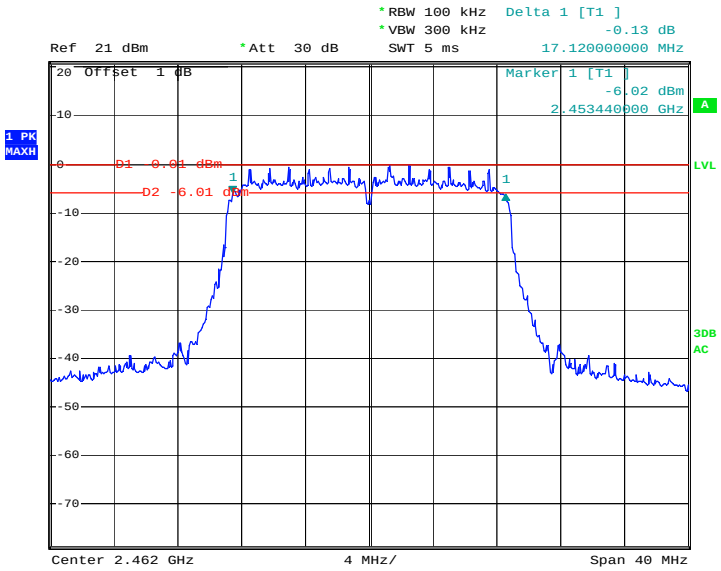
802.11n20 Middle Channel



PHONE-LINE

Date: 6.JUL.2010 16:10:07

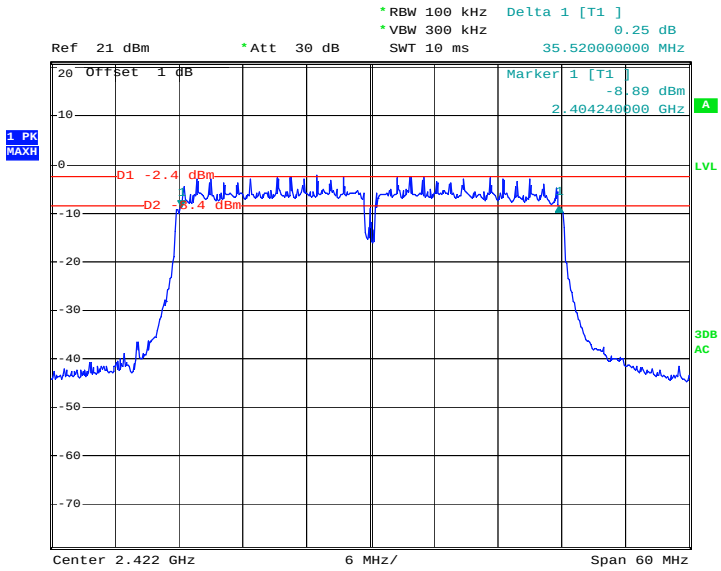
802.11n20 High Channel



PHONE-LINE

Date: 6.JUL.2010 16:17:03

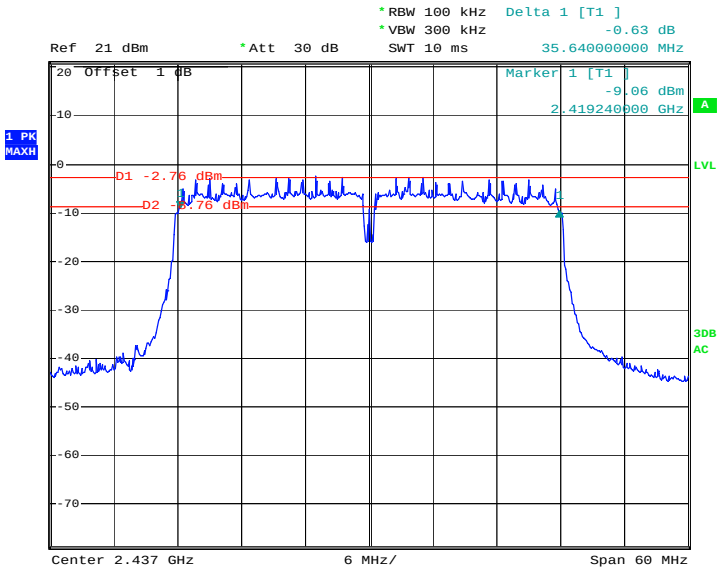
802.11n40 Low Channel



PHONE-LINE

Date: 6.JUL.2010 16:18:57

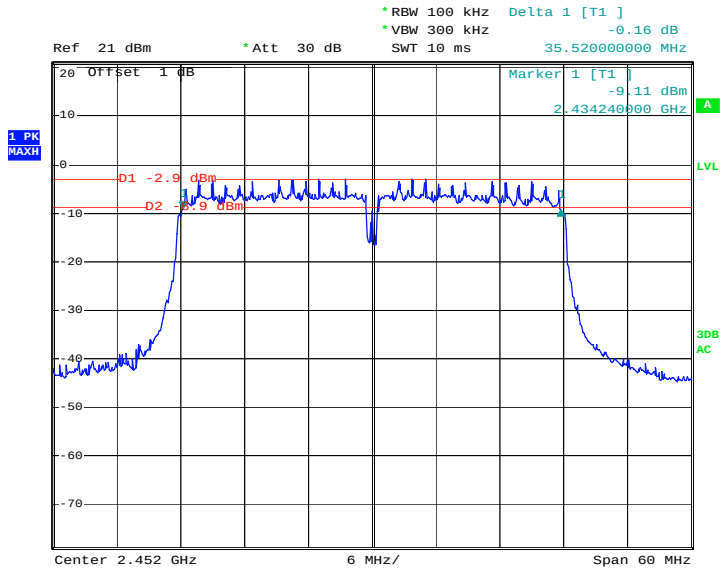
802.11n40 Middle Channel



PHONE-LINE

Date: 6.JUL.2010 16:21:13

802.11n40 High Channel



PHONE-LINE

Date: 6.JUL.2010 16:23:54

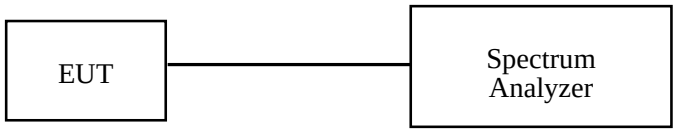
FCC §15.247(b)(3) - MAXIMUM PEAK OUTPUT POWER

Applicable Standard

According to FCC §15.247(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.

Test Procedure

1. Place the EUT on a bench 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 an EMI Test Receiver.
3. Add a correction factor to the display.



Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Rohde & Schwarz	EMI Test Receiver	ESCI	100035	2009-11-24	2010-11-24

*** Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Shenzhen) attests that all calibrations have been performed in accordance to NVLAP requirements, traceable to the NIST.

Test Data

Environmental Conditions

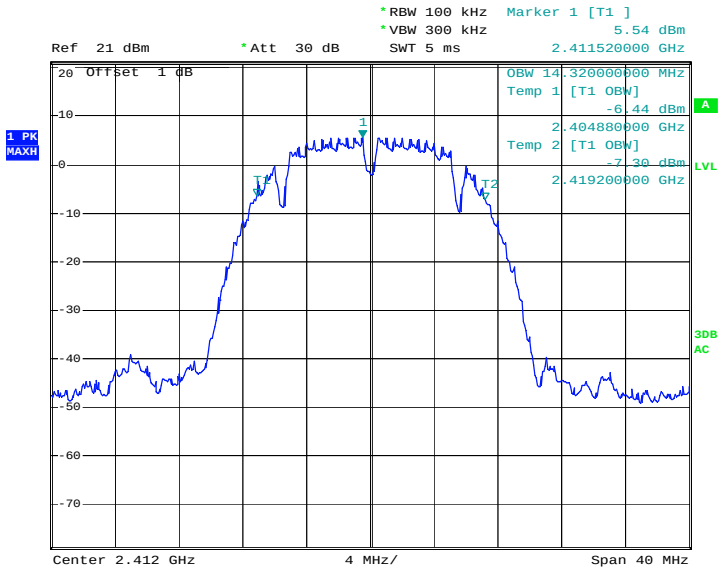
Temperature:	25 ° C
Relative Humidity:	56 %
ATM Pressure:	100.0 kPa

The testing was performed by Cookies Bu on 2010-07-05 and 2010-07-06.

Test Mode: Transmitting

Channel	Channel Frequency (MHz)	Data Rate (Mbps)	Conducted Output Power (dBm)	Limit (dBm)
802.11b mode				
Low	2412	1	17.04	30
Middle	2437	1	16.46	30
High	2462	1	16.48	30
802.11g mode				
Low	2412	6	13.69	30
Middle	2437	6	13.54	30
High	2462	6	13.37	30
802.11n20 mode				
Low	2412	6.5	13.66	30
Middle	2437	6.5	13.58	30
High	2462	6.5	13.48	30
802.11n40 mode				
Low	2422	6.5	13.71	30
Middle	2437	6.5	13.62	30
High	2452	6.5	13.55	30

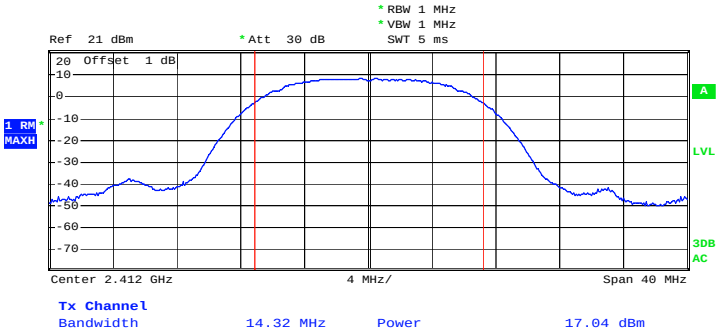
802.11b 99% Occupied Bandwith, Low Channel



PHONE-LINE

Date: 6.JUL.2010 14:24:47

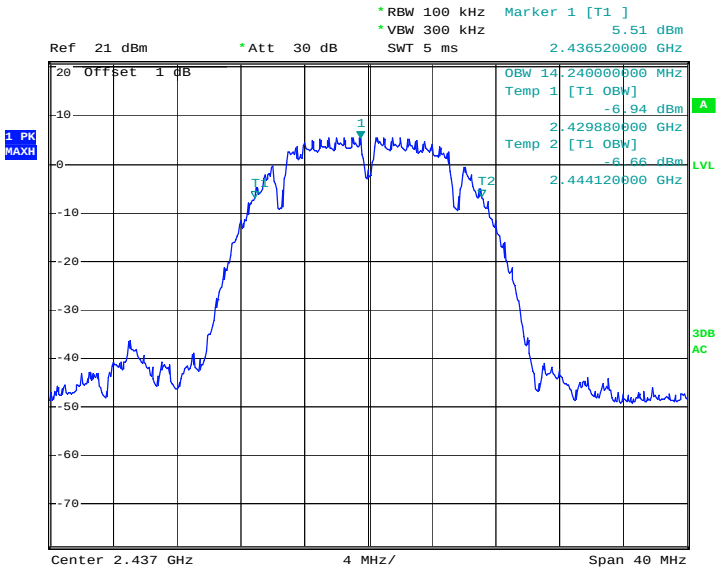
802.11b RF Output Power, Low Channel



PHONE-LINE

Date: 6.JUL.2010 14:25:44

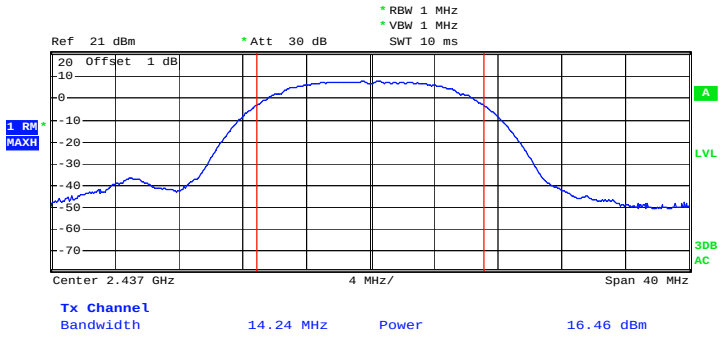
802.11b 99% Occupied Bandwith, Middle Channel



PHONE-LINE

Date: 6.JUL.2010 14:32:59

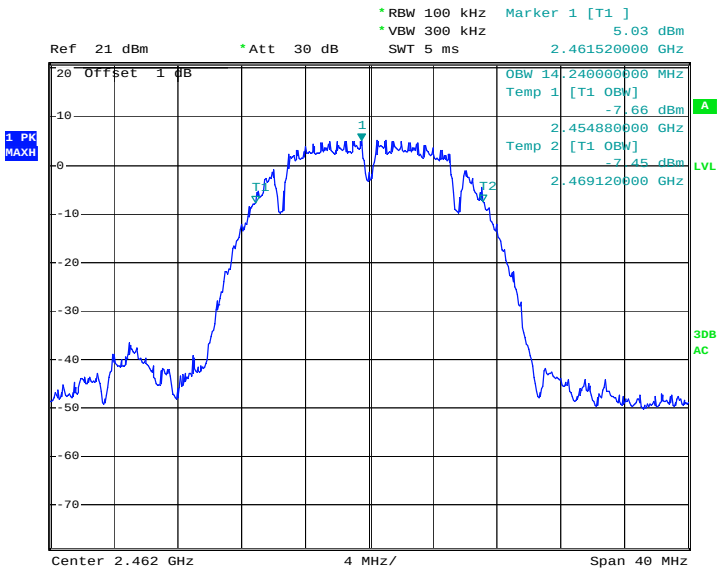
802.11b RF Output Power, Middle Channel



PHONE-LINE

Date: 6.JUL.2010 14:35:21

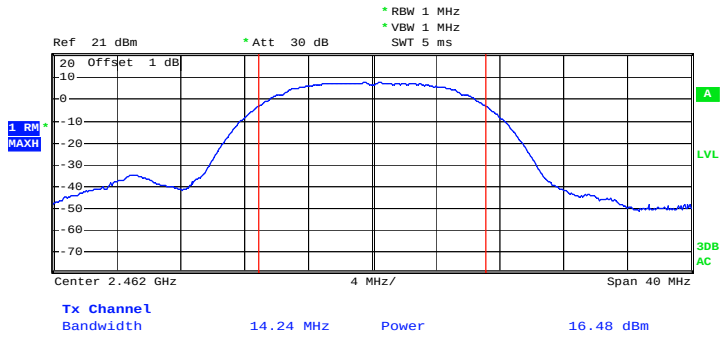
802.11b 99% Occupied Bandwith, High Channel



PHONE-LINE

Date: 6.JUL.2010 14:43:29

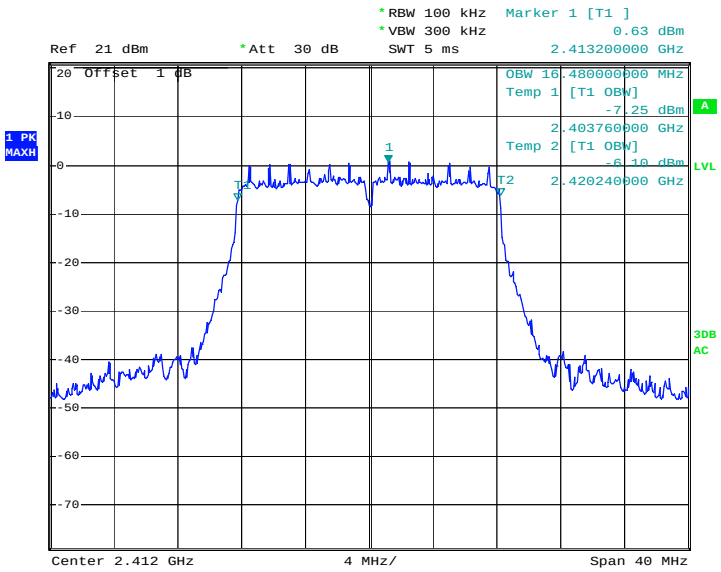
802.11b RF Output Power, High Channel



PHONE-LINE

Date: 6.JUL.2010 14:43:07

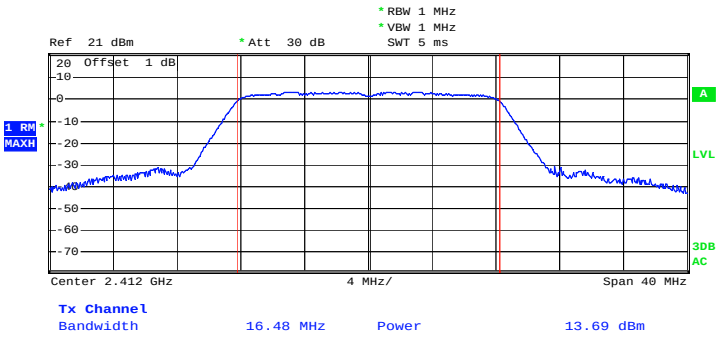
802.11g 99% Occupied Bandwith, Low Channel



PHONE-LINE

Date: 5.JUL.2010 15:41:21

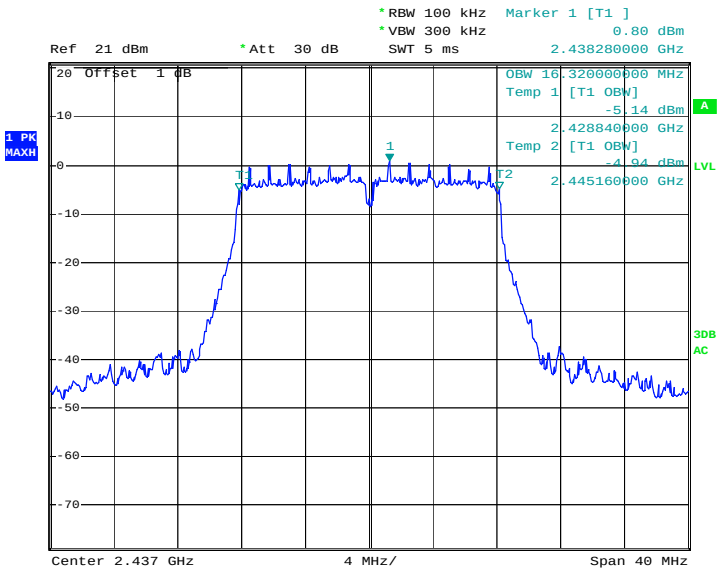
802.11g RF Output Power, Low Channel



PHONE-LINE

Date: 5.JUL.2010 15:42:36

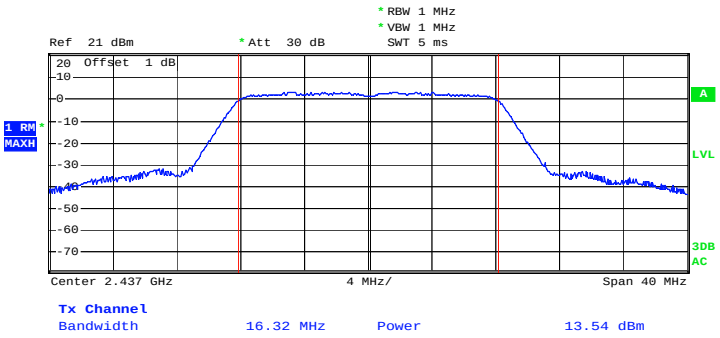
802.11g 99% Occupied Bandwith, Middle Channel



PHONE-LINE

Date: 5.JUL.2010 15:44:09

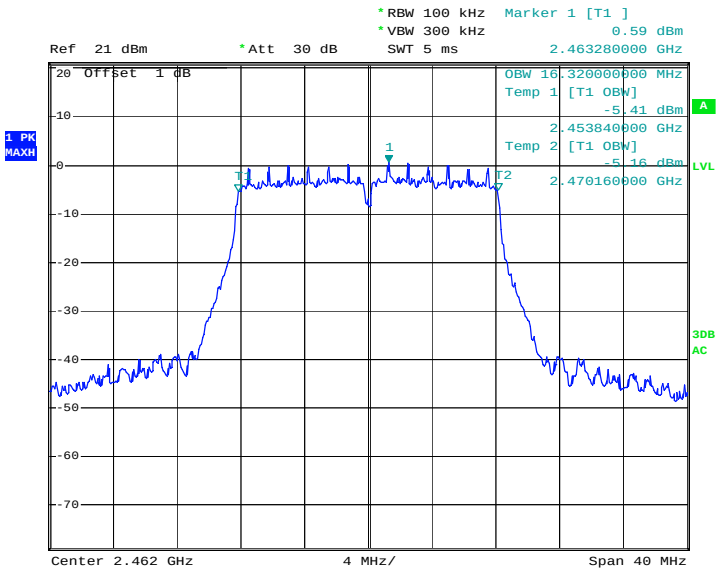
802.11g RF Output Power, Middle Channel



PHONE-LINE

Date: 5.JUL.2010 15:45:30

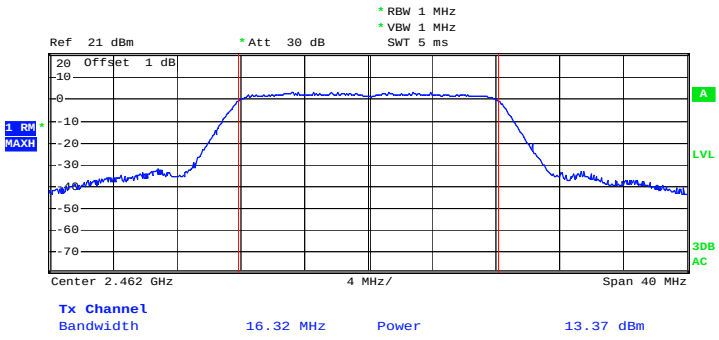
802.11g 99% Occupied Bandwith, High Channel



PHONE-LINE

Date: 5.JUL.2010 16:13:31

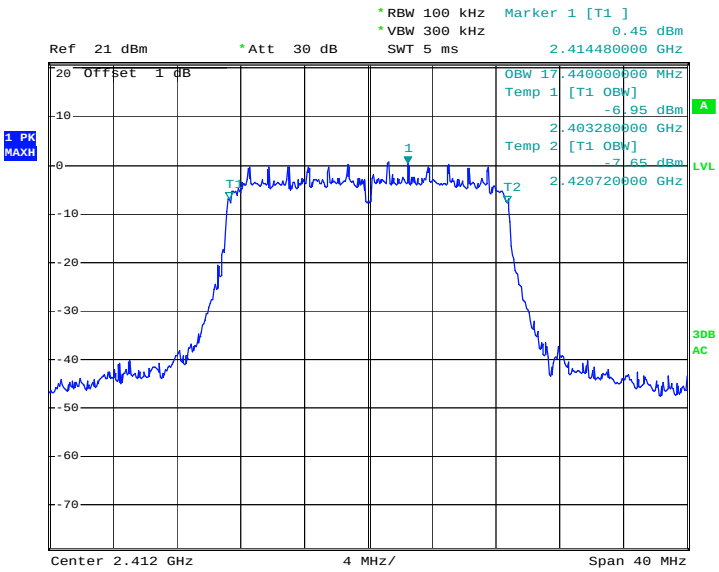
802.11g RF Output Power, High Channel



PHONE-LINE

Date: 5.JUL.2010 16:14:40

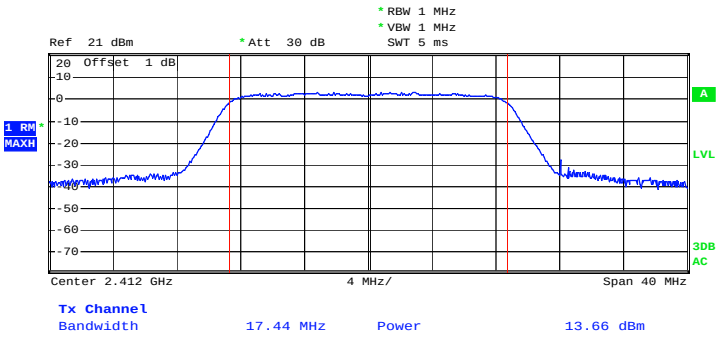
802.11n20 99% Occupied Bandwith, Low Channel



PHONE-LINE

Date: 5.JUL.2010 15:51:32

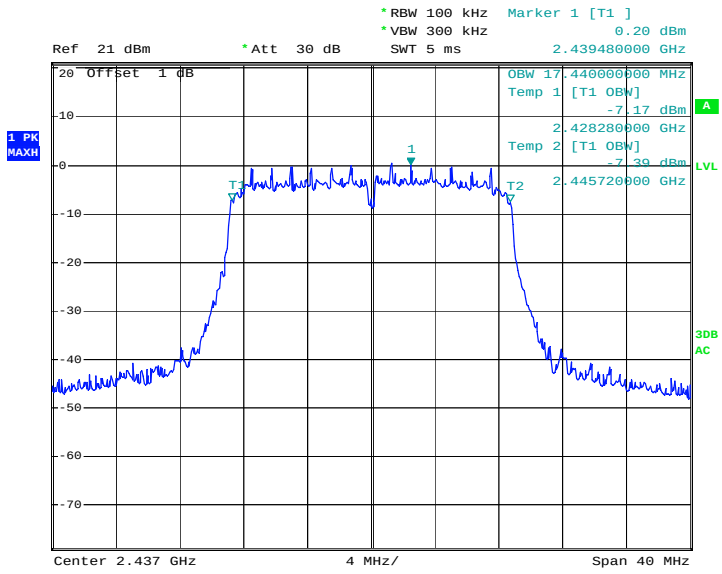
802.11n20 RF Output Power, Low Channel



PHONE-LINE

Date: 5.JUL.2010 15:52:25

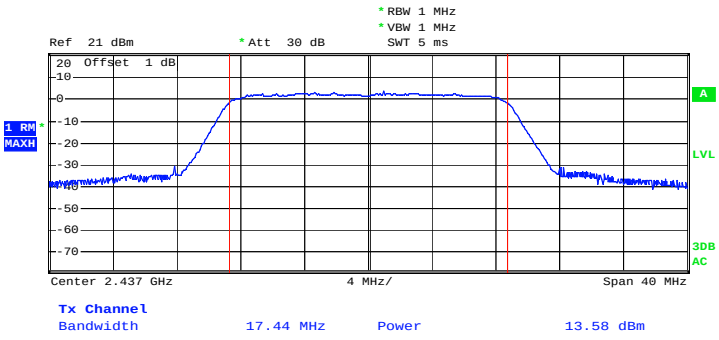
802.11n20 99% Occupied Bandwith, Middle Channel



PHONE-LINE

Date: 5.JUL.2010 15:53:47

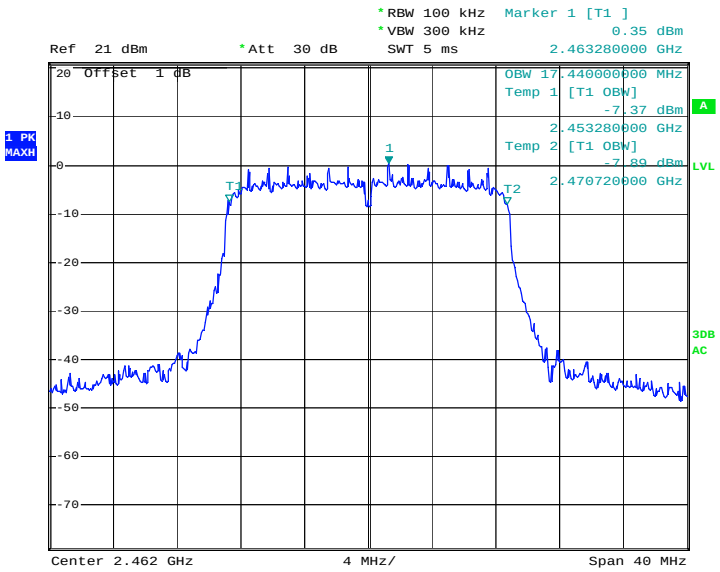
802.11n20 RF Output Power, Middle Channel



PHONE-LINE

Date: 5.JUL.2010 15:54:33

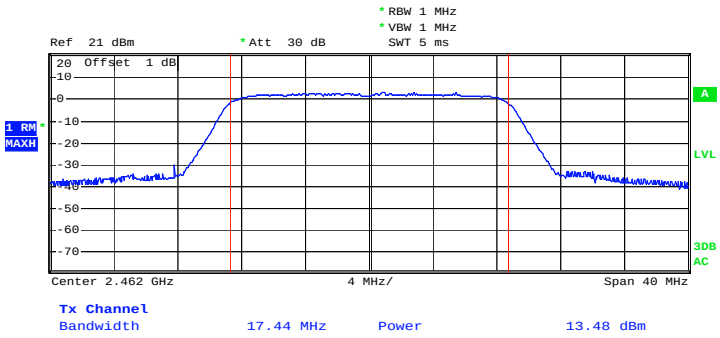
802.11n20 99% Occupied Bandwith, High Channel



PHONE-LINE

Date: 5.JUL.2010 16:16:27

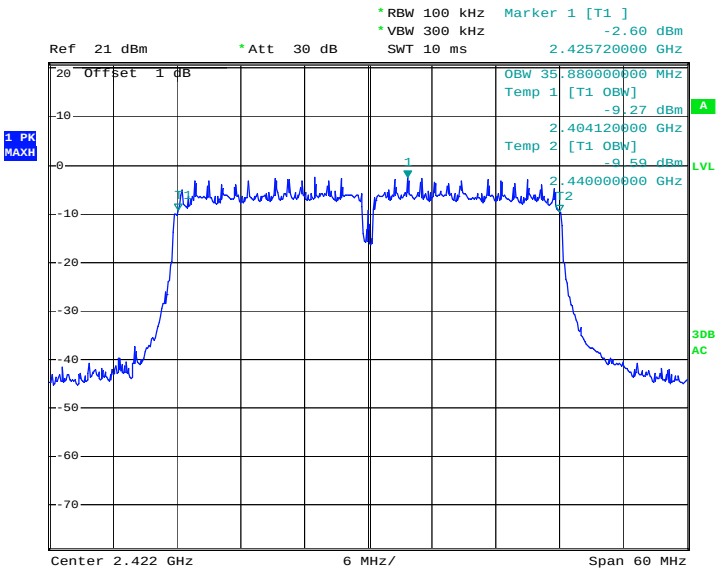
802.11n20 RF Output Power, High Channel



PHONE-LINE

Date: 5.JUL.2010 16:17:35

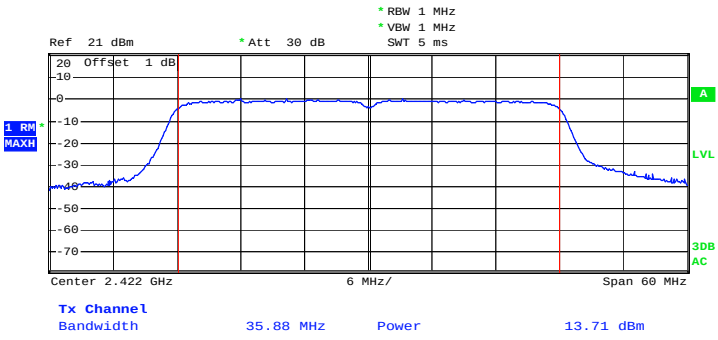
802.11n40 99% Occupied Bandwith, Low Channel



PHONE-LINE

Date: 5.JUL.2010 16:00:24

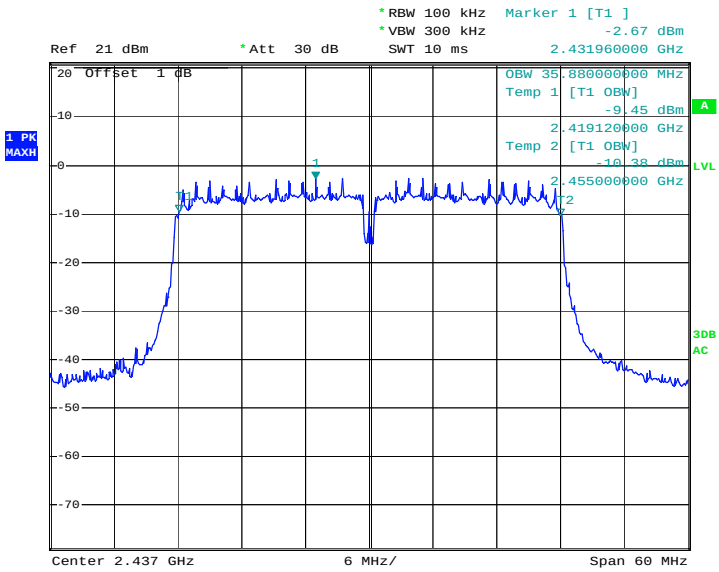
802.11n40 RF Output Power, Low Channel



PHONE-LINE

Date: 5.JUL.2010 16:01:26

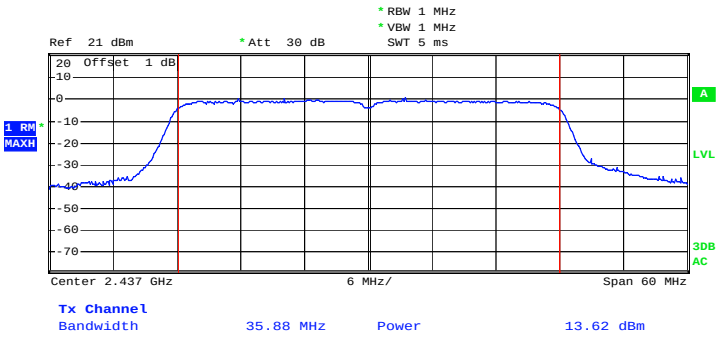
802.11n40 99% Occupied Bandwith, Middle Channel



PHONE-LINE

Date: 5.JUL.2010 16:02:20

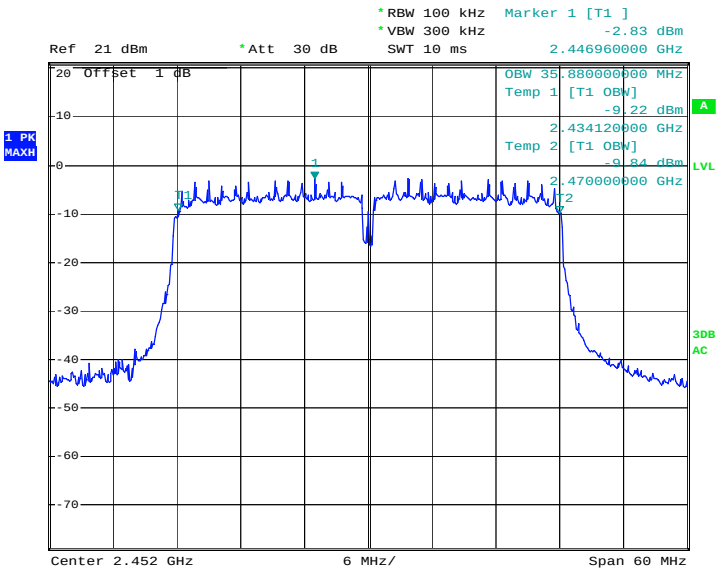
802.11n40 RF Output Power, Middle Channel



PHONE-LINE

Date: 5.JUL.2010 16:03:29

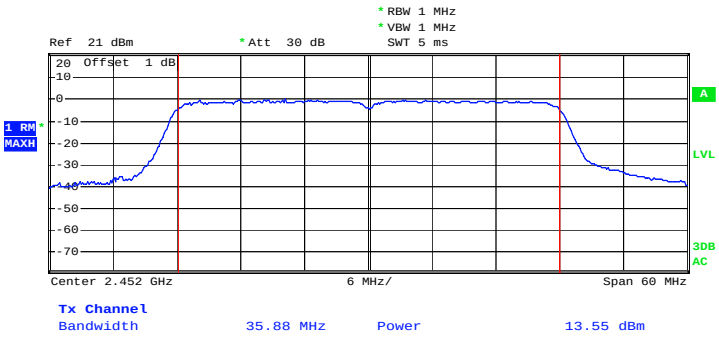
802.11n40 99% Occupied Bandwith, High Channel



PHONE-LINE

Date: 5.JUL.2010 16:06:38

802.11n40 RF Output Power, High Channel



PHONE-LINE

Date: 5.JUL.2010 16:07:51

FCC §15.247(d) – 100 kHz BANDWIDTH OF FREQUENCY BAND EDGE

Applicable Standard

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. 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) (see §15.205(c)).

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Rohde & Schwarz	EMI Test Receiver	ESCI	100035	2009-11-24	2010-11-24

*** Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Shenzhen) attests that all calibrations have been performed in accordance to NVLAP requirements, traceable to the NIST.

Test Procedure

1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
2. Position the EUT without connection to measurement instrument. Turn on the EUT and connect its antenna terminal to measurement instrument via a low loss cable. Then set it to any one measured frequency within its operating range, and make sure the instrument is operated in its linear range.
3. Set RBW to 1 MHz and VBW of spectrum analyzer to 1 MHz with a convenient frequency span including 100 kHz bandwidth from band edge.
4. Measure the highest amplitude appearing on spectral display and set it as a reference level. Plot the graph with marking the highest point and edge frequency.
5. Repeat above procedures until all measured frequencies were complete.

Test Data

Environmental Conditions

Temperature:	25 ° C
Relative Humidity:	56 %
ATM Pressure:	100.0 kPa

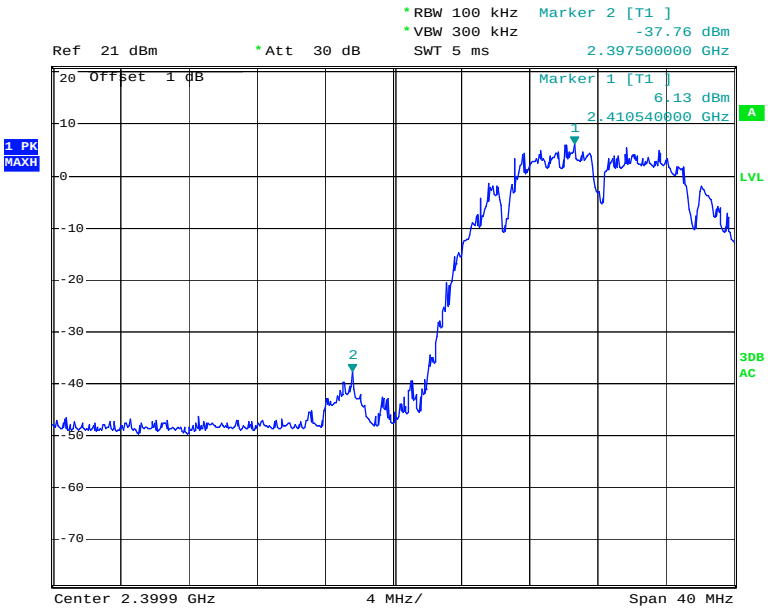
The testing was performed by Cookies Bu on 2010-07-14.

Test Result: *Compliant.*

Frequency (MHz)	Delta Value (dBc)	Limit (dBc)	Result
802.11b mode			
2397.50	43.89	20	Pass
2490.80	52.54	20	Pass
802.11g mode			
2398.78	36.41	20	Pass
2484.32	46.21	20	Pass
802.11n20 mode			
2398.78	39.90	20	Pass
2484.68	46.10	20	Pass
802.11n40 mode			
2398.94	36.85	20	Pass
2487.32	41.15	20	Pass

Please refer to following plots.

802.11b: Band Edge, Left Side

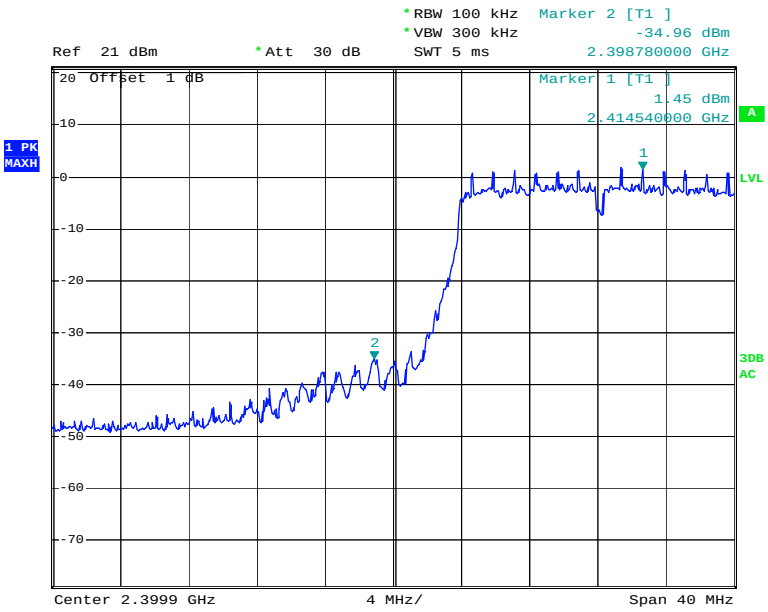


Date: 14.JUL.2010 17:29:35

802.11b: Band Edge, Right Side

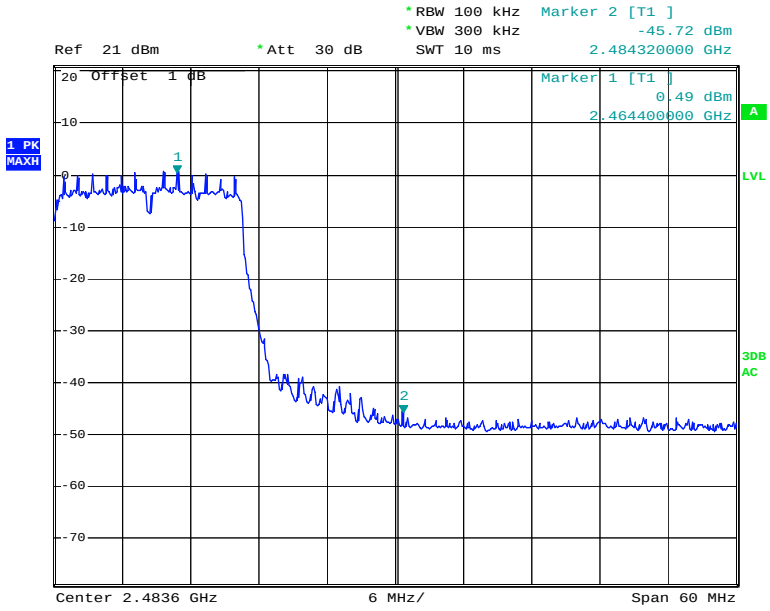
Date: 14.JUL.2010 17:31:11

802.11g: Band Edge, Left Side



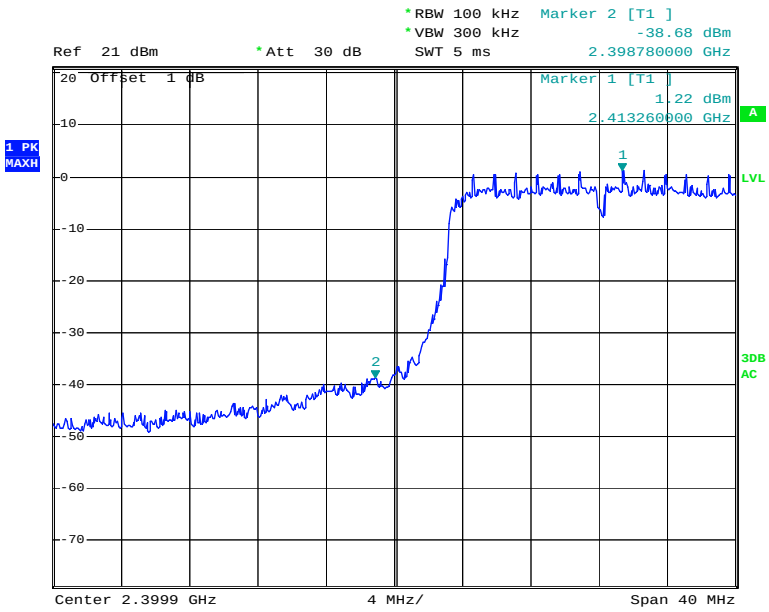
Date: 14.JUL.2010 17:33:20

802.11g: Band Edge, Right Side



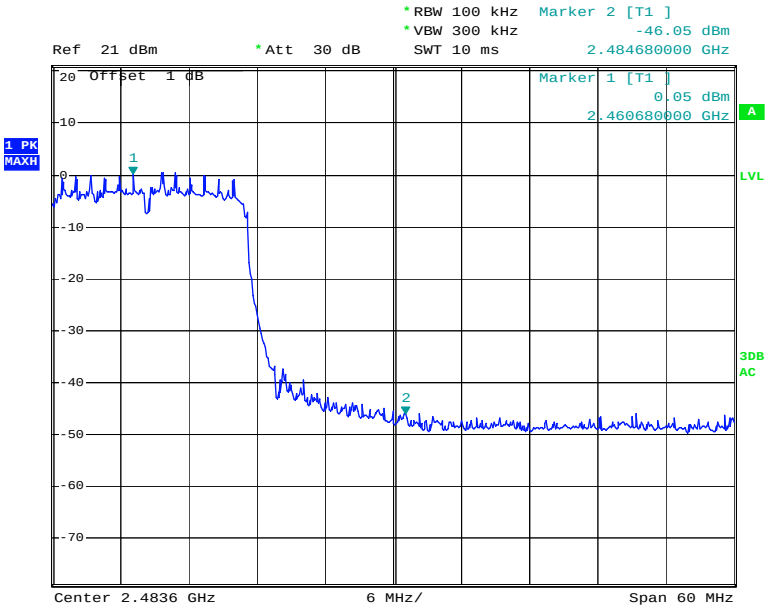
Date: 14.JUL.2010 17:32:28

802.11n20: Band Edge, Left Side



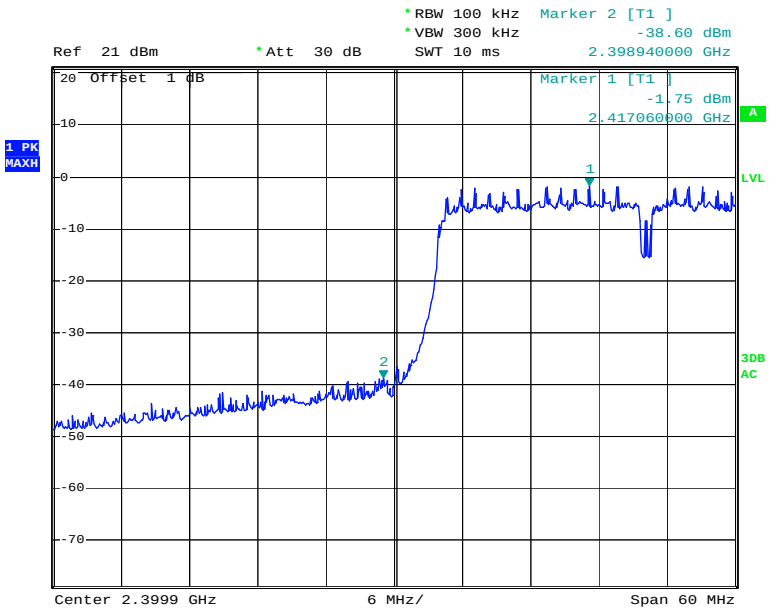
Date: 14.JUL.2010 17:34:12

802.11n20: Band Edge, Right Side



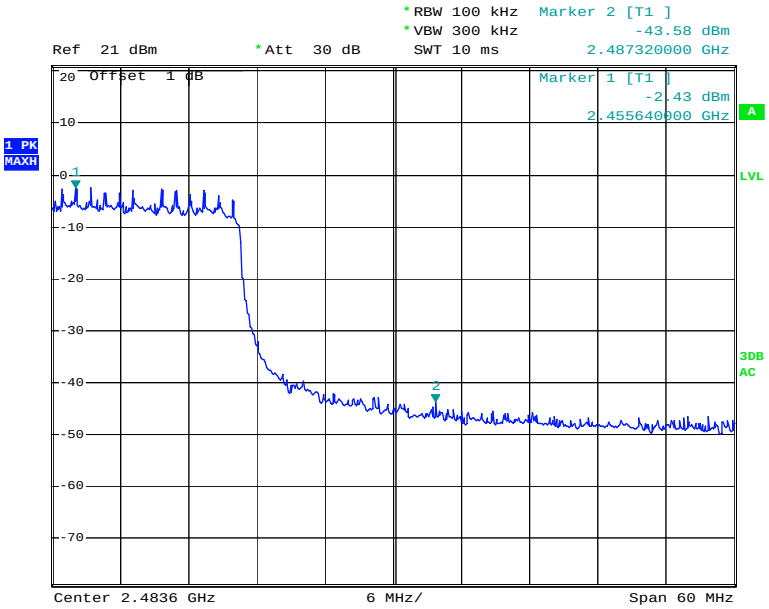
Date: 14.JUL.2010 17:34:59

802.11n40: Band Edge, Left Side



Date: 14.JUL.2010 17:36:01

802.11n40: Band Edge, Right Side



Date: 14.JUL.2010 17:36:49

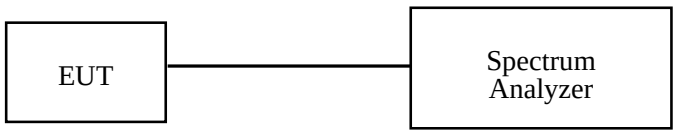
FCC §15.247(e) - POWER SPECTRAL DENSITY

Applicable Standard

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.

Test Procedure

1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
2. Position the EUT was set without connection to measurement instrument. Turn on the EUT and connect its antenna terminal to measurement instrument via a low loss cable. Then set it to any one measured frequency within its operating range, and make sure the instrument is operated in its linear range.
3. Adjust the center frequency of SA on any frequency be measured and set SA to 1.5 MHz span mode. And then, set RBW and VBW of spectrum analyzer to proper value. (DTS)
4. Repeat above procedures until all frequencies measured were complete.



Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Rohde & Schwarz	EMI Test Receiver	ESCI	100035	2009-11-24	2010-11-24

*** Statement of Traceability:** Bay Area Compliance Lab Corp. (ShenZhen) attests that all calibrations have been performed in accordance to NVLAP requirements, traceable to the NIST.

Test Data

Environmental Conditions

Temperature:	25 ° C
Relative Humidity:	56 %
ATM Pressure:	100.0 kPa

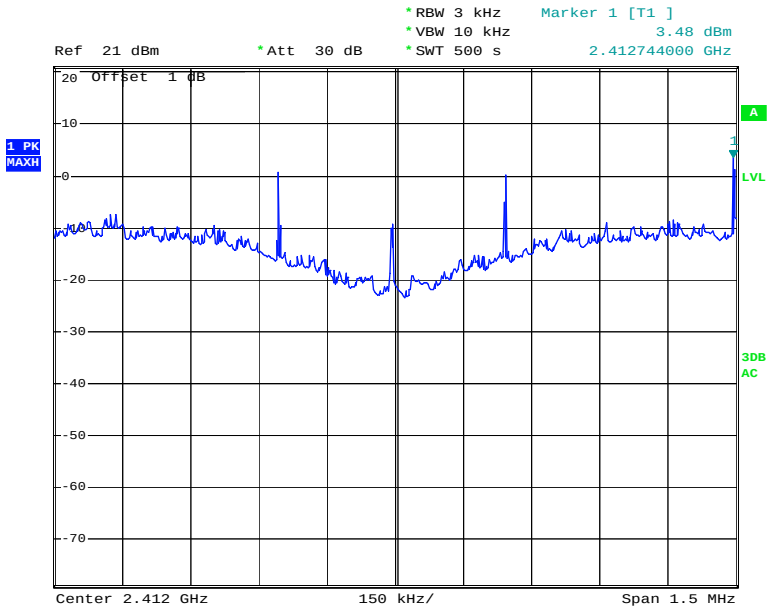
The testing was performed by Cookies Bu on 2010-04-07 to 2010-04-12

Test Mode: Transmitting

Test Result: Pass

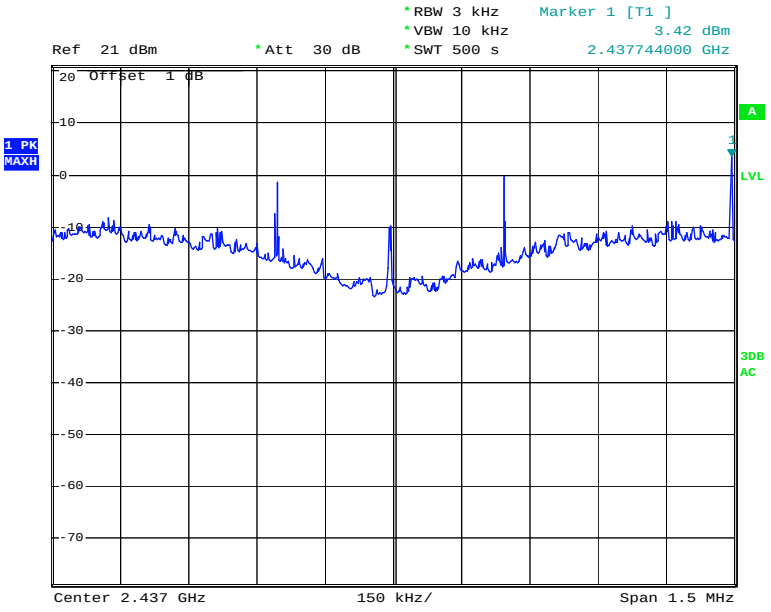
Channel	Frequency (MHz)	Data Rate	Power Spectal Density (dBm/3kHz)	Part 15.247 Limit (dBm/3kHz)	Result
802.11b mode					
Low	2412	1	3.48	8	Pass
Middle	2437	1	3.42	8	Pass
High	2462	1	3.13	8	Pass
802.11g mode					
Low	2412	6	-12.10	8	Pass
Middle	2437	6	-12.47	8	Pass
High	2462	6	-12.98	8	Pass
802.11n20 mode					
Low	2412	6.5	-12.07	8	Pass
Middle	2437	6.5	-12.47	8	Pass
High	2462	6.5	-13.02	8	Pass
802.11n40 mode					
Low	2422	6.5	-12.28	8	Pass
Middle	2437	6.5	-12.44	8	Pass
High	2452	6.5	-12.70	8	Pass

Power Spectral Density, 802.11b Low Channel



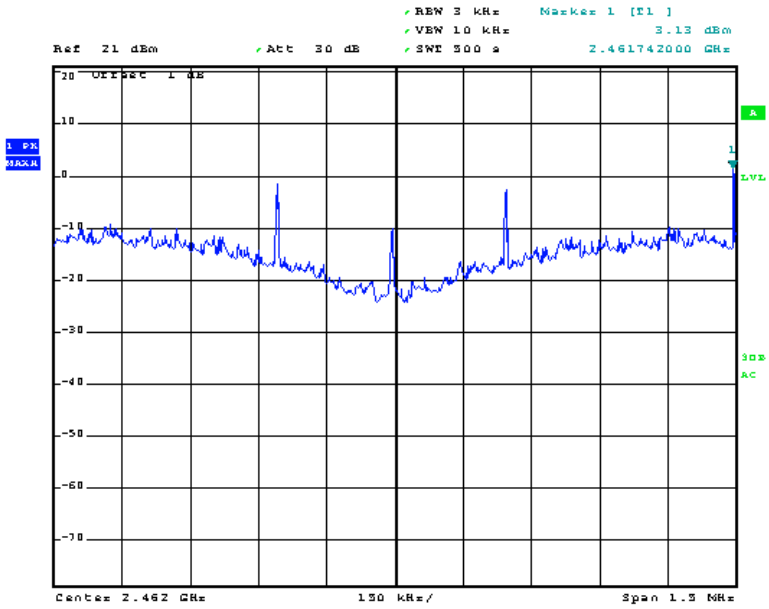
Date: 14.JUL.2010 09:35:32

Power Spectral Density, 802.11b Middle Channel



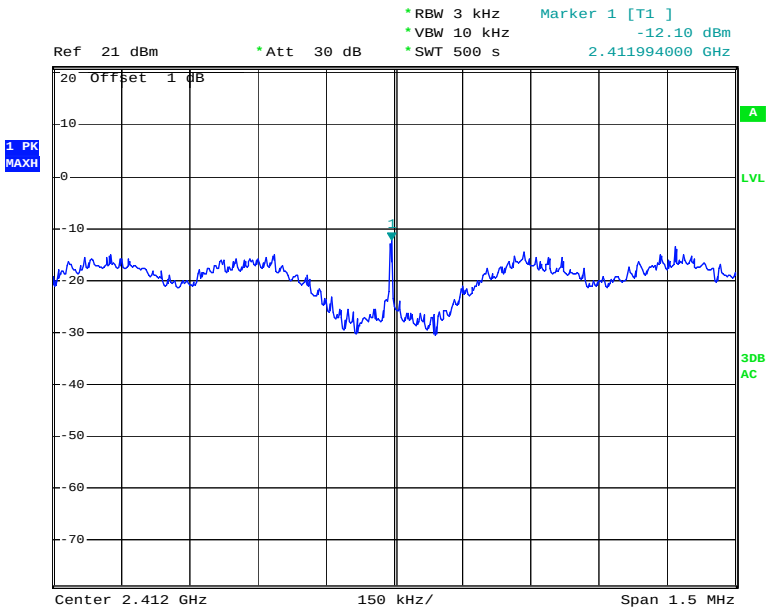
Date: 14.JUL.2010 09:49:26

Power Spectral Density, 802.11b High Channel



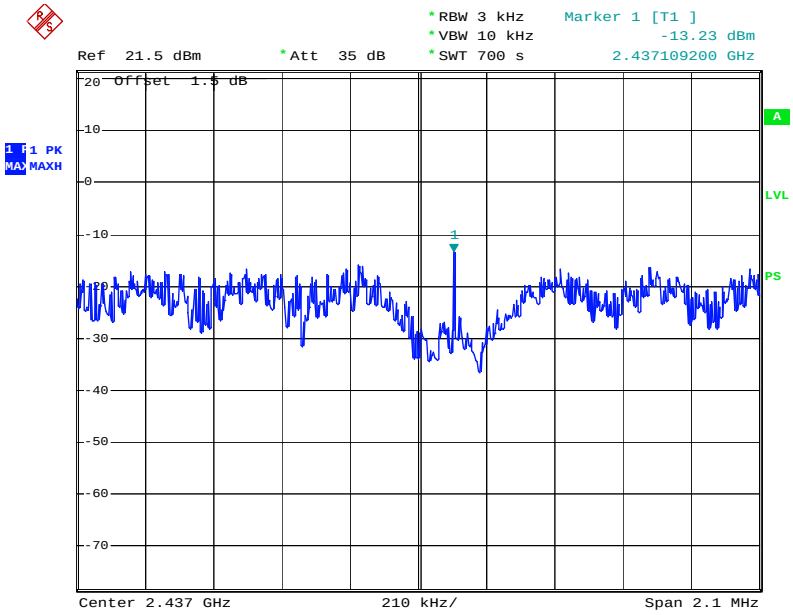
Date: 14.JUL.2010 10:11:24

Power Spectral Density, 802.11g Low Channel



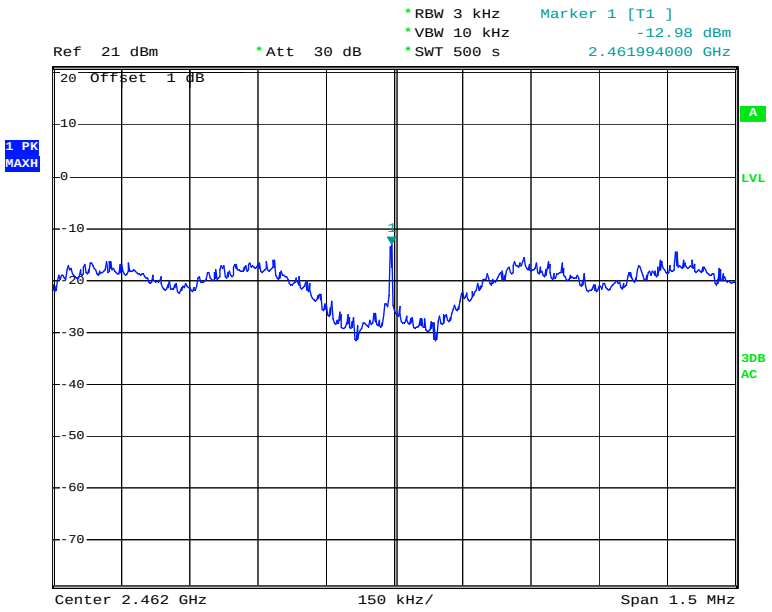
Date: 14.JUL.2010 10:31:48

Power Spectral Density, 802.11g Middle Channel



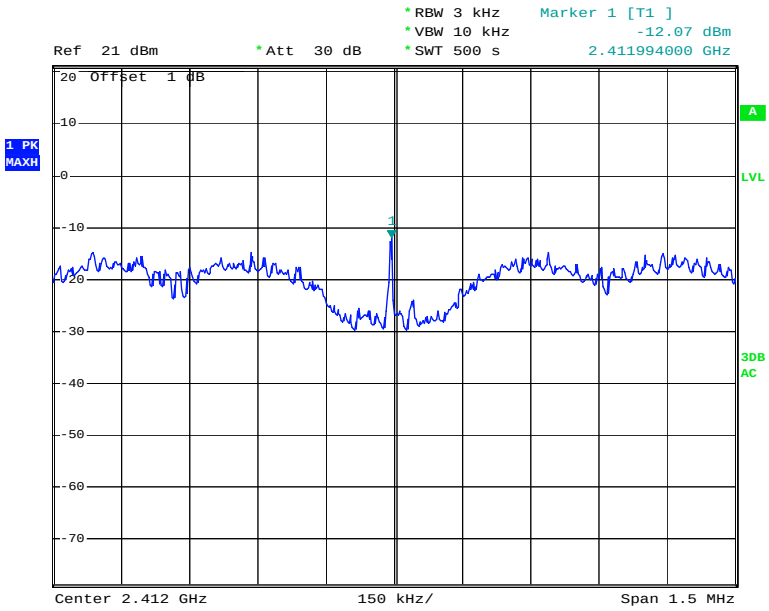
DaDate: 8.APR.2010 17:02:59

Power Spectral Density, 802.11g High Channel



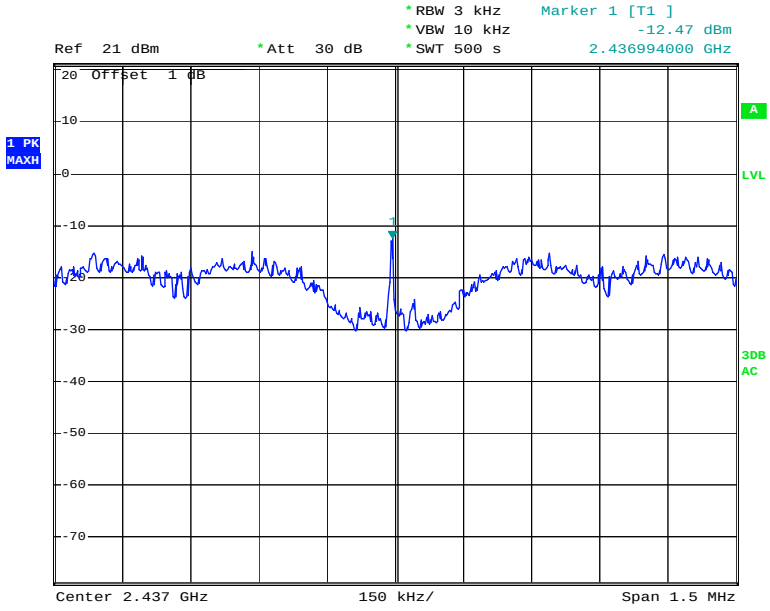
Date: 14.JUL.2010 10:10:43

Power Spectral Density, 802.11n20 Low Channel



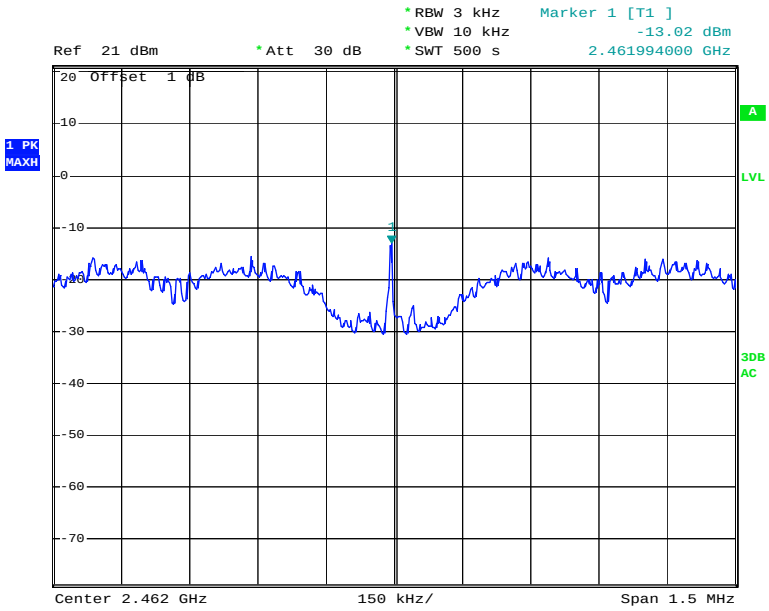
Date: 14.JUL.2010 10:43:16

Power Spectral Density, 802.11n20 Middle Channel



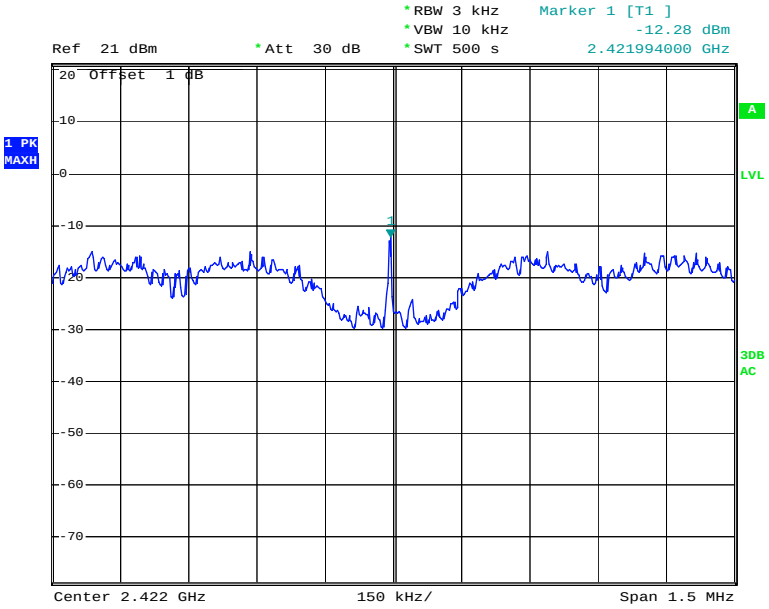
Date: 14.JUL.2010 10:53:16

Power Spectral Density, 802.11n20 High Channel



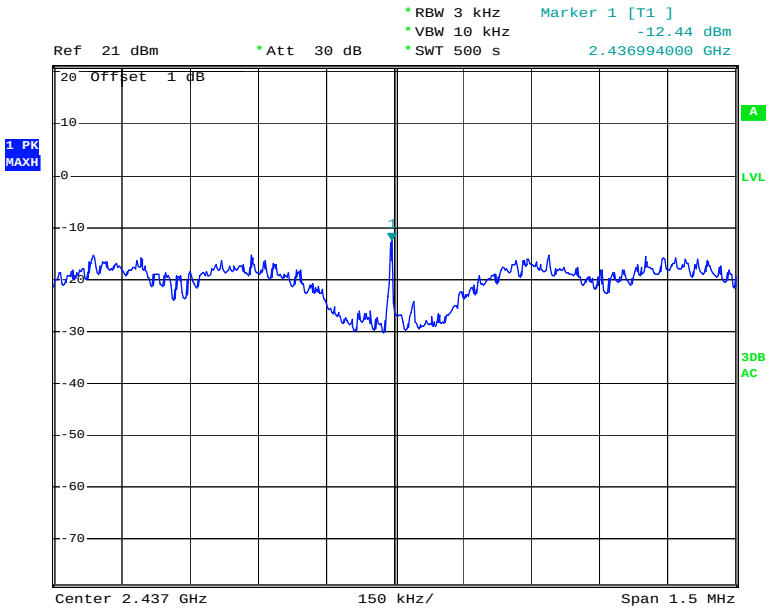
Date: 14.JUL.2010 11:07:20

Power Spectral Density, 802.11n40 Low Channel



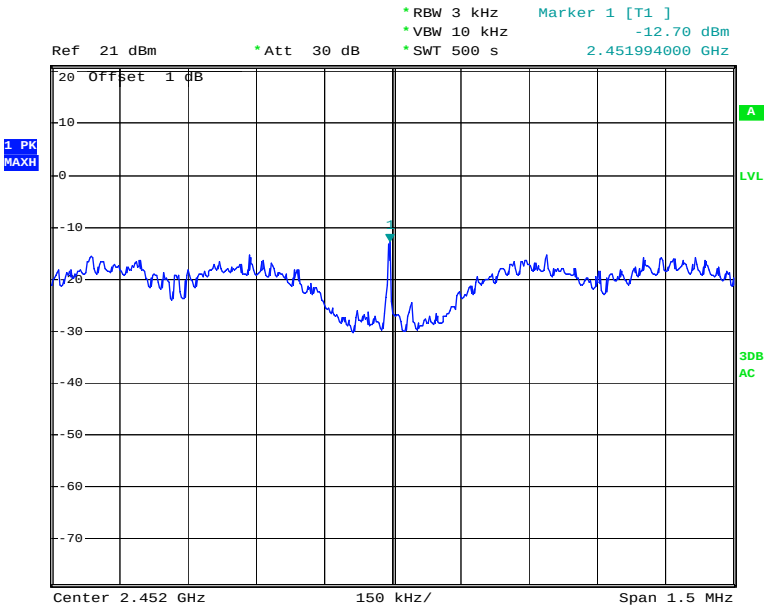
Date: 14.JUL.2010 11:23:35

Power Spectral Density, 802.11n40 Middle Channel



Date: 14.JUL.2010 11:34:07

Power Spectral Density, 802.11n40 High Channel



Date: 14.JUL.2010 12:08:28

DECLARATION LETTER

Storage Appliance Corporation

Company Address: Suite 115 115-30 West Beaver Creek Road, Toronto, ON, Canada, L4B 3K1
Tel: +1.416.484.0009 ex 273 Fax: +1-905-370-0044

Product Similarity Declaration

To

We, Storage Appliance Corporation, hereby declare that our Clickfree C3 2.5. Model Number: 528wi、428wi、328wi、228wi、128wi, are identical with the model number 628wi that was certified by BACL.They are namely different and have different capability,for details as bellow:

NO.	Model	Capability
1	628wi	640G
2	528wi	500G
3	428wi	400G
4	328wi	320G
5	228wi	250G
6	128wi	160G

Please contact me if you have any question.

Signature:

Print Name: 林飞翔/Eason Lin
Title:

Date:2010-8-12

***** END OF REPORT *****