Lab Code: 200707-0

FCC PART 15.247

MEASUREMENT AND TEST REPORT

For

Shenzhen Contel Electronics Technology Co., Ltd.

3/F, R2-A, High-tech Industrial Park, Nanshan District, Shenzhen, China

FCC ID: YAPSMB100

Report Type:	Product Type:
Original Report	Wi-Fi device

Test Engineer:	Eric Lee
Report Number:	RSZ120618004-00B
Report Date:	2012-07-23
Reviewed By:	Alvin Huang RF Leader
Test Laboratory:	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 www.baclcorp.com.cn

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GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

The *Shenzhen Contel Electronics Technology Co., Ltd. 's* product, model number: *SMB-100 (FCC ID: YAPSMB100)* or the "EUT" as referred to in this report is a *Wi-Fi device,* named as *Streaming Media Box* by applicant, which measures approximately: 17.7 cm (L) x 12.9 cm (W) x 3.1 cm (H), rated input voltage: DC 5V from adapter.

Adapter Information: AC ADAPTER
Model: SMS-01050150-S04US;
Input: 100-240V~50/60Hz 0.3A.
Output: 5V 1.5A

** All measurement and test data in this report was gathered from production sample serial number: 1206061 (Assigned by BACL, Shenzhen). The EUT was received on 2012-06-18.*

Objective

This Type approval report is prepared on behalf of *Shenzhen Contel Electronics Technology Co., Ltd. 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)

FCC Part 15B JBP submissions with FCC ID: YAPSMB100.

Test Methodology

All measurements contained in this report were conducted with ANSI C63.4-2009, 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 December 06, 2010. The facility also complies with the radiated and AC line conducted test site criteria set forth in ANSI C63.4-2009.

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).

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, 802.11g mode and 802.11n-HT20, 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 for 802.11b, 802.11g and 802.11n-HT20 modes were tested with Channel 1, 6 and 11. 802.11n-HT40 modes were tested with Channel 3, 6 and 9.

EUT Exercise Software

Test software: Microsoft Hyper Terminal
The test was performed under:
802.11b: Data rate: 1 Mbps.
802.11g: Data rate: 6 Mbps.
802.11n-HT20: Data rate: 6.5 Mbps.
802.11n-HT40: Data rate: 13.5 Mbps.

Equipment Modifications

No modification was made to the unit tested.

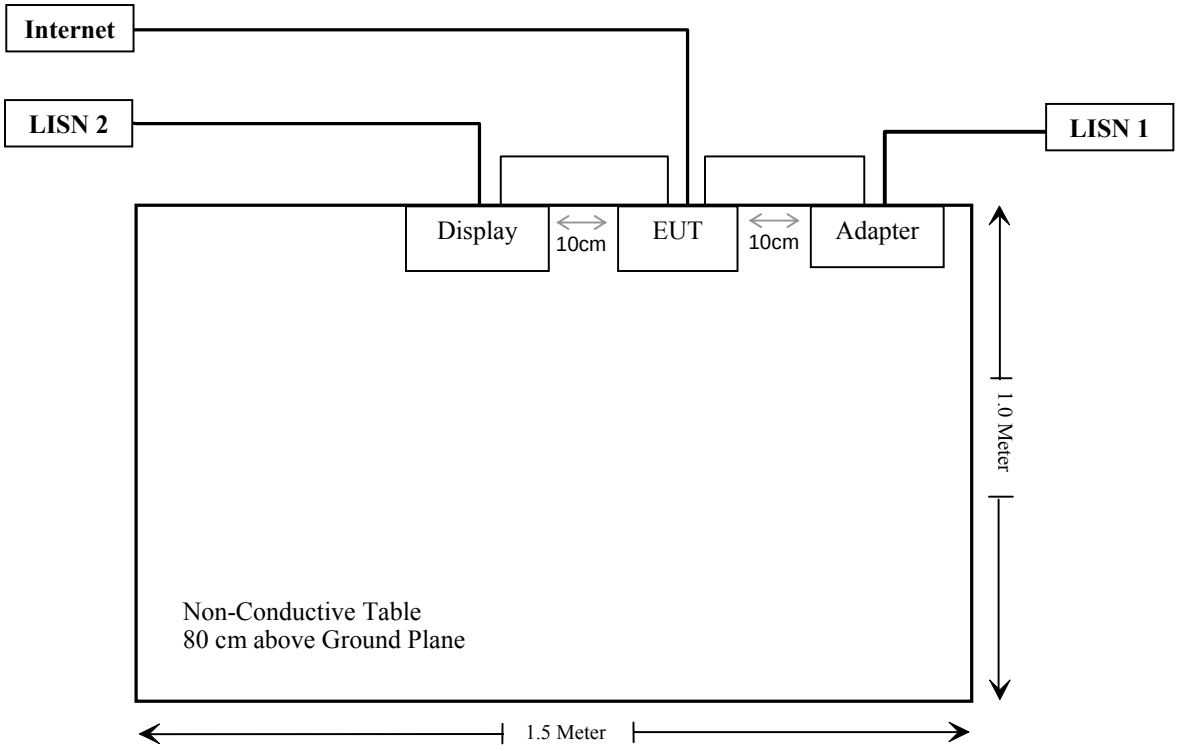
Support Equipment List and Details

Manufacturer	Description	Model	Serial Number
SAMSUNG	Display	225MS	CR22HV2P401073M

External I/O Cabling List and Details

Cable Description	Length (m)	From	To
Unshielded Detachable DC power Cable	1.6	EUT	Adapter
Shielded Detachable HDMI Cable	1.2	HDMI Port	EUT
Shielded Detachable RJ45 Cable	1.5	EUT	Internet port

Block Diagram of Test Setup



SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Result
§15.247 (i), §1.1307 (b)(1), §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) & §1.1307 (b) (1) & §2.1091- MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Applicable Standard

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

Limits for Maximum Permissible Exposure (MPE) (§1.1310, §2.1091)

(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;

According to §1.1310 and §2.1091 RF exposure is calculated.

Calculated Formulary:

Predication of MPE limit at a given distance
$S = PG/4\pi R^2$ = 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);

Calculated Data:

Mode	Frequency (MHz)	Antenna Gain		Conducted Power		Evaluation Distance (cm)	Power Density (mW/cm^2)	MPE Limit (mW/cm^2)
		(dBi)	(numeric)	(dBm)	(mW)			
802.11b	2437	0	1	16.32	42.85	20	0.0085	1
802.11g	2462	0	1	15.23	33.34	20	0.0066	1
802.11n-HT20	2437	0	1	14.35	27.23	20	0.0054	1
802.11n-HT40	2437	0	1	13.07	20.28	20	0.0040	1

Result: Compliance

FCC §15.203 - ANTENNA REQUIREMENT

Applicable Standard

According to § 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 47 CFR section 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 has a PCB antenna for Wi-Fi, which was permanently attached and the gain was 0 dBi, fulfill the requirement of this section. Please refer to the internal photos.

Result: Compliance.

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 CISPR 16-4-4, 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 (k=2, 95% level of confidence).
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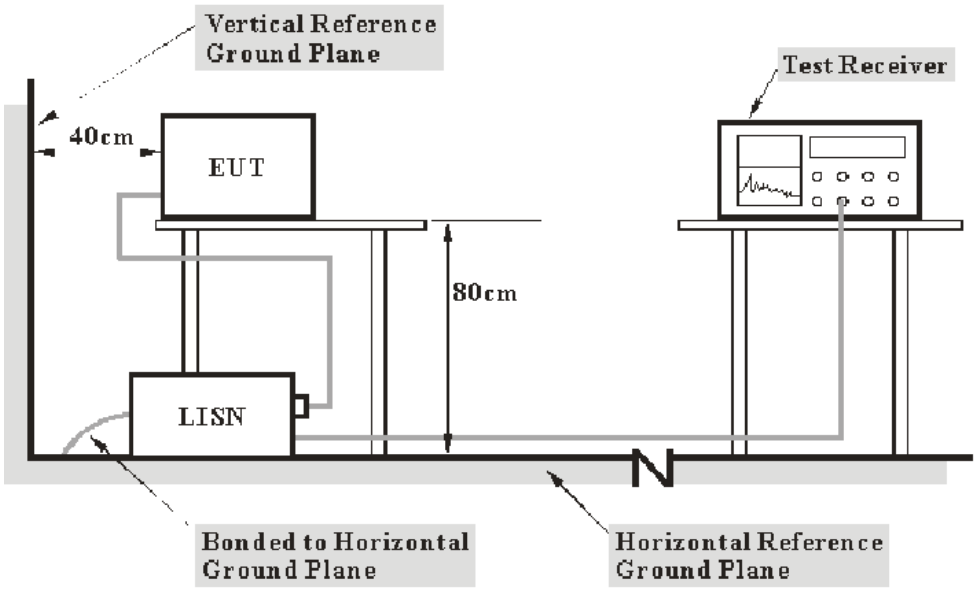
EUT Setup



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 C63.4-2009 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	100176	2011-11-24	2012-11-23
Rohde & Schwarz	L.I.S.N.	ESH2-Z5	892107/021	2011-11-17	2012-11-16
Rohde & Schwarz	Pulse limiter	ESH3Z2	DE25985	2011-07-08	2012-07-07
BACL	CE Test software	BACL-CE	V1.0	-	-

*** 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 connected to the 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:

9.66 dB at **0.660 MHz** in the **Line** conductor mode

Test Data

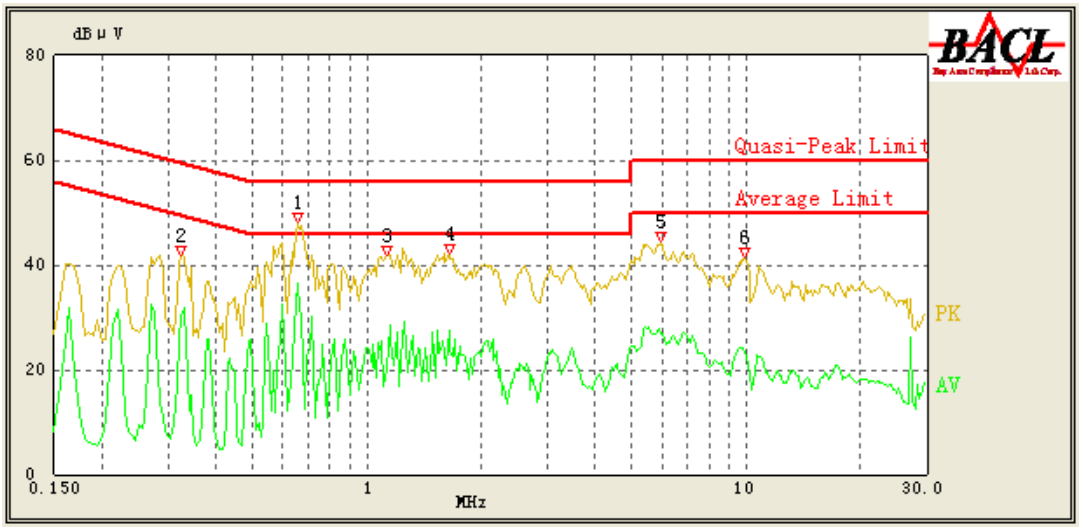
Environmental Conditions

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

The testing was performed by Eric Lee on 2012-07-12.

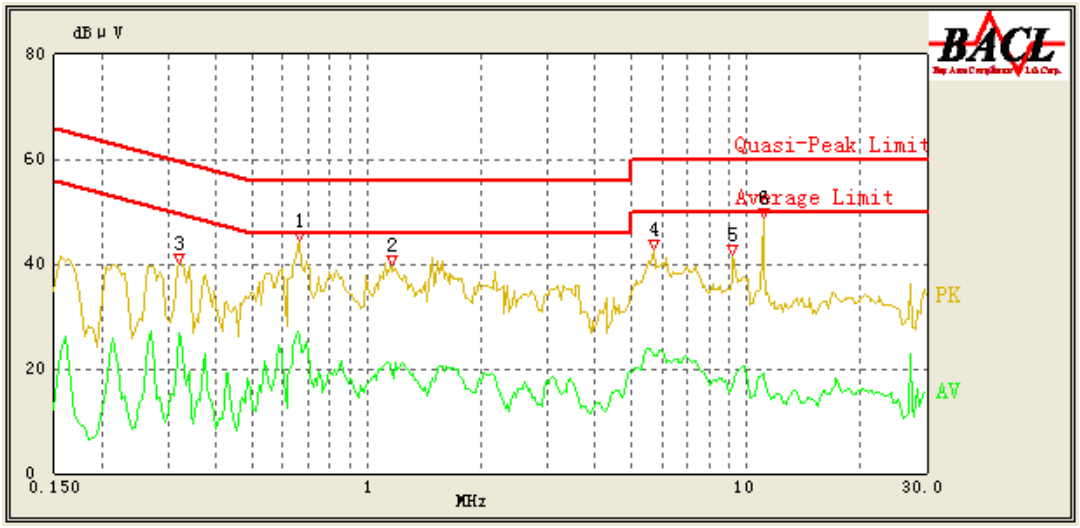
Test Mode: Transmitting

AC 120V / 60Hz - Line



Conducted Emissions			FCC Part 15.207		
Frequency (MHz)	**Corrected Result (dBµV)**	**Corrected Factor (dB)**	**Limit (dBµV)**	**Margin (dB)**	**Detector (PK /QP/Ave.)**
0.660	36.34	9.75	46.00	9.66	Ave.
0.660	41.58	9.75	56.00	14.42	QP
1.645	27.48	9.89	46.00	18.52	Ave.
0.325	30.27	9.66	51.00	20.73	Ave.
1.645	33.68	9.89	56.00	22.32	QP
6.010	26.63	10.06	50.00	23.37	Ave.
5.970	34.43	10.06	60.00	25.57	QP
0.325	35.39	9.66	61.00	25.61	QP
1.130	20.23	9.87	46.00	25.77	Ave.
9.880	23.47	10.28	50.00	26.53	Ave.
1.135	27.16	9.87	56.00	28.84	QP
9.885	28.96	10.28	60.00	31.04	QP

Neutral:



Conducted Emissions			FCC Part 15.207		
Frequency (MHz)	**Corrected Result (dBμV)**	**Corrected Factor (dB)**	**Limit (dBμV)**	**Margin (dB)**	**Detector (PK /QP/Ave.)**
0.665	40.26	9.75	56.00	15.74	QP
0.665	26.48	9.75	46.00	19.52	Ave.
0.320	38.92	9.65	61.14	22.22	QP
0.320	26.84	9.65	51.14	24.30	Ave.
1.155	20.35	9.87	46.00	25.65	Ave.
1.160	29.99	9.87	56.00	26.01	QP
5.690	33.77	10.03	60.00	26.23	QP
5.710	22.77	10.03	50.00	27.23	Ave.
11.095	19.14	10.45	50.00	30.86	Ave.
9.230	28.73	10.24	60.00	31.27	QP
11.095	28.46	10.45	60.00	31.54	QP
9.345	18.18	10.25	50.00	31.82	Ave.

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

Applicable Standard

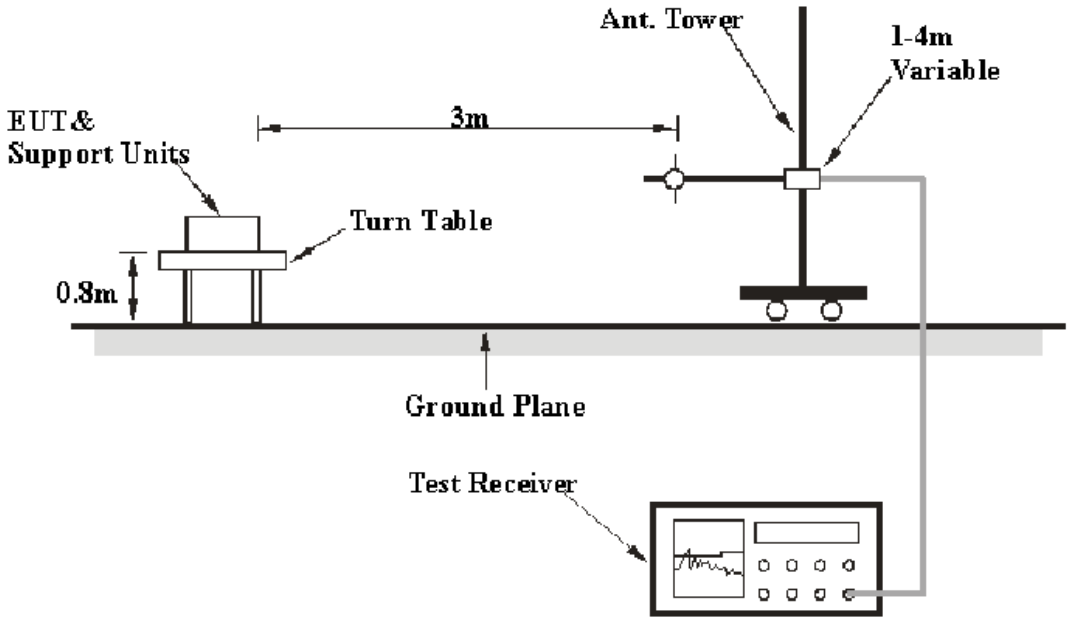
FCC §15.247 (d); §15.209; §15.205;

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 CISPR 16-4-4, 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(k=2, 95% level of confidence) .

EUT Setup



The radiated emission tests were performed in the 3 meters test site, using the setup accordance with the ANSI C63.4-2009. 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	Ave.

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
HP	Amplifier	HP8447D	2944A09795	2011-11-24	2012-11-23
Rohde & Schwarz	EMI Test Receiver	ESCI	101122	2011-11-17	2012-11-16
Sunol Sciences	Broadband Antenna	JB1	A040904-1	2012-03-17	2013-03-16
Mini-Circuits	Amplifier	ZVA-213+	T-E27H	2012-03-08	2013-03-08
Sunol Sciences	Horn Antenna	DRH-118	A052304	2011-12-01	2012-11-30
Rohde & Schwarz	Signal Analyzer	FSIQ26	8386001028	2011-11-24	2012-11-23
Agilent	Spectrum Analyzer	8564E	3943A01781	2012-04-12	2013-04-11
the electro-Mechanics Co.	Horn Antenna	3116	9510-2270	2011-10-14	2012-10-13
R&S	Auto test Software	EMC32	V6.30	-	-

*** 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 was 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-1 GHz and peak and Average detection modes for frequencies above 1 GHz.

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 7dB means the emission is 7dB 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:

6.40 dB at **32.28 MHz** in the **Vertical** polarization for mode 802.11b

Test Data

Environmental Conditions

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

The testing was performed by Eric Lee on 2012-07-20.

Test Mode: Transmitting

30 MHz-25 GHz

802.11b mode:

Frequency (MHz)	Receiver		Turntable Degree	Rx Antenna			Cable loss (dB)	Amplifier Gain (dB)	Corrected Amplitude (dBuV/m)	FCC Part 15.247/15.205/15.209		
	Reading (dBμV/m)	Detector (PK/QP/Ave.)		Height (m)	Polar (H/V)	Factor (dB)				Limit (dBuV/m)	Margin (dB)	Comment
Low channel (2412 MHz)												
2412	91.23	PK	37	1.2	V	29.60	3.03	26.50	97.36	/	/	Fund.
2412	85.66	Ave.	37	1.2	V	29.60	3.03	26.50	91.79	/	/	Fund.
2412	89.25	PK	125	1.1	H	29.60	3.03	26.50	95.38	/	/	Fund.
2412	82.54	Ave.	125	1.1	H	29.60	3.03	26.50	88.67	/	/	Fund.
32.28	38.77	QP	182	1.0	V	20.40	0.29	25.86	33.60	40.00	6.40	Spurious
9648	18.57	Ave.	102	1.3	V	39.80	5.98	26.50	37.85	54.00	16.15	Harmonic
4824	24.87	Ave.	44	1.2	V	34.60	4.30	26.50	37.27	54.00	16.73	Harmonic
7236	17.95	Ave.	30	1.1	H	37.90	5.22	26.50	34.57	54.00	19.43	Harmonic
4824	40.36	PK	44	1.2	V	34.60	4.30	26.50	52.76	74.00	21.24	Harmonic
9648	33.29	PK	102	1.3	V	39.80	5.98	26.50	52.57	74.00	21.43	Harmonic
2497.1	24.01	Ave.	11	1.3	V	30.20	3.11	26.50	30.82	54.00	23.18	Spurious
2497.1	43.27	PK	11	1.3	V	30.20	3.11	26.50	50.08	74.00	23.92	Spurious
7236	33.28	PK	30	1.1	H	37.90	5.22	26.50	49.90	74.00	24.10	Harmonic
2385.4	23.67	Ave.	10	1.1	H	29.60	3.03	26.50	29.80	54.00	24.20	Spurious
2332.1	23.27	Ave.	22	1.2	V	29.00	2.98	26.50	28.75	54.00	25.25	Spurious
2385.4	42.18	PK	10	1.1	H	29.60	3.03	26.50	48.31	74.00	25.69	Spurious
2332.1	42.69	PK	22	1.2	V	29.00	2.98	26.50	48.17	74.00	25.83	Spurious
Middle channel (2437 MHz)												
2437	92.83	PK	113	1.3	V	29.60	3.03	26.50	98.96	/	/	Fund.
2437	86.07	Ave.	113	1.3	V	29.60	3.03	26.50	92.20	/	/	Fund.
2437	90.25	PK	25	1.2	H	29.60	3.03	26.50	96.38	/	/	Fund.
2437	84.01	Ave.	25	1.2	H	29.60	3.03	26.50	90.14	/	/	Fund.
33.56	36.57	QP	163	1.1	V	20.40	0.29	25.86	31.40	40.00	8.60	Spurious
4874	32.67	Ave.	37	1.2	V	34.60	4.36	26.50	45.13	54.00	8.87	Harmonic
9748	17.08	Ave.	44	1.3	V	39.80	6.10	26.50	36.48	54.00	17.52	Harmonic
7311	17.44	Ave.	43	1.1	H	37.90	5.09	26.50	33.93	54.00	20.07	Harmonic
9748	33.29	PK	44	1.3	V	39.80	6.10	26.50	52.69	74.00	21.31	Harmonic
4874	39.83	PK	37	1.2	V	34.60	4.36	26.50	52.29	74.00	21.71	Harmonic
2490.9	23.67	Ave.	81	1.2	V	30.20	3.11	26.50	30.48	54.00	23.52	Spurious
2381.4	23.36	Ave.	45	1.2	H	29.60	3.03	26.50	29.49	54.00	24.51	Spurious
7311	32.15	PK	43	1.1	H	37.90	5.09	26.50	48.64	74.00	25.36	Harmonic
2330.1	22.97	Ave.	3	1.2	V	29.00	2.98	26.50	28.45	54.00	25.55	Spurious
2381.4	42.21	PK	45	1.2	H	29.60	3.03	26.50	48.34	74.00	25.66	Spurious
2490.9	40.11	PK	81	1.2	V	30.20	3.11	26.50	46.92	74.00	27.08	Spurious
2330.1	41.02	PK	3	1.2	V	29.00	2.98	26.50	46.50	74.00	27.50	Spurious
High channel (2462 MHz)												
2462	95.94	PK	22	1.3	V	30.20	3.11	26.50	102.75	/	/	Fund.
2462	88.19	Ave.	22	1.3	V	30.20	3.11	26.50	95.00	/	/	Fund.
2462	91.05	PK	315	1.2	H	30.20	3.11	26.50	97.86	/	/	Fund.
2462	84.75	Ave.	315	1.1	H	30.20	3.11	26.50	91.56	/	/	Fund.

4924	32.61	Ave.	217	1.2	V	34.60	4.40	26.50	45.11	54.00	8.89	Harmonic
97.47	48.86	QP	142	1.5	V	6.60	0.47	25.73	30.20	43.50	13.30	Spurious
9848	18.57	Ave.	223	1.2	V	39.80	6.09	26.50	37.96	54.00	16.04	Harmonic
7386	17.49	Ave.	54	1.1	H	37.20	5.21	26.50	33.40	54.00	20.60	Harmonic
9848	33.29	PK	223	1.2	V	39.80	6.09	26.50	52.68	74.00	21.32	Harmonic
4924	39.55	PK	217	1.2	V	34.60	4.40	26.50	52.05	74.00	21.95	Harmonic
2492.7	24.28	Ave.	31	1.1	V	30.20	3.11	26.50	31.09	54.00	22.91	Spurious
2383.1	23.37	Ave.	27	1.2	H	29.60	3.03	26.50	29.50	54.00	24.50	Spurious
2337.2	23.37	Ave.	2	1.3	V	29.00	2.98	26.50	28.85	54.00	25.15	Spurious
7386	32.57	PK	54	1.1	H	37.20	5.21	26.50	48.48	74.00	25.52	Harmonic
2492.7	41.08	PK	31	1.1	V	30.20	3.11	26.50	47.89	74.00	26.11	Spurious
2337.2	41.26	PK	2	1.3	V	29.00	2.98	26.50	46.74	74.00	27.26	Spurious
2383.1	40.33	PK	27	1.2	H	29.60	3.03	26.50	46.46	74.00	27.54	Spurious

802.11g mode:

Frequency (MHz)	Receiver		Turntable Degree	Rx Antenna			Cable loss (dB)	Amplifier Gain (dB)	Corrected Amplitude (dBuV/m)	FCC Part 15.247/15.205/15.209		
	Reading (dBμV/m)	Detector (PK/QP/Ave.)		Height (m)	Polar (H/V)	Factor (dB)				Limit (dBuV/m)	Margin (dB)	Comment
Low channel (2412 MHz)												
2412.0	87.33	PK	23	1.2	V	29.60	3.03	26.50	93.46	/	/	Fund.
2412.0	79.31	Ave.	23	1.2	V	29.60	3.03	26.50	80.44	/	/	Fund.
2412.0	86.75	PK	245	1.3	H	29.60	3.03	26.50	92.88	/	/	Fund.
2412.0	73.12	Ave.	245	1.3	H	29.60	3.03	26.50	84.86	/	/	Fund.
122.53	47.73	QP	68	1	V	12.20	0.54	25.77	34.70	43.50	8.80	Spurious
9648.0	18.26	Ave.	114	1.2	V	39.80	5.98	26.50	37.54	54.00	16.46	Harmonic
4824.0	22.37	Ave.	92	1.2	V	34.60	4.30	26.50	34.77	54.00	19.23	Harmonic
7236.0	17.15	Ave.	52	1.3	H	37.90	5.22	26.50	33.77	54.00	20.23	Harmonic
9648.0	33.67	PK	114	1.2	V	39.80	5.98	26.50	52.95	74.00	21.05	Harmonic
4824.0	40.39	PK	92	1.2	V	34.60	4.30	26.50	52.79	74.00	21.21	Harmonic
2493.6	23.07	Ave.	103	1.2	V	30.20	3.11	26.50	29.88	54.00	24.12	Spurious
2382.5	23.08	Ave.	38	1.2	H	29.60	3.03	26.50	29.21	54.00	24.79	Spurious
2493.6	42.33	PK	103	1.2	V	30.20	3.11	26.50	49.14	74.00	24.86	Spurious
7236.0	32.25	PK	52	1.3	H	37.90	5.22	26.50	48.87	74.00	25.13	Harmonic
2336.4	22.98	Ave.	7	1.3	V	29.00	2.98	26.50	28.46	54.00	25.54	Spurious
2382.5	41.27	PK	38	1.2	H	29.60	3.03	26.50	47.40	74.00	26.60	Spurious
2336.4	41.26	PK	7	1.3	V	29.00	2.98	26.50	46.74	74.00	27.26	Spurious
Middle channel (2437 MHz)												
2437.0	87.19	PK	227	1.3	V	29.60	3.03	26.50	93.32	/	/	Fund.
2437.0	74.92	Ave.	227	1.3	V	29.60	3.03	26.50	81.05	/	/	Fund.
2437.0	85.21	PK	0	1.1	H	29.60	3.03	26.50	91.34	/	/	Fund.
2437.0	73.10	Ave.	0	1.1	H	29.60	3.03	26.50	79.23	/	/	Fund.
125.86	47.92	QP	256	1.2	H	12.20	0.56	25.38	35.30	43.50	8.20	Spurious
9739.2	17.57	Ave.	11	1.2	V	39.80	6.10	26.50	36.97	54.00	17.03	Spurious
4874.0	22.37	Ave.	33	1.2	V	34.60	4.36	26.50	34.83	54.00	19.17	Harmonic
7311.0	18.24	Ave.	8	1.3	H	37.90	5.09	26.50	34.73	54.00	19.27	Harmonic
4874.0	40.33	PK	33	1.2	V	34.60	4.36	26.50	52.79	74.00	21.21	Harmonic
9739.2	32.29	PK	11	1.2	V	39.80	6.10	26.50	51.69	74.00	22.31	Spurious
2496.9	23.37	Ave.	44	1.1	V	30.20	3.11	26.50	30.18	54.00	23.82	Spurious
7311.0	33.29	PK	8	1.3	H	37.90	5.09	26.50	49.78	74.00	24.22	Harmonic
2382.7	23.37	Ave.	37	1.3	H	29.60	3.03	26.50	29.50	54.00	24.50	Spurious
2496.9	42.22	PK	44	1.1	V	30.20	3.11	26.50	49.03	74.00	24.97	Spurious
2335.5	23.31	Ave.	33	1.2	V	29.00	2.98	26.50	28.79	54.00	25.21	Spurious
2382.7	41.29	PK	37	1.3	H	29.60	3.03	26.50	47.42	74.00	26.58	Spurious
2335.5	40.18	PK	33	1.2	V	29.00	2.98	26.50	45.66	74.00	28.34	Spurious
High channel (2462 MHz)												
2462.0	88.93	PK	302	1.2	V	30.20	3.11	26.50	95.74	/	/	Fund.
2462.0	75.19	Ave.	302	1.2	V	30.20	3.11	26.50	82.00	/	/	Fund.
2462.0	88.22	PK	32	1.2	H	30.20	3.11	26.50	95.03	/	/	Fund.
2462.0	75.87	Ave.	32	1.2	H	30.20	3.11	26.50	82.68	/	/	Fund.
765.50	35.67	QP	328	1.6	V	19.20	3.74	26.01	32.60	46.00	13.40	Spurious

9848.0	17.66	Ave.	13	1.1	V	39.80	6.09	26.50	37.05	54.00	16.95	Harmonic
4924.0	23.16	Ave.	26	1.2	V	34.60	4.40	26.50	35.66	54.00	18.34	Harmonic
4924.0	42.37	PK	26	1.2	V	34.60	4.40	26.50	54.87	74.00	19.13	Harmonic
7386.0	17.45	Ave.	41	1.3	H	37.20	5.21	26.50	33.36	54.00	20.64	Harmonic
9848.0	33.25	PK	13	1.1	V	39.80	6.09	26.50	52.64	74.00	21.36	Harmonic
2492.8	25.33	Ave.	26	1.2	V	30.20	3.11	26.50	32.14	54.00	21.86	Spurious
2492.8	44.26	PK	26	1.2	V	30.20	3.11	26.50	51.07	74.00	22.93	Spurious
7386.0	33.29	PK	41	1.3	H	37.20	5.21	26.50	49.20	74.00	24.80	Harmonic
2381.9	23.04	Ave.	102	1.3	H	29.60	3.03	26.50	29.17	54.00	24.83	Spurious
2333.1	23.04	Ave.	9	1.2	V	29.00	2.98	26.50	28.52	54.00	25.48	Spurious
2333.1	42.29	PK	9	1.2	V	29.00	2.98	26.50	47.77	74.00	26.23	Spurious
2381.9	41.22	PK	102	1.3	H	29.60	3.03	26.50	47.35	74.00	26.65	Spurious

802.11n-HT20 mode:

Frequency (MHz)	Receiver		Turntable Degree	Rx Antenna			Cable loss (dB)	Amplifier Gain (dB)	Corrected Amplitude (dBuV/m)	FCC Part 15.247/15.205/15.209		
	Reading (dBµV/m)	Detector (PK/QP/Ave.)		Height (m)	Polar (H/V)	Factor (dB)				Limit (dBuV/m)	Margin (dB)	Comment
Low channel (2412 MHz)												
2412.0	90.67	PK	254	1.2	V	29.60	3.03	26.50	96.80	/	/	Fund.
2412.0	77.91	Ave.	254	1.2	V	29.60	3.03	26.50	84.04	/	/	Fund.
2412.0	88.67	PK	120	1.3	H	29.60	3.03	26.50	94.80	/	/	Fund.
2412.0	79.65	Ave.	120	1.3	H	29.60	3.03	26.50	85.78	/	/	Fund.
9648.0	17.06	Ave.	46	1.2	V	39.80	5.98	26.50	36.34	54.00	17.66	Harmonic
4824.0	23.69	Ave.	37	1.1	V	34.60	4.30	26.50	36.09	54.00	17.91	Harmonic
4824.0	43.17	PK	37	1.1	V	34.60	4.30	26.50	55.57	74.00	18.43	Harmonic
7236.0	17.41	Ave.	55	1.3	H	37.90	5.22	26.50	34.03	54.00	19.97	Harmonic
9648.0	32.29	PK	46	1.2	V	39.80	5.98	26.50	51.57	74.00	22.43	Harmonic
2384.1	24.18	Ave.	105	1.3	H	29.60	3.03	26.50	30.31	54.00	23.69	Spurious
7236.0	33.67	PK	55	1.3	H	37.90	5.22	26.50	50.29	74.00	23.71	Harmonic
2492.9	23.38	Ave.	23	1.3	V	30.20	3.11	26.50	30.19	54.00	23.81	Spurious
2384.1	43.67	PK	105	1.3	H	29.60	3.03	26.50	49.80	74.00	24.20	Spurious
2336.8	23.37	Ave.	37	1.2	V	29.00	2.98	26.50	28.85	54.00	25.15	Spurious
2336.8	43.26	PK	37	1.2	V	29.00	2.98	26.50	48.74	74.00	25.26	Spurious
2492.9	41.06	PK	23	1.3	V	30.20	3.11	26.50	47.87	74.00	26.13	Spurious
Middle channel (2437 MHz)												
2437.0	90.33	PK	77	1.1	V	29.60	3.03	26.50	96.46	/	/	Fund.
2437.0	77.26	Ave.	77	1.1	V	29.60	3.03	26.50	83.39	/	/	Fund.
2437.0	88.67	PK	91	1.1	H	29.60	3.03	26.50	94.80	/	/	Fund.
2437.0	76.45	Ave.	91	1.1	H	29.60	3.03	26.50	82.58	/	/	Fund.
9748.0	17.06	Ave.	4	1.2	V	39.80	6.10	26.50	36.46	54.00	17.54	Harmonic
4874.0	23.89	Ave.	37	1.3	V	34.60	4.36	26.50	36.35	54.00	17.65	Harmonic
4874.0	43.67	PK	37	1.3	V	34.60	4.36	26.50	56.13	74.00	17.87	Harmonic
7311.0	18.02	Ave.	43	1.2	H	37.90	5.09	26.50	34.51	54.00	19.49	Harmonic
9748.0	32.22	PK	4	1.2	V	39.80	6.10	26.50	51.62	74.00	22.38	Harmonic
7311.0	34.16	PK	43	1.2	H	37.90	5.09	26.50	50.65	74.00	23.35	Harmonic
2491.7	22.98	Ave.	67	1.2	V	30.20	3.11	26.50	29.79	54.00	24.21	Spurious
2385.9	23.21	Ave.	44	1.2	H	29.60	3.03	26.50	29.34	54.00	24.66	Spurious
2334.4	23.34	Ave.	38	1.1	V	29.00	2.98	26.50	28.82	54.00	25.18	Spurious
2385.9	42.37	PK	44	1.2	H	29.60	3.03	26.50	48.50	74.00	25.50	Spurious
2491.7	40.29	PK	67	1.2	V	30.20	3.11	26.50	47.10	74.00	26.90	Spurious
2334.4	41.26	PK	38	1.1	V	29.00	2.98	26.50	46.74	74.00	27.26	Spurious
High channel (2462 MHz)												
2462.0	90.83	PK	37	1.3	V	30.20	3.11	26.50	97.64	/	/	Fund.
2462.0	77.54	Ave.	37	1.3	V	30.20	3.11	26.50	84.35	/	/	Fund.
2462.0	89.67	PK	258	1.2	H	30.20	3.11	26.50	96.48	/	/	Fund.
2462.0	78.91	Ave.	258	1.2	H	30.20	3.11	26.50	85.72	/	/	Fund.
4924.0	24.96	Ave.	103	1.3	V	34.60	4.40	26.50	37.46	54.00	16.54	Harmonic
4924.0	44.67	PK	103	1.3	V	34.60	4.40	26.50	57.17	74.00	16.83	Harmonic
9848.0	17.46	Ave.	53	1.2	V	39.80	6.09	26.50	36.85	54.00	17.15	Harmonic

7386.0	17.94	Ave.	39	1.2	H	37.20	5.21	26.50	33.85	54.00	20.15	Harmonic
2499.1	46.33	PK	68	1.2	V	30.20	3.11	26.50	53.14	74.00	20.86	Spurious
9848.0	33.45	PK	53	1.2	V	39.80	6.09	26.50	52.84	74.00	21.16	Harmonic
2499.1	25.97	Ave.	68	1.2	V	30.20	3.11	26.50	32.78	54.00	21.22	Spurious
7386.0	34.22	PK	39	1.2	H	37.20	5.21	26.50	50.13	74.00	23.87	Harmonic
2383.4	23.64	Ave.	102	1.3	H	29.60	3.03	26.50	29.77	54.00	24.23	Spurious
2383.4	42.67	PK	102	1.3	H	29.60	3.03	26.50	48.80	74.00	25.20	Spurious
2336.5	23.01	Ave.	44	1.3	V	29.00	2.98	26.50	28.49	54.00	25.51	Spurious
2336.5	41.29	PK	44	1.3	V	29.00	2.98	26.50	46.77	74.00	27.23	Spurious

802.11n-HT40 mode:

Frequency (MHz)	Receiver		Turntable Degree	Rx Antenna			Cable loss (dB)	Amplifier Gain (dB)	Corrected Amplitude (dBuV/m)	FCC Part 15.247/15.205/15.209		
	Reading (dBµV/m)	Detector (PK/QP/Ave.)		Height (m)	Polar (H/V)	Factor (dB)				Limit (dBuV/m)	Margin (dB)	Comment
Low channel (2422 MHz)												
2422.0	86.16	PK	77	1.3	V	29.60	3.03	26.50	92.29	/	/	Fund.
2422.0	71.55	Ave.	77	1.3	V	29.60	3.03	26.50	77.68	/	/	Fund.
2422.0	85.38	PK	215	1.1	H	29.60	3.03	26.50	91.51	/	/	Fund.
2422.0	71.96	Ave.	215	1.1	H	29.60	3.03	26.50	78.09	/	/	Fund.
9688.0	17.54	Ave.	44	1.3	V	39.80	5.99	26.50	36.83	54.00	17.17	Harmonic
7266.0	17.25	Ave.	38	1.2	H	37.90	5.22	26.50	33.87	54.00	20.13	Harmonic
4844.0	21.06	Ave.	23	1.2	V	34.60	4.30	26.50	33.46	54.00	20.54	Harmonic
9688.0	33.29	PK	44	1.3	V	39.80	5.99	26.50	52.58	74.00	21.42	Harmonic
2497.6	23.22	Ave.	16	1.2	V	30.20	3.11	26.50	30.03	54.00	23.97	Spurious
4844.0	36.93	PK	23	1.2	V	34.60	4.30	26.50	49.33	74.00	24.67	Harmonic
2383.9	22.18	Ave.	55	1.1	H	29.60	3.03	26.50	28.31	54.00	25.69	Spurious
2497.6	41.16	PK	16	1.2	V	30.20	3.11	26.50	47.97	74.00	26.03	Spurious
7266.0	31.25	PK	38	1.2	H	37.90	5.22	26.50	47.87	74.00	26.13	Harmonic
2335.2	22.26	Ave.	238	1.3	V	29.00	2.98	26.50	27.74	54.00	26.26	Spurious
2335.2	40.15	PK	238	1.3	V	29.00	2.98	26.50	45.63	74.00	28.37	Spurious
2383.9	39.34	PK	55	1.1	H	29.60	3.03	26.50	45.47	74.00	28.53	Spurious
Middle channel (2437 MHz)												
2437.0	86.39	PK	31	1.3	V	29.60	3.03	26.50	92.52	/	/	Fund.
2437.0	71.63	Ave.	31	1.3	V	29.60	3.03	26.50	77.76	/	/	Fund.
2437.0	85.67	PK	67	1.2	H	29.60	3.03	26.50	91.80	/	/	Fund.
2437.0	71.24	Ave.	67	1.2	H	29.60	3.03	26.50	77.37	/	/	Fund.
9748.0	17.55	Ave.	68	1.3	V	39.80	6.10	26.50	36.95	54.00	17.05	Harmonic
7311.0	17.46	Ave.	215	1.2	H	37.90	5.09	26.50	33.95	54.00	20.05	Harmonic
4874.0	21.37	Ave.	55	1.2	V	34.60	4.36	26.50	33.83	54.00	20.17	Harmonic
9748.0	33.67	PK	68	1.3	V	39.80	6.10	26.50	53.07	74.00	20.93	Harmonic
7311.0	33.25	PK	215	1.2	H	37.90	5.09	26.50	49.74	74.00	24.26	Harmonic
4874.0	37.18	PK	55	1.2	V	34.60	4.36	26.50	49.64	74.00	24.36	Harmonic
2499.4	22.09	Ave.	29	1.3	V	30.20	3.11	26.50	28.90	54.00	25.10	Spurious
2386.9	22.67	Ave.	206	1.2	H	29.60	3.03	26.50	28.80	54.00	25.20	Spurious
2335.5	22.25	Ave.	61	1.1	V	29.00	2.98	26.50	27.73	54.00	26.27	Spurious
2386.9	41.29	PK	206	1.2	H	29.60	3.03	26.50	47.42	74.00	26.58	Spurious
2499.4	40.11	PK	29	1.3	V	30.20	3.11	26.50	46.92	74.00	27.08	Spurious
2335.5	41.26	PK	61	1.1	V	29.00	2.98	26.50	46.74	74.00	27.26	Spurious
High channel (2452 MHz)												
2452.0	87.28	PK	44	1.2	V	30.20	3.11	26.50	94.09	/	/	Fund.
2452.0	72.03	Ave.	44	1.2	V	30.20	3.11	26.50	78.84	/	/	Fund.
2452.0	87.10	PK	357	1.2	H	30.20	3.11	26.50	93.91	/	/	Fund.
2452.0	73.28	Ave.	357	1.2	H	30.20	3.11	26.50	80.09	/	/	Fund.
9808.0	17.05	Ave.	56	1.1	V	39.80	5.99	26.50	36.34	54.00	17.66	Harmonic
4904.0	21.13	Ave.	58	1.2	V	34.60	4.40	26.50	33.63	54.00	20.37	Harmonic
7356.0	17.59	Ave.	48	1.3	H	37.20	5.21	26.50	33.50	54.00	20.50	Harmonic

9808.0	33.28	PK	56	1.1	V	39.80	5.99	26.50	52.57	74.00	21.43	Harmonic
2495.3	23.26	Ave.	209	1.2	V	30.20	3.11	26.50	30.07	54.00	23.93	Spurious
4904.0	36.96	PK	58	1.2	V	34.60	4.40	26.50	49.46	74.00	24.54	Harmonic
7356.0	33.25	PK	48	1.3	H	37.20	5.21	26.50	49.16	74.00	24.84	Harmonic
2382.6	22.07	Ave.	132	1.3	H	29.60	3.03	26.50	28.20	54.00	25.80	Spurious
2495.3	41.19	PK	209	1.2	V	30.20	3.11	26.50	48.00	74.00	26.00	Spurious
2333.7	22.28	Ave.	99	1.2	V	29.00	2.98	26.50	27.76	54.00	26.24	Spurious
2382.6	40.18	PK	132	1.3	H	29.60	3.03	26.50	46.31	74.00	27.69	Spurious
2333.7	39.67	PK	99	1.2	V	29.00	2.98	26.50	45.15	74.00	28.85	Spurious

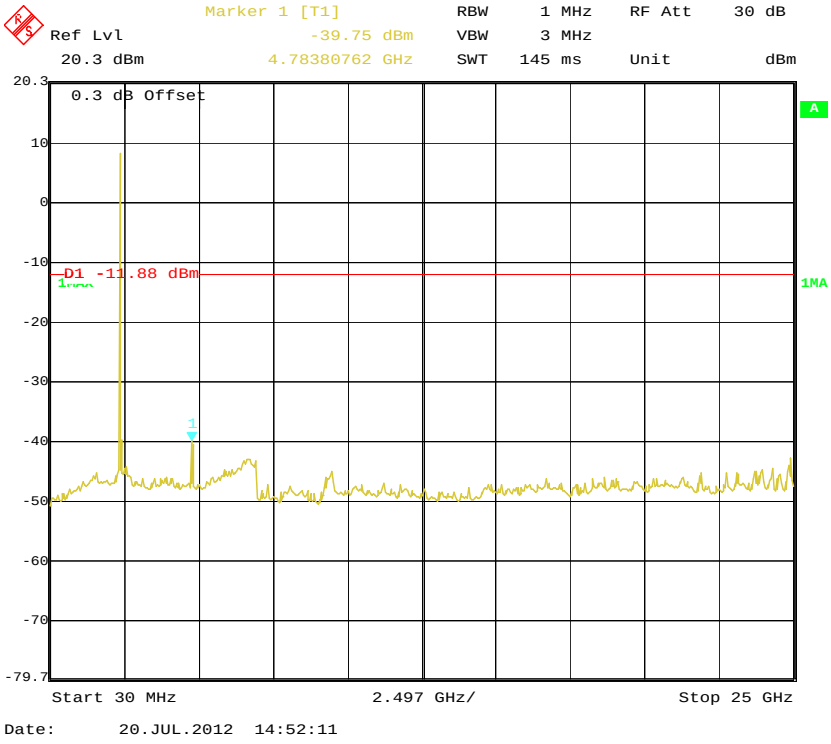
Note：

Absolute Level = SG Level - Cable loss + Antenna Gain

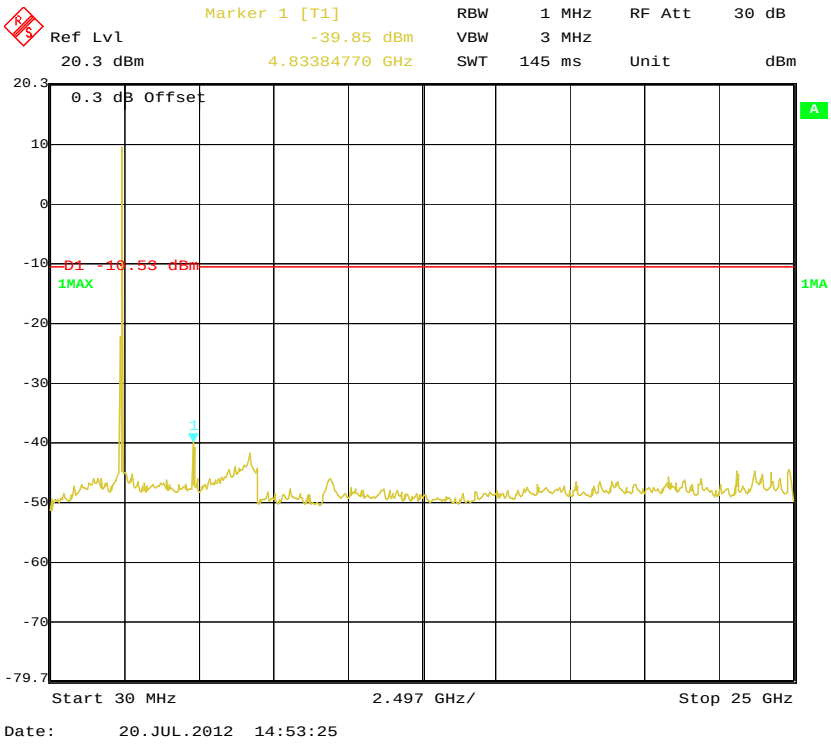
Margin = Limit- Corr. Amplitude

Antenna Port Conducted Spurious Emissions:

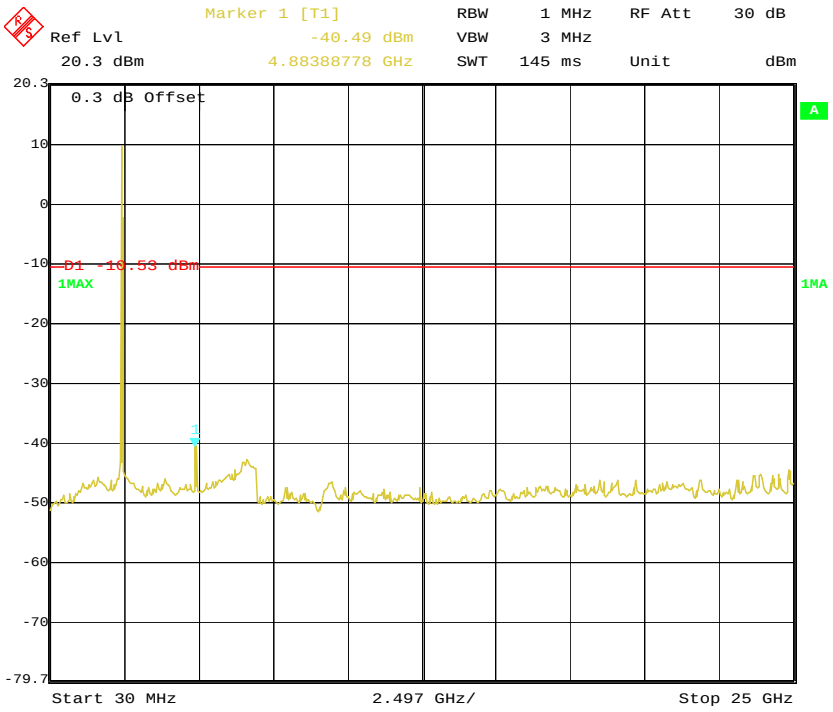
802.11b Low Channel



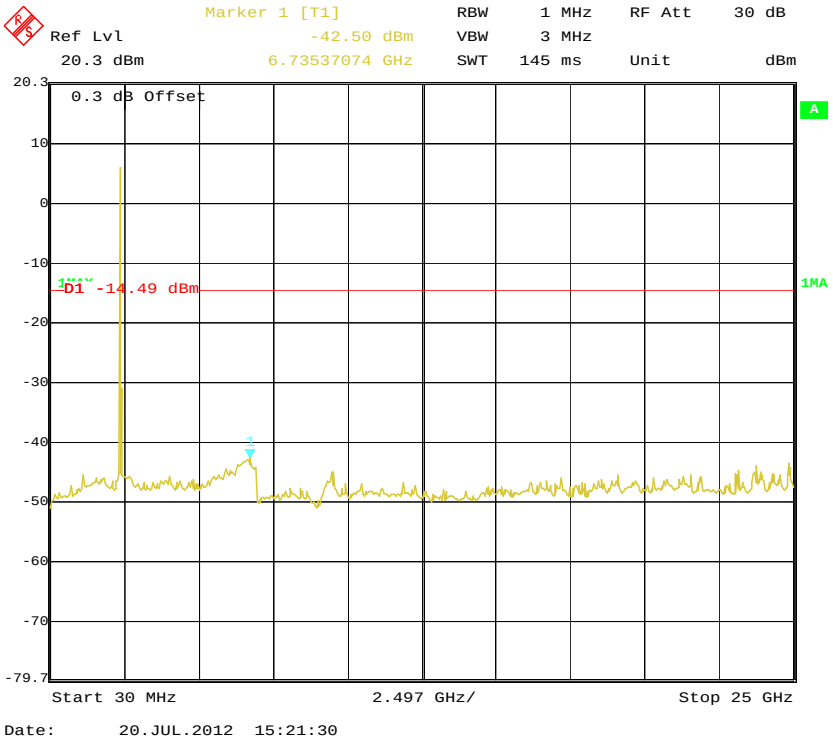
802.11b Middle Channel



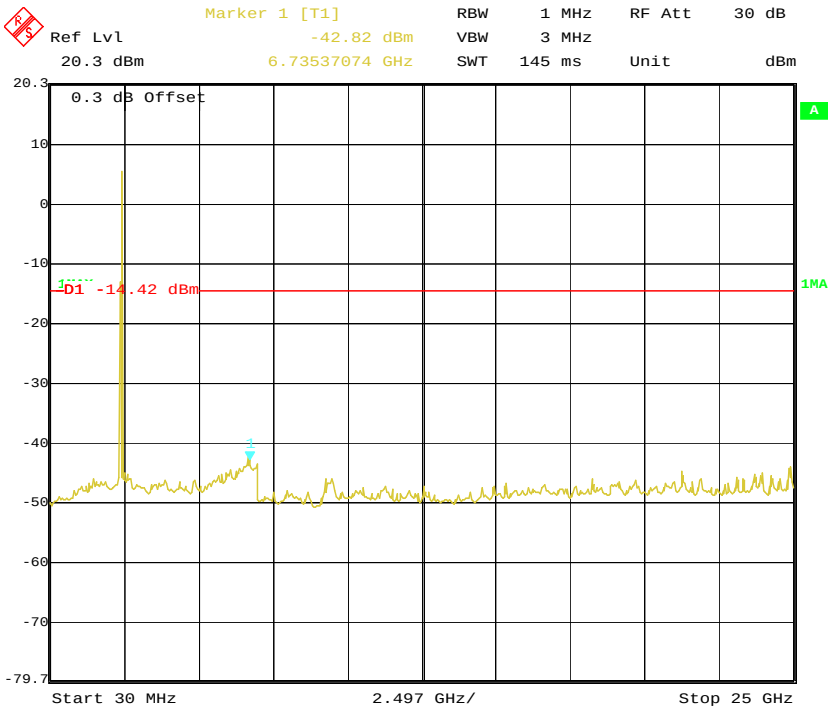
802.11b High Channel



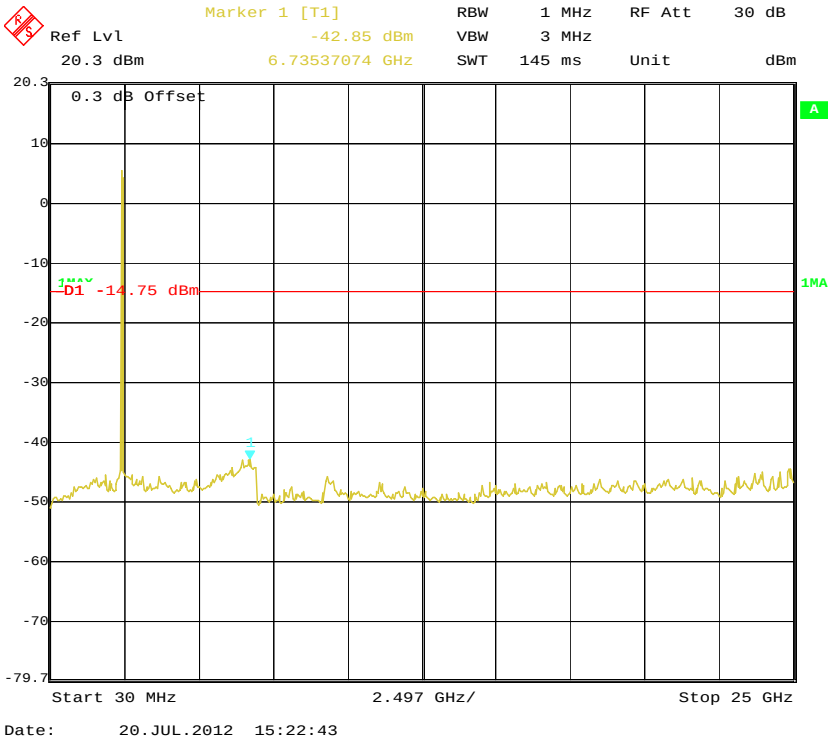
802.11g Low Channel



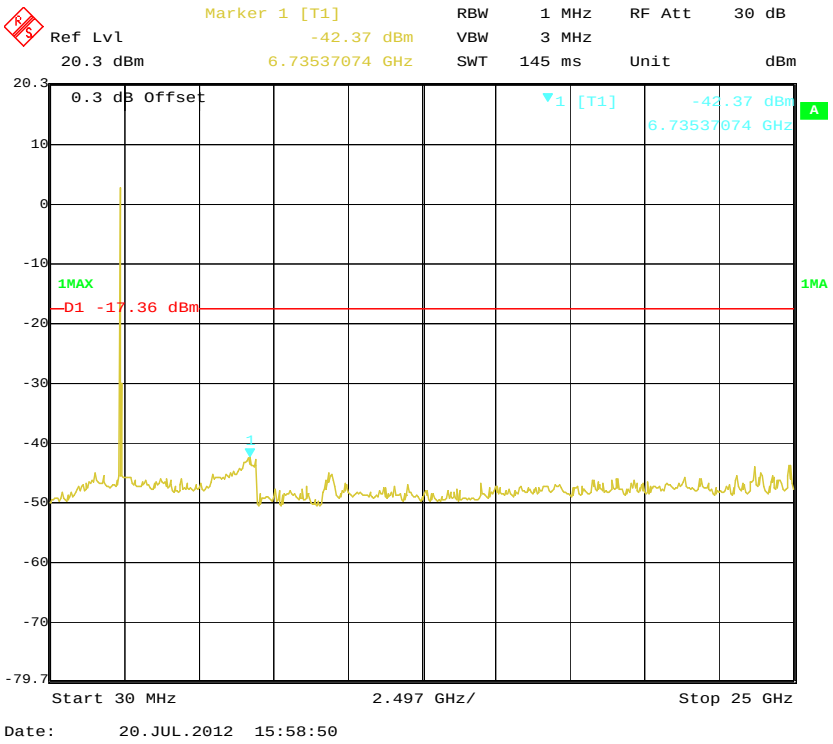
802.11g Middle Channel



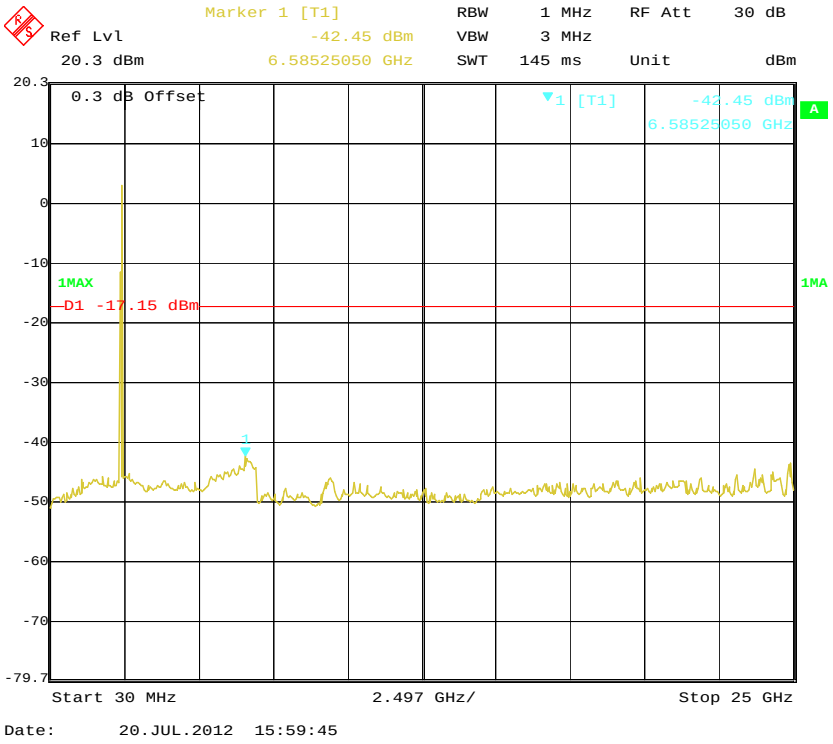
802.11g High Channel



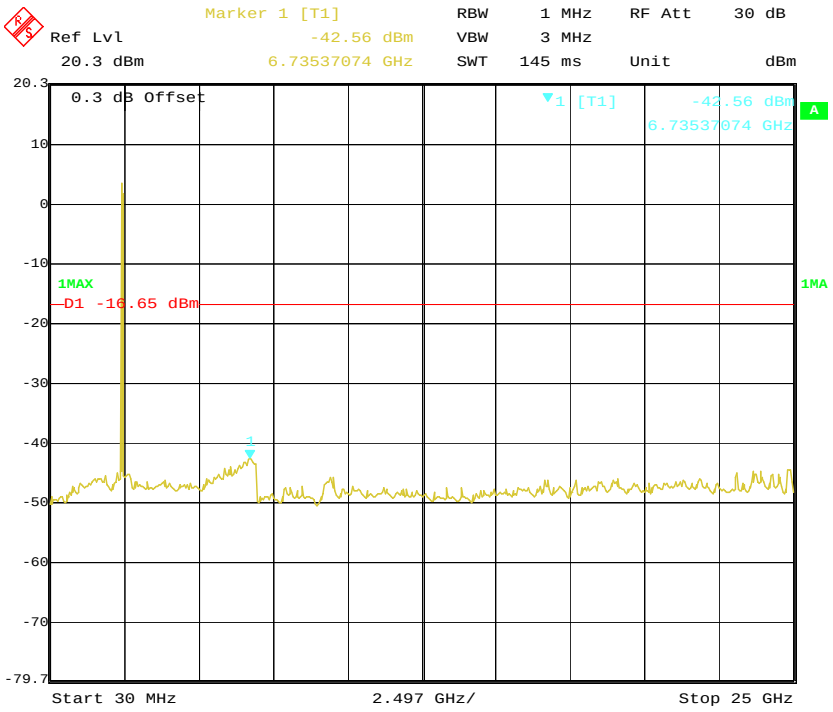
802.11n-HT20 Low Channel



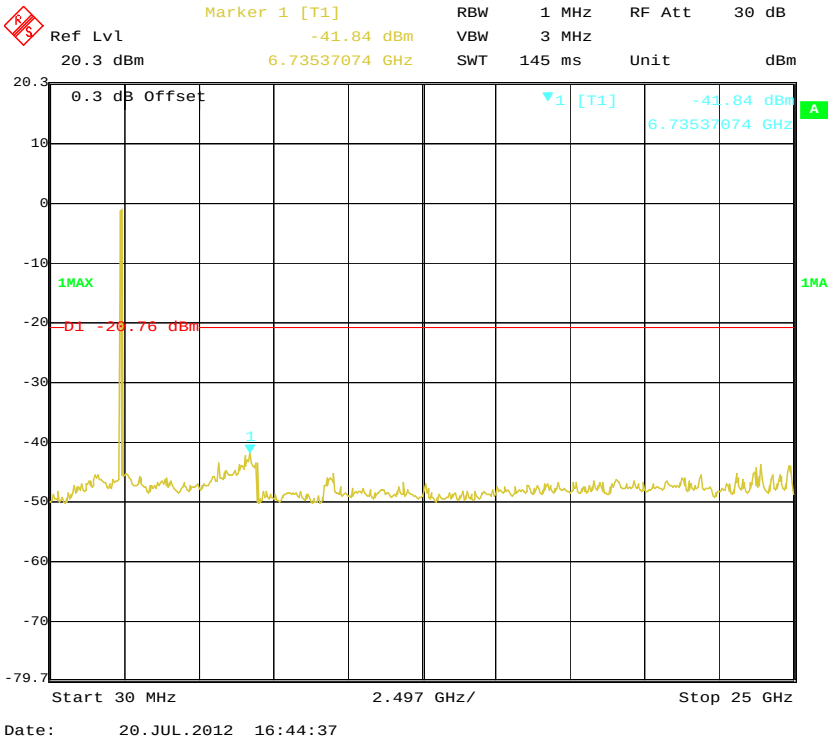
802.11n-HT20 Middle Channel



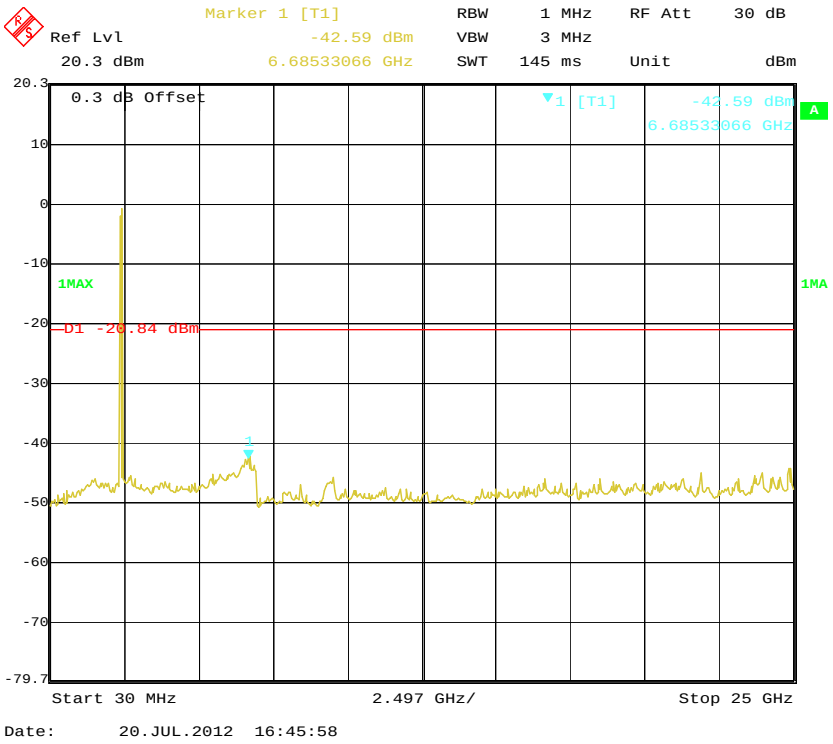
802.11n-HT20 High Channel



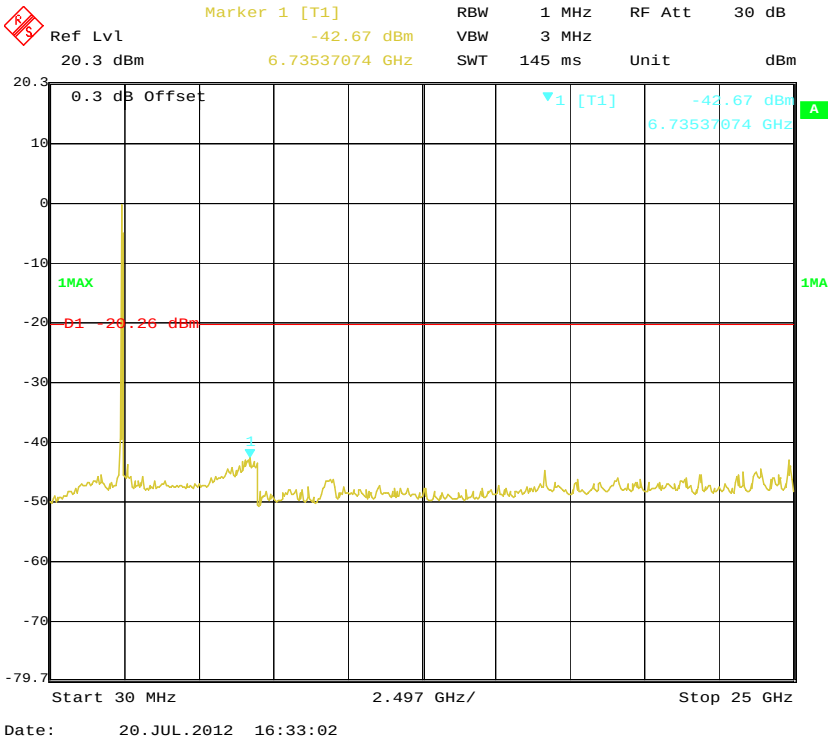
802.11n-HT40 Low Channel



802.11n-HT40 Middle Channel



802.11n-HT40 High Channel



FCC §15.247(a) (2) – 6dB 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.

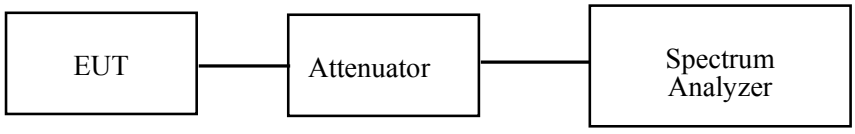
Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Rohde & Schwarz	Signal Analyzer	FSIQ26	8386001028	2011-11-24	2012-11-23

*** 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 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 Data

Environmental Conditions

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

The testing was performed by Eric Lee on 2012-07-20.

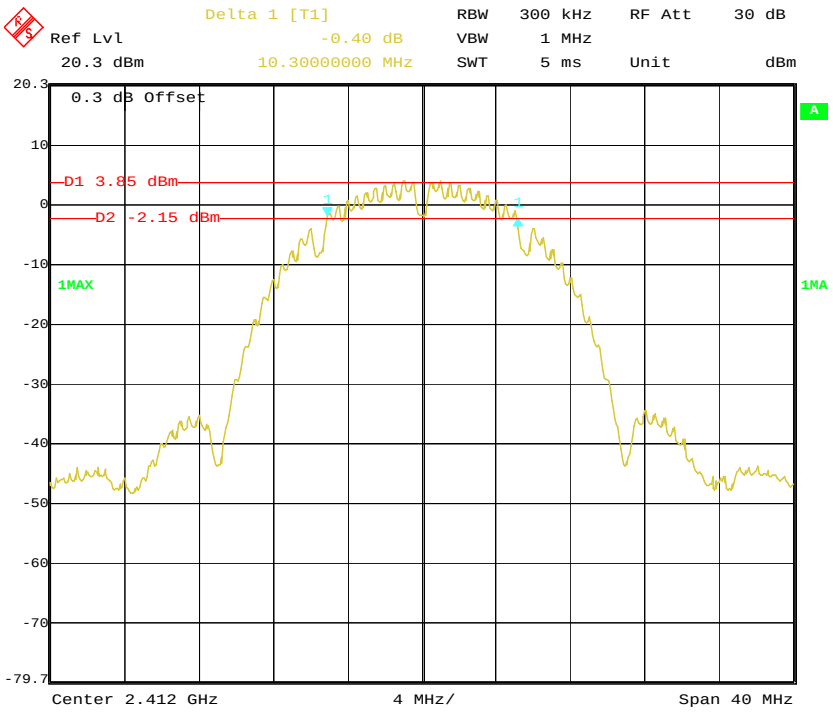
Test Mode: Transmitting

Test Result: Pass.

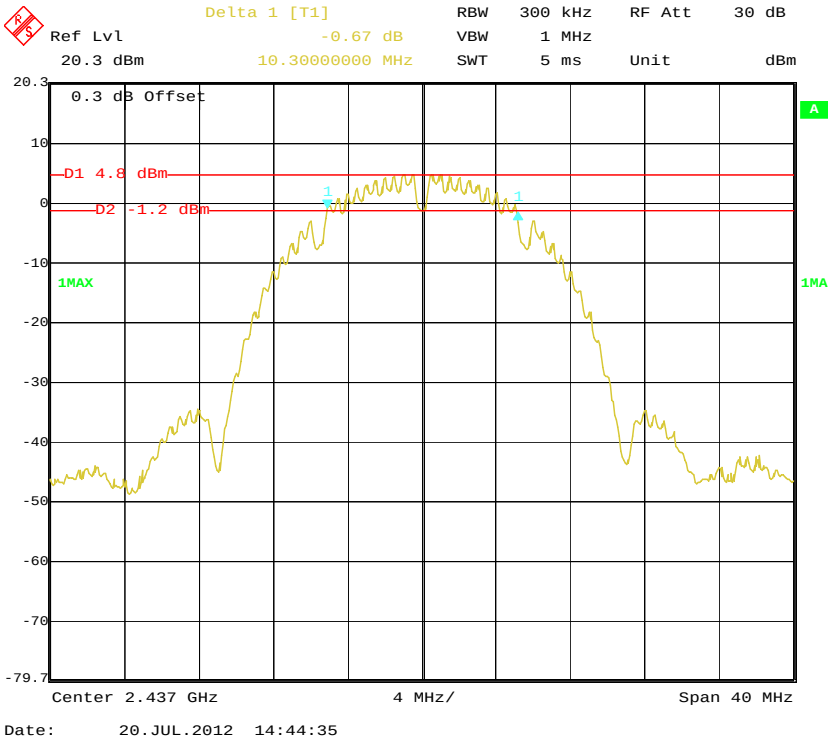
Please refer to the following tables and plots.

Channel	Frequency (MHz)	Data Rate (Mbps)	6dB bandwidth (MHz)	Limit (kHz)	Result
802.11b mode					
Low	2412	1	10.3	≥500	Pass
Middle	2437	1	10.3	≥500	Pass
High	2462	1	10.3	≥500	Pass
802.11g mode					
Low	2412	6	16.6	≥500	Pass
Middle	2437	6	16.6	≥500	Pass
High	2462	6	16.6	≥500	Pass
802.11n-HT20 mode					
Low	2412	6.5	17.7	≥500	Pass
Middle	2437	6.5	17.7	≥500	Pass
High	2462	6.5	17.7	≥500	Pass
802.11n-HT40 mode					
Low	2422	13.5	35.8	≥500	Pass
Middle	2437	13.5	35.8	≥500	Pass
High	2452	13.5	35.8	≥500	Pass

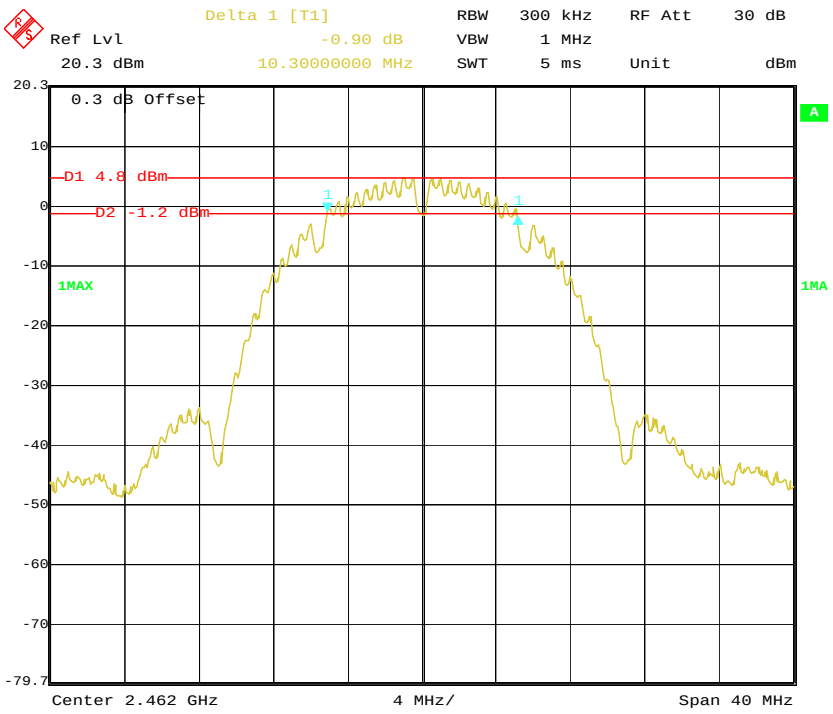
802.11b Low Channel



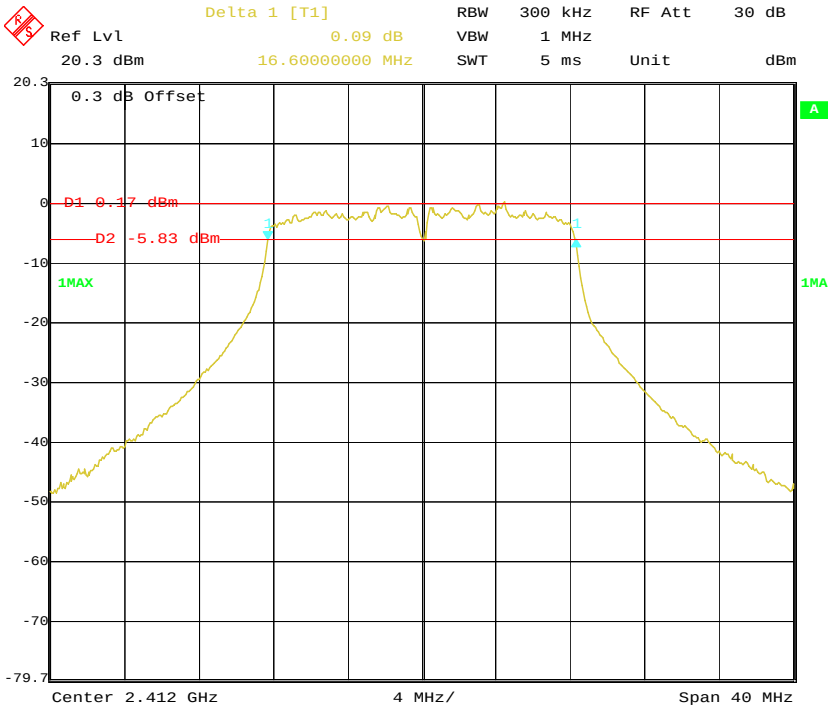
802.11b Middle Channel



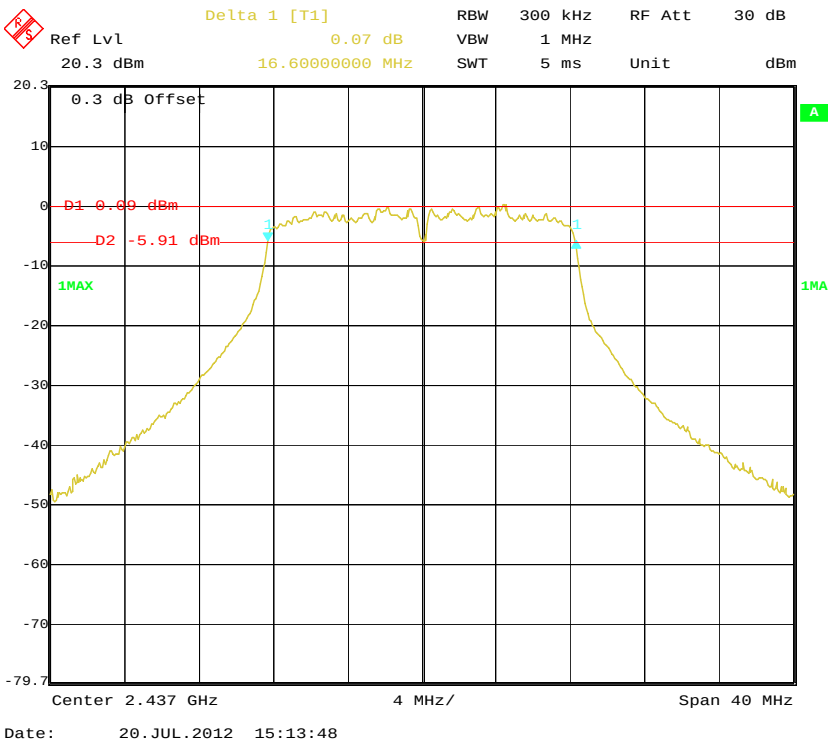
802.11b High Channel



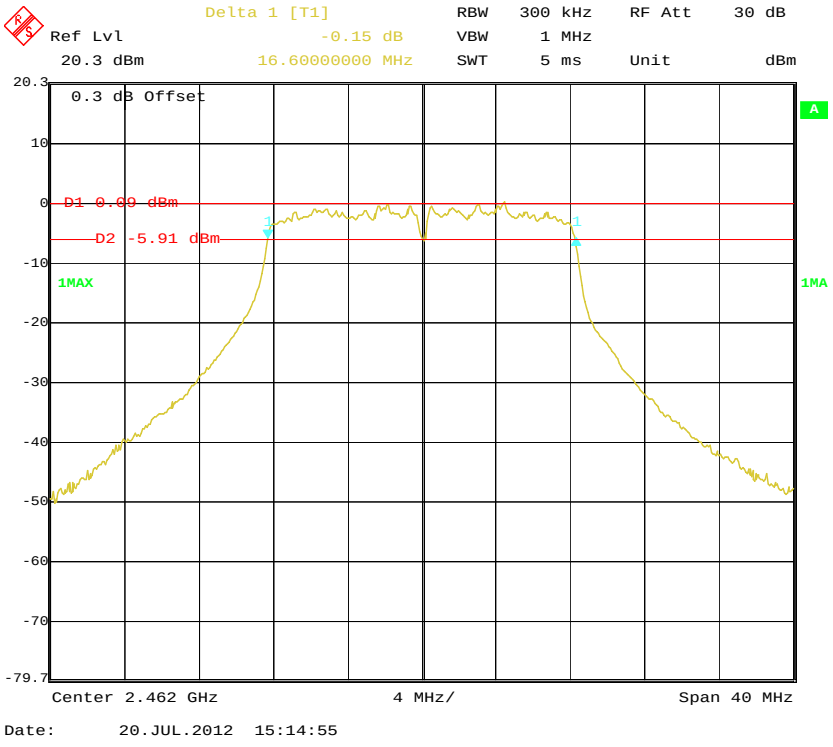
802.11g Low Channel



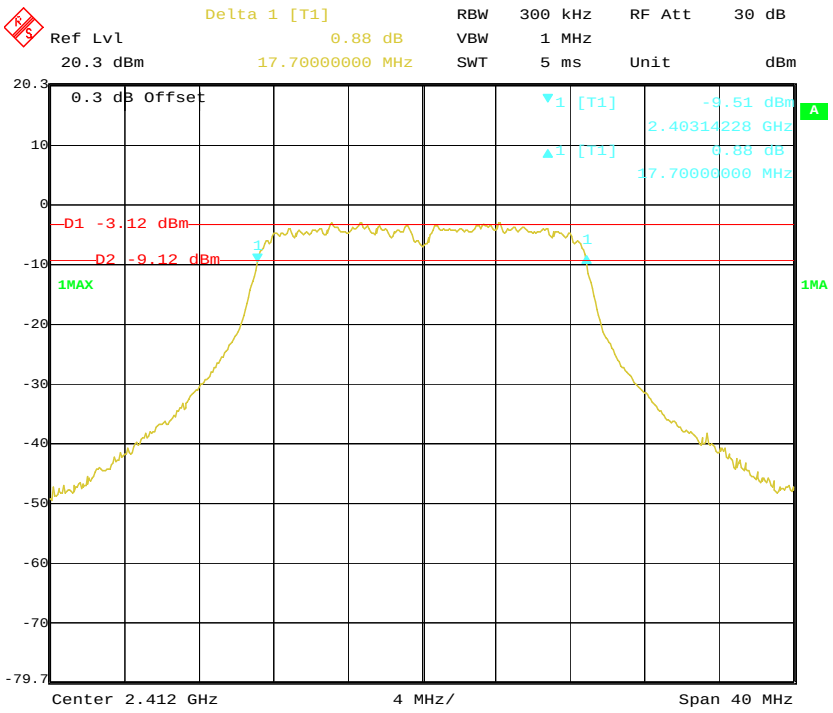
802.11g Middle Channel



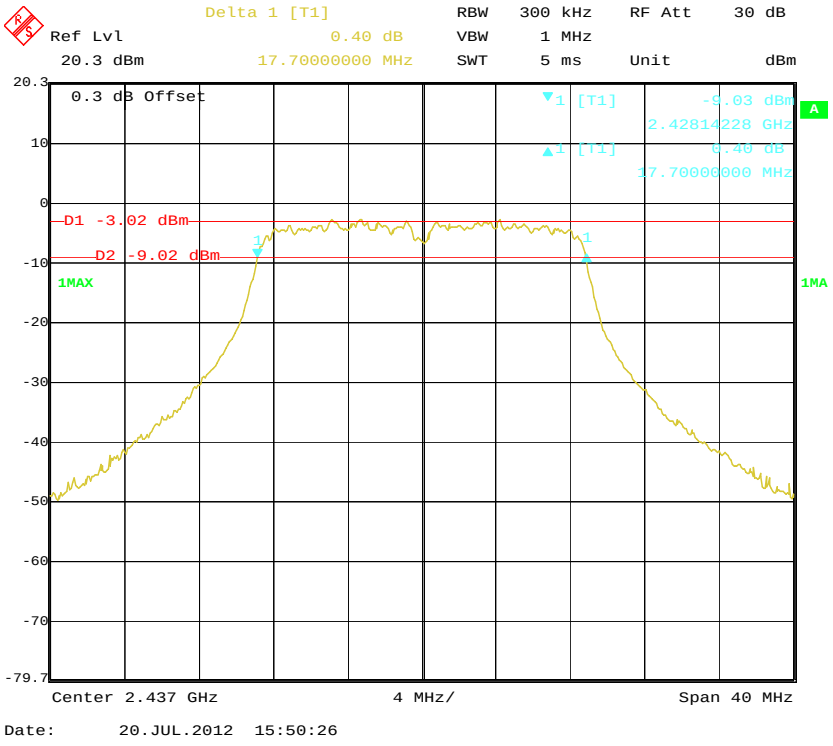
802.11g High Channel



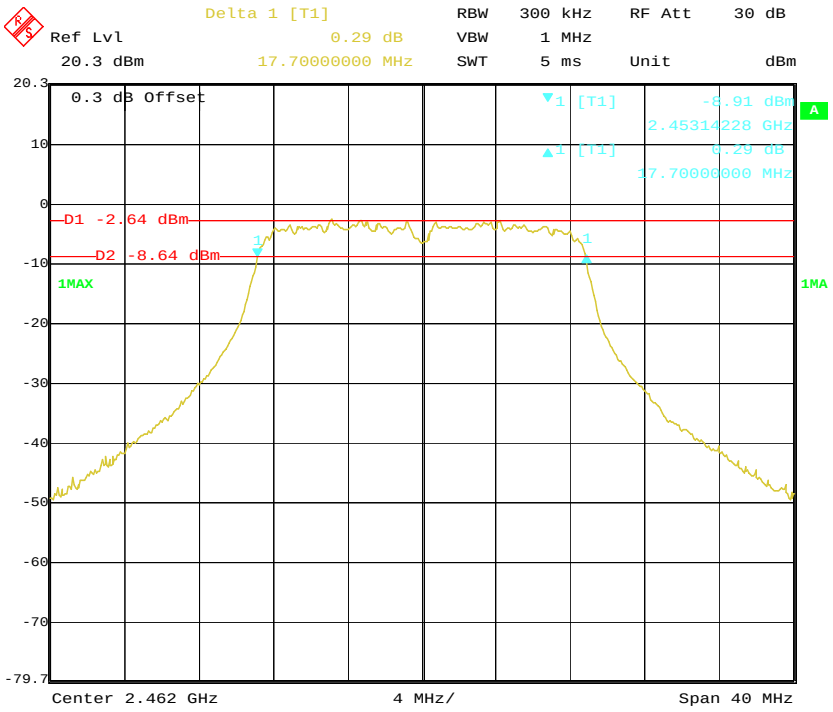
802.11n-HT20 Low Channel



802.11n-HT20 Middle Channel

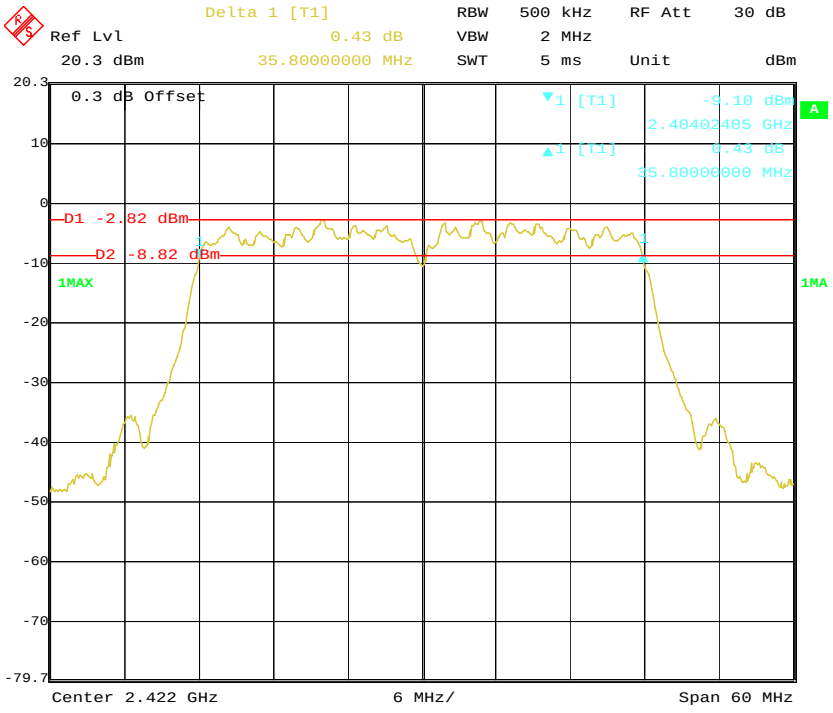


802.11n-HT20 High Channel



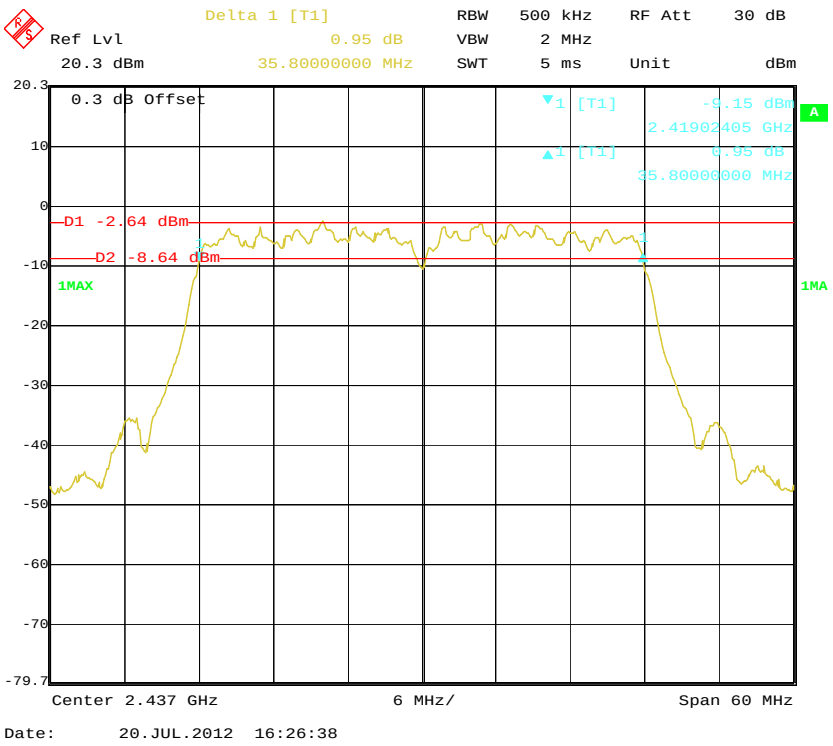
Date: 20.JUL.2012 15:52:25

802.11n-HT40

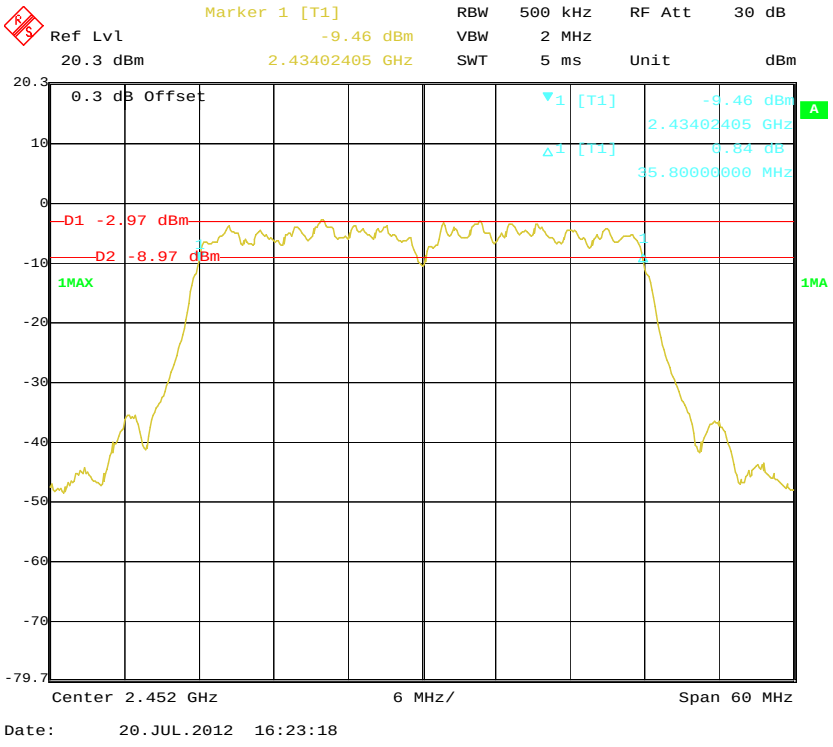


Date: 20.JUL.2012 16:29:12

802.11n-HT40 Middle Channel



802.11n-HT40 High Channel



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

Applicable Standard

According to §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.

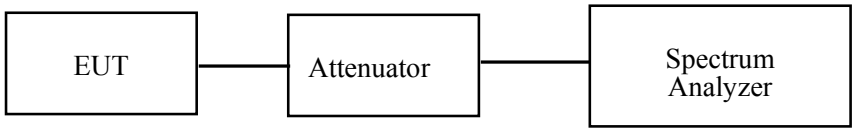
Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Rohde & Schwarz	Signal Analyzer	FSIQ26	8386001028	2011-11-24	2012-11-23

*** 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. 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 Data

Environmental Conditions

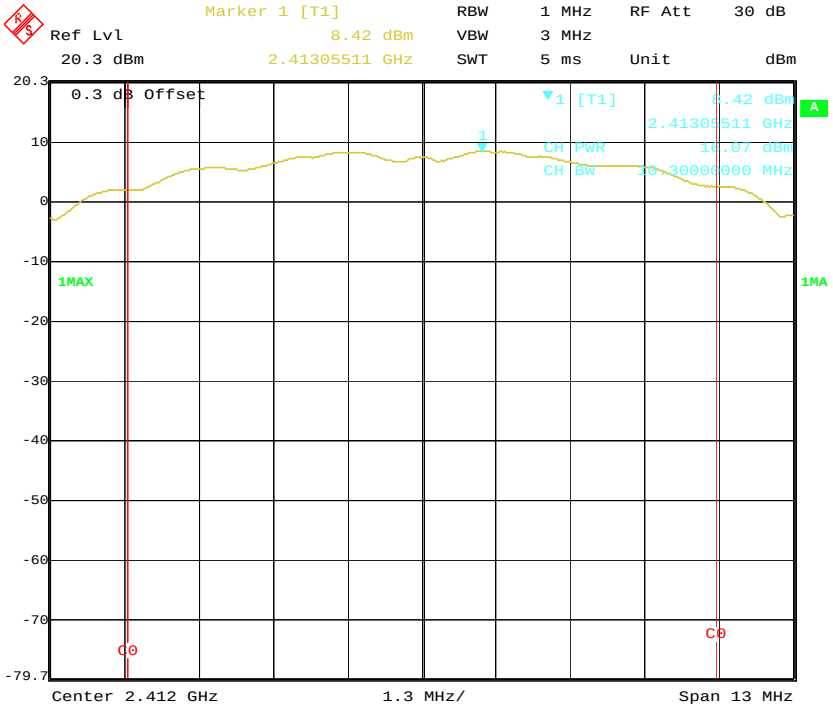
Temperature:	25 ° C
Relative Humidity:	56 %
ATM Pressure:	100.0 kPa

The testing was performed by Eric Lee on 2012-07-20.

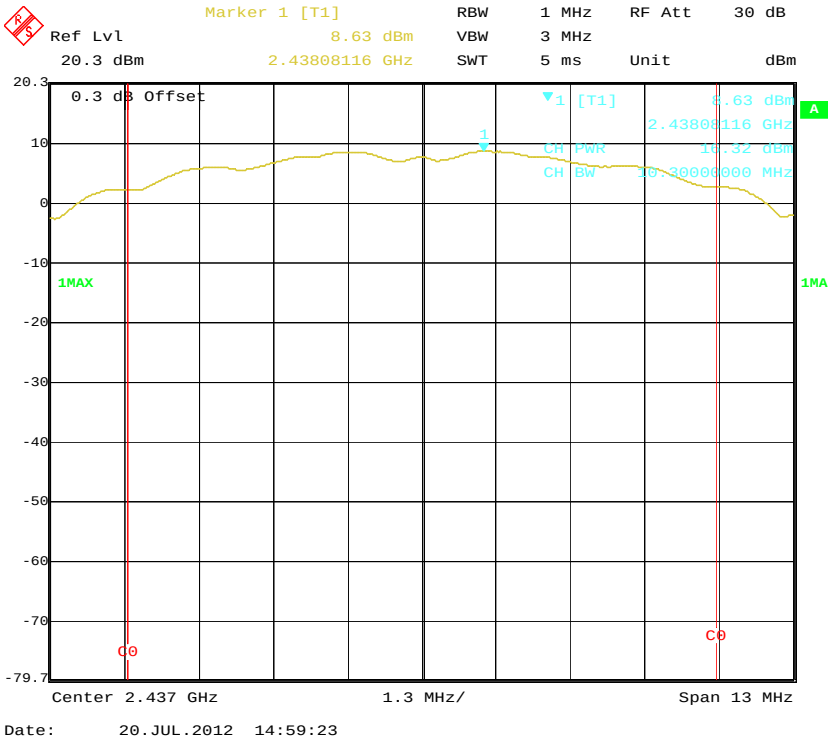
Test Mode: Transmitting

Channel	Frequency (MHz)	Data Rate (Mbps)	Output Power (dBm)	Limit (dBm)	Result
802.11b mode					
Low	2412	1	16.07	30	Pass
Middle	2437	1	16.32	30	Pass
High	2462	1	16.08	30	Pass
802.11g mode					
Low	2412	6	14.68	30	Pass
Middle	2437	6	15.09	30	Pass
High	2462	6	15.23	30	Pass
802.11n-HT20 mode					
Low	2412	6.5	14.01	30	Pass
Middle	2437	6.5	14.35	30	Pass
High	2462	6.5	14.22	30	Pass
802.11n-HT40 mode					
Low	2422	13.5	13.01	30	Pass
Middle	2437	13.5	13.07	30	Pass
High	2452	13.5	13.07	30	Pass

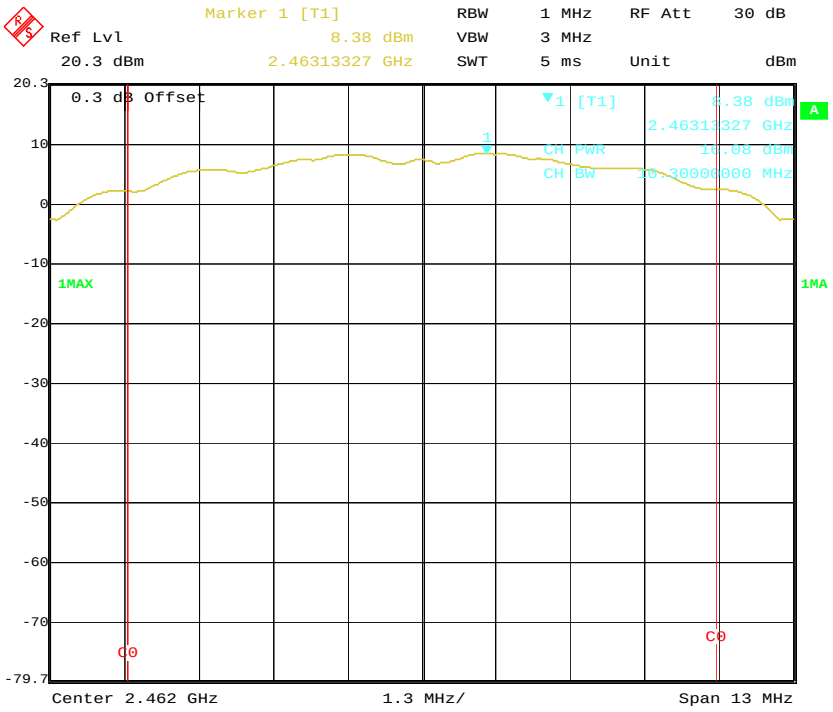
802.11b RF Output Power, Low Channel



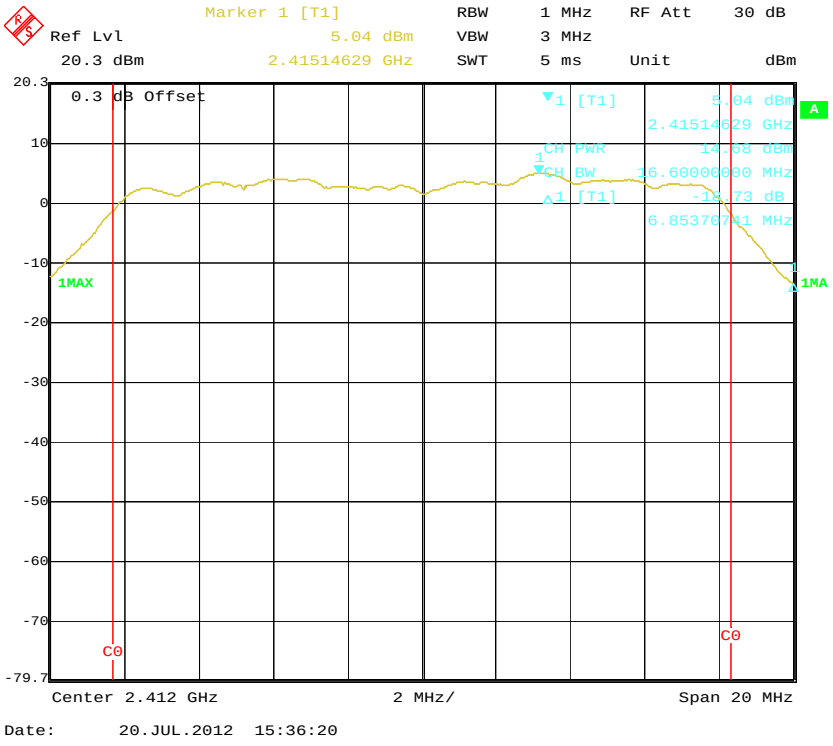
802.11b RF Output Power, Middle Channel



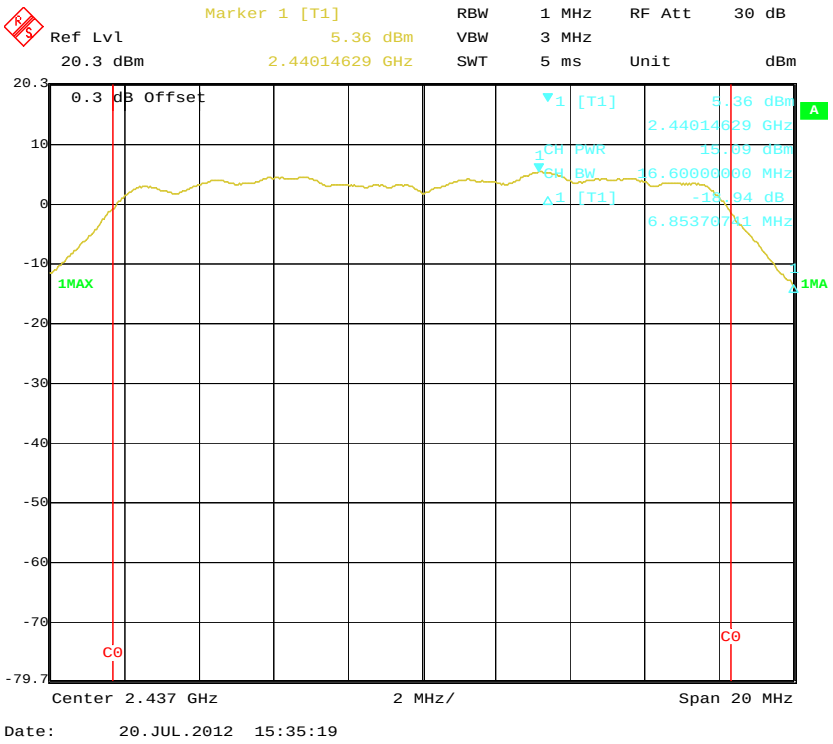
802.11b RF Output Power, High Channel



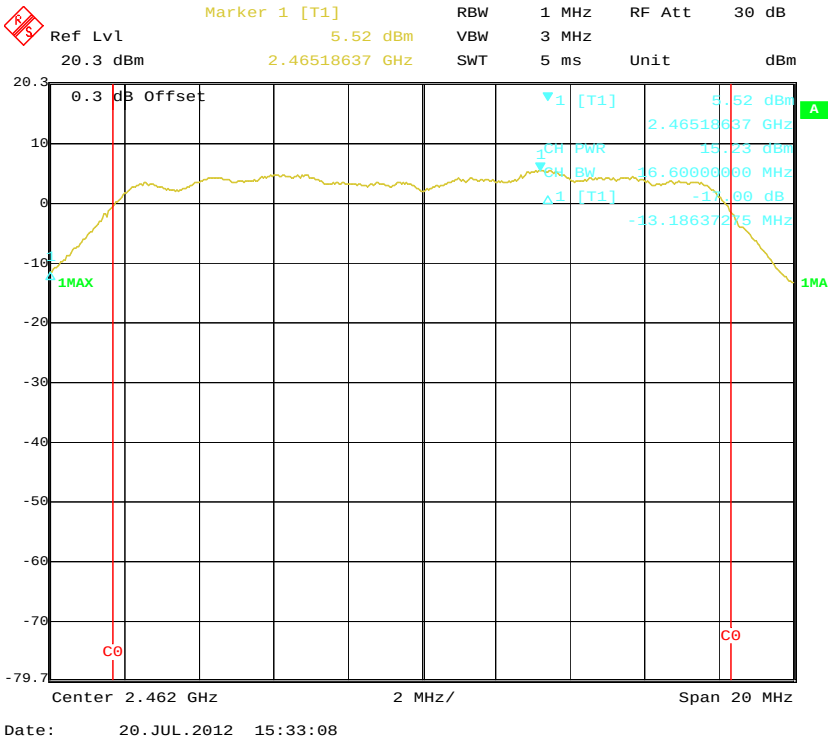
802.11g RF Output Power, Low Channel



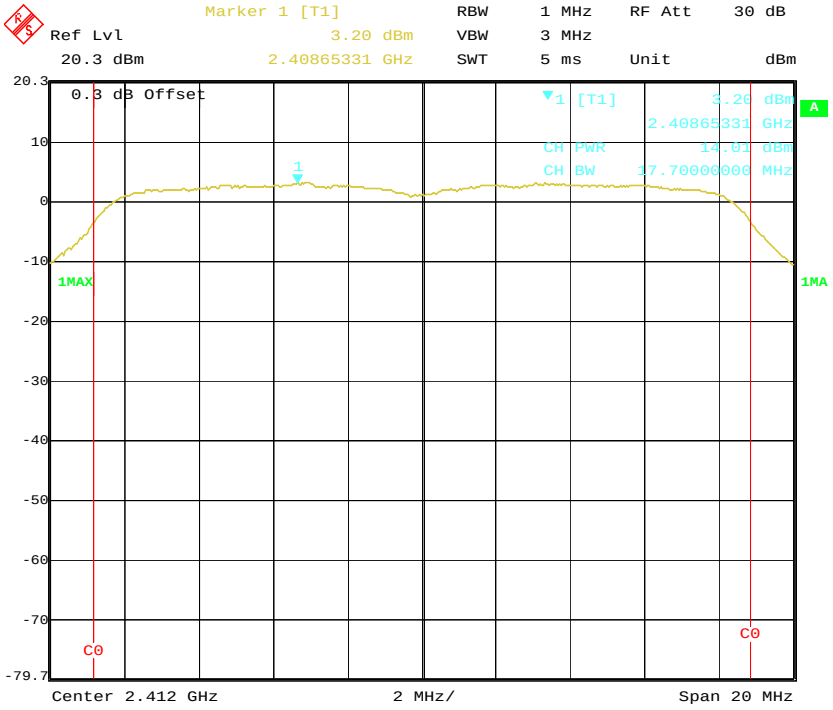
802.11g RF Output Power, Middle Channel



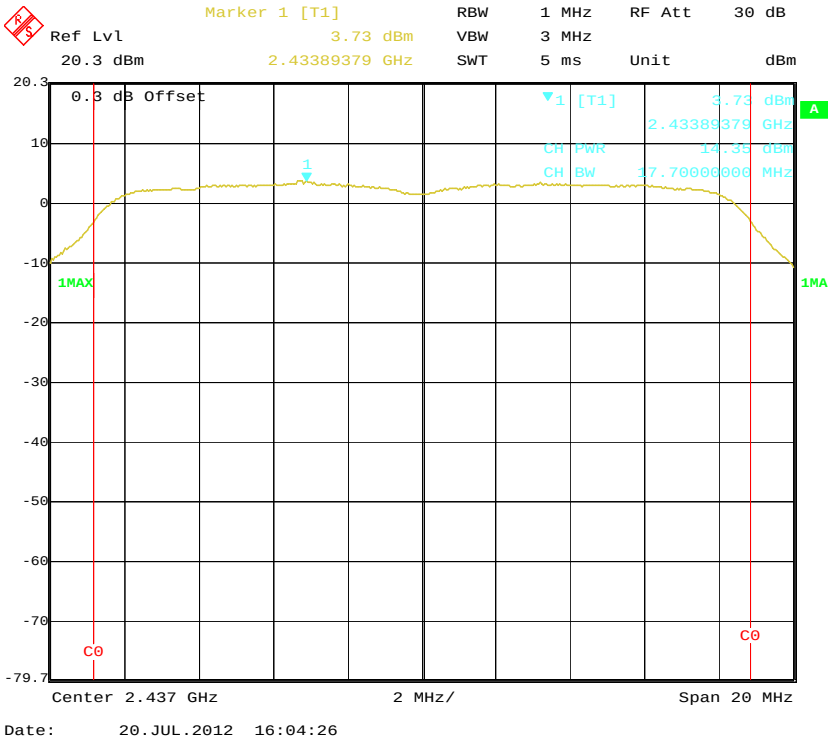
802.11g RF Output Power, High Channel



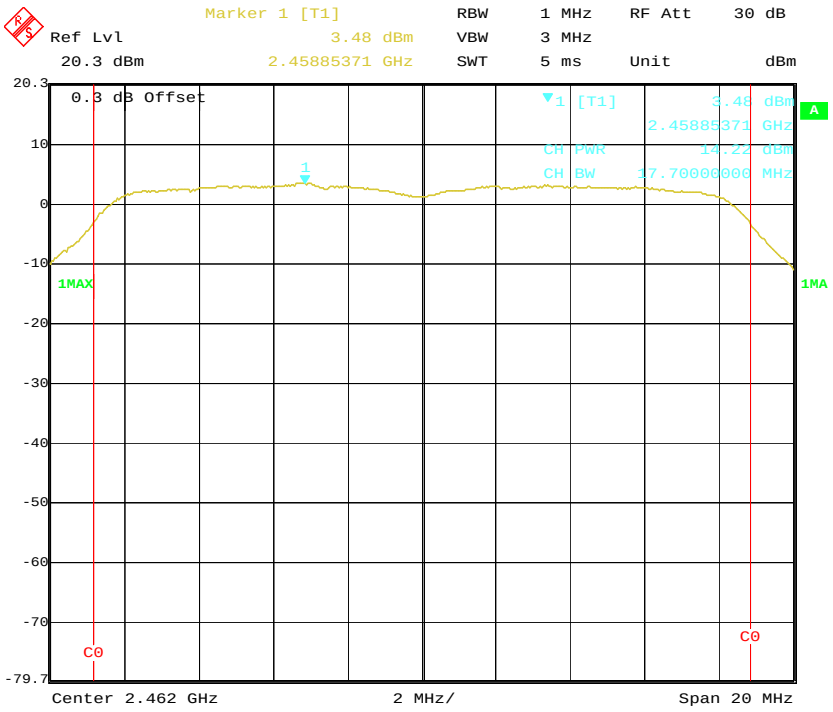
802.11n-HT20 RF Output Power, Low Channel



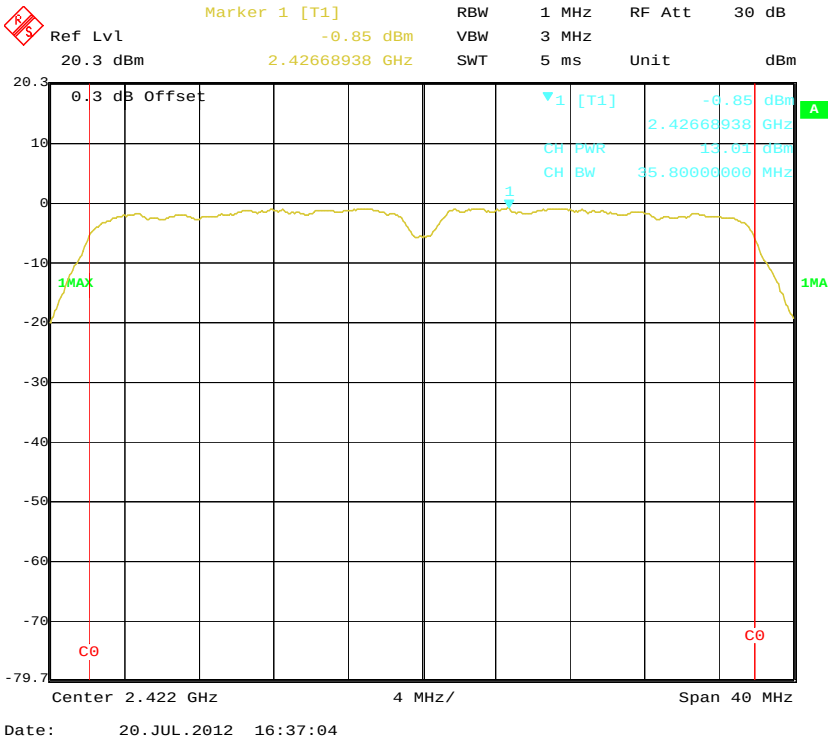
802.11n-HT20 RF Output Power, Middle Channel



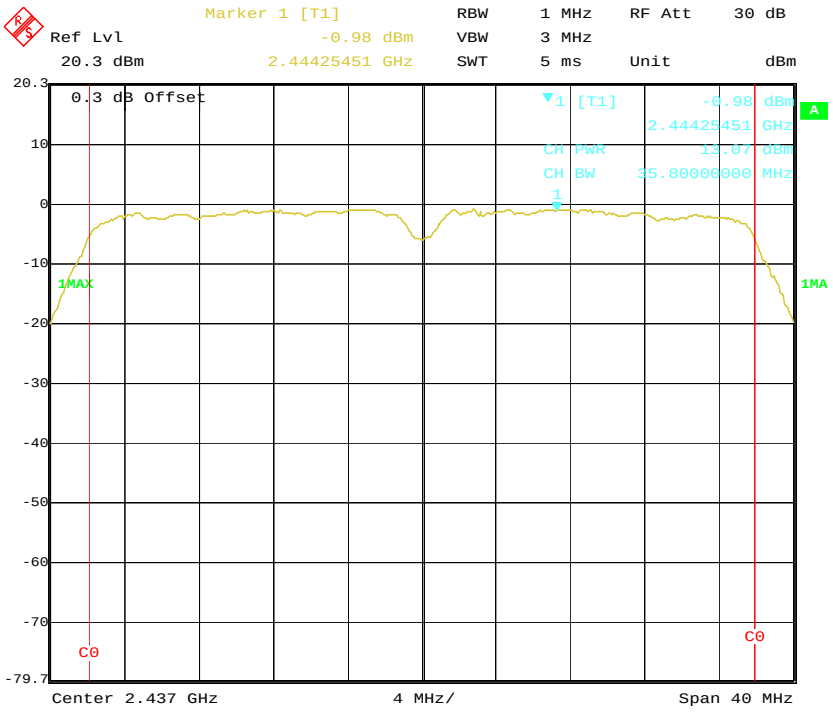
802.11n-HT20 RF Output Power, High Channel



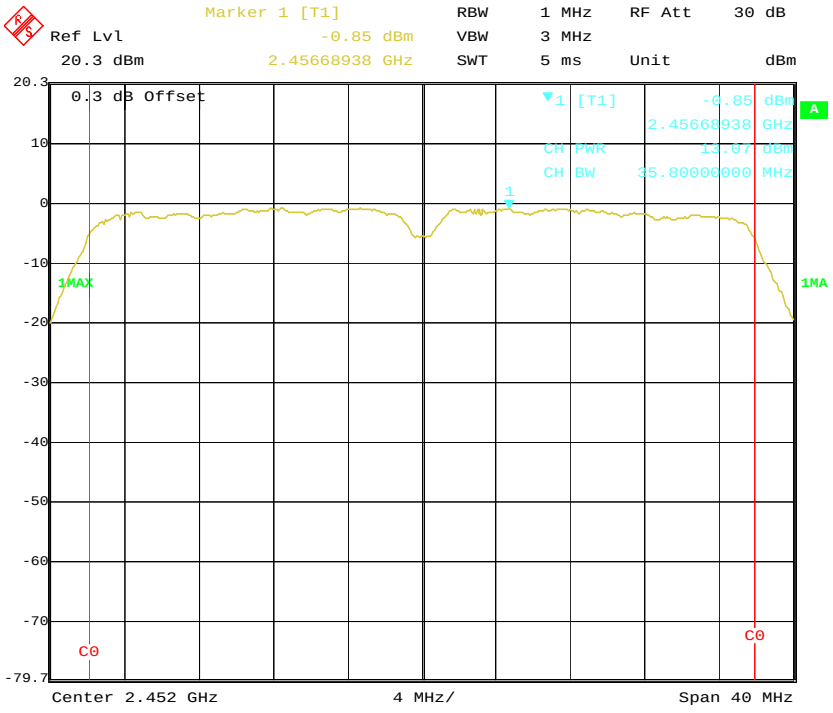
802.11n-HT40 RF Output Power, Low Channel



802.11n-HT40 RF Output Power, Middle Channel



802.11n-HT40 RF Output Power, High Channel



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)).

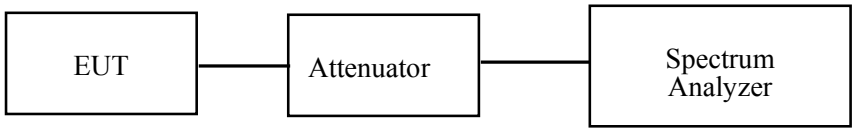
Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Rohde & Schwarz	Signal Analyzer	FSIQ26	8386001028	2011-11-24	2012-11-23

*** 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 100 kHz and VBW of spectrum analyzer to 300 kHz 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 Eric Lee on 2012-07-20.

Test Mode: Transmitting

Test Result: *Compliance.*

Frequency Band	Delta Peak to band emission (dBc)	⩾Limit (dBc)	Result
802.11b mode			
Left-band	40.19	20	Pass
Right-band	55.35	20	Pass
802.11g mode			
Left-band	31.69	20	Pass
Right-band	47.07	20	Pass
802.11n-HT20 mode			
Left-band	30.27	20	Pass
Right-band	43.83	20	Pass
802.11n-HT40 mode			
Left-band	31.83	20	Pass
Right-band	40.12	20	Pass

Please refer to following plots