

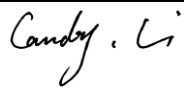

FCC PART 15.247
MEASUREMENT AND TEST REPORT

For

ShenZhen Gospell Smarthome Electronic Co., Ltd.

5Floor/Block 2, Vision (SZ) Park, Hi-Tech, Industrial Park, Shenzhen, China

FCC ID: TW5GD8713

Report Type: Original Report	Product Type: WIFI INSPECTION CAMERA
Test Engineer: Candy Li 	
Report Number: RSZ130320005-00	
Report Date: 2013-04-10	
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Note: This test report is prepared for the customer shown above and for the equipment described herein. It may not be duplicated or used in part without prior written consent from Bay Area Compliance Laboratories Corp.

TABLE OF CONTENTS

GENERAL INFORMATION.....	4
PRODUCT DESCRIPTION FOR EQUIPMENT UNDER TEST (EUT)	4
OBJECTIVE	4
RELATED SUBMITTAL(S)/GRANT(S).....	4
TEST METHODOLOGY	4
TEST FACILITY	4
SYSTEM TEST CONFIGURATION.....	5
DESCRIPTION OF TEST CONFIGURATION	5
EUT EXERCISE SOFTWARE	5
EQUIPMENT MODIFICATIONS	5
BLOCK DIAGRAM OF TEST SETUP	5
SUMMARY OF TEST RESULTS	6
FCC §15.247 (i) & §1.1307 (b) (1) & §2.1091- MAXIMUM PERMISSIBLE EXPOSURE (MPE).....	7
APPLICABLE STANDARD	7
FCC §15.203 - ANTENNA REQUIREMENT.....	8
APPLICABLE STANDARD	8
ANTENNA CONNECTOR CONSTRUCTION	8
FCC §15.209, §15.205 & §15.247(d) - SPURIOUS EMISSIONS.....	9
APPLICABLE STANDARD	9
MEASUREMENT UNCERTAINTY	9
EUT SETUP	9
EMI TEST RECEIVER & SPECTRUM ANALYZER SETUP	10
TEST EQUIPMENT LIST AND DETAILS.....	10
TEST PROCEDURE	10
CORRECTED AMPLITUDE & MARGIN CALCULATION	11
TEST RESULTS SUMMARY	11
TEST DATA	11
FCC §15.247(a) (2) – 6 dB BANDWIDTH TESTING.....	26
APPLICABLE STANDARD	26
TEST EQUIPMENT LIST AND DETAILS.....	26
TEST PROCEDURE	26
TEST DATA	26
FCC §15.247(b) (3) - MAXIMUM PEAK OUTPUT POWER	34
APPLICABLE STANDARD	34
TEST EQUIPMENT LIST AND DETAILS.....	34
TEST PROCEDURE	34
TEST DATA	34
FCC §15.247(d) – 100 kHz BANDWIDTH OF FREQUENCY BAND EDGE.....	42
APPLICABLE STANDARD	42
TEST EQUIPMENT LIST AND DETAILS.....	42
TEST PROCEDURE	42
TEST DATA	42

FCC §15.247(e) - POWER SPECTRAL DENSITY47
 APPLICABLE STANDARD47
 TEST EQUIPMENT LIST AND DETAILS.....47
 TEST PROCEDURE47
 TEST DATA47

GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

The *ShenZhen Gospell Smarthome Electronic Co., Ltd.*'s product, model number: *GD8713 (FCC ID: TW5GD8713)* or the "EUT" as referred to in this report was a *WIFI INSPECTION CAMERA*, which was measured approximately: 23.35 cm (L) x 12.0 cm (W) x 4.25 cm (H), rated with input voltage: 4×AA batteries.

** All measurement and test data in this report was gathered from production sample serial number: 1303064 (Assigned by BACL, Shenzhen). The EUT was received on 2013-03-20.*

Objective

This Type approval report is prepared on behalf of *ShenZhen Gospell Smarthome Electronic 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)

No related submittal(s).

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 at 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 C63.4-2003.

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.

SYSTEM TEST CONFIGURATION

Description of Test Configuration

For 802.11b, 802.11g mode, 802.11n-HT20 and 802.11n-HT40 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 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

Run CMD.exe and input relative command which provided by applicant.

The test was performed under:

802.11b: Data rate: 1 Mbps.

802.11g: Data rate: 6 Mbps.

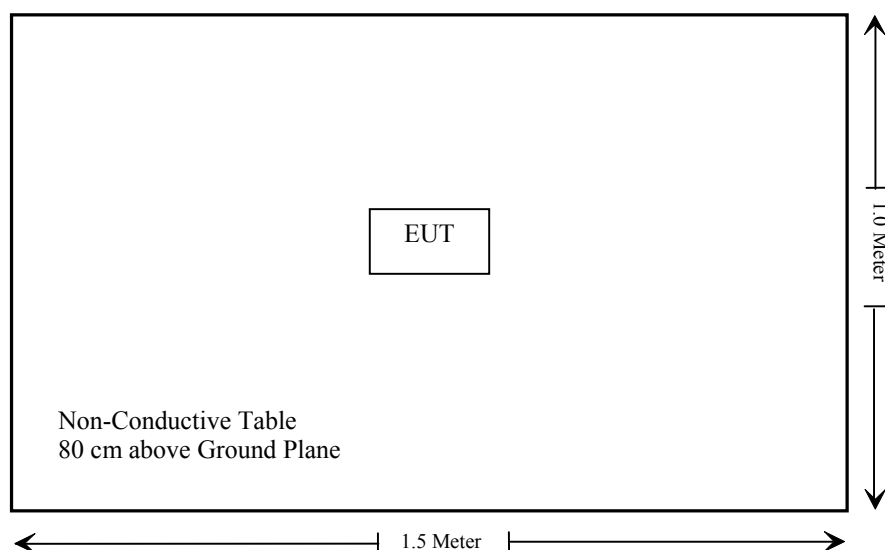
802.11n-HT20: Data rate: 6.5 Mbps.

802.11n-HT40: Data rate: 13.5 Mbps.

Equipment Modifications

No modification was made to the unit tested.

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	N/A
§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

Note: The EUT was powered by battery.

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

$$S = \frac{PG}{4\pi R^2}$$

S = power density (in appropriate units, e.g. mW/cm²)

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	2462	0	1.0	13.17	20.75	20	0.00413	1.0
802.11g	2462	0	1.0	12.36	17.22	20	0.00343	1.0
802.11n-HT20	2412	0	1.0	11.61	14.49	20	0.00288	1.0
802.11n-HT40	2437	0	1.0	10.64	11.59	20	0.00231	1.0

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 6 dBi 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 an integrated antenna arrangement, 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 §15.209, §15.205 & §15.247(d) - SPURIOUS EMISSIONS

Applicable Standard

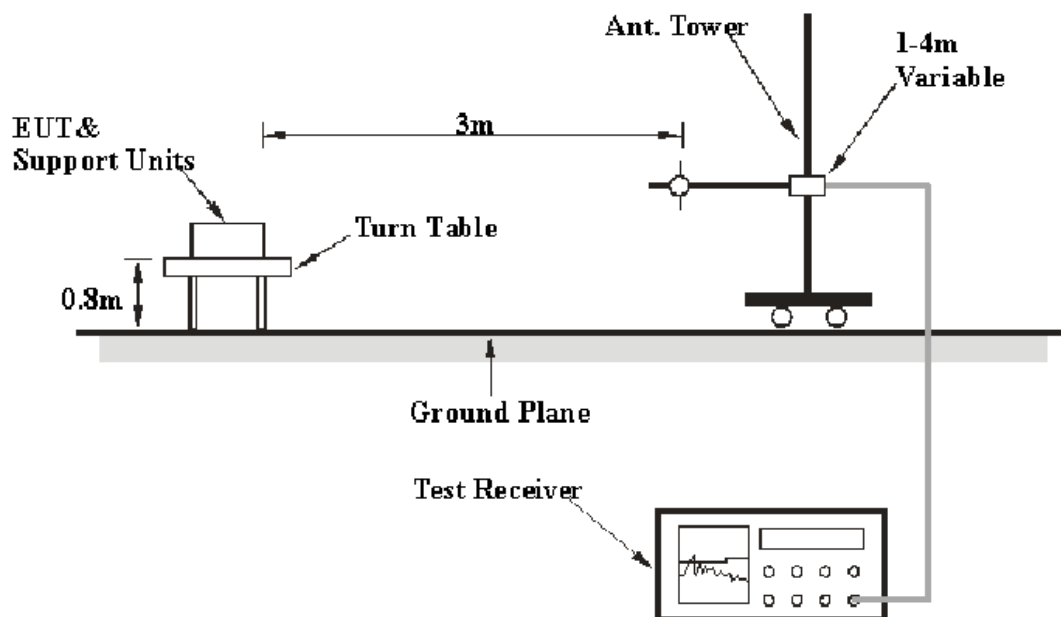
FCC §15.247 (d); §15.209; §15.205;

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), and the uncertainty will not be taken into consideration for all the test data recorded in the report.

EUT Setup



The radiated emission tests were performed in the 3 meters 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.

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	IF B/W	Detector
30 MHz – 1000 MHz	100 kHz	300 kHz	120 kHz	QP
Above 1 GHz	1MHz	3 MHz	/	PK
	1MHz	10 Hz	/	Ave.

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
HP	Amplifier	8447E	1937A01046	2012-11-24	2013-11-23
Rohde & Schwarz	EMI Test Receiver	ESCI	101122	2012-08-08	2013-08-07
Sunol Sciences	Broadband Antenna	JB1	A040904-2	2011-11-28	2014-11-27
Mini-Circuits	Amplifier	ZVA-213+	N/A	2012-11-24	2013-11-23
Sunol Sciences	Horn Antenna	DRH-118	A052304	2011-12-01	2014-11-30
Rohde & Schwarz	Signal Analyzer	FSIQ26	8386001028	2012-11-24	2013-11-23
the electro-Mechanics Co.	Horn Antenna	3116	9510-2270	2010-10-14	2013-10-13

* **Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Shenzhen) attests that all calibrations have been performed in accordance to requirements, traceable to National Primary Standards and International System of Units (SI).

Test Procedure

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:

$$\text{Corrected Amplitude} = \text{Meter Reading} + \text{Antenna Factor} + \text{Cable Loss} - \text{Amplifier Gain}$$

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:

$$\text{Margin} = \text{Limit} - \text{Corrected Amplitude}$$

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:

4.92 dB at 9848 MHz in the **Vertical** polarization for mode 802.11n-HT20

Test Data

Environmental Conditions

Temperature:	24 °C
Relative Humidity:	55 %
ATM Pressure:	100.0kPa

The testing was performed by Candy Li on 2013-04-02.

Test Mode: Transmitting

30 MHz-25 GHz**802.11b mode:**

Frequency (MHz)	Receiver		Turntable Degree	Rx Antenna		Corrected Factor (dB)	Corrected Amplitude (dBμV/m)	FCC Part 15.247	
	Reading (dBμV)	Detector (PK/QP/Ave.)		Height (m)	Polar (H/V)			Limit (dBμV/m)	Margin (dB)
Low Channel (2412 MHz)									
2412	99.67	PK	147	1.0	H	6.13	105.80	/	/
2412	95.51	Ave.	147	1.0	H	6.13	101.64	/	/
2412	96.88	PK	360	1.1	V	6.13	103.01	/	/
2412	93.23	Ave.	360	1.1	V	6.13	99.36	/	/
2388.4	61.76	PK	193	1.3	H	6.13	67.89	74	6.11
364.51	51.89	QP	37	1.1	H	-13.1	38.79	46	7.21
2386.5	59.57	PK	240	1.2	H	6.13	65.70	74	8.30
9648	26.15	Ave.	0	1.3	V	19.29	45.44	54	8.56
4824	52.51	PK	85	1.3	H	12.40	64.91	74	9.09
7236	27.28	Ave.	203	1.3	V	16.62	43.90	54	10.10
7236	46.78	PK	203	1.3	V	16.62	63.40	74	10.60
4824	29.36	Ave.	85	1.3	H	12.40	41.76	54	12.24
9648	39.83	PK	0	1.3	V	19.29	59.12	74	14.88
2388.4	29.63	Ave.	193	1.3	H	6.13	35.76	54	18.24
2386.5	28.75	Ave.	240	1.2	H	6.13	34.88	54	19.12
2487.1	26.37	Ave.	94	1.1	V	7.21	33.58	54	20.42
2487.1	42.63	PK	94	1.1	V	7.21	49.84	74	24.16
Middle Channel (2437 MHz)									
2437	98.58	PK	260	1.2	H	6.13	104.71	/	/
2437	95.96	Ave.	260	1.2	H	6.13	102.09	/	/
2437	97.65	PK	67	1.1	V	6.13	103.78	/	/
2437	93.90	Ave.	67	1.1	V	6.13	100.03	/	/
364.51	51.91	QP	163	1.1	H	-13.1	38.81	46	7.19
9748	26.63	Ave.	257	1.1	V	19.40	46.03	54	7.97
4874	52.35	PK	0	1.2	V	12.46	64.81	74	9.19
7311	27.92	Ave.	96	1.1	H	16.49	44.41	54	9.59
7311	47.17	PK	96	1.1	H	16.49	63.66	74	10.34
4874	29.14	Ave.	0	1.2	V	12.46	41.60	54	12.40
9748	40.23	PK	257	1.1	V	19.40	59.63	74	14.37
2379.4	30.88	Ave.	360	1.1	V	7.21	38.09	54	15.91
2353.2	28.52	Ave.	0	1.2	V	7.21	35.73	54	18.27
2379.4	47.22	PK	360	1.1	V	7.21	54.43	74	19.57
2484.8	26.92	Ave.	280	1.0	V	7.21	34.13	54	19.87
2353.2	44.83	PK	0	1.2	V	7.21	52.04	74	21.96
2484.8	43.12	PK	280	1.0	V	7.21	50.33	74	23.67

Frequency (MHz)	Receiver		Turntable Degree	Rx Antenna		Corrected Factor (dB)	Corrected Amplitude (dBμV/m)	FCC Part 15.247	
	Reading (dBμV)	Detector (PK/QP/Ave.)		Height (m)	Polar (H/V)			Limit (dBμV/m)	Margin (dB)
High Channel(2462 MHz)									
2462	98.45	PK	197	1.0	H	7.21	105.66	/	/
2462	94.42	Ave.	197	1.0	H	7.21	101.63	/	/
2462	98.68	PK	232	1.0	V	7.21	105.89	/	/
2462	94.36	Ave.	232	1.0	V	7.21	101.57	/	/
9848	27.90	Ave.	360	1.0	V	19.39	47.29	54	6.71
364.51	52.18	QP	216	1.2	H	-13.1	39.08	46	6.92
7386	29.28	Ave.	0	1.1	V	15.91	45.19	54	8.81
4924	52.33	PK	360	1.3	H	12.50	64.83	74	9.17
2489.6	57.43	PK	0	1.1	H	7.21	64.64	74	9.36
7386	47.76	PK	0	1.1	V	15.91	63.67	74	10.33
4924	29.92	Ave.	360	1.3	H	12.50	42.42	54	11.58
2491.3	54.99	PK	181	1.1	H	7.21	62.20	74	11.80
9848	40.62	PK	360	1.0	V	19.39	60.01	74	13.99
2489.6	30.86	Ave.	0	1.1	H	7.21	38.07	54	15.93
2491.3	29.99	Ave.	181	1.1	H	7.21	37.20	54	16.80
2383.6	27.02	Ave.	274	1.3	V	6.13	33.15	54	20.85
2383.6	43.67	PK	274	1.3	V	6.13	49.80	74	24.20

802.11g mode:

Frequency (MHz)	Receiver		Turntable Degree	Rx Antenna		Corrected Factor (dB)	Corrected Amplitude (dBµV/m)	FCC Part 15.247	
	Reading (dBµV)	Detector (PK/QP/Ave.)		Height (m)	Polar (H/V)			Limit (dBµV/m)	Margin (dB)
Low Channel (2412 MHz)									
2412	94.29	PK	252	1.2	H	6.13	100.42	/	/
2412	85.67	Ave.	252	1.2	H	6.13	91.80	/	/
2412	92.67	PK	184	1.3	V	6.13	98.80	/	/
2412	83.08	Ave.	184	1.3	V	6.13	89.21	/	/
364.51	51.75	QP	99	1.2	H	-13.1	38.65	46	7.35
9648	26.35	Ave.	235	1.2	H	19.29	45.64	54	8.36
4824	47.03	PK	310	1.1	V	12.40	59.43	74	14.57
4824	27.31	Ave.	310	1.1	V	12.40	39.71	54	14.29
7236	43.14	PK	0	1.1	H	16.62	59.76	74	14.24
7236	27.82	Ave.	0	1.1	H	16.62	44.44	54	9.56
2362.7	57.91	PK	152	1.2	H	6.13	64.04	74	9.96
2341.2	55.05	PK	0	1.0	H	5.48	60.53	74	13.47
9648	39.82	PK	235	1.2	H	19.29	59.11	74	14.89
2362.7	29.40	Ave.	152	1.2	H	6.13	35.53	54	18.47
2341.2	29.12	Ave.	0	1.0	H	5.48	34.60	54	19.40
2484.1	26.76	Ave.	95	1.0	V	7.21	33.97	54	20.03
2484.1	42.55	PK	95	1.0	V	7.21	49.76	74	24.24
Middle Channel (2437 MHz)									
2437	93.79	PK	103	1.2	H	6.13	99.92	/	/
2437	84.77	Ave.	103	1.2	H	6.13	90.90	/	/
2437	92.61	PK	360	1.1	V	6.13	98.74	/	/
2437	83.15	Ave.	360	1.1	V	6.13	89.28	/	/
364.51	51.87	QP	136	1.1	H	-13.1	38.77	46	7.23
9748	26.30	Ave.	89	1.2	V	19.40	45.70	54	8.30
4874	47.12	PK	168	1.1	H	12.46	59.58	74	14.42
4874	27.38	Ave.	168	1.1	H	12.46	39.84	54	14.16
7311	43.49	PK	0	1.0	V	16.49	59.98	74	14.02
7311	28.64	Ave.	0	1.0	V	16.49	45.13	54	8.87
9748	41.17	PK	89	1.2	V	19.40	60.57	74	13.43
2355.2	31.16	Ave.	291	1.1	H	5.48	36.64	54	17.36
2483.9	29.01	Ave.	259	1.0	V	7.21	36.22	54	17.78
2491.7	27.68	Ave.	360	1.3	V	7.21	34.89	54	19.11
2355.2	48.36	PK	291	1.1	H	5.48	53.84	74	20.16
2483.9	44.88	PK	259	1.0	V	7.21	52.09	74	21.91
2491.7	43.73	PK	360	1.3	V	7.21	50.94	74	23.06

Frequency (MHz)	Receiver		Turntable Degree	Rx Antenna		Corrected Factor (dB)	Corrected Amplitude (dBµV/m)	FCC Part 15.247	
	Reading (dBµV)	Detector (PK/QP/Ave.)		Height (m)	Polar (H/V)			Limit (dBµV/m)	Margin (dB)
High Channel(2462 MHz)									
2462	92.88	PK	325	1.1	H	7.21	100.09	/	/
2462	81.86	Ave.	325	1.1	H	7.21	89.07	/	/
2462	94.29	PK	38	1.0	V	7.21	101.5	/	/
2462	83.84	Ave.	38	1.0	V	7.21	91.05	/	/
9848	28.94	Ave.	0	1.0	H	19.39	48.33	54	5.67
364.51	52.03	QP	330	1.1	H	-13.1	38.93	46	7.07
2492.6	58.05	PK	88	1.1	H	7.21	65.26	74	8.74
4924	47.68	PK	0	1.1	H	12.50	60.18	74	13.82
4924	27.59	Ave.	0	1.1	H	12.50	40.09	54	13.91
7386	43.69	PK	360	1.1	V	15.91	59.6	74	14.4
7386	27.76	Ave.	360	1.1	V	15.91	43.67	54	10.33
2493.9	55.66	PK	38	1.3	H	7.21	62.87	74	11.13
9848	41.17	PK	0	1.0	H	19.39	60.56	74	13.44
2492.6	30.74	Ave.	88	1.1	H	7.21	37.95	54	16.05
2493.9	30.69	Ave.	38	1.3	H	7.21	37.90	54	16.10
2334.6	26.78	Ave.	290	1.2	V	5.48	32.26	54	21.74
2334.6	43.83	PK	290	1.2	V	5.48	49.31	74	24.69

802.11n-HT20 mode:

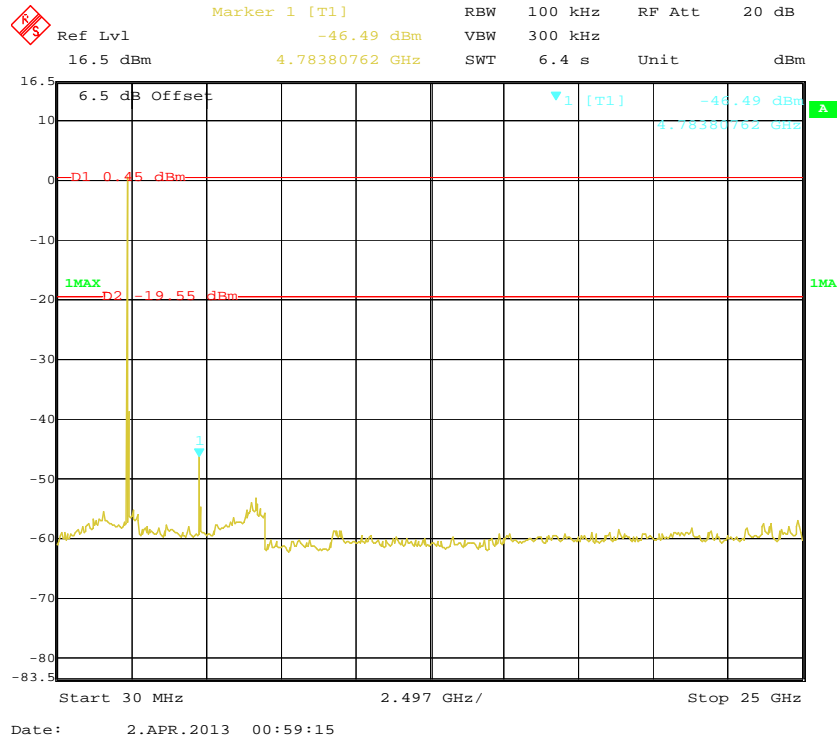
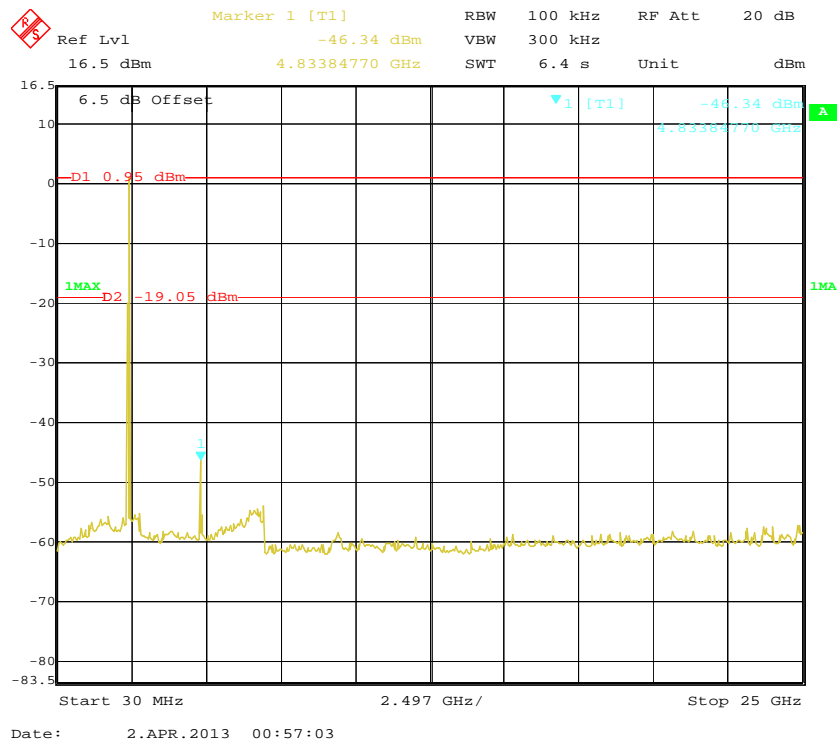
Frequency (MHz)	Receiver		Turntable Degree	Rx Antenna		Corrected Factor (dB)	Corrected Amplitude (dBμV/m)	FCC Part 15.247	
	Reading (dBμV)	Detector (PK/QP/Ave.)		Height (m)	Polar (H/V)			Limit (dBμV/m)	Margin (dB)
Low Channel (2412 MHz)									
2412	93.57	PK	251	1.0	H	6.13	99.70	/	/
2412	82.80	Ave.	251	1.0	H	6.13	88.93	/	/
2412	92.44	PK	37	1.3	V	6.13	98.57	/	/
2412	81.90	Ave.	37	1.3	V	6.13	88.03	/	/
364.51	51.91	QP	135	1.1	H	-13.1	38.81	46	7.19
9648	27.37	Ave.	83	1.2	H	19.29	46.66	54	7.34
4824	46.59	PK	336	1.1	V	12.40	58.99	74	15.01
4824	26.06	Ave.	336	1.1	V	12.40	38.46	54	15.54
7236	43.68	PK	0	1.1	V	16.62	60.3	74	13.70
7236	26.87	Ave.	0	1.1	V	16.62	43.49	54	10.51
2384.2	58.46	PK	360	1.3	V	6.13	64.59	74	9.41
2359.1	54.74	PK	6	1.2	H	5.48	60.22	74	13.78
9648	39.61	PK	83	1.2	H	19.29	58.90	74	15.10
2384.2	30.53	Ave.	360	1.3	V	6.13	36.66	54	17.34
2359.1	29.35	Ave.	6	1.2	H	5.48	34.83	54	19.17
2496.6	26.38	Ave.	176	1.3	H	7.21	33.59	54	20.41
2496.6	43.29	PK	176	1.3	H	7.21	50.50	74	23.50
Middle Channel (2437 MHz)									
2437	93.63	PK	77	1.1	H	6.13	99.76	/	/
2437	81.72	Ave.	77	1.1	H	6.13	87.85	/	/
2437	91.18	PK	65	1.2	V	6.13	97.31	/	/
2437	80.83	Ave.	65	1.2	V	6.13	86.96	/	/
364.51	51.86	QP	102	1.1	H	-13.1	38.76	46	7.24
9748	26.17	Ave.	360	1.2	V	19.40	45.57	54	8.43
4874	46.44	PK	221	1.1	V	12.46	58.9	74	15.10
4874	26.46	Ave.	221	1.1	V	12.46	38.92	54	15.08
7311	42.56	PK	0	1.2	V	16.49	59.05	74	14.95
7311	26.74	Ave.	0	1.2	V	16.49	43.23	54	10.77
9748	41.70	PK	360	1.2	V	19.40	61.10	74	12.90
2318.3	31.78	Ave.	168	1.1	H	5.48	37.26	54	16.74
2339.1	30.25	Ave.	32	1.2	H	5.48	35.73	54	18.27
2487.5	28.17	Ave.	216	1.2	V	7.21	35.38	54	18.62
2318.3	48.75	PK	168	1.1	H	5.48	54.23	74	19.77
2487.5	44.72	PK	216	1.2	V	7.21	51.93	74	22.07
2339.1	45.65	PK	32	1.2	H	5.48	51.13	74	22.87

Frequency (MHz)	Receiver		Turntable Degree	Rx Antenna		Corrected Factor (dB)	Corrected Amplitude (dBμV/m)	FCC Part 15.247	
	Reading (dBμV)	Detector (PK/QP/Ave.)		Height (m)	Polar (H/V)			Limit (dBμV/m)	Margin (dB)
High Channel(2462 MHz)									
2462	93.32	PK	272	1.2	H	7.21	100.53	/	/
2462	81.39	Ave.	272	1.2	H	7.21	88.6	/	/
2462	93.79	PK	10	1.0	V	7.21	101	/	/
2462	81.23	Ave.	10	1.0	V	7.21	88.44	/	/
9848	29.69	Ave.	360	1.3	V	19.39	49.08	54	4.92
2484.6	59.33	PK	265	1.2	V	7.21	66.54	74	7.46
364.51	51.53	QP	182	1.1	H	-13.1	38.43	46	7.57
4924	46.51	PK	0	1.3	H	12.50	59.01	74	14.99
4924	26.40	Ave.	0	1.3	H	12.50	38.90	54	15.10
7386	43.02	PK	163	1.2	V	15.91	58.93	74	15.07
7386	26.91	Ave.	163	1.2	V	15.91	42.82	54	11.18
2492.5	56.21	PK	206	1.2	H	7.21	63.42	74	10.58
9848	42.24	PK	360	1.3	V	19.39	61.63	74	12.37
2484.6	31.46	Ave.	265	1.2	V	7.21	38.67	54	15.33
2492.5	30.78	Ave.	206	1.2	H	7.21	37.99	54	16.01
2320.8	26.16	Ave.	136	1.0	H	5.48	31.64	54	22.36
2320.8	44.46	PK	136	1.0	H	5.48	49.94	74	24.06

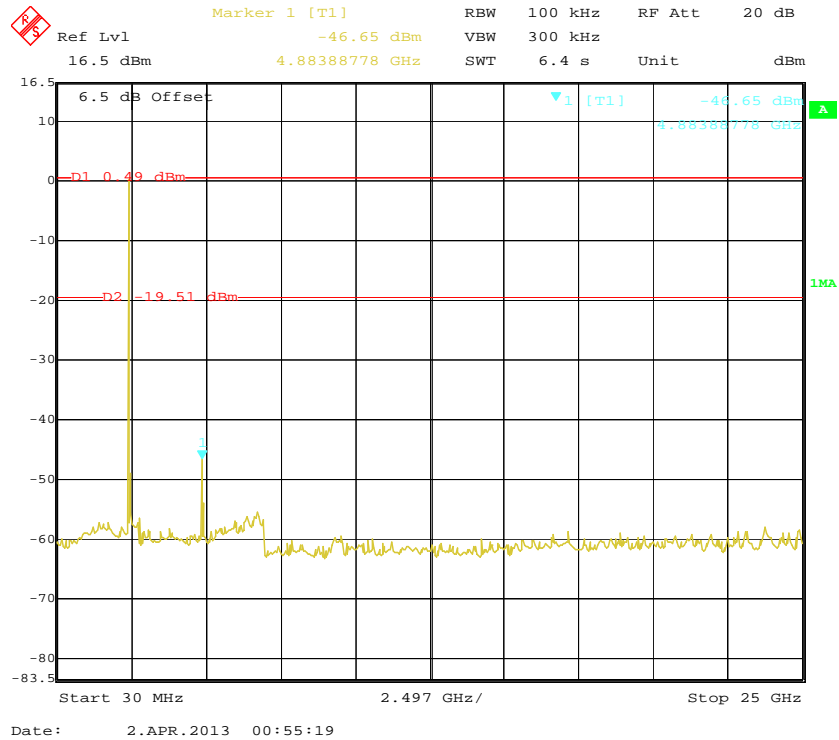
802.11n-HT40 mode:

Frequency (MHz)	Receiver		Turntable Degree	Rx Antenna		Corrected Factor (dB)	Corrected Amplitude (dBμV/m)	FCC Part 15.247	
	Reading (dBμV)	Detector (PK/QP/Ave.)		Height (m)	Polar (H/V)			Limit (dBμV/m)	Margin (dB)
Low Channel (2422 MHz)									
2422	89.21	PK	113	1.0	H	6.13	95.34	/	/
2422	76.83	Ave.	113	1.0	H	6.13	82.96	/	/
2422	88.01	PK	52	1.2	V	6.13	94.14	/	/
2422	74.77	Ave.	52	1.2	V	6.13	80.9	/	/
9688	27.95	Ave.	255	1.1	H	19.29	47.24	54	6.76
364.51	51.78	QP	96	1.2	H	-13.1	38.68	46	7.32
2387.8	58.23	PK	360	1.1	H	6.13	64.36	74	9.64
4844	42.55	PK	0	1.0	V	12.40	54.95	74	19.05
4844	27.31	Ave.	0	1.0	V	12.40	39.71	54	14.29
7266	40.30	PK	74	1.2	V	16.62	56.92	74	17.08
7266	26.44	Ave.	74	1.2	V	16.62	43.06	54	10.94
2323.6	55.02	PK	194	1.2	V	5.48	60.50	74	13.50
9688	39.71	PK	255	1.1	H	19.29	59.00	74	15.00
2387.8	32.01	Ave.	360	1.1	H	6.13	38.14	54	15.86
2323.6	29.91	Ave.	194	1.2	V	5.48	35.39	54	18.61
2485.4	27.13	Ave.	63	1.2	V	7.21	34.34	54	19.66
2485.4	43.23	PK	63	1.2	V	7.21	50.44	74	23.56
Middle Channel (2437 MHz)									
2437	89.05	PK	59	1.2	H	6.13	95.18	/	/
2437	75.38	Ave.	59	1.2	H	6.13	81.51	/	/
2437	87.97	PK	360	1.0	V	6.13	94.1	/	/
2437	73.25	Ave.	360	1.0	V	6.13	79.38	/	/
364.51	51.88	QP	251	1.1	H	-13.1	38.78	46	7.22
4874	42.26	PK	71	1.1	H	12.46	54.72	74	19.28
4874	26.60	Ave.	71	1.1	H	12.46	39.06	54	14.94
7311	40.44	PK	193	1.2	V	16.49	56.93	74	17.07
7311	26.42	Ave.	193	1.2	V	16.49	42.91	54	11.09
9748	42.52	PK	360	1.2	H	19.40	61.92	74	12.08
9748	25.72	Ave.	360	1.2	H	19.40	45.12	54	8.88
2315.4	32.26	Ave.	0	1.0	H	5.48	37.74	54	16.26
2327.4	31.13	Ave.	297	1.2	V	5.48	36.61	54	17.39
2489.2	27.98	Ave.	295	1.0	V	7.21	35.19	54	18.81
2315.4	48.75	PK	0	1.0	H	5.48	54.23	74	19.77
2489.2	44.74	PK	295	1.0	V	7.21	51.95	74	22.05
2327.4	46.22	PK	297	1.2	V	5.48	51.70	74	22.30

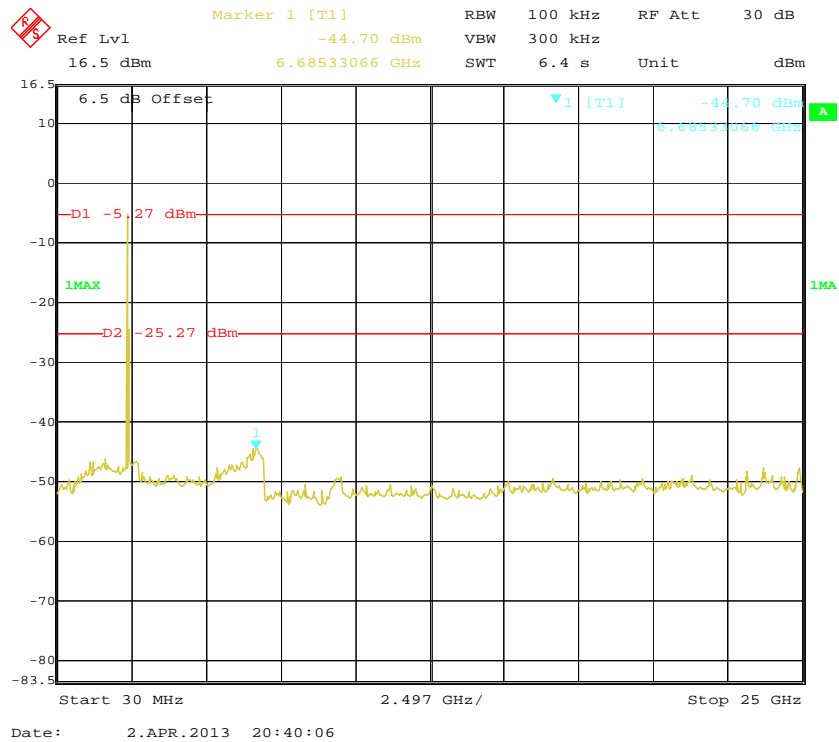
Frequency (MHz)	Receiver		Turntable Degree	Rx Antenna		Corrected Factor (dB)	Corrected Amplitude (dBμV/m)	FCC Part 15.247	
	Reading (dBμV)	Detector (PK/QP/Ave.)		Height (m)	Polar (H/V)			Limit (dBμV/m)	Margin (dB)
High Channel(2452 MHz)									
2452	88.98	PK	194	1.1	H	7.21	96.19	/	/
2452	74.13	Ave.	194	1.1	H	7.21	81.34	/	/
2452	89.92	PK	75	1.2	V	7.21	97.13	/	/
2452	75.18	Ave.	75	1.2	V	7.21	82.39	/	/
9808	28.35	Ave.	360	1.2	V	19.29	47.64	54	6.36
2484.9	59.76	PK	240	1.1	H	7.21	66.97	74	7.03
364.51	51.46	QP	117	1.0	H	-13.1	38.36	46	7.64
4904	41.83	PK	183	1.0	V	12.46	54.29	74	19.71
4904	26.60	Ave.	183	1.0	V	12.46	39.06	54	14.94
7356	40.60	PK	68	1.1	V	15.91	56.51	74	17.49
7356	26.38	Ave.	68	1.1	V	15.91	42.29	54	11.71
2493.6	56.76	PK	0	1.0	H	7.21	63.97	74	10.03
9808	42.79	PK	360	1.2	V	19.29	62.08	74	11.92
2484.9	31.41	Ave.	240	1.1	H	7.21	38.62	54	15.38
2493.6	31.15	Ave.	0	1.0	H	7.21	38.36	54	15.64
2317.4	26.75	Ave.	357	1.1	V	5.48	32.23	54	21.77
2317.4	44.24	PK	357	1.1	V	5.48	49.72	74	24.28

Antenna Port Conducted Spurious Emissions:**802.11b Low Channel****802.11b Middle Channel**

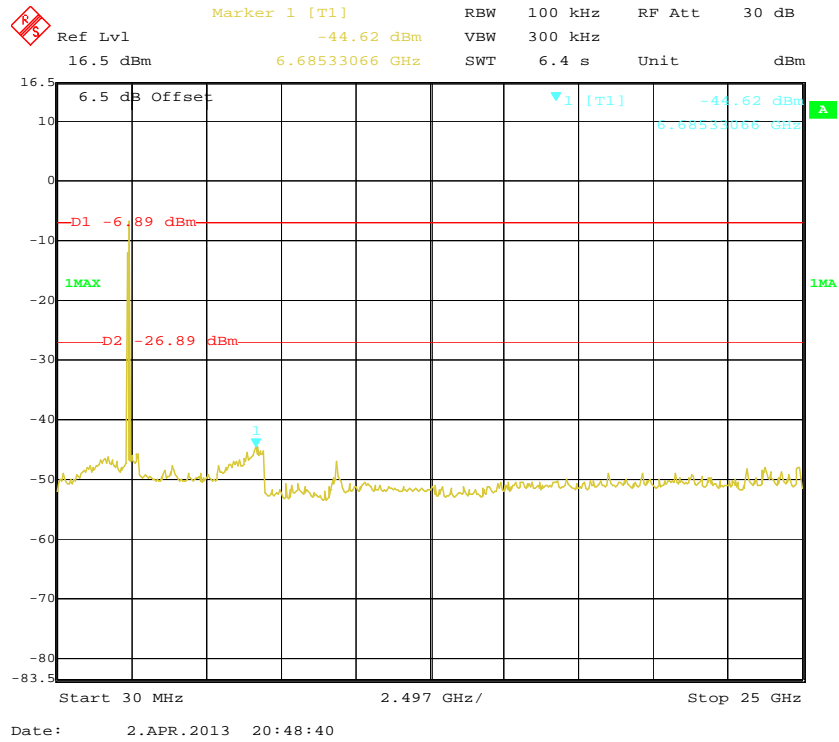
802.11b High Channel



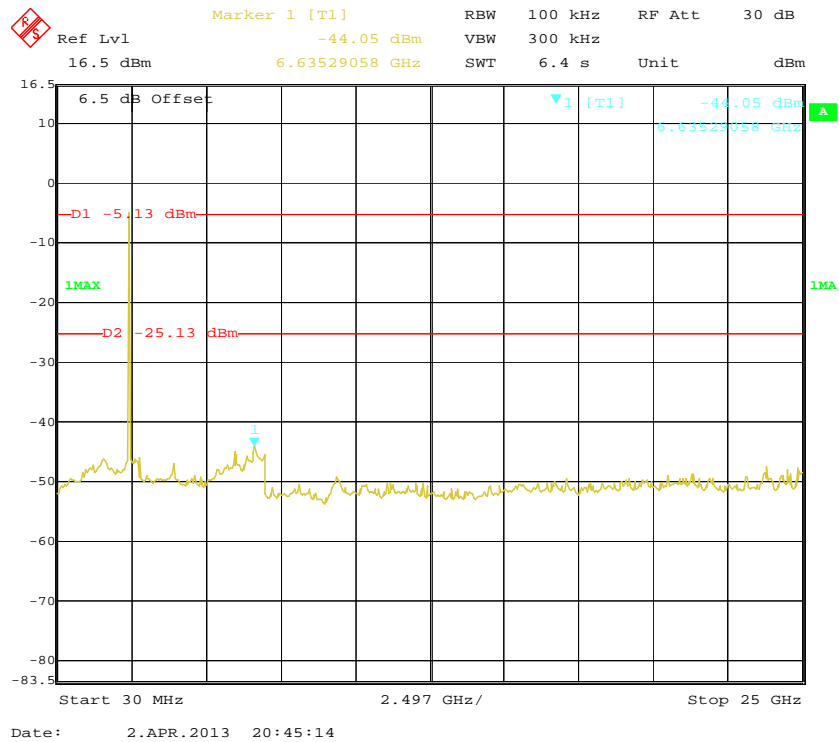
802.11g Low Channel



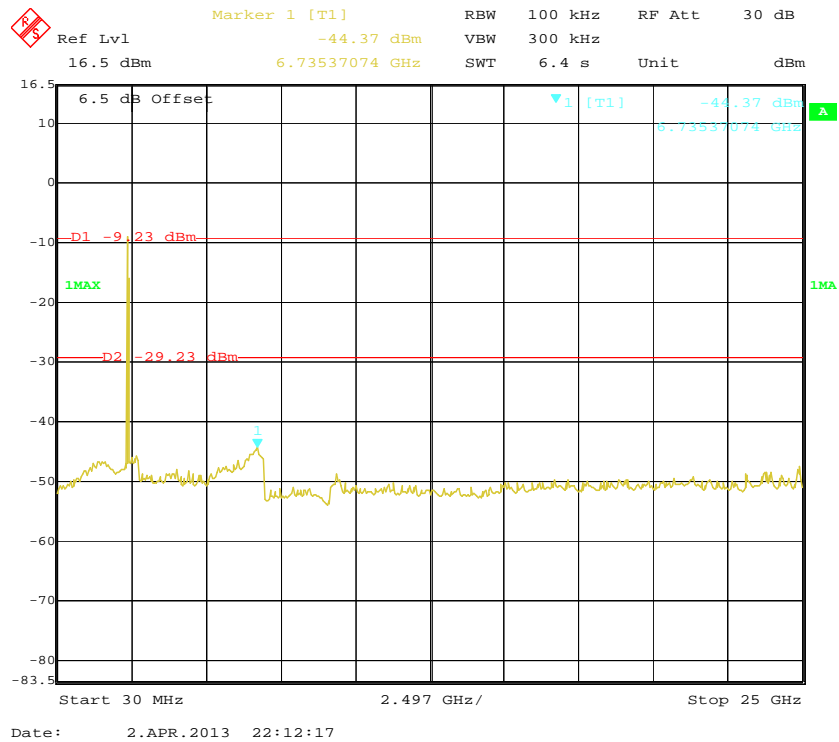
802.11g Middle Channel



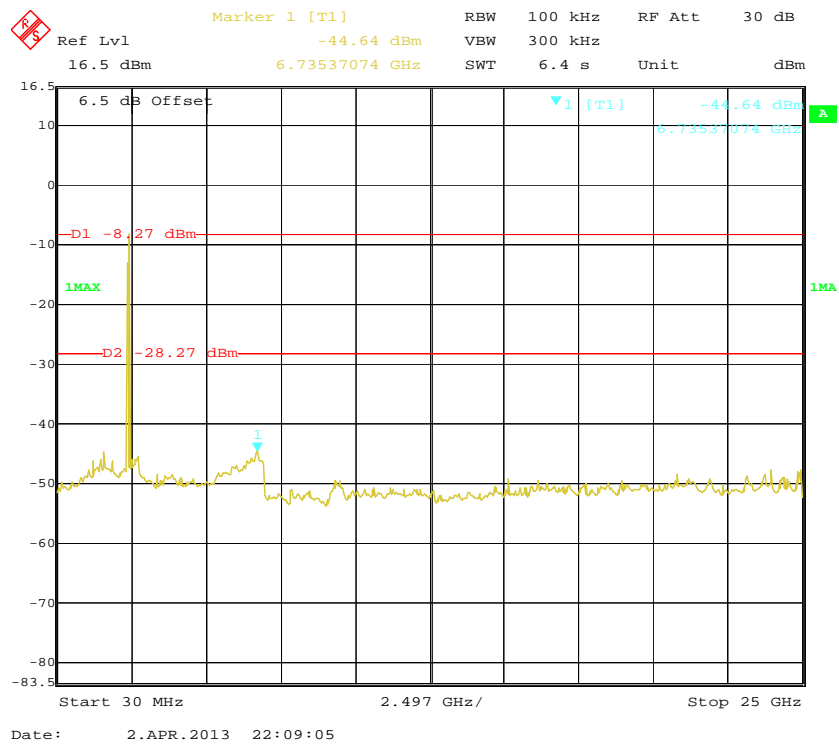
802.11g High Channel



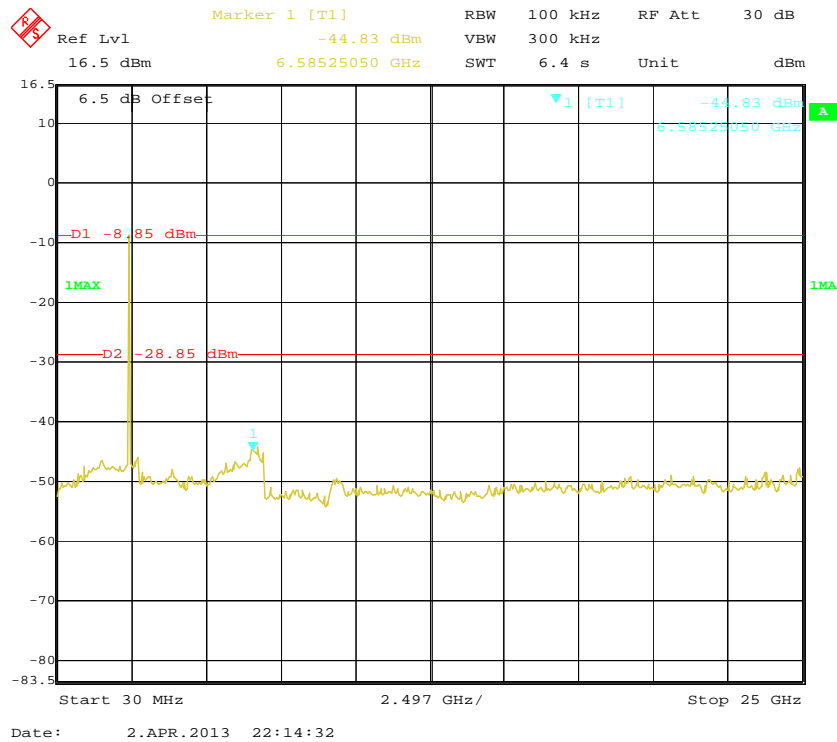
802.11n-HT20 Low Channel



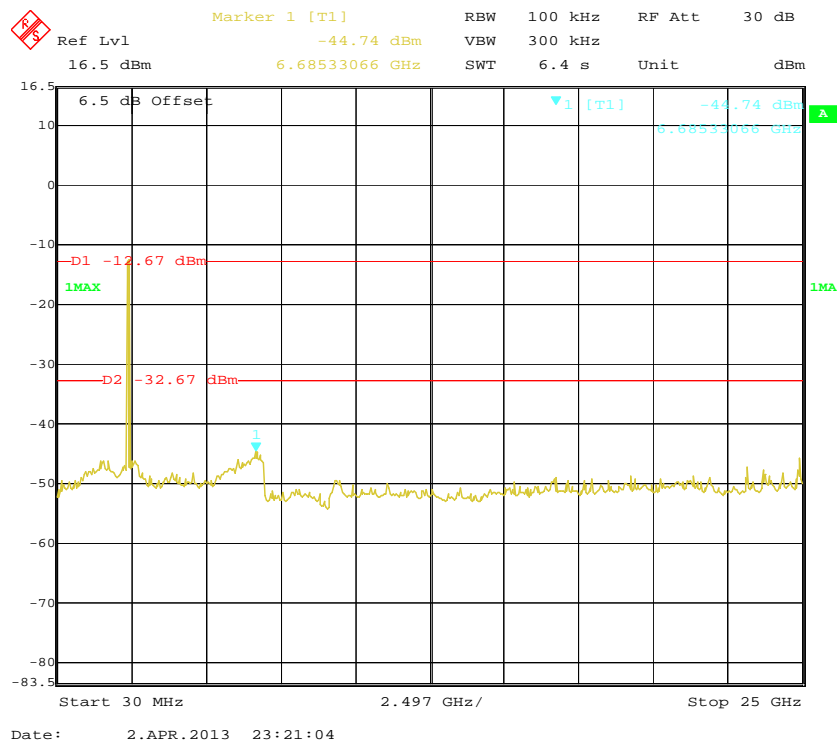
802.11n-HT20 Middle Channel



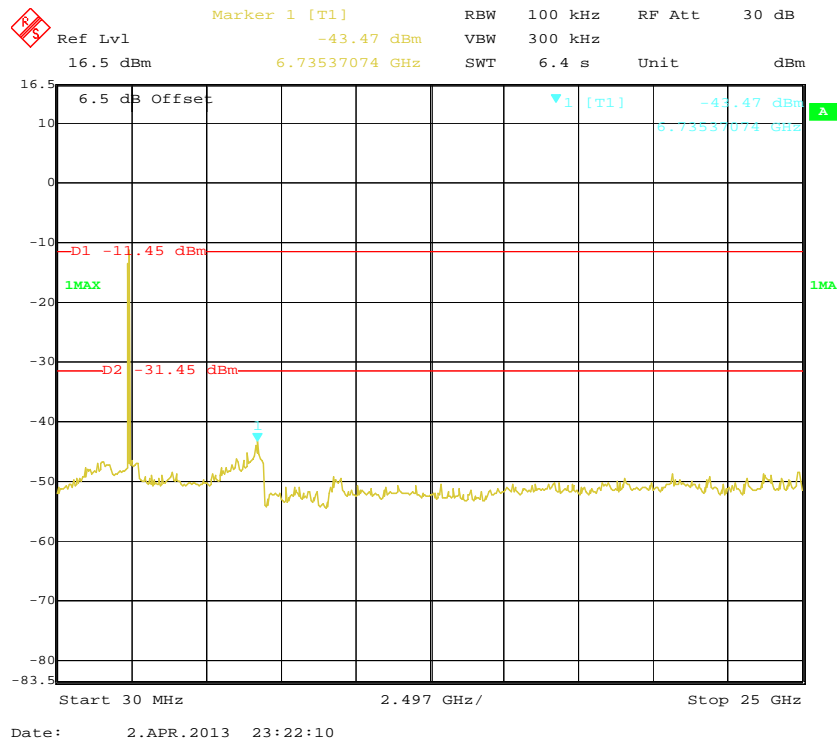
802.11n-HT20 High Channel



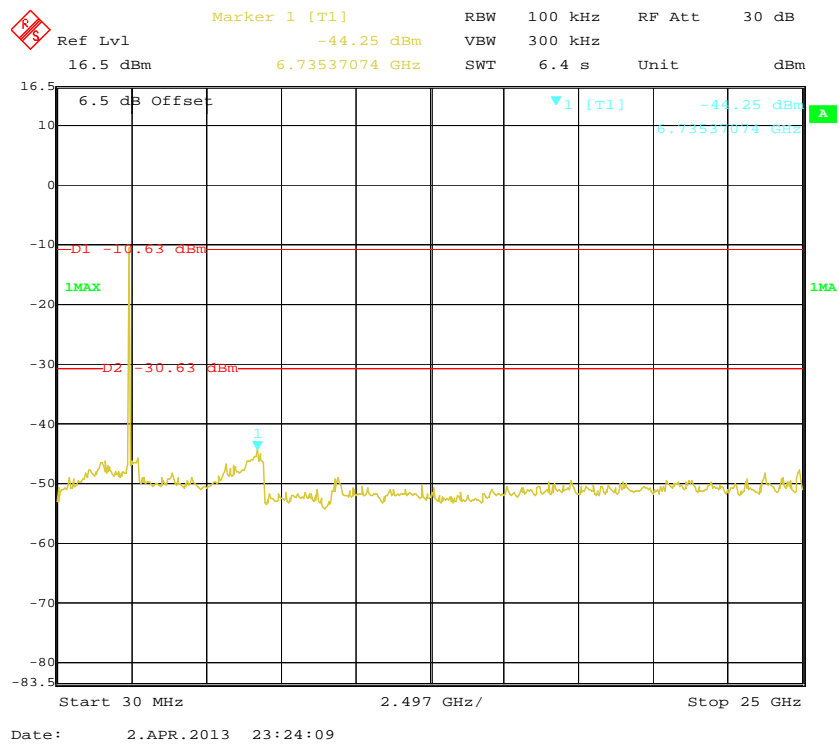
802.11n-HT40 Low Channel



802.11n-HT40 Middle Channel



802.11n-HT40 High Channel



FCC §15.247(a) (2) – 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 Equipment List and Details

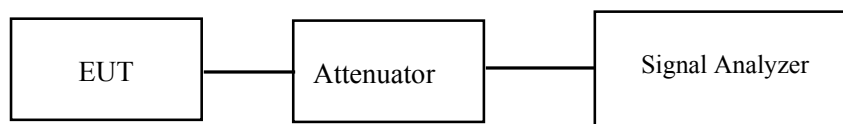
Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Rohde & Schwarz	Signal Analyzer	FSIQ26	8386001028	2012-11-24	2013-11-23

* **Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Shenzhen) attests that all calibrations have been performed in accordance to requirements, traceable to traceable to National Primary Standards and International System of Units (SI).

Test Procedure

According to KDB 558074 D01 DTS Meas Guidance v02

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:	24 °C
Relative Humidity:	55 %
ATM Pressure:	100.0kPa

The testing was performed by Candy Li on 2013-04-02.

Test Mode: Transmitting

Test Result: Pass.

Please refer to the following tables and plots.

Channel	Frequency (MHz)	Data Rate (Mbps)	6 dB Emission Bandwidth (MHz)	Limit (kHz)	Result
802.11b mode					
Low	2412	1	9.06	≥ 500	Pass
Middle	2437	1	9.06	≥ 500	Pass
High	2462	1	9.06	≥ 500	Pass
802.11g mode					
Low	2412	6	16.43	≥ 500	Pass
Middle	2437	6	16.43	≥ 500	Pass
High	2462	6	16.43	≥ 500	Pass
802.11n-HT20 mode					
Low	2412	6.5	17.64	≥ 500	Pass
Middle	2437	6.5	17.64	≥ 500	Pass
High	2462	6.5	17.64	≥ 500	Pass
802.11n-HT40 mode					
Low	2422	13.5	35.91	≥ 500	Pass
Middle	2437	13.5	35.91	≥ 500	Pass
High	2452	13.5	35.91	≥ 500	Pass

Delta 1 [T1] 0.82 dB

RBW 100 kHz RF Att 30 dB

Ref Lvl 21.5 dBm 9.05811623 MHz SWT 5 ms Unit dBm

6.5 dB Offset

D1 1.15 dBm

D2 -4.85 dBm

1MAX

1 [T1] -4.10 dBm

2.40749098 GHz

9.05811623 MHz

Center 2.412 GHz 2 MHz/ Span 20 MHz

Date: 2.APR.2013 00:27:07

Ref Lvl 21.5 dBm Marker 1 [T1] -3.88 dBm RBW 100 kHz RF Att 30 dB

21.5 dBm 2.43249098 GHz VBW 300 kHz Unit dBm

6.5 dB Offset

D1 1.3 dBm D2 -4.7 dBm

1MAX

Center 2.437 GHz 2 MHz/ Span 20 MHz

Date: 2.APR.2013 00:31:19

Delta 1 [T1] 0.88 dB RBW 100 kHz RF Att 30 dB
 Ref Lvl 21.5 dBm 9.05811623 MHz SWT 5 ms Unit dBm

6.5 dB Offset

D1 1.61 dBm
 D2 -4.39 dBm

1MAX

Center 2.462 GHz 2 MHz/ Span 20 MHz

21.5
 10
 0
 -10
 -20
 -30
 -40
 -50
 -60
 -70
 -78.5

1 [T1] -4.01 dBm
 2.45749098 GHz
 9.05811623 MHz

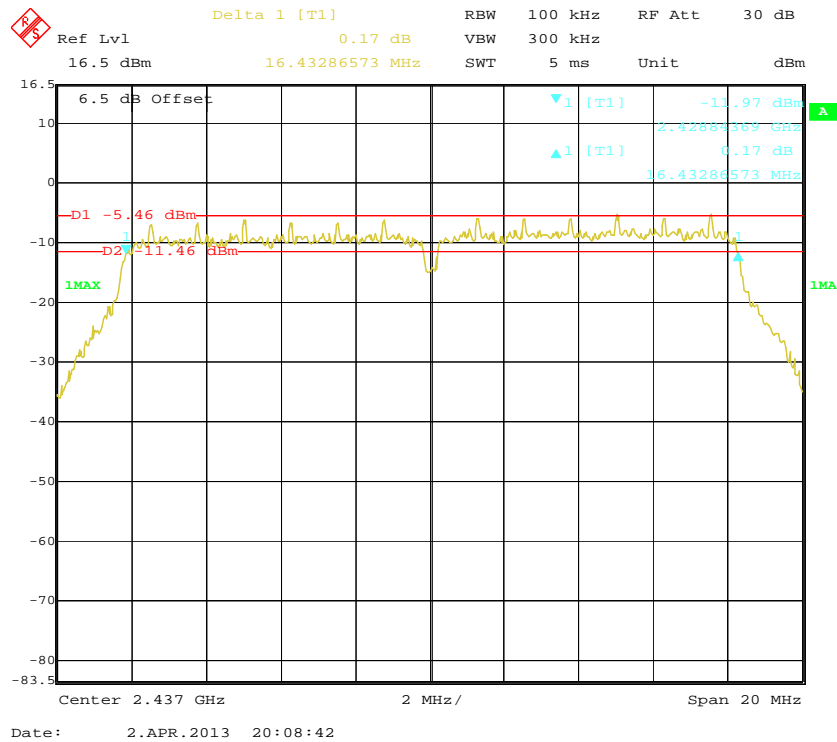
1MAX

Date: 2.APR.2013 00:33:09

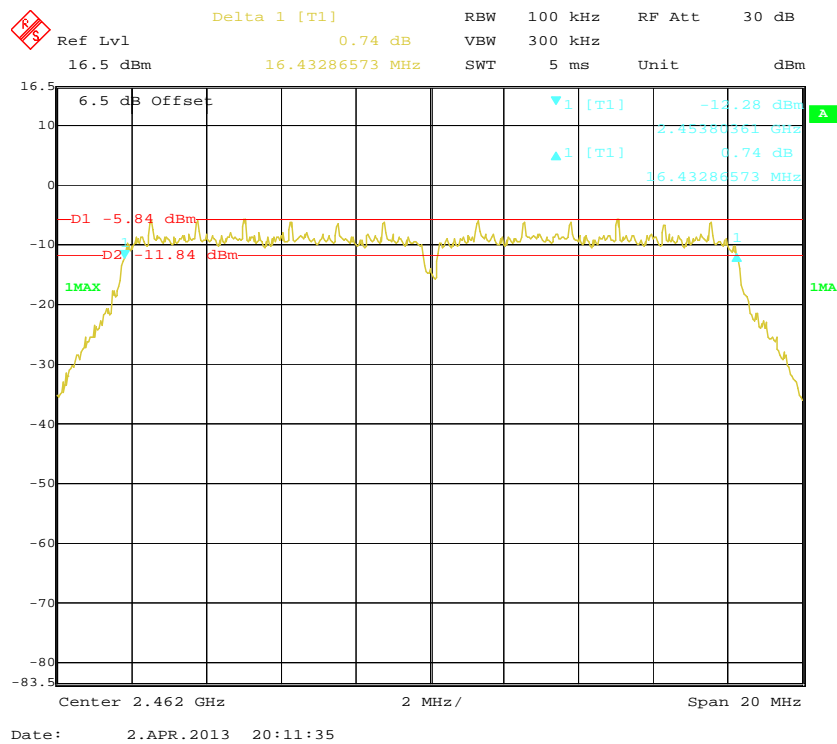
Ref Lvl 16.5 dBm
 Marker 1 [T1] -13.23 dBm
 RBW 100 kHz
 VBW 300 kHz
 RF Att 30 dB
 2.40384369 GHz
 SWT 5 ms
 Unit dBm

6.5 dB Offset
 D1 -6.88 dBm
 D2 -12.88 dBm
 1MAX
 1MAX
 Center 2.412 GHz
 2 MHz/
 Span 20 MHz
 Date: 2013-04-20 04:11

802.11g Middle Channel



802.11g High Channel



Delta 1 [T1]

Ref Lvl -0.23 dB

16.5 dBm 17.63527054 MHz

RBW 100 kHz

VBW 300 kHz

SWT 5 ms

RF Att 30 dB

Unit dBm

6.5 dB Offset

1 [T1] -12.95 dBm

1 [T1] -0.23 dBm

17.63527054 MHz

D1 -7.03 dBm

D2 -13.03 dBm

1MAX

1MAX

Center 2.412 GHz

2 MHz/

Span 20 MHz

Date: 2.APR.2013 21:26:26

Ref Lvl 16.5 dBm Delta 1 [T1] -0.09 dB RBW 100 kHz VBW 300 kHz RF Att 30 dB Unit dBm SWT 5 ms

6.5 dB Offset

1 [T1] -11.48 dBm

1 [T1] -0.09 dBm

17.63527054 MHz

D1 -5.36 dBm

1MAX

1MA

Center 2.437 GHz 2 MHz/ Span 20 MHz

Date: 2.APR.2013 21:29:56

Delta 1 [T1] RBW 100 kHz RF Att 30 dB
 Ref Lvl 1.19 dB VBW 300 kHz
 16.5 dBm 17.63527054 MHz SWT 5 ms Unit dBm

6.5 dB Offset

1 [T1] -12.11 dBm
 2.45320240 GHz
 1 [T1] 1.19 dB
 17.63527054 MHz

D1 -5.95 dBm
 D2 -11.95 dBm

1MAX

Center 2.462 GHz 2 MHz/ Span 20 MHz

Date: 2.APR.2013 21:40:27

Delta 1 [T1] 0.49 dB
 Ref Lvl 16.5 dBm
 RBW 100 kHz
 VBW 300 kHz
 RF Att 30 dB
 SWT 10 ms
 Unit dBm

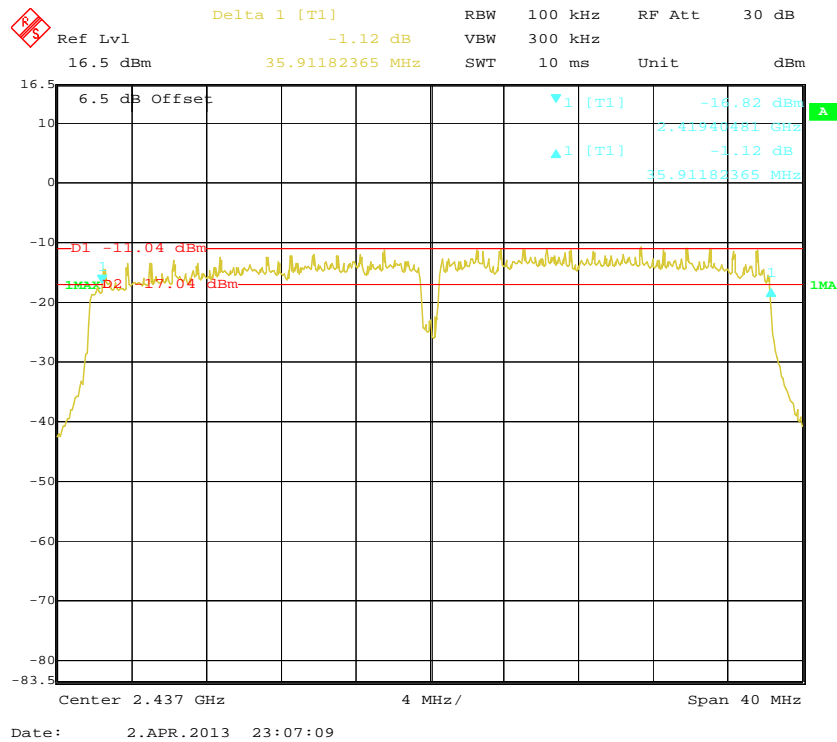
6.5 dB Offset
 -17.68 dBm
 2.40432405 GHz
 0.49 dB
 35.91182365 MHz

D1 -11.72 dBm
 D2 -17.72 dBm
 1 MAX
 1 MIN

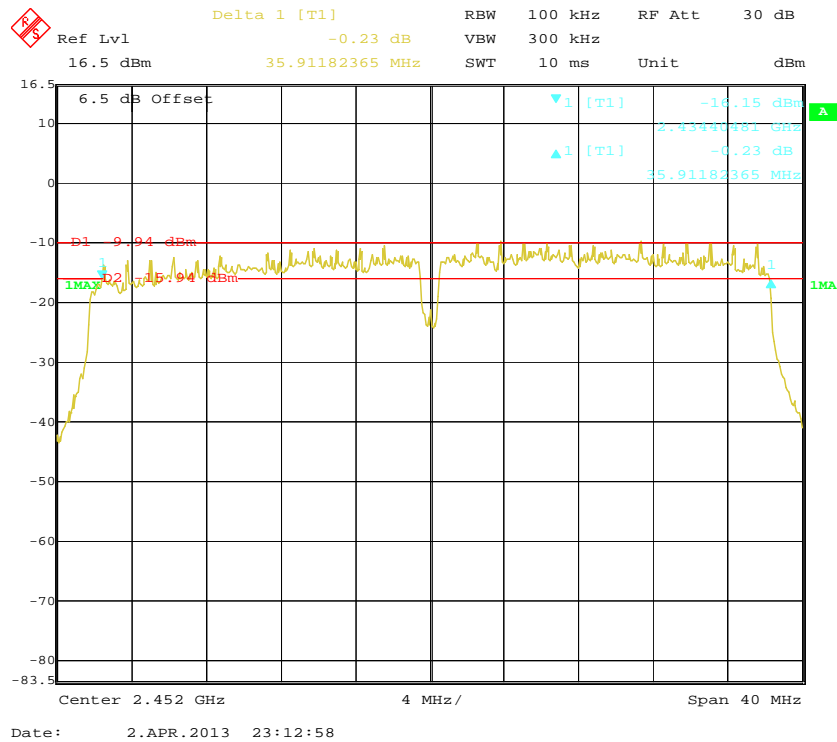
Center 2.422 GHz
 4 MHz/
 Span 40 MHz

Date: 2.APR.2013 23:10:36

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

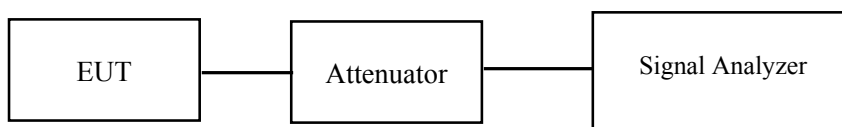
Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Rohde & Schwarz	Signal Analyzer	FSIQ26	8386001028	2012-11-24	2013-11-23

* **Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Shenzhen) attests that all calibrations have been performed in accordance to requirements, traceable to traceable to National Primary Standards and International System of Units (SI).

Test Procedure

According to KDB 558074 D01 DTS Meas Guidance v02

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

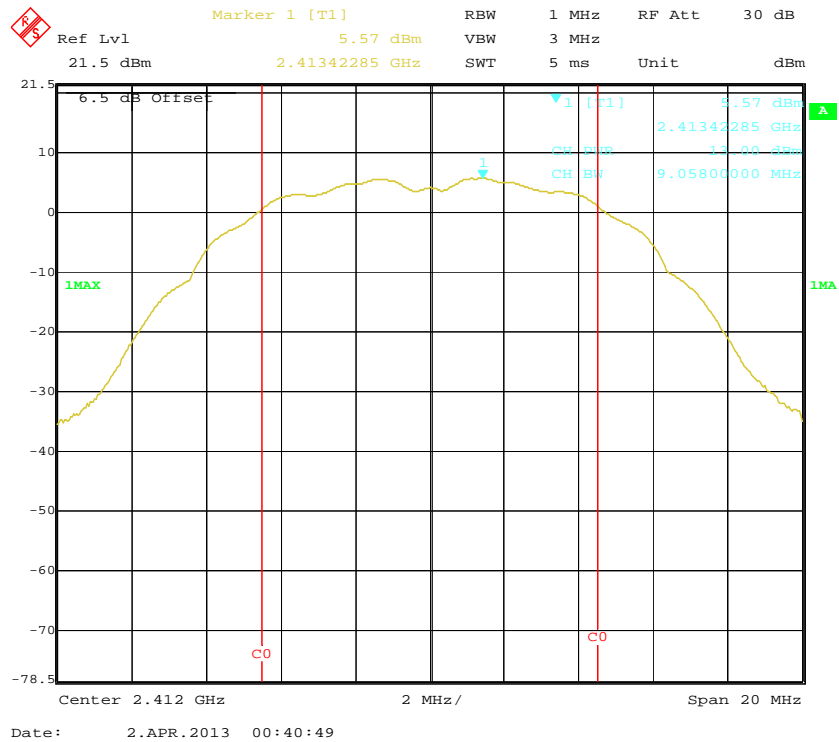
Temperature:	24 °C
Relative Humidity:	55 %
ATM Pressure:	100.0kPa

The testing was performed by Candy Li on 2013-04-02.

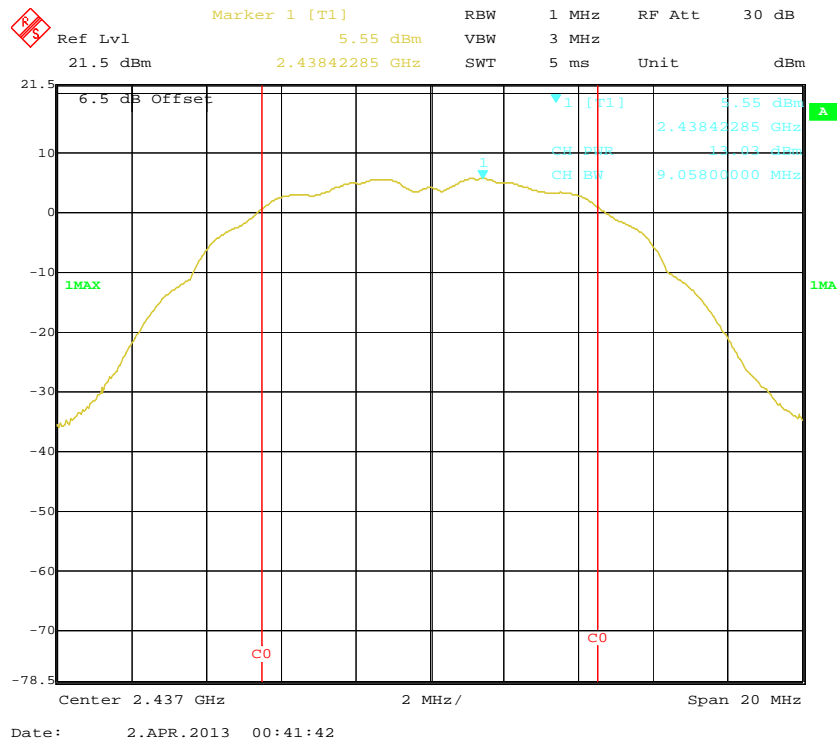
Test Mode: Transmitting

Channel	Frequency (MHz)	Data Rate (Mbps)	Conducted Output Power (dBm)	Limit (dBm)	Result
802.11b mode					
Low	2412	1	13.00	30	Pass
Middle	2437	1	13.03	30	Pass
High	2462	1	13.17	30	Pass
802.11g mode					
Low	2412	6	12.10	30	Pass
Middle	2437	6	11.95	30	Pass
High	2462	6	12.36	30	Pass
802.11n-HT20 mode					
Low	2412	6.5	11.61	30	Pass
Middle	2437	6.5	11.59	30	Pass
High	2462	6.5	11.35	30	Pass
802.11n-HT40 mode					
Low	2422	13.5	10.25	30	Pass
Middle	2437	13.5	10.64	30	Pass
High	2452	13.5	10.43	30	Pass

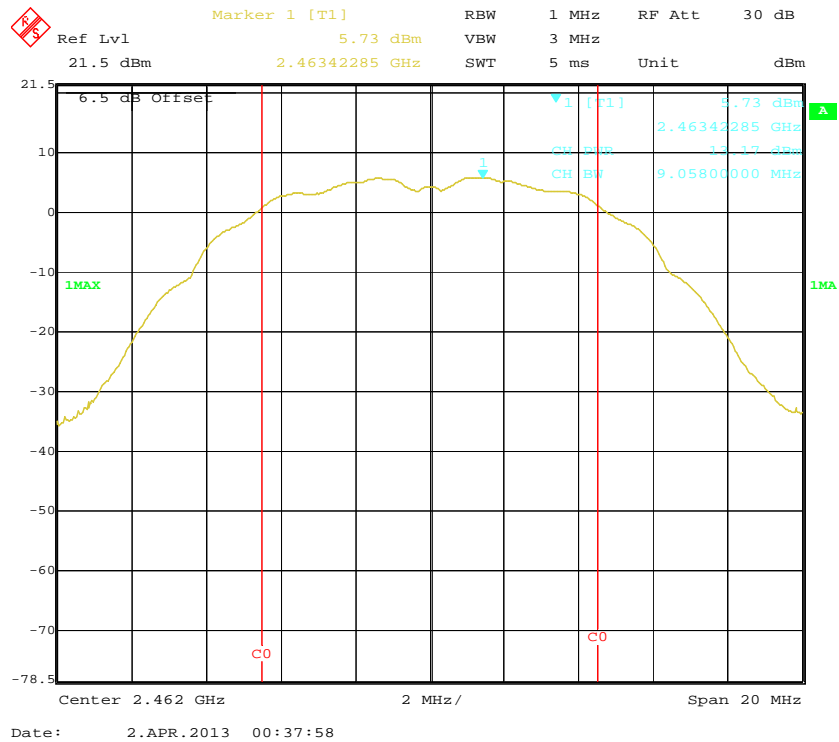
802.11b RF Output Power, Low Channel



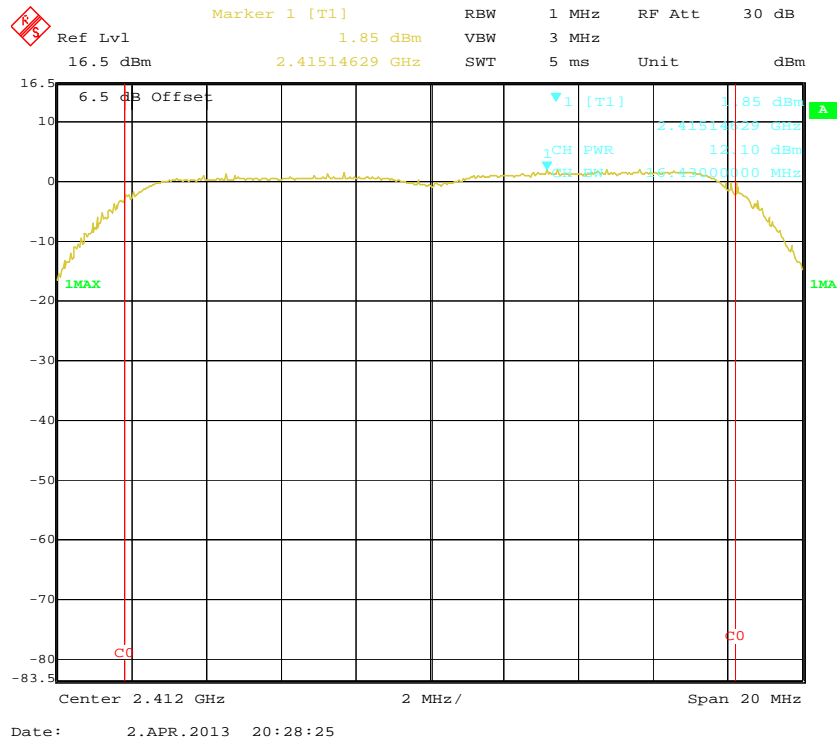
802.11b RF Output Power, Middle Channel



802.11b RF Output Power, High Channel



802.11g RF Output Power, Low Channel



6.5 dB Offset

Marker 1 [T1] 1.31 dBm

Ref Lvl 16.5 dBm

2.44299198 GHz

RBW 1 MHz

VBW 3 MHz

SWT 5 ms

RF Att 30 dB

Unit dBm

1MAX

1MA

CH PWR 11.95 dBm

CH BW 1.000000 MHz

Center 2.437 GHz

2 MHz/

Span 20 MHz

Date: 2.APR.2013 20:19:30

Ref Lvl 16.5 dBm

Marker 1 [T1] 1.50 dBm

RBW 1 MHz VBW 3 MHz SWT 5 ms RF Att 30 dB Unit dBm

6.5 dB Offset

1 [T1] 1.50 dBm

CH PWR 2.4564930 GHz 12.36 dBm

CH SW 2.4564930 MHz

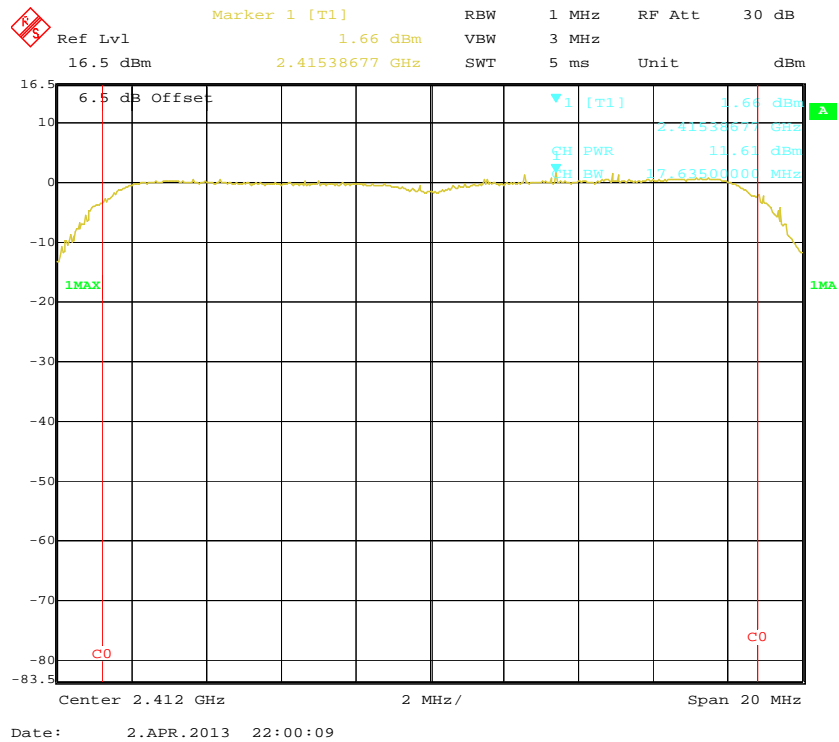
1MAX

1MA

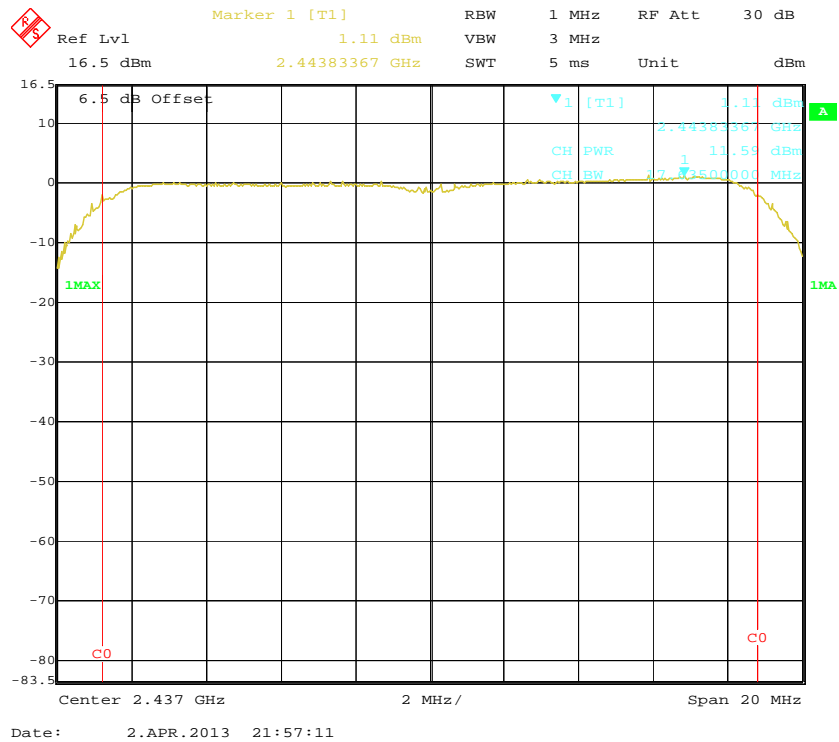
Center 2.462 GHz 2 MHz/ Span 20 MHz

Date: 2.APR.2013 20:15:31

802.11n-HT20 RF Output Power, Low Channel



802.11n-HT20 RF Output Power, Middle Channel



Marker 1 [T1]

Ref Lvl 16.5 dBm 1.10 dBm RBW 1 MHz RF Att 30 dB

2.46498597 GHz 3 MHz VBW 5 ms Unit dBm

6.5 dB Offset

1 CH PWR 1.10 dBm

1 CH BW 11.35 dBm

17.63500000 MHz

1MAX

1MAX

Center 2.462 GHz 2 MHz/ Span 20 MHz

Date: 2.APR.2013 23:56:21

Marker 1 [T1] -2.40 dBm

Ref Lvl 16.5 dBm

2.42364329 GHz

RBW 1 MHz

VBW 3 MHz

SWT 5 ms

Unit dBm

6.5 dB Offset

CH PWR 10.25 dBm

CH BW 35.91200000 MHz

1MAX

1MAX

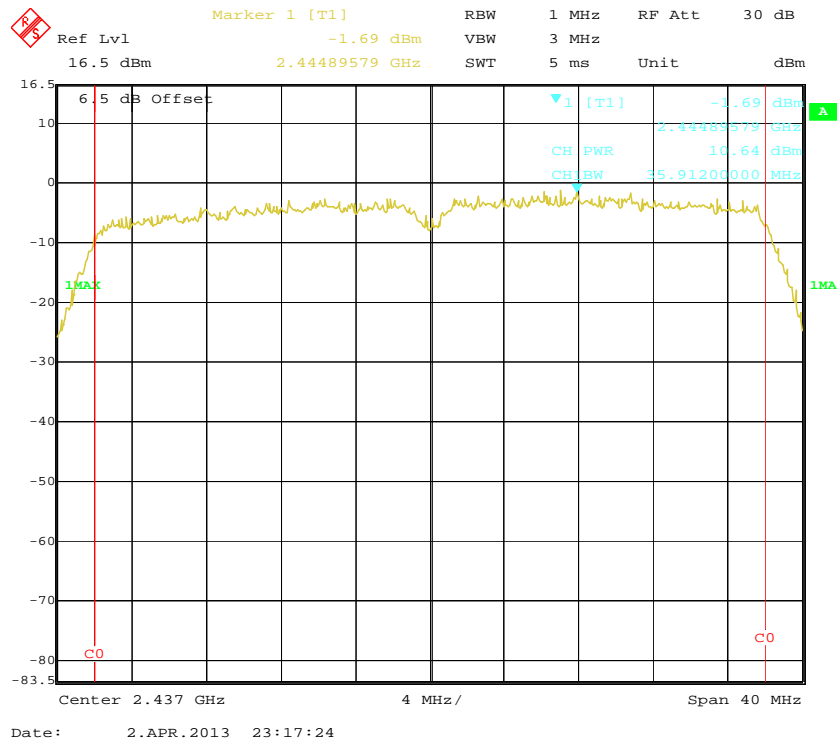
Center 2.422 GHz

4 MHz/

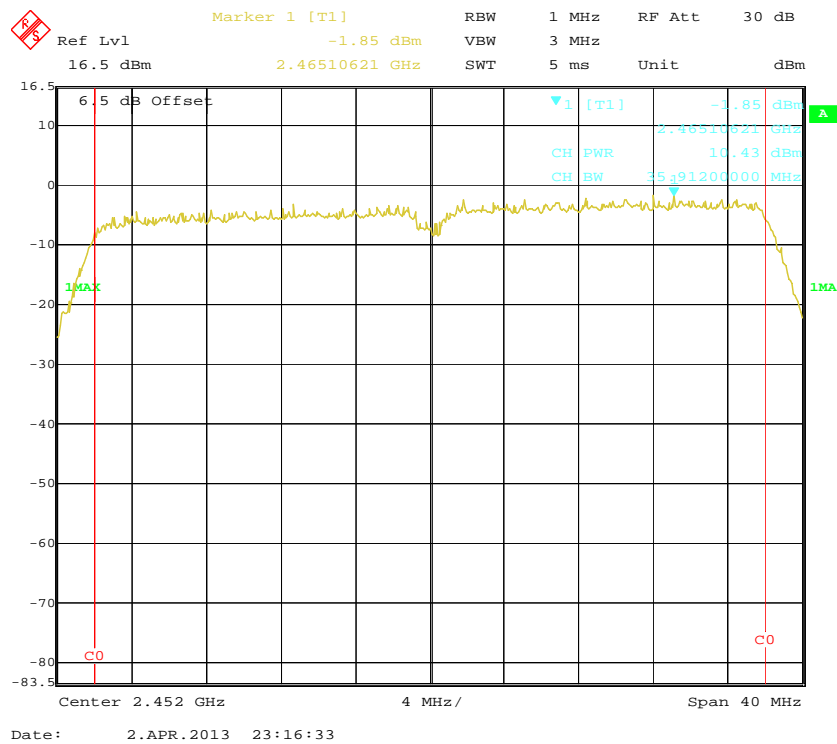
Span 40 MHz

Date: 2.APR.2013 23:19:07

802.11n-HT20 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

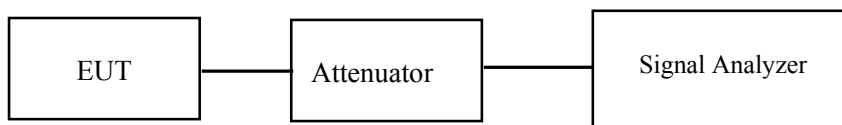
Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Rohde & Schwarz	Signal Analyzer	FSIQ26	8386001028	2012-11-24	2013-11-23

* **Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Shenzhen) attests that all calibrations have been performed in accordance to requirements, traceable to traceable to National Primary Standards and International System of Units (SI).

Test Procedure

According to KDB 558074 D01 DTS Meas Guidance v02

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

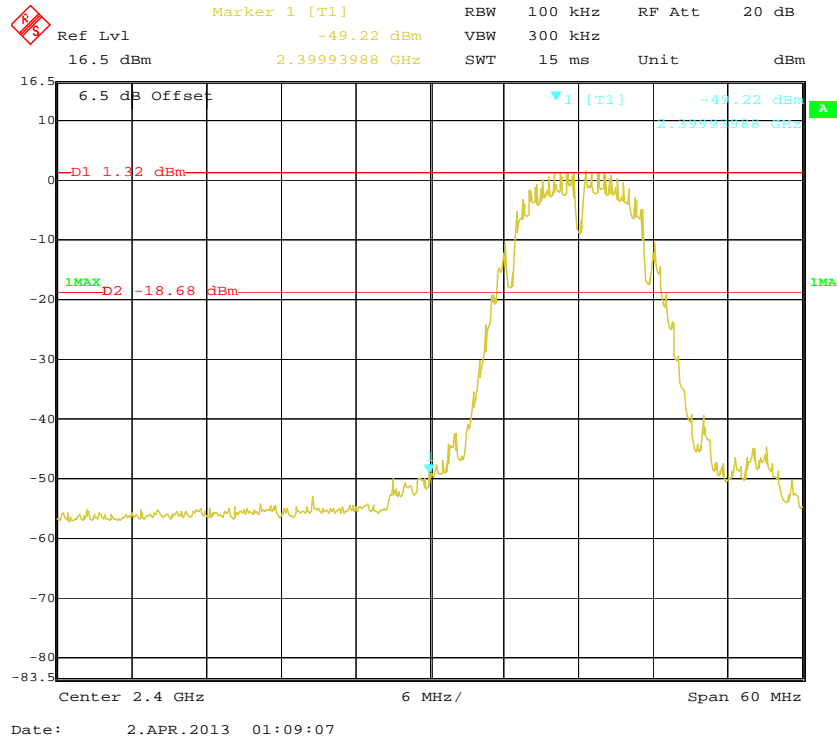
Temperature:	24 °C
Relative Humidity:	55 %
ATM Pressure:	100.0kPa

The testing was performed by Candy Li on 2013-04-02.

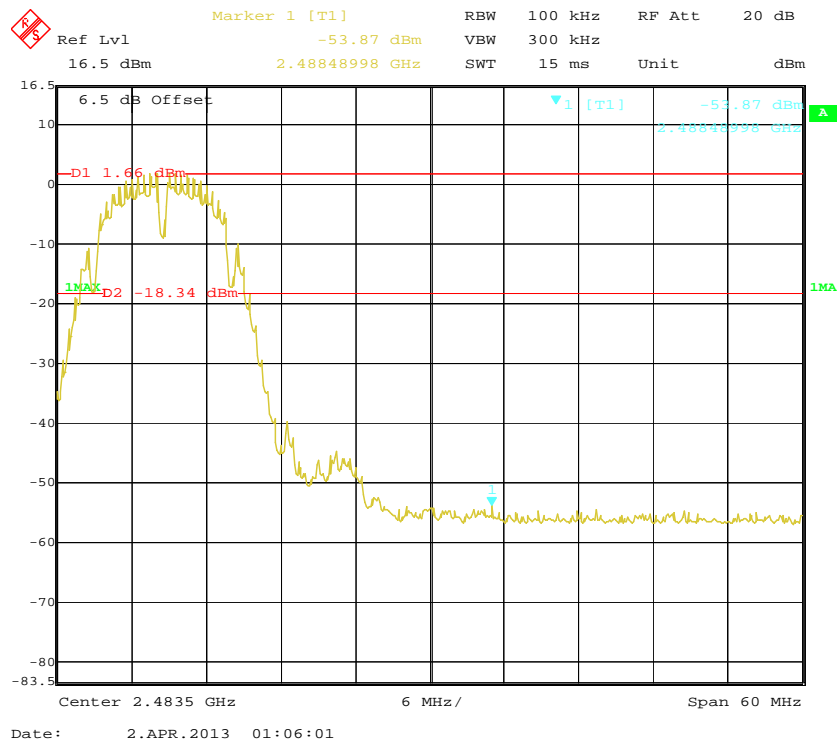
Test Mode: Transmitting

Test Result: Compliance. Please refer to following plots.

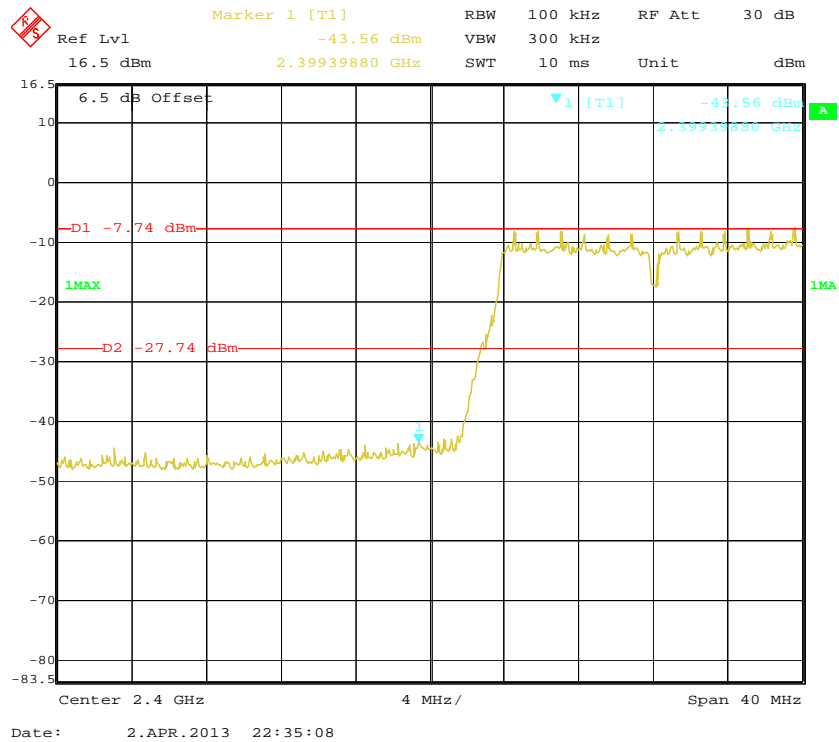
802.11b Band Edge, Left Side



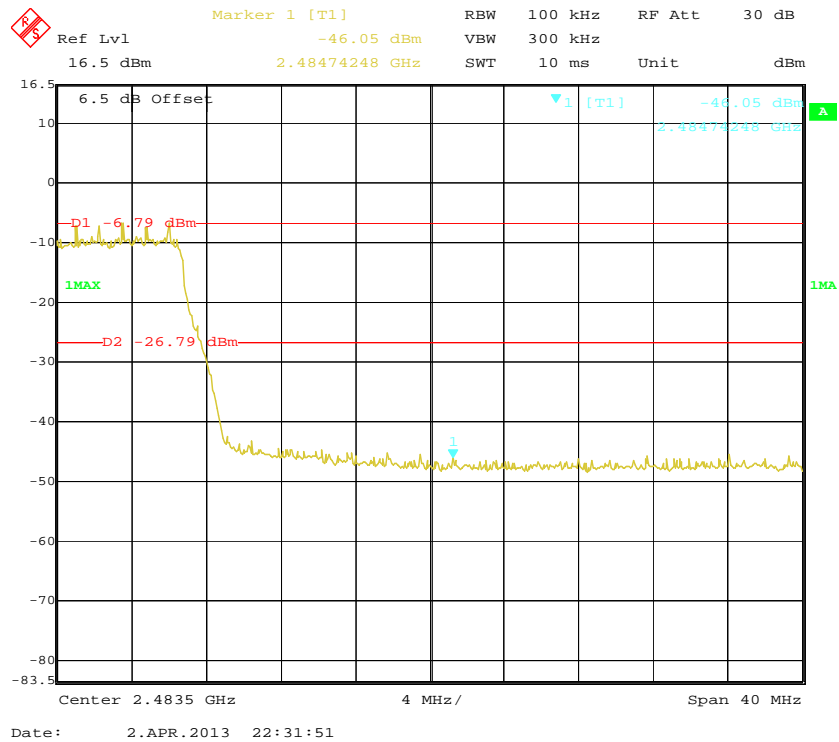
802.11b Band Edge, Right Side



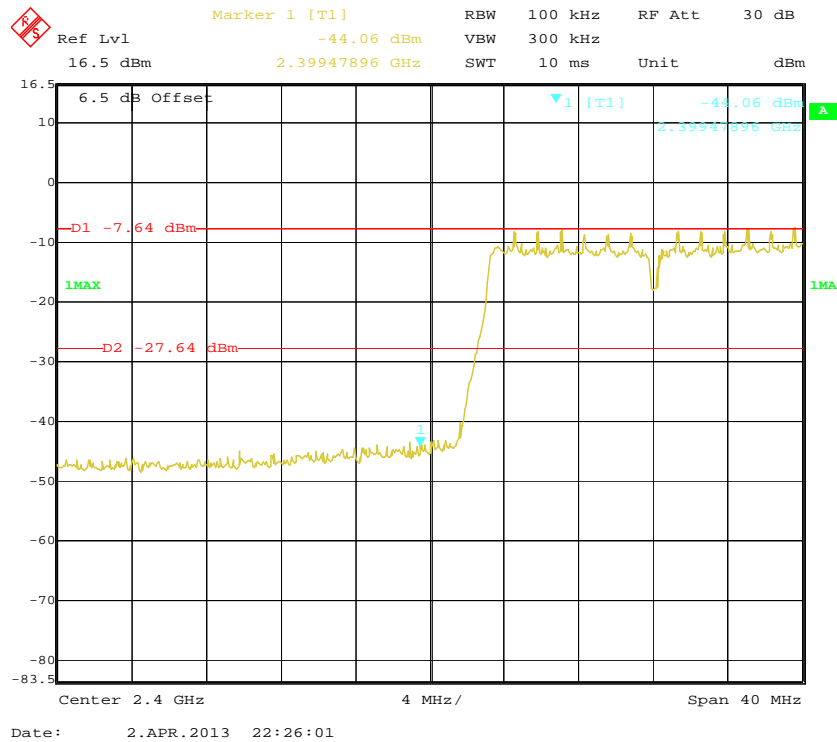
802.11g Band Edge, Left Side



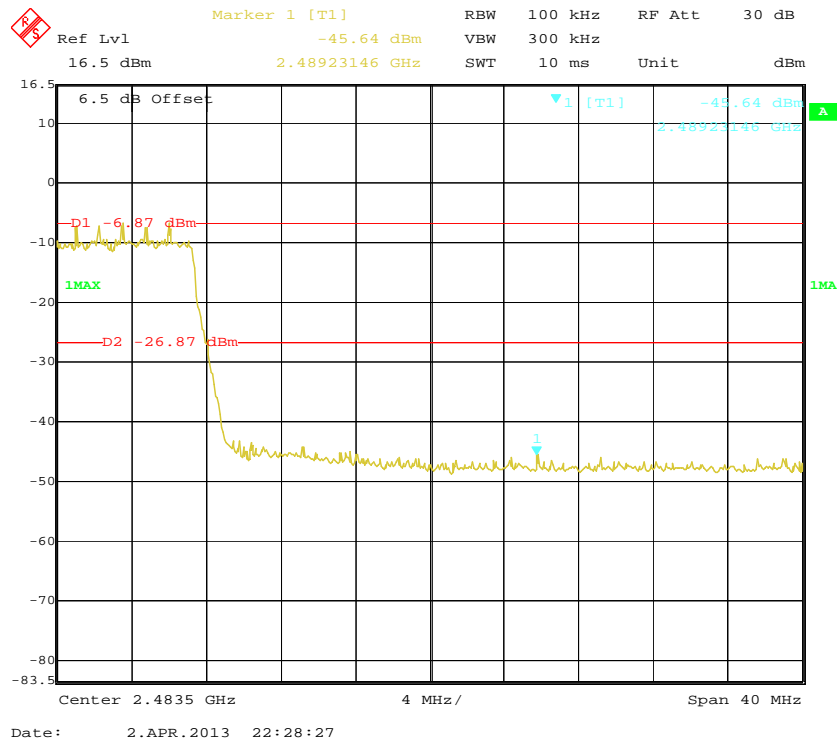
802.11g Band Edge, Right Side



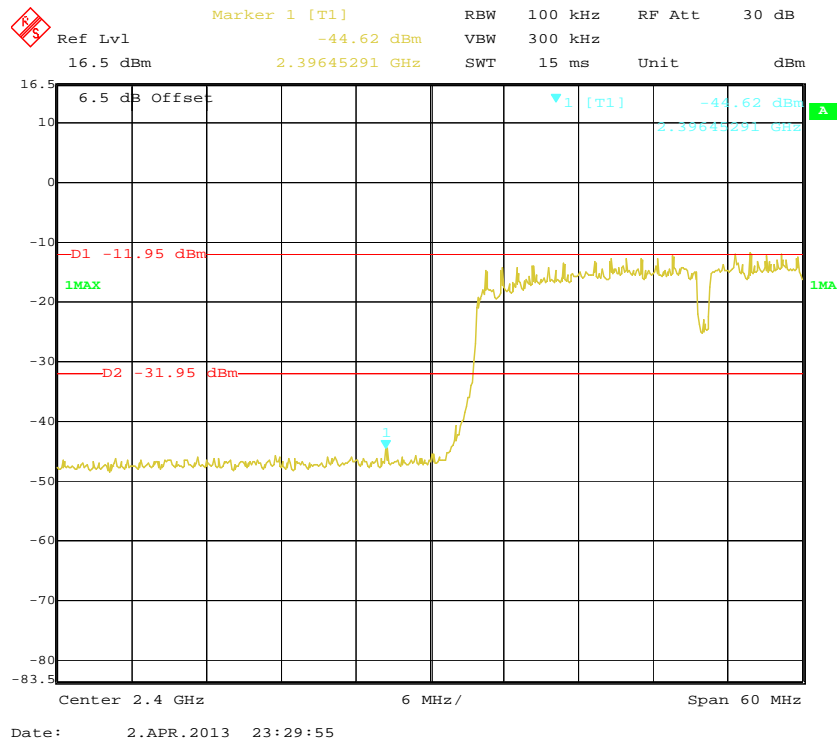
802.11n-HT20 Band Edge, Left Side



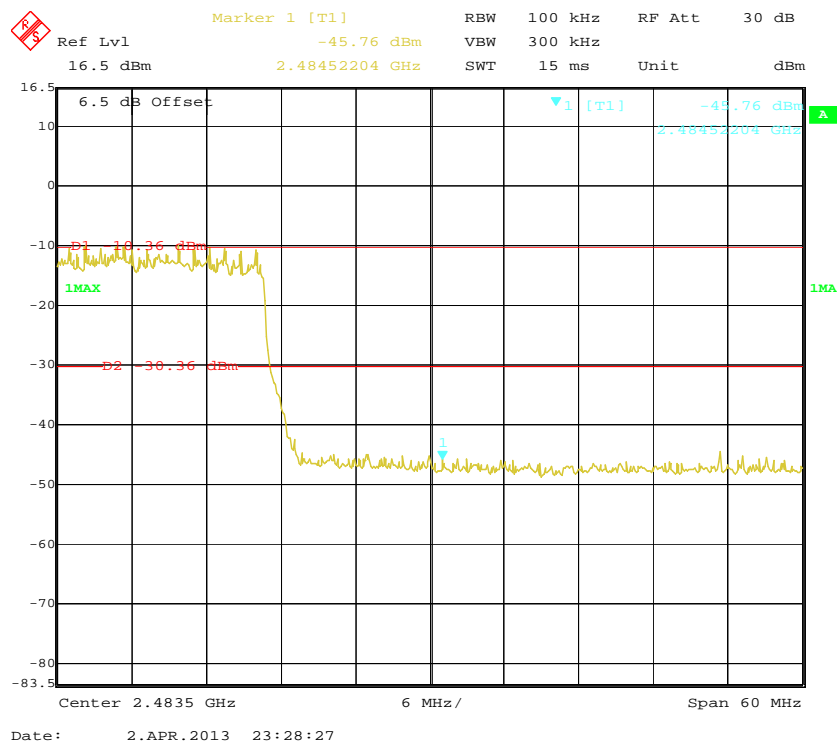
802.11n-HT20 Band Edge, Right Side



802.11n-HT40 Band Edge, Left Side



802.11n-HT40 Band Edge, Right Side



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 Equipment List and Details

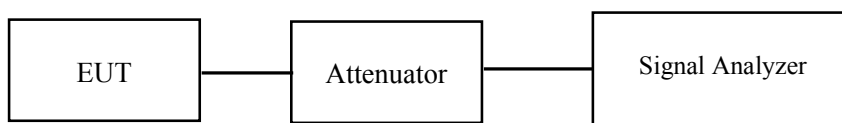
Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Rohde & Schwarz	Signal Analyzer	FSIQ26	8386001028	2012-11-24	2013-11-23

* **Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Shenzhen) attests that all calibrations have been performed in accordance to requirements, traceable to traceable to National Primary Standards and International System of Units (SI).

Test Procedure

According to KDB 558074 D01 DTS Meas Guidance v02 Clause 9.1 Option 1

1. Set analy center frequency to DTS channel center frequency.
2. Set the span to 1.5 times the DTS channel bandwidth.
3. Set the RBW ≥ 3 kHz.
4. Set the VBW $\geq 3 \times$ RBW.
5. Detector = peak.
6. Sweep time = auto couple.
7. Trace mode = max hold.
8. Allow trace to fully stabilize.
9. Use the peak marker function to determine the maximum power level.
10. If measurement value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.



Test Data

Environmental Conditions

Temperature:	24 °C
Relative Humidity:	55 %
ATM Pressure:	100.0kPa

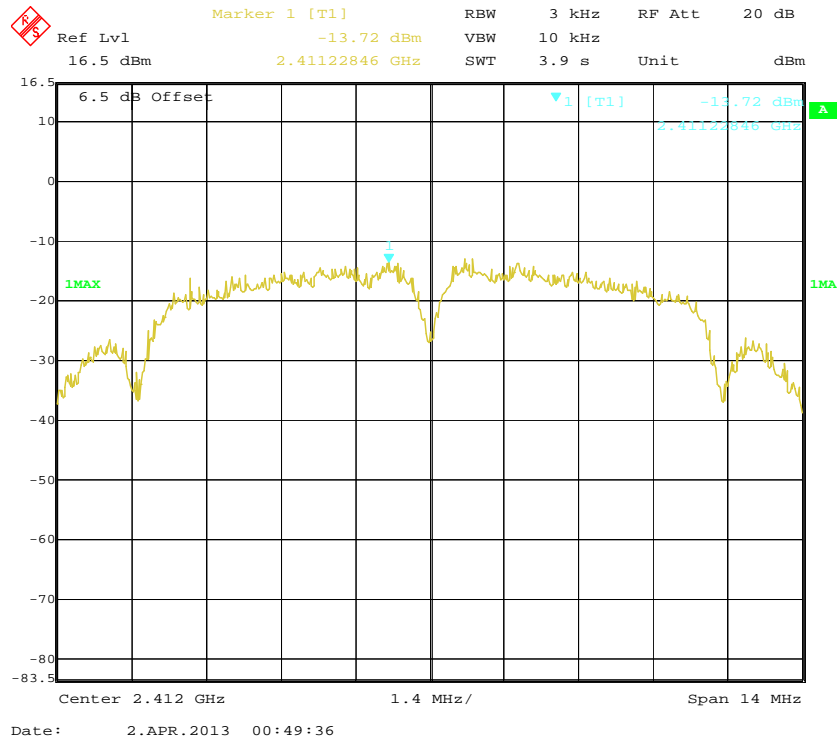
The testing was performed by Candy Li on 2013-04-02.

Test Mode: Transmitting

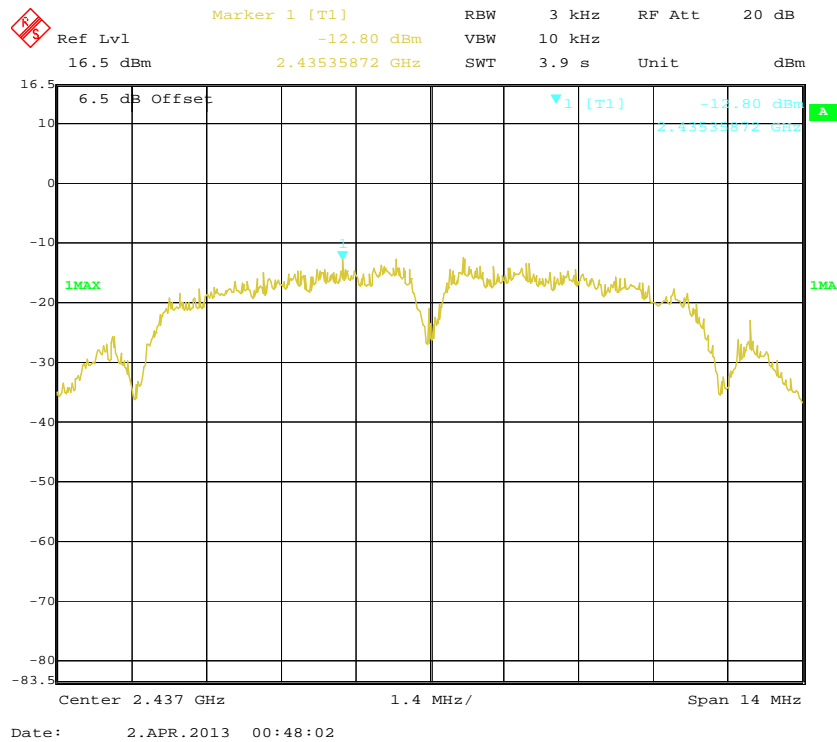
Test Result: Pass

Channel	Frequency (MHz)	Data Rate (Mbps)	Power spectral density (dBm/3 kHz)	Limit (dBm/3 kHz)
802.11b mode				
Low	2412	1	-13.72	8
Middle	2437	1	-12.80	8
High	2462	1	-11.95	8
802.11g mode				
Low	2412	6	-20.52	8
Middle	2437	6	-20.19	8
High	2462	6	-20.24	8
802.11n-HT20 mode				
Low	2412	6.5	-23.94	8
Middle	2437	6.5	-23.46	8
High	2462	6.5	-22.46	8
802.11n-HT40 mode				
Low	2422	13.5	-27.03	8
Middle	2437	13.5	-26.77	8
High	2452	13.5	-25.63	8

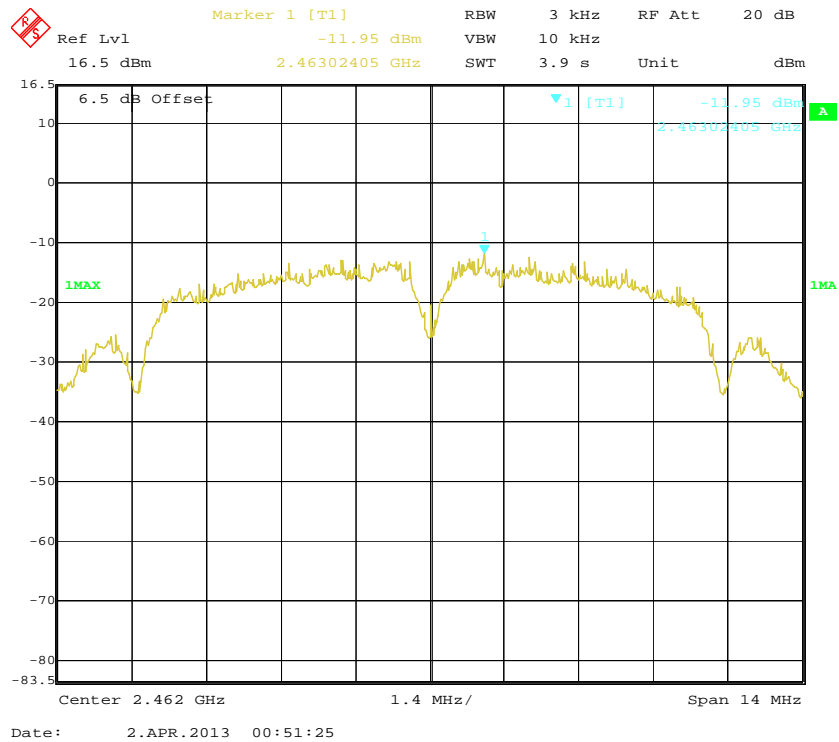
Power Spectral Density, 802.11b Low Channel



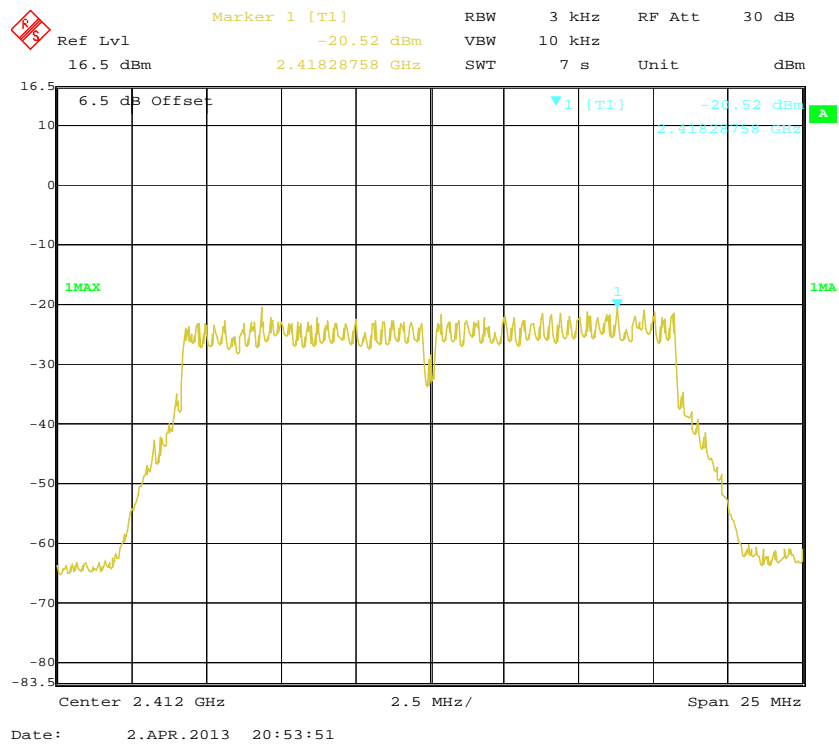
Power Spectral Density, 802.11b Middle Channel



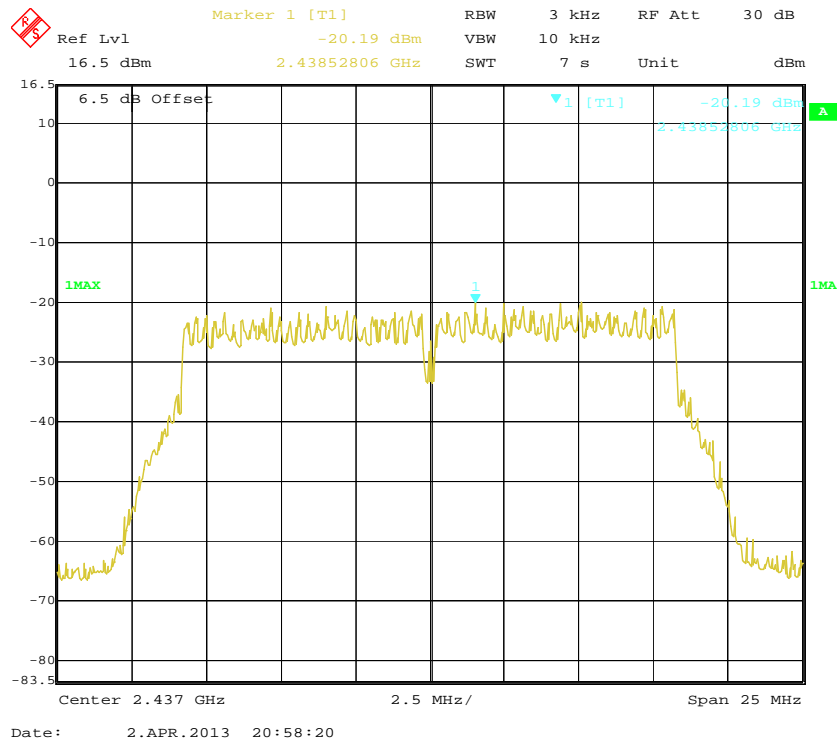
Power Spectral Density, 802.11b High Channel



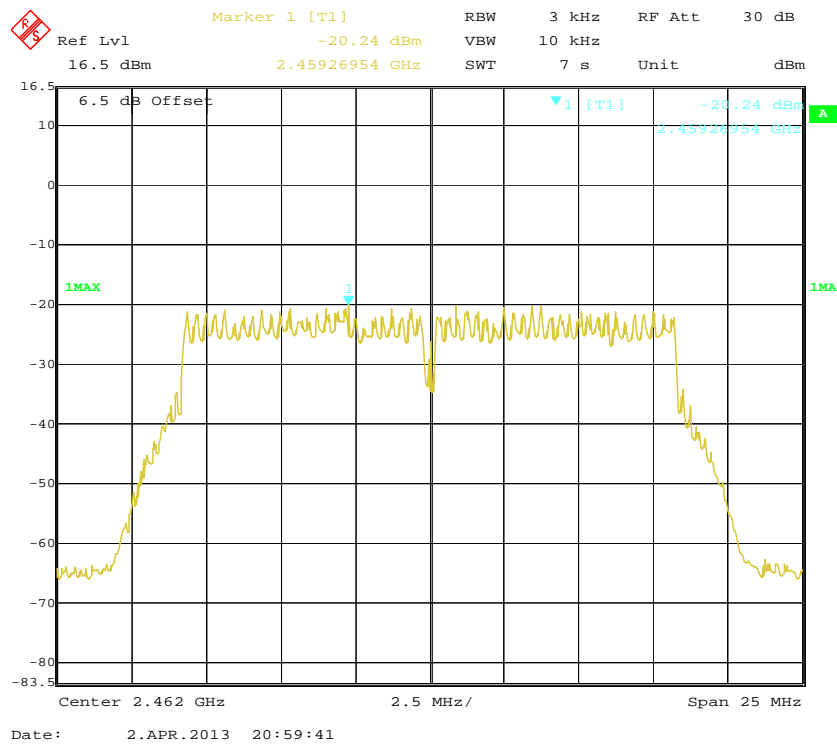
Power Spectral Density, 802.11g Low Channel



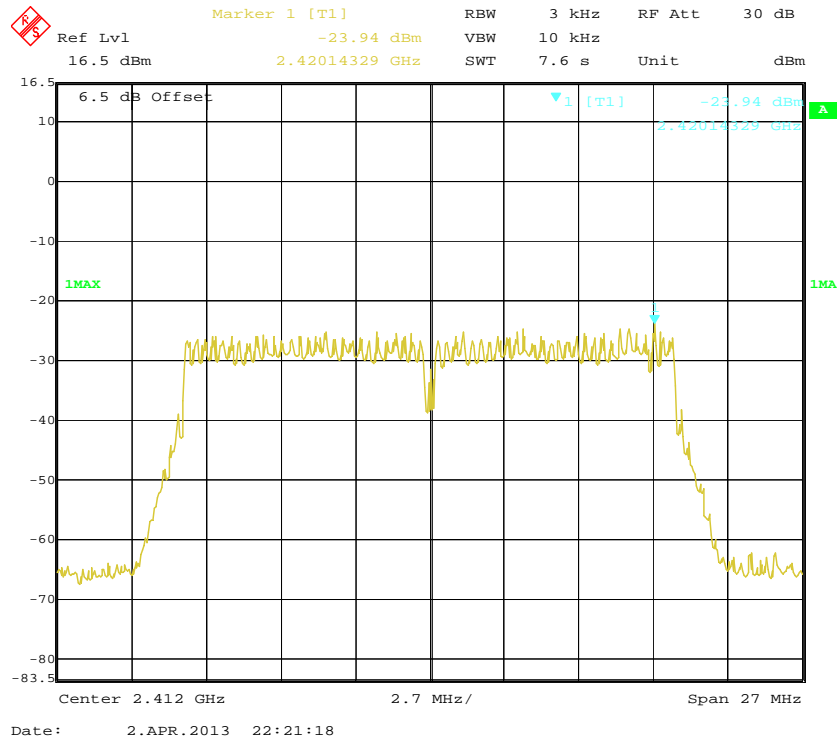
Power Spectral Density, 802.11g Middle Channel



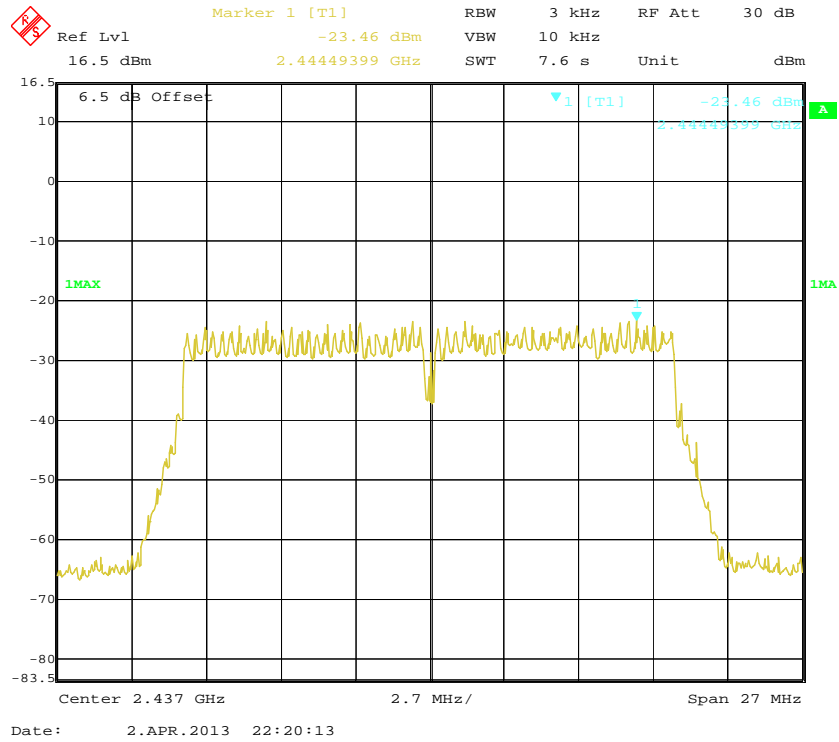
Power Spectral Density, 802.11g High Channel

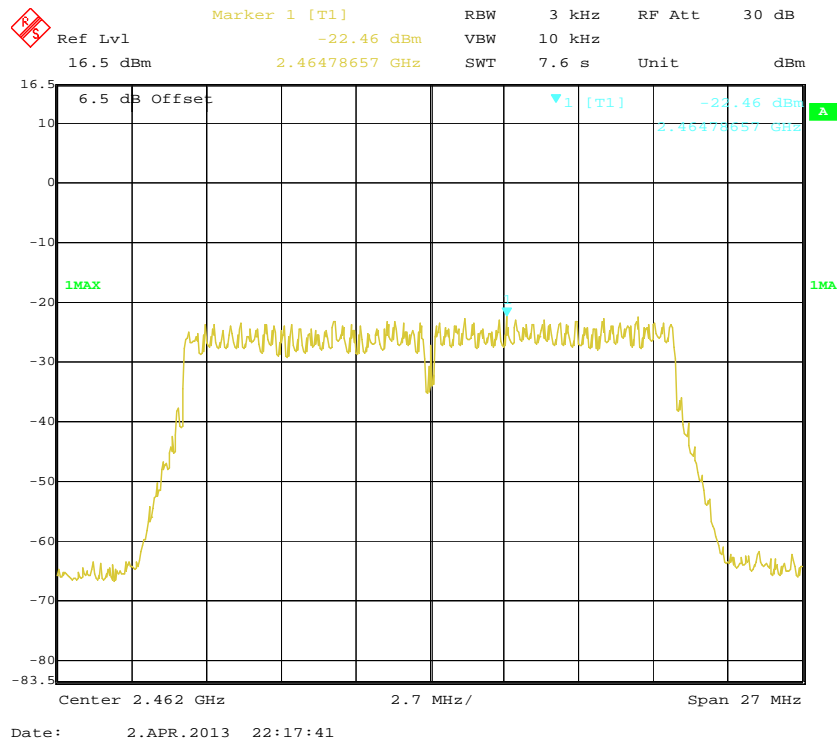
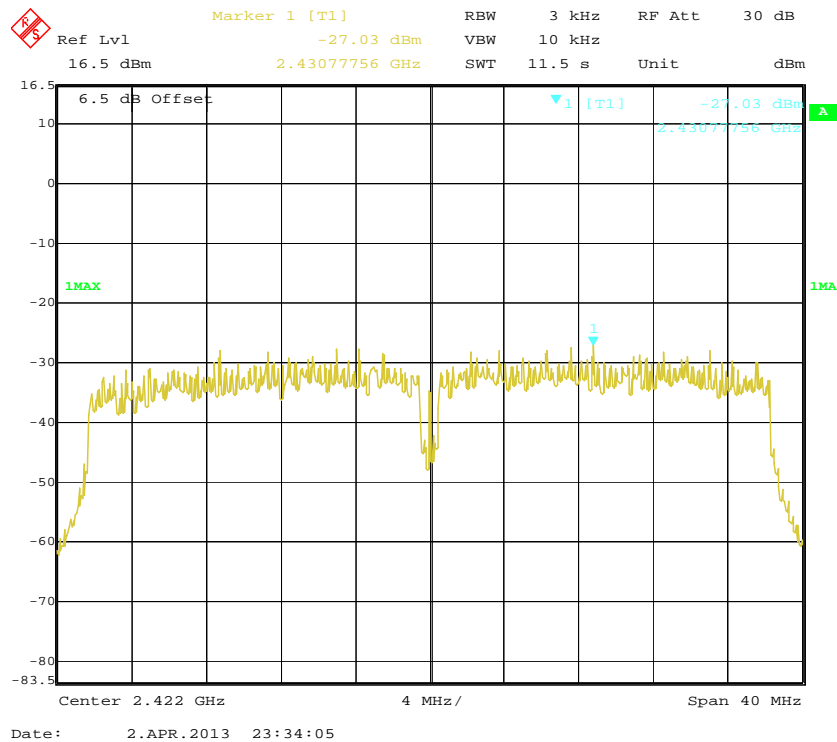


Power Spectral Density, 802.11n-HT20 Low Channel

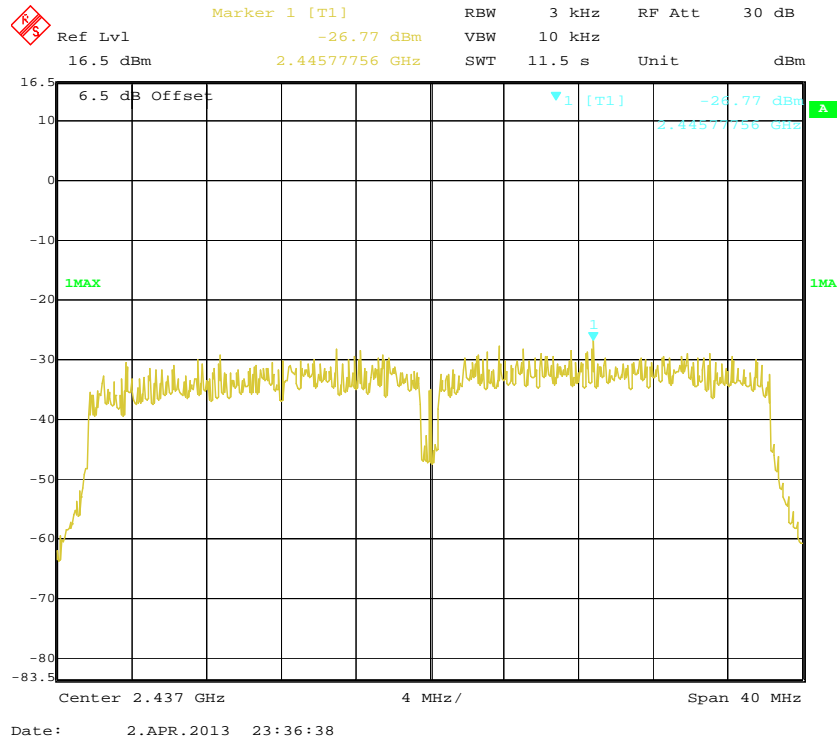


Power Spectral Density, 802.11n-HT20 Middle Channel

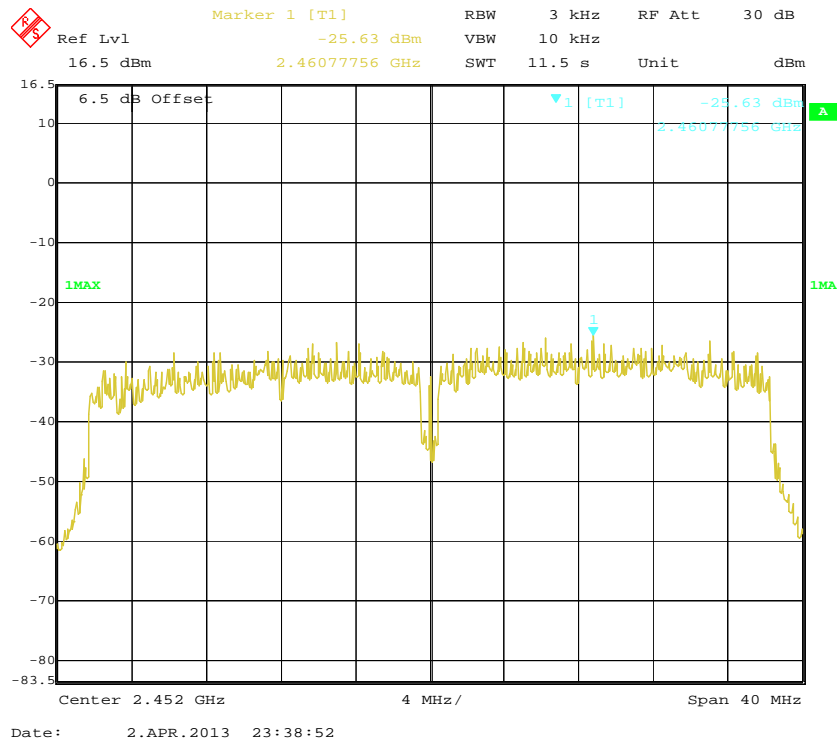


Power Spectral Density, 802.11n-HT20 High Channel**Power Spectral Density, 802.11n-HT40 Low Channel**

Power Spectral Density, 802.11n-HT40 Middle Channel



Power Spectral Density, 802.11n-HT40 High Channel



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