FCC PART 15.247

TEST REPORT

For

TECHVIEW,INC

8016 NW 68TH STREET, MIAMI FL 33166 United States

FCC ID: 2ACJGH300D

Report Type:	Product Type:
Original Report	Router inalámbrico N300

Test Engineer:	Leon Chen
Report Number:	RDG140930009-00
Report Date:	2014-10-21
Reviewed By:	Sula Huang RF Engineer
Test Laboratory:	Bay Area Compliance Laboratories Corp. (Dongguan) No.69 Pulongcun, Puxinhu Industrial Zone, Tangxia, Dongguan, Guangdong, China Tel: +86-769-86858888 Fax: +86-769-86858891 www.baclcorp.com.cn

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GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

The *TECHVIEW,INC's* product, model number: *H300D (FCC ID: 2ACJGH300D) or* ("EUT") in this report is a Router inalámbrico N300, which measures without antenna approximately:17.2 cm (L) x 11.2cm (W) x 2.6 cm (H), rated input voltage: DC 9V from adapter.

Adapter information:
Model: TEA09U-09060
Input: AC 100-240V, 50/60Hz, 0.3 A
Output: DC 9V, 0.6A

** All measurement and test data in this report was gathered from production sample serial number: 140930009 (Assigned by BACL.Dongguan). The EUT was received on 2014-10-10.*

Objective

This report is prepared on behalf of *TECHVIEW,INC* in accordance with Part 2, Subpart J, Part 15, Subparts A, B and C of the Federal Communications Commission's rules

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

Related Submittal(s)/Grant(s)

N/A

Test Methodology

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

All emissions measurement was performed and Bay Area Compliance Laboratories Corp. (Dongguan).

Test Facility

The Test site used by Bay Area Compliance Laboratories Corp. (Dongguan) to collect test data is located on the No.69 Pulongcun, Puxinhu Industrial Zone, Tangxia, Dongguan, Guangdong, China

Test site at Bay Area Compliance Laboratories Corp. (Dongguan) has been fully described in reports submitted to the Federal Communications 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 February 02, 2012. 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.: 273710. 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

The system was configured for testing in an engineering mode, which was provided by manufacturer. For 2.4G band, 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	/	/

For 802.11b, 802.11g and 802.11n-HT20 modes were tested with Channel 1, 6 and 11.

The worst-case data rates are determined to be as follows for each mode based upon investigations by measuring the average power and PSD across all data rates bandwidths, and modulations.

EUT Exercise Software

The software "MTOOL 2.0.0.3" was used, which was provided by manufacturer. The maximum power was set by default configuration.

Software and version			MTOOL 2.0.0.3			
Mode	Channel	Frequency(MHz)	Data Rate (Mbps)		Power Level	
			Chain 0	Chain 1	Chain 0	Chain 1
802.11 b	Low	2412	1	1	72	70
	Middle	2437	1	1	72	70
	High	2462	1	1	72	69
802.11 g	Low	2412	6	6	58	56
	Middle	2437	6	6	58	56
	High	2462	6	6	58	55
802.11 n20	Low	2412	MCS0	MCS0	45	43
	Middle	2437	MCS0	MCS0	45	43
	High	2462	MCS0	MCS0	44	42
802.11 n40	Low	2422	MCS0	MCS0	48	44
	Middle	2437	MCS0	MCS0	49	45
	High	2452	MCS0	MCS0	48	43

Equipment Modifications

No modification was made to the EUT.

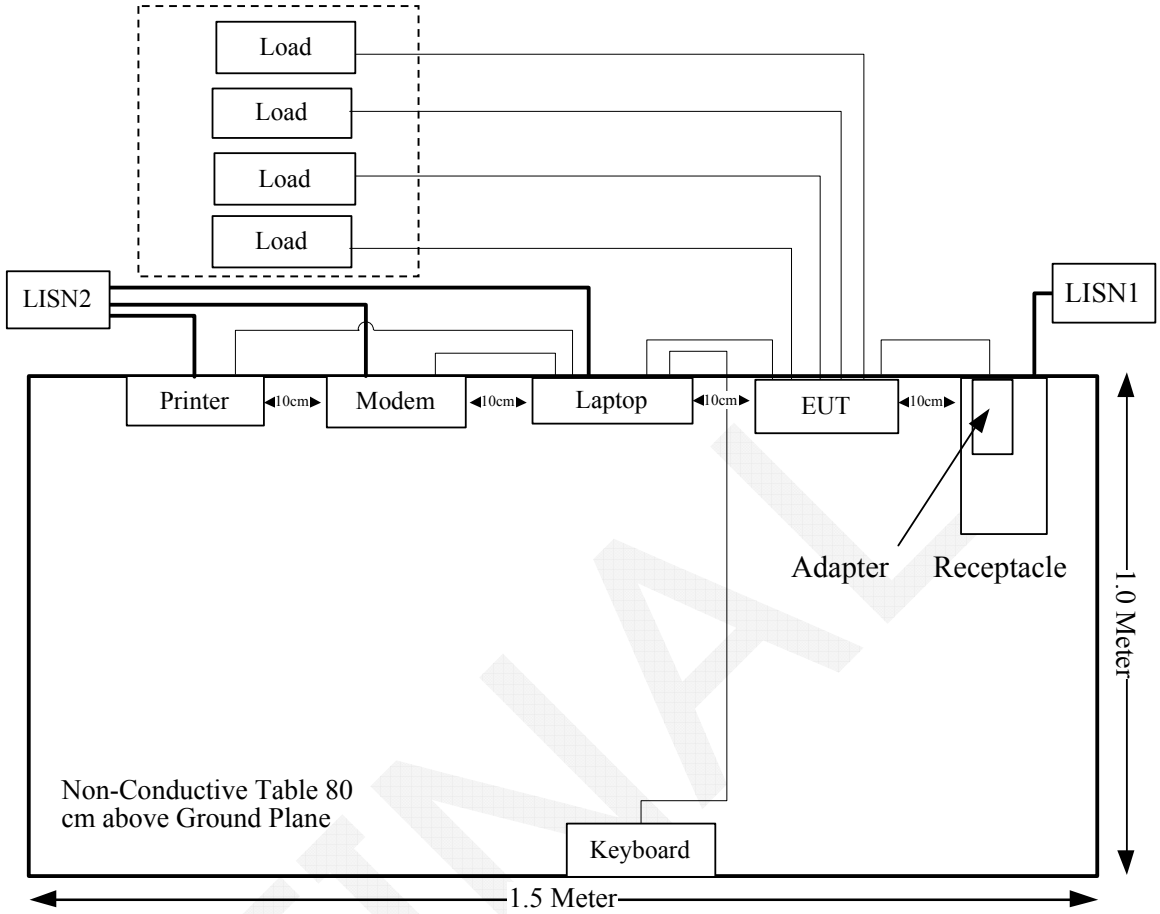
Support Equipment List and Details

Manufacturer	Description	Model	Serial Number
DELL	Laptop	PP11L	QDS-BRCM1017
HP	Printer	C3941A	JPTVOB2337
DELL	Keyboard	L100	CNORH656658907BL05DC
SAST	Modem	AEM-2100	0293

External Cable

Cable Description	Shielding Type	Ferrite Core	Length (m)	From Port	To
Serial Cable	Yes	no	1.2	Serial Port of Laptop	Modem
Parallel Cable	Yes	no	1.2	Parallel Port of Laptop	Printer
Keyboard Cable	Yes	Yes	1.8	USB Port of Laptop	Keyboard
RJ45 Cable*1	Yes	no	1.0	EUT	Laptop
RJ45 Cable*4	Yes	no	10	EUT	Load

Block Diagram of Test Setup



SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Result
§15.247 (i), §1.1310 & §2.1091	Maximum Permissible Exposure (MPE)	Compliance
§15.203	Antenna Requirement	Compliance
§15.207 (a)	AC Line 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 Emission Bandwidth	Compliance
§15.247(b)(3)	Maximum Conducted Output Power	Compliance
§15.247(d)	100 kHz Bandwidth of Frequency Band Edge	Compliance
§15.247(e)	Power Spectral Density	Compliance

FCC §15.247 (i) & §1.1310 & §2.1091- MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Applicable Standard

According to subpart 15.247(i) and subpart §1.1310, 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/f²)	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	2412	5.0	3.16	20.38	109.14	20	0.069	1.0
802.11g	2462	5.0	3.16	22.55	179.89	20	0.113	1.0
802.11n HT20	2412	5.0	3.16	21.67	146.89	20	0.092	1.0
802.11n HT40	2452	5.0	3.16	22.52	178.65	20	0.112	1.0

Result: The device meet FCC MPE at 20 cm distance.

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.

Antenna Connector Construction

The EUT has two integral antennas arrangement and the antenna gain is 5.0 dBi, fulfill the requirement of this section. Please refer to the EUT photos.

Result: Compliant.

FCC §15.207 (a) – AC LINE CONDUCTED EMISSIONS

Applicable Standard

FCC§15.207

Measurement Uncertainty

Compliance or non- compliance with a disturbance limit shall be determined in the following manner：

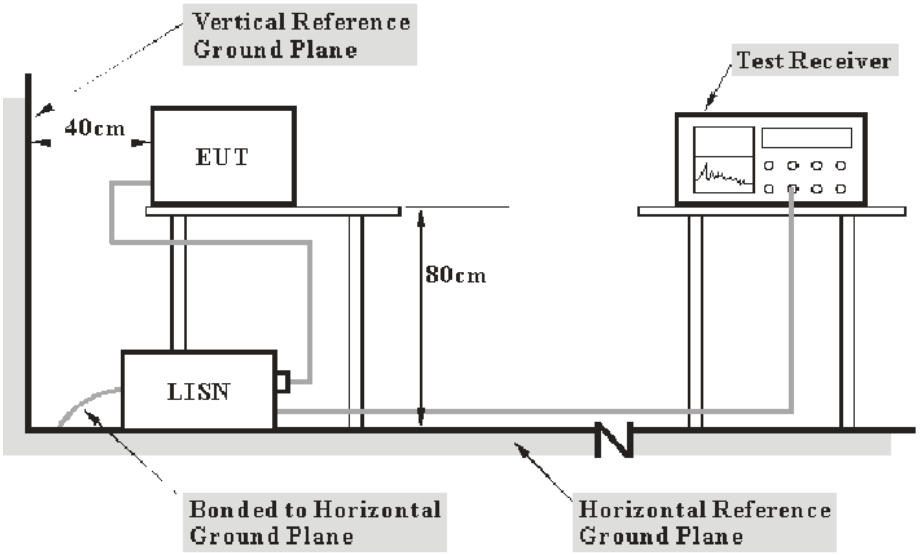
If U_{lab} is less than or equal to U_{cispr} of Table 1, then:
– compliance is deemed to occur if no measured disturbance level exceeds the disturbance limit;
– non - compliance is deemed to occur if any measured disturbance level exceeds the disturbance limit.
If U_{lab} is greater than U_{cispr} of Table 1, then:
– compliance is deemed to occur if no measured disturbance level, increased by ($U_{lab} - U_{cispr}$), exceeds the disturbance limit;
– non - compliance is deemed to occur if any measured disturbance level, increased by ($U_{lab} - U_{cispr}$), exceeds the disturbance limit.

Based on CISPR 16-4-2-2011, measurement uncertainty of conducted disturbance at mains port using AMN at Bay Area Compliance Laboratories Corp. (Dongguan) is 3.46 dB (150 kHz to 30 MHz).

Table 1 – Values of U_{cispr}

Measurement	U_{cispr}
Conducted disturbance at mains port using AMN (150 kHz to 30 MHz)	3.4 dB

EUT Setup



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

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

The spacing between the peripherals was 10 cm.

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

EMI Test Receiver Setup

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

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

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

Test Procedure

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.

Corrected Amplitude & Margin Calculation

The basic equation is as follows:

$V_C = V_R + A_C + VDF$
$C_f = A_C + VDF$

Herein,
V_C (cord. Reading): corrected voltage amplitude
V_R: reading voltage amplitude
A_c: attenuation caused by cable loss
VDF: voltage division factor of AMN
C_f: Correction Factor

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

Margin = Limit – Corrected Amplitude

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	EMI Test Receiver	ESCS 30	830245/006	2013-11-20	2014-11-20
R&S	L.I.S.N	ESH3-Z5	843331/015	N/A	N/A
R&S	Two-line V-network	ENV 216	3560.6550.12	2014-01-22	2015-01-22
R&S	Test Software	EMC32	Version8.53.0	N/A	N/A

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

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:

4.1 dB at **0.609741MHz** in the **Neutral** conducted mode

Test Data

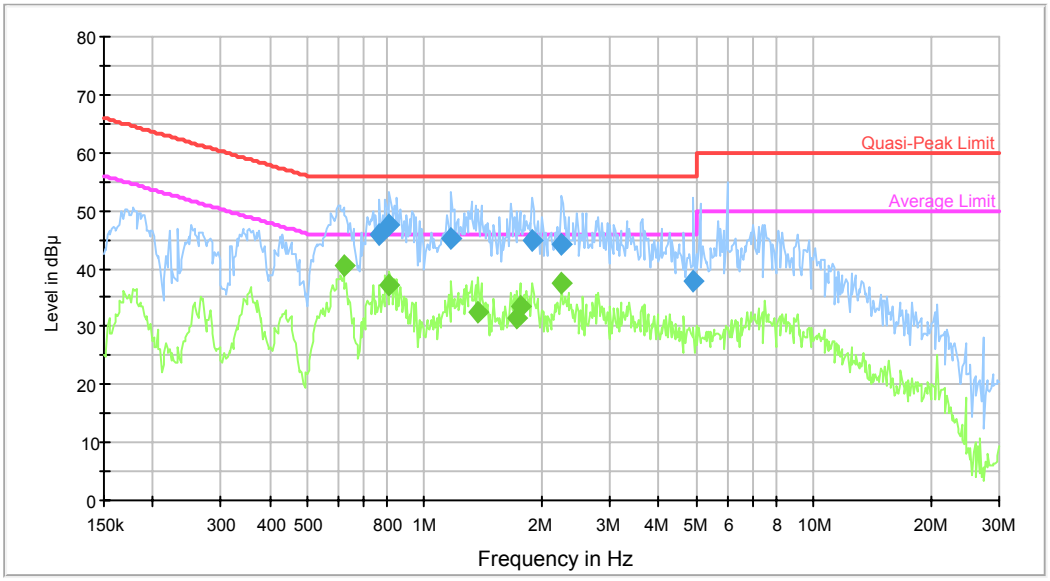
Environmental Conditions

Temperature:	27.6 °C
Relative Humidity:	44 %
ATM Pressure:	100.6 kPa

The testing was performed by Leon Chen on 2014-10-11

Test Mode: Transmitting

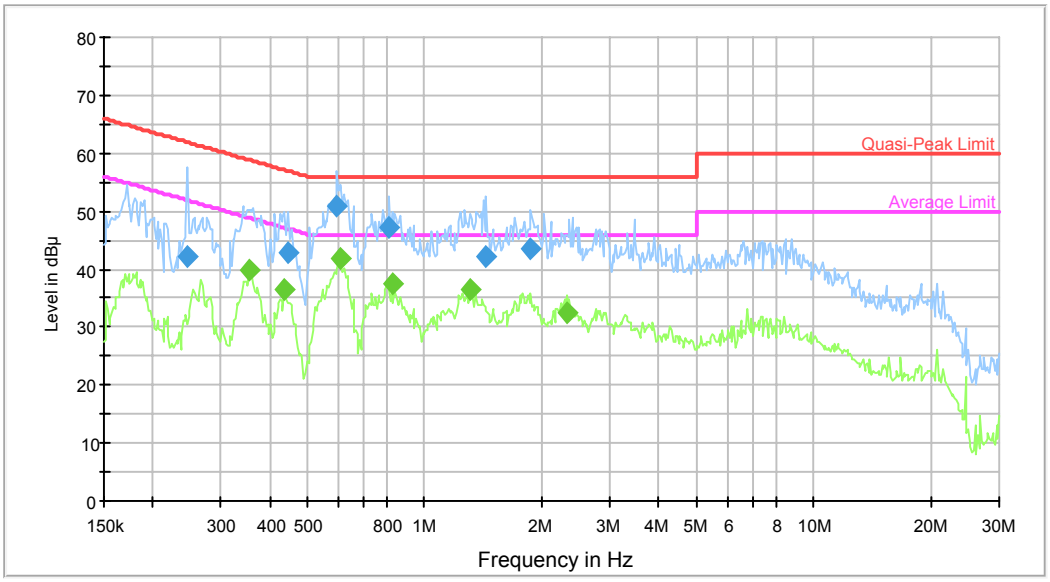
AC 120 V, 60 Hz, Line:



Frequency (MHz)	Corrected Quasi-Peak (dBµV)	Bandwidth (kHz)	Line	Corr. Factor (dB)	Margin (dB)	Limit (dBµV)	Comment
0.768247	45.8	9.000	L1	10.5	10.2	56.0	Compliance
0.812315	47.7	9.000	L1	10.5	8.3	56.0	Compliance
1.171949	45.0	9.000	L1	10.4	11.0	56.0	Compliance
1.890344	44.9	9.000	L1	10.4	11.1	56.0	Compliance
2.252540	44.1	9.000	L1	10.5	11.9	56.0	Compliance
4.918182	37.7	9.000	L1	10.7	18.3	56.0	Compliance

Frequency (MHz)	Corrected Average (dBµV)	Bandwidth (kHz)	Line	Corr. Factor (dB)	Margin (dB)	Limit (dBµV)	Comment
0.619536	40.5	9.000	L1	10.5	5.5	46.0	Compliance
0.812315	37.2	9.000	L1	10.5	8.8	46.0	Compliance
1.374420	32.5	9.000	L1	10.4	13.5	46.0	Compliance
1.731709	31.4	9.000	L1	10.4	14.6	46.0	Compliance
1.759527	33.3	9.000	L1	10.4	12.7	46.0	Compliance
2.252540	37.3	9.000	L1	10.5	8.7	46.0	Compliance

AC 120 V, 60 Hz, Neutral:



Frequency (MHz)	Corrected Quasi-Peak (dBµV)	Bandwidth (kHz)	Line	Corr. Factor (dB)	Margin (dB)	Limit (dBµV)	Comment
0.245835	42.2	9.000	N	11.2	19.7	61.9	Compliance
0.446873	43.0	9.000	N	10.6	14.0	56.9	Compliance
0.595338	51.0	9.000	N	10.4	5.0	56.0	Compliance
0.812315	47.1	9.000	N	10.5	9.0	56.0	Compliance
1.441726	42.3	9.000	N	10.5	13.7	56.0	Compliance
1.875341	43.4	9.000	N	10.5	12.6	56.0	Compliance

Frequency (MHz)	Corrected Average (dBµV)	Bandwidth (kHz)	Line	Corr. Factor (dB)	Margin (dB)	Limit (dBµV)	Comment
0.354674	39.7	9.000	N	11.0	9.1	48.9	Compliance
0.436318	36.5	9.000	N	10.6	10.7	47.1	Compliance
0.609741	41.9	9.000	N	10.5	4.1	46.0	Compliance
0.825364	37.6	9.000	N	10.5	8.4	46.0	Compliance
1.310256	36.6	9.000	N	10.5	9.4	46.0	Compliance
2.325491	32.4	9.000	N	10.5	13.6	46.0	Compliance

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

Applicable Standard

FCC §15.247 (d); §15.209; §15.205;

Measurement Uncertainty

Compliance or non- compliance with a disturbance limit shall be determined in the following manner：

If U_{lab} is less than or equal to U_{cispr} of Table 2, then:
- compliance is deemed to occur if no measured disturbance level exceeds the disturbance limit;
- non - compliance is deemed to occur if any measured disturbance level exceeds the disturbance limit.

If U_{lab} is greater than U_{cispr} of Table 2, then:
- compliance is deemed to occur if no measured disturbance level, increased by ($U_{lab} - U_{cispr}$), exceeds the disturbance limit;
- non - compliance is deemed to occur if any measured disturbance level, increased by ($U_{lab} - U_{cispr}$), exceeds the disturbance limit.

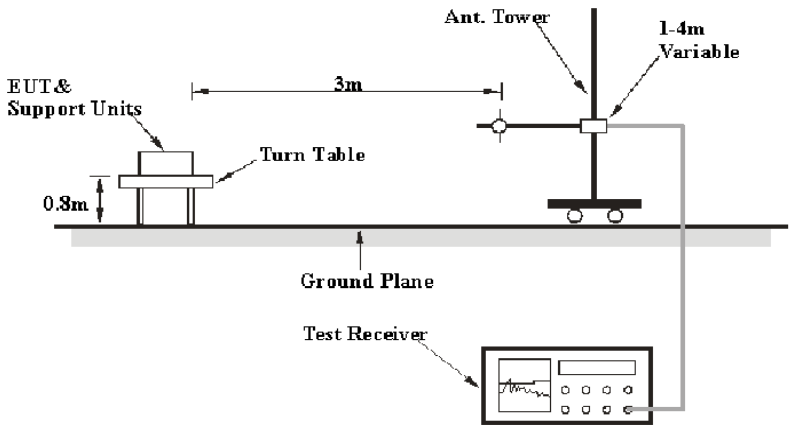
Based on CISPR 16-4-2-2011, measurement uncertainty of radiated emission at a distance of 3m at Bay Area Compliance Laboratories Corp. (Dongguan) is:
30M~200MHz: 5.0 dB
200M~1GHz: 6.2 dB
1G~6GHz: 4.45 dB
6G~18GHz: 5.23 dB

Table 2 – Values of U_{cispr}

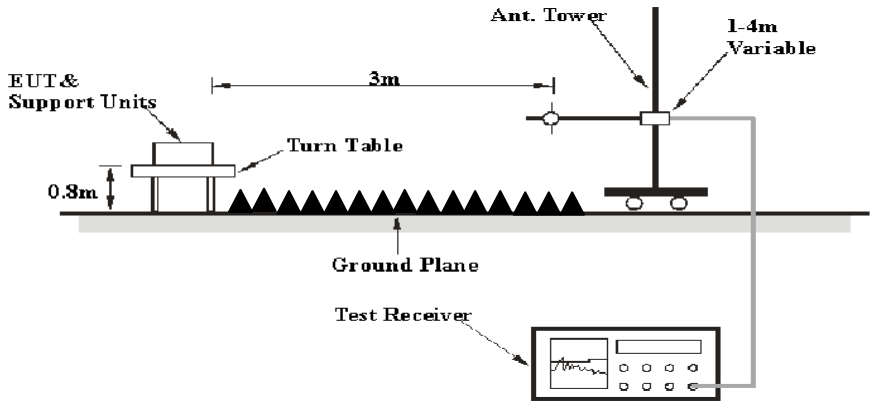
Measurement	U_{cispr}
Radiated disturbance (electric field strength at an OATS or in a SAC) (30 MHz to 1000 MHz)	6.3 dB
Radiated disturbance (electric field strength in a FAR) (1 GHz to 6 GHz)	5.2 dB
Radiated disturbance (electric field strength in a FAR) (6 GHz to 18 GHz)	5.5 dB

EUT Setup

Below 1GHz:



Above 1GHz:



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

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

The spacing between the peripherals was 10 cm.

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

EMI Test Receiver & Spectrum Analyzer Setup

The system was investigated from 30 MHz to 25 GHz.

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

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

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, peak and average detection modes for frequencies above 1 GHz.

Corrected Amplitude & Margin Calculation

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

Corrected Amplitude = Meter Reading + Antenna Loss + 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 Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	EMI Test Receiver	ESCI	100224	2014-05-09	2015-05-09
Sunol Sciences	Antenna	JB3	A060611-3	2014-07-28	2017-07-27
HP	Amplifier	8447E	2434A02181	2014-09-01	2015-09-01
R&S	Spectrum Analyzer	FSEM	DE31388	2014-05-09	2015-05-09
ETS LINDGREN	Horn Antenna	3115	000 527 35	2012-09-06	2015-09-06
Mini-Circuit	Amplifier	ZVA-213-S+	054201245	2014-02-19	2015-02-19
R&S	Spectrum Analyzer	FSP 38	100478	2014-05-09	2015-05-09
Ducommun Technolagies	Horn Antenna	ARH-4223-02	1007726-01 1304	2014-06-16	2017-06-15
Quinstar	Amplifier	QLW-18405536-JO	15964001001	2014-09-06	2015-09-06

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

Test Results Summary

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

1.0 dB at **4874 MHz** in the **Vertical** polarization for 802.11b mode

Test Data

Environmental Conditions

Temperature:	24.7 °C-
Relative Humidity:	56 %
ATM Pressure:	101.1kPa

The testing was performed by Leon Chen on 2014-10-20

Test Mode: Transmitting

802.11b:

Frequency (MHz)	Receiver		Rx Antenna		Cable loss (dB)	Amplifier Gain (dB)	Corrected Amplitude (dBμV/m)	FCC 15.247	
	Reading (dBμV)	Detector (PK/QP/AV)	Polar (H/V)	Factor (dB/m)				Limit (dBμV/m)	Margin (dB)
Low Channel: 2412 MHz									
2412	69.28	PK	H	25.67	4.42	0.00	99.37	N/A	N/A
2412	65.77	AV	H	25.67	4.42	0.00	95.86	N/A	N/A
2412	79.47	PK	V	25.67	4.42	0.00	109.56	N/A	N/A
2412	75.69	AV	V	25.67	4.42	0.00	105.78	N/A	N/A
2390	29.14	PK	V	25.61	4.39	0.00	59.14	74.00	14.86
2390	17.99	AV	V	25.61	4.39	0.00	47.99	54.00	6.01
4824	47.54	PK	V	30.64	6.03	27.41	56.80	74.00	17.20
4824	43.48	AV	V	30.64	6.03	27.41	52.74	54.00	1.26*
7236	39.81	PK	V	34.17	7.47	25.90	55.55	74.00	18.45
7236	28.85	AV	V	34.17	7.47	25.90	44.59	54.00	9.41
9648	36.78	PK	V	36.06	8.81	27.46	54.19	74.00	19.81
9648	25.74	AV	V	36.06	8.81	27.46	43.15	54.00	10.85
1723	37.64	PK	V	24.05	3.53	27.64	37.58	74.00	36.42
1723	25.45	AV	V	24.05	3.53	27.64	25.39	54.00	28.61
109.54	40.67	QP	V	12.80	1.28	21.41	33.34	43.50	10.16
Middle Channel: 2437 MHz									
2437	70.73	PK	H	25.74	4.41	0.00	100.88	N/A	N/A
2437	66.26	AV	H	25.74	4.41	0.00	96.41	N/A	N/A
2437	81.00	PK	V	25.74	4.41	0.00	111.15	N/A	N/A
2437	77.18	AV	V	25.74	4.41	0.00	107.33	N/A	N/A
4874	47.99	PK	V	30.77	6.09	27.42	57.43	74.00	16.57
4874	43.56	AV	V	30.77	6.09	27.42	53.00	54.00	1.00*
7311	40.81	PK	V	34.35	7.51	25.88	56.79	74.00	17.21
7311	28.03	AV	V	34.35	7.51	25.88	44.01	54.00	9.99
9748	38.94	PK	V	36.30	8.83	27.24	56.83	74.00	17.17
9748	26.77	AV	V	36.30	8.83	27.24	44.66	54.00	9.34
3065	38.02	PK	V	27.41	7.28	27.48	45.23	74.00	28.77
3065	26.70	AV	V	27.41	7.28	27.48	33.91	54.00	20.09
109.54	40.11	QP	V	12.80	1.28	21.41	32.78	43.50	10.72
High Channel: 2462 MHz									
2462	70.64	PK	H	25.80	4.43	0.00	100.87	N/A	N/A
2462	66.83	AV	H	25.80	4.43	0.00	97.06	N/A	N/A
2462	80.15	PK	V	25.80	4.43	0.00	110.38	N/A	N/A
2462	76.69	AV	V	25.80	4.43	0.00	106.92	N/A	N/A
2483.5	26.94	PK	V	25.86	4.49	0.00	57.29	74.00	16.71
2483.5	16.64	AV	V	25.86	4.49	0.00	46.99	54.00	7.01
4924	47.09	PK	V	30.90	5.97	27.43	56.53	74.00	17.47
4924	43.49	AV	V	30.90	5.97	27.43	52.93	54.00	1.07*
7386	40.21	PK	V	34.53	7.55	25.86	56.43	74.00	17.57
7386	28.51	AV	V	34.53	7.55	25.86	44.73	54.00	9.27
9848	37.36	PK	V	36.54	8.85	26.94	55.81	74.00	18.19
9848	25.91	AV	V	36.54	8.85	26.94	44.36	54.00	9.64
1782	37.04	PK	V	24.16	3.56	27.56	37.20	74.00	36.80
1782	25.66	AV	V	24.16	3.56	27.56	25.82	54.00	28.18
109.54	40.23	QP	V	12.80	1.28	21.41	32.90	43.50	10.60

*Within measurement uncertainty!

802.11g:

Frequency (MHz)	Receiver		Rx Antenna		Cable loss (dB/m)	Amplifier Gain (dB)	Corrected Amplitude (dBμV/m)	FCC 15.247	
	Reading (dBμV)	Detector (PK/QP/AV)	Polar (H/V)	Factor (dB)				Limit (dBμV/m)	Margin (dB)
Low Channel: 2412 MHz									
2412	67.22	PK	H	25.67	4.42	0.00	97.31	N/A	N/A
2412	57.88	AV	H	25.67	4.42	0.00	87.97	N/A	N/A
2412	78.01	PK	V	25.67	4.42	0.00	108.10	N/A	N/A
2412	68.69	AV	V	25.67	4.42	0.00	98.78	N/A	N/A
2390	38.52	PK	V	25.61	4.39	0.00	68.52	74.00	5.48
2390	22.85	AV	V	25.61	4.39	0.00	52.85	54.00	1.15 *
4824	47.83	PK	V	30.64	6.03	27.41	57.09	74.00	16.91
4824	33.71	AV	V	30.64	6.03	27.41	42.97	54.00	11.03
7236	39.39	PK	V	34.17	7.47	25.90	55.13	74.00	18.87
7236	27.98	AV	V	34.17	7.47	25.90	43.72	54.00	10.28
9648	37.55	PK	V	36.06	8.81	27.46	54.96	74.00	19.04
9648	25.72	AV	V	36.06	8.81	27.46	43.13	54.00	10.87
3147	39.24	PK	V	27.67	7.66	27.41	47.16	74.00	26.84
3147	27.44	AV	V	27.67	7.66	27.41	35.36	54.00	18.64
109.54	40.19	QP	V	12.80	1.28	21.41	32.86	43.50	10.64
Middle Channel: 2437 MHz									
2437	67.19	PK	H	25.74	4.41	0.00	97.34	N/A	N/A
2437	57.22	AV	H	25.74	4.41	0.00	87.37	N/A	N/A
2437	79.41	PK	V	25.74	4.41	0.00	109.56	N/A	N/A
2437	68.48	AV	V	25.74	4.41	0.00	98.63	N/A	N/A
4874	48.29	PK	V	30.77	6.09	27.42	57.73	74.00	16.27
4874	34.74	AV	V	30.77	6.09	27.42	44.18	54.00	9.82
7311	39.48	PK	V	34.35	7.51	25.88	55.46	74.00	18.54
7311	27.67	AV	V	34.35	7.51	25.88	43.65	54.00	10.35
9748	37.45	PK	V	36.30	8.83	27.24	55.34	74.00	18.66
9748	25.69	AV	V	36.30	8.83	27.24	43.58	54.00	10.42
3147	38.32	PK	V	27.67	7.66	27.41	46.24	74.00	27.76
3147	26.02	AV	V	27.67	7.66	27.41	33.94	54.00	20.06
109.54	40.38	QP	V	12.80	1.28	21.41	33.05	43.50	10.45
High Channel: 2462 MHz									
2462	67.66	PK	H	25.80	4.43	0.00	97.89	N/A	N/A
2462	57.01	AV	H	25.80	4.43	0.00	87.24	N/A	N/A
2462	78.08	PK	V	25.80	4.43	0.00	108.31	N/A	N/A
2462	67.30	AV	V	25.80	4.43	0.00	97.53	N/A	N/A
2483.5	38.96	PK	V	25.86	4.49	0.00	69.31	74.00	4.69
2483.5	22.48	AV	V	25.86	4.49	0.00	52.83	54.00	1.17 *
4924	48.00	PK	V	30.90	5.97	27.43	57.44	74.00	16.56
4924	34.71	AV	V	30.90	5.97	27.43	44.15	54.00	9.85
7386	40.72	PK	V	34.53	7.55	25.86	56.94	74.00	17.06
7386	28.28	AV	V	34.53	7.55	25.86	44.50	54.00	9.50
9848	37.08	PK	V	36.54	8.85	26.94	55.53	74.00	18.47
9848	25.94	AV	V	36.54	8.85	26.94	44.39	54.00	9.61
3357	38.10	PK	V	28.34	5.37	27.24	44.57	74.00	29.43
3357	26.83	AV	V	28.34	5.37	27.24	33.30	54.00	20.70
109.54	40.86	QP	V	12.80	1.28	21.41	33.53	43.50	9.97

*Within measurement uncertainty!

802.11 n20:

Frequency (MHz)	Receiver		Rx Antenna		Cable loss (dB)	Amplifier Gain (dB)	Corrected Amplitude (dBμV/m)	FCC 15.247	
	Reading (dBμV)	Detector (PK/QP/AV)	Polar (H/V)	Factor (dB/m)				Limit (dBμV/m)	Margin (dB)
Low Channel: 2412 MHz									
2412	66.50	PK	H	25.67	4.42	0.00	96.59	N/A	N/A
2412	55.78	AV	H	25.67	4.42	0.00	85.87	N/A	N/A
2412	78.45	PK	V	25.67	4.42	0.00	108.54	N/A	N/A
2412	67.33	AV	V	25.67	4.42	0.00	97.42	N/A	N/A
2390	40.06	PK	V	25.61	4.39	0.00	70.06	74.00	3.94 *
2390	22.69	AV	V	25.61	4.39	0.00	52.69	54.00	1.31 *
4824	42.18	PK	V	30.64	6.03	27.41	51.44	74.00	22.56
4824	27.44	AV	V	30.64	6.03	27.41	36.70	54.00	17.30
7236	36.48	PK	V	34.17	7.47	25.90	52.22	74.00	21.78
7236	24.60	AV	V	34.17	7.47	25.90	40.34	54.00	13.66
9648	32.42	PK	V	36.06	8.81	27.46	49.83	74.00	24.17
9648	20.67	AV	V	36.06	8.81	27.46	38.08	54.00	15.92
1828	33.88	PK	V	24.26	3.65	27.52	34.27	74.00	39.73
1828	21.67	AV	V	24.26	3.65	27.52	22.06	54.00	31.94
109.54	40.46	QP	V	12.80	1.28	21.41	33.13	43.50	10.37
Middle Channel: 2437 MHz									
2437	66.73	PK	H	25.74	4.41	0.00	96.88	N/A	N/A
2437	55.51	AV	H	25.74	4.41	0.00	85.66	N/A	N/A
2437	78.52	PK	V	25.74	4.41	0.00	108.67	N/A	N/A
2437	67.76	AV	V	25.74	4.41	0.00	97.91	N/A	N/A
4874	42.70	PK	V	30.77	6.09	27.42	52.14	74.00	21.86
4874	27.29	AV	V	30.77	6.09	27.42	36.73	54.00	17.27
7311	36.30	PK	V	34.35	7.51	25.88	52.28	74.00	21.72
7311	24.46	AV	V	34.35	7.51	25.88	40.44	54.00	13.56
9748	32.31	PK	V	36.30	8.83	27.24	50.20	74.00	23.80
9748	20.79	AV	V	36.30	8.83	27.24	38.68	54.00	15.32
1957	33.95	PK	V	24.51	3.79	27.49	34.76	74.00	39.24
1957	21.97	AV	V	24.51	3.79	27.49	22.78	54.00	31.22
109.54	40.41	QP	V	12.80	1.28	21.41	33.08	43.50	10.42
High Channel: 2462 MHz									
2462	66.53	PK	H	25.80	4.43	0.00	96.76	N/A	N/A
2462	55.01	AV	H	25.80	4.43	0.00	85.24	N/A	N/A
2462	78.83	PK	V	25.80	4.43	0.00	109.06	N/A	N/A
2462	67.95	AV	V	25.80	4.43	0.00	98.18	N/A	N/A
2483.5	40.38	PK	V	25.86	4.49	0.00	70.73	74.00	3.27 *
2483.5	22.07	AV	V	25.86	4.49	0.00	52.42	54.00	1.58 *
4924	42.52	PK	V	30.90	5.97	27.43	51.96	74.00	22.04
4924	27.12	AV	V	30.90	5.97	27.43	36.56	54.00	17.44
7386	36.47	PK	V	34.53	7.55	25.86	52.69	74.00	21.31
7386	24.05	AV	V	34.53	7.55	25.86	40.27	54.00	13.73
9848	32.71	PK	V	36.54	8.85	26.94	51.16	74.00	22.84
9848	20.32	AV	V	36.54	8.85	26.94	38.77	54.00	15.23
1723	34.83	PK	V	24.05	3.53	27.64	34.77	74.00	39.23
1723	22.65	AV	V	24.05	3.53	27.64	22.59	54.00	31.41
109.54	40.52	QP	V	12.80	1.28	21.41	33.19	43.50	10.31

*Within measurement uncertainty!

802.11 n40:

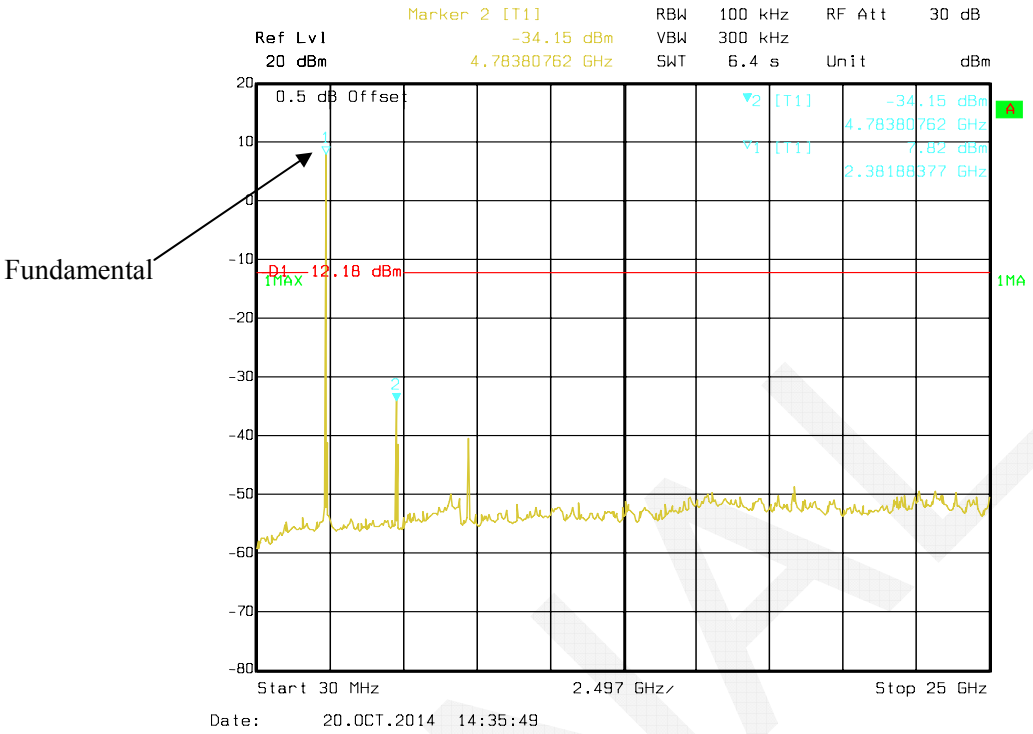
Frequency (MHz)	Receiver		Rx Antenna		Cable loss (dB)	Amplifier Gain (dB)	Corrected Amplitude (dBμV/m)	FCC 15.247	
	Reading (dBμV)	Detector (PK/QP/AV)	Polar (H/V)	Factor (dB/m)				Limit (dBμV/m)	Margin (dB)
Low Channel: 2422 MHz									
2422	63.49	PK	H	25.70	4.41	0.00	93.60	N/A	N/A
2422	52.93	AV	H	25.70	4.41	0.00	83.04	N/A	N/A
2422	75.54	PK	V	25.70	4.41	0.00	105.65	N/A	N/A
2422	62.68	AV	V	25.70	4.41	0.00	92.79	N/A	N/A
2390	40.78	PK	V	25.61	4.39	0.00	70.78	74.00	3.22 *
2390	22.62	AV	V	25.61	4.39	0.00	52.62	54.00	1.38 *
4844	40.91	PK	V	30.69	6.08	27.42	50.26	74.00	23.74
4844	23.42	AV	V	30.69	6.08	27.42	32.77	54.00	21.23
7266	33.05	PK	V	34.24	7.48	25.89	48.88	74.00	25.12
7266	22.12	AV	V	34.24	7.48	25.89	37.95	54.00	16.05
9688	30.34	PK	V	36.15	8.82	27.37	47.94	74.00	26.06
9688	19.47	AV	V	36.15	8.82	27.37	37.07	54.00	16.93
1968	33.16	PK	V	24.54	3.80	27.49	34.01	74.00	39.99
1968	21.44	AV	V	24.54	3.80	27.49	22.29	54.00	31.71
109.54	40.66	QP	V	12.80	1.28	21.41	33.33	43.50	10.17
Middle Channel: 2437 MHz									
2437	63.64	PK	H	25.74	4.41	0.00	93.79	N/A	N/A
2437	52.04	AV	H	25.74	4.41	0.00	82.19	N/A	N/A
2437	74.91	PK	V	25.74	4.41	0.00	105.06	N/A	N/A
2437	62.88	AV	V	25.74	4.41	0.00	93.03	N/A	N/A
4874	40.72	PK	V	30.77	6.09	27.42	50.16	74.00	23.84
4874	23.13	AV	V	30.77	6.09	27.42	32.57	54.00	21.43
7311	33.98	PK	V	34.35	7.51	25.88	49.96	74.00	24.04
7311	22.31	AV	V	34.35	7.51	25.88	38.29	54.00	15.71
9748	30.86	PK	V	36.30	8.83	27.24	48.75	74.00	25.25
9748	19.75	AV	V	36.30	8.83	27.24	37.64	54.00	16.36
1957	35.19	PK	V	24.51	3.79	27.49	36.00	74.00	38.00
1957	23.36	AV	V	24.51	3.79	27.49	24.17	54.00	29.83
109.54	40.60	QP	V	12.80	1.28	21.41	33.27	43.50	10.23
High Channel: 2452 MHz									
2452	63.71	PK	H	25.78	4.41	0.00	93.90	N/A	N/A
2452	52.01	AV	H	25.78	4.41	0.00	82.20	N/A	N/A
2452	75.22	PK	V	25.78	4.41	0.00	105.41	N/A	N/A
2452	63.87	AV	V	25.78	4.41	0.00	94.06	N/A	N/A
2483.5	40.29	PK	V	25.86	4.49	0.00	70.64	74.00	3.36 *
2483.5	22.14	AV	V	25.86	4.49	0.00	52.49	54.00	1.51 *
4904	40.37	PK	V	30.85	6.06	27.43	49.85	74.00	24.15
4904	23.79	AV	V	30.85	6.06	27.43	33.27	54.00	20.73
7356	33.15	PK	V	34.45	7.53	25.87	49.26	74.00	24.74
7356	22.54	AV	V	34.45	7.53	25.87	38.65	54.00	15.35
9808	30.97	PK	V	36.44	8.84	27.09	49.16	74.00	24.84
9808	19.88	AV	V	36.44	8.84	27.09	38.07	54.00	15.93
2027	34.13	PK	V	24.67	3.87	27.45	35.22	74.00	38.78
2027	22.70	AV	V	24.67	3.87	27.45	23.79	54.00	30.21
109.54	40.72	QP	V	12.80	1.28	21.41	33.39	43.50	10.11

*Within measurement uncertainty!

Conducted Spurious Emissions at Antenna Port:

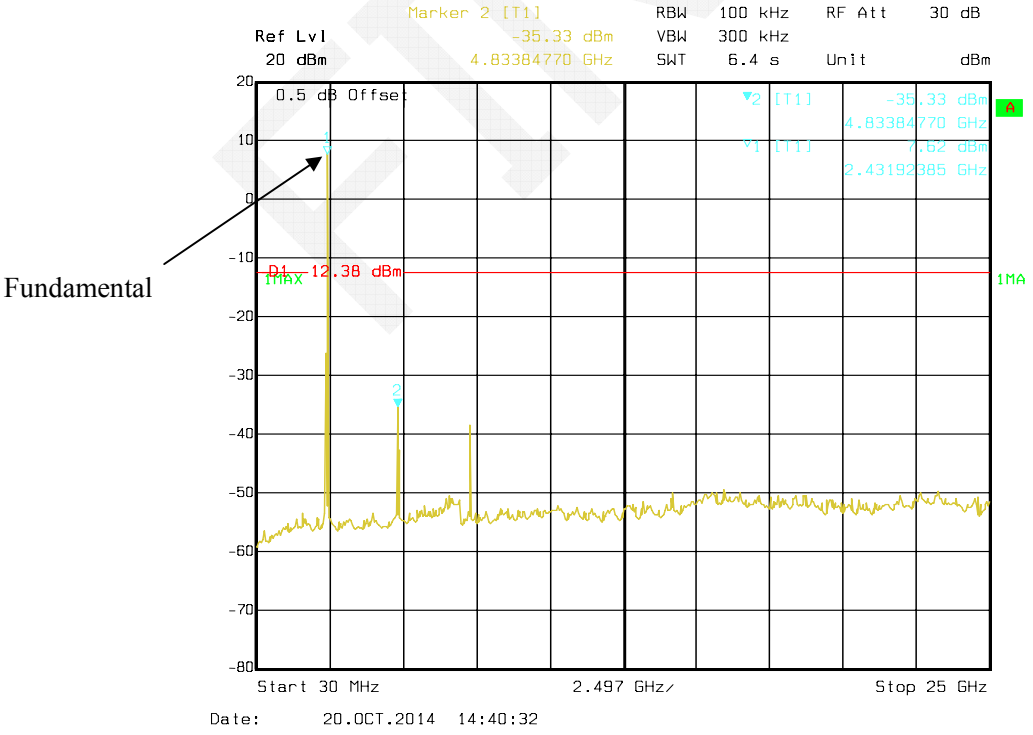
Chain0:

802.11b Low Channel



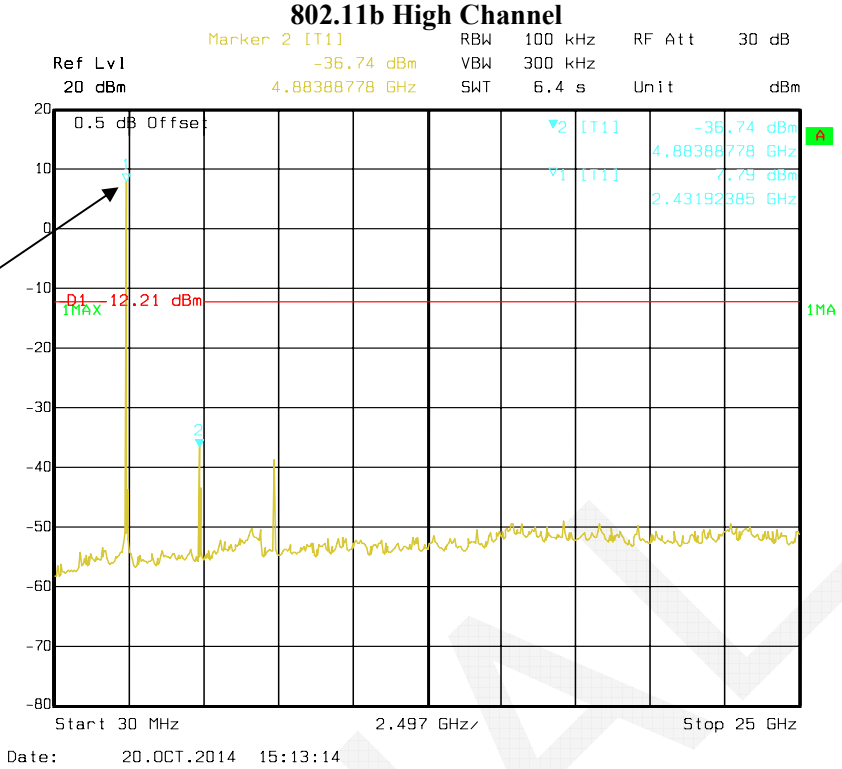
Fundamental

802.11b Middle Channel



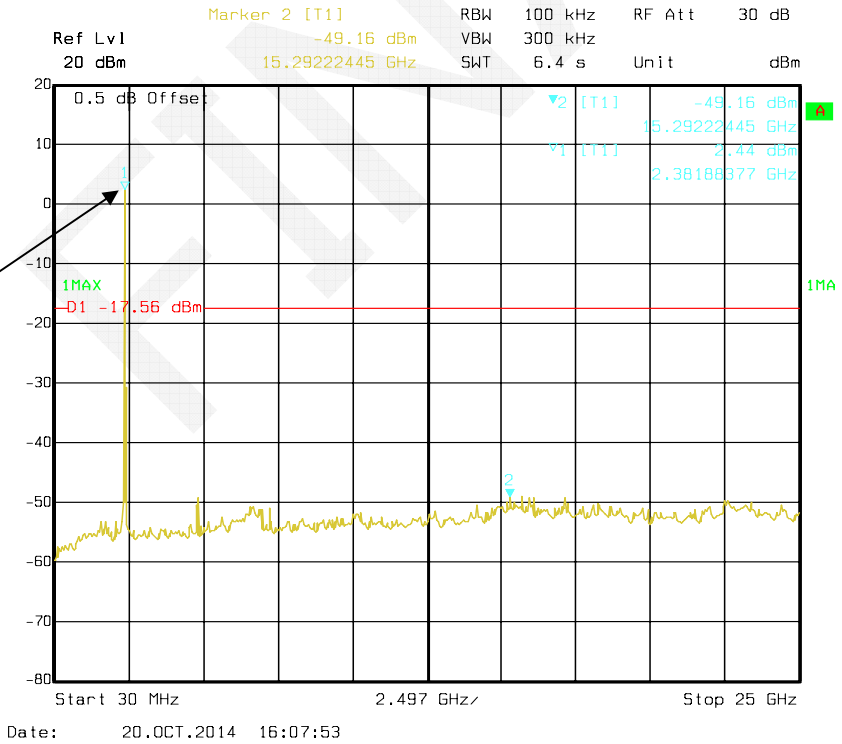
Fundamental

802.11b High Channel



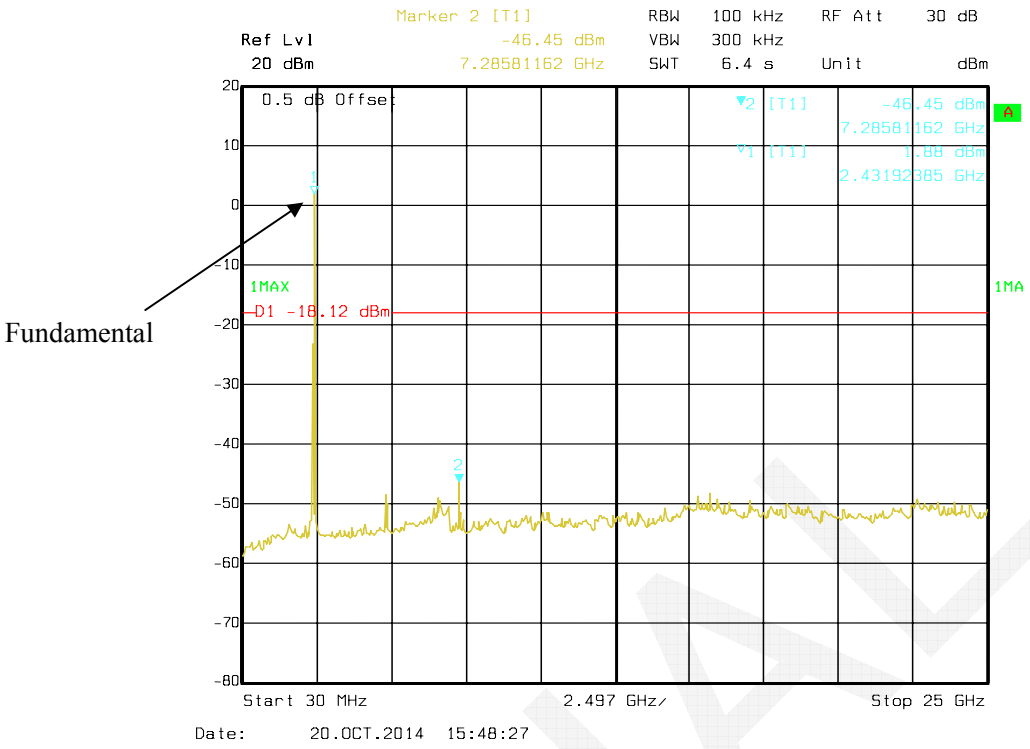
Fundamental

802.11g Low Channel



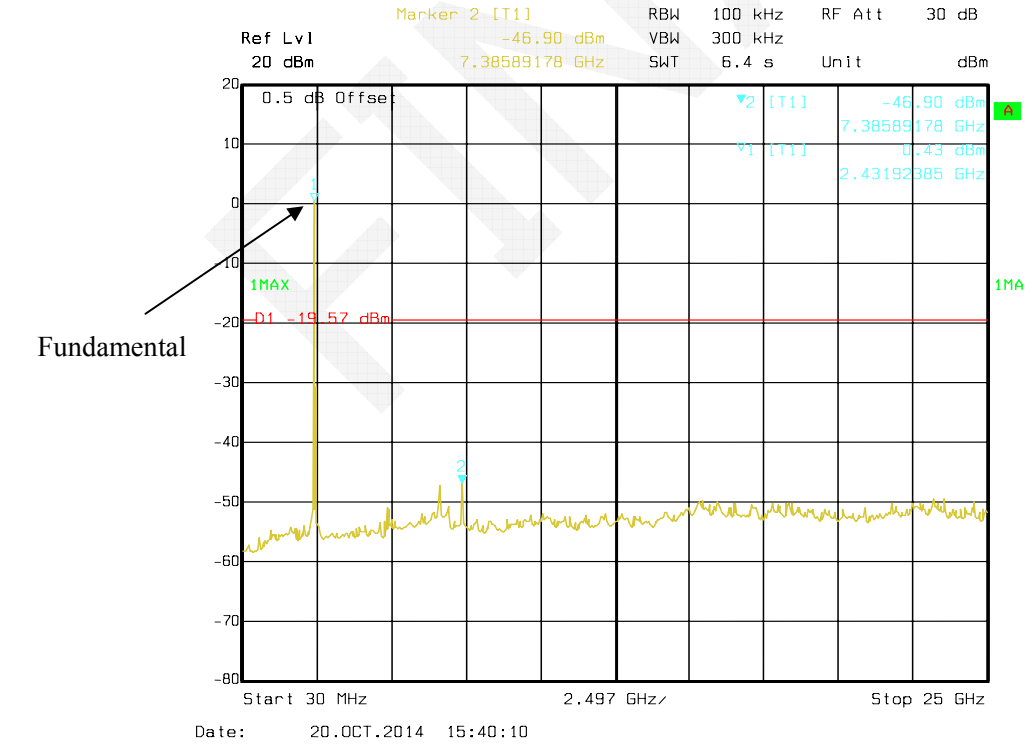
Fundamental

802.11g Middle Channel



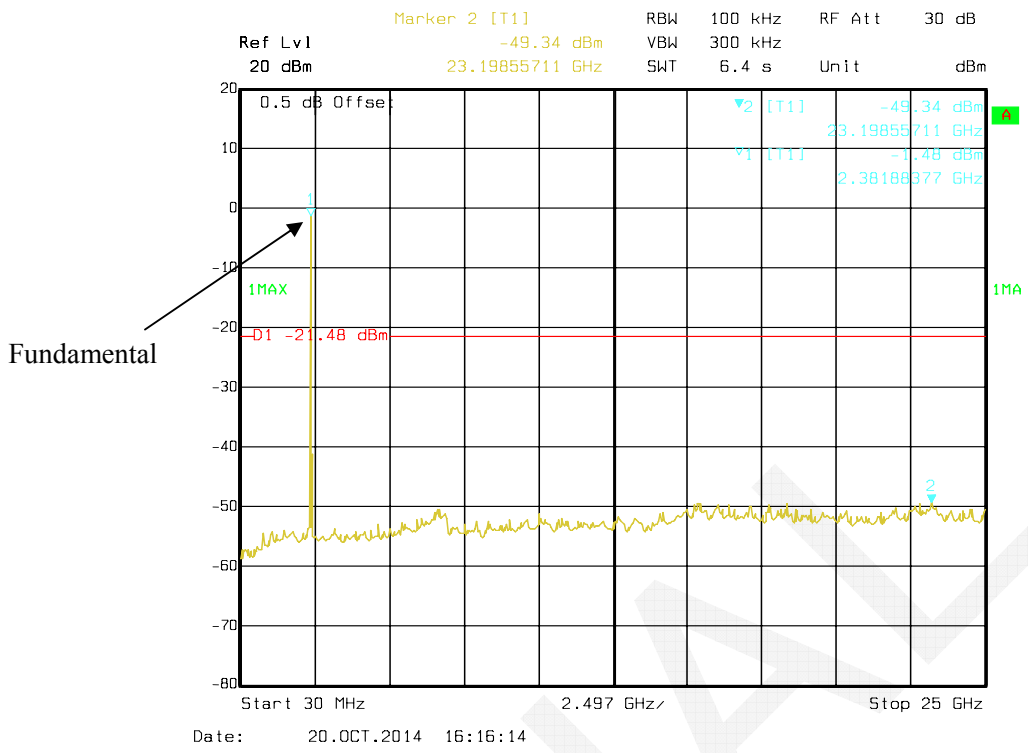
Fundamental

802.11g High Channel



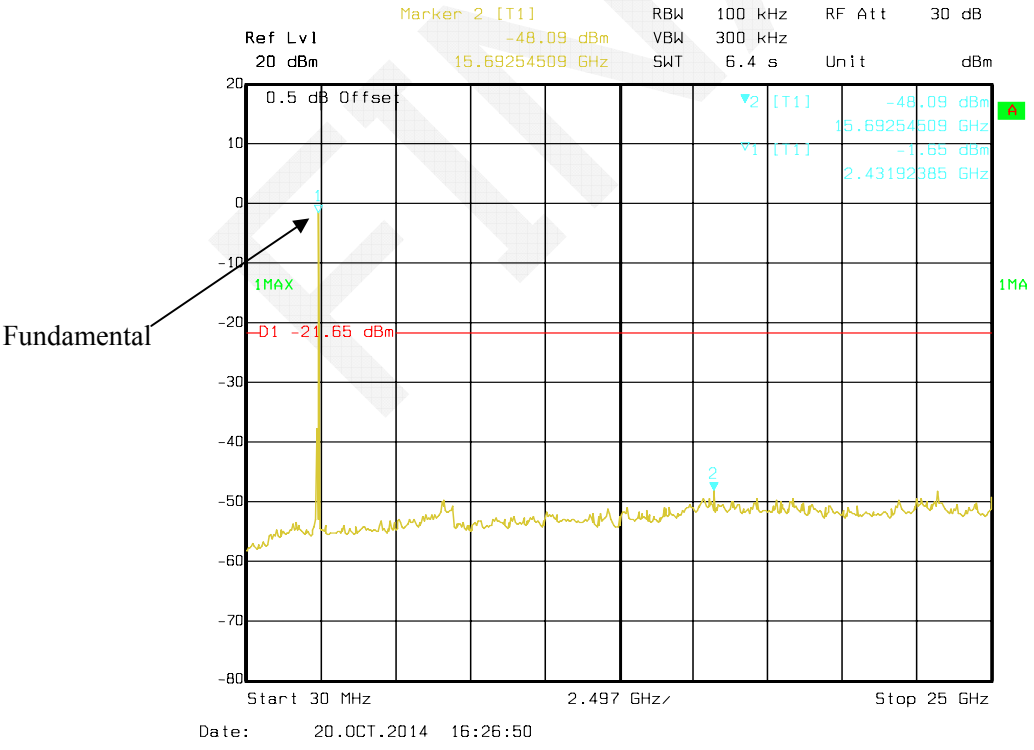
Fundamental

802.11n-HT20 Low Channel



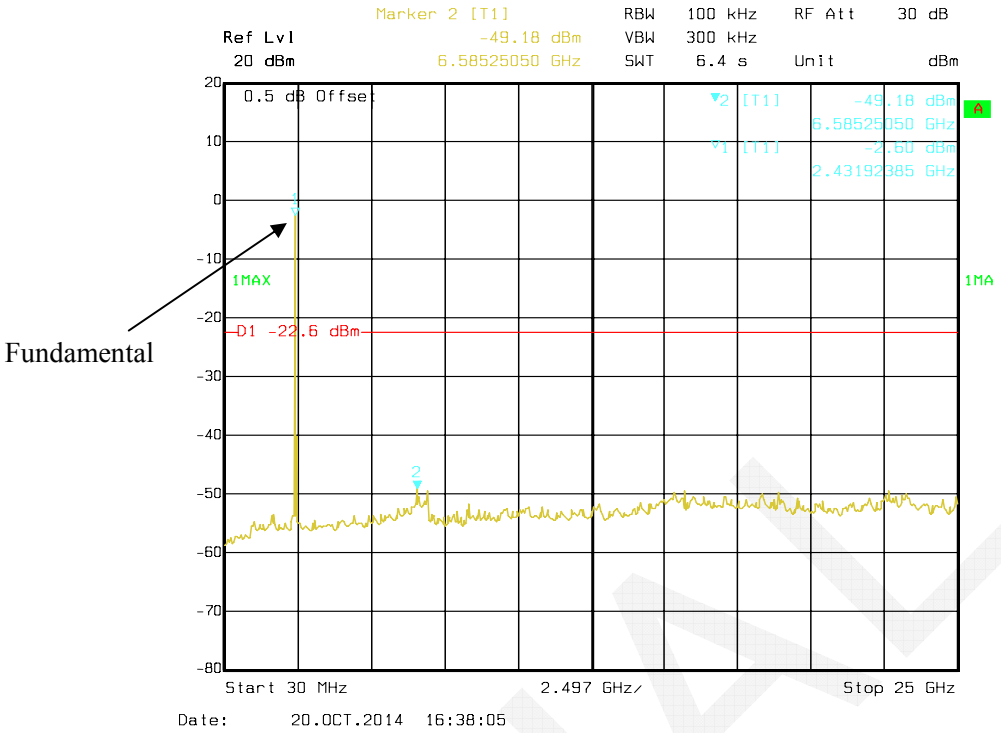
Fundamental

802.11n-HT20 Middle Channel

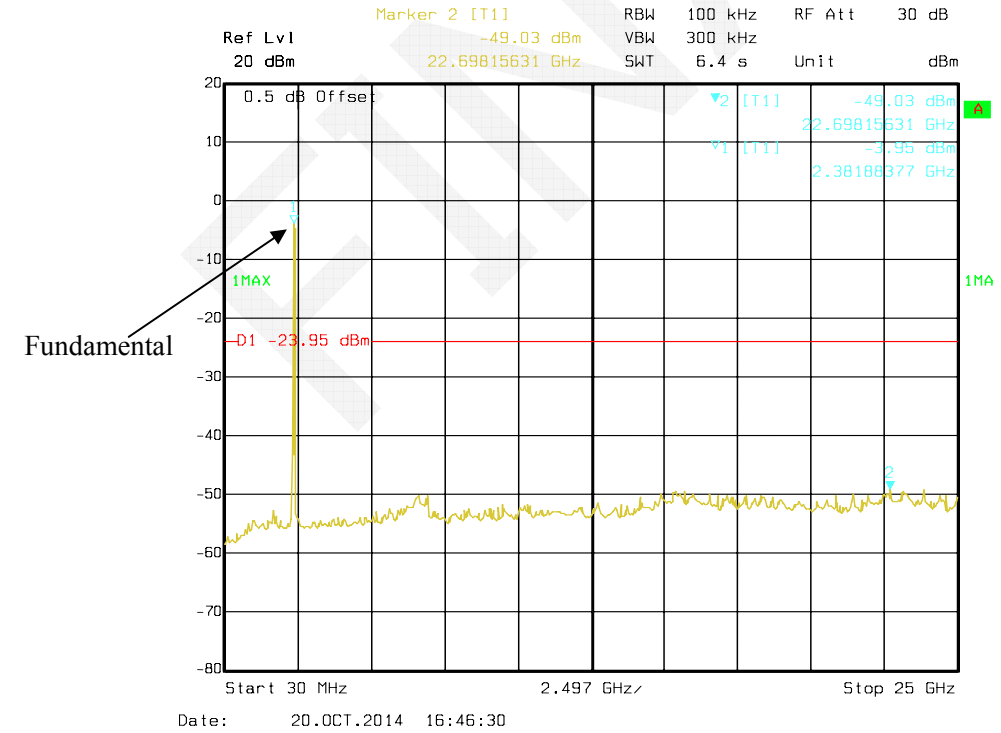


Fundamental

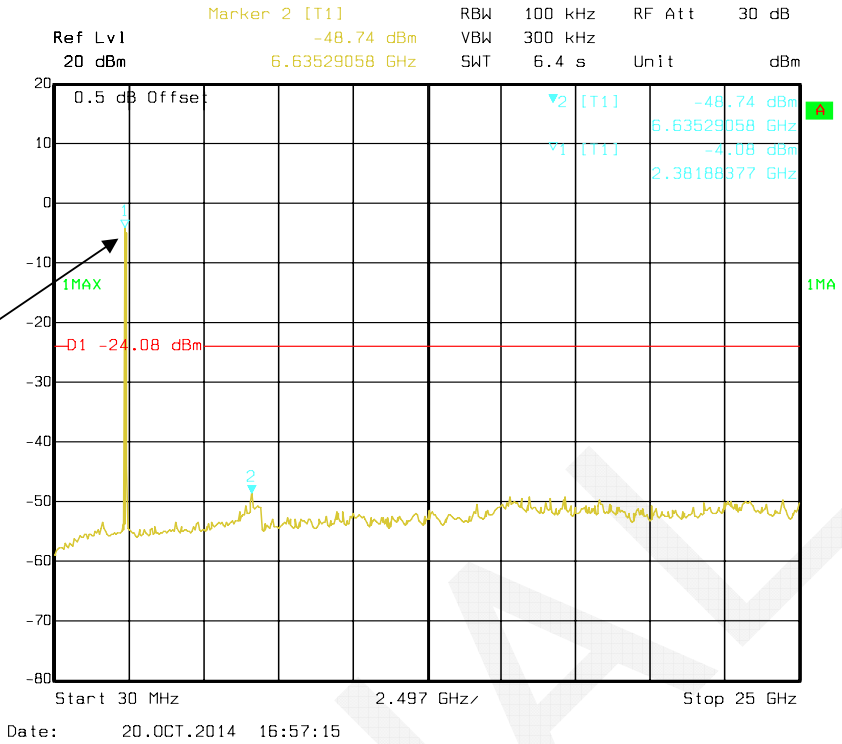
802.11n- HT20 High Channel



802.11n- HT40 Low Channel

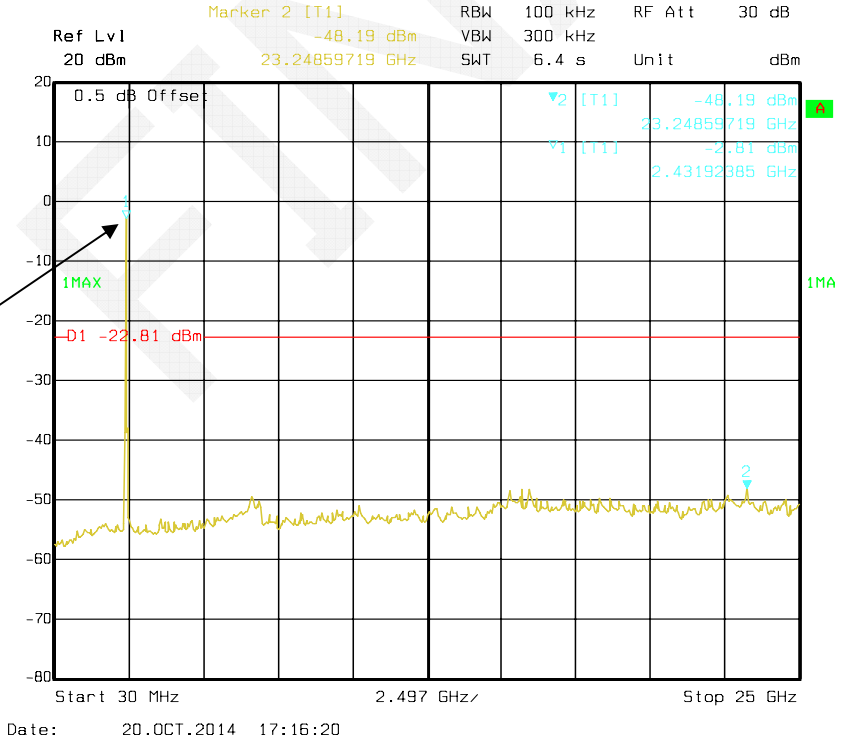


802.11n- HT40 Middle Channel



Fundamental

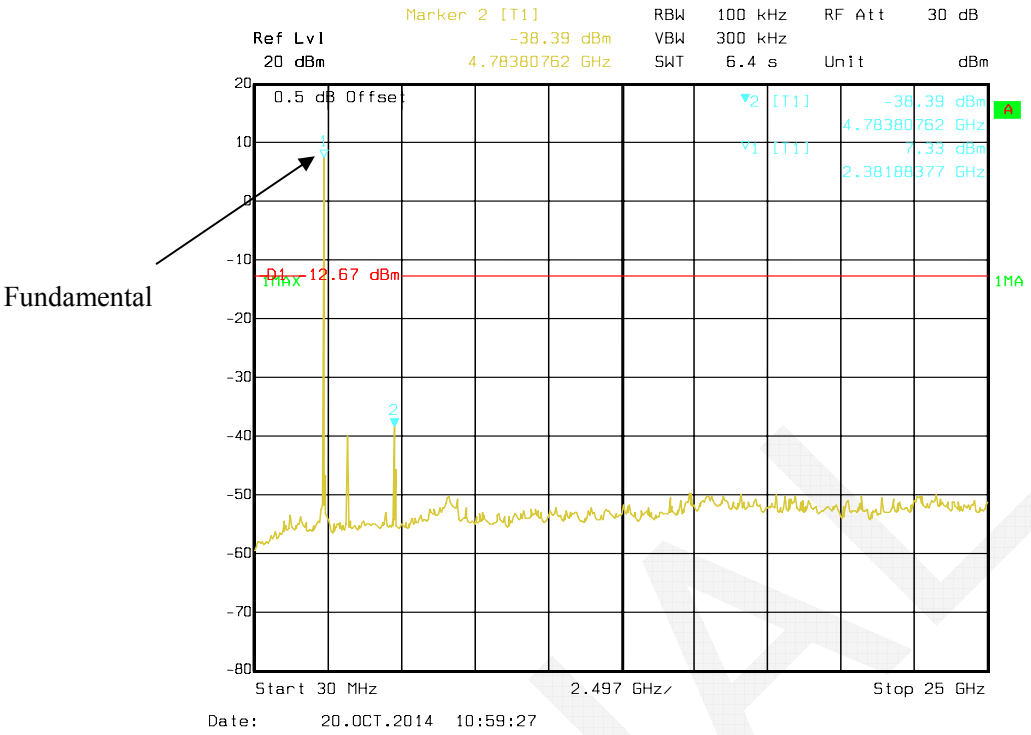
802.11n- HT40 High Channel



Fundamental

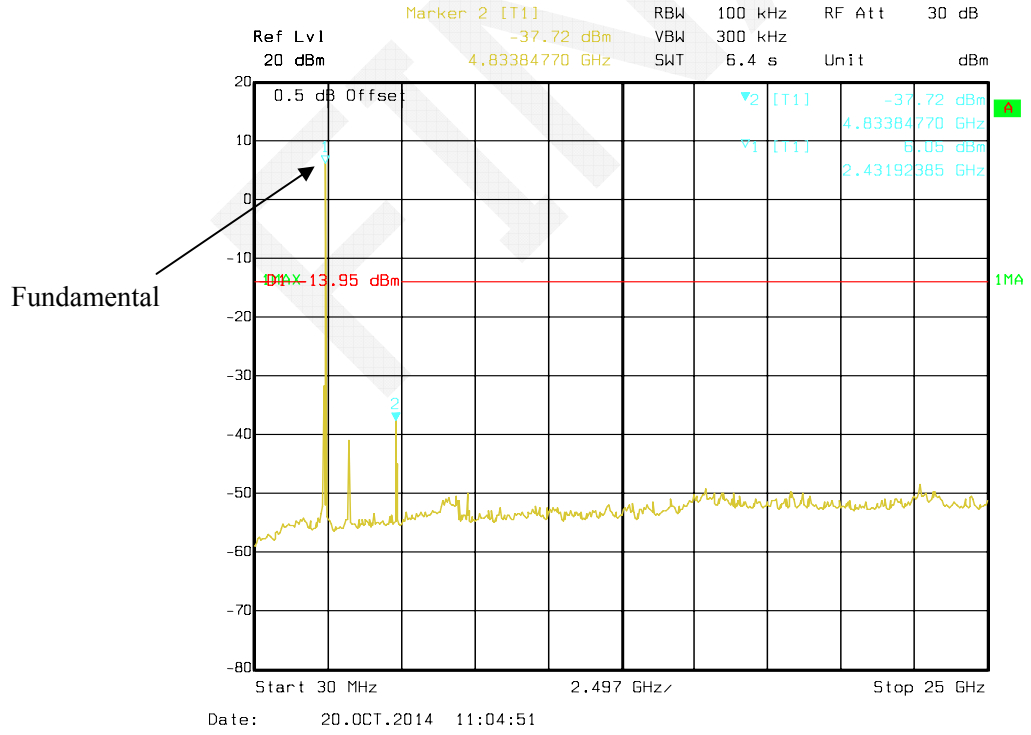
Chain1

802.11b Low Channel



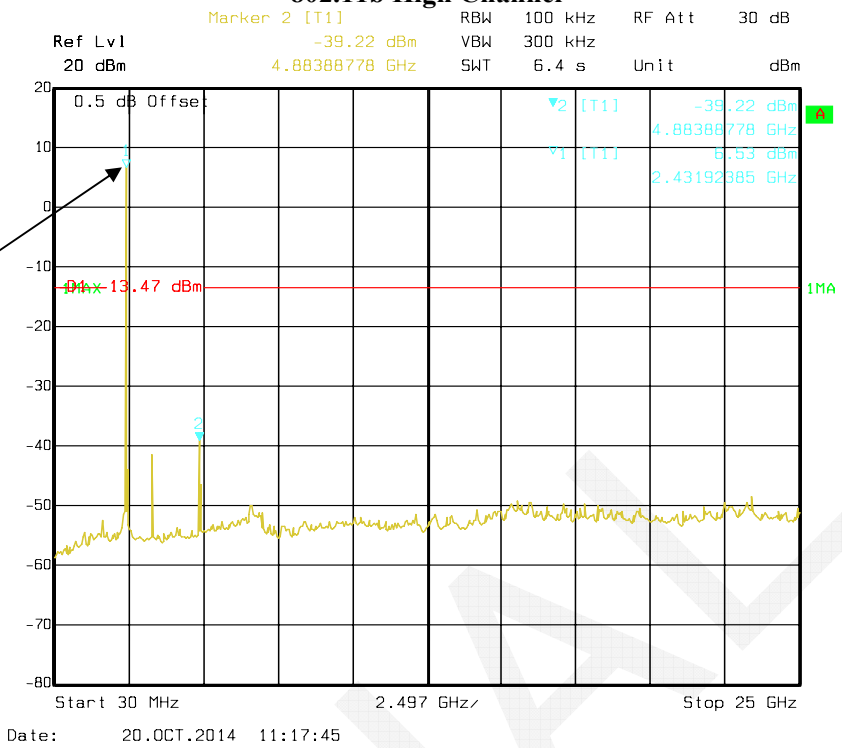
Fundamental

802.11b Middle Channel



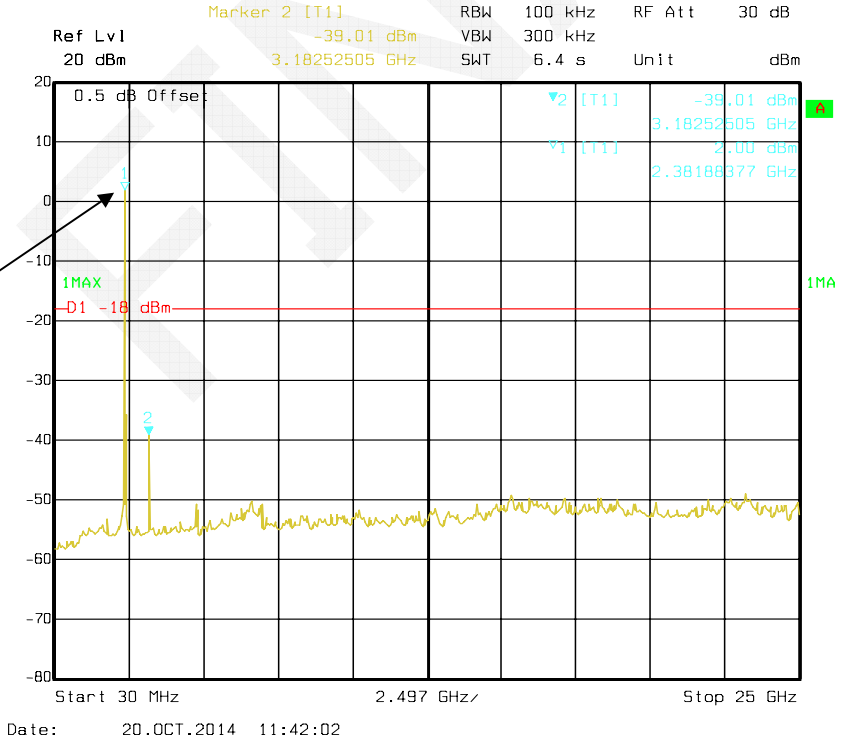
Fundamental

802.11b High Channel



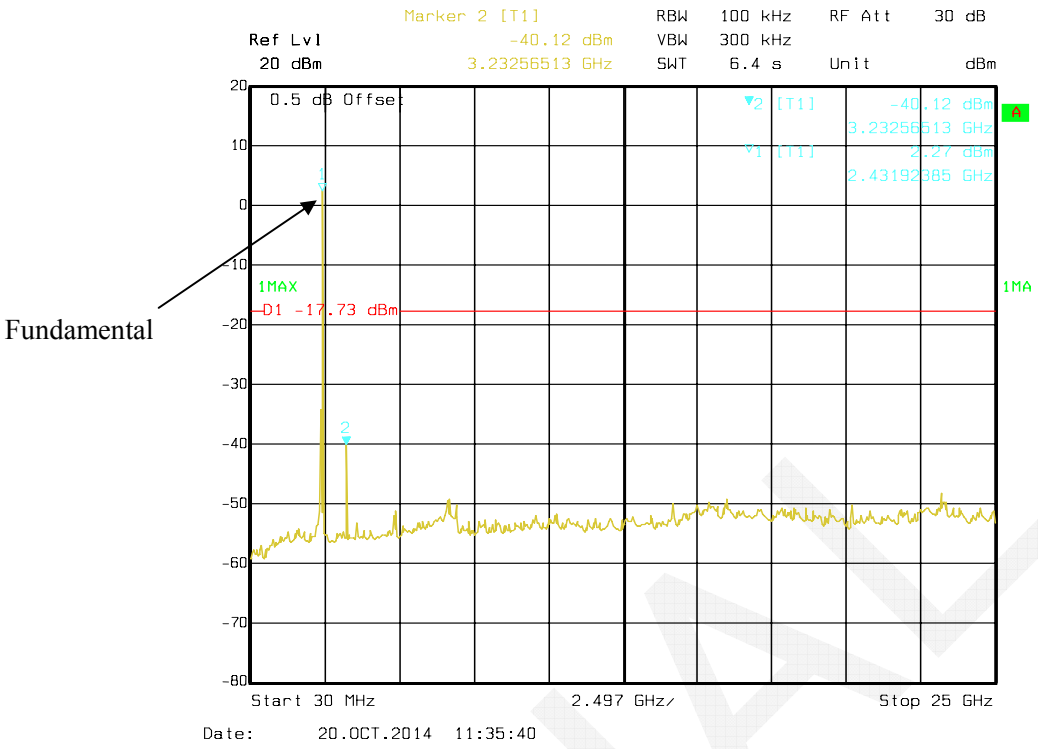
Fundamental

802.11g Low Channel



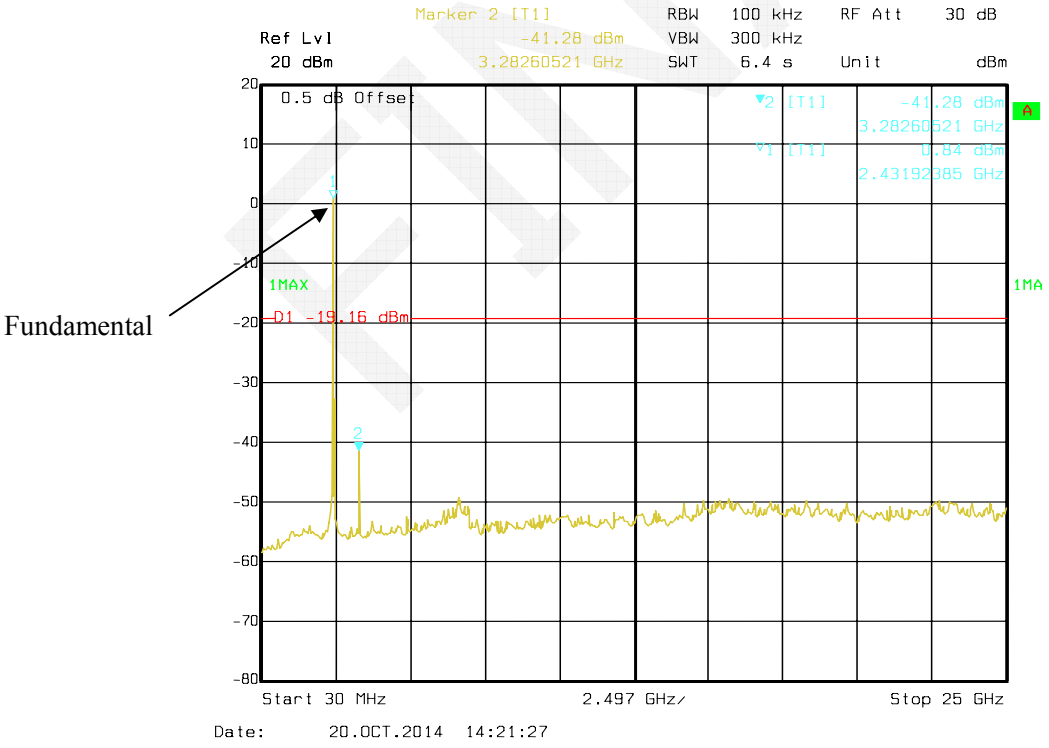
Fundamental

802.11g Middle Channel



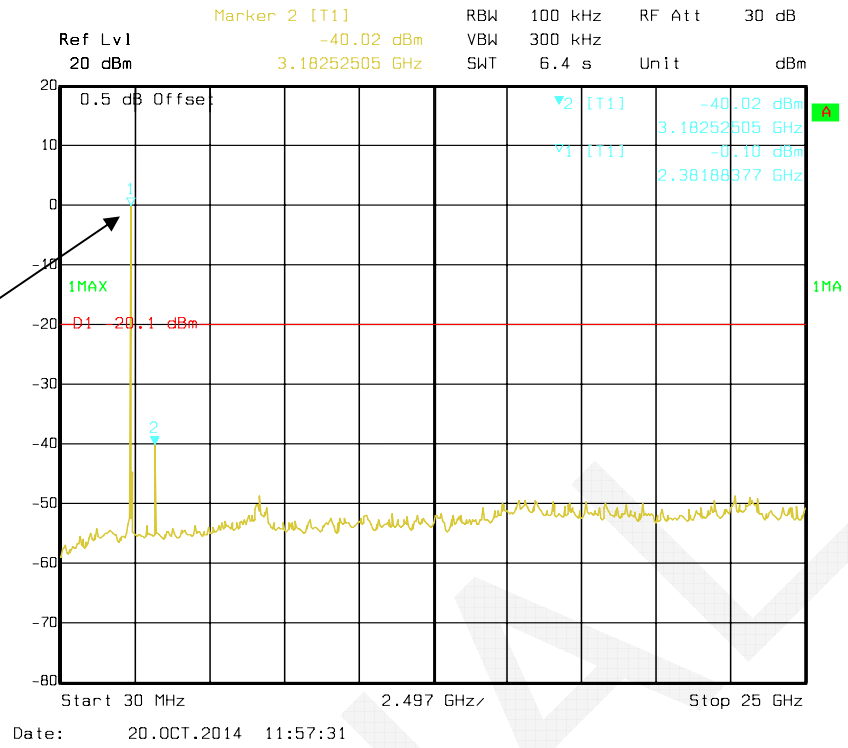
Fundamental

802.11g High Channel



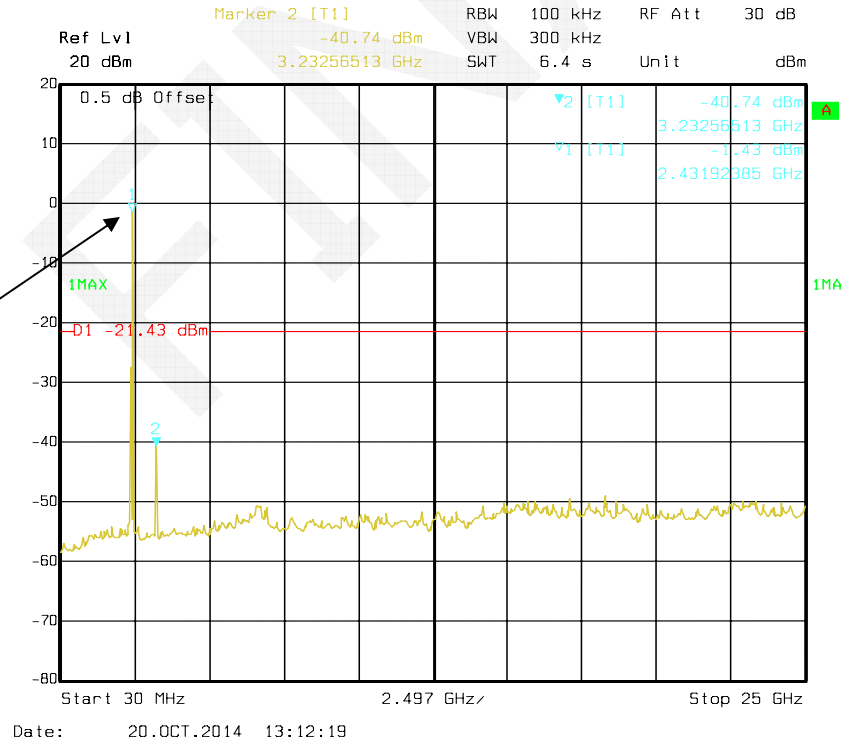
Fundamental

802.11n-HT20 Low Channel



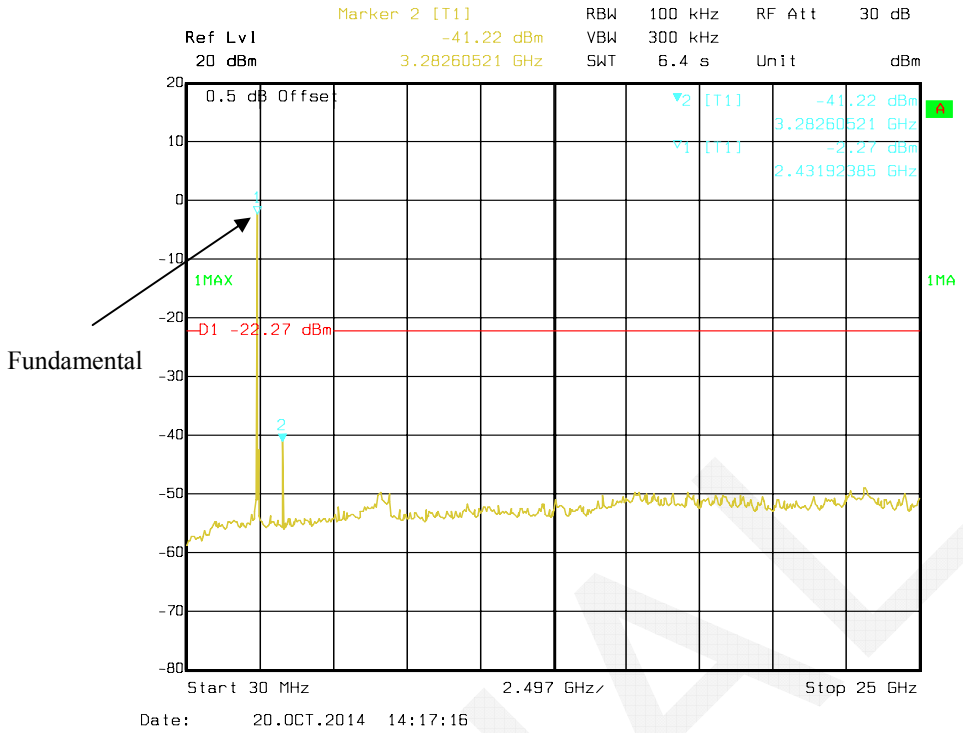
Fundamental

802.11n-HT20 Middle Channel



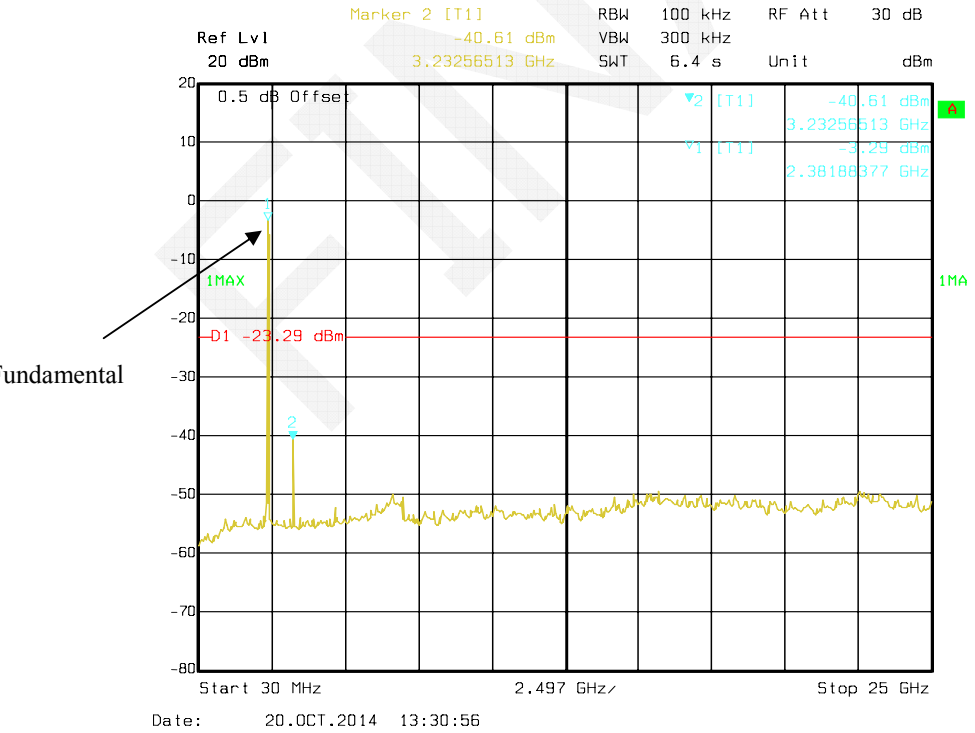
Fundamental

802.11n- HT20 High Channel



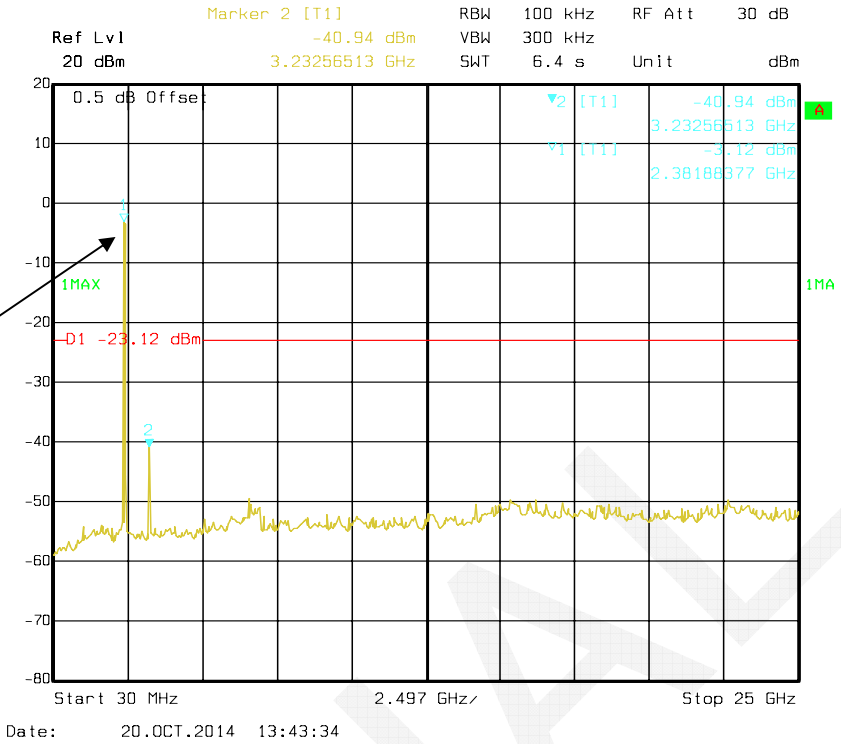
Fundamental

802.11n- HT40 Low Channel



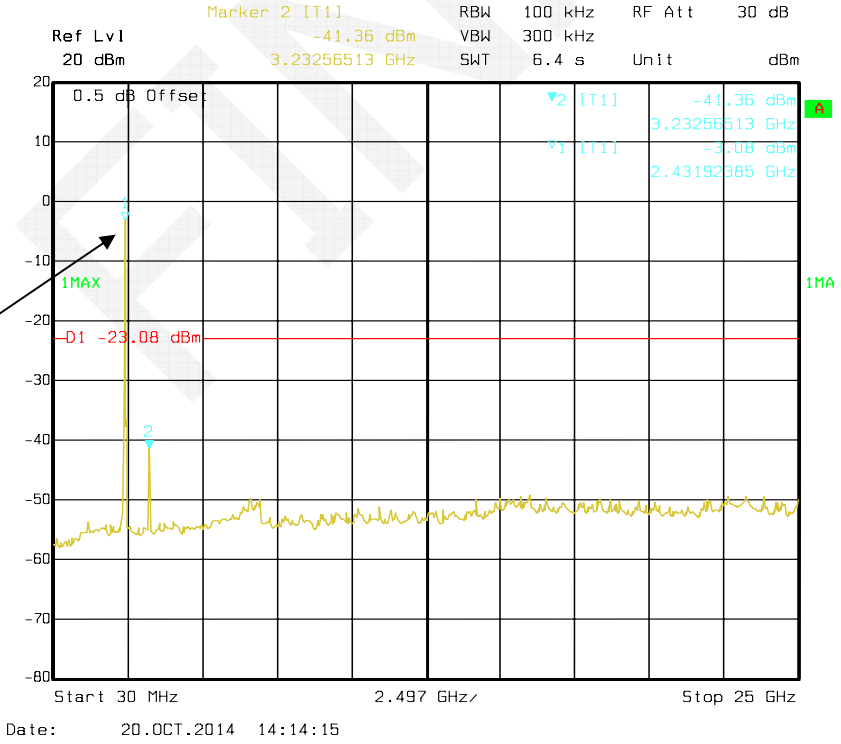
Fundamental

802.11n- HT40 Middle Channel



Fundamental

802.11n- HT40 High Channel



Fundamental

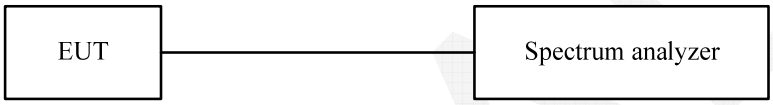
FCC §15.247(a) (2) – 6 dB EMISSION BANDWIDTH

Applicable Standard

Systems using digital modulation techniques may operate in the 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz bands. The minimum 6 dB bandwidth shall be at least 500 kHz.

Test Procedure

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



Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum Analyzer	FSP 38	100478	2014-05-09	2015-05-09

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

Test Data

Environmental Conditions

Temperature:	28 °C
Relative Humidity:	44 %
ATM Pressure:	101 kPa

** The testing was performed by Leon Chen on 2014-10-20*

Test Result: Pass.

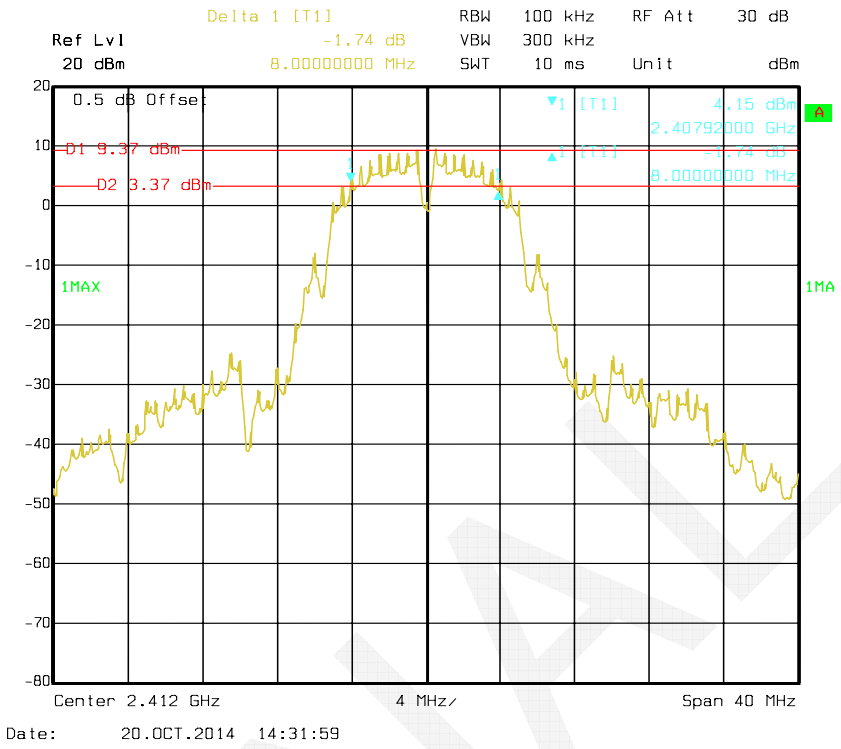
Please refer to the following tables and plots.

Test Mode: Transmitting

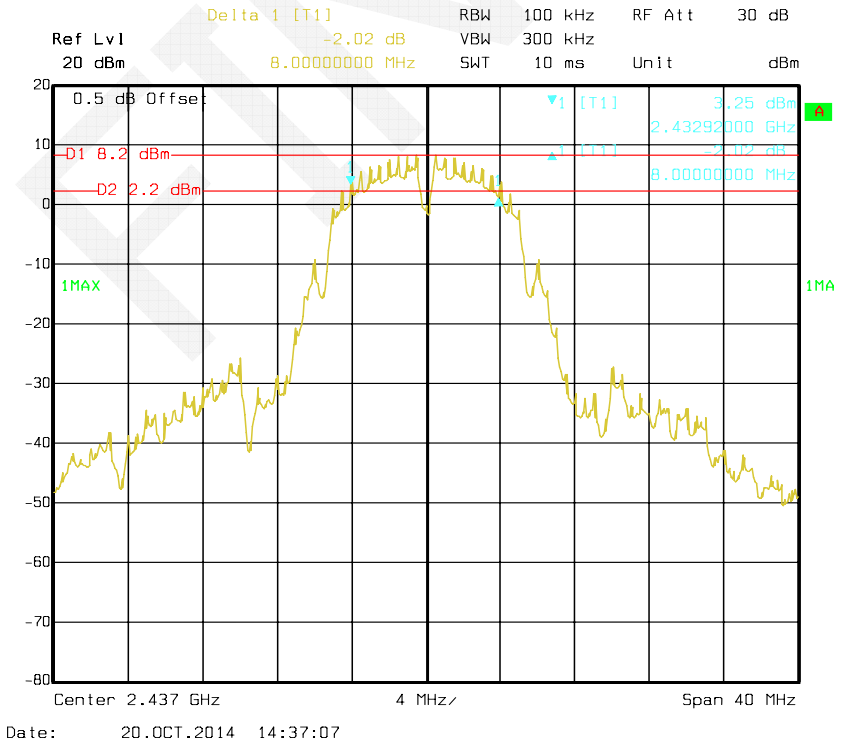
Test Mode	Channel	Frequency	6 dB Bandwidth(MHz)	
		(MHz)	Chain 0	Chain 1
802.11b	Low	2412	8.00	8.00
	Middle	2437	8.00	8.00
	High	2462	8.00	8.08
802.11g	Low	2412	15.12	15.12
	Middle	2437	15.28	15.04
	High	2462	15.04	15.12
802.11n-HT20	Low	2412	15.12	15.04
	Middle	2437	16.08	15.04
	High	2462	16.32	15.04
802.11n-HT40	Low	2422	36.00	35.84
	Middle	2437	36.64	36.16
	High	2452	36.00	36.00

6 dB Bandwidth:
Chain0:

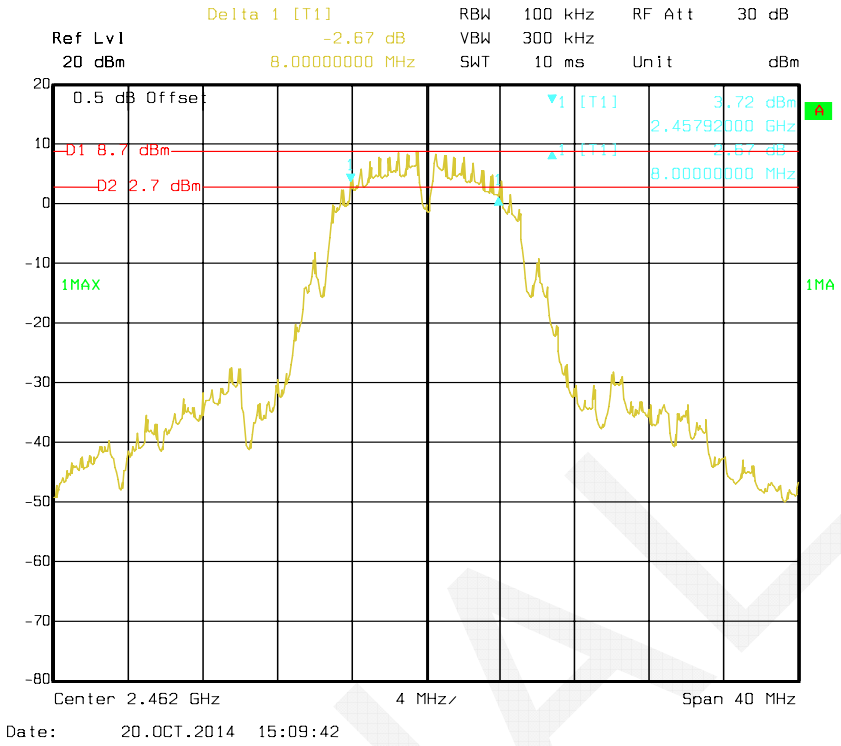
802.11b Low Channel



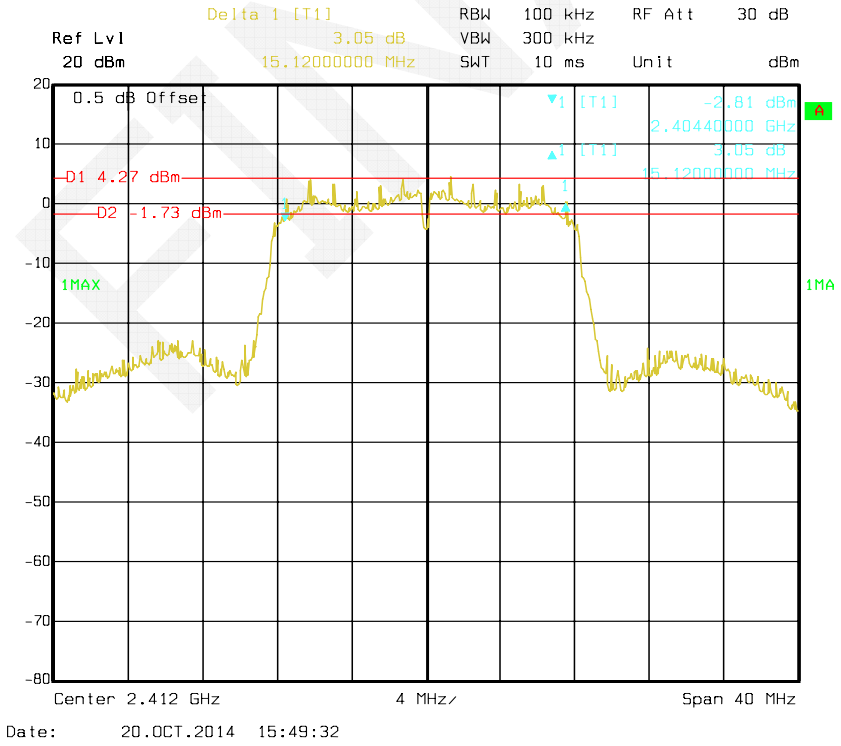
802.11b Middle Channel



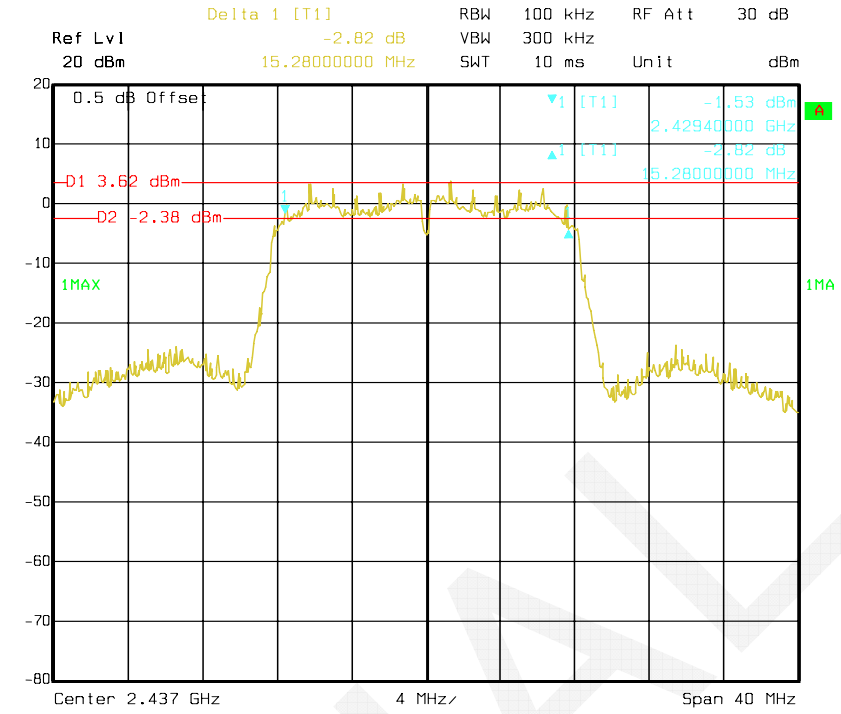
802.11b High Channel



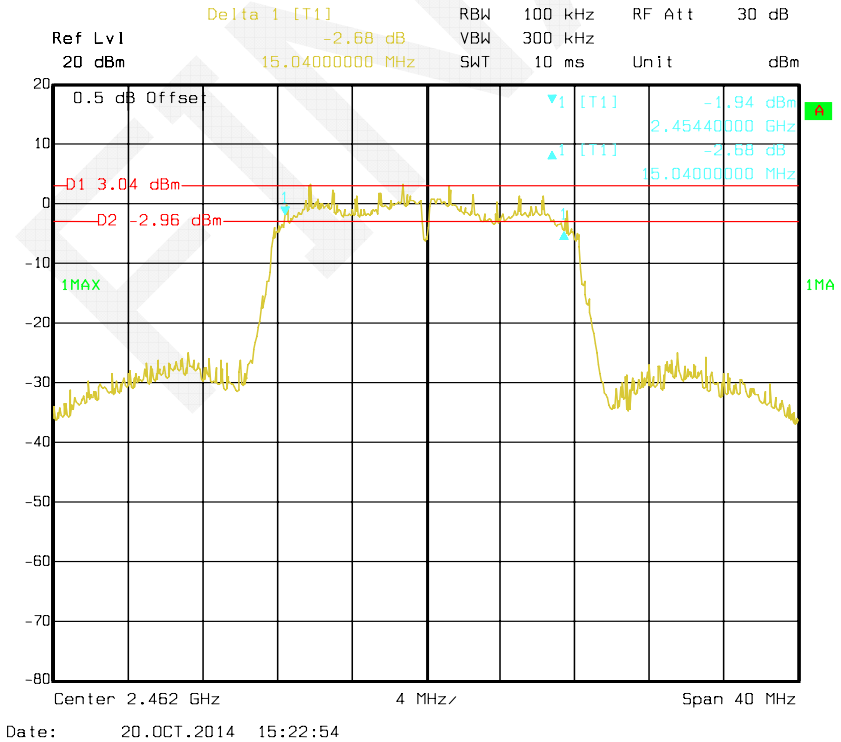
802.11g Low Channel



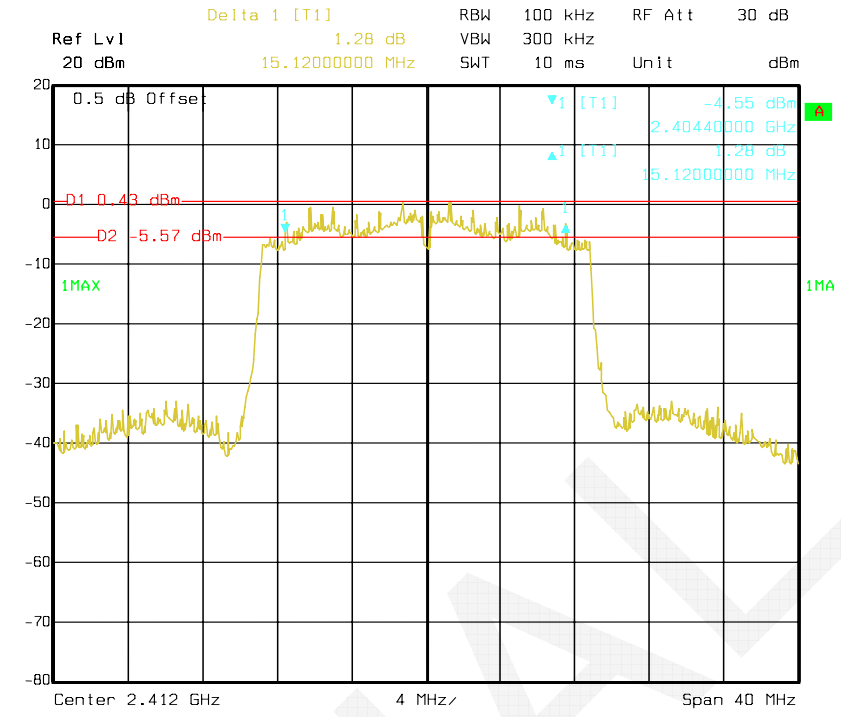
802.11g Middle Channel



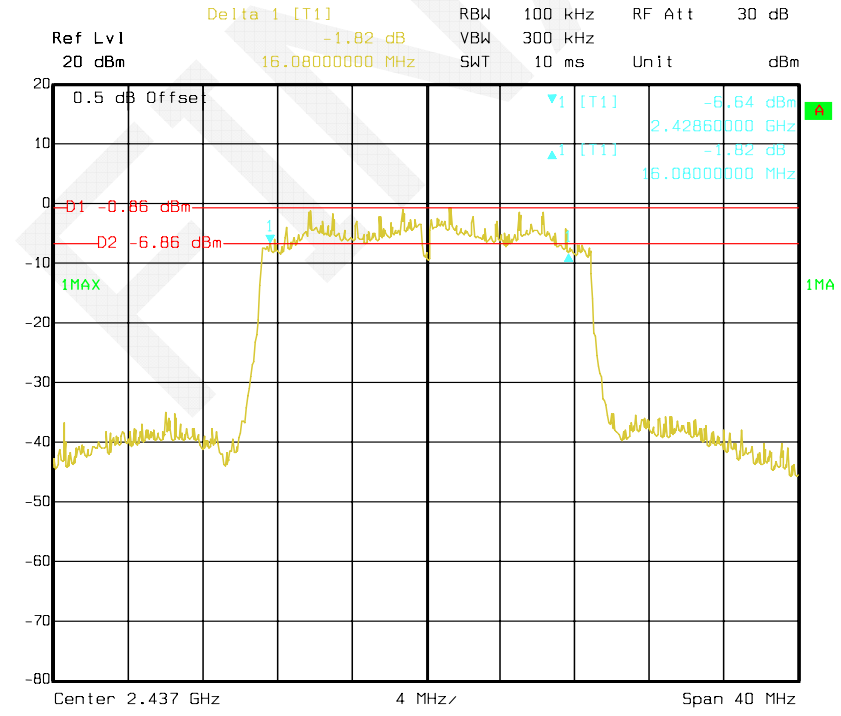
802.11g High Channel



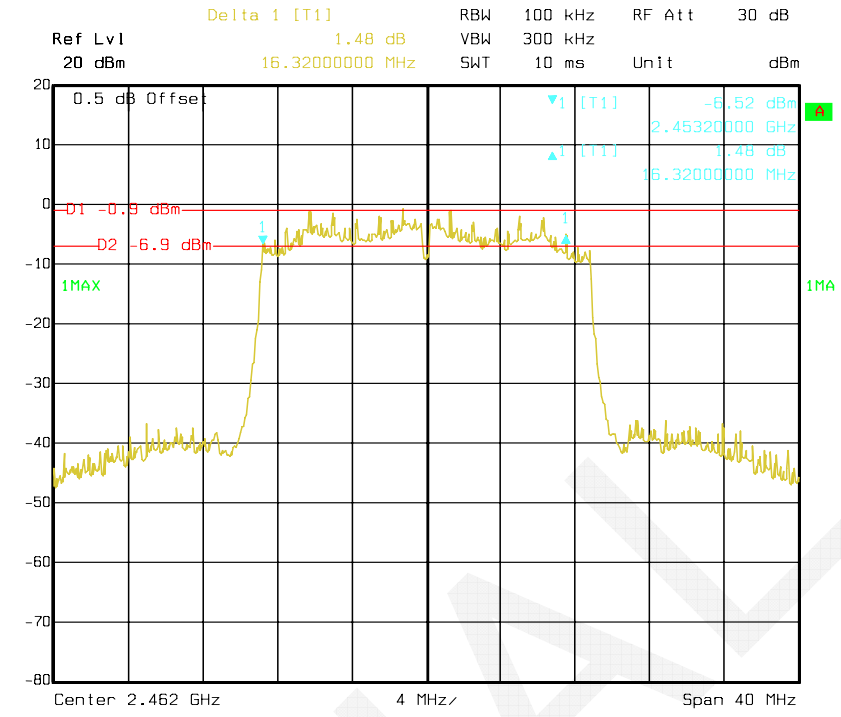
802.11n-HT20 Low Channel



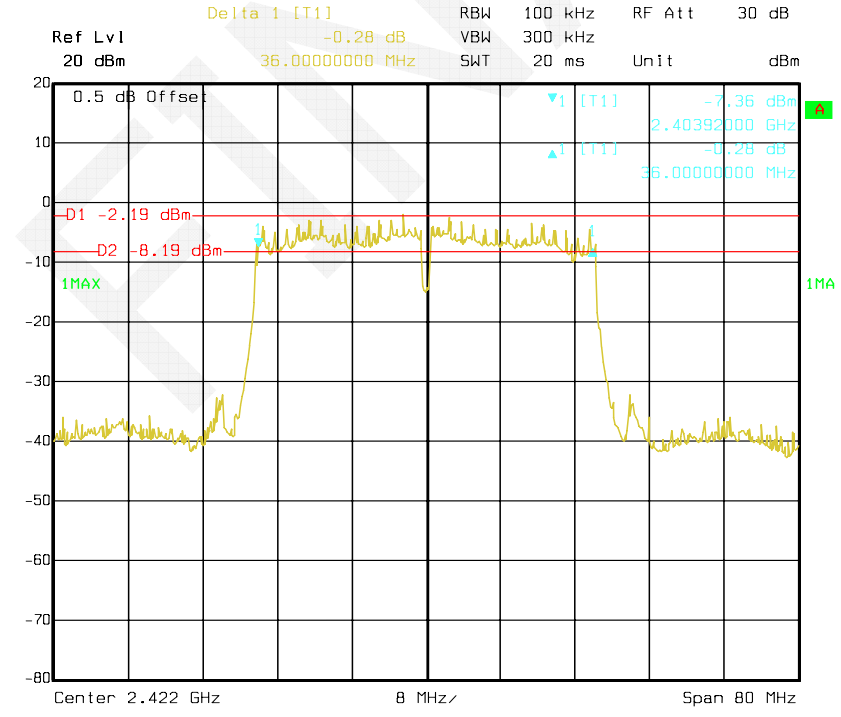
802.11n-HT20 Middle Channel



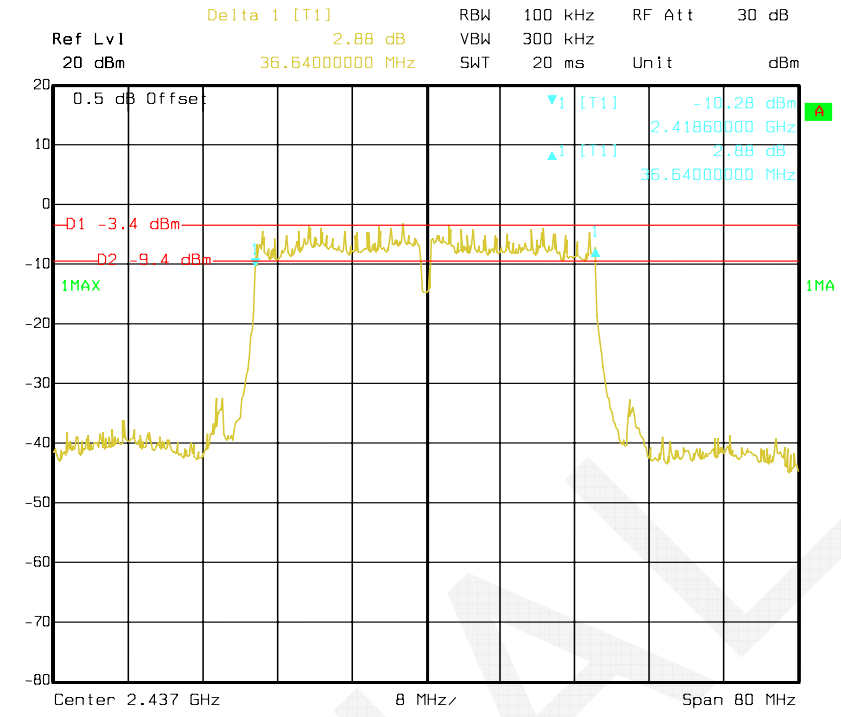
802.11n-HT20 High Channel



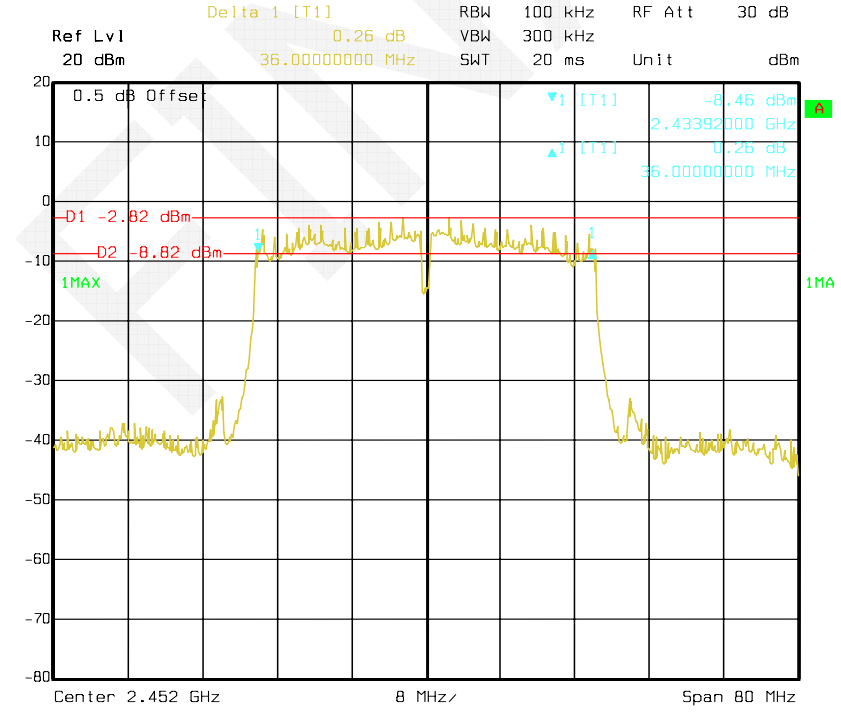
802.11n-HT40 Low Channel



802.11HT40 Middle Channel

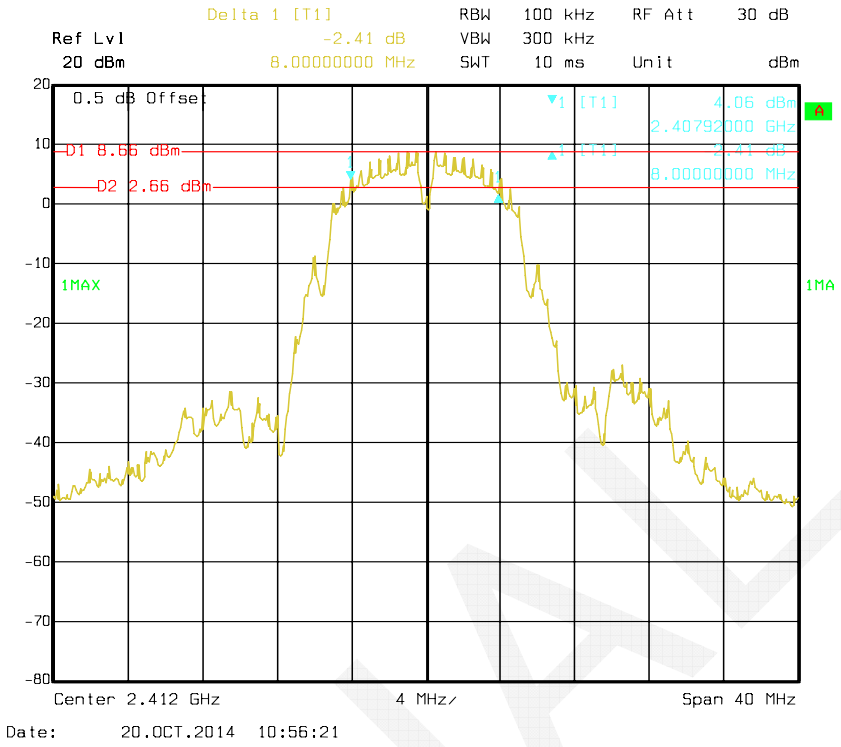


802.11HT40 High Channel

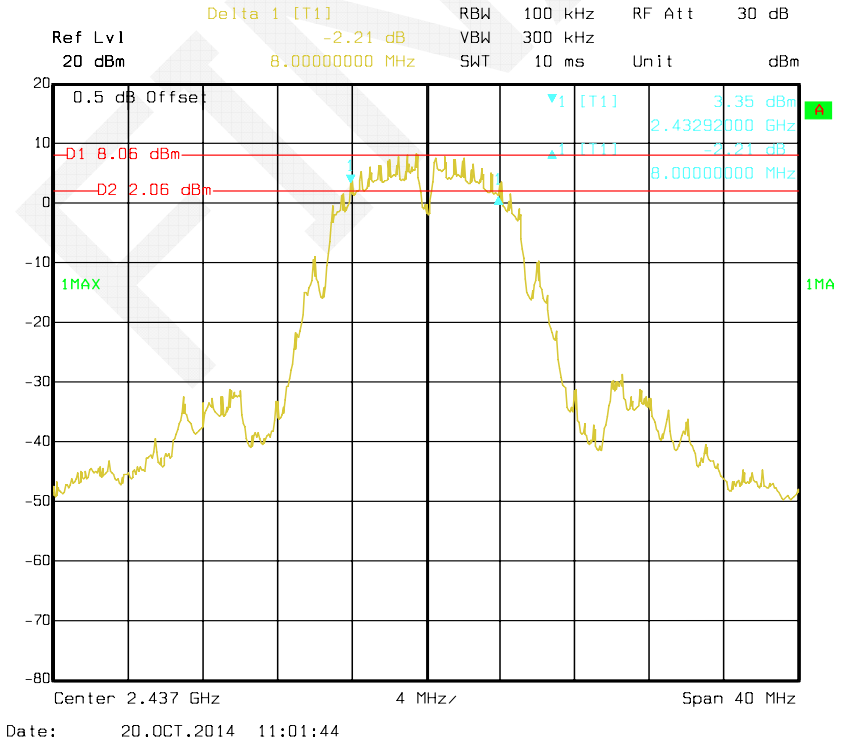


Chain1:

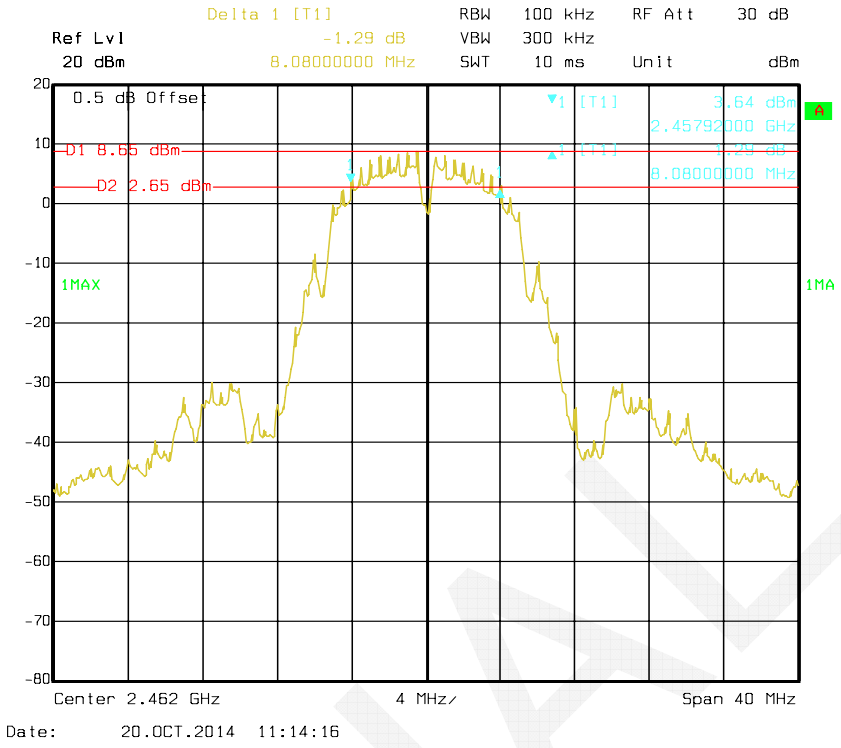
802.11b Low Channel



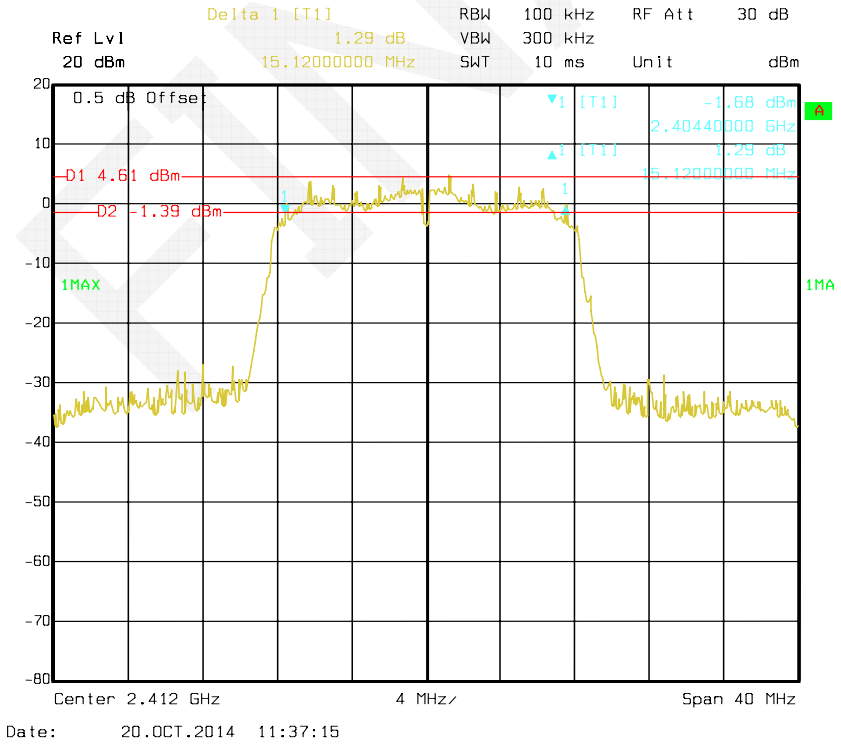
802.11b Middle Channel



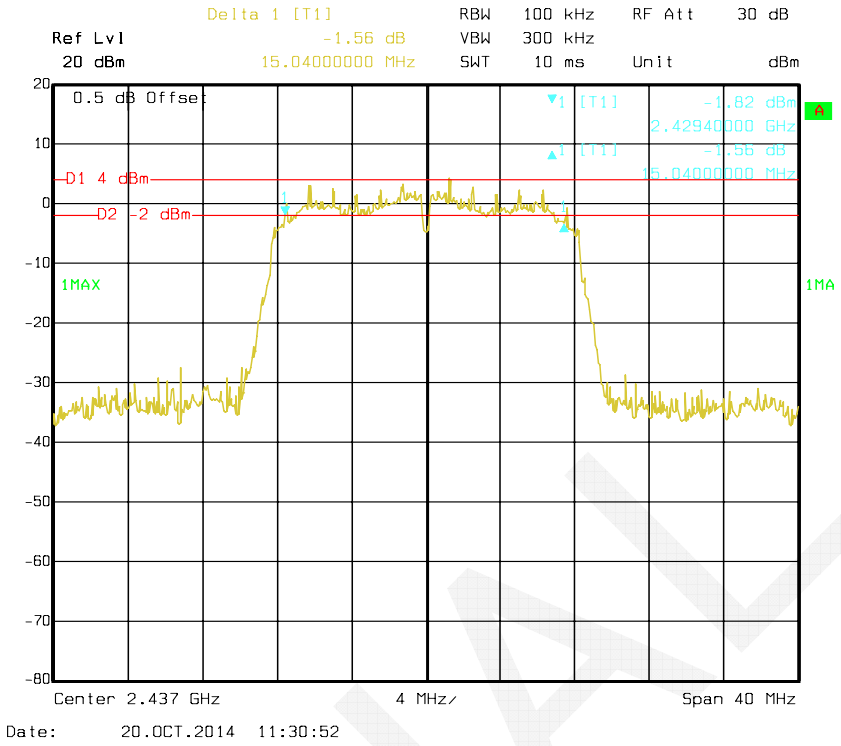
802.11b High Channel



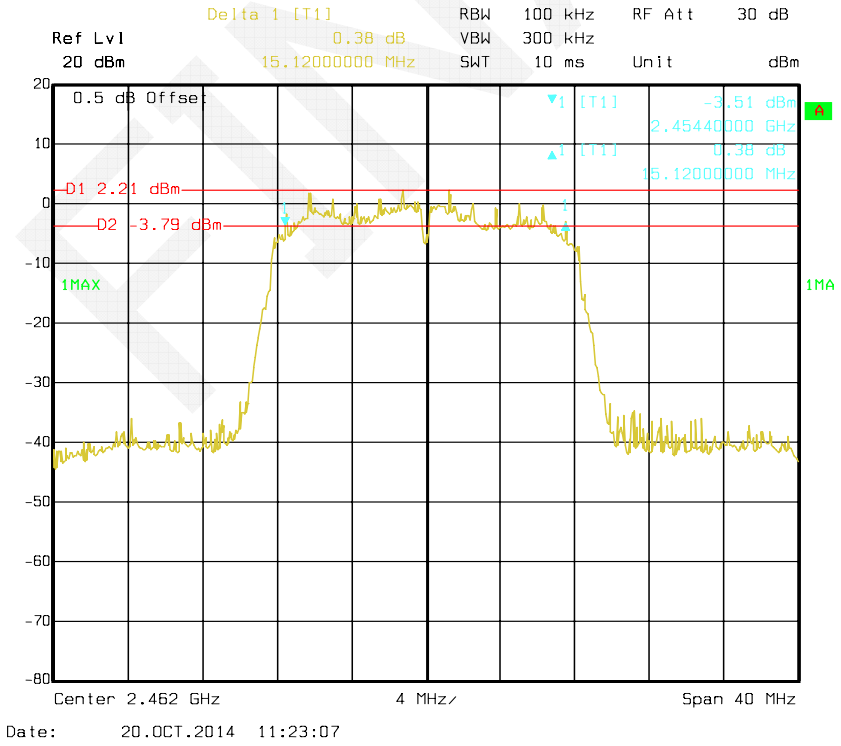
802.11g Low Channel



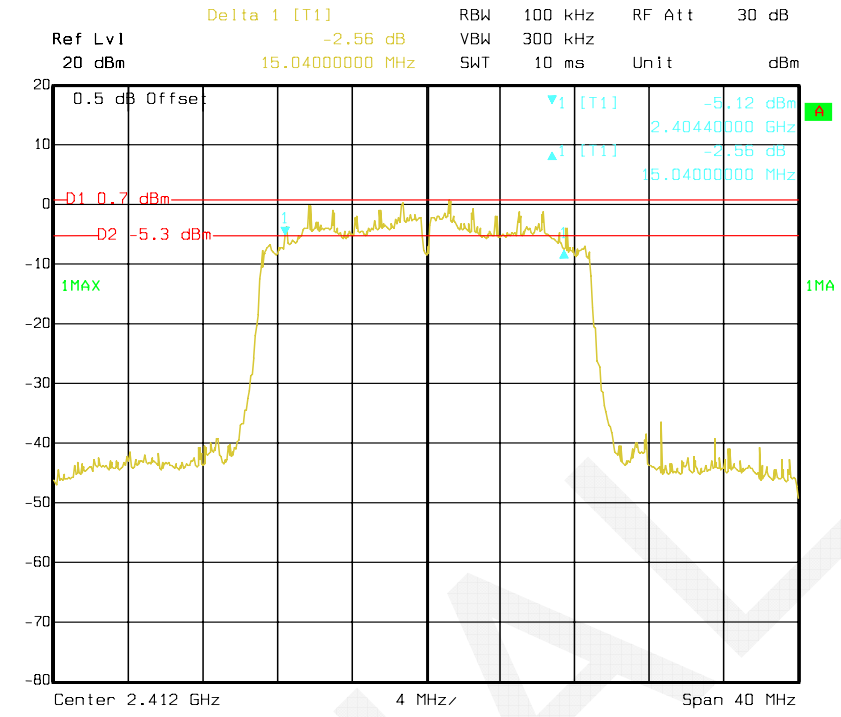
802.11g Middle Channel



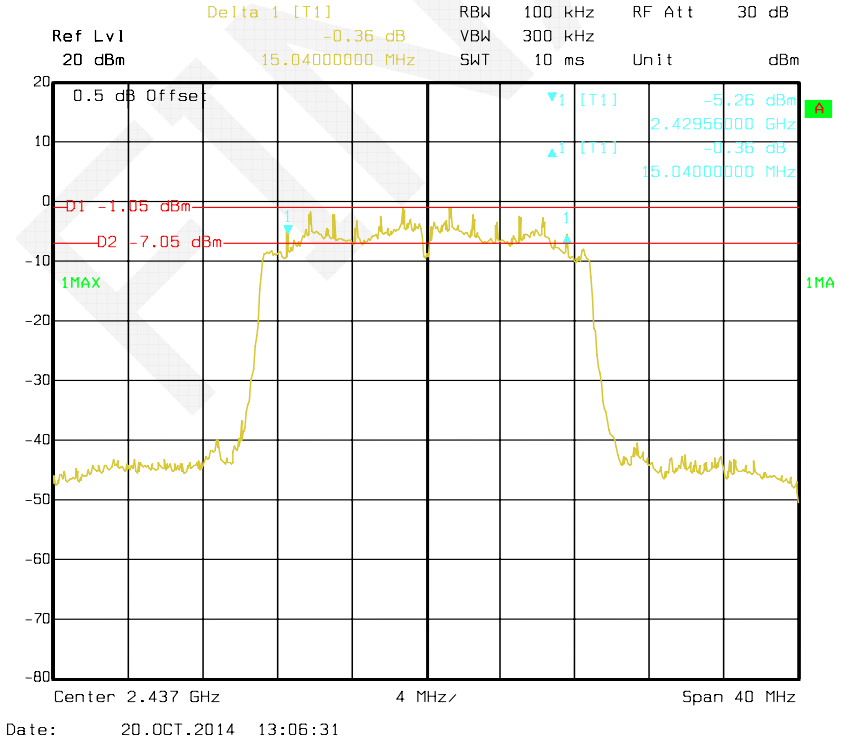
802.11g High Channel



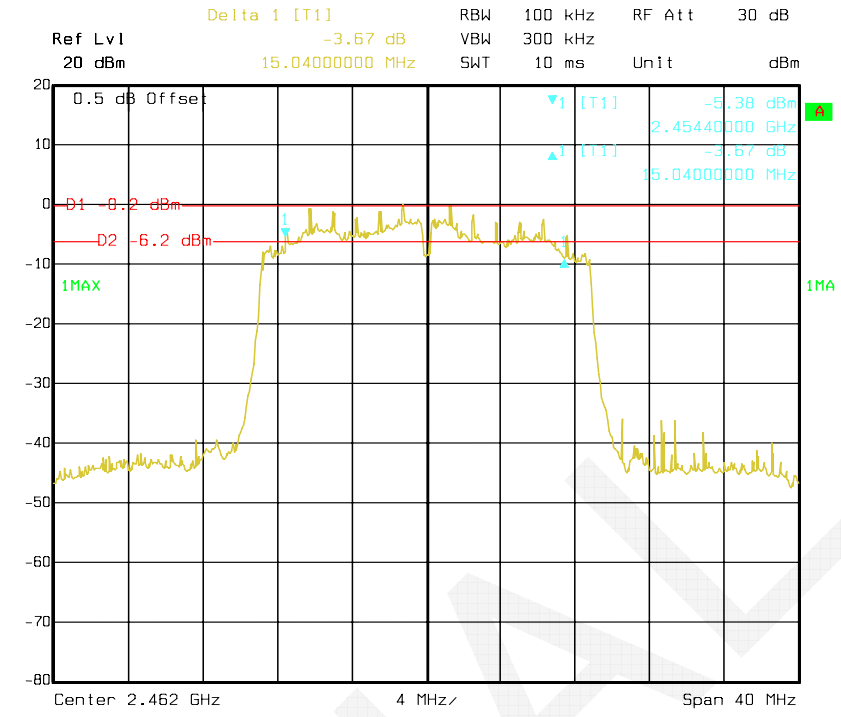
802.11n-HT20 Low Channel



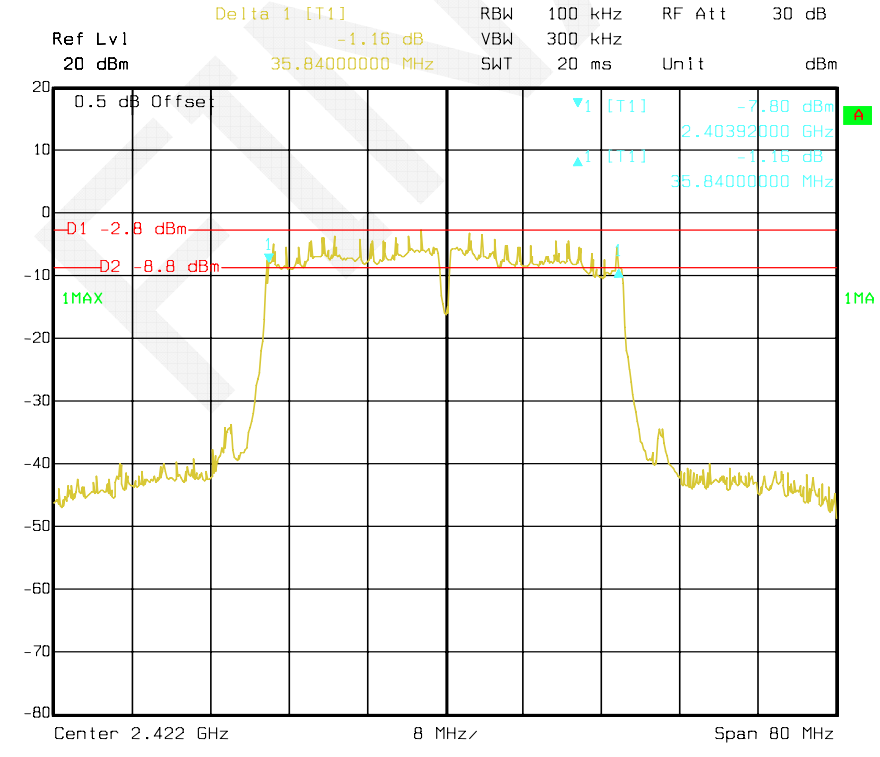
802.11n-HT20 Middle Channel



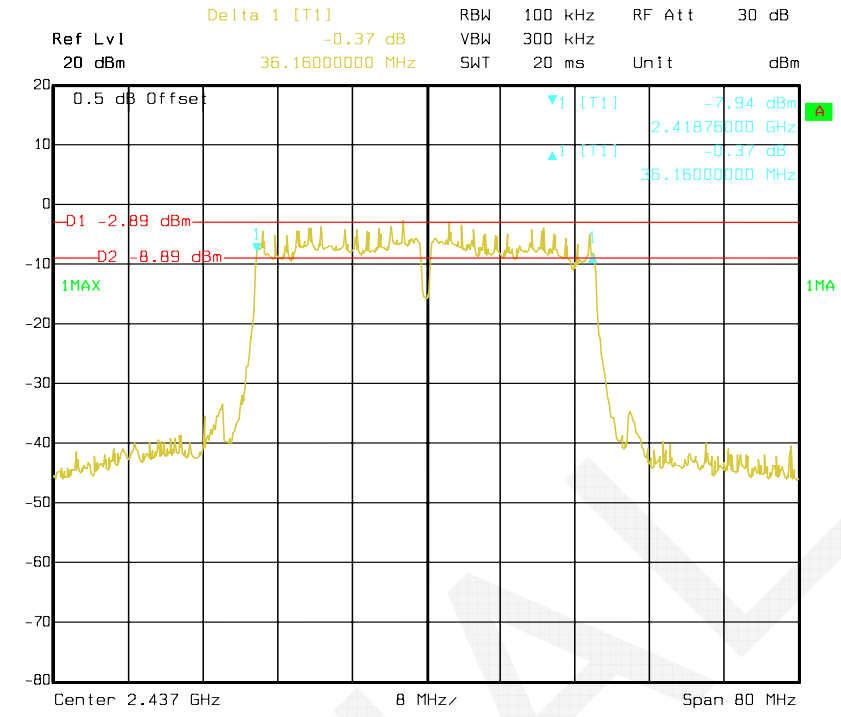
802.11n-HT20 High Channel



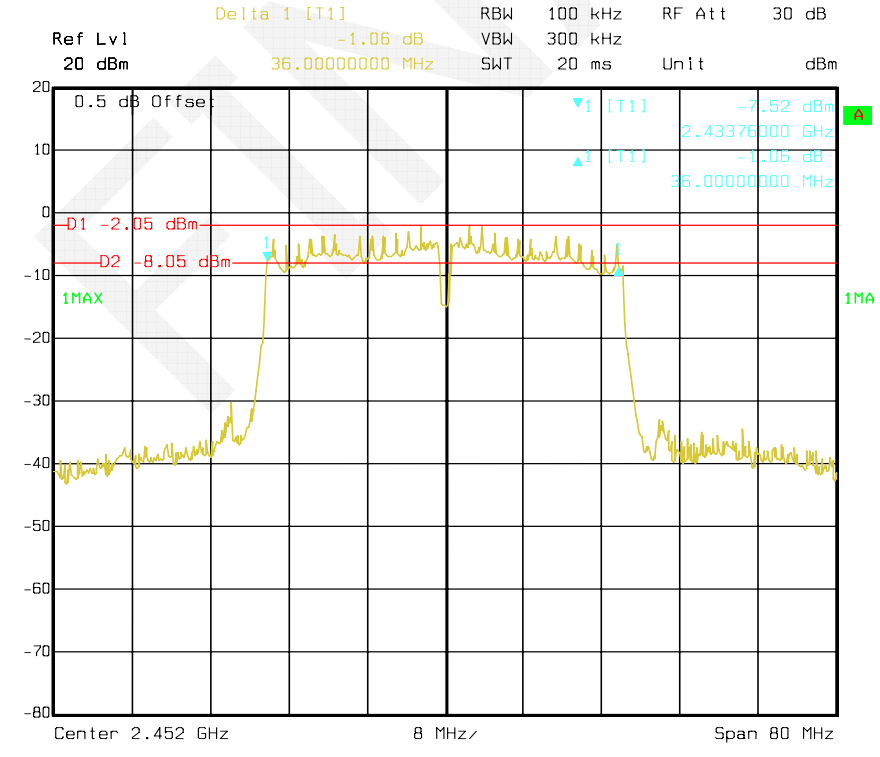
802.11n-HT40 Low Channel



802.11n-HT40 Middle Channel



802.11n-HT40 Hihg Channel



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

Applicable Standard

According to FCC §15.247(b) (3), for systems using digital modulation in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands: 1 Watt. As an alternative to a peak power measurement, compliance with the one Watt limit can be based on a measurement of the maximum conducted output power. Maximum Conducted Output Power is defined as the total transmit power delivered to all antennas and antenna elements averaged across all symbols in the signaling alphabet when the transmitter is operating at its maximum power control level. Power must be summed across all antennas and antenna elements. The average must not include any time intervals during which the transmitter is off or is transmitting at a reduced power level. If multiple modes of operation are possible (e.g., alternative modulation methods), the maximum conducted output power is the highest total transmit power occurring in any mode.

Test Procedure

1. According to KDB 558074 D01 DTS Meas Guidance v03r02, 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 a spectrum Analyzer.
3. Add a correction factor to the display.

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Agilent	Wideband Power Sensor	N1921A	MY54210016	2013-12-12	2014-12-12
Agilent	Wideband Power Sensor	N1921A	MY54170013	2013-12-12	2014-12-12
Agilent	P-Series Power Meter	N1912A	MY5000448	2013-12-12	2014-12-12

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

Test Data

Environmental Conditions

Temperature:	28°C
Relative Humidity:	44 %
ATM Pressure:	101.2 kPa

** The testing was performed by Leon Chen on 2014-10-20*

Test Mode: Transmitting

Please refer to the following tables.

Mode	Channel	Frequency(MHz)	Max Peak Conducted Output Power (dBm)			Limit (dBm)
			Chain0	Chain1	Total	
802.11 b	Low	2412	20.38	20.10	/	30
	Middle	2437	19.61	20.14	/	30
	High	2462	19.69	19.59	/	30
802.11 g	Low	2412	22.06	22.51	/	30
	Middle	2437	22.19	22.36	/	30
	High	2462	22.44	22.55	/	30
802.11 n20	Low	2412	18.74	18.58	21.67	30
	Middle	2437	18.65	18.60	21.64	30
	High	2462	18.28	18.37	21.34	30
802.11 n40	Low	2422	19.76	18.60	22.23	30
	Middle	2437	19.09	18.70	21.91	30
	High	2452	19.78	19.23	22.52	30

Note: The duty cycle is 100%.

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 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 Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum Analyzer	FSP 38	100478	2014-05-09	2015-05-09

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

Test Data

Environmental Conditions

Temperature:	28 °C
Relative Humidity:	44 %
ATM Pressure:	101.2 kPa

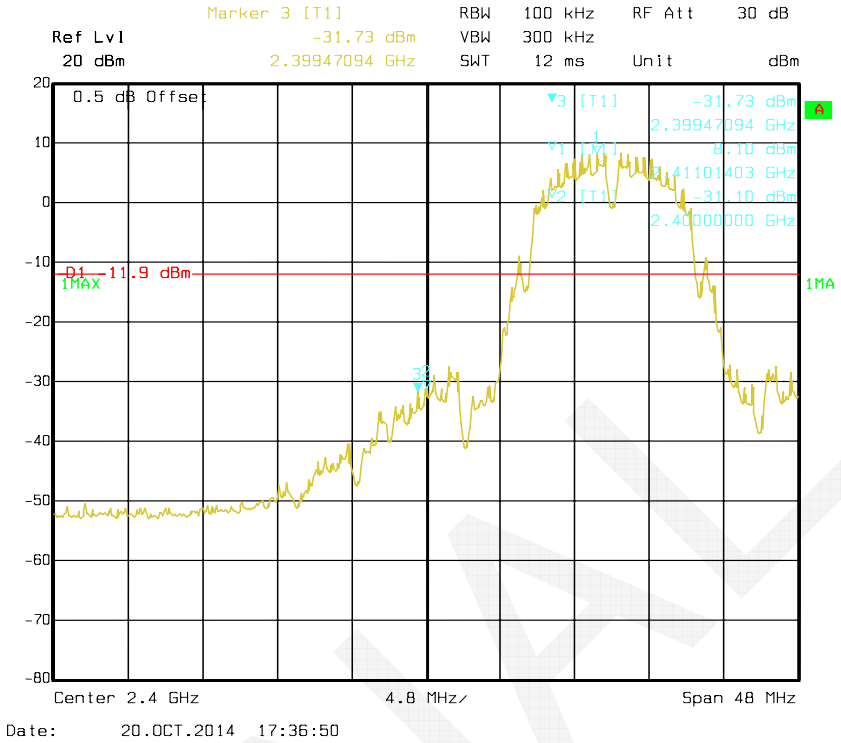
** The testing was performed by Leon Chen on 2014-10-20*

Test Result: *Compliant.*

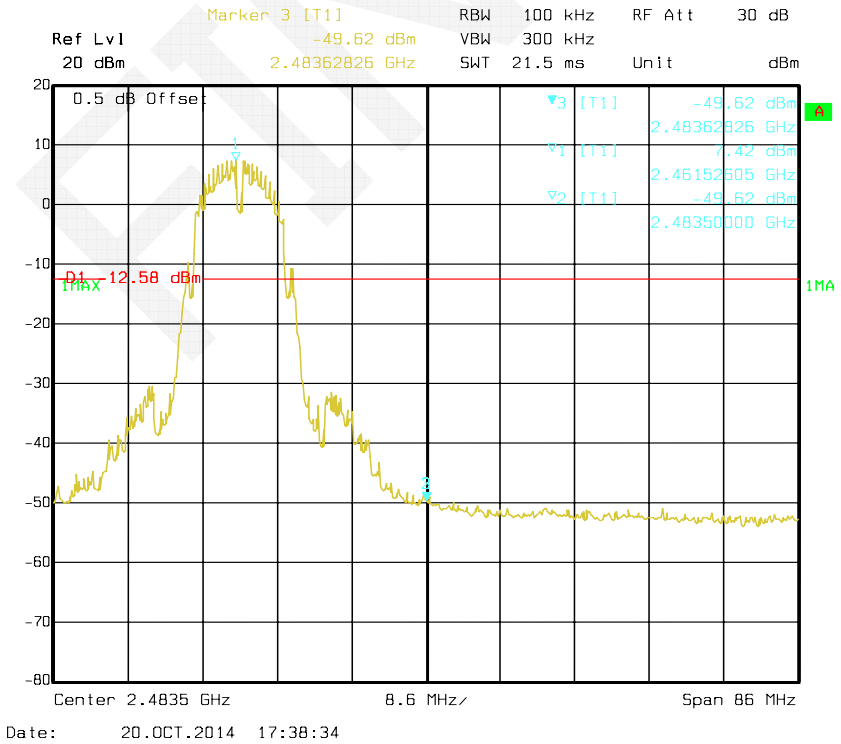
Please refer to following plots.

Chain 0:

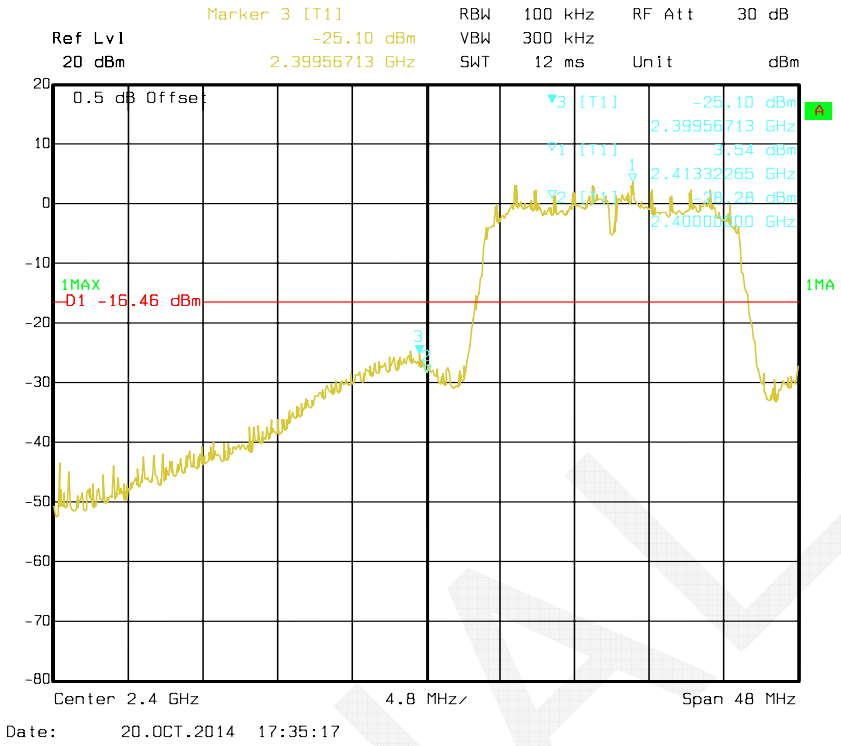
802.11b: Band Edge, Left Side



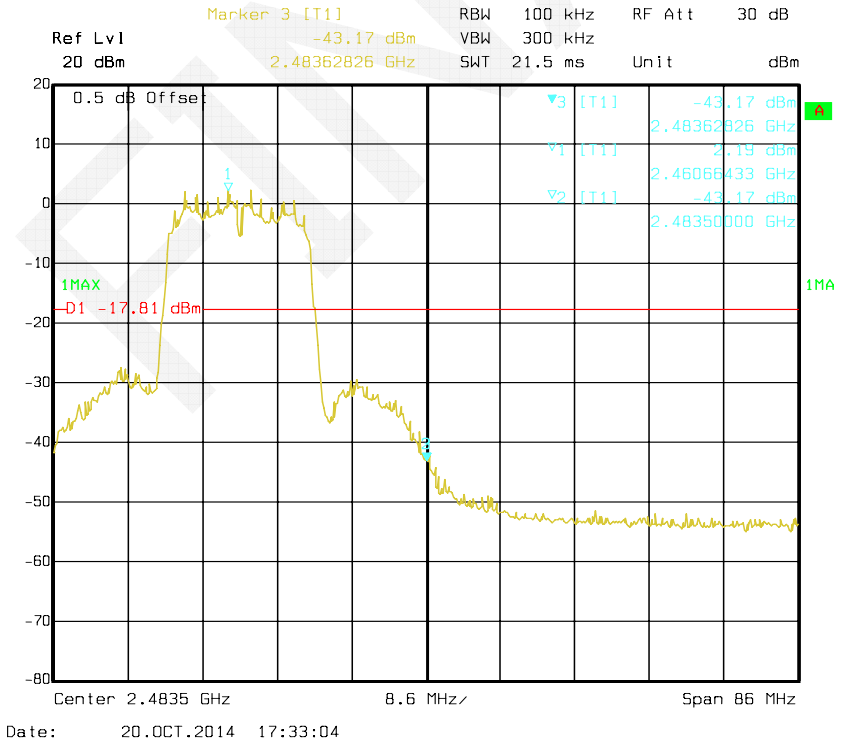
802.11b: Band Edge, Right Side



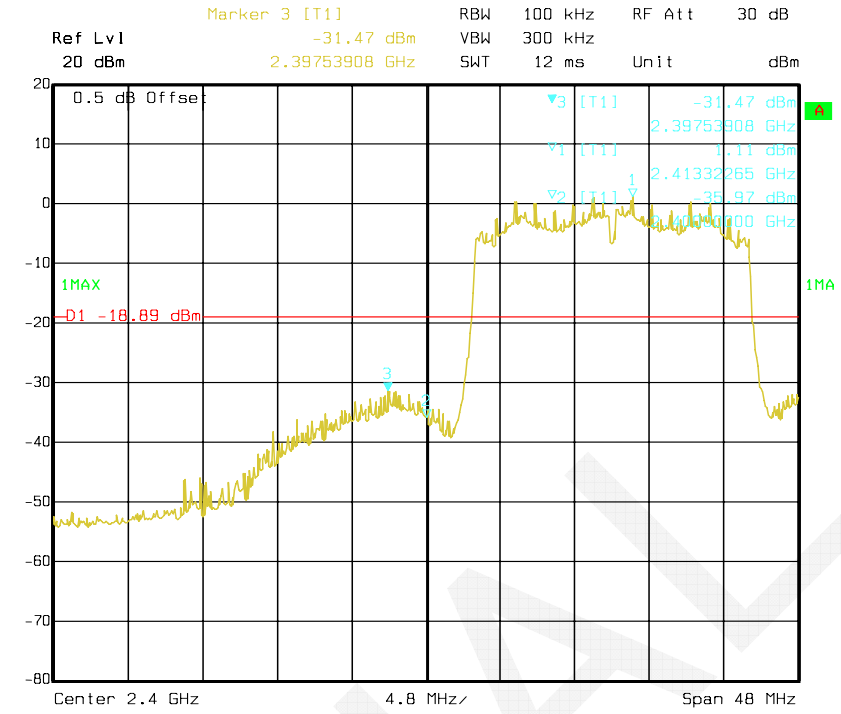
802.11g: Band Edge, Left Side



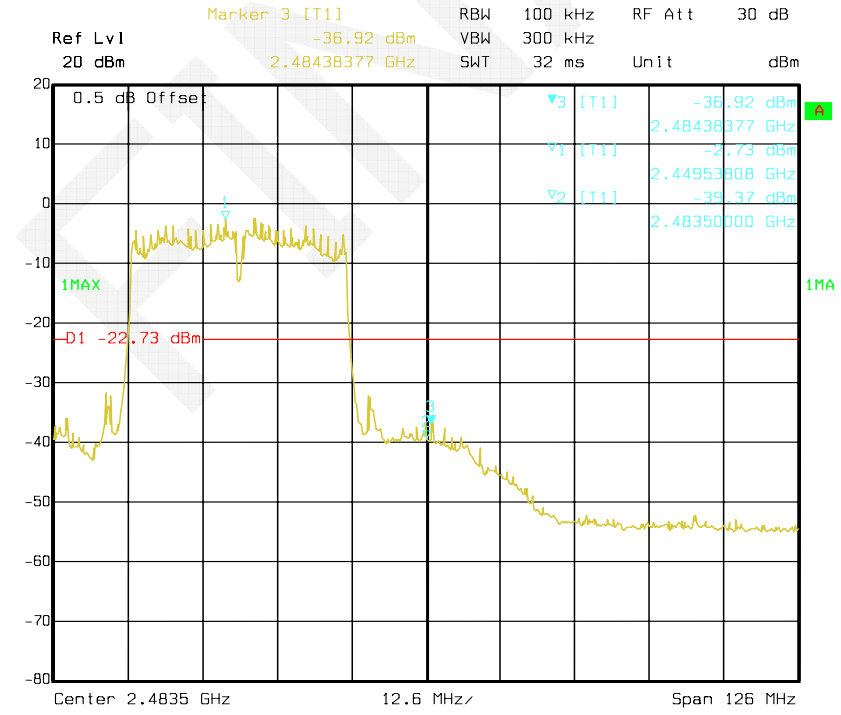
802.11g: Band Edge, Right Side



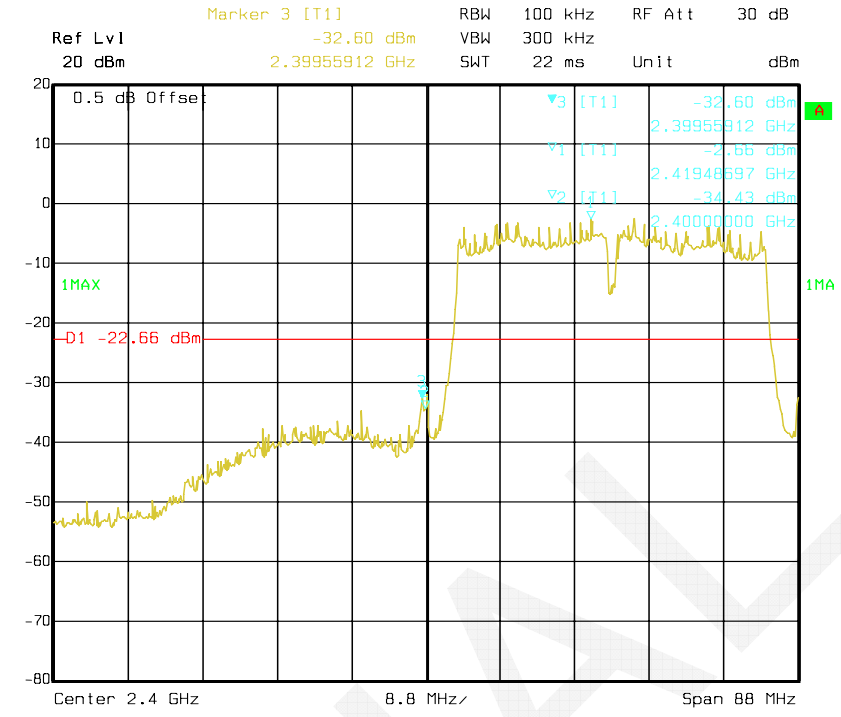
802.11n-HT20 Band Edge, Left Side



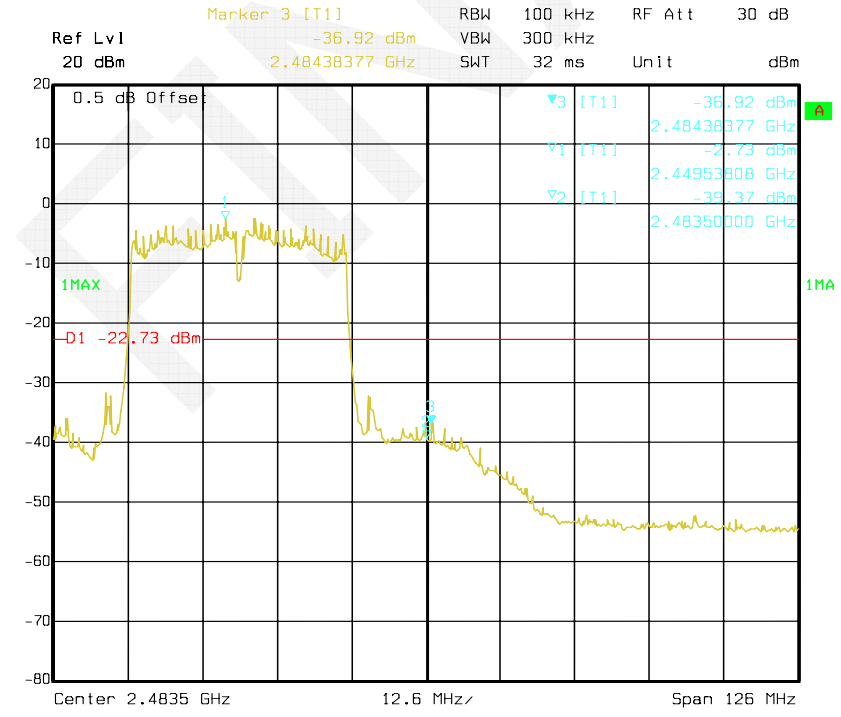
802.11n-HT20 Band Edge, Right Side



802.11n-HT40 Band Edge, Left Side

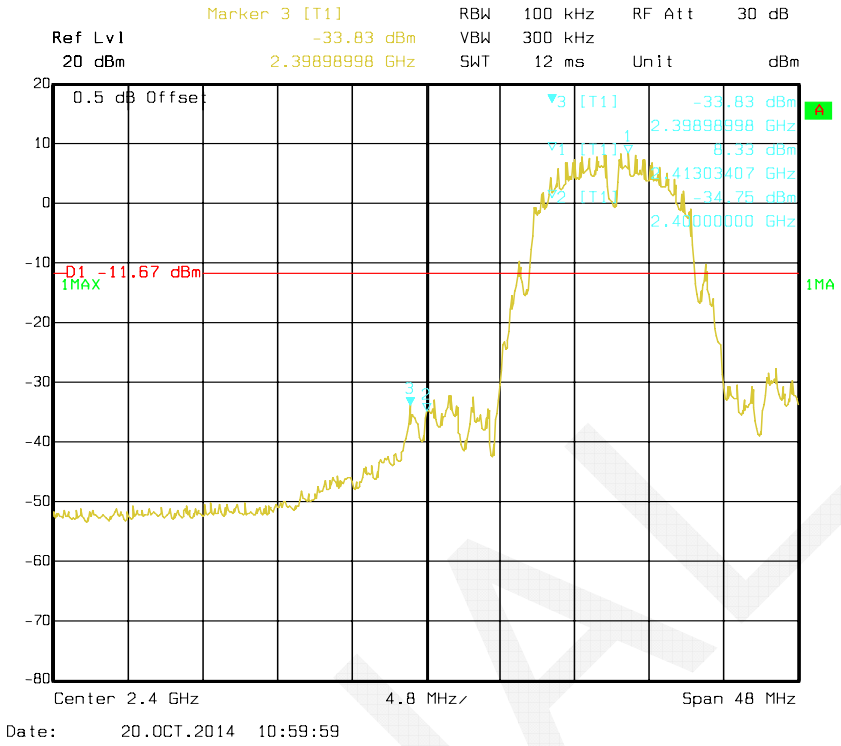


802.11n-HT40 Band Edge, Right Side

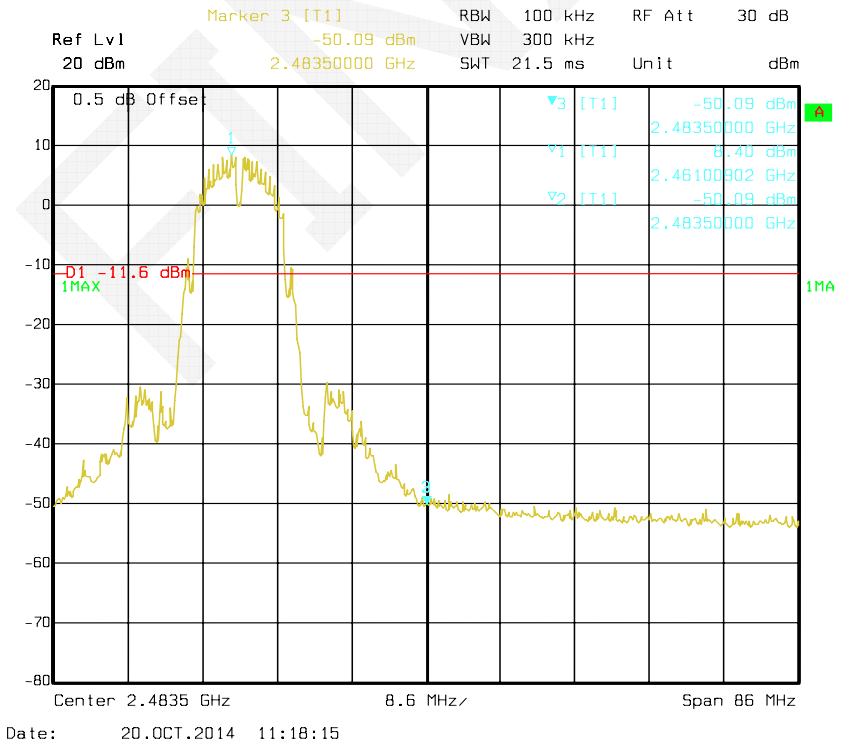


Chain 1:

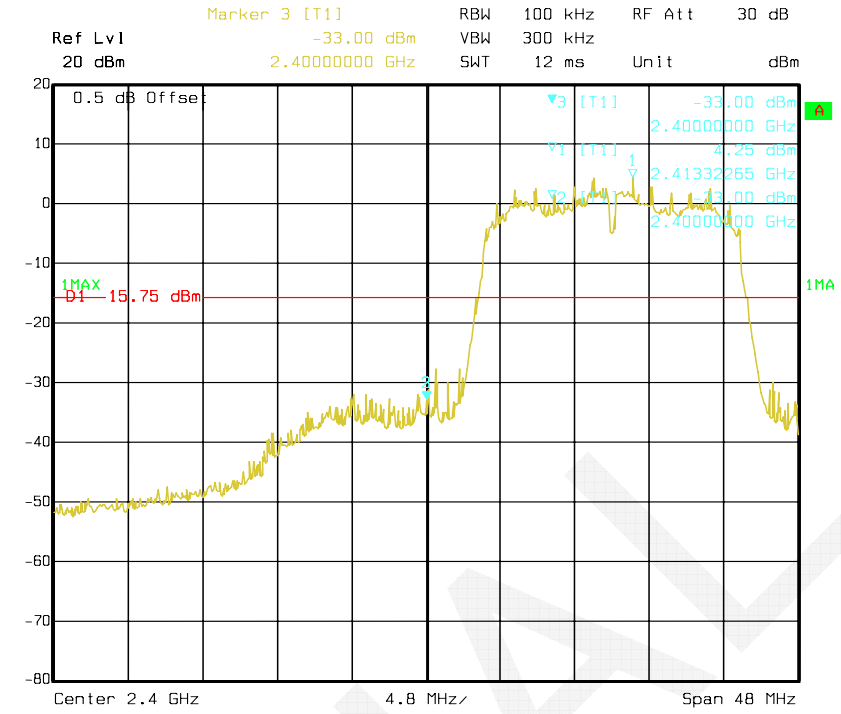
802.11b: Band Edge, Left Side



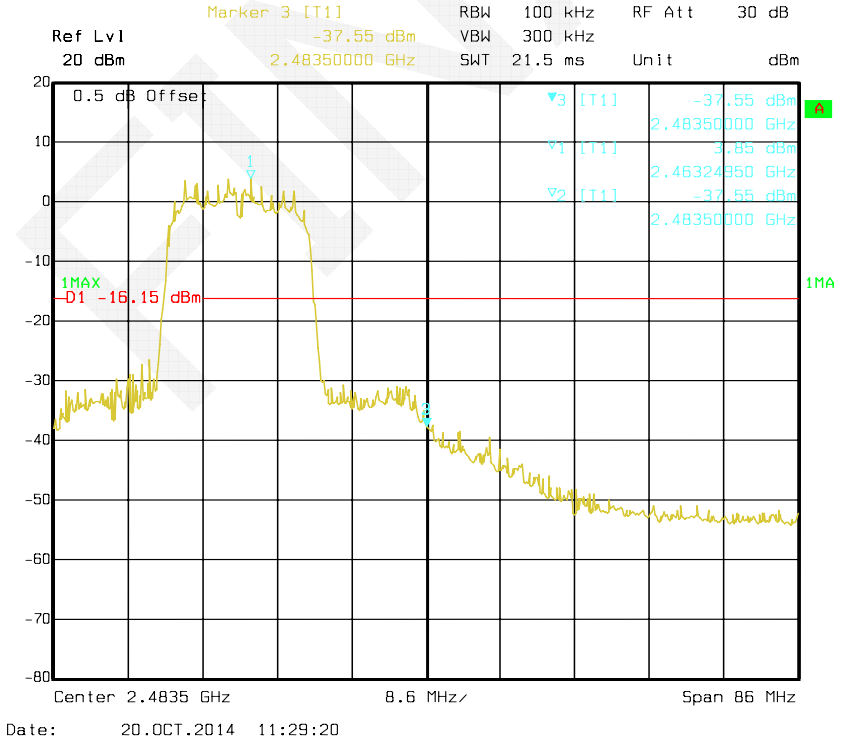
802.11b: Band Edge, Right Side



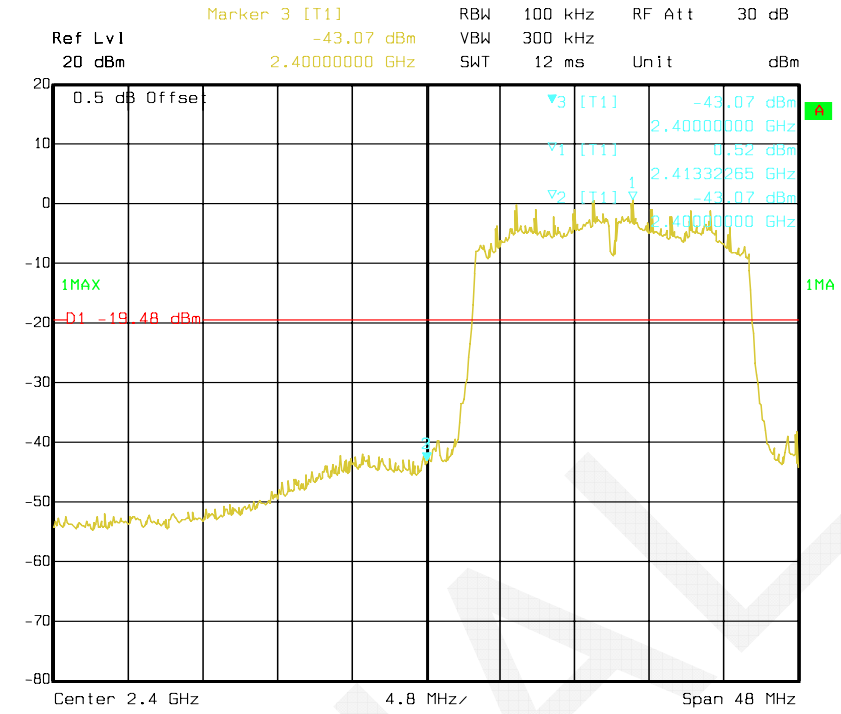
802.11g: Band Edge, Left Side



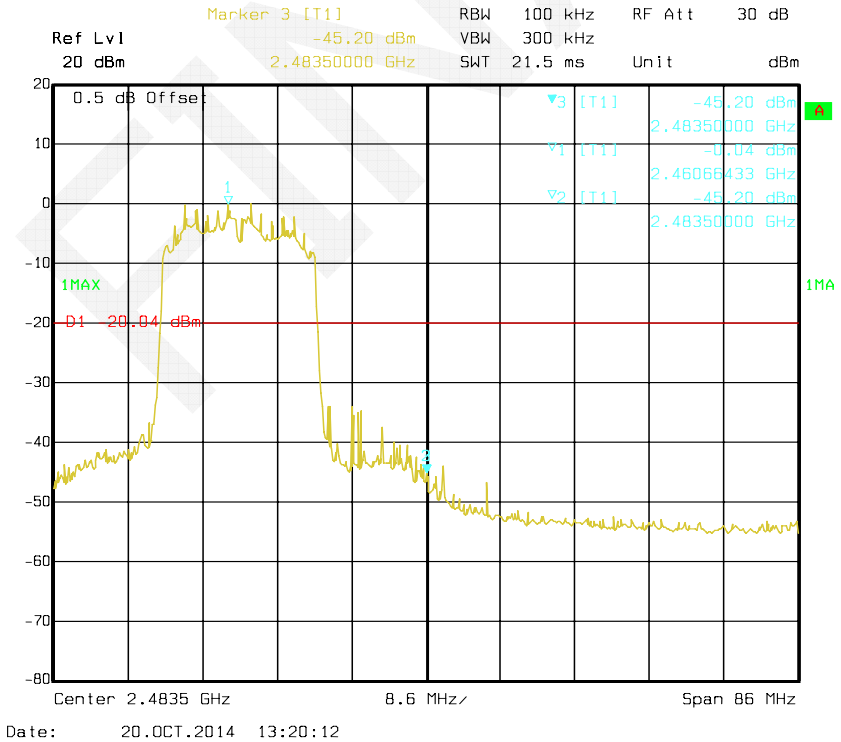
802.11g: Band Edge, Right Side



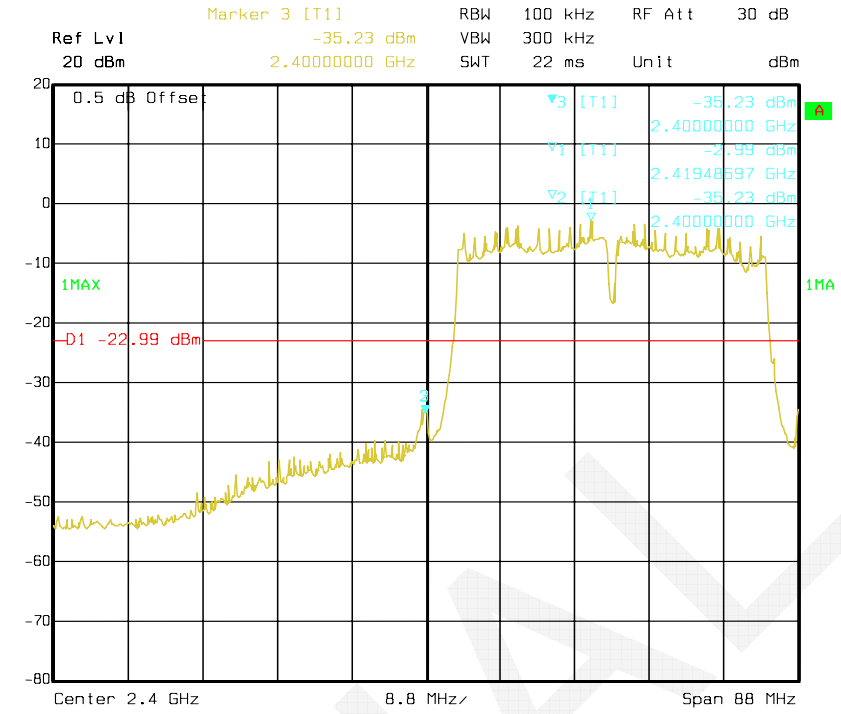
802.11n-HT20 Band Edge, Left Side



802.11n-HT20 Band Edge, Right Side



802.11n-HT40 Band Edge, Left Side



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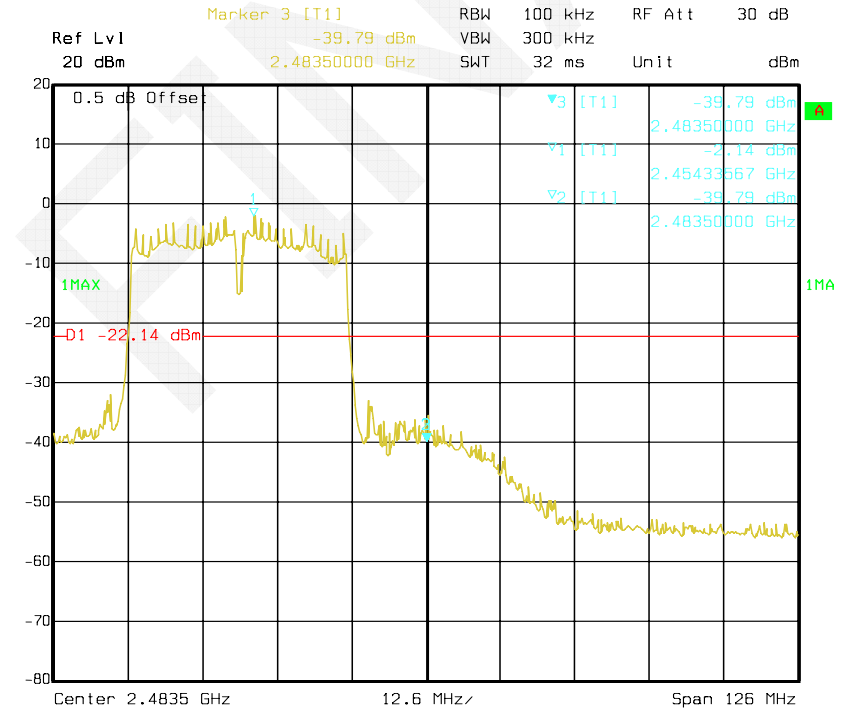
802.11n-HT40 Band Edge, Right Side



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FCC §15.247(e) - POWER SPECTRAL DENSITY

Applicable Standard

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

Test Procedure

1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
2. Position the EUT was set without connection to measurement instrument. Turn on the EUT and connect its antenna terminal to measurement instrument via a low loss cable. Then set it to any one measured frequency within its operating range, and make sure the instrument is operated in its linear range.
3. Set the RBW = 3 kHz, VBW = 10 kHz, Set the span to 1.5 times the DTS bandwidth.
4. Use the peak marker function to determine the maximum amplitude level.

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum Analyzer	FSP 38	100478	2014-05-09	2015-05-09

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

Test Data

Environmental Conditions

Temperature:	28°C
Relative Humidity:	44 %
ATM Pressure:	101.2kPa

** The testing was performed by Leon Chen on 2014-10-20*

Test Mode: Transmitting

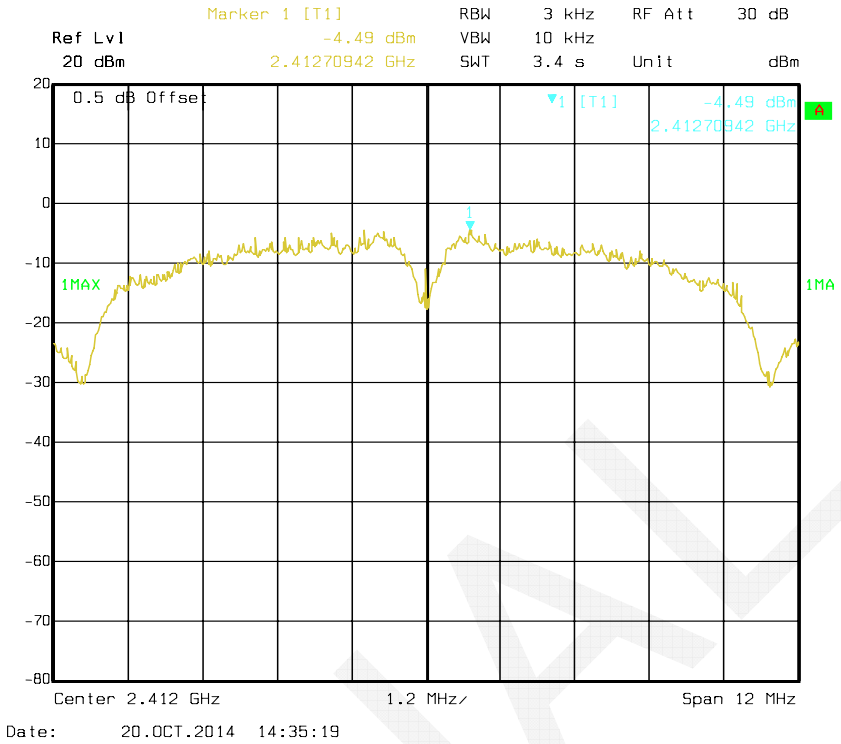
Test Result: Pass. Please refer to the following tables and plots.

Test mode	Channel	Frequency (MHz)	PSD (dBm/3kHz)			Limit (dBm/3kHz)
			Chain 0	Chain 1	Total	
802.11b	Low	2412	-4.49	-4.87	/	≤8
	Middle	2437	-5.42	-4.45	/	≤8
	High	2462	-4.32	-5.74	/	≤8
802.11g	Low	2412	-10.29	-9.31	/	≤8
	Middle	2437	-10.93	-10.13	/	≤8
	High	2462	-10.35	-9.51	/	≤8
802.11n ht20	Low	2412	-14.24	-13.84	-11.03	≤8
	Middle	2437	-13.98	-14.12	-11.04	≤8
	High	2462	-14.43	-13.44	-10.90	≤8
802.11n ht40	Low	2422	-16.67	-15.72	-13.16	≤8
	Middle	2437	-16.81	-16.58	-13.68	≤8
	High	2452	-16.62	-16.63	-13.61	≤8

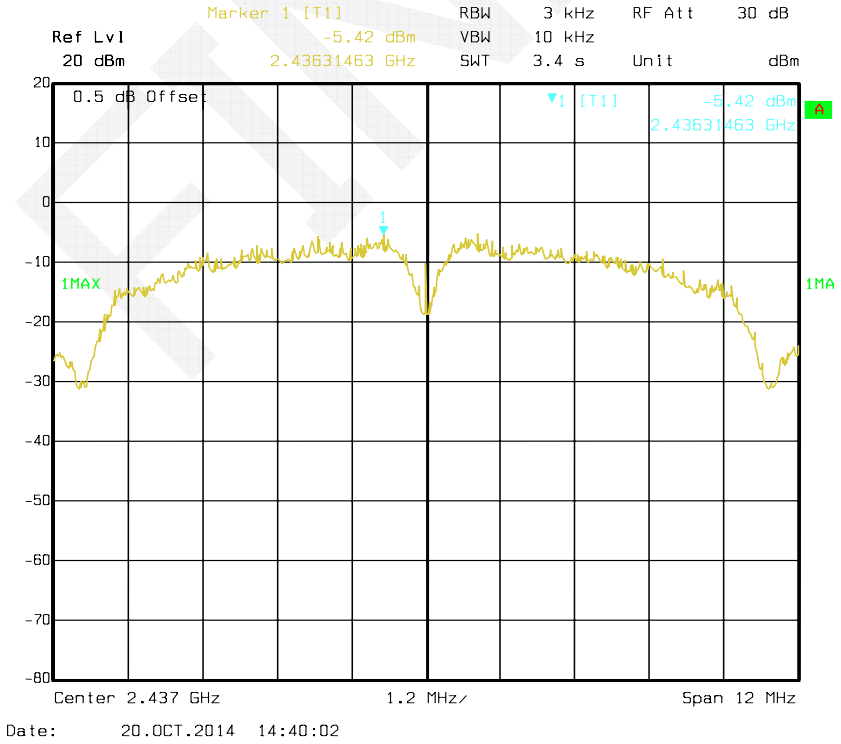
Note：The duty cycle is 100%.

Chain0:

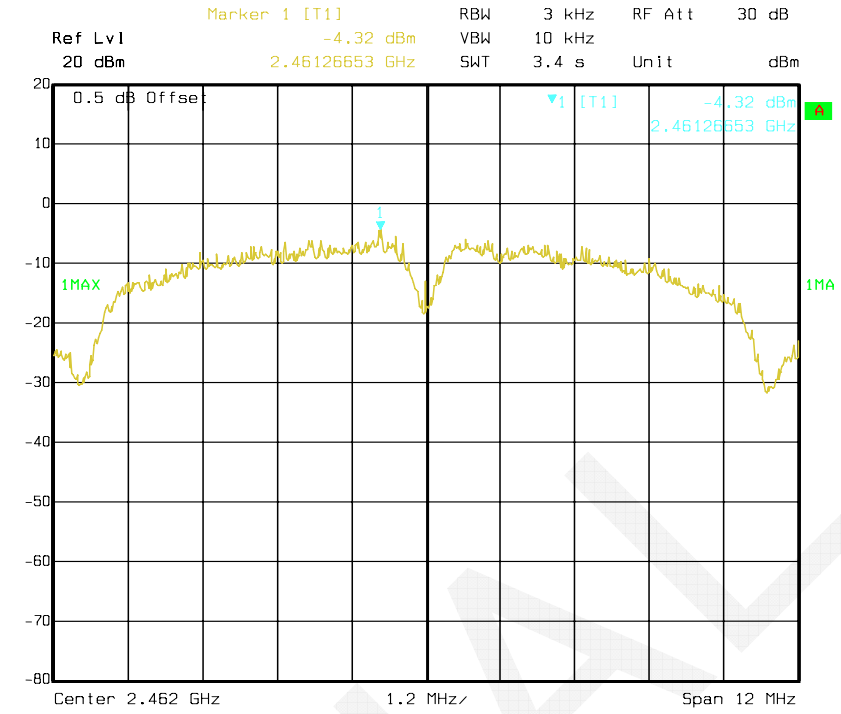
Power Spectral Density, 802.11b Low Channel



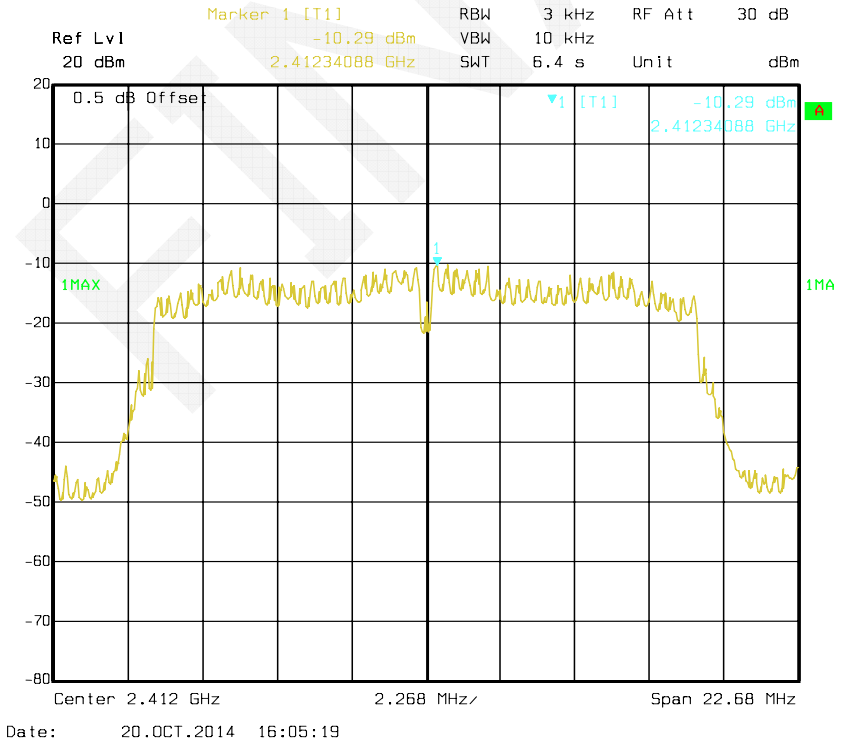
Power Spectral Density, 802.11b Middle Channel



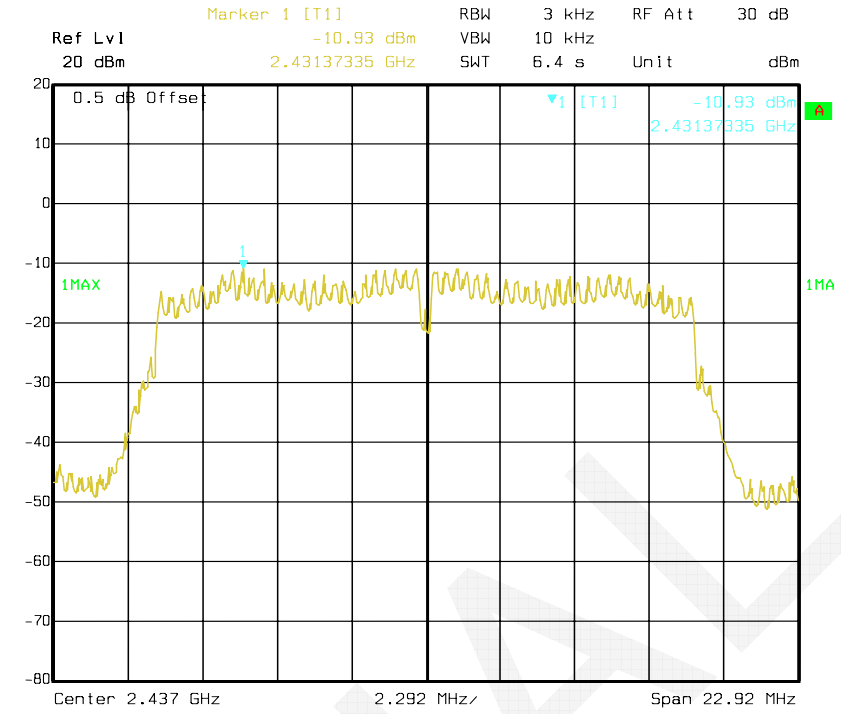
Power Spectral Density, 802.11b High Channel



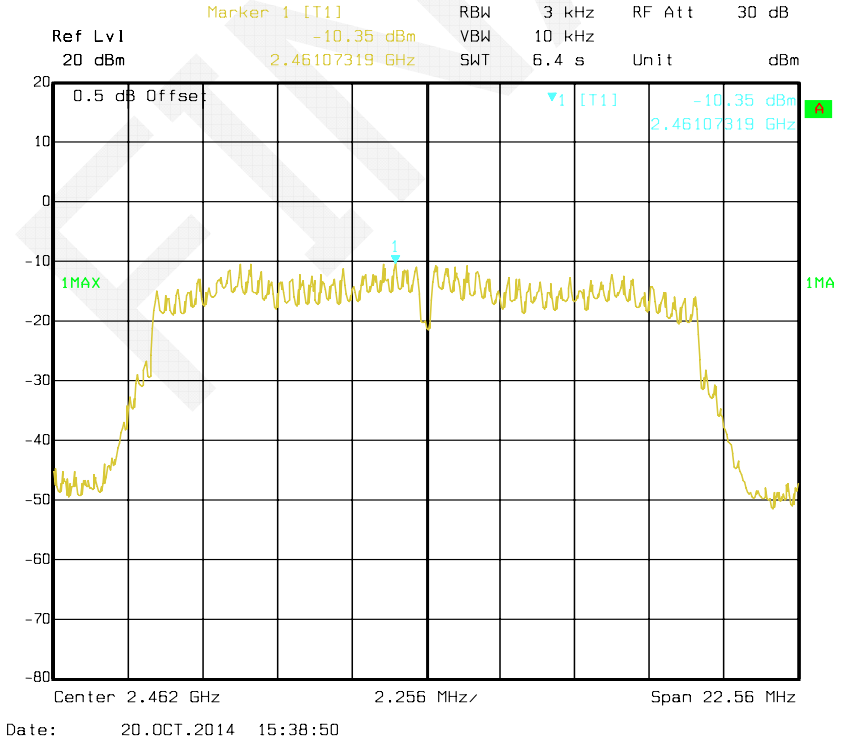
Power Spectral Density, 802.11g Low Channel



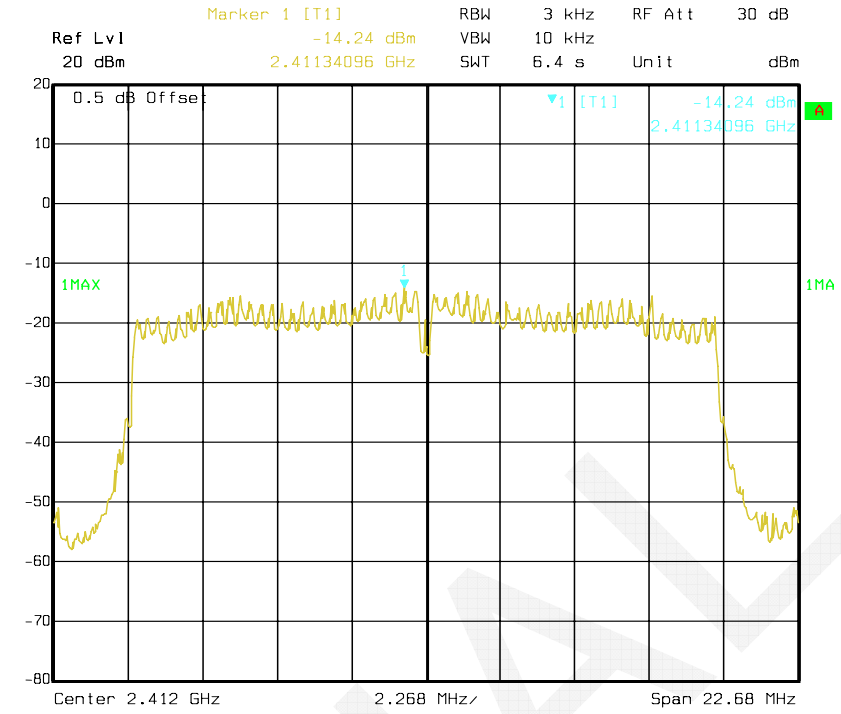
Power Spectral Density, 802.11g Middle Channel



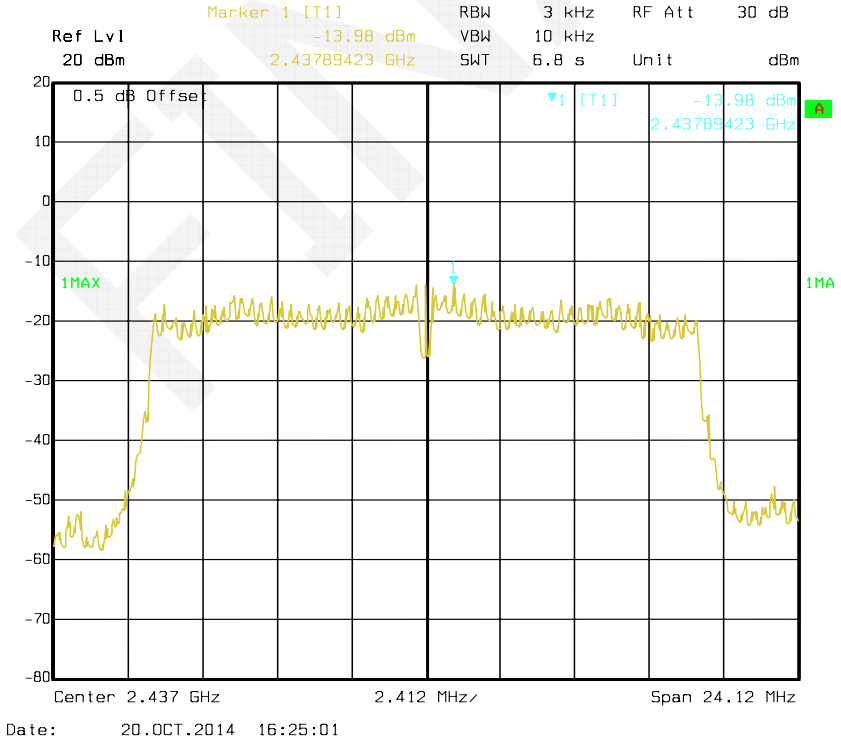
Power Spectral Density, 802.11g High Channel



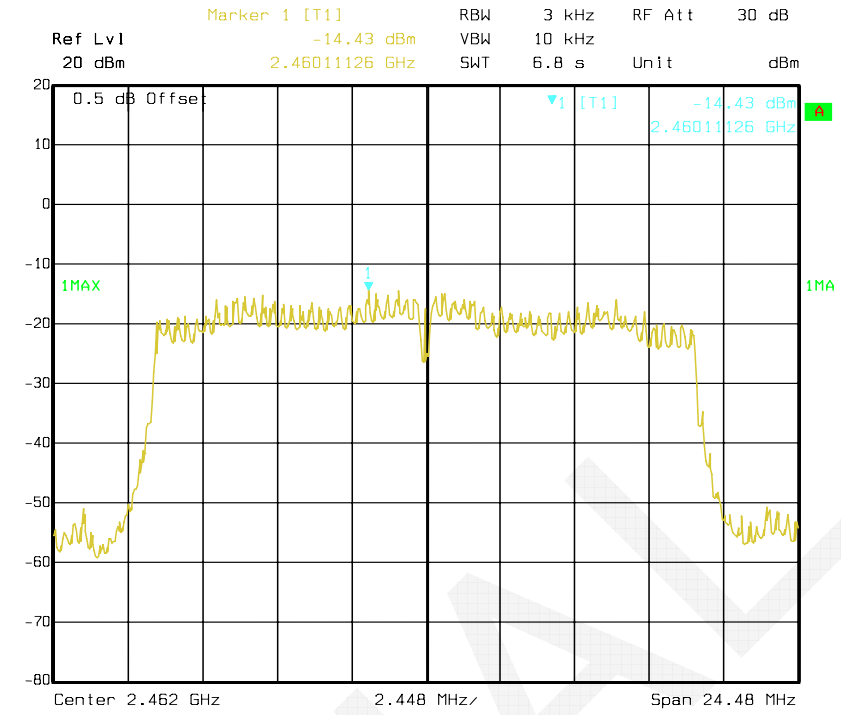
Power Spectral Density, 802.11n-HT20 Low Channel



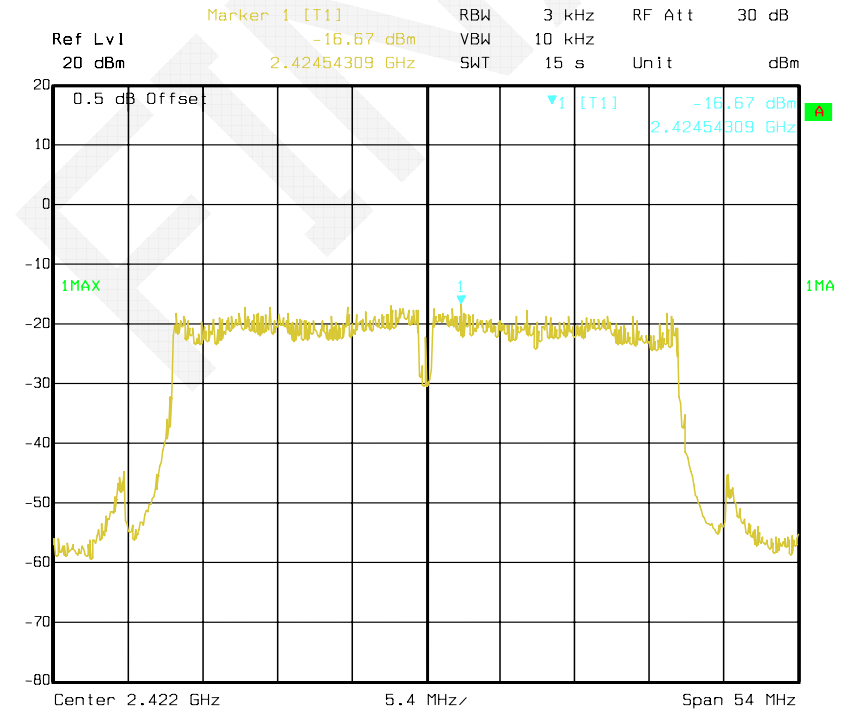
Power Spectral Density, 802.11n-HT20 Middle Channel



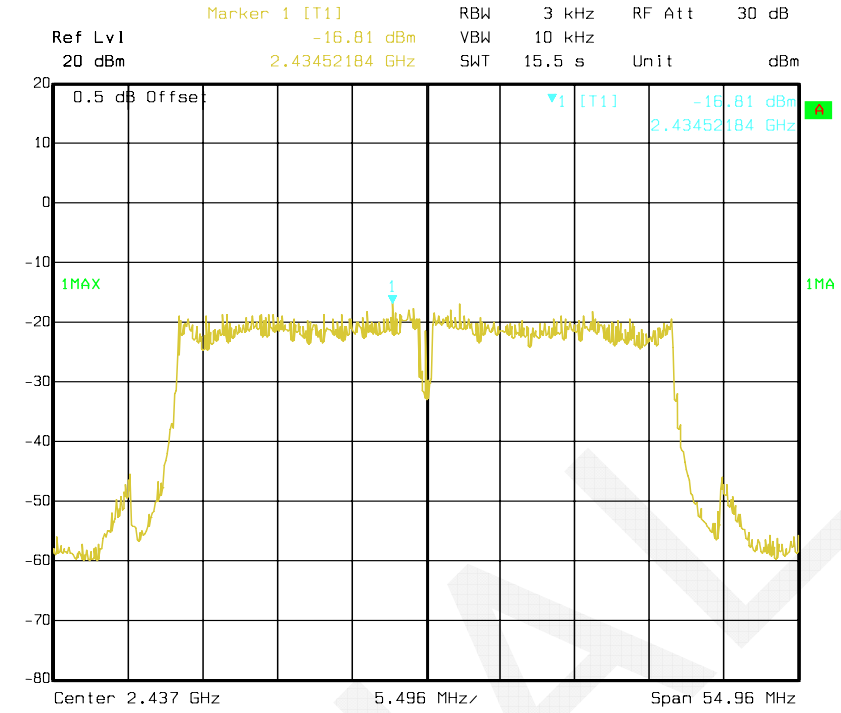
Power Spectral Density, 802.11n-HT20 High Channel



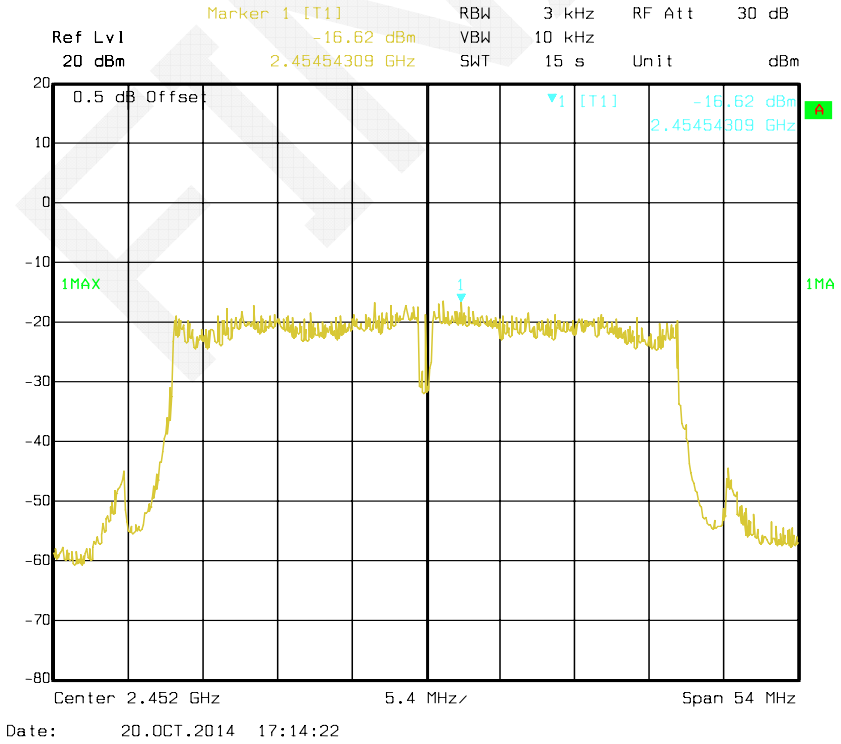
Power Spectral Density, 802.11n-HT40 Low Channel



Power Spectral Density, 802.11n-HT40 Middle Channel

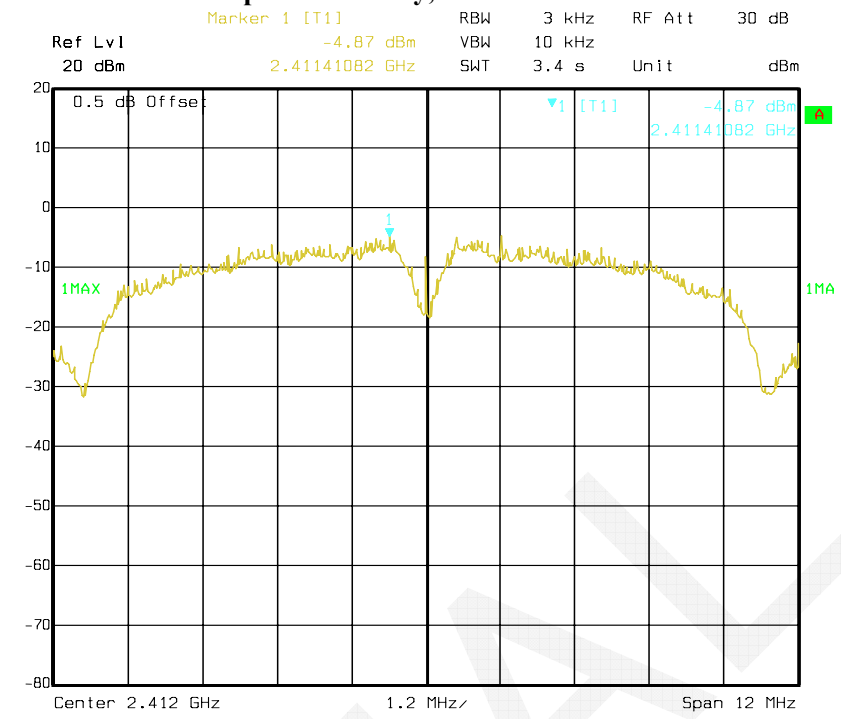


Power Spectral Density, 802.11n-HT40 High Channel

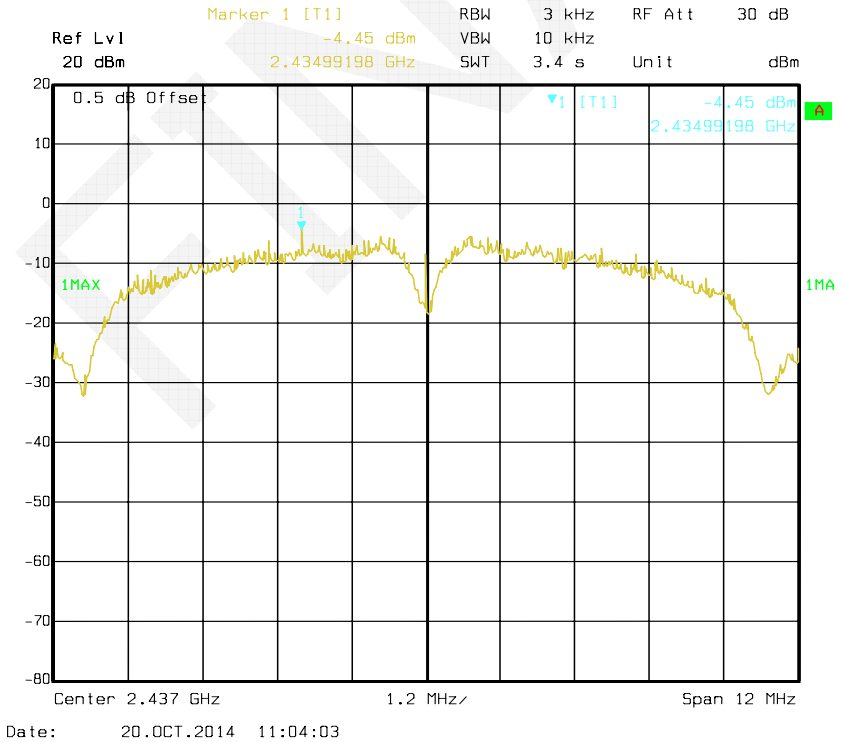


Chain1:

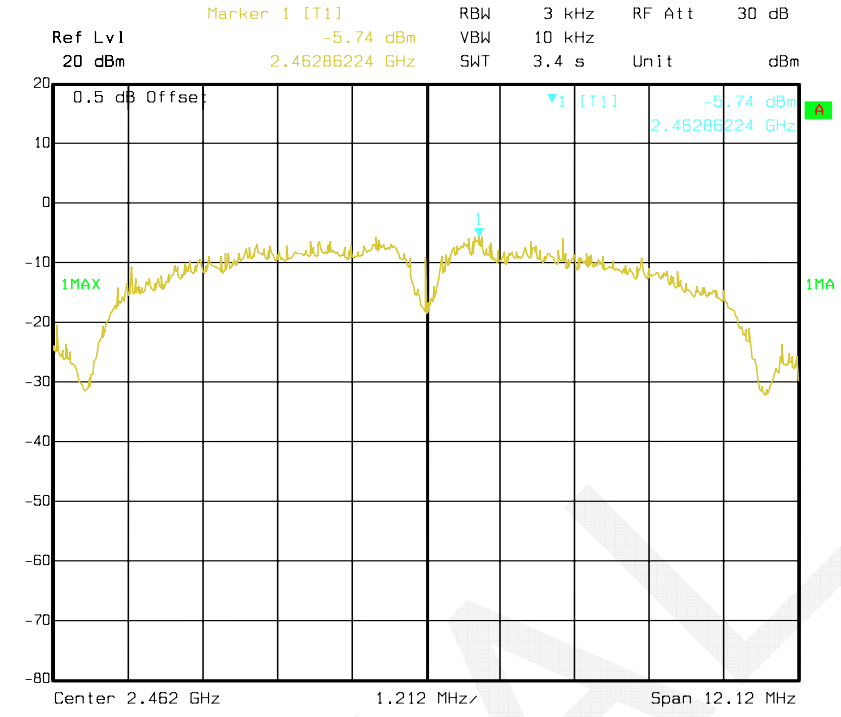
Power Spectral Density, 802.11b Low Channel



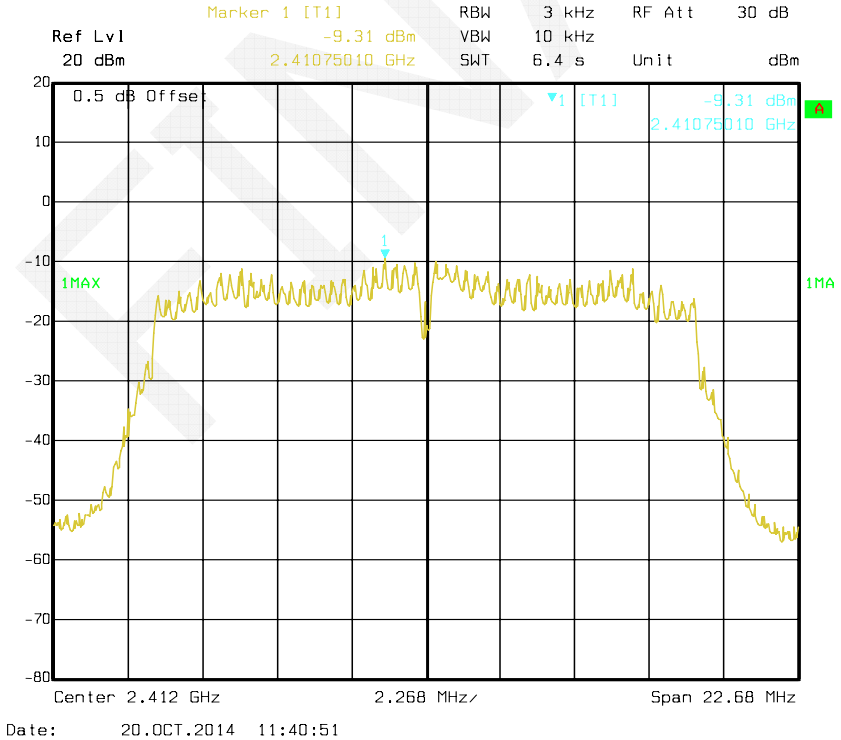
Power Spectral Density, 802.11b Middle Channel



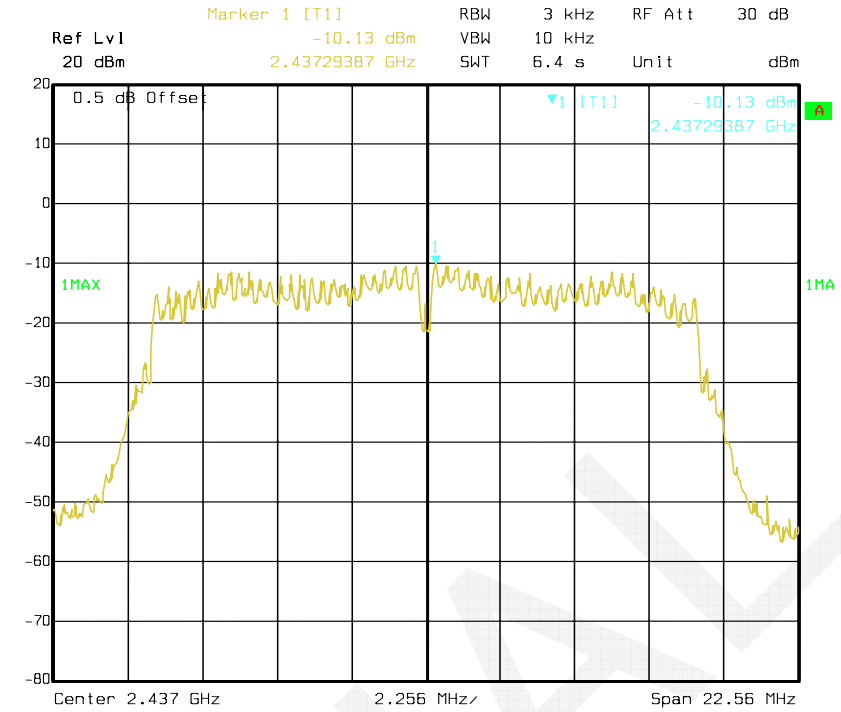
Power Spectral Density, 802.11b High Channel



Power Spectral Density, 802.11g Low Channel



Power Spectral Density, 802.11g Middle Channel



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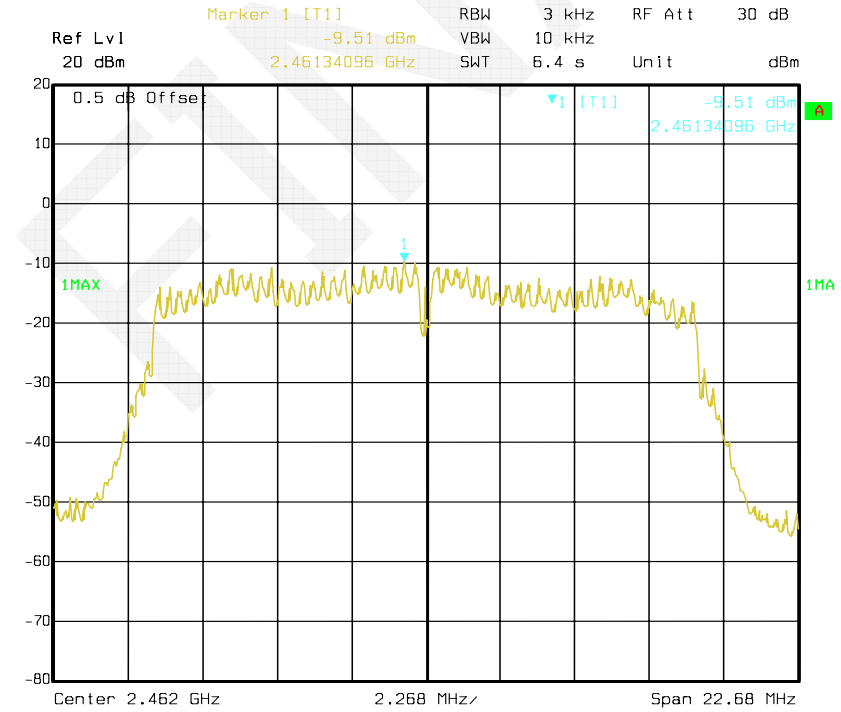
Power Spectral Density, 802.11g High Channel



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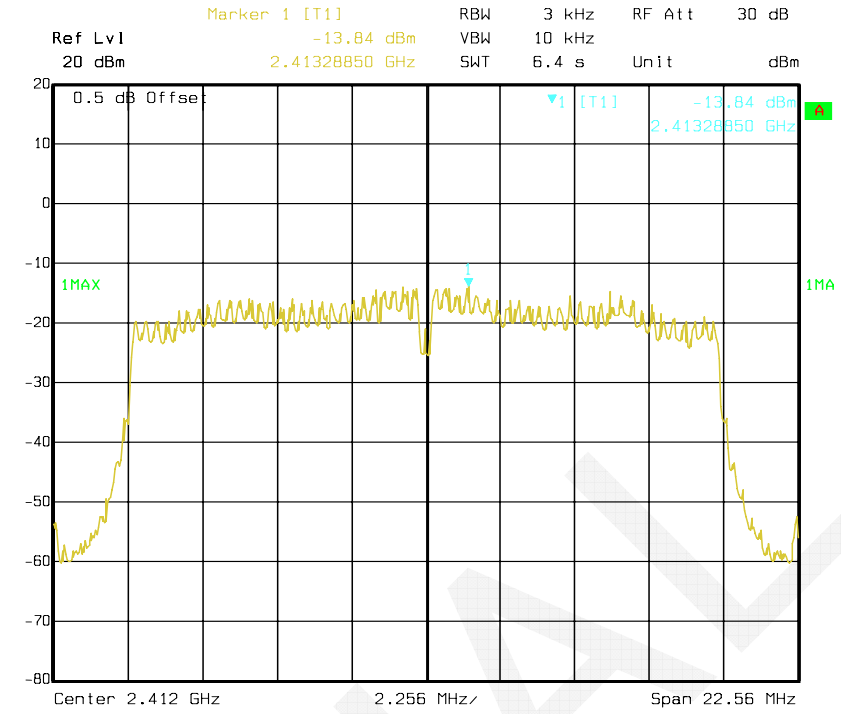
Power Spectral Density, 802.11n-HT20 Low Channel



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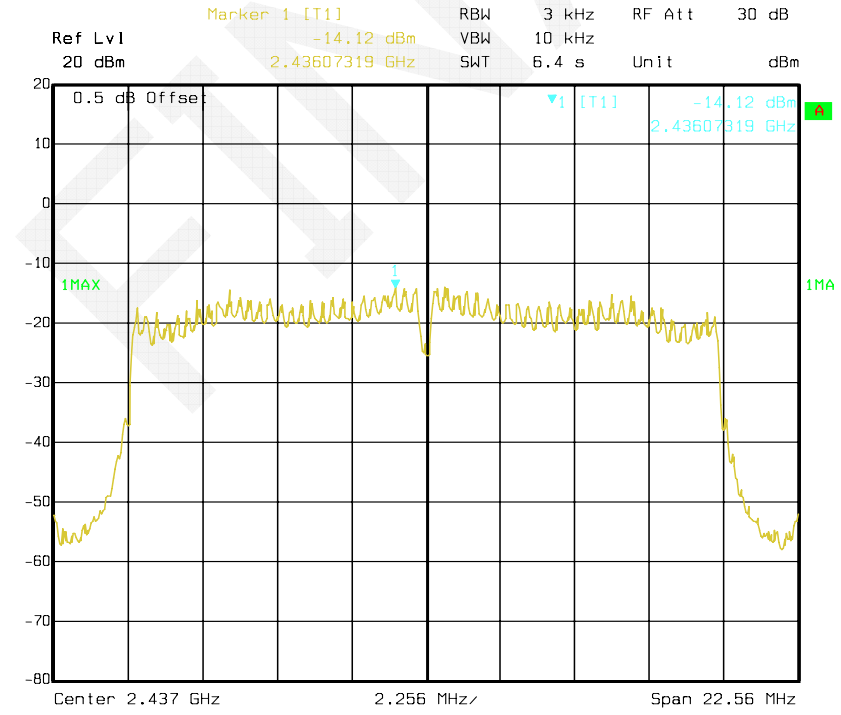
Power Spectral Density, 802.11n-HT20 Middle Channel



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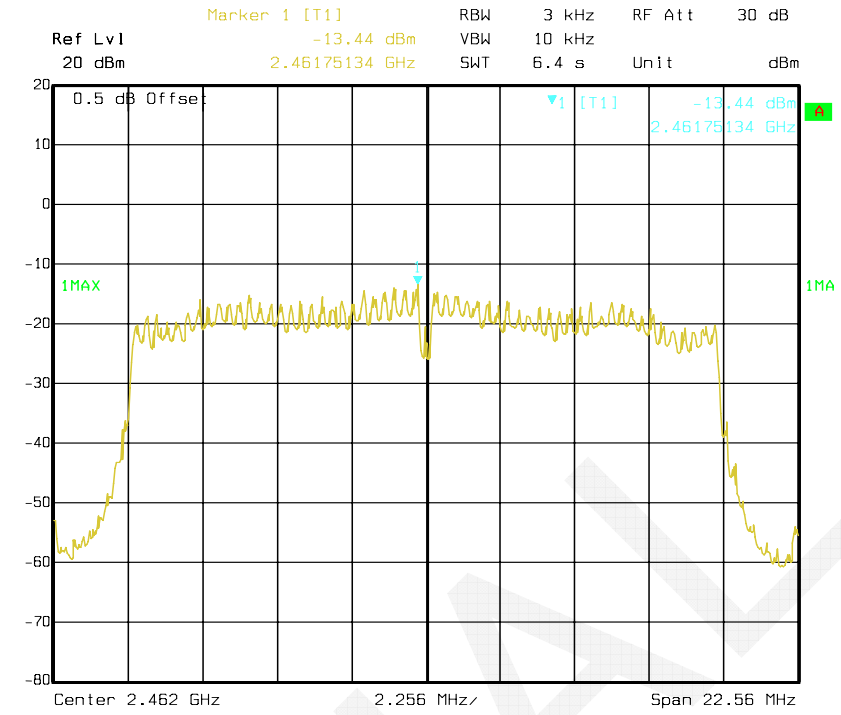
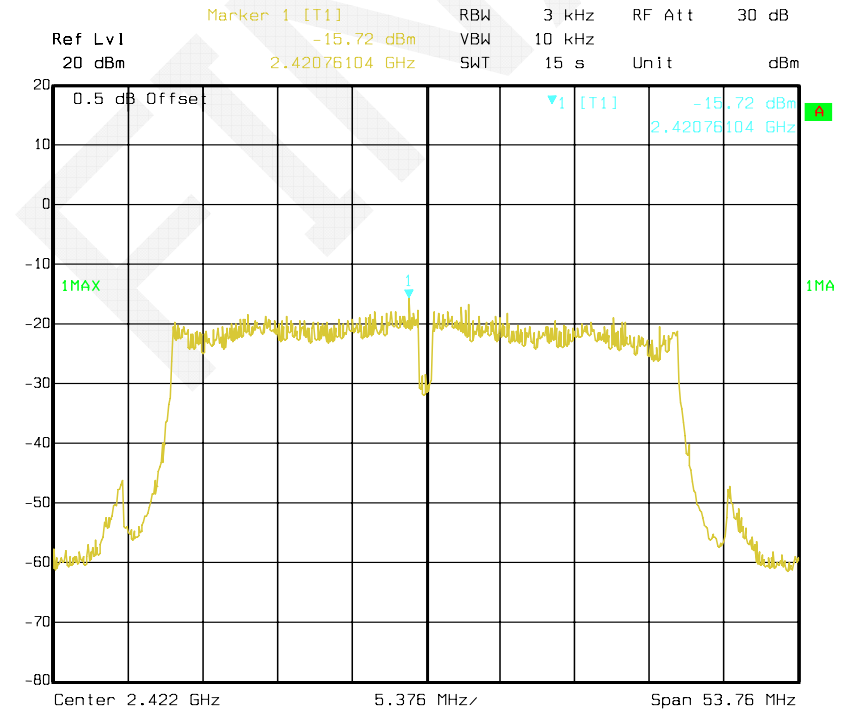
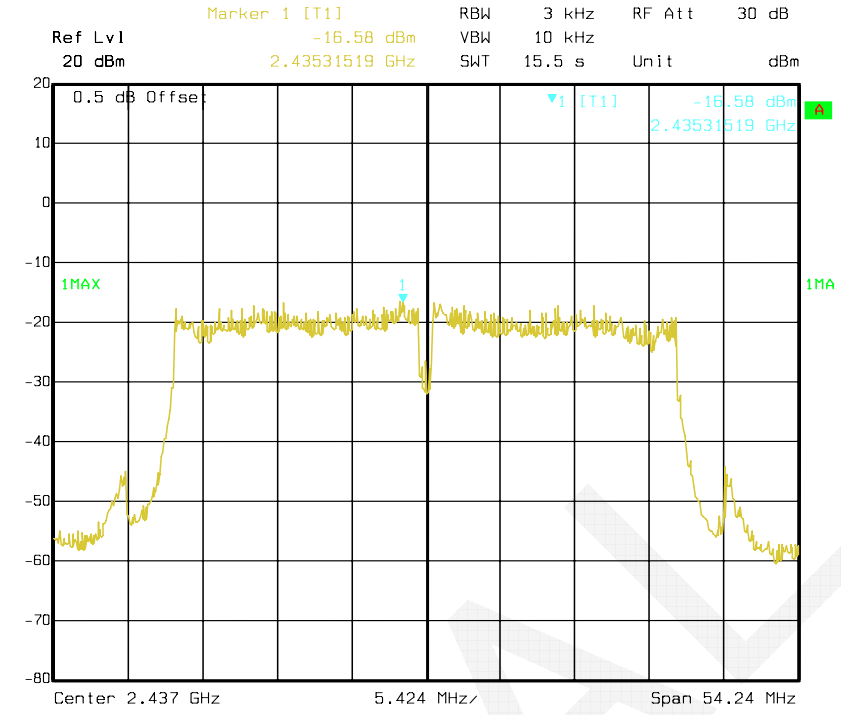
Power Spectral Density, 802.11n-HT20 High Channel



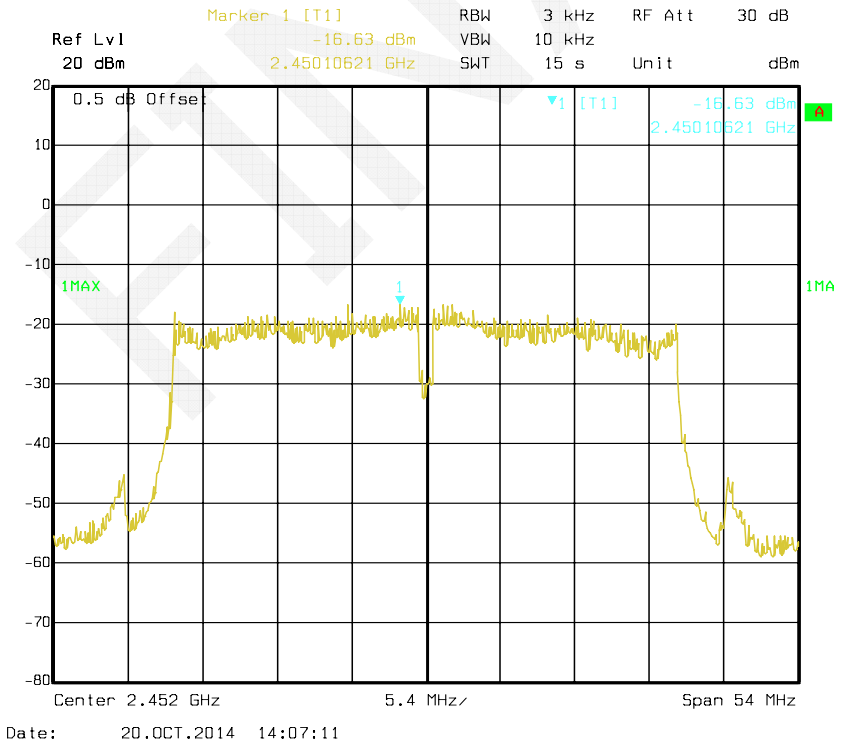
Power Spectral Density, 802.11n-HT40 Low Channel



Power Spectral Density, 802.11n-HT40 Middle Channel



Power Spectral Density, 802.11n-HT40 High Channel



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