LABCODE: 500069-0

FCC PART 15.247

TEST REPORT

For

BYD Precision Manufacture Co., Ltd

Baohe Road, Baolong Industrial, Longgang, Shenzhen, 518116, P.R.China

FCC ID: ZW9-T11B13

Report Type:	Product Type:
Original Report	Tablet PC

Test Engineer:	Allen Qiao
Report Number:	R2DG 140115001-00A
Report Date:	2014-03-19
Reviewed By:	Ivan Cao RF Leader
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 *BYD Precision Manufacture Co., Ltd*'s product, model number: *T11B (FCC ID: ZW9-T11B13)* (the "EUT") in this report was a *Tablet PC*, the tablet was measured approximately: 30.5 cm (L) x 19.5 cm (W) x 1.1 cm (H), rated input voltage: DC 19.0V from adapter or DC 11.1V from Li-ion Polymer Battery.

Accessory Information:

Keyboard:
Model: DOK-K8275U
Approximately: 30.0 cm (L) x 21.5 cm (W) x 0.6 cm (H)
Power rating: 5V, 7mA
Manufacturer: Shenzhen Doking Electronic Technology Co., Ltd.

Adapter:
Model: ADS-40SG-19-3 19030G
Input: AC 100-240V, 50/60Hz, 1.0A
Output: DC 19V, 1.58A
Manufacturer: SHENZHEN HONOR ELECTRONIC CO., LTD.

** All measurement and test data in this report was gathered from production sample serial number: 140115001 (Assigned by BACL.Dongguan). The EUT was received on 2014-01-16*

Objective

This report is prepared on behalf of *BYD Precision Manufacture Co., Ltd* 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)

FCC Part15C DSS submissions with FCC ID: *ZW9-T11B13 for Bluetooth BDR, EDR mode.*
FCC Part15C DTS submissions with FCC ID: *ZW9-T11B13 for Bluetooth LE mode.*

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.

Additionally, Bay Area Compliance Laboratories Corp. (Dongguan) is an ISO/IEC 17025 accredited laboratory, and is accredited by National Voluntary Laboratory Accredited Program (Lab Code 500069-0).

The current scope of accreditations can be found at http://ts.nist.gov/standards/scopes/5000690.htm

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 and 802.11g modes were tested with Channel 1, 6 and 11.
For 802.11n40 mode were tested with Channel 3, 6 and 9.

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 date rates bandwidths, and modulations.

EUT Exercise Software

The engineering mode was a build in software: Atheros Radio Test 2, which was provided by manufacturer, and the test configured as following table:

Test Mode	Test Software Version	Atheros Radio Test 2		
802.11b	Test Frequency	2412MHz	2437MHz	2462MHz
	Data Rate	1Mbps	1Mbps	1Mbps
	Power Level Setting	12.5	12.5	12.5
802.11g	Test Frequency	2412MHz	2437MHz	2462MHz
	Data Rate	6Mbps	6Mbps	6Mbps
	Power Level Setting	9	9	9
802.11n20	Test Frequency	2412MHz	2437MHz	2462MHz
	Data Rate	MCS0	MCS0	MCS0
	Power Level Setting	8	8	8
802.11n40	Test Frequency	2422MHz	2437MHz	2452MHz
	Data Rate	MCS0	MCS0	MCS0
	Power Level Setting	9.5	9.5	9.5

Equipment Modifications

No modification was made to the EUT.

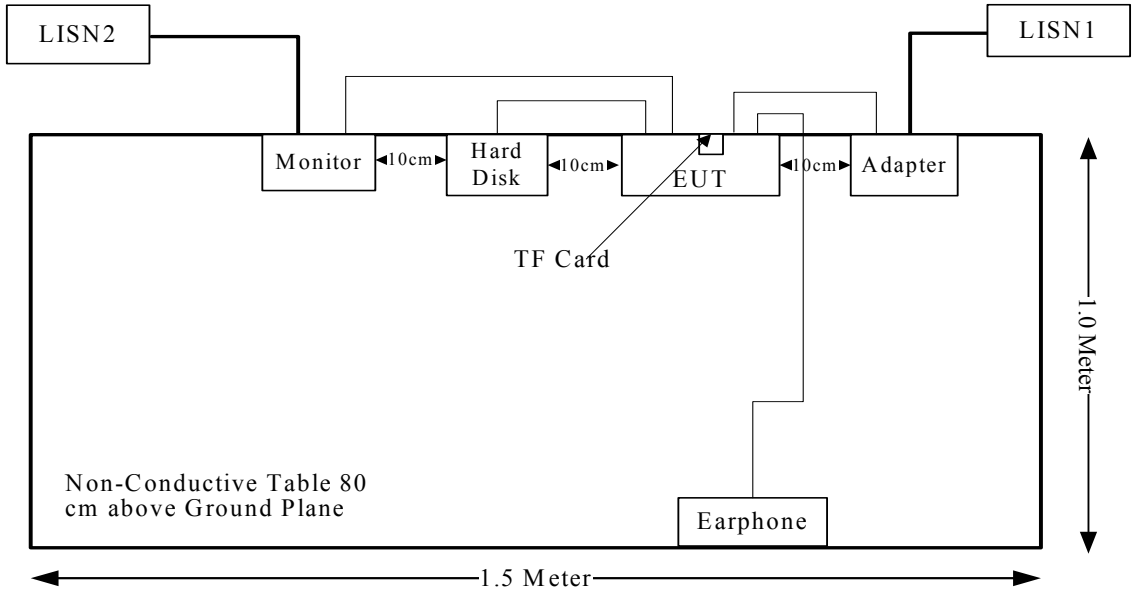
Support Equipment List and Details

Manufacturer	Description	Model	Serial Number
SAMSUNG	Monitor	S22C330H	ZXDCHTHD10149K
TOSHIBA	Hard Disk	V63700-A	7283T8CUTSJ2
SAMSUNG	TF Card	N/A	N/A
APPLE	Earphone	N/A	N/A

External I/O Cable

Cable Description	Shielding Type	Ferrite Core	Length (m)	From Port	To
HDMI Cable	Yes	No	1.0	HDMI Port of Monitor	EUT
USB Cable	Yes	No	0.6	USB Port of Hard Disk	EUT
Adapter Power Cable	Yes	No	2.7	Adapter	EUT
Earphone Cable	No	No	1.2	EUT	Earphone

Block Diagram of Test Setup



SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Result
FCC §15.247 (i) & §1.1310 & §2.1093	RF EXPOSURE	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 & §2.1093- RF EXPOSURE

Applicable Standard

FCC§1.1310 and §2.1093.

Test Result

Compliance, please refer to the SAR report: R1DG140115001-20

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 have two internal antennas for wifi, and the maximum gains are -2.97dBi, please refer to the internal photos.

Result: Compliance.

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：

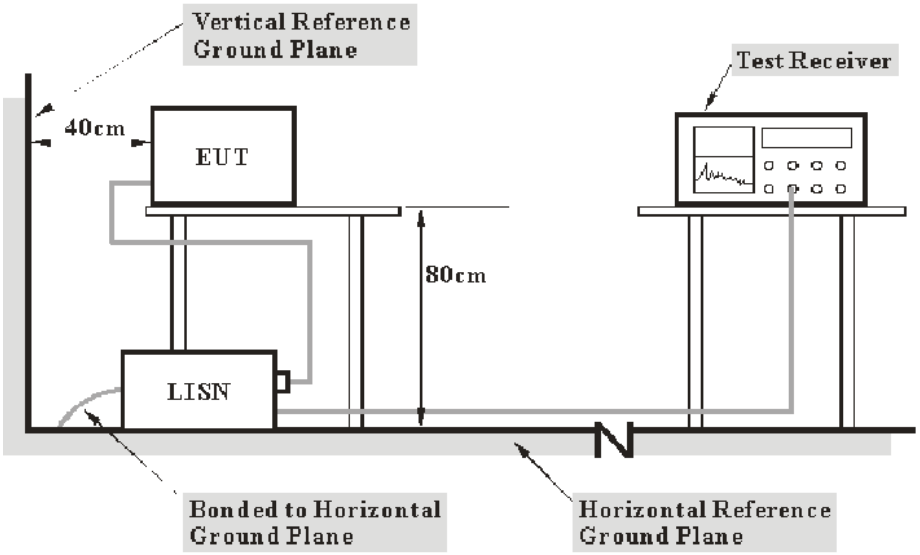
If U_{lab} is less than or equal to U_{cispr} of Table 1, then:
– compliance is deemed to occur if no measured disturbance level exceeds the disturbance limit;
– non - compliance is deemed to occur if any measured disturbance level exceeds the disturbance limit.
If U_{lab} is greater than U_{cispr} of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

During the conducted emission test, the adapter was connected to the outlet of the first LISN and the other support equipments were connected to the outlet of the second LISN.

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

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

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	2014-11-19
R&S	Two-line V-network	ENV216	3560.6550.12	2014-1-22	2015-1-21
R&S	L.I.S.N	ESH3-Z5	100113	N/A	N/A
BACL	Test Software	BACL-EMC	V1.0-2010	N/A	N/A

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

8.38 dB at **0.830 MHz** in the **Neutral** conducted mode

Test Data

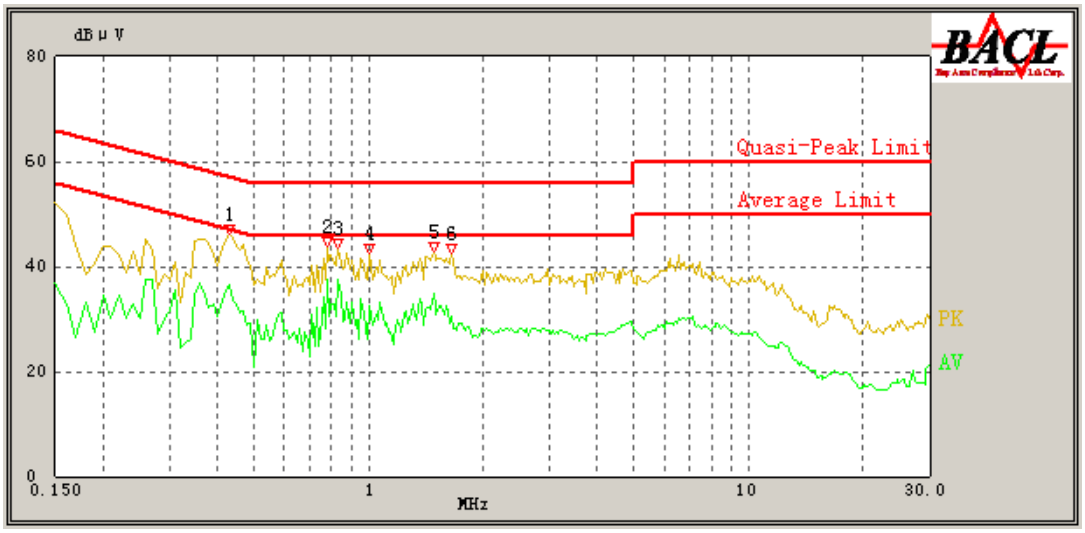
Environmental Conditions

Temperature:	19.9 °C
Relative Humidity:	37 %
ATM Pressure:	102 kPa

The testing was performed by Allen Qiao on 2014-01-20.

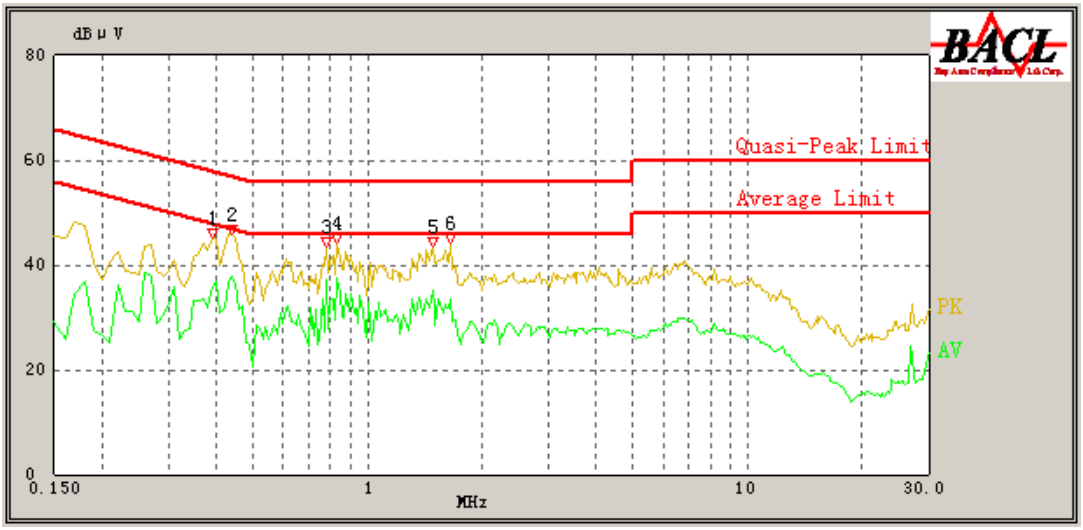
Test Mode: Transmitting

120 V, 60 Hz, Line:



Frequency (MHz)	Cord. Reading (dBµV)	Correction Factor (dB)	Limit (dBµV)	Margin (dB)	Detector (PK/AV/QP)
0.430	43.38	9.67	57.25	13.87	QP
0.430	36.58	9.67	47.25	10.67	AV
0.780	41.70	9.67	56.00	14.30	QP
0.780	37.39	9.67	46.00	8.61	AV
0.830	42.32	9.67	56.00	13.68	QP
0.830	37.45	9.67	46.00	8.55	AV
1.000	37.78	9.68	56.00	18.22	QP
1.000	32.47	9.68	46.00	13.53	AV
1.480	41.49	9.68	56.00	14.51	QP
1.480	34.95	9.68	46.00	11.05	AV
1.650	39.21	9.68	56.00	16.79	QP
1.650	30.36	9.68	46.00	15.64	AV

120 V, 60 Hz, Neutral:



Frequency (MHz)	Cord. Reading (dBµV)	Correction Factor (dB)	Limit (dBµV)	Margin (dB)	Detector (PK/AV/QP)
0.390	44.73	9.67	58.06	13.33	QP
0.390	35.79	9.67	48.06	12.27	AV
0.440	44.18	9.67	57.06	12.88	QP
0.440	37.69	9.67	47.06	9.37	AV
0.780	41.58	9.68	56.00	14.42	QP
0.780	37.22	9.68	46.00	8.78	AV
0.830	42.32	9.68	56.00	13.68	QP
0.830	37.62	9.68	46.00	8.38	AV
1.480	40.88	9.69	56.00	15.12	QP
1.480	35.04	9.69	46.00	10.96	AV
1.650	40.03	9.68	56.00	15.97	QP
1.650	33.37	9.68	46.00	12.63	AV

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.

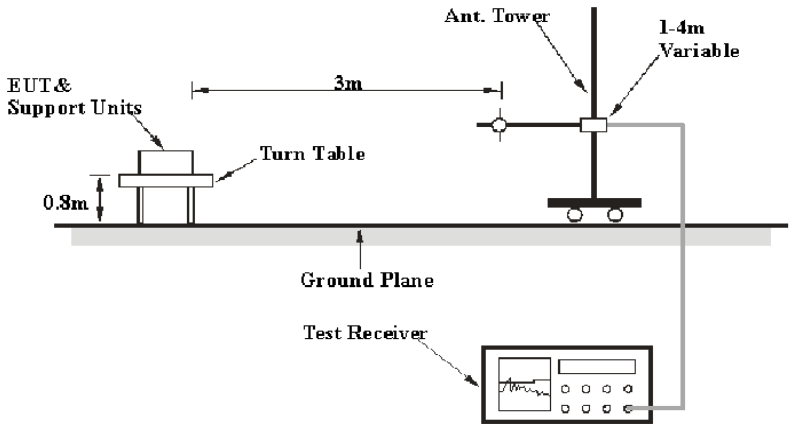
Based on CISPR 16-4-2-2011, measurement uncertainty of radiated emission at a distance of 3m at Bay Area Compliance Laboratories Corp. (Dongguan) is:
30M~200MHz: 5.0 dB
200M~1GHz: 6.2 dB
1G~6GHz: 4.45 dB
6G~18GHz: 5.23 dB

Table 2 – Values of U_{cispr}

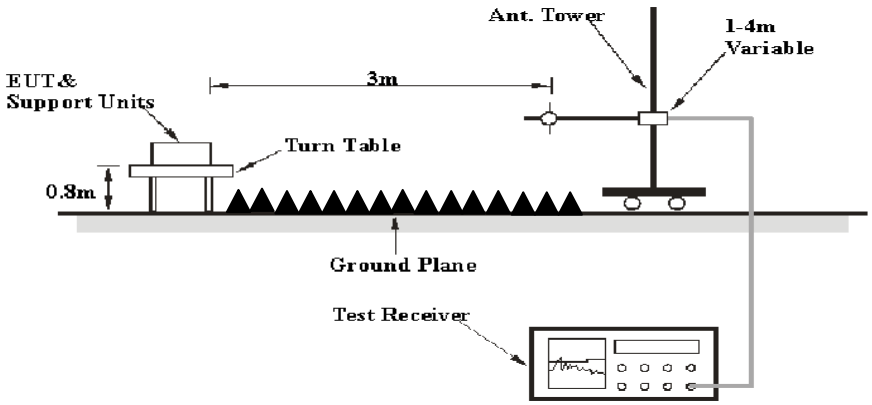
Measurement	U_{cispr}
Radiated disturbance (electric field strength at an OATS or in a SAC) (30 MHz to 1000 MHz)	6.3 dB
Radiated disturbance (electric field strength in a FAR) (1 GHz to 6 GHz)	5.2 dB
Radiated disturbance (electric field strength in a FAR) (6 GHz to 18 GHz)	5.5 dB

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
30MHz – 1000 MHz	120 kHz	300 kHz	120kHz	QP
Above 1 GHz	1MHz	3 MHz	/	PK
	1MHz	10 Hz	/	Ave.

Test Procedure

During the radiated emission test, the adapter was connected to the first AC floor outlet and the other support equipments were connected to the second AC floor outlet.

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

Data was recorded in Quasi-peak detection mode for frequency range of 30 MHz-1 GHz, 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	2013-5-6	2014-5-5
Sunol Sciences	Antenna	JB3	A060611-1	2011-9-6	2014-9-5
HP	AMPLIFIER	8447E	2434A02181	2013-09-06	2014-09-05
R&S	Spectrum analyzer	FSEM	DE31388	2013-5-7	2014-5-6
ETS LINDGREN	horn antenna	3115	000 527 35	2012-9-6	2015-9-5
Mini-Circuit	Amplifier	ZVA-213-S+	054201245	2013-04-06	2014-04-05
R&S	Spectrum Analyzer	FSP 38	100478	2013-6-16	2014-6-15
Ducommun Technolagies	horn antenna	ARH-4223-02	1007726-01 1304	2013-6-16	2014-6-15
Quinstar	Amplifier	QLW-18405536-JO	15964001001	2013-09-06	2014-09-05

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

4.26 dB at **431.95 MHz** in the **Vertical** polarization for 802.11n40 Mode

Test Data

Environmental Conditions

Temperature:	20.4 °C
Relative Humidity:	53 %
ATM Pressure:	102 kPa

The testing was performed by Allen Qiao on 2014-01-20.

Mode: Transmitting
802.11b Mode

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)				Limit (dBμV/m)	Margin (dB)
Low Channel: 2412 MHz									
2412	67.68	PK	H	25.67	4.42	0.00	97.77	N/A	N/A
2412	62.67	AV	H	25.67	4.42	0.00	92.76	N/A	N/A
2412	61.66	PK	V	25.67	4.42	0.00	91.75	N/A	N/A
2412	56.72	AV	V	25.67	4.42	0.00	86.81	N/A	N/A
2390	28.53	PK	H	25.61	4.39	0.00	58.53	74.00	15.47
2390	14.12	AV	H	25.61	4.39	0.00	44.12	54.00	9.88
4824	35.02	PK	H	30.64	6.03	27.26	44.43	74.00	29.57
4824	28.24	AV	H	30.64	6.03	27.26	37.65	54.00	16.35
7236	32.99	PK	H	34.17	7.47	26.36	48.27	74.00	25.73
7236	18.56	AV	H	34.17	7.47	26.36	33.84	54.00	20.16
9648	33.11	PK	V	36.06	8.81	26.06	51.92	74.00	22.08
9648	18.57	AV	V	36.06	8.81	26.06	37.38	54.00	16.62
3215.9	36.66	PK	H	27.89	6.51	27.48	43.58	74.00	30.42
3215.9	30.86	AV	H	27.89	6.51	27.48	37.78	54.00	16.22
431.49	43.60	QP	H	16.78	2.50	21.85	41.03	46.00	4.97*
Middle Channel: 2437 MHz									
2437	68.51	PK	H	25.74	4.41	0.00	98.66	N/A	N/A
2437	63.22	AV	H	25.74	4.41	0.00	93.37	N/A	N/A
2437	61.82	PK	V	25.74	4.41	0.00	91.97	N/A	N/A
2437	56.75	AV	V	25.74	4.41	0.00	86.90	N/A	N/A
4874	37.25	PK	H	30.77	6.09	27.26	46.85	74.00	27.15
4874	32.03	AV	H	30.77	6.09	27.26	41.63	54.00	12.37
7311	32.63	PK	H	34.35	7.51	26.51	47.98	74.00	26.02
7311	18.12	AV	H	34.35	7.51	26.51	33.47	54.00	20.53
9748	32.18	PK	V	36.30	8.83	25.68	51.63	74.00	22.37
9748	18.09	AV	V	36.30	8.83	25.68	37.54	54.00	16.46
2721.55	33.63	PK	H	26.48	4.95	27.36	37.70	74.00	36.30
2721.55	19.07	AV	H	26.48	4.95	27.36	23.14	54.00	30.86
3249.12	37.61	PK	H	28.00	6.32	27.45	44.48	74.00	29.52
3249.12	31.01	AV	H	28.00	6.32	27.45	37.88	54.00	16.12
431.72	43.10	QP	V	16.79	2.50	21.85	40.54	46.00	5.46*
High Channel: 2462 MHz									
2462	69.68	PK	H	25.80	4.43	0.00	99.91	N/A	N/A
2462	64.77	AV	H	25.80	4.43	0.00	95.00	N/A	N/A
2462	65.11	PK	V	25.80	4.43	0.00	95.34	N/A	N/A
2462	60.15	AV	V	25.80	4.43	0.00	90.38	N/A	N/A
2483.5	27.47	PK	H	25.86	4.49	0.00	57.82	74.00	16.18
2483.5	13.64	AV	H	25.86	4.49	0.00	43.99	54.00	10.01
4924	38.09	PK	H	30.90	5.97	27.27	47.69	74.00	26.31
4924	32.49	AV	H	30.90	5.97	27.27	42.09	54.00	11.91
7386	33.17	PK	H	34.53	7.55	26.66	48.59	74.00	25.41
7386	18.05	AV	H	34.53	7.55	26.66	33.47	54.00	20.53
9848	33.03	PK	V	36.54	8.85	25.49	52.93	74.00	21.07
9848	18.43	AV	V	36.54	8.85	25.49	38.33	54.00	15.67
3282.79	37.93	PK	H	28.10	5.93	27.41	44.55	74.00	29.45
3282.79	32.38	AV	H	28.10	5.93	27.41	39.00	54.00	15.00
431.95	43.70	QP	V	16.79	2.50	21.85	41.14	46.00	4.86*

**Within measurement uncertainty!*

802.11g Mode

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)				Limit (dBμV/m)	Margin (dB)
Low Channel: 2412 MHz									
2412	67.49	PK	H	25.67	4.42	0.00	97.58	N/A	N/A
2412	55.35	AV	H	25.67	4.42	0.00	85.44	N/A	N/A
2412	61.79	PK	V	25.67	4.42	0.00	91.88	N/A	N/A
2412	50.35	AV	V	25.67	4.42	0.00	80.44	N/A	N/A
2390	28.54	PK	H	25.61	4.39	0.00	58.54	74.00	15.46
2390	14.57	AV	H	25.61	4.39	0.00	44.57	54.00	9.43
4824	32.03	PK	H	30.64	6.03	27.26	41.44	74.00	32.56
4824	18.16	AV	H	30.64	6.03	27.26	27.57	54.00	26.43
7236	32.18	PK	H	34.17	7.47	26.36	47.46	74.00	26.54
7236	18.26	AV	H	34.17	7.47	26.36	33.54	54.00	20.46
9648	32.98	PK	V	36.06	8.81	26.06	51.79	74.00	22.21
9648	18.21	AV	V	36.06	8.81	26.06	37.02	54.00	16.98
3215.9	36.79	PK	H	27.89	6.51	27.48	43.71	74.00	30.29
3215.9	30.98	AV	H	27.89	6.51	27.48	37.90	54.00	16.10
431.49	44.00	QP	H	16.78	2.50	21.85	41.43	46.00	4.57*
Middle Channel: 2437 MHz									
2437	67.54	PK	H	25.74	4.41	0.00	97.69	N/A	N/A
2437	55.94	AV	H	25.74	4.41	0.00	86.09	N/A	N/A
2437	63.06	PK	V	25.74	4.41	0.00	93.21	N/A	N/A
2437	50.62	AV	V	25.74	4.41	0.00	80.77	N/A	N/A
4874	32.27	PK	H	30.77	6.09	27.26	41.87	74.00	32.13
4874	18.08	AV	H	30.77	6.09	27.26	27.68	54.00	26.32
7311	31.41	PK	H	34.35	7.51	26.51	46.76	74.00	27.24
7311	18.15	AV	H	34.35	7.51	26.51	33.50	54.00	20.50
9748	31.64	PK	V	36.30	8.83	25.68	51.09	74.00	22.91
9748	18.07	AV	V	36.30	8.83	25.68	37.52	54.00	16.48
2721.55	33.75	PK	H	26.48	4.95	27.36	37.82	74.00	36.18
2721.55	19.16	AV	H	26.48	4.95	27.36	23.23	54.00	30.77
3249.12	37.59	PK	H	28.00	6.32	27.45	44.46	74.00	29.54
3249.12	30.89	AV	H	28.00	6.32	27.45	37.76	54.00	16.24
431.72	44.20	QP	V	16.79	2.50	21.85	41.64	46.00	4.36*
High Channel: 2462 MHz									
2462	68.63	PK	H	25.80	4.43	0.00	98.86	N/A	N/A
2462	56.86	AV	H	25.80	4.43	0.00	87.09	N/A	N/A
2462	62.22	PK	V	25.80	4.43	0.00	92.45	N/A	N/A
2462	50.67	AV	V	25.80	4.43	0.00	80.90	N/A	N/A
2483.5	29.52	PK	H	25.86	4.49	0.00	59.87	74.00	14.13
2483.5	14.48	AV	H	25.86	4.49	0.00	44.83	54.00	9.17
4924	33.53	PK	H	30.90	5.97	27.27	43.13	74.00	30.87
4924	18.28	AV	H	30.90	5.97	27.27	27.88	54.00	26.12
7386	31.77	PK	H	34.53	7.55	26.66	47.19	74.00	26.81
7386	17.98	AV	H	34.53	7.55	26.66	33.40	54.00	20.60
9848	32.16	PK	V	36.54	8.85	25.49	52.06	74.00	21.94
9848	18.55	AV	V	36.54	8.85	25.49	38.45	54.00	15.55
3282.79	37.86	PK	H	28.10	5.93	27.41	44.48	74.00	29.52
3282.79	32.25	AV	H	28.10	5.93	27.41	38.87	54.00	15.13
431.95	43.80	QP	V	16.79	2.50	21.85	41.24	46.00	4.76*

**Within measurement uncertainty!*

802.11 n20 Mode

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	65.84	PK	H	25.67	4.42	0.00	95.93	N/A	N/A
2412	54.22	AV	H	25.67	4.42	0.00	84.31	N/A	N/A
2412	58.71	PK	V	25.67	4.42	0.00	88.80	N/A	N/A
2412	46.89	AV	V	25.67	4.42	0.00	76.98	N/A	N/A
2390	27.93	PK	H	25.61	4.39	0.00	57.93	74.00	16.07
2390	14.45	AV	H	25.61	4.39	0.00	44.45	54.00	9.55
4824	32.25	PK	H	30.64	6.03	27.26	41.66	74.00	32.34
4824	18.17	AV	H	30.64	6.03	27.26	27.58	54.00	26.42
7236	32.23	PK	H	34.17	7.47	26.36	47.51	74.00	26.49
7236	18.33	AV	H	34.17	7.47	26.36	33.61	54.00	20.39
9648	32.11	PK	V	36.06	8.81	26.06	50.92	74.00	23.08
9648	18.21	AV	V	36.06	8.81	26.06	37.02	54.00	16.98
3215.9	36.69	PK	H	27.89	6.51	27.48	43.61	74.00	30.39
3215.9	30.89	AV	H	27.89	6.51	27.48	37.81	54.00	16.19
431.49	44.10	QP	H	16.78	2.50	21.85	41.53	46.00	4.47*
Middle Channel: 2437 MHz									
2437	66.35	PK	H	25.74	4.41	0.00	96.50	N/A	N/A
2437	54.82	AV	H	25.74	4.41	0.00	84.97	N/A	N/A
2437	61.12	PK	V	25.74	4.41	0.00	91.27	N/A	N/A
2437	49.67	AV	V	25.74	4.41	0.00	79.82	N/A	N/A
4874	32.41	PK	H	30.77	6.09	27.26	42.01	74.00	31.99
4874	18.11	AV	H	30.77	6.09	27.26	27.71	54.00	26.29
7311	31.68	PK	H	34.35	7.51	26.51	47.03	74.00	26.97
7311	18.16	AV	H	34.35	7.51	26.51	33.51	54.00	20.49
9748	31.72	PK	V	36.30	8.83	25.68	51.17	74.00	22.83
9748	18.15	AV	V	36.30	8.83	25.68	37.60	54.00	16.40
2721.55	33.63	PK	H	26.48	4.95	27.36	37.70	74.00	36.30
2721.55	19.07	AV	H	26.48	4.95	27.36	23.14	54.00	30.86
3249.12	37.56	PK	H	28.00	6.32	27.45	44.43	74.00	29.57
3249.12	31.05	AV	H	28.00	6.32	27.45	37.92	54.00	16.08
431.72	43.40	QP	V	16.79	2.50	21.85	40.84	46.00	5.16*
High Channel: 2462 MHz									
2462	67.28	PK	H	25.80	4.43	0.00	97.51	N/A	N/A
2462	55.16	AV	H	25.80	4.43	0.00	85.39	N/A	N/A
2462	61.46	PK	V	25.80	4.43	0.00	91.69	N/A	N/A
2462	49.82	AV	V	25.80	4.43	0.00	80.05	N/A	N/A
2483.5	28.95	PK	H	25.86	4.49	0.00	59.30	74.00	14.70
2483.5	14.52	AV	H	25.86	4.49	0.00	44.87	54.00	9.13
4924	32.18	PK	H	30.90	5.97	27.27	41.78	74.00	32.22
4924	18.19	AV	H	30.90	5.97	27.27	27.79	54.00	26.21
7386	32.16	PK	H	34.53	7.55	26.66	47.58	74.00	26.42
7386	18.01	AV	H	34.53	7.55	26.66	33.43	54.00	20.57
9848	32.15	PK	V	36.54	8.85	25.49	52.05	74.00	21.95
9848	18.54	AV	V	36.54	8.85	25.49	38.44	54.00	15.56
3282.79	37.97	PK	H	28.10	5.93	27.41	44.59	74.00	29.41
3282.79	32.55	AV	H	28.10	5.93	27.41	39.17	54.00	14.83
431.95	43.60	QP	V	16.79	2.50	21.85	41.04	46.00	4.96*

*Within measurement uncertainty!

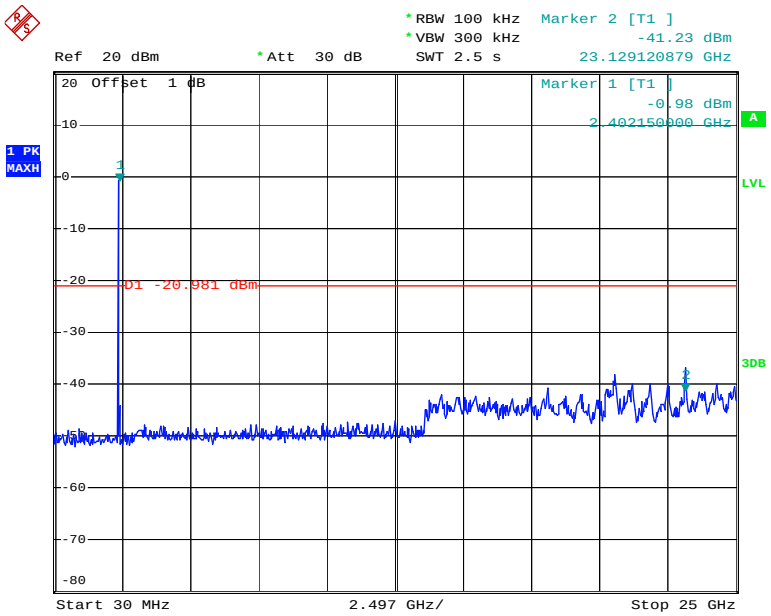
802.11 n40 Mode

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	65.23	PK	H	25.70	4.41	0.00	95.34	N/A	N/A
2422	53.45	AV	H	25.70	4.41	0.00	83.56	N/A	N/A
2422	59.63	PK	V	25.70	4.41	0.00	89.74	N/A	N/A
2422	47.33	AV	V	25.70	4.41	0.00	77.44	N/A	N/A
2390	32.53	PK	H	25.61	4.39	0.00	62.53	74.00	11.47
2390	16.61	AV	H	25.61	4.39	0.00	46.61	54.00	7.39
4844	31.26	PK	H	30.69	6.08	27.26	40.77	74.00	33.23
4844	18.04	AV	H	30.69	6.08	27.26	27.55	54.00	26.45
7266	32.49	PK	H	34.24	7.48	26.42	47.79	74.00	26.21
7266	18.37	AV	H	34.24	7.48	26.42	33.67	54.00	20.33
9688	32.08	PK	V	36.15	8.82	25.91	51.14	74.00	22.86
9688	18.06	AV	V	36.15	8.82	25.91	37.12	54.00	16.88
3229.45	36.53	PK	H	27.93	6.44	27.47	43.43	74.00	30.57
3229.45	30.65	AV	H	27.93	6.44	27.47	37.55	54.00	16.45
431.49	43.50	QP	H	16.78	2.50	21.85	40.93	46.00	5.07*
Middle Channel: 2437 MHz									
2437	65.71	PK	H	25.74	4.41	0.00	95.86	N/A	N/A
2437	53.05	AV	H	25.74	4.41	0.00	83.20	N/A	N/A
2437	60.11	PK	V	25.74	4.41	0.00	90.26	N/A	N/A
2437	47.78	AV	V	25.74	4.41	0.00	77.93	N/A	N/A
4874	31.92	PK	H	30.77	6.09	27.26	41.52	74.00	32.48
4874	18.07	AV	H	30.77	6.09	27.26	27.67	54.00	26.33
7311	31.78	PK	H	34.35	7.51	26.51	47.13	74.00	26.87
7311	18.14	AV	H	34.35	7.51	26.51	33.49	54.00	20.51
9748	32.24	PK	V	36.30	8.83	25.68	51.69	74.00	22.31
9748	18.12	AV	V	36.30	8.83	25.68	37.57	54.00	16.43
2721.55	33.49	PK	H	26.48	4.95	27.36	37.56	74.00	36.44
2721.55	18.82	AV	H	26.48	4.95	27.36	22.89	54.00	31.11
3249.12	37.51	PK	H	28.00	6.32	27.45	44.38	74.00	29.62
3249.12	30.76	AV	H	28.00	6.32	27.45	37.63	54.00	16.37
431.72	43.60	QP	V	16.79	2.50	21.85	41.04	46.00	4.96*
High Channel: 2452 MHz									
2452	66.77	PK	H	25.78	4.41	0.00	96.96	N/A	N/A
2452	54.28	AV	H	25.78	4.41	0.00	84.47	N/A	N/A
2452	60.32	PK	V	25.78	4.41	0.00	90.51	N/A	N/A
2452	48.54	AV	V	25.78	4.41	0.00	78.73	N/A	N/A
2483.5	33.87	PK	H	25.86	4.49	0.00	64.22	74.00	9.78
2483.5	15.99	AV	H	25.86	4.49	0.00	46.34	54.00	7.66
4904	31.61	PK	H	30.85	6.06	27.27	41.25	74.00	32.75
4904	18.01	AV	H	30.85	6.06	27.27	27.65	54.00	26.35
7356	31.21	PK	H	34.45	7.53	26.60	46.59	74.00	27.41
7356	17.96	AV	H	34.45	7.53	26.60	33.34	54.00	20.66
9808	31.91	PK	V	36.44	8.84	25.48	51.71	74.00	22.29
9808	18.27	AV	V	36.44	8.84	25.48	38.07	54.00	15.93
3269.42	37.36	PK	H	28.06	6.09	27.43	44.08	74.00	29.92
3269.42	32.03	AV	H	28.06	6.09	27.43	38.75	54.00	15.25
431.95	44.30	QP	V	16.79	2.50	21.85	41.74	46.00	4.26*

*Within measurement uncertainty!

Conducted Spurious Emissions at Antenna Port

802.11b Low Channel



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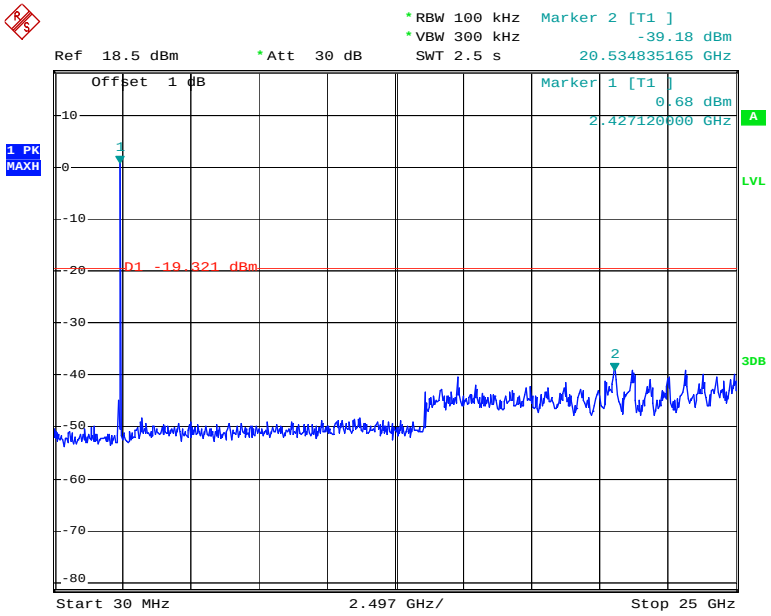
802.11b Middle Channel



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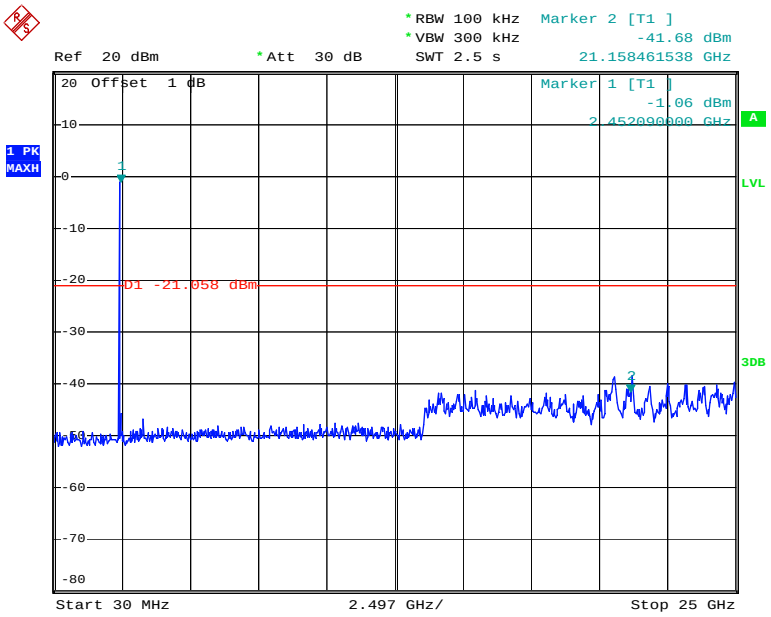
802.11b High Channel



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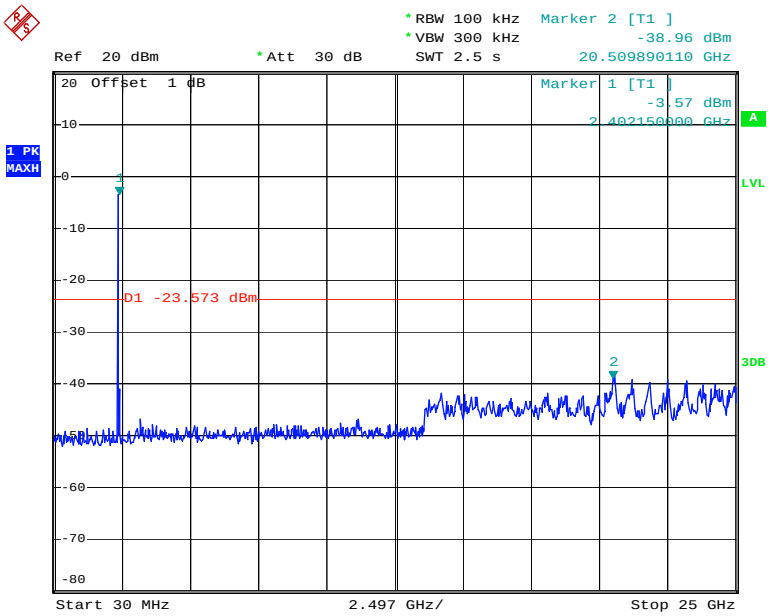
802.11g Low Channel



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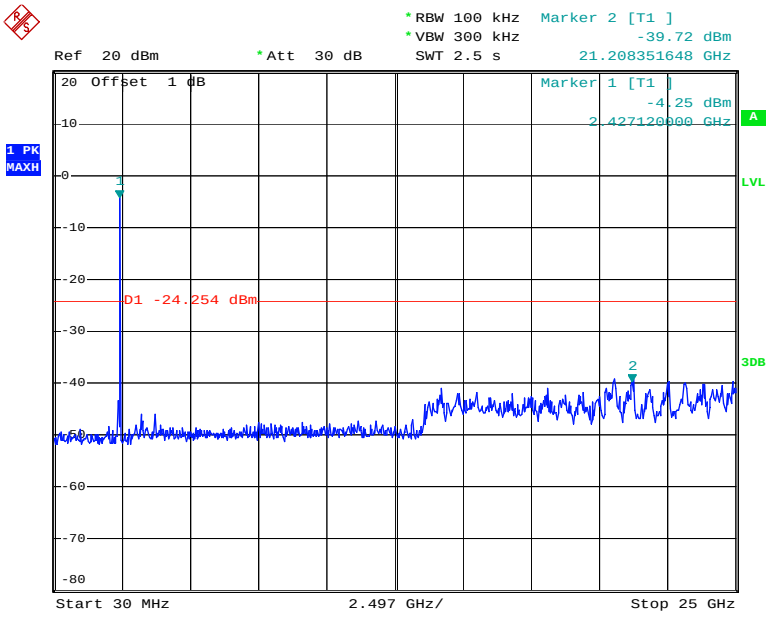
802.11g Middle Channel



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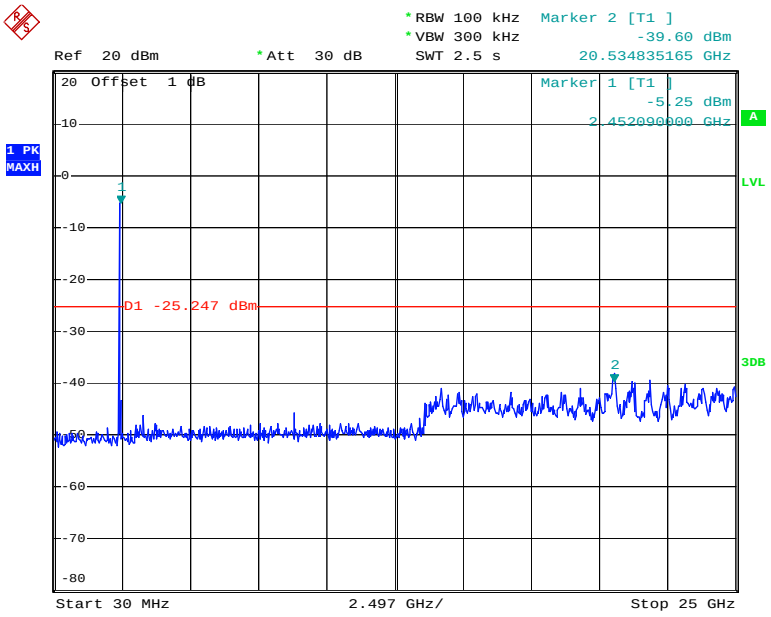
802.11g High Channel



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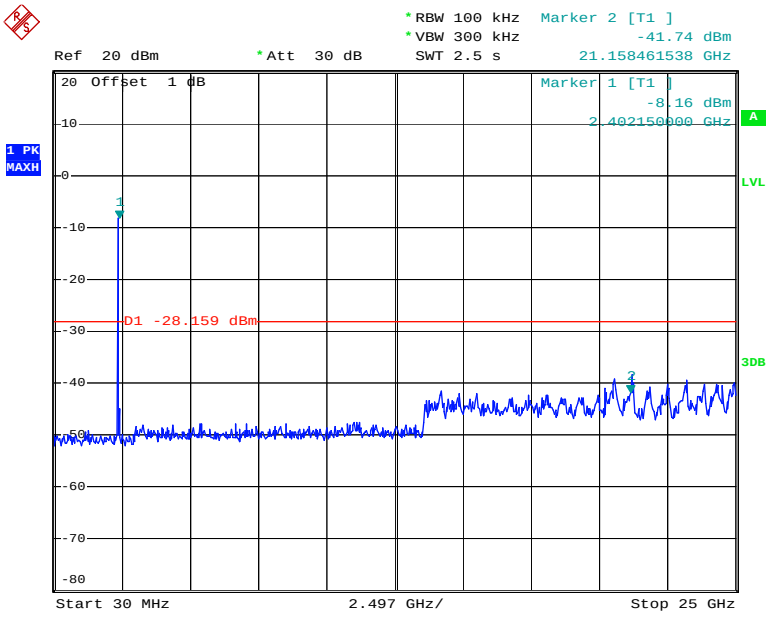
802.11n20 Low Channel



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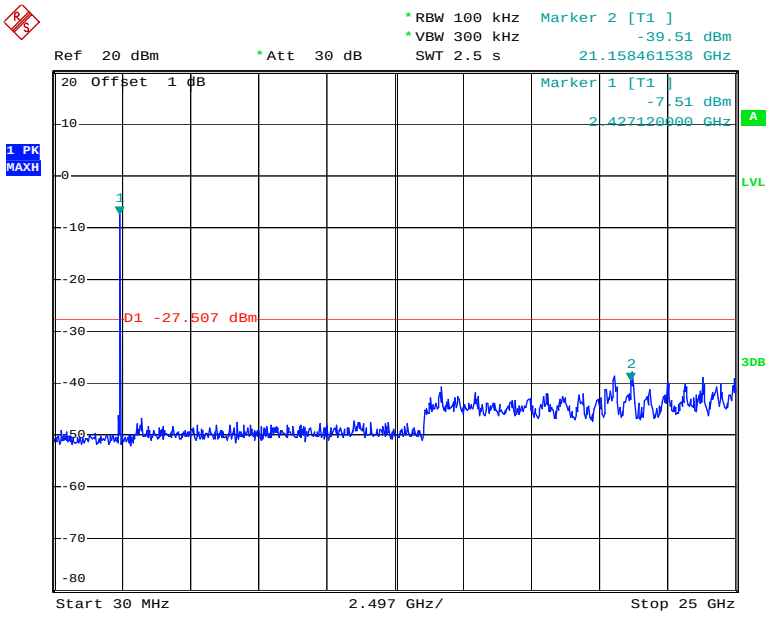
802.11n20 Middle Channel



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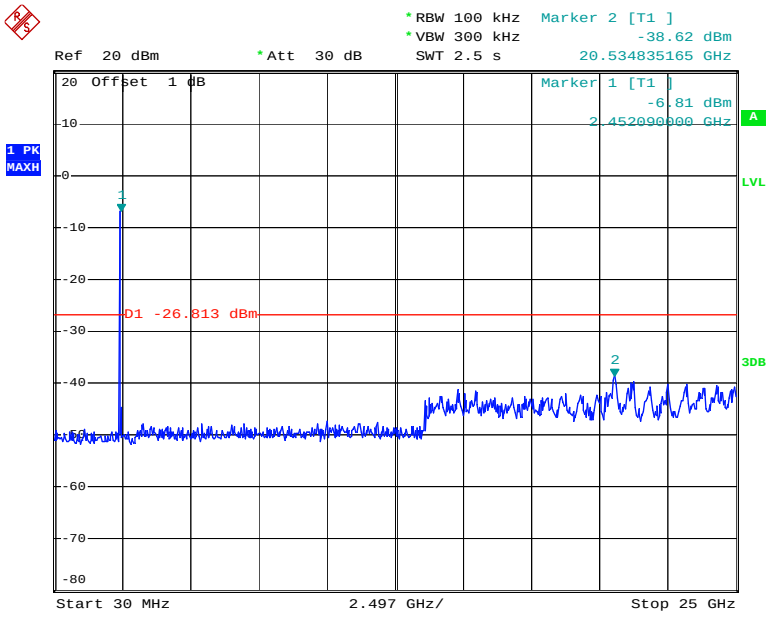
802.11n20 High Channel



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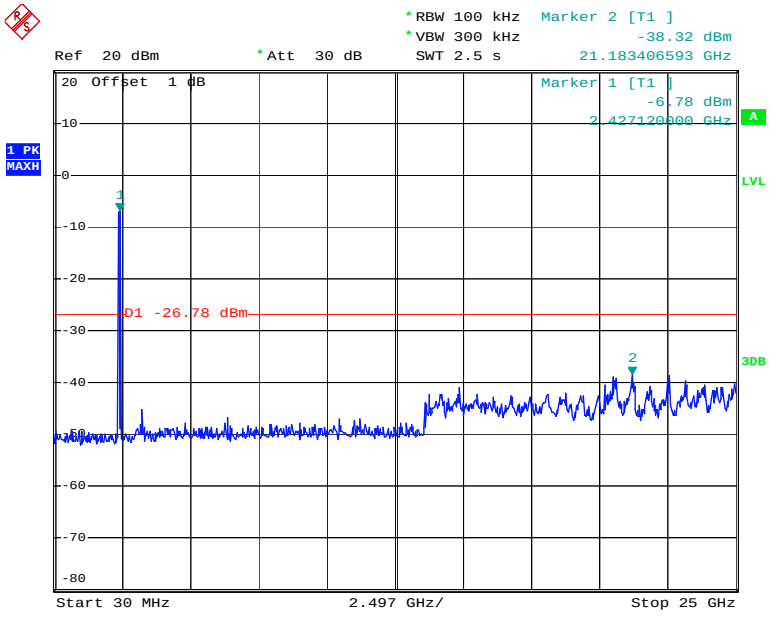
802.11n40 Low Channel



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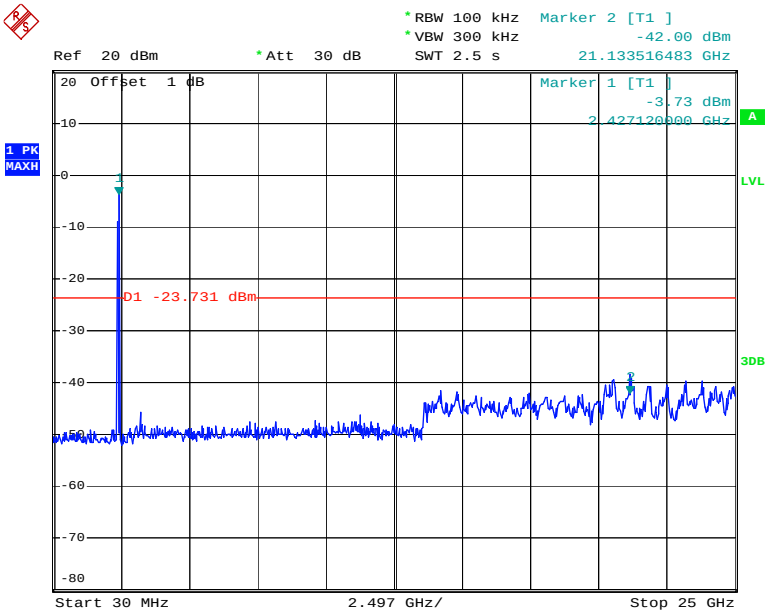
802.11n40 Middle Channel



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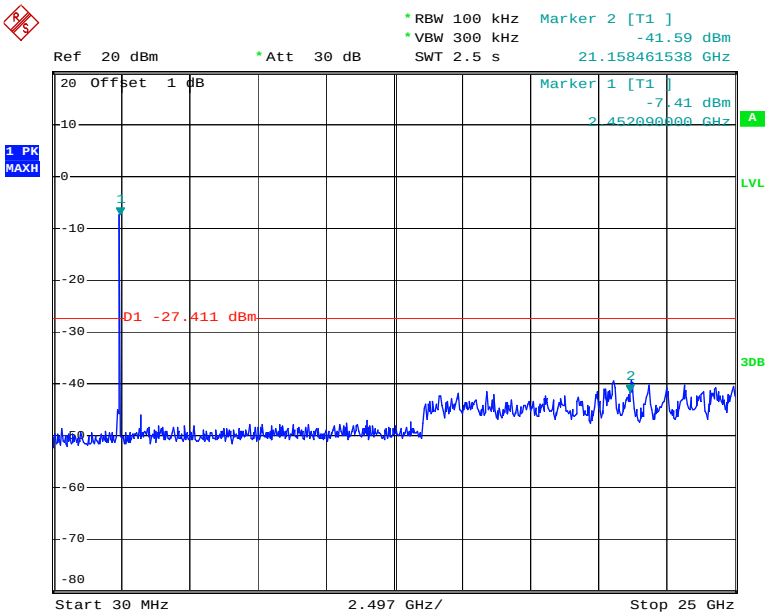
802.11n40 High Channel



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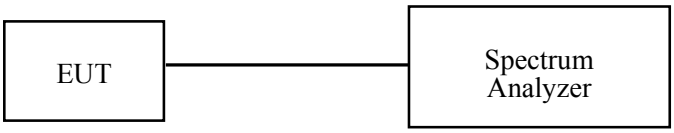
FCC §15.247(a) (2) – 6 dB EMISSION BANDWIDTH

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	2013-6-16	2014-6-15

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

Test Data

Environmental Conditions

Temperature:	21.1°C
Relative Humidity:	37 %
ATM Pressure:	102 kPa

** The testing was performed by Allen Qiao on 2014-01-20.*

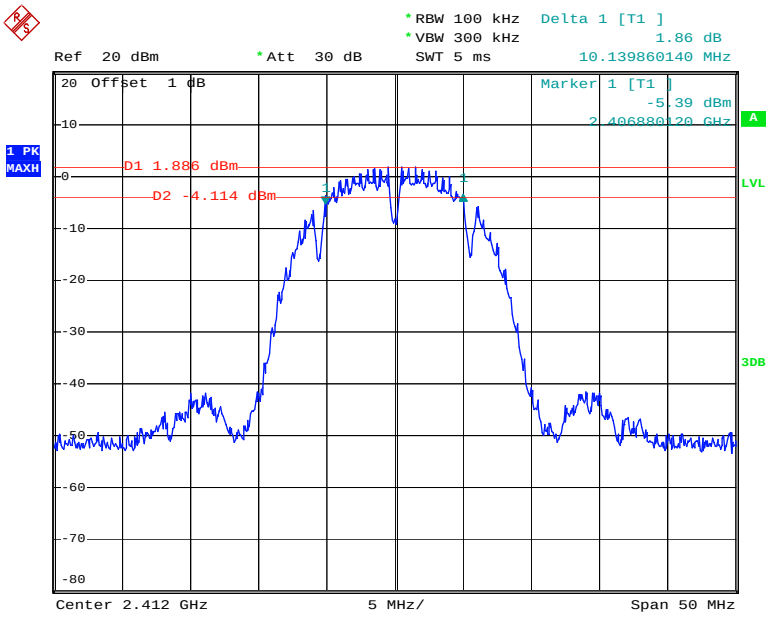
Test Result: Pass.

Please refer to the following tables and plots.

Test Mode: Transmitting

Test Mode	Channel	Frequency	6 dB Bandwidth	Limit
		(MHz)	(MHz)	(kHz)
802.11b	Low	2412	10.14	>500
	Middle	2437	10.14	>500
	High	2462	10.19	>500
802.11g	Low	2412	16.48	>500
	Middle	2437	16.48	>500
	High	2462	16.43	>500
802.11n20	Low	2412	17.68	>500
	Middle	2437	17.68	>500
	High	2462	17.68	>500
802.11n40	Low	2422	35.16	>500
	Middle	2437	32.77	>500
	High	2452	33.97	>500

802.11b Low Channel



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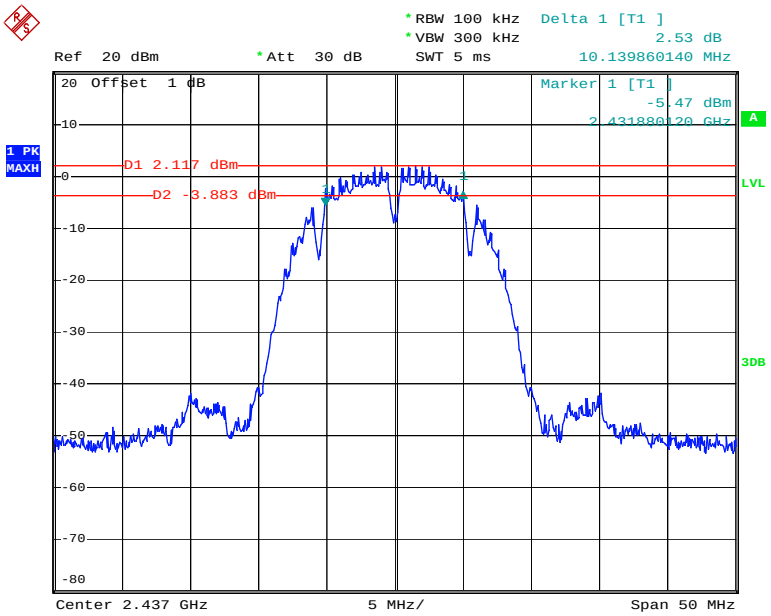
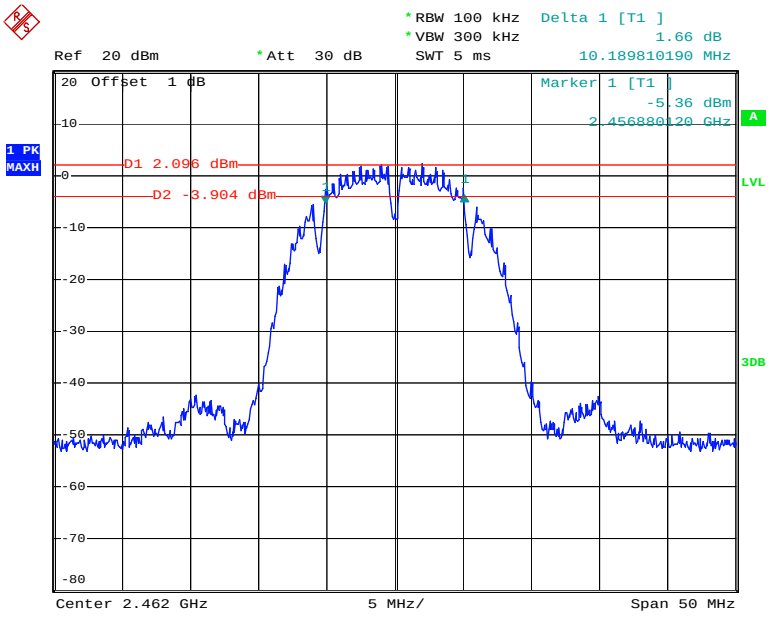
802.11b Middle Channel



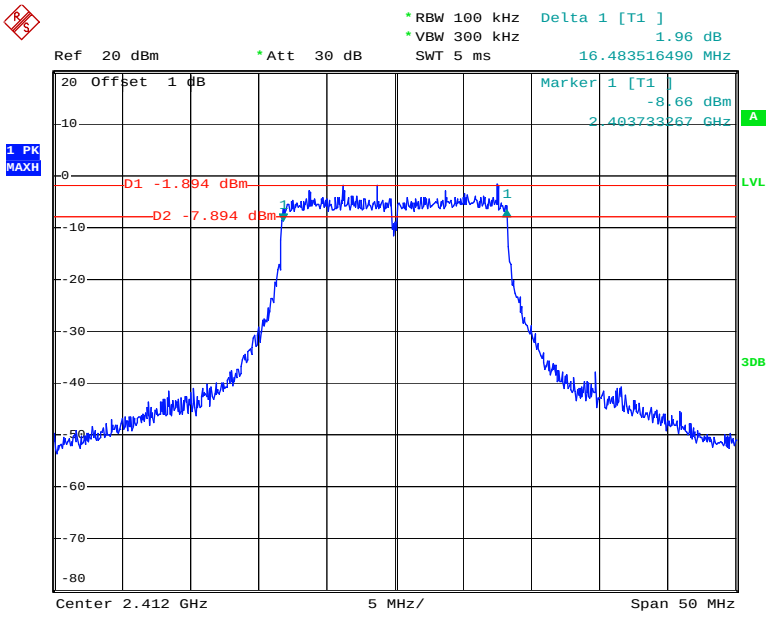
Date: 20.JAN.2014 16:05:09

802.11b High Channel



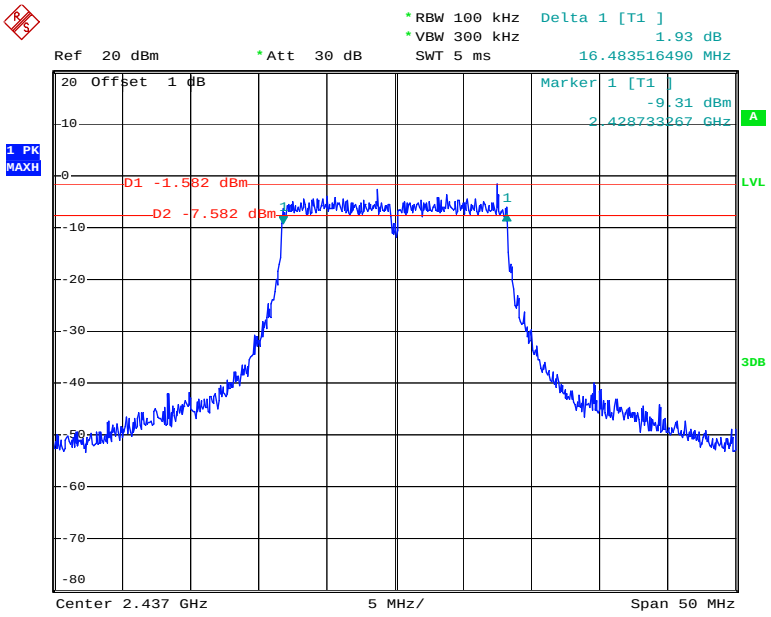
Date: 20.JAN.2014 16:37:28

802.11g Low Channel



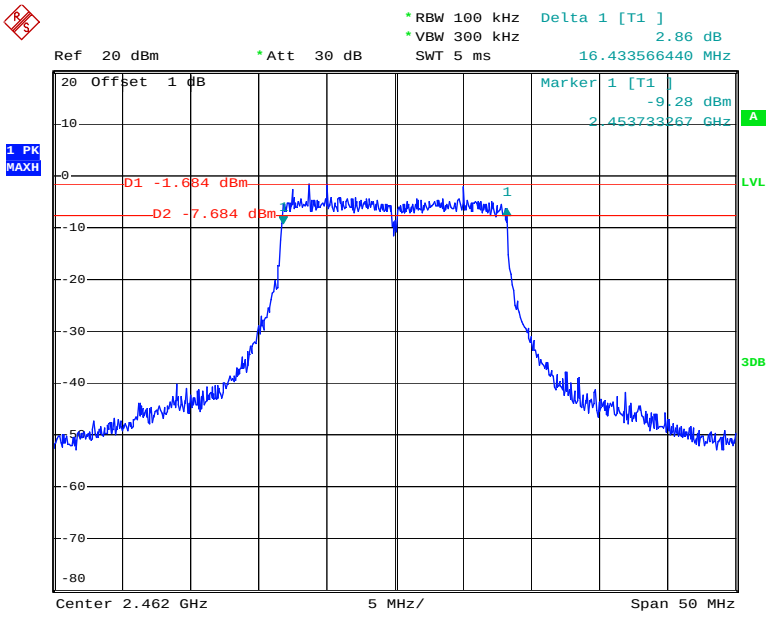
Date: 20.JAN.2014 16:12:31

802.11g Middle Channel



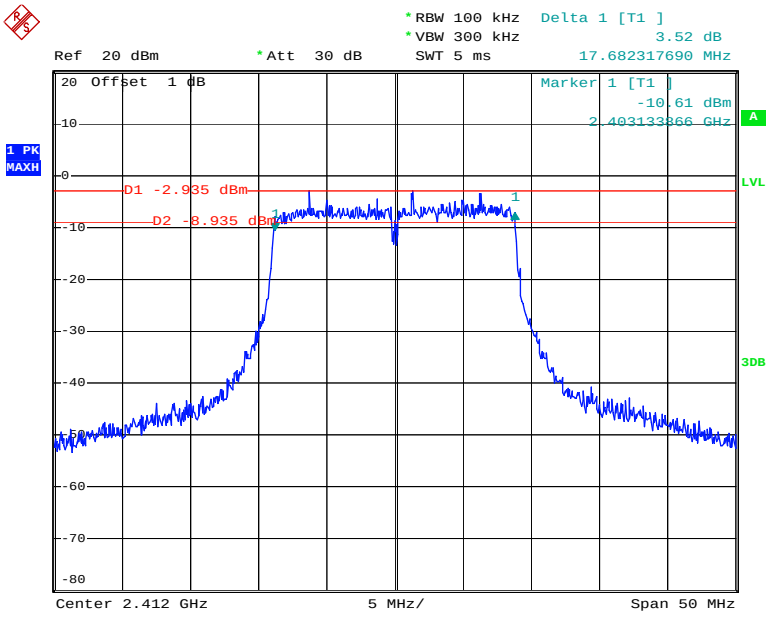
Date: 20.JAN.2014 16:18:00

802.11g High Channel



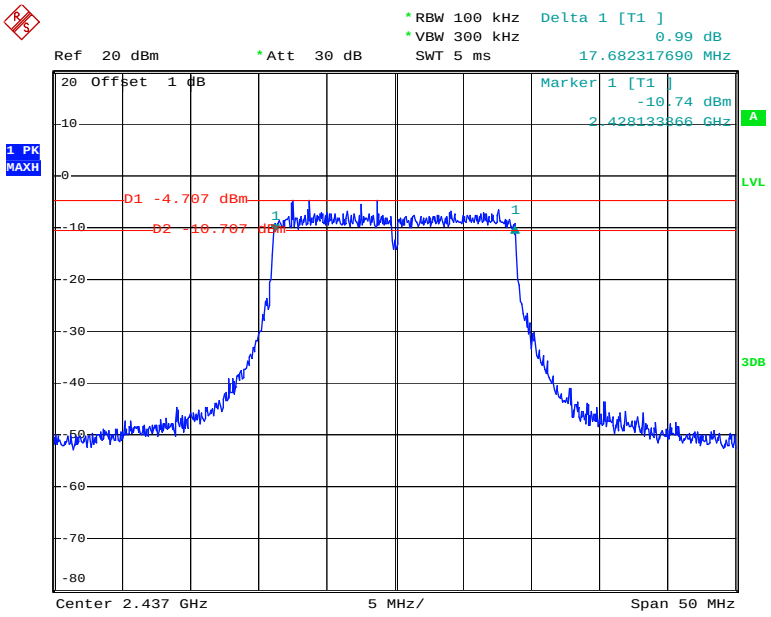
Date: 20.JAN.2014 16:15:41

802.11n20 Low Channel



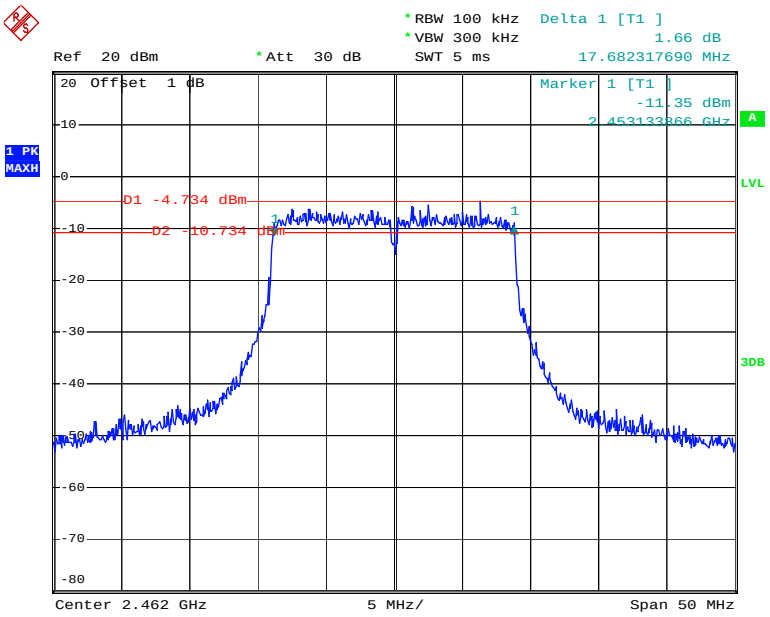
Date: 20.JAN.2014 16:21:34

802.11n20 Middle Channel



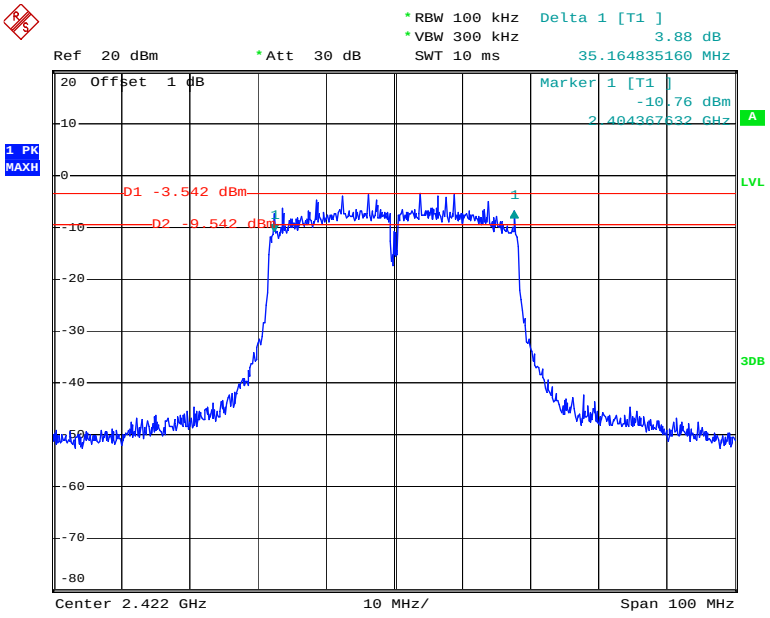
Date: 20.JAN.2014 16:23:40

802.11n20 High Channel



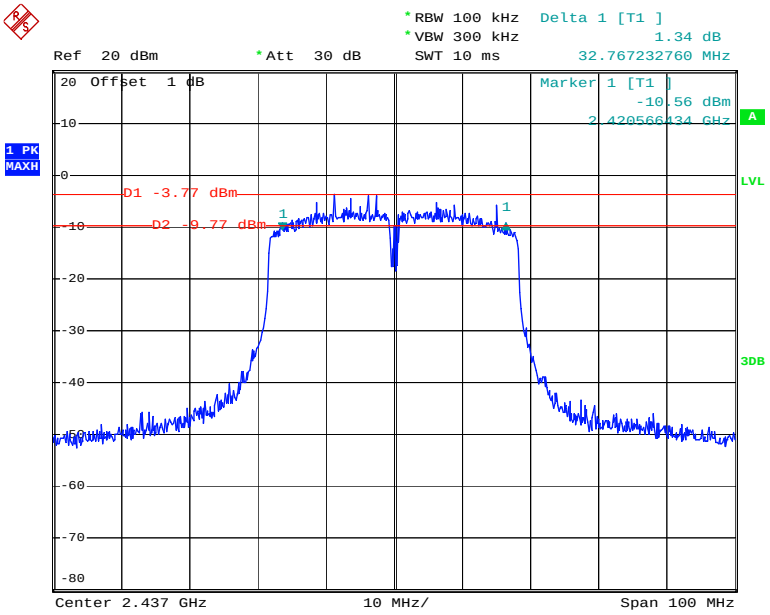
Date: 20.JAN.2014 16:25:09

802.11n40 Low Channel



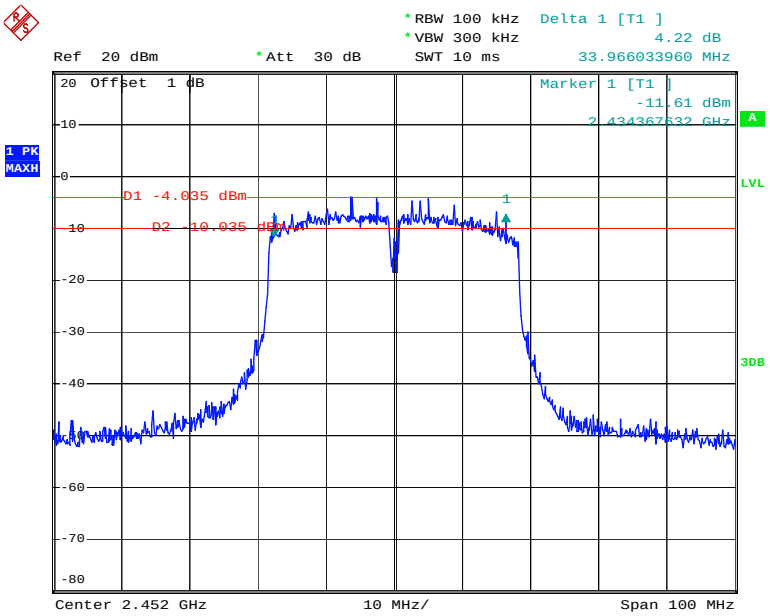
Date: 20.JAN.2014 16:31:49

802.11n40 Middle Channel



Date: 20.JAN.2014 16:30:22

802.11n40 High Channel



Date: 20.JAN.2014 16:34:18

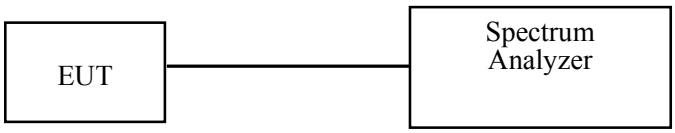
FCC §15.247(b) (3) - MAXIMUM CONDUCTED OUTPUT POWER

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 v03r01, 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
R&S	Spectrum analyzer	FSP 38	100478	2013-6-16	2014-6-15

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

Test Data

Environmental Conditions

Temperature:	18.6~25.7 °C
Relative Humidity:	23~71 %
ATM Pressure:	100~102.1 kPa

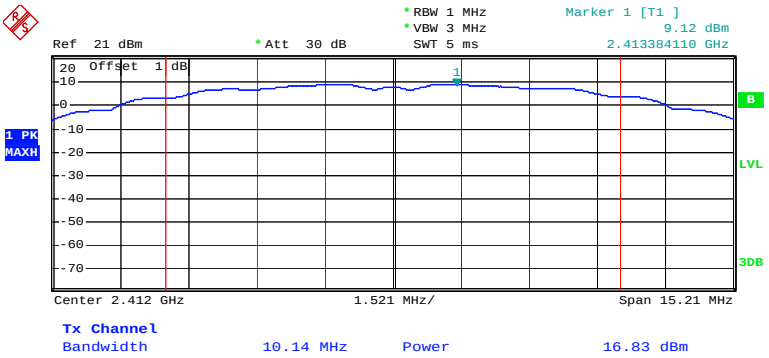
** The testing was performed by Allen Qiao from 2014-01-20 to 2014-03-19.*

Test Mode: Transmitting

Test Mode	Channel	Frequency	Conducted Output Power (AVG)	Conducted Peak Output Power	Limit	Result
		(MHz)	(dBm)	(dBm)	(dBm)	
802.11b	Low	2412	14.48	16.83	30	PASS
	Middle	2437	14.41	16.65	30	PASS
	High	2462	14.91	17.52	30	PASS
802.11g	Low	2412	13.97	18.25	30	PASS
	Middle	2437	13.67	18.13	30	PASS
	High	2462	13.99	18.70	30	PASS
802.11n20	Low	2412	11.63	16.26	30	PASS
	Middle	2437	11.67	16.33	30	PASS
	High	2462	11.70	16.82	30	PASS
802.11n40	Low	2422	11.25	18.88	30	PASS
	Middle	2437	11.95	18.37	30	PASS
	High	2452	11.67	18.19	30	PASS

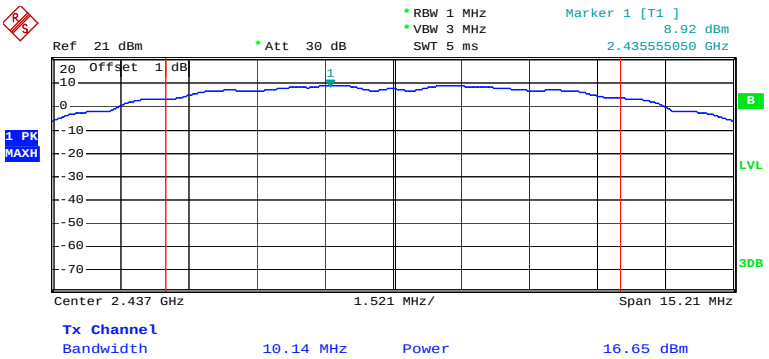
Please refer to the following plots

802.11b RF Peak Power, Low Channel



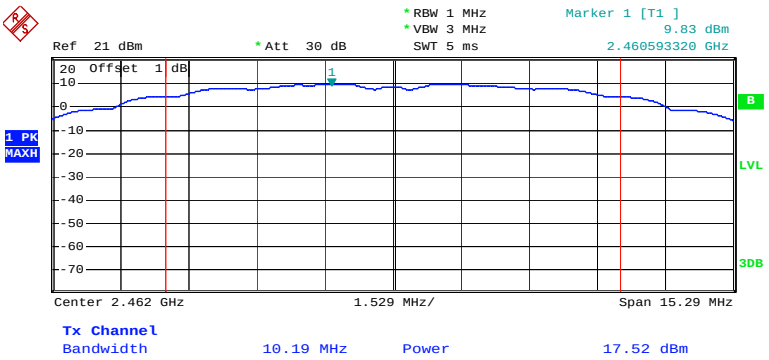
Date: 19.MAR.2014 11:13:58

802.11b RF Peak Power, Middle Channel



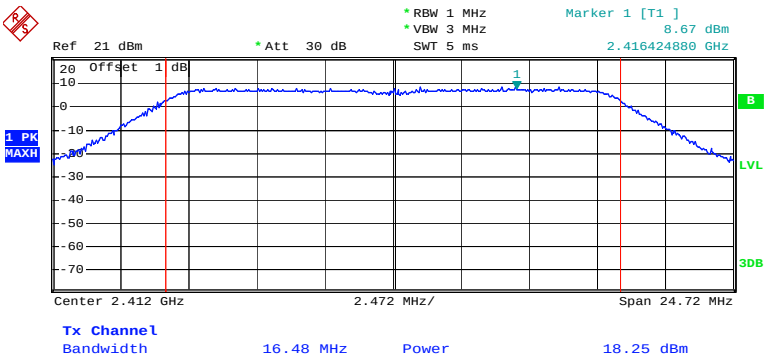
Date: 19.MAR.2014 11:13:28

802.11b RF Peak Power, High Channel



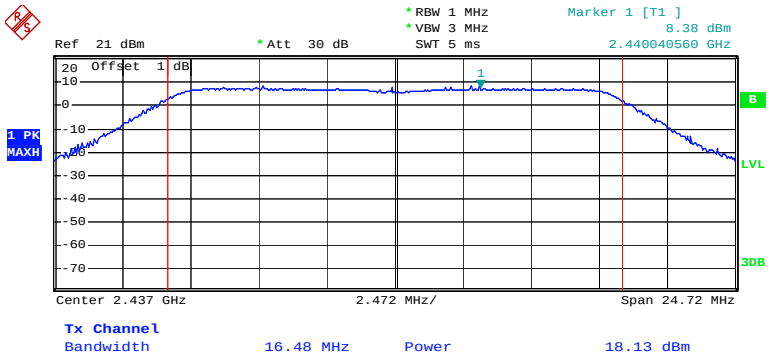
Date: 19.MAR.2014 11:12:58

802.11g RF Peak Power, Low Channel



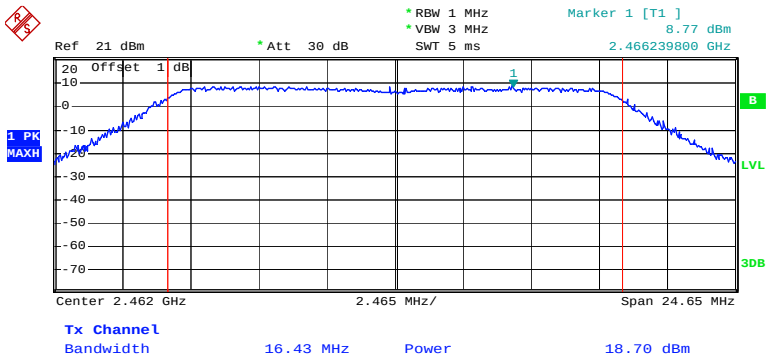
Date: 19.MAR.2014 11:09:45

802.11g RF Peak Power, Middle Channel



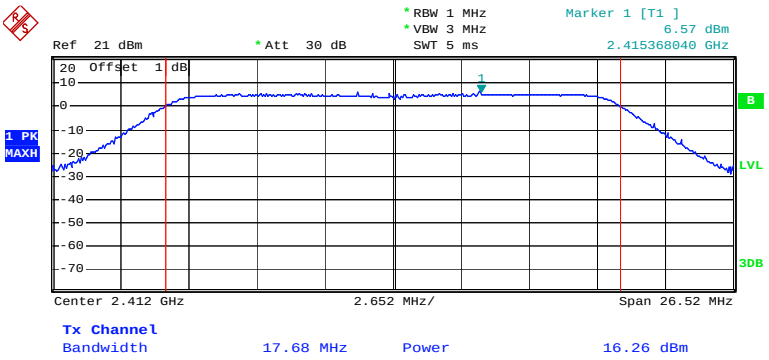
Date: 19.MAR.2014 11:10:13

802.11g RF Peak Power, High Channel



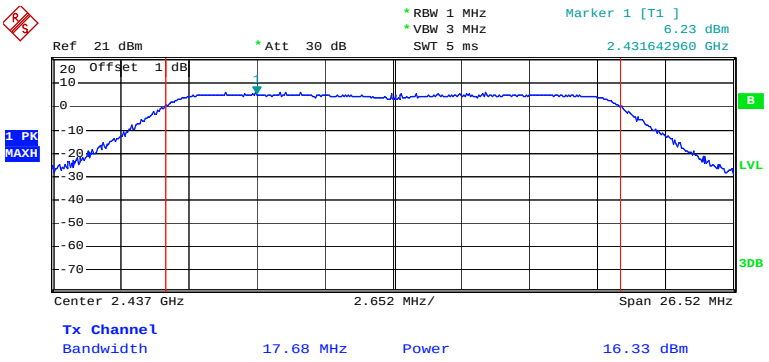
Date: 19.MAR.2014 11:11:39

802.11n20 RF Peak Power, Low Channel



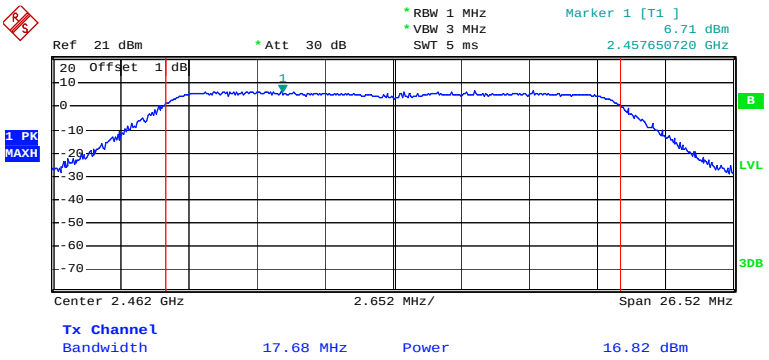
Date: 19.MAR.2014 11:16:14

802.11n20 RF Peak Power, Middle Channel



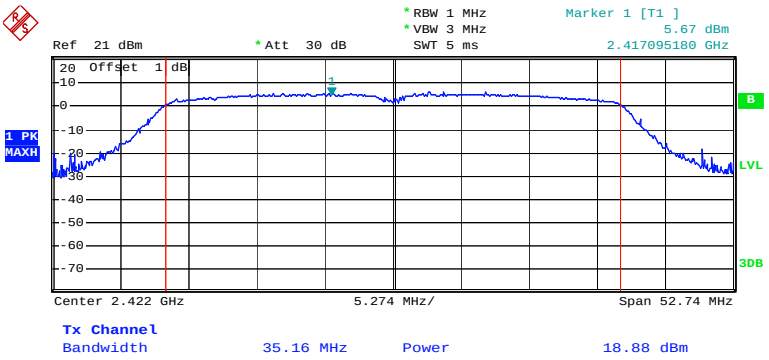
Date: 19.MAR.2014 11:16:39

802.11n20 RF Peak Power, High Channel



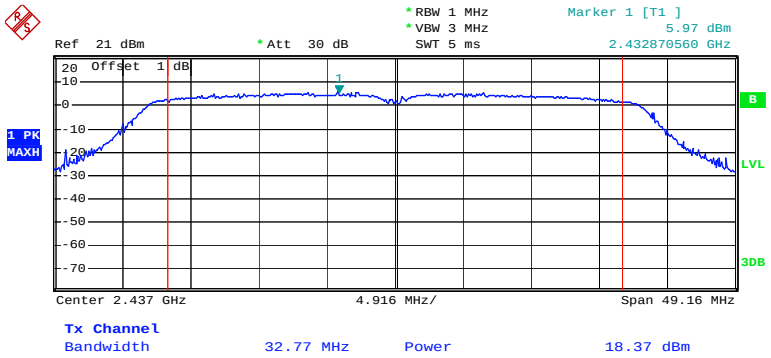
Date: 19.MAR.2014 11:16:59

802.11n40 RF Peak Power, Low Channel



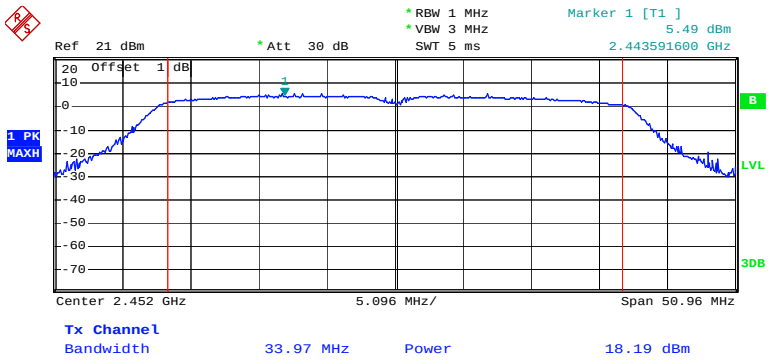
Date: 19.MAR.2014 11:18:36

802.11n40 RF Peak Power, Middle Channel



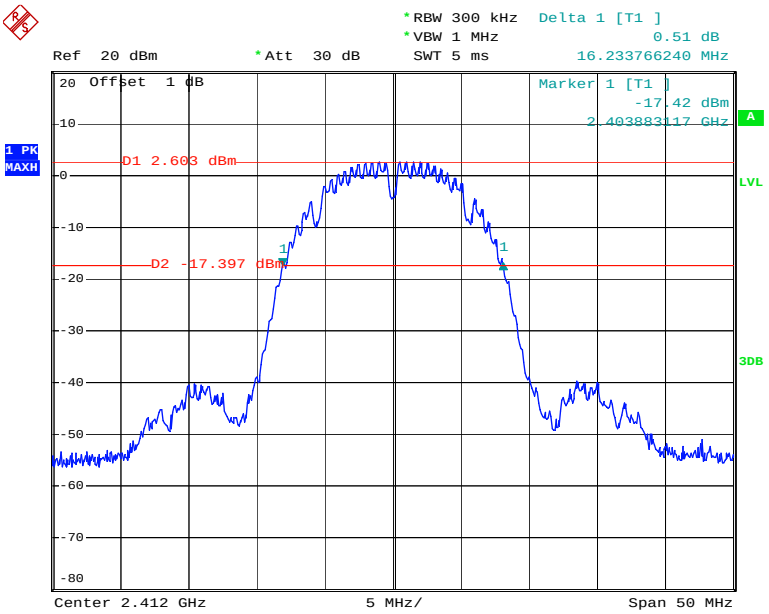
Date: 19.MAR.2014 11:19:32

802.11n40 RF Peak Power, High Channel



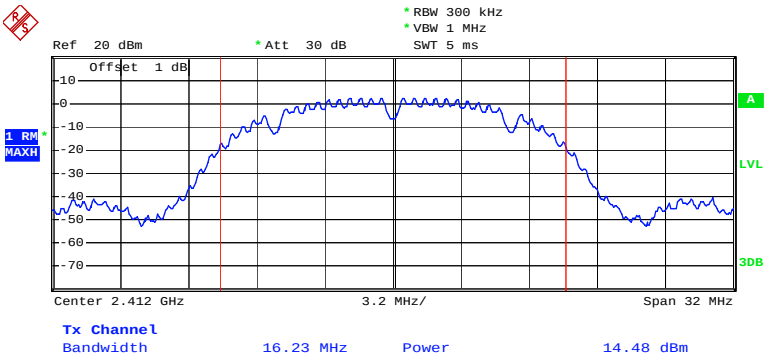
Date: 19.MAR.2014 11:20:21

802.11b 20dB OBW, Low Channel



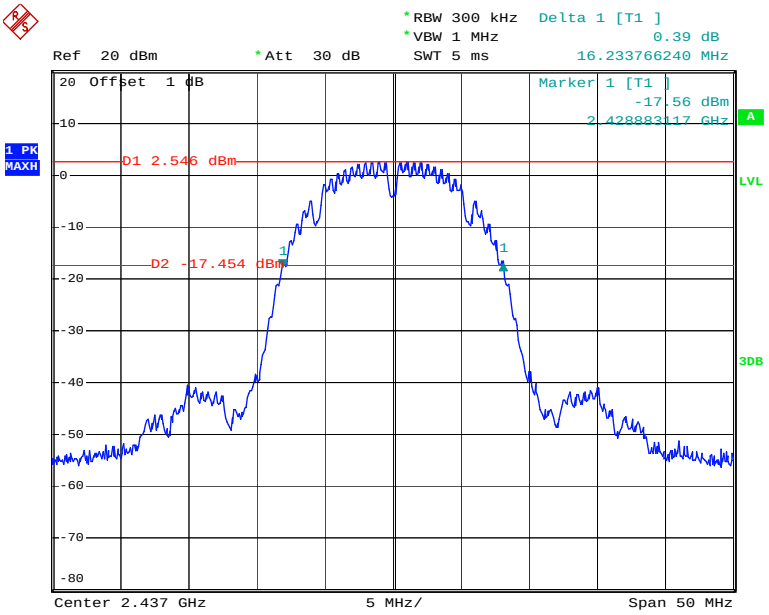
Date: 20.JAN.2014 15:56:21

802.11b RF Output Power, Low Channel



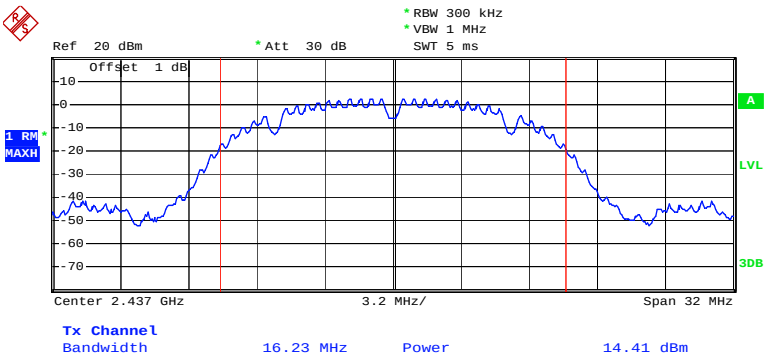
Date: 20.JAN.2014 15:56:30

802.11b 20dB OBW, Middle Channel



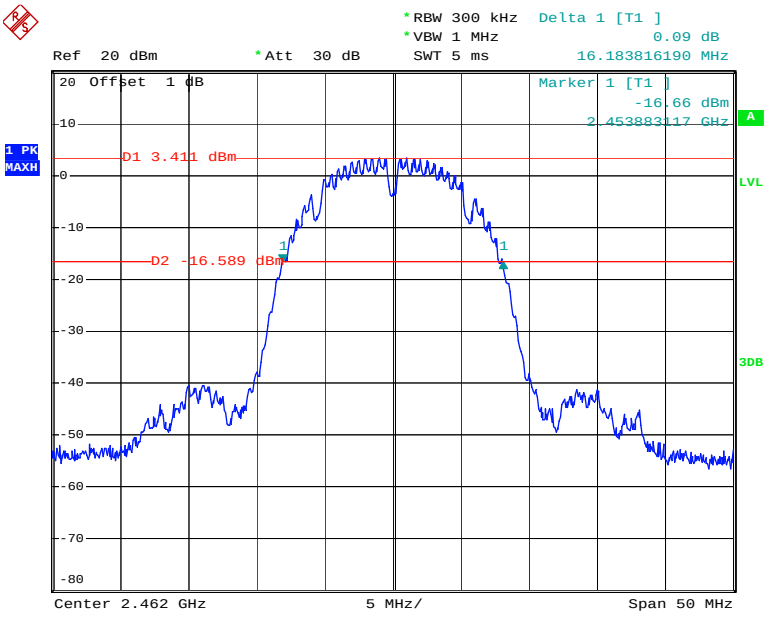
Date: 20.JAN.2014 16:05:23

802.11b RF Output Power, Middle Channel



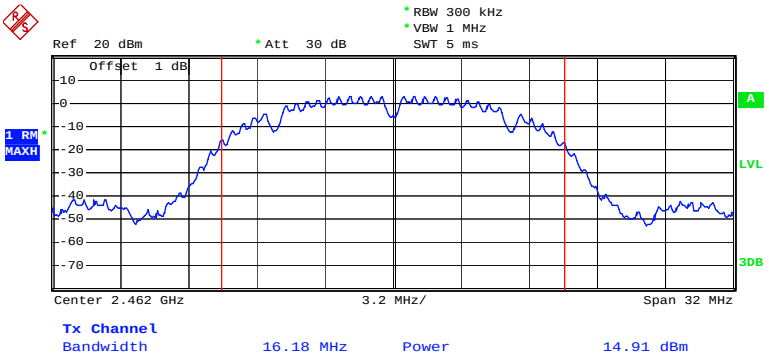
Date: 20.JAN.2014 16:05:31

802.11b 20dB OBW, High Channel



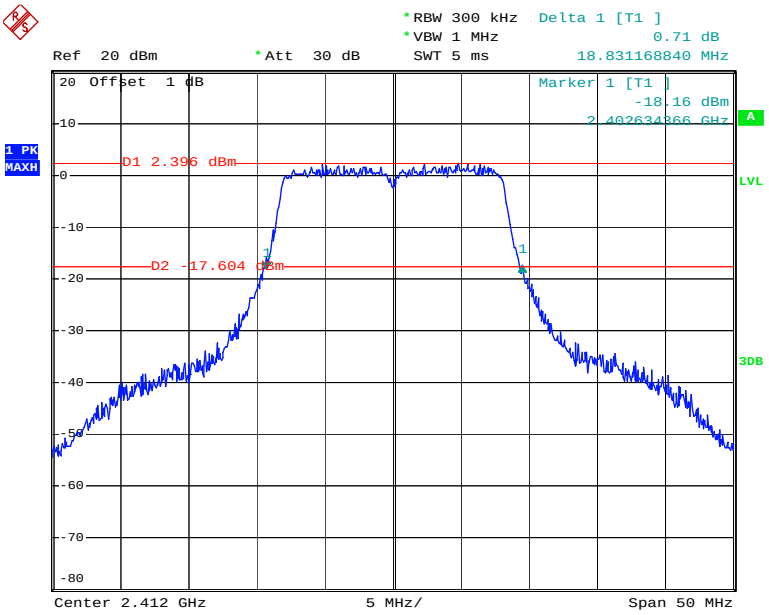
Date: 20.JAN.2014 16:37:41

802.11b RF Output Power, High Channel



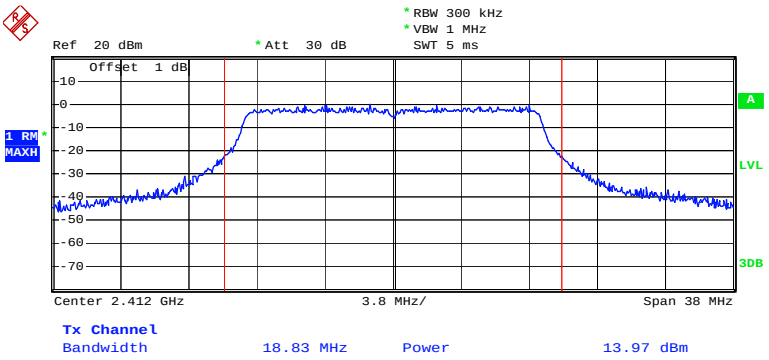
Date: 20.JAN.2014 16:37:52

802.11g 20dB OBW, Low Channel



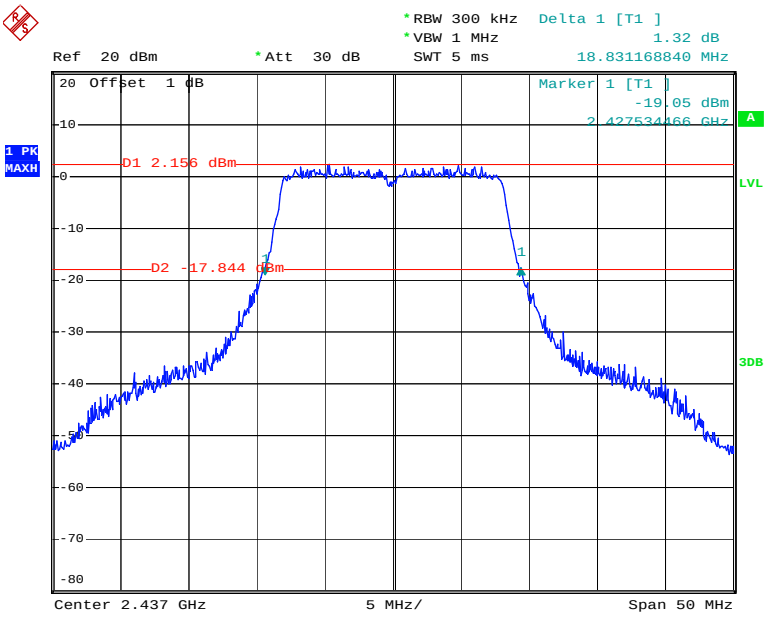
Date: 20.JAN.2014 16:12:45

802.11g RF Output Power, Low Channel



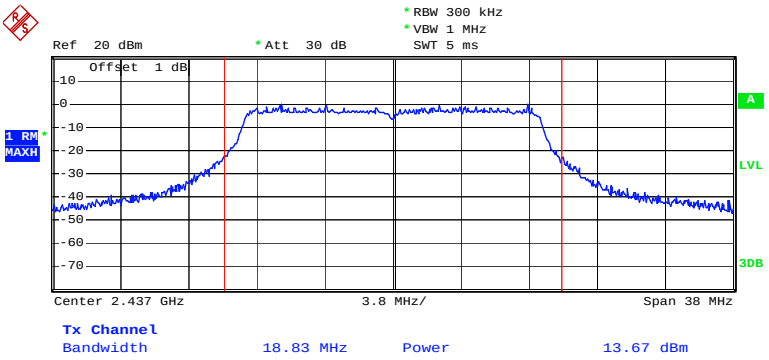
Date: 20.JAN.2014 16:12:56

802.11g 20dB OBW, Middle Channel



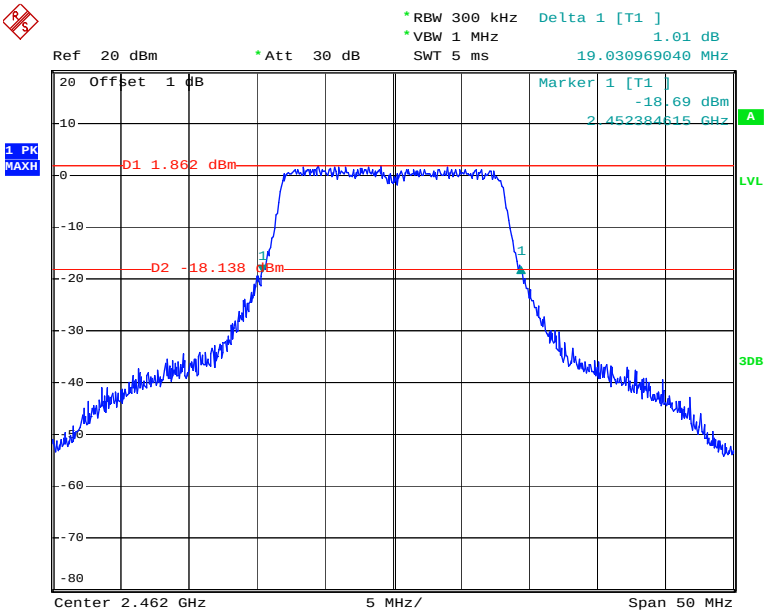
Date: 20.JAN.2014 16:18:13

802.11g RF Output Power, Middle Channel



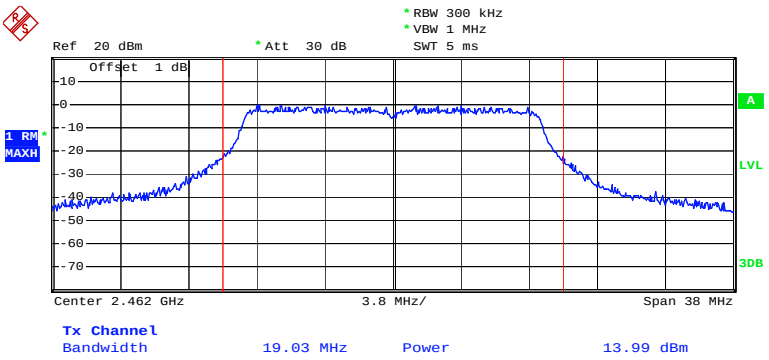
Date: 20.JAN.2014 16:18:20

802.11g RF 20dB OBW, High Channel



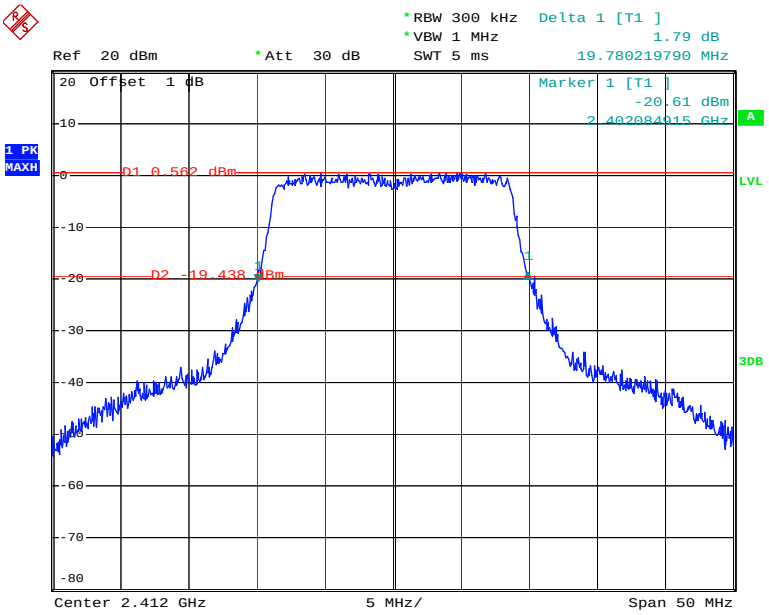
Date: 20.JAN.2014 16:15:55

802.11g RF Output Power, High Channel



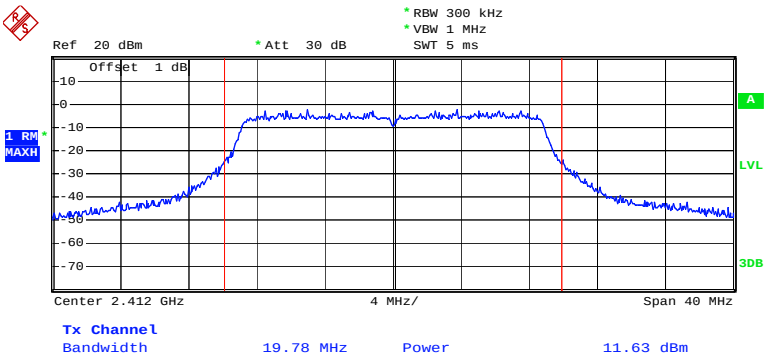
Date: 20.JAN.2014 16:16:12

802.11n20 20dB OBW, Low Channel



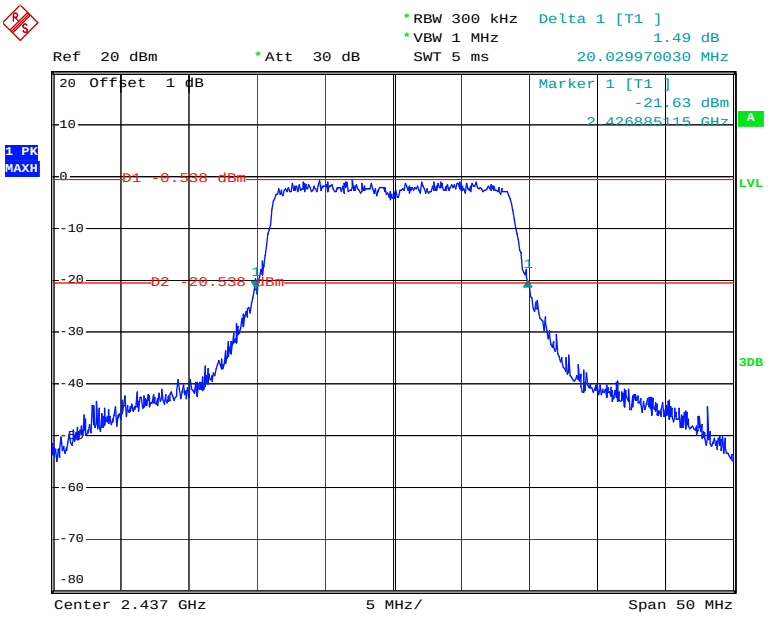
Date: 20.JAN.2014 16:21:48

802.11n20 RF Output Power, Low Channel



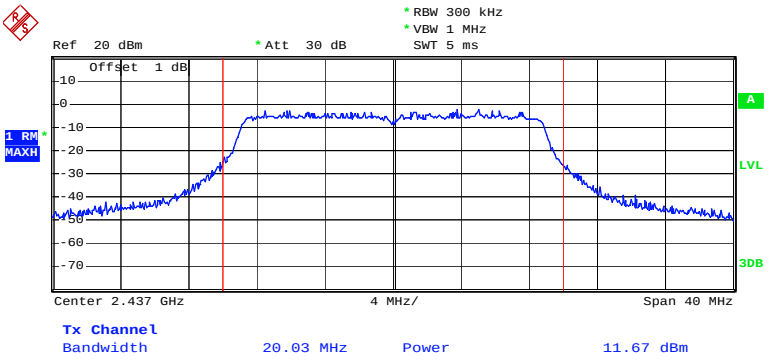
Date: 20.JAN.2014 16:22:31

802.11n20 20dB OBW, Middle Channel



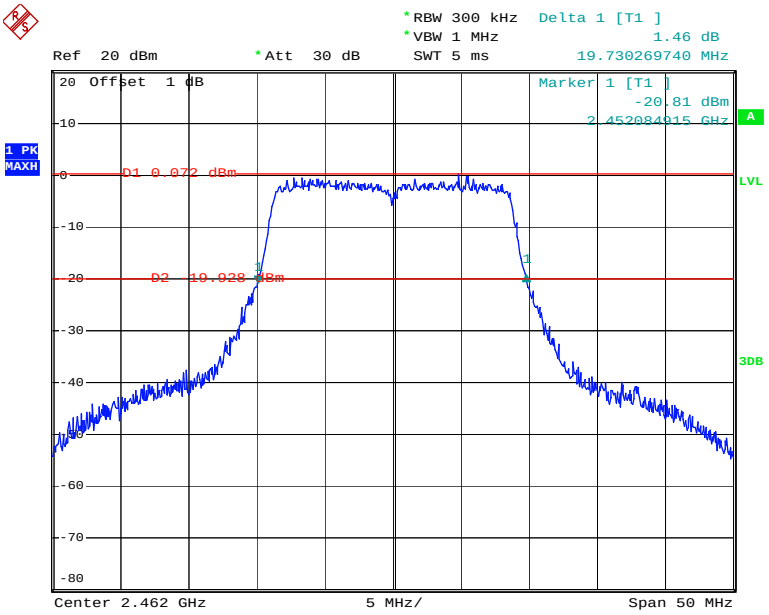
Date: 20.JAN.2014 16:23:54

802.11n20 RF Output Power, Middle Channel



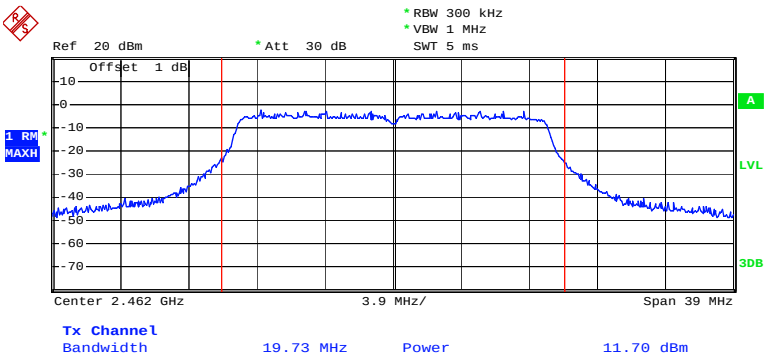
Date: 20.JAN.2014 16:24:11

802.11n20 RF 20dB OBW, High Channel



Date: 20.JAN.2014 16:25:22

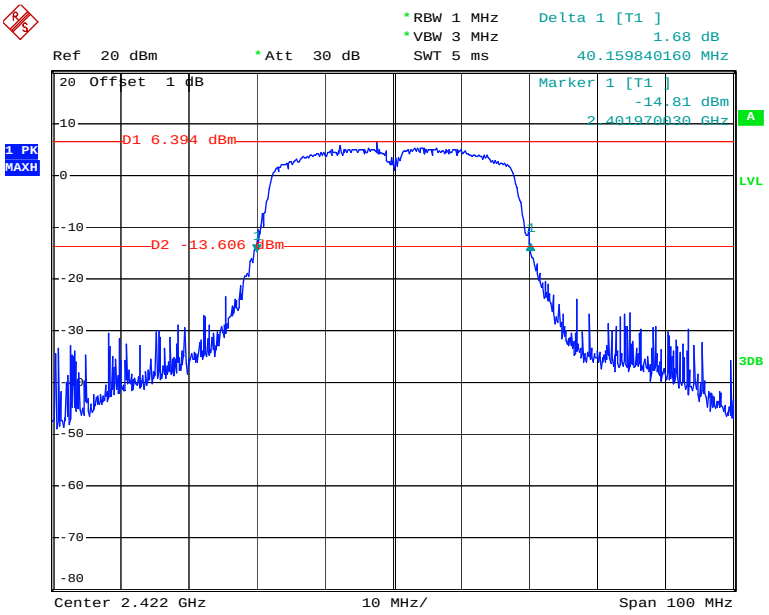
802.11n20 RF Output Power, High Channel



Tx Channel
Bandwidth 19.73 MHz Power 11.70 dBm

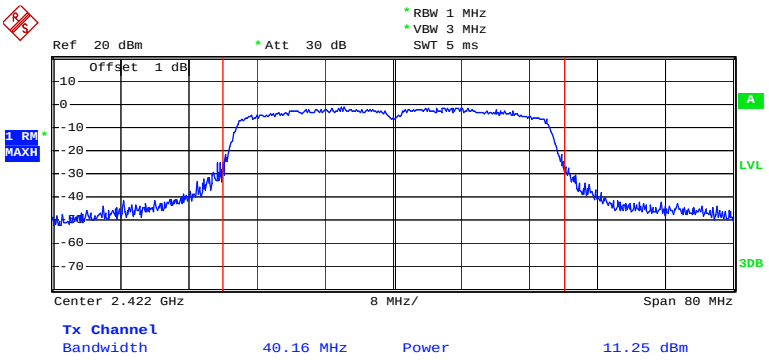
Date: 20.JAN.2014 16:25:40

802.11n40 20dB OBW, Low Channel



Date: 20.JAN.2014 16:32:02

802.11n40 RF Output Power, Low Channel

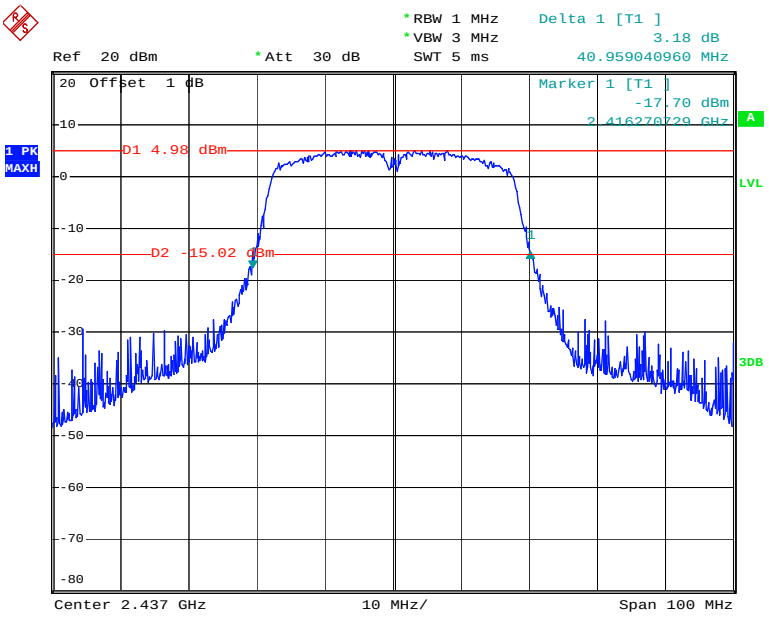


Tx Channel

Bandwidth	40.16 MHz	Power	11.25 dBm

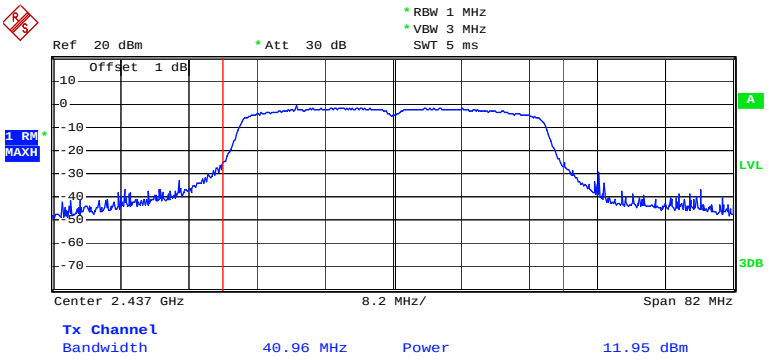
Date: 20.JAN.2014 16:32:26

802.11n40 20dB OBW, Middle Channel



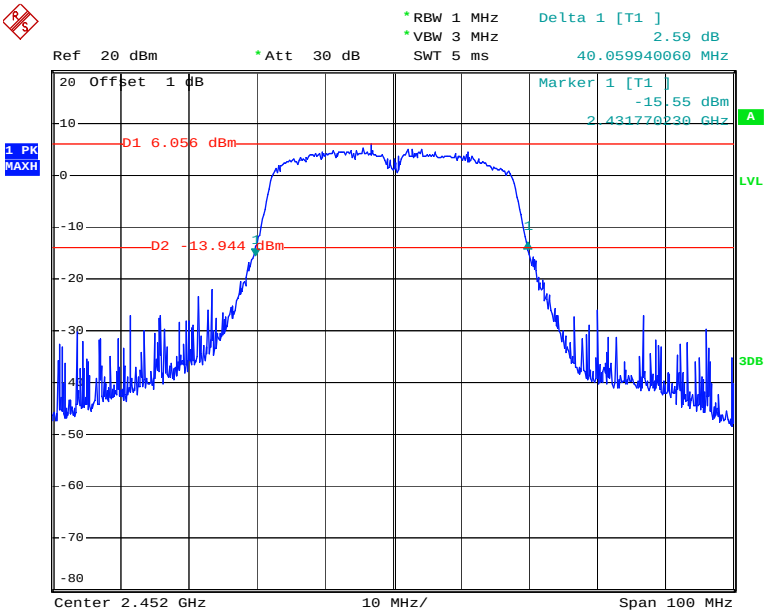
Date: 20.JAN.2014 16:30:35

802.11n40 RF Output Power, Middle Channel



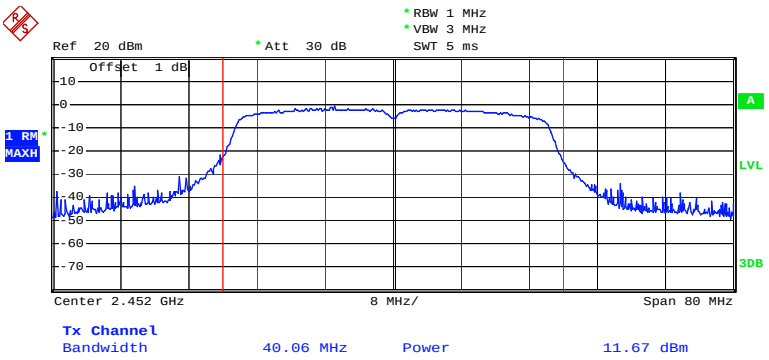
Date: 20.JAN.2014 16:30:46

802.11n40 RF 20dB OBW, High Channel



Date: 20.JAN.2014 16:34:31

802.11n40 RF Output Power, High Channel



Date: 20.JAN.2014 16:34:43

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	2013-6-16	2014-6-15

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

Test Data

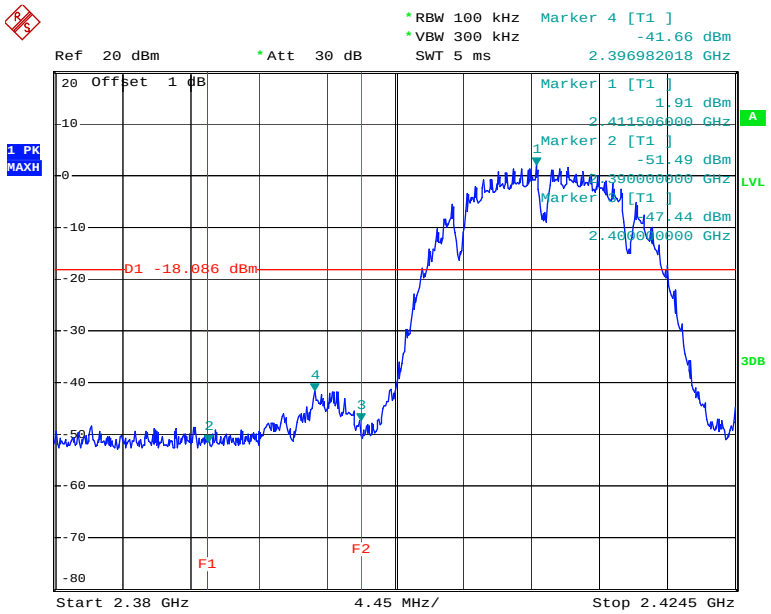
Environmental Conditions

Temperature:	21.1°C
Relative Humidity:	37 %
ATM Pressure:	102 kPa

** The testing was performed by Allen Qiao on 2014-01-20*

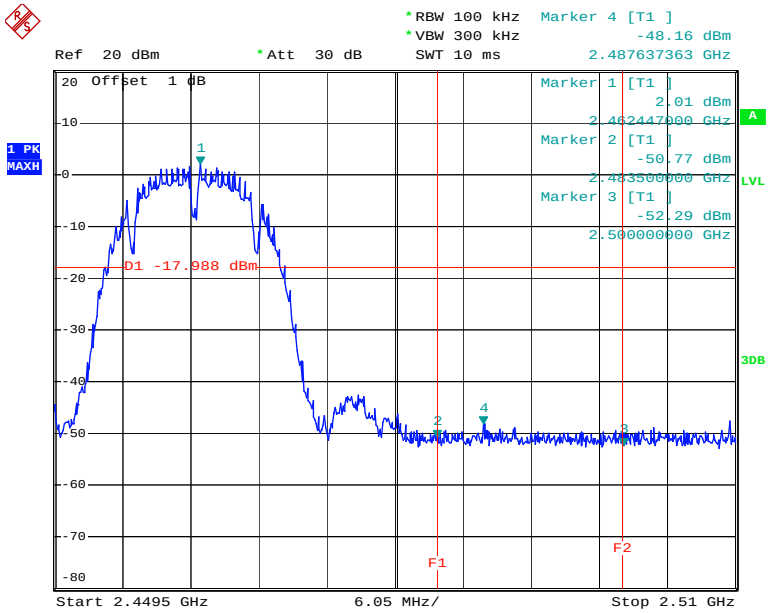
Test Result: *Compliance*
Please refer to following table and plots.

802.11b: Band Edge, Left Side



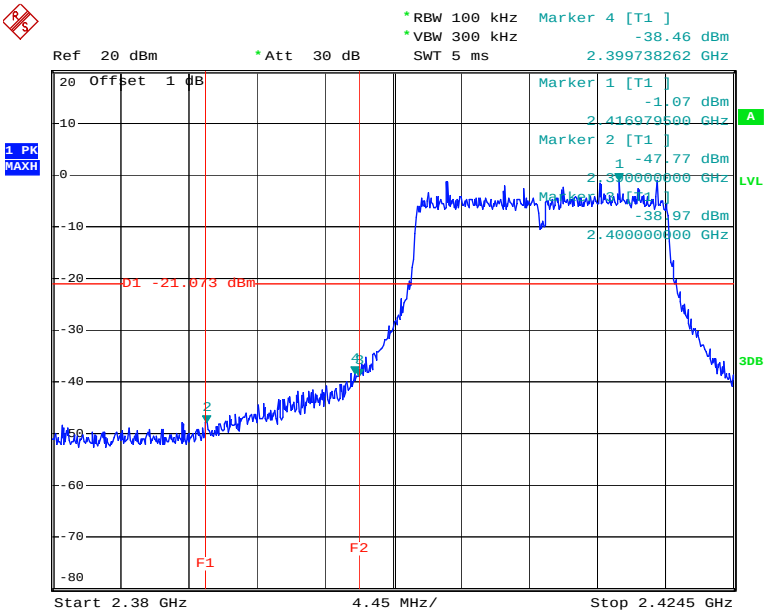
Date: 20.JAN.2014 15:57:04

802.11b: Band Edge, Right Side



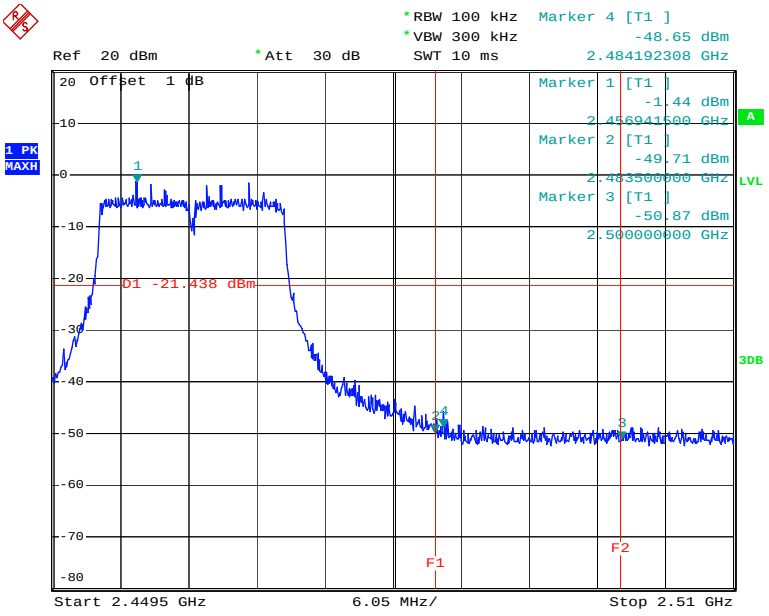
Date: 20.JAN.2014 16:03:00

802.11g: Band Edge, Left Side



Date: 20.JAN.2014 16:13:33

802.11g: Band Edge, Right Side



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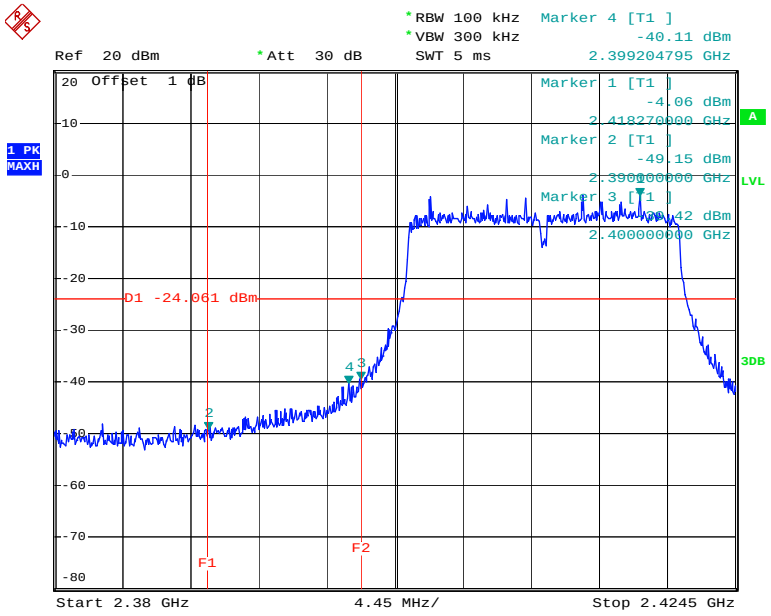
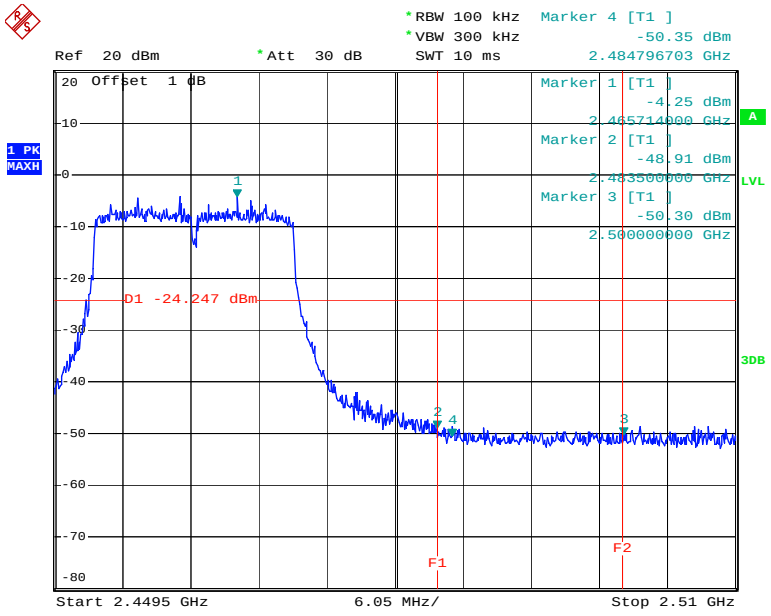
802.11n20 Band Edge, Left Side



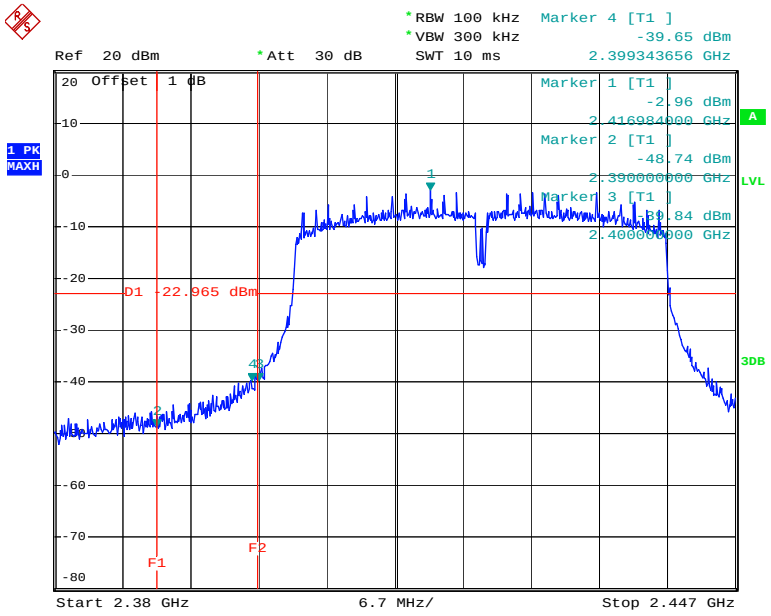
Date: 20.JAN.2014 16:23:10

802.11n20 Band Edge, Right Side



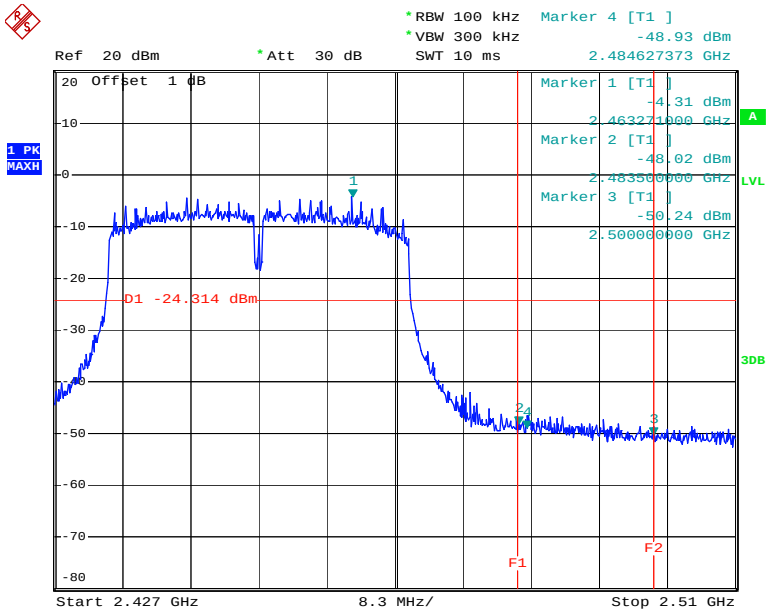
Date: 20.JAN.2014 16:26:18

802.11n40 Band Edge, Left Side



Date: 20.JAN.2014 16:33:16

802.11n40 Band Edge, Right Side



Date: 20.JAN.2014 16:35:57

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	2013-6-16	2014-6-15

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

Test Data

Environmental Conditions

Temperature:	21.1°C
Relative Humidity:	37 %
ATM Pressure:	102 kPa

** The testing was performed by Allen Qiao on 2014-01-20*

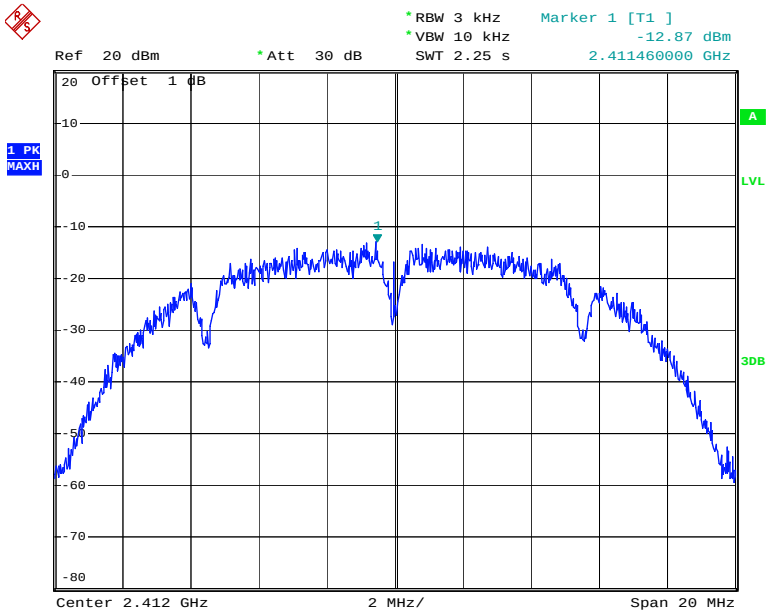
Test Mode: Transmitting

Test Result: Pass

Test Mode	Channel	PSD (dBm/3kHz)	Limit (dBm/3kHz)	Result
802.11b	Low	-12.87	8	PASS
	Middle	-12.91	8	PASS
	High	-13.08	8	PASS
802.11g	Low	-13.32	8	PASS
	Middle	-14.00	8	PASS
	High	-12.39	8	PASS
802.11n20	Low	-18.08	8	PASS
	Middle	-17.52	8	PASS
	High	-17.75	8	PASS
802.11n40	Low	-12.89	8	PASS
	Middle	-11.84	8	PASS
	High	-14.55	8	PASS

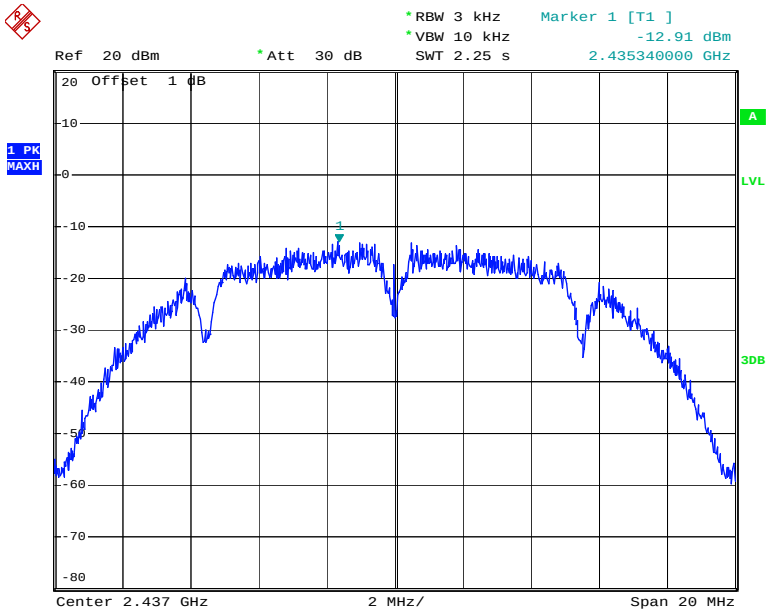
Please refer to the following plots

Power Spectral Density, 802.11b Low Channel



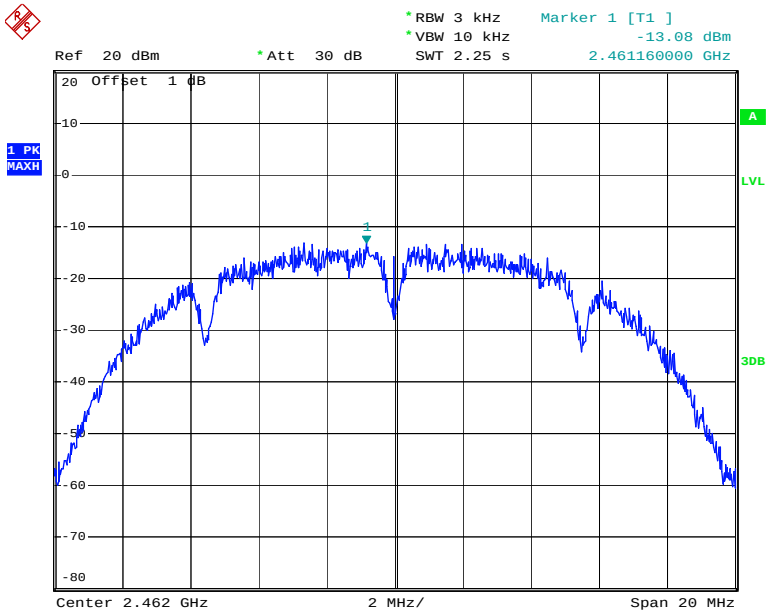
Date: 20.JAN.2014 15:56:39

Power Spectral Density, 802.11b Middle Channel



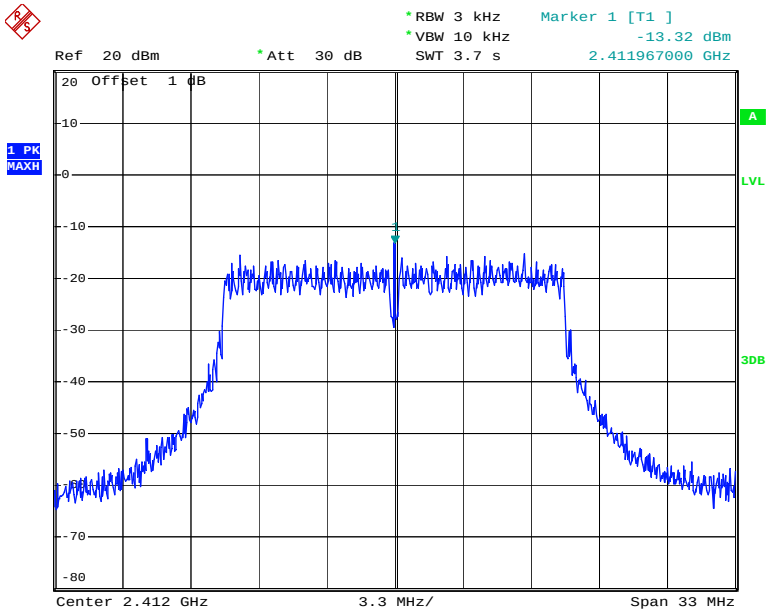
Date: 20.JAN.2014 16:05:40

Power Spectral Density, 802.11b High Channel



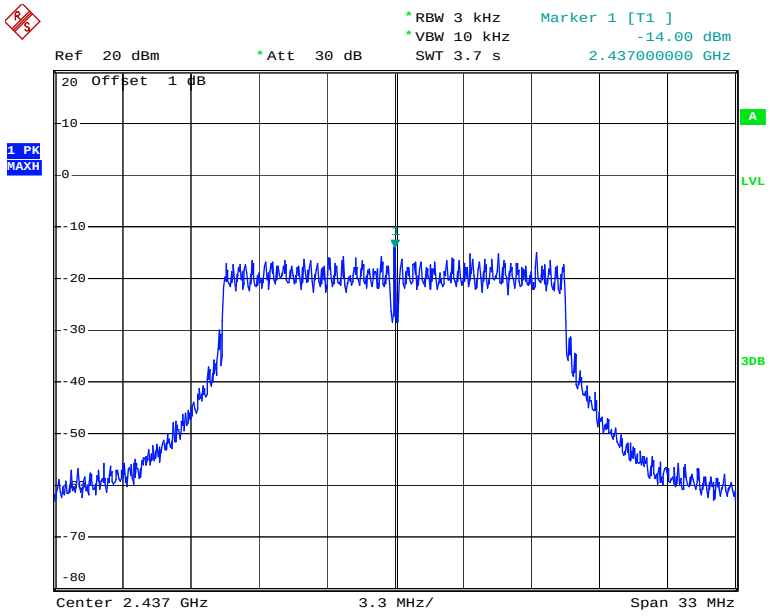
Date: 20.JAN.2014 16:02:35

Power Spectral Density, 802.11g Low Channel



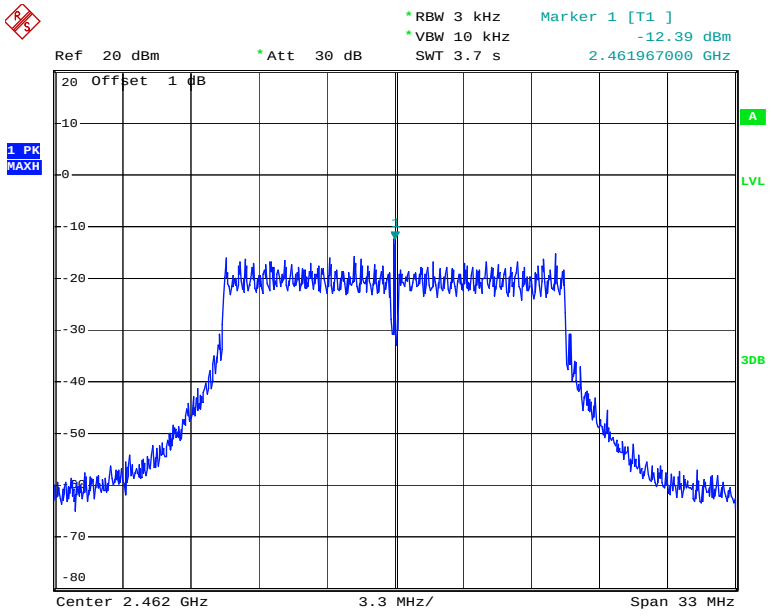
Date: 20.JAN.2014 16:13:09

Power Spectral Density, 802.11g Middle Channel



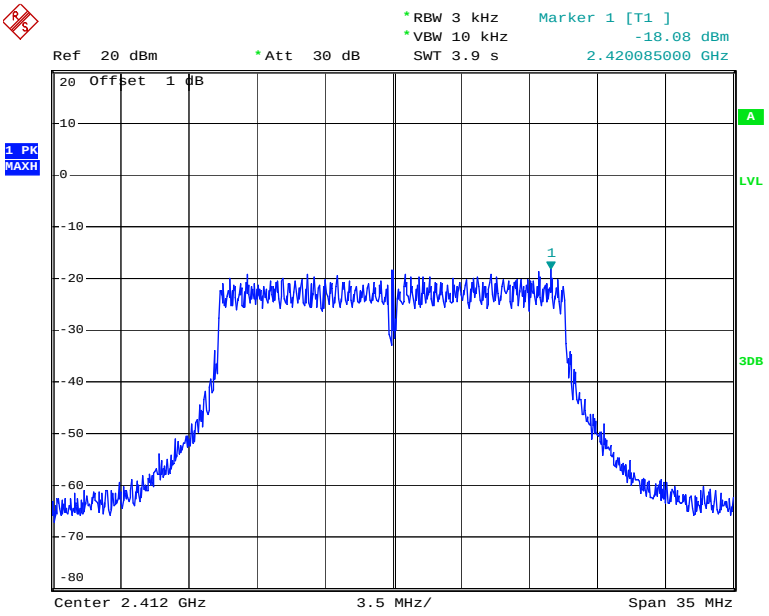
Date: 20.JAN.2014 16:18:51

Power Spectral Density, 802.11g High Channel



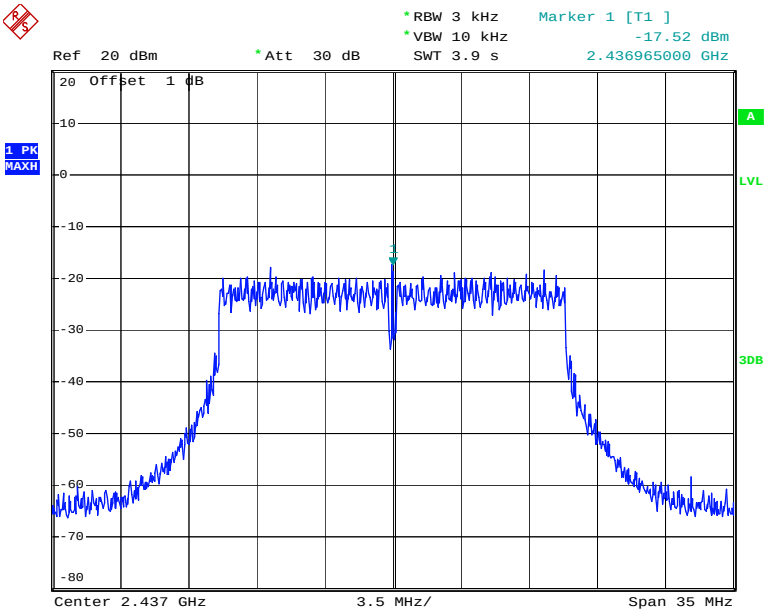
Date: 20.JAN.2014 16:16:25

Power Spectral Density, 802.11n20 Low Channel



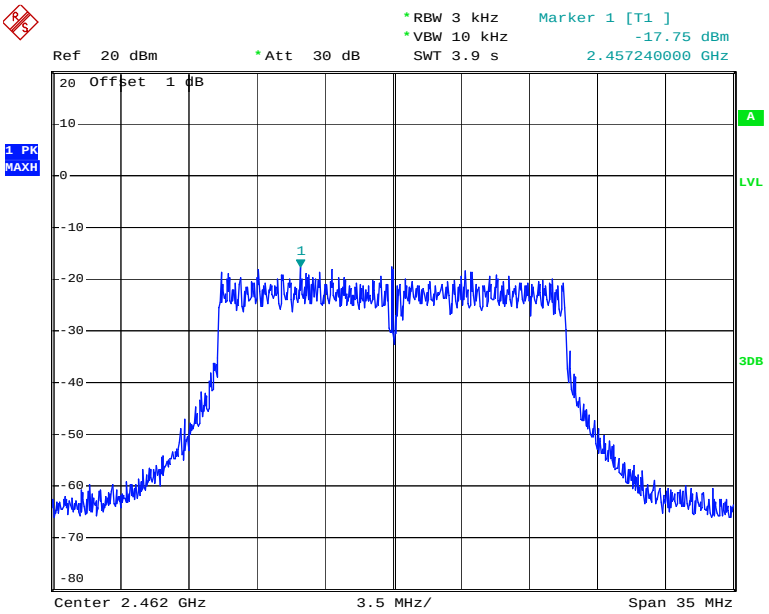
Date: 20.JAN.2014 16:22:45

Power Spectral Density, 802.11n20 Middle Channel



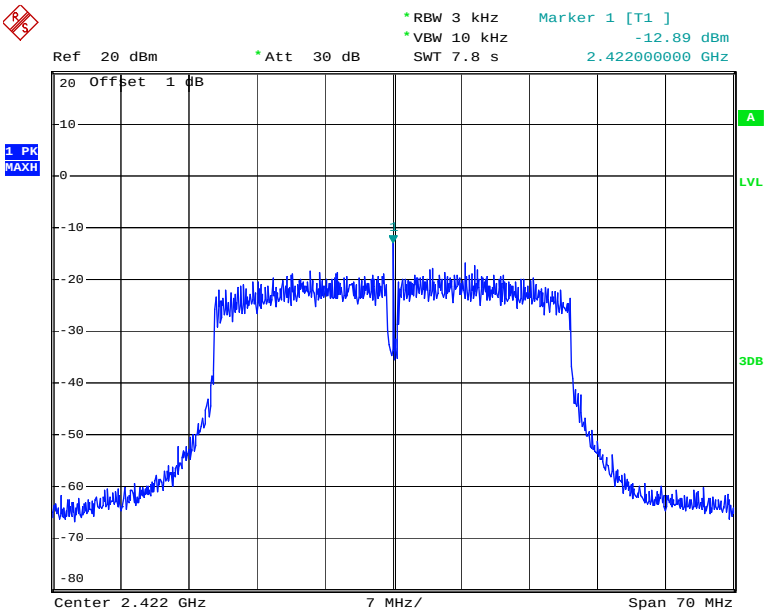
Date: 20.JAN.2014 16:24:24

Power Spectral Density, 802.11n20 High Channel



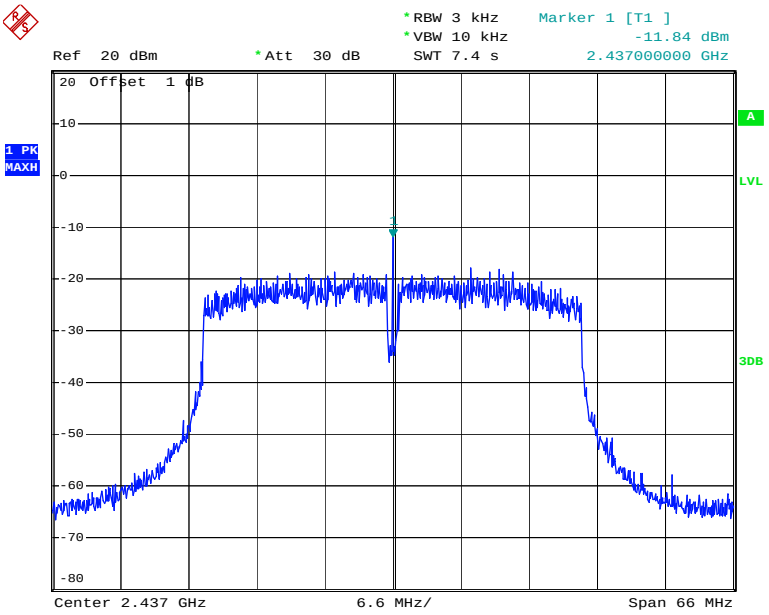
Date: 20.JAN.2014 16:25:54

Power Spectral Density, 802.11n40 Low Channel



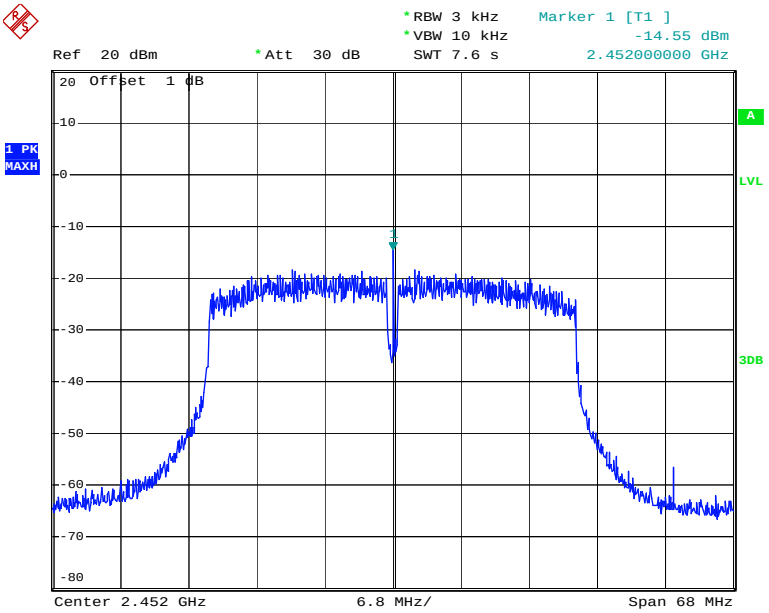
Date: 20.JAN.2014 16:32:51

Power Spectral Density, 802.11n40 Middle Channel



Date: 20.JAN.2014 16:31:10

Power Spectral Density, 802.11n40 High Channel



Date: 20.JAN.2014 16:35:32

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