FCC PART 15.247

TEST REPORT

For

ShenZhen Foscam Intelligent Technology Co., Ltd.

5/F, Block 1,Vision Business Park, Nanshan District, Shenzhen, Guangdong Province, China

FCC ID: ZDEFI9805W

Report Type:	**Product Type:**
Original Report	IP Camera

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GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

The *ShenZhen Foscam Intelligent Technology Co., Ltd.*'s product, model number: *FI9805W (FCC ID: ZDEFI9805W)* or the "EUT" in this report was an *IP Camera,* which was measured approximately: 18.0cm (L) x 9.8 cm (W) x 10.3 cm (H), rated with input voltage: DC 12V from adapter.

Adapter Information:
Model: SAW24-120-2000
Input: 100-240V~50/60Hz, 0.8A
Output: DC 12V, 2.0A

Note: Product IP Camera, model FI9805W, FI9804W, HD953W, HD951W, FC5511W and FC5411W, they are just different from the model number due to the marketing purposes, model FI9805W was selected for fully testing, which was explained in the attached declaration letter that stated and guarantied by the applicant.

**All measurement and test data in this report was gathered from production sample serial number: 1305033 (Assigned by BACL, Shenzhen). The EUT supplied by the applicant was received on 2013-05-08.*

Objective

This report is prepared on behalf of *ShenZhen Foscam Intelligent Technology Co., Ltd.* in accordance with Part 2-Subpart J, Part 15-Subparts A, B and C of the Federal Communication Commissions rules.

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

Related Submittal(s)/Grant(s)

FCC Part 15B JBP submissions with FCC ID: ZDEFI9805W

Test Methodology

All measurements contained in this report were conducted with ANSI C63.4-2009, American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the range of 9 kHz to 40 GHz.

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

The uncertainty of any RF tests which use conducted method measurement is ±0.96 dB, the uncertainty of any radiation on emissions measurement is ±4.0 dB

Test Facility

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

Test site at Bay Area Compliance Laboratories Corp. (Shenzhen) has been fully described in reports submitted to the Federal Communication Commission (FCC). The details of these reports have been found to be in compliance with the requirements of Section 2.948 of the FCC Rules on December 06, 2010. The facility also complies with the radiated and AC line conducted test site criteria set forth in ANSI C63.4-2009.

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

SYSTEM TEST CONFIGURATION

Description of Test Configuration

For 802.11b, 802.11g, and 802.11n-HT20 mode, 11 channels are provided to testing:

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

For 802.11b, 802.11g, 802.11n-HT20 mode, EUT was tested with Channel 1, 6 and 11.

For 802.11n-HT40 mode, 7 channels are provided to testing:

Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	2422	6	2447
2	2427	7	2452
3	2432	/	/
4	2437	/	/
5	2442	/	/

EUT was tested with Channel 1, 4 and 7.

EUT Exercise Software

QA_RT3x7x_V1.5.6.7

802.11b: Rate 1 MHz, Power level: 13
802.11g: Rate 6 MHz, Power level: 10
802.11n-HT20: Rate MCS0, Power level: 0C
802.11n-HT40: Rate MCS0, Power level: 0A

Equipment Modifications

No modification was made to the EUT tested.

External I/O Cable

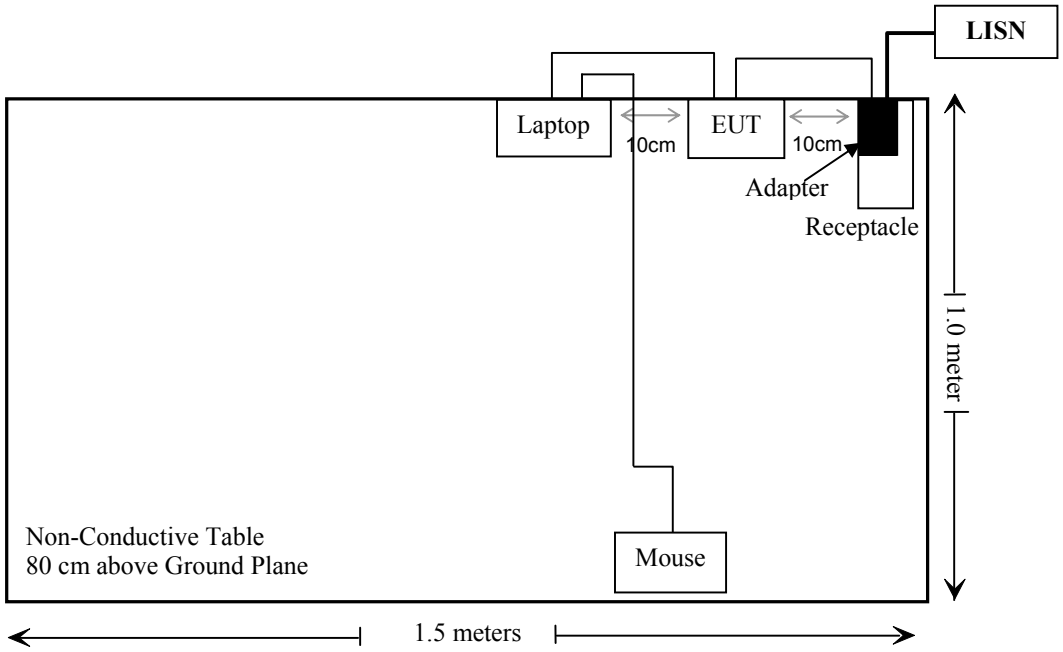
Cable Description	Length (m)	From Port	To
DELL	Laptop	PP111L	N/A
DELL	Mouse	MOC5UO	G1B0096D

External I/O Cable

Cable Description	Length (m)	From/Port	To
Unshielded Detachable Mouse Cable	1.5	Mouse Port / Laptop	Mouse
Unshielded Detachable RJ45 Cable	2.0	EUT	Laptop
Unshielded Detachable DC Cable	1.6	EUT	Adapter

Block Diagram of Test Setup

For conducted emission:



SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Result
§15.247 (i), §1.1307 (b)(1), §2.1091	Maximum Permissible Exposure (MPE)	Compliance
§15.203	Antenna Requirement	Compliance
§15.207 (a)	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 Peak 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) & §1.1307 (b) (1) & §2.1091- MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Standard Applicable

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

Limits for General Population/Uncontrolled Exposure

Limits for General Population/Uncontrolled Exposure				
Frequency Range (MHz)	**Electric Field Strength (V/m)**	**Magnetic Field Strength (A/m)**	**Power Density (mw/cm^2)**	**Averaging Time (Minutes)**
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*($180/f^2$)	30
30-300	27.5	0.073	0.2	30
300-1500	/	/	f/1500	30
1500-100,000	/	/	1.0	30

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

MPE Calculation

Predication of MPE limit at a given distance

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

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

Mode	Frequency (MHz)	Antenna Gain		Conducted Power		Evaluation Distance (cm)	Power Density (mW/cm^2)	MPE Limit (mW/cm^2)
		(dBi)	(numeric)	(dBm)	(mW)			
802.11b	2437	5.0	3.16	20.16	103.753	20	0.0652	1.0
802.11g	2412	5.0	3.16	19.64	92.045	20	0.0579	1.0
802.11n-HT20	2412	5.0	3.16	18.08	64.269	20	0.0404	1.0
802.11n-HT40	2437	5.0	3.16	17.96	62.517	20	0.0393	1.0

Result: Compliance

FCC §15.203 - ANTENNA REQUIREMENT

Applicable Standard

According to § 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the user of a standard antenna jack or electrical connector is prohibited. The structure and application of the EUT were analyzed to determine compliance with section §15.203 of the rules. §15.203 state that the subject device must meet the following criteria:

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

Unit must be professionally installed, and installer shall be responsible for verifying that the correct antenna is employed with the unit.
And according to FCC 47 CFR section 15.247 (b), if the transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

Antenna Connector Construction

The EUT use one external omni-directional antenna (with reversed SMA-J connector) arrangement and the maximum gain is 5.0 dBi, fulfill the requirement of this section. Please refer to the internal photos.

Result: Compliance.

FCC §15.207 (a) – AC LINE CONDUCTED EMISSIONS

Applicable Standard

FCC§15.207

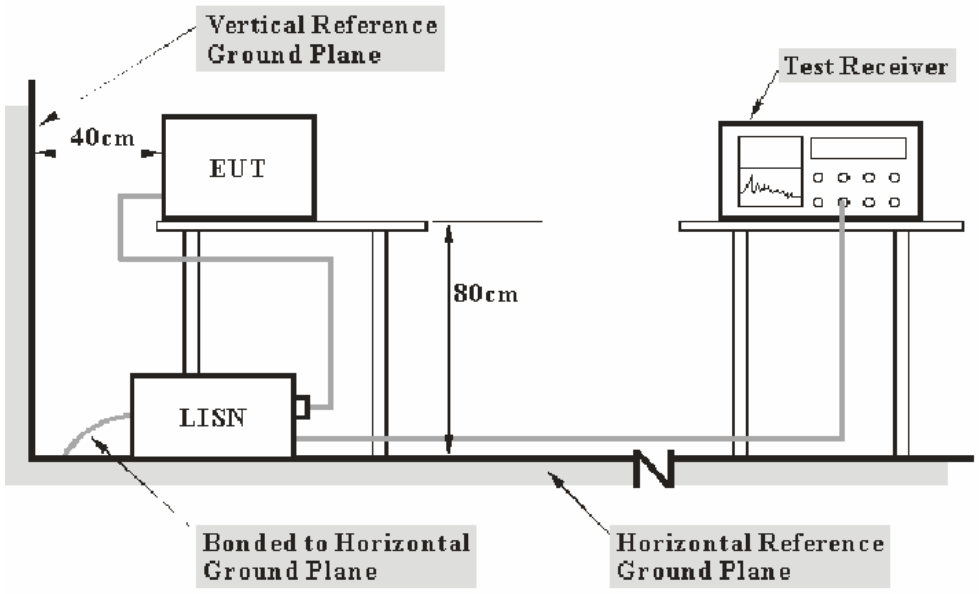
Measurement Uncertainty

Input quantities to be considered for conducted disturbance measurements maybe receiver reading, attenuation of the connection between AMN/ISN and receiver, AMN/ISN voltage division factor, AMN/ISN VDF frequency interpolation and receiver related input quantities, etc.

Based on CISPR 16-4-2:2011, the expended combined standard uncertainty of conducted disturbance test at Bay Area Compliance Laboratories Corp. (Shenzhen) is shown as below. And the uncertainty will not be taken into consideration for the test data recorded in the report

Port	Measurement uncertainty
AC Mains	3.26 dB (k=2, 95% level of confidence)
CAT 3	3.70 dB (k=2, 95% level of confidence)
CAT 5	3.86 dB (k=2, 95% level of confidence)
CAT 6	4.64 dB (k=2, 95% level of confidence)

EUT Setup



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

The setup of EUT is according with per ANSI C63.4-2009 measurement procedure. The specification used was with the FCC Part 15.207 limits.

The spacing between the peripherals was 10 cm.

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.

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Rohde & Schwarz	EMI Test Receiver	ESCS30	100176	2012-11-24	2013-11-23
Rohde & Schwarz	L.I.S.N.	ENV216	3560.6650.12-101613-Yb	2013-05-07	2014-05-07
BACL	CE Test software	BACL-CE	V1.0	-	-

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

Test Results Summary

According to the recorded data in following table, with the worst margin reading of:

14.7 dB at **12.649504 MHz** in the **Neutral** conducted mode

Refer to CISPR16-4-2:2011 and CISPR 16-4-1:2009, the measured level is in compliance with the limit if

$$L_m + U_{(Lm)} \leq L_{lim} + U_{cispr}$$

In BACL, $U_{(Lm)}$ is less than U_{cispr}, if L_m is less than L_{lim}, it implies that the EUT complies with the limit.

Test Data

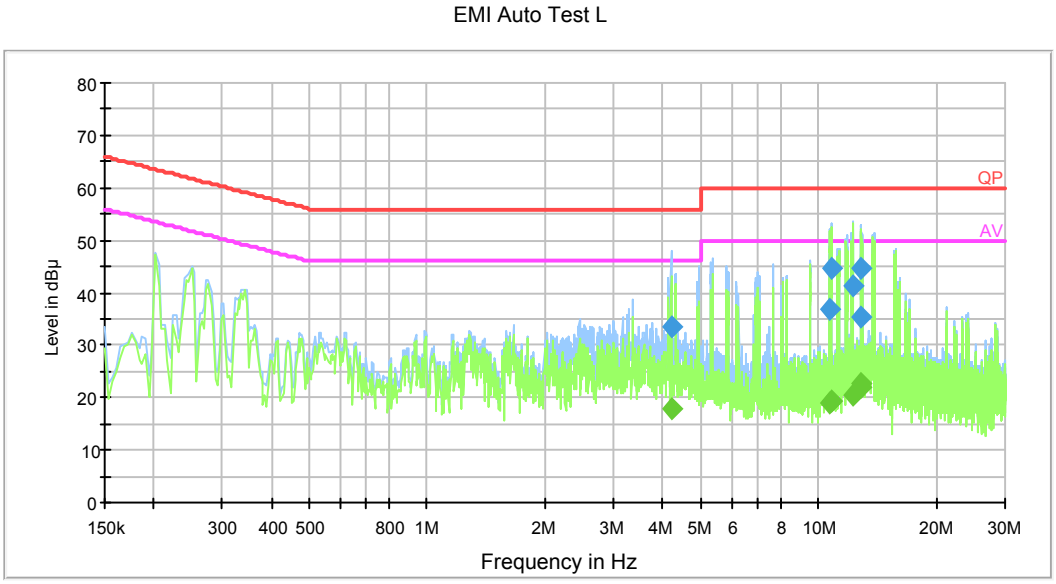
Environmental Conditions

Temperature:	25 ℃
Relative Humidity:	56 %
ATM Pressure:	100.0 kPa

The testing was performed by Simon Wang on 2013-06-27.

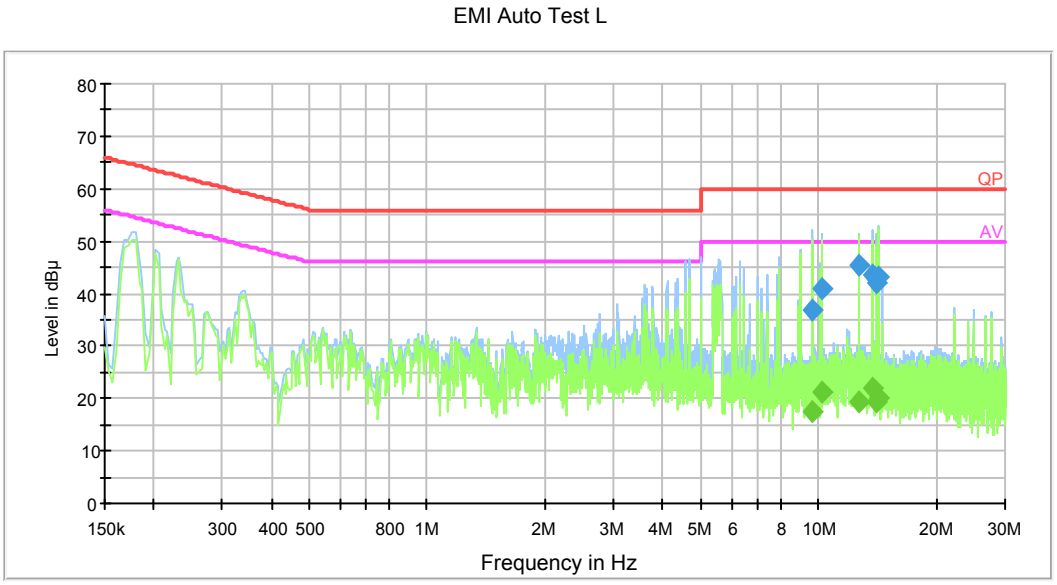
EUT operation mode: Transmitting

AC 120V/60 Hz, Line



Frequency (MHz)	Corrected Amplitude (dBµV)	Corrected Factor (dB)	Limit (dBµV)	Margin (dB)	Remark (PK/QP/Ave.)
10.776898	44.6	0.6	60.0	15.4	QP
12.904564	44.6	0.7	60.0	15.4	QP
12.213430	41.4	0.7	60.0	18.6	QP
4.201804	33.4	0.4	56.0	22.6	QP
10.684958	36.7	0.6	60.0	23.3	QP
12.851062	35.4	0.7	60.0	24.6	QP
12.904564	22.8	0.7	50.0	27.2	Ave.
12.851062	22.0	0.7	50.0	28.0	Ave.
4.201804	17.9	0.4	46.0	28.1	Ave.
12.213430	20.4	0.7	50.0	29.6	Ave.
10.776898	19.3	0.6	50.0	30.7	Ave.
10.684958	19.1	0.6	50.0	30.9	Ave.

AC 120V/60 Hz, Neutral



Frequency (MHz)	Corrected Amplitude (dBµV)	Corrected Factor (dB)	Limit (dBµV)	Margin (dB)	Remark (PK/QP/Ave.)
12.649504	45.3	0.7	60.0	14.7	QP
13.737690	43.6	0.7	60.0	16.4	QP
14.211919	43.2	0.8	60.0	16.8	QP
14.100026	42.1	0.8	60.0	17.9	QP
10.162924	40.8	0.6	60.0	19.2	QP
9.666810	36.9	0.6	60.0	23.1	QP
13.737690	21.8	0.7	50.0	28.2	Ave.
10.162924	21.1	0.6	50.0	28.9	Ave.
14.211919	20.3	0.8	50.0	29.7	Ave.
12.649504	19.4	0.7	50.0	30.6	Ave.
14.100026	19.2	0.8	50.0	30.8	Ave.
9.666810	17.5	0.6	50.0	32.5	Ave.

Note:
1. Corrected Amplitude = Reading + Correction Factor
2. Correction Factor = LISN VDF + Cable Loss
   The corrected factor has been input into the transducer of the test software
3. Margin = Limit – Corrected Amplitude

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

Applicable Standard

FCC §15.247 (d); §15.209; §15.205;

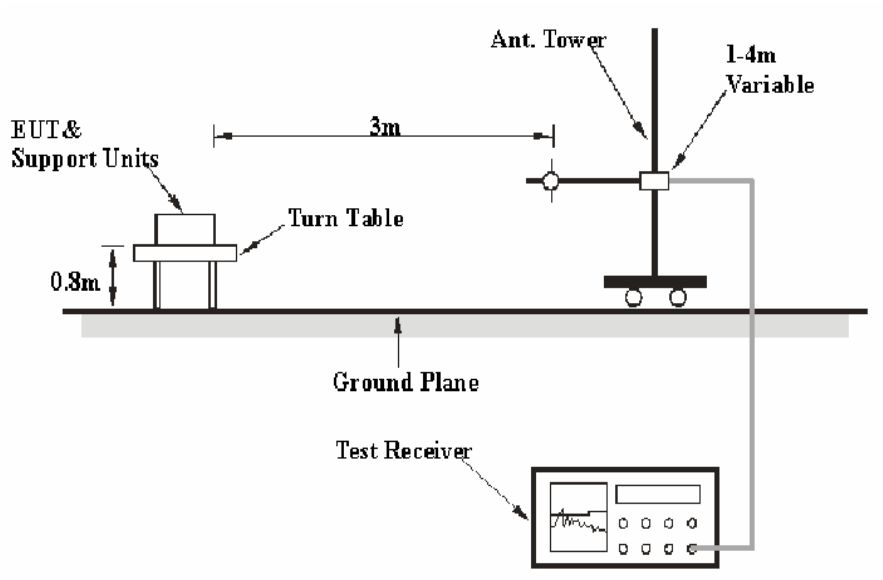
Measurement Uncertainty

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

Based on CISPR 16-4-2:2011, the expended combined standard uncertainty of radiation emissions at Bay Area Compliance Laboratories Corp. (Shenzhen) is shown in below table. And the uncertainty will not be taken into consideration for the test data recorded in the report

Frequency	Polarity	Measurement uncertainty
30MHz~200MHz	Horizontal	4.62 dB (k=2, 95% level of confidence)
	Vertical	4.54 dB (k=2, 95% level of confidence)
200MHz~1GHz	Horizontal	4.84 dB (k=2, 95% level of confidence)
	Vertical	5.91 dB (k=2, 95% level of confidence)
1 GHz~6 GHz	Horizontal/Vertical	4.68 dB (k=2, 95% level of confidence)
Above 6 GHz	Horizontal/Vertical	4.92 dB (k=2, 95% level of confidence)

EUT Setup



The radiated emission tests were performed in the 3 meters test site, using the setup accordance with the ANSI C63.4-2009. The specification used was the FCC 15.209, and FCC 15.247 limits.

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	100 kHz	300 kHz	120 kHz	QP
Above 1 GHz	1MHz	3 MHz	/	PK
	1MHz	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.

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
HP	Amplifier	8447E	1937A01046	2012-11-24	2013-11-23
Rohde & Schwarz	EMI Test Receiver	ESCI	101122	2013-05-09	2014-05-09
Sunol Sciences	Broadband Antenna	JB1	A040904-2	2011-11-28	2014-11-27
SUPER ULTRA	Amplifier	ZVA-213+	N/A	2012-11-24	2013-11-23
Sunol Sciences	Horn Antenna	DRH-118	A052304	2011-12-01	2014-11-30
Rohde & Schwarz	Signal Analyzer	FSIQ26	8386001028	2012-11-24	2013-11-23
the electro-Mechanics Co.	Horn Antenna	3116	9510-2270	2010-10-14	2013-10-13

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

Corrected Amplitude & Margin Calculation

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

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

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

Margin = Limit – Corrected Amplitude

Test Results Summary

According to the recorded data in following table, with the worst margin reading of:

6.64 dB at **4924 MHz** in the **Horizontal** polarization for 802.11b Mode

Refer to CISPR16-4-2:2011 and CISPR 16-4-1:2009, the measured level is in compliance with the limit if

$$L_m + U_{(Lm)} \leq L_{lim} + U_{cispr}$$

In BACL, $U_{(Lm)}$ is less than U_{cispr}, if L_m is less than L_{lim}, it implies that the EUT complies with the limit.

Test Data

Environmental Conditions

Temperature:	25 ℃
Relative Humidity:	56 %
ATM Pressure:	100.0 kPa

The testing was performed by Simon Wang on 2013-05-14.

EUT operation mode: Transmitting

30 MHz-25 GHz:

802.11b Mode:

Frequency (MHz)	Receiver		Turntable Degree	Rx Antenna		Corrected Factor (dB)	Corrected Amplitude (dBμV/m)	FCC Part 15.247/205/209	
	Reading (dBμV)	Detector (PK/QP/Ave.)		Height (m)	Polar (H/V)			Limit (dBμV/m)	Margin (dB)
Low Channel (2412 MHz)									
283.5	46.46	QP	180	1.2	H	-14.3	32.16	46	13.84
2412	91.35	PK	131	1.5	H	6.13	97.48	/	/
2412	87.20	Ave.	131	1.5	H	6.13	93.33	/	/
2412	100.08	PK	16	1.3	V	6.13	106.21	/	/
2412	95.37	Ave.	16	1.3	V	6.13	101.5	/	/
4824	33.52	Ave.	233	1.4	V	12.40	45.92	54	8.08
2485..3	32.01	Ave.	336	1.5	V	7.21	39.22	54	14.78
7236	22.35	Ave.	175	1.0	V	16.62	38.97	54	15.03
2332.1	32.22	Ave.	95	1.1	V	5.48	37.70	54	16.30
2263.7	31.13	Ave.	112	1.4	H	4.99	36.12	54	17.88
4824	42.14	PK	233	1.4	V	12.40	54.54	74	19.46
7236	35.61	PK	175	1.0	V	16.62	52.23	74	21.77
2332.1	45.87	PK	95	1.1	V	5.48	51.35	74	22.65
2263.7	46.32	PK	112	1.4	H	4.99	51.31	74	22.69
2485.3	43.51	PK	336	1.5	V	7.21	50.72	74	23.28
Middle Channel (2437 MHz)									
283.5	46.68	QP	180	1.2	H	-14.3	32.38	46	13.62
2437	89.02	PK	66	1.1	H	7.21	96.23	/	/
2437	84.97	Ave.	66	1.1	H	7.21	92.18	/	/
2437	98.76	PK	157	1.5	V	7.21	105.97	/	/
2437	96.42	Ave.	157	1.5	V	7.21	103.63	/	/
4874	33.33	Ave.	331	1.4	V	12.46	45.79	54	8.21
2382.6	32.12	Ave.	348	1.5	V	6.13	38.25	54	15.75
2485.8	30.69	Ave.	80	1.1	H	7.21	37.90	54	16.10
2215.4	31.17	Ave.	360	1.4	V	4.40	35.57	54	18.43
4874	42.56	PK	331	1.4	V	12.46	55.02	74	18.98
7311	17.83	Ave.	142	1.2	V	16.49	34.32	54	19.68
2382.6	47.01	PK	348	1.5	V	6.13	53.14	74	20.86
2485.8	45.43	PK	80	1.1	H	7.21	52.64	74	21.36
2215.4	47.32	PK	360	1.4	V	4.40	51.72	74	22.28
7311	34.48	PK	142	1.2	V	16.49	50.97	74	23.03

Frequency (MHz)	Receiver		Turntable Degree	Rx Antenna		Corrected Factor (dB)	Corrected Amplitude (dBμV/m)	FCC Part 15.247/205/209	
	Reading (dBμV)	Detector (PK/QP/Ave.)		Height (m)	Polar (H/V)			Limit (dBμV/m)	Margin (dB)
High Channel (2462 MHz)									
283.5	46.57	QP	180	1.2	H	-14.3	32.27	46	13.73
2462	89.27	PK	146	1.3	H	7.21	96.48	/	/
2462	83.53	Ave.	146	1.3	H	7.21	90.74	/	/
2462	99.87	PK	250	1.2	V	7.21	107.08	/	/
2462	95.56	Ave.	250	1.2	V	7.21	102.77	/	/
4924	34.86	Ave.	99	1.1	H	12.50	47.36	54	6.64
2496.5	32.51	Ave.	98	1.0	V	7.21	39.72	54	14.28
2394.1	33.12	Ave.	212	1.4	H	6.13	39.25	54	14.75
7386	23.06	Ave.	87	1.1	H	15.91	38.97	54	15.03
4924	43.78	PK	99	1.1	H	12.50	56.28	74	17.72
2496.5	47.89	PK	98	1.0	V	7.21	55.10	74	18.90
2241.7	29.88	Ave.	182	1.1	V	4.40	34.28	54	19.72
2394.1	47.03	PK	212	1.4	H	6.13	53.16	74	20.84
2241.7	46.58	PK	182	1.1	V	4.40	50.98	74	23.02
7386	35.02	PK	87	1.1	H	15.91	50.93	74	23.07

802.11g Mode:

Frequency (MHz)	Receiver		Turntable Degree	Rx Antenna		Corrected Factor (dB)	Corrected Amplitude (dBμV/m)	FCC Part 15.247/205/209	
	Reading (dBμV)	Detector (PK/QP/Ave.)		Height (m)	Polar (H/V)			Limit (dBμV/m)	Margin (dB)
Low Channel (2412 MHz)									
283.5	47.19	QP	180	1.2	H	-14.3	32.89	46	13.11
2412	86.01	PK	263	1.4	H	6.13	92.14	/	/
2412	78.46	Ave.	263	1.4	H	6.13	84.59	/	/
2412	98.34	PK	91	1.2	V	6.13	104.47	/	/
2412	90.90	Ave.	91	1.2	V	6.13	97.03	/	/
4824	33.57	Ave.	207	1.2	V	12.40	45.97	54	8.03
2488.7	33.09	Ave.	55	1.0	H	7.21	40.30	54	13.70
7236	22.71	Ave.	85	1.1	H	16.62	39.33	54	14.67
2272.6	32.45	Ave.	35	1.3	V	4.99	37.44	54	16.56
2359.3	31.96	Ave.	109	1.1	H	5.48	37.44	54	16.56
4824	42.35	PK	207	1.2	V	12.40	54.75	74	19.25
2488.7	47.11	PK	55	1.0	H	7.21	54.32	74	19.68
2359.3	46.04	PK	109	1.1	H	5.48	51.52	74	22.48
2272.6	45.78	PK	35	1.3	V	4.99	50.77	74	23.23
7236	33.49	PK	85	1.1	H	16.62	50.11	74	23.89
Middle Channel (2437 MHz)									
283.5	46.72	QP	180	1.2	H	-14.3	32.42	46	13.58
2437	85.90	PK	121	1.1	H	6.13	92.03	/	/
2437	78.96	Ave.	121	1.1	H	6.13	85.09	/	/
2437	97.99	PK	69	1.3	V	6.13	104.12	/	/
2437	90.37	Ave.	69	1.3	V	6.13	96.5	/	/
4874	33.77	Ave.	94	1.0	V	12.46	46.23	54	7.77
7311	23.33	Ave.	245	1.5	H	16.49	39.82	54	14.18
2496.5	32.12	Ave.	13	1.5	V	7.21	39.33	54	14.67
2332.8	31.85	Ave.	49	1.3	V	5.48	37.33	54	16.67
2251.3	31.44	Ave.	258	1.3	H	4.99	36.43	54	17.57
4874	41.57	PK	94	1.0	V	12.46	54.03	74	19.97
2332.8	47.01	PK	49	1.3	V	5.48	52.49	74	21.51
2251.3	46.53	PK	258	1.3	H	4.99	51.52	74	22.48
2496.5	42.31	PK	13	1.5	V	7.21	49.52	74	24.48
7311	32.54	PK	245	1.5	H	16.49	49.03	74	24.97

Frequency (MHz)	Receiver		Turntable Degree	Rx Antenna		Corrected Factor (dB)	Corrected Amplitude (dBμV/m)	FCC Part 15.247/205/209	
	Reading (dBμV)	Detector (PK/QP/Ave.)		Height (m)	Polar (H/V)			Limit (dBμV/m)	Margin (dB)
High Channel (2462 MHz)									
283.5	46.39	QP	180	1.2	H	-14.3	32.09	46	13.91
2462	89.02	PK	112	1.1	H	7.21	96.23	/	/
2462	80.97	Ave.	112	1.1	H	7.21	88.18	/	/
2462	99.44	PK	57	1.2	V	7.21	106.65	/	/
2462	90.99	Ave.	57	1.2	V	7.21	98.2	/	/
4924	34.05	Ave.	65	1.2	V	12.50	46.55	54	7.45
2712.5	32.18	Ave.	225	1.2	H	7.93	40.11	54	13.89
2257.3	33.53	Ave.	274	1.4	V	4.99	38.52	54	15.48
2348.9	31.96	Ave.	359	1.0	V	5.48	37.44	54	16.56
7386	21.09	Ave.	289	1.0	H	15.91	37.00	54	17.00
2712.5	48.01	PK	225	1.2	H	7.93	55.94	74	18.06
4924	43.21	PK	65	1.2	V	12.50	55.71	74	18.29
2257.3	45.81	PK	274	1.4	V	4.99	50.80	74	23.2
2348.9	44.75	PK	359	1.0	V	5.48	50.23	74	23.77
7386	33.16	PK	289	1.0	H	15.91	49.07	74	24.93

802.11n-HT20 Mode:

Frequency (MHz)	Receiver		Turntable Degree	Rx Antenna		Corrected Factor (dB)	Corrected Amplitude (dBμV/m)	FCC Part 15.247/205/209	
	Reading (dBμV)	Detector (PK/QP/Ave.)		Height (m)	Polar (H/V)			Limit (dBμV/m)	Margin (dB)
Low Channel (2412 MHz)									
283.5	46.26	QP	180	1.2	H	-14.3	31.96	46	14.04
2412	86.54	PK	28	1.2	H	6.13	92.67	/	/
2412	79.59	Ave.	28	1.2	H	6.13	85.72	/	/
2412	97.62	PK	101	1.1	V	6.13	103.75	/	/
2412	91	Ave.	101	1.1	V	6.13	97.13	/	/
4824	34.62	Ave.	342	1.5	H	12.40	47.02	54	6.98
7236	24.11	Ave.	35	1.2	V	16.62	40.73	54	13.27
2732.2	32.53	Ave.	116	1.2	H	7.93	40.46	54	13.54
2378.9	32.45	Ave.	262	1.4	V	6.13	38.58	54	15.42
2265.1	31.09	Ave.	104	1.3	H	4.99	36.08	54	17.92
2732.2	45.95	PK	116	1.2	H	7.93	53.88	74	20.12
4824	40.66	PK	342	1.5	H	12.40	53.06	74	20.94
2378.9	46.32	PK	262	1.4	V	6.13	52.45	74	21.55
2265.1	44.89	PK	104	1.3	H	4.99	49.88	74	24.12
7236	31.99	PK	35	1.2	V	16.62	48.61	74	25.39
Middle Channel (2437 MHz)									
283.5	46.65	QP	180	1.2	H	-14.3	32.35	46	13.65
2437	85.49	PK	283	1.4	H	6.13	91.62	/	/
2437	79.03	Ave.	283	1.4	H	6.13	85.16	/	/
2437	96.77	PK	24	1.3	V	6.13	102.9	/	/
2437	90.49	Ave.	24	1.3	V	6.13	96.62	/	/
4874	34.89	Ave.	338	1.1	V	12.46	47.35	54	6.65
2492.1	32.97	Ave.	147	1.4	H	7.21	40.18	54	13.82
7311	23.18	Ave.	110	1.0	H	16.49	39.67	54	14.33
2213.5	33.54	Ave.	0	1.2	V	4.40	37.94	54	16.06
2342.8	32.22	Ave.	201	1.2	H	5.48	37.70	54	16.3
2492.1	47.33	PK	147	1.4	H	7.21	54.54	74	19.46
4874	40.06	PK	338	1.1	V	12.46	52.52	74	21.48
2342.8	45.93	PK	201	1.2	H	5.48	51.41	74	22.59
2213.5	46.18	PK	0	1.2	V	4.40	50.58	74	23.42
7311	32.76	PK	110	1.0	H	16.49	49.25	74	24.75

Frequency (MHz)	Receiver		Turntable Degree	Rx Antenna		Corrected Factor (dB)	Corrected Amplitude (dBμV/m)	FCC Part 15.247/205/209	
	Reading (dBμV)	Detector (PK/QP/Ave.)		Height (m)	Polar (H/V)			Limit (dBμV/m)	Margin (dB)
High Channel (2462 MHz)									
283.5	47.01	QP	180	1.2	H	-14.3	32.71	46	13.29
2462	83.83	PK	161	1.5	H	7.21	91.04	/	/
2462	78.53	Ave.	161	1.5	H	7.21	85.74	/	/
2462	96.66	PK	298	1.4	V	7.21	103.87	/	/
2462	89.42	Ave.	298	1.4	V	7.21	96.63	/	/
4924	34.22	Ave.	348	1.2	H	12.50	46.72	54	7.28
7386	23.43	Ave.	40	1.0	H	15.91	39.34	54	14.66
2498.7	31.26	Ave.	72	1.4	V	7.59	38.85	54	15.15
2486.6	30.65	Ave.	60	1.2	V	7.21	37.86	54	16.14
2498.7	49.14	PK	72	1.4	V	7.59	56.73	74	17.27
2331.8	30.54	Ave.	249	1.4	V	5.48	36.02	54	17.98
2486.6	48.71	PK	60	1.2	V	7.21	55.92	74	18.08
4924	41.76	PK	348	1.2	H	12.50	54.26	74	19.74
2331.8	46.36	PK	249	1.4	V	5.48	51.84	74	22.16
7386	32.81	PK	40	1.0	H	15.91	48.72	74	25.28

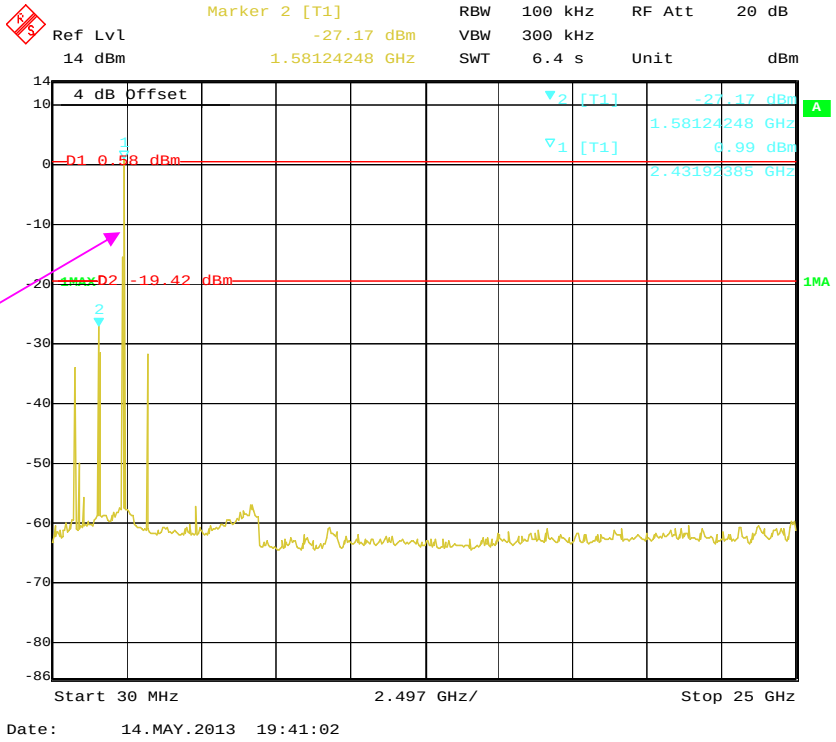
802.11n-HT40 Mode:

Frequency (MHz)	Receiver		Turntable Degree	Rx Antenna		Corrected Factor (dB)	Corrected Amplitude (dBμV/m)	FCC Part 15.247/205/209	
	Reading (dBμV)	Detector (PK/QP/Ave.)		Height (m)	Polar (H/V)			Limit (dBμV/m)	Margin (dB)
Low Channel (2422 MHz)									
283.5	46.71	QP	180	1.2	H	-14.3	32.41	46	13.59
2422	82.56	PK	356	1.5	H	6.13	88.69	/	/
2422	76.55	Ave.	356	1.5	H	6.13	82.68	/	/
2422	94.45	PK	78	1.4	V	6.13	100.58	/	/
2422	88.25	Ave.	78	1.4	V	6.13	94.38	/	/
4844	34.29	Ave.	194	1.2	H	12.40	46.69	54	7.31
2490.2	33.47	Ave.	327	1.1	H	7.21	40.68	54	13.32
2387.5	32.99	Ave.	291	1.5	V	6.13	39.12	54	14.88
2333.4	32.75	Ave.	61	1.3	H	5.48	38.23	54	15.77
7266	21.57	Ave.	354	1.1	H	16.62	38.19	54	15.81
2490.2	46.55	PK	327	1.1	H	7.21	53.76	74	20.24
2333.4	48.15	PK	61	1.3	H	5.48	53.63	74	20.37
2387.5	47.24	PK	291	1.5	V	6.13	53.37	74	20.63
4844	40.65	PK	194	1.2	H	12.40	53.05	74	20.95
7266	33.14	PK	354	1.1	H	16.62	49.76	74	24.24
Middle Channel (2437 MHz)									
283.5	47.21	QP	180	1.2	H	-14.3	32.91	46	13.09
2437	83.05	PK	68	1.0	H	6.13	89.18	/	/
2437	76.65	Ave.	68	1.0	H	6.13	82.78	/	/
2437	95.19	PK	24	1.3	V	6.13	101.32	/	/
2437	87.97	Ave.	24	1.3	V	6.13	94.1	/	/
4874	33.85	Ave.	360	1.2	V	12.46	46.31	54	7.69
2732..3	32.11	Ave.	42	1.2	H	7.93	40.04	54	13.96
7311	21.08	Ave.	111	1.2	H	16.49	37.57	54	16.43
2271.1	32.08	Ave.	265	1.2	H	4.99	37.07	54	16.93
2315.6	31.53	Ave.	121	1.0	H	5.48	37.01	54	16.99
4874	40.99	PK	360	1.2	V	12.46	53.45	74	20.55
2732.3	43.82	PK	42	1.2	H	7.93	51.75	74	22.25
2271.1	45.27	PK	265	1.2	H	4.99	50.26	74	23.74
7311	32.83	PK	111	1.2	H	16.49	49.32	74	24.68
2315.6	42.24	PK	121	1.0	H	5.48	47.72	74	26.28

Frequency (MHz)	Receiver		Turntable Degree	Rx Antenna		Corrected Factor (dB)	Corrected Amplitude (dBμV/m)	FCC Part 15.247/205/209	
	Reading (dBμV)	Detector (PK/QP/Ave.)		Height (m)	Polar (H/V)			Limit (dBμV/m)	Margin (dB)
High Channel (2452 MHz)									
283.5	46.54	QP	180	1.2	H	-14.3	32.24	46	13.76
2452	83.56	PK	291	1.3	H	7.21	90.77	/	/
2452	77.75	Ave.	291	1.3	H	7.21	84.96	/	/
2452	95.63	PK	56	1.1	V	7.21	102.84	/	/
2452	88.81	Ave.	56	1.1	V	7.21	96.02	/	/
4904	34.19	Ave.	104	1.2	V	12.46	46.65	54	7.35
2735.1	33.08	Ave.	68	1.3	H	7.93	41.01	54	12.99
2282.2	33.05	Ave.	339	1.1	V	4.99	38.04	54	15.96
7356	22.03	Ave.	265	1.4	H	15.91	37.94	54	16.06
2333.7	32.38	Ave.	205	1.2	H	5.48	37.86	54	16.14
2735.1	47.11	PK	68	1.3	H	7.93	55.04	74	18.96
2282.2	48.19	PK	339	1.1	V	4.99	53.18	74	20.82
2333.7	47.69	PK	205	1.2	H	5.48	53.17	74	20.83
4904	39.57	PK	104	1.2	V	12.46	52.03	74	21.97
7356	32.14	PK	265	1.4	H	15.91	48.05	74	25.95

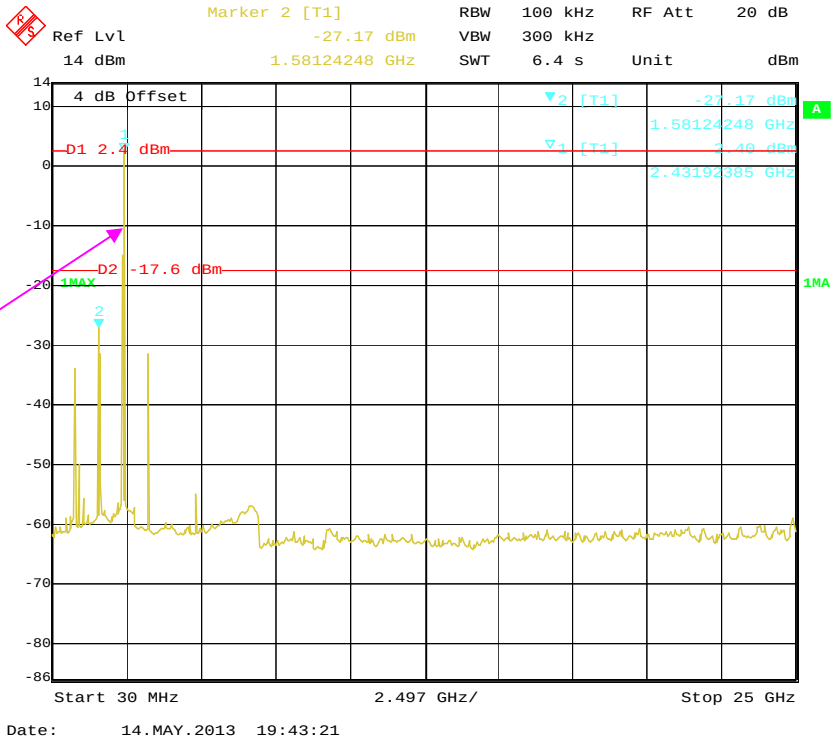
Conducted Spurious Emissions at Antenna Port:

802.11b Low Channel



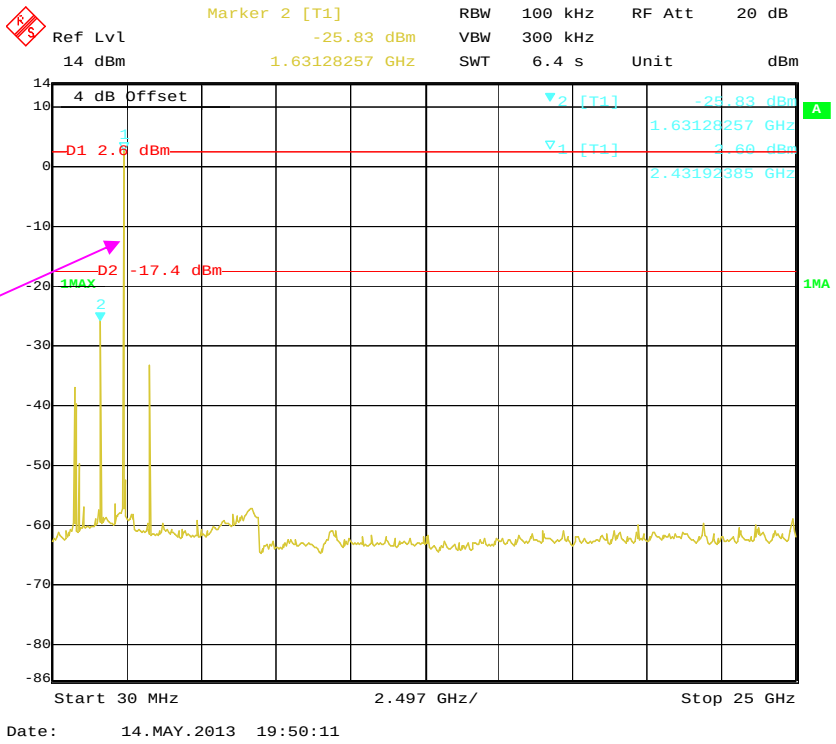
Fundamental

802.11b Middle Channel



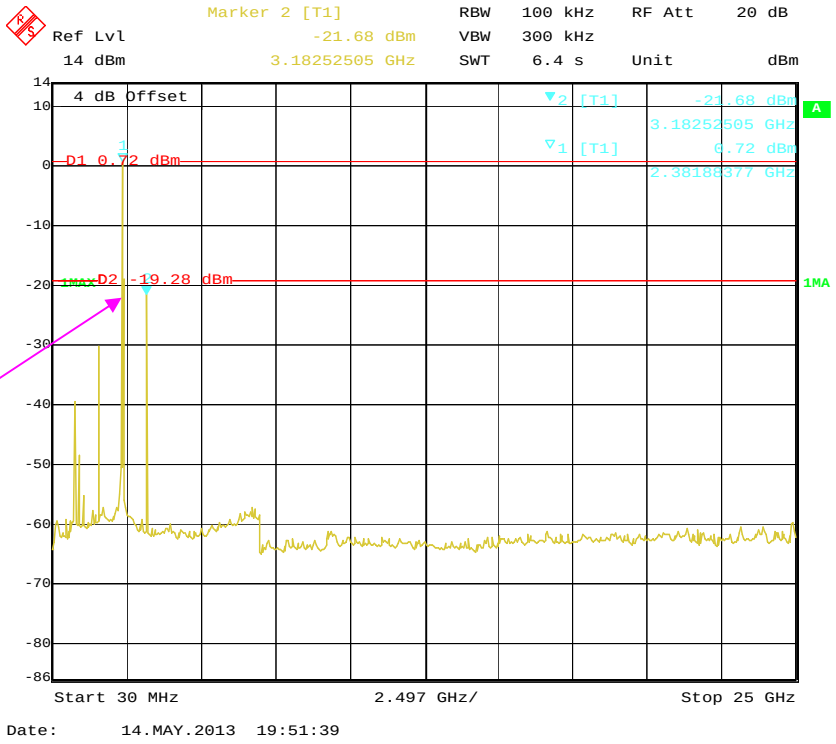
Fundamental

802.11b High Channel



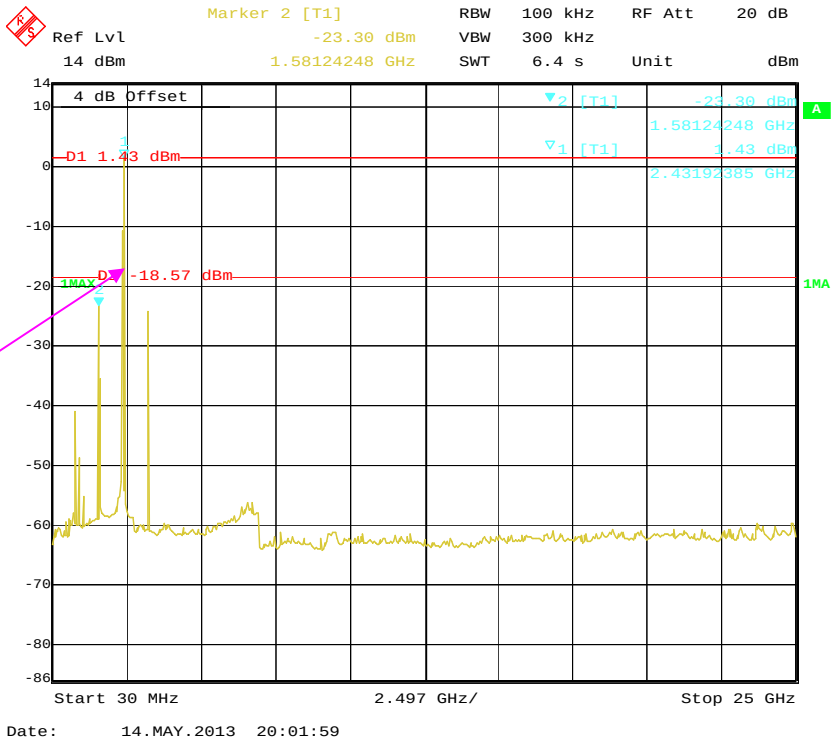
Fundamental

802.11g Low Channel



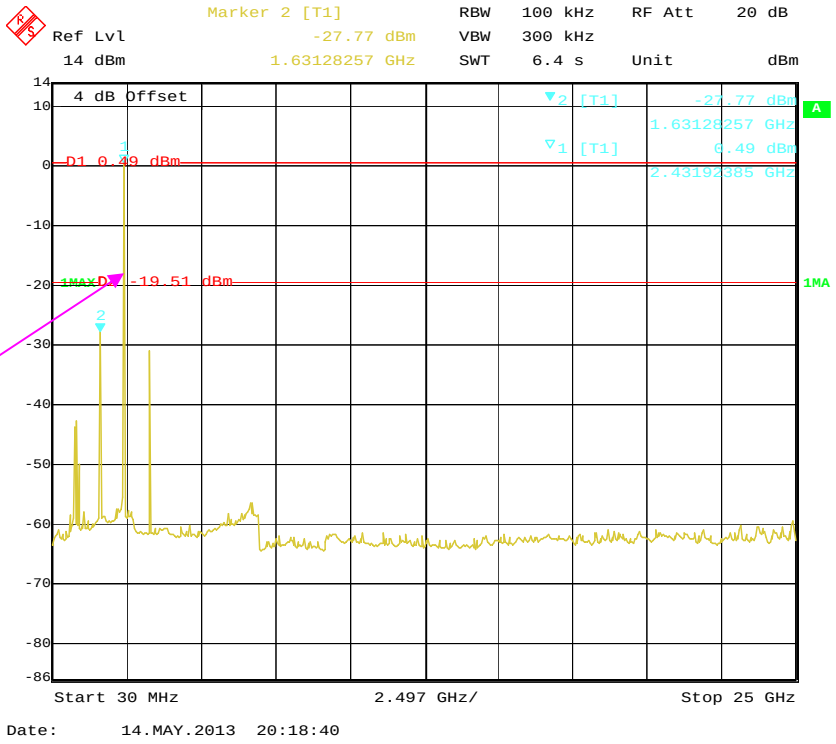
Fundamental

802.11g Middle Channel



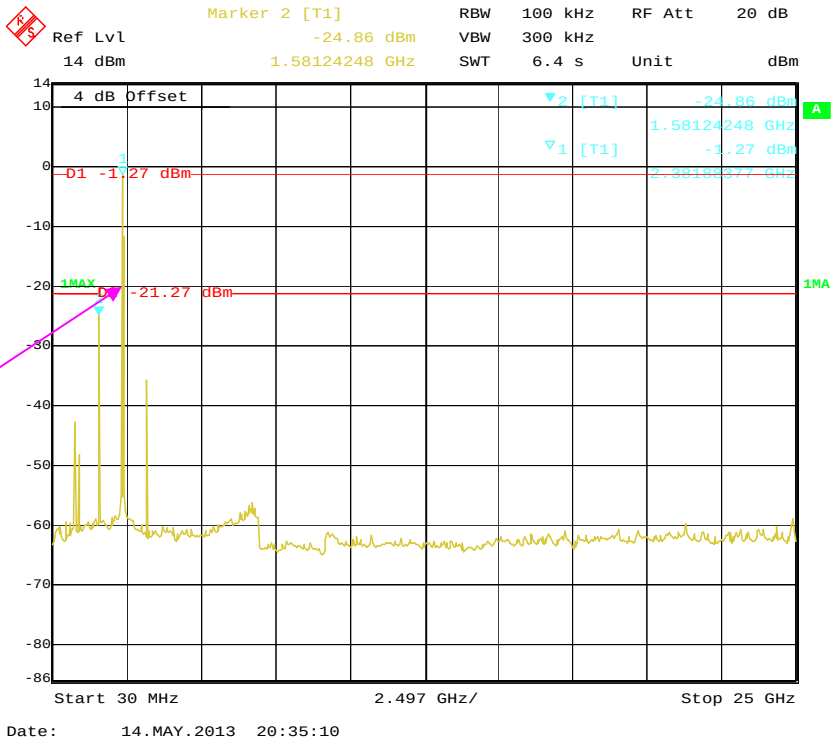
Fundamental

802.11g High Channel



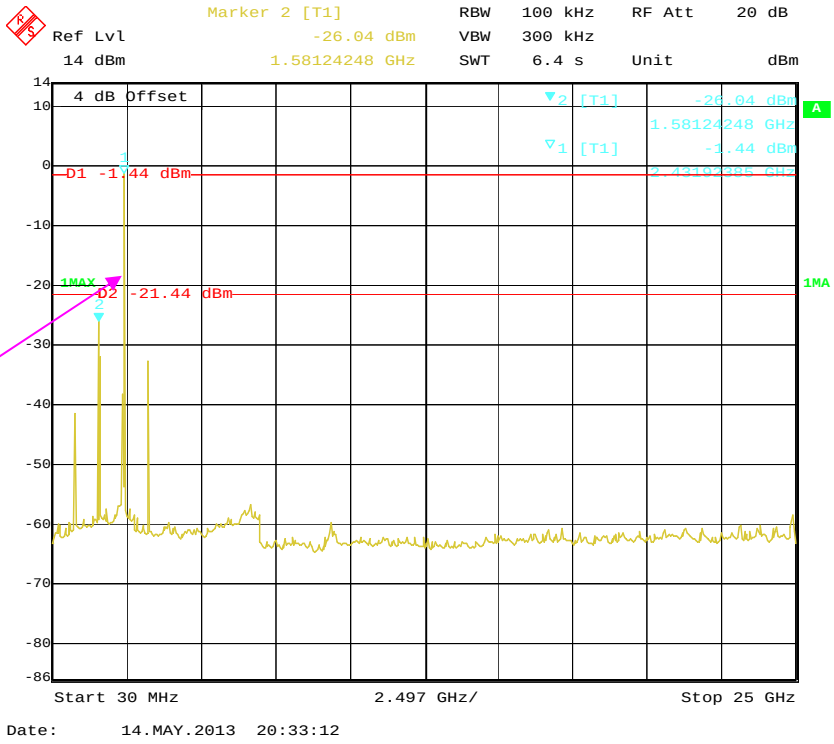
Fundamental

802.11n-HT20 Low Channel



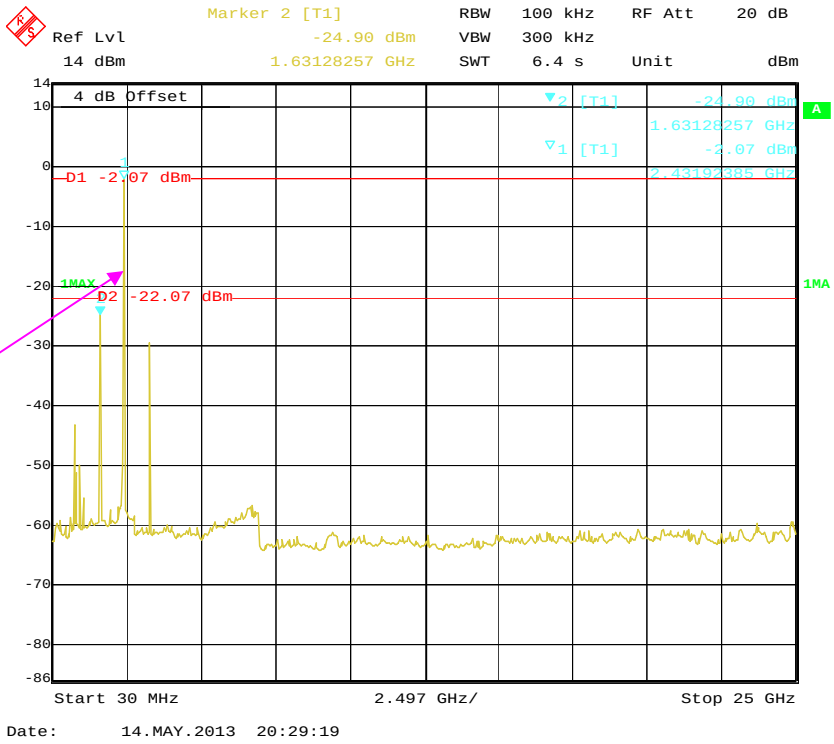
Fundamental

802.11n-HT20 Middle Channel



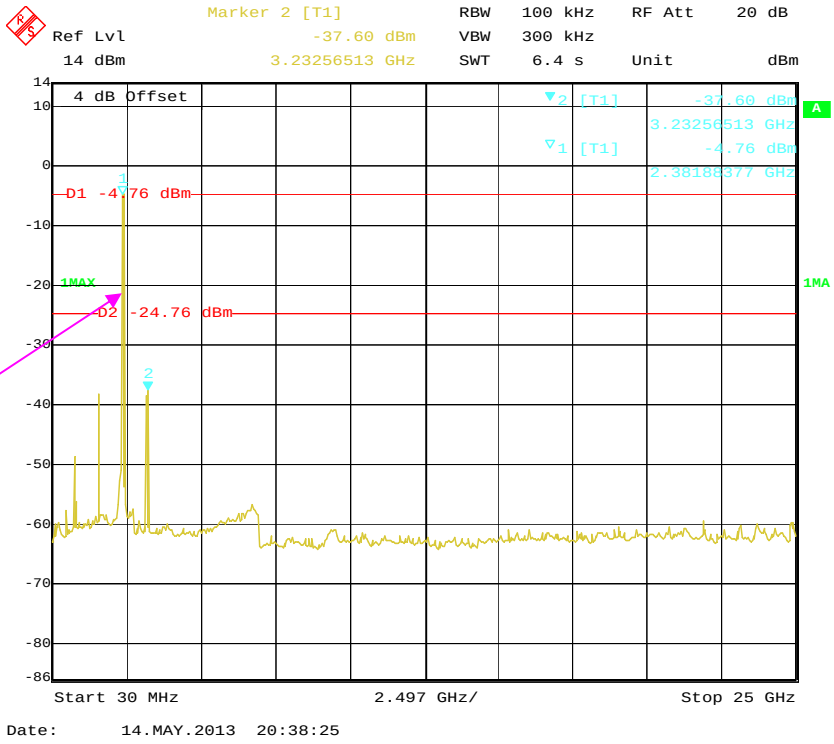
Fundamental

802.11n-HT20 High Channel



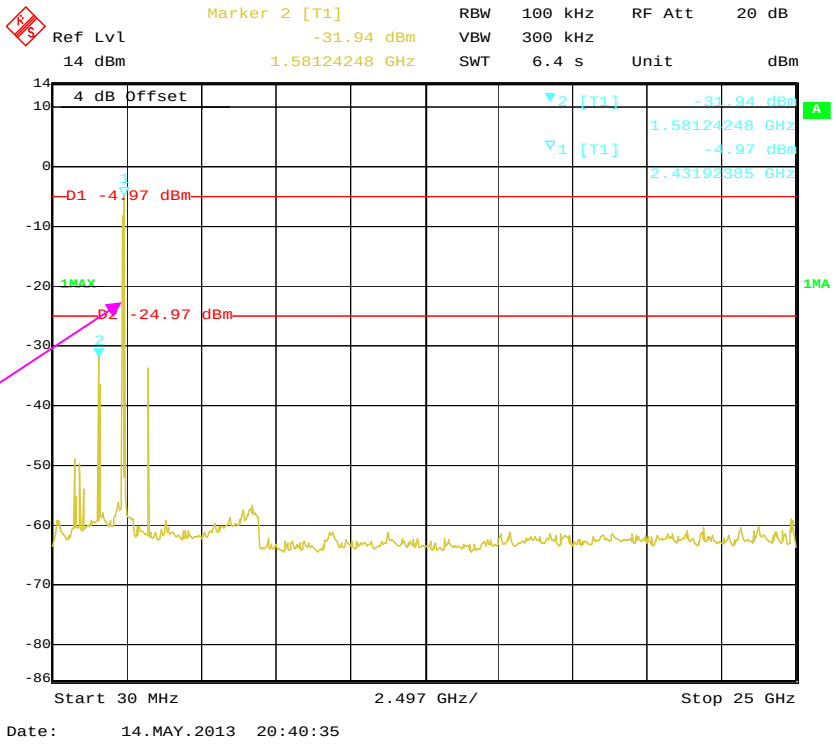
Fundamental

802.11n-HT40 Low Channel



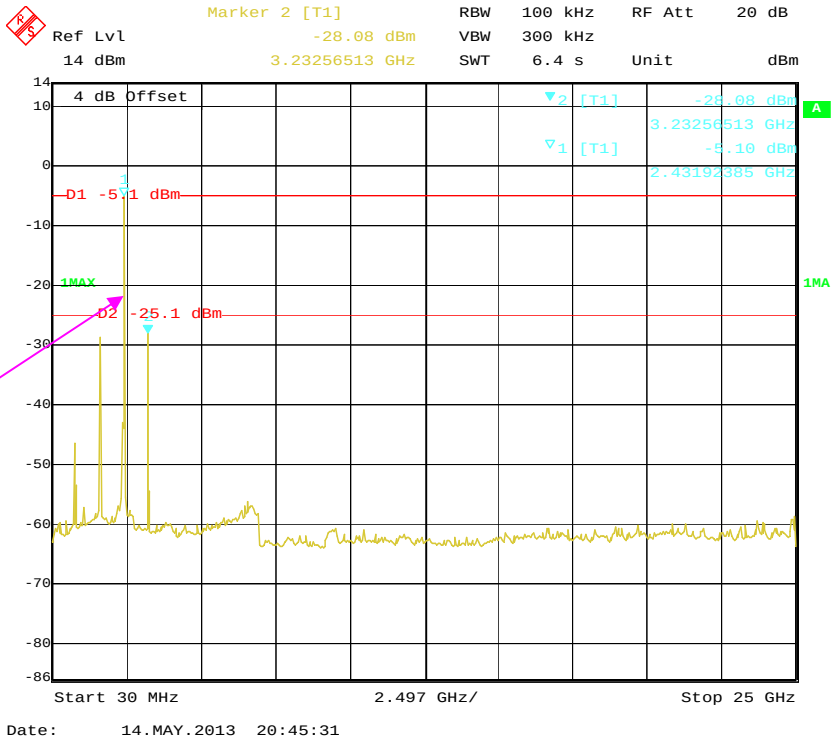
Fundamental

802.11n-HT40 Middle Channel



Fundamental

802.11n-HT40 High Channel



Fundamental

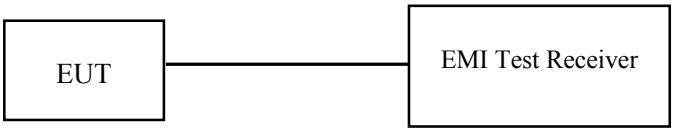
FCC §15.247(a) (2) – 6 dB EMISSION BANDWIDTH

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
Rohde & Schwarz	EMI Test Receiver	ESCI	101122	2013-05-09	2014-05-09

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

Test Data

Environmental Conditions

Temperature:	25 ℃
Relative Humidity:	56 %
ATM Pressure:	101.0kPa

The testing was performed by Simon Wang on 2013-05-13.

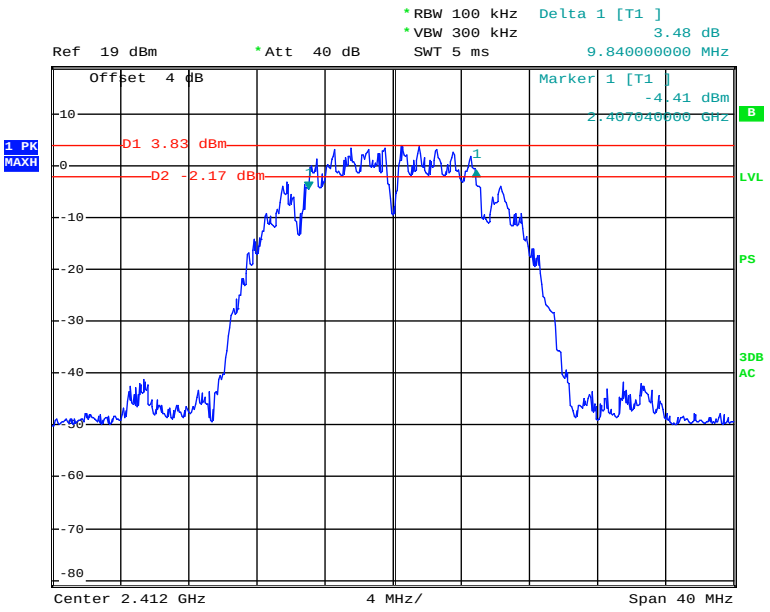
Test Result: Pass.

Please refer to the following tables and plots.

EUT operation mode: Transmitting

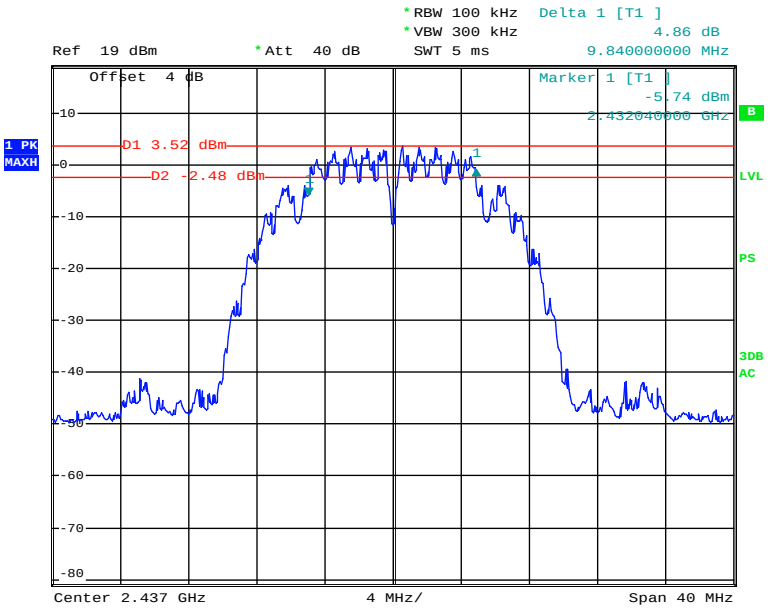
Channel	Channel Frequency (MHz)	Data Rate (Mbps)	6dB Emission Bandwidth (MHz)	FCC Part 15.247 Limit (kHz)
802.11b mode				
Low	2412	1	9.84	≥500
Middle	2437	1	9.84	≥500
High	2462	1	9.92	≥500
802.11g mode				
Low	2412	6	15.44	≥500
Middle	2437	6	15.44	≥500
High	2462	6	15.44	≥500
802.11n-HT20 mode				
Low	2412	MCS0	15.28	≥500
Middle	2437	MCS0	15.28	≥500
High	2462	MCS0	15.28	≥500
802.11n-HT40 mode				
Low	2422	MCS0	35.64	≥500
Middle	2437	MCS0	35.64	≥500
High	2452	MCS0	35.64	≥500

802.11b Low Channel



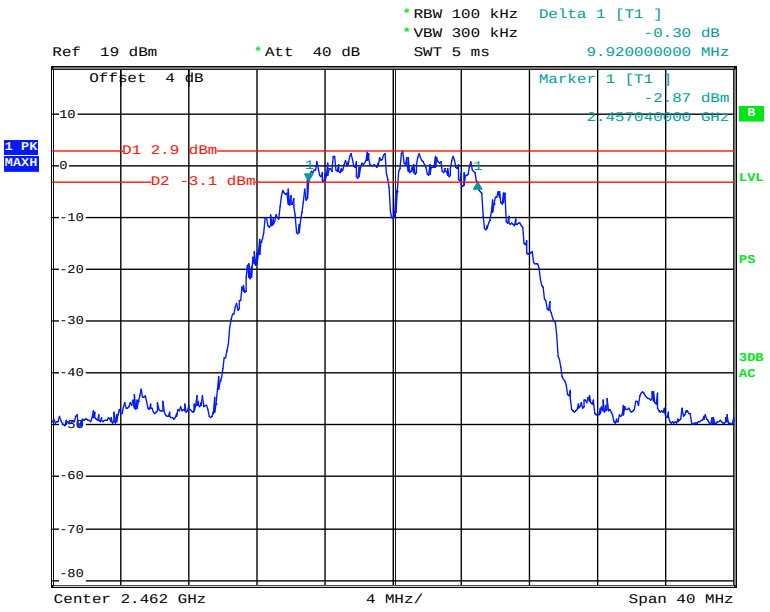
Date: 13.MAY.2013 23:33:45

802.11b Middle Channel



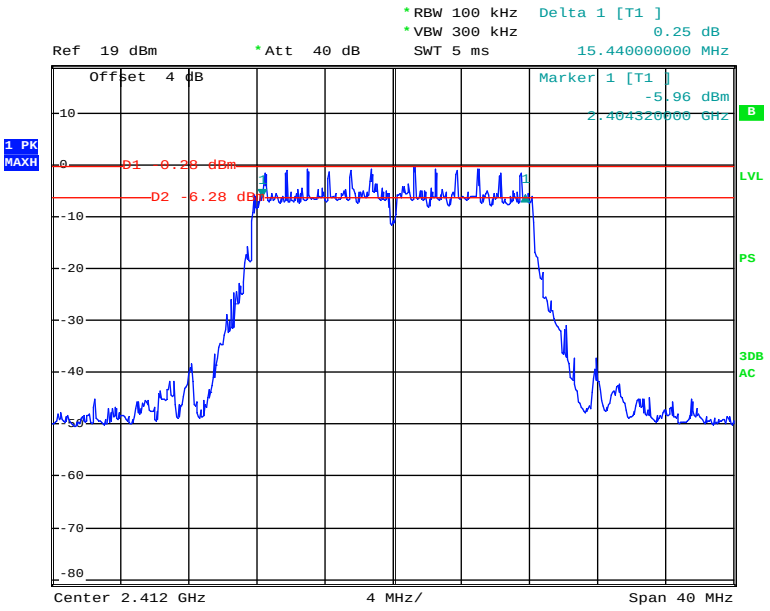
Date: 13.MAY.2013 23:36:56

802.11b High Channel



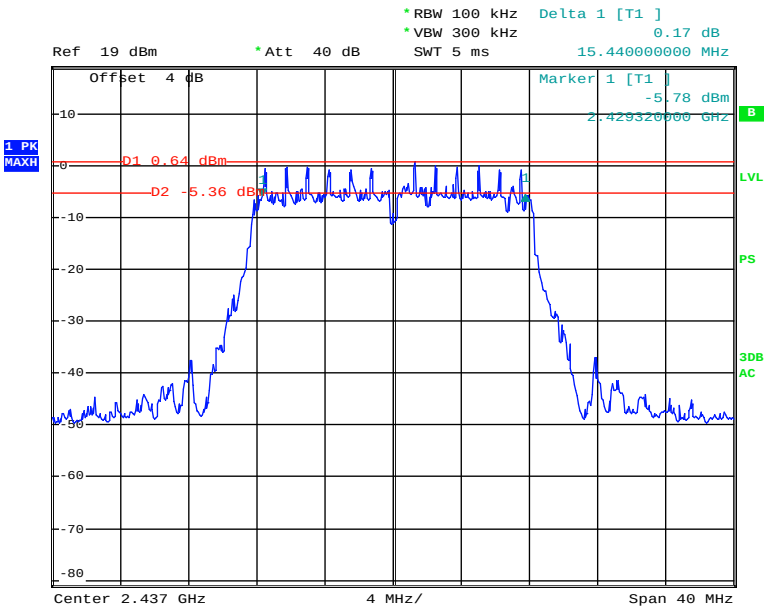
Date: 13.MAY.2013 23:38:37

802.11g Low Channel



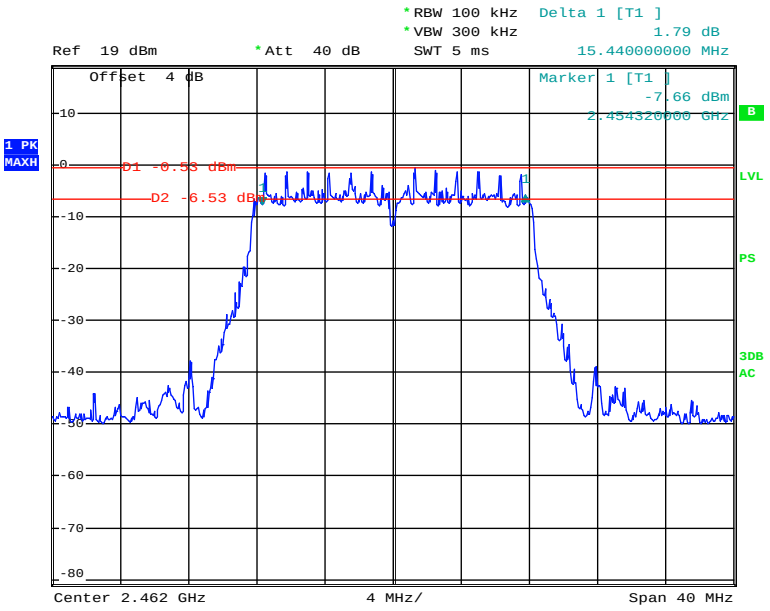
Date: 13.MAY.2013 23:31:22

802.11g Middle Channel



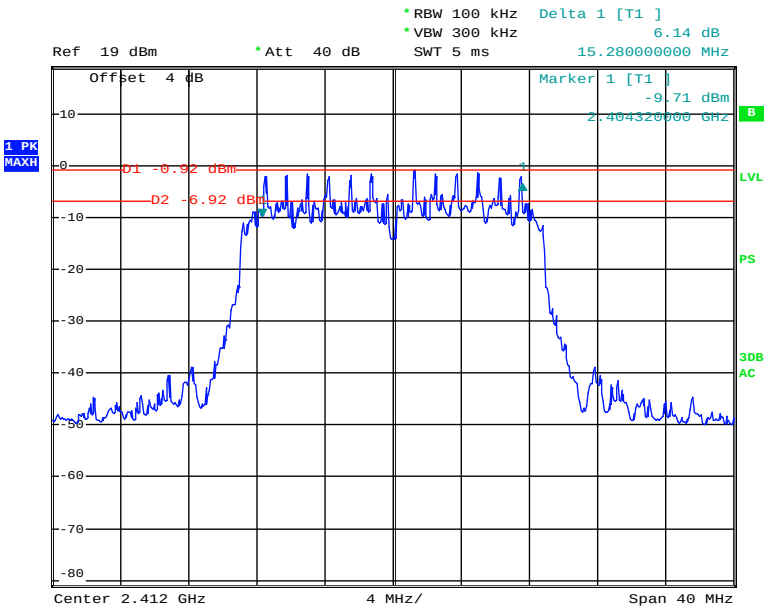
Date: 13.MAY.2013 23:28:41

802.11g High Channel



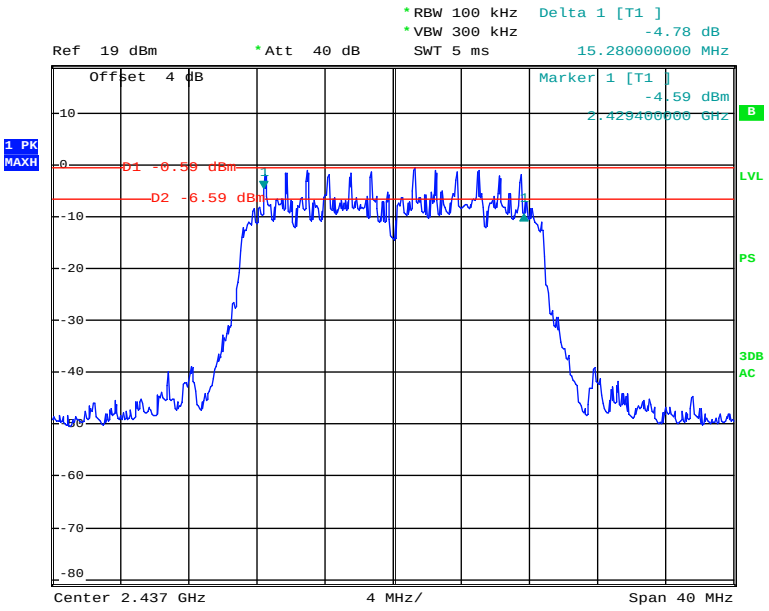
Date: 13.MAY.2013 23:30:23

802.11n-HT20 Low Channel



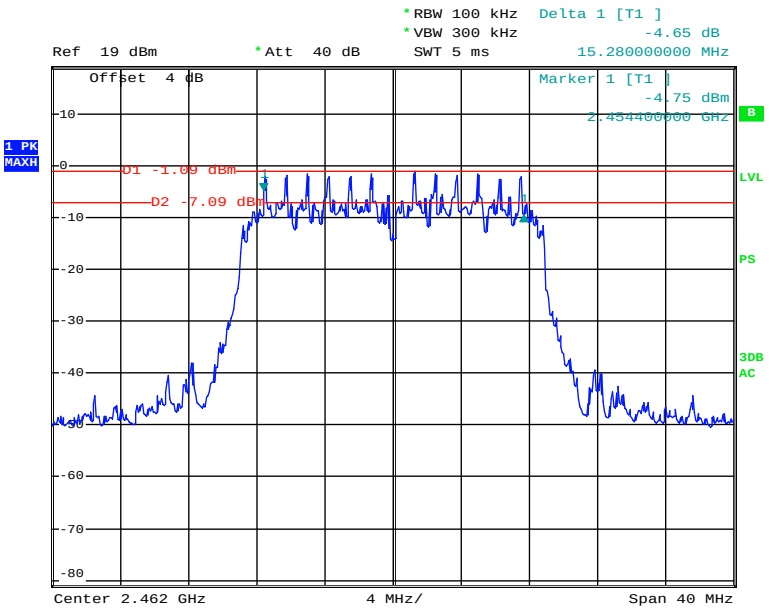
Date: 13.MAY.2013 23:20:42

802.11n-HT20 Middle Channel



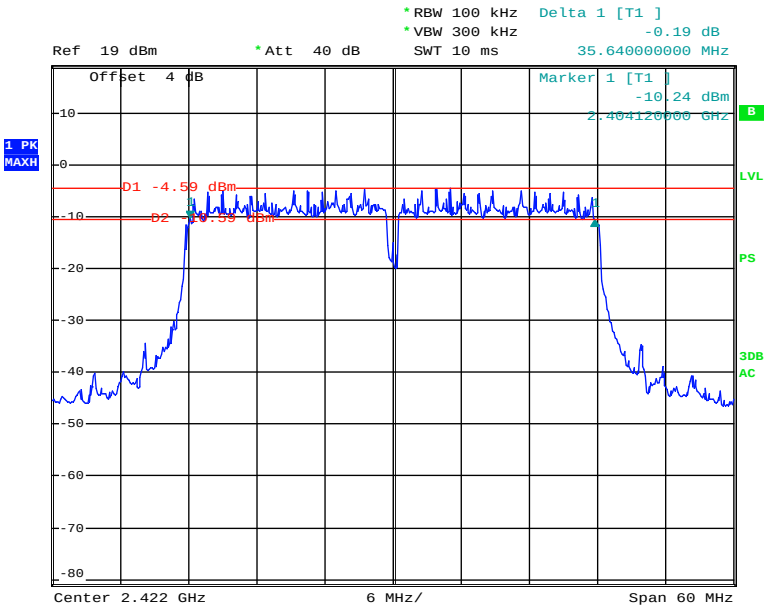
Date: 13.MAY.2013 23:22:13

802.11n-HT20 High Channel



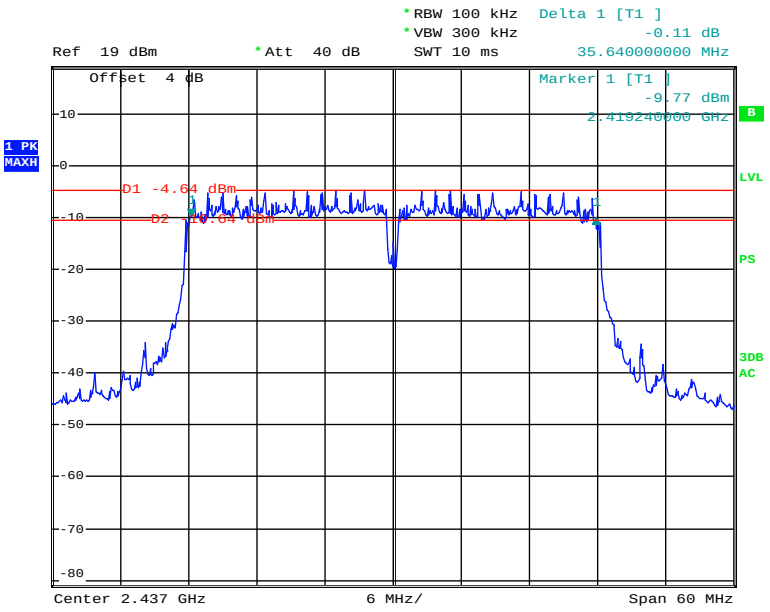
Date: 13.MAY.2013 23:23:25

802.11n-HT40 Low Channel



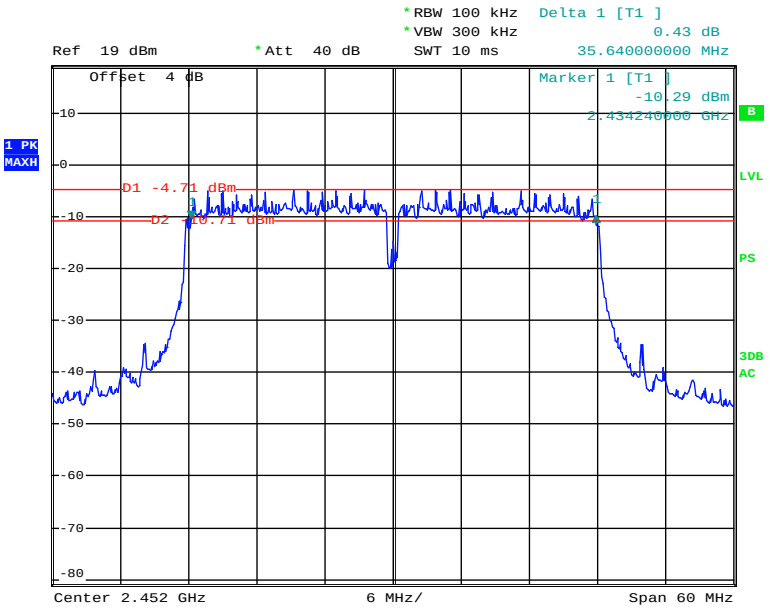
Date: 13.MAY.2013 23:40:59

802.11n-HT40 Middle Channel



Date: 13.MAY.2013 23:42:13

802.11n-HT40 High Channel



Date: 13.MAY.2013 23:44:10

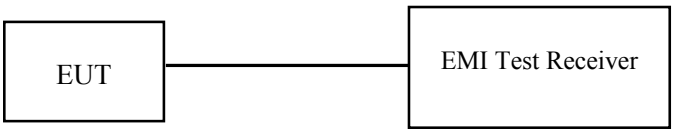
FCC §15.247(b) (3) - MAXIMUM PEAK OUTPUT POWER

Applicable Standard

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

Test Procedure

1. Place the EUT on a bench and set it in transmitting mode.
2. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to an EMI Test Receiver.
3. Add a correction factor to the display.



Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Rohde & Schwarz	EMI Test Receiver	ESCI	101122	2013-05-09	2014-05-09

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

Test Data

Environmental Conditions

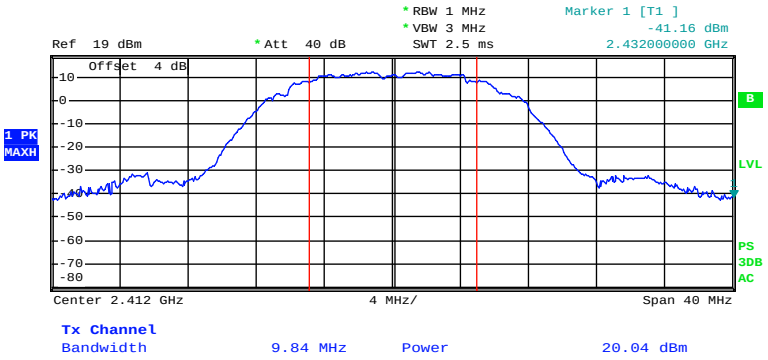
Temperature:	23~25 ℃
Relative Humidity:	50~56 %
ATM Pressure:	100.0 kPa

The testing was performed by Simon Wang on 2013-05-13 and 2013-05-14.

EUT operation mode: Transmitting

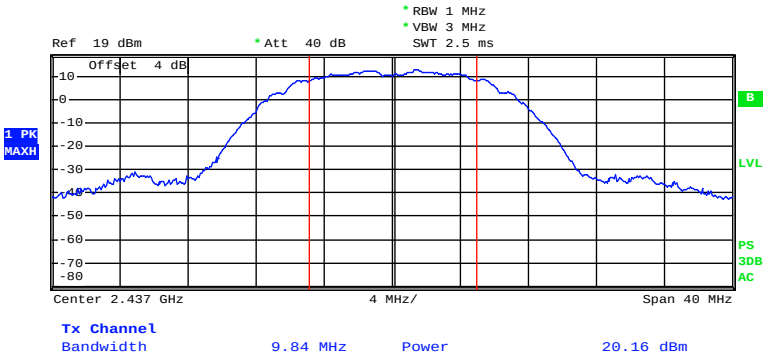
Channel	Frequency (MHz)	Data Rate (Mbps)	Reading Power (dBm)	Limit (dBm)	Result
802.11b mode					
Low	2412	1	20.04	30	Pass
Middle	2437	1	20.16	30	Pass
High	2462	1	20.14	30	Pass
802.11g mode					
Low	2412	6	19.64	30	Pass
Middle	2437	6	19.56	30	Pass
High	2462	6	19.58	30	Pass
802.11n-HT20 mode					
Low	2412	MCS0	18.08	30	Pass
Middle	2437	MCS0	18.06	30	Pass
High	2462	MCS0	18.04	30	Pass
802.11n-HT40 mode					
Low	2422	MCS0	17.83	30	Pass
Middle	2437	MCS0	17.96	30	Pass
High	2452	MCS0	17.51	30	Pass

802.11b RF Output Power, Low Channel



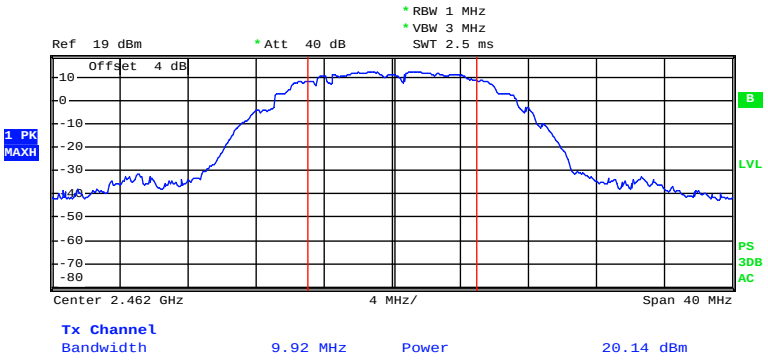
Date: 14.MAY.2013 00:00:41

802.11b RF Output Power, Middle Channel



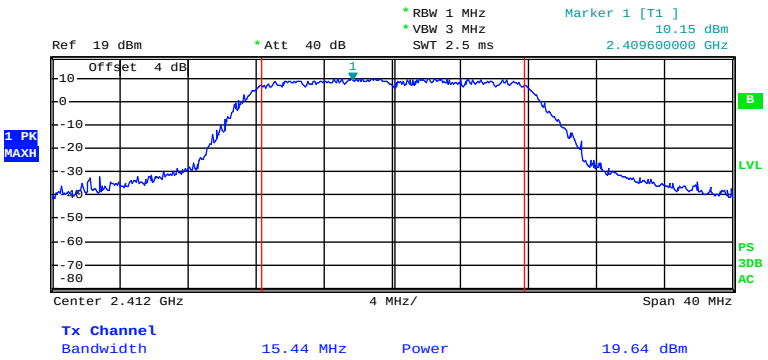
Date: 14.MAY.2013 00:02:15

802.11b RF Output Power, High Channel



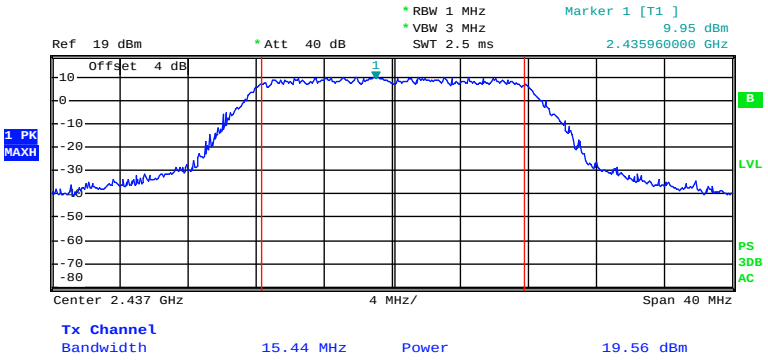
Date: 14.MAY.2013 00:03:31

802.11g RF Output Power, Low Channel



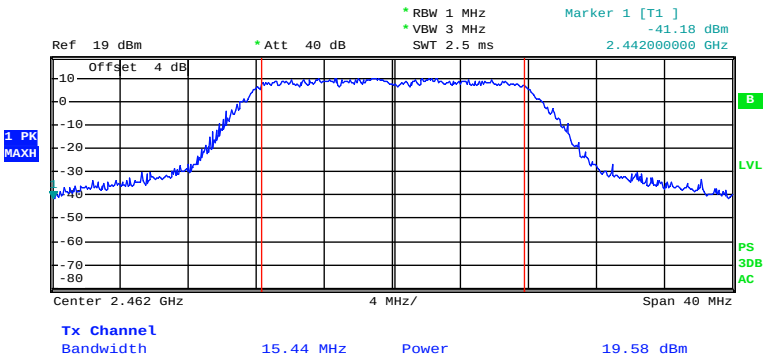
Date: 13.MAY.2013 23:55:51

802.11g RF Output Power, Middle Channel



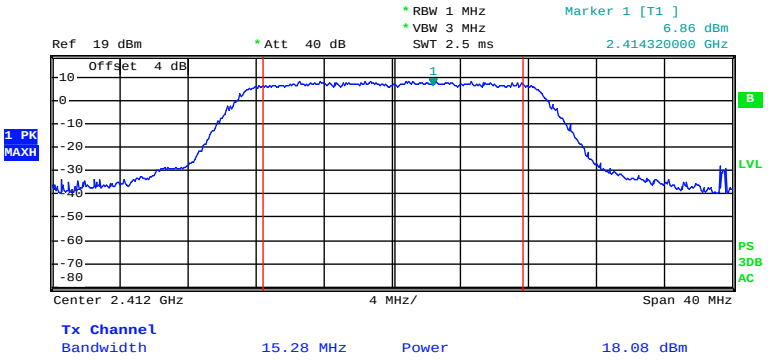
Date: 13.MAY.2013 23:57:13

802.11g RF Output Power, High Channel



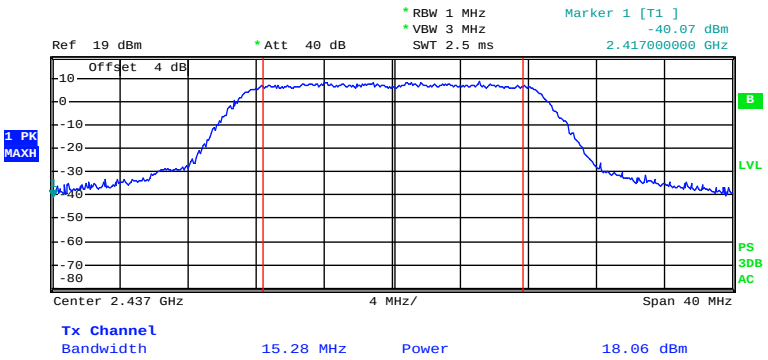
Date: 13.MAY.2013 23:58:36

802.11n-HT20 RF Output Power, Low Channel



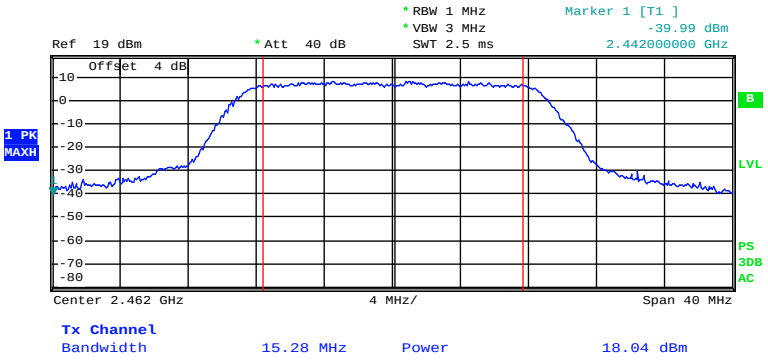
Date: 13.MAY.2013 23:52:14

802.11n-HT20 RF Output Power, Middle Channel



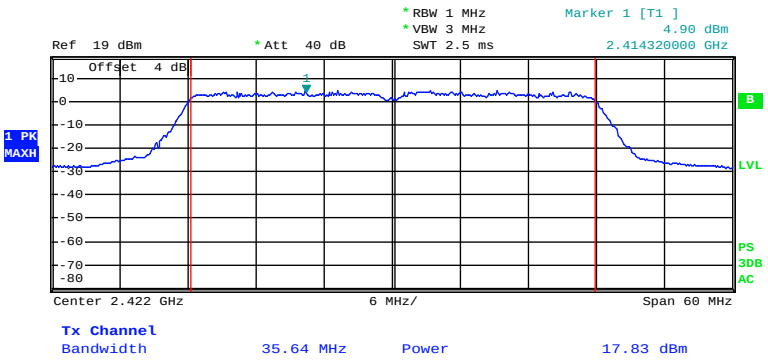
Date: 13.MAY.2013 23:53:15

802.11n-HT20 RF Output Power, High Channel



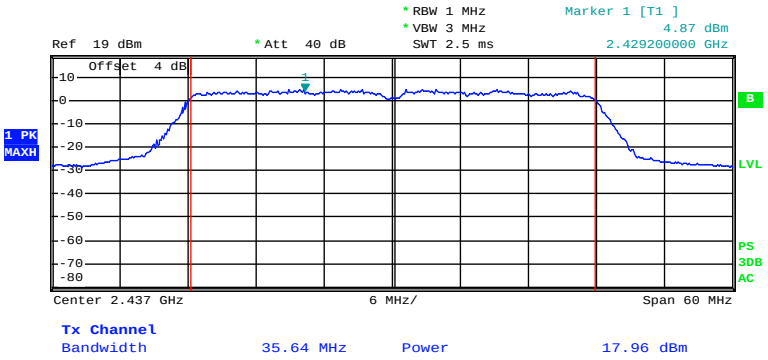
Date: 13.MAY.2013 23:54:04

802.11n-HT40 RF Output Power, Low Channel



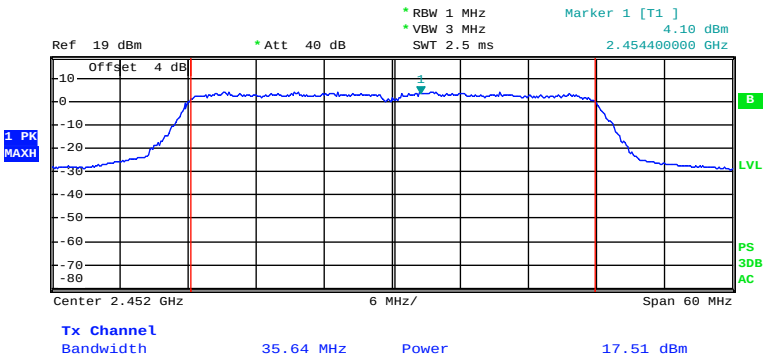
Date: 13.MAY.2013 23:49:36

802.11n-HT40 RF Output Power, Middle Channel



Date: 13.MAY.2013 23:49:04

802.11n-HT40 RF Output Power, High Channel



Date: 13.MAY.2013 23:48:05

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
Rohde & Schwarz	EMI Test Receiver	ESCI	101122	2013-05-09	2014-05-09

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

Test Data

Environmental Conditions

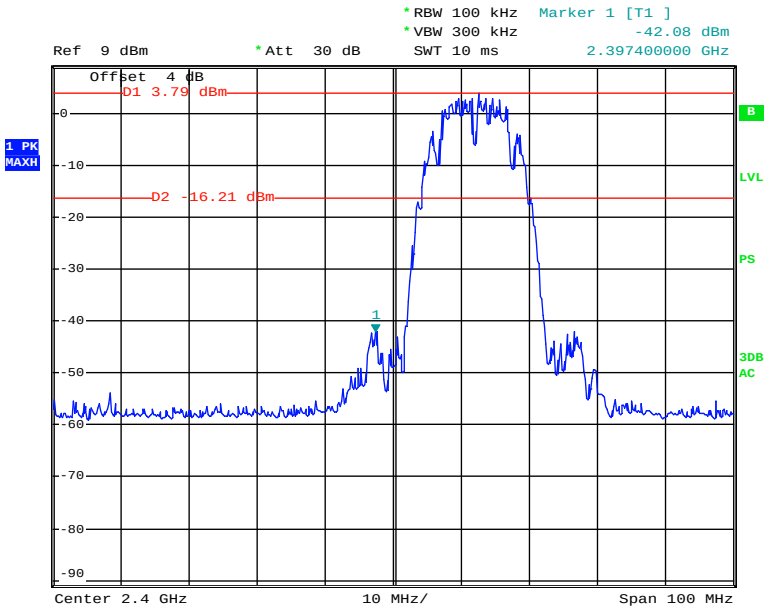
Temperature:	25℃
Relative Humidity:	56 %
ATM Pressure:	100.0 kPa

The testing was performed by Simon Wang on 2013-05-14.

Test Result: *Compliance*

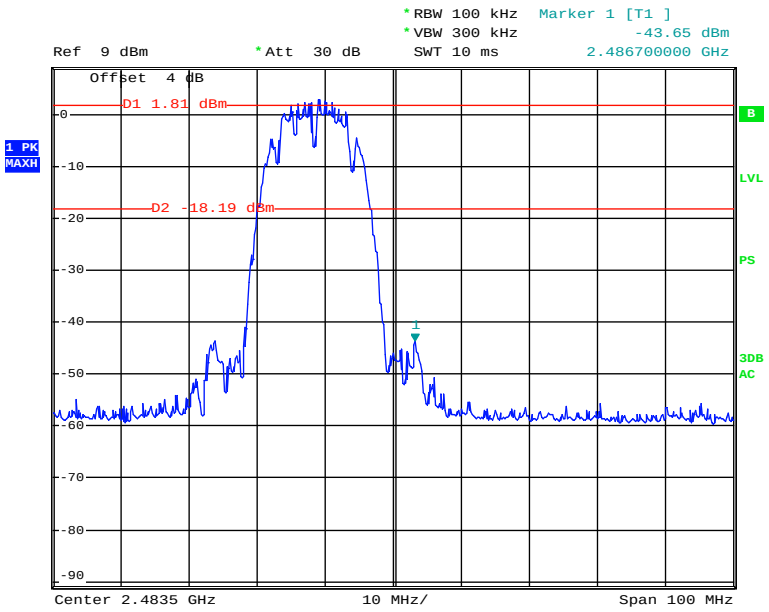
Please refer to following plots.

802.11b: Band Edge, Left Side



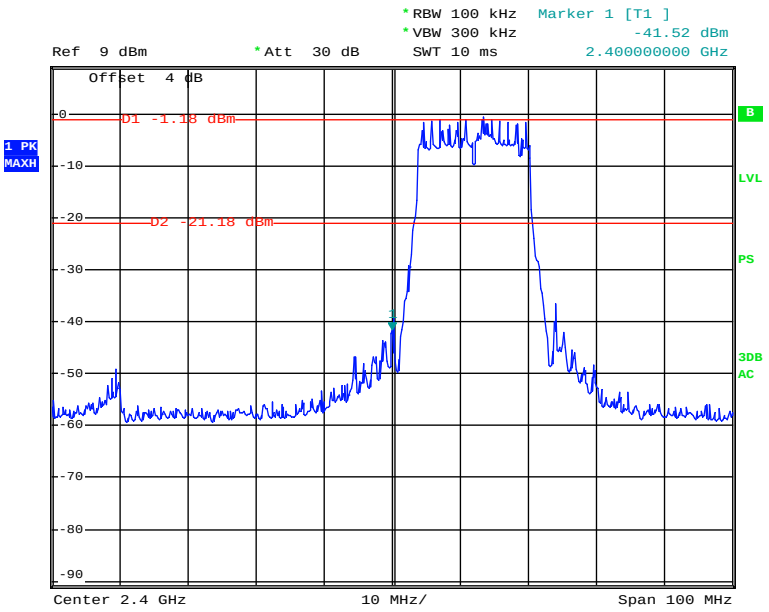
Date: 14.MAY.2013 00:56:25

802.11b: Band Edge, Right Side



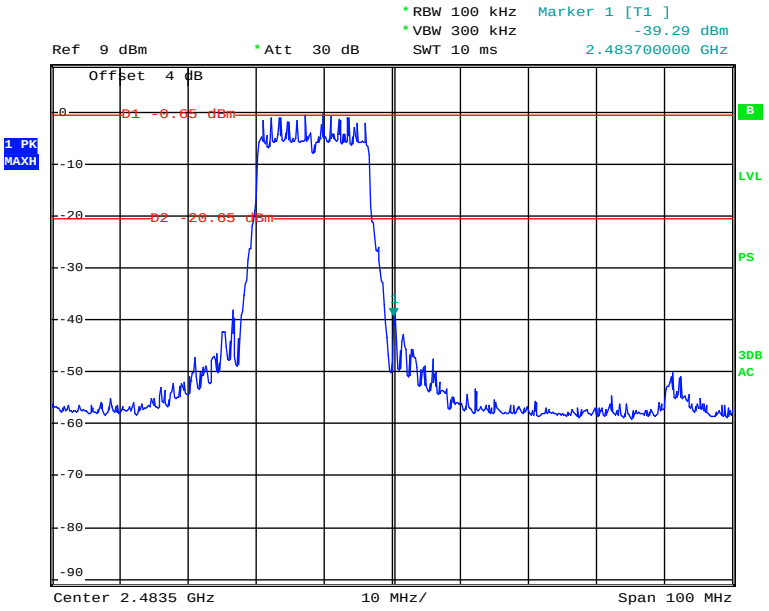
Date: 14.MAY.2013 00:54:35

802.11g: Band Edge, Left Side



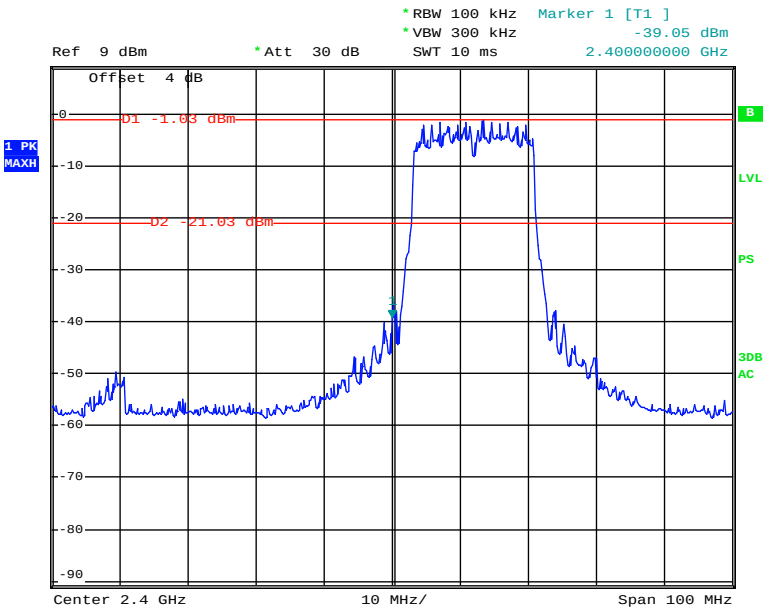
Date: 14.MAY.2013 00:57:28

802.11g: Band Edge, Right Side



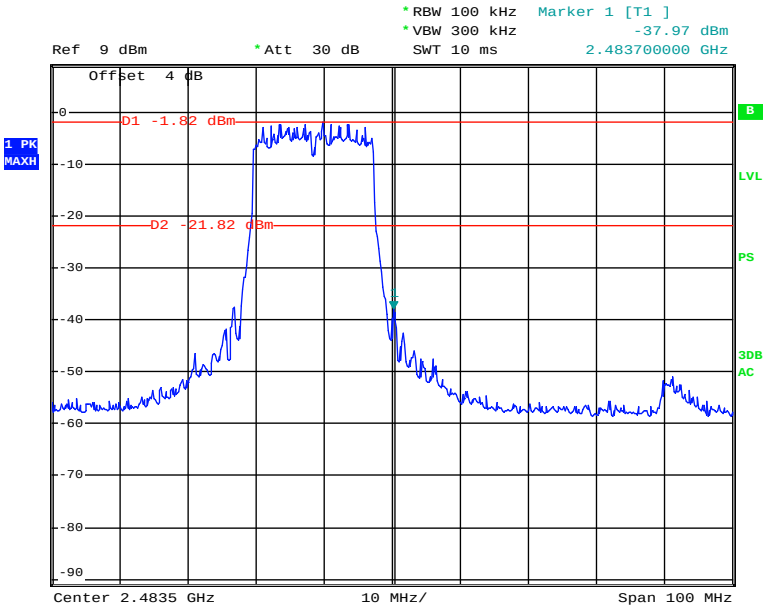
Date: 14.MAY.2013 00:53:26

802.11n-HT20: Band Edge, Left Side



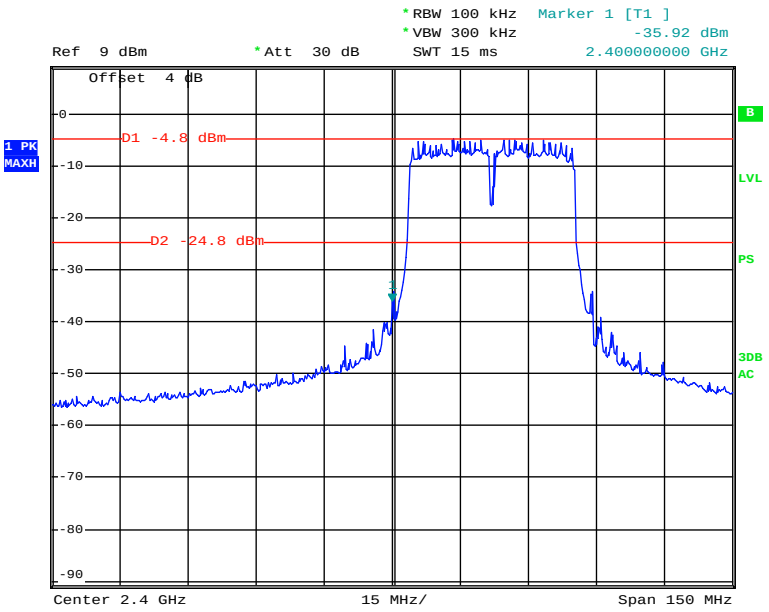
Date: 14.MAY.2013 00:49:34

802.11n-HT20: Band Edge, Right Side



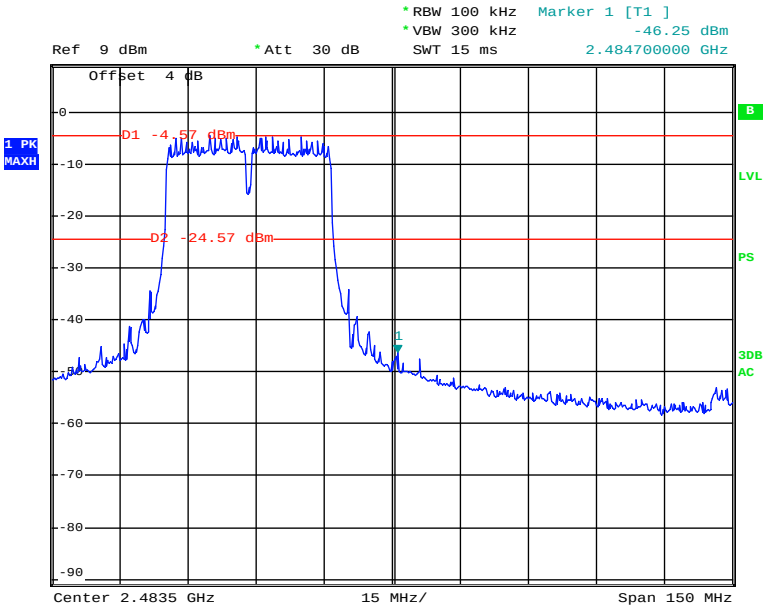
Date: 14.MAY.2013 00:52:12

802.11n-HT40: Band Edge, Left Side



Date: 14.MAY.2013 00:46:40

802.11n-HT40: Band Edge, Right Side



Date: 14.MAY.2013 00:45:15

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 (KDB558074 D01 DTS Meas Guidance v03r01 sub-clause 10.2)

1. Use this procedure when the maximum peak conducted output power in the fundamental emission is used to demonstrate compliance.
2. Set the RBW to: 3kHz≤ RBW≤100 kHz.
3. Set the VBW ≥ 3×RBW.
4. Set the span to 1.5 times the DTS bandwidth.
5. Detector = peak.
6. Sweep time = auto couple.
7. Trace mode = max hold.
8. Allow trace to fully stabilize.
9. Use the peak marker function to determine the maximum amplitude level within the RBW.
10. If measured value exceeds limit，reduce RBW（no less than 3 kHz）and repeat.

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Rohde & Schwarz	EMI Test Receiver	ESCI	101122	2013-05-09	2014-05-09

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

Test Data

Environmental Conditions

Temperature:	25 ℃
Relative Humidity:	56 %
ATM Pressure:	100.0 kPa

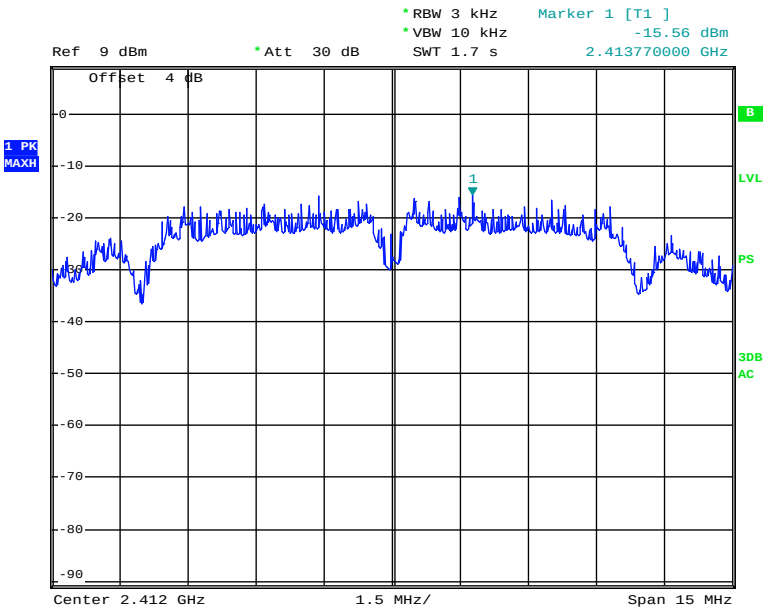
The testing was performed by Simon Wang on 2013-05-14.

EUT operation mode: Transmitting

Test Result: Pass

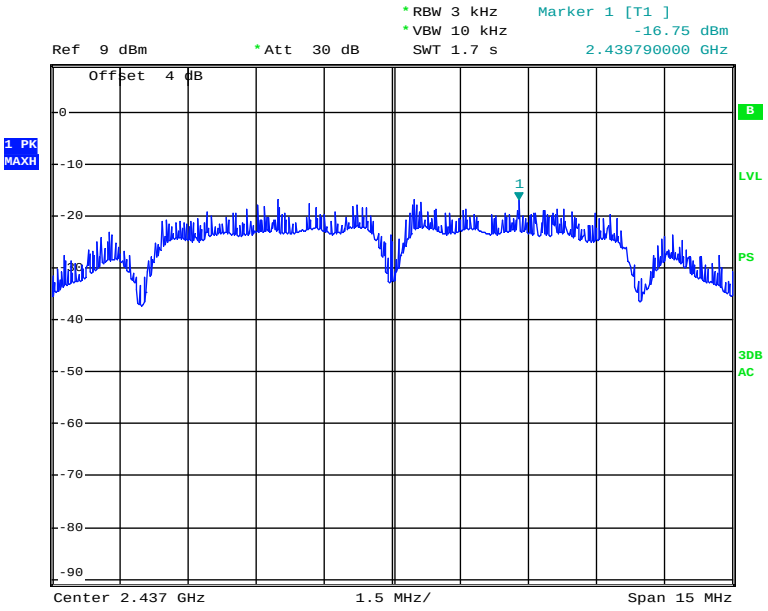
Channel	Frequency (MHz)	Data Rate (Mbps)	Correct Power spectral density (dBm)	Limit (dBm)	Result
802.11b mode					
Low	2412	1	-15.56	≤8	Pass
Middle	2437	1	-16.75	≤8	Pass
High	2462	1	-17.62	≤8	Pass
802.11g mode					
Low	2412	6	-18.27	≤8	Pass
Middle	2437	6	-19.68	≤8	Pass
High	2462	6	-18.99	≤8	Pass
802.11n-HT20 mode					
Low	2412	MCS0	-17.83	≤8	Pass
Middle	2437	MCS0	-17.82	≤8	Pass
High	2462	MCS0	-18.23	≤8	Pass
802.11n-HT40 mode					
Low	2422	MCS0	-21.00	≤8	Pass
Middle	2437	MCS0	-21.78	≤8	Pass
High	2452	MCS0	-21.65	≤8	Pass

Power Spectral Density, 802.11b Low Channel



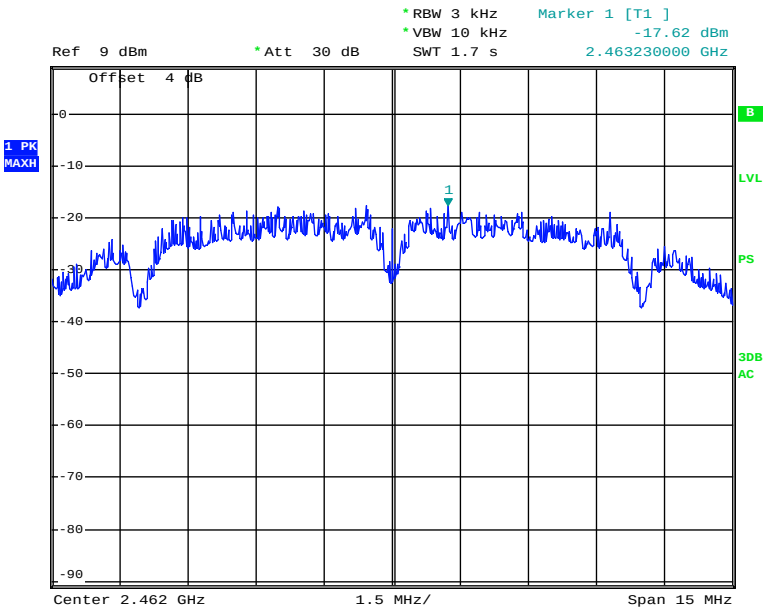
Date: 14.MAY.2013 00:20:49

Power Spectral Density, 802.11b Middle Channel



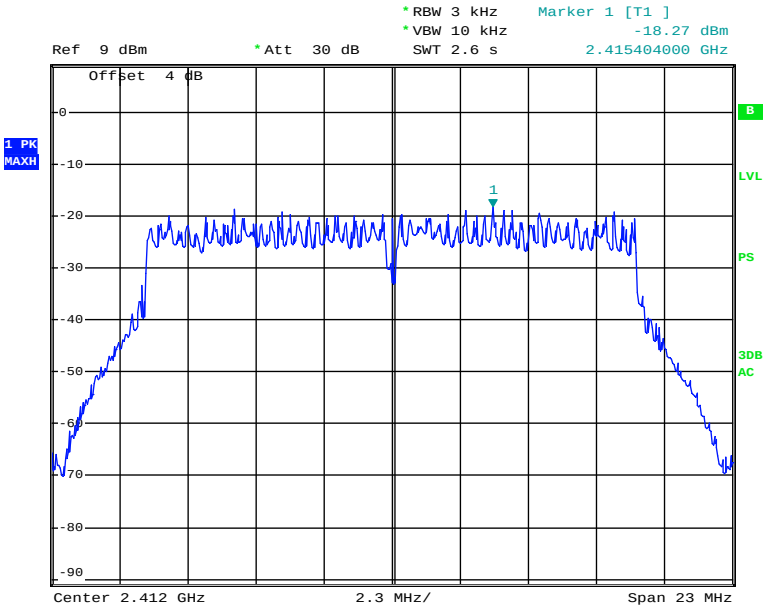
Date: 14.MAY.2013 00:19:29

Power Spectral Density, 802.11b High Channel



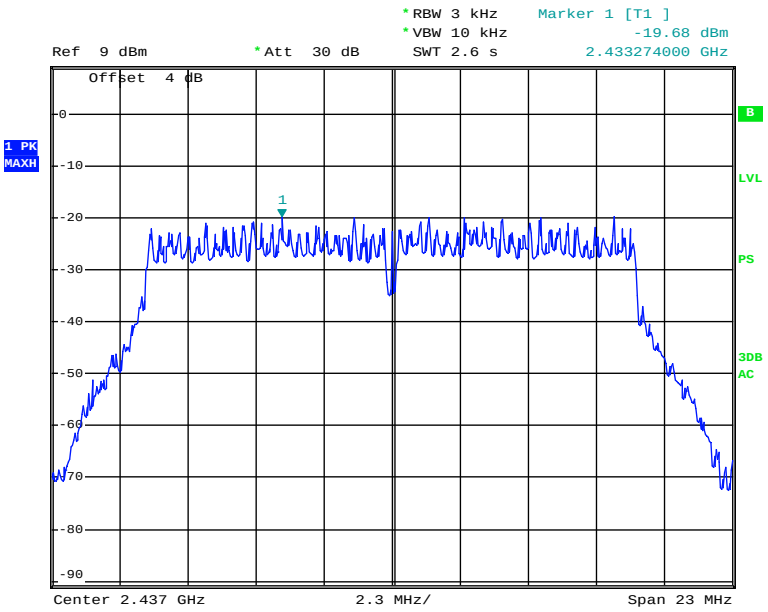
Date: 14.MAY.2013 00:17:53

Power Spectral Density, 802.11g Low Channel



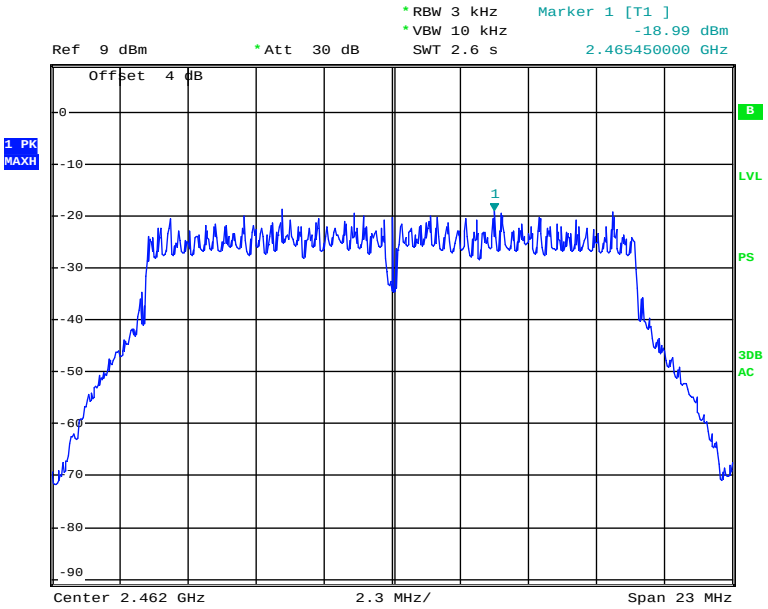
Date: 14.MAY.2013 00:24:16

Power Spectral Density, 802.11g Middle Channel



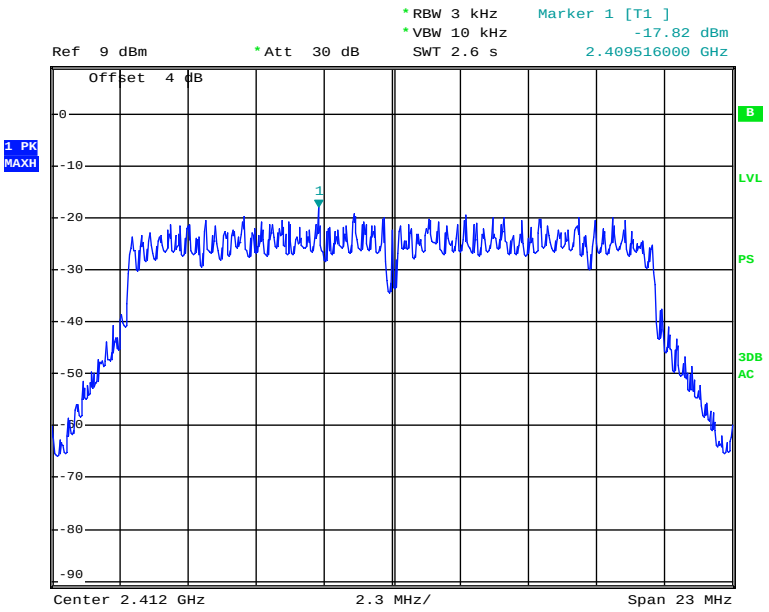
Date: 14.MAY.2013 00:22:39

Power Spectral Density, 802.11g High Channel



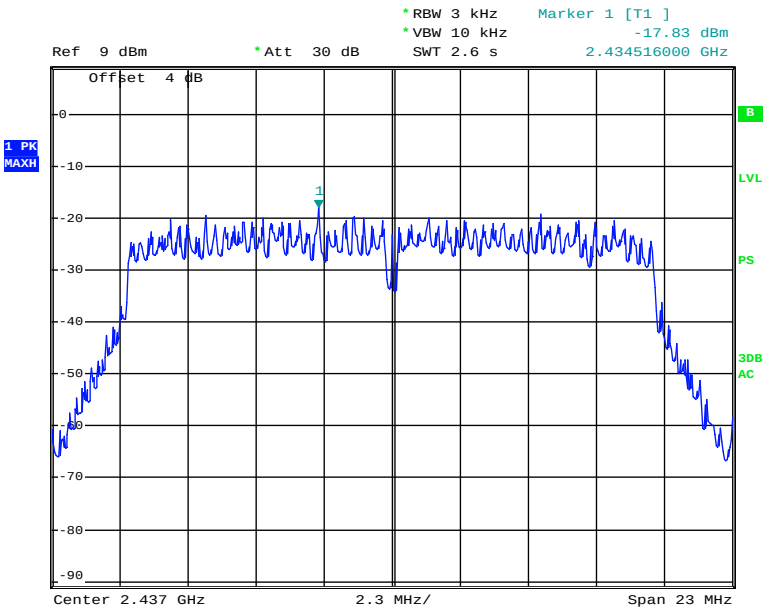
Date: 14.MAY.2013 00:23:19

Power Spectral Density, 802.11n-HT20 Low Channel



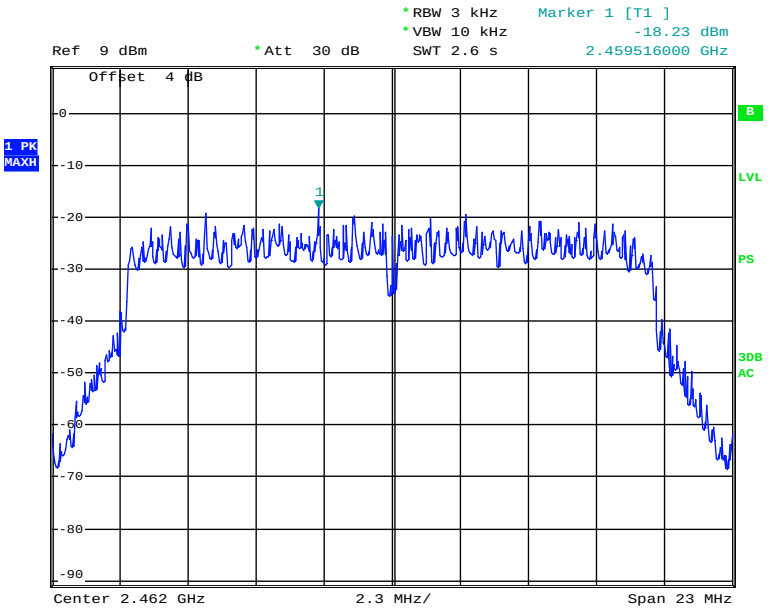
Date: 14.MAY.2013 00:26:38

Power Spectral Density, 802.11n-HT20 Middle Channel



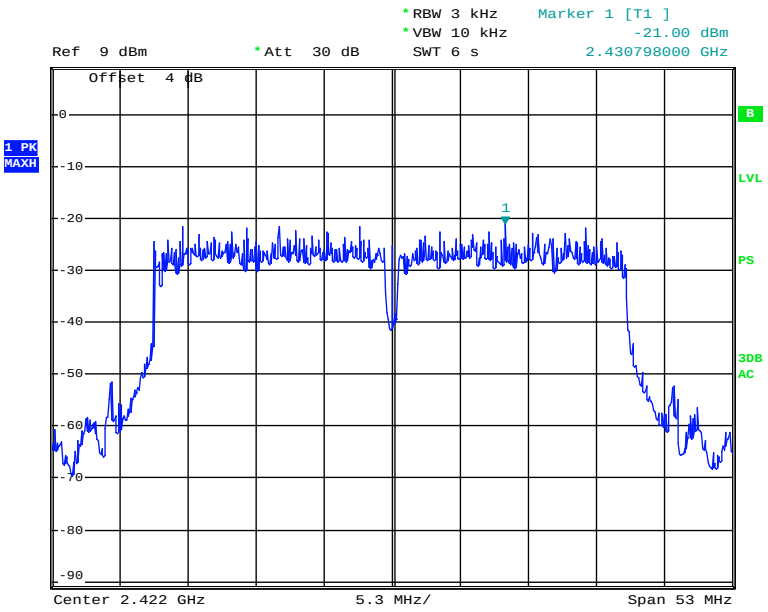
Date: 14.MAY.2013 00:26:09

Power Spectral Density, 802.11n-HT20 High Channel



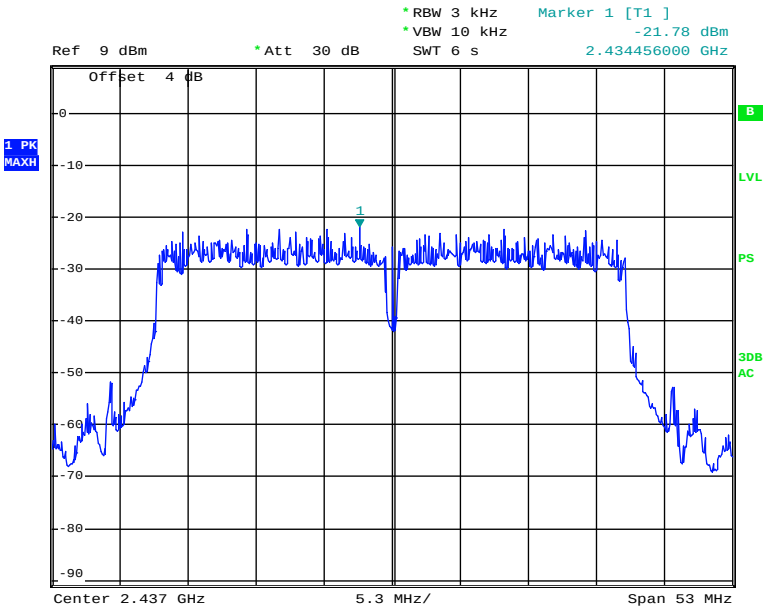
Date: 14.MAY.2013 00:27:12

Power Spectral Density, 802.11n-HT40 Low Channel



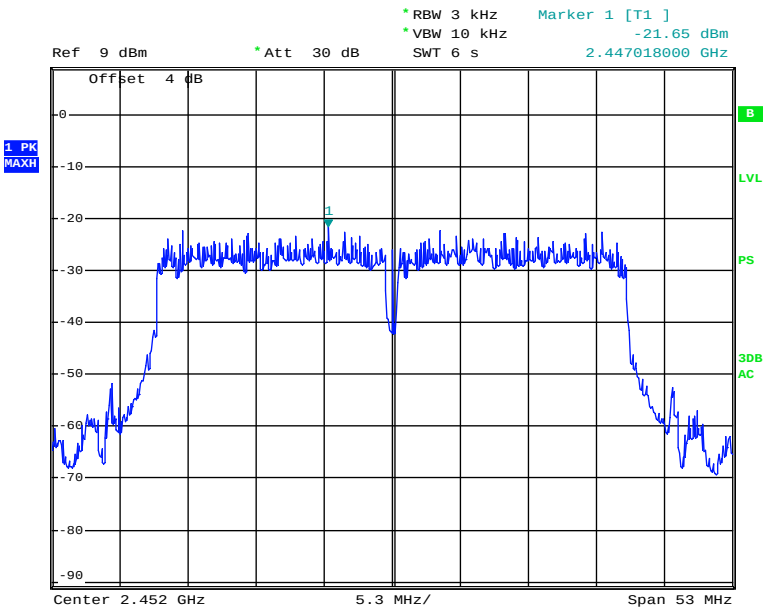
Date: 14.MAY.2013 00:28:41

Power Spectral Density, 802.11n-HT40 Middle Channel



Date: 14.MAY.2013 00:29:46

Power Spectral Density, 802.11n-HT40 High Channel



Date: 14.MAY.2013 00:30:57

DECLARATION LETTER

ShenZhen Foscam Intelligent Technology Co.,Ltd.
5/F, Block 1,Vision Business Park, Nanshan District,Shenzhen, China
Tel: 0755-26745668 Fax: 0755-26745168

2013-7-15

Product Similarity Declaration

To Whom It May Concern,

We, ShenZhen Foscam Intelligent Technology Co.,Ltd. hereby declare that our IP Camera, Model Number: FI9804W ,HD953W,HD951W,FC5511W,FC5411W are electrically identical with FI9805W that was certified by BACL. They are just different in model numbers due to marketing purposes.

Please contact me if you have any question.

Yidong Xu
Manager

Yidong Xu
2013.7.15

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