

# FCC PART 15.247 TEST REPORT

For

# Hisense Electric Co., Ltd.

No. 218 Qianwangang Road, Economy & Technology Dev, Qingdao 266071, China

FCC ID: W9HPADP0004

Report Type: Original Report		Product Type:  Mobile Internet De	evice
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Report Number:		-00	
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**Note**: This test report is prepared for the customer shown above and for the equipment described herein. It may not be duplicated or used in part without prior written consent from Bay Area Compliance Laboratories Corp.

# TABLE OF CONTENTS

Report No.: RSZ140609006-00

GENERAL INFORMATION	4
PRODUCT DESCRIPTION FOR EQUIPMENT UNDER TEST (EUT)	4
Objective	
RELATED SUBMITTAL(S)/GRANT(S)	
TEST METHODOLOGY TEST FACILITY	
SYSTEM TEST CONFIGURATION	
DESCRIPTION OF TEST CONFIGURATION	
EQUIPMENT MODIFICATIONS	
EXTERNAL I/O CABLE.	
BLOCK DIAGRAM OF TEST SETUP	
SUMMARY OF TEST RESULTS	
FCC §15.247 (i) & §1.1310 & §2.1093- RF EXPOSURE	9
APPLICABLE STANDARD	
FCC §15.203 - ANTENNA REQUIREMENT	10
APPLICABLE STANDARD	10
ANTENNA CONNECTOR CONSTRUCTION	
FCC §15.207 (a) – AC LINE CONDUCTED EMISSIONS	11
APPLICABLE STANDARD	
MEASUREMENT UNCERTAINTY	
EUT SETUP	
EMI TEST RECEIVER SETUP TEST PROCEDURE	
TEST FROCEDURE  TEST EQUIPMENT LIST AND DETAILS	
CORRECTED FACTOR & MARGIN CALCULATION	
TEST RESULTS SUMMARY	
TEST DATA	13
FCC §15.209, §15.205 & §15.247(d) - SPURIOUS EMISSIONS	16
APPLICABLE STANDARD	
MEASUREMENT UNCERTAINTY	
EUT SETUPEMI TEST RECEIVER & SPECTRUM ANALYZER SETUP	
TEST PROCEDURE	
TEST FROEEDORE TEST EQUIPMENT LIST AND DETAILS.	
CORRECTED AMPLITUDE & MARGIN CALCULATION	
TEST RESULTS SUMMARY	
TEST DATA	18
FCC §15.247(a) (2) – 6 dB EMISSION BANDWIDTH	
APPLICABLE STANDARD	
TEST PROCEDURE	
TEST EQUIPMENT LIST AND DETAILS TEST DATA	
FCC §15.247(b) (3) - MAXIMUM CONDUCTED OUTPUT POWER	41

APPLICABLE STANDARD	4]
TEST PROCEDURE	41
TEST EQUIPMENT LIST AND DETAILS	
FCC §15.247(d) – 100 kHz BANDWIDTH OF FREQUENCY BAND EDGE	
APPLICABLE STANDARD	43
Test Procedure	43
TEST EQUIPMENT LIST AND DETAILS	43
TEST DATA	43
FCC §15.247(e) - POWER SPECTRAL DENSITY	48
APPLICABLE STANDARD	48
TEST PROCEDURE	48
TEST EQUIPMENT LIST AND DETAILS	48
TEST DATA	48
PRODUCT SIMILARITY DECLARATION LETTER	50

#### **GENERAL INFORMATION**

#### **Product Description for Equipment under Test (EUT)**

The *Hisense Electric Co.*, *Ltd.*'s product, model number: *E7244 (FCC ID: W9HPADP0004)* or the "EUT" in this report was a *Mobile Internet Device*, named as *Sero 7+* by applicant, which was measured approximately: 19.0 cm (L) x 10.5 cm (W) x 0.8 cm (H), rated with input voltage: DC 3.7 V rechargeable Li-ion battery or DC 5.0V charging from adapter.

Report No.: RSZ140609006-00

Adapter Information:

Model: PS10C050K1500UU

Input: AC 100-240V, 50/60 Hz, 0.35A

Output: DC 5.0V, 1500mA

Note: The product Sero 7+, models E7244XX (XX=A-Z) are electrically identical with the model E7244 that was selected to test, they are just different in model number, which was explained in the attached product similarity declaration letter.

\*All measurement and test data in this report was gathered from production sample serial number: 1406052 (Assigned by BACL, Shenzhen). The EUT supplied by the applicant was received on 2014-06-09.

## **Objective**

This report is prepared on behalf of *Hisense Electric Co., Ltd.* in accordance with Part 2-Subpart J, Part 15-Subparts A, B and C of the Federal Communication Commission rules.

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

#### Related Submittal(s)/Grant(s)

No related submittal

#### **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.

Measurement uncertainty with RF radiated emission is 5.91 dB for 30MHz-1GHz.and 4.92 dB for above 1GHz, 1.95dB for conducted measurement.

FCC Part 15.247 Page 4 of 56

#### **Test Facility**

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

Report No.: RSZ140609006-00

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.

FCC Part 15.247 Page 5 of 56

## **SYSTEM TEST CONFIGURATION**

#### **Description of Test Configuration**

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

Channel	rannel 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	/	/	

Report No.: RSZ140609006-00

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	1	/
5	2442	1	/

EUT was tested with Channel 1, 4 and 7.

## **Equipment Modifications**

No modification was made to the EUT tested.

#### **EUT Exercise Software**

RF test tool built-in the EUT.

802.11b: Data rate: 1 Mbps, Power level: 40 802.11g: Data rate: 6 Mbps, Power level: 51 802.11n-HT20: Data rate: MCS0, Power level: 51 802.11n-HT40: Data rate: MCS0, Power level: 51

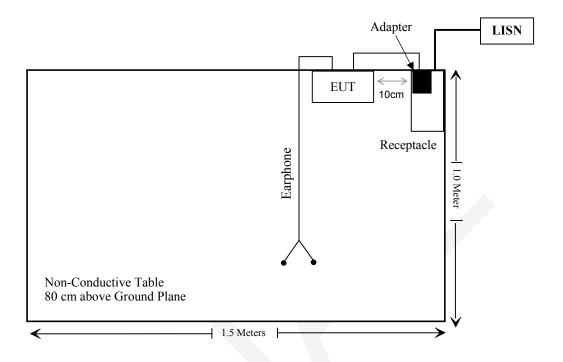
#### **External I/O Cable**

Cable Description	Length (m)	From Port	To
Shielding Detachable USB Cable	1.0	EUT	Adapter

FCC Part 15.247 Page 6 of 56

## **Block Diagram of Test Setup**

For conducted emission



FCC Part 15.247 Page 7 of 56

## 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

Report No.: RSZ140609006-00

FCC Part 15.247 Page 8 of 56

## FCC §15.247 (i) & §1.1310 & §2.1093- RF EXPOSURE

## **Applicable Standard**

According to FCC §2.1093 and §1.1307(b) (1), systems operating under the provisions of this section shall be operated in a manner that ensure that the public is not exposed to radio frequency energy level in excess of the Commission's guideline.

Report No.: RSZ140609006-00

The SAR data please refer to the SAR report, report No.: RSZ140609006-20.

FCC Part 15.247 Page 9 of 56

## 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:

Report No.: RSZ140609006-00

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

Unit must be professionally installed, and installer shall be responsible for verifying that the correct antenna is employed with the unit.

And according to FCC 47 CFR section 15.247 (b), if the transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

#### **Antenna Connector Construction**

The EUT has one integral antenna arrangement, which was permanently attached and the antenna gain is 0 dBi, fulfill the requirement of this section. Please refer to the EUT photos.

**Result:** Compliance.

FCC Part 15.247 Page 10 of 56

## FCC §15.207 (a) – AC LINE CONDUCTED EMISSIONS

#### **Applicable Standard**

FCC§15.207

#### **Measurement Uncertainty**

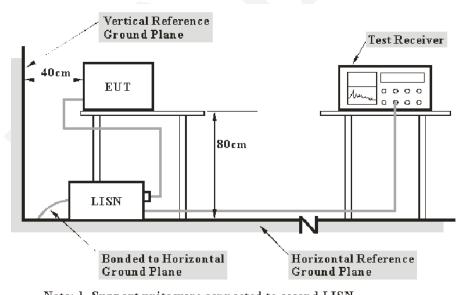
Input quantities to be considered for conducted disturbance measurements maybe receiver reading, attenuation of the connection between AMN/ISN and receiver, AMN/ISN voltage division factor, AMN/ISN VDF frequency interpolation and receiver related input quantities, etc.

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.

Report No.: RSZ140609006-00

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

FCC Part 15.247 Page 11 of 56

#### **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

Report No.: RSZ140609006-00

#### **Test Procedure**

During the conducted emission test, the adapter was connected to the outlet of the LISN.

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

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

## **Test Equipment List and Details**

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Rohde & Schwarz	EMI Test Receiver	ESCS30	100176	2014-06-03	2015-06-03
Rohde & Schwarz	LISN	ENV216	3560.6650.12- 101613-Yb	2015-05-07	2015-05-07
Rohde & Schwarz	Transient Limiter	ESH3Z2	DE25985	2013-10-15	2014-10-15
Rohde & Schwarz	CE Test software	EMC 32	V8.53	-	-

<sup>\*</sup> 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 Factor & Margin Calculation**

The Corrected factor is calculated by adding LISN/ISN VDF (Voltage Division Factor), Cable Loss and Transient Limiter Attenuation. The basic equation is as follows:

Correction Factor = LISN VDF + Cable Loss + Transient Limiter Attenuation

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

Margin = Limit – Corrected Amplitude

FCC Part 15.247 Page 12 of 56

#### **Test Results Summary**

According to the recorded data in following table, the EUT complied with the <u>FCC Part 15.207</u>, the worst margin reading as bellow:

Report No.: RSZ140609006-00

#### 5.9 dB at 0.459190 MHz in the Neutral conducted mode

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

$$L_{\rm m} + U_{(L{\rm m})} \leq L_{\rm lim} + U_{\rm cispr}$$

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:	26 ℃
Relative Humidity:	53 %
ATM Pressure:	101.0 kPa

The testing was performed by David Lee on 2014-06-16.

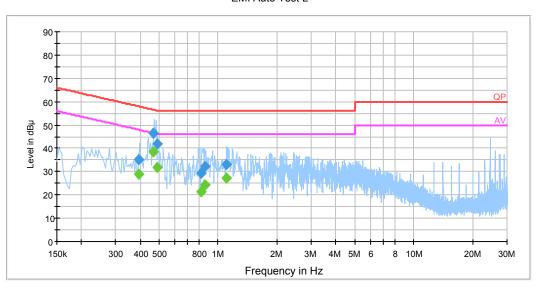
EUT operation mode: Transmitting

FCC Part 15.247 Page 13 of 56

## AC 120V/60 Hz, Line

#### EMI Auto Test L

Report No.: RSZ140609006-00



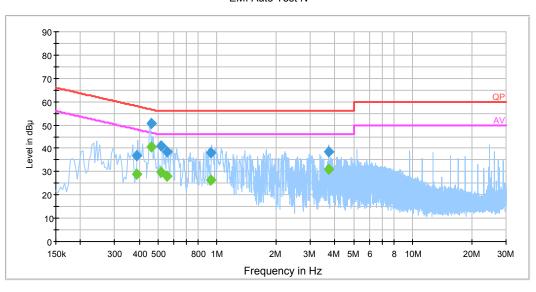
Frequency (MHz)	Corrected Amplitude (dBµV)	Correction Factor (dB)	Limit (dBµV)	Margin (dB)	Detector (PK/Ave./QP)
0.392030	35.3	19.5	58.0	22.8	QP
0.392030	29.0	19.5	48.0	19.0	Ave.
0.466890	46.3	19.6	56.6	10.3	QP
0.466890	38.5	19.6	46.6	8.1	Ave.
0.489230	41.9	19.6	56.2	14.3	QP
0.489230	31.8	19.6	46.2	14.3	Ave.
0.817910	29.4	19.5	56.0	26.6	QP
0.817910	21.3	19.5	46.0	24.7	Ave.
0.858690	32.3	19.5	56.0	23.7	QP
0.858690	24.4	19.5	46.0	21.6	Ave.
1.097290	33.0	19.5	56.0	23.0	QP
1.097290	27.3	19.5	46.0	18.7	Ave.

FCC Part 15.247 Page 14 of 56

## AC 120V/60 Hz, Neutral

#### EMI Auto Test N

Report No.: RSZ140609006-00



Frequency (MHz)	Corrected Amplitude (dBµV)	Correction Factor (dB)	Limit (dBµV)	Margin (dB)	Detector (PK/Ave./QP)
0.388090	36.9	19.5	58.1	21.2	QP
0.388090	28.7	19.5	48.1	19.4	Ave.
0.459190	50.8	19.6	56.7	5.9	QP
0.459190	40.8	19.6	46.7	5.9	Ave.
0.518110	40.8	19.7	56.0	15.2	QP
0.518110	29.6	19.7	46.0	16.4	Ave.
0.553630	38.5	19.6	56.0	17.5	QP
0.553630	28.0	19.6	46.0	18.0	Ave.
0.931930	38.2	19.5	56.0	17.8	QP
0.931930	26.5	19.5	46.0	19.5	Ave.
3.718170	38.4	19.7	56.0	17.6	QP
3.718170	30.9	19.7	46.0	15.1	Ave.

#### **Note:**

- 1) Correction Factor =LISN VDF (Voltage Division Factor) + Cable Loss + Transient Limiter Attenuation
- 2) Corrected Amplitude = Reading + Correction Factor
  3) Margin = Limit Corrected Amplitude

FCC Part 15.247 Page 15 of 56

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

#### **Applicable Standard**

FCC §15.247 (d); §15.209; §15.205;

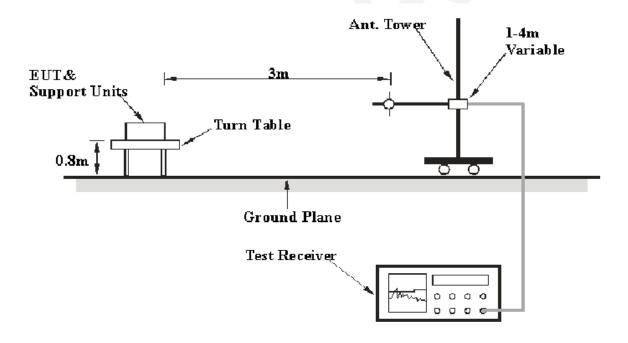
#### **Measurement Uncertainty**

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.

Report No.: RSZ140609006-00

Based on CISPR 16-4-2:2011, the expended combined standard uncertainty of radiation emissions at Bay Area Compliance Laboratories Corp. (Shenzhen) is 5.91 dB for 30MHz-1GHz and 4.92 dB for above 1GHz, 1.95dB for conducted measurement at antenna port. And the uncertainty will not be taken into consideration for the test data recorded in the report

#### **EUT Setup**



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

FCC Part 15.247 Page 16 of 56

## **EMI Test Receiver & Spectrum Analyzer Setup**

The system was investigated from 30 MHz to 25 GHz.

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

Frequency Range	RBW	Video B/W	IF B/W	Detector
30 MHz – 1000 MHz	100 kHz	300 kHz	120 kHz	QP
Above 1 GHz	1MHz	3 MHz	/	PK
Above I GHZ	1MHz	10 Hz	/	Ave.

Report No.: RSZ140609006-00

#### **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	2013-09-30	2014-09-30
Rohde & Schwarz	EMI Test Receiver	ESCI	101122	2013-09-25	2014-09-25
Sunol Sciences	Broadband Antenna	JB1	A040904-2	2011-11-28	2014-11-27
Mini	Amplifier	ZVA-183-S+	5969001149	2014-04-03	2015-04-03
A.H. System	Horn Antenna	SAS-200/571	135	2012-02-11	2015-02-10
Rohde & Schwarz	Signal Analyzer	FSIQ26	8386001028	2013-11-12	2014-11-12
the electro- Mechanics Co.	Horn Antenna	3116	9510-2270	2013-10-14	2016-10-13
R&S	Auto test Software	EMC32	V9.10		
Quinstar	Amplifier	QLW-18405536-50	15964001001	N/A	N/A

<sup>\*</sup> 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).

FCC Part 15.247 Page 17 of 56

### **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:

Report No.: RSZ140609006-00

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

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

Margin = Limit – Corrected Amplitude

#### **Test Results Summary**

According to the recorded data in following table, the EUT complied with the <u>FCC Title 47, Part 15, Subpart C</u>, section 15.205, 15.209 and 15.247.

13.22 at 2494.10 MHz in the Vertical polarization for 802.11n-HT40 Mode

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

$$L_{\rm m} + U_{(L{\rm m})} \leq L_{\rm lim} + U_{\rm cispr}$$

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

#### **Test Data**

#### **Environmental Conditions**

Temperature:	26℃
Relative Humidity:	5 %
ATM Pressure:	101.0 kPa

The testing was performed by David Lee on 2014-07-10 and 2014-07-16.

EUT operation mode: Transmitting

FCC Part 15.247 Page 18 of 56

## 30 MHz-25 GHz:

#### 802.11b Mode:

Frequency	Re	eceiver	Turntable	Rx Ar	itenna		Corrected		C Part /205/209
(MHz)	Reading (dBµV)	Detector (PK/QP/Ave.)		Height (m)	Polar (H/V)	Factor (dB)	Amplitude (dBµV/m)	Limit (dBµV/m)	Margin (dB)
			Low Ch	annel (2	2412 MI	Hz)			
176.2	35.25	QP	159	1.3	V	-15.3	19.95	43.5	23.55
2412.00	102.77	PK	134	2.0	Н	6.13	108.90	/	/
2412.00	92.90	Ave.	134	2.0	Н	6.13	99.03	/	/
2412.00	102.39	PK	192	1.3	V	6.13	108.52	/	/
2412.00	91.84	Ave.	192	1.3	V	6.13	97.97	/	/
2366.91	50.34	PK	73	2.3	V	5.48	55.82	74	18.18
2366.91	32.35	Ave.	73	2.3	V	5.48	37.83	54	16.17
2381.20	51.93	PK	166	1.5	Н	5.48	57.41	74	16.59
2381.20	30.62	Ave.	166	1.5	Н	5.48	36.10	54	17.90
2491.87	52.85	PK	358	1.9	Н	7.21	60.06	74	13.94
2491.87	31.96	Ave.	358	1.9	Н	7.21	39.17	54	14.83
4824.00	36.63	PK	39	1.6	Н	12.44	49.07	74	24.93
4824.00	23.57	Ave.	39	1.6	Н	12.44	36.01	54	17.99
7236.00	35.01	PK	32	2.0	V	17.06	52.07	74	21.93
7236.00	20.72	Ave.	32	2.0	V	17.06	37.78	54	16.22
9648.00	34.34	PK	61	1.3	V	19.28	53.62	74	20.38
9648.00	19.14	Ave.	61	1.3	V	19.28	38.42	54	15.58
			Middle C	Channel	(2437 N	MHz)			
176.2	36.60	QP	184	2.1	V	-15.3	21.3	43.5	22.2
2437.00	101.30	PK	98	2.2	Н	6.13	107.43	/	/
2437.00	91.06	Ave.	98	2.2	Н	6.13	97.19	/	/
2437.00	101.63	PK	271	2.4	V	6.13	107.76	/	/
2437.00	91.51	Ave.	271	2.4	V	6.13	97.64	/	/
2364.33	49.65	PK	230	1.6	Н	5.48	55.13	74	18.87
2364.33	32.68	Ave.	230	1.6	Н	5.48	38.16	54	15.84
2370.11	51.31	PK	335	1.6	Н	5.48	56.79	74	17.21
2370.11	29.20	Ave.	335	1.6	Н	5.48	34.68	54	19.32
2496.34	52.19	PK	223	1.6	V	7.21	59.4	74	14.60
2496.34	30.94	Ave.	223	1.6	V	7.21	38.15	54	15.85
4874.00	37.12	PK	255	1.6	V	12.4	49.52	74	24.48
4874.00	21.72	Ave.	255	1.6	V	12.4	34.12	54	19.88
7311.00	34.69	PK	69	2.0	Н	16.62	51.31	74	22.69
7311.00	20.33	Ave.	69	2.0	Н	16.62	36.95	54	17.05
9748.00	33.19	PK	21	1.2	V	19.4	52.59	74	21.41
9748.00	17.85	Ave.	21	1.2	V	19.4	37.25	54	16.75

Report No.: RSZ140609006-00

FCC Part 15.247 Page 19 of 56

Frequency	Re	eceiver	Turntable	Rx An	itenna	Corrected	Corrected	15.247	C Part /205/209	
(MHz)	Reading (dBµV)	Detector (PK/QP/Ave.)	Degree	Height (m)	Polar (H/V)	Factor (dB)	Amplitude (dBµV/m)	Limit (dBµV/m)	Margin (dB)	
	High Channel (2462 MHz)									
176.2	36.49	QP	60	2.5	V	-15.3	21.19	43.5	22.31	
2462.00	98.52	PK	175	1.2	Н	6.13	104.65	/	/	
2462.00	88.79	Ave.	175	1.2	Н	6.13	94.92	/	/	
2462.00	99.40	PK	280	1.0	V	6.13	105.53	/	/	
2462.00	88.10	Ave.	280	1.0	V	6.13	94.23	/	/	
2378.49	52.44	PK	325	1.6	Н	5.48	57.92	74	16.08	
2378.49	32.62	Ave.	325	1.6	Н	5.48	38.1	54	15.90	
2487.72	52.22	PK	152	1.0	Н	7.21	59.43	74	14.57	
2487.72	31.91	Ave.	152	1.0	Н	7.21	39.12	54	14.88	
2490.23	52.83	PK	358	2.4	V	7.21	60.04	74	13.96	
2490.23	33.02	Ave.	358	2.4	V	7.21	40.23	54	13.77	
4924.00	34.76	PK	67	1.2	Н	12.46	47.22	74	26.78	
4924.00	23.46	Ave.	67	1.2	Н	12.46	35.92	54	18.08	
7386.00	36.25	PK	241	1.2	Н	15.91	52.16	74	21.84	
7386.00	20.41	Ave.	241	1.2	Н	15.91	36.32	54	17.68	
9848.00	35.38	PK	262	1.5	V	19.29	54.67	74	19.33	
9848.00	19.14	Ave.	262	1.5	V	19.29	38.43	54	15.57	

FCC Part 15.247 Page 20 of 56

## 802.11g Mode:

Frequency	Re	eceiver	Turntable	Rx An	itenna		Corrected		C Part /205/209
(MHz)	Reading (dBµV)	Detector (PK/QP/Ave.)		Height (m)	Polar (H/V)	Factor (dB)	Amplitude (dBµV/m)	Limit (dBµV/m)	Margin (dB)
			Low Ch	annel (2	2412 MI	Hz)			
176.2	35.98	QP	110	1.5	V	-15.3	20.68	43.5	22.82
2412.00	95.84	PK	2	1.9	Н	6.13	101.97	/	/
2412.00	86.88	Ave.	2	1.9	Н	6.13	93.01	/	/
2412.00	96.05	PK	282	1.2	V	6.13	102.18	/	/
2412.00	85.74	Ave.	282	1.2	V	6.13	91.87	/	/
2352.85	52.55	PK	217	1.1	Н	5.48	58.03	74	15.97
2352.85	30.38	Ave.	217	1.1	Н	5.48	35.86	54	18.14
2387.30	51.25	PK	333	1.9	Н	5.48	56.73	74	17.27
2387.30	30.74	Ave.	333	1.9	Н	5.48	36.22	54	17.78
2484.64	50.33	PK	306	1.4	V	7.21	57.54	74	16.46
2484.64	32.49	Ave.	306	1.4	V	7.21	39.7	54	14.30
4824.00	34.09	PK	314	1.1	Н	12.44	46.53	74	27.47
4824.00	23.07	Ave.	314	1.1	Н	12.44	35.51	54	18.49
7236.00	36.21	PK	144	1.8	V	17.06	53.27	74	20.73
7236.00	20.50	Ave.	144	1.8	V	17.06	37.56	54	16.44
9648.00	34.78	PK	280	1.7	V	19.28	54.06	74	19.94
9648.00	20.88	Ave.	280	1.7	V	19.28	40.16	54	13.84
	•		Middle C	hannel (	(2437 N	ИHz)			
176.2	36.27	QP	123	1.4	V	-15.3	20.97	43.5	22.53
2437.00	94.78	PK	120	2.1	Н	6.13	100.91	/	/
2437.00	86.41	Ave.	120	2.1	Н	6.13	92.54	/	/
2437.00	94.30	PK	15	1.2	V	6.13	100.43	/	/
2437.00	84.27	Ave.	15	1.2	V	6.13	90.40	/	/
2340.58	52.26	PK	286	1.9	V	5.48	57.74	74	16.26
2340.58	29.03	Ave.	286	1.9	V	5.48	34.51	54	19.49
2381.37	49.42	PK	359	1.4	Н	5.48	54.9	74	19.10
2381.37	31.71	Ave.	359	1.4	Н	5.48	37.19	54	16.81
2483.70	51.18	PK	269	2.0	Н	7.21	58.39	74	15.61
2483.70	33.10	Ave.	269	2.0	Н	7.21	40.31	54	13.69
4874.00	32.50	PK	292	1.2	V	12.4	44.9	74	29.10
4874.00	22.81	Ave.	292	1.2	V	12.4	35.21	54	18.79
7311.00	35.33	PK	240	2.1	Н	16.62	51.95	74	22.05
7311.00	19.46	Ave.	240	2.1	Н	16.62	36.08	54	17.92
9748.00	33.50	PK	85	1.0	Н	19.4	52.9	74	21.10
9748.00	20.44	Ave.	85	1.0	Н	19.4	39.84	54	14.16

Report No.: RSZ140609006-00

FCC Part 15.247 Page 21 of 56

Frequency	Re	eceiver	Turntable	Rx An	itenna	Corrected	Corrected	15.247	C Part /205/209	
(MHz)	Reading (dBµV)	Detector (PK/QP/Ave.)	Degree	Height (m)	Polar (H/V)	Factor (dB)	Amplitude (dBµV/m)	Limit (dBµV/m)	Margin (dB)	
	High Channel (2462 MHz)									
176.2	36.14	QP	232	1.2	V	-15.3	20.84	43.5	22.66	
2462.00	92.72	PK	238	1.4	Н	6.13	98.85	/	/	
2462.00	83.51	Ave.	238	1.4	Н	6.13	89.64	/	/	
2462.00	92.30	PK	350	2.5	V	6.13	98.43	/	/	
2462.00	83.25	Ave.	350	2.5	V	6.13	89.38	/	/	
2361.11	52.75	PK	40	2.0	V	5.48	58.23	74	15.77	
2361.11	30.58	Ave.	40	2.0	V	5.48	36.06	54	17.94	
2489.25	52.19	PK	314	1.7	Н	7.21	59.4	74	14.60	
2489.25	31.26	Ave.	314	1.7	Н	7.21	38.47	54	15.53	
2493.77	51.29	PK	30	1.9	Н	7.21	58.5	74	15.50	
2493.77	32.87	Ave.	30	1.9	Н	7.21	40.08	54	13.92	
4924.00	35.77	PK	331	1.4	Н	12.46	48.23	74	25.77	
4924.00	21.14	Ave.	331	1.4	Н	12.46	33.6	54	20.40	
7386.00	35.68	PK	55	1.7	Н	15.91	51.59	74	22.41	
7386.00	21.43	Ave.	55	1.7	Н	15.91	37.34	54	16.66	
9848.00	35.05	PK	210	2.2	Н	19.29	54.34	74	19.66	
9848.00	19.82	Ave.	210	2.2	Н	19.29	39.11	54	14.89	

FCC Part 15.247 Page 22 of 56

## 802.11n-HT20 Mode:

Frequency	Re	eceiver	Turntable	Rx Ar	ntenna		Corrected		C Part /205/209
(MHz)	Reading (dBµV)	Detector (PK/QP/Ave.)		Height (m)	Polar (H/V)	Factor (dB)	Amplitude (dBµV/m)	Limit (dBµV/m)	Margin (dB)
			Low Ch	annel (2	2412 MI	Hz)			
176.2	36.73	QP	127	1.5	V	-15.3	21.43	43.5	22.07
2412.00	95.27	PK	2	1.9	Н	6.13	101.40	/	/
2412.00	86.50	Ave.	2	1.9	Н	6.13	92.63	/	/
2412.00	96.11	PK	282	1.2	V	6.13	102.24	/	/
2412.00	86.75	Ave.	282	1.2	V	6.13	92.88	/	/
2351.56	51.36	PK	360	1.9	Н	5.48	56.84	74	17.16
2351.56	32.64	Ave.	360	1.9	Н	5.48	38.12	54	15.88
2381.82	51.08	PK	283	1.9	Н	5.48	56.56	74	17.44
2381.82	32.92	Ave.	283	1.9	Н	5.48	38.4	54	15.60
2490.15	52.23	PK	203	1.5	V	7.21	59.44	74	14.56
2490.15	32.29	Ave.	203	1.5	V	7.21	39.5	54	14.50
4824.00	35.82	PK	157	1.1	Н	12.44	48.26	74	25.74
4824.00	22.24	Ave.	157	1.1	Н	12.44	34.68	54	19.32
7236.00	35.53	PK	161	1.8	V	17.06	52.59	74	21.41
7236.00	20.53	Ave.	161	1.8	V	17.06	37.59	54	16.41
9648.00	35.42	PK	353	2.4	Н	19.28	54.7	74	19.30
9648.00	19.76	Ave.	353	2.4	Н	19.28	39.04	54	14.96
			Middle C	hannel	(2437 N	IHz)			
176.2	36.79	QP	309	2.4	V	-15.3	21.49	43.5	22.01
2437.00	94.63	PK	120	2.1	Н	6.13	100.76	/	/
2437.00	85.68	Ave.	120	2.1	Н	6.13	91.81	/	/
2437.00	94.82	PK	15	1.2	V	6.13	100.95	/	/
2437.00	86.01	Ave.	15	1.2	V	6.13	92.14	/	/
2344.84	52.21	PK	6	1.5	Н	5.48	57.69	74	16.31
2344.84	33.35	Ave.	6	1.5	Н	5.48	38.83	54	15.17
2373.53	49.85	PK	276	1.5	Н	5.48	55.33	74	18.67
2373.53	33.69	Ave.	276	1.5	Н	5.48	39.17	54	14.83
2497.74	51.22	PK	252	2.2	V	7.21	58.43	74	15.57
2497.74	33.03	Ave.	252	2.2	V	7.21	40.24	54	13.76
4874.00	34.35	PK	46	1.6	V	12.4	46.75	74	27.25
4874.00	21.78	Ave.	46	1.6	V	12.4	34.18	54	19.82
7311.00	34.55	PK	11	1.1	V	16.62	51.17	74	22.83
7311.00	19.46	Ave.	11	1.1	V	16.62	36.08	54	17.92
9748.00	35.37	PK	149	1.9	V	19.4	54.77	74	19.23
9748.00	18.77	Ave.	149	1.9	V	19.4	38.17	54	15.83

Report No.: RSZ140609006-00

FCC Part 15.247 Page 23 of 56

Frequency	Re	eceiver	Turntable	Rx An	itenna	Corrected	Corrected	15.247	C Part /205/209
(MHz)	Reading (dBµV)	Detector (PK/QP/Ave.)	Degree	Height (m)	Polar (H/V)	Factor (dB)	Amplitude (dBµV/m)	Limit (dBµV/m)	Margin (dB)
			High Cł	nannel (2	2462 M	Hz)			
176.2	35.01	QP	109	2.0	V	-15.3	19.71	43.5	23.79
2462.00	93.04	PK	238	1.4	Н	6.13	99.17	/	/
2462.00	82.11	Ave.	238	1.4	Н	6.13	88.24	/	/
2462.00	93.09	PK	350	2.5	V	6.13	99.22	/	/
2462.00	83.20	Ave.	350	2.5	V	6.13	89.33	/	/
2367.25	50.87	PK	253	1.2	Н	5.48	56.35	74	17.65
2367.25	30.85	Ave.	253	1.2	Н	5.48	36.33	54	17.67
2488.27	51.63	PK	107	2.0	Н	7.21	58.84	74	15.16
2488.27	30.95	Ave.	107	2.0	Н	7.21	38.16	54	15.84
2496.50	52.60	PK	57	1.5	V	7.21	59.81	74	14.19
2496.50	32.64	Ave.	57	1.5	V	7.21	39.85	54	14.15
4924.00	36.06	PK	333	1.8	V	12.46	48.52	74	25.48
4924.00	21.82	Ave.	333	1.8	V	12.46	34.28	54	19.72
7386.00	34.68	PK	175	1.9	Н	15.91	50.59	74	23.41
7386.00	20.27	Ave.	175	1.9	Н	15.91	36.18	54	17.82
9848.00	34.27	PK	291	1.1	Н	19.29	53.56	74	20.44
9848.00	19.45	Ave.	291	1.1	Н	19.29	38.74	54	15.26

FCC Part 15.247 Page 24 of 56

## 802.11n-HT40 Mode:

Frequency	Re	eceiver	Turntable	Rx Ar	ntenna		Corrected	15 247	C Part //205/209
(MHz)	Reading (dBµV)	Detector (PK/QP/Ave.)	Degree	Height (m)	Polar (H/V)	Factor (dB)	Amplitude (dBµV/m)		Margin (dB)
			Low Ch	annel (2	2422 M	Hz)			
176.2	35.38	QP	348	2.0	V	-15.3	20.08	43.5	23.42
2422.00	92.74	PK	2	1.9	Н	6.13	98.87	/	/
2422.00	83.92	Ave.	2	1.9	Н	6.13	90.05	/	/
2422.00	92.17	PK	282	1.2	V	6.13	98.30	/	/
2422.00	82.71	Ave.	282	1.2	V	6.13	88.84	/	/
2343.34	52.24	PK	227	2.0	V	5.48	57.72	74	16.28
2343.34	32.06	Ave.	227	2.0	V	5.48	37.54	54	16.46
2383.75	52.52	PK	199	1.1	Н	5.48	58	74	16.00
2383.75	31.08	Ave.	199	1.1	Н	5.48	36.56	54	17.44
2494.10	51.93	PK	252	2.4	Н	7.21	59.14	74	14.86
2494.10	33.57	Ave.	252	2.4	Н	7.21	40.78	54	13.22
4824.00	35.43	PK	80	2.5	Н	12.44	47.87	74	26.13
4824.00	21.51	Ave.	80	2.5	Н	12.44	33.95	54	20.05
7236.00	36.09	PK	70	1.6	Н	17.06	53.15	74	20.85
7236.00	21.68	Ave.	70	1.6	Н	17.06	38.74	54	15.26
9648.00	34.24	PK	63	1.5	V	19.28	53.52	74	20.48
9648.00	20.48	Ave.	63	1.5	V	19.28	39.76	54	14.24
			Middle C	hannel	(2437 N	(Hz)			
176.2	36.15	QP	186	1.5	V	-15.3	20.85	43.5	22.65
2437.00	91.63	PK	120	2.1	Н	6.13	97.76	/	/
2437.00	82.13	Ave.	120	2.1	Н	6.13	88.26	/	/
2437.00	91.31	PK	15	1.2	V	6.13	97.44	/	/
2437.00	81.03	Ave.	15	1.2	V	6.13	87.16	/	/
2360.17	51.00	PK	322	2.3	V	5.48	56.48	74	17.52
2360.17	30.91	Ave.	322	2.3	V	5.48	36.39	54	17.61
2383.13	53.18	PK	22	1.5	Н	5.48	58.66	74	15.34
2383.13	30.17	Ave.	22	1.5	Н	5.48	35.65	54	18.35
2496.05	51.71	PK	32	2.3	Н	7.21	58.92	74	15.08
2496.05	32.80	Ave.	32	2.3	Н	7.21	40.01	54	13.99
4874.00	33.79	PK	335	1.1	V	12.4	46.19	74	27.81
4874.00	20.32	Ave.	335	1.1	V	12.4	32.72	54	21.28
7311.00	34.72	PK	263	1.5	V	16.62	51.34	74	22.66
7311.00	21.30	Ave.	263	1.5	V	16.62	37.92	54	16.08
9748.00	33.48	PK	195	1.8	V	19.4	52.88	74	21.12
9748.00	18.65	Ave.	195	1.8	V	19.4	38.05	54	15.95

Report No.: RSZ140609006-00

FCC Part 15.247 Page 25 of 56

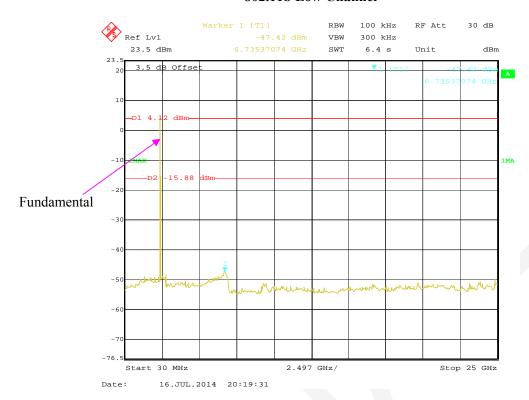
Frequency	Re	eceiver	Turntable		ntenna		Corrected	15.247	C Part /205/209	
(MHz)	Reading (dBµV)	Detector (PK/QP/Ave.)	Degree	Height (m)	Polar (H/V)	Factor (dB)	Amplitude (dBµV/m)	Limit (dBµV/m)	Margin (dB)	
	High Channel (2452 MHz)									
176.2	35.26	QP	13	1.3	V	-15.3	19.96	43.5	23.54	
2452.00	89.25	PK	238	1.4	Н	6.13	95.38	/	/	
2452.00	80.78	Ave.	238	1.4	Н	6.13	86.91	/	/	
2452.00	89.21	PK	350	2.5	V	6.13	95.34	/	/	
2452.00	80.30	Ave.	350	2.5	V	6.13	86.43	/	/	
2382.22	52.54	PK	75	1.7	V	5.48	58.02	74	15.98	
2382.22	32.08	Ave.	75	1.7	V	5.48	37.56	54	16.44	
2487.21	52.61	PK	8	1.5	Н	7.21	59.82	74	14.18	
2487.21	32.76	Ave.	8	1.5	Н	7.21	39.97	54	14.03	
2493.07	52.04	PK	248	2.4	Н	7.21	59.25	74	14.75	
2493.07	32.66	Ave.	248	2.4	Н	7.21	39.87	54	14.13	
4924.00	36.17	PK	177	2.2	Н	12.46	48.63	74	25.37	
4924.00	21.53	Ave.	177	2.2	Н	12.46	33.99	54	20.01	
7386.00	35.25	PK	107	1.5	Н	15.91	51.16	74	22.84	
7386.00	21.15	Ave.	107	1.5	Н	15.91	37.06	54	16.94	
9848.00	35.80	PK	107	2.4	Н	19.29	55.09	74	18.91	
9848.00	19.54	Ave.	107	2.4	Н	19.29	38.83	54	15.17	

#### Note:

Corrected Factor = Antenna factor (RX) + Cable Loss – Amplifier Factor Corrected Amplitude = Corrected Factor + Reading Margin = Limit - Corrected. Amplitude

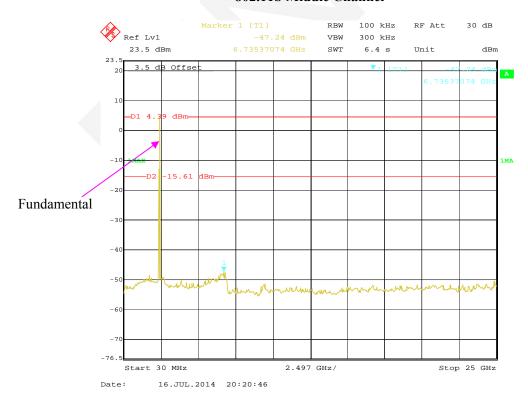
FCC Part 15.247 Page 26 of 56

#### Conducted Spurious Emissions at Antenna Port 802.11b Low Channel



#### 802.11b Middle Channel

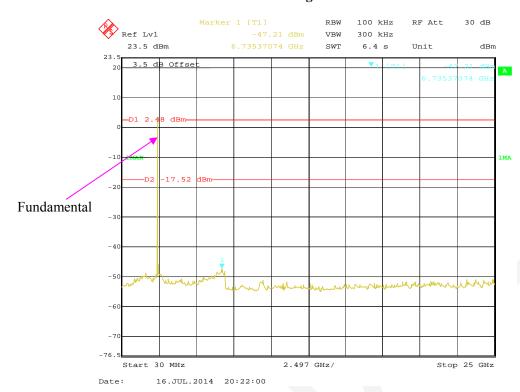
Report No.: RSZ140609006-00



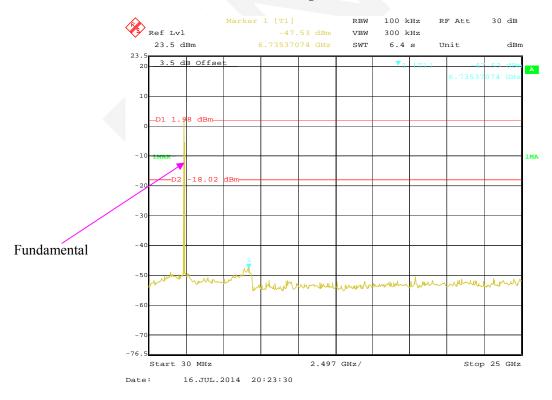
FCC Part 15.247 Page 27 of 56

## 802.11b High Channel

Report No.: RSZ140609006-00



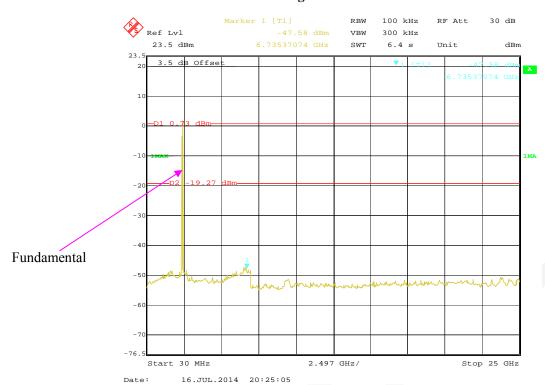
## 802.11g Low Channel



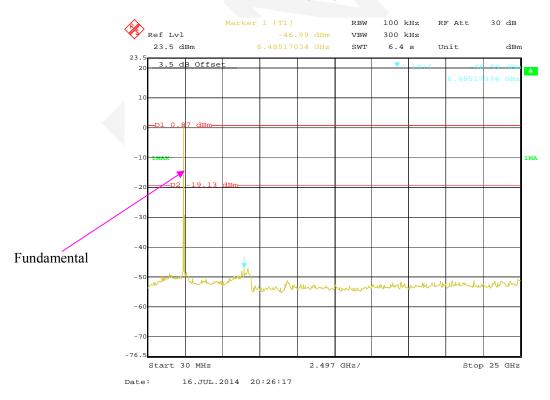
FCC Part 15.247 Page 28 of 56

## **802.11g Middle Channel**

Report No.: RSZ140609006-00



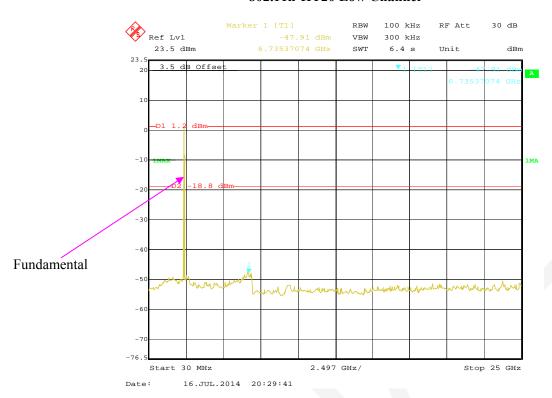
## 802.11g High Channel



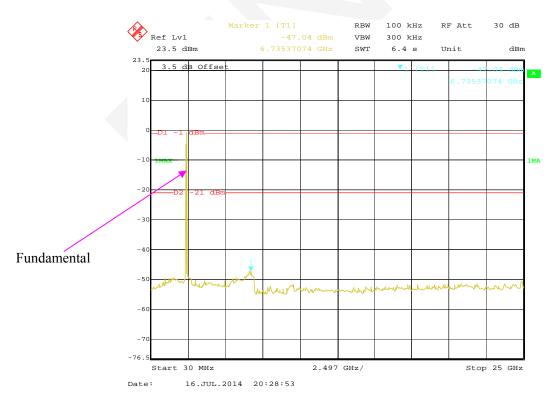
FCC Part 15.247 Page 29 of 56

#### 802.11n-HT20 Low Channel

Report No.: RSZ140609006-00



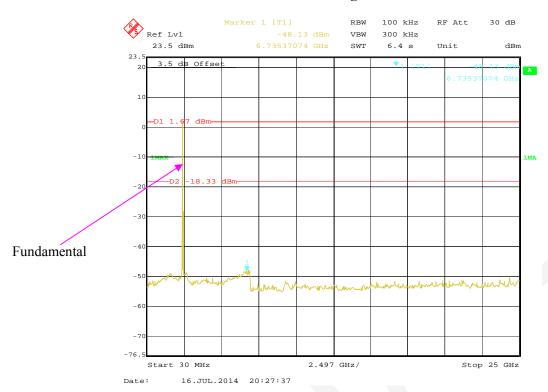
#### 802.11n-HT20 Middle Channel



FCC Part 15.247 Page 30 of 56

## 802.11n-HT20 High Channel

Report No.: RSZ140609006-00



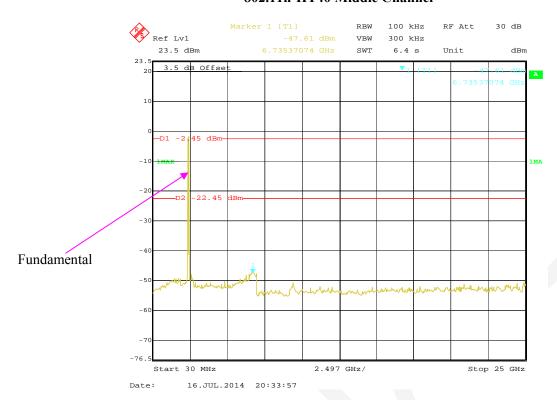
#### 802.11n-HT40 Low Channel



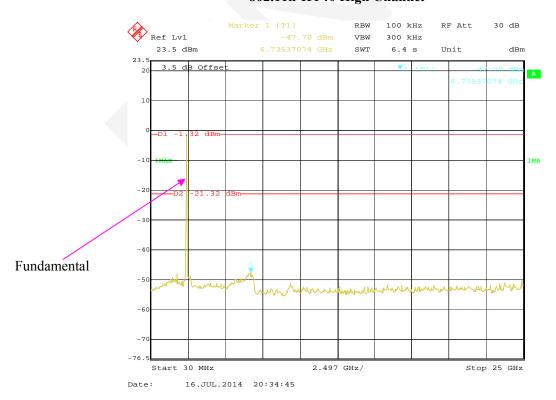
FCC Part 15.247 Page 31 of 56

#### 802.11n-HT40 Middle Channel

Report No.: RSZ140609006-00



## 802.11n-HT40 High Channel



FCC Part 15.247 Page 32 of 56

## 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.

Report No.: RSZ140609006-00

#### **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	Signal Analyzer	FSIQ26	837405/023	2014-05-31	2015-05-31

<sup>\*</sup> 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:	26 ℃	
Relative Humidity:	56 %	
ATM Pressure:	101.0 kPa	

The testing was performed by David Lee on 2014-07-16.

Test Result: Pass.

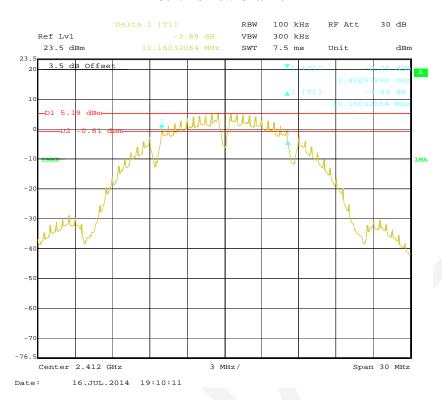
Please refer to the following tables and plots.

FCC Part 15.247 Page 33 of 56

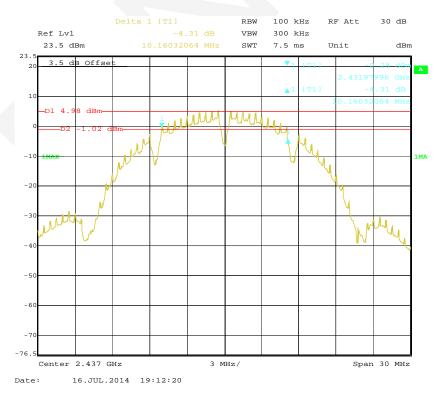
Channel	Frequency (MHz)	6 dB Emission Bandwidth (MHz)	Limit (kHz)				
	802.11b mode						
Low	2412	10.16	≥500				
Middle	2437	10.16	≥500				
High	2462	10.16	≥500				
	802.11	g mode					
Low	2412	16.47	≥500				
Middle	2437	16.47	≥500				
High	2462	16.47	≥500				
	802.11n-l	HT20 mode					
Low	2412	17.68	≥500				
Middle	2437	17.68	≥500				
High	2462	17.68	≥500				
	802.11n-l	HT40 mode					
Low	2422	36.09	≥500				
Middle	2437	36.09	≥500				
High	2452	36.09	≥500				

FCC Part 15.247 Page 34 of 56

#### 802.11b Low Channel

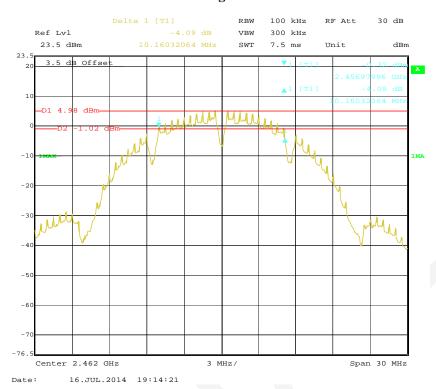


#### 802.11b Middle Channel

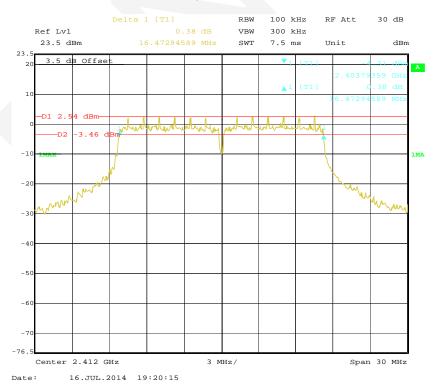


FCC Part 15.247 Page 35 of 56

## 802.11b High Channel

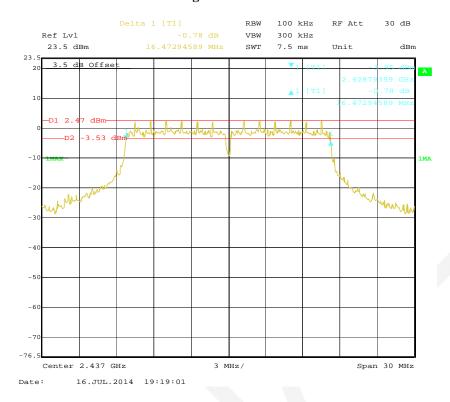


## 802.11g Low Channel

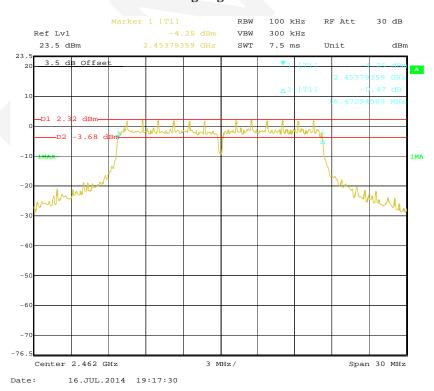


FCC Part 15.247 Page 36 of 56

#### **802.11g Middle Channel**

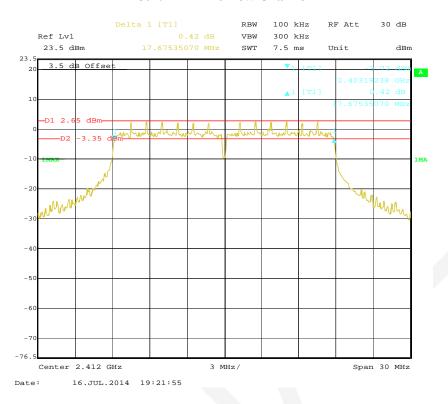


#### 802.11g High Channel

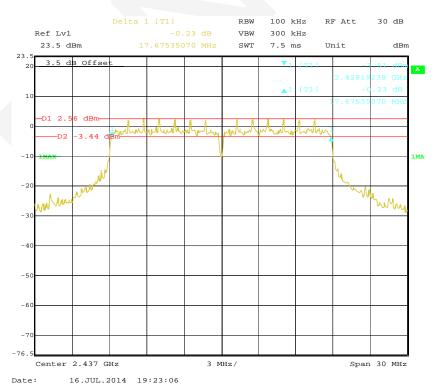


FCC Part 15.247 Page 37 of 56

#### 802.11n-HT20 Low Channel

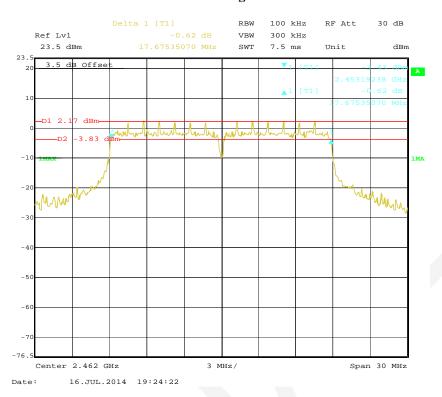


#### 802.11n-HT20 Middle Channel

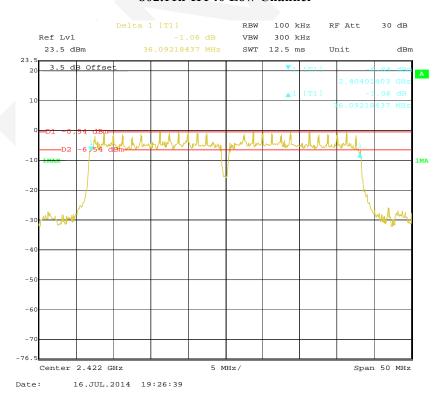


FCC Part 15.247 Page 38 of 56

#### 802.11n-HT20 High Channel



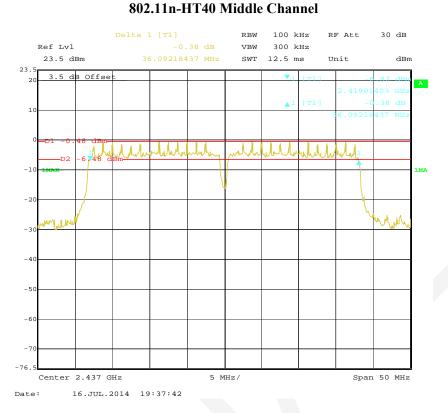
#### 802.11n-HT40 Low Channel



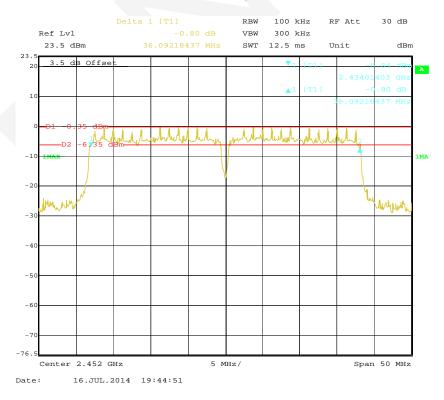
FCC Part 15.247 Page 39 of 56

#### \_\_\_\_\_

Report No.: RSZ140609006-00



#### 802.11n-HT40 High Channel



FCC Part 15.247 Page 40 of 56

### 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.

Report No.: RSZ140609006-00

#### **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 one test equipment.
- 3. Add a correction factor to the display.



#### **Test Equipment List and Details**

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
НР	Power Meter	EPM-441A	GB37481494	2013-11-24	2014-11-24
HP	Power Sensor	EPM-441A	GB37481494	2013-11-24	2014-11-24

<sup>\*</sup> 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:	50 %	
ATM Pressure:	101.0 kPa	

The testing was performed by David Lee on 2014-07-10 and 2014-07-16.

FCC Part 15.247 Page 41 of 56

Channel	Frequency (MHz)	Maximum Peak Conducted Output Power (dBm)	Maximum Conducted Output (Average) Power (dBm)	Limit (dBm)	
		802.11b			
Low	2412	16.30	14.50	30	
Middle	2437	16.82	14.82	30	
High	2462	16.83	14.86	30	
	•	802.11g			
Low	2412	20.59	14.57	30	
Middle	2437	20.98	14.75	30	
High	2462	21.14	14.84	30	
	•	802.11n-H	Γ20		
Low	2412	20.74	14.43	30	
Middle	2437	20.95	14.70	30	
High	2462	21.00	14.88	30	
802.11n-HT40					
Low	2422	20.47	14.42	30	
Middle	2437	20.68	14.68	30	
High	2452	20.72	14.76	30	

FCC Part 15.247 Page 42 of 56

### FCC §15.247(d) – 100 kHz BANDWIDTH OF FREQUENCY BAND EDGE

Report No.: RSZ140609006-00

#### **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	Signal Analyzer	FSIQ26	837405/023	2014-05-31	2015-05-31

<sup>\*</sup> 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:	26 ℃	
Relative Humidity:	56 %	
ATM Pressure:	101.0 kPa	

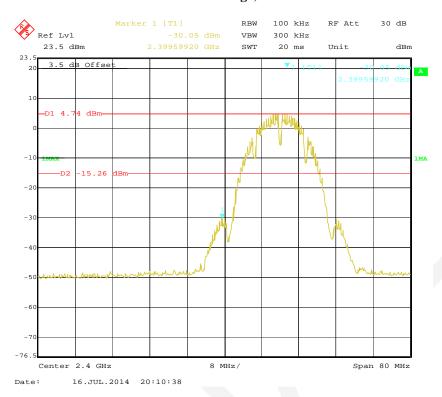
The testing was performed by David Lee on 2014-07-16.

**Test Result:** Compliance

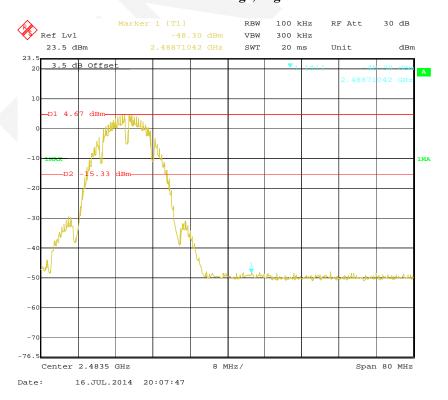
Please refer to the following plots.

FCC Part 15.247 Page 43 of 56

#### 802.11b: Band Edge, Left Side



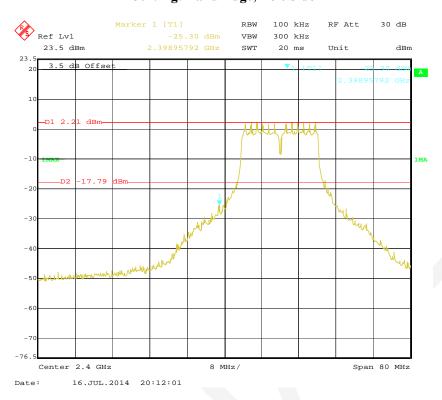
### 802.11b: Band Edge, Right Side



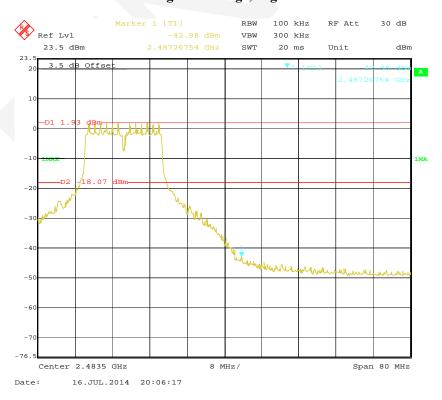
FCC Part 15.247 Page 44 of 56

#### 802.11g: Band Edge, Left Side

Report No.: RSZ140609006-00



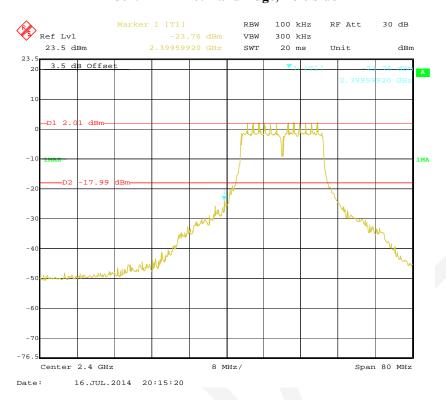
### 802.11g: Band Edge, Right Side



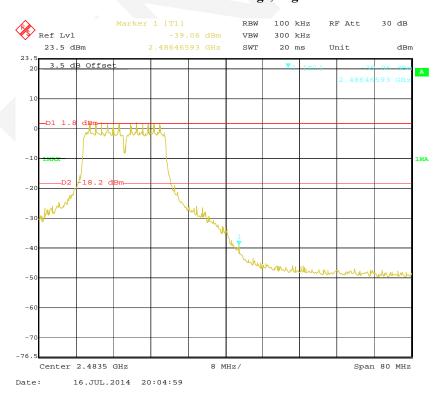
FCC Part 15.247 Page 45 of 56

### 802.11n-HT20: Band Edge, Left Side

Report No.: RSZ140609006-00



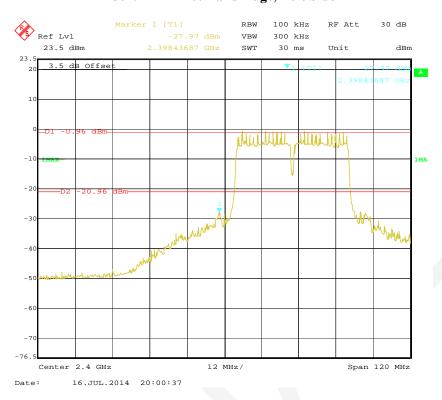
### 802.11n-HT20: Band Edge, Right Side



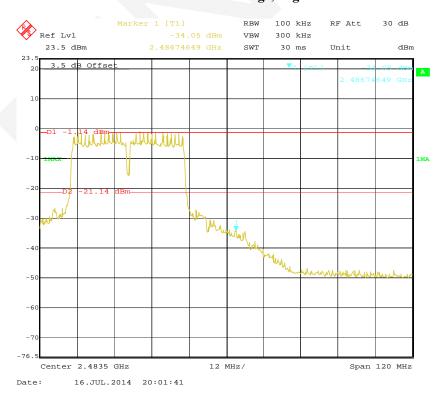
FCC Part 15.247 Page 46 of 56

#### 802.11n-HT40: Band Edge, Left Side

Report No.: RSZ140609006-00



### 802.11n-HT40: Band Edge, Right Side



FCC Part 15.247 Page 47 of 56

### 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.

Report No.: RSZ140609006-00

#### **Test Procedure**

According to KDB558074 D01 DTS Meas Guidance v03r02 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:  $3kHz \le RBW \le 100 kHz$ .
- 3. Set the VBW  $\geq$  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	Signal Analyzer	FSIQ26	837405/023	2014-05-31	2015-05-31

<sup>\*</sup> 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:	26 ℃	
Relative Humidity:	56 %	
ATM Pressure:	101.0 kPa	

The testing was performed by David Lee on 2014-07-16.

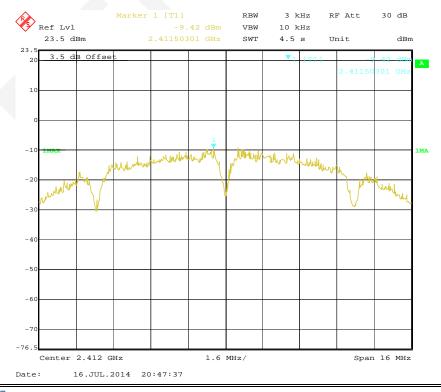
EUT operation mode: Transmitting

**Test Result:** Pass

FCC Part 15.247 Page 48 of 56

Channel	Frequency (MHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)			
	802.11b mode					
Low	2412	-9.42	≤8			
Middle	2437	-9.11	≤8			
High	2462	-9.61	≤8			
	802.11g	mode				
Low	2412	-12.24	≤8			
Middle	2437	-13.28	≤8			
High	2462	-12.15	≤8			
	802.11n-HT20 mode					
Low	2412	-12.76	≤8			
Middle	2437	-12.96	≤8			
High	2462	-12.33	≤8			
802.11n-HT40 mode						
Low	2422	-15.60	≤8			
Middle	2437	-15.89	≤8			
High	2452	-15.86	≤8			

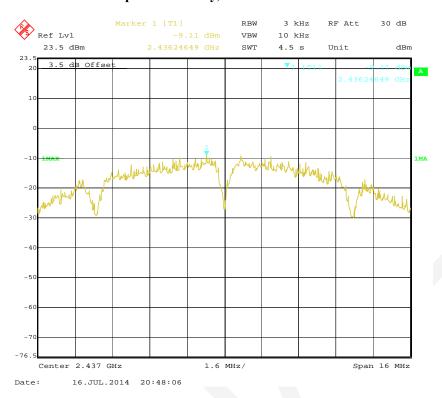
### Power Spectral Density, 802.11b Low Channel



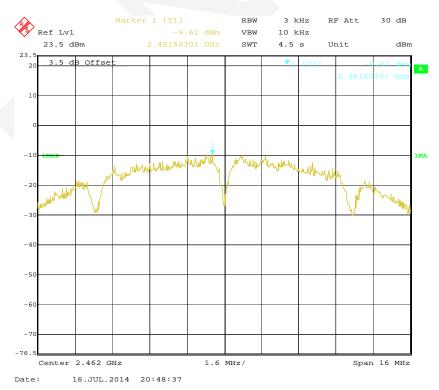
FCC Part 15.247 Page 49 of 56

#### Power Spectral Density, 802.11b Middle Channel

Report No.: RSZ140609006-00



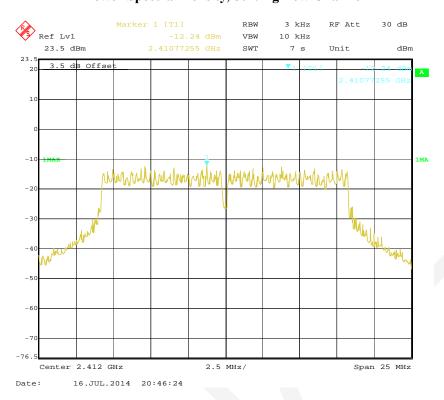
### Power Spectral Density, 802.11b High Channel



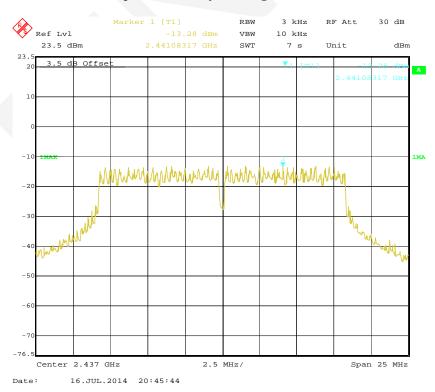
FCC Part 15.247 Page 50 of 56

### Power Spectral Density, 802.11g Low Channel

Report No.: RSZ140609006-00



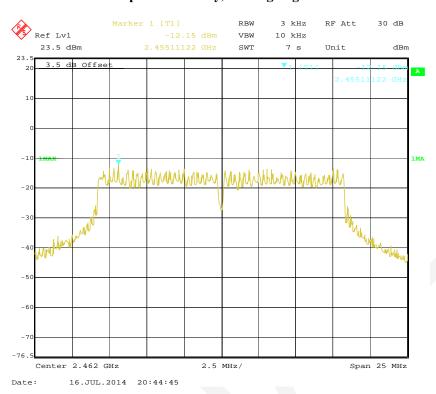
### Power Spectral Density, 802.11g Middle Channel



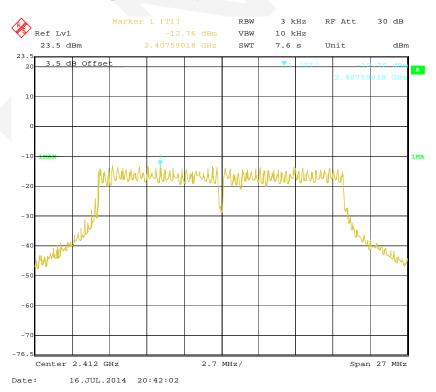
FCC Part 15.247 Page 51 of 56

#### Power Spectral Density, 802.11g High Channel

Report No.: RSZ140609006-00



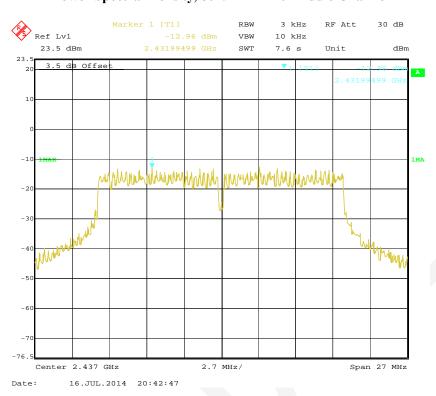
### Power Spectral Density, 802.11n-HT20 Low Channel



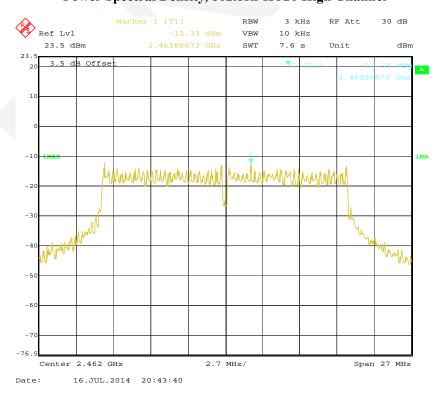
FCC Part 15.247 Page 52 of 56

### Power Spectral Density, 802.11n-HT20 Middle Channel

Report No.: RSZ140609006-00



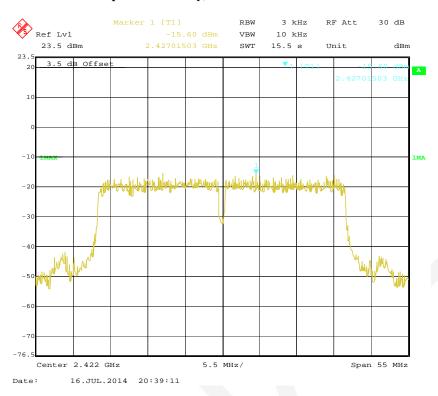
### Power Spectral Density, 802.11n-HT20 High Channel



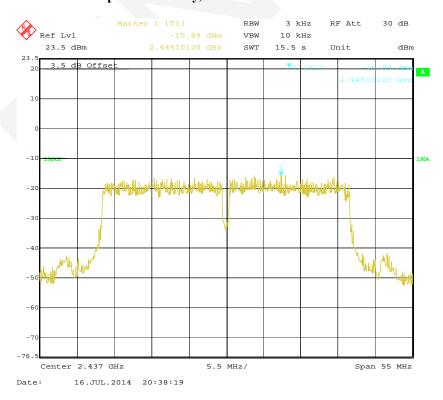
FCC Part 15.247 Page 53 of 56

#### Power Spectral Density, 802.11n-HT40 Low Channel

Report No.: RSZ140609006-00

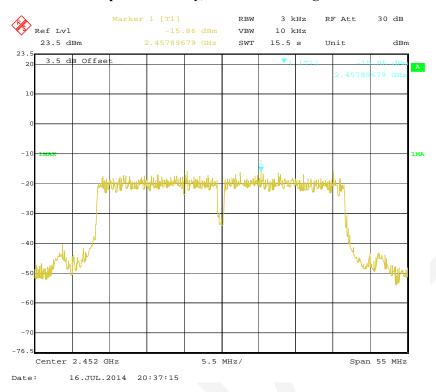


## Power Spectral Density, 802.11n-HT40 Middle Channel



FCC Part 15.247 Page 54 of 56

### Power Spectral Density, 802.11n-HT40 High Channel



FCC Part 15.247 Page 55 of 56

# PRODUCT SIMILARITY DECLARATION LETTER

#### Hisense Electric Co., Ltd.

No. 218 Qianwangang Road, Economy & Technology Dev, Qingdao ,266071, China Tel: 0532-80874377 Fax: 0532-80874665

Report No.: RSZ140609006-00

2014-06-17

### **Product Similarity Declaration**

To Whom It May Concern,

We, Hisense Electric Co., Ltd. hereby declare that our Sero 7+, the series models E7244xx (x shall consist of lowercase letters a-z or capital letters A-Z) are electrically identical with the E7244 that was certified by BACL. They are just different in model numbers.

Please contact me if you have any question.

Signature:

Culu Tang

Lulu Tang Director

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

FCC Part 15.247 Page 56 of 56