

FCC Part 15C Measurement and Test Report

For

ELECTRONICS TECHNOLOGY(DONG GUAN) COMPANY LIMITED

No. 161, Xin Min Road, Tong Luo Wei Industrial Zone, Dong Guan, China

FCC ID:ZL9-MA2EJ2

FCC Rule(s): FCC Part 15C

Product Description: <u>Tablet PC</u>

Tested Model: MA2EJ2-P(AP)

Report No.: <u>STR14098121I-1</u>

Tested Date: <u>2014-09-16 to 2014-09-29</u>

Issued Date: 2014-09-29

Tested By: <u>Lebron Wang / Engineer</u>

Reviewed By: Lahm Peng / EMC Manager

Approved & Authorized By: Jandy so / PSQ Manager

Prepared By:

Shenzhen SEM.Test Technology Co., Ltd.

1/F, Building A, Hongwei Industrial Park, Liuxian 2nd Road,

Lebron Wang Lahm peny Jumbyso

Bao'an District, Shenzhen, P.R.C. (518101)

Tel.: +86-755-33663308 Fax.: +86-755-33663309 Website: www.semtest.com.cn

Note: This test report is limited to the above client company and the product model only. It may not be duplicated without prior permitted by Shenzhen SEM.Test Technology Co., Ltd.



TABLE OF CONTENTS

1. GENERAL INFORMATION	3
1.1 PRODUCT DESCRIPTION FOR EQUIPMENT UNDER TEST (EUT)	
1.2 Test Standards.	
1.3 TEST METHODOLOGY	
1.4 TEST FACILITY	4
2. SUMMARY OF TEST RESULTS	6
3. RF EXPOSURE	7
3.1 STANDARD APPLICABLE.	
3.2 TEST RESULT	7
4. ANTENNA REQUIREMENT	8
4.1 STANDARD APPLICABLE	
4.2 EVALUATION INFORMATION	8
5. POWER SPECTRAL DENSITY	9
5.1 STANDARD APPLICABLE	
5.2 TEST EQUIPMENT LIST AND DETAILS	
5.3 TEST PROCEDURE	
5.4 ENVIRONMENTAL CONDITIONS	
6. 6DB BANDWIDTH	
6.1 STANDARD APPLICABLE	
6.3 TEST PROCEDURE	
6.4 ENVIRONMENTAL CONDITIONS	
6.5 SUMMARY OF TEST RESULTS/PLOTS	
7. RF OUTPUT POWER	23
7.1 STANDARD APPLICABLE	
7.2 TEST EQUIPMENT LIST AND DETAILS	
7.3 TEST PROCEDURE	
7.4 ENVIRONMENTAL CONDITIONS	
7.5 SUMMARY OF TEST RESULTS/PLOTS	
8. FIELD STRENGTH OF SPURIOUS EMISSIONS	
8.1 MEASUREMENT UNCERTAINTY	
8.2 Standard Applicable 8.3 Test Equipment List and Details	
8.4 TEST PROCEDURE	
8.5 CORRECTED AMPLITUDE & MARGIN CALCULATION	
8.6 Environmental Conditions	
8.7 SUMMARY OF TEST RESULTS/PLOTS	32
9. OUT OF BAND EMISSIONS	54
9.1 Standard Applicable	
9.2 TEST EQUIPMENT LIST AND DETAILS	
9.3 TEST PROCEDURE	
9.5 SUMMARY OF TEST RESULTS/PLOTS	
10. CONDUCTED EMISSIONS	
10.1 Measurement Uncertainty	
10.3 TEST PROCEDURE.	
10.4 BASIC TEST SETUP BLOCK DIAGRAM	
10.5 Environmental Conditions	
10.6 TEST RECEIVER SETUP	
10.7 SUMMARY OF TEST RESULTS/PLOTS	
	05



1. GENERAL INFORMATION

1.1 Product Description for Equipment Under Test (EUT)

Client Information

Applicant: ELECTRONICS TECHNOLOGY(DONG GUAN) COMPANY

LIMITED

Address of applicant: No. 161, Xin Min Road, Tong Luo Wei Industrial Zone, Dong

Guan, China

Manufacturer: ELECTRONICS TECHNOLOGY(DONG GUAN) COMPANY

LIMITED

Address of manufacturer: No. 161, Xin Min Road, Tong Luo Wei Industrial Zone, Dong

Guan, China

General Description of EU	т
Product Name:	Tablet PC
Trade Name:	/
Model No.:	MA2EJ2-P(AP)
Adding Model(s):	Trio-Stealth G4 7.85
Rated Voltage:	Adapter: DC 5V/2.0A, Battery: DC 3.7V
Power Adapter Model:	PGAE0500200U1UL
	•

Note: The test data is gathered from a production sample provided by the manufacturer. The appearance of others models listed in the report is different from main-test model MA2EJ2-P(AP), but the circuit and the electronic construction do not change, declared by the manufacturer.

Technical Characteristics of EUT			
Support Standards:	802.11b, 802.11g, 802.11n		
Frequency Range:	2412-2462MHz		
RF Output Power:	11.05dBm (Conducted)		
Type of Modulation:	CCK, OFDM, QPSK, BPSK, 16QAM, 64QAM		
Data Rate:	1-11Mbps, 6-54Mbps, up to 150Mbps		
Quantity of Channels:	11		
Channel Separation:	5MHz		
Type of Antenna:	Integral		
Antenna Gain:	0dBi		

REPORT NO.: STR14098121I-1 PAGE 3 OF 65 FCC PART 15.247



1.2 Test Standards

The following report is prepared on behalf of the ELECTRONICS TECHNOLOGY(DONG GUAN) COMPANY LIMITED in accordance with FCC Part 15, Subpart C, and section 15.203, 15.205, 15.207, 15.209 and 15.247 of the Federal Communication Commissions rules.

The objective is to determine compliance with FCC Part 15, Subpart C, and section 15.203, 15.205, 15.207, 15.209 and 15.247 of the Federal Communication Commissions rules.

Maintenance of compliance is the responsibility of the manufacturer. Any modification of the product, which result in lowering the emission, should be checked to ensure compliance has been maintained.

1.3 Test Methodology

All measurements contained in this report were conducted with ANSI C63.4-2003, American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the range of 9 kHz to 40 GHz. The measurement guide KDB 558074 D01 V03r02 for digital transmission systems shall be performed also.

1.4 Test Facility

FCC - Registration No.: 934118

Shenzhen SEM.Test Technology Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files and the Registration is 934118.

Industry Canada (IC) Registration No.: 11464A

The 3m Semi-anechoic chamber of Shenzhen SEM. Test Technology Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 11464A.

CNAS Registration No.: L4062

Shenzhen SEM. Test Technology Co., Ltd. is a testing organization accredited by China National Accreditation Service for Conformity Assessment (CNAS) according to ISO/IEC 17025. The accreditation certificate number is L4062. All measurement facilities used to collect the measurement data are located at 1/F, Building A, Hongwei Industrial Park, Liuxian 2nd Road, Bao'an District, Shenzhen, P.R.C (518101).

REPORT NO.: STR14098121I-1 PAGE 4 OF 65 FCC PART 15.247



1.5 EUT Setup and Test Mode

The EUT was operated in the engineering mode to fix the Tx frequency that was for the purpose of the measurements. All testing shall be performed under maximum output power condition, and to measure its highest possible emissions level, more detailed description as follows:

Test Mode List				
Test Mode	Description	Remark		
TM1	802.11b	2412MHz, 2437MHz, 2462MHz		
TM2	802.11g	2412MHz, 2437MHz, 2462MHz		
TM3	802.11n-HT20	2412MHz, 2437MHz, 2462MHz		

EUT Cable List and Details						
Cable Description Length (m) Shielded/Unshielded With / Without Ferrite						
USB Cable	1.0	Unshielded	Without Ferrite			

Special Cable List and Details						
Cable Description Length (m) Shielded/Unshielded With / Without Ferrite						
Earphone Cable	1.2	Unshielded	Without Ferrite			

Auxiliary Equipment List and Details						
Description Manufacturer Model Serial Number						
Notebook Computer	Lenovo	E10	LR-63C8R			

REPORT NO.: STR14098121I-1 PAGE 5 OF 65 FCC PART 15.247



2. SUMMARY OF TEST RESULTS

FCC Rules	FCC Rules Description of Test Item	
§ 2.1093	RF Exposure	Compliant
§ 15.203; § 15.247(b)(4)(i)	Antenna Requirement	Compliant
§ 15.207(a)	Conducted Emission	Compliant
§ 15.247(e)	Power Spectral Density	Compliant
§ 15.247(a)(2)	6 dB Bandwidth	Compliant
§ 15.247(b)(3)	RF Output Power	Compliant
§ 15.209(a)	Radiated Emission	Compliant
§ 15.247(d)	Band Edge (Out of Band Emissions) Compliant	

N/A: not applicable



3. RF Exposure

3.1 Standard Applicable

According to § 1.1307 and § 2.1093, the portable transmitter must comply the RF exposure requirements.

3.2 Test Result

This product complied with the requirement of the RF exposure, please see the RF Exposure Report.



4. Antenna Requirement

4.1 Standard Applicable

According to FCC Part 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.

4.2 Evaluation Information

This product has a integral antenna, fulfill the requirement of this section.



5. Power Spectral Density

5.1 Standard Applicable

According to 15.247(a)(1)(iii), 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.

5.2 Test Equipment List and Details

Description	Manufacturer	Model	Serial Number	Cal. Date	Due. Date
Spectrum Analyzer	Agilent	E4402B	US41192821	2014-05-28	2015-05-27
Attenuator	ATTEN	ATS100-4-20	/	2014-05-28	2015-05-27

5.3 Test Procedure

According to the KDB 558074 D01 V03r02, the test method of power spectral density as below:

3

- 1. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.
- 2. Set analyzer center frequency to DTS channel center frequency.
- 3. Set the span to 1.5 times the DTS channel bandwidth.
- 4. Set the RBW \geq 3 kHz.
- 5. Set the VBW \geq 3 x RBW.
- 6. Detector = peak.
- 7. Sweep time = auto couple.
- 8. Trace mode = max hold.
- 9. Allow trace to fully stabilize.
- 10. Use the peak marker function to determine the maximum amplitude level.
- 11. If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

5.4 Environmental Conditions

Temperature:	26° C
Relative Humidity:	54%
ATM Pressure:	1011 mbar

REPORT NO.: STR14098121I-1 PAGE 9 OF 65 FCC PART 15.247



5.5 Summary of Test Results/Plots

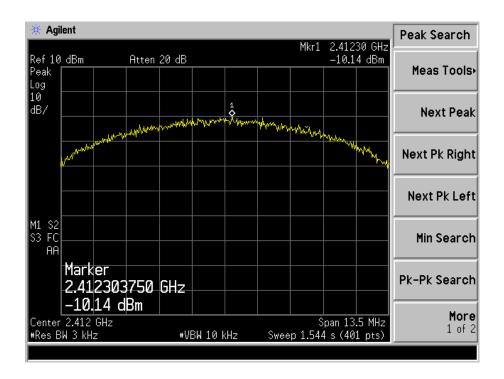
Test Mode	Test Channel MHz	Power Spectral Density dBm/3kHz	Limit dBm/3kHz
	2412	-10.14	8
802.11b	2437	-10.94	8
	2462	-10.69	8
	2412	-14.24	8
802.11g	2437	-14.36	8
	2462	-13.82	8
	2412	-13.85	8
802.11n HT20	2437	-14.57	8
	2462	-14.91	8

Please refer to the following test plots:

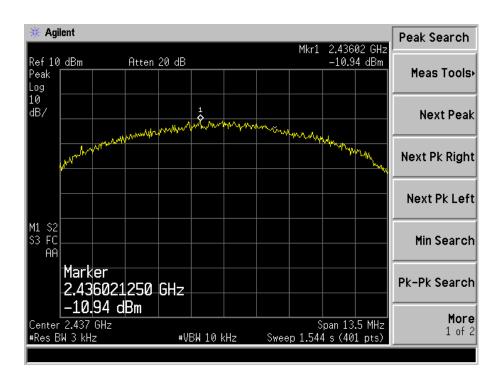
REPORT NO.: STR14098121I-1 PAGE 10 OF 65 FCC PART 15.247



802.11b-Low Channel

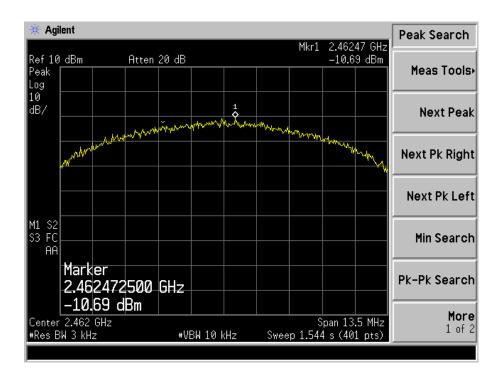


802.11b-Middle Channel

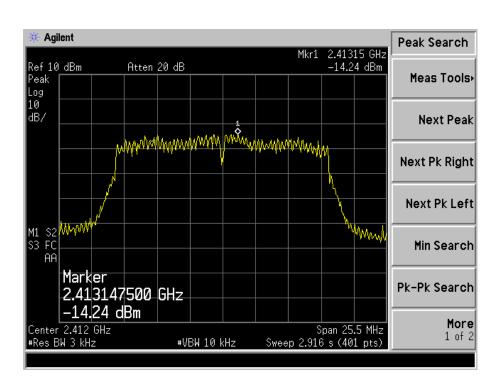




802.11b-High Channel

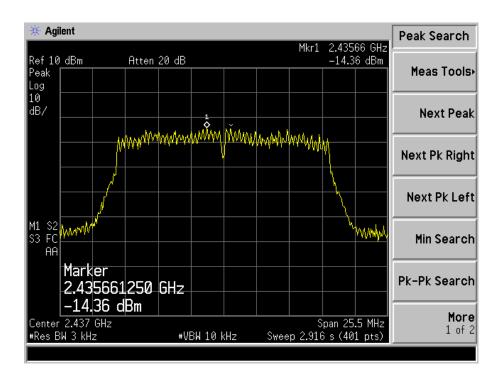


802.11g-Low Channel

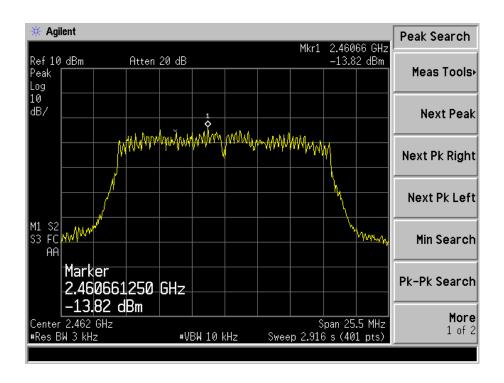




802.11g-Middle Channel

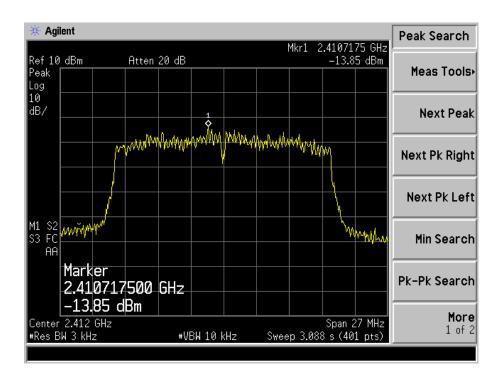


802.11g-High Channel

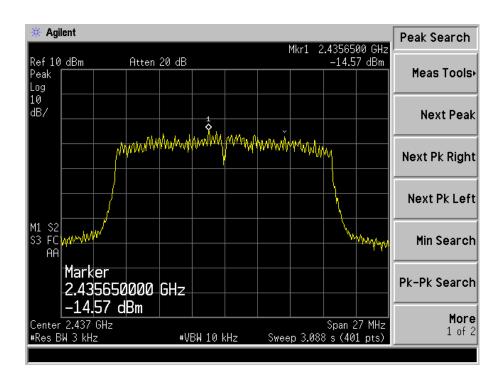




802.11n-HT20-Low Channel

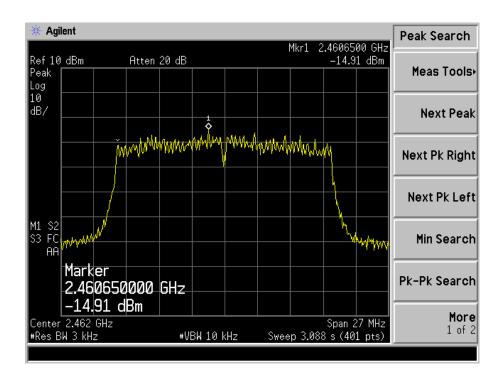


802.11n-HT20-Middle Channel





802.11n-HT20-High Channel





6. 6dB Bandwidth

6.1 Standard Applicable

According to 15.247(a)(2). 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.

6.2 Test Equipment List and Details

Description	Manufacturer	Model	Serial Number	Cal. Date	Due. Date
Spectrum Analyzer	Agilent	E4402B	US41192821	2014-05-28	2015-05-27
Attenuator	ATTEN	ATS100-4-20	/	2014-05-28	2015-05-27

6.3 Test Procedure

According to the KDB 558074 D01 v03r02, the test method of power spectral density as below:

- 1. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.
- 2. Set RBW = 100 kHz.
- 3. Set the video bandwidth (VBW) \geq 3 \times RBW.
- 4. Detector = Peak.
- 5. Trace mode = \max hold.
- 6. Sweep = auto couple.
- 7. Allow the trace to stabilize.
- 8. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

6.4 Environmental Conditions

Temperature:	25° C
Relative Humidity:	53%
ATM Pressure:	1018 mbar

REPORT NO.: STR14098121I-1 PAGE 16 OF 65 FCC PART 15.247



6.5 Summary of Test Results/Plots

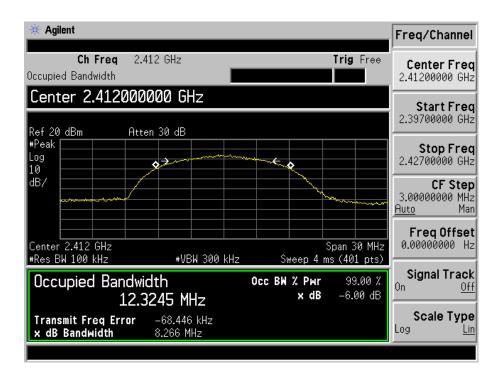
Test Mode	Test Channel MHz	6 dB Bandwidth kHz	99% Bandwidth kHz	Limit kHz
	2412	8266	12324.5	500
802.11b	2437	8302	12314.2	500
	2462	8134	12259.2	500
	2412	15457	16311.1	500
802.11g	2437	15813	16306.0	500
	2462	16352	16323.8	500
	2412	17527	17466.8	500
802.11n-HT20	2437	16893	17483.1	500
	2462	16917	17479.5	500

Please refer to the following test plots:

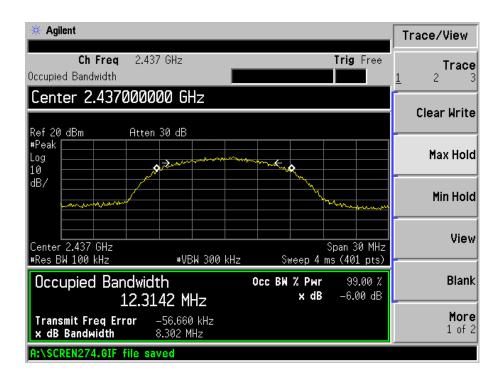
REPORT NO.: STR14098121I-1 PAGE 17 OF 65 FCC PART 15.247



802.11b-Low Channel



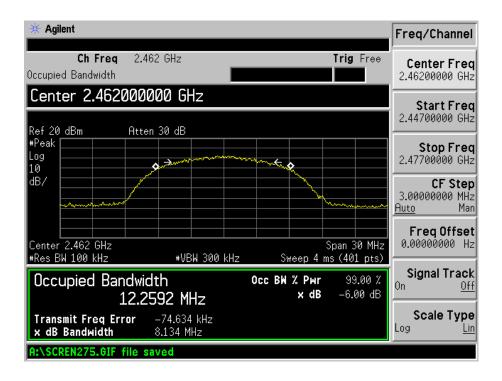
802.11b-Middle Channel



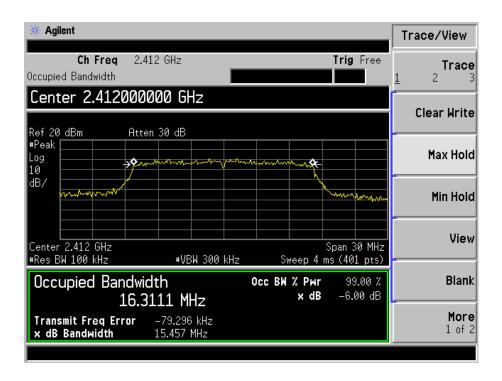
REPORT NO.: STR14098121I-1 PAGE 18 OF 65 FCC PART 15.247



802.11b-High Channel



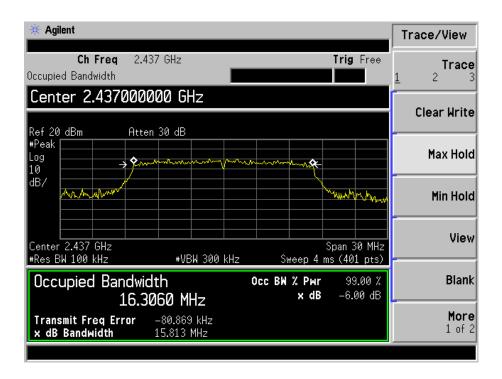
802.11g-Low Channel



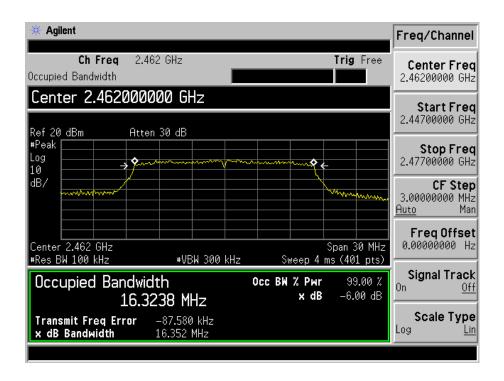
REPORT NO.: STR14098121I-1 PAGE 19 OF 65 FCC PART 15.247



802.11g-Middle Channel



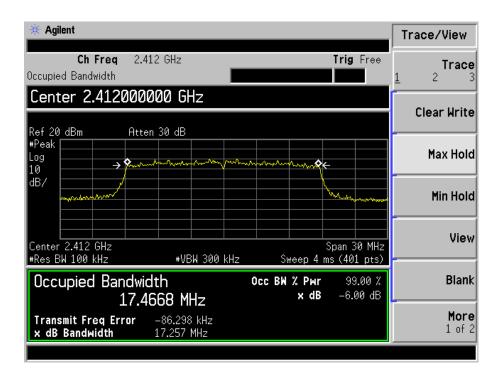
802.11g-High Channel



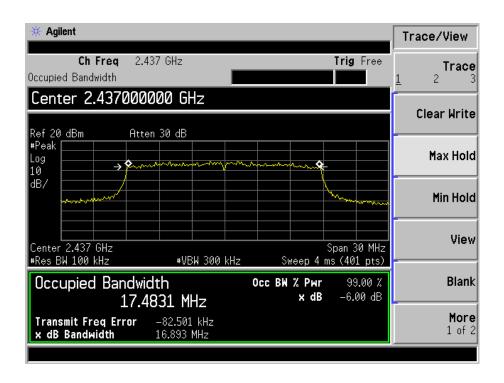
REPORT NO.: STR14098121I-1 PAGE 20 OF 65 FCC PART 15.247



802.11n-HT20-Low Channel



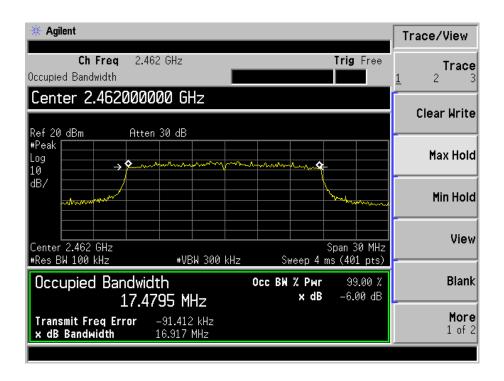
802.11n-HT20-Middle Channel



REPORT NO.: STR14098121I-1 PAGE 21 OF 65 FCC PART 15.247



802.11n-HT20-High Channel





7. RF Output Power

7.1 Standard Applicable

According to 15.247(b)(3). For systems using digital modulation in the 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz bands: 1 Watt.

7.2 Test Equipment List and Details

Description	Manufacturer	Model	Serial Number	Cal. Date	Due. Date
Spectrum Analyzer	Agilent	E4402B	US41192821	2014-05-28	2015-05-27
Attenuator	ATTEN	ATS100-4-20	/	2014-05-28	2015-05-27

7.3 Test Procedure

According to section 15.247(b)-power output of the KDB-558074 D01 V03r02, 8.1.2 Option 2 (channel integration method) this procedure should only be used when the maximum available RBW of the spectrum/signal analyzer is less than the DTS bandwidth.

- 1. Set span to at least 1.5 times the OBW.
- 2. Set RBW = 1-5% of the OBW, not to exceed 1 MHz.
- 3. Set VBW \geq 3 x RBW.
- 4. Number of points in sweep $\geq 2 \times \text{span} / \text{RBW}$. (This gives bin-to-bin spacing $\leq \text{RBW}/2$, so that narrowband signals are not lost between frequency bins.)
- 5. Sweep time = auto.
- 6. Detector = RMS (i.e., power averaging), if available. Otherwise, use sample detector mode.
- 7. Trace average at least 100 traces in power averaging (i.e., RMS) mode.
- 8. Compute power by integrating the spectrum across the OBW of the signal using the instrument's band power measurement function, with band limits set equal to the OBW band edges. If the instrument does not have a band power function, sum the spectrum levels (in power units) at intervals equal to the RBW extending across the entire OBW of the spectrum.

7.4 Environmental Conditions

Temperature:	26° C
Relative Humidity:	57%
ATM Pressure:	1011 mbar

REPORT NO.: STR14098121I-1 PAGE 23 OF 65 FCC PART 15.247



7.5 Summary of Test Results/Plots

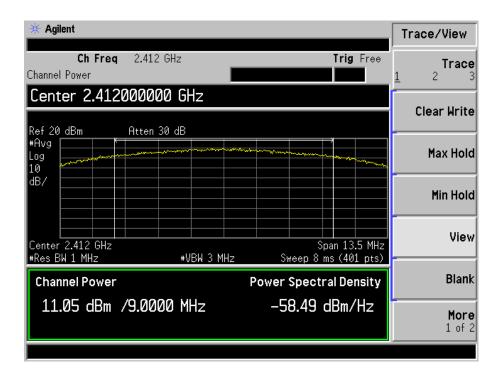
Test Mode	Frequency	Reading	Output Power	Limit
Test Mode	MHz	dBm	mW	mW
	2412	11.05	12.74	1000
802.11b _ 11Mbps	2437	10.70	11.75	1000
	2462	10.35	10.84	1000
	2412	9.63	9.18	1000
802.11g_54Mbps	2437	9.23	8.38	1000
	2462	8.92	7.80	1000
	2412	8.62	7.28	1000
802.11n HT20_MCS7	2437	8.07	6.41	1000
	2462	7.63	5.79	1000

Please refer to the following test plots:

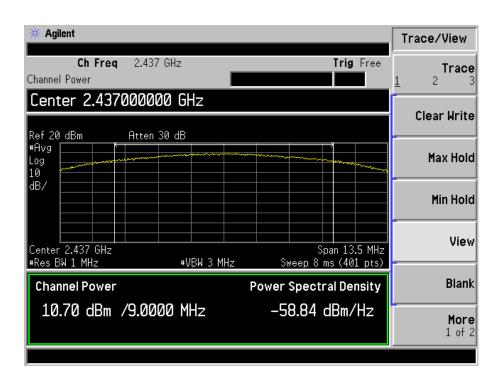
REPORT NO.: STR14098121I-1 PAGE 24 OF 65 FCC PART 15.247



802.11b-Low Channel



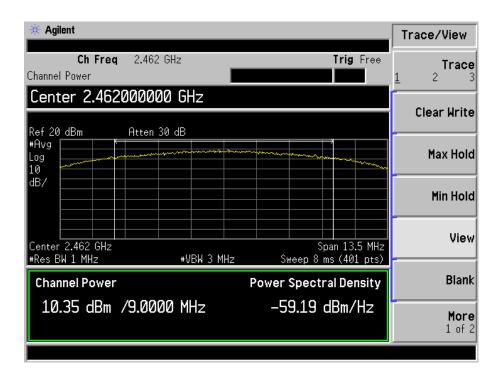
802.11b-Middle Channel



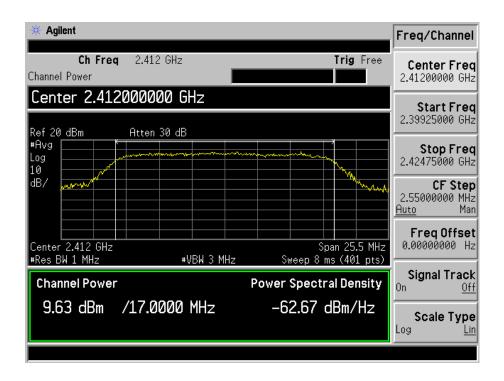
REPORT NO.: STR14098121I-1 PAGE 25 OF 65 FCC PART 15.247



802.11b-High Channel



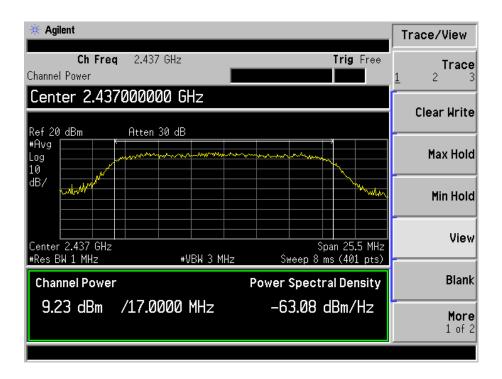
802.11g-Low Channel



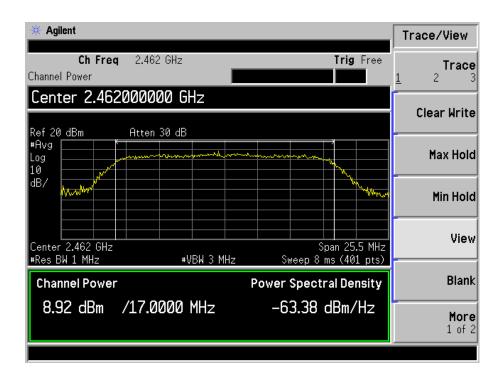
REPORT NO.: STR14098121I-1 PAGE 26 OF 65 FCC PART 15.247



802.11g-Middle Channel



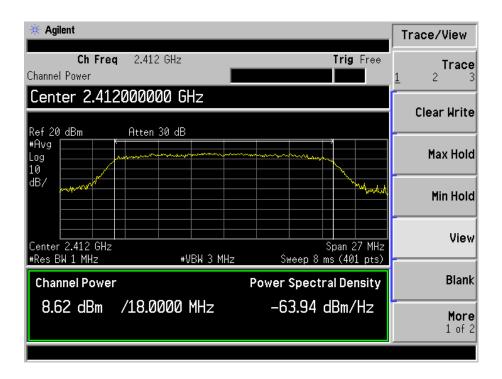
802.11g-High Channel



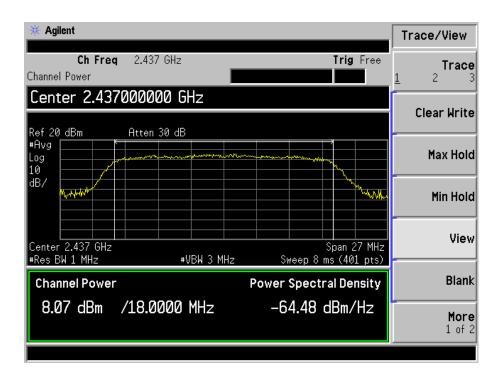
REPORT NO.: STR14098121I-1 PAGE 27 OF 65 FCC PART 15.247



802.11n-HT20-Low Channel



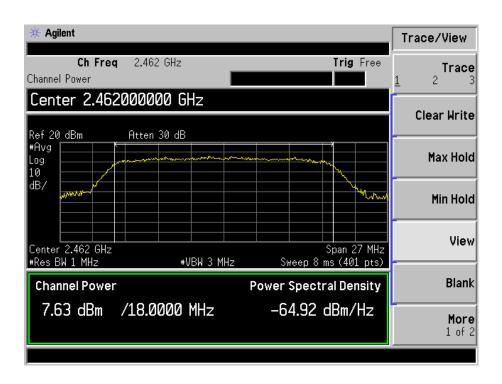
802.11n-HT20-Middle Channel



REPORT NO.: STR14098121I-1 PAGE 28 OF 65 FCC PART 15.247



802.11n-HT20-High Channel





8. Field Strength of Spurious Emissions

8.1 Measurement Uncertainty

Based on NIS 81, The Treatment of Uncertainty in EMC Measurements, the best estimate of the uncertainty of a radiation emissions measurement is ±5.10 dB.

8.2 Standard Applicable

According to §15.247(d), 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).

The emission limit in this paragraph is based on measurement instrumentation employing an average detector. The provisions in §15.35 for limiting peak emissions apply. Spurious Radiated Emissions measurements starting below or at the lowest crystal frequency.

8.3 Test Equipment List and Details

Description	Manufacturer	Model	Serial Number	Cal. Date	Due. Date
Spectrum Analyzer	R&S	FSP	836079/035	2014-05-28	2015-05-27
EMI Test Receiver	R&S	ESVB	825471/005	2014-05-28	2015-05-27
Pre-amplifier	Agilent	8447F	3113A06717	2014-05-28	2015-05-27
Pre-amplifier	Compliance Direction	PAP-0118	24002	2014-05-28	2015-05-27
Trilog Broadband Antenna	SCHWARZBECK	VULB9163	9163-333	2014-05-24	2015-05-23
Horn Antenna	ETS	3117	00086197	2014-05-24	2015-05-23
Horn Antenna	ETS	3116B	00088203	2014-05-24	2015-05-23
Loop Antenna	SCHWARZECK	HFRA 5165	9365	2014-05-24	2015-05-23

REPORT NO.: STR14098121I-1 PAGE 30 OF 65 FCC PART 15.247



8.4 Test Procedure

The setup of EUT is according with per ANSI C63.4-2003 measurement procedure. The specification used was with the FCC Part 15.205 15.247(a) and FCC Part 15.209 Limit.

The external I/O cables were draped along the test table and formed a bundle 30 to 40 cm long in the middle. The spacing between the peripherals was 10 cm.



Frequency:9kHz-30MHz	Frequency:30MHz-1GHz	Frequency: Above 1GHz
RBW=10KHz,	RBW=120KHz,	RBW=1MHz,
VBW = 30KHz	VBW=300KHz	VBW=3MHz(Peak), 10Hz(AV)
Sweep time= Auto	Sweep time= Auto	Sweep time= Auto
Trace = \max hold	Trace = \max hold	Trace = \max hold
Detector function = peak	Detector function = peak, QP	Detector function = peak, AV

8.5 Corrected Amplitude & Margin Calculation

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

Corr. Ampl. = Indicated Reading + Ant. Factor + Cable Loss – Ampl. Gain

The "Margin" column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of $-6dB\mu V$ means the emission is $6dB\mu V$ below the maximum limit for Class B. The equation for margin calculation is as follows:

Margin = Corr. Ampl. – FCC Part 15 Limit

REPORT NO.: STR14098121I-1 PAGE 31 OF 65 FCC PART 15.247



8.6 Environmental Conditions

Temperature:	25 °C
Relative Humidity:	52%
ATM Pressure:	1012 mbar

8.7 Summary of Test Results/Plots

According to the data below, the FCC Part 15.205, 15.209 and 15.247 standards, and had the worst cases:

Note: this EUT was tested in 3 orthogonal positions and the worst case position data was reported.

REPORT NO.: STR14098121I-1 PAGE 32 OF 65 FCC PART 15.247



Plot of Radiated Emissions Test Data (30MHz to 1GHz)

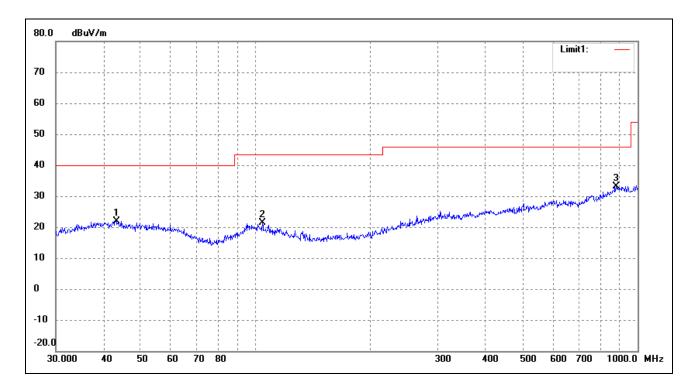
EUT: Tablet PC

Tested Model: MA2EJ2-P(AP)

Operating Condition: 802.11b Transmitting Low Channel-2412MHz

Comment: Battery DC 3.7V

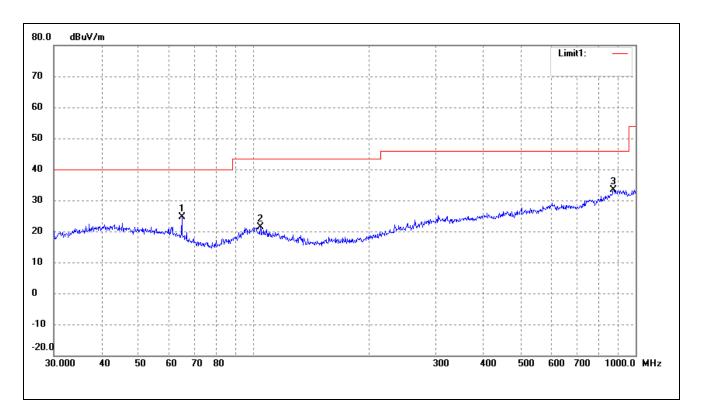
Test Specification: Horizontal



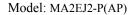
	No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
		(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(•)	(cm)	
Ī	1	43.2017	14.94	6.93	21.87	40.00	-18.13	178	100	peak
ſ	2	104.1701	15.58	5.69	21.27	43.50	-22.23	180	100	peak
	3	878.3214	16.46	16.78	33.24	46.00	-12.76	102	100	peak



Test Specification: Vertical



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(•)	(cm)	
1	64.8865	20.72	3.82	24.54	40.00	-15.46	110	100	peak
2	104.1701	15.58	5.69	21.27	43.50	-22.23	270	100	peak
3	875.2470	16.57	16.70	33.27	46.00	-12.73	360	100	peak

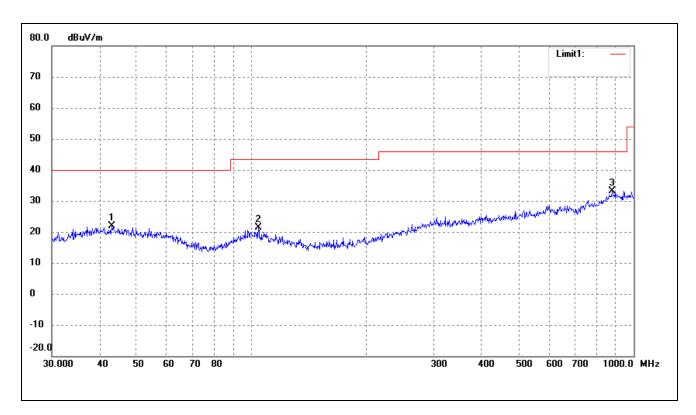




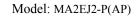
Operating Condition: 802.11b Transmitting Middle Channel-2437MHz

Comment: Battery DC 3.7V

Test Specification: Horizontal

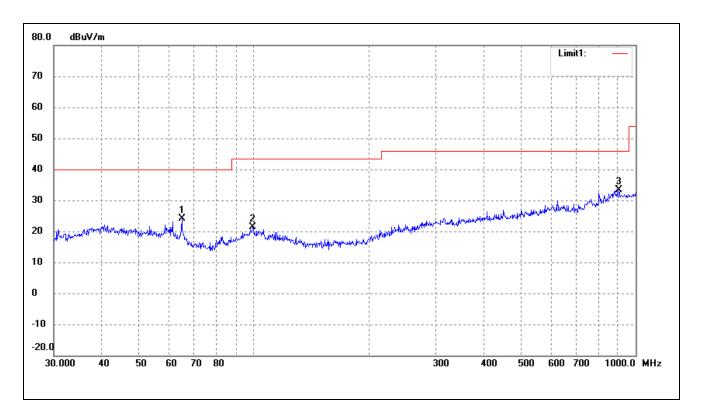


No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(•)	(cm)	
1	43.0505	14.89	6.94	21.83	40.00	-18.17	180	100	peak
2	104.1701	15.58	5.69	21.27	43.50	-22.23	140	100	peak
3	878.3214	16.46	16.78	33.24	46.00	-12.76	160	100	peak





Test Specification: Vertical

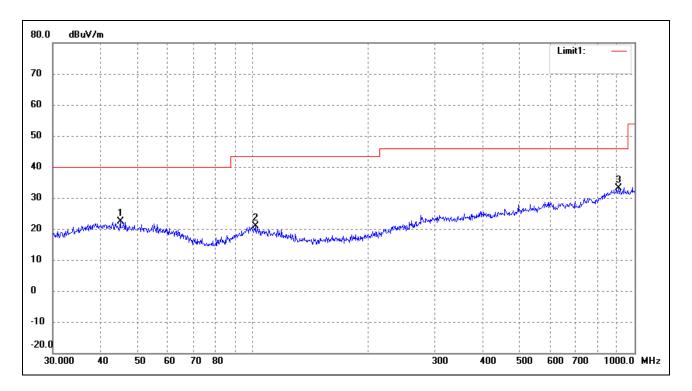


No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(•)	(cm)	
1	64.8865	20.25	3.82	24.07	40.00	-15.93	270	100	peak
2	99.5281	15.46	6.01	21.47	43.50	-22.03	158	100	peak
3	903.3094	16.55	16.79	33.34	46.00	-12.66	360	100	peak



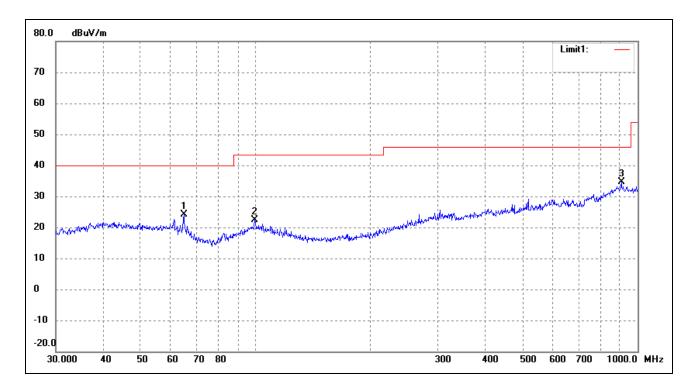
Operating Condition: 802.11b Transmitting High Channel-2462MHz

Comment: Battery DC 3.7V



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(•)	(cm)	
1	45.0583	15.60	6.75	22.35	40.00	-17.65	120	100	peak
2	101.6443	14.91	5.95	20.86	43.50	-22.64	250	100	peak
3	909.6667	16.53	16.68	33.21	46.00	-12.79	360	100	peak





	No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
		(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(•)	(cm)	
Ī	1	64.8865	20.37	3.82	24.19	40.00	-15.81	360	100	peak
	2	99.5281	16.47	6.01	22.48	43.50	-21.02	200	100	peak
	3	906.4824	17.99	16.73	34.72	46.00	-11.28	120	100	peak



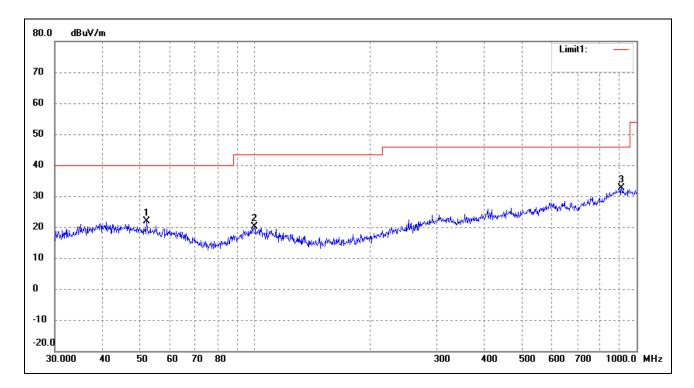
Plot of Radiated Emissions Test Data (30MHz to 1GHz)

EUT: Tablet PC

Tested Model: MA2EJ2-P(AP)

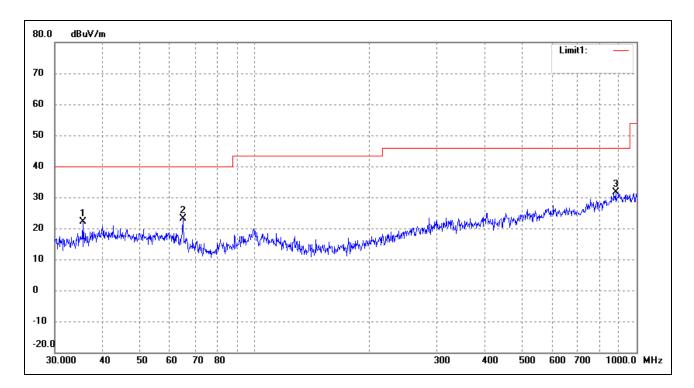
Operating Condition: 802.11g Transmitting Low Channel-2412MHz

Comment: Battery DC 3.7V



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(•)	(cm)	
1	52.2079	15.93	6.07	22.00	40.00	-18.00	170	100	peak
2	99.8777	13.91	6.10	20.01	43.50	-23.49	220	100	peak
3	912.8620	16.01	16.62	32.63	46.00	-13.37	320	100	peak



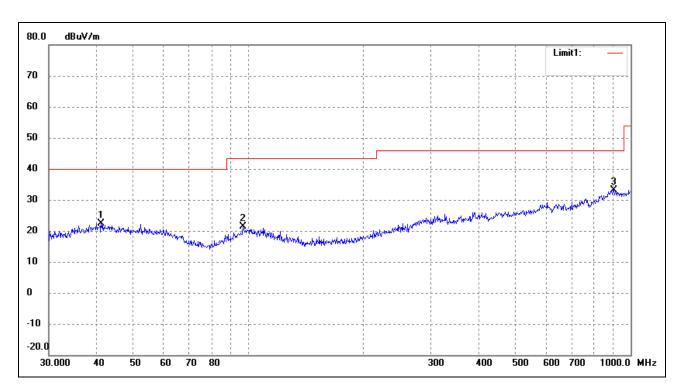


No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(•)	(cm)	
1	35.4993	13.61	8.47	22.08	40.00	-17.92	270	100	peak
2	64.8865	19.32	3.82	23.14	40.00	-16.86	190	100	peak
3	881.4067	14.78	16.82	31.60	46.00	-14.40	360	100	peak



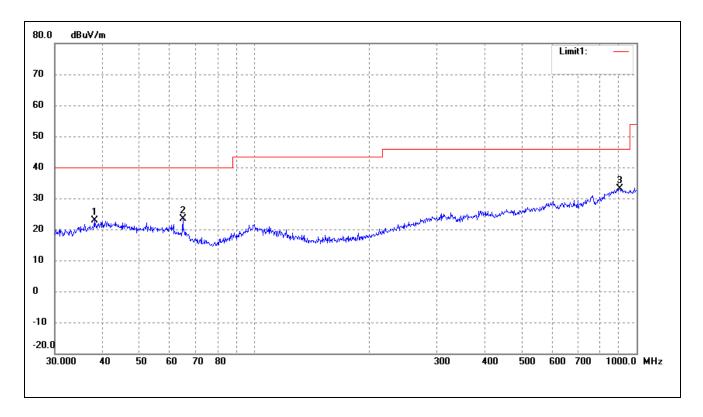
Operating Condition: 802.11g Transmitting Middle Channel-2437MHz

Comment: Battery DC 3.7V



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(•)	(cm)	
1	41.1320	15.30	7.14	22.44	40.00	-17.56	270	100	peak
2	96.7749	16.05	5.32	21.37	43.50	-22.13	160	100	peak
3	903.3094	16.32	16.79	33.11	46.00	-12.89	228	200	peak



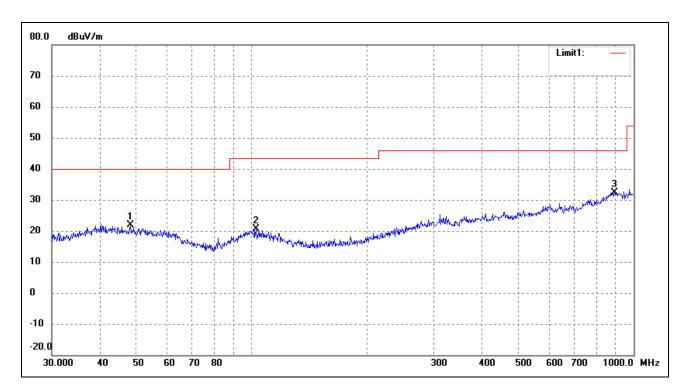


No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(•)	(cm)	
1	38.0783	14.02	8.92	22.94	40.00	-17.06	360	100	peak
2	64.8865	19.45	3.82	23.27	40.00	-16.73	120	100	peak
3	903.3094	16.32	16.79	33.11	46.00	-12.89	270	100	peak



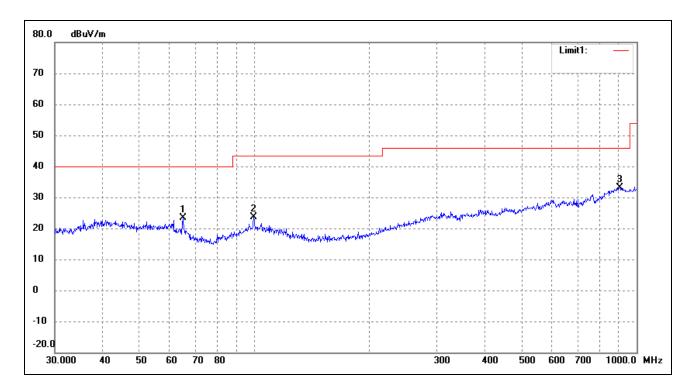
Operating Condition: 802.11g Transmitting High Channel-2462MHz

Comment: Battery DC 3.7V



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(•)	(cm)	
1	48.1626	15.33	6.44	21.77	40.00	-18.23	270	100	peak
2	102.7192	14.82	5.85	20.67	43.50	-22.83	150	100	peak
3	890.7278	15.66	16.84	32.50	46.00	-13.50	360	100	peak





No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(•)	(cm)	
1	64.8865	19.45	3.82	23.27	40.00	-16.73	360	100	peak
2	99.5281	17.66	6.01	23.67	43.50	-19.83	180	100	peak
3	903.3094	16.32	16.79	33.11	46.00	-12.89	120	100	peak



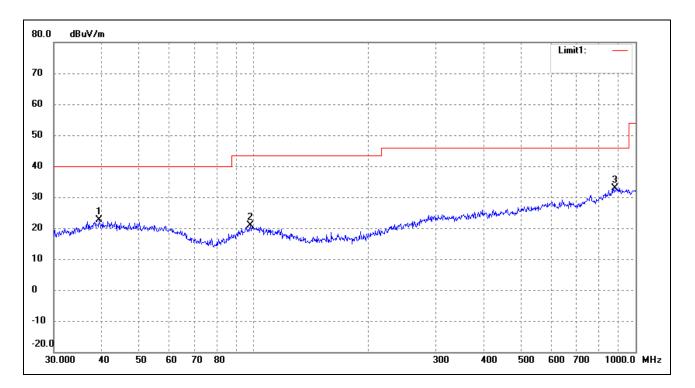
Plot of Radiated Emissions Test Data (30MHz to 1GHz)

EUT: Tablet PC

Tested Model: MA2EJ2-P(AP)

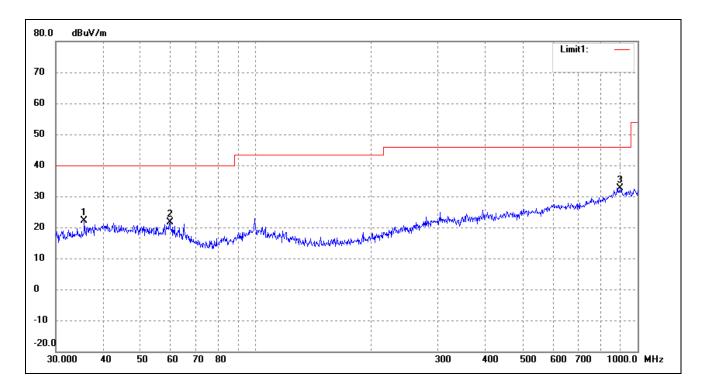
Operating Condition: 802.11n-HT20 Transmitting Low Channel-2412MHz

Comment: Battery DC 3.7V



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(•)	(cm)	
1	39.4372	15.43	7.10	22.53	40.00	-17.47	260	100	peak
2	98.1419	15.26	5.67	20.93	43.50	-22.57	120	200	peak
3	884.5029	16.12	16.83	32.95	46.00	-13.05	289	200	peak



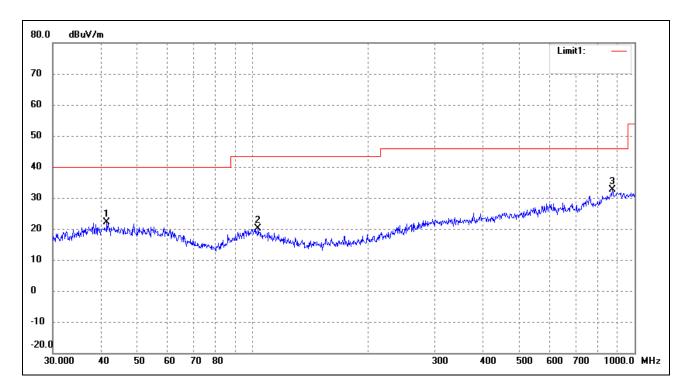


No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(•)	(cm)	
1	35.6240	13.62	8.49	22.11	40.00	-17.89	130	100	peak
2	59.6493	16.24	5.41	21.65	40.00	-18.35	120	100	peak
3	900.1474	15.73	16.85	32.58	46.00	-13.42	360	100	peak



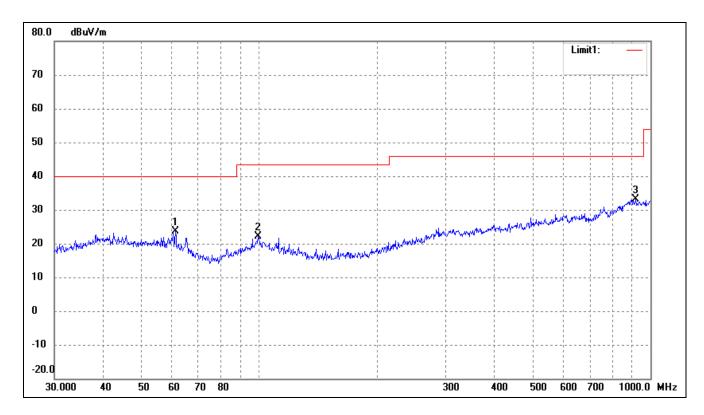
Operating Condition: 802.11n-HT20 Transmitting Middle Channel-2437MHz

Comment: Battery DC 3.7V



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(•)	(cm)	
1	41.5670	14.94	7.09	22.03	40.00	-17.97	274	100	peak
2	103.4421	14.40	5.77	20.17	43.50	-23.33	130	100	peak
3	875.2470	15.96	16.70	32.66	46.00	-13.34	120	100	peak



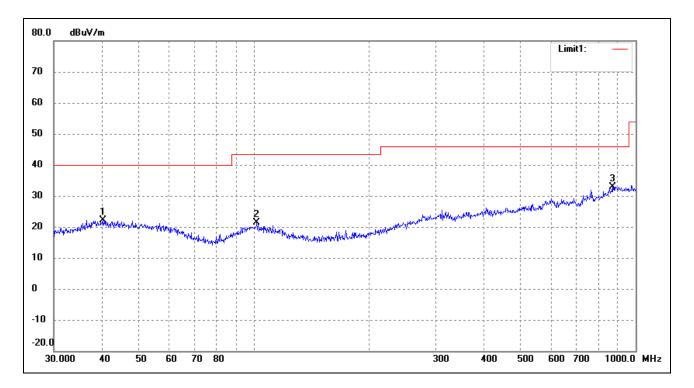


No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(•)	(cm)	
1	61.1316	18.53	5.02	23.55	40.00	-16.45	360	100	peak
2	99.5281	16.16	6.01	22.17	43.50	-21.33	110	100	peak
3	916.0687	16.62	16.56	33.18	46.00	-12.82	120	100	peak



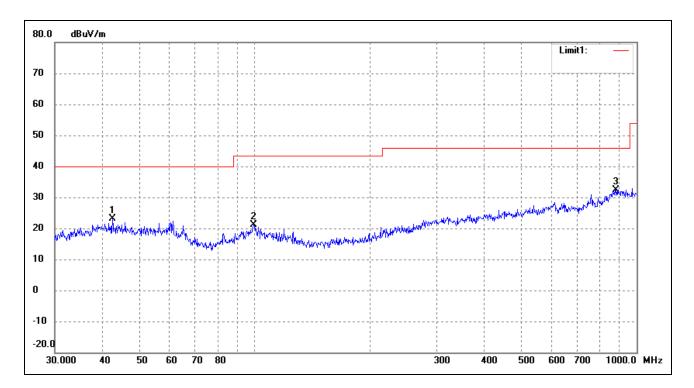
Operating Condition: 802.11n-HT20 Transmitting High Channel-2462MHz

Comment: Battery DC 3.7V



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(•)	(cm)	
1	40.2757	14.89	7.22	22.11	40.00	-17.89	360	100	peak
2	102.0014	15.56	5.91	21.47	43.50	-22.03	138	100	peak
3	869.1302	16.36	16.54	32.90	46.00	-13.10	180	200	peak





No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(•)	(cm)	
1	42.4508	14.66	8.51	23.17	40.00	-16.83	270	100	peak
2	99.5281	15.16	6.01	21.17	43.50	-22.33	120	100	peak
3	884.5029	15.57	16.83	32.40	46.00	-13.60	360	100	peak



Spurious Emissions Above 1GHz

Test Mode: 802.11b

Frequency	Reading	Correct	Result	Limit	Margin	Polar	Detector
(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	H/V	
			Low Channe	el-2412MHz			
4824.000	59.24	0.57	59.81	74.00	-14.19	Н	PK
4824.000	44.84	0.57	45.41	54.00	-8.59	Н	AV
7236.000	35.01	3.69	38.70	74.00	-35.30	Н	PK
7236.000	23.58	3.69	27.27	54.00	-26.73	Н	AV
4824.000	50.85	0.57	51.42	74.00	-22.58	V	PK
4824.000	37.17	0.57	37.74	54.00	-16.26	V	AV
7236.000	34.80	3.69	38.49	74.00	-35.51	V	PK
7236.000	23.41	3.69	27.10	54.00	-26.90	V	AV
			Middle Chan	nel-2437MHz			
4874.000	57.35	0.66	58.01	74.00	-15.99	Н	PK
4874.000	42.77	0.66	43.43	54.00	-10.57	Н	AV
7311.000	37.61	3.76	41.37	74.00	-32.63	Н	PK
7311.000	25.87	3.76	29.63	54.00	-24.37	Н	AV
4874.000	51.19	0.66	51.85	74.00	-22.15	V	PK
4874.000	37.61	0.66	38.27	54.00	-15.73	V	AV
7311.000	38.83	3.76	42.59	74.00	-31.41	V	PK
7311.000	25.84	3.76	29.60	54.00	-24.40	V	AV
			High Chann	el-2462MHz			
4924.000	56.32	0.74	57.06	74.00	-16.94	Н	PK
4924.000	42.94	0.74	43.68	54.00	-10.32	Н	AV
7386.000	37.91	3.83	41.74	74.00	-32.26	Н	PK
7386.000	27.26	3.83	31.09	54.00	-22.91	Н	AV
4924.000	53.07	0.74	53.81	74.00	-20.19	V	PK
4924.000	39.42	0.74	40.16	54.00	-13.84	V	AV
7386.000	38.69	3.83	42.52	74.00	-31.48	V	PK
7386.000	27.20	3.83	31.03	54.00	-22.97	V	AV



Test Mode: 802.11g

Frequency	Reading	Correct	Result	Limit	Margin	Polar	Detector
(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	H/V	
			Low Channe	el-2412MHz			
4824.000	34.00	0.57	34.57	54.00	-19.43	Н	PK
4824.000	47.78	0.57	48.35	74.00	-25.65	Н	AV
7236.000	35.17	3.69	38.86	74.00	-35.14	Н	PK
7236.000	23.82	3.69	27.51	54.00	-26.49	Н	AV
4824.000	42.22	0.57	42.79	54.00	-11.21	V	PK
4824.000	33.11	0.57	33.68	54.00	-20.32	V	AV
7236.000	35.08	3.69	38.77	74.00	-35.23	V	PK
7236.000	23.89	3.69	27.58	54.00	-26.42	V	AV
			Middle Chan	nel-2437MHz			
4874.000	33.19	0.66	33.85	54.00	-20.15	Н	PK
4874.000	46.35	0.66	47.01	74.00	-26.99	Н	AV
7311.000	37.62	3.76	41.38	74.00	-32.62	Н	PK
7311.000	26.04	3.76	29.80	54.00	-24.20	Н	AV
4874.000	43.36	0.66	44.02	74.00	-29.98	V	PK
4874.000	32.19	0.66	32.85	54.00	-21.15	V	AV
7311.000	37.03	3.76	40.79	74.00	-33.21	V	PK
7311.000	26.65	3.76	30.41	54.00	-23.59	V	AV
			High Chann	el-2462MHz			
4924.000	45.79	0.74	46.53	74.00	-27.47	Н	PK
4924.000	33.00	0.74	33.74	54.00	-20.26	Н	AV
7386.000	37.86	3.83	41.69	74.00	-32.31	Н	PK
7386.000	27.21	3.83	31.04	54.00	-22.96	Н	AV
4924.000	45.15	0.74	45.89	74.00	-28.11	V	PK
4924.000	33.60	0.74	34.34	54.00	-19.66	V	AV
7386.000	38.93	3.83	42.76	74.00	-31.24	V	PK
7386.000	27.12	3.83	30.95	54.00	-23.05	V	AV



Test Mode: 802.11n(HT20)

Frequency	Reading	Correct	Result	Limit	Margin	Polar	Detector
(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	H/V	
			Low Channe	el-2412MHz			
4824.000	45.85	0.57	46.42	74.00	-27.58	Н	PK
4824.000	32.67	0.57	33.24	54.00	-20.76	Н	AV
7236.000	34.49	3.69	38.18	74.00	-35.82	Н	PK
7236.000	23.28	3.69	26.97	54.00	-27.03	Н	AV
4824.000	43.03	0.57	43.60	74.00	-30.40	V	PK
4824.000	31.74	0.57	32.31	54.00	-21.69	V	AV
7236.000	34.59	3.69	38.28	74.00	-35.72	V	PK
7236.000	23.31	3.69	27.00	54.00	-27.00	V	AV
			Middle Chan	nel-2437MHz			
4874.000	43.08	0.66	43.74	74.00	-30.26	Н	PK
4874.000	31.66	0.66	32.32	54.00	-21.68	Н	AV
7311.000	36.80	3.76	40.56	74.00	-33.44	Н	PK
7311.000	26.16	3.76	29.92	54.00	-24.08	Н	AV
4874.000	44.14	0.66	44.80	74.00	-29.20	V	PK
4874.000	32.41	0.66	33.07	54.00	-20.93	V	AV
7311.000	37.59	3.76	41.35	74.00	-32.65	V	PK
7311.000	25.48	3.76	29.24	54.00	-24.76	V	AV
			High Chann	el-2462MHz			
4924.000	43.25	0.74	43.99	74.00	-30.01	Н	PK
4924.000	31.69	0.74	32.43	54.00	-21.57	Н	AV
7386.000	38.35	3.83	42.18	74.00	-31.82	Н	PK
7386.000	27.19	3.83	31.02	54.00	-22.98	Н	AV
4924.000	43.52	0.74	44.26	74.00	-29.74	V	PK
4924.000	31.12	0.74	31.86	54.00	-22.14	V	AV
7386.000	38.66	3.83	42.49	74.00	-31.51	V	PK
7386.000	26.99	3.83	30.82	54.00	-23.18	V	AV

Note: Testing is carried out with frequency rang 9kHz to the tenth harmonics, which above 3^{th} Harmonics are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured. The measurements greater than 20dB below the limit from 9kHz to 30MHz.

REPORT NO.: STR14098121I-1 PAGE 53 OF 65 FCC PART 15.247



9. Out of Band Emissions

9.1 Standard Applicable

According to §15.247 (d) 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).

9.2 Test Equipment List and Details

Description	otion Manufacturer		Serial Number	Cal. Date	Due. Date
Spectrum Analyzer	R&S	FSP	836079/035	2014-05-28	2015-05-27
EMI Test Receiver	R&S	ESVB	825471/005	2014-05-28	2015-05-27
Pre-amplifier	Agilent	8447F	3113A06717	2014-05-28	2015-05-27
Pre-amplifier	Compliance Direction	PAP-0118	24002	2014-05-28	2015-05-27
Trilog Broadband Antenna	SCHWARZBECK	VULB9163	9163-333	2014-05-24	2015-05-23
Horn Antenna	ETS	3117	00086197	2014-05-24	2015-05-23

9.3 Test Procedure

According to the KDB 558074D01 v03r02, the band-edge radiated test method as follows:

Set span = wide enough to capture the peak level of the emission operating on the channel closest to the bandedge, as well as any modulation products which fall outside of the authorized band of operation (2310MHz to 2420MHz for low bandedge, 2460MHz to 2500MHz for the high bandedge)

RBW = 1MHz, VBW = 1MHz for peak value measured

RBW = 1MHz, VBW = 10Hz for average value measured

Sweep = auto; Detector function = peak/average; Trace = max hold

All the trace to stabilize, set the marker on the emission at the bandedge, or on the highest modulation product outside of the band, if this level is greater than that at the bandedge. Enable the marker-delta function, then use the marker-to-peak function to move the marker to the peak of the in-band emission. Those emission must comply with the 15.209 limit for fall in the restricted bands listed in section 15.205. Note that the method of measurement KDB publication number: 913591 may be used for the radiated bandedge measurements.

REPORT NO.: STR14098121I-1 PAGE 54 OF 65 FCC PART 15.247



According to the KDB 558074 D01 V03r02, the conducted spurious emissions test method as follows:

- 1. Set start frequency to DTS channel edge frequency.
- 2. Set stop frequency so as to encompass the spectrum to be examined.
- 3. Set RBW = 100 kHz.
- 4. Set VBW \geq 300 kHz.
- 5. Detector = peak.
- 6. Trace Mode = \max hold.
- 7. Sweep = auto couple.
- 8. Allow the trace to stabilize (this may take some time, depending on the extent of the span).
- 9. Use peak marker function to determine maximum amplitude of all unwanted emissions within any 100 kHz bandwidth.

Ensure that the amplitude of all unwanted emissions outside of the authorized frequency band (excluding restricted frequency bands) are attenuated by at least the minimum requirements specified in section 8.1. Report the three highest emissions relative to the limit.

9.4 Environmental Conditions

Temperature:	23°C
Relative Humidity:	54%
ATM Pressure:	1011 mbar

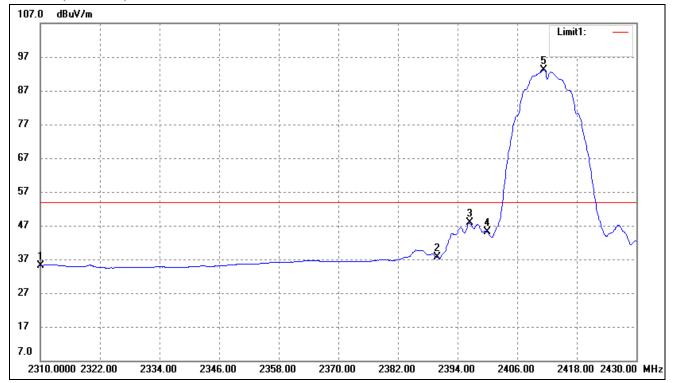
9.5 Summary of Test Results/Plots

Please refer to the test plots as below.

REPORT NO.: STR14098121I-1 PAGE 55 OF 65 FCC PART 15.247



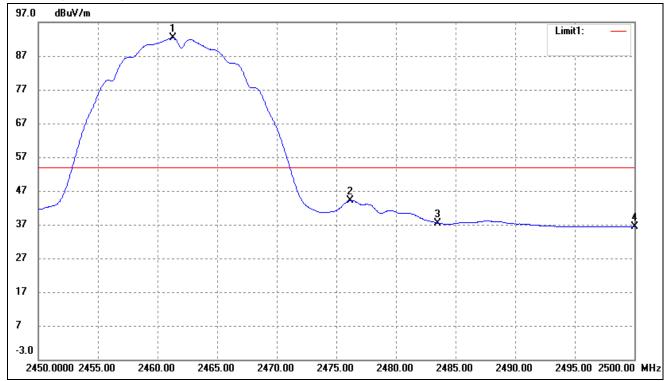
802.11b-Lowest Bandedge



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
1	2310.000	18.87	16.34	35.21	54.00	-18.79	Average Detector
	2310.000	30.84	16.34	47.18	74.00	-26.82	Peak Detector
2	2390.000	20.52	17.03	37.55	54.00	-16.45	Average Detector
	2390.000	32.55	17.03	49.58	74.00	-24.42	Peak Detector
3	2396.400	30.69	17.08	47.77	54.00	-6.23	Average Detector
4	2400.000	27.96	17.11	45.07	Delta=48.09dBc		Average Detector
5	2411.280	75.97	17.19	93.16	Dena-48	5.09dBc	Average Detector



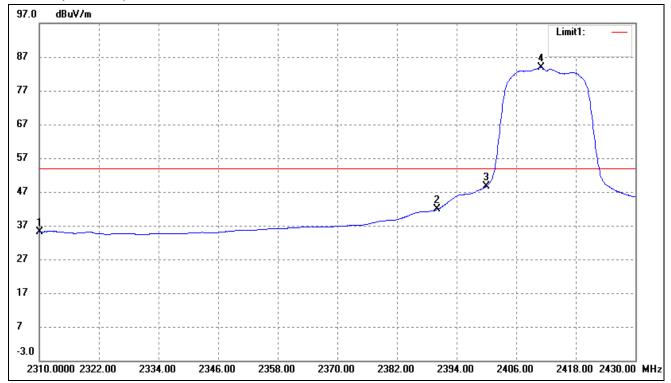
802.11b-Highest Bandedge



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
1	2461.300	74.84	17.57	92.41	/	/	Average Detector
	2460.450	80.06	17.56	97.62	/	/	Peak Detector
2	2476.150	26.48	17.68	44.16	54.00	-9.84	Average Detector
3	2483.500	Dolto - 5	Delta = 50.08dBc		54.00	-11.67	Average Detector
	2483.500	Delta – Si	0.08aBc	47.54	74.00	-26.26	Peak Detector
4	2500.000	18.51	17.86	36.37	54.00	-17.63	Average Detector
	2500.000	30.23	17.86	48.09	74.00	-25.91	Peak Detector



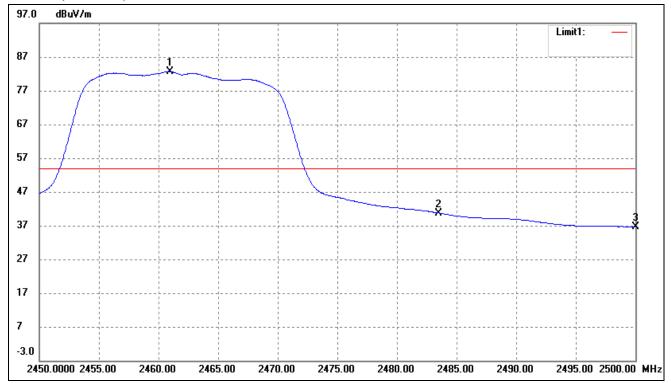
802.11g-Lowest Bandedge



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
1	2310.000	18.82	16.34	35.16	54.00	-18.84	Average Detector
	2310.000	30.84	16.34	47.18	74.00	-26.82	Peak Detector
2	2390.000	24.75	17.03	41.78	54.00	-12.22	Average Detector
	2390.000	40.57	17.03	57.60	74.00	-16.40	Peak Detector
3	2400.000	31.61	17.11	48.72	Delta=35.17dBc		Average Detector
	2411.040	66.70	17.19	83.89	Della-33	0.1/UDC	Average Detector



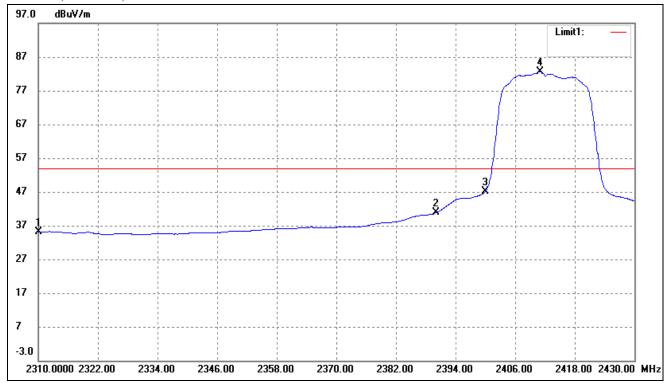
802.11g-Highest Bandedge



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
1	2460.950	65.09	17.56	82.65	/	/	Average Detector
	2462.300	82.02	17.57	99.59	/	/	Peak Detector
2	2483.500	Dolto - 4	Delta = 44.10dBc		54.00	-15.15	Average Detector
	2483.500	Della – 4	4.100DC	55.49	74.00	-18.51	Peak Detector
3	2500.000	18.83	17.86	36.69	54.00	-17.31	Average Detector
	2500.000	30.89	17.86	48.75	74.00	-25.25	Peak Detector



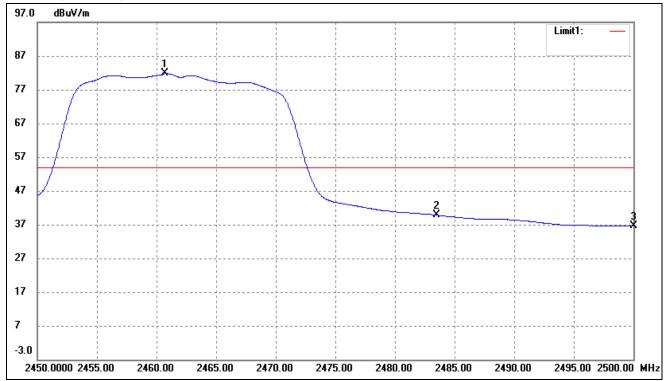
802.11n-HT20-Lowest Bandedge



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
1	2310.000	18.74	16.34	35.08	54.00	-18.92	Average Detector
	2310.000	30.59	16.34	46.93	74.00	-27.07	Peak Detector
2	2390.000	23.80	17.03	40.83	54.00	-13.17	Average Detector
	2390.000	41.24	17.03	58.27	74.00	-15.73	Peak Detector
3	2400.000	30.00	17.11	47.11	Delta=35.54dBc		Average Detector
	2411.040	65.46	17.19	82.65	Della-33	0.34uDC	Average Detector



802.11n-HT20-Highest Bandedge



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark	
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)		
1	2460.700	64.22	17.56	81.78	/	/	Average Detector	
	2463.000	80.98	17.58	98.56	/	/	Peak Detector	
2	2483.500	Delta = 43.83dBc		37.95	54.00	16.05	Average Detector	
	2483.500			54.73	74.00	19.27	Peak Detector	
3	2500.000	18.72	17.86	36.58	54.00	-17.42	Average Detector	
	2500.000	31.56	17.86	49.42	74.00	-24.58	Peak Detector	



10. Conducted Emissions

10.1 Measurement Uncertainty

Base on NIS 81, The Treatment of Uncertainty in EMC Measurements, the best estimate of the uncertainty of any conducted emissions measurement is ± 2.88 dB.

10.2 Test Equipment List and Details

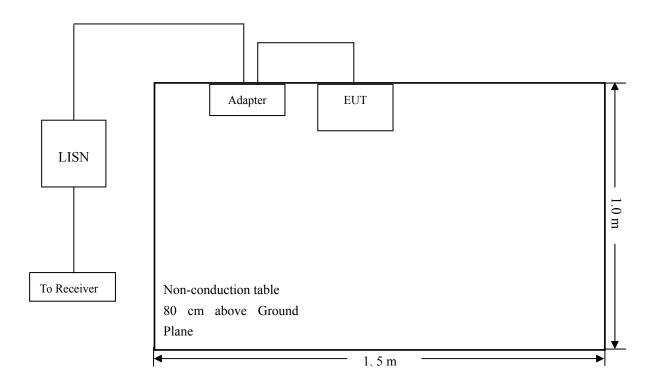
Description	Manufacturer	Model	Serial Number	Cal. Date	Due. Date
EMI Test Receiver	Rohde & Schwarz	ESPI	101611	2014-05-28	2015-05-27
L.I.S.N	Schwarz beck	NSLK8126	8126-224	2014-05-28	2015-05-27
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100911	2014-05-28	2015-05-27

10.3 Test Procedure

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

The external I/O cables were draped along the test table and formed a bundle 30 to 40 cm long in the middle. The spacing between the peripherals was 10 cm.

10.4 Basic Test Setup Block Diagram



REPORT NO.: STR14098121I-1 PAGE 62 OF 65 FCC PART 15.247



10.5 Environmental Conditions

Temperature:	25 °C
Relative Humidity:	52%
ATM Pressure:	1012 mbar

10.6 Test Receiver Setup

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

Start Frequency	150 kHz
Stop Frequency	30 MHz
Sweep Speed	
IF Bandwidth	10 kHz
Quasi-Peak Adapter Bandwidth	9 kHz
Quasi-Peak Adapter Mode	Normal

10.7 Summary of Test Results/Plots

According to the data in section 9.8, the EUT <u>complied with the FCC Part 15.207</u> Conducted margin for a Class B device, with the *worst* margin reading of:

-5.61 dB at 0.1940 MHz in the Line mode, Peak detector, 0.15-30MHz

10.8 Conducted Emissions Test Data



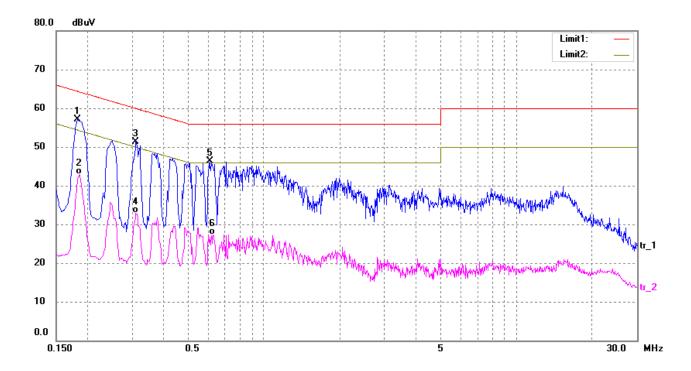
Plot of Conducted Emissions Test Data

EUT: Tablet PC

Tested Model: MA2EJ2-P(AP)
Operating Condition: Transmitting(Wi-Fi)

Comment: AC 120V/60Hz, Adapter DC 5V

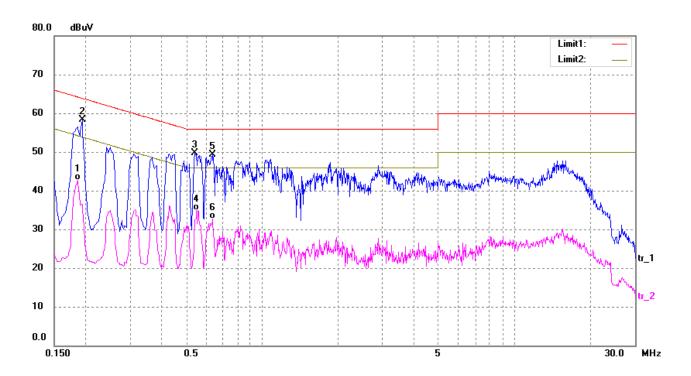
Test Specification: Neutral



No.	Frequency	Reading	Correct	Result	Limit	Margin	Detector
	(MHz)	(dBuV)	(dB/m)	(dBuV)	(dBuV)	(dB)	
1	0.1820	47.58	9.50	57.08	64.39	-7.31	peak
2	0.1860	33.42	9.50	42.92	54.21	-11.29	AVG
3	0.3100	41.90	9.50	51.40	59.97	-8.57	peak
4	0.3100	23.32	9.50	32.82	49.97	-17.15	AVG
5	0.6100	36.71	9.61	46.32	56.00	-9.68	peak
6	0.6300	17.72	9.63	27.35	46.00	-18.65	AVG



Test Specification: Line



No.	Frequency	Reading	Correct	Result	Limit	Margin	Detector
	(MHz)	(dBuV)	(dB/m)	(dBuV)	(dBuV)	(dB)	
1	0.1860	33.22	9.50	42.72	54.21	-11.49	AVG
2	0.1940	48.75	9.50	58.25	63.86	-5.61	peak
3	0.5420	40.21	9.54	49.75	56.00	-6.25	peak
4	0.5500	25.45	9.55	35.00	46.00	-11.00	AVG
5	0.6340	39.62	9.63	49.25	56.00	-6.75	peak
6	0.6380	23.06	9.64	32.70	46.00	-13.30	AVG

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