MEASUREMENT REPORT

FCC PART 15C / RSS-247 WLAN 802.11b/g/n

FCC ID	:	HD5-EDA700
IC	:	1693B-EDA700
APPLICANT	:	Honeywell International Inc Honeywell Sensing & Productivity Solutions

Application Type	:	Certification
Product	:	Tablet
Model No.	:	EDA70-0
Brand Name	:	Honeywell
FCC Classification	:	Digital Transmission System (DTS)
FCC Rule Part(s)	:	Part 15 Subpart C (Section 15.247)
IC Rule(s):	:	RSS-247 Issue 2, RSS-GEN Issue 4
Test Procedure(s)	:	ANSI C63.10-2013, KDB 558074 D01v04
Test Date	:	June 02 ~ 16, 2017

Reviewed By : Jame Yuan
(Jame Yuan)

Approved By : Marlin Chen
(Marlin Chen)

ACCREDITED
TESTING LABORATORY
CERTIFICATE #3628.01

The test results relate only to the samples tested.

This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in KDB 558074 D01v04. Test results reported herein relate only to the item(s) tested.

Revision History

Report No.	Version	Description	Issue Date	Note
1705RSU05103	Rev. 01	Initial report	06-28-2017	Valid

CONTENTS

Description Page

§2.1033 General Information

Applicant:	Honeywell International Inc Honeywell Sensing & Productivity Solutions
Applicant Address:	9680 Old Bailes Road, Fort Mill, SC 29707 United States
Manufacturer:	Honeywell International Inc Honeywell Sensing & Productivity Solutions
Manufacturer Address:	9680 Old Bailes Road, Fort Mill, SC 29707 United States
Test Site:	MRT Technology (Suzhou) Co., Ltd
Test Site Address:	D8 Building, No.2 Tian'edang Rd., Wuzhong Economic Development Zone, Suzhou, China
MRT FCC Registration No.:	809388
MRT IC Registration No.:	11384A-1
Test Device Serial No.:	N/A ☐ Production ☒ Pre-Production ☐ Engineering

Test Facility / Accreditations

Measurements were performed at MRT Laboratory located in Tian'edang Rd., Suzhou, China.

- **MRT facility is a FCC registered (MRT Reg. No. 809388) test facility with the site description report on file and has met all the requirements specified in Section 2.948 of the FCC Rules.**
- **MRT facility is an IC registered (MRT Reg. No. 11384A-1) test laboratory with the site description on file at Industry Canada.**
- **MRT facility is a VCCI registered (R-4179, G-814, C-4664, T-2206) test laboratory with the site description on file at VCCI Council.**
- **MRT Lab is accredited to ISO 17025 by the American Association for Laboratory Accreditation (A2LA) under the American Association for Laboratory Accreditation Program (A2LA Cert. No. 3628.01) in EMC, Telecommunications and Radio testing for FCC, Industry Canada, EU and TELEC Rules.**

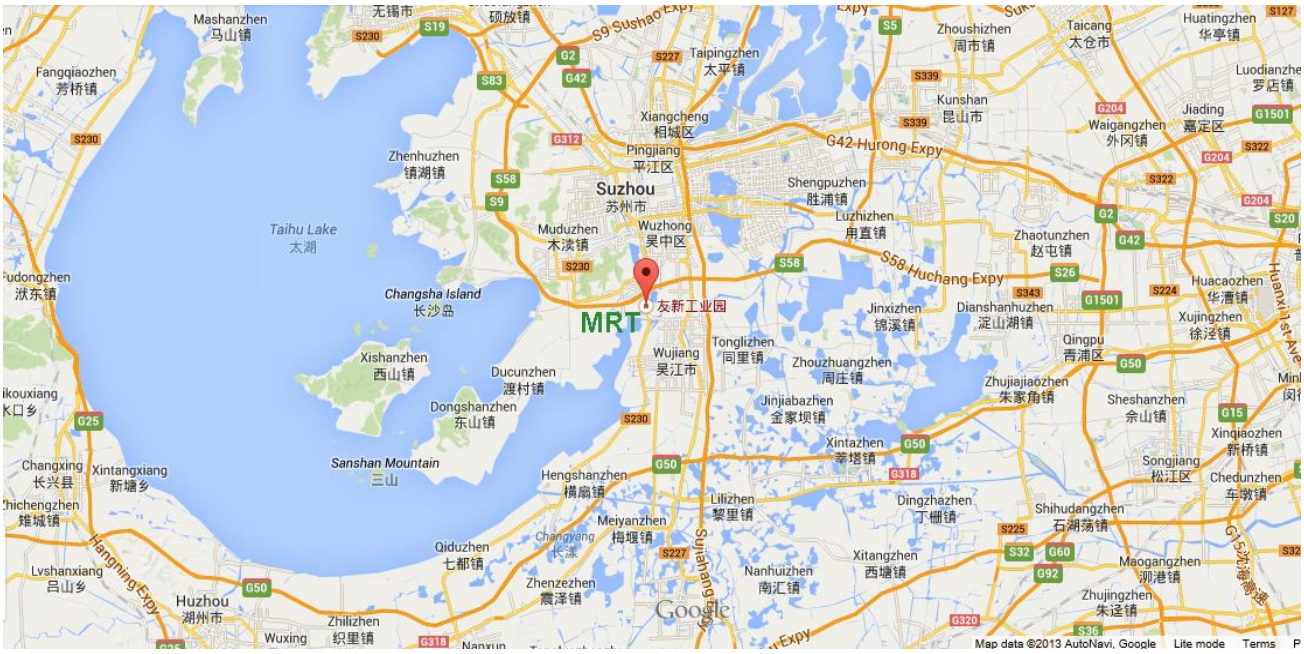
1. INTRODUCTION

1.1. Scope

Measurement and determination of electromagnetic emissions (EMC) of radio frequency devices including intentional and/or unintentional radiators for compliance with the technical rules and regulations of the Federal Communications Commission and the Industry Canada Certification and Engineering Bureau.

1.2. MRT Test Location

The map below shows the location of the MRT LABORATORY, its proximity to the Taihu Lake. These measurement tests were conducted at the MRT Technology (Suzhou) Co., Ltd. Facility located at D8 Building, Youxin Industrial Park, No.2 Tian'edang Rd., Wuzhong Economic Development Zone, Suzhou, China. The detailed description of the measurement facility was found to be in compliance with the requirements of § 2.948 according to ANSI C63.4-2009 on September 30, 2013.



2. PRODUCT INFORMATION

2.1. Feature of Equipment under Test

Product Name	Tablet
Model No.	EDA70-0
Hardware Version	IDH53_MB_V2.0.0
Software Version	209.01.00.0002
Wi-Fi Specification	802.11a/b/g/n
Bluetooth Version	v4.0 dual mode
NFC	13.56MHz

2.2. Product Specification Subjective to this Report

Frequency Range	802.11b/g: 2412 ~ 2462 MHz
Channel Number:	802.11b/g: 11
Type of Modulation	802.11b: DSSS 802.11g: OFDM
Data Rate:	802.11b: 1/2/5.5/11Mbps 802.11g: 6/9/12/18/24/36/48/54Mbps
Maximum Peak Output Power	802.11b: 15.01dBm 802.11g: 20.14dBm
Antenna Type	FPC Antenna
Antenna Gain	3.18dBi

Note: For other features of this EUT, test report will be issued separately.

2.3. Operation Frequency / Channel List

802.11b/g

Channel	Frequency	Channel	Frequency	Channel	Frequency
01	2412 MHz	02	2417 MHz	03	2422 MHz
04	2427 MHz	05	2432 MHz	06	2437 MHz
07	2442 MHz	08	2447 MHz	09	2452 MHz
10	2457 MHz	11	2462 MHz	--	--

2.4. Test Mode

Test Mode	Mode 1: Transmit by 802.11b
	Mode 2: Transmit by 802.11g

2.5. Description of Test Software

The test utility software used during testing was “QRCT”.

Power Parameter Value

Test Mode	Test Channel No.	Test Frequency (MHz)	Power Parameter Value
802.11b	01	2412	8.0
	06	2437	7.0
	11	2462	8.0
802.11g	01	2412	9.5
	06	2437	9.0
	11	2462	9.5

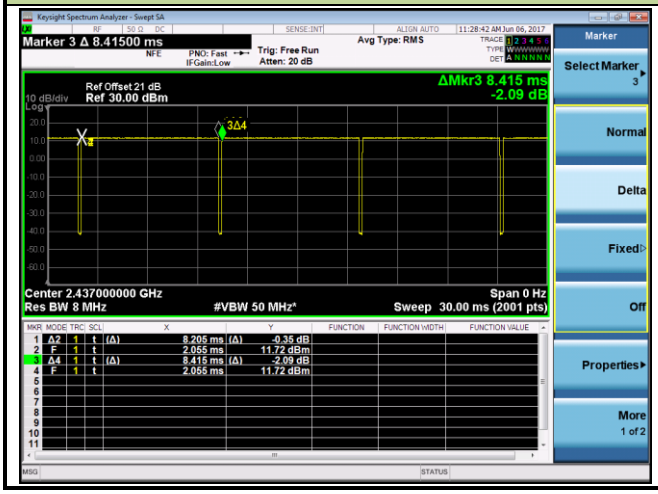
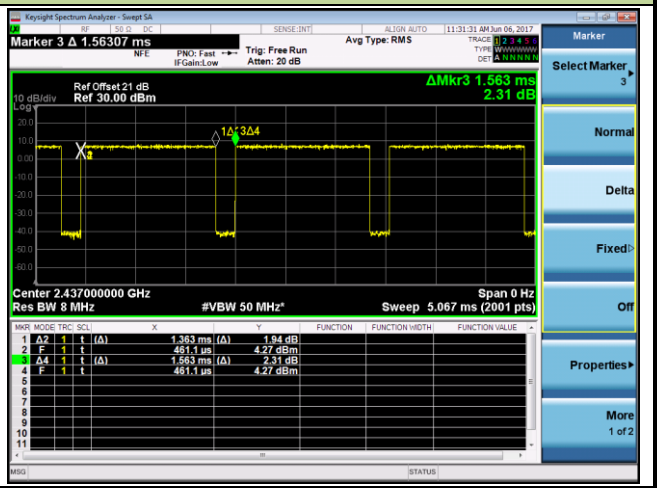
2.6. Device Capabilities

This device contains the following capabilities:

5GHz WLAN (UNII), 2.4GHz WLAN (DTS), Bluetooth (v4.0 dual mode), NFC

Note: 2.4GHz WLAN (DTS) operation is possible in 20MHz channel bandwidths. The maximum achievable duty cycle was determined based on measurements performed on a spectrum analyzer in zero-span mode with RBW = 8MHz, VBW = 50MHz. The RBW and VBW were both greater than 50/T, where T is the minimum transmission duration, and the number of sweep points across T was greater than 100. The duty cycles are as follows:

Test Mode	Duty Cycle
802.11b	97.50%
802.11g	87.20%

802.11b - Duty Cycle	802.11g - Duty Cycle
	

2.7. Test Configuration

The **Tablet** was tested per the guidance of KDB 558074 D01v04. ANSI C63.10-2013 was used to reference the appropriate EUT setup for radiated spurious emissions testing and AC line conducted testing.

2.8. EMI Suppression Device(s)/Modifications

No EMI suppression device(s) were added and/or no modifications were made during testing.

2.9. Labeling Requirements

Per 2.1074 & 15.19; Docket 95-19

The label shall be permanently affixed at a conspicuous location on the device; instruction manual or pamphlet supplied to the user and be readily visible to the purchaser at the time of purchase. However, when the device is so small wherein placement of the label with specified statement is not practical, only the FCC ID must be displayed on the device per Section 15.19(a)(5). Please see attachment for FCC ID label and label location.

RSP-100 Issue 11 Section 3

The manufacturer, importer or distributor shall meet the labelling requirements set out in this section for every unit:

(i) prior to marketing in Canada, for products manufactured in Canada

(ii) prior to importation into Canada, for imported products

For information regarding the e-labelling option, see Notice 2014–DRS1003. The label for the certified product represents the manufacturer's or importer's compliance with Innovation, Science and Economic Development Canada's (ISED) regulatory requirements.

Please see attachment for IC label and label location.

3. DESCRIPTION OF TEST

3.1. Evaluation Procedure

The measurement procedures described in the American National Standard for Testing Unlicensed Wireless Devices (ANSI C63.10-2013), and the guidance provided in KDB 558074 D01v04 were used in the measurement of the **Tablet**.

Deviation from measurement procedure…….....None

3.2. AC Line Conducted Emissions

The line-conducted facility is located inside an 8'x4'x4' shielded enclosure. A 1m x 2m wooden table 80cm high is placed 40cm away from the vertical wall and 80cm away from the sidewall of the shielded room. Two 10kHz-30MHz, 50Ω/50uH Line-Impedance Stabilization Networks (LISNs) are bonded to the shielded room floor. Power to the LISNs is filtered by external high-current high-insertion loss power line filters. These filters attenuate ambient signal noise from entering the measurement lines. These filters are also bonded to the shielded enclosure.

The EUT is powered from one LISN and the support equipment is powered from the second LISN. All interconnecting cables more than 1 meter were shortened to a 1 meter length by non-inductive bundling (serpentine fashion) and draped over the back edge of the test table. All cables were at least 40cm above the horizontal reference ground-plane. Power cables for support equipment were routed down to the second LISN while ensuring that that cables were not draped over the second LISN.

Sufficient time for the EUT, support equipment, and test equipment was allowed in order for them to warm up to their normal operating condition. The RF output of the LISN was connected to the receiver and exploratory measurements were made to determine the frequencies producing the maximum emission from the EUT. The receiver was scanned from 150kHz to 30MHz. The detector function was set to peak mode for exploratory measurements while the bandwidth of the analyzer was set to 9kHz. The EUT, support equipment, and interconnecting cables were arranged and manipulated to maximize each emission. Each emission was also maximized by varying: power lines, the mode of operation or data exchange speed, or support equipment whichever determined the worst-case emission. Once the worst case emissions have been identified, the one EUT cable configuration/arrangement and mode of operation that produced these emissions are used for final measurements on the same test site. The analyzer is set to CISPR quasi-peak and average detectors with a 9kHz resolution bandwidth for final measurements.

An extension cord was used to connect to a single LISN which powered by EUT. The extension cord was calibrated with LISN, the impedance and insertion loss are compliance with the requirements as stated in ANSI C63.10-2013.

Line conducted emissions test results are shown in Section 7.8.

3.3. Radiated Emissions

The radiated test facilities consisted of an indoor 3 meter semi-anechoic chamber used for final measurements and exploratory measurements, when necessary. The measurement area is contained within the semi-anechoic chamber which is shielded from any ambient interference. For measurements above 1GHz absorbers are arranged on the floor between the turn table and the antenna mast in such a way so as to maximize the reduction of reflections. For measurements below 1GHz, the absorbers are removed. A MF Model 210SS turntable is used for radiated measurement. It is a continuously rotatable, remote controlled, metallic turntable and 2 meters (6.56 ft.) in diameter. The turn table is flush with the raised floor of the chamber in order to maintain its function as a ground plane. An 80cm high PVC support structure is placed on top of the turntable.

For all measurements, the spectrum was scanned through all EUT azimuths and from 1 to 4 meter receive antenna height using a broadband antenna from 30MHz up to the upper frequency shown in 15.33(b)(1) depending on the highest frequency generated or used in the device or on which the device operates or tunes. For frequencies above 1GHz, linearly polarized double ridge horn antennas were used. For frequencies below 30MHz, a calibrated loop antenna was used. When exploratory measurements were necessary, they were performed at 1 meter test distance inside the semi-anechoic chamber using broadband antennas, broadband amplifiers, and spectrum analyzers to determine the frequencies and modes producing the maximum emissions. Sufficient time for the EUT, support equipment, and test equipment was allowed in order for them to warm up to their normal operating condition. The test set-up for frequencies below 1GHz was placed on top of the 0.8 meter high, 1 x 1.5 meter table; and test set-up for frequencies 1-25GHz was placed on top of the 1.5 meter high, 1 x 1.5 meter table. The EUT, support equipment, and interconnecting cables were arranged and manipulated to maximize each emission. Appropriate precaution was taken to ensure that all emissions from the EUT were maximized and investigated. The system configuration, clock speed, mode of operation or video resolution, if applicable, turntable azimuth, and receive antenna height was noted for each frequency found.

Final measurements were made in the semi-anechoic chamber using calibrated, linearly polarized broadband and horn antennas. The test setup was configured to the setup that produced the worst case emissions. The spectrum analyzer was set to investigate all frequencies required for testing to compare the highest radiated disturbances with respect to the specified limits. The turntable containing the EUT was rotated through 360 degrees and the height of the receive antenna was varied 1 to 4 meters and stopped at the azimuth and height producing the maximum emission. Each emission was maximized by changing the orientation of the EUT through three orthogonal planes and changing the polarity of the receive antenna, whichever produced the worst-case emissions. According to 3dB Beam-Width of horn antenna, the horn antenna should be always directed to the EUT when rising height.

4. ANTENNA REQUIREMENTS

Excerpt from §15.203 of the FCC Rules/Regulations:

"An intentional radiator antenna shall be designed to ensure that no antenna other than that furnished by the responsible party can 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 antenna of the **Tablet** is **permanently attached.**
- There are no provisions for connection to an external antenna.

Conclusion:

The **Tablet** unit complies with the requirement of §15.203.

5. TEST EQUIPMENT CALIBRATION DATE

Conducted Emissions - SR2

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
EMI Test Receiver	R&S	ESR7	MRTSUE06001	1 year	2018/06/20
Two-Line V-Network	R&S	ENV216	MRTSUE06002	1 year	2018/06/20
Two-Line V-Network	R&S	ENV216	MRTSUE06003	1 year	2018/06/20
Temperature/Humidity Meter	Yuhuaze	HTC-2	MRTSUE06181	1 year	2017/12/20
Shielding Anechoic Chamber	Mikebang	Chamber-SR2	MRTSUE06214	1 year	2018/05/10

Radiated Emission - AC1

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
MXE EMI Receiver	Agilent	N9038A	MRTSUE06125	1 year	2017/08/03
Microwave System Amplifier	Agilent	83017A	MRTSUE06076	1 year	2018/03/28
Loop Antenna	Schwarzbeck	FMZB1519	MRTSUE06025	1 year	2017/11/21
Bilog Period Antenna	Schwarzbeck	VULB 9168	MRTSUE06172	1 year	2017/11/19
Horn Antenna	Schwarzbeck	BBHA9120D	MRTSUE06023	1 year	2017/10/22
Broadband Horn Antenna	Schwarzbeck	BBHA9170	MRTSUE06024	1 year	2018/01/04
Temperature/Humidity Meter	Yuhuaze	HTC-2	MRTSUE06183	1 year	2017/12/20
Anechoic Chamber	TDK	Chamber-AC1	MRTSUE06212	1 year	2018/05/10
RF Cable	HUBER+SUHNER	Cable 01	MRTSUE06055-1	1 year	2018/03/29
RF Cable	HUBER+SUHNER	Cable 02	MRTSUE06055-2	1 year	2018/03/29

Conducted Test Equipment - TR3

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
MXE EMI Receiver	Agilent	N9038A	MRTSUE06125	1 year	2017/08/03
Power Meter	Agilent	U2021XA	MRTSUE06030	1 year	2017/12/06
RF Cable	HUBER+SUHNER	Cable 03	MRTSUE06055-3	1 year	2018/03/29
Attenuator	Woken	WATT-218FS-15	MRTSUE06220	1 year	2018/03/29
DC Block	Woken	00900A1A2A101A	MRTSUE06221	1 year	2018/03/29
Temperature/Humidity Meter	Yuhuaze	HTC-2	MRTSUE06180	1 year	2017/12/22

Software	Version	Function
e3	V8.3.5	EMI Test Software

6. MEASUREMENT UNCERTAINTY

Where relevant, the following test uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k = 2.

AC Conducted Emission Measurement - SR2
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): 150kHz~30MHz: 3.46dB
Radiated Emission Measurement - AC1
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): 9kHz ~ 1GHz: 4.18dB 1GHz ~ 25GHz: 4.76dB
Spurious Emissions, Conducted - TR3
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): 0.78dB
Output Power - TR3
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): 1.13dB
Power Spectrum Density - TR3
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): 1.15dB
Occupied Bandwidth - TR3
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): 0.28%

7. TEST RESULT

7.1. Summary

Company Name:	**Honeywell International Inc** **Honeywell Sensing & Productivity Solutions**
FCC ID:	**HD5-EDA700**
IC:	**1693B-EDA700**
FCC Classification:	**Digital Transmission System (DTS)**
Data Rate(s) Tested:	**1Mbps ~ 11Mbps (b); 6Mbps ~ 54Mbps (g);**

FCC Part Section(s)	RSS Section(s)	Test Description	Test Limit	Test Condition	Test Result	Reference
15.247(a)(2)	RSS-247 [5.2]	6dB Bandwidth	≥ 500kHz	Conducted	Pass	Section 7.2
15.247(b)(3)	RSS-247 [5.4(d)]	Output Power	≤ 1Watt & EIRP ≤ 4Watt		Pass	Section 7.3
15.247(e)	RSS-247 [5.2]	Power Spectral Density	≤ 8dBm / 3kHz		Pass	Section 7.4
15.247(d)	RSS-247 [5.5]	Band Edge / Out-of-Band Emissions	≥ 20dBc(Peak)		Pass	Section 7.5
15.205 15.209	RSS-247 [5.5]	General Field Strength Limits (Restricted Bands and Radiated Emission Limits)	Emissions in restricted bands must meet the radiated limits detailed in 15.209	Radiated	Pass	Section 7.6&7.7
15.207	RSS-Gen [8.8]	AC Conducted Emissions 150kHz - 30MHz	< FCC 15.207 limits	Line Conducted	Pass	Section 7.8

Note

1) The analyzer plots shown in this section were all taken with a correction table loaded into the analyzer. The correction table was used to account for the losses of the cables and attenuators used as part of the system to connect the EUT to the analyzer at all frequencies of interest.
2) All modes of operation and data rates were investigated. For radiated emission test, every axis (X, Y, Z) was also verified. The test results shown in the following sections represent the worst case emissions.

7.2. 6dB Bandwidth Measurement

7.2.1.Test Limit

The minimum 6dB bandwidth shall be at least 500 kHz.

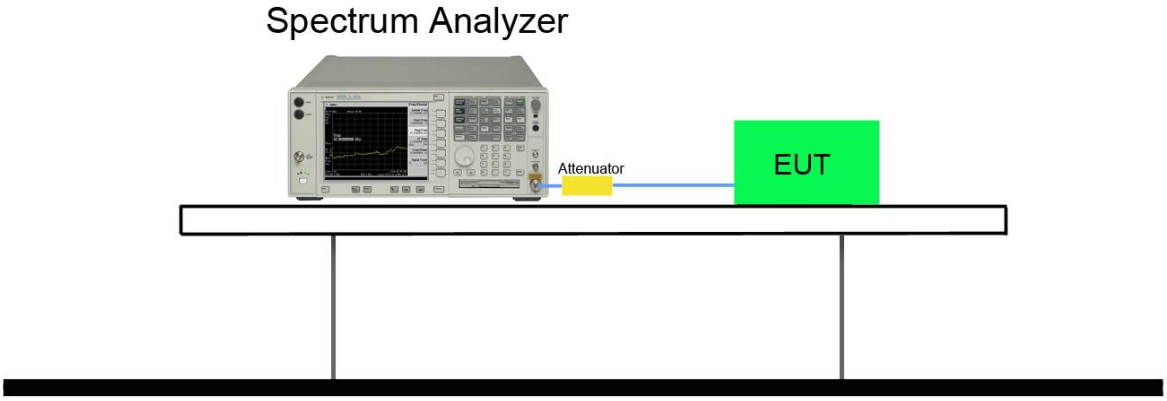
7.2.2.Test Procedure used

KDB 558074 D01v04 – Section 8.2 Option 2

7.2.3.Test Setting

1. The Spectrum's automatic bandwidth measurement capability was used to perform the 6dB bandwidth measurement. The "X" dB bandwidth parameter was set to X = 6. The bandwidth measurement was not influenced by any intermediate power nulls in the fundamental emission.
2. Set RBW = 100 kHz
3. VBW ≥ 3 × RBW
4. Detector = Peak
5. Trace mode = max hold
6. Sweep = auto couple
7. Allow the trace was allowed to stabilize

7.2.4.Test Setup



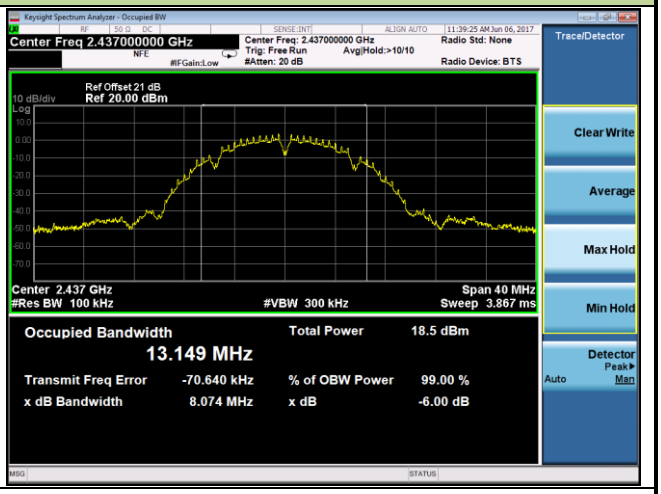
7.2.5.Test Result

Test Mode	Data Rate (Mbps)	Channel No.	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (MHz)	Result
802.11b	1	01	2412	8.56	≥0.5	Pass
802.11b	1	06	2437	8.07	≥0.5	Pass
802.11b	1	11	2462	8.08	≥0.5	Pass
802.11g	6	01	2412	16.35	≥0.5	Pass
802.11g	6	06	2437	16.34	≥0.5	Pass
802.11g	6	11	2462	16.34	≥0.5	Pass

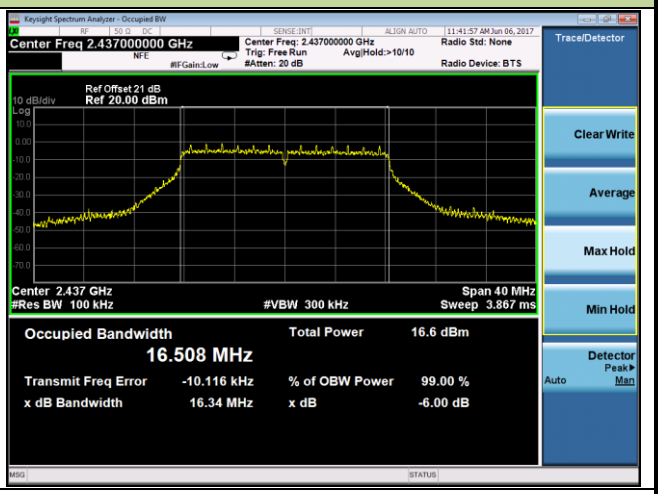
802.11b 6dB Bandwidth

Channel 01 (2412MHz)

Channel 06 (2437MHz)



Channel 11 (2462MHz)

802.11g 6dB Bandwidth	
Channel 01 (2412MHz)	**Channel 06 (2437MHz)**
	
Channel 11 (2462MHz)	
	

7.3. Output Power Measurement

7.3.1.Test Limit

The maximum conducted output power shall be exceed 1 Watt (30dBm) and the E.I.R.P shall not exceed 4 Watt (36dBm).

7.3.2.Test Procedure Used

KDB 558074 D01v04 - Section 9.1.3 PKPM1 Peak-reading power meter method

KDB 558074 D01v04 - Section 9.2.3.2 Method AVGPM-G

7.3.3.Test Setting

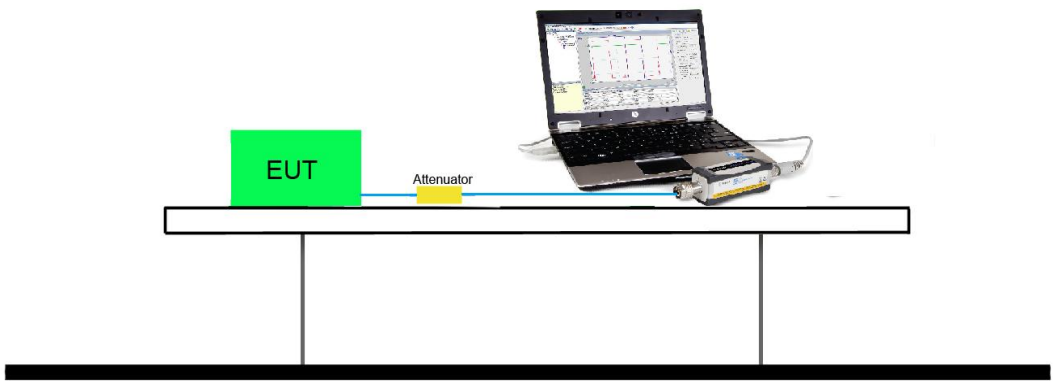
Method PKPM1 (Peak Power Measurement)

Peak power measurements were performed only when the EUT was transmitting at its maximum power control level using a broadband power meter with a pulse sensor. The pulse sensor employs a VBW = 50MHz so this method was only used for signals whose DTS bandwidth was less than or equal to 50MHz.

Method AVGPM-G (Measurement using a gated RF average-reading power meter)

Measurements may be performed using a wideband gated RF power meter provided that the gate parameters are adjusted such that the power is measured only when the EUT is transmitting at its maximum power control level. Since this measurement is made only during the ON time of the transmitter, no duty cycle correction is required.

7.3.4.Test Setup



7.3.5.Test Result of Output Power

Test Result of Peak Output Power

Test Mode	Data Rate (Mbps)	Channel No.	Freq. (MHz)	Peak Power (dBm)	Limit (dBm)	Result
11b	1	1	2412	15.01	≤ 30	Pass
11b	1	6	2437	14.55	≤ 30	Pass
11b	1	11	2462	14.69	≤ 30	Pass
11g	6	1	2412	20.08	≤ 30	Pass
11g	6	6	2437	20.05	≤ 30	Pass
11g	6	11	2462	20.14	≤ 30	Pass

Note 1: EIRP (dBm) = Conducted Power (dBm) + Antenna Gain (dBi), Antenna Gain = 3.18 dBi.
Note 2: Max EIRP (dBm) = 20.14 dBm + 3.18 dBi = 23.32 dBm < 36 dBm.

7.3.6.Test Result of Average Output Power (Reporting Only)

Test Mode	Data Rate (Mbps)	Channel No.	Freq. (MHz)	Average Power (dBm)	Limit (dBm)	Result
11b	1	1	2412	12.11	≤ 30	Pass
11b	1	6	2437	11.84	≤ 30	Pass
11b	5.5	6	2437	11.42	≤ 30	Pass
11b	11	6	2437	11.15	≤ 30	Pass
11b	1	11	2462	11.90	≤ 30	Pass
11g	6	1	2412	11.85	≤ 30	Pass
11g	6	6	2437	11.93	≤ 30	Pass
11g	24	6	2437	11.70	≤ 30	Pass
11g	54	6	2437	11.48	≤ 30	Pass
11g	6	11	2462	11.90	≤ 30	Pass

Note 1: EIRP (dBm) = Conducted Power (dBm) + Antenna Gain (dBi), Antenna Gain = 3.18 dBi.
Note 2: Max EIRP (dBm) = 12.11 dBm + 3.18 dBi = 15.29 dBm < 36 dBm.

7.4. Power Spectral Density Measurement

7.4.1.Test Limit

The maximum permissible power spectral density is 8dBm in any 3 kHz band.

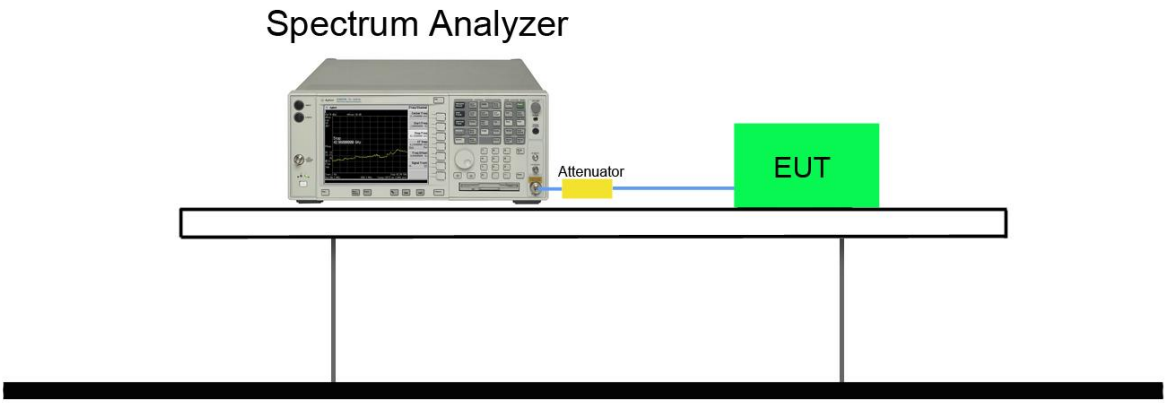
7.4.2.Test Procedure Used

KDB 558074 D01v04 - Section 10.2 Method PKPSD

7.4.3.Test Setting

1. Analyzer was set to the center frequency of the DTS channel under investigation
2. Span = 1.5 times the DTS channel bandwidth
3. RBW = 3kHz
4. VBW = 10kHz
5. Detector = peak
6. Sweep time = auto couple
7. Trace mode = max hold
8. Trace was allowed to stabilize

7.4.4.Test Setup



7.4.5.Test Result

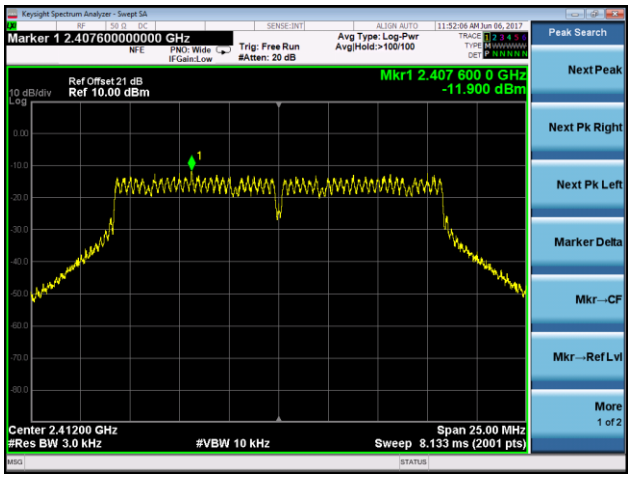
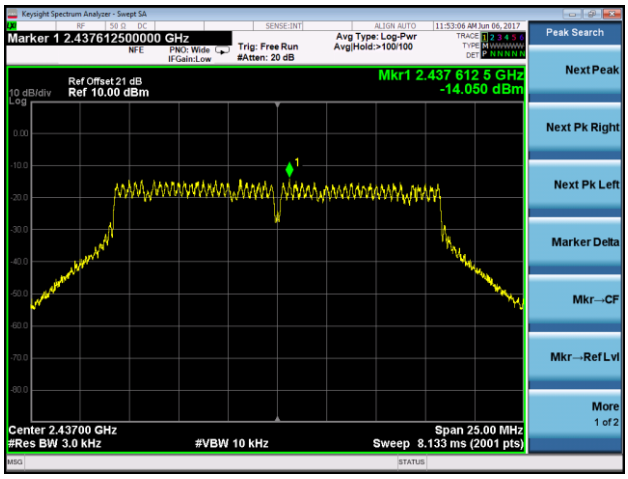
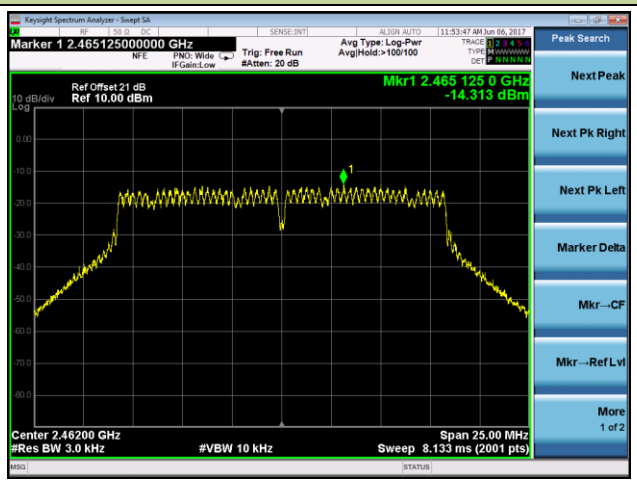
Test Mode	Data Rate (Mbps)	Channel No.	Freq. (MHz)	PSD (dBm / 3kHz)	Total PSD (dBm / 3kHz)	Limit (dBm / 3kHz)	Result
11b	1	1	2412	-9.25	-9.25	≤ 8.0	Pass
11b	1	6	2437	-9.70	-9.70	≤ 8.0	Pass
11b	1	11	2462	-8.84	-8.84	≤ 8.0	Pass
11g	6	1	2412	-11.90	-11.90	≤ 8.0	Pass
11g	6	6	2437	-14.05	-14.05	≤ 8.0	Pass
11g	6	11	2462	-14.31	-14.31	≤ 8.0	Pass

802.11b Peak PSD

Channel 01 (2412MHz)

Channel 06 (2437MHz)

Channel 11 (2462MHz)

802.11g Peak PSD	
Channel 01 (2412MHz)	**Channel 06 (2437MHz)**
	
Channel 11 (2462MHz)	
	

7.5. Conducted Band Edge and Out-of-Band Emissions

7.5.1.Test Limit

The limit for out-of-band spurious emissions at the band edge is 20dB below the fundamental emission level, as determined from the in-band power measurement of the DTS channel performed in a 100 kHz bandwidth per the PSD procedure.

7.5.2.Test Procedure Used

KDB 558074 D01v04 - Section 11.2 & Section 11.3

7.5.3.Test Settitng

1. Reference level measurement

Set instrument center frequency to DTS channel center frequency

Set the span to ≥ 1.5 times the DTS bandwidth

Set the RBW = 100 kHz

Set the VBW ≥ 3 x RBW

Detector = peak

Sweep time = auto couple

Trace mode = max hold

Allow trace to fully stabilize

2. Emission level measurement

Set the center frequency and span to encompass frequency range to be measured

RBW = 100kHz

VBW = 300kHz

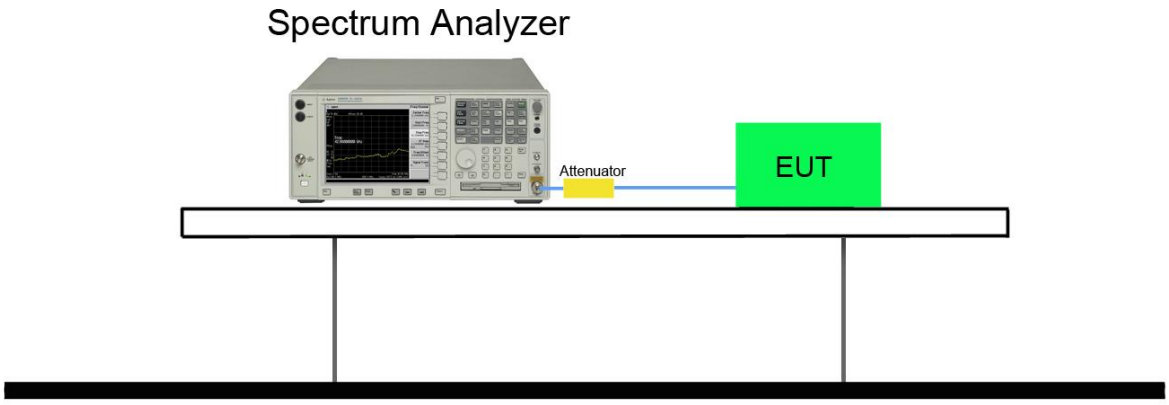
Detector = Peak

Trace mode = max hold

Sweep time = auto couple

The trace was allowed to stabilize

7.5.4.Test Setup



7.5.5.Test Result

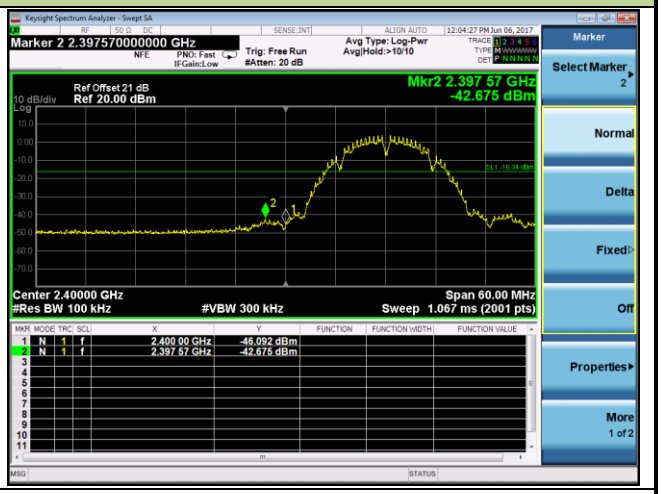
Test Mode	Data Rate (Mbps)	Channel No.	Frequency (MHz)	Limit	Result
802.11b	1	01	2412	20dBc	Pass
802.11b	1	06	2437	20dBc	Pass
802.11b	1	11	2462	20dBc	Pass
802.11g	6	01	2412	20dBc	Pass
802.11g	6	06	2437	20dBc	Pass
802.11g	6	11	2462	20dBc	Pass

802.11b Out-of-Band Emissions

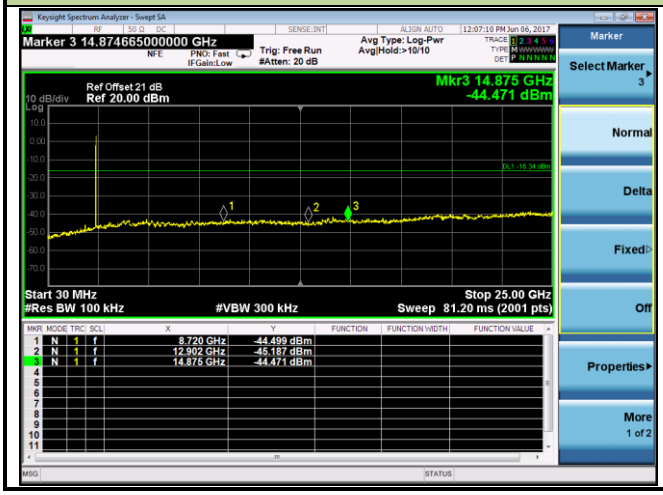
Channel 01 (2412MHz)

100kHz PSD Reference Level

Low Band Edge



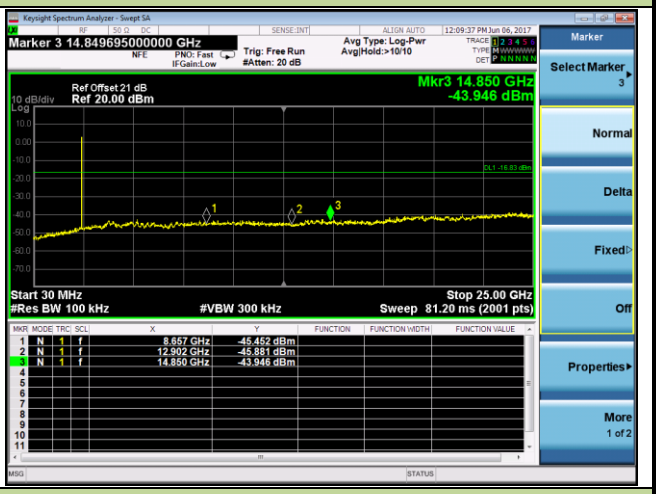
Spurious Emission



Channel 06 (2437MHz)

100kHz PSD Reference Level

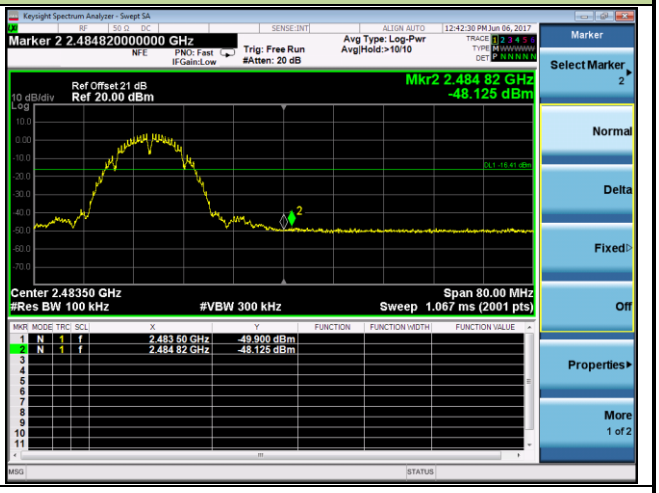
Spurious Emission



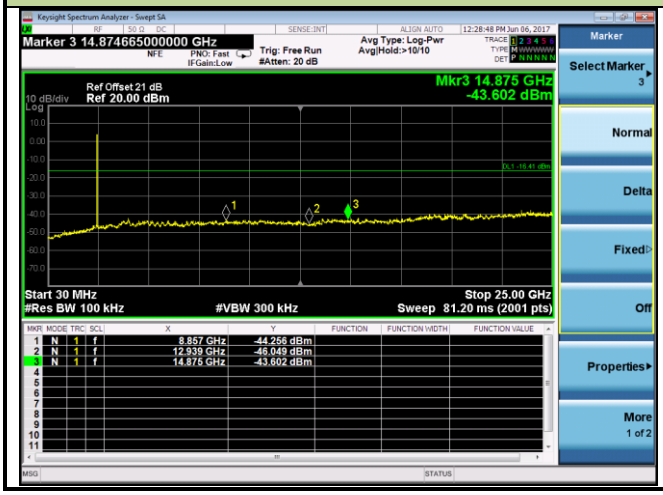
Channel 11 (2462MHz)

100kHz PSD Reference Level

High Band Edge



Spurious Emission

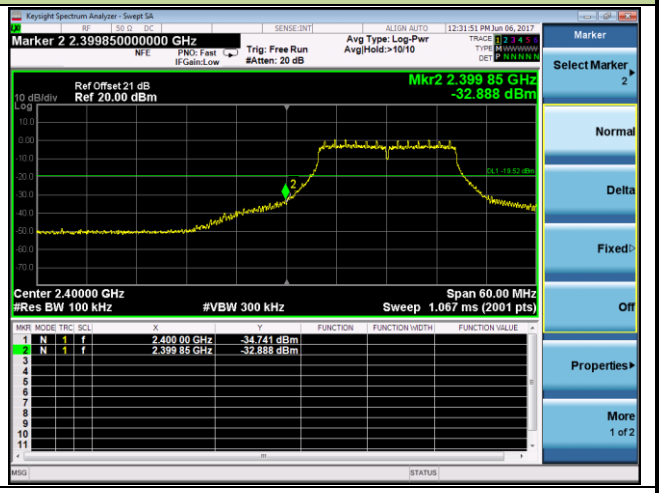


802.11g Out-of-Band Emissions

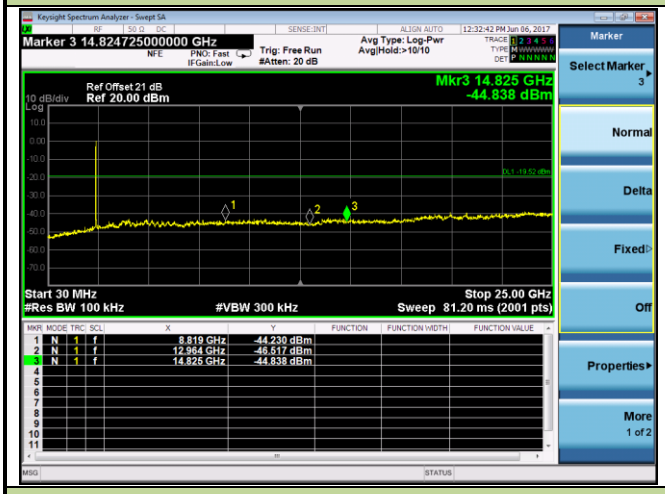
Channel 01 (2412MHz)

100kHz PSD Reference Level

Low Band Edge



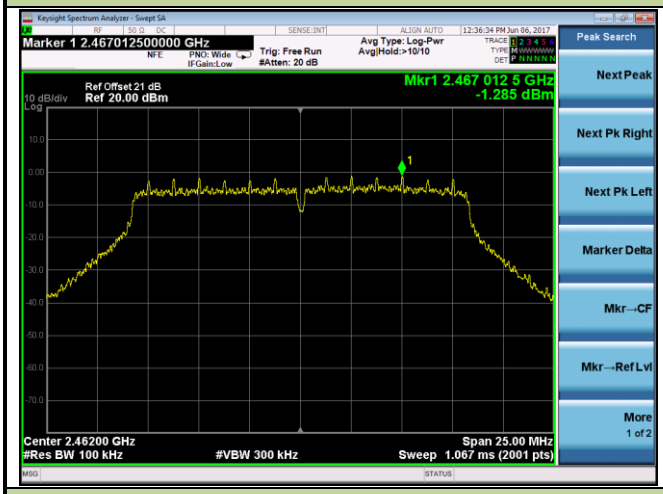
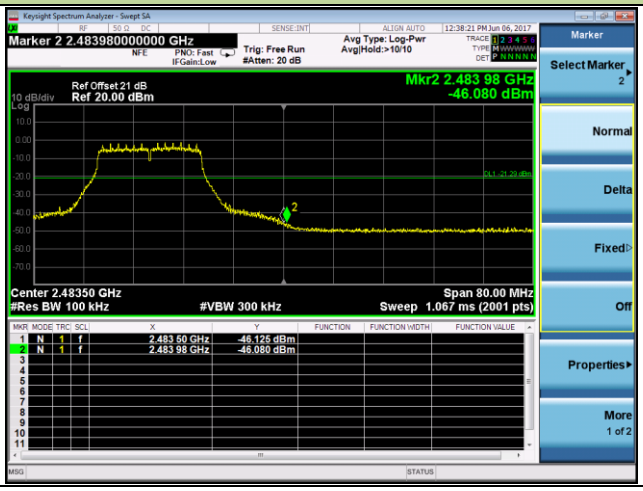
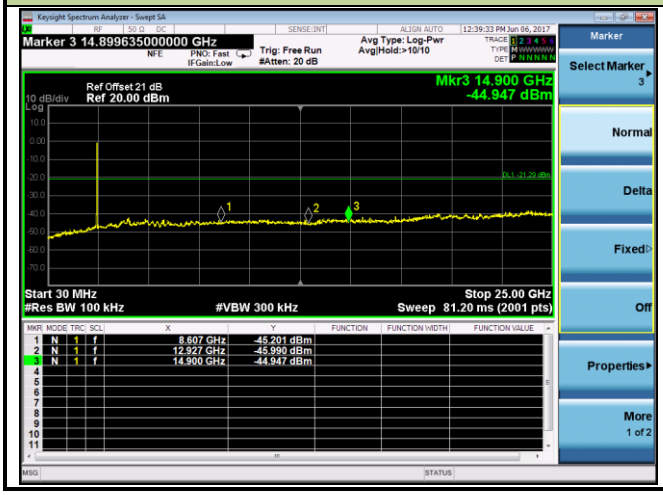
Spurious Emission



Channel 06 (2437MHz)

100kHz PSD Reference Level

Spurious Emission

Channel 11 (2462MHz)	
100kHz PSD Reference Level	**High Band Edge**
	
Spurious Emission	
	

7.6. Radiated Spurious Emission Measurement

7.6.1.Test Limit

All out of band emissions appearing in a restricted band as specified in Section 15.205 of the Title 47 CFR must not exceed the limits shown in Table per Section 15.209.

FCC Part 15 Subpart C Paragraph 15.209		
Frequency [MHz]	Field Strength [uV/m]	Measured Distance [Meters]
0.009 – 0.490	2400/F (kHz)	300
0.490 – 1.705	24000/F (kHz)	30
1.705 - 30	30	30
30 - 88	100	3
88 - 216	150	3
216 - 960	200	3
Above 960	500	3

7.6.2.Test Procedure Used

KDB 558074 D01v04 – Section 12.2.3 (quasi-peak measurements)

KDB 558074 D01v04 – Section 12.2.4 (peak power measurements)

KDB 558074 D01v04 – Section 12.2.5 (average power measurements)

7.6.3.Test Setting

Peak Field Strength Measurements per Section 12.2.4 of KDB 558074 D01v04

Analyzer center frequency was set to the frequency of the radiated spurious emission of interest

RBW = as specified in Table 1

VBW = 3MHz

Detector = peak

Sweep time = auto couple

Trace mode = max hold

Trace was allowed to stabilize

Table 1 - RBW as a function of frequency

Frequency	RBW
9 ~ 150 kHz	200 ~ 300 Hz
0.15 ~ 30 MHz	9 ~ 10 kHz
30 ~ 1000 MHz	100 ~ 120 kHz
> 1000 MHz	1 MHz

Average Field Strength Measurements

Analyzer center frequency was set to the frequency of the radiated spurious emission of interest

RBW = 1MHz

VBW ≥ 1/T

De As an alternative, the instrument may be set to linear detector mode. Ensure that video filtering is applied in linear voltage domain (rather than in a log or dB domain). Some instruments require linear display mode in order to accomplish this. Others have a setting for Average-VBW Type, which can be set to “Voltage” regardless of the display mode

Detector = Peak

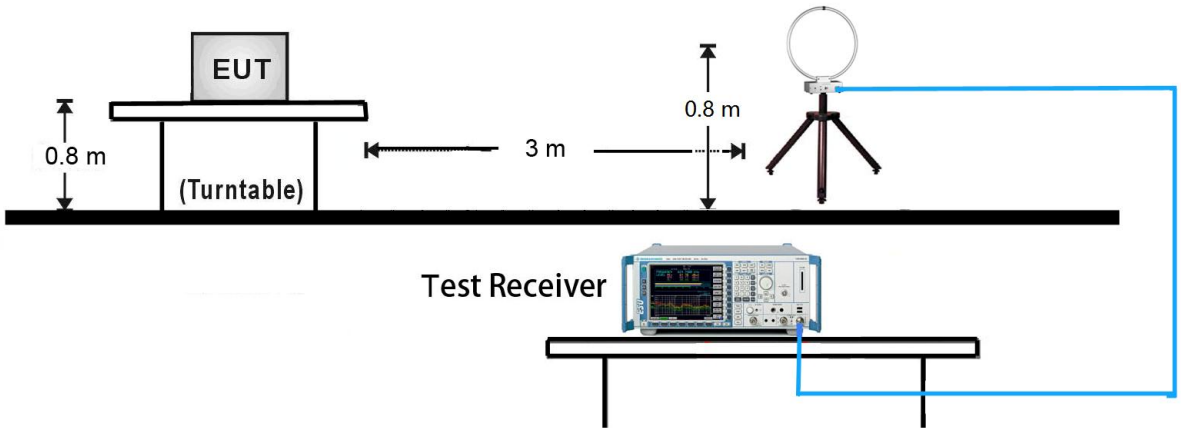
Sweep time = auto

Trace mode = max hold

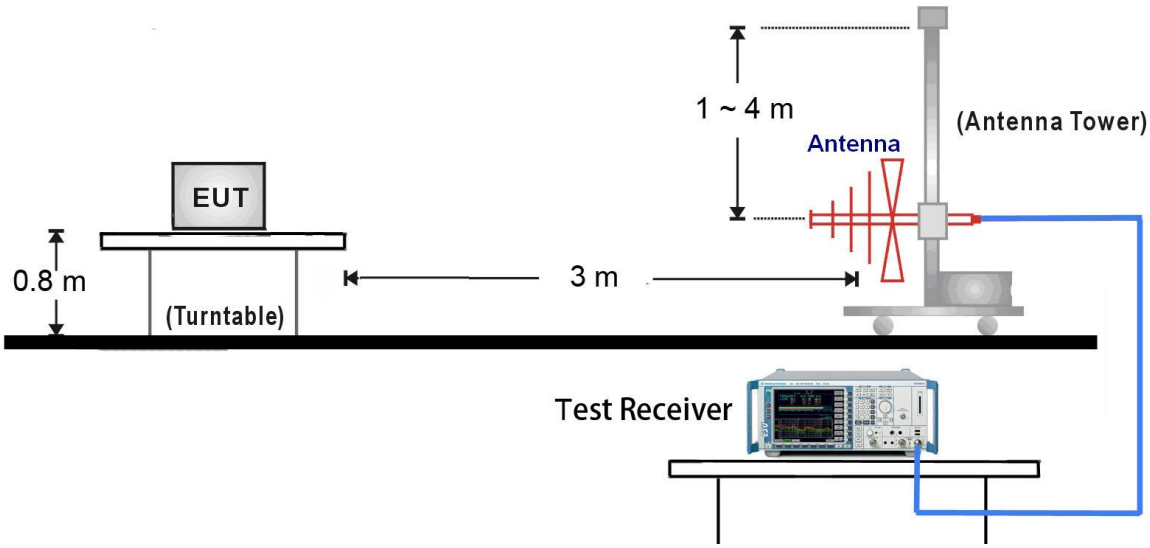
Allow max hold to run for at least 50 times (1/duty cycle) traces

7.6.4.Test Setup

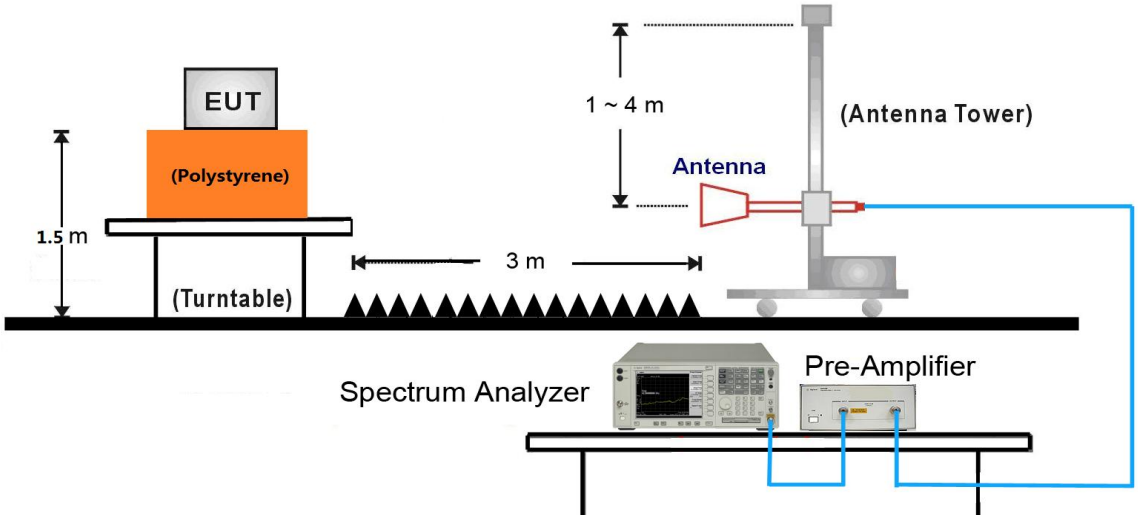
9kHz ~ 30MHz Test Setup:



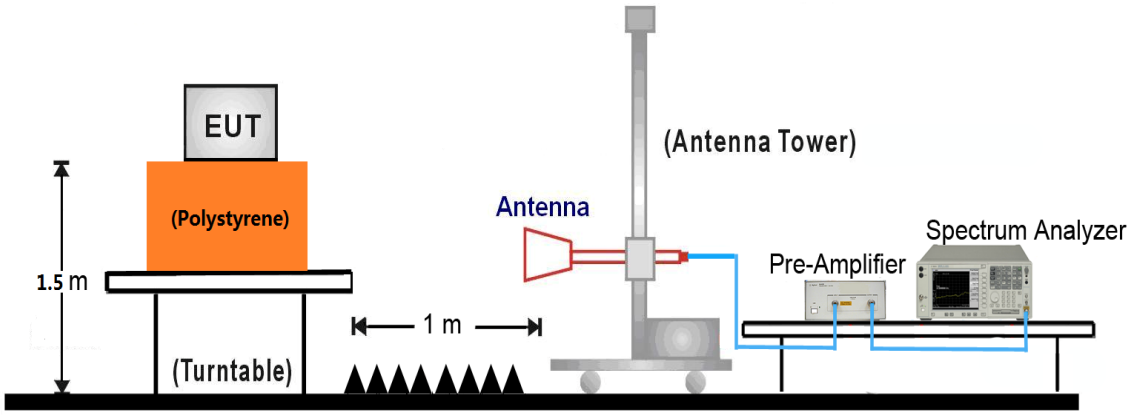
30MHz ~ 1GHz Test Setup:



1GHz ~ 18GHz Test Setup:



18GHz ~25GHz Test Setup:



7.6.5.Test Result

Test Mode:	802.11b	Test Site:	AC2
Test Channel:	01	Test Engineer:	Bruce Wang
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	3873.0	37.0	-0.6	36.4	74.0	-37.6	Peak	Horizontal
	4816.5	34.8	2.6	37.4	74.0	-36.6	Peak	Horizontal
*	6652.5	33.9	7.6	41.5	79.8	-38.3	Peak	Horizontal
*	10061.0	32.4	13.7	46.1	79.8	-33.7	Peak	Horizontal
	3762.5	35.7	-0.7	35.0	74.0	-39.0	Peak	Vertical
	4910.0	35.1	2.5	37.6	74.0	-36.4	Peak	Vertical
*	6576.0	33.5	7.5	41.0	79.8	-38.8	Peak	Vertical
*	9950.5	32.4	13.5	45.9	79.8	-33.9	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (99.8dBμV/m).

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Test Mode:	802.11b	Test Site:	AC2
Test Channel:	06	Test Engineer:	Bruce Wang
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	3830.5	36.3	-0.6	35.7	74.0	-38.3	Peak	Horizontal
	4816.5	34.0	2.6	36.6	74.0	-37.4	Peak	Horizontal
*	6712.0	34.2	7.7	41.9	78.1	-36.2	Peak	Horizontal
*	9899.5	32.5	13.3	45.8	78.1	-32.3	Peak	Horizontal
	3856.0	37.4	-0.6	36.8	74.0	-37.2	Peak	Vertical
	4859.0	34.2	2.5	36.7	74.0	-37.3	Peak	Vertical
*	6567.5	33.4	7.5	40.9	78.1	-37.2	Peak	Vertical
*	10103.5	32.7	13.4	46.1	78.1	-32.0	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (98.1dBμV/m) or FCC 15.209 which is higher.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Test Mode:	802.11b	Test Site:	AC2
Test Channel:	11	Test Engineer:	Bruce Wang
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	3762.5	37.3	-0.7	36.6	74.0	-37.4	Peak	Horizontal
	4842.0	34.8	2.9	37.7	74.0	-36.3	Peak	Horizontal
*	6431.5	34.0	6.7	40.7	82.1	-41.4	Peak	Horizontal
*	10256.5	31.8	14.3	46.1	82.1	-36.0	Peak	Horizontal
	3966.5	37.2	-0.6	36.6	74.0	-37.4	Peak	Vertical
	4859.0	34.6	2.5	37.1	74.0	-36.9	Peak	Vertical
*	6627.0	32.7	7.6	40.3	82.1	-41.8	Peak	Vertical
*	10146.0	32.0	13.8	45.8	82.1	-36.3	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (102.1dBμV/m) or FCC 15.209 which is higher.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Test Mode:	802.11g	Test Site:	AC2
Test Channel:	01	Test Engineer:	Bruce Wang
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	3796.5	37.1	-0.6	36.5	74.0	-37.5	Peak	Horizontal
	4884.5	34.8	2.7	37.5	74.0	-36.5	Peak	Horizontal
*	6465.5	33.2	7.0	40.2	86.2	-46.0	Peak	Horizontal
*	9967.5	32.3	13.2	45.5	86.2	-40.7	Peak	Horizontal
	3864.5	36.7	-0.6	36.1	74.0	-37.9	Peak	Vertical
	4859.0	35.2	2.5	37.7	74.0	-36.3	Peak	Vertical
*	6601.5	33.4	7.5	40.9	86.2	-45.3	Peak	Vertical
*	9874.0	32.2	13.4	45.6	86.2	-40.6	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (106.2dBμV/m) or FCC 15.209 which is higher.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Test Mode:	802.11g	Test Site:	AC2
Test Channel:	06	Test Engineer:	Bruce Wang
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	3805.0	36.5	-0.6	35.9	74.0	-38.1	Peak	Horizontal
	4952.5	35.8	2.7	38.5	74.0	-35.5	Peak	Horizontal
*	6406.0	34.4	6.6	41.0	85.3	-44.3	Peak	Horizontal
*	10129.0	31.8	13.6	45.4	85.3	-39.9	Peak	Horizontal
	3915.5	36.8	-0.6	36.2	74.0	-37.8	Peak	Vertical
	4927.0	35.4	2.6	38.0	74.0	-36.0	Peak	Vertical
*	6593.0	33.1	7.5	40.6	85.3	-44.7	Peak	Vertical
*	10035.5	32.0	13.1	45.1	85.3	-40.2	Peak	Vertical

Note 1: “*” is not in restricted band, its limit is 20dBc of the fundamental emission level (105.3dBμV/m) or FCC 15.209 which is higher.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Test Mode:	802.11g	Test Site:	AC2
Test Channel:	11	Test Engineer:	Bruce Wang
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	3830.5	35.9	-0.6	35.3	74.0	-38.7	Peak	Horizontal
	4859.0	35.1	2.5	37.6	74.0	-36.4	Peak	Horizontal
*	6737.5	33.2	7.5	40.7	87.9	-47.2	Peak	Horizontal
*	10171.5	31.2	14.0	45.2	87.9	-42.7	Peak	Horizontal
	3881.5	36.5	-0.6	35.9	74.0	-38.1	Peak	Vertical
	4910.0	34.3	2.5	36.8	74.0	-37.2	Peak	Vertical
*	6627.0	33.3	7.6	40.9	87.9	-47.0	Peak	Vertical
*	10086.5	30.8	13.4	44.2	87.9	-43.7	Peak	Vertical

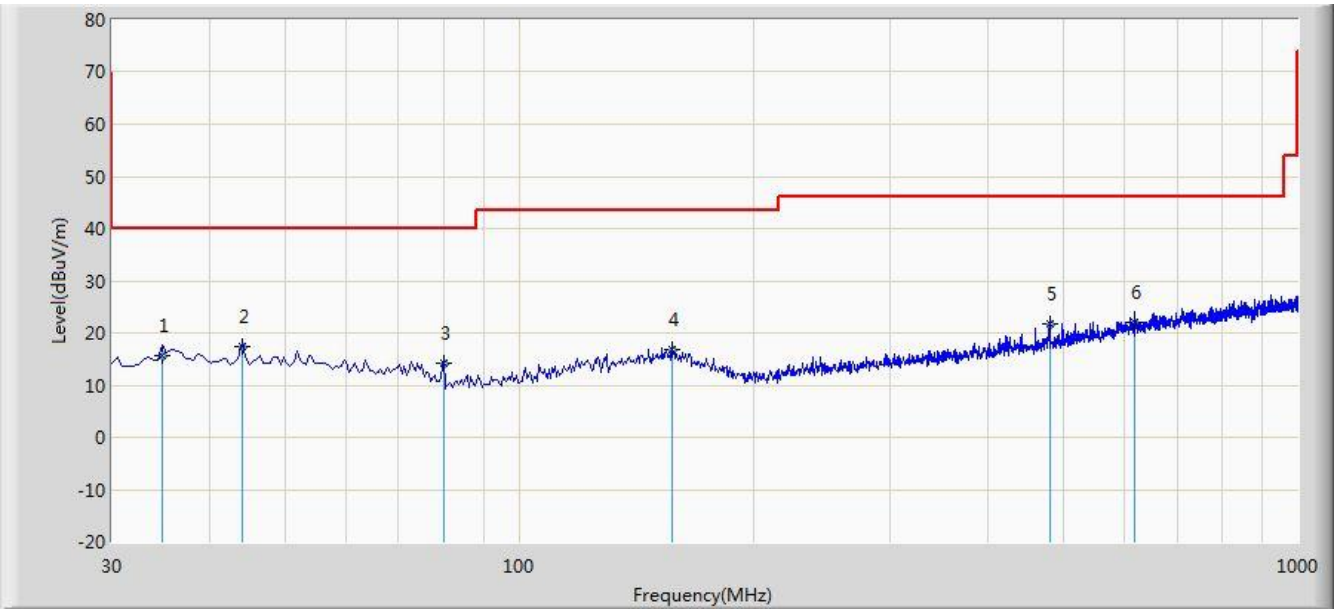
Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (107.9dBμV/m) or FCC 15.209 which is higher.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

The worst case of Radiated Emission below 1GHz:

Site: AC1	Time: 2017/06/11 - 17:42
Limit: FCC_Part15.209_RE(3m)	Engineer: Bruce Wang
Probe: VULB 9168 _20-2000MHz	Polarity: Horizontal
EUT: Tablet	Power: By Battery
Worse Case Mode: Transmit by 802.11ng at Channel 2462MHz	



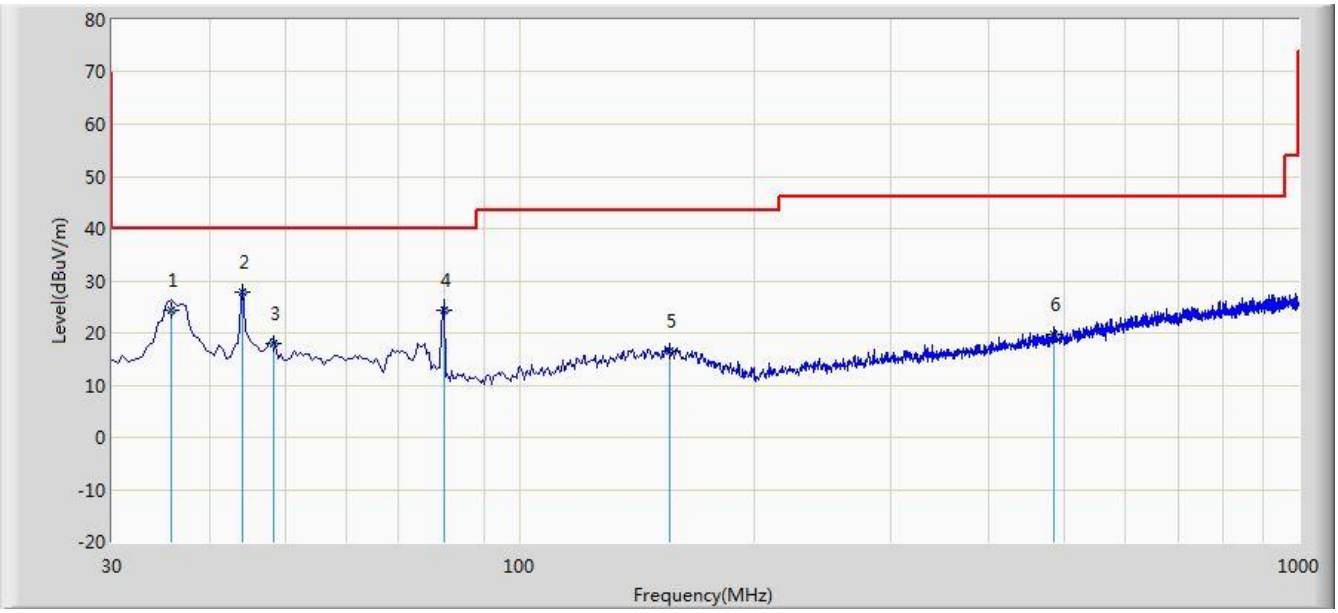
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			34.850	15.769	1.921	-24.230	40.000	13.849	QP
2			44.065	17.348	3.104	-22.652	40.000	14.244	QP
3			79.955	14.303	4.219	-25.697	40.000	10.084	QP
4			157.070	16.693	1.508	-26.807	43.500	15.185	QP
5			480.080	21.862	3.669	-24.138	46.000	18.193	QP
6		*	616.850	22.121	1.283	-23.879	46.000	20.838	QP

Note 1: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Note 2: The test trace is same as the ambient noise and the amplitude of the emissions are attenuated more than 20dB below the permissible (the test frequency range: 9kHz ~ 30MHz, 18GHz ~ 25GHz), therefore no data appear in the report.

Site: AC1	Time: 2017/06/11 - 17:43
Limit: FCC_Part15.209_RE(3m)	Engineer: Bruce Wang
Probe: VULB 9162_0.03-8GHz	Polarity: Vertical
EUT: Tablet	Power: By Battery
Worse Case Mode: Transmit by 802.11g at Channel 2462MHz	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			35.820	24.428	10.497	-15.572	40.000	13.931	QP
2		*	44.065	27.854	13.610	-12.146	40.000	14.244	QP
3			48.430	17.916	3.812	-22.084	40.000	14.104	QP
4			79.955	24.402	14.318	-15.598	40.000	10.084	QP
5			155.615	16.568	1.384	-26.932	43.500	15.184	QP
6			485.900	19.797	1.525	-26.203	46.000	18.272	QP

Note 1: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

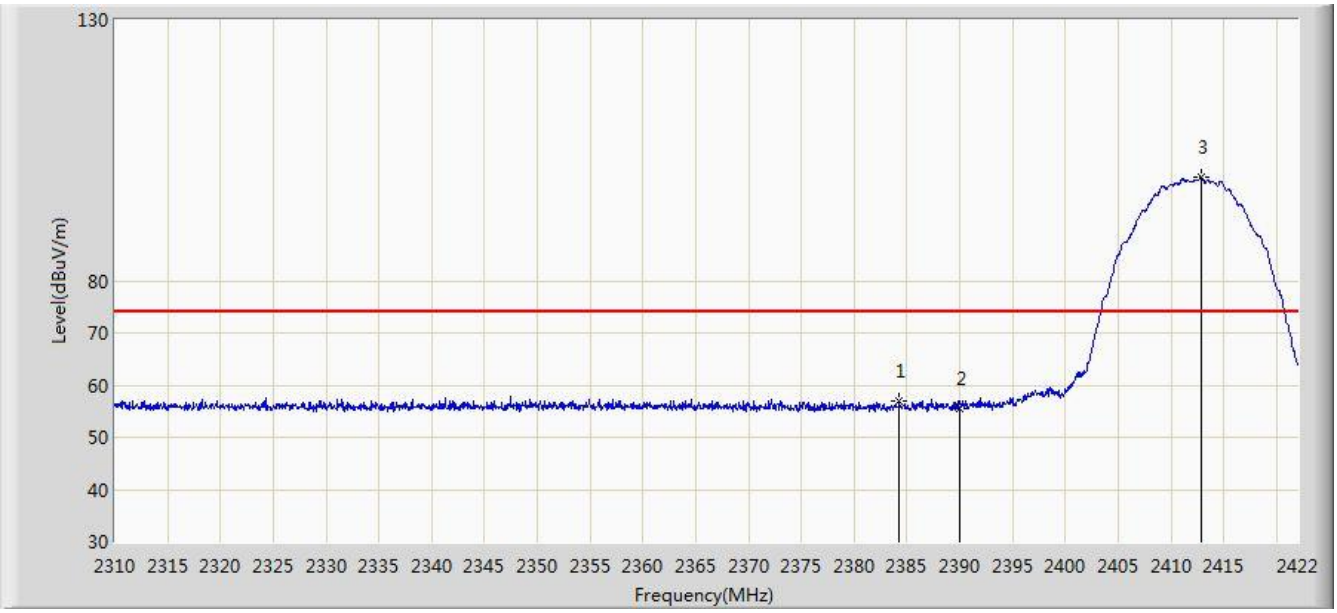
Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Note 2: The test trace is same as the ambient noise and the amplitude of the emissions are attenuated more than 20dB below the permissible (the test frequency range: 9kHz ~ 30MHz, 18GHz ~ 25GHz), therefore no data appear in the report.

7.7. Radiated Restricted Band Edge Measurement

7.7.1.Test Result

Site: AC1	Time: 2017/06/13 - 03:35
Limit: FCC_Part15.209_RE(3m)	Engineer: Alex Ma
Probe: VULB 9162_0.03-8GHz	Polarity: Horizontal
EUT: Tablet	Power: By Battery
Test Mode: Transmit by 802.11b at channel 2412MHz	

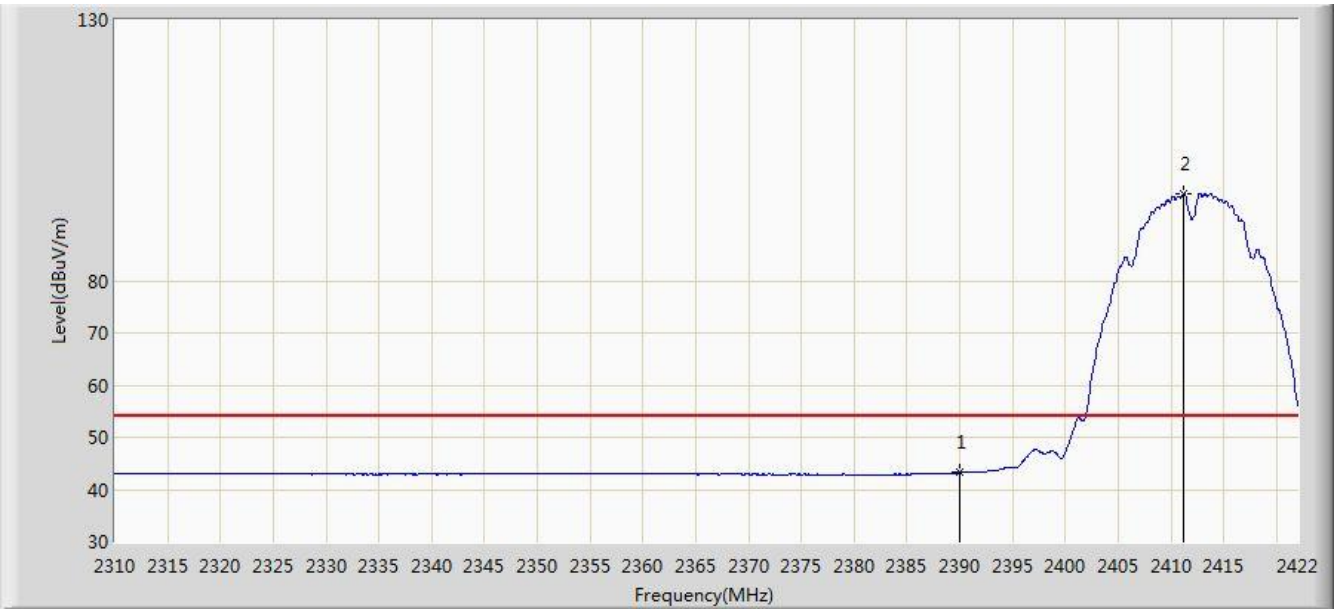


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2384.312	56.953	24.707	N/A	N/A	32.247	PK
2			2390.000	55.552	23.274	-18.448	74.000	32.278	PK
3		*	2412.872	99.777	67.541	25.777	74.000	32.236	PK

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB) (dB/m)

Site: AC1	Time: 2017/06/13 - 03:41
Limit: FCC_Part15.209_RE(3m)	Engineer: Alex Ma
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Tablet	Power: By Battery
Test Mode: Transmit by 802.11b at channel 2412MHz	

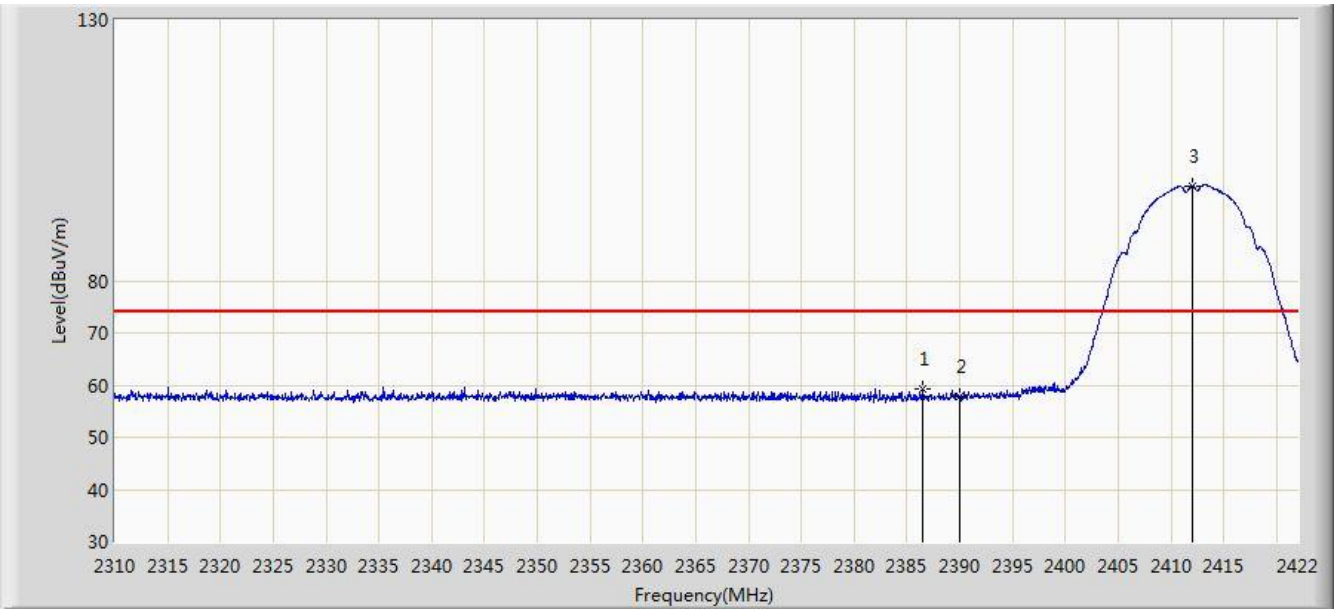


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	43.249	10.971	-10.751	54.000	32.278	AV
2		*	2411.248	96.628	64.385	N/A	N/A	32.243	AV

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB) (dB/m)

Site: AC1	Time: 2017/06/13 - 03:42
Limit: FCC_Part15.209_RE(3m)	Engineer: Alex Ma
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Tablet	Power: By Battery
Test Mode: Transmit by 802.11b at channel 2412MHz	

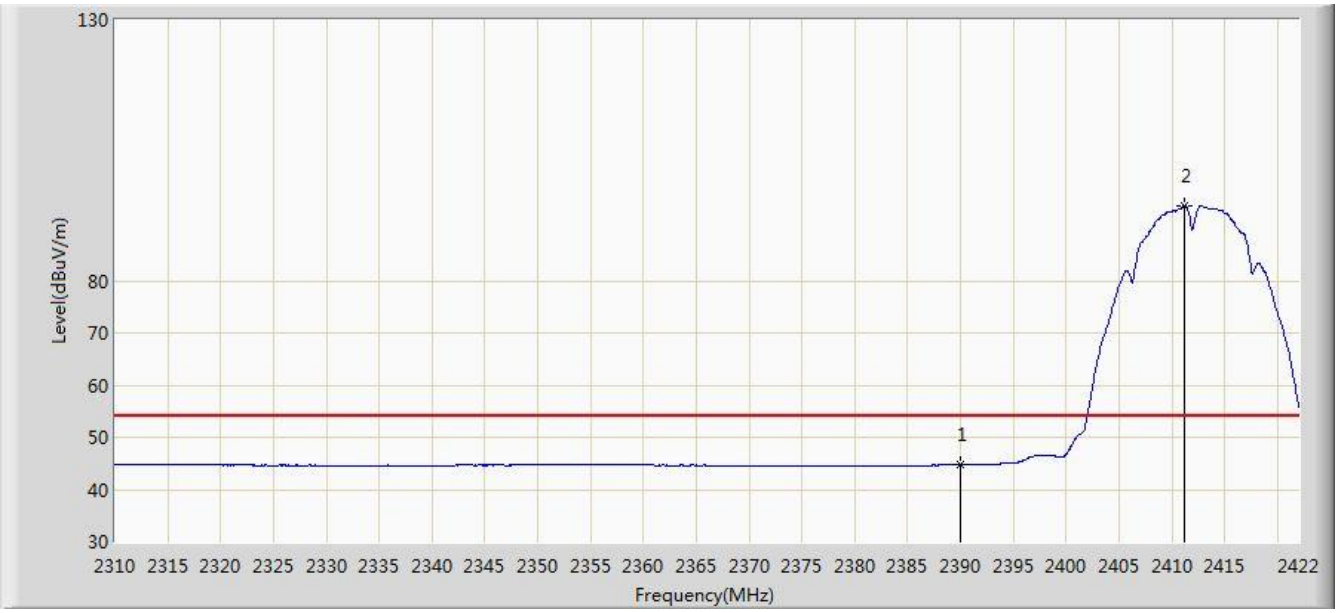


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2386.552	59.404	27.145	-14.596	74.000	32.259	PK
2			2390.000	57.850	25.572	-16.150	74.000	32.278	PK
3		*	2412.032	98.199	65.959	N/A	N/A	32.240	PK

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB) (dB/m)

Site: AC1	Time: 2017/06/13 - 03:45
Limit: FCC_Part15.209_RE(3m)	Engineer: Alex Ma
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Tablet	Power: By Battery
Test Mode: Transmit by 802.11b at channel 2412MHz	

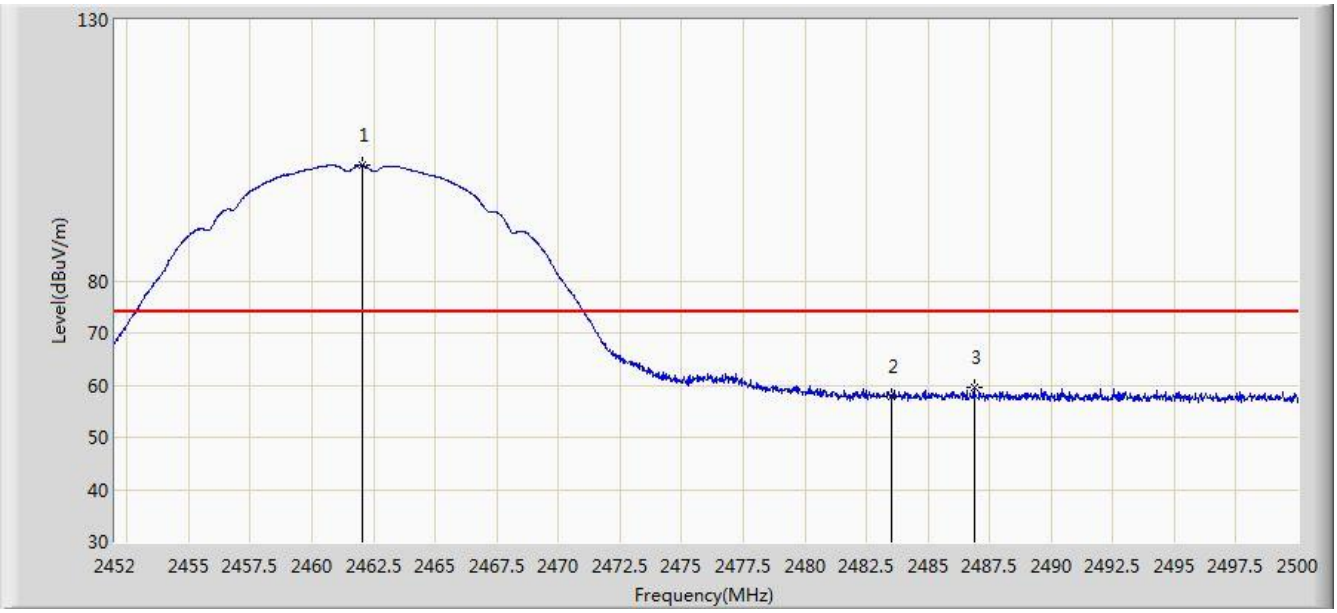


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	44.774	12.496	-9.226	54.000	32.278	AV
2		*	2411.192	94.437	62.194	N/A	N/A	32.243	AV

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB) (dB/m)

Site: AC1	Time: 2017/06/13 - 03:46
Limit: FCC_Part15.209_RE(3m)	Engineer: Alex Ma
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Tablet	Power: By Battery
Test Mode: Transmit by 802.11b at channel 2462MHz	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2462.056	102.125	69.887	N/A	N/A	32.238	PK
2			2483.500	57.731	25.450	-16.269	74.000	32.282	PK
3			2486.872	59.547	27.254	-14.453	74.000	32.293	PK

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB) (dB/m)

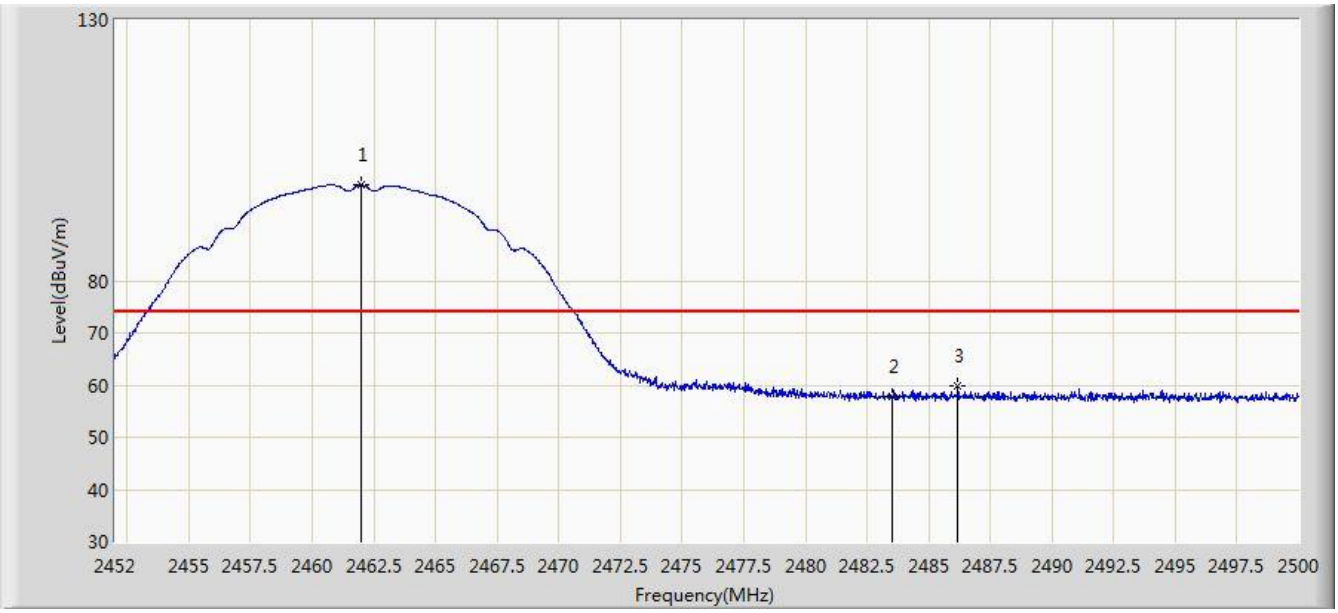
Site: AC1	Time: 2017/06/13 - 04:05
Limit: FCC_Part15.209_RE(3m)	Engineer: Alex Ma
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Tablet	Power: By Battery
Test Mode: Transmit by 802.11b at channel 2462MHz	

No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2461.312	98.488	66.253	N/A	N/A	32.235	AV
2			2483.500	45.216	12.935	-8.784	54.000	32.282	AV

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB) (dB/m)

Site: AC1	Time: 2017/06/13 - 04:06
Limit: FCC_Part15.209_RE(3m)	Engineer: Alex Ma
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Tablet	Power: By Battery
Test Mode: Transmit by 802.11b at channel 2462MHz	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2461.984	98.307	66.069	N/A	N/A	32.238	PK
2			2483.500	57.822	25.541	-16.178	74.000	32.282	PK
3			2486.176	59.718	27.428	-14.282	74.000	32.290	PK

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB) (dB/m)

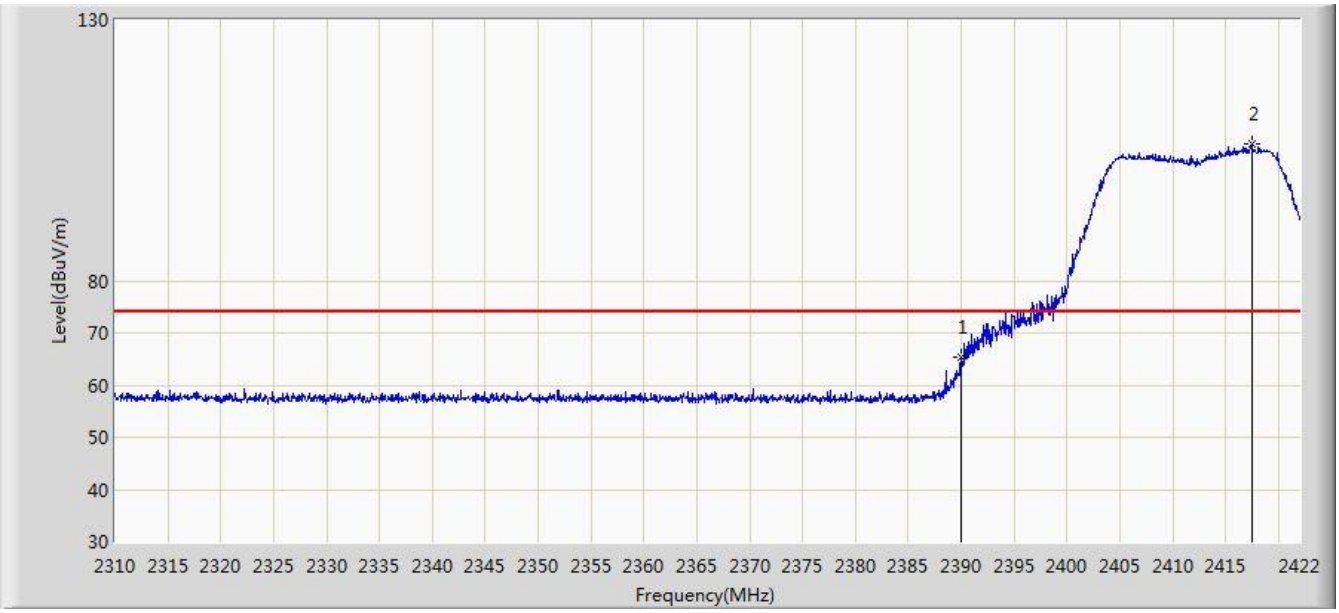
Site: AC1	Time: 2017/06/13 - 04:08
Limit: FCC_Part15.209_RE(3m)	Engineer: Alex Ma
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Tablet	Power: By Battery
Test Mode: Transmit by 802.11b at channel 2462MHz	

No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2461.312	93.927	61.692	N/A	N/A	32.235	AV
2			2483.500	44.783	12.502	-9.217	54.000	32.282	AV

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB) (dB/m)

Site: AC1	Time: 2017/06/13 - 04:09
Limit: FCC_Part15.209_RE(3m)	Engineer: Alex Ma
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Tablet	Power: By Battery
Test Mode: Transmit by 802.11g at channel 2412MHz	

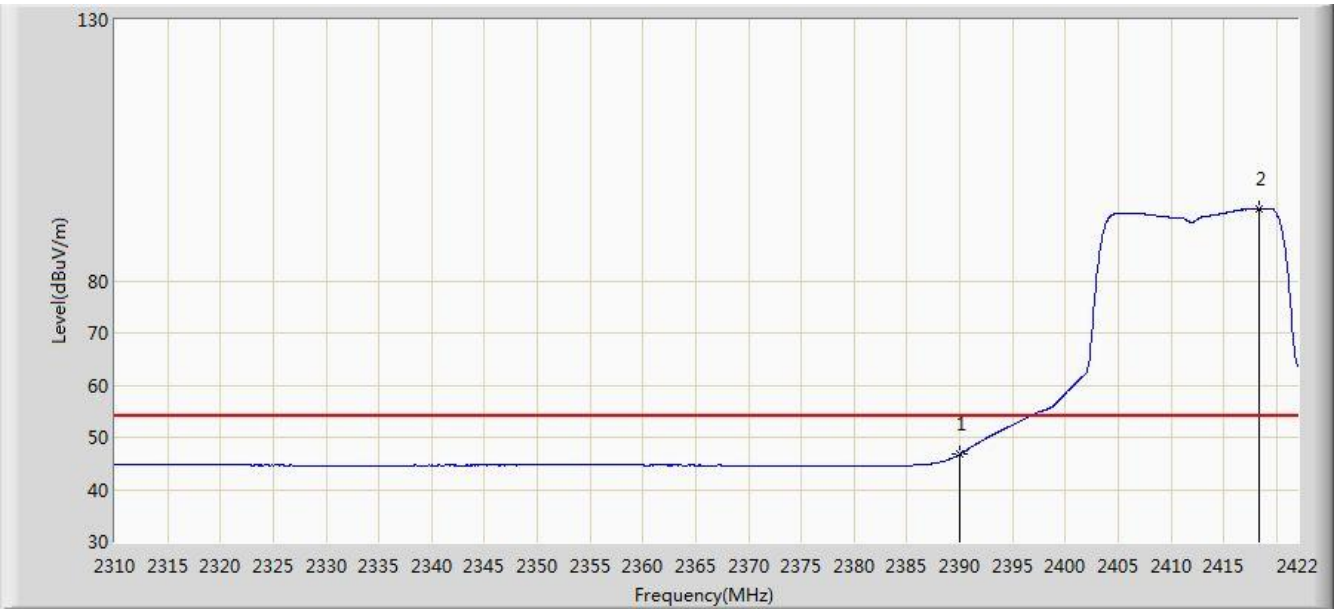


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	65.272	32.994	-8.728	74.000	32.278	PK
2		*	2417.520	106.218	74.001	N/A	N/A	32.217	PK

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB) (dB/m)

Site: AC1	Time: 2017/06/13 - 04:12
Limit: FCC_Part15.209_RE(3m)	Engineer: Alex Ma
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Tablet	Power: By Battery
Test Mode: Transmit by 802.11g at channel 2412MHz	

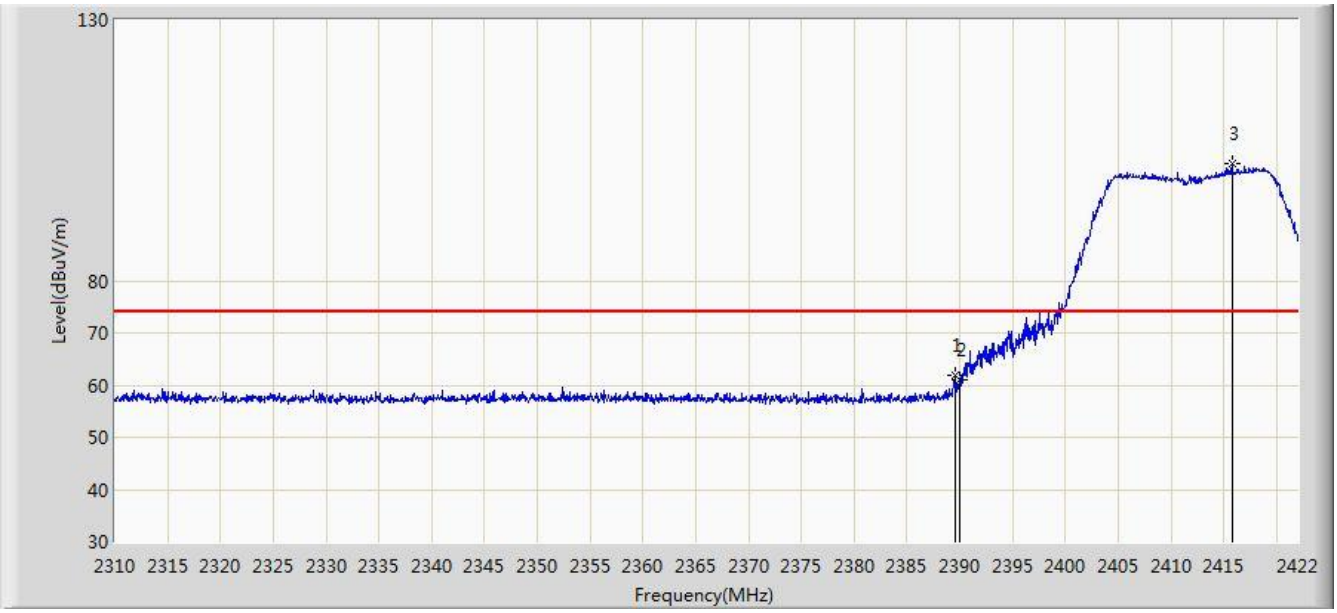


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	46.754	14.476	-7.246	54.000	32.278	AV
2		*	2418.360	93.821	61.608	N/A	N/A	32.213	AV

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB) (dB/m)

Site: AC1	Time: 2017/06/13 - 04:12
Limit: FCC_Part15.209_RE(3m)	Engineer: Alex Ma
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Tablet	Power: By Battery
Test Mode: Transmit by 802.11g at channel 2412MHz	

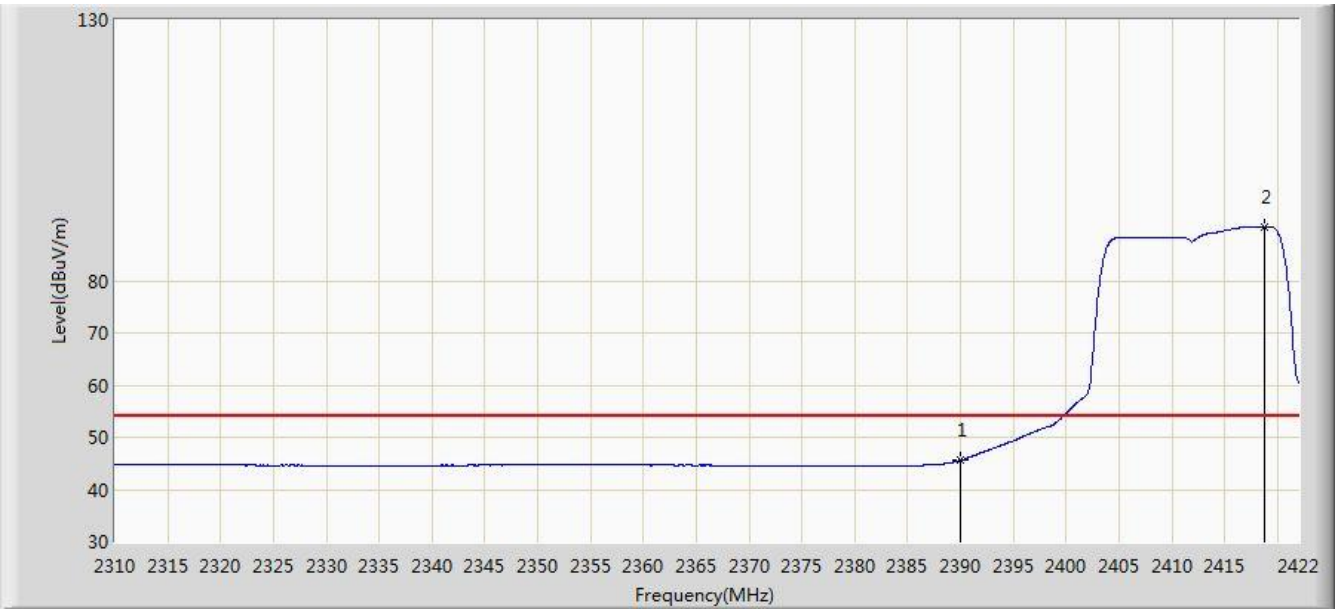


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2389.632	61.974	29.698	-12.026	74.000	32.276	PK
2			2390.000	61.110	28.832	-12.890	74.000	32.278	PK
3		*	2415.784	102.326	70.102	N/A	N/A	32.224	PK

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB) (dB/m)

Site: AC1	Time: 2017/06/13 - 04:14
Limit: FCC_Part15.209_RE(3m)	Engineer: Alex Ma
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Tablet	Power: By Battery
Test Mode: Transmit by 802.11g at channel 2412MHz	

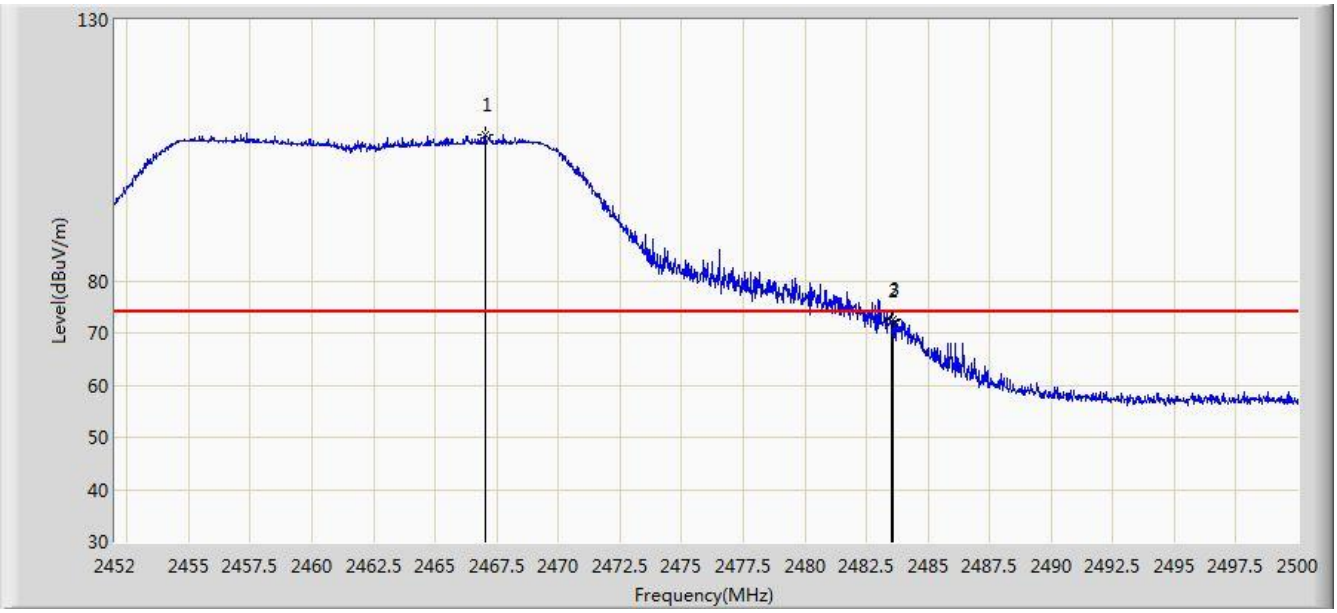


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	45.569	13.291	-8.431	54.000	32.278	AV
2		*	2418.808	90.385	58.174	N/A	N/A	32.212	AV

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB) (dB/m)

Site: AC1	Time: 2017/06/13 - 04:58
Limit: FCC_Part15.209_RE(3m)	Engineer: Alex Ma
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Tablet	Power: By Battery
Test Mode: Transmit by 802.11g at channel 2462MHz	

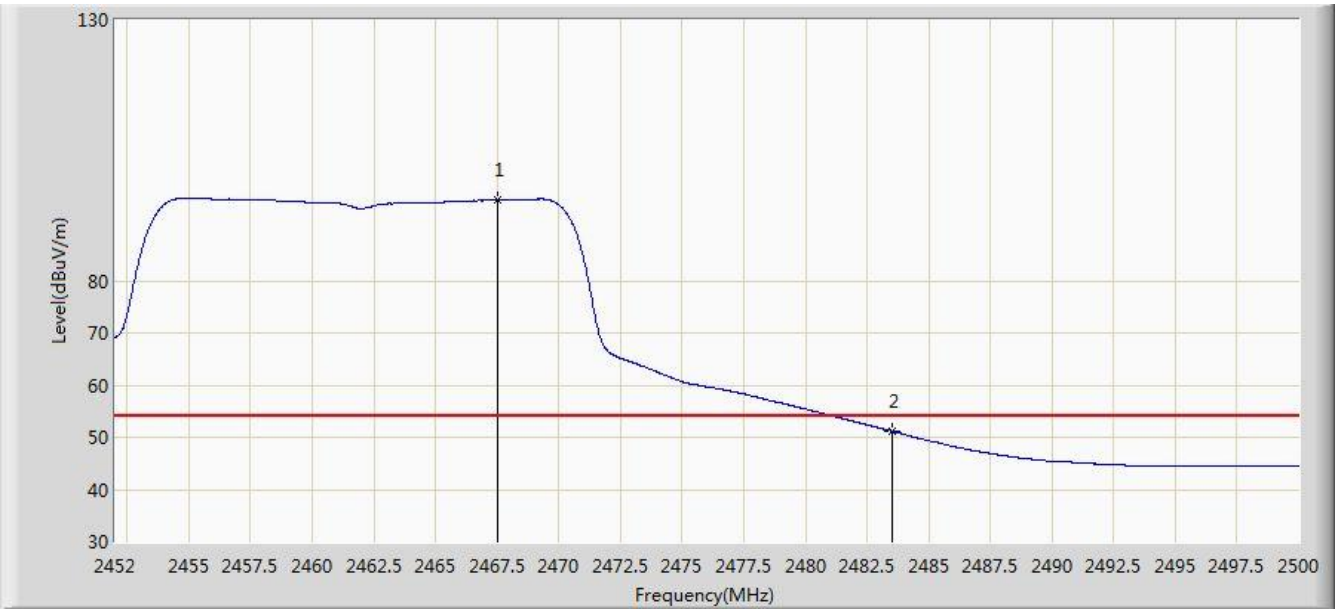


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2467.024	107.882	75.637	N/A	N/A	32.245	PK
2			2483.500	72.353	40.072	-1.647	74.000	32.282	PK
3			2483.560	72.531	40.250	-1.469	74.000	32.282	PK

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB) (dB/m)

Site: AC1	Time: 2017/06/13 - 04:59
Limit: FCC_Part15.209_RE(3m)	Engineer: Alex Ma
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Tablet	Power: By Battery
Test Mode: Transmit by 802.11g at channel 2462MHz	

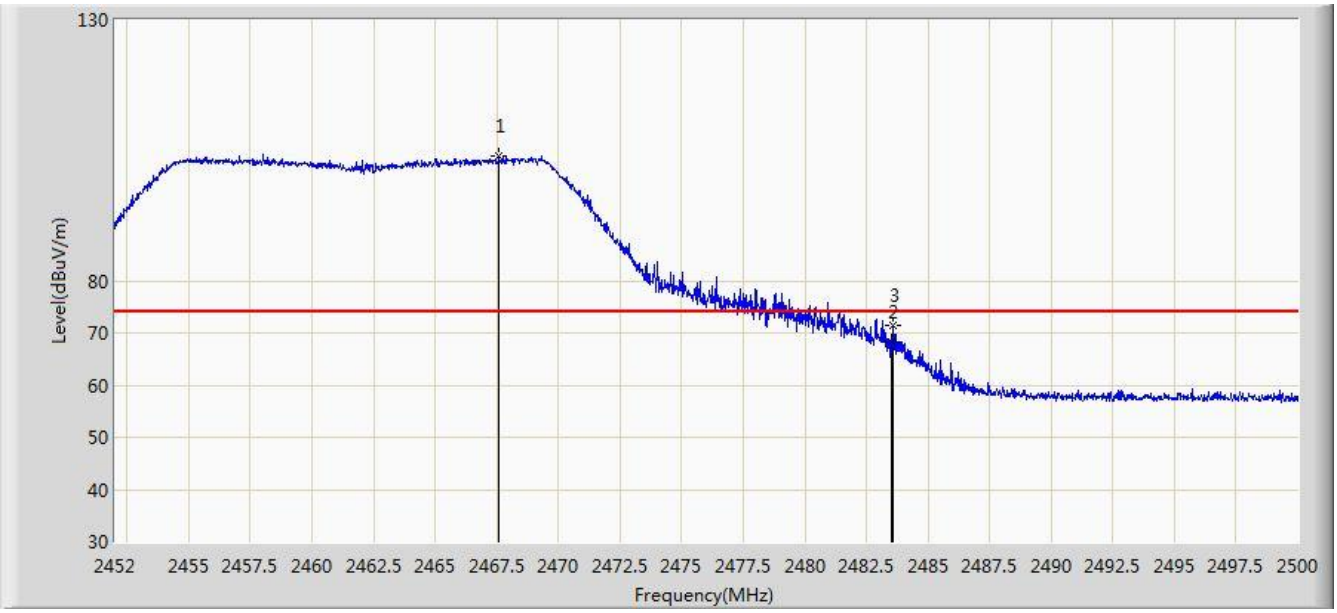


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2467.504	95.437	63.191	N/A	N/A	32.246	AV
2			2483.500	51.176	18.895	-2.824	54.000	32.282	AV

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB) (dB/m)

Site: AC1	Time: 2017/06/13 - 04:59
Limit: FCC_Part15.209_RE(3m)	Engineer: Alex Ma
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Tablet	Power: By Battery
Test Mode: Transmit by 802.11g at channel 2462MHz	

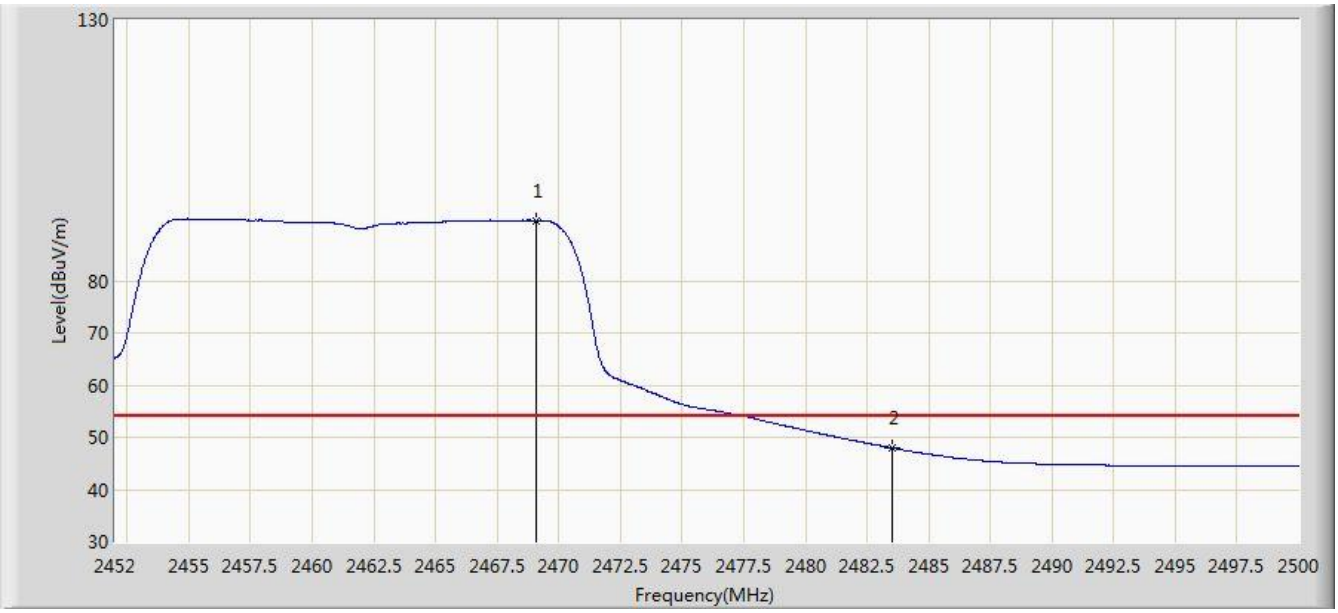


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2467.576	103.769	71.523	N/A	N/A	32.246	PK
2			2483.500	68.203	35.922	-5.797	74.000	32.282	PK
3			2483.608	71.306	39.024	-2.694	74.000	32.282	PK

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB) (dB/m)

Site: AC1	Time: 2017/06/13 - 05:02
Limit: FCC_Part15.209_RE(3m)	Engineer: Alex Ma
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Tablet	Power: By Battery
Test Mode: Transmit by 802.11g at channel 2462MHz	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2469.064	91.566	59.317	N/A	N/A	32.249	AV
2			2483.500	47.979	15.698	-6.021	54.000	32.282	AV

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB) (dB/m)

7.8. AC Conducted Emissions Measurement

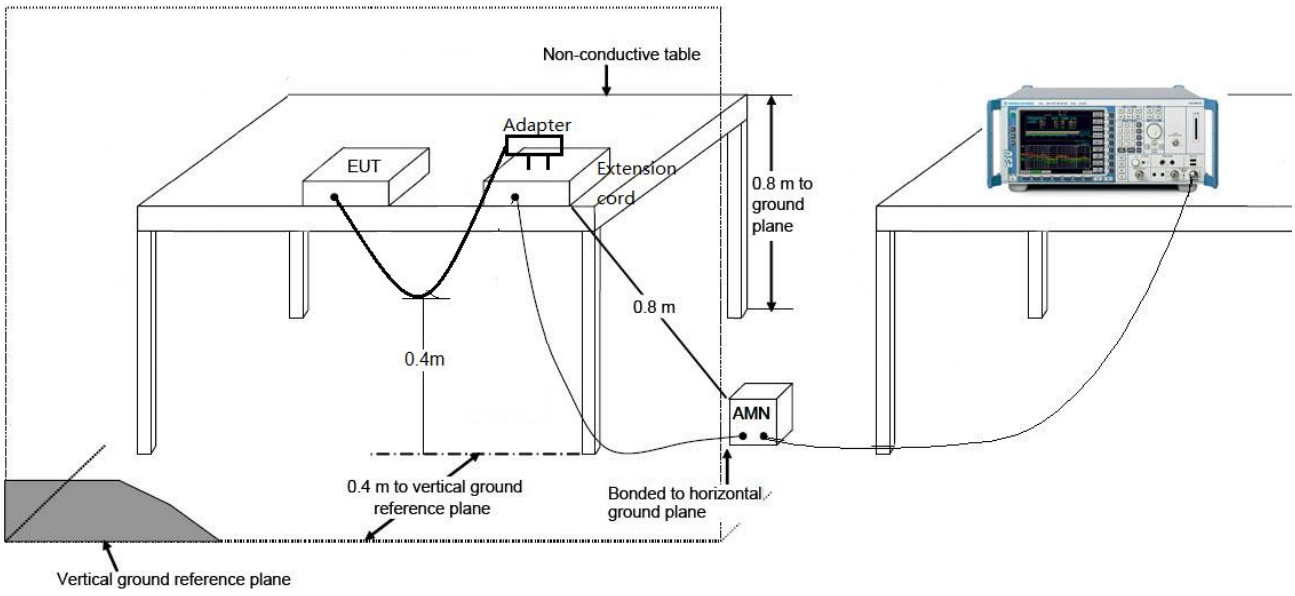
7.8.1.Test Limit

FCC Part 15 Subpart C Paragraph 15.207 Limits		
Frequency (MHz)	QP (dBuV)	AV (dBuV)
0.15 - 0.50	66 - 56	56 – 46
0.50 - 5.0	56	46
5.0 - 30	60	50

Note 1: The lower limit shall apply at the transition frequencies.

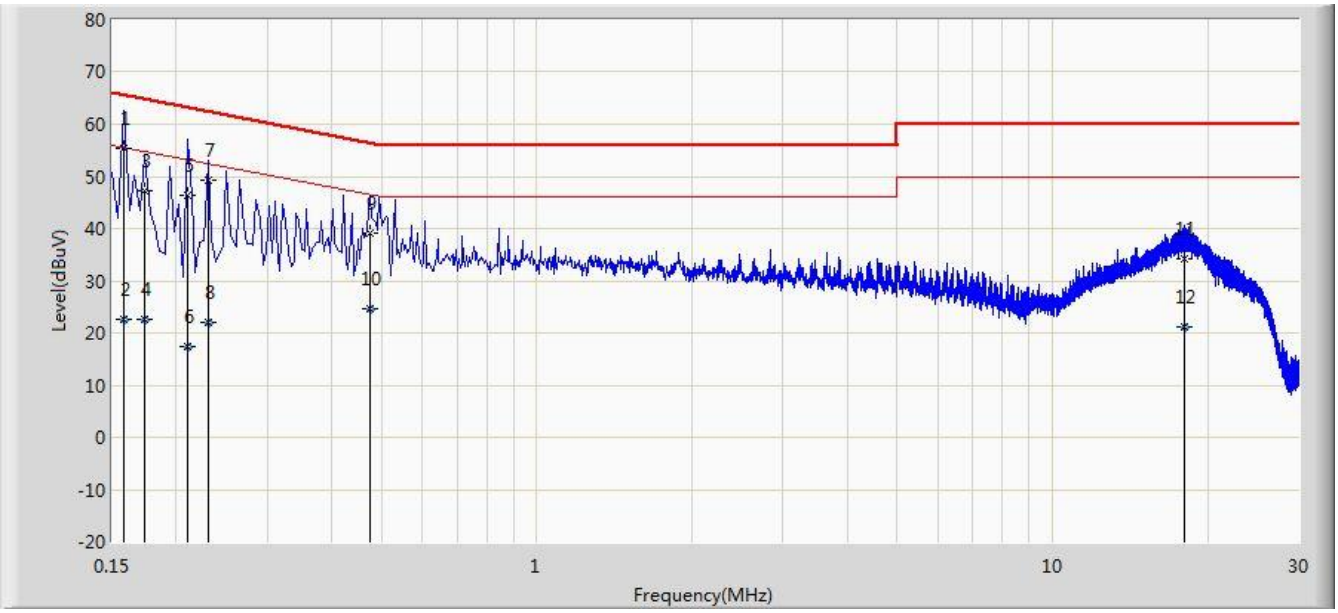
Note 2: The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.5MHz.

7.8.2.Test Setup



7.8.3.Test Result

Site: SR2	Time: 2017/06/12 - 20:38
Limit: FCC_Part15.207_CE_AC Power_Class B	Engineer: Vince Yu
Probe: ENV216_101683_Filter On	Polarity: Line
EUT: Tablet	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11g at Channel 2437MHz	

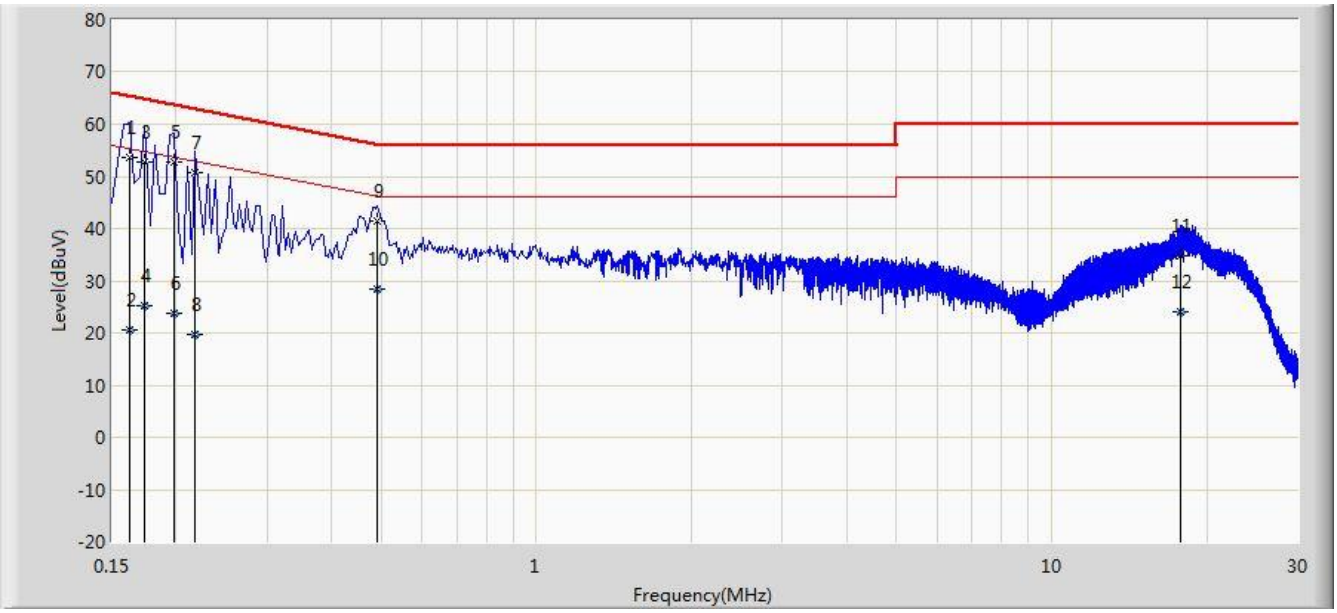


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Factor (dB)	Type
1		*	0.158	55.292	44.981	-10.277	65.568	10.311	QP
2			0.158	22.529	12.218	-33.039	55.568	10.311	AV
3			0.174	47.275	37.207	-17.492	64.767	10.068	QP
4			0.174	22.559	12.492	-32.208	54.767	10.068	AV
5			0.210	46.426	36.458	-16.779	63.205	9.969	QP
6			0.210	17.473	7.504	-35.732	53.205	9.969	AV
7			0.230	49.339	39.391	-13.111	62.450	9.947	QP
8			0.230	21.934	11.987	-30.516	52.450	9.947	AV
9			0.474	38.987	28.842	-17.457	56.444	10.145	QP
10			0.474	24.514	14.369	-21.929	46.444	10.145	AV
11			18.054	34.154	24.054	-25.846	60.000	10.100	QP
12			18.054	21.253	11.153	-28.747	50.000	10.100	AV

Note: Measure Level (dBμV) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + LISN Factor (dB)

Site: SR2	Time: 2017/06/12 - 20:44
Limit: FCC_Part15.207_CE_AC Power_Class B	Engineer: Vince Yu
Probe: ENV216_101683_Filter On	Polarity: Neutral
EUT: Tablet	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11g at Channel 2437MHz	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Factor (dB)	Type
1			0.162	53.736	43.658	-11.624	65.361	10.078	QP
2			0.162	20.574	10.496	-34.787	55.361	10.078	AV
3			0.174	52.884	42.827	-11.883	64.767	10.057	QP
4			0.174	25.127	15.070	-29.640	54.767	10.057	AV
5		*	0.198	52.656	42.642	-11.038	63.694	10.015	QP
6			0.198	23.824	13.809	-29.870	53.694	10.015	AV
7			0.218	50.734	40.753	-12.161	62.895	9.981	QP
8			0.218	19.775	9.794	-33.119	52.895	9.981	AV
9			0.490	41.438	31.260	-14.729	56.168	10.179	QP
10			0.490	28.309	18.130	-17.859	46.168	10.179	AV
11			17.730	34.926	24.793	-25.074	60.000	10.133	QP
12			17.730	24.189	14.056	-25.811	50.000	10.133	AV

Note: Measure Level (dBμV) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + LISN Factor (dB)

8. CONCLUSION

The data collected relate only the item(s) tested and show that the **Tablet FCC ID: HD5-EDA700** is in compliance with Part 15C of the FCC Rules.

The End