



MEASUREMENT REPORT

FCC PART 15.247 802.11b/g/n

FCC ID: 2AJPQM2

APPLICANT: Shanghai Lexiang Technology Co.,Ltd

Application Type: Certification

Product: Deepoon VR All-In-One Headset

Model No.: DeePoon M2

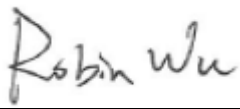
FCC Classification: Digital Transmission System (DTS)

FCC Rule Part(s): Part 15.247

Test Procedure(s): ANSI C63.10-2013, KDB 558074 D01v03r05
KDB 662911 D01v02r01

Test Date: July 25 ~ September 22, 2016

Reviewed By
Manager

: 
(Robin Wu)

Approved By
CEO

: 
(Marlin Chen)



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 D01v03r05. Test results reported herein relate only to the item(s) tested.

The test report shall not be reproduced except in full without the written approval of MRT Technology (Suzhou) Co., Ltd.

Revision History

Report No.	Version	Description	Issue Date	Note
1607RSU03003	Rev. 01	Initial report	09-22-2016	Valid

CONTENTS

Description	Page
§2.1033 General Information	5#
1.# INTRODUCTION	6#
1.1.# Scope	6#
1.2.# MRT Test Location	6#
2.# PRODUCT INFORMATION	7#
2.1.# Feature of Equipment under Test	7#
2.2.# Product Specification Subjective to this Report	7#
2.3.# Operation Frequency / Channel List	7#
2.4.# Description of Available Antennas	8#
2.5.# Description of Antenna RF Port	9#
2.6.# Test Mode	9#
2.7.# Test Software	9#
2.8.# Device Capabilities	10#
2.9.# Test Configuration	11#
2.10.# EMI Suppression Device(s)/Modifications	11#
2.11.# Labeling Requirements	11#
3.# DESCRIPTION OF TEST	12#
3.1.# Evaluation Procedure	12#
3.2.# AC Line Conducted Emissions	12#
3.3.# Radiated Emissions	13#
4.# ANTENNA REQUIREMENTS	14#
5.# TEST EQUIPMENT CALIBRATION DATE	15#
6.# MEASUREMENT UNCERTAINTY	16#
7.# TEST RESULT	17#
7.1.# Summary	17#
7.2.# 6dB Bandwidth Measurement	18#
7.2.1.# Test Limit	18#
7.2.2.# Test Procedure used	18#
7.2.3.# Test Setting	18#
7.2.4.# Test Setup	18#
7.2.5.# Test Result	19#
7.3.# Output Power Measurement	26#

7.3.1.#	Test Limit	26#
7.3.2.#	Test Procedure Used	26#
7.3.3.#	Test Setting.....	26#
7.3.4.#	Test Setup	26#
7.3.5.#	Test Result of Output Power.....	27#
7.3.6.#	Test Result of Average Output Power (Reporting Only)	30#
7.4.#	Power Spectral Density Measurement	31#
7.4.1.#	Test Limit	31#
7.4.2.#	Test Procedure Used	31#
7.4.3.#	Test Setting.....	31#
7.4.4.#	Test Setup	31#
7.4.5.#	Test Result.....	32#
7.5.#	Conducted Band Edge and Out-of-Band Emissions	39#
7.5.1.#	Test Limit	39#
7.5.2.#	Test Procedure Used	39#
7.5.3.#	Test Setting.....	39#
7.5.4.#	Test Setup	40#
7.5.5.#	Test Result.....	41#
7.6.#	Radiated Spurious Emission Measurement	56#
7.6.1.#	Test Limit	56#
7.6.2.#	Test Procedure Used	56#
7.6.3.#	Test Setting.....	56#
7.6.4.#	Test Setup	58#
7.6.5.#	Test Result.....	60#
7.7.#	Radiated Restricted Band Edge Measurement.....	87#
7.7.1.#	Test Result.....	87#
7.8.#	AC Conducted Emissions Measurement.....	143#
7.8.1.#	Test Limit	143#
7.8.2.#	Test Setup	143#
7.8.3.#	Test Result.....	144#
8.#	CONCLUSION.....	146#

§2.1033 General Information

Applicant:	Shanghai Lexiang Technology Co.,Ltd
Applicant Address:	Room 2189, Building 1, No.151, Chuansha Road, Pudong New District ,Shanghai,China
Manufacturer:	Shanghai Lexiang Technology Co.,Ltd
Manufacturer Address:	Room 2189, Building 1, No.151, Chuansha Road, Pudong New District ,Shanghai,China
Test Site:	MRT Technology (Suzhou) Co., Ltd
Test Site Address:	D8 Building, No.2 Tian'edang Rd., Wuzhong Economic Development Zone, Suzhou, China
MRT Registration No.:	809388
FCC Rule Part(s):	Part 15.247
FCC ID:	2AJPQM2
Test Device Serial No.:	N/A <input type="checkbox"/> Production <input checked="" type="checkbox"/> Pre-Production <input type="checkbox"/> Engineering
FCC Classification:	Digital Transmission System (DTS)

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	Deepoon VR All-In-One Headset
Model No.	DeePoon M2
Wi-Fi Specification	802.11a//b/g/n/ac
Bluetooth Version	v4.0 dual mode
Components	
Adapter	M/N: A8-502000 INPUT: 100-240V ~ 50/60Hz, 0.35A OUTPUT: 5Vdc, 2.0A

2.2. Product Specification Subjective to this Report

Frequency Range	802.11b/g/n-HT20: 2412 ~ 2462 MHz
Type of Modulation	802.11b: DSSS 802.11g/n: OFDM
Maximum Peak Output Power	802.11b: 20.07dBm 802.11g: 22.11dBm 802.11n-HT20: 24.19dBm
Antenna Type	Chip Antenna
Antenna Gain	0.6dBi

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

2.3. Operation Frequency / Channel List

802.11b/g/n-HT20

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. Description of Available Antennas

Antenna Type	Frequency Band (GHz)	Tx Paths	Max Peak Gain (dBi)	Beam-forming Gain (dBi)	CDD Directional Gain (dBi)	
					For Power	For PSD
Chip Antenna	2.4	2	0.6	3.61	0.6	3.61
	5	2	2	5.01	2	5.01

Note:

- The EUT supports Cyclic Delay Diversity (CDD) technology, only 802.11n/ac mode support, and CDD signals are correlated.

For CDD transmissions, directional gain is calculated as follows, $N_{ANT} = 2$, $N_{SS} = 1$.

If all antennas have the same gain, G_{ANT} , Directional gain = $G_{ANT} + \text{Array Gain}$, where Array Gain is as follows.

- For power spectral density (PSD) measurements on all devices,
Array Gain = $10 \log (N_{ANT} / N_{SS})$ dB = 3.01;
- For power measurements on IEEE 802.11 devices,
Array Gain = 0 dB for $N_{ANT} \leq 4$;

- The EUT also supports Beam Forming technology, and only 802.11n/ac mode support, not include 802.11a/b/g.

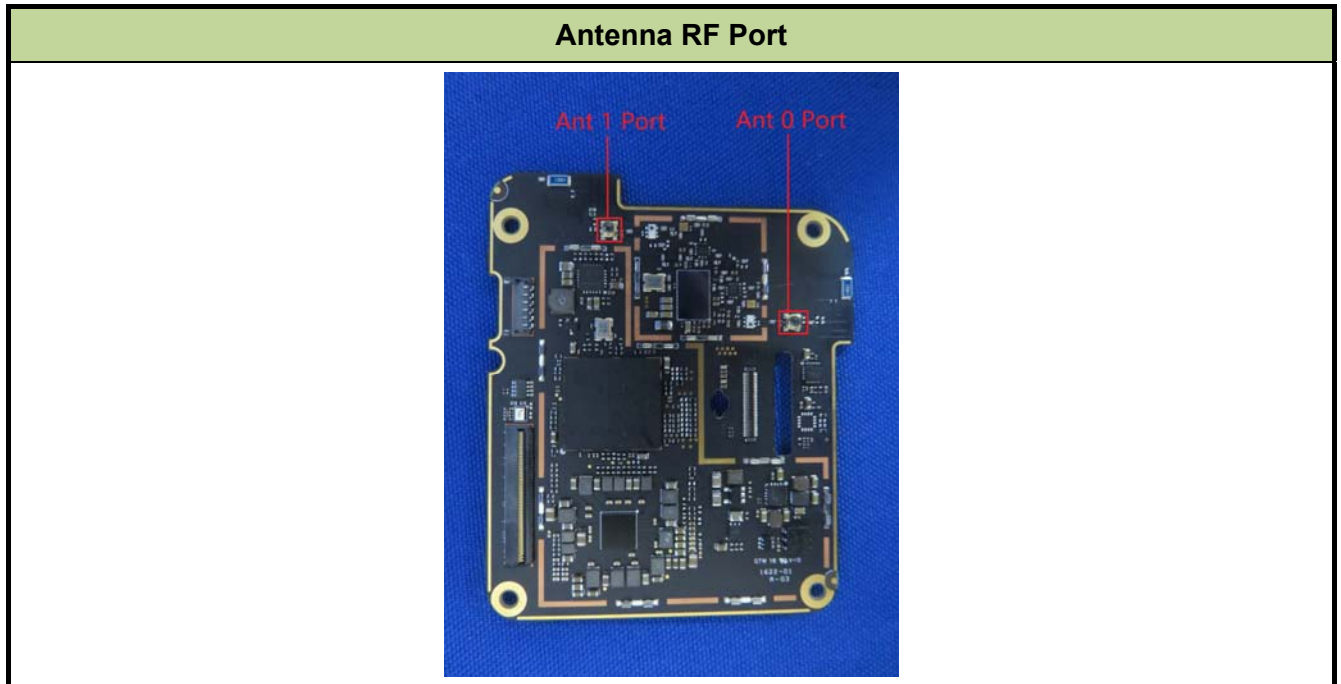
Correlated signals include, but are not limited to, signals transmitted in any of the following modes:

- Any transmit Beam Forming mode, whether fixed or adaptive (e.g., phased array modes, closed loop MIMO modes, Transmitter Adaptive Antenna modes, Maximum Ratio Transmission (MRT) modes, and Statistical Eigen Beam Forming (EBF) modes).

If all antennas have the same gain G_{ANT} , Directional gain = $G_{ANT} + 10 \log(N_{ANT}/N_{SS})$ dBi.

$N_{ANT} = 2$, $N_{SS} = 1$

2.5. Description of Antenna RF Port



2.6. Test Mode

Test Mode	Mode 1: Transmit by 802.11b
	Mode 2: Transmit by 802.11g
	Mode 3: Transmit by 802.11n-HT20

2.7. Test Software

The test utility software used during testing was “adb.exe”.

2.8. Device Capabilities

This device contains the following capabilities:

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

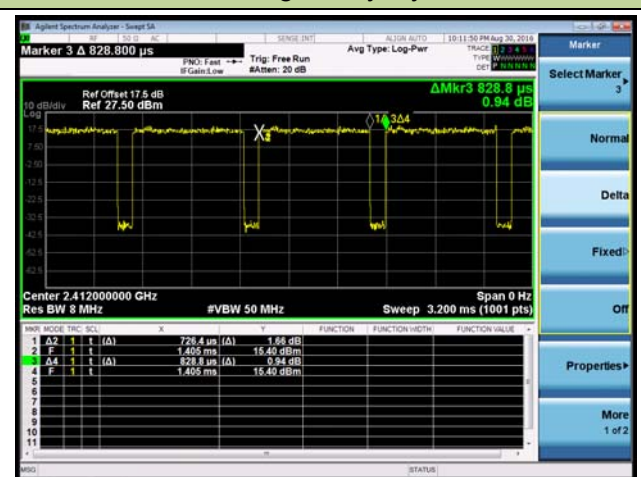
Note: 2.4GHz WLAN (DTS) operation is possible in 20MHz channel bandwidths. The maximum achievable duty cycle was determined based on measurements performed on a spectrum analyzer in zero-span mode with RBW = 8MHz, VBW = 50MHz. The RBW and VBW were both greater than 50/T, where T is the minimum transmission 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	98.0%
802.11g	87.6%
802.11n-HT20	87.5%

802.11b - Duty Cycle



802.11g - Duty Cycle



802.11n-HT20 - Duty Cycle



2.9. Test Configuration

The **Deepoon VR All-In-One Headset** was tested per the guidance of KDB 558074 D01v03r05. ANSI C63.10-2013 was used to reference the appropriate EUT setup for radiated spurious emissions testing and AC line conducted testing.

2.10. EMI Suppression Device(s)/Modifications

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

2.11. 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.

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 D01v03r05 were used in the measurement of the **Deepoon VR All-In-One Headset**.

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 **Deepoon VR All-In-One Headset** is **permanently attached**.
- There are no provisions for connection to an external antenna.

Conclusion:

The **Deepoon VR All-In-One Headset** unit complies with the requirement of §15.203.

5. TEST EQUIPMENT CALIBRATION DATE

Conducted Emissions - SR2

Instrument	Manufacturer	Type No.	Serial No.	Cali. Interval	Cali. Due Date
EMI Test Receiver	R&S	ESR 3.6	102030	1 year	2017/04/29
Two-Line V-Network	R&S	ENV216	101683	1 year	2016/11/03
Two-Line V-Network	R&S	ENV216	101684	1 year	2016/11/03
Temperature/Humidity Meter	Yuhuaze	HTC-2	N/A	1 year	2016/12/20
Shielding Anechoic Chamber	Mikebang	Chamber-SR2	N/A	1 year	2017/05/10

Radiated Emission - AC1

Instrument	Manufacturer	Type No.	Serial No.	Cali. Interval	Cali. Due Date
EXA Signal Analyzer	Agilent	N9010A	MY52090106	1 year	2017/06/23
Microwave System Amplifier	Agilent	83017A	MY53270040	1 year	2017/03/29
Loop Antenna	Schwarzbeck	FMZB1519	1519-041	1 year	2016/12/14
TRILOG Antenna	Schwarzbeck	VULB9168	662	1 year	2016/12/10
Broad-Band Horn Antenna	Schwarzbeck	BBHA9120D	1457	1 year	2016/11/07
Broadband Horn Antenna	Schwarzbeck	BBHA9170	BBHA9170549	1 year	2017/01/04
Temperature/ Meter Humidity	Yuhuaze	HTC-2	N/A	1 year	2016/12/20
Anechoic Chamber	TDK	Chamber-AC1	N/A	1 year	2017/05/10

Conducted Test Equipment - TR3

Instrument	Manufacturer	Type No.	Serial No.	Cali. Interval	Cali. Due Date
Spectrum Analyzer	Agilent	N9020A	MY52090106	1 year	2017/05/08
Power Meter	Agilent	U2021XA	MY53410005	1 year	2016/12/08
Temperature/Humidity Meter	Yuhuaze	HTC-2	N/A	1 year	2016/12/20

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% ($U=2U_c(y)$): 150kHz~30MHz: 3.46dB
Radiated Emission Measurement - AC1
Measuring Uncertainty for a Level of Confidence of 95% ($U=2U_c(y)$): 9kHz ~ 1GHz: 4.18dB 1GHz ~ 25GHz: 4.76dB

7. TEST RESULT

7.1. Summary

Company Name: Shanghai Lexiang Technology Co.,Ltd
FCC ID: 2AJPQM2
FCC Classification: Digital Transmission System (DTS)
Data Rate(s) Tested: 1Mbps ~ 11Mbps (b); 6Mbps ~ 54Mbps (g);
6.5/7.2Mbps ~ 65.0/72.2Mbps (n-HT20);

FCC Part Section(s)	Test Description	Test Limit	Test Condition	Test Result	Reference
15.247(a)(2)	6dB Bandwidth	$\geq 500\text{kHz}$	Conducted	Pass	Section 7.2
15.247(b)(3)	Output Power	$\leq 30\text{dBm}$		Pass	Section 7.3
15.247(e)	Power Spectral Density	$\leq 8\text{dBm}/3\text{kHz}$		Pass	Section 7.4
15.247(d)	Band Edge / Out-of-Band Emissions	$\geq 20\text{dBc}$		Pass	Section 7.5
15.205 15.209	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	AC Conducted Emissions 150kHz - 30MHz	< FCC 15.207 limits	Line Conducted	Pass	Section 7.8

Notes:

- 1) 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.
- 2) 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.
- 3) All antenna port conducted emissions testing was performed on a test bench with the antenna port of the EUT connected to the spectrum analyzer through calibrated cables and attenuators.

7.2. 6dB Bandwidth Measurement

7.2.1. Test Limit

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

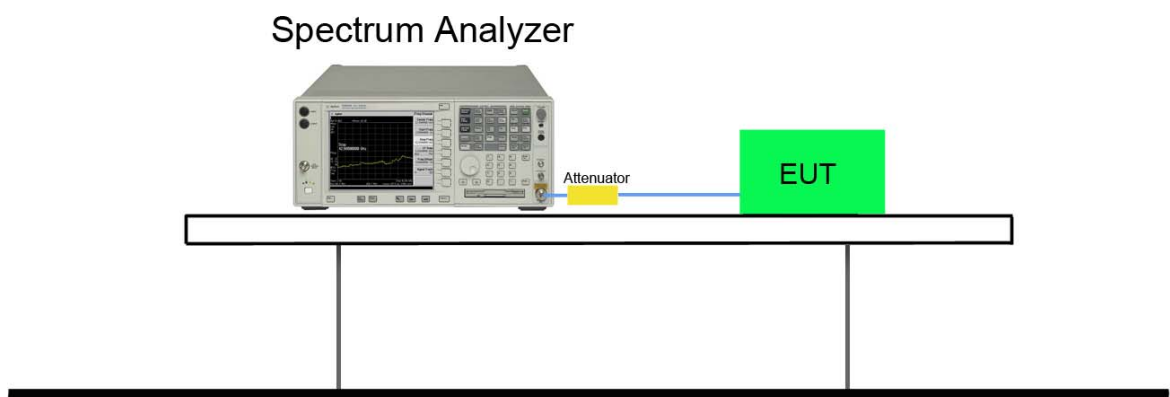
7.2.2. Test Procedure used

KDB 558074 D01v03r05 – 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 $\geq 3 \times$ 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

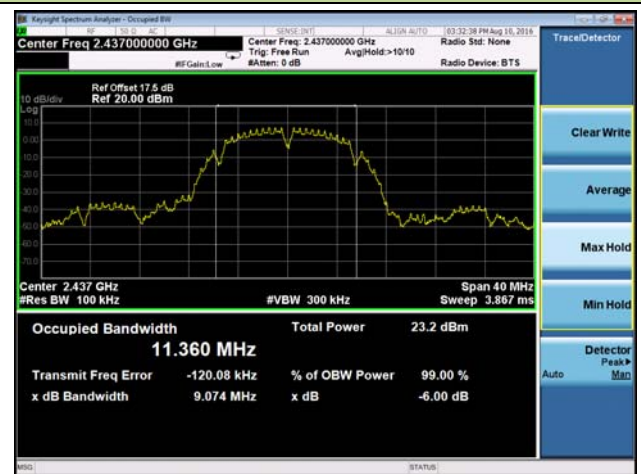
Test Mode	Data Rate (Mbps)	Channel No.	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (MHz)	Result
Ant 0						
802.11b	1	01	2412	9.1	≥ 0.5	Pass
802.11b	1	06	2437	9.1	≥ 0.5	Pass
802.11b	1	11	2462	8.1	≥ 0.5	Pass
802.11g	6	01	2412	16.4	≥ 0.5	Pass
802.11g	6	06	2437	16.4	≥ 0.5	Pass
802.11g	6	11	2462	15.8	≥ 0.5	Pass
802.11n-HT20	6.5	01	2412	17.6	≥ 0.5	Pass
802.11n-HT20	6.5	06	2437	17.6	≥ 0.5	Pass
802.11n-HT20	6.5	11	2462	16.4	≥ 0.5	Pass
Ant 1						
802.11b	1	01	2412	9.1	≥ 0.5	Pass
802.11b	1	06	2437	9.1	≥ 0.5	Pass
802.11b	1	11	2462	8.6	≥ 0.5	Pass
802.11g	6	01	2412	16.4	≥ 0.5	Pass
802.11g	6	06	2437	16.4	≥ 0.5	Pass
802.11g	6	11	2462	15.8	≥ 0.5	Pass
802.11n-HT20	6.5	01	2412	17.6	≥ 0.5	Pass
802.11n-HT20	6.5	06	2437	17.6	≥ 0.5	Pass
802.11n-HT20	6.5	11	2462	16.4	≥ 0.5	Pass
Ant 0 / Ant 0 + 1						
802.11n-HT20	13	01	2412	17.6	≥ 0.5	Pass
802.11n-HT20	13	06	2437	17.7	≥ 0.5	Pass
802.11n-HT20	13	11	2462	16.4	≥ 0.5	Pass
Ant 1 / Ant 0 + 1						
802.11n-HT20	13	01	2412	17.7	≥ 0.5	Pass
802.11n-HT20	13	06	2437	17.7	≥ 0.5	Pass
802.11n-HT20	13	11	2462	17.2	≥ 0.5	Pass

802.11b 6dB Bandwidth – Ant 0

Channel 01 (2412MHz)



Channel 06 (2437MHz)



Channel 11 (2462MHz)

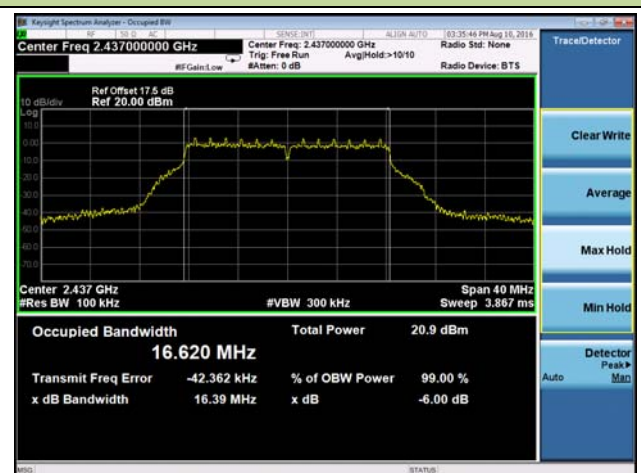


802.11g 6dB Bandwidth – Ant 0

Channel 01 (2412MHz)



Channel 06 (2437MHz)



Channel 11 (2462MHz)



802.11n-HT20 6dB Bandwidth – Ant 0

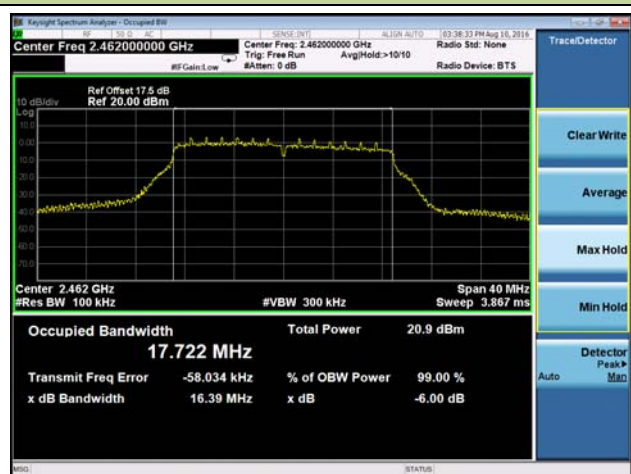
Channel 01 (2412MHz)



Channel 06 (2437MHz)



Channel 11 (2462MHz)



802.11b 6dB Bandwidth – Ant 1

Channel 01 (2412MHz)



Channel 06 (2437MHz)



Channel 11 (2462MHz)



802.11g 6dB Bandwidth – Ant 1

Channel 01 (2412MHz)



Channel 06 (2437MHz)



Channel 11 (2462MHz)



802.11n-HT20 6dB Bandwidth – Ant 1

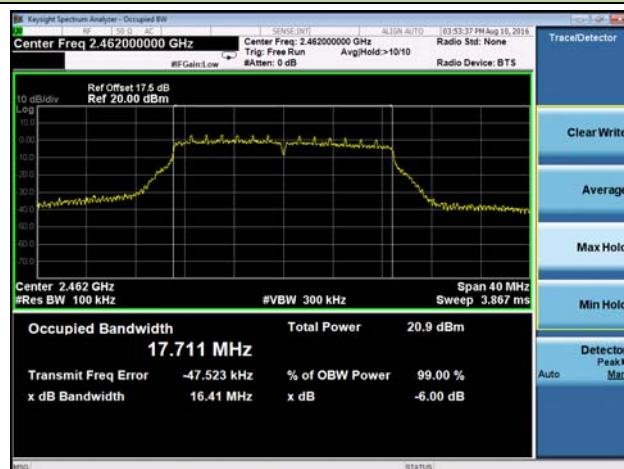
Channel 01 (2412MHz)



Channel 06 (2437MHz)

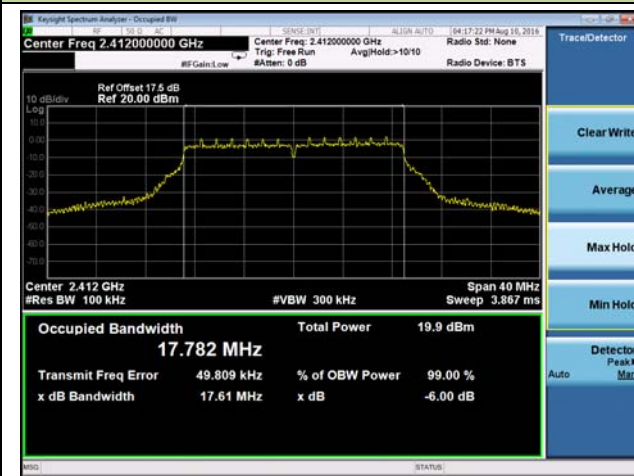


Channel 11 (2462MHz)



802.11n-HT20 6dB Bandwidth – Ant 0 / Ant 0 + 1

Channel 01 (2412MHz)



Channel 06 (2437MHz)

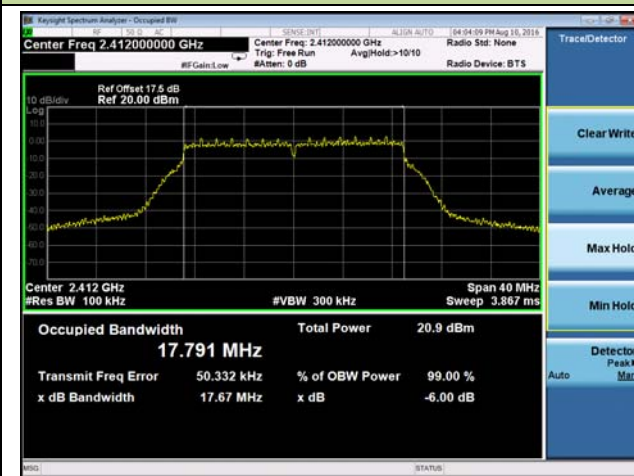


Channel 11 (2462MHz)



802.11n-HT20 6dB Bandwidth –Ant 1 / Ant 0 + 1

Channel 01 (2412MHz)



Channel 06 (2437MHz)



Channel 11 (2462MHz)



7.3. Output Power Measurement

7.3.1. Test Limit

The maximum output power shall be less 1 Watt (30dBm).

7.3.2. Test Procedure Used

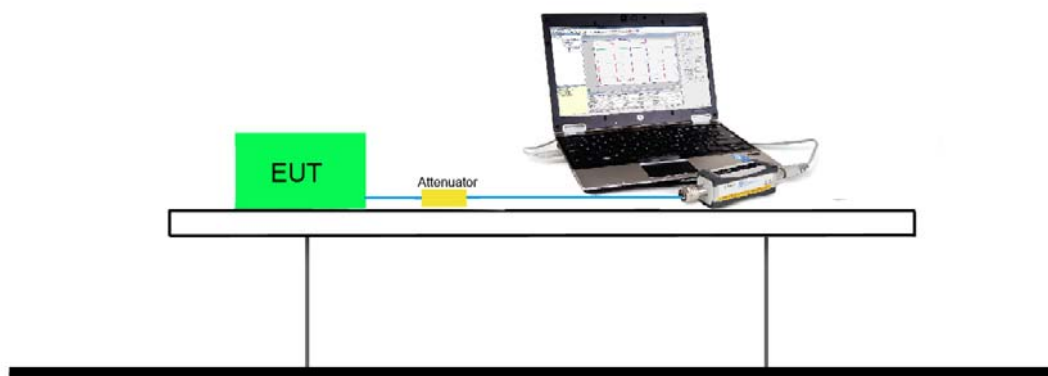
KDB 558074 D01v03r05 - Section 9.1.2 PKPM1 Peak Power Method (for signals with BW \leq 50MHz)

7.3.3. Test Setting

Method PKPM1 (Peak Power Measurement of Signals with DTS BW \leq 50MHz)

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.

7.3.4. Test Setup



7.3.5. Test Result of Output Power

Power output test was verified over all data rates of each mode shown as below, and then choose the maximum power output (yellow marker) for final test of each channel.

MCS Index for 802.11n	N _{TX}	Data Rate (Mbps)			
		802.11b	802.11g	20MHz Bandwidth	
				800ns GI	400ns GI
0	1	1	6	6.5	7.2
1	1	2	9	13.0	14.4
2	1	5.5	12	19.5	21.7
3	1	11	18	26.0	28.9
4	1	--	24	39.0	43.3
5	1	--	36	52.0	57.8
6	1	--	48	58.5	65.0
7	1	--	54	65.0	72.2
8	2	--	--	13.0	14.4
9	2	--	--	26.0	28.9
10	2	--	--	39.0	43.3
11	2	--	--	52.0	57.8
12	2	--	--	78.0	86.7
13	2	--	--	104.0	115.6
14	2	--	--	117.0	130.0
15	2	--	--	130.0	144.0

Output power at various data rates for Ant 1:

Test Mode	Bandwidth (MHz)	Channel No.	Frequency (MHz)	Data Rate (Mbps)	Average Power (dBm)
802.11b	20	6	2437	1	15.96
				5.5	15.12
				11	14.58
802.11g	20	6	2437	6	14.13
				24	13.68
				54	12.89
802.11n	20	6	2437	6.5	13.29
				7.2	13.14
				26.0	12.44
				28.9	12.11
				65.0	10.85
				72.2	10.35

Test Result of Peak Output Power

Test Mode	Data Rate (Mbps)	Channel No.	Freq. (MHz)	Ant 0 Peak Power (dBm)	Ant 1 Peak Power (dBm)	Total Peak Power (dBm)	Limit (dBm)	Result
1Tx - Ant 0								
11b	1	1	2412	19.23	--	19.23	≤ 30	Pass
11b	1	6	2437	19.27	--	19.27	≤ 30	Pass
11b	1	11	2462	20.07	--	20.07	≤ 30	Pass
11g	6	1	2412	21.09	--	21.09	≤ 30	Pass
11g	6	6	2437	21.13	--	21.13	≤ 30	Pass
11g	6	11	2462	21.84	--	21.84	≤ 30	Pass
11n-HT20	6.5	1	2412	20.03	--	20.03	≤ 30	Pass
11n-HT20	6.5	6	2437	20.12	--	20.12	≤ 30	Pass
11n-HT20	6.5	11	2462	21.20	--	21.20	≤ 30	Pass
1Tx - Ant 1								
11b	1	1	2412	--	18.93	18.93	≤ 30	Pass
11b	1	6	2437	--	19.71	19.71	≤ 30	Pass
11b	1	11	2462	--	19.17	19.17	≤ 30	Pass
11g	6	1	2412	--	21.92	21.92	≤ 30	Pass
11g	6	6	2437	--	22.11	22.11	≤ 30	Pass
11g	6	11	2462	--	21.66	21.66	≤ 30	Pass
11n-HT20	6.5	1	2412	--	20.90	20.90	≤ 30	Pass
11n-HT20	6.5	6	2437	--	21.25	21.25	≤ 30	Pass
11n-HT20	6.5	11	2462	--	21.14	21.14	≤ 30	Pass
2Tx - Ant 0 + 1								
11n-HT20	13	1	2412	21.21	21.14	24.19	≤ 30	Pass
11n-HT20	13	6	2437	20.15	21.91	24.13	≤ 30	Pass
11n-HT20	13	11	2462	20.71	21.01	23.87	≤ 30	Pass

Note: Total Peak Power (dBm) = $10 \cdot \log\{10^{(\text{Ant 0 Peak Power} / 10)} + 10^{(\text{Ant 1 Peak Power} / 10)}\}$ (dBm).

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

Test Mode	Data Rate (Mbps)	Channel No.	Freq. (MHz)	Ant 0 Average Power (dBm)	Ant 1 Average Power (dBm)	Total Average Power (dBm)	Limit (dBm)	Result
1Tx – Ant 0								
11b	1	1	2412	15.22	--	15.22	≤ 30	Pass
11b	1	6	2437	15.54	--	15.54	≤ 30	Pass
11b	1	11	2462	16.21	--	16.21	≤ 30	Pass
11g	6	1	2412	12.89	--	12.89	≤ 30	Pass
11g	6	6	2437	13.02	--	13.02	≤ 30	Pass
11g	6	11	2462	13.64	--	13.64	≤ 30	Pass
11n-HT20	6.5	1	2412	11.95	--	11.95	≤ 30	Pass
11n-HT20	6.5	6	2437	12.21	--	12.21	≤ 30	Pass
11n-HT20	6.5	11	2462	12.83	--	12.83	≤ 30	Pass
1Tx – Ant 1								
11b	1	1	2412	--	15.16	15.16	≤ 30	Pass
11b	1	6	2437	--	15.96	15.96	≤ 30	Pass
11b	1	11	2462	--	15.47	15.47	≤ 30	Pass
11g	6	1	2412	--	13.58	13.58	≤ 30	Pass
11g	6	6	2437	--	14.13	14.13	≤ 30	Pass
11g	6	11	2462	--	13.87	13.87	≤ 30	Pass
11n-HT20	6.5	1	2412	--	12.60	12.60	≤ 30	Pass
11n-HT20	6.5	6	2437	--	13.29	13.29	≤ 30	Pass
11n-HT20	6.5	11	2462	--	13.02	13.02	≤ 30	Pass
2Tx - Ant 0 + 1								
11n-HT20	13	1	2412	11.67	12.30	15.01	≤ 30	Pass
11n-HT20	13	6	2437	11.54	12.85	15.25	≤ 30	Pass
11n-HT20	13	11	2462	12.45	12.91	15.70	≤ 30	Pass

Note: Total Average Power (dBm) = $10 \cdot \log\{10^{(\text{Ant 0 Average Power} / 10)} + 10^{(\text{Ant 1 Average Power} / 10)}\}$ (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.

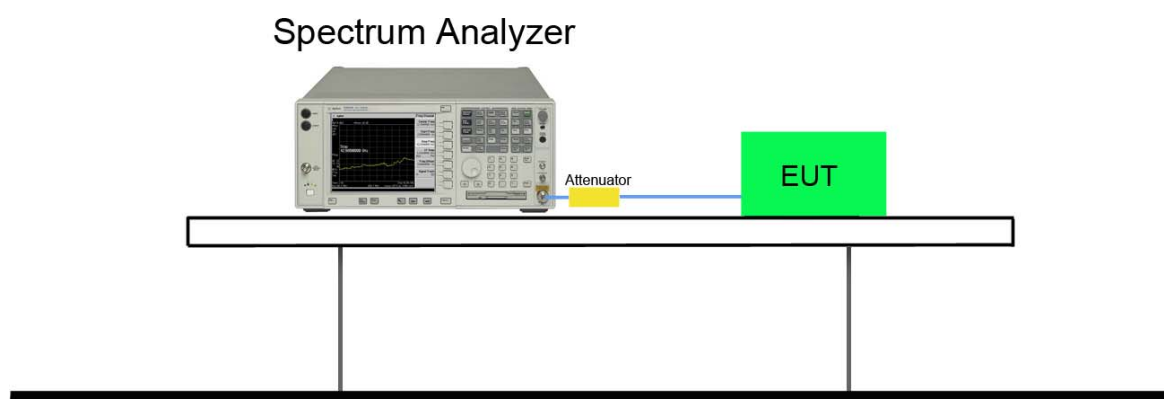
7.4.2. Test Procedure Used

KDB 558074 D01v03r05 - 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)	Ant 0 PSD (dBm / 3kHz)	Ant 1 PSD (dBm / 3kHz)	Total PSD (dBm / 3kHz)	Limit (dBm / 3kHz)	Result
1Tx - Ant 0								
11b	1	1	2412	-6.33	---	-6.33	≤ 8.0	Pass
11b	1	6	2437	-6.71	---	-6.71	≤ 8.0	Pass
11b	1	11	2462	-5.99	---	-5.99	≤ 8.0	Pass
11g	6	1	2412	-12.94	---	-12.94	≤ 8.0	Pass
11g	6	6	2437	-12.78	---	-12.78	≤ 8.0	Pass
11g	6	11	2462	-10.51	---	-10.51	≤ 8.0	Pass
11n-HT20	6.5	1	2412	-13.01	---	-13.01	≤ 8.0	Pass
11n-HT20	6.5	6	2437	-12.35	---	-12.35	≤ 8.0	Pass
11n-HT20	6.5	11	2462	-11.78	---	-11.78	≤ 8.0	Pass
1Tx - Ant1								
11b	1	1	2412	---	-6.75	-6.75	≤ 8.0	Pass
11b	1	6	2437	---	-6.48	-6.48	≤ 8.0	Pass
11b	1	11	2462	---	-7.00	-7.00	≤ 8.0	Pass
11g	6	1	2412	---	-11.36	-11.36	≤ 8.0	Pass
11g	6	6	2437	---	-10.95	-10.95	≤ 8.0	Pass
11g	6	11	2462	---	-10.75	-10.75	≤ 8.0	Pass
11n-HT20	6.5	1	2412	---	-10.04	-10.04	≤ 8.0	Pass
11n-HT20	6.5	6	2437	---	-11.43	-11.43	≤ 8.0	Pass
11n-HT20	6.5	11	2462	---	-12.49	-12.49	≤ 8.0	Pass
2Tx - Ant 0 + 1								
11n-HT20	6.5	1	2412	-12.29	-12.06	-9.16	≤ 8.0	Pass
11n-HT20	6.5	6	2437	-12.30	-11.49	-8.87	≤ 8.0	Pass
11n-HT20	6.5	11	2462	-12.14	-11.66	-8.88	≤ 8.0	Pass

Note: Total PSD (dBm/3kHz) = $10 \cdot \log\{10^{(\text{Ant 0 PSD}/10)} + 10^{(\text{Ant 1 PSD}/10)}\}$ (dBm/3kHz).

802.11b Peak PSD - Ant 0

Channel 01 (2412MHz)



Channel 06 (2437MHz)

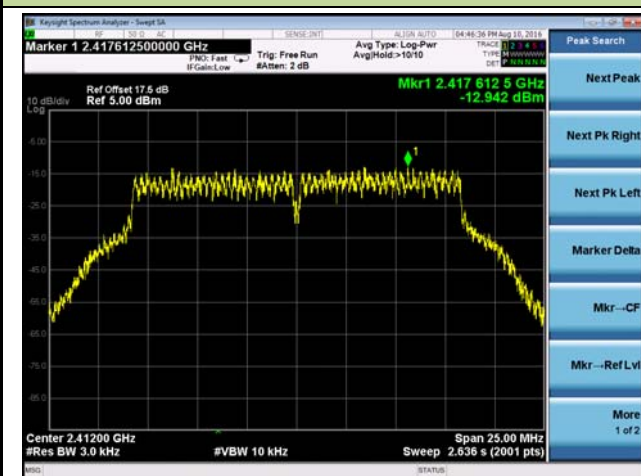


Channel 11 (2462MHz)

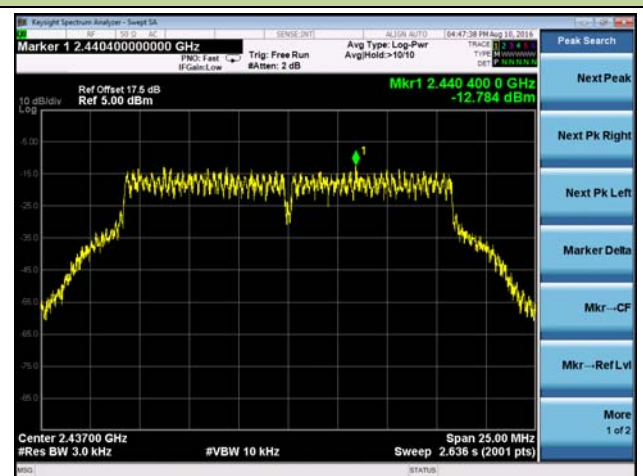


802.11g Peak PSD - Ant 0

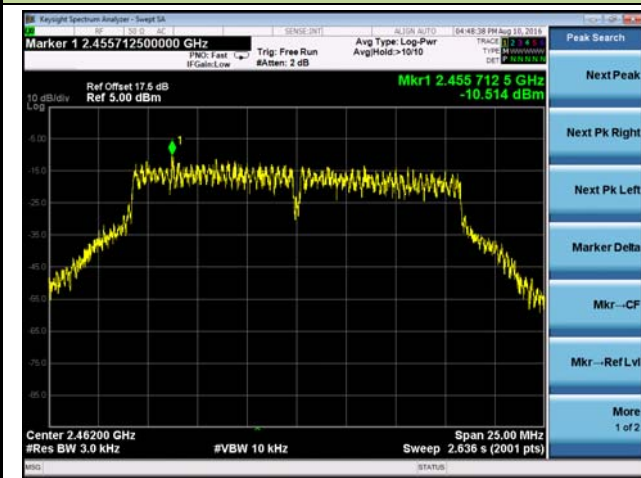
Channel 01 (2412MHz)



Channel 06 (2437MHz)

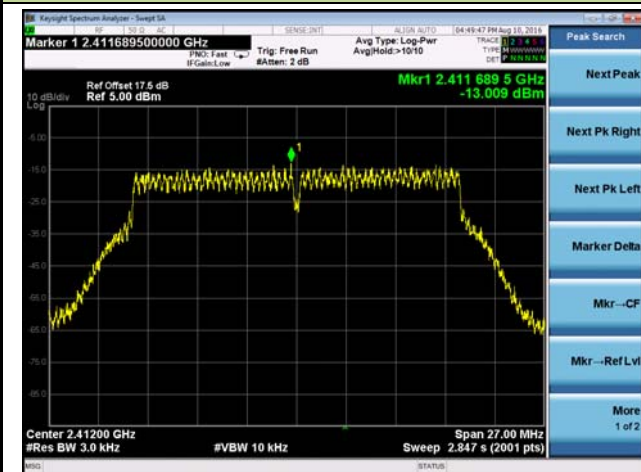


Channel 11 (2462MHz)

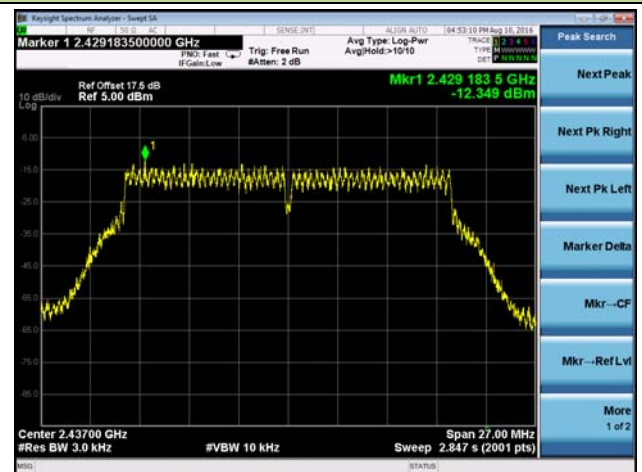


802.11n-HT20 Peak PSD - Ant 0

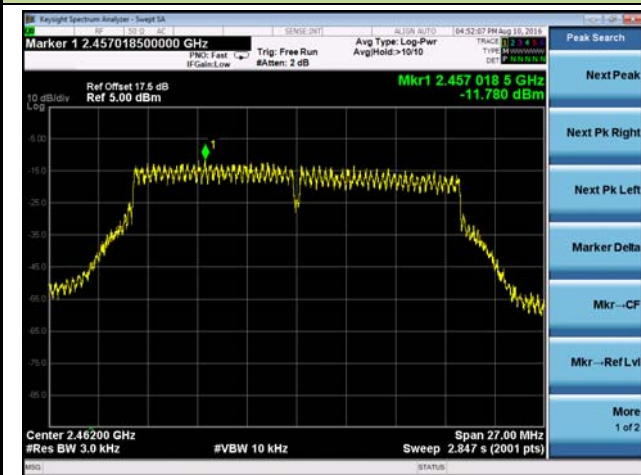
Channel 01 (2412MHz)



Channel 06 (2437MHz)



Channel 11 (2462MHz)



802.11b Peak PSD - Ant 1

Channel 01 (2412MHz)



Channel 06 (2437MHz)

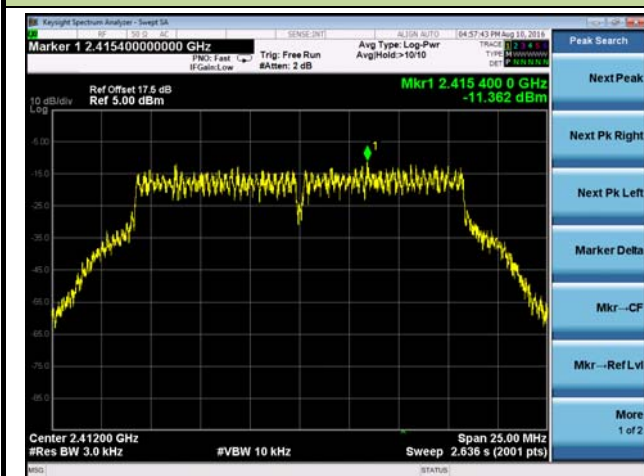


Channel 11 (2462MHz)

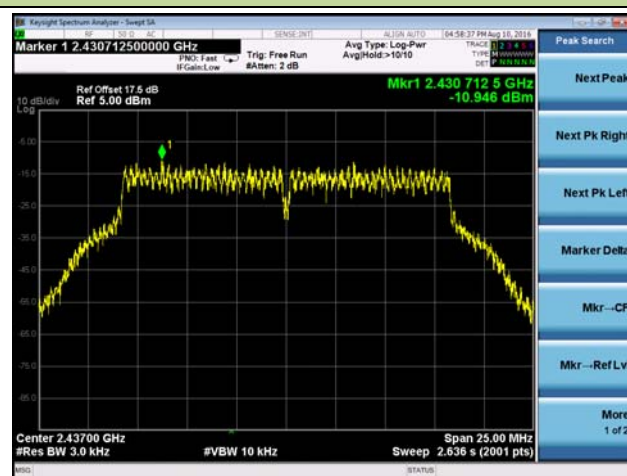


802.11g Peak PSD - Ant 1

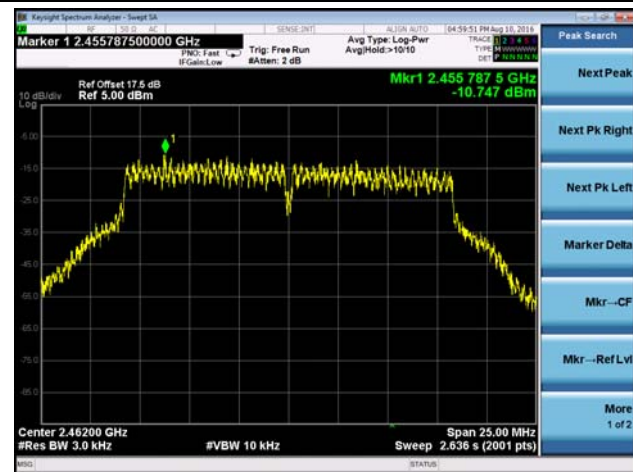
Channel 01 (2412MHz)



Channel 06 (2437MHz)

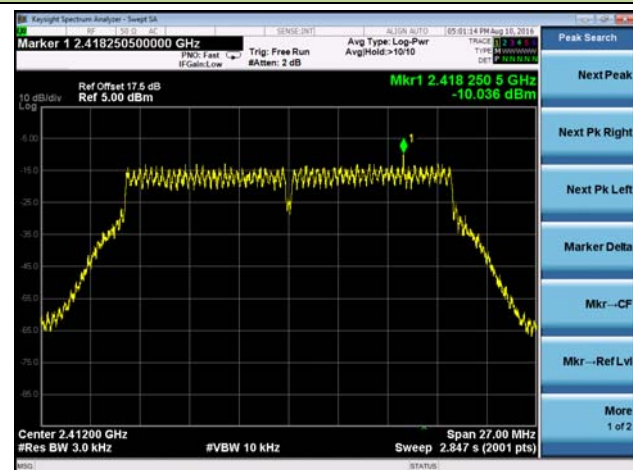


Channel 11 (2462MHz)

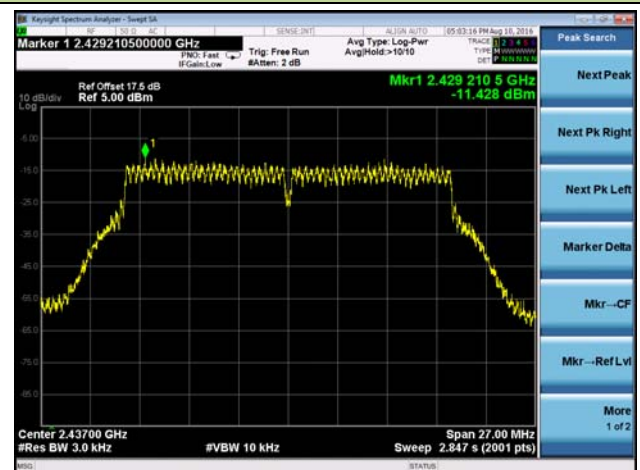


802.11n-HT20 Peak PSD - Ant 1

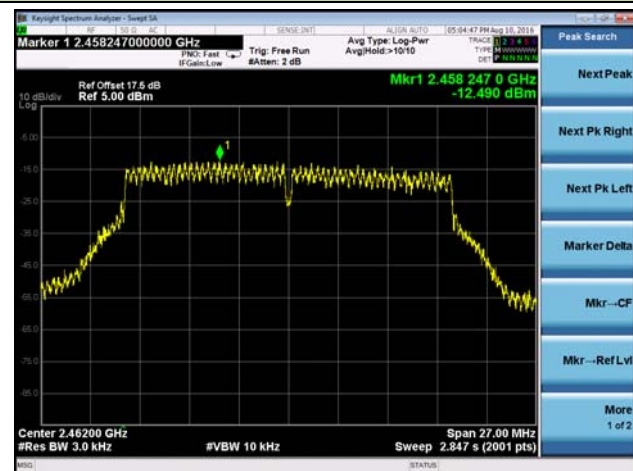
Channel 01 (2412MHz)



Channel 06 (2437MHz)

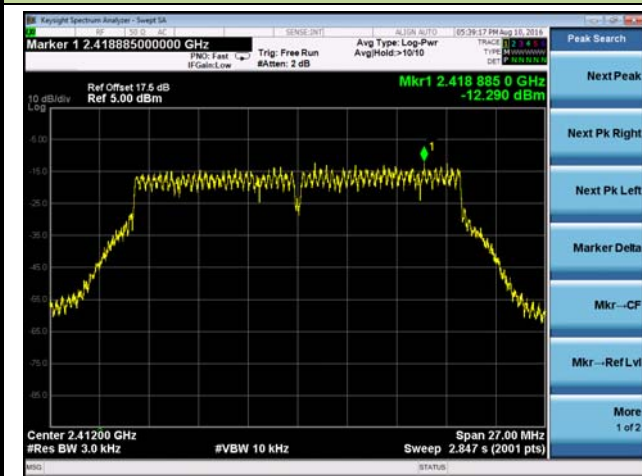


Channel 11 (2462MHz)

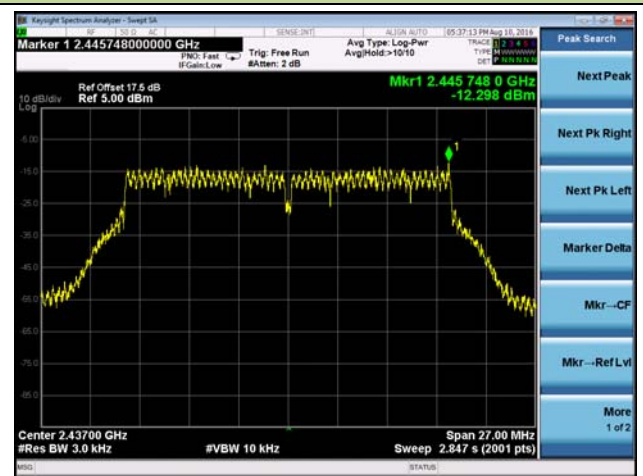


802.11n-HT20 Peak PSD - Ant 0 / Ant 0 + 1

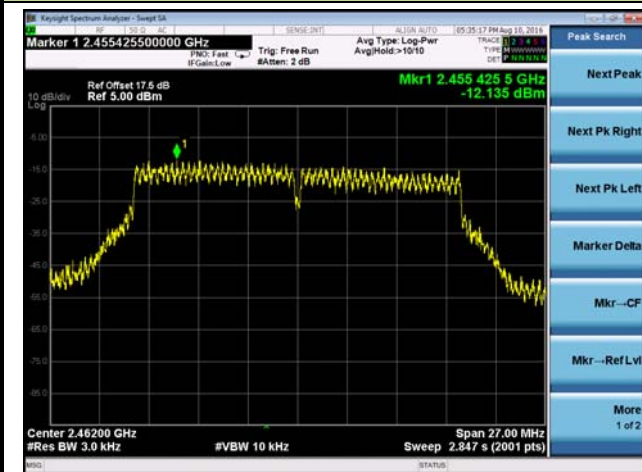
Channel 01 (2412MHz)



Channel 06 (2437MHz)

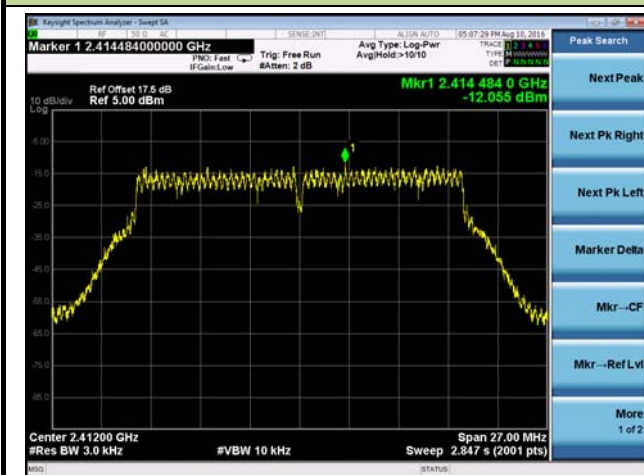


Channel 11 (2462MHz)

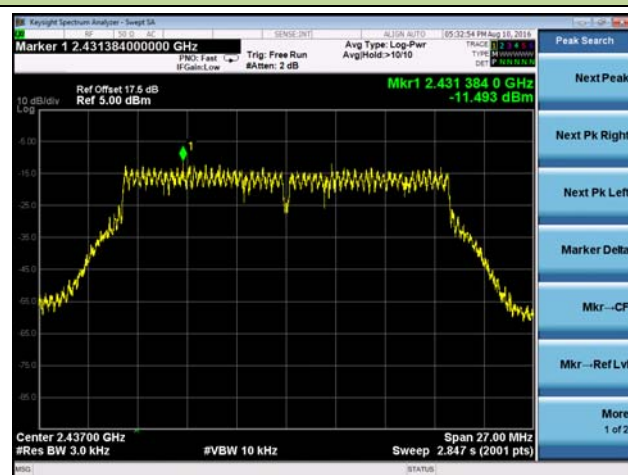


802.11n-HT20 Peak PSD - Ant 1 / Ant 0 + 1

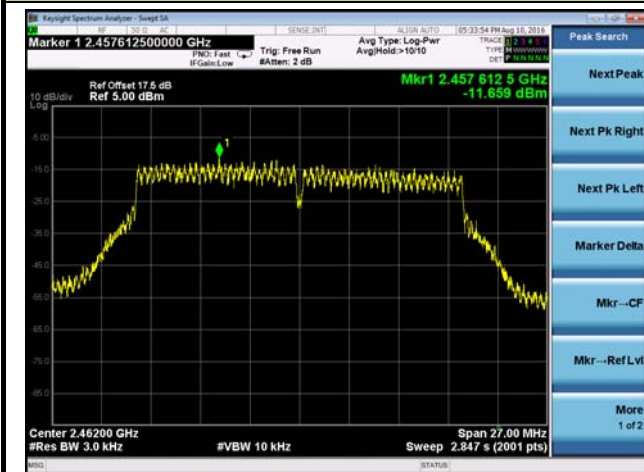
Channel 01 (2412MHz)



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 D01v03r05 - Section 11.2 & Section 11.3

7.5.3. Test Settling

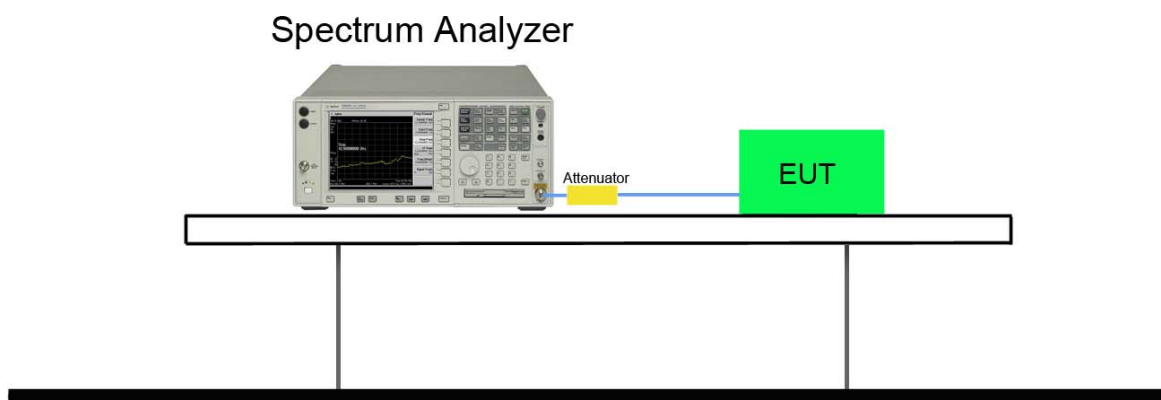
1. Reference level measurement

- (a) Set instrument center frequency to DTS channel center frequency
- (b) Set the span to ≥ 1.5 times the DTS bandwidth
- (c) Set the RBW = 100 kHz
- (d) Set the VBW $\geq 3 \times$ RBW
- (e) Detector = peak
- (f) Sweep time = auto couple
- (g) Trace mode = max hold
- (h) Allow trace to fully stabilize

2. Emission level measurement

- (a) Set the center frequency and span to encompass frequency range to be measured
- (b) RBW = 100kHz
- (c) VBW = 300kHz
- (d) Detector = Peak
- (e) Trace mode = max hold
- (f) Sweep time = auto couple
- (g) 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
1Tx - Ant 0					
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
802.11n-HT20	6.5	01	2412	20dBc	Pass
802.11n-HT20	6.5	06	2437	20dBc	Pass
802.11n-HT20	6.5	11	2462	20dBc	Pass
1Tx - Ant 1					
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	2422	20dBc	Pass
802.11g	6	06	2437	20dBc	Pass
802.11g	6	11	2452	20dBc	Pass
802.11n-HT20	6.5	01	2412	20dBc	Pass
802.11n-HT20	6.5	06	2437	20dBc	Pass
802.11n-HT20	6.5	11	2462	20dBc	Pass
2Tx - Ant 0 + 1					
802.11n-HT20	13	01	2412	20dBc	Pass
802.11n-HT20	13	06	2437	20dBc	Pass
802.11n-HT20	13	11	2462	20dBc	Pass

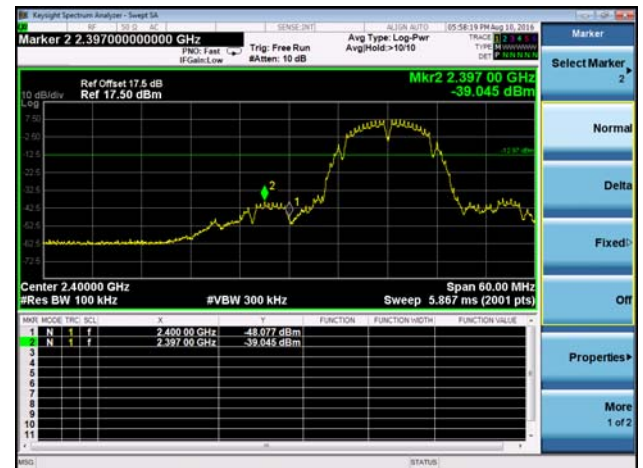
802.11b Out-of-Band Emissions - Ant 0

Channel 01 (2412MHz)

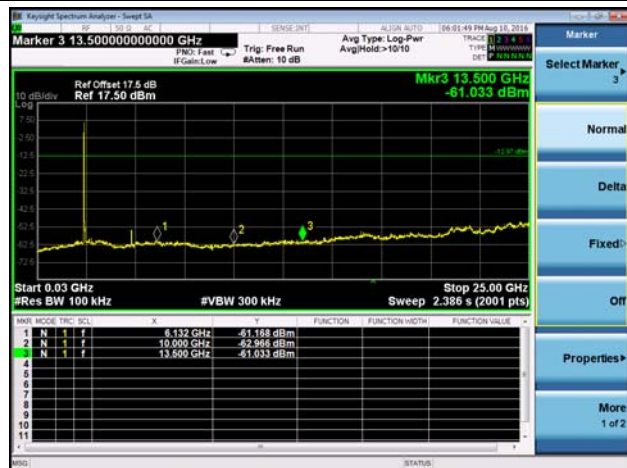
100kHz PSD Reference Level



Low Band Edge



Spurious Emission

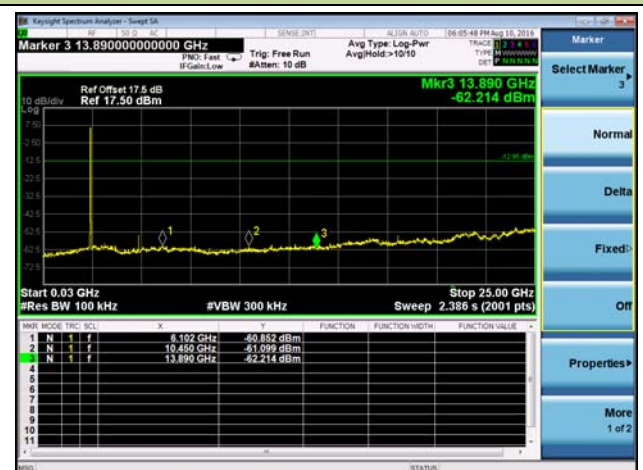


Channel 06 (2437MHz)

100kHz PSD Reference Level

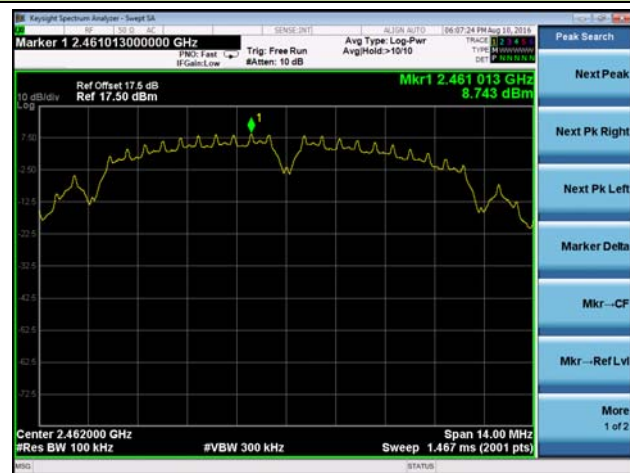


Spurious Emission

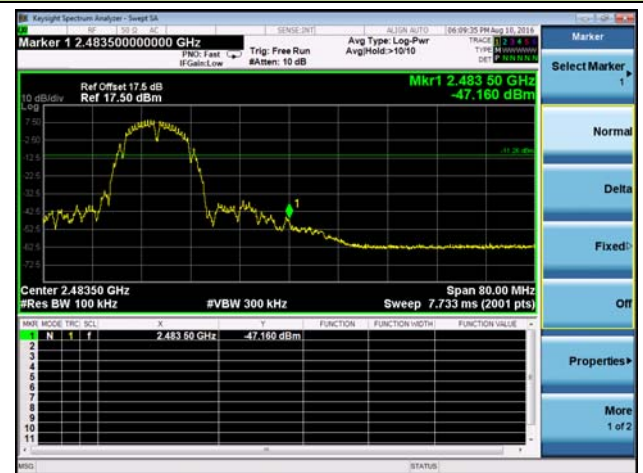


Channel 11 (2462MHz)

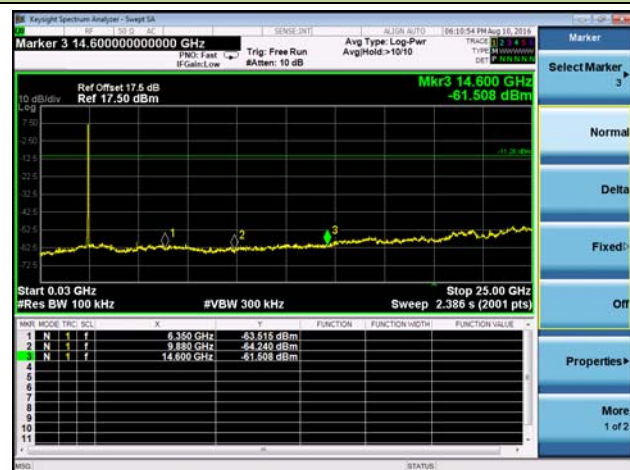
100kHz PSD Reference Level



High Band Edge



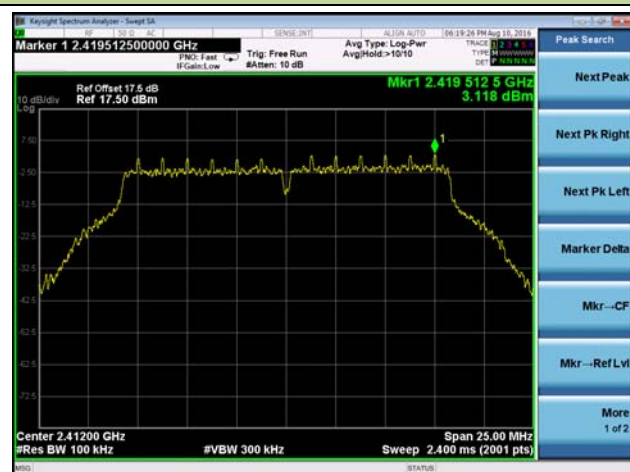
Spurious Emission



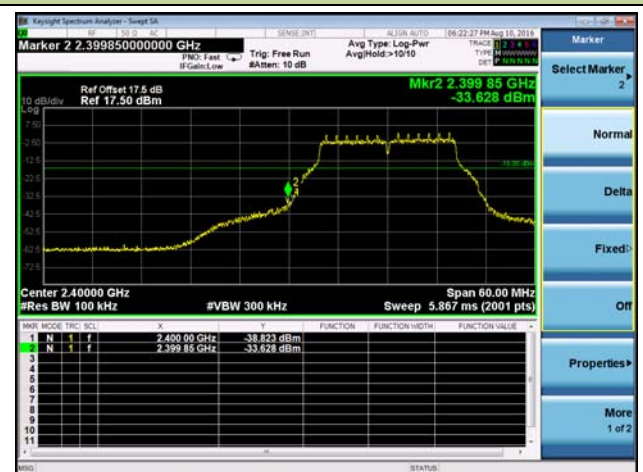
802.11g Out-of-Band Emissions - Ant 0

Channel 01 (2412MHz)

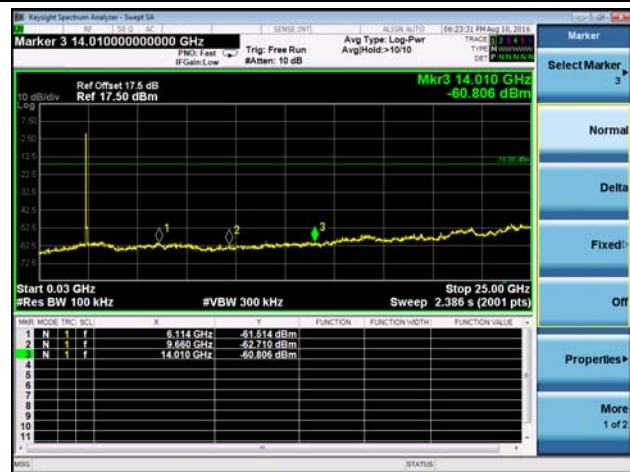
100kHz PSD Reference Level



Low Band Edge

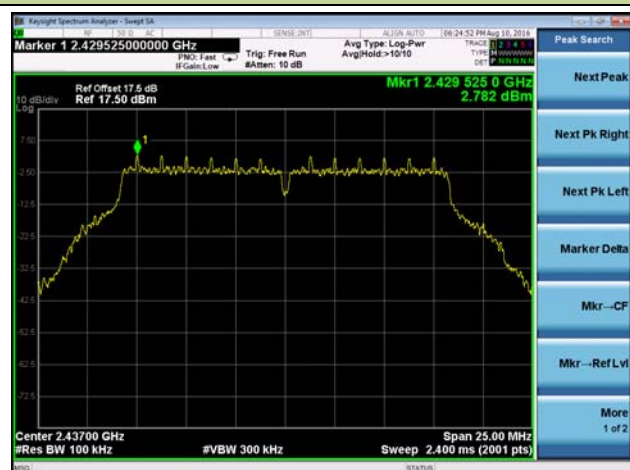


Spurious Emission

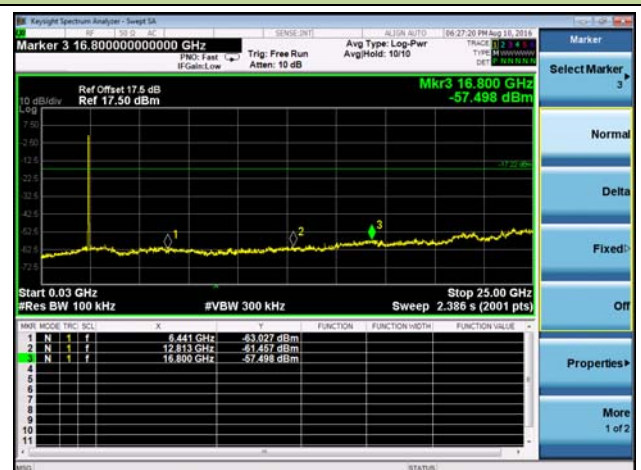


Channel 06 (2437MHz)

100kHz PSD Reference Level



Spurious Emission

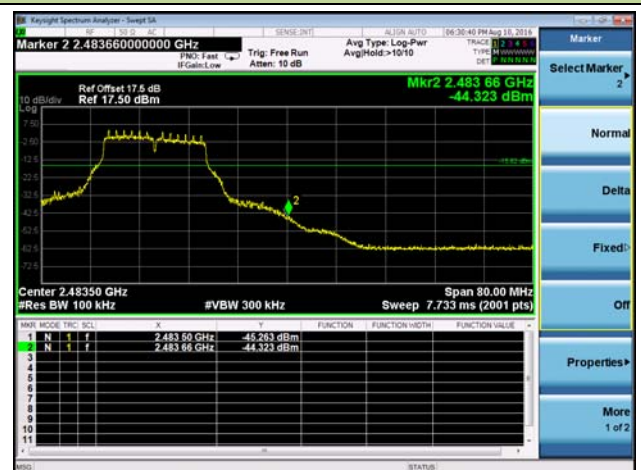


Channel 11 (2462MHz)

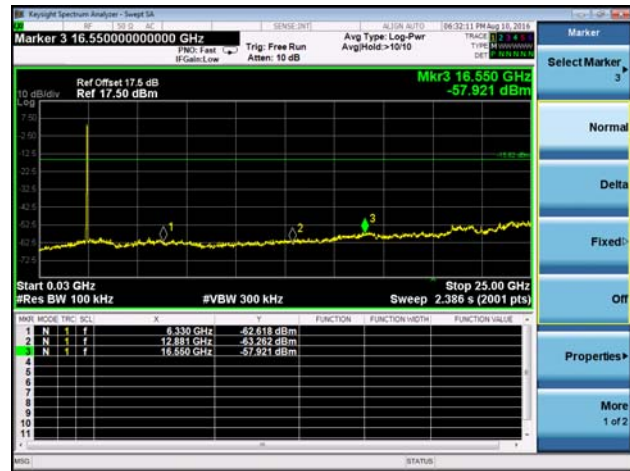
100kHz PSD Reference Level



High Band Edge



Spurious Emission



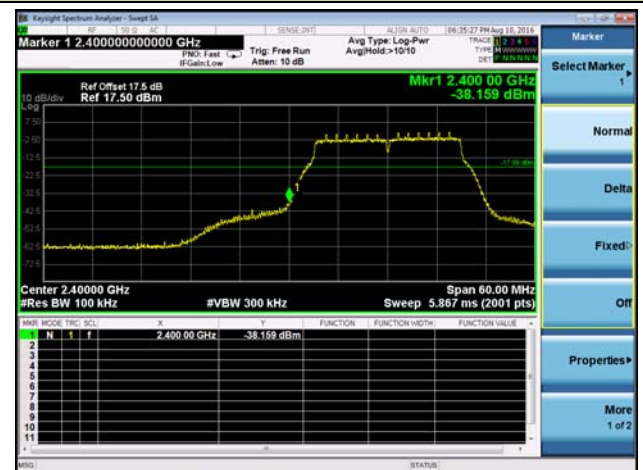
802.11n-HT20 Out-of-Band Emissions - Ant 0

Channel 01 (2412MHz)

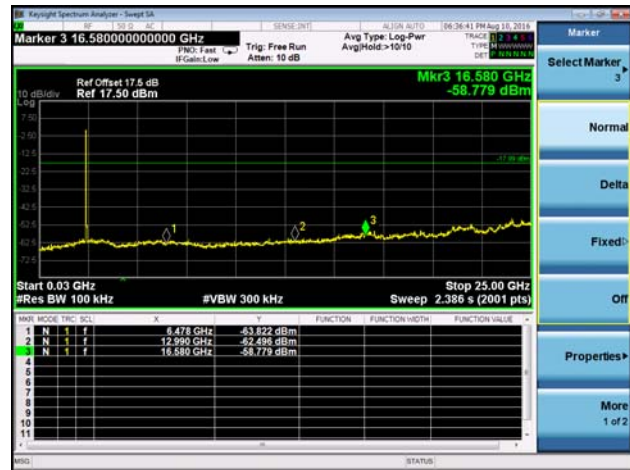
100kHz PSD Reference Level



Low Band Edge

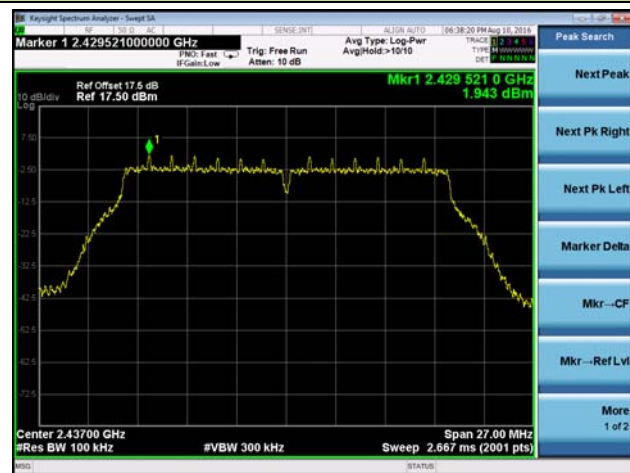


Spurious Emission

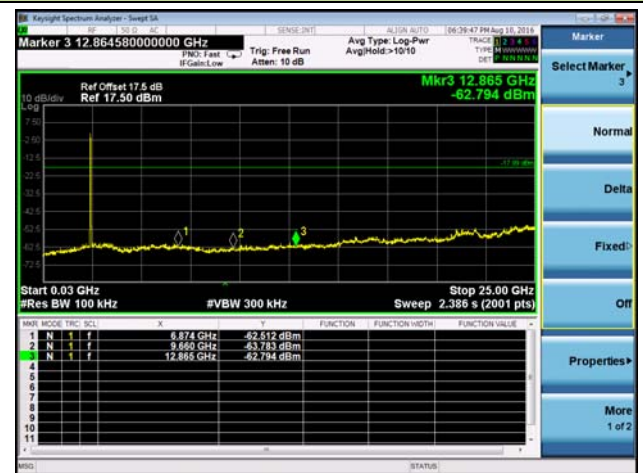


Channel 06 (2437MHz)

100kHz PSD Reference Level

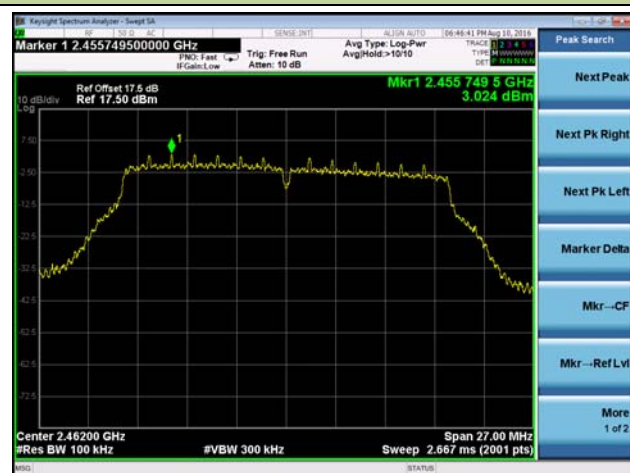


Spurious Emission

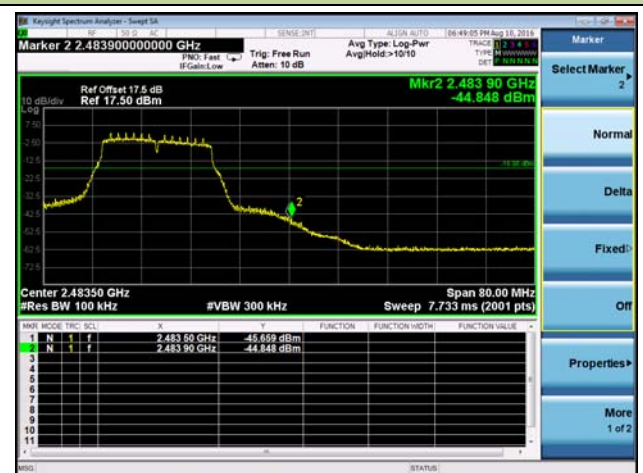


Channel 11 (2462MHz)

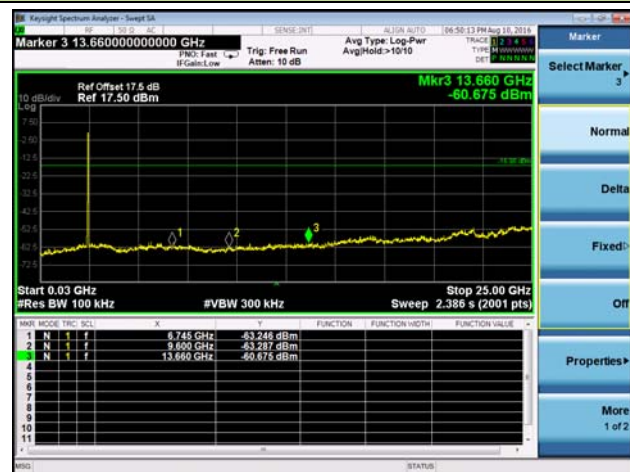
100kHz PSD Reference Level



High Band Edge



Spurious Emission



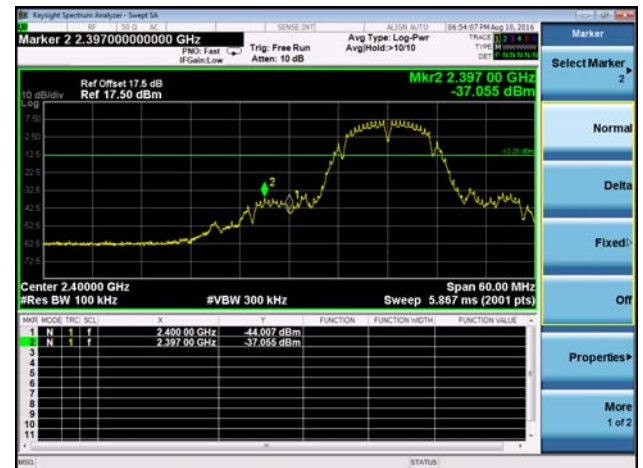
802.11b Out-of-Band Emissions - Ant 1

Channel 01 (2412MHz)

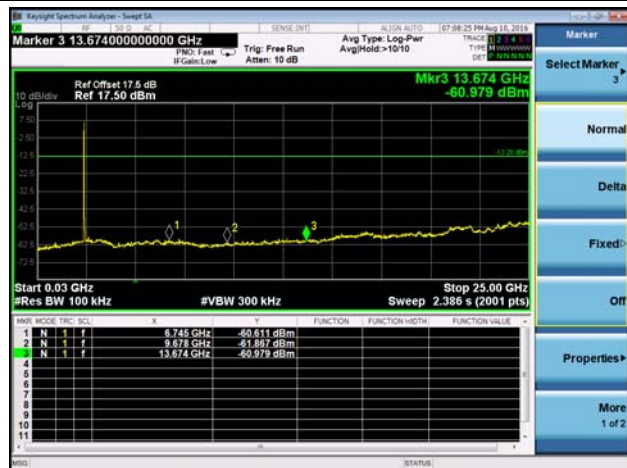
100kHz PSD Reference Level



Low Band Edge



Spurious Emission

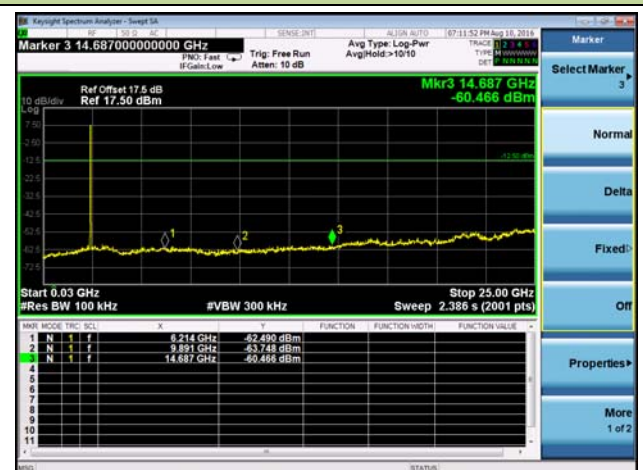


Channel 06 (2437MHz)

100kHz PSD Reference Level



Spurious Emission



Channel 11 (2462MHz)

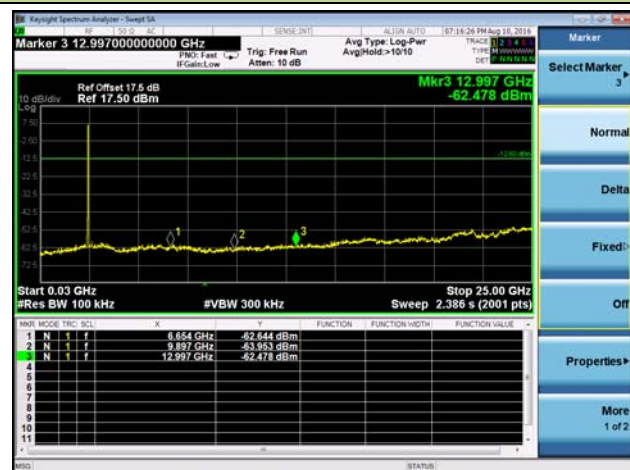
100kHz PSD Reference Level



High Band Edge



Spurious Emission



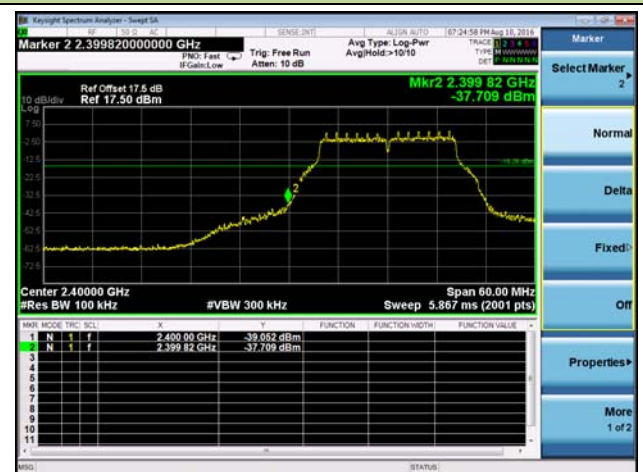
802.11g Out-of-Band Emissions - Ant 1

Channel 01 (2412MHz)

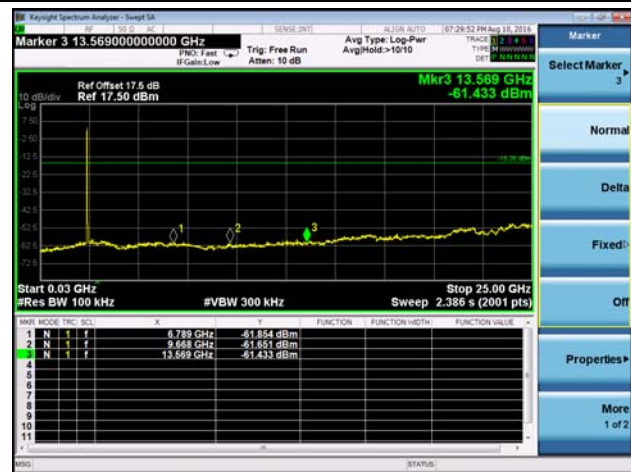
100kHz PSD Reference Level



Low Band Edge



Spurious Emission

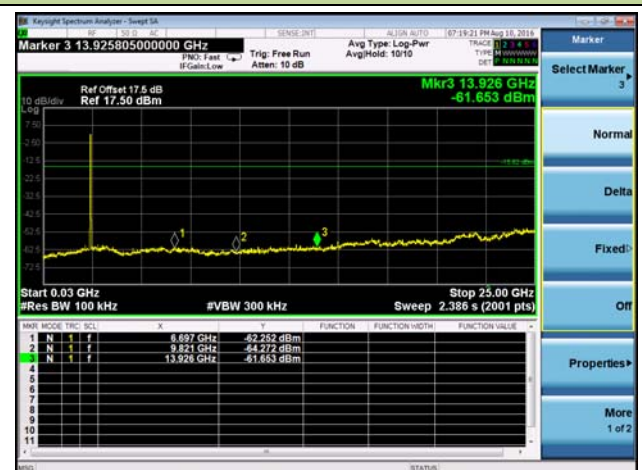


Channel 06 (2437MHz)

100kHz PSD Reference Level



Spurious Emission

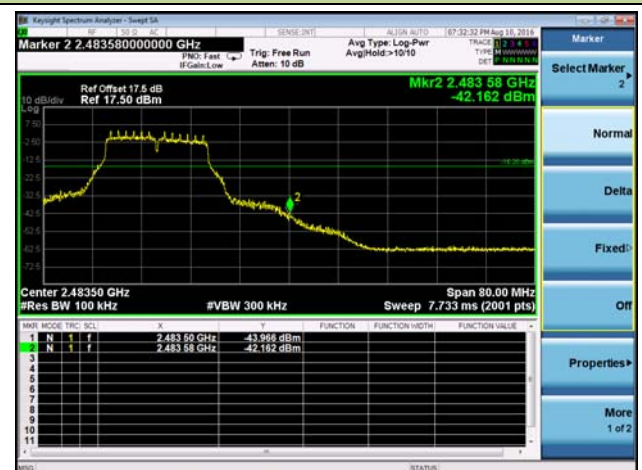


Channel 11 (2462MHz)

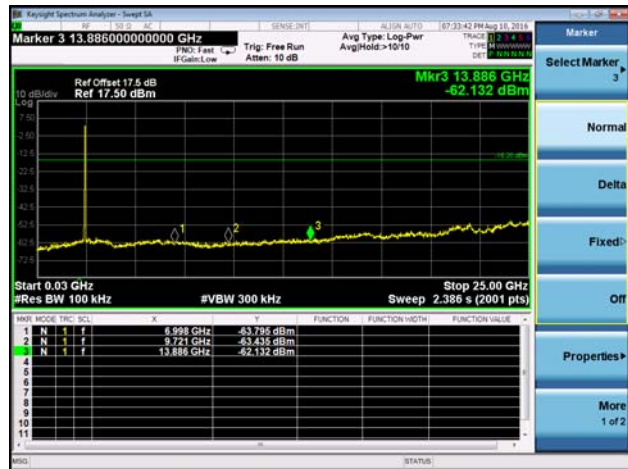
100kHz PSD Reference Level



High Band Edge



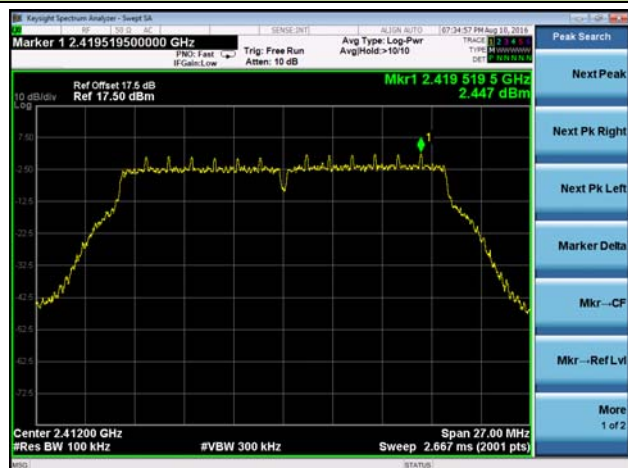
Spurious Emission



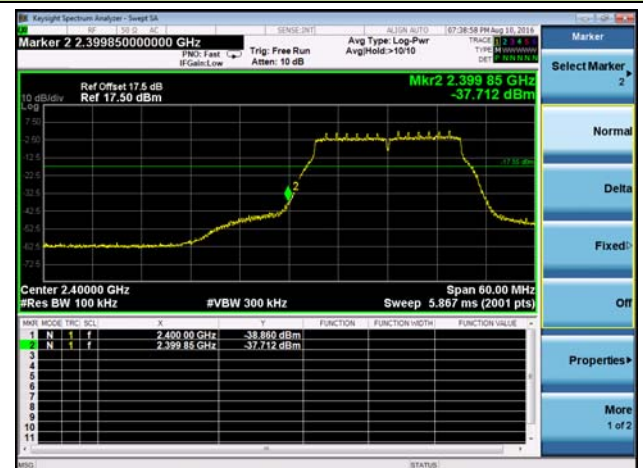
802.11n-HT20 Out-of-Band Emissions - Ant 1

Channel 01 (2412MHz)

100kHz PSD Reference Level



Low Band Edge

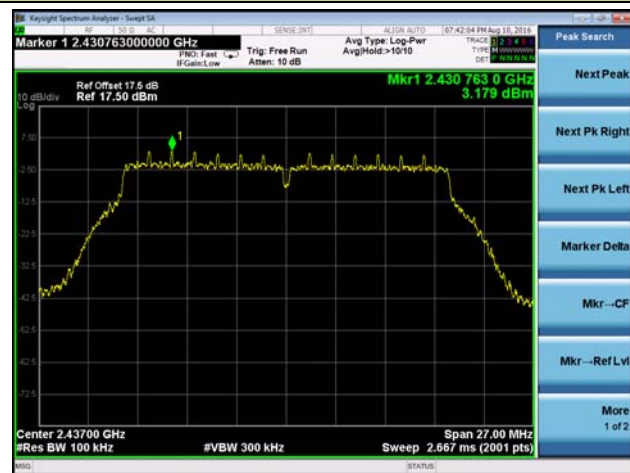


Spurious Emission

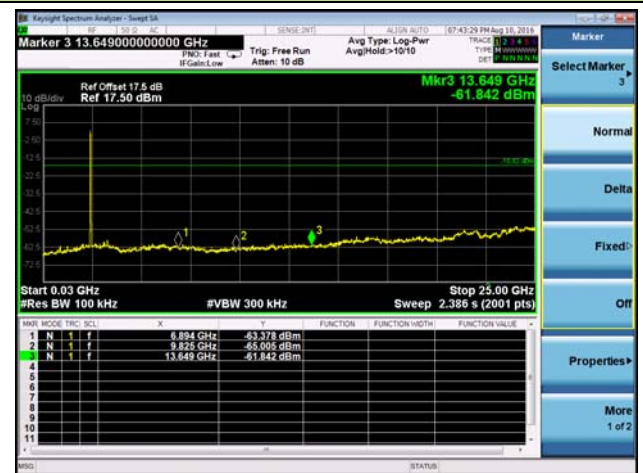


Channel 06 (2437MHz)

100kHz PSD Reference Level

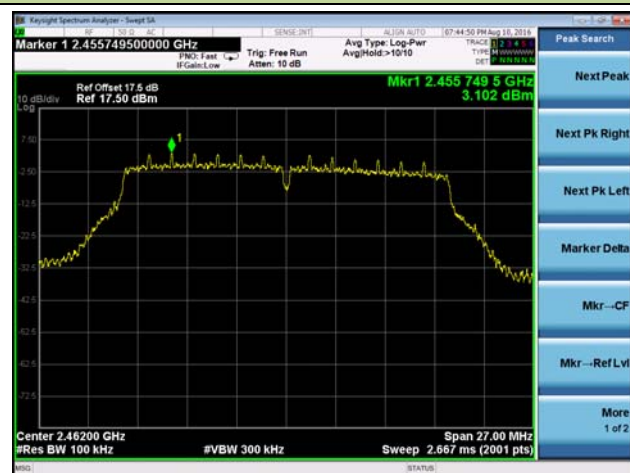


Spurious Emission



Channel 11 (2462MHz)

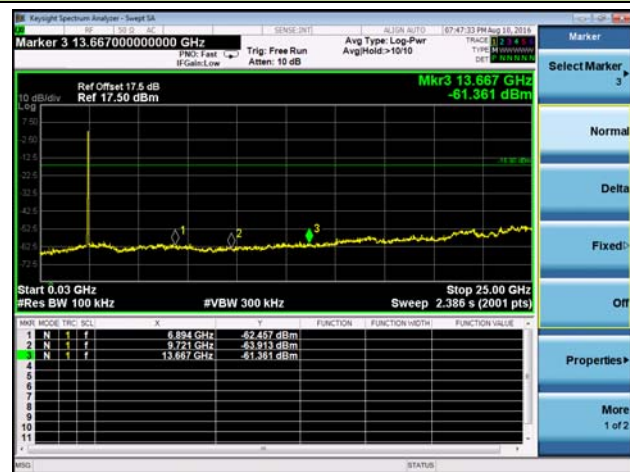
100kHz PSD Reference Level



High Band Edge



Spurious Emission



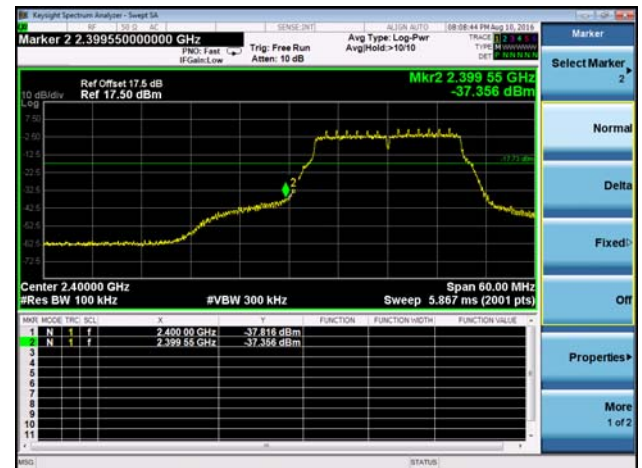
802.11n-HT20 Out-of-Band Emissions - Ant 0 / Ant 0 + 1

Channel 01 (2412MHz)

100kHz PSD Reference Level



Low Band Edge

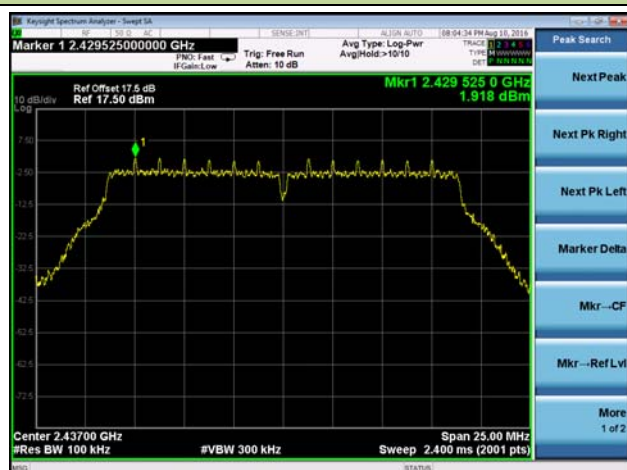


Spurious Emission

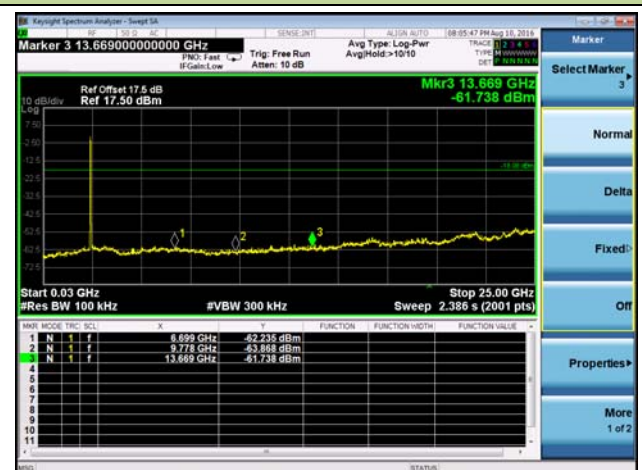


Channel 06 (2437MHz)

100kHz PSD Reference Level



Spurious Emission

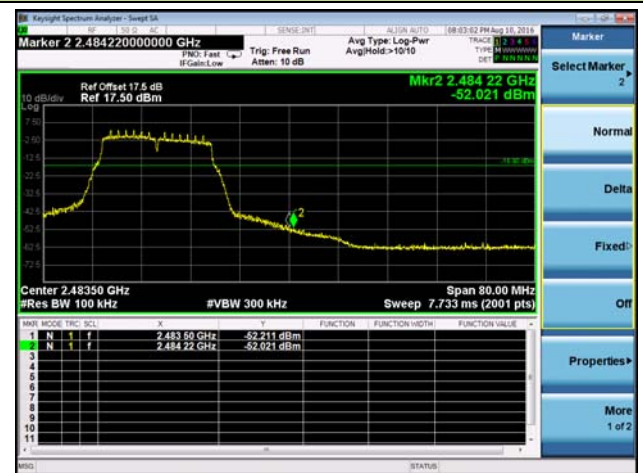


Channel 11 (2462MHz)

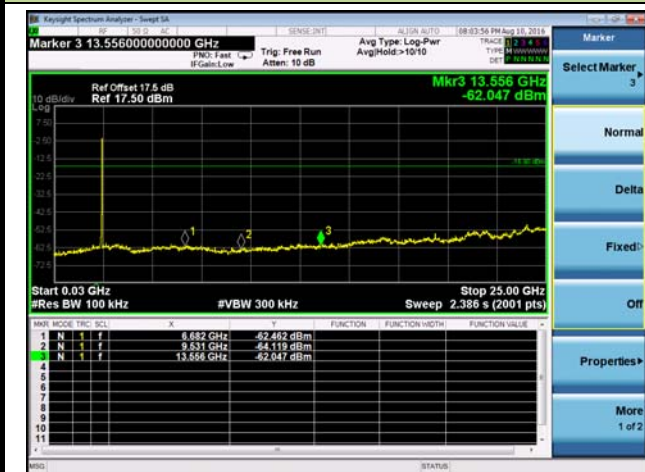
100kHz PSD Reference Level



High Band Edge



Spurious Emission



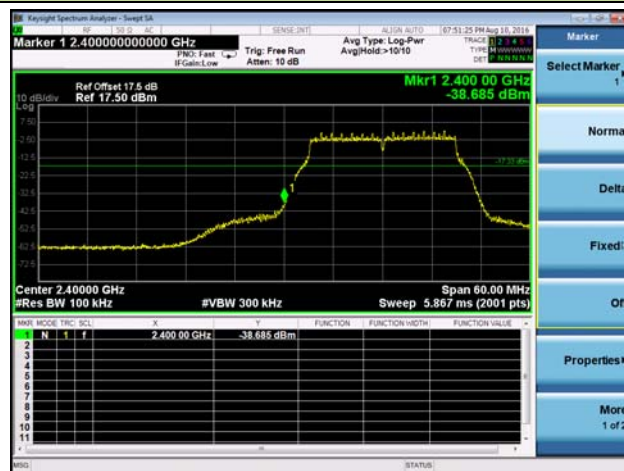
802.11n-HT20 Out-of-Band Emissions - Ant 1 / Ant 0 + 1

Channel 01 (2412MHz)

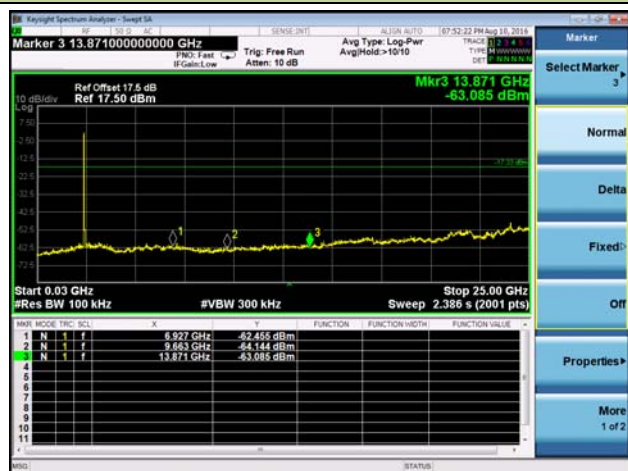
100kHz PSD Reference Level



Low Band Edge



Spurious Emission

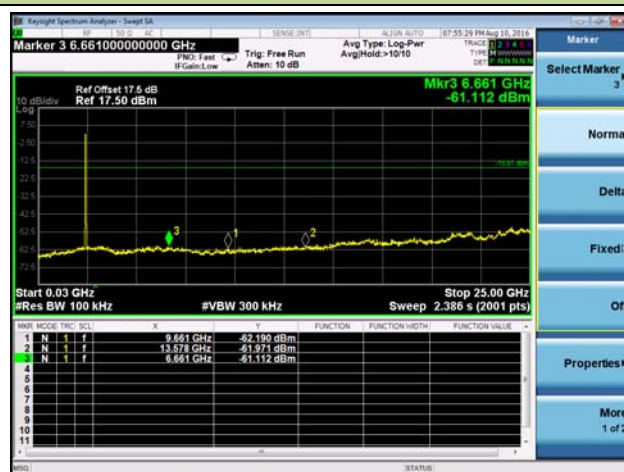


Channel 06 (2437MHz)

100kHz PSD Reference Level



Spurious Emission



Channel 11 (2462MHz)

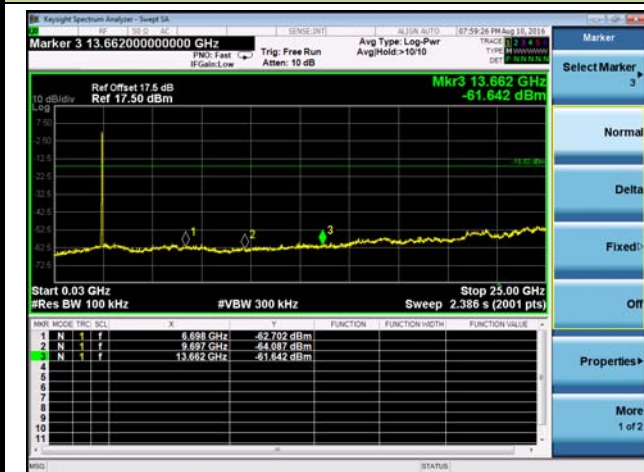
100kHz PSD Reference Level



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 [V/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 D01v03r05 – Section 12.2.3 (quasi-peak measurements)

KDB 558074 D01v03r05 – Section 12.2.4 (peak power measurements)

KDB 558074 D01v03r05 – Section 12.2.5 (average power measurements)

7.6.3. Test Setting

Peak Field Strength Measurements per Section 12.2.4 of KDB 558074 D01v03r05

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = as specified in Table 1
3. VBW = 3MHz
4. Detector = peak
5. Sweep time = auto couple

6. Trace mode = max hold

7. Trace was allowed to stabilize

Table 1 - RBW as a function of frequency

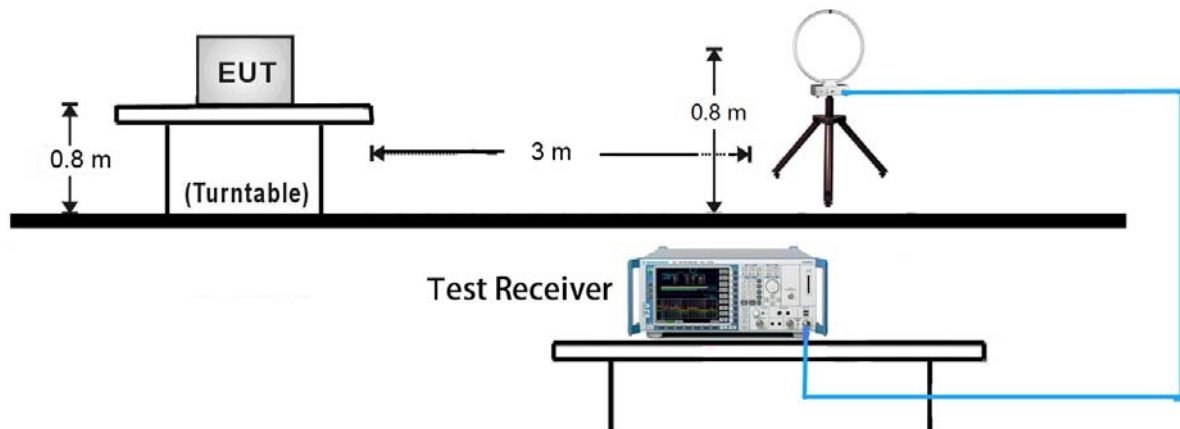
Frequency	RBW
9 ~ 150 kHz	200 ~ 300 Hz
0.15 ~ 30 MHz	9 ~ 10 kHz
30 ~ 1000 MHz	100 ~ 120 kHz
> 1000 MHz	1 MHz

Average Field Strength Measurements per Section 12.2.5.3 of KDB 558074 D01v03r05

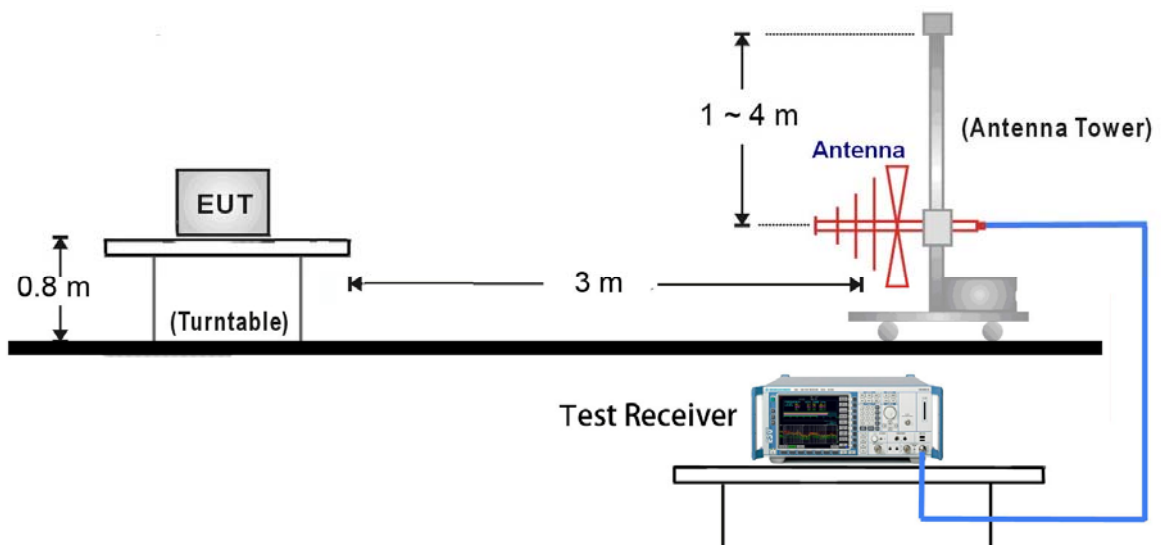
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW $\geq 1/T$
4. De As an alternative, the instrument may be set to linear detector mode. Ensure that video filtering is applied in linear voltage domain (rather than in a log or dB domain). 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
5. Detector = Peak
6. Sweep time = auto
7. Trace mode = max hold
8. Allow max hold to run for at least 50 times (1/duty cycle) traces

7.6.4. Test Setup

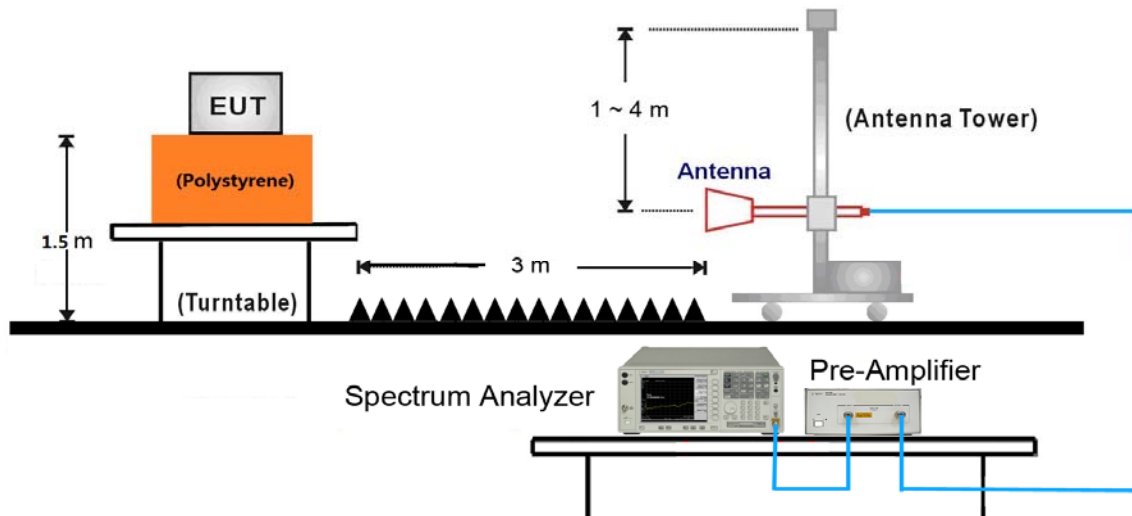
9kHz ~ 30MHz Test Setup:



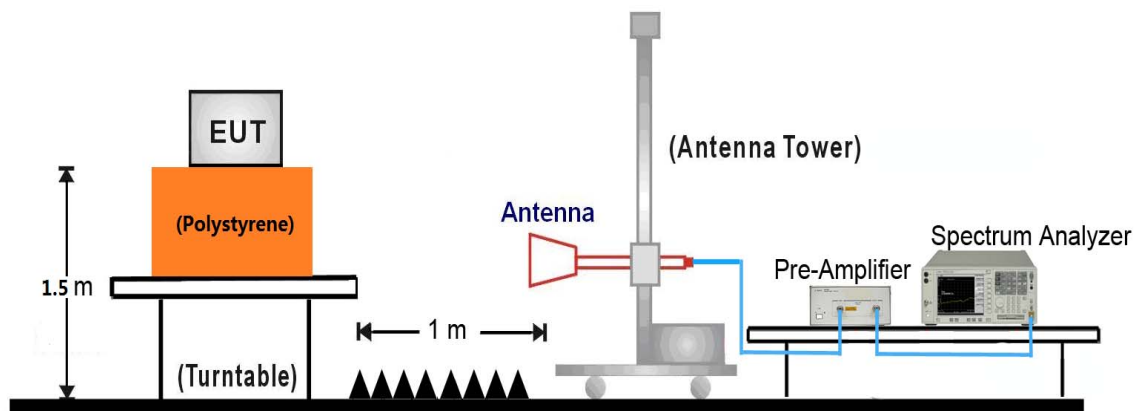
30MHz ~ 1GHz Test Setup:



1GHz ~ 18GHz Test Setup:



18GHz ~25GHz Test Setup:



7.6.5. Test Result

Test Mode:	802.11b - Ant 0	Test Site:	AC1
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
	3856.0	37.4	0.1	37.5	74.0	-36.5	Peak	Horizontal
	4842.0	35.9	2.7	38.6	74.0	-35.4	Peak	Horizontal
*	7239.0	40.3	7.8	48.1	81.0	-32.9	Peak	Horizontal
*	10069.5	35.1	11.5	46.6	81.0	-34.4	Peak	Horizontal
	3822.0	37.4	0.1	37.5	74.0	-36.5	Peak	Vertical
	4927.0	35.8	2.8	38.6	74.0	-35.4	Peak	Vertical
*	7239.0	38.2	7.8	46.0	81.0	-35.0	Peak	Vertical
*	10052.5	34.6	11.5	46.1	81.0	-34.9	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (101.0dBμV/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 - Ant 0	Test Site:	AC1
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
	3813.5	37.1	0.1	37.2	74.0	-36.8	Peak	Horizontal
	7307.0	38.5	8.0	46.5	74.0	-27.5	Peak	Horizontal
*	8650.0	37.3	8.8	46.1	83.4	-37.3	Peak	Horizontal
*	10171.5	35.9	11.7	47.6	83.4	-35.8	Peak	Horizontal
	4782.5	35.7	2.7	38.4	74.0	-35.6	Peak	Vertical
	7307.0	38.8	8.0	46.8	74.0	-27.2	Peak	Vertical
*	8565.0	36.6	8.7	45.3	83.4	-38.1	Peak	Vertical
*	10120.5	35.1	11.6	46.7	83.4	-36.7	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (103.4dBμV/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 - Ant 0	Test Site:	AC1
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
	4816.5	36.6	2.7	39.3	74.0	-34.7	Peak	Horizontal
	7383.5	42.2	7.9	50.1	74.0	-23.9	Peak	Horizontal
*	8650.0	37.0	8.8	45.8	82.9	-37.1	Peak	Horizontal
*	10188.5	35.3	11.8	47.1	82.9	-35.8	Peak	Horizontal
	3890.0	38.0	0.2	38.2	74.0	-35.8	Peak	Vertical
	7383.5	37.8	7.9	45.7	74.0	-28.3	Peak	Vertical
*	8633.0	37.6	8.8	46.4	82.9	-36.5	Peak	Vertical
*	10180.0	35.3	11.7	47.0	82.9	-35.9	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (102.9dBμV/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:	802.11g - Ant 0	Test Site:	AC1
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
	3847.5	36.9	0.1	37.0	74.0	-37.0	Peak	Horizontal
	4791.0	36.4	2.7	39.1	74.0	-34.9	Peak	Horizontal
*	6576.0	35.4	6.0	41.4	81.5	-40.1	Peak	Horizontal
*	10052.5	34.4	11.5	45.9	81.5	-35.6	Peak	Horizontal
	3847.5	36.9	0.1	37.0	74.0	-37.0	Peak	Vertical
	4850.5	36.1	2.7	38.8	74.0	-35.2	Peak	Vertical
*	7188.0	36.9	7.8	44.7	81.5	-36.8	Peak	Vertical
*	10018.5	35.0	11.4	46.4	81.5	-35.1	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (101.5dBμV/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:	802.11g - Ant 0	Test Site:	AC1
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	37.2	0.1	37.3	74.0	-36.7	Peak	Horizontal
	4910.0	35.6	2.7	38.3	74.0	-35.7	Peak	Horizontal
*	8658.5	37.0	8.8	45.8	84.3	-38.5	Peak	Horizontal
*	10095.0	35.2	11.6	46.8	84.3	-37.5	Peak	Horizontal
	3728.5	38.1	0.5	38.6	74.0	-35.4	Peak	Vertical
	4791.0	36.5	2.7	39.2	74.0	-34.8	Peak	Vertical
*	7137.0	36.3	7.7	44.0	84.3	-40.3	Peak	Vertical
*	10112.0	36.0	11.6	47.6	84.3	-36.7	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (104.3dBμV/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:	802.11g - Ant 0	Test Site:	AC1
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
	3924.0	36.6	0.3	36.9	74.0	-37.1	Peak	Horizontal
	7383.5	38.7	7.9	46.6	74.0	-27.4	Peak	Horizontal
*	8845.5	36.8	9.1	45.9	83.5	-37.6	Peak	Horizontal
*	10112.0	35.4	11.6	47.0	83.5	-36.5	Peak	Horizontal
	3890.0	36.9	0.2	37.1	74.0	-36.9	Peak	Vertical
	4952.5	36.4	2.9	39.3	74.0	-34.7	Peak	Vertical
*	7800.0	36.9	8.4	45.3	83.5	-38.2	Peak	Vertical
*	10154.5	35.4	11.6	47.0	83.5	-36.5	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (103.5dBμV/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:	802.11n-HT20 - Ant 0	Test Site:	AC1
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
	3856.0	37.6	0.1	37.7	74.0	-36.3	Peak	Horizontal
	4774.0	37.1	2.6	39.7	74.0	-34.3	Peak	Horizontal
*	7222.0	36.7	7.8	44.5	80.8	-36.3	Peak	Horizontal
*	10027.0	35.0	11.5	46.5	80.8	-34.3	Peak	Horizontal
	3788.0	37.8	0.1	37.9	74.0	-36.1	Peak	Vertical
	4842.0	35.8	2.7	38.5	74.0	-35.5	Peak	Vertical
*	7137.0	36.7	7.7	44.4	80.8	-36.4	Peak	Vertical
*	10171.5	34.8	11.7	46.5	80.8	-34.3	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (100.8dBμV/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:	802.11n-HT20 - Ant 0	Test Site:	AC1
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
	3881.5	37.2	0.1	37.3	74.0	-36.7	Peak	Horizontal
	4723.0	36.8	2.4	39.2	74.0	-34.8	Peak	Horizontal
*	6457.0	35.3	5.8	41.1	84.2	-43.1	Peak	Horizontal
*	9993.0	35.2	11.4	46.6	84.2	-37.6	Peak	Horizontal
	3796.5	37.4	0.2	37.6	74.0	-36.4	Peak	Vertical
	4842.0	36.6	2.7	39.3	74.0	-34.7	Peak	Vertical
*	6516.5	35.7	6.0	41.7	84.2	-42.5	Peak	Vertical
*	10112.0	35.4	11.6	47.0	84.2	-37.2	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (104.2dBμV/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:	802.11n-HT20 - Ant 0	Test Site:	AC1
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
	4740.0	36.3	2.5	38.8	74.0	-35.2	Peak	Horizontal
	7383.5	38.1	7.9	46.0	74.0	-28.0	Peak	Horizontal
*	8735.0	36.7	8.9	45.6	83.0	-37.7	Peak	Horizontal
*	10078.0	33.6	11.5	45.1	83.0	-38.2	Peak	Horizontal
	4833.5	36.4	2.7	39.1	74.0	-34.9	Peak	Vertical
	7400.5	36.9	7.9	44.8	74.0	-29.2	Peak	Vertical
*	8667.0	36.4	8.9	45.3	83.0	-38.0	Peak	Vertical
*	10035.5	34.4	11.5	45.9	83.0	-37.4	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (103.0dBμV/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 - Ant 1	Test Site:	AC1
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
	4825.0	36.6	2.7	39.3	74.0	-34.7	Peak	Horizontal
	7239.0	37.5	7.8	45.3	74.0	-28.7	Peak	Horizontal
*	8650.0	37.1	8.8	45.9	74.0	-28.1	Peak	Horizontal
*	10171.5	35.7	11.7	47.4	74.0	-26.6	Peak	Horizontal
	3924.0	36.9	0.3	37.2	74.0	-36.8	Peak	Vertical
	4867.5	36.3	2.7	39.0	74.0	-35.0	Peak	Vertical
*	7154.0	37.3	7.7	45.0	74.0	-29.0	Peak	Vertical
*	8794.5	36.6	8.9	45.5	74.0	-28.5	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (89.8dBμV/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 - Ant 1	Test Site:	AC1
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
	4859.0	36.3	2.7	39.0	74.0	-35.0	Peak	Horizontal
	7307.0	37.1	8.0	45.1	74.0	-28.9	Peak	Horizontal
*	8735.0	35.9	8.9	44.8	77.1	-32.3	Peak	Horizontal
*	10163.0	35.4	11.7	47.1	77.1	-30.0	Peak	Horizontal
	4876.0	36.5	2.7	39.2	74.0	-34.8	Peak	Vertical
	7281.5	36.6	8.0	44.6	74.0	-29.4	Peak	Vertical
*	8845.5	36.8	9.1	45.9	77.1	-31.2	Peak	Vertical
*	10112.0	35.3	11.6	46.9	77.1	-30.2	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (97.1dBμV/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 - Ant 1	Test Site:	AC1
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
	4842.0	36.6	2.7	39.3	74.0	-34.7	Peak	Horizontal
	7383.5	38.4	7.9	46.3	74.0	-27.7	Peak	Horizontal
*	8845.5	36.4	9.1	45.5	76.0	-30.5	Peak	Horizontal
*	10120.5	35.1	11.6	46.7	76.0	-29.3	Peak	Horizontal
	3915.5	37.5	0.2	37.7	74.0	-36.3	Peak	Vertical
	4731.5	36.3	2.5	38.8	74.0	-35.2	Peak	Vertical
*	7120.0	36.4	7.6	44.0	76.0	-32.0	Peak	Vertical
*	8726.5	36.2	9.0	45.2	76.0	-30.8	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (96.0dBμV/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:	802.11g - Ant 1	Test Site:	AC1
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
	3847.5	37.4	0.1	37.5	74.0	-36.5	Peak	Horizontal
	4833.5	35.6	2.7	38.3	74.0	-35.7	Peak	Horizontal
*	7239.0	36.4	7.8	44.2	74.0	-29.8	Peak	Horizontal
*	10112.0	35.1	11.6	46.7	74.0	-27.3	Peak	Horizontal
	4833.5	36.0	2.7	38.7	74.0	-35.3	Peak	Vertical
	7426.0	36.2	8.0	44.2	74.0	-29.8	Peak	Vertical
*	8633.0	36.1	8.8	44.9	74.0	-29.1	Peak	Vertical
*	10239.5	35.7	11.9	47.6	74.0	-26.4	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (92.0dBμV/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:	802.11g - Ant 1	Test Site:	AC1
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
	4927.0	36.3	2.8	39.1	74.0	-34.9	Peak	Horizontal
	7298.5	37.6	8.0	45.6	74.0	-28.4	Peak	Horizontal
*	8845.5	35.8	9.1	44.9	78.5	-33.6	Peak	Horizontal
*	10112.0	35.4	11.6	47.0	78.5	-31.5	Peak	Horizontal
	4935.5	36.4	2.8	39.2	74.0	-34.8	Peak	Vertical
	7230.5	36.7	7.8	44.5	74.0	-29.5	Peak	Vertical
*	8760.5	36.5	9.0	45.5	78.5	-33.0	Peak	Vertical
*	10103.5	35.5	11.6	47.1	78.5	-31.4	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (98.5dBμV/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:	802.11g - Ant 1	Test Site:	AC1
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
	4893.0	36.6	2.7	39.3	74.0	-34.7	Peak	Horizontal
	7383.5	37.9	7.9	45.8	74.0	-28.2	Peak	Horizontal
*	8633.0	36.9	8.8	45.7	77.9	-32.2	Peak	Horizontal
*	10163.0	35.7	11.7	47.4	77.9	-30.5	Peak	Horizontal
	4774.0	36.7	2.6	39.3	74.0	-34.7	Peak	Vertical
	7307.0	36.6	8.0	44.6	74.0	-29.4	Peak	Vertical
*	8701.0	36.5	9.0	45.5	77.9	-32.4	Peak	Vertical
*	10341.5	35.3	12.2	47.5	77.9	-30.4	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (97.9dBμV/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:	802.11n-HT20 - Ant 1	Test Site:	AC1
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
	3966.5	38.1	0.3	38.4	74.0	-35.6	Peak	Horizontal
	5046.0	36.2	3.1	39.3	74.0	-34.7	Peak	Horizontal
*	6380.5	36.9	5.3	42.2	74.0	-31.8	Peak	Horizontal
*	7239.0	36.9	7.8	44.7	74.0	-29.3	Peak	Horizontal
	3822.0	37.0	0.1	37.1	74.0	-36.9	Peak	Vertical
	4816.5	36.2	2.7	38.9	74.0	-35.1	Peak	Vertical
*	6601.5	35.5	6.0	41.5	74.0	-32.5	Peak	Vertical
*	7196.5	37.1	7.8	44.9	74.0	-29.1	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (91.3dBμV/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:	802.11n-HT20 - Ant 1	Test Site:	AC1
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
	3907.0	36.8	0.2	37.0	74.0	-37.0	Peak	Horizontal
	4799.5	36.0	2.7	38.7	74.0	-35.3	Peak	Horizontal
*	6729.0	36.9	5.7	42.6	78.1	-35.5	Peak	Horizontal
*	8633.0	37.0	8.8	45.8	78.1	-32.3	Peak	Horizontal
	3856.0	37.1	0.1	37.2	74.0	-36.8	Peak	Vertical
	4825.0	36.2	2.7	38.9	74.0	-35.1	Peak	Vertical
*	6304.0	36.1	4.9	41.0	78.1	-37.1	Peak	Vertical
*	7137.0	35.9	7.7	43.6	78.1	-34.5	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (98.1dBμV/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:	802.11n-HT20 - Ant 1	Test Site:	AC1
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
	3890.0	37.4	0.2	37.6	74.0	-36.4	Peak	Horizontal
	7383.5	37.4	7.9	45.3	74.0	-28.7	Peak	Horizontal
*	8616.0	37.1	8.8	45.9	77.3	-31.4	Peak	Horizontal
*	10112.0	35.6	11.6	47.2	77.3	-30.1	Peak	Horizontal
	4723.0	38.0	2.4	40.4	74.0	-33.6	Peak	Vertical
	7264.5	36.8	7.9	44.7	74.0	-29.3	Peak	Vertical
*	8743.5	36.9	9.0	45.9	77.3	-31.4	Peak	Vertical
*	10120.5	35.8	11.6	47.4	77.3	-29.9	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (97.3dBμV/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:	802.11n-HT20 - Ant 0+1	Test Site:	AC1
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
	3779.5	38.0	0.3	38.3	74.0	-35.7	Peak	Horizontal
	4833.5	36.6	2.7	39.3	74.0	-34.7	Peak	Horizontal
*	7239.0	37.4	7.8	45.2	82.2	-37.0	Peak	Horizontal
*	8616.0	36.2	8.8	45.0	82.2	-37.2	Peak	Horizontal
	3924.0	37.1	0.3	37.4	74.0	-36.6	Peak	Vertical
	4612.5	37.5	2.0	39.5	74.0	-34.5	Peak	Vertical
*	6652.5	36.4	6.0	42.4	82.2	-39.8	Peak	Vertical
*	7137.0	36.5	7.7	44.2	82.2	-38.0	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (102.2dBμV/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:	802.11n-HT20 - Ant 0+1	Test Site:	AC1
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
	3915.5	36.9	0.2	37.1	74.0	-36.9	Peak	Horizontal
	7315.5	37.2	8.0	45.2	74.0	-28.8	Peak	Horizontal
*	8607.5	37.3	8.8	46.1	84.5	-38.4	Peak	Horizontal
*	10171.5	35.3	11.7	47.0	84.5	-37.5	Peak	Horizontal
	4867.5	36.4	2.7	39.1	74.0	-34.9	Peak	Vertical
	7298.5	36.9	8.0	44.9	74.0	-29.1	Peak	Vertical
*	8658.5	37.1	8.8	45.9	84.5	-38.6	Peak	Vertical
*	10163.0	35.7	11.7	47.4	84.5	-37.1	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (104.5dBμV/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:	802.11n-HT20 - Ant 0+1	Test Site:	AC1
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
	4867.5	36.7	2.7	39.4	74.0	-34.6	Peak	Horizontal
	7392.0	39.2	7.9	47.1	74.0	-26.9	Peak	Horizontal
*	8633.0	36.8	8.8	45.6	83.8	-38.2	Peak	Horizontal
*	10188.5	36.0	11.8	47.8	83.8	-36.0	Peak	Horizontal
	4825.0	36.2	2.7	38.9	74.0	-35.1	Peak	Vertical
	7383.5	37.3	7.9	45.2	74.0	-28.8	Peak	Vertical
*	8633.0	36.8	8.8	45.6	83.8	-38.2	Peak	Vertical
*	10171.5	35.4	11.7	47.1	83.8	-36.7	Peak	Vertical

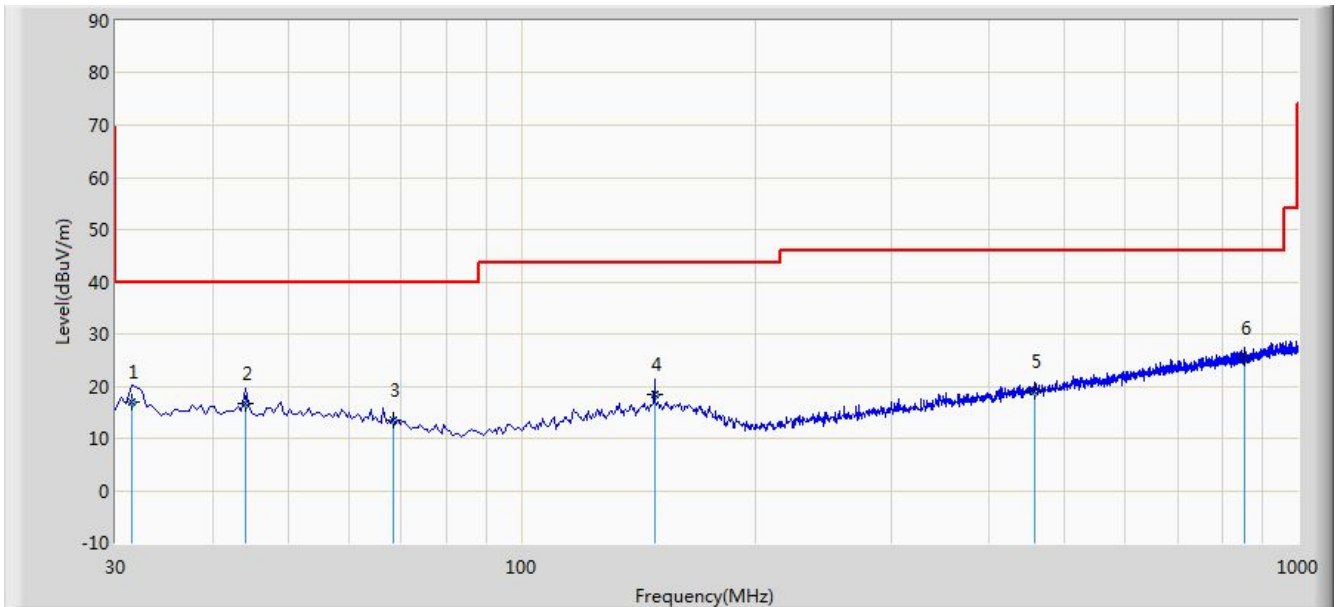
Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (103.8dBμV/m).

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

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

The worst case of Radiated Emission below 1GHz:

Site: AC1	Time: 2016/08/08 - 11:09
Limit: FCC_Part15.209_RE(3m)	Engineer: Bruce Wang
Probe: VULB 9168 _20-2000MHz	Polarity: Horizontal
EUT: Deepoon VR All-In-One Headset	Power: By Battery
Worse Case Mode: Transmit by 802.11n-HT20 at Channel 2462MHz Ant 0+1	

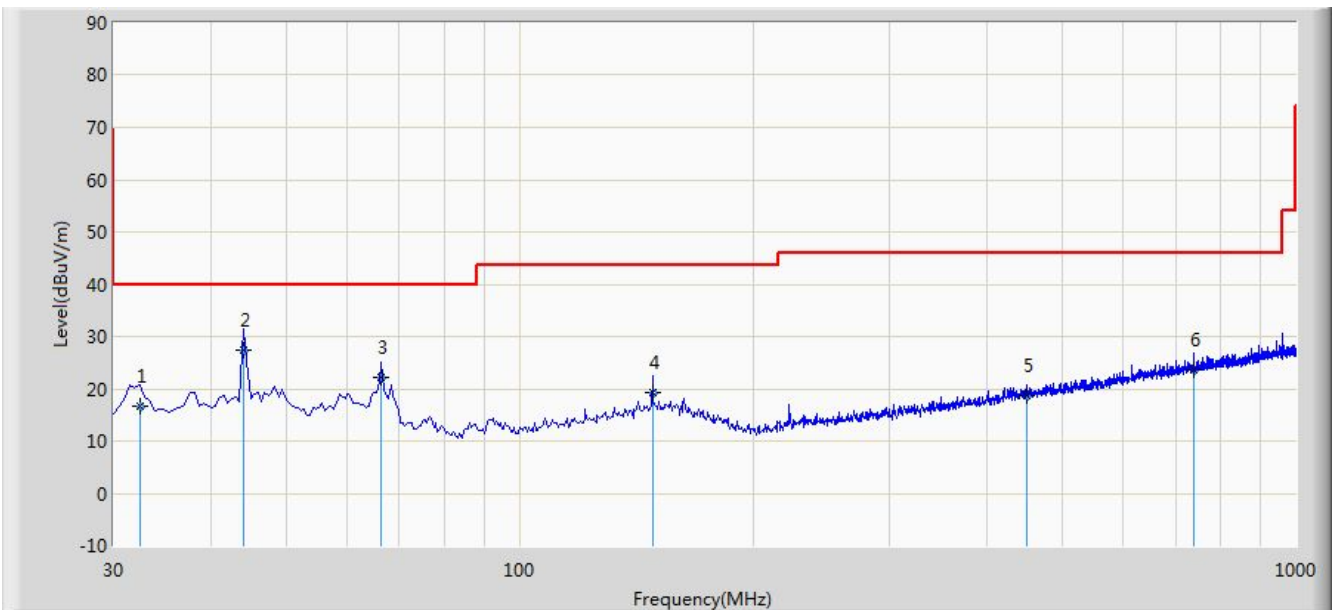


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			31.455	17.032	3.362	-22.968	40.000	13.670	QP
2			44.065	16.673	2.429	-23.327	40.000	14.244	QP
3			68.375	13.473	1.677	-26.527	40.000	11.796	QP
4			148.340	18.318	3.267	-25.182	43.500	15.051	QP
5			457.770	18.935	1.025	-27.065	46.000	17.910	QP
6		*	852.560	25.250	1.575	-20.750	46.000	23.675	QP

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

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

Site: AC1	Time: 2016/08/08 - 11:12
Limit: FCC_Part15.209_RE(3m)	Engineer: Bruce Wang
Probe: VULB 9168 _20-2000MHz	Polarity: Vertical
EUT: Deepoon VR All-In-One Headset	Power: By Battery
Worse Case Mode: Transmit by 802.11n-HT20 at Channel 2462MHz Ant 0+1	

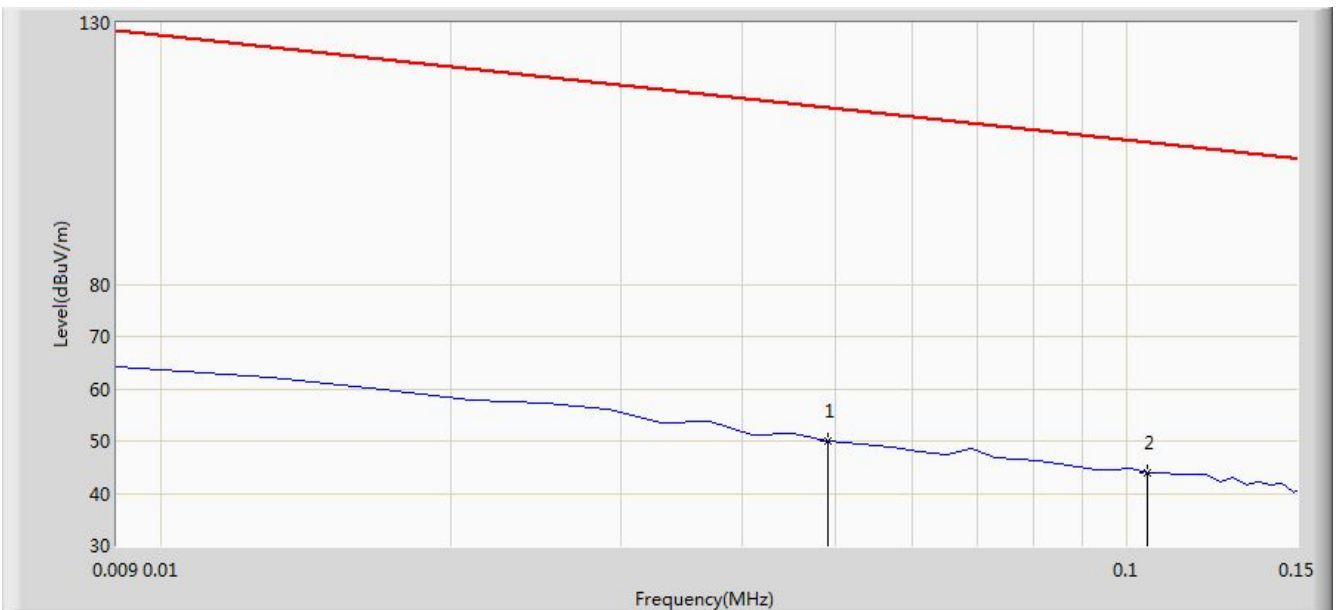


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			32.425	16.713	3.005	-23.287	40.000	13.708	QP
2		*	44.065	27.460	13.216	-12.540	40.000	14.244	QP
3			66.375	22.169	10.001	-17.831	40.000	12.168	QP
4			148.340	19.272	4.221	-24.228	43.500	15.051	QP
5			450.010	18.826	1.005	-27.174	46.000	17.821	QP
6			739.070	23.754	1.168	-22.246	46.000	22.586	QP

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

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

Site: AC1	Time: 2016/08/16 - 16:18
Limit: FCC_Part15.209_RE(3m)	Engineer: Bruce Wang
Probe: FMZB1519_0.009-30MHz	Polarity: Face on
EUT: Deepoon VR All-In-One Headset	Power: By Battery
Note: There is the ambient noise within frequency range 9kHz~30MHz.	

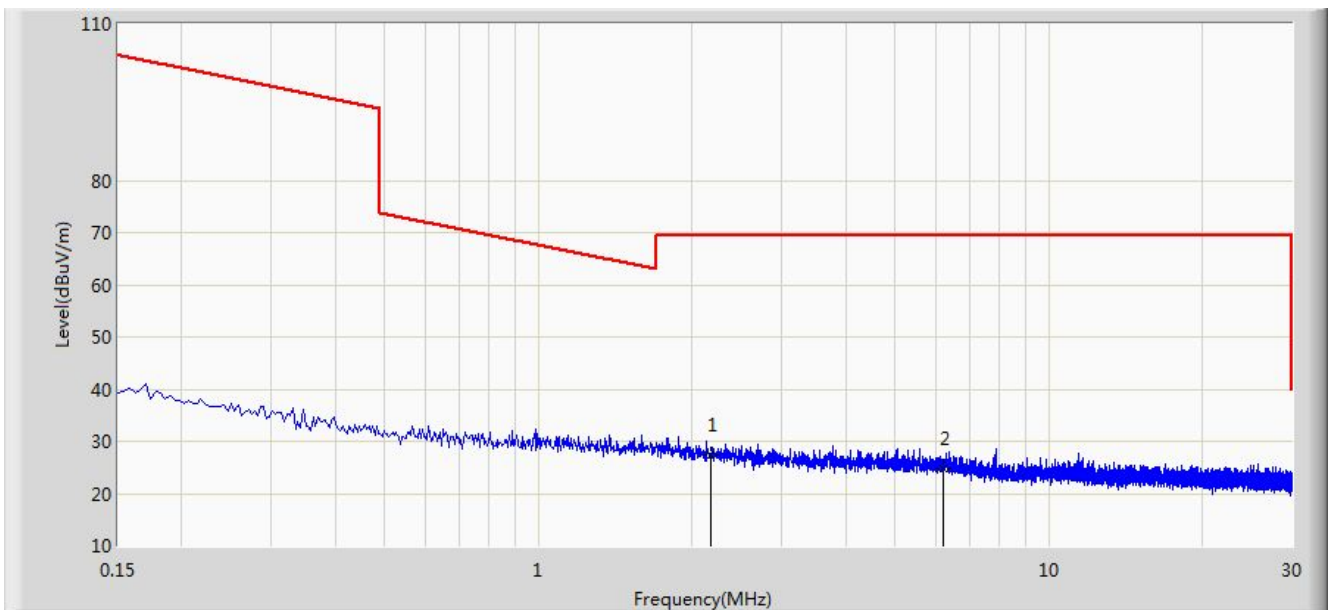


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			0.049	50.112	29.552	-63.688	113.800	20.560	AV
2		*	0.105	44.043	23.845	-63.137	107.180	20.198	QP

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

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

Site: AC1	Time: 2016/08/16 - 16:19
Limit: FCC_Part15.209_RE(3m)	Engineer: Bruce Wang
Probe: FMZB1519_0.009-30MHz	Polarity: Face on
EUT: Deepoon VR All-In-One Headset	Power: By Battery
Note: There is the ambient noise within frequency range 9kHz~30MHz.	

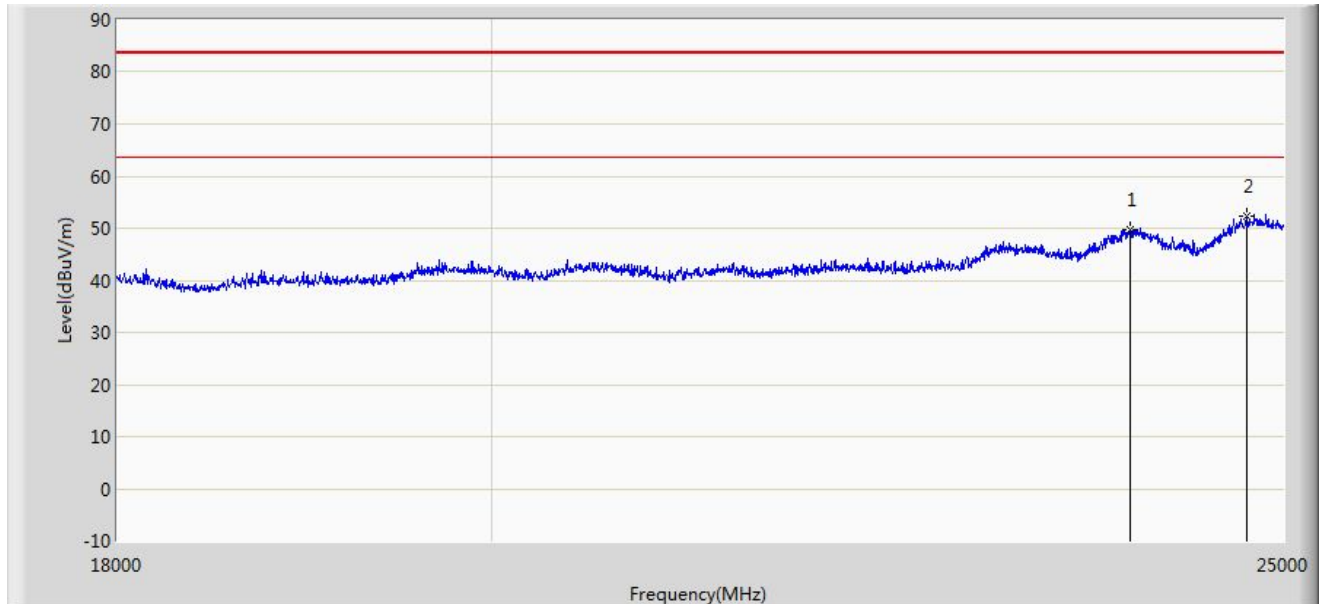


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2.175	27.371	6.960	-42.129	69.500	20.412	QP
2			6.216	24.786	4.701	-44.714	69.500	20.085	QP

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

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

Site: AC1	Time: 2016/08/16- 21:20
Limit: FCC_Part15.209_RE(1m)	Engineer: Bruce Wang
Probe: BBHA9170_18-40GHz	Polarity: Horizontal
EUT: Deepoon VR All-In-One Headset	Power: By Battery
Note: There is the ambient noise within frequency range 18GHz~25GHz.	

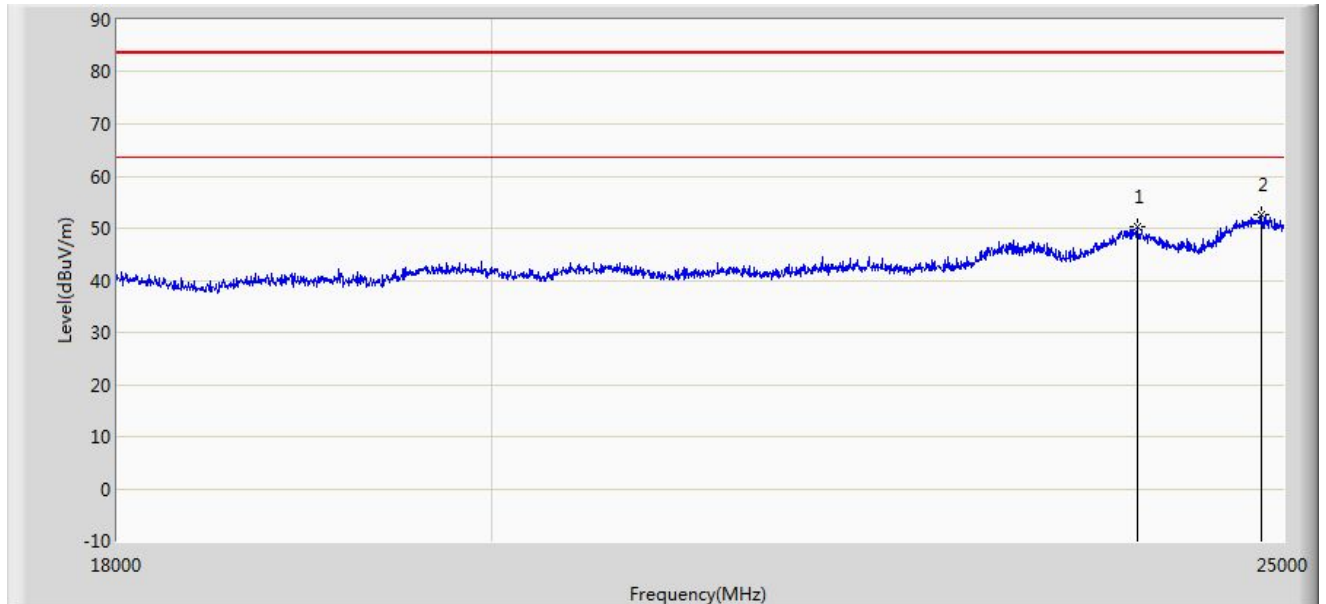


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			23943.000	49.776	35.866	-33.724	83.500	13.910	PK
2		*	24741.000	52.375	37.681	-31.125	83.500	14.694	PK

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

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

Site: AC1	Time: 2016/08/16 - 21:32
Limit: FCC_Part15.209_RE(1m)	Engineer: Bruce Wang
Probe: BBHA9170_18-40GHz	Polarity: Vertical
EUT: Deepoon VR All-In-One Headset	Power: By Battery
Note: There is the ambient noise within frequency range 18GHz~25GHz.	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			23999.000	50.379	36.435	-33.121	83.500	13.944	PK
2		*	24846.000	52.503	37.735	-30.997	83.500	14.768	PK

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

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