

APPLICATION CERTIFICATION FCC Part 15C
On Behalf of
Greenwave Scientific, Inc., d/b/a Mohu

Mohu Channels
Model No.: MHCHBOX01

FCC ID: 2ABUT-MHCHBOX01

Prepared for : Greenwave Scientific, Inc., d/b/a Mohu
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Report No. : ATE20140410
Date of Test : Apr 01, 2014- Apr 25, 2014
Date of Report : Apr 25, 2014

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Test Report Certification

Applicant& address : Greenwave Scientific, Inc., d/b/a Mohu
2720 Discovery Dr Raleigh, NC 27616 United States
Manufacturer& address : VideoStrong Technology CO., Ltd
402A, Building B, Donglian Industrial, 23rd District, Bao'an,
Shenzhen, China
Product : Mohu Channels
Model No. : MHCHBOX01
Trade name : Mohu

Measurement Procedure Used:

**FCC Rules and Regulations Part 15 Subpart C Section 15.247
ANSI C63.4: 2009**

The EUT was tested according to DTS test procedure of April 09, 2013 KDB558074 D01 DTS Meas Guidance v03 for compliance to FCC 47CFR 15.247 requirements

The device described above is tested by ACCURATE TECHNOLOGY CO. LTD to determine the maximum emission levels emanating from the device. The maximum emission levels are compared to the FCC Part 15 Subpart C Section 15.247 limits. The measurement results are contained in this test report and ACCURATE TECHNOLOGY CO. LTD is assumed full responsibility for the accuracy and completeness of these measurements. Also, this report shows that the Equipment Under Test (EUT) is to be technically compliant with the FCC requirements.

This report applies to above tested sample only. This report shall not be reproduced in part without written approval of ACCURATE TECHNOLOGY CO. LTD.

Date of Test : Apr 01, 2014- Apr 25, 2014

Prepared by :



(Tim.zhang, Engineer)

Approved & Authorized Signer :



(Sean Liu, Manager)

1. GENERAL INFORMATION

1.1. Description of Device (EUT)

EUT : Mohu Channels
 Model Number : MHCHBOX01
 Frequency Range : 802.11b/g/n(20MHz): 2412-2462MHz
 802.11n(40MHz): 2422-2452MHz
 Number of Channels : 802.11b/g/n (20MHz):11
 802.11n (40MHz): 7
 Antenna Gain : 2.15dBi
 Type of Antenna : Integral Antenna
 Power Supply : AC 120V/60Hz (Powered by Adapter)
 Adapter : Model:TYP60-0502500u
 Input: AC 100-240V
 Output: 5.0V 2.5amp
 Modulation Type : CCK, OFDM
 Applicant : Greenwave Scientific, Inc., d/b/a Mohu
 Address : 2720 Discovery Dr Raleigh, NC 27616 United States
 Manufacturer : VideoStrong Technology CO.,Ltd
 Address : 402A, Building B, Donglian Industrial, 23rd District,
 Bao'an, Shenzhen, China
 Date of sample received : Apr 01, 2014
 Date of Test : Apr 01, 2014- Apr 25, 2014

1.2. Carrier Frequency of Channels

802.11b, 802.11g, 802.11n (20MHz)

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

802.11n (40MHz)

Channel	Frequency(MHz)	Channel	Frequency(MHz)
---	---	07	2442
---	---	08	2447
03	2422	09	2452
04	2427	---	---
05	2432	---	---
06	2437	---	---

1.3. Accessory and Auxiliary Equipment

HDTV	Manufacturer: DELL M/N: 1704FPTt Serial No.: 709913441
Mouse	Manufacturer: DELL M/N: DMC S/N: HZXLM1

1.4. Description of Test Facility

EMC Lab	: Accredited by TUV Rheinland Shenzhen Listed by FCC The Registration Number is 752051 Listed by Industry Canada The Registration Number is 5077A-2 Accredited by China National Accreditation Committee for Laboratories The Certificate Registration Number is L3193
Name of Firm	: ACCURATE TECHNOLOGY CO. LTD
Site Location	: F1, Bldg. A, Changyuan New Material Port, Keyuan Rd. Science & Industry Park, Nanshan, Shenzhen, Guangdong P.R. China

1.5. Measurement Uncertainty

Conducted Emission Expanded Uncertainty	=	2.23dB, k=2
Radiated emission expanded uncertainty (9kHz-30MHz)	=	3.08dB, k=2
Radiated emission expanded uncertainty (30MHz-1000MHz)	=	4.42dB, k=2
Radiated emission expanded uncertainty (Above 1GHz)	=	4.06dB, k=2

2. MEASURING DEVICE AND TEST EQUIPMENT

Table 1: List of Test and Measurement Equipment

Kind of equipment	Manufacturer	Type	S/N	Calibrated dates	Calibrated until
EMI Test Receiver	Rohde&Schwarz	ESCS30	100307	Jan. 11, 2014	Jan. 10, 2015
EMI Test Receiver	Rohde&Schwarz	ESPI3	101526/003	Jan. 11, 2014	Jan. 10, 2015
Spectrum Analyzer	Agilent	E7405A	MY45115511	Jan. 11, 2014	Jan. 10, 2015
Pre-Amplifier	Rohde&Schwarz	CBLU118354 0-01	3791	Jan. 11, 2014	Jan. 10, 2015
Loop Antenna	Schwarzbeck	FMZB1516	1516131	Jan. 15, 2014	Jan. 14, 2015
Bilog Antenna	Schwarzbeck	VULB9163	9163-323	Jan. 15, 2014	Jan. 14, 2015
Horn Antenna	Schwarzbeck	BBHA9120D	9120D-655	Jan. 15, 2014	Jan. 14, 2015
Horn Antenna	Schwarzbeck	BBHA9170	9170-359	Jan. 15, 2014	Jan. 14, 2015
LISN	Rohde&Schwarz	ESH3-Z5	100305	Jan. 11, 2014	Jan. 10, 2015
LISN	Schwarzbeck	NSLK8126	8126431	Jan. 11, 2014	Jan. 10, 2015
Highpass Filter	Wainwright Instruments	WHKX3.6/18 G-10SS	N/A	Jan. 11, 2014	Jan. 10, 2015
Band Reject Filter	Wainwright Instruments	WRCG2400/2 485-2375/2510 -60/11SS	N/A	Jan. 11, 2014	Jan. 10, 2015

3. OPERATION OF EUT DURING TESTING

3.1. Operating Mode

The mode is used: **1.802.11b Transmitting mode**

Low Channel: 2412MHz

Middle Channel: 2437MHz

High Channel: 2462MHz

2.802.11g Transmitting mode

Low Channel: 2412MHz

Middle Channel: 2437MHz

High Channel: 2462MHz

3.802.11n (20MHz) Transmitting mode

Low Channel: 2412MHz

Middle Channel: 2437MHz

High Channel: 2462MHz

4.802.11n (40MHz) Transmitting mode

Low Channel: 2422MHz

Middle Channel: 2437MHz

High Channel: 2452MHz

3.2. Configuration and peripherals

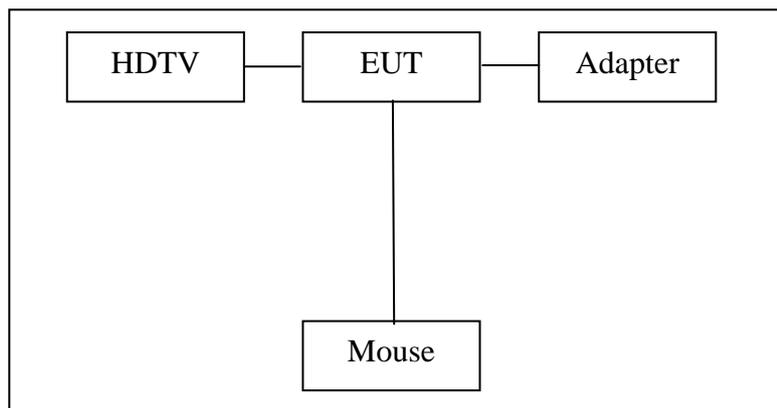


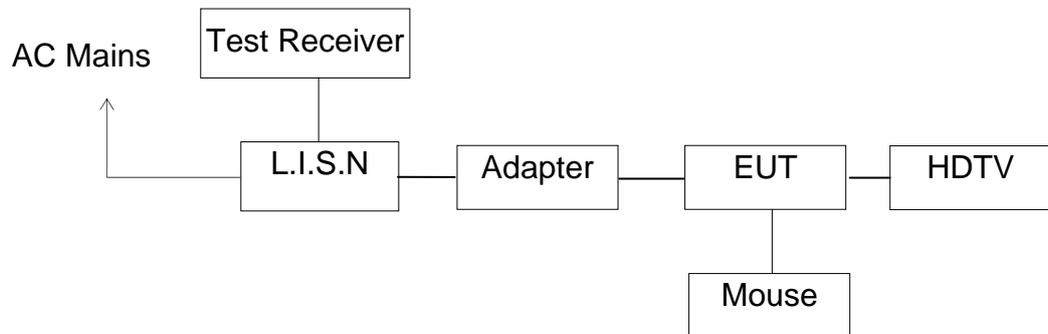
Figure 1 Setup: Transmitting mode

4. TEST PROCEDURES AND RESULTS

FCC Rules	Description of Test	Result
Section 15.207	Power Line Conducted Emission	Compliant
Section 15.247(a)(2)	6dB Bandwidth Test	Compliant
Section 15.247(e)	Power Spectral Density Test	Compliant
Section 15.247(b)(3)	Maximum Peak Output Power Test	Compliant
Section 15.247(d)	Band Edge Compliance Test	Compliant
Section 15.247(d) Section 15.209	Radiated Spurious Emission Test	Compliant
Section 15.247(d)	Conducted Spurious Emission Test	Compliant
Section 15.203	Antenna Requirement	Compliant

5. POWER LINE CONDUCTED MEASUREMENT

5.1. Block Diagram of Test Setup



(EUT: Mohu Channels)

5.2. Power Line Conducted Emission Measurement Limits

Frequency (MHz)	Limit dB(μ V)	
	Quasi-peak Level	Average Level
0.15 - 0.50	66.0 – 56.0 *	56.0 – 46.0 *
0.50 - 5.00	56.0	46.0
5.00 - 30.00	60.0	50.0

NOTE1: The lower limit shall apply at the transition frequencies.
NOTE2: The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.50MHz.

5.3. Configuration of EUT on Measurement

The following equipments are installed on Power Line Conducted Emission Measurement to meet the commission requirement and operating regulations in a manner, which tends to maximize its emission characteristics in a normal application.

5.4. Operating Condition of EUT

5.4.1. Setup the EUT and simulator as shown as Section 5.1.

5.4.2. Turn on the power of all equipment.

5.4.3. Let the EUT work in test mode and measure it.

5.5. Test Procedure

The EUT is put on the plane 0.8m high above the ground by insulating support and is connected to the power mains through a line impedance stabilization network (L.I.S.N.). This provides a 50ohm coupling impedance for the EUT system. Please refer the block diagram of the test setup and photographs. Both sides of AC lines are checked to find out the maximum conducted emission. In order to find the maximum emission levels, the relative positions of equipment and all of the interface cables shall be changed according to ANSI C63.4: 2009 on Conducted Emission Measurement.

The bandwidth of test receiver (R & S ESCS30) is set at 9kHz.

The frequency range from 150kHz to 30MHz is checked.

5.6.Power Line Conducted Emission Measurement Results

PASS.

The frequency range from 150kHz to 30MHz is checked.

Test mode : WIFI communicating								
MEASUREMENT RESULT: "M-0421-V03_fin"								
4/21/2014 4:52PM								
Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE	
0.171806	53.60	10.5	65	11.3	QP	L1	GND	
3.243771	43.60	11.1	56	12.4	QP	L1	GND	
3.471549	43.70	11.1	56	12.3	QP	L1	GND	
MEASUREMENT RESULT: "M-0421-V03_fin2"								
4/21/2014 4:52PM								
Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE	
1.993137	37.30	11.0	46	8.7	AV	L1	GND	
2.049619	35.80	11.0	46	10.2	AV	L1	GND	
3.416555	37.30	11.1	46	8.7	AV	L1	GND	
MEASUREMENT RESULT: "M-0421-V04_fin"								
4/21/2014 4:56PM								
Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE	
0.172493	52.10	10.5	65	12.7	QP	N	GND	
3.192385	48.80	11.1	56	7.2	QP	N	GND	
3.362432	46.80	11.1	56	9.2	QP	N	GND	
MEASUREMENT RESULT: "M-0421-V04_fin2"								
4/21/2014 4:56PM								
Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE	
0.285246	37.50	10.6	51	13.2	AV	N	GND	
0.342744	37.40	10.6	49	11.7	AV	N	GND	
1.768177	36.90	11.0	46	9.1	AV	N	GND	

Emissions attenuated more than 20 dB below the permissible value are not reported.

The spectral diagrams are attached as below.

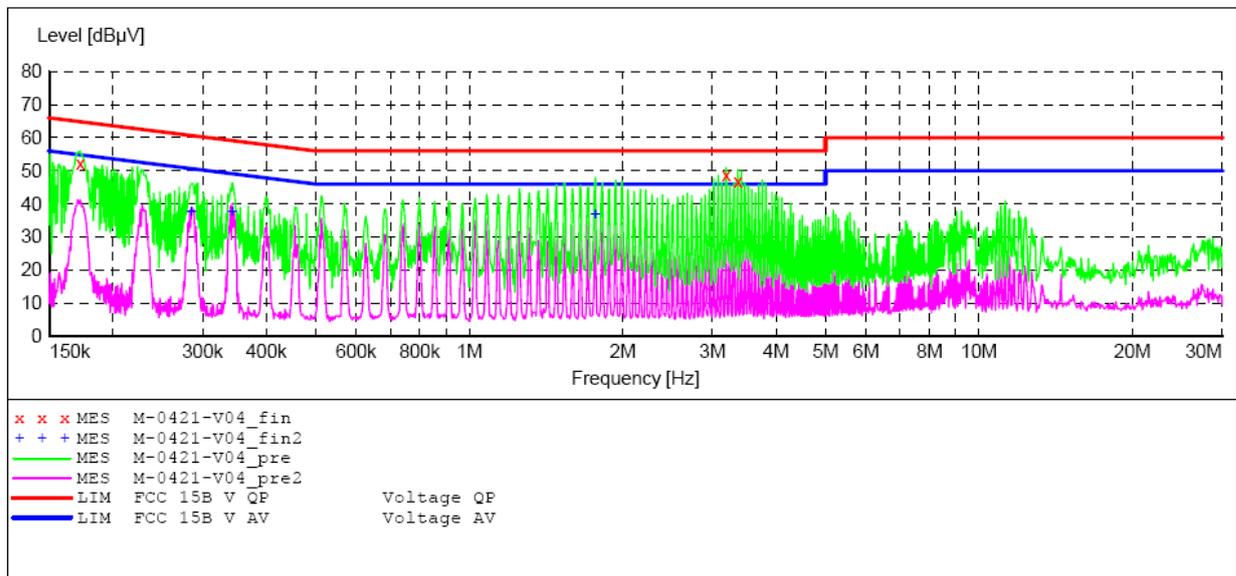
ACCURATE TECHNOLOGY CO.,LTD

CONDUCTED EMISSION STANDARD FCC PART 15

EUT: Mohu Channels M/N:MHCHBOX01
 Manufacturer: VideoStrong
 Operating Condition: WIFI Running
 Test Site: 1#Shielding Room
 Operator: Alen
 Test Specification: N 120V/60Hz
 Comment: Report No:ATE20140410
 Start of Test: 4/21/2014 / 4:53:26PM

SCAN TABLE: "V 150K-30MHz fin"

Short Description: _SUB_STD_VTERM2 1.70
 Start Stop Step Detector Meas. IF Transducer
 Frequency Frequency Width Time Bandw.
 150.0 kHz 30.0 MHz 4.5 kHz QuasiPeak 1.0 s 9 kHz NSLK8126 2008
 Average



MEASUREMENT RESULT: "M-0421-V04_fin"

4/21/2014 4:56PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.172493	52.10	10.5	65	12.7	QP	N	GND
3.192385	48.80	11.1	56	7.2	QP	N	GND
3.362432	46.80	11.1	56	9.2	QP	N	GND

MEASUREMENT RESULT: "M-0421-V04_fin2"

4/21/2014 4:56PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.285246	37.50	10.6	51	13.2	AV	N	GND
0.342744	37.40	10.6	49	11.7	AV	N	GND
1.768177	36.90	11.0	46	9.1	AV	N	GND

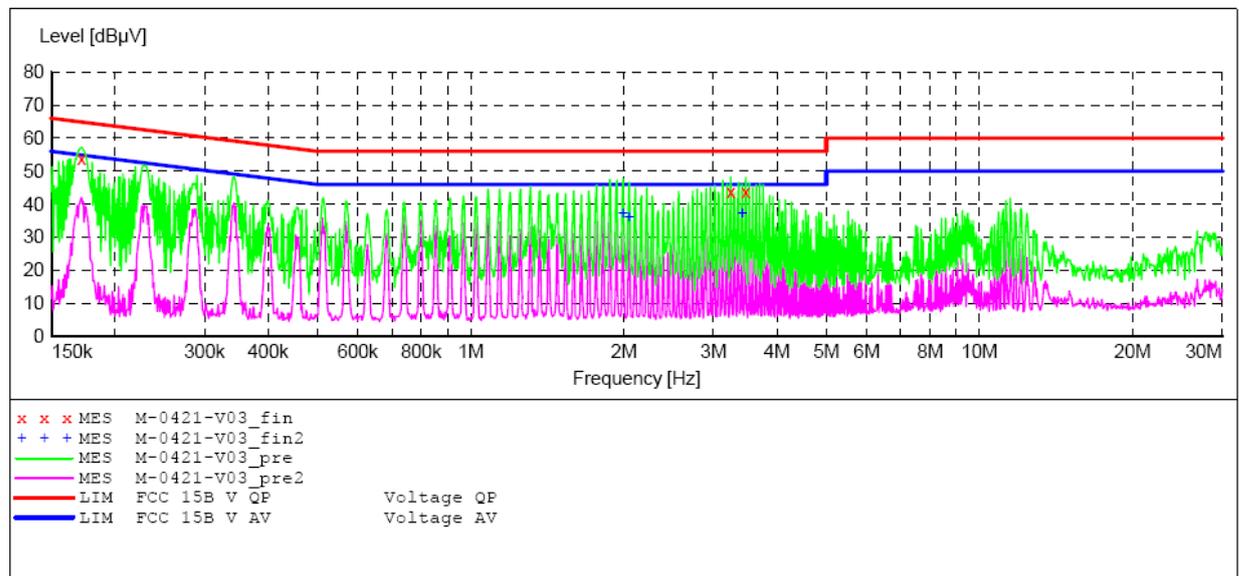
ACCURATE TECHNOLOGY CO., LTD

CONDUCTED EMISSION STANDARD FCC PART 15

EUT: Mohu Channels M/N:MHCHBOX01
 Manufacturer: VideoStrong
 Operating Condition: WIFI Running
 Test Site: 1#Shielding Room
 Operator: Alen
 Test Specification: L 120V/60Hz
 Comment: Report No:ATE20140410
 Start of Test: 4/21/2014 / 4:50:35PM

SCAN TABLE: "V 150K-30MHz fin"

Short Description:		_SUB_STD_VTERM2 1.70					
Start	Stop	Step	Detector	Meas. Time	IF Bandw.	Transducer	
Frequency	Frequency	Width					
150.0 kHz	30.0 MHz	4.5 kHz	QuasiPeak	1.0 s	9 kHz	NSLK8126 2008	
			Average				



MEASUREMENT RESULT: "M-0421-V03_fin"

4/21/2014 4:52PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.171806	53.60	10.5	65	11.3	QP	L1	GND
3.243771	43.60	11.1	56	12.4	QP	L1	GND
3.471549	43.70	11.1	56	12.3	QP	L1	GND

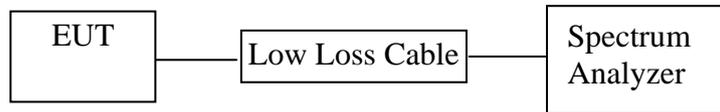
MEASUREMENT RESULT: "M-0421-V03_fin2"

4/21/2014 4:52PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
1.993137	37.30	11.0	46	8.7	AV	L1	GND
2.049619	35.80	11.0	46	10.2	AV	L1	GND
3.416555	37.30	11.1	46	8.7	AV	L1	GND

6. 6DB BANDWIDTH MEASUREMENT

6.1. Block Diagram of Test Setup



6.2. The Requirement For Section 15.247(a)(2)

Section 15.247(a)(2): Systems using digital modulation techniques may operate in the 902-928MHz, 2400-2483.5MHz, and 5725-5850MHz bands. The minimum 6 dB bandwidth shall be at least 500 kHz.

6.3. EUT Configuration on Measurement

The equipment are installed on the emission measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

6.4. Operating Condition of EUT

6.4.1. Setup the EUT and simulator as shown as Section 6.1.

6.4.2. Turn on the power of all equipment.

6.4.3. Let the EUT work in TX modes measure it. The transmit frequency are 2412-2462 and 2422-2452MHz. We select 2412MHz, 2437MHz, 2462MHz and 2422MHz, 2437MHz, 2452MHz TX frequency to transmit.

6.5. Test Procedure

1. Set resolution bandwidth (RBW) = 100 kHz.
2. Set the video bandwidth (VBW) $\geq 3 \times$ RBW.
3. Detector = Peak.
4. Trace mode = max hold.
5. Sweep = auto couple.
6. Allow the trace to stabilize.
7. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

6.6. Test Result

The test was performed with 802.11b			
Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (MHz)
Low	2412	8.80	> 0.5MHz
Middle	2437	8.80	> 0.5MHz
High	2462	8.80	> 0.5MHz

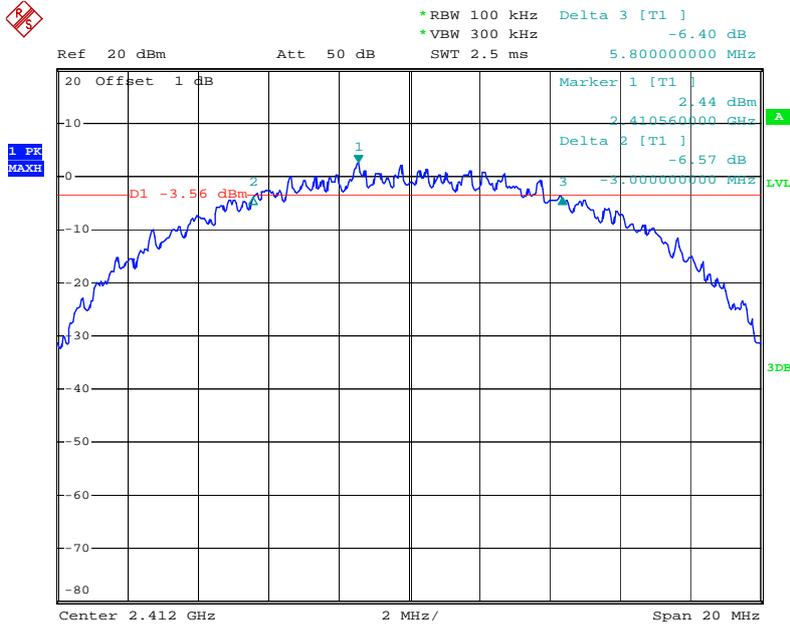
The test was performed with 802.11g			
Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (MHz)
Low	2412	16.60	> 0.5MHz
Middle	2437	16.60	> 0.5MHz
High	2462	16.60	> 0.5MHz

The test was performed with 802.11n (Bandwidth: 20 MHz)			
Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (MHz)
Low	2412	17.88	> 0.5MHz
Middle	2437	17.88	> 0.5MHz
High	2462	17.88	> 0.5MHz

The test was performed with 802.11n (Bandwidth: 40 MHz)			
Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (MHz)
Low	2422	36.56	> 0.5MHz
Middle	2437	36.56	> 0.5MHz
High	2452	36.56	> 0.5MHz

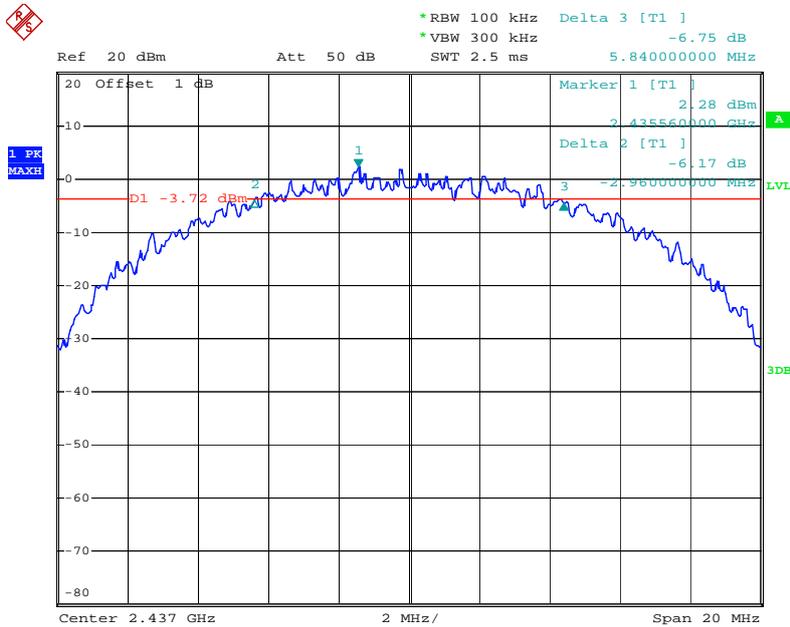
The spectrum analyzer plots are attached as below.

802.11b Channel Low 2412MHz



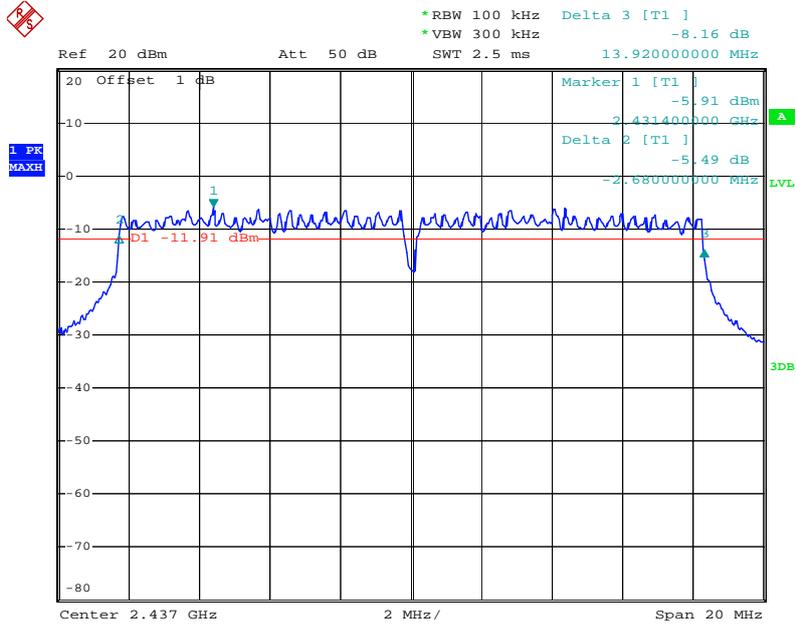
Date: 2.APR.2014 14:01:54

802.11b Channel Middle 2437MHz



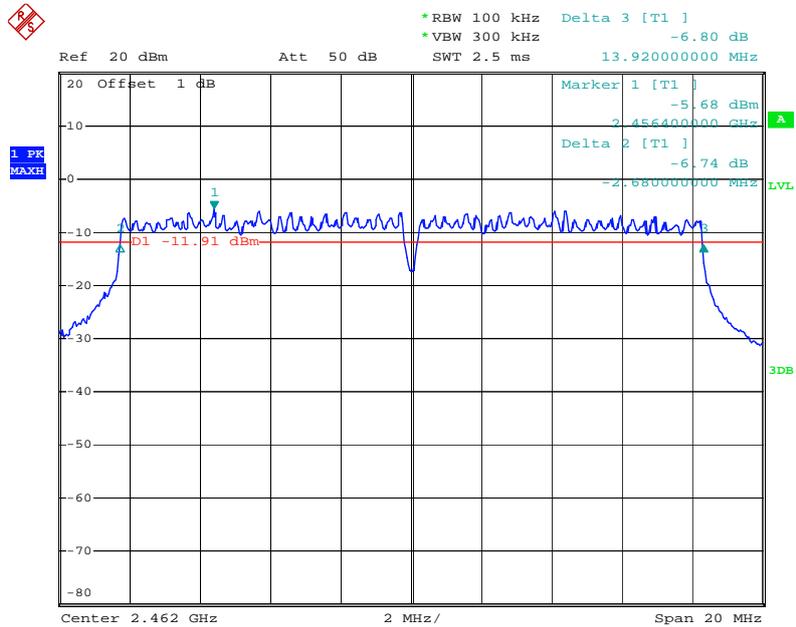
Date: 2.APR.2014 13:59:19

802.11g Channel Middle 2437MHz



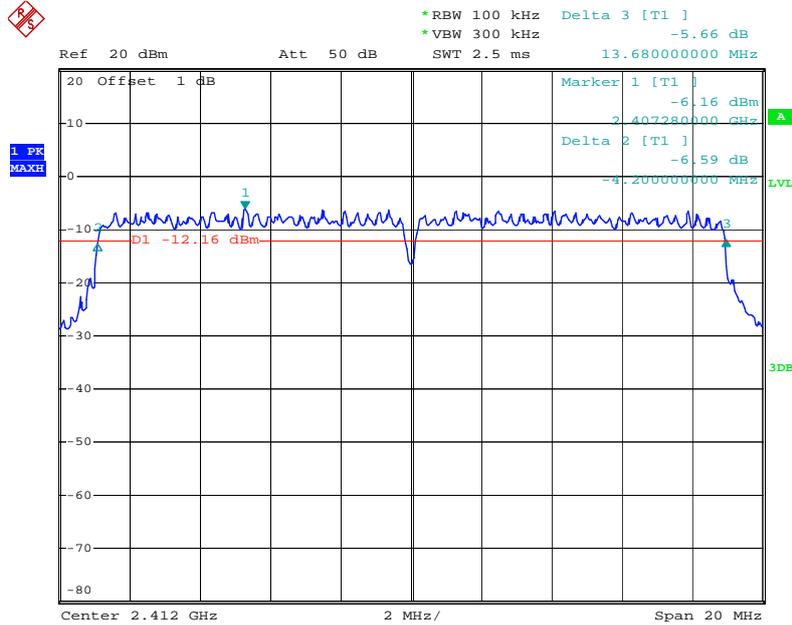
Date: 2.APR.2014 11:38:15

802.11g Channel High 2462MHz



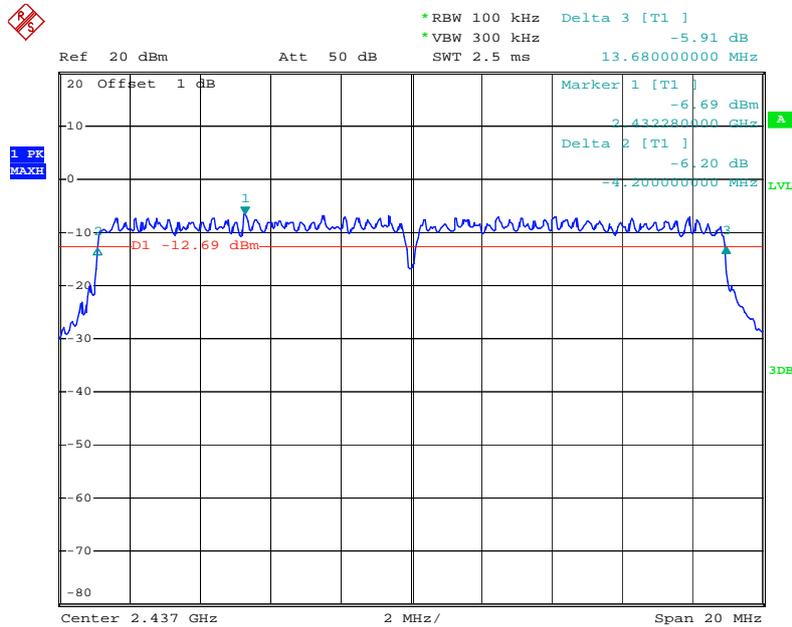
Date: 2.APR.2014 11:40:02

802.11n Channel Low 2412MHz (20MHz)



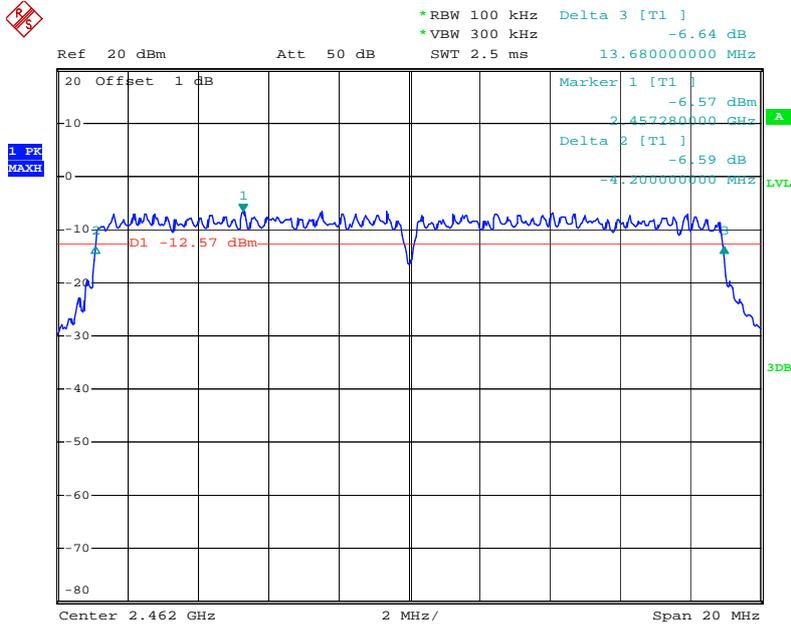
Date: 2.APR.2014 16:53:26

802.11n Channel Middle 2437MHz(20MHz)



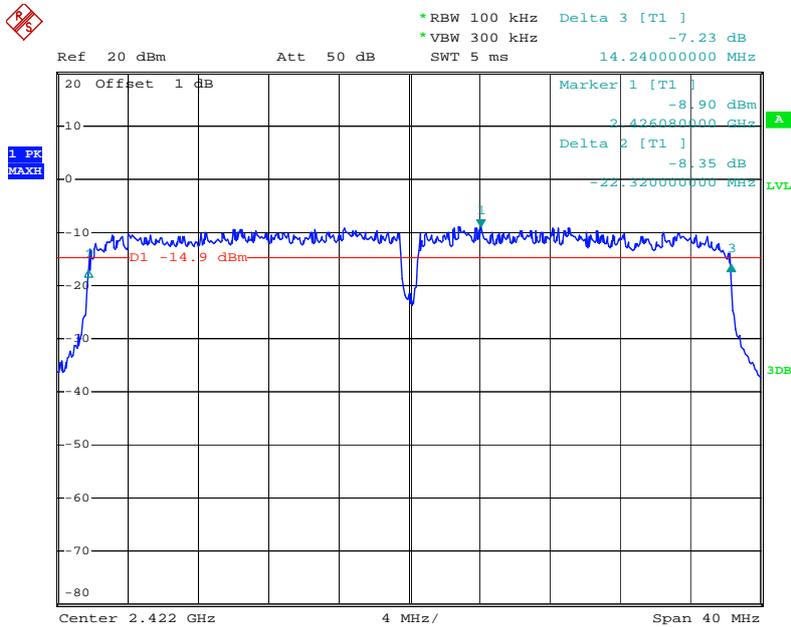
Date: 2.APR.2014 16:55:46

802.11n Channel High 2462MHz(20MHz)



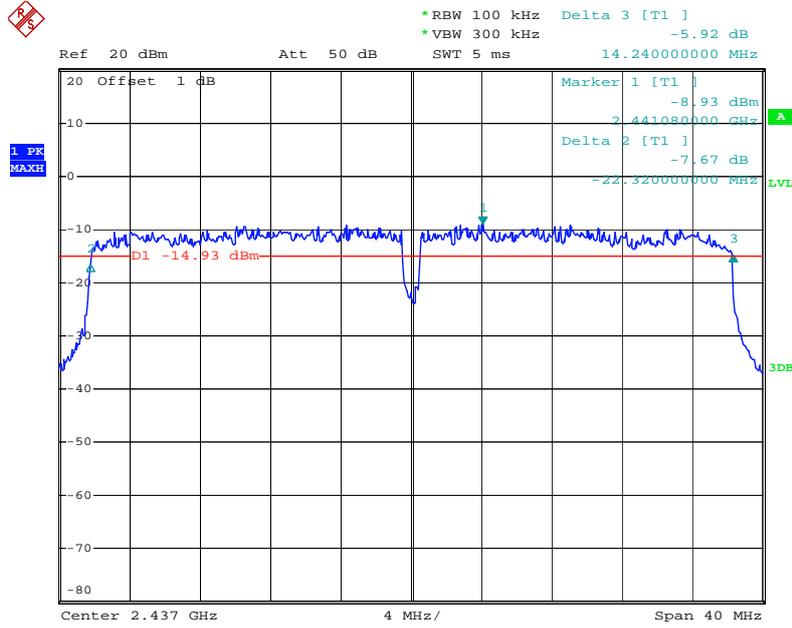
Date: 2.APR.2014 16:57:30

802.11n Channel Low 2422MHz (40MHz)



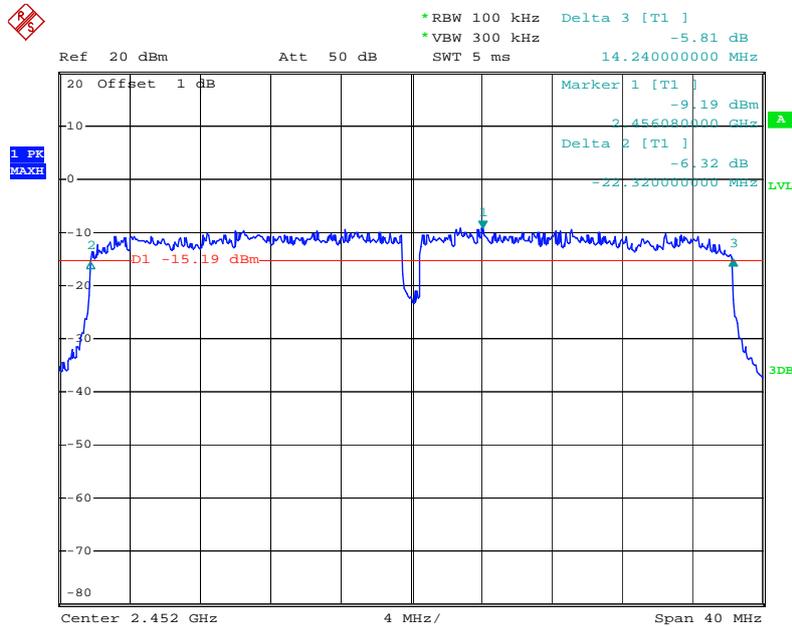
Date: 2.APR.2014 17:05:25

802.11n Channel Middle 2437MHz(40MHz)



Date: 2.APR.2014 17:02:47

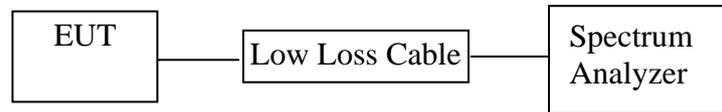
802.11n Channel High 2452MHz(40MHz)



Date: 2.APR.2014 17:01:35

7. MAXIMUM PEAK OUTPUT POWER

7.1. Block Diagram of Test Setup



7.2. The Requirement For Section 15.247(b)(3)

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

7.3. EUT Configuration on Measurement

The equipment is installed on the emission Measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

7.4. Operating Condition of EUT

7.4.1. Setup the EUT and simulator as shown as Section 7.1.

7.4.2. Turn on the power of all equipment.

7.4.3. Let the EUT work in TX modes measure it. The transmit frequency are 2412-2462 and 2422-2452MHz. We select 2412MHz, 2437MHz, 2462MHz and 2422MHz, 2437MHz, 2452MHz TX frequency to transmit.

7.5. Test Procedure

7.5.1. The EUT was tested according to DTS test procedure of April 09, 2013 KDB558074 D01 DTS Meas Guidance v03 for compliance to FCC 47CFR 15.247 requirements.

7.5.2. The transmitter output was connected to the spectrum analyzer through a low loss cable.

7.5.3. Set RBW of spectrum analyzer to 1MHz and VBW to 3MHz.

7.5.4. Measurement the maximum peak output power.

7.6. Test Result

The test was performed with 802.11b				
Channel	Frequency (MHz)	Peak Output Power (dBm)	Peak Output Power (mW)	Limits dBm / W
Low	2412	16.41	43.75	30 dBm / 1 W
Middle	2437	16.18	41.50	30 dBm / 1 W
High	2462	15.86	38.55	30 dBm / 1 W

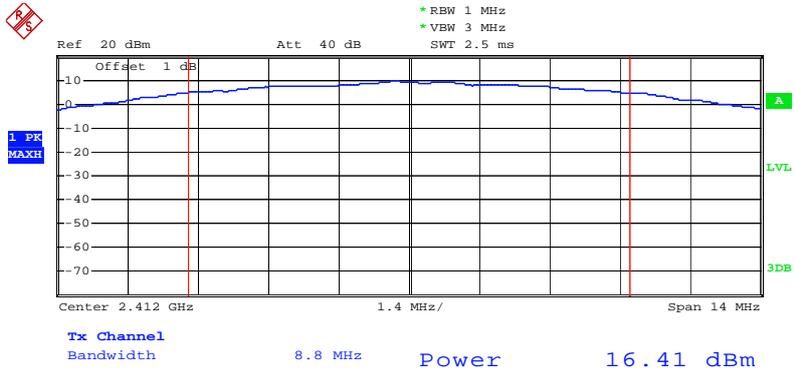
The test was performed with 802.11g				
Channel	Frequency (MHz)	Peak Output Power (dBm)	Peak Output Power (mW)	Limits dBm / W
Low	2412	15.01	31.70	30 dBm / 1 W
Middle	2437	14.73	29.72	30 dBm / 1 W
High	2462	14.37	27.35	30 dBm / 1 W

The test was performed with 802.11n (20MHz)				
Channel	Frequency (MHz)	Peak Output Power (dBm)	Peak Output Power (mW)	Limits dBm / W
Low	2412	14.73	29.72	30 dBm / 1 W
Middle	2437	14.55	28.51	30 dBm / 1 W
High	2462	14.23	26.49	30 dBm / 1 W

The test was performed with 802.11n (40MHz)				
Channel	Frequency (MHz)	Peak Output Power (dBm)	Peak Output Power (mW)	Limits dBm / W
Low	2422	14.32	27.04	30 dBm / 1 W
Middle	2437	14.16	26.06	30 dBm / 1 W
High	2452	13.84	24.21	30 dBm / 1 W

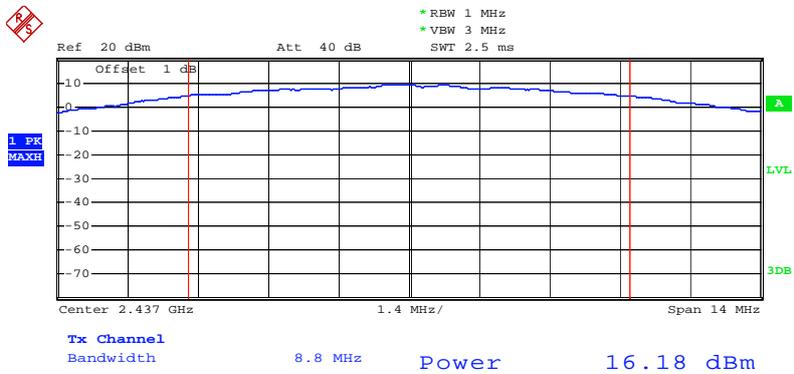
The spectrum analyzer plots are attached as below.

802.11b Channel Low 2412MHz



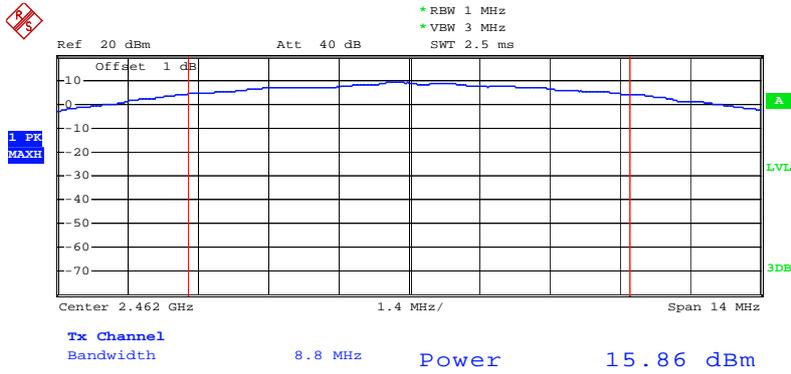
Date: 2.APR.2014 17:16:48

802.11b Channel Middle 2437MHz



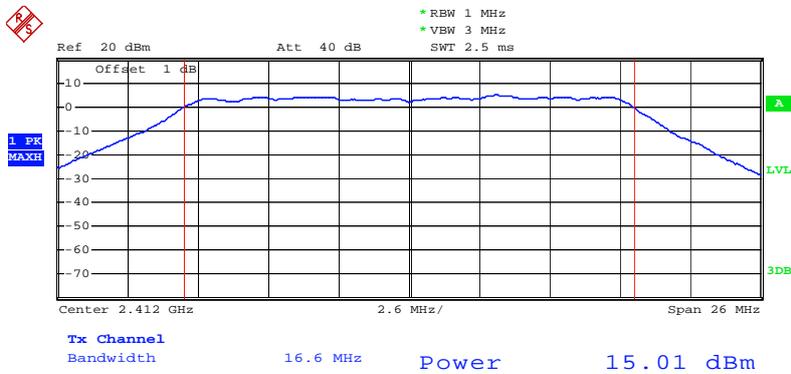
Date: 2.APR.2014 17:17:23

802.11b Channel High 2462MHz



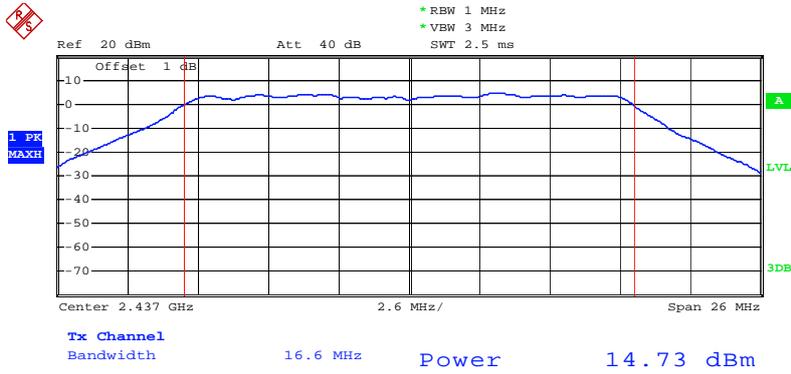
Date: 2.APR.2014 17:17:51

802.11g Channel Low 2412MHz



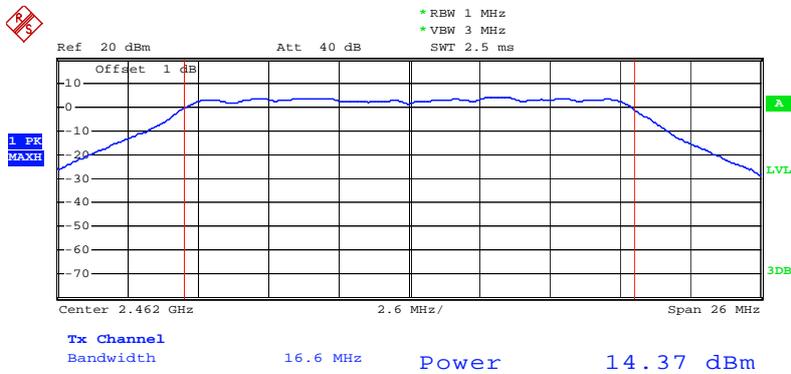
Date: 2.APR.2014 17:21:02

802.11g Channel Middle 2437MHz



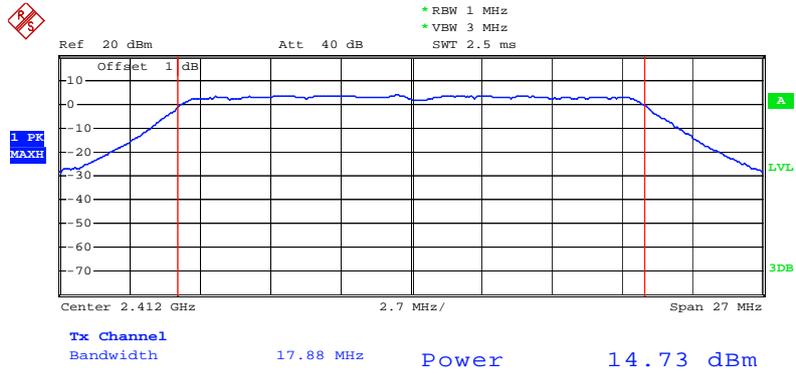
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802.11g Channel High 2462MHz



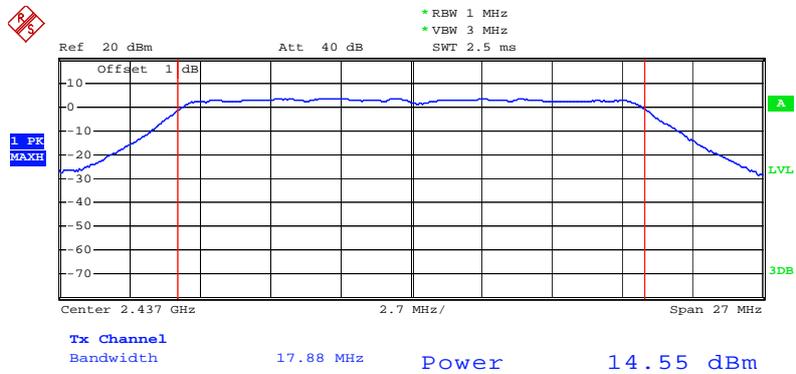
Date: 2.APR.2014 17:19:39

802.11n Channel Low 2412MHz (20MHz)



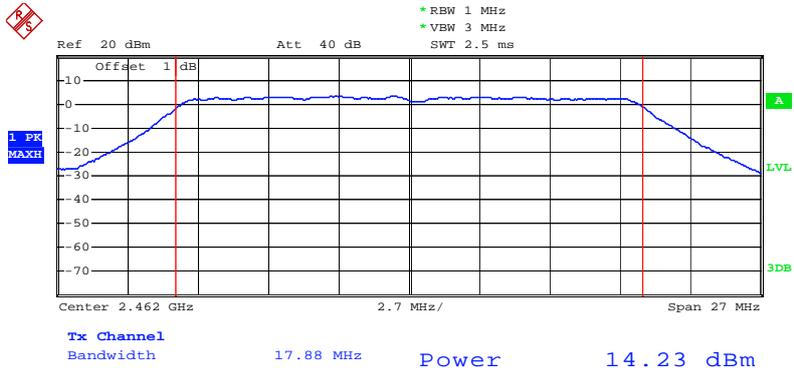
Date: 2.APR.2014 17:22:09

802.11n Channel Middle 2437MHz (20MHz)



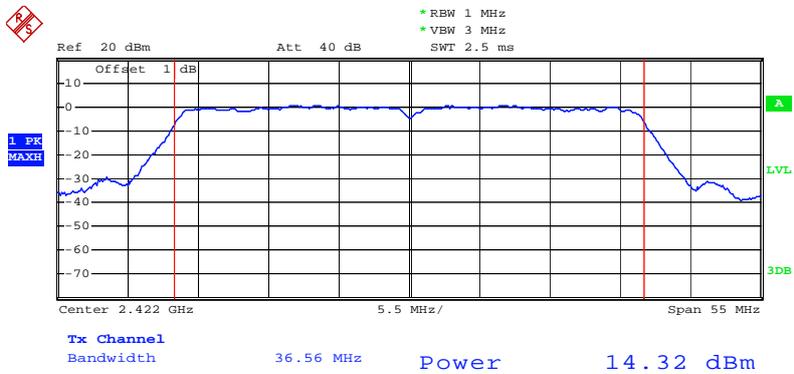
Date: 2.APR.2014 17:22:38

802.11n Channel High 2462MHz (20MHz)



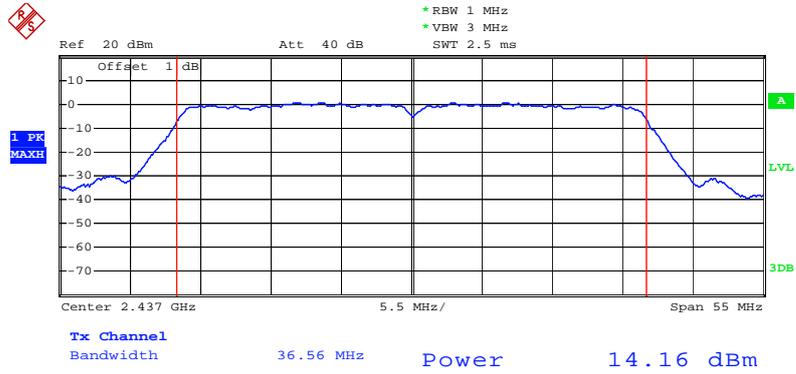
Date: 2.APR.2014 17:23:45

802.11n Channel Low 2422MHz (40MHz)



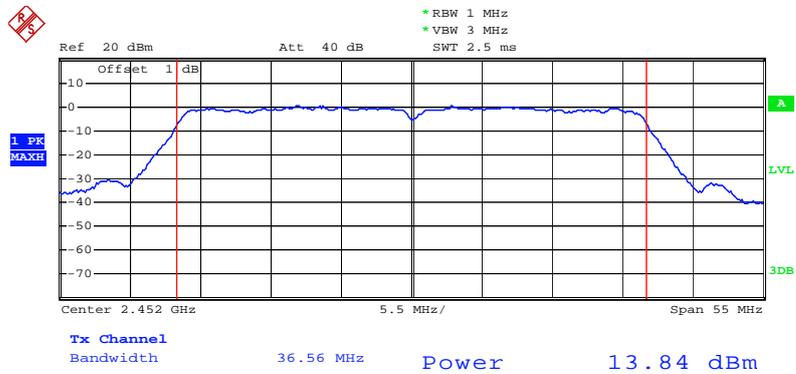
Date: 2.APR.2014 17:27:37

802.11n Channel Middle 2437MHz (40MHz)



Date: 2.APR.2014 17:27:02

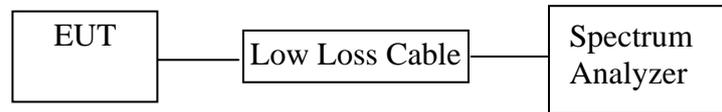
802.11n Channel High 2452MHz (40MHz)



Date: 2.APR.2014 17:25:51

8. POWER SPECTRAL DENSITY MEASUREMENT

8.1. Block Diagram of Test Setup



8.2. The Requirement For Section 15.247(e)

Section 15.247(e): For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

8.3. EUT Configuration on Measurement

The equipment are installed on the emission Measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

8.4. Operating Condition of EUT

8.4.1. Setup the EUT and simulator as shown as Section 8.1.

8.4.2. Turn on the power of all equipment.

8.4.3. Let the EUT work in TX modes measure it. The transmit frequency are 2412-2462 and 2422-2452MHz. We select 2412MHz, 2437MHz, 2462MHz and 2422MHz, 2437MHz, 2452MHz TX frequency to transmit.

8.5. Test Procedure

8.5.1. The transmitter output was connected to the spectrum analyzer through a low loss cable.

8.5.2. Measurement Procedure PKPSD:

This procedure must be used if maximum peak conducted output power was used to demonstrate compliance to the fundamental output power limit, and is optional if the maximum (average) conducted output power was used to demonstrate compliance.

1. Set analyzer center frequency to DTS channel center frequency.
2. Set the span to 1.5 times the DTS channel bandwidth.

3. Set the RBW $3 \text{ kHz} \leq \text{RBW} \leq 100 \text{ kHz}$.
4. Set the VBW $\geq 3 \times \text{RBW}$.
5. Detector = peak.
6. Sweep time = auto couple.
7. Trace mode = max hold.
8. Allow trace to fully stabilize.
9. Use the peak marker function to determine the maximum amplitude level.
10. If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

8.5.3.Measurement the maximum power spectral density.

8.6.Test Result

The test was performed with 802.11b			
Channel	Frequency (MHz)	Power Spectral Density (dBm)	Limits (dBm)
Low	2412	-11.89	8 dBm
Middle	2437	-12.10	8 dBm
High	2462	-12.43	8 dBm

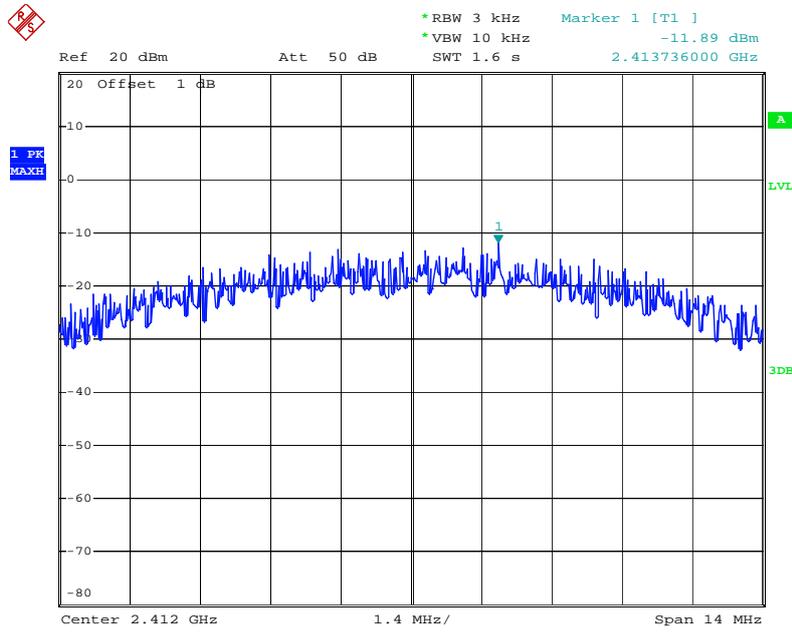
The test was performed with 802.11g			
Channel	Frequency (MHz)	Power Spectral Density (dBm)	Limits (dBm)
Low	2412	-19.74	8 dBm
Middle	2437	-20.04	8 dBm
High	2462	-20.29	8 dBm

The test was performed with 802.11n (20MHz)			
Channel	Frequency (MHz)	Power Spectral Density (dBm)	Limits (dBm)
Low	2412	-20.57	8 dBm
Middle	2437	-20.43	8 dBm
High	2462	-20.87	8 dBm

The test was performed with 802.11n (40MHz)			
Channel	Frequency (MHz)	Power Spectral Density (dBm)	Limits (dBm)
Low	2422	-21.72	8 dBm
Middle	2437	-22.44	8 dBm
High	2452	-21.78	8 dBm

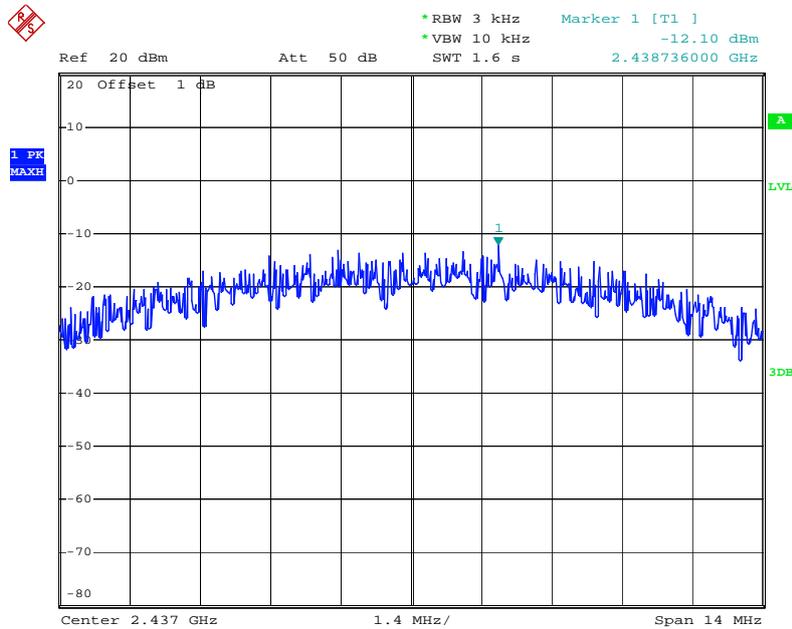
The spectrum analyzer plots are attached as below.

802.11b Channel Low 2412MHz



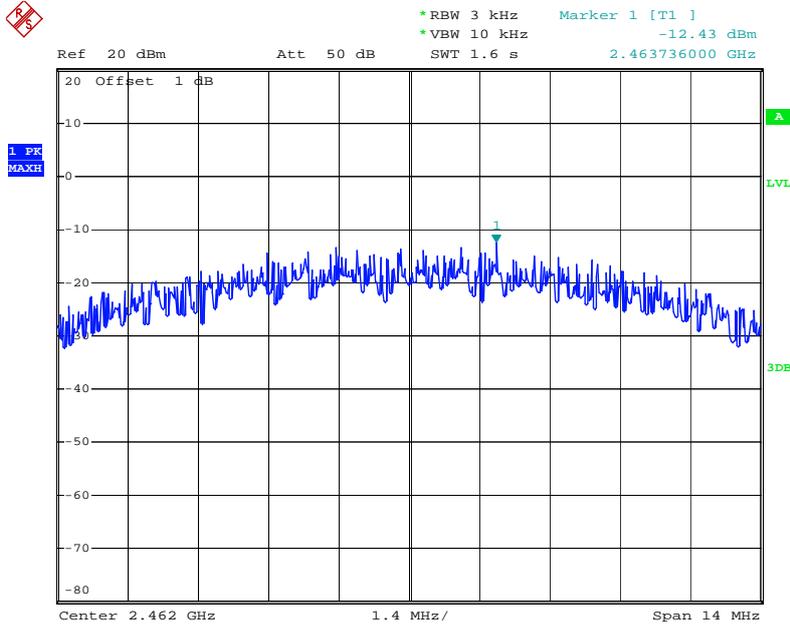
Date: 2.APR.2014 17:33:13

802.11b Channel Middle 2437MHz



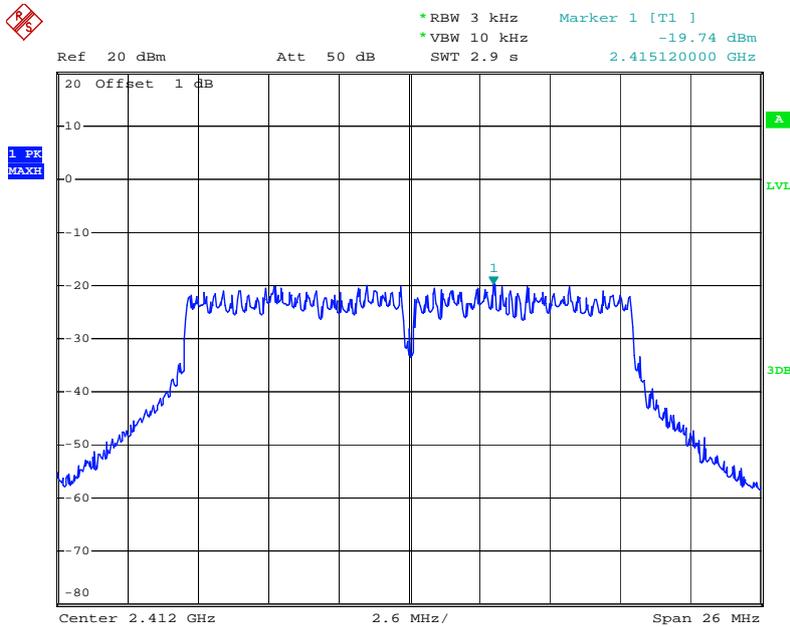
Date: 2.APR.2014 17:33:38

802.11b Channel High 2462MHz



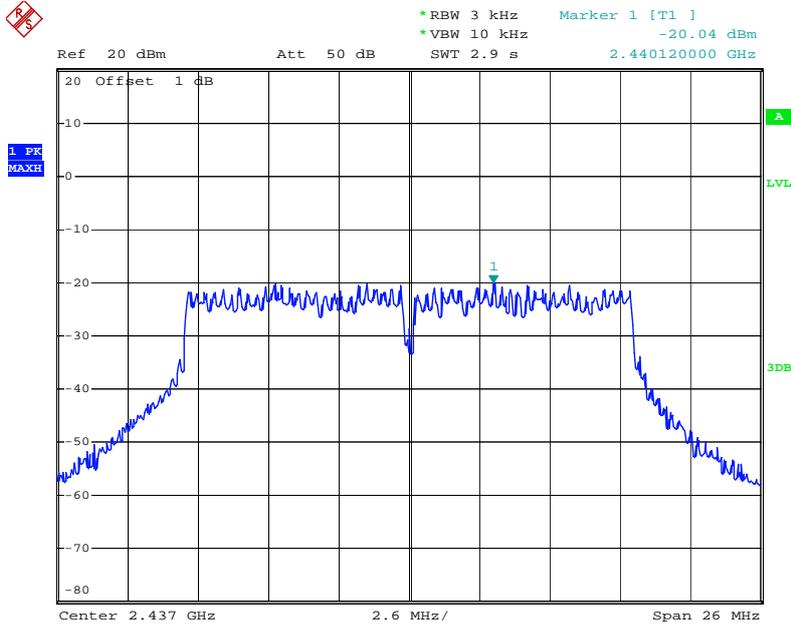
Date: 2.APR.2014 17:34:13

802.11g Channel Low 2412MHz



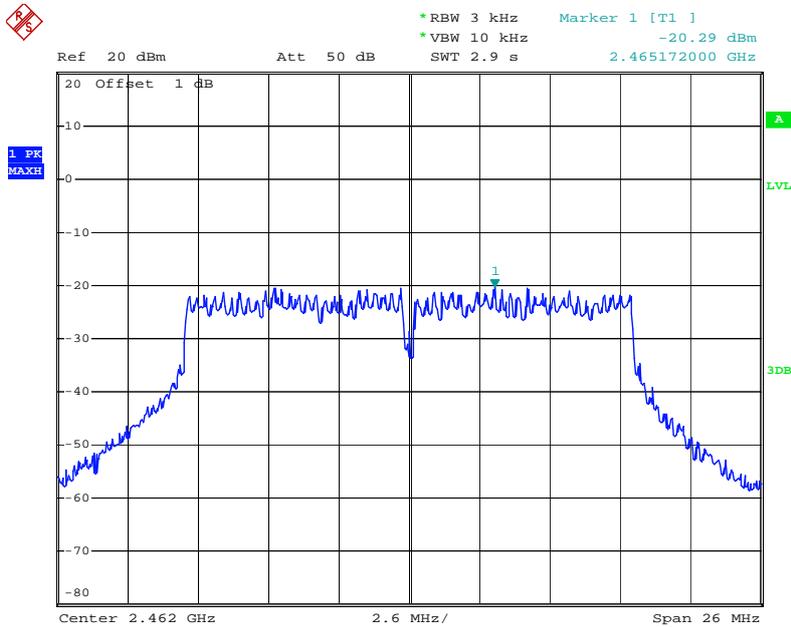
Date: 2.APR.2014 17:36:12

802.11g Channel Middle 2437MHz



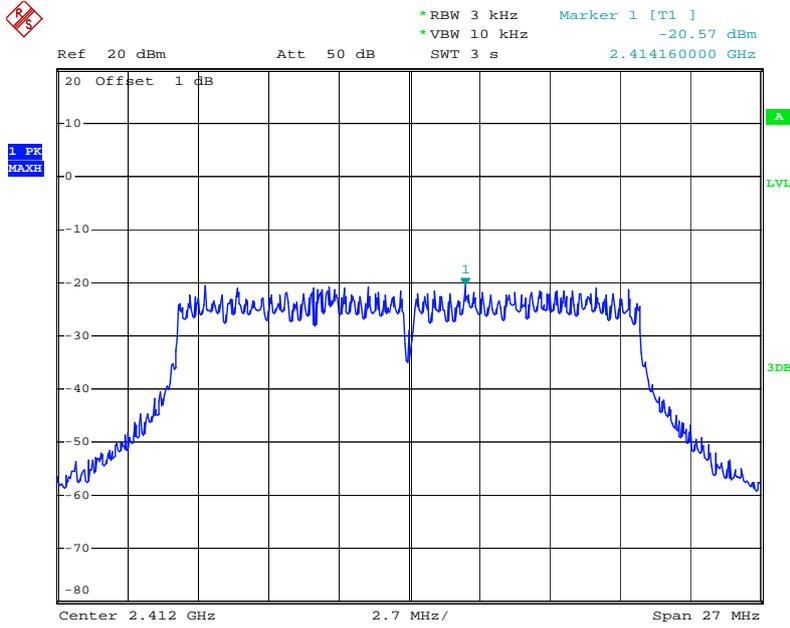
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802.11g Channel High 2462MHz



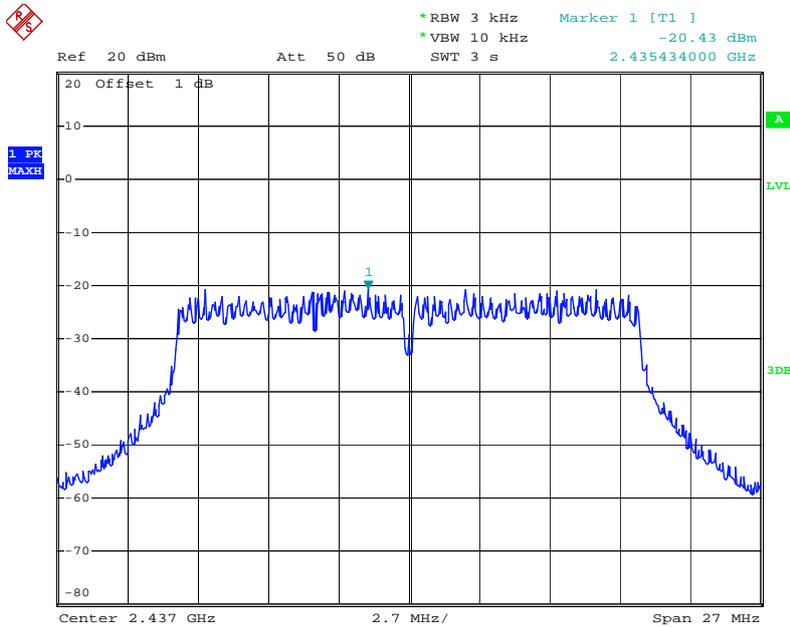
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802.11n Channel Low 2412MHz (20MHz)



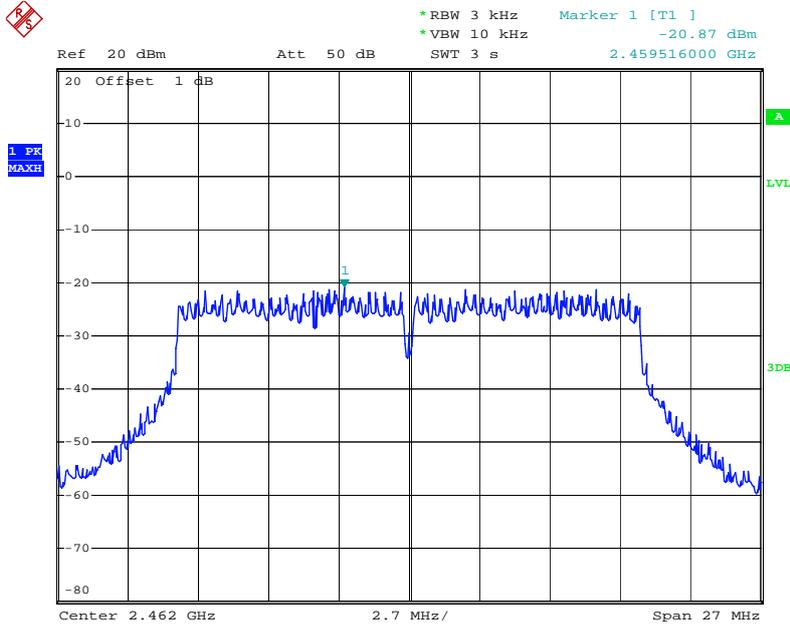
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802.11n Channel Middle 2437MHz (20MHz)



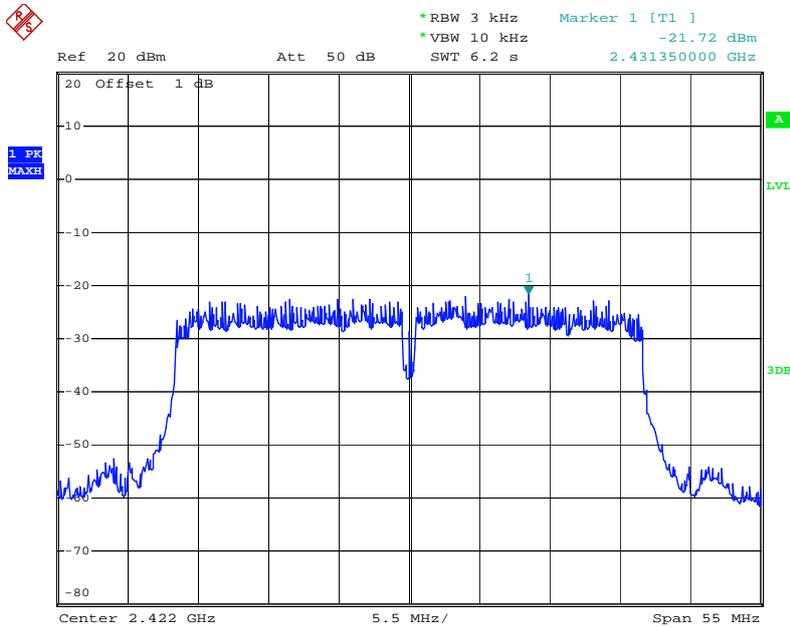
Date: 2.APR.2014 17:37:11

802.11n Channel High 2462MHz(20MHz)



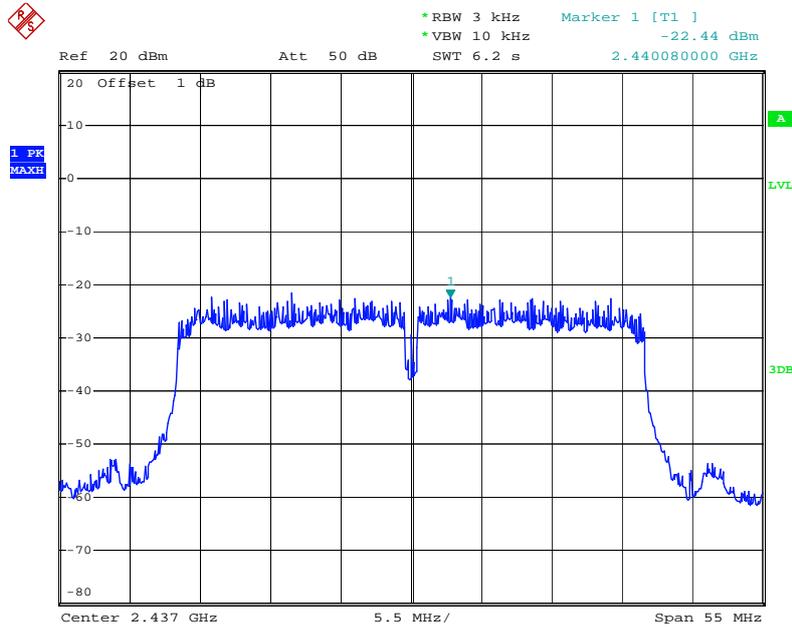
Date: 2.APR.2014 17:37:48

802.11n Channel Low 2422MHz (40MHz)



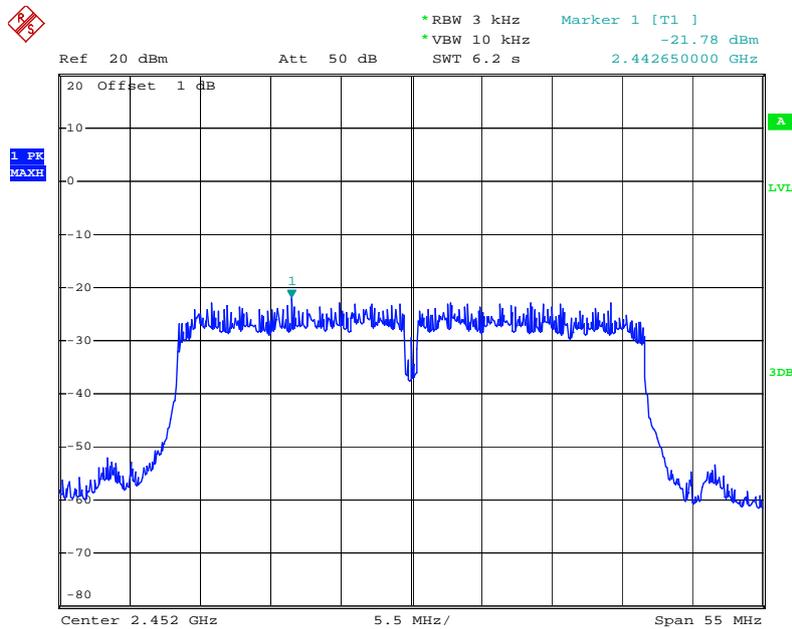
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802.11n Channel Middle 2437MHz(40MHz)



Date: 2.APR.2014 17:30:47

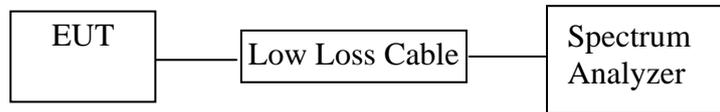
802.11n Channel High 2452MHz(40MHz)



Date: 2.APR.2014 17:31:23

9. BAND EDGE COMPLIANCE TEST

9.1. Block Diagram of Test Setup



9.2. The Requirement For Section 15.247(d)

Section 15.247(d): In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a).

9.3. EUT Configuration on Measurement

The equipment are installed on the emission Measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

9.4. Operating Condition of EUT

9.4.1. Setup the EUT and simulator as shown as Section 9.1.

9.4.2. Turn on the power of all equipment.

9.4.3. Let the EUT work in TX modes measure it. The transmit frequency are 2412-2462 and 2422-2452MHz MHz. We select 2412MHz, 2462MHz and 2422MHz, 2452MHz TX frequency to transmit.

9.5. Test Procedure

Conducted Band Edge:

9.5.1. The transmitter output was connected to the spectrum analyzer via a low loss cable.

9.5.2. Set RBW of spectrum analyzer to 100kHz and VBW to 300kHz.

Radiate Band Edge:

9.5.3. The EUT is placed on a turntable, which is 0.8m above the ground plane and worked at highest radiated power.

9.5.4. The turntable was rotated for 360 degrees to determine the position of maximum emission level.

9.5.5. EUT is set 3m away from the receiving antenna, which is varied from 1m to 4m to find out the highest emission.

9.5.6. Set the spectrum analyzer in the following setting in order to capture the lower and upper band-edges of the emission:

9.5.7. RBW=1MHz, VBW=1MHz

9.5.8. The band edges was measured and recorded.

9.6. Test Result

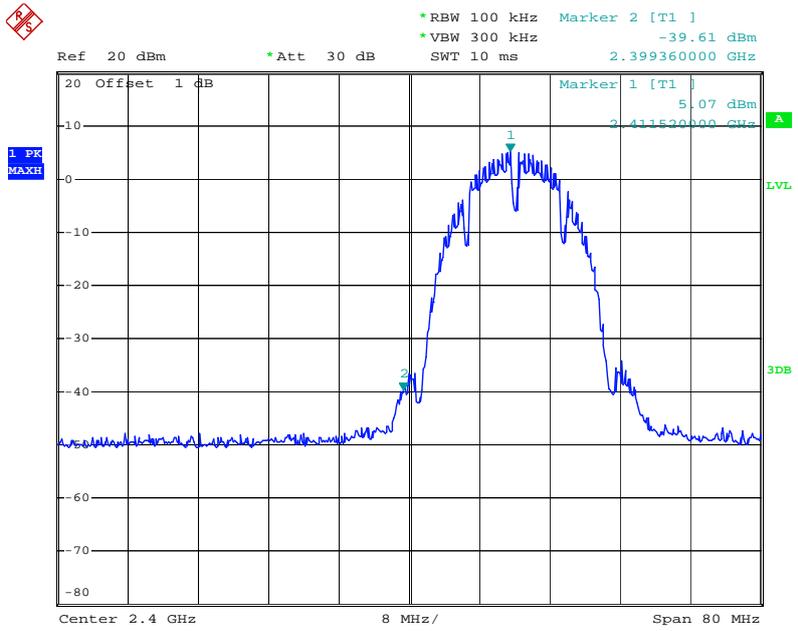
The test was performed with 802.11b		
Frequency (MHz)	Result of Band Edge (dBc)	Limit of Band Edge (dBc)
2412	44.61	> 20dBc
2462	52.87	> 20dBc

The test was performed with 802.11g		
Frequency (MHz)	Result of Band Edge (dBc)	Limit of Band Edge (dBc)
2412	34.95	> 20dBc
2462	40.66	> 20dBc

The test was performed with 802.11n (20MHz)		
Frequency (MHz)	Result of Band Edge (dBc)	Limit of Band Edge (dBc)
2412	36.25	> 20dBc
2462	41.87	> 20dBc

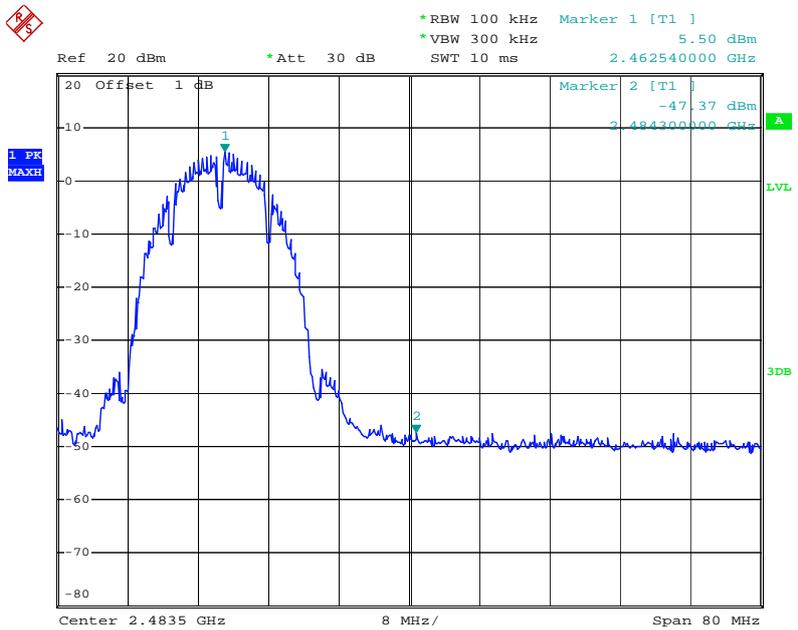
The test was performed with 802.11n (40MHz)		
Frequency (MHz)	Result of Band Edge (dBc)	Limit of Band Edge (dBc)
2422	31.15	> 20dBc
2452	37.70	> 20dBc

802.11b Channel Low 2412MHz



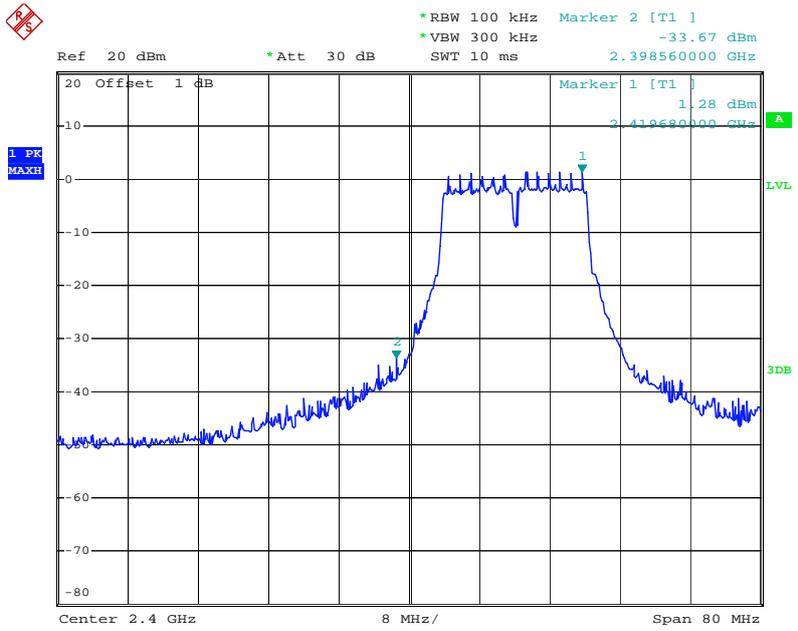
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Date: 2 .APR.2014

802.11b Channel High 2462MHz



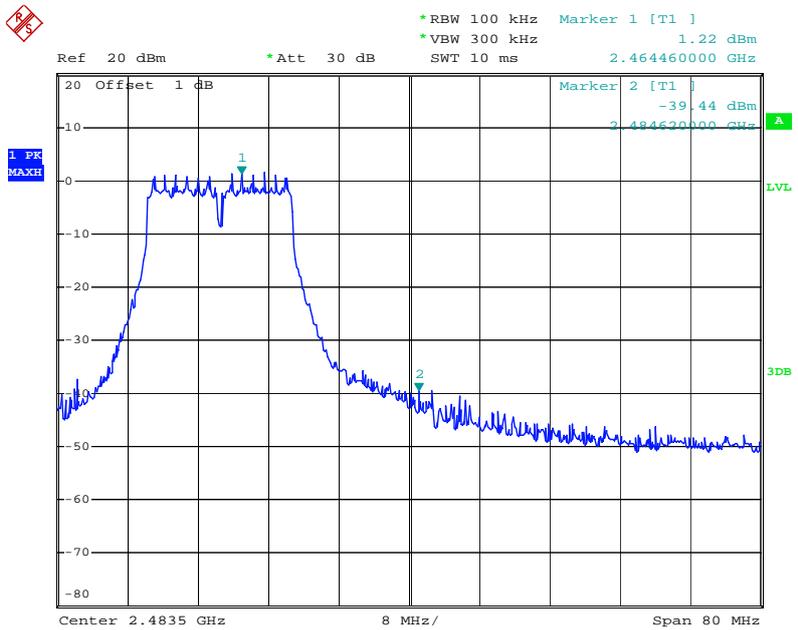
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802.11g Channel Low 2412MHz



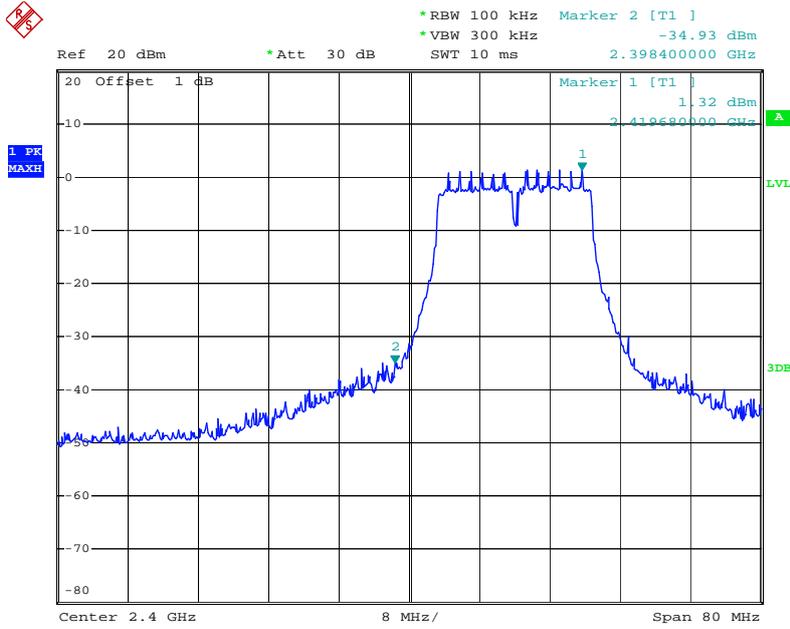
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Date: 2.APR.2014

802.11g Channel High 2462MHz



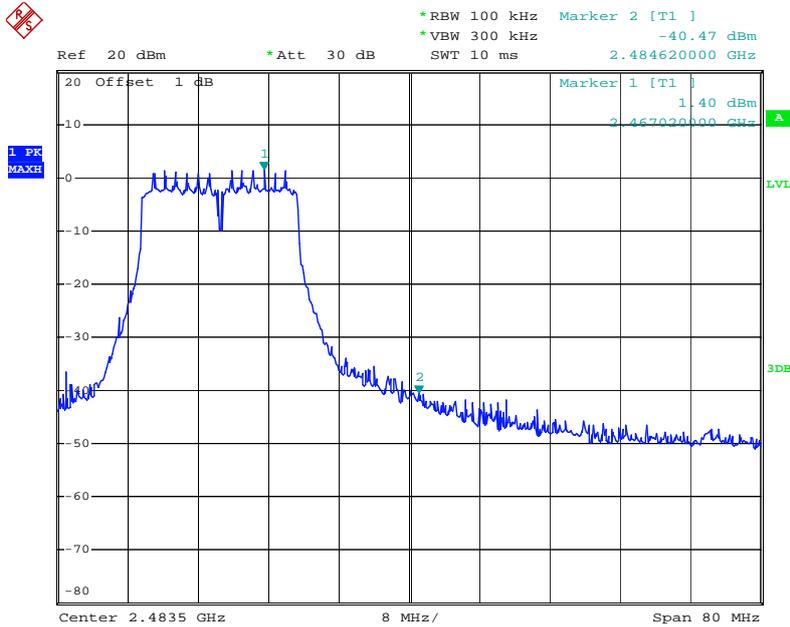
Date: 2.APR.2014 11:32:11

802.11n Channel Low 2412MHz (20MHz)



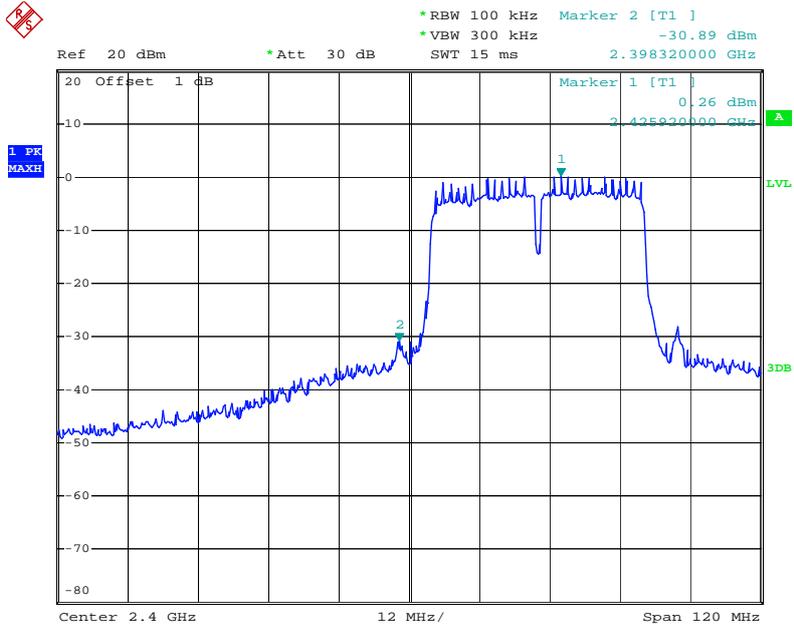
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Date: 2 APR 2014

802.11n Channel High 2462MHz (20MHz)



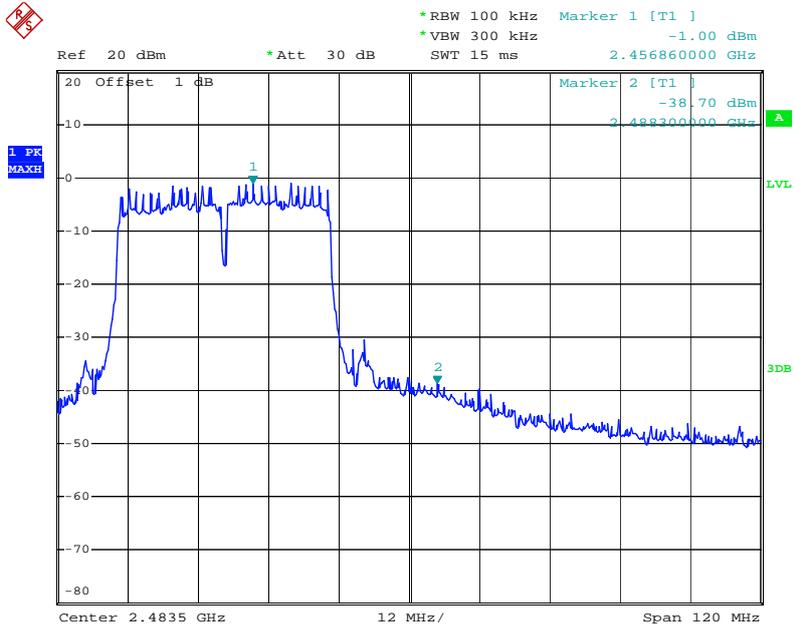
Date: 2 APR 2014 11:35:41

802.11n Channel Low 2422MHz (40MHz)



Date: 25 .JAN 2014 11:28:23
Date: 2 .APR. 2014

802.11n Channel High 2452MHz (40MHz)



Date: 2 .APR. 2014 11:29:10

Radiated Band Edge Result

Note:

1. Emissions attenuated more than 20 dB below the permissible value are not reported.
2. The field strength is calculated by adding the antenna factor, high pass filter loss(if used) and cable loss, and subtracting the amplifier gain(if any)from the measured reading. The basic equation calculation is as follows:

$$\text{Result} = \text{Reading} + \text{Corrected Factor}$$

3. Display the measurement of peak values.



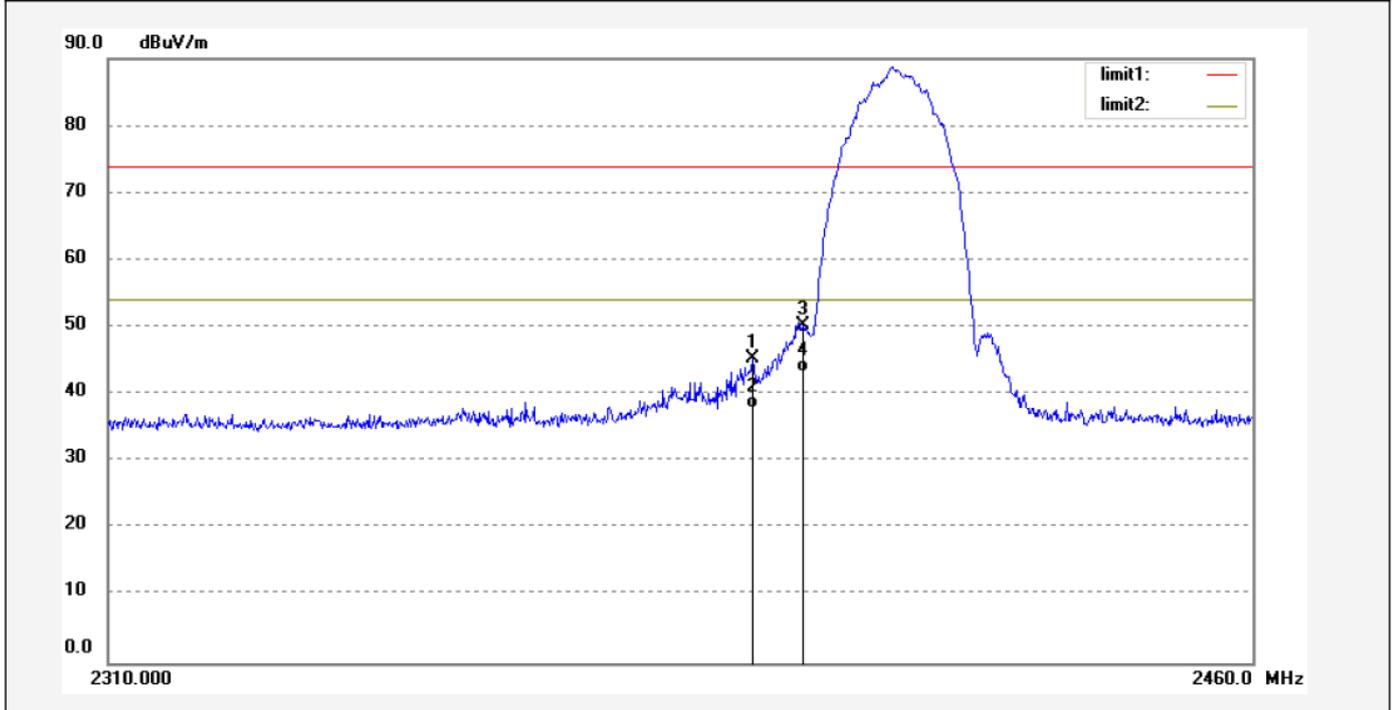
ACCURATE TECHNOLOGY CO., LTD.

F1,Bldg,A,Changyuan New Material Port Keyuan Rd,
Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 1# Chamber
Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.: alen #3892	Polarization: Horizontal
Standard: FCC PK	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 14/03/31/
Temp.(C)/Hum.(%) 25 C / 55 %	Time: 16/43/02
EUT: Mohu Channels	Engineer Signature:
Mode: TX 2412MHz(802.11b)	Distance: 3m
Model: MHCHBOX01	
Manufacturer: VideoStrong	

Note: Report No:ATE20140410

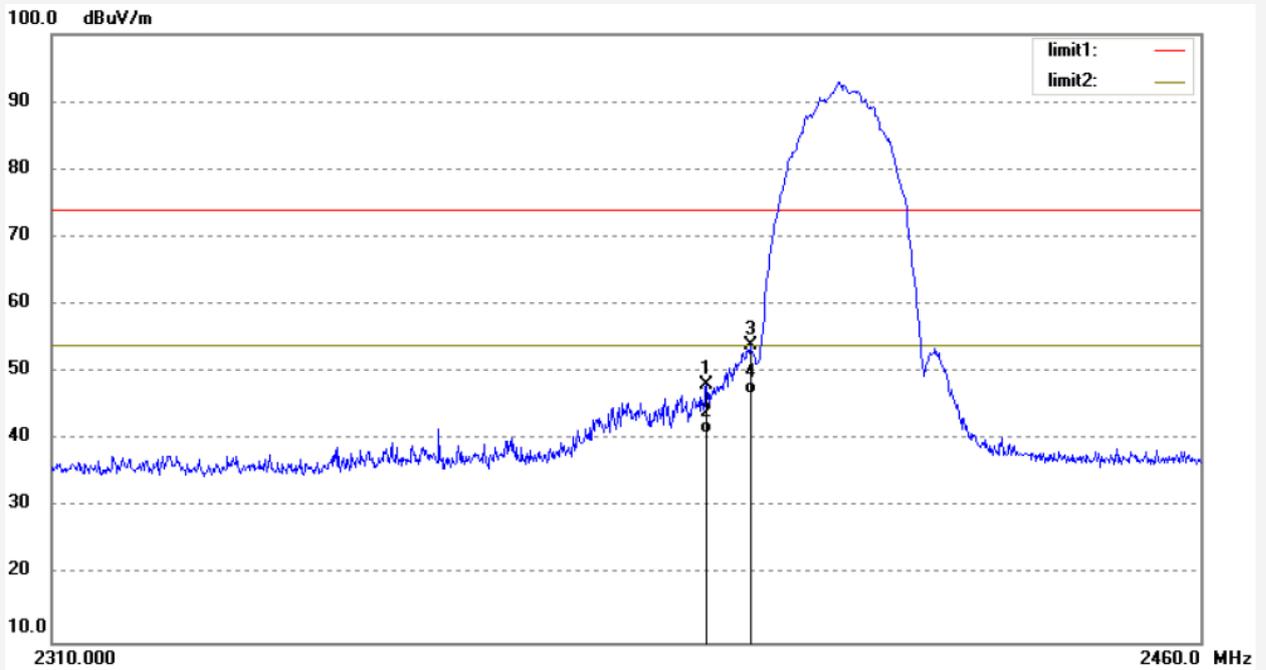


No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2393.400	52.01	-6.77	45.24	74.00	-28.76	peak			
2	2393.400	44.78	-6.77	38.01	54.00	-15.99	AVG			
3	2400.000	56.94	-6.76	50.18	74.00	-23.82	peak			
4	2400.000	50.01	-6.76	43.25	54.00	-10.75	AVG			

Job No.: alen #3893
Standard: FCC PK
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Mohu Channels
Mode: TX 2412MHz(802.11b)
Model: MHCHBOX01
Manufacturer: VideoStrong

Polarization: Vertical
Power Source: AC 120V/60Hz
Date: 14/03/31/
Time: 16/44/28
Engineer Signature:
Distance: 3m

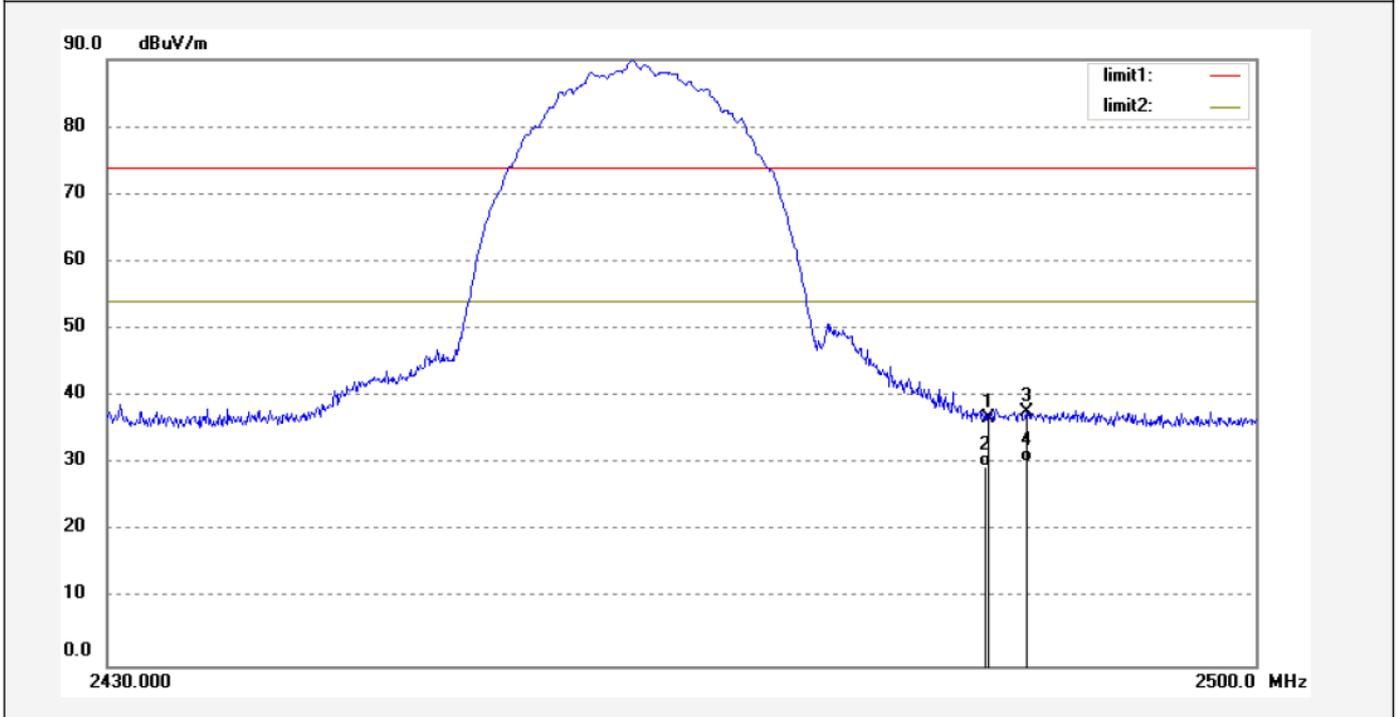
Note: Report No:ATE20140410



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2394.450	54.88	-6.76	48.12	74.00	-25.88	peak			
2	2394.450	47.80	-6.76	41.04	54.00	-12.96	AVG			
3	2400.150	60.74	-6.76	53.98	74.00	-20.02	peak			
4	2400.150	53.51	-6.76	46.75	54.00	-7.25	AVG			

Job No.: alen #3895	Polarization: Horizontal
Standard: FCC PK	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 14/03/31/
Temp.(C)/Hum.(%) 25 C / 55 %	Time: 16/47/23
EUT: Mohu Channels	Engineer Signature:
Mode: TX 2462MHz(802.11b)	Distance: 3m
Model: MHCHBOX01	
Manufacturer: VideoStrong	

Note: Report No:ATE20140410

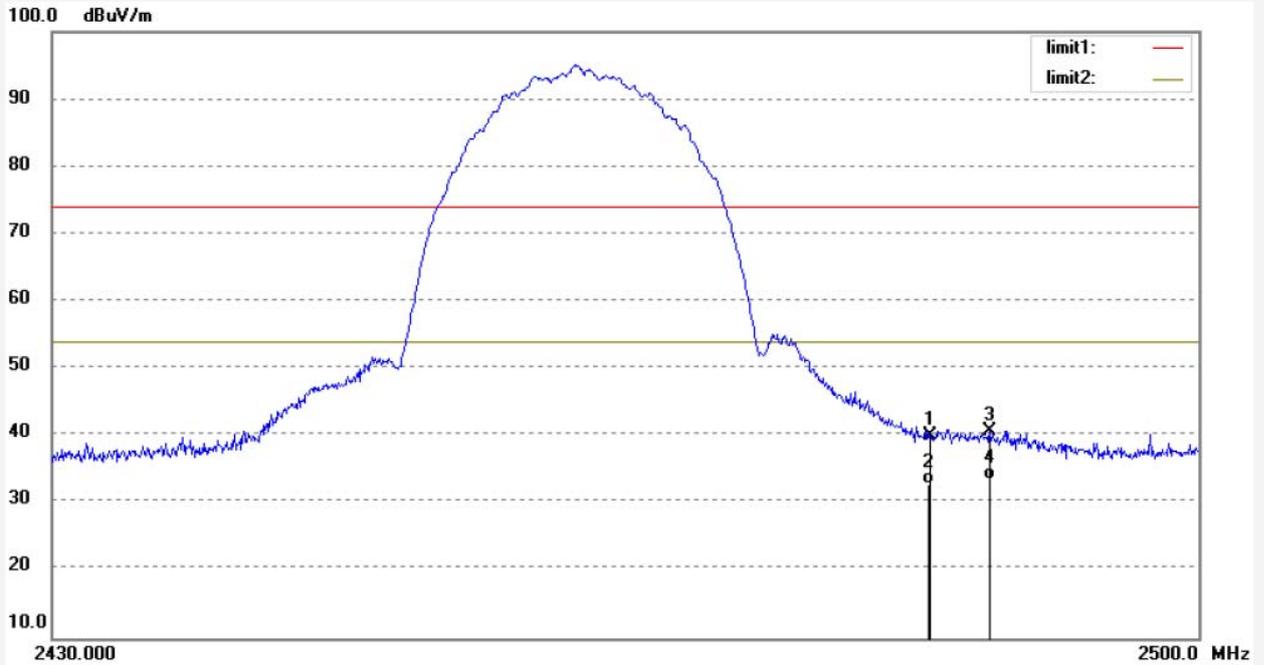


No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2483.550	43.24	-6.54	36.70	74.00	-37.30	peak			
2	2483.550	36.21	-6.54	29.67	54.00	-24.33	AVG			
3	2485.860	44.32	-6.54	37.78	74.00	-36.22	peak			
4	2485.860	36.87	-6.54	30.33	54.00	-23.67	AVG			

Job No.: alen #3894
Standard: FCC PK
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Mohu Channels
Mode: TX 2462MHz(802.11b)
Model: MHCHBOX01
Manufacturer: VideoStrong

Polarization: Vertical
Power Source: AC 120V/60Hz
Date: 14/03/31/
Time: 16/45/54
Engineer Signature:
Distance: 3m

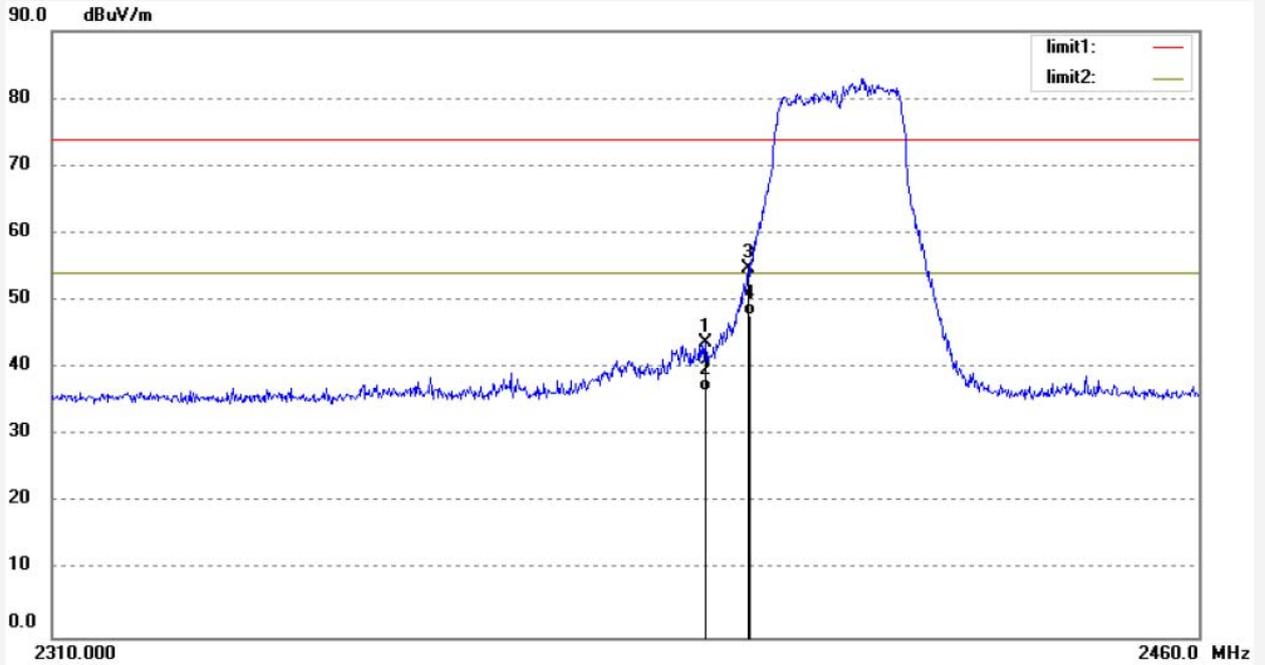
Note: Report No:ATE20140410



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2483.480	46.51	-6.54	39.97	74.00	-34.03	peak			
2	2483.480	39.35	-6.54	32.81	54.00	-21.19	AVG			
3	2487.120	47.35	-6.53	40.82	74.00	-33.18	peak			
4	2487.120	40.10	-6.53	33.57	54.00	-20.43	AVG			

Job No.: alen #3899	Polarization: Horizontal
Standard: FCC PK	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 14/03/31/
Temp.(C)/Hum.(%) 25 C / 55 %	Time: 16/53/03
EUT: Mohu Channels	Engineer Signature:
Mode: TX 2412MHz(802.11g)	Distance: 3m
Model: MHCHBOX01	
Manufacturer: VideoStrong	

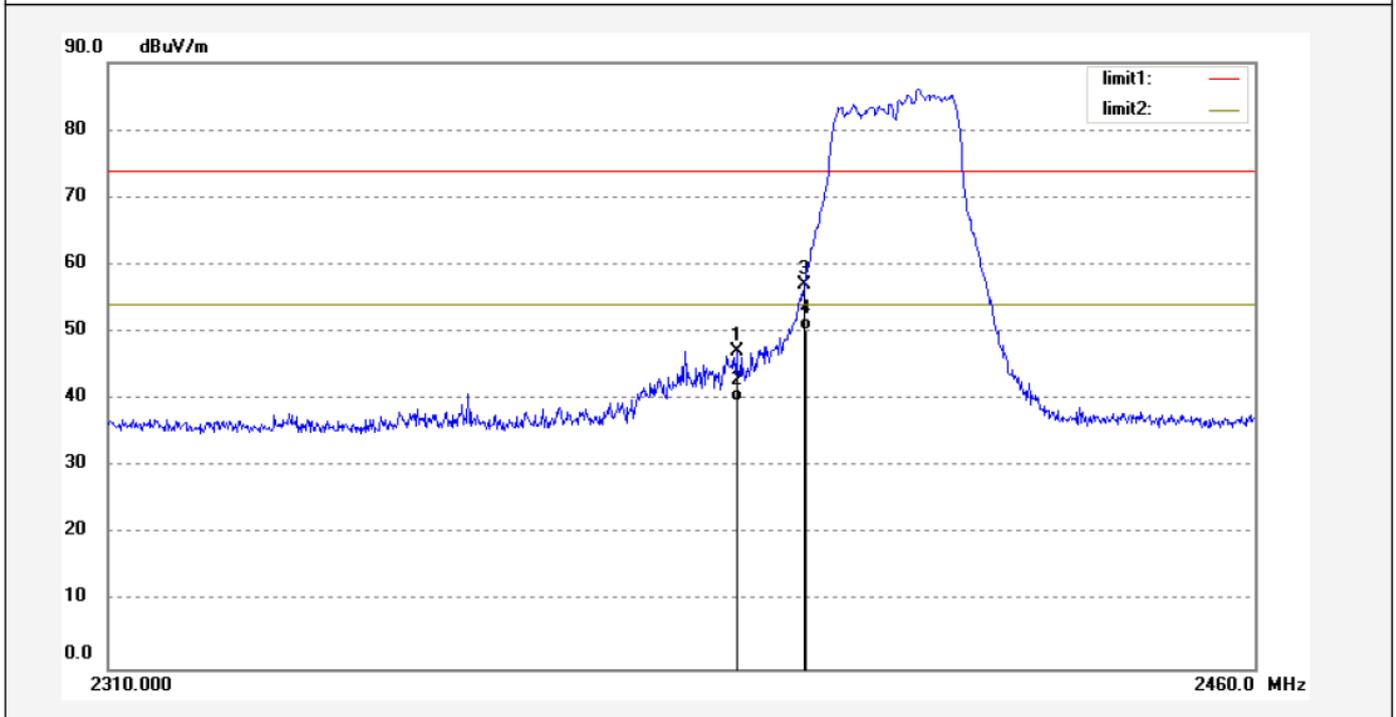
Note: Report No:ATE20140410



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2394.450	50.59	-6.76	43.83	74.00	-30.17	peak			
2	2394.450	43.25	-6.76	36.49	54.00	-17.51	AVG			
3	2400.000	61.60	-6.76	54.84	74.00	-19.16	peak			
4	2400.000	54.52	-6.76	47.76	54.00	-6.24	AVG			

Job No.: alen #3898	Polarization: Vertical
Standard: FCC PK	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 14/03/31/
Temp.(C)/Hum.(%) 25 C / 55 %	Time: 16/51/38
EUT: Mohu Channels	Engineer Signature:
Mode: TX 2412MHz(802.11g)	Distance: 3m
Model: MHCHBOX01	
Manufacturer: VideoStrong	

Note: Report No:ATE20140410

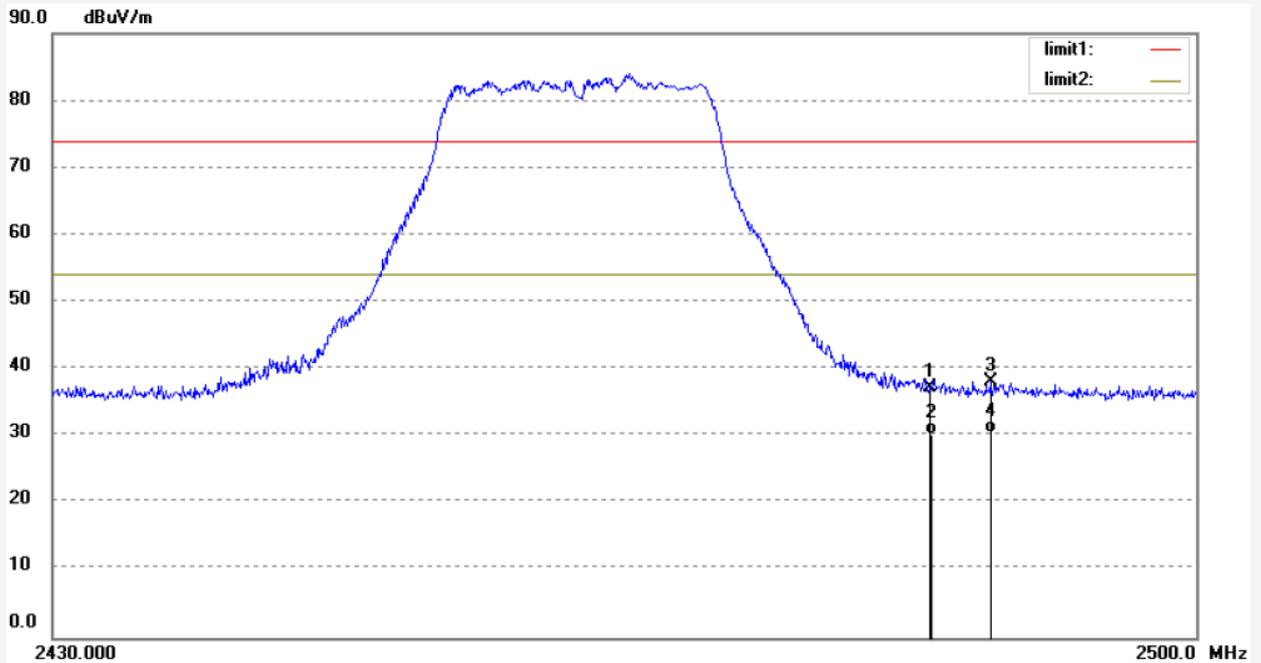


No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2391.150	53.81	-6.77	47.04	74.00	-26.96	peak			
2	2391.150	46.54	-6.77	39.77	54.00	-14.23	AVG			
3	2400.000	63.86	-6.76	57.10	74.00	-16.90	peak			
4	2400.000	57.01	-6.76	50.25	54.00	-3.75	AVG			

Job No.: alen #3896
Standard: FCC PK
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Mohu Channels
Mode: TX 2462MHz(802.11g)
Model: MHCHBOX01
Manufacturer: VideoStrong

Polarization: Horizontal
Power Source: AC 120V/60Hz
Date: 14/03/31/
Time: 16/48/53
Engineer Signature:
Distance: 3m

Note: Report No:ATE20140410

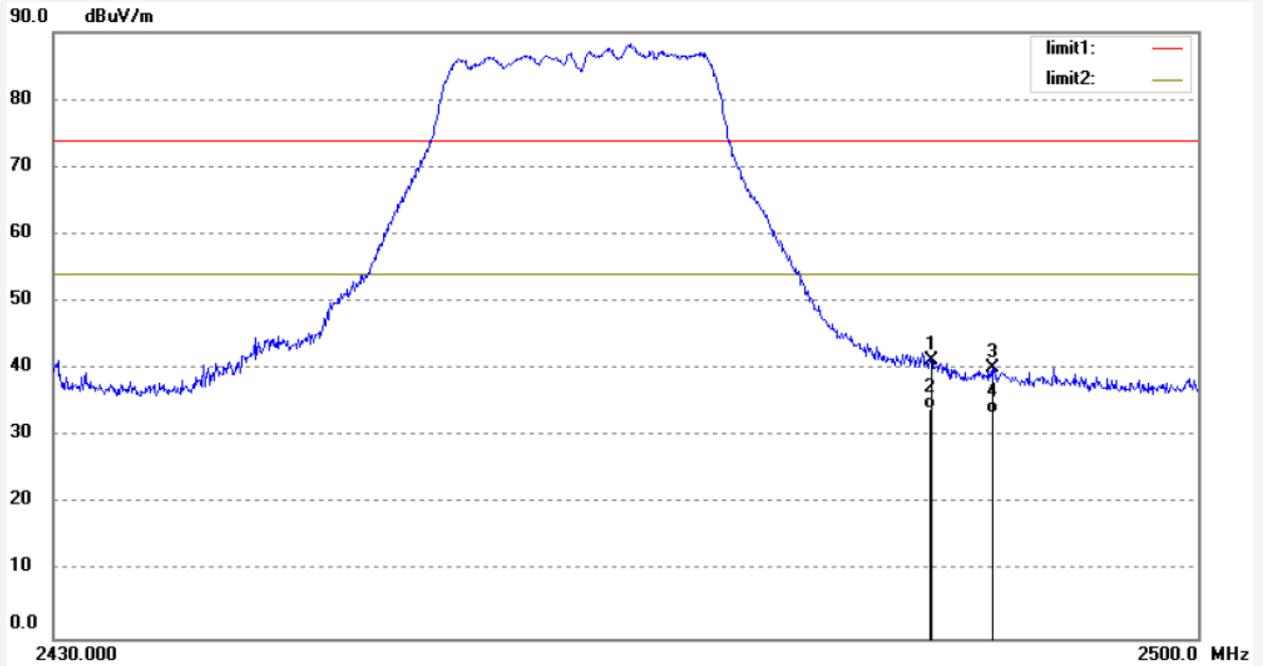


No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2483.550	43.81	-6.54	37.27	74.00	-36.73	peak			
2	2483.550	36.74	-6.54	30.20	54.00	-23.80	AVG			
3	2487.260	44.62	-6.53	38.09	74.00	-35.91	peak			
4	2487.260	36.98	-6.53	30.45	54.00	-23.55	AVG			

Job No.: alen #3897
Standard: FCC PK
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Mohu Channels
Mode: TX 2462MHz(802.11g)
Model: MHCHBOX01
Manufacturer: VideoStrong

Polarization: Vertical
Power Source: AC 120V/60Hz
Date: 14/03/31/
Time: 16/50/04
Engineer Signature:
Distance: 3m

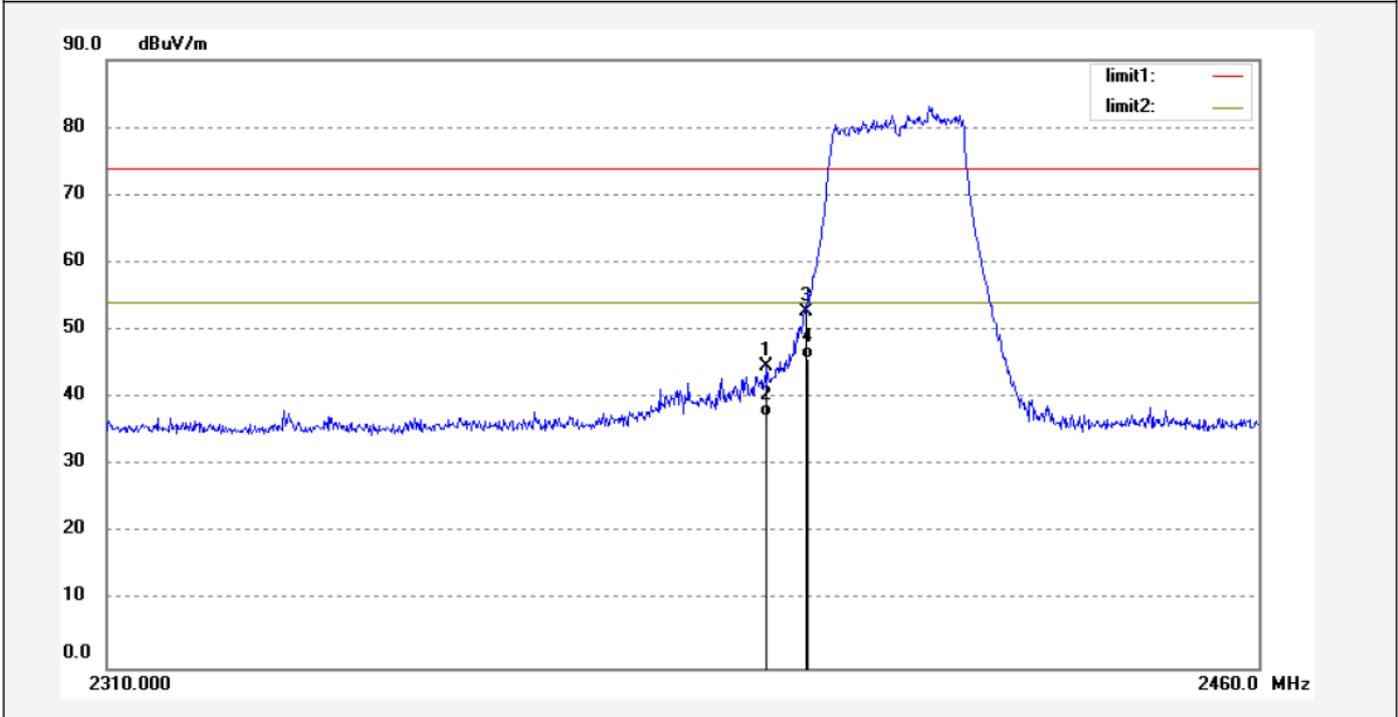
Note: Report No:ATE20140410



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2483.550	47.92	-6.54	41.38	74.00	-32.62	peak			
2	2483.550	40.68	-6.54	34.14	54.00	-19.86	AVG			
3	2487.330	46.80	-6.53	40.27	74.00	-33.73	peak			
4	2487.330	39.89	-6.53	33.36	54.00	-20.64	AVG			

Job No.: alen #3900	Polarization: Horizontal
Standard: FCC PK	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 14/03/31/
Temp.(C)/Hum.(%) 25 C / 55 %	Time: 16/55/55
EUT: Mohu Channels	Engineer Signature:
Mode: TX 2412MHz(802.11n20)	Distance: 3m
Model: MHCHBOX01	
Manufacturer: VideoStrong	

Note: Report No:ATE20140410

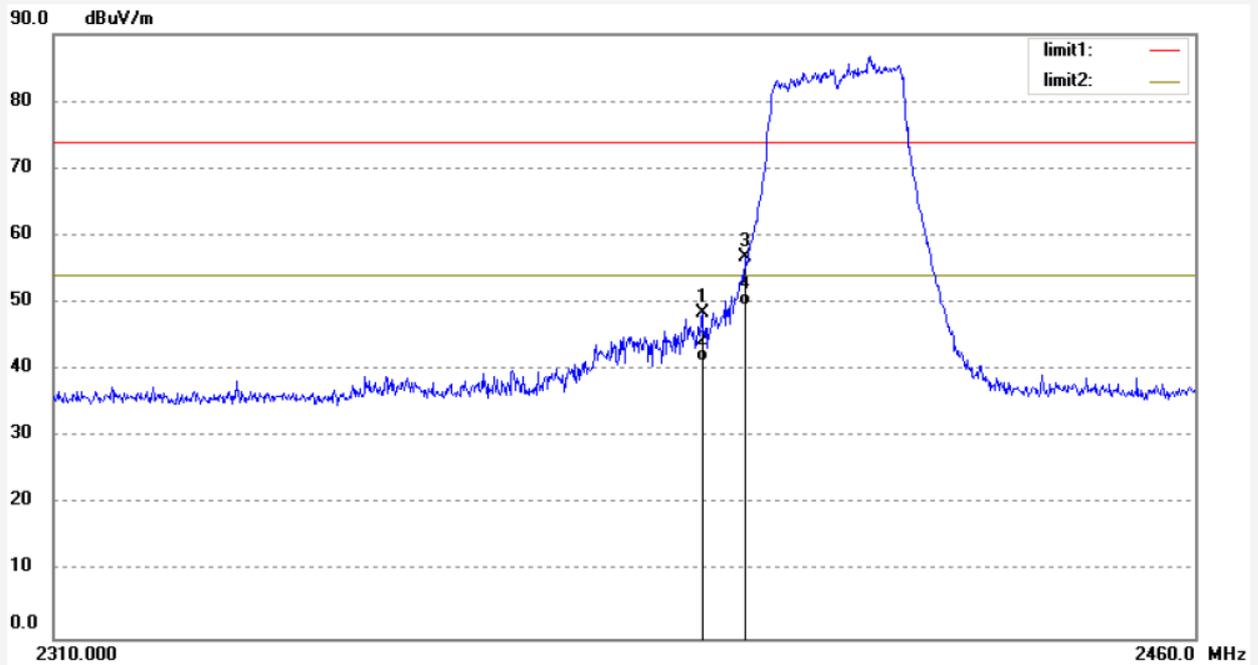


No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2394.900	51.46	-6.76	44.70	74.00	-29.30	peak			
2	2394.900	43.92	-6.76	37.16	54.00	-16.84	AVG			
3	2400.000	59.53	-6.76	52.77	74.00	-21.23	peak			
4	2400.000	52.51	-6.76	45.75	54.00	-8.25	AVG			

Job No.: alen #3901
Standard: FCC PK
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Mohu Channels
Mode: TX 2412MHz(802.11n20)
Model: MHCHBOX01
Manufacturer: VideoStrong

Polarization: Vertical
Power Source: AC 120V/60Hz
Date: 14/03/31/
Time: 16/57/17
Engineer Signature:
Distance: 3m

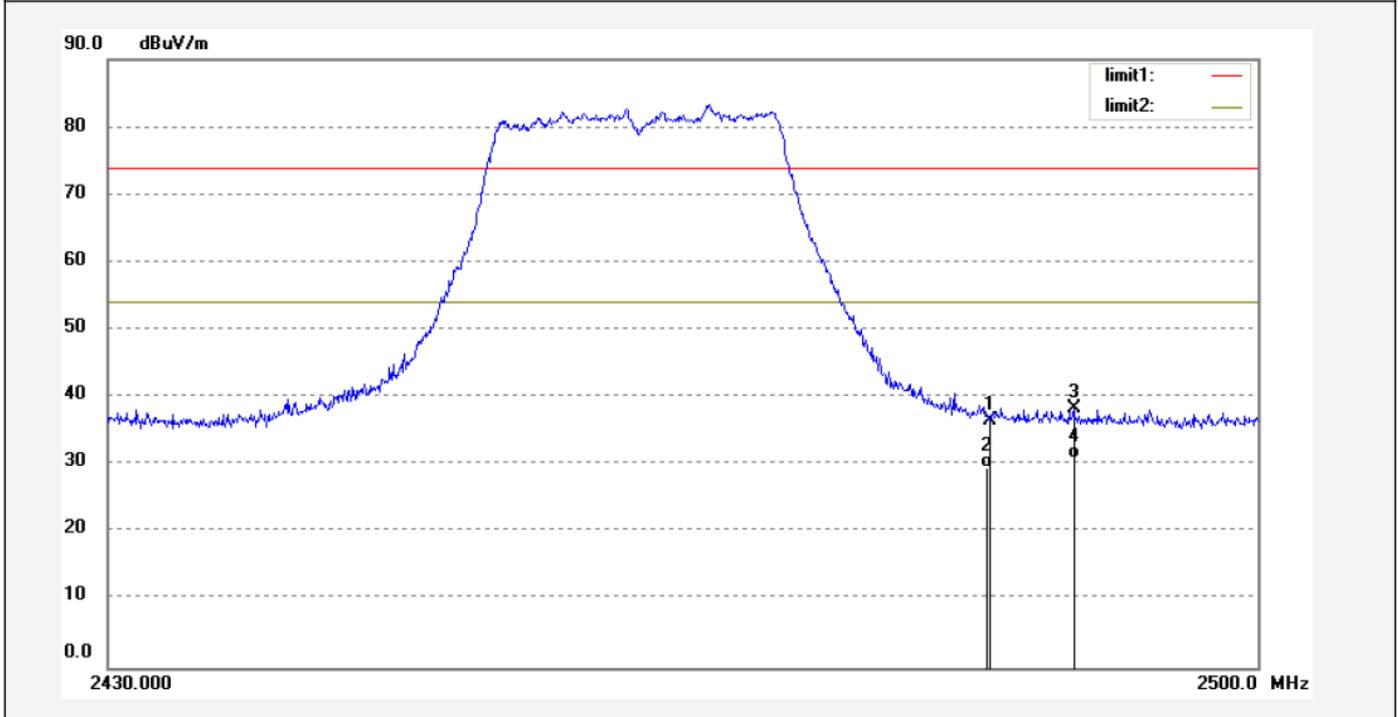
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No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2394.150	55.23	-6.77	48.46	74.00	-25.54	peak			
2	2394.150	48.01	-6.77	41.24	54.00	-12.76	AVG			
3	2399.850	63.49	-6.76	56.73	74.00	-17.27	peak			
4	2399.850	56.45	-6.76	49.69	54.00	-4.31	AVG			

Job No.: alen #3903	Polarization: Horizontal
Standard: FCC PK	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 14/03/31/
Temp.(C)/Hum.(%) 25 C / 55 %	Time: 16/59/57
EUT: Mohu Channels	Engineer Signature:
Mode: TX 2462MHz(802.11n20)	Distance: 3m
Model: MHCHBOX01	
Manufacturer: VideoStrong	

Note: Report No:ATE20140410

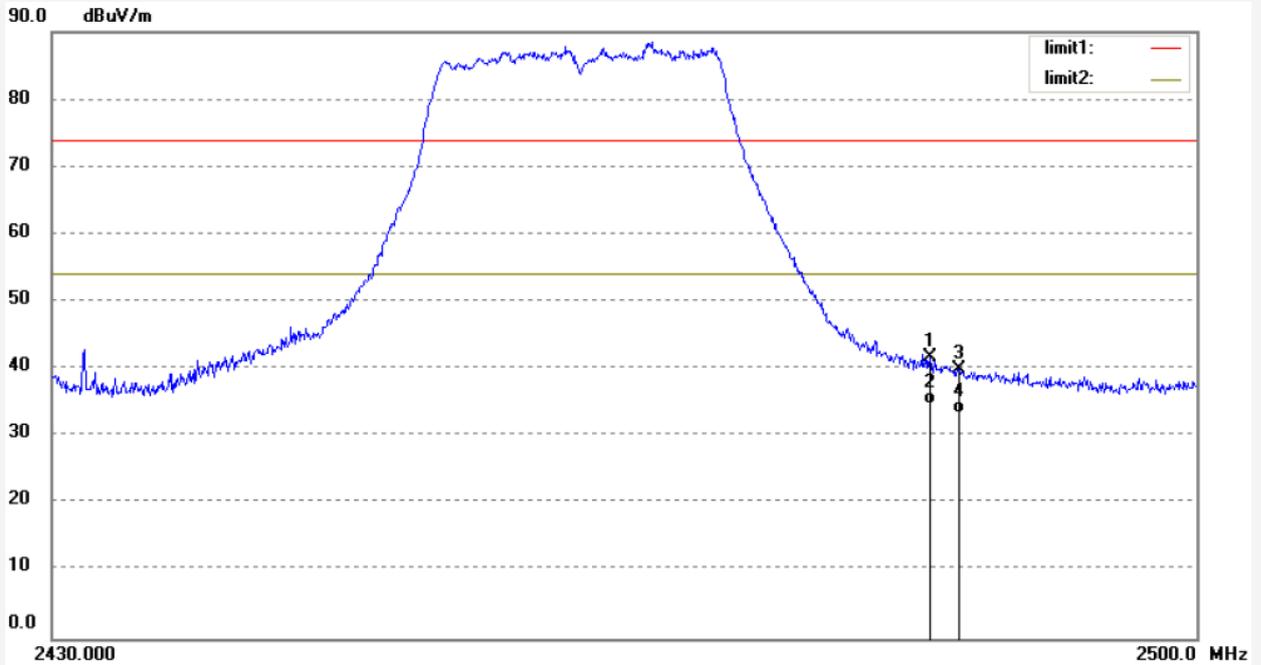


No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2483.550	43.12	-6.54	36.58	74.00	-37.42	peak			
2	2483.550	36.10	-6.54	29.56	54.00	-24.44	AVG			
3	2488.730	44.99	-6.52	38.47	74.00	-35.53	peak			
4	2488.730	37.51	-6.52	30.99	54.00	-23.01	AVG			

Job No.: alen #3902
Standard: FCC PK
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Mohu Channels
Mode: TX 2462MHz(802.11n20)
Model: MHCHBOX01
Manufacturer: VideoStrong

Polarization: Vertical
Power Source: AC 120V/60Hz
Date: 14/03/31/
Time: 16/58/34
Engineer Signature:
Distance: 3m

Note: Report No:ATE20140410

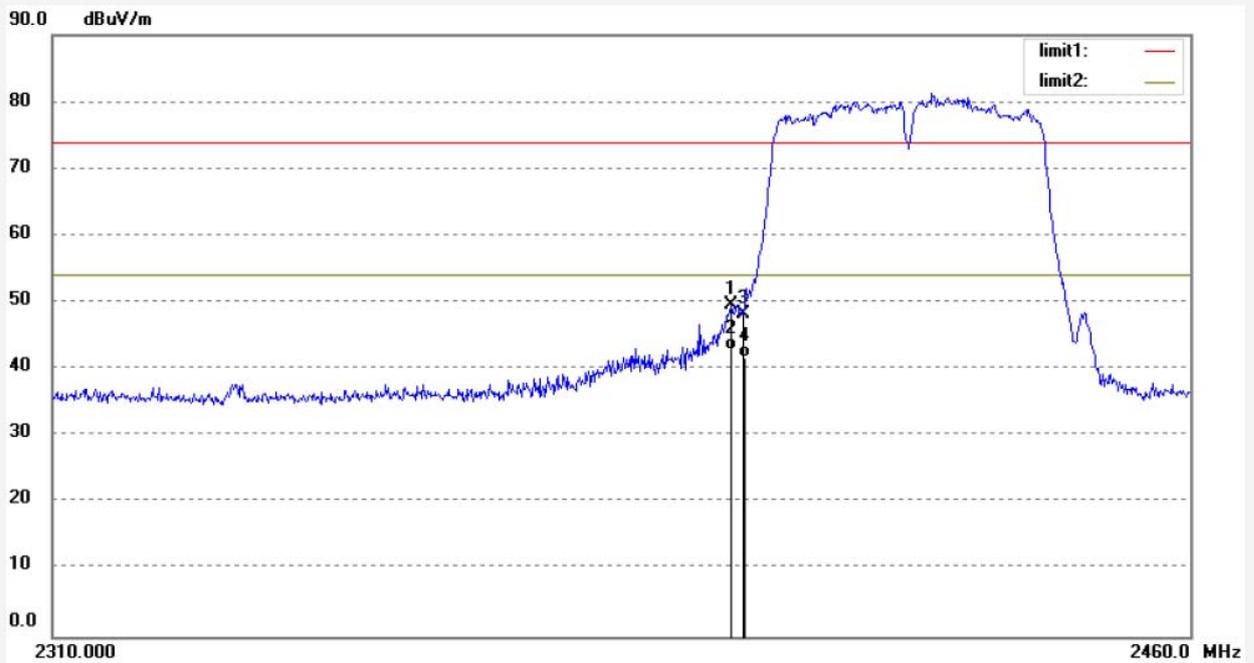


No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2483.550	48.30	-6.54	41.76	74.00	-32.24	peak			
2	2483.550	41.29	-6.54	34.75	54.00	-19.25	AVG			
3	2485.300	46.55	-6.54	40.01	74.00	-33.99	peak			
4	2485.300	40.02	-6.54	33.48	54.00	-20.52	AVG			

Job No.: alen #3907
Standard: FCC PK
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Mohu Channels
Mode: TX 2422MHz(802.11n40)
Model: MHCHBOX01
Manufacturer: VideoStrong

Polarization: Horizontal
Power Source: AC 120V/60Hz
Date: 14/03/31/
Time: 17/08/59
Engineer Signature:
Distance: 3m

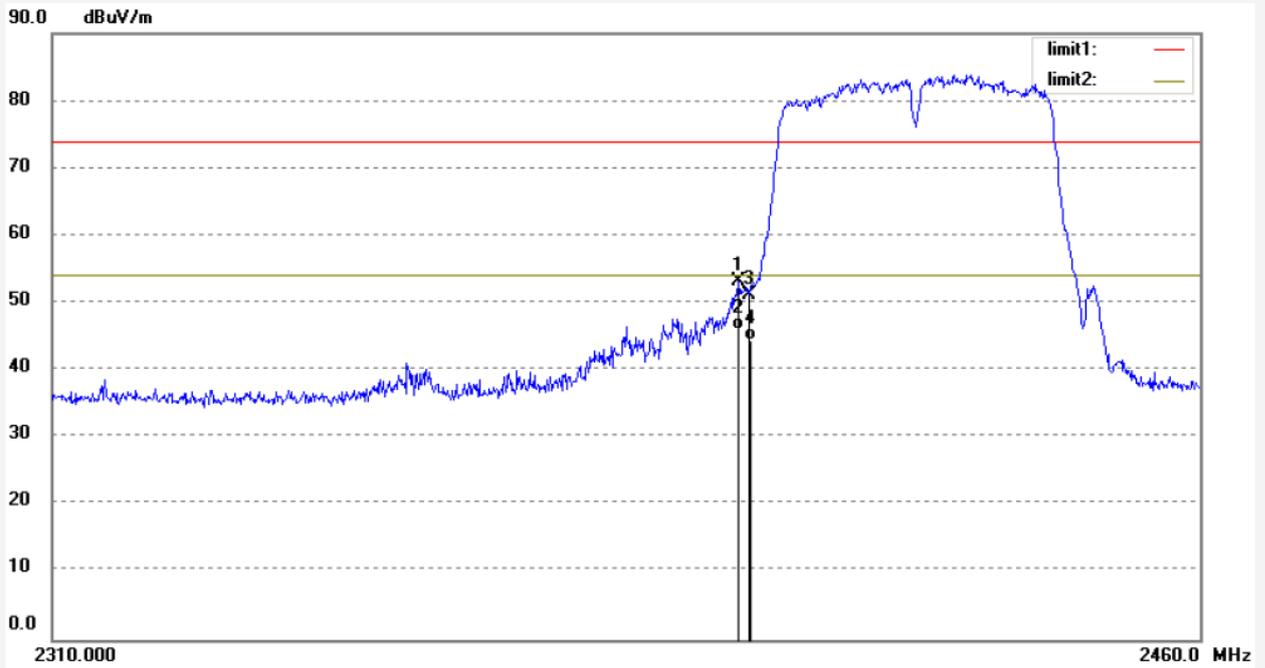
Note: Report No:ATE20140410



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2398.500	56.34	-6.75	49.59	74.00	-24.41	peak			
2	2398.500	49.54	-6.75	42.79	54.00	-11.21	AVG			
3	2400.000	55.01	-6.76	48.25	74.00	-25.75	peak			
4	2400.000	48.51	-6.76	41.75	54.00	-12.25	AVG			

Job No.: alen #3906	Polarization: Vertical
Standard: FCC PK	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 14/03/31/
Temp.(C)/Hum.(%) 25 C / 55 %	Time: 17/07/30
EUT: Mohu Channels	Engineer Signature:
Mode: TX 2422MHz(802.11n40)	Distance: 3m
Model: MHCHBOX01	
Manufacturer: VideoStrong	

Note: Report No:ATE20140410

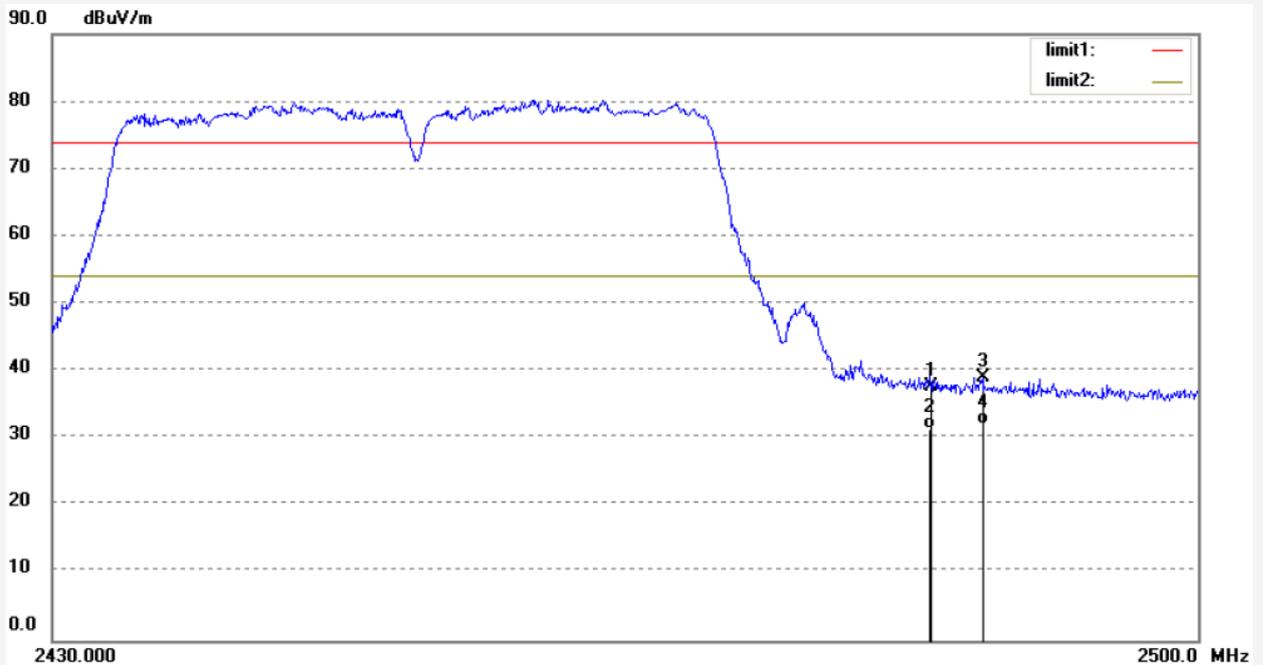


No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2398.650	59.87	-6.76	53.11	74.00	-20.89	peak			
2	2398.650	52.79	-6.76	46.03	54.00	-7.97	AVG			
3	2400.000	58.05	-6.76	51.29	74.00	-22.71	peak			
4	2400.000	51.21	-6.76	44.45	54.00	-9.55	AVG			

Job No.: alen #3904
Standard: FCC PK
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Mohu Channels
Mode: TX 2452MHz(802.11n40)
Model: MHCHBOX01
Manufacturer: VideoStrong

Polarization: Horizontal
Power Source: AC 120V/60Hz
Date: 14/03/31/
Time: 17/03/37
Engineer Signature:
Distance: 3m

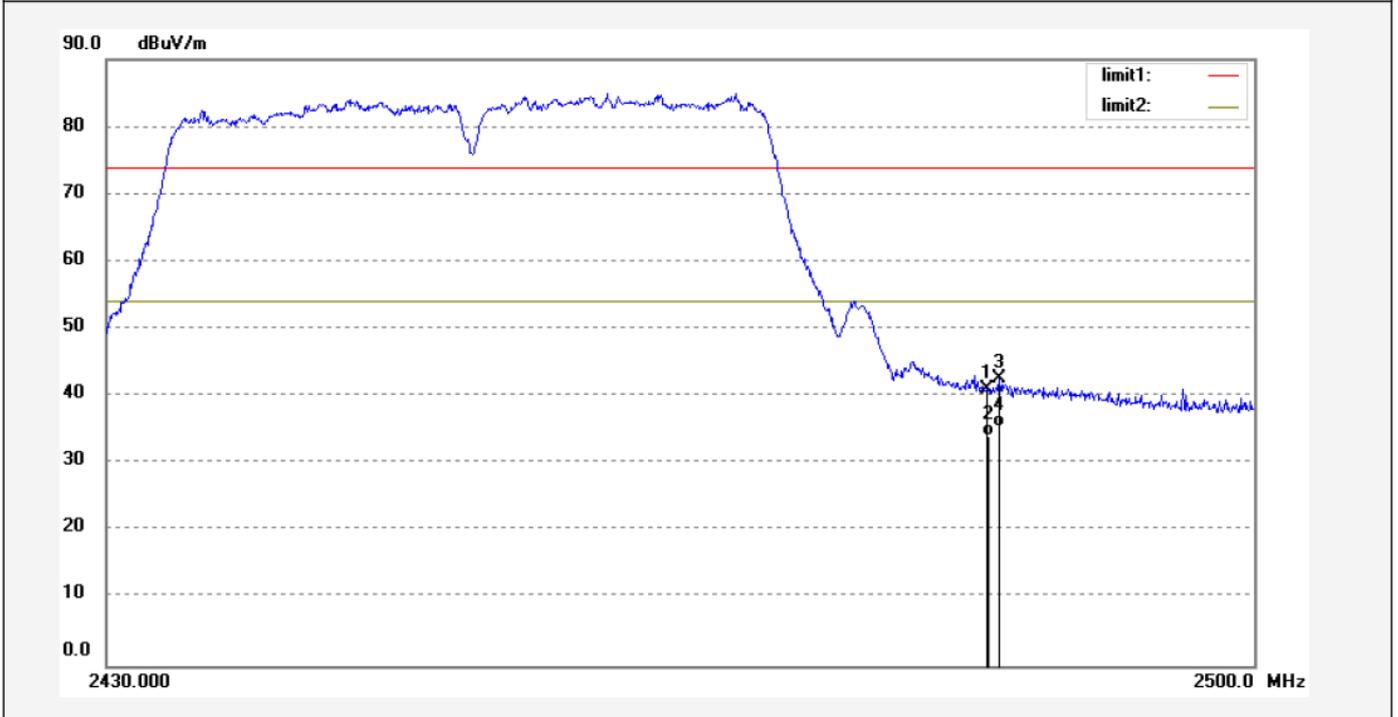
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No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2483.550	44.30	-6.54	37.76	74.00	-36.24	peak			
2	2483.550	37.87	-6.54	31.33	54.00	-22.67	AVG			
3	2486.700	45.57	-6.53	39.04	74.00	-34.96	peak			
4	2486.700	38.65	-6.53	32.12	54.00	-21.88	AVG			

Job No.: alen #3905	Polarization: Vertical
Standard: FCC PK	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 14/03/31/
Temp.(C)/Hum.(%) 25 C / 55 %	Time: 17/05/01
EUT: Mohu Channels	Engineer Signature:
Mode: TX 2452MHz(802.11n40)	Distance: 3m
Model: MHCHBOX01	
Manufacturer: VideoStrong	

Note: Report No:ATE20140410

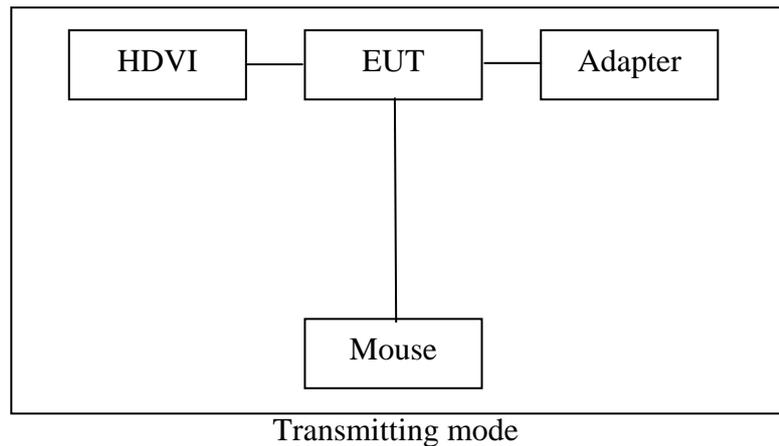


No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2483.550	47.51	-6.54	40.97	74.00	-33.03	peak			
2	2483.550	40.68	-6.54	34.14	54.00	-19.86	AVG			
3	2484.320	49.07	-6.54	42.53	74.00	-31.47	peak			
4	2484.320	42.01	-6.54	35.47	54.00	-18.53	AVG			

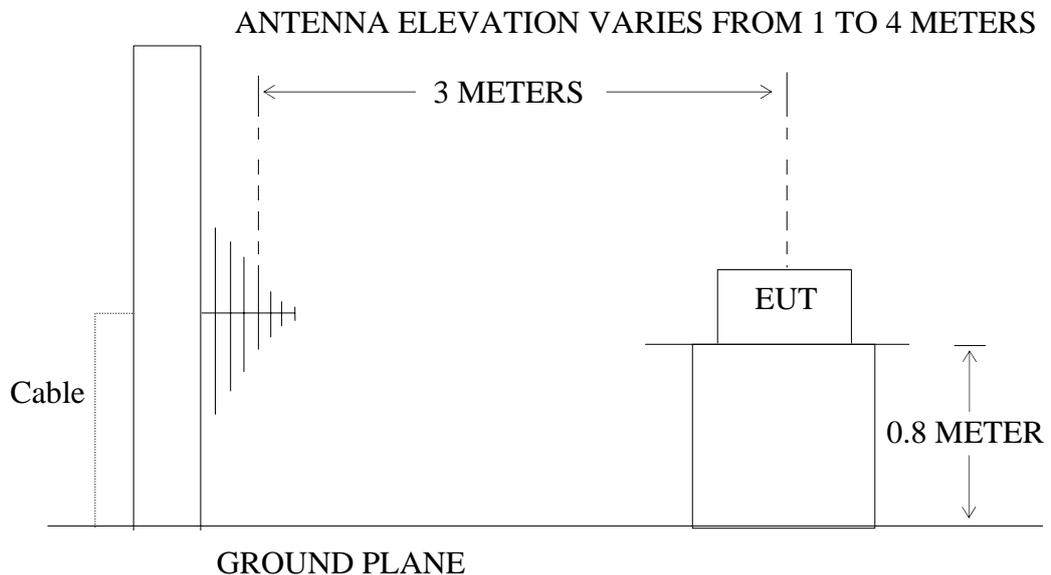
10. RADIATED SPURIOUS EMISSION TEST

10.1. Block Diagram of Test Setup

10.1.1. Block diagram of connection between the EUT and peripherals



10.1.2. Semi-Anechoic Chamber Test Setup Diagram



10.2. The Limit For Section 15.247(d)

Section 15.247(d): In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the

transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a).

10.3.Restricted bands of operation

10.3.1.FCC Part 15.205 Restricted bands of operation

(a) Except as shown in paragraph (d) of this section, Only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
¹ 0.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	(²)
13.36-13.41			

¹Until February 1, 1999, this restricted band shall be 0.490-0.510

²Above 38.6

(b) Except as provided in paragraphs (d) and (e), the field strength of emission appearing within these frequency bands shall not exceed the limits shown in Section 15.209. At frequencies equal to or less than 1000MHz, Compliance with the limits in Section 15.209 shall be demonstrated using measurement instrumentation employing a CISPR quasi-peak detector. Above 1000MHz, compliance with the emission limits in Section 15.209 shall be demonstrated based on the average value of the measured emissions. The provisions in Section 15.35 apply to these measurements.

10.4.Configuration of EUT on Measurement

The equipment are installed on Radiated Emission Measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

10.5. Operating Condition of EUT

10.5.1. Setup the EUT and simulator as shown as Section 10.1.

10.5.2. Turn on the power of all equipment.

10.5.3. Let the EUT work in TX modes measure it. The transmit frequency are 2412-2462 and 2422-2452MHz. We select 2412MHz, 2437MHz, 2462MHz and 2422MHz, 2437MHz, 2452MHz TX frequency to transmit.

10.6. Test Procedure

The EUT and its simulators are placed on a turntable, which is 0.8 meter high above ground. The turntable can rotate 360 degrees to determine the position of the maximum emission level. EUT is set 3.0 meters away from the receiving antenna, which is mounted on an antenna tower. The antenna can be moved up and down between 1.0 meter and 4 meters to find out the maximum emission level. Broadband antenna (calibrated bilog antenna) is used as receiving antenna. Both horizontal and vertical polarizations of the antenna are set on measurement. In order to find the maximum emission levels, all of the interface cables must be manipulated according to ANSI C63.4: 2009 on radiated emission measurement. The EUT was tested in 3 orthogonal planes.

The worst-case data rate for this channel to be 1Mbps for 802.11b mode and 6Mbps for 802.11g mode and 150Mbps for 802.11n mode, based on previous with 802.11 WLAN product design architectures.

The bandwidth of test receiver is set at 9kHz in below 30MHz. and set at 120kHz in 30-1000MHz, and 1MHz in above 1000MHz.

The frequency range from 9kHz to 25GHz is checked.

The final measurement in band 9-90kHz, 110-490kHz and above 1000MHz is performed with Average detector. Except those frequency bands mention above, the final measurement for frequencies below 1000MHz is performed with Quasi Peak detector.

The field strength is calculated by adding the antenna factor, and cable loss, and subtracting the amplifier gain from the measured reading. The basic equation calculation is as follows: $\text{Result} = \text{Reading} + \text{Corrected Factor}$

Where $\text{Corrected Factor} = \text{Antenna Factor} + \text{Cable Loss} - \text{Amplifier Gain}$

10.7. The Field Strength of Radiation Emission Measurement Results

Note: 1. Emissions attenuated more than 20 dB below the permissible value are not reported.

2. *: Denotes restricted band of operation.

3. The fundamental radiated emissions were reduced by Band Reject Filter in the attached plots.

4. The EUT is tested radiation emission at each test mode(802.11 b/g/n) in three axes. The worst emissions are reported in all test mode and channels.

5. The radiation emissions from 18-25GHz are not reported, because the test values lower than the limits of 20dB.

Below 1G



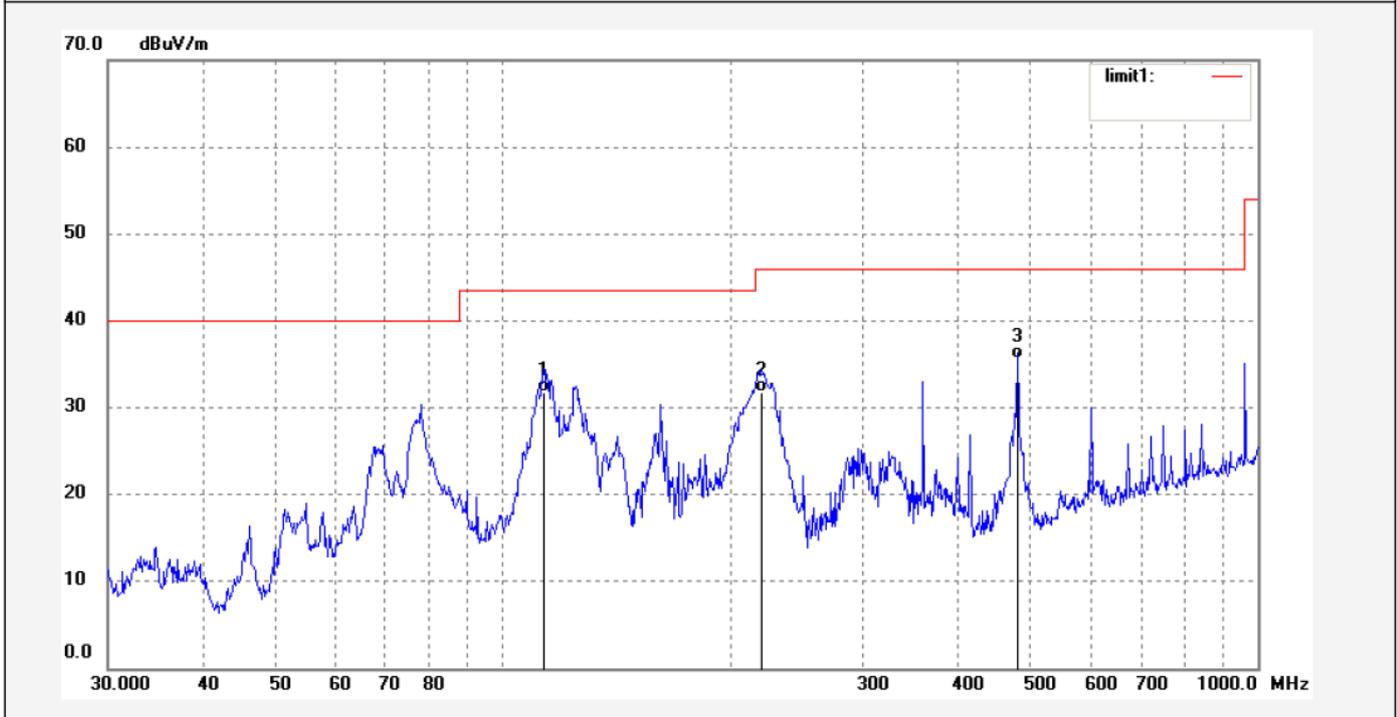
ACCURATE TECHNOLOGY CO., LTD.

F1,Bldg,A,Changyuan New Material Port Keyuan Rd,
Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 1# Chamber
Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.: alen #3830	Polarization: Horizontal
Standard: FCC Class B 3M Radiated	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 14/03/31/
Temp.(C)/Hum.(%) 25 C / 55 %	Time: 8/48/32
EUT: Mohu Channels	Engineer Signature:
Mode: TX 2412MHz(802.11b)	Distance: 3m
Model: MHCHBOX01	
Manufacturer: VideoStrong	

Note: Report No:ATE20140410

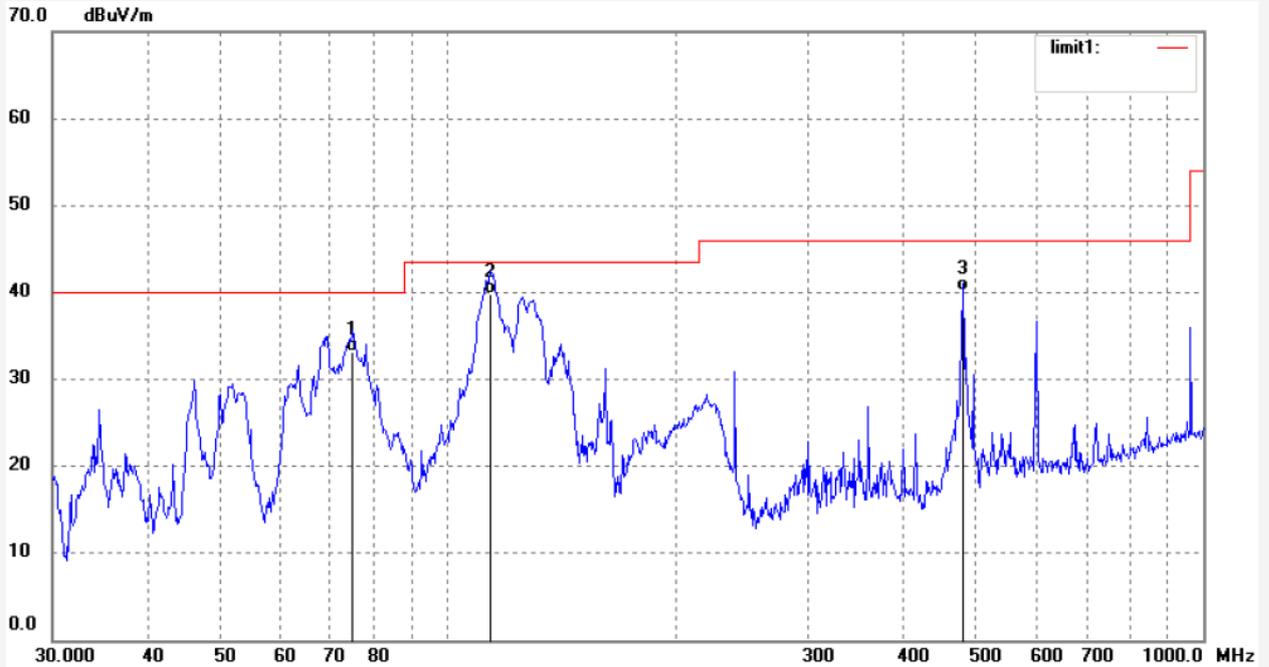


No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	113.3161	54.12	-22.28	31.84	43.50	-11.66	QP			
2	219.8447	51.68	-19.94	31.74	46.00	-14.26	QP			
3	480.5276	49.75	-14.16	35.59	46.00	-10.41	QP			

Job No.: alen #3829
Standard: FCC Class B 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Mohu Channels
Mode: TX 2412MHz(802.11b)
Model: MHCHBOX01
Manufacturer: VideoStrong

Polarization: Vertical
Power Source: AC 120V/60Hz
Date: 14/03/31/
Time: 8/46/44
Engineer Signature:
Distance: 3m

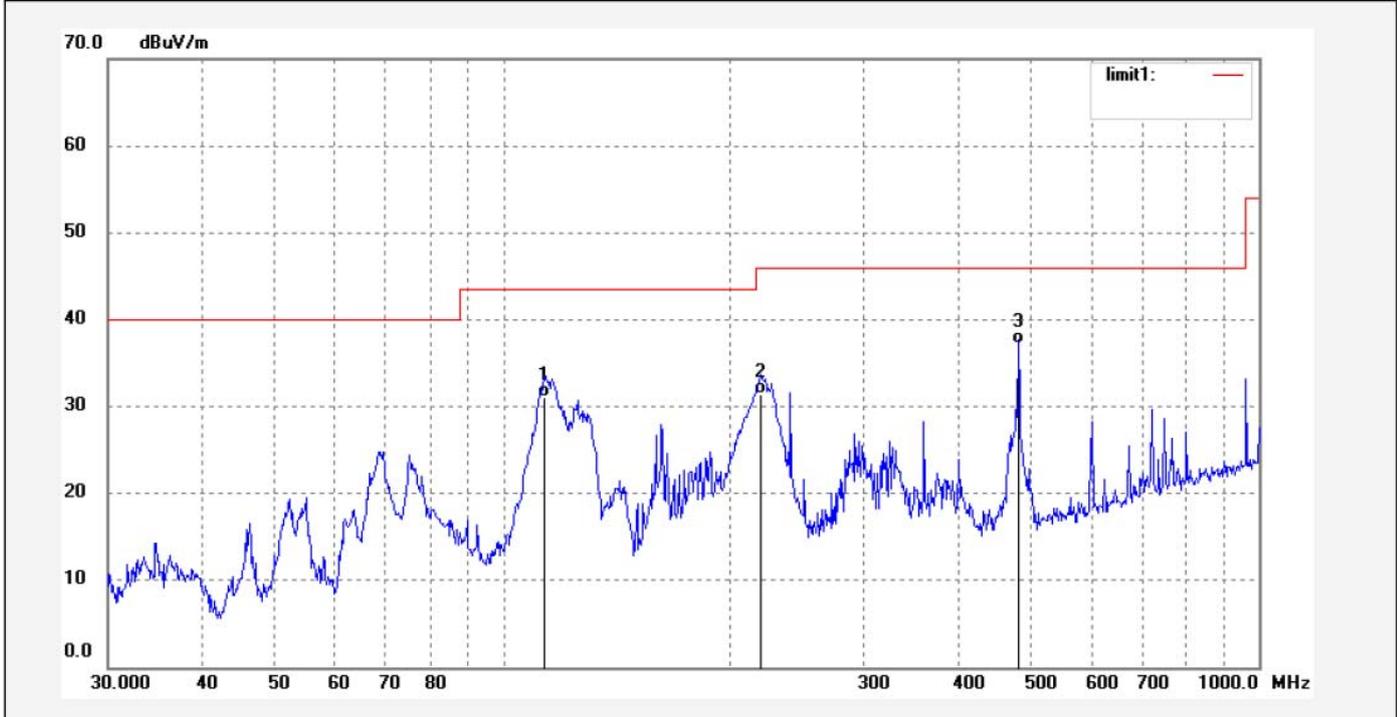
Note: Report No:ATE20140410



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	74.9191	54.71	-21.62	33.09	40.00	-6.91	QP			
2	114.1137	62.21	-22.31	39.90	43.50	-3.60	QP			
3	480.5276	54.35	-14.16	40.19	46.00	-5.81	QP			

Job No.: alen #3831	Polarization: Horizontal
Standard: FCC Class B 3M Radiated	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 14/03/31/
Temp.(C)/Hum.(%) 25 C / 55 %	Time: 8/49/18
EUT: Mohu Channels	Engineer Signature:
Mode: TX 2437MHz(802.11b)	Distance: 3m
Model: MHCHBOX01	
Manufacturer: VideoStrong	

Note: Report No:ATE20140410

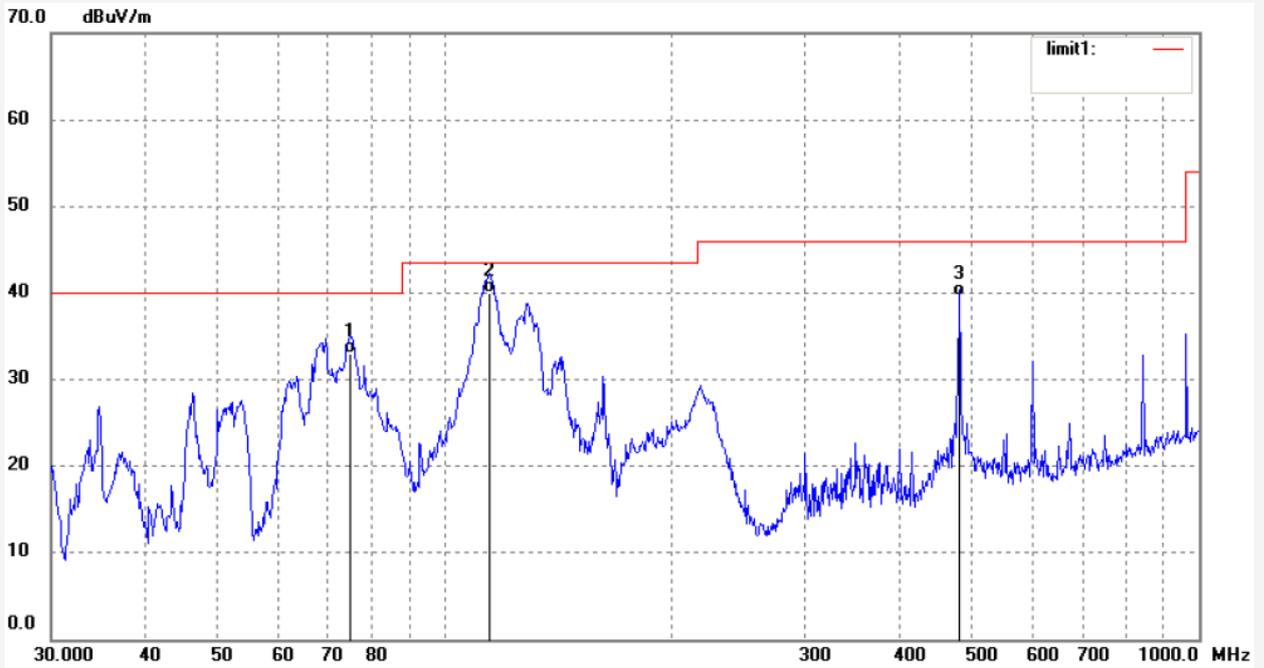


No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	113.3162	53.41	-22.28	31.13	43.50	-12.37	QP			
2	219.0752	51.32	-19.94	31.38	46.00	-14.62	QP			
3	480.5276	51.35	-14.16	37.19	46.00	-8.81	QP			

Job No.: alen #3832
Standard: FCC Class B 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Mohu Channels
Mode: TX 2437MHz(802.11b)
Model: MHCHBOX01
Manufacturer: VideoStrong

Polarization: Vertical
Power Source: AC 120V/60Hz
Date: 14/03/31/
Time: 8/50/59
Engineer Signature:
Distance: 3m

Note: Report No:ATE20140410

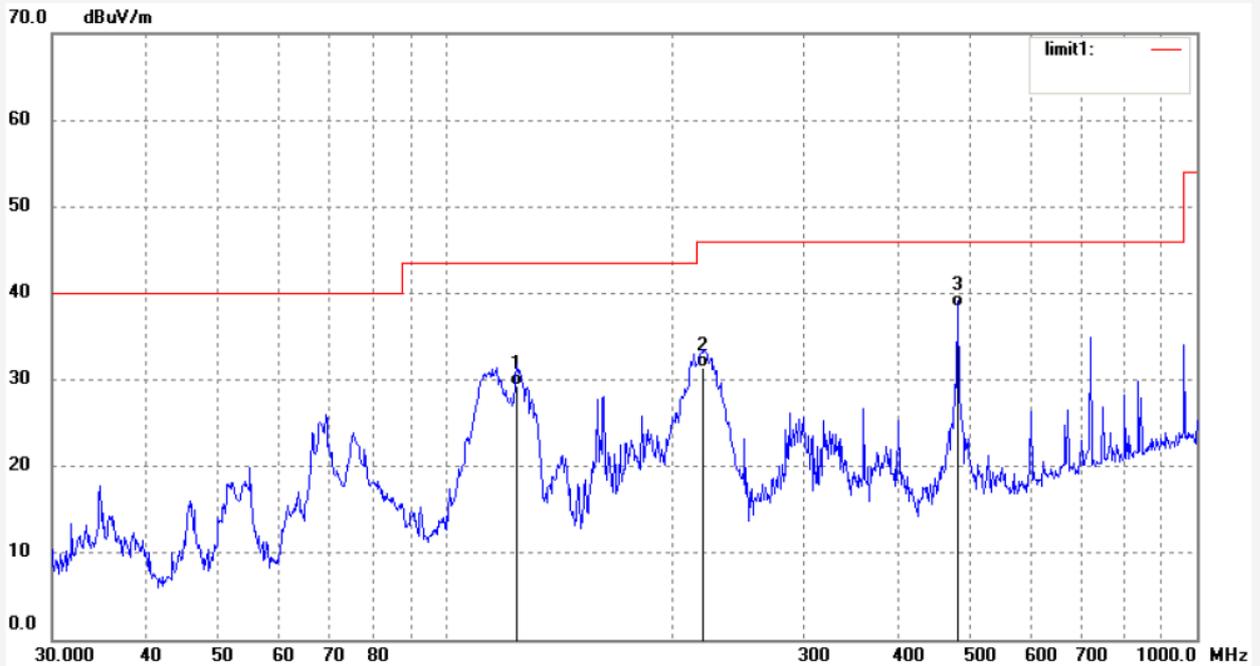


No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	74.6568	54.52	-21.61	32.91	40.00	-7.09	QP			
2	114.5146	62.35	-22.33	40.02	43.50	-3.48	QP			
3	480.5276	53.74	-14.16	39.58	46.00	-6.42	QP			

Job No.: alen #3834
Standard: FCC Class B 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Mohu Channels
Mode: TX 2462MHz(802.11b)
Model: MHCHBOX01
Manufacturer: VideoStrong

Polarization: Horizontal
Power Source: AC 120V/60Hz
Date: 14/03/31/
Time: 8/52/37
Engineer Signature:
Distance: 3m

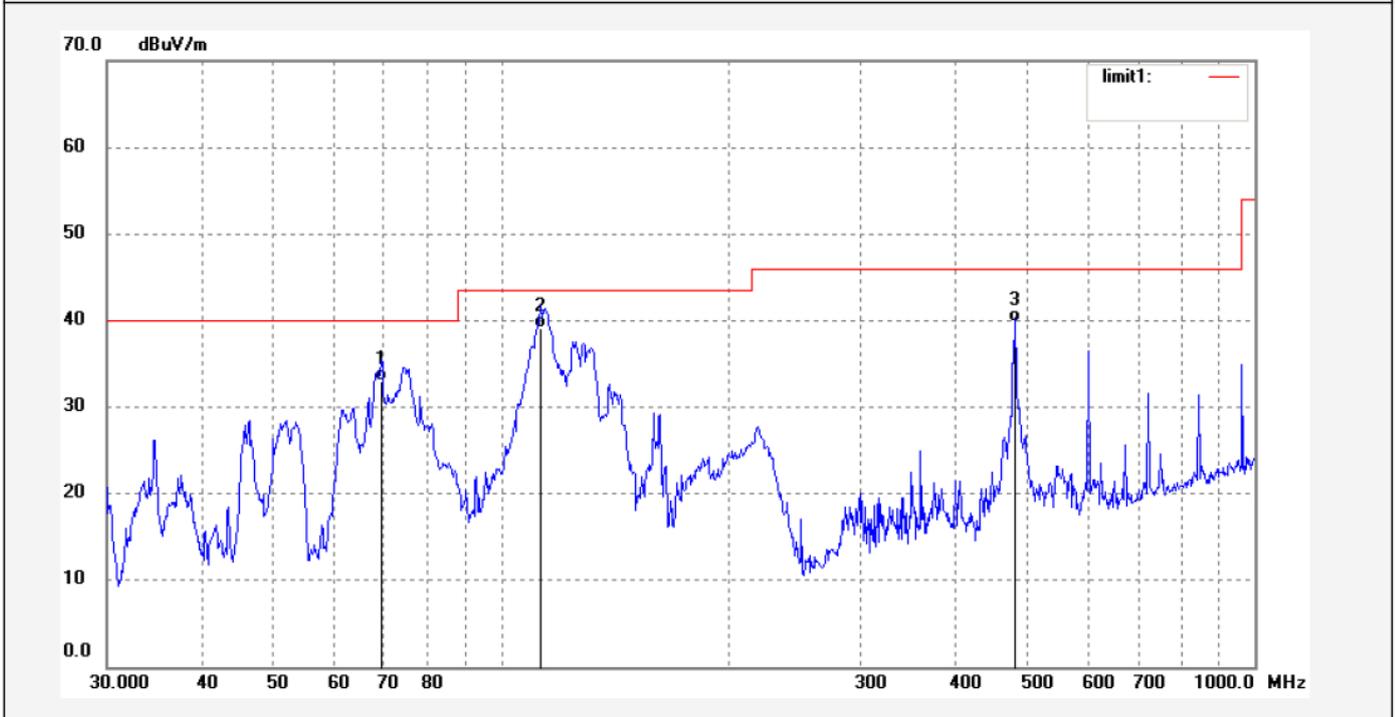
Note: Report No:ATE20140410



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	124.5690	52.02	-22.77	29.25	43.50	-14.25	QP			
2	220.6170	51.38	-19.94	31.44	46.00	-14.56	QP			
3	480.5276	52.65	-14.16	38.49	46.00	-7.51	QP			

Job No.: alen #3833	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 14/03/31/
Temp.(C)/Hum.(%) 25 C / 55 %	Time: 8/51/43
EUT: Mohu Channels	Engineer Signature:
Mode: TX 2462MHz(802.11b)	Distance: 3m
Model: MHCHBOX01	
Manufacturer: VideoStrong	

Note: Report No:ATE20140410

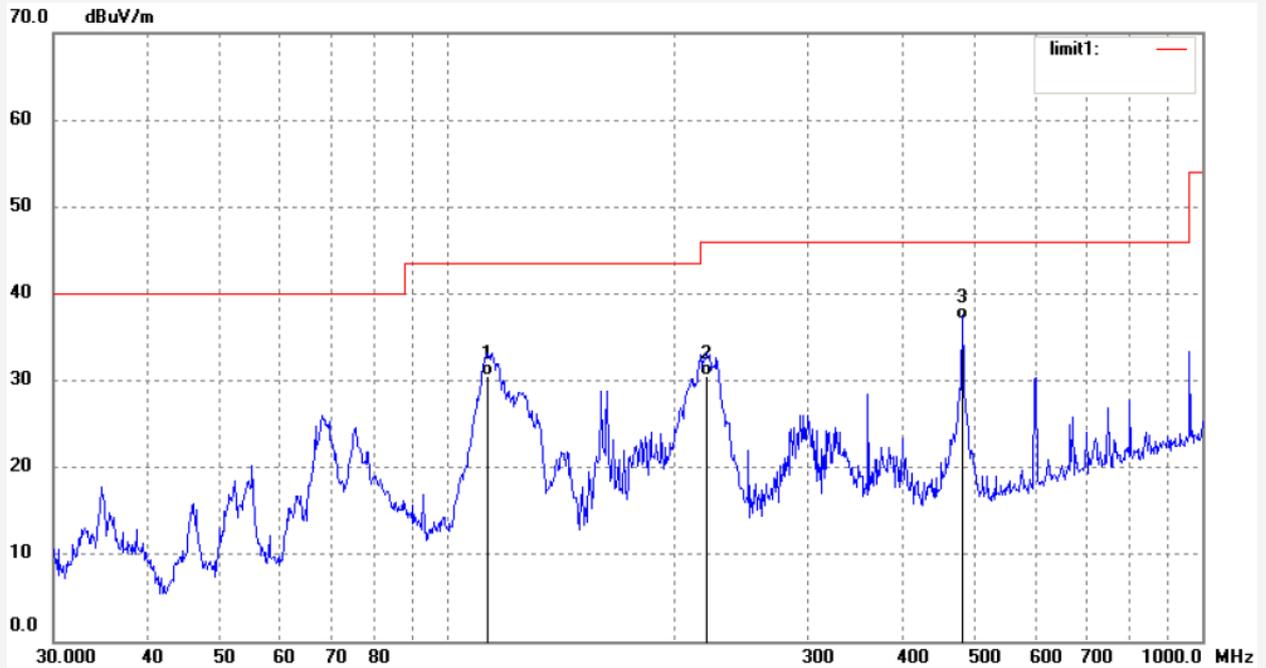


No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	69.3568	54.28	-21.33	32.95	40.00	-7.05	QP			
2	112.9196	61.35	-22.26	39.09	43.50	-4.41	QP			
3	480.5276	54.01	-14.16	39.85	46.00	-6.15	QP			

Job No.: alen #3839
Standard: FCC Class B 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Mohu Channels
Mode: TX 2412MHz(802.11g)
Model: MHCHBOX01
Manufacturer: VideoStrong

Polarization: Horizontal
Power Source: AC 120V/60Hz
Date: 14/03/31/
Time: 8/56/48
Engineer Signature:
Distance: 3m

Note: Report No:ATE20140410

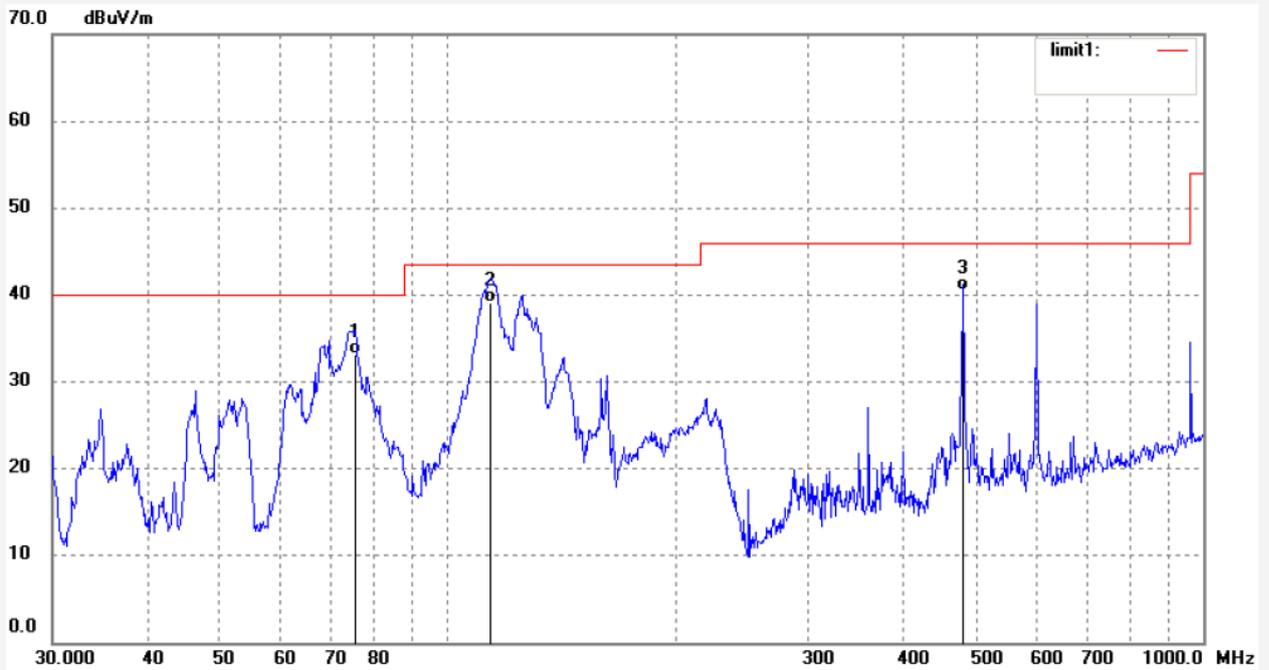


No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	112.9196	52.82	-22.26	30.56	43.50	-12.94	QP			
2	220.6170	50.54	-19.94	30.60	46.00	-15.40	QP			
3	480.5276	51.12	-14.16	36.96	46.00	-9.04	QP			

Job No.: alen #3840
Standard: FCC Class B 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Mohu Channels
Mode: TX 2412MHz(802.11g)
Model: MHCHBOX01
Manufacturer: VideoStrong

Polarization: Vertical
Power Source: AC 120V/60Hz
Date: 14/03/31/
Time: 8/57/40
Engineer Signature:
Distance: 3m

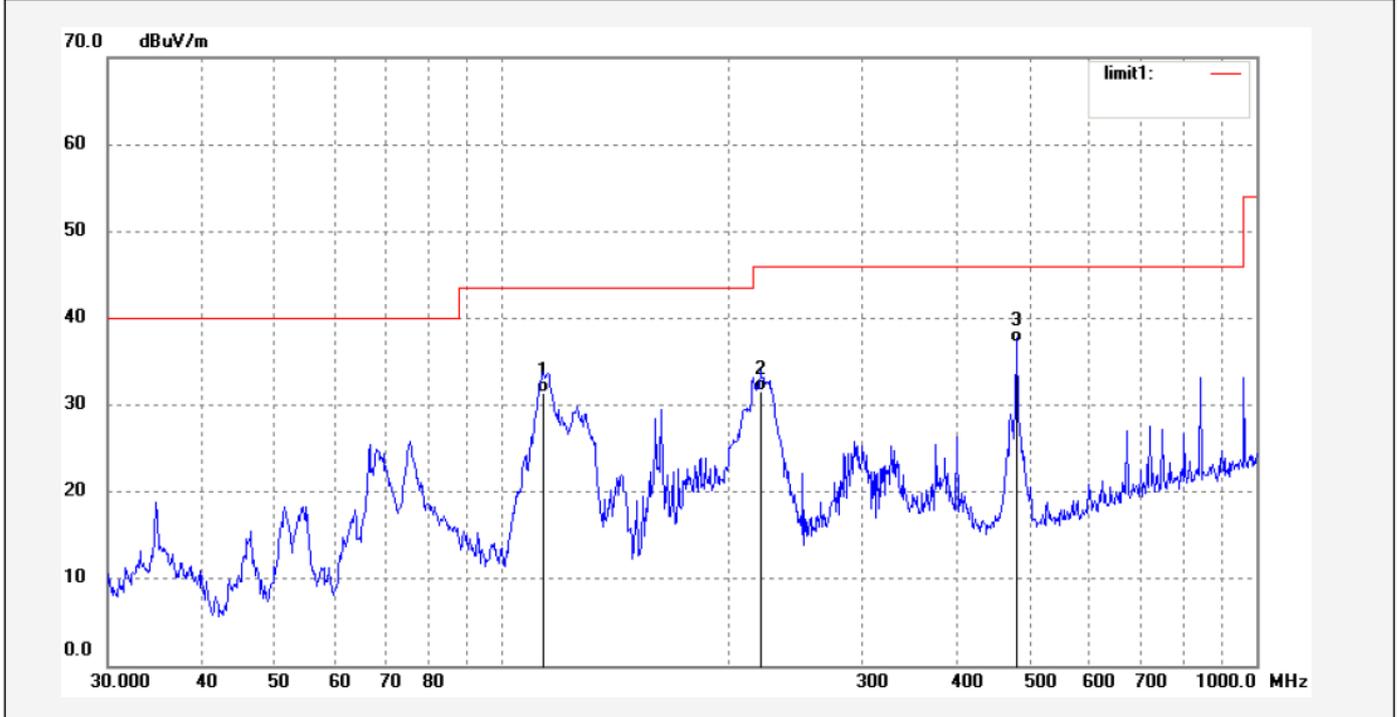
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No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	75.4463	54.68	-21.60	33.08	40.00	-6.92	QP			
2	114.1137	61.38	-22.31	39.07	43.50	-4.43	QP			
3	480.5276	54.71	-14.16	40.55	46.00	-5.45	QP			

Job No.: alen #3838	Polarization: Horizontal
Standard: FCC Class B 3M Radiated	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 14/03/31/
Temp.(C)/Hum.(%) 25 C / 55 %	Time: 8/56/02
EUT: Mohu Channels	Engineer Signature:
Mode: TX 2437MHz(802.11g)	Distance: 3m
Model: MHCHBOX01	
Manufacturer: VideoStrong	

Note: Report No:ATE20140410

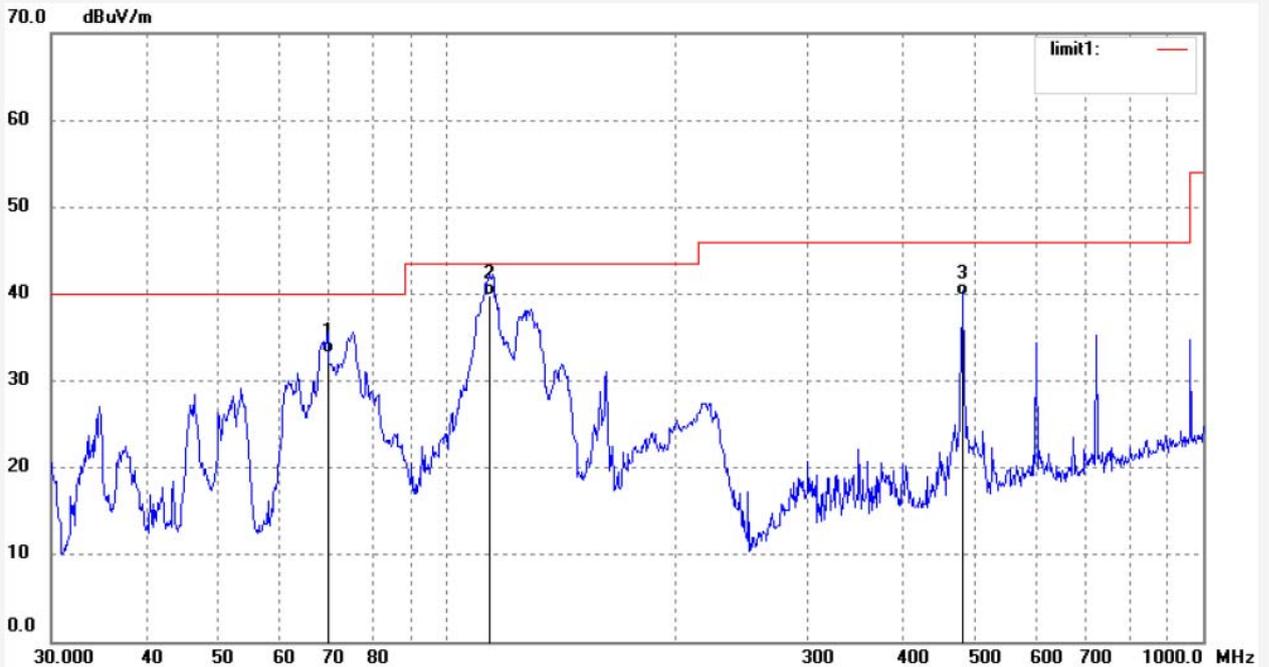


No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	113.3162	53.66	-22.28	31.38	43.50	-12.12	QP			
2	219.8448	51.60	-19.94	31.66	46.00	-14.34	QP			
3	480.5276	51.36	-14.16	37.20	46.00	-8.80	QP			

Job No.: alen #3837
Standard: FCC Class B 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Mohu Channels
Mode: TX 2437MHz(802.11g)
Model: MHCHBOX01
Manufacturer: VideoStrong

Polarization: Vertical
Power Source: AC 120V/60Hz
Date: 14/03/31/
Time: 8/55/05
Engineer Signature:
Distance: 3m

Note: Report No:ATE20140410

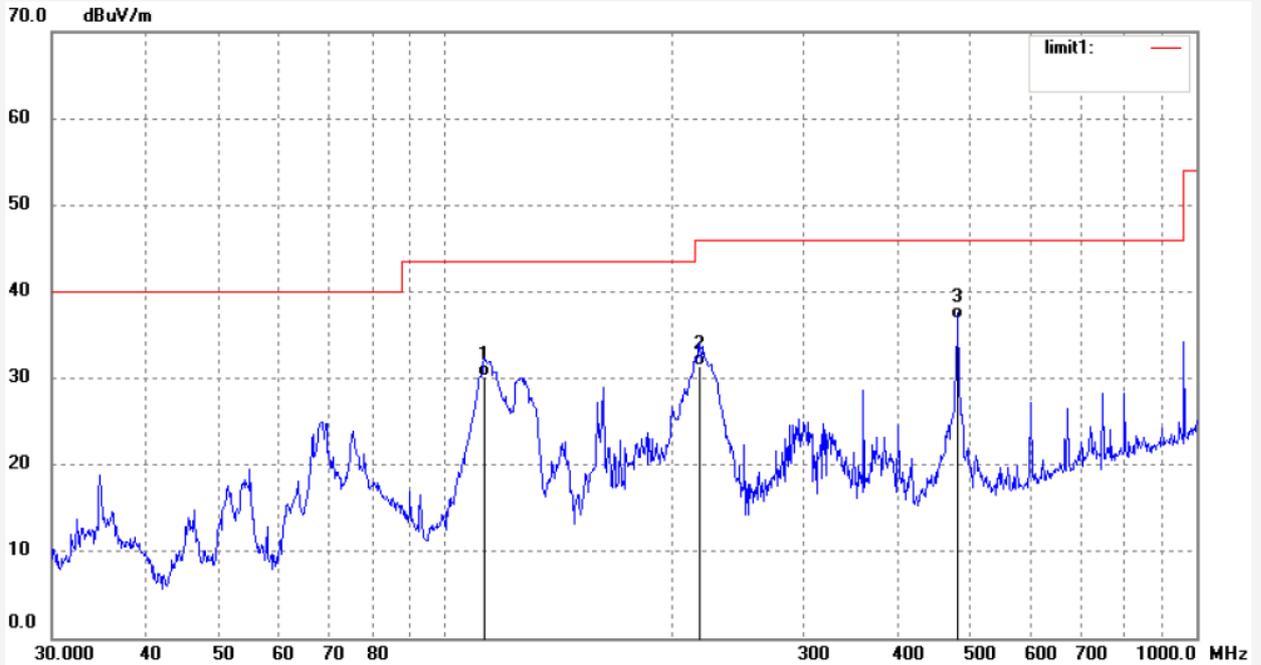


No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	69.6003	54.41	-21.33	33.08	40.00	-6.92	QP			
2	113.7142	62.03	-22.29	39.74	43.50	-3.76	QP			
3	480.5276	54.01	-14.16	39.85	46.00	-6.15	QP			

Job No.: alen #3835
Standard: FCC Class B 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Mohu Channels
Mode: TX 2462MHz(802.11g)
Model: MHCHBOX01
Manufacturer: VideoStrong

Polarization: Horizontal
Power Source: AC 120V/60Hz
Date: 14/03/31/
Time: 8/53/29
Engineer Signature:
Distance: 3m

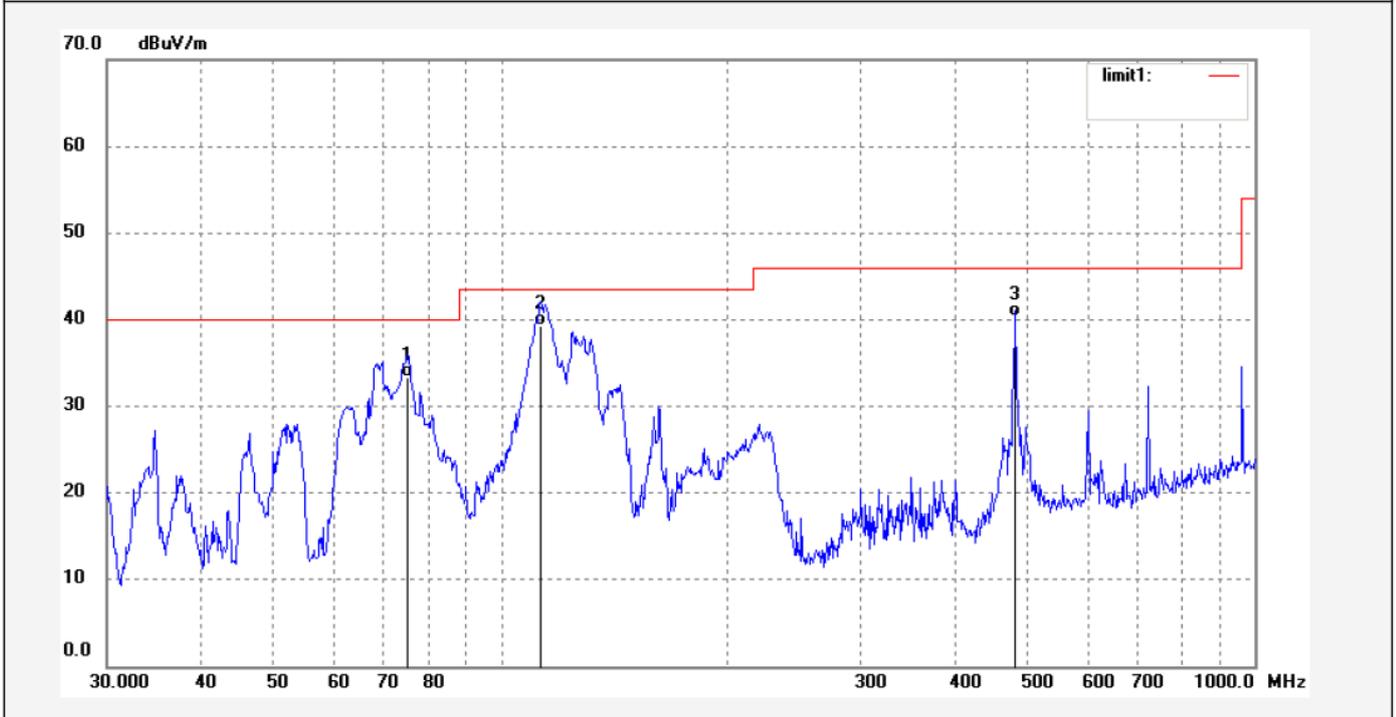
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No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	112.9196	52.37	-22.26	30.11	43.50	-13.39	QP			
2	218.3085	51.34	-19.95	31.39	46.00	-14.61	QP			
3	480.5276	51.02	-14.16	36.86	46.00	-9.14	QP			

Job No.: alen #3836	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 14/03/31/
Temp.(C)/Hum.(%) 25 C / 55 %	Time: 8/54/22
EUT: Mohu Channels	Engineer Signature:
Mode: TX 2462MHz(802.11g)	Distance: 3m
Model: MHCHBOX01	
Manufacturer: VideoStrong	

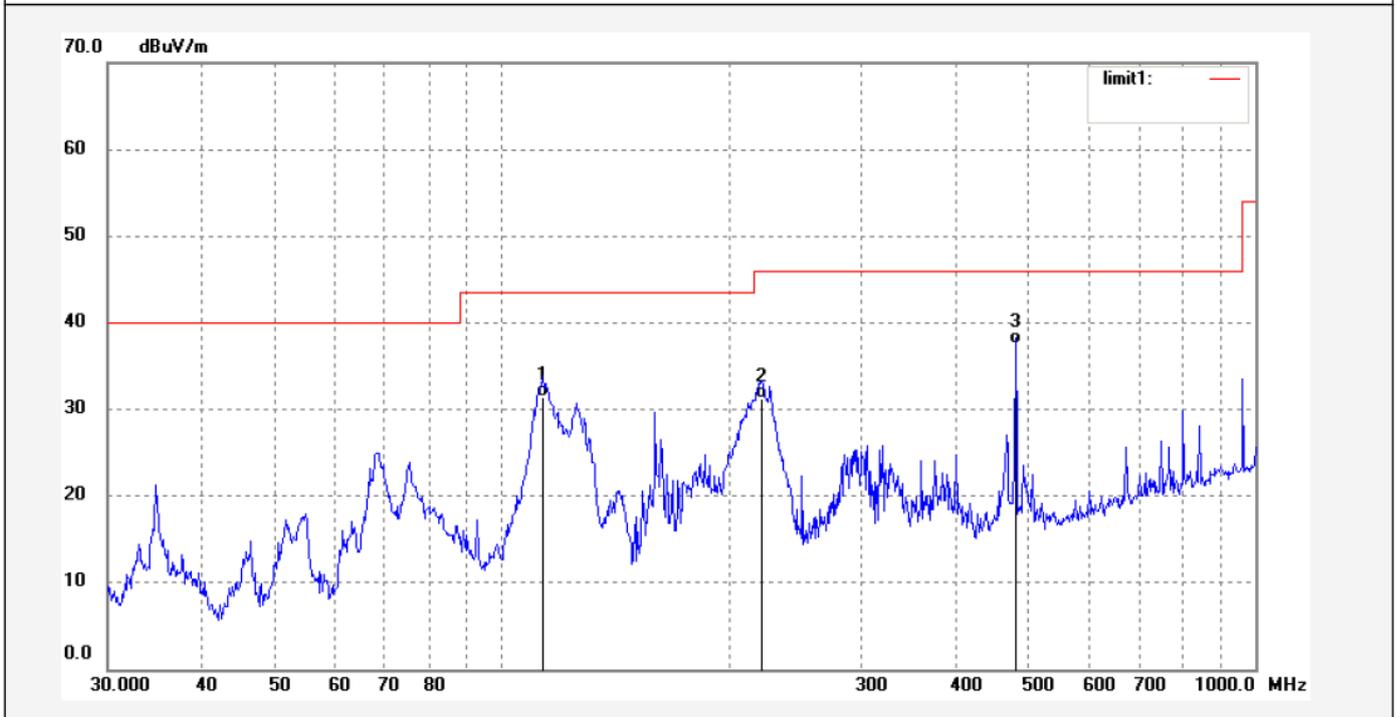
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No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	75.1822	54.89	-21.61	33.28	40.00	-6.72	QP			
2	112.9196	61.56	-22.26	39.30	43.50	-4.20	QP			
3	480.5276	54.42	-14.16	40.26	46.00	-5.74	QP			

Job No.: alen #3842	Polarization: Horizontal
Standard: FCC Class B 3M Radiated	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 14/03/31/
Temp.(C)/Hum.(%) 25 C / 55 %	Time: 9/00/52
EUT: Mohu Channels	Engineer Signature:
Mode: TX 2412MHz(802.11n20)	Distance: 3m
Model: MHCHBOX01	
Manufacturer: VideoStrong	

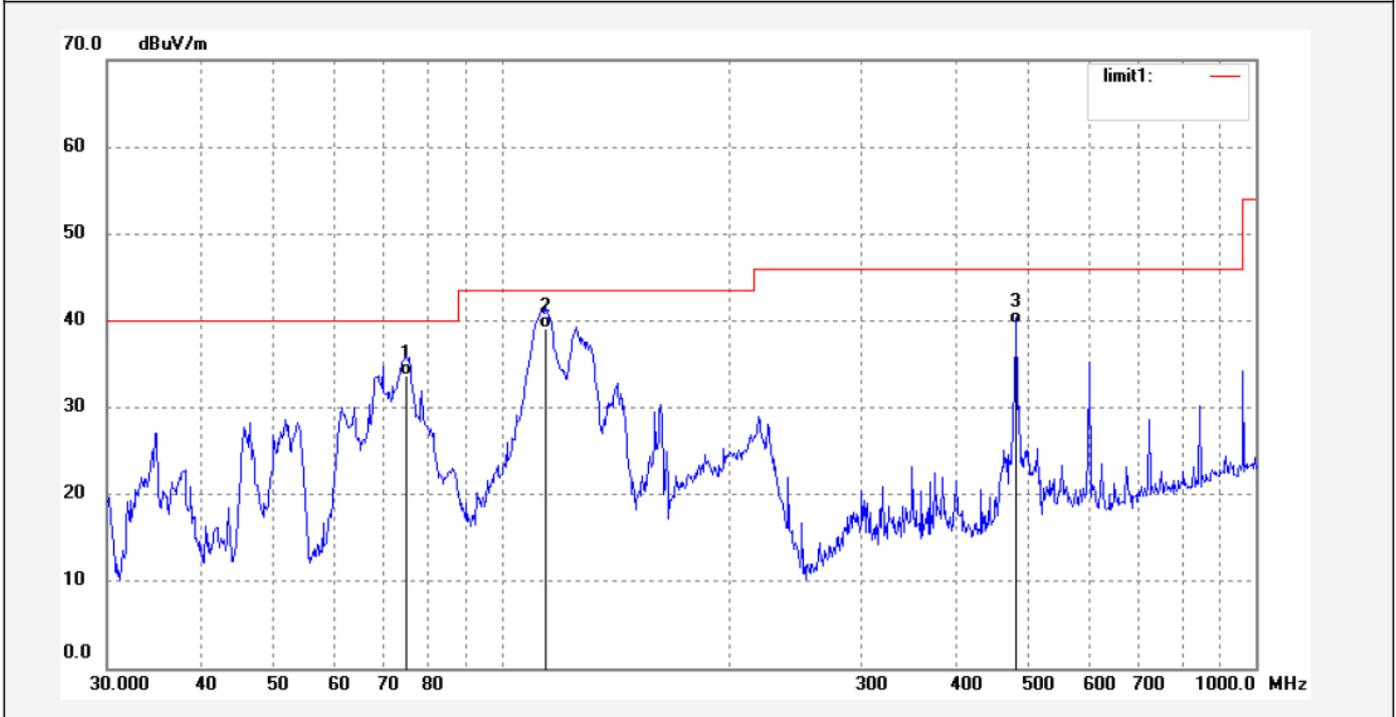
Note: Report No:ATE20140410



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	113.3162	53.69	-22.28	31.41	43.50	-12.09	QP			
2	221.3920	51.24	-19.93	31.31	46.00	-14.69	QP			
3	480.5276	51.68	-14.16	37.52	46.00	-8.48	QP			

Job No.: alen #3841	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 14/03/31/
Temp.(C)/Hum.(%) 25 C / 55 %	Time: 8/59/54
EUT: Mohu Channels	Engineer Signature:
Mode: TX 2412MHz(802.11n20)	Distance: 3m
Model: MHCHBOX01	
Manufacturer: VideoStrong	

Note: Report No:ATE20140410



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	74.6568	55.30	-21.61	33.69	40.00	-6.31	QP			
2	114.5146	61.38	-22.33	39.05	43.50	-4.45	QP			
3	480.5276	53.74	-14.16	39.58	46.00	-6.42	QP			