Prüfbericht-Nr.: *Test Report No.:*	**50063509 001**	**Auftrags-Nr.:** *Order No.:*	164078776	Seite 1 von 24 *Page 1 of 24*
Kunden-Referenz-Nr.: *Client Reference No.:*	N/A	**Auftragsdatum:** *Order date:*	14.11.2016	
Auftraggeber: *Client:*	**Qingdao Intelligent & Precise Electronics Co., Ltd.** No. 218, Qianwangang Road Qingdao Economic & Technological Development Zone, Qingdao 266071, China			
Prüfgegenstand: *Test item:*	IEEE 802.11 b/g/n 2.4GHz 2T2R USB Module			
Bezeichnung / Typ-Nr.: *Identification / Type No.:*	ZDWFM2402			
Auftrags-Inhalt: *Order content:*	FCC approval			
Prüfgrundlage: *Test specification:*	CFR47 FCC Part 15: Subpart C Section 15.247 CFR47 FCC Part 15: Subpart C Section 15.209 CFR47 FCC Part 15: Subpart C Section 15.207 CFR47 FCC Part 2: Section 2.1091 CFR47 FCC Part 1: Section 1.1310 FCC KDB publication 447498 D01 v06			

Wareneingangsdatum: *Date of receipt:*	14.11.2016	Refer to photo document
Prüfmuster-Nr.: *Test sample No.:*	A000452142-003, A000452142-004, A000452142-005, A000452142-006	
Prüfzeitraum: *Testing period:*	22.11.2016 - 10.12.2016	
Ort der Prüfung: *Place of testing:*	Accurate Technology Co., Ltd.	
Prüflaboratorium: *Testing laboratory:*	TÜV Rheinland (Shenzhen) Co., Ltd.	
Prüfergebnis*: *Test result*:*	Pass	

geprüft von / *tested by:*

Datum *Date*	**Name / Stellung** *Name / Position*	**Unterschrift** *Signature*
03.01.2017	Alex Lan / Project Engineer	

kontrolliert von / *reviewed by:*

Datum *Date*	**Name / Stellung** *Name / Position*	**Unterschrift** *Signature*
03.01.2017	Sam Lin / Technical Certifier	

Sonstiges / *Other:*
This report is for DTS equipment class.
FCC ID: 2AJVQ-ZDWFM2402

Zustand des Prüfgegenstandes bei Anlieferung: Prüfmuster vollständig und unbeschädigt
Condition of the test item at delivery: *Test item complete and undamaged*

* Legende:	1 = sehr gut	2 = gut	3 = befriedigend	4 = ausreichend	5 = mangelhaft
	P(ass) = entspricht o.g. Prüfgrundlage(n)		F(ail) = entspricht nicht o.g. Prüfgrundlage(n)	N/A = nicht anwendbar	N/T = nicht getestet
Legend:	*1 = very good*	*2 = good*	*3 = satisfactory*	*4 = sufficient*	*5 = poor*
	P(ass) = passed a.m. test specification(s)		*F(ail) = failed a.m. test specification(s)*	*N/A = not applicable*	*N/T = not tested*

TEST SUMMARY

5.1.1 ANTENNA REQUIREMENT
RESULT: *Pass*

5.1.2 MAXIMUM CONDUCTED (AVERAGE) OUTPUT POWER
RESULT: *Pass*

5.1.3 6DB BANDWIDTH AND 99% BANDWIDTH
RESULT: *Pass*

5.1.4 CONDUCTED SPURIOUS EMISSIONS MEASURED IN 100KHZ BANDWIDTH
RESULT: *Pass*

5.1.5 POWER SPECTRAL DENSITY
RESULT: *Pass*

5.1.6 SPURIOUS EMISSION
RESULT: *Pass*

5.1.7 CONDUCTED EMISSIONS
RESULT: *Pass*

6.1.1 ELECTROMAGNETIC FIELDS
RESULT: *Pass*

Table of Contents

1. General Remarks

1.1 Complementary Materials

All attachments are integral parts of this test report. This applies especially to the following appendix:

Appendix A: Test Results of Wi-Fi 802.11 b/g/n Conducted Testing

Appendix B: Test Results of Wi-Fi 802.11 b/g/n Exposure Radiated Testing

2. Test Sites

2.1 Test Facilities

Accurate Technology Co., Ltd.

F1, Bldg. A, Changyuan New Meterial Port, Keyuan Rd., Science & Industry Park Nanshan District, Shenzhen 518057, P.R. China

FCC Registration No.: 752051

The tests at the test site have been conducted under the supervision of a TÜV engineer.

2.2 List of Test and Measurement Instruments

Table 1: List of Test and Measurement Equipment

Kind of Equipment	Manufacturer	Type	S/N	Calibrated until
Spurious emission and Radiated emission				
Spectrum Analyzer	Rohde&Schwarz	FSV40	101495	2017-01-09
Test Receiver	Rohde&Schwarz	ESCS30	100307	2017-01-09
Bilog Antenna	Schwarzbeck	VULB9163	9163-323	2017-01-09
Loop Antenna	Schwarzbeck	FMZB1516	1516131	2017-01-09
Horn Antenna	Schwarzbeck	BBHA9120D	9120D-655	2017-01-09
Horn Antenna	Schwarzbeck	BBHA9170	9170-359	2017-01-09
RF Switching Unit+PreAMP	Compliance Direction	RSU-M2	38322	2017-01-09
Pre-Amplifier	Rohde&Schwarz	CBLU11835 40-01	3791	2017-01-09
Radio Spectrum Test				
Spectrum Analyzer	Rohde&Schwarz	FSV40	101495	2017-01-09
Test Receiver	Rohde& Schwarz	ESR	101817	2017-01-09
Spectrum Analyzer	Rohde&Schwarz	FSP30	100220	2017-01-09
Conducted Emission				
Test Receiver	Rohde & Schwarz	ESCS30	100307	2017-01-09
L.I.S.N.	Schwarzbeck	NLSK8126	8126431	2017-01-09
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100815	2017-01-09
50Ω Coaxial Switch	Anritsu Corp	MP59B	6200283933	2017-01-09

2.3 Traceability

All measurement equipment calibrations are traceable to NIM (National Institute of Metrology) or where calibration is performed in other countries, to equivalent nationally recognized standards organizations.

2.4 Calibration

Equipment requiring calibration is calibrated periodically by the manufacturer or according to manufacturer's specifications. Additionally all equipment is verified for proper performance on a regular basics using in house standards or comparisons.

2.5 Measurement Uncertainty

The estimated combined standard uncertainty for radiated emissions and conducted emissions measurements as below table.

Items		Extended Uncertainty
CE	Disturbance Voltage (dBuV)	U=1.94dB, k=2, σ=95%
RE (9kHz-30MHz)	Field strength (dBuV/m)	U=3.08dB, k=2, σ=95%
RE (30-1000MHz)	Field strength (dBuV/m)	U=4.42dB, k=2, σ=95%
RE (above 1000MHz)	Field strength (dBuV/m)	U=4.06dB, k=2, σ=95%

2.6 Location of Original Data

The original copies of all test data taken during actual testing were attached at Appendix1 of this report and delivered to the applicant. A copy has been retained in the TÜV Rheinland (Shenzhen) file for certification follow-up purposes.

2.7 Status of Facility Used for Testing

The Shenzhen Accurate Technology Co., Ltd. test facility located at F1, Bldg. A, Changyuan New Meterial Port, Keyuan Rd., Science & Industry Park Nanshan District, Shenzhen 518057, P.R. China is listed on the US Federal Communications Commission list of facilities approved to perform measurements.

3. General Product Information

3.1 Product Function and Intended Use

The EUT is IEEE 802.11 b/g/n 2.4GHz 2T2R USB WiFi Module.
For details refer to the User Manual, Technical Description and Circuit Diagram.

3.2 Ratings and System Details

Table 2: Technical Specification of EUT

Technical Specification	**Value**	
Kind of Equipment:	IEEE 802.11 b/g/n 2.4GHz 2T2R USB WiFi Module	
Type Designation:	ZDWFM2402	
FCC ID:	2AJVQ-ZDWFM2402	
Equiupment Class:	DTS	
Wireless Technology:	IEEE 802.11 b/g/n	
Operating Frequency Range:	2412-2462MHz for 802.11b/g/n-HT20 2422-2452MHz for 802.11n-HT40	
Channel Number:	11 Channels for 802.11b/g/n-HT20 7 Channels for 802.11n-HT40	
Channel Separation:	5MHz	
Type of Modulation:	DSSS, OFDM	
Operating Voltage:	DC 5V via USB interface	
Operating Temperature Range:	-10℃ to 70℃	
Antenna Type:	Integral Antenna	
Smart Antenna Systems:	Applicable	
Number of Antenna:	2	
Antenna Gain:	Antenna 1	2 dBi
	Antenna 2	2 dBi
Number of Transmission chains	802.11b/g	1
	802.11n	2

Table 3: List of Radio Frequency Channel

RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)
1	2412	2	2417	3	2422	4	2427
5	2432	6	2437	7	2442	8	2447
9	2452	10	2457	11	2462		

3.3 Independent Operation Modes

The basic operation modes are:

A. WiFi operating
    1. Transmitting (802.11b/g/n)
        i. Low channel
        ii. Middle channel
        iii. High channel
B. DC power supply via PC
C. Standby
D. Of

3.4 Noise Generating and Noise Suppressing Parts

Refer to the Circuit Diagram.

3.5 Submitted Documents

- Bill of Material
- PCB Layout
- Photo Document
- Technical Description
- Circuit Diagram
- Block Diagram
- Rating Label
- Instruction Manual

4. Test Set-up and Operation Modes

4.1 Principle of Configuration Selection

Radio Spectrum: The equipment under test (EUT) was configured at its highest power output in order to measure its highest possible radiation and conducted level. The test modes were adapted accordingly in reference to the instructions for use.

Emission: The equipment under test (EUT) was configured to measure its highest possible radiation level. The test modes were adapted accordingly in reference to the instructions for use.

4.2 Test Operation and Test Software

Table 4: List of Frequencies under Test, 802.11b/g/n

802.11b/g/n-HT20				
Test Channel	Channel Number	Frequency (MHz)	Power Setting	Remark
Low	1	2412	Default	802.11b_ANT1: 1Mbps 802.11g_ANT1: 6Mbps 802.11n-HT20_ANT1: MCS0 802.11n-HT20_ANT2: MCS0
Middle	6	2437	Default	
High	11	2462	Default	
802.11n-HT40				
Test Channel	Channel number	Frequency (MHz)	Power Setting	Remark
Low	3	2422	Default	802.11n-HT40_ANT1: MCS0 802.11n-HT40_ANT2: MCS0
Middle	6	2437	Default	
High	9	2452	Default	

Note: All test modes have been pre-scanning test and the above mode is the worst case of test mode.

4.3 Special Accessories and Auxiliary Equipment

Table 5: List of Accessories and Auxiliary Equipment

Description	Manufacturer	Model	S/N	Rating
Notebook PC	Lenovo	X240	PD-01UAM3	Input: DC 20V, 3.25A
Printer	HP	HP laserjet 1015	CNFG030424	---

Table 6: List of Accessories and Cables

Interface(s) / Port (s)	Max. cable length, Shielding	Cable classification
USB	50cm, shielded with ferrite ring	USB cable

4.4 Countermeasures to achieve EMC Compliance

The test sample, which has been tested, contained the noise suppression parts as described in the Constructional Data Form or the Technical Construction File. No additional measures were employed to achieve compliance.

4.5 Test Setup Diagram

Diagram of Measurement Configuration for Radiation Test (Below 1GHz)

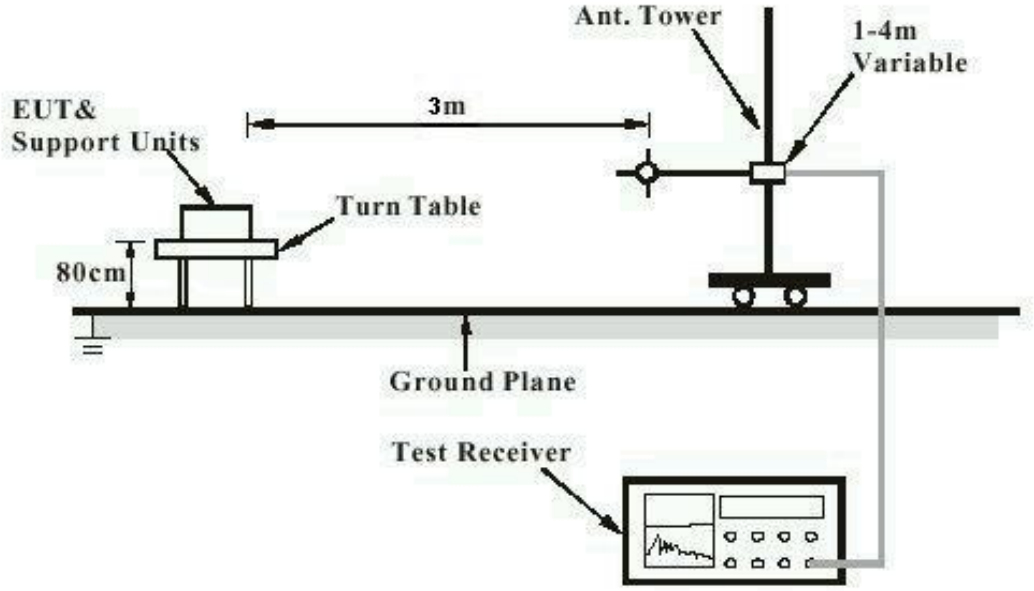


Diagram of Measurement Configuration for Radiation Test (Above 1GHz)

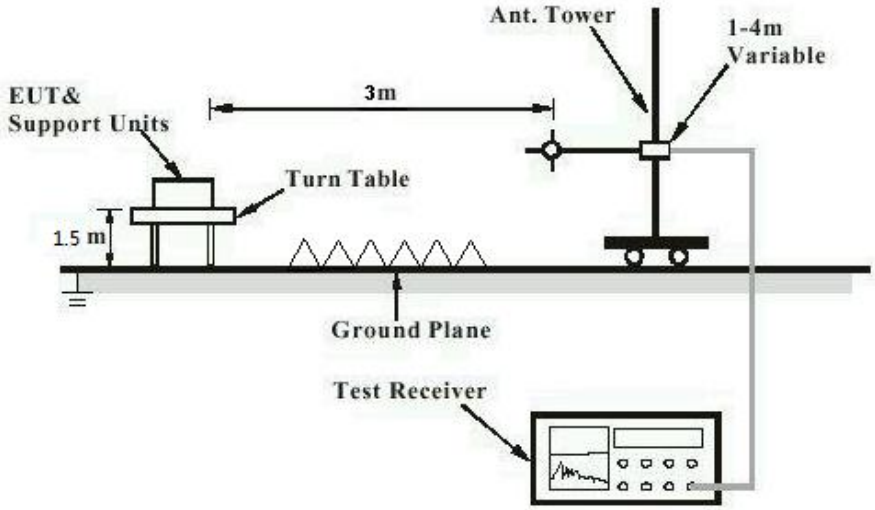


Diagram of Measurement Equipment Configuration for Mains Conduction Measurement

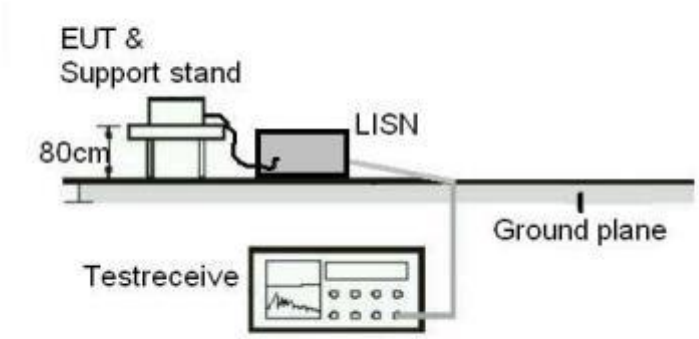
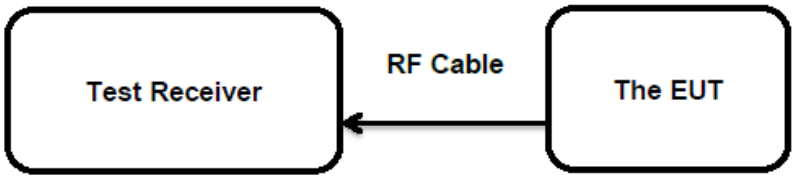


Diagram of Measurement Equipment Configuration for Conducted Transmitter Measurement



5. Test Results

5.1 Transmitter Requirement & Test Suites

5.1.1 Antenna Requirement

RESULT: **Pass**

Test standard	:	FCC Part 15.247(b)(4) and Part 15.203
Limit	:	the use of antennas with directional gains that do not exceed 6 dBi

According to the manufacturer declared, the EUT has an integral antenna, the directional gain of antenna is 2dBi for each antenna for WiFi, and the antenna connector is designed with permanent attachment and no consideration of replacement. Therefore the EUT is considered sufficient to compliance the provision.

Refer to EUT photo for details.

5.1.2 Maximum conducted (average) output power

RESULT: **Pass**

Date of testing	:	2016-12-1
Test standard	:	FCC Part 15.247(b)(3)
Basic standard	:	ANSI C63.10:2013 KDB 558074 D01 DTS Meas Guidance v03r05
Limit	:	1Watt
Kind of test site	:	Shielded room

Test setup

Test Channel	:	Low/ Middle/ High
Operation Mode	:	A.1
Ambient temperature	:	25℃
Relative humidity	:	50%
Atmospheric pressure	:	101.0 kPa

Table 7: Maximum conducted (average) output power

Maximum Conducted Output Power_802.11b/g

Channel	Channel Frequency (MHz)	Maximum Conducted Output Power (dBm)	Limit(dBm)	Verdict
1 (802.11b)	2412	16.20	30	Pass
6 (802.11b)	2437	16.20	30	Pass
11 (802.11b)	2462	16.10	30	Pass
1 (802.11g)	2412	14.10	30	Pass
6 (802.11g)	2437	14.00	30	Pass
11 (802.11g)	2462	14.10	30	Pass

Maximum Conducted Output Power_802.11n HT20/HT40

Channel	Channel Frequency (MHz)	Maximum Conducted Output Power_ANT1 (dBm)	Maximum Conducted Output Power_ANT 2 (dBm)	Maximum Conducted Output Power_Total (dBm)	Limit(dBm)	Verdict
1 (802.11n-HT20)	2412	12.60	12.40	15.10	30	Pass
6 (802.11n-HT20)	2437	12.70	12.50	15.60	30	Pass
11 (802.11n-HT20)	2462	12.70	12.60	15.60	30	Pass
3 (802.11n-HT40)	2422	12.50	12.50	15.50	30	Pass
6 (802.11n-HT40)	2437	12.70	12.50	15.60	30	Pass
9 (802.11n-HT40)	2452	12.50	12.60	15.60	30	Pass

5.1.3 6dB Bandwidth and 99% Bandwidth

RESULT: **Pass**

Date of testing	:	2016-12-1
Test standard	:	FCC Part 15.247(a)(2)
Basic standard	:	ANSI C63.10:2013 KDB 558074 D01 DTS Meas Guidance v03r05
Kind of test site	:	Shielded room

Test setup

Test Channel	:	Low/ Middle/ High
Operation Mode	:	A.1
Ambient temperature	:	26℃
Relative humidity	:	50%
Atmospheric pressure	:	101.0 kPa

Refer to attached Appendix A for details.

5.1.4 Conducted spurious emissions measured in 100kHz Bandwidth

RESULT: **Pass**

Date of testing	:	2016-12-1
Test standard	:	FCC part 15.247(d)
Basic standard	:	ANSI C63.10:2013 KDB 558074 D01 DTS Meas Guidance v03r05
Limit	:	30dB (below that in the 100kHz bandwidth within the band that contains the highest level of the desired power); In addition, radiated emissions which fall in the restricted bands, must also comply with the radiated emission limits specified in 15.209(a)
Kind of test site	:	Shield room

Test setup

Test Channel	:	Low/ Middle/ High
Operation mode	:	A.1
Ambient temperature	:	23℃
Relative humidity	:	51%
Atmospheric pressure	:	101.0 kPa

Refer to attached Appendix A for details.

5.1.5 Power spectral density

RESULT: **Pass**

Date of testing	:	2016-12-1
Test standard	:	FCC part 15.247(e)
Basic standard	:	ANSI C63.10:2013 KDB 558074 D01 DTS Meas Guidance v03r05
Limit	:	8dBm/3kHz
Kind of test site	:	Shield room

Test setup

Test Channel	:	Low/ Middle/ High
Operation mode	:	A.1
Ambient temperature	:	23℃
Relative humidity	:	53%
Atmospheric pressure	:	101kPa

Refer to attached Appendix A for details.

5.1.6 Spurious Emission

RESULT: **Pass**

Date of testing	:	2016-11-28 to 2016-12-8
Test standard	:	FCC part 15.247(d)
Basic standard	:	ANSI C63.10:2013
Limits	:	Refer to 15.209
Kind of test site	:	3m Semi-Anechoic Chamber

Test setup

Test Channel	:	Low/ Middle/ High
Operation mode	:	A.1
Ambient temperature	:	23℃
Relative humidity	:	48%
Atmospheric pressure	:	101.0 kPa

Refer to attached Appendix B for details.

5.1.7 Conducted emissions

RESULT: **Pass**

Date of testing	:	2016-12-10
Test standard	:	FCC Part 15.207
Basic standard	:	ANSI C63.10:2013
Frequency range	:	0.15MHz – 30MHz
Limits	:	FCC Part 15.207
Kind of test site	:	Shield Room

Test Setup

Input Voltage	:	DC 5V via USB interface
Operation Mode	:	B
Ambient temperature	:	23℃
Relative humidity	:	48%
Atmospheric pressure	:	101.0 kPa

Refer to attached Appendix B for details.

6. Safety Human Exposure

6.1 Radio Frequency Exposure Compliance

6.1.1 Electromagnetic Fields

RESULT: **Pass**

Test Specification

Test standard : CFR47 FCC Part 2: Section 2.1091
CFR47 FCC Part 1: Section 1.1310
FCC KDB Publication 447498 v06
OET Bulletin 65 (Edition 97-01)

The Equipment under Test (EUT) is IEEE 802.11 b/g/n 2.4GHz 2T2R USB Module, Model: ZDWFM2402, operating at 2412-2462MHz assign band. It is powered by DC 5V.

802.11b/g/n Maximum conducted (average) output power

Mode	Frequency (MHz)	Maximum conducted (average) output power (dBm)	Maximum conducted (average) output power (mW)	Target power (dBm)	Antenna gain (dBi)
802.11b	2412	16.20	41.69	16±1	2
	2437	16.20	41.69	16±1	2
	2462	16.10	40.74	16±1	2
802.11g	2412	14.10	25.70	14±1	2
	2437	14.00	25.12	14±1	2
	2462	14.10	25.70	14±1	2
802.11n-HT20	2412	15.10	32.36	16±1	5
	2437	15.60	36.31	16±1	5
	2462	15.60	36.31	16±1	5
802.11n-HT40	2422	15.50	35.48	15±1	5
	2437	15.60	36.31	15±1	5
	2452	15.60	36.31	15±1	5

According to the KDB 447498 and OET 65, the simple calculation as below:
The maximum E.I.R.P (802.11n HT20 mode) = 16+1+5 = 22dBm = 158.49mW.
The EUT transmit continuously during the test, the duty cycle is 1.
The source-based time averaged maximum radiated power = 158.49x Duty Cycle = 158.49mW

From above data, the exposed power density at a distance (R) of 20cm from the center of radiation of the antenna can be calculated according to OET Bulletin 65 as follow:
= 158.49 / 4πR^2 = 0.032 mW/cm^2

The MPE limit is 1.0 mWcm-2 for general population and uncontrolled exposure in the 1,500-100,000MHz frequency range according to FCC Part 1.1310. As the measured power density at 20cm from the transmitter is lower than the MPE limit, the compliance to the MPE limit can be ensured by indicating the minimum 20cm separation between the transmitter's radiating structure and body of the user or nearby persons.

8. List of Tables

9. List of Photographs

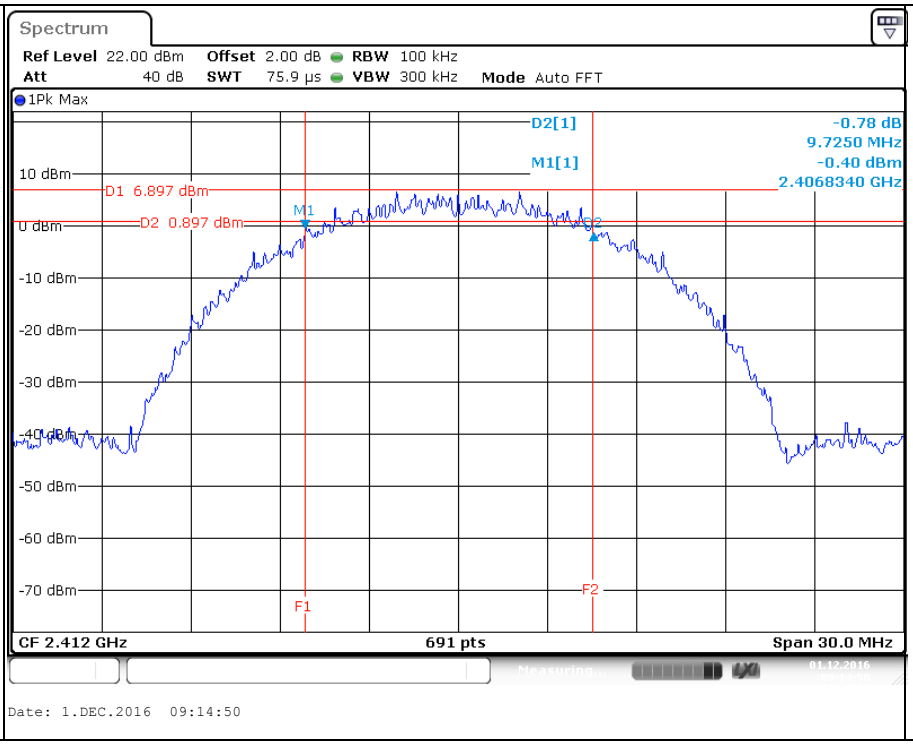
Appendix A

Test Results of Wi-Fi 802.11 b/g/n Conducted Testing

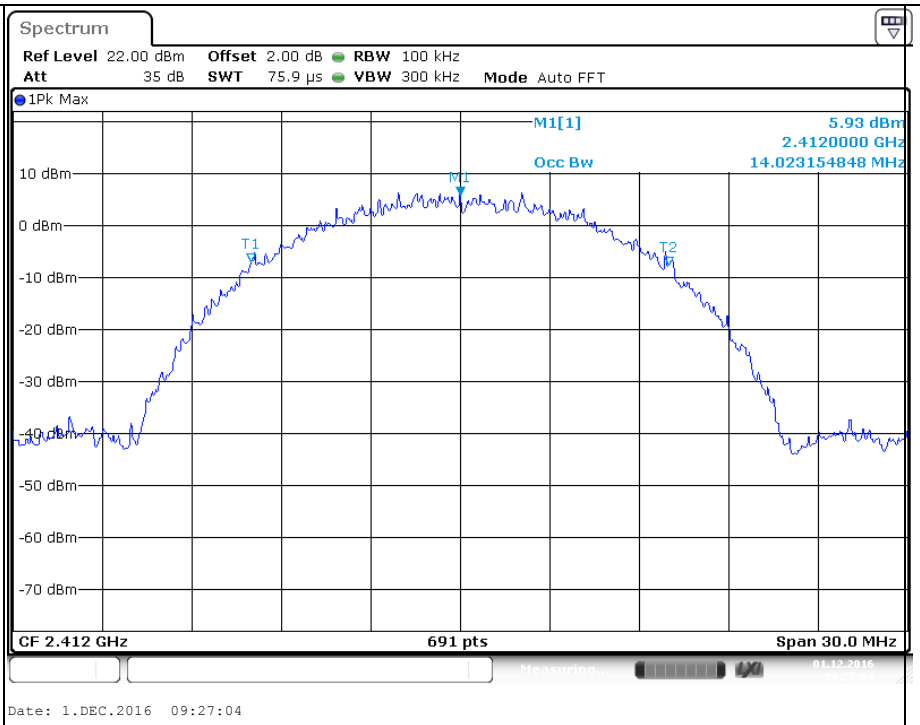
Appendix A.1: 6dB Bandwidth and 99% Bandwidth_802.11b

Channel	Channel Frequency (MHz)	6dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low Channel	2412	9.73	14.02
Middle Channel	2437	9.77	13.89
High Channel	2462	9.77	13.94

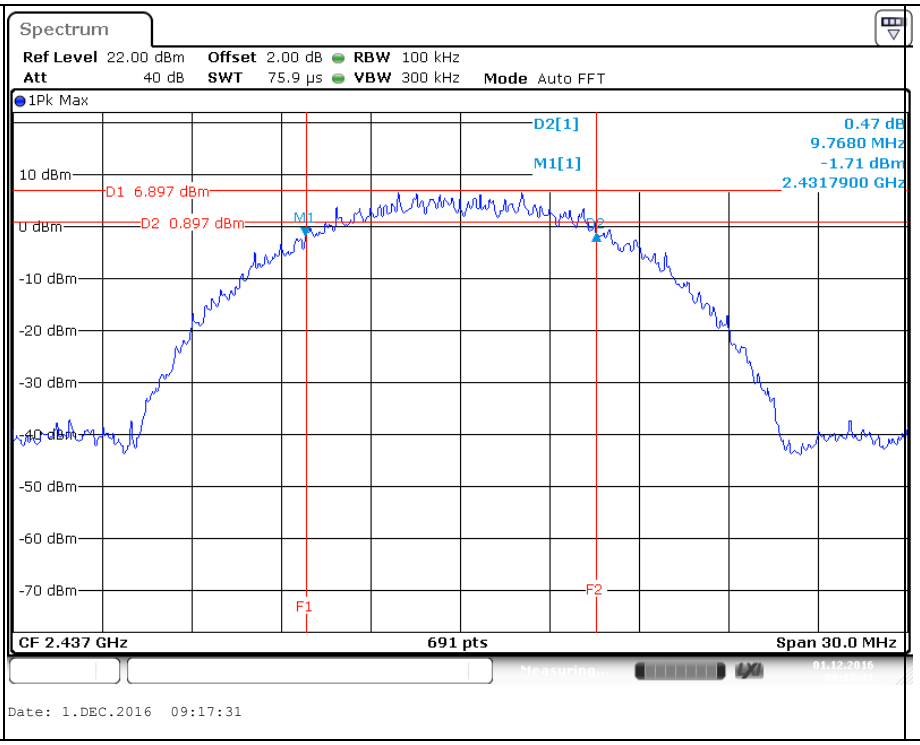
Low Channel 6dB Bandwidth



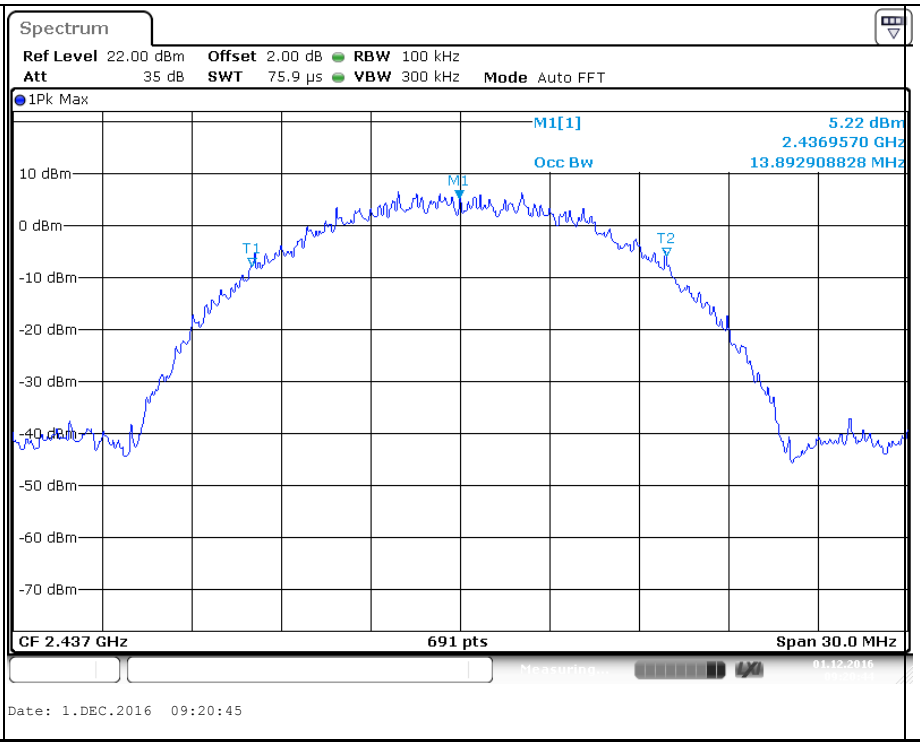
Low Channel 99% Bandwidth



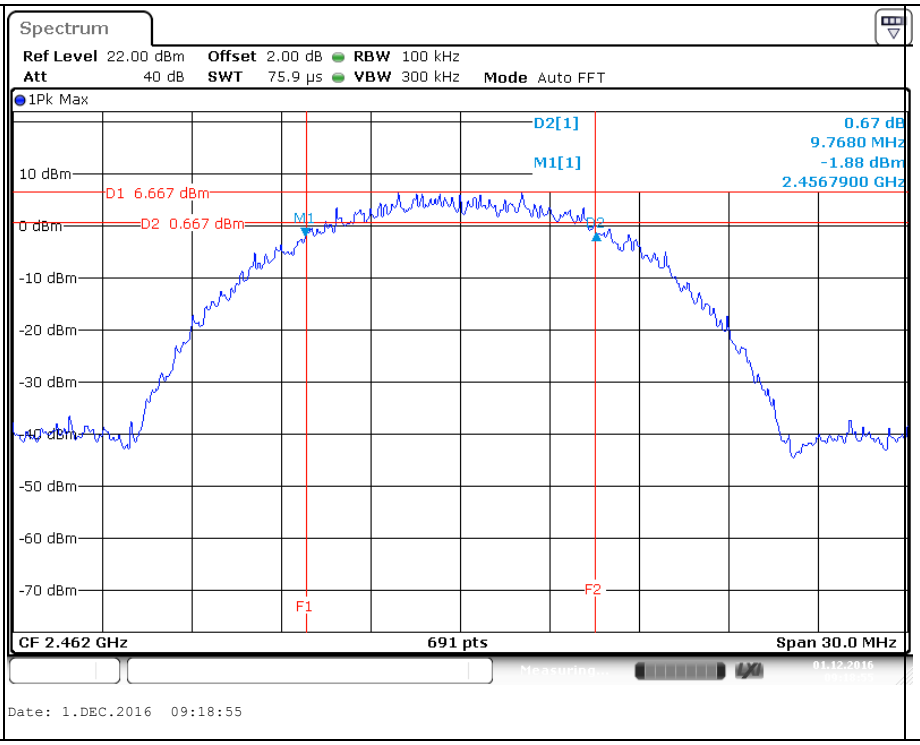
Middle Channel 6dB Bandwidth



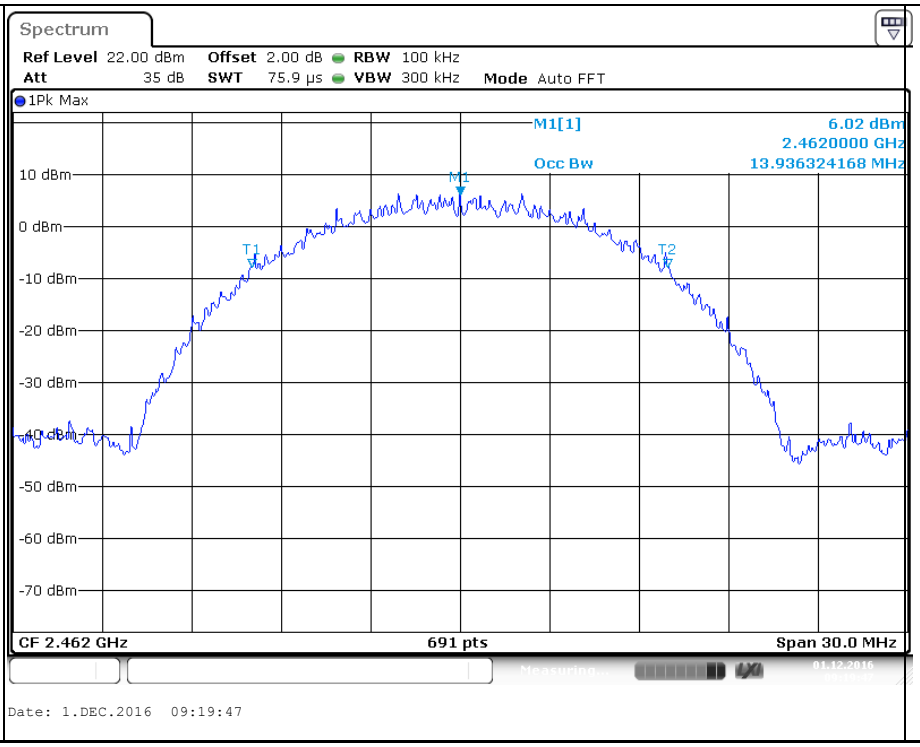
Middle Channel 99% Bandwidth



High Channel 6dB Bandwidth

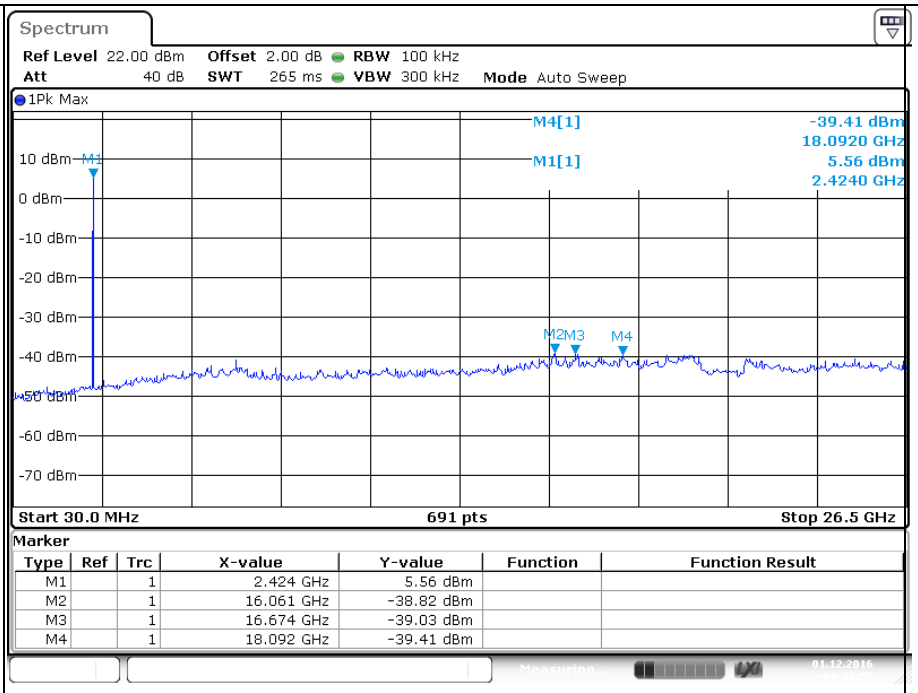


High Channel 99% Bandwidth

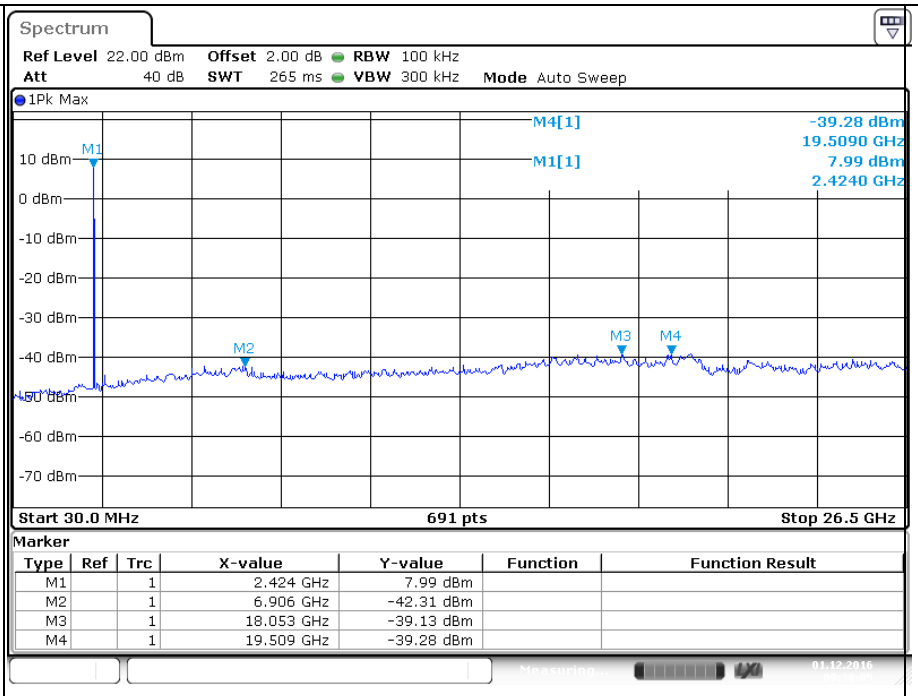


Appendix A.2: Conducted Spurious Emissions measured in 100kHz Bandwidth_802.11b

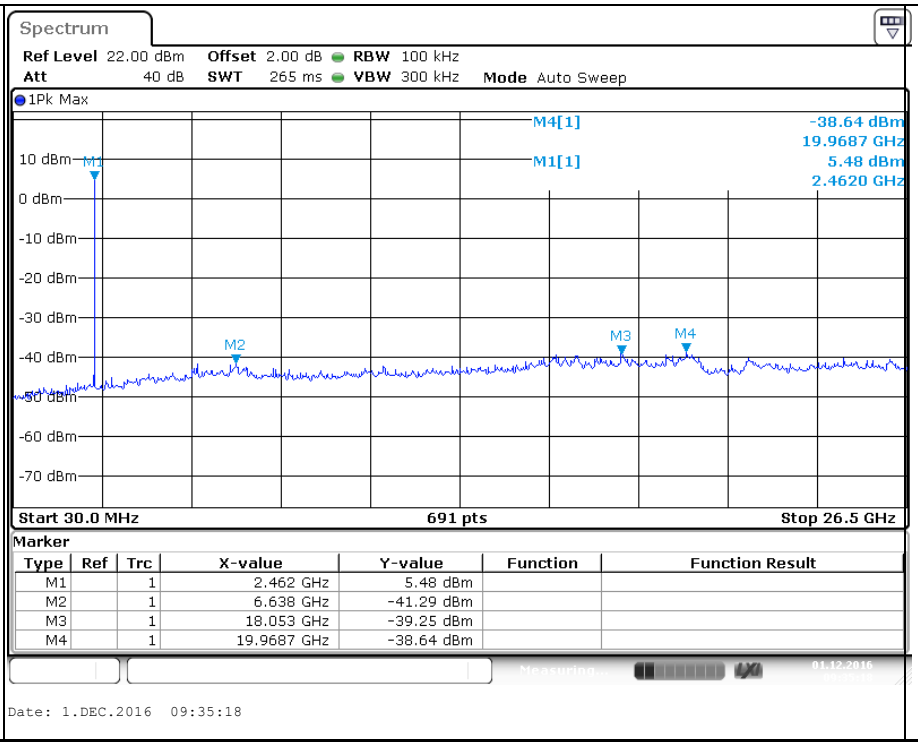
Low Channel



Middle Channel

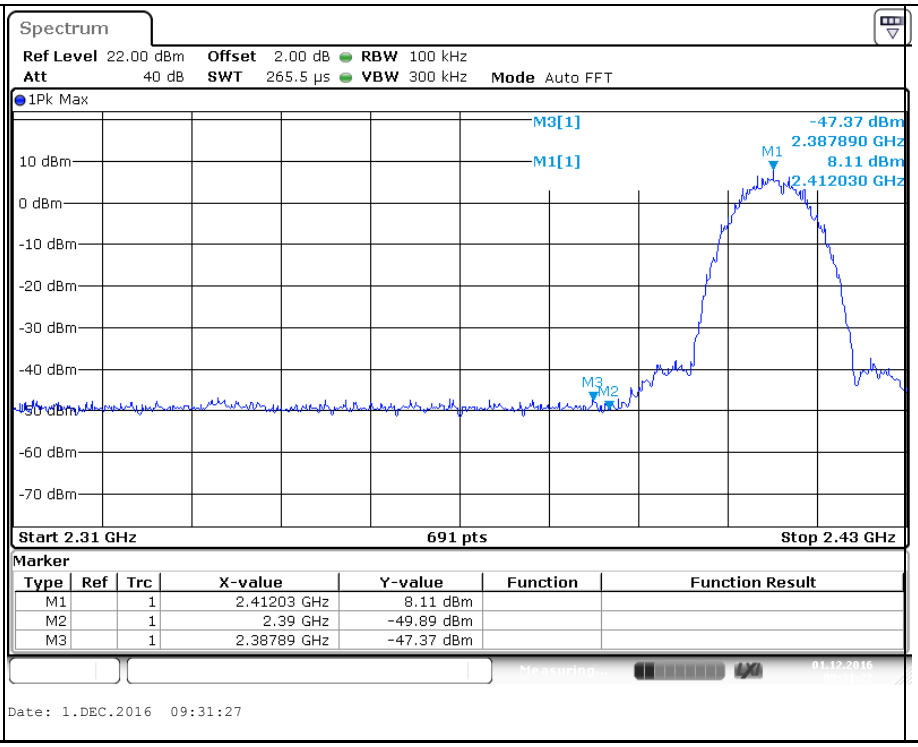


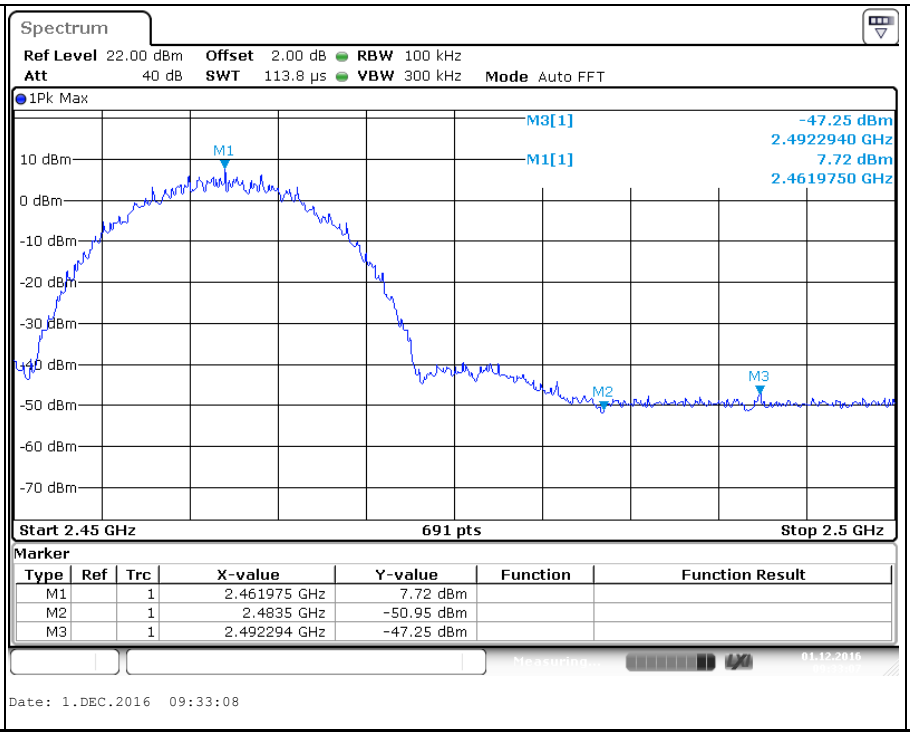
High Channel



Appendix A.3: Frequency Band Edge in 100kHz Bandwidth_802.11b

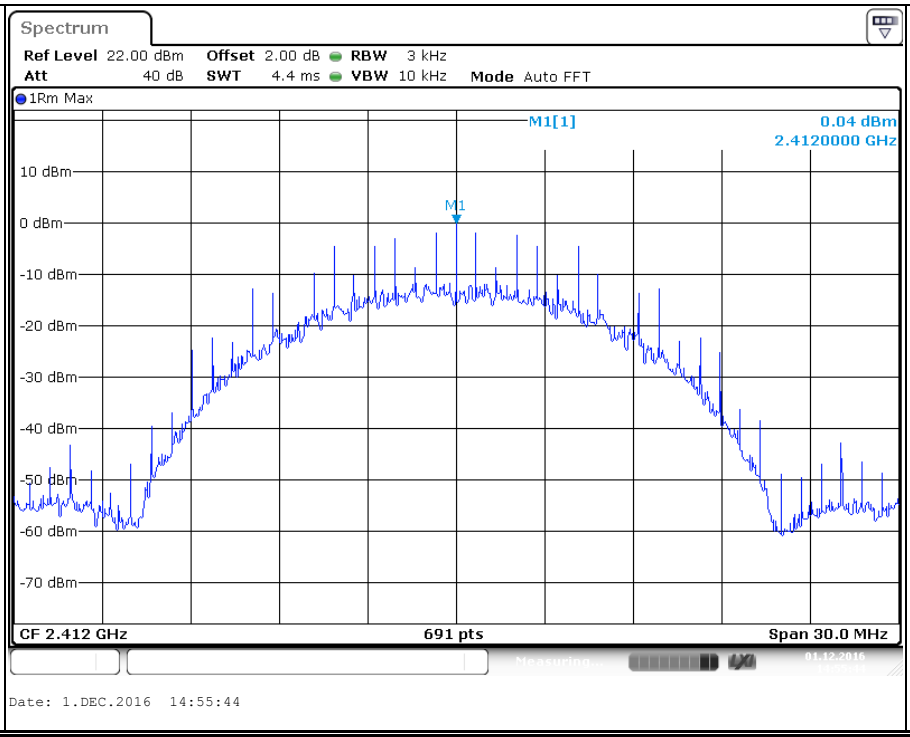
Low Channel



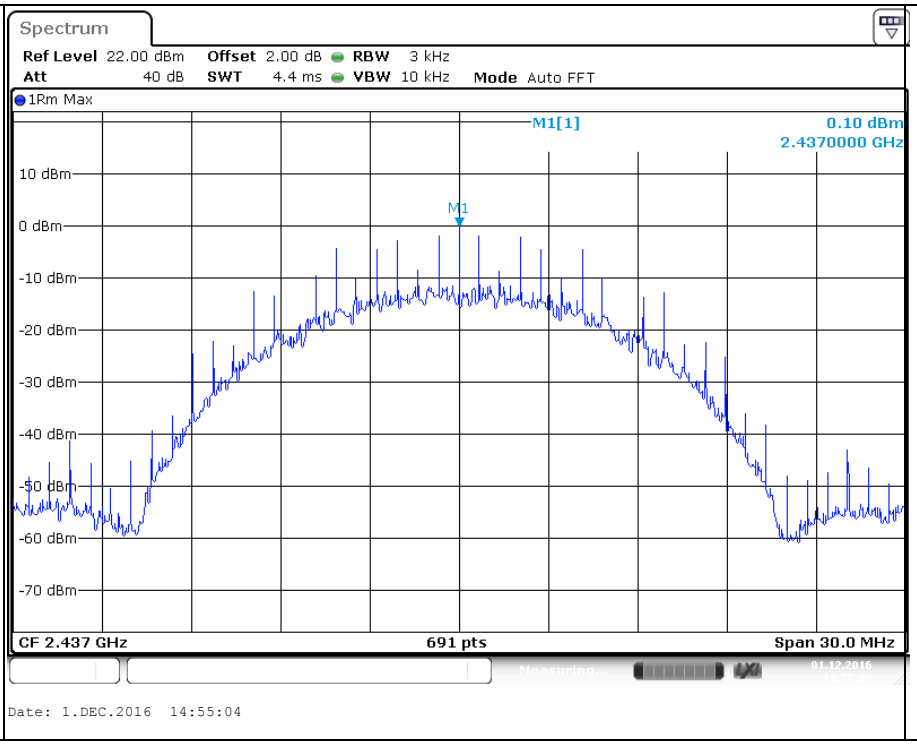
High Channel


Appendix A.4: Power spectral density_802.11b

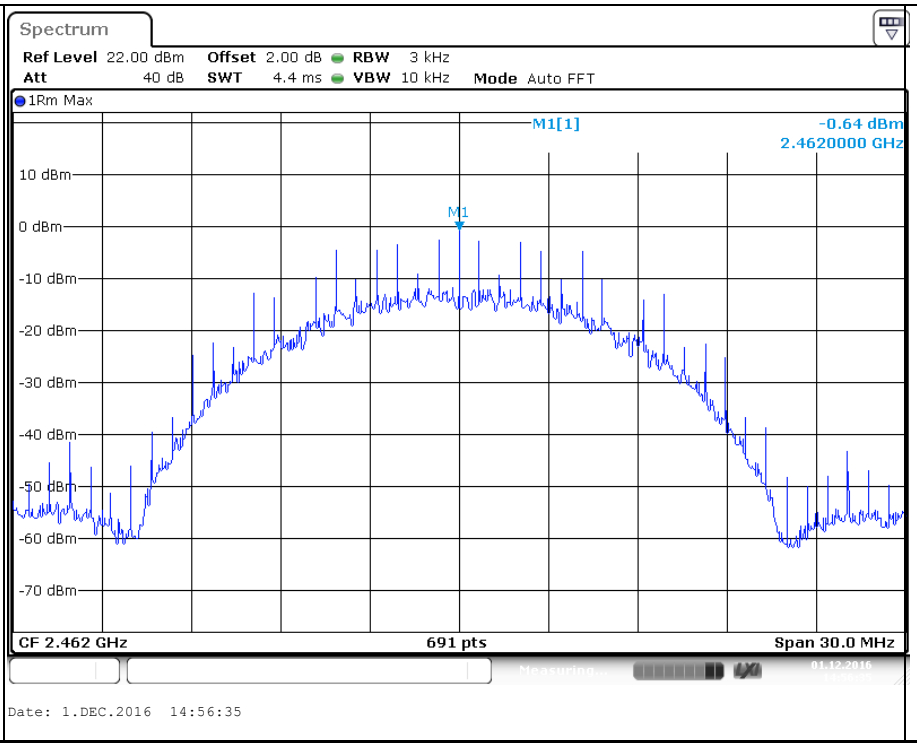
Channel (MHz)	Result (dBm/3kHz)	Limit (dBm/3kHz)	Conclusion
2412	0.04	8	Pass
2437	0.10	8	Pass
2462	-0.64	8	Pass
Low Channel			



Middle Channel



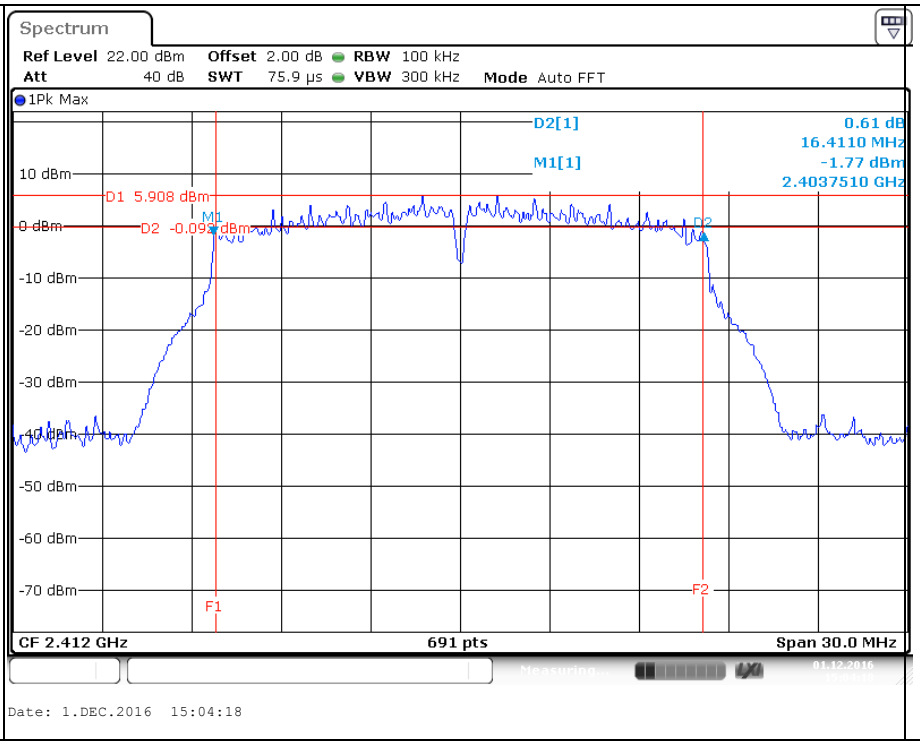
High Channel



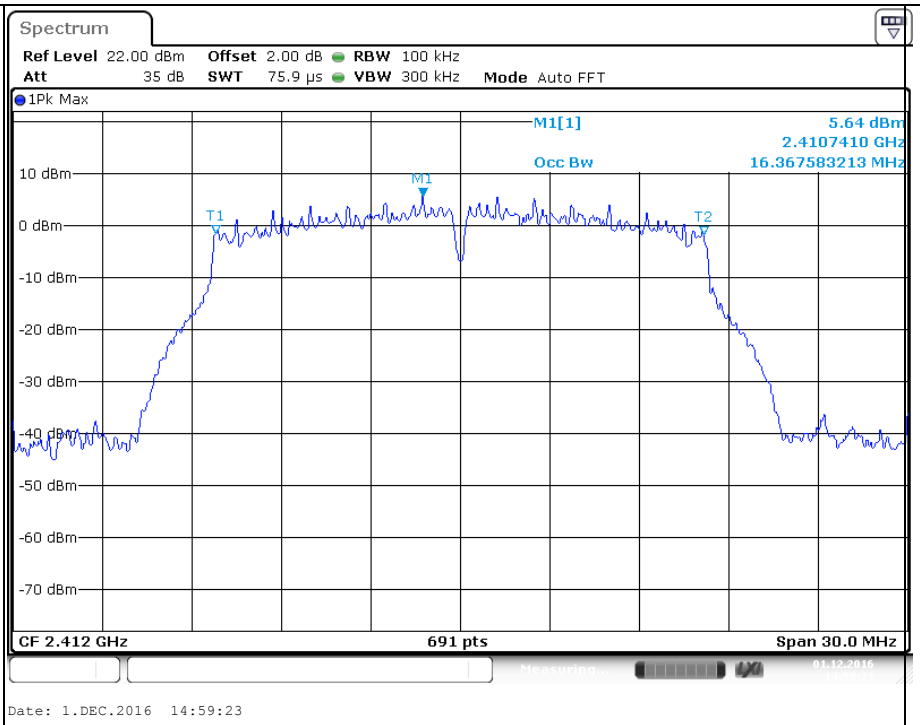
Appendix A.5: 6dB Bandwidth and 99% Bandwidth_802.11g

Channel	Channel Frequency (MHz)	6dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low Channel	2412	16.41	16.37
Middle Channel	2437	16.41	16.37
High Channel	2462	16.37	16.32

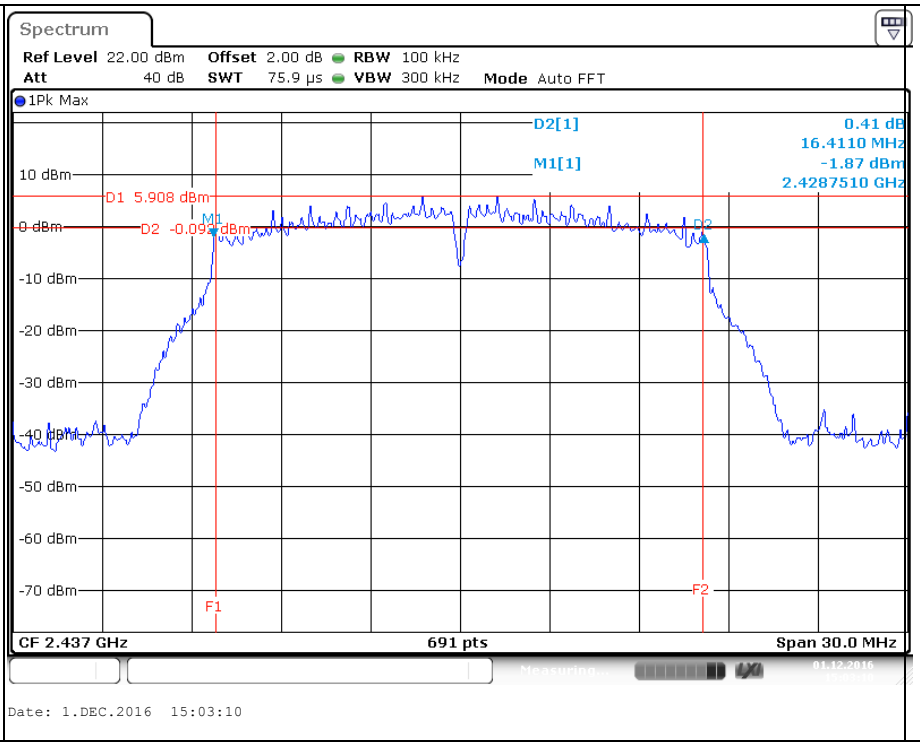
Low Channel 6dB Bandwidth



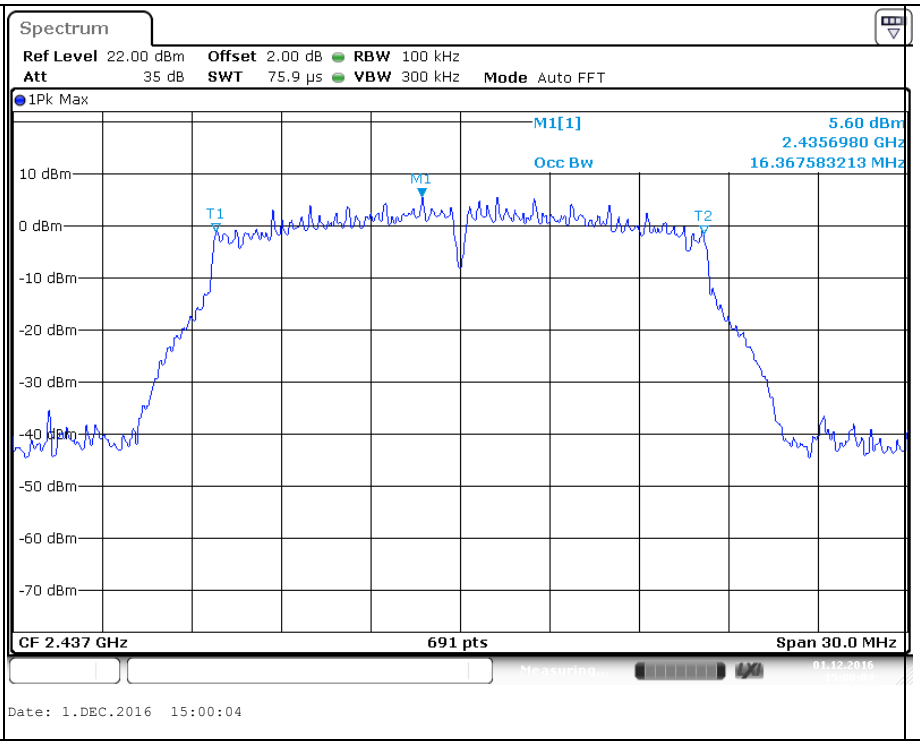
Low Channel 99% Bandwidth



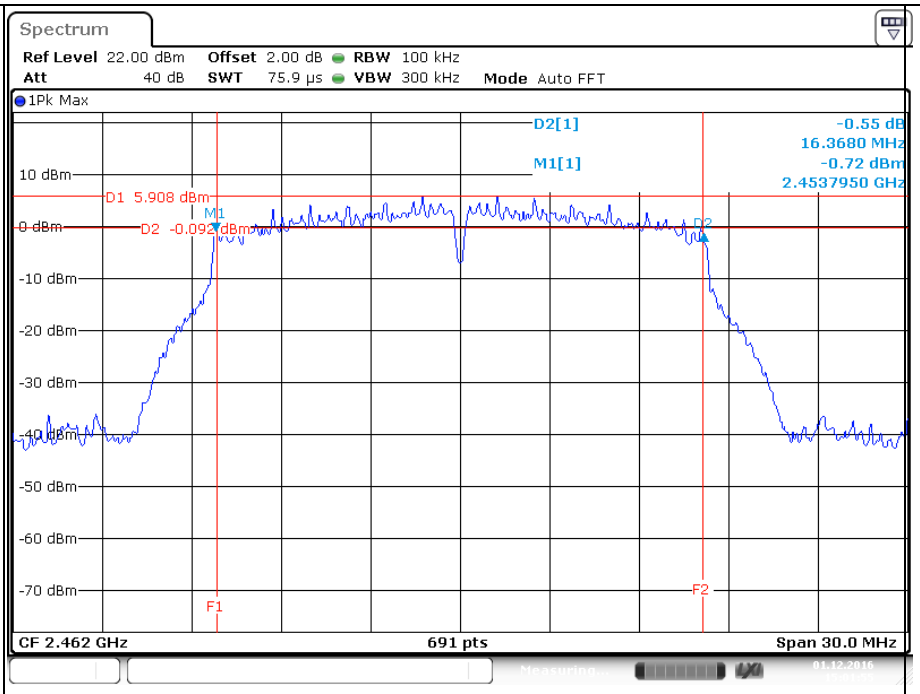
Middle Channel 6dB Bandwidth



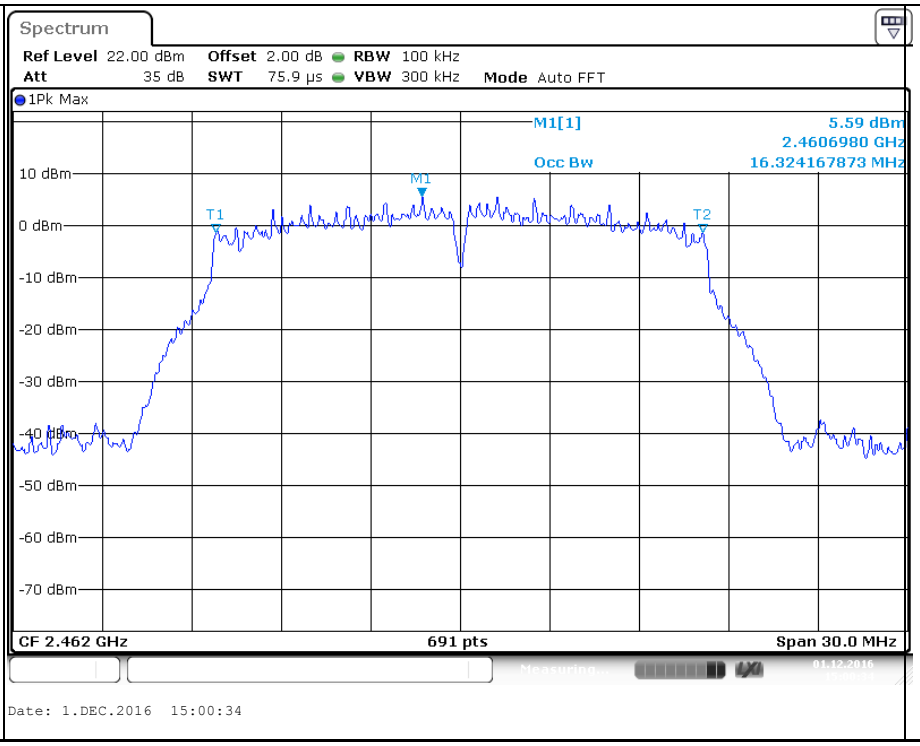
Middle Channel 99% Bandwidth



High Channel 6dB Bandwidth

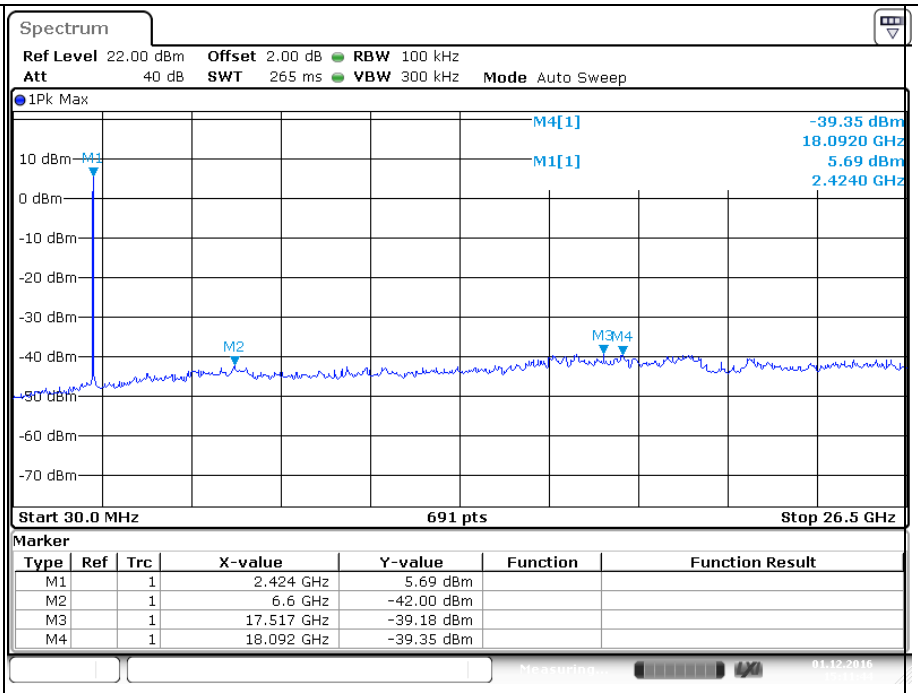


High Channel 99% Bandwidth

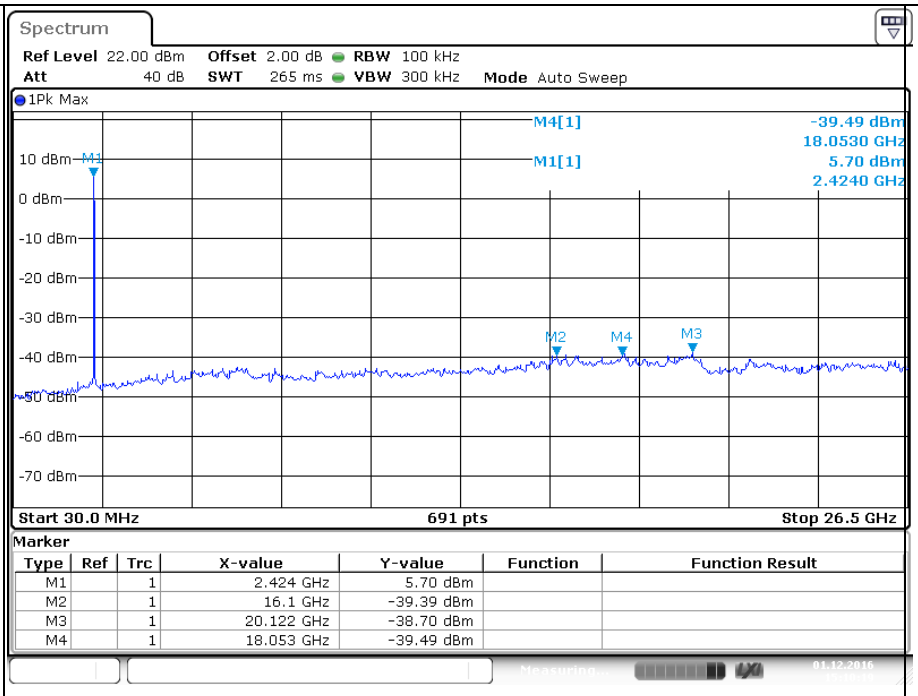


Appendix A.6: Conducted Spurious Emissions measured in 100kHz Bandwidth_802.11g

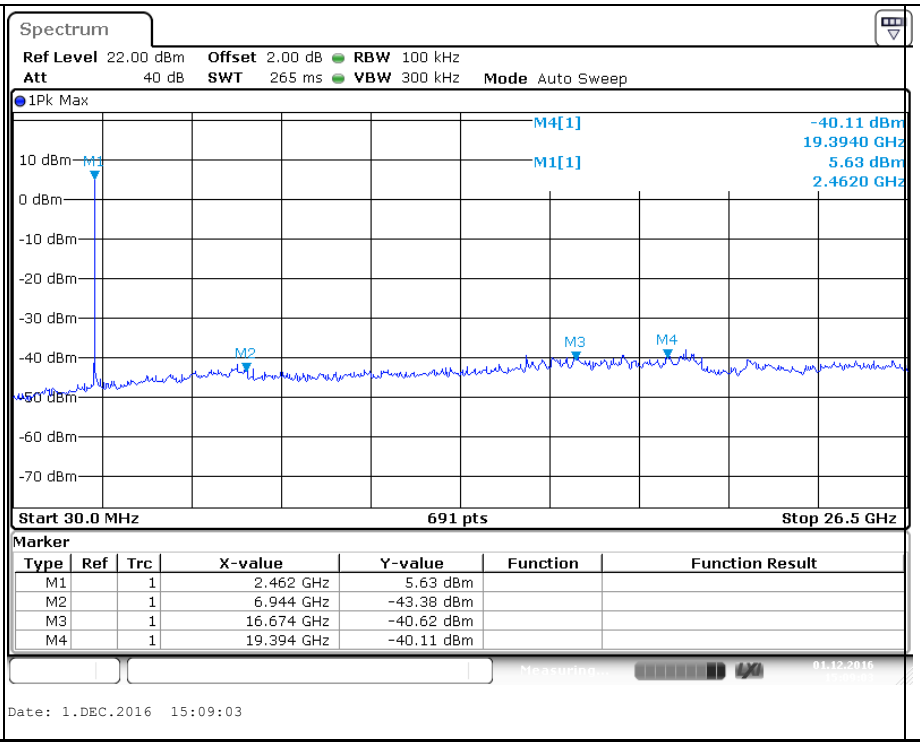
Low Channel



Middle Channel

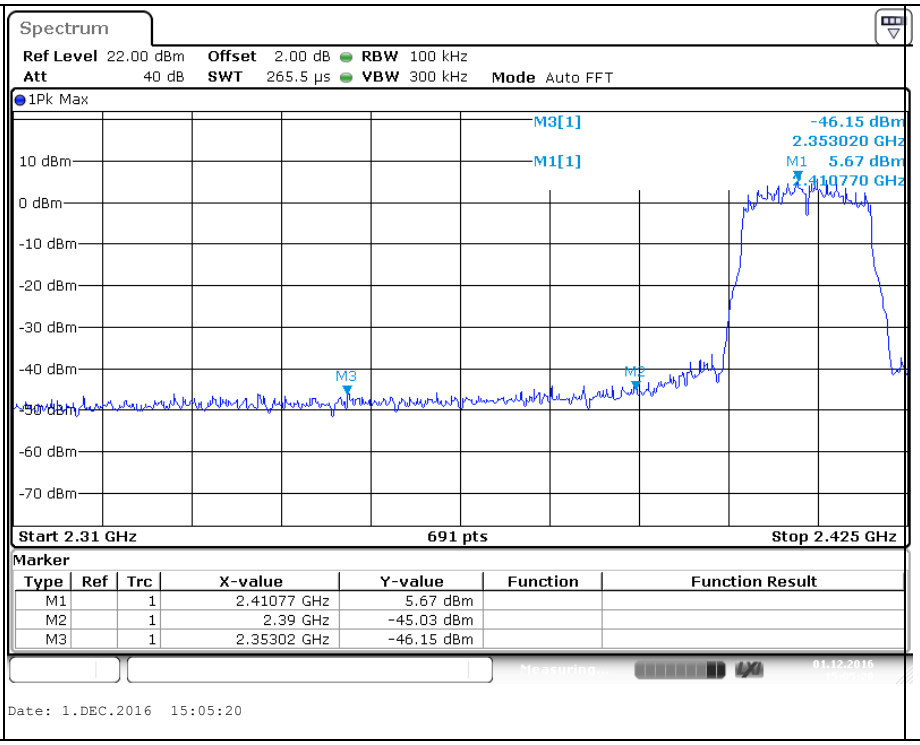


High Channel

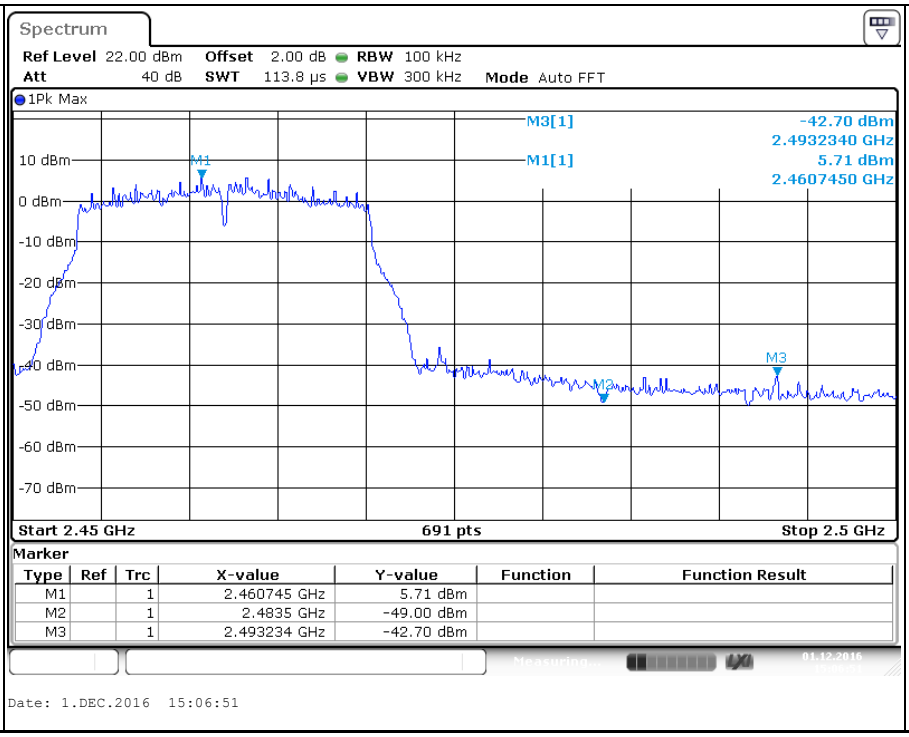


Appendix A.7: Frequency Band Edge in 100kHz Bandwidth_802.11g

Low Channel



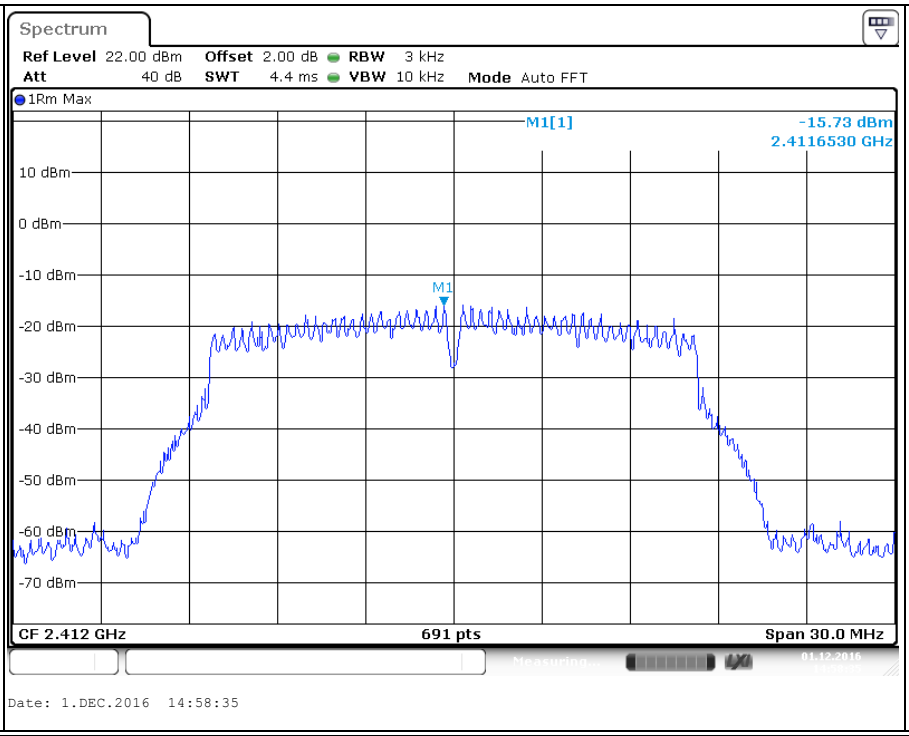
High Channel



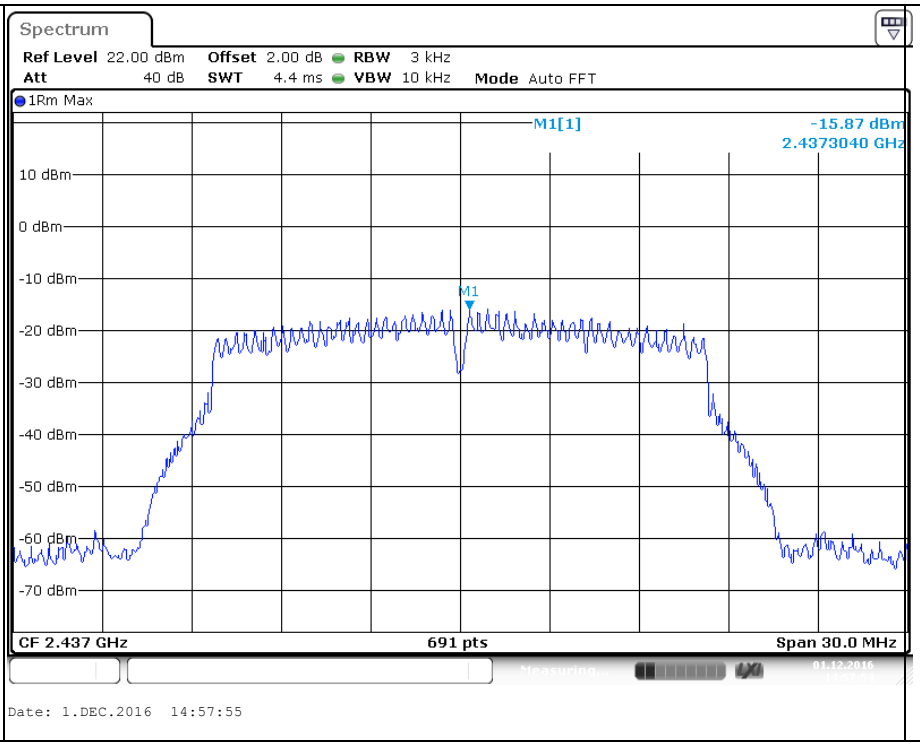
Appendix A.8: Power Spectral Density_802.11g

Channel (MHz)	Result (dBm/3kHz)	Limit (dBm/3kHz)	Conclusion
2412	-15.73	8	Pass
2437	-15.87	8	Pass
2462	-15.88	8	Pass

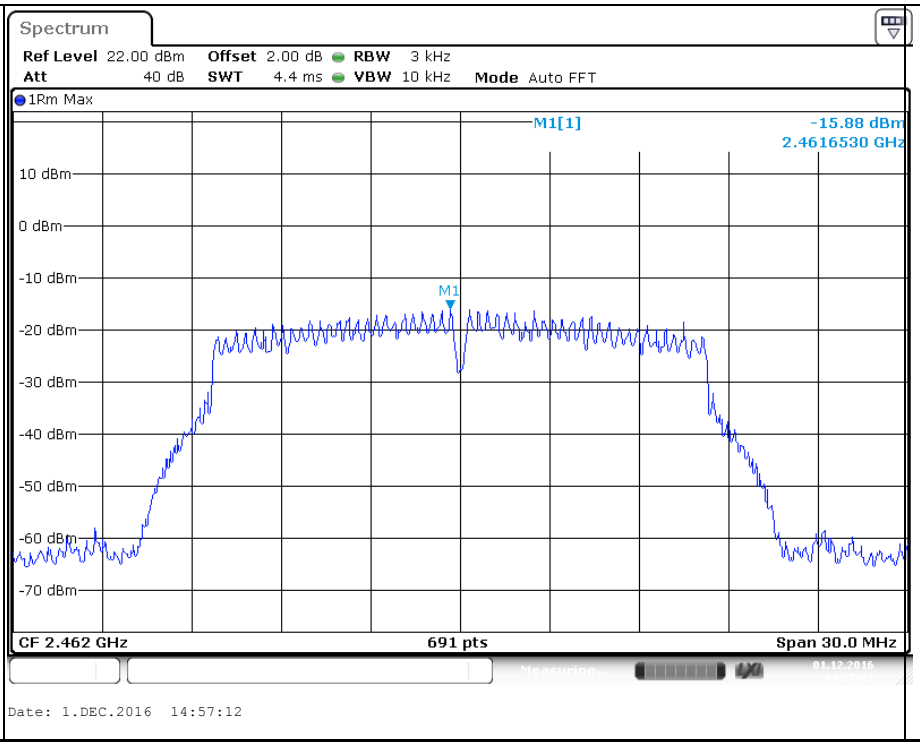
Low Channel



Middle Channel



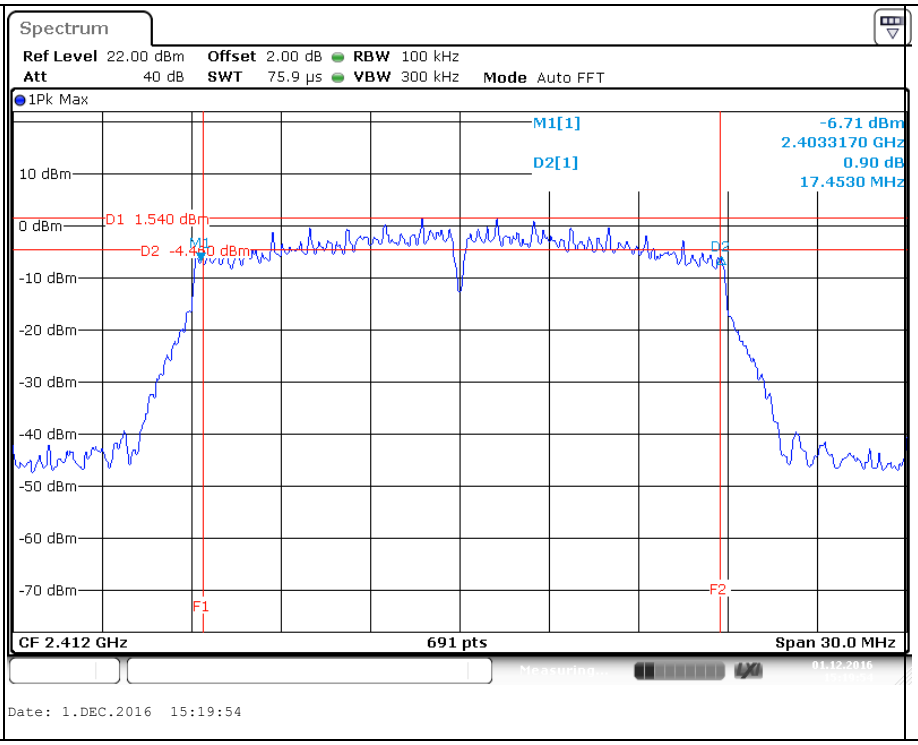
High Channel



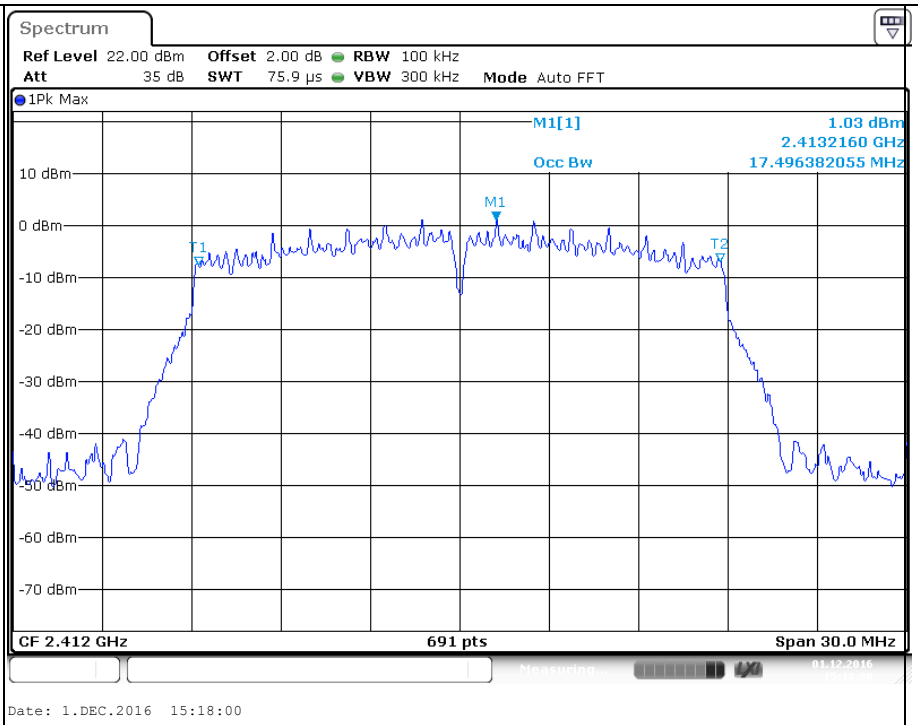
Appendix A.9: 6dB Bandwidth and 99% Bandwidth_802.11n_HT20 (ANT1)

Channel	Channel Frequency (MHz)	6dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low Channel	2412	17.45	17.50
Middle Channel	2437	17.41	17.50
High Channel	2462	17.41	17.54

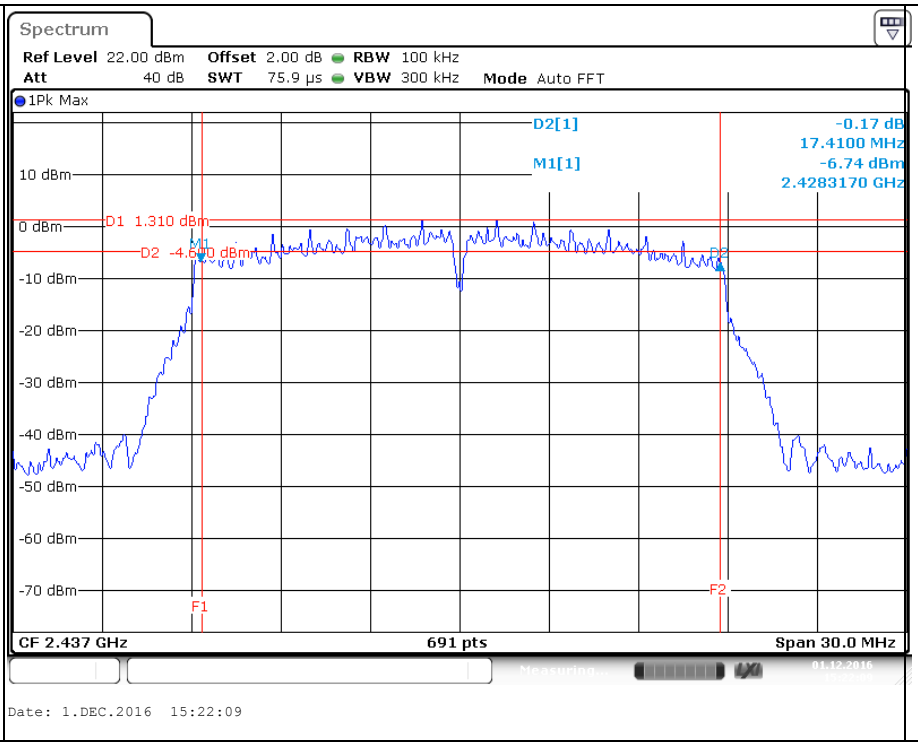
Low Channel 6dB Bandwidth



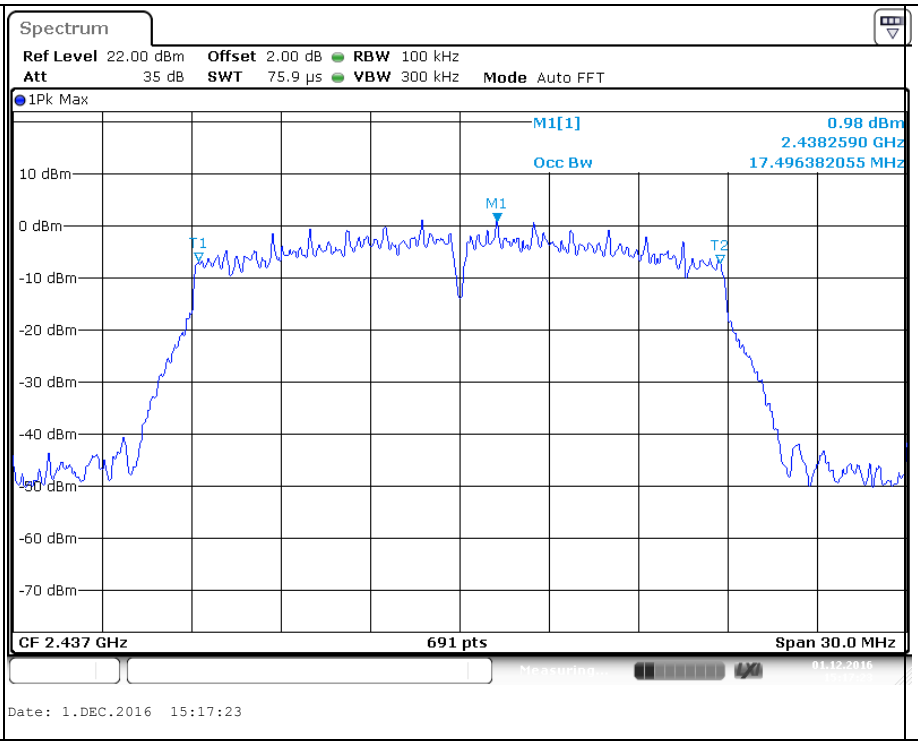
Low Channel 99% Bandwidth



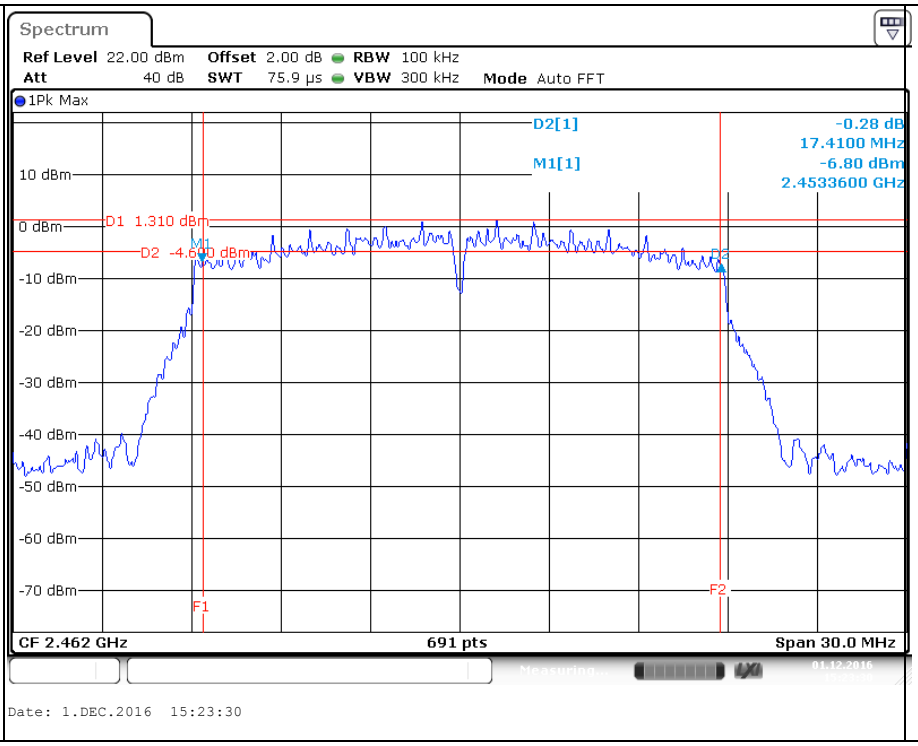
Middle Channel 6dB Bandwidth



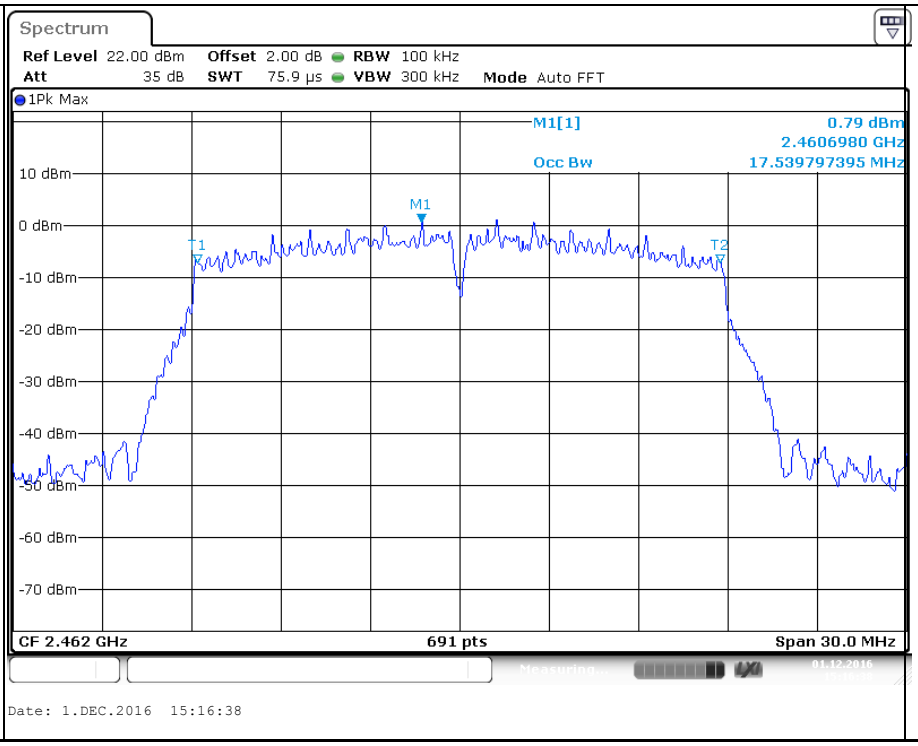
Middle Channel 99% Bandwidth



High Channel 6dB Bandwidth

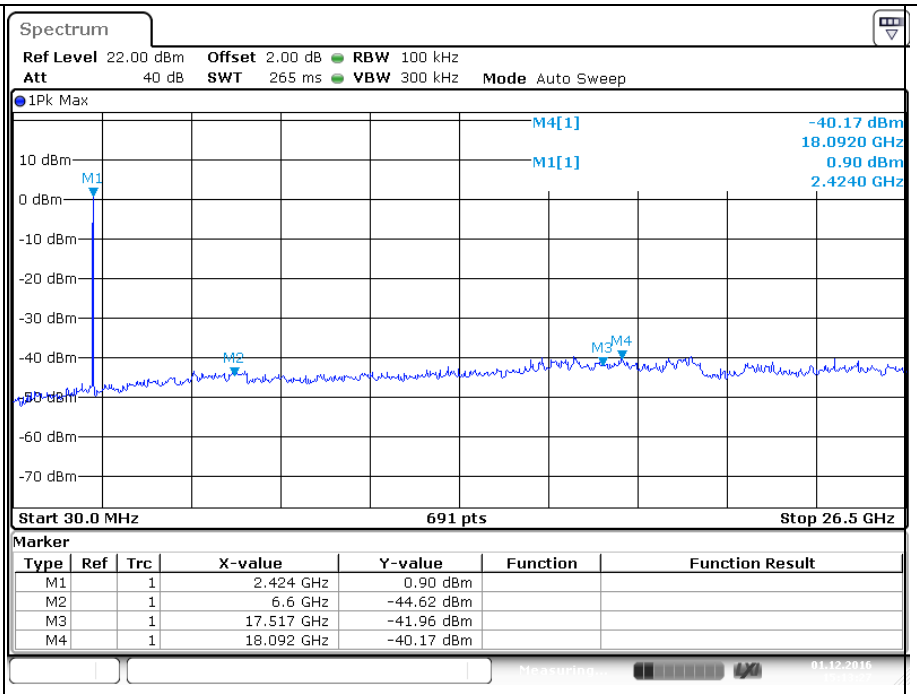


High Channel 99% Bandwidth

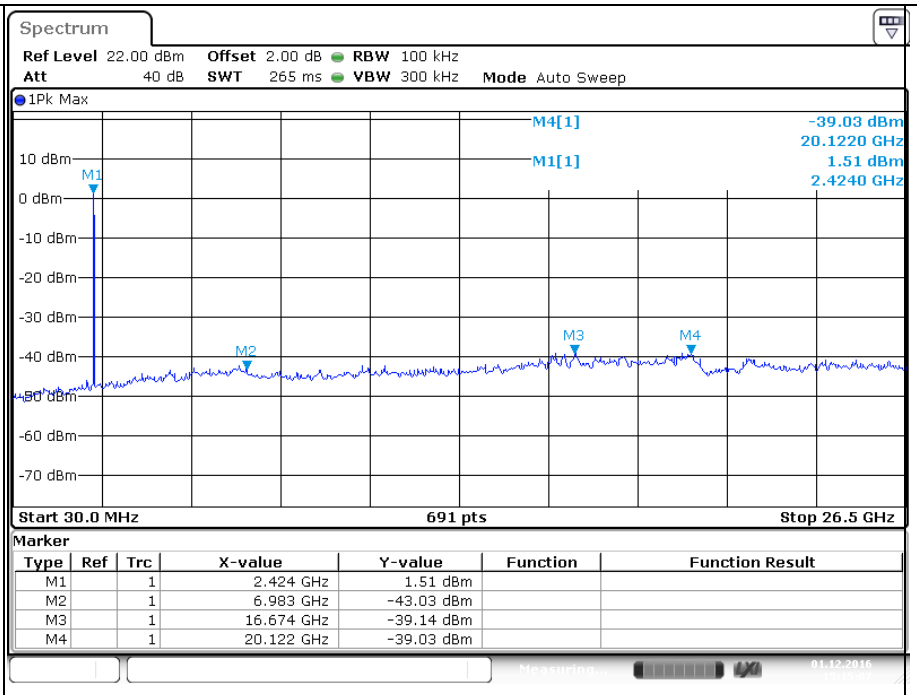


Appendix A.10: Conducted Spurious Emissions measured in 100kHz Bandwidth_802.11n HT20 (ANT1)

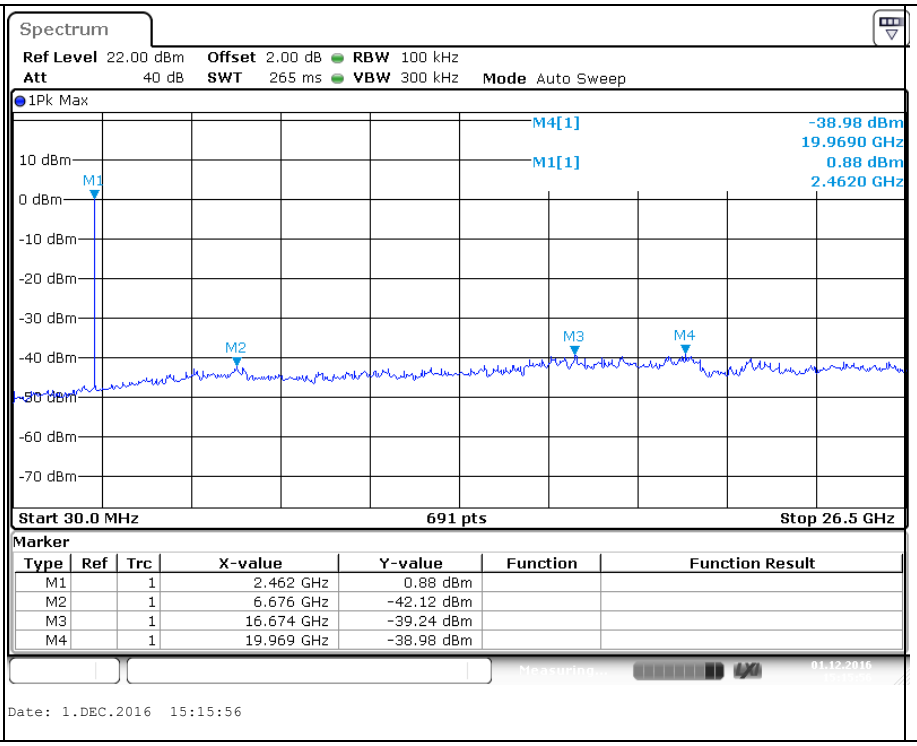
Low Channel



Middle Channel

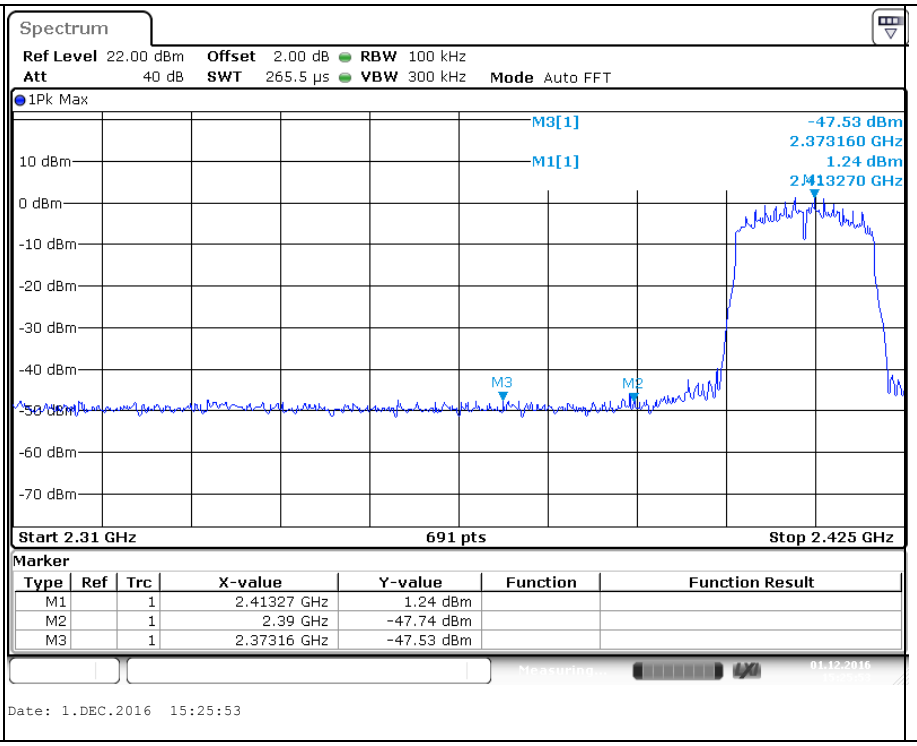


High Channel

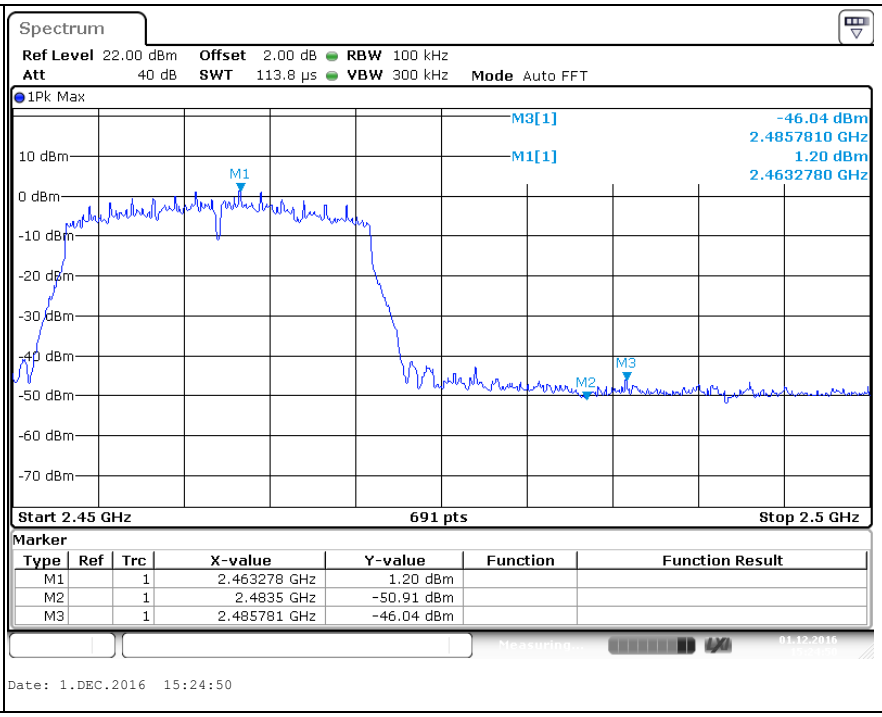


Appendix A.11: Frequency Band Edge in 100kHz Bandwidth_802.11n_HT20 (ANT1)1

Low Channel



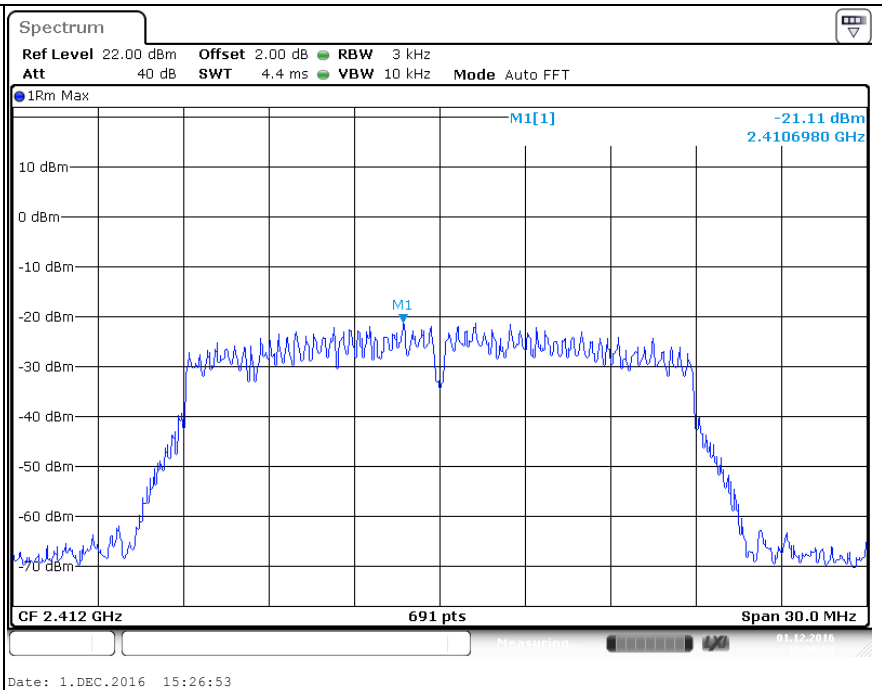
High Channel



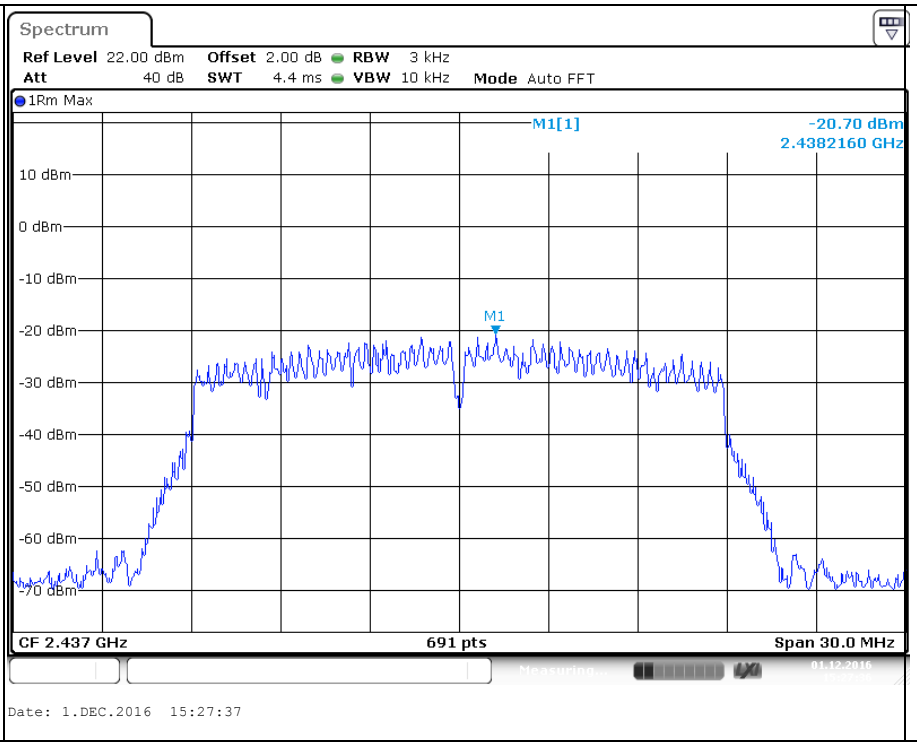
Appendix A.12: Power Spectral Density_802.11n HT20

Channel	Channel Frequency (MHz)	PSD_ANT1 (dBm/3kHz)	PSD_ANT2 (dBm/3kHz)	PSD_Total (dBm/3kHz)	Limit (dBm/3kHz)
Low Channel	2412	-21.11	-19.33	-17.12	8
Middle Channel	2437	-20.70	-19.37	-16.97	8
High Channel	2462	-21.17	-19.15	-17.03	8

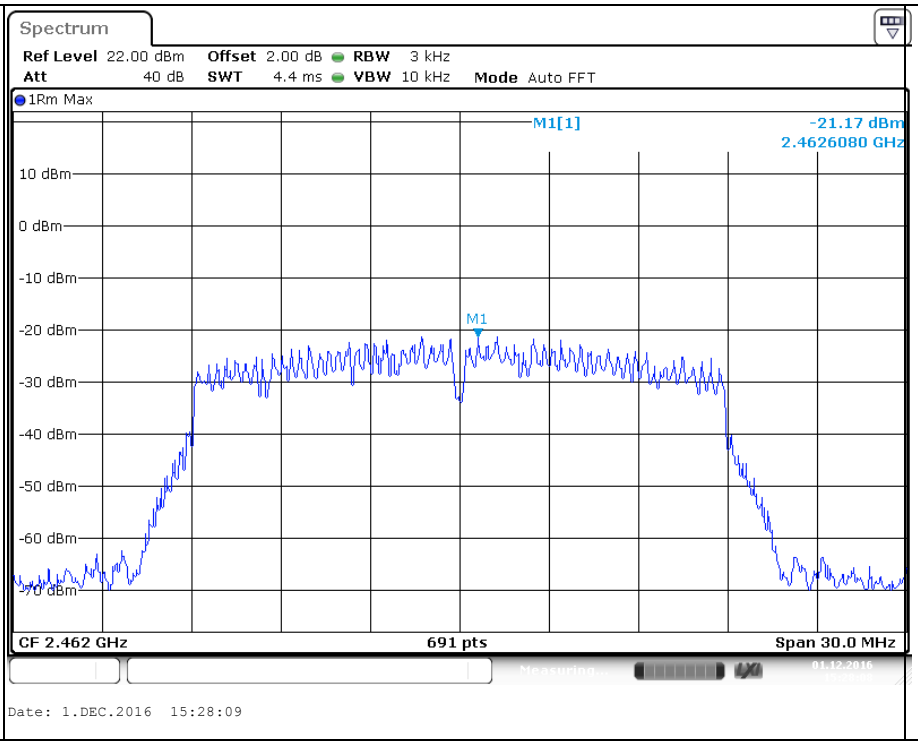
Low Channel_ANT1



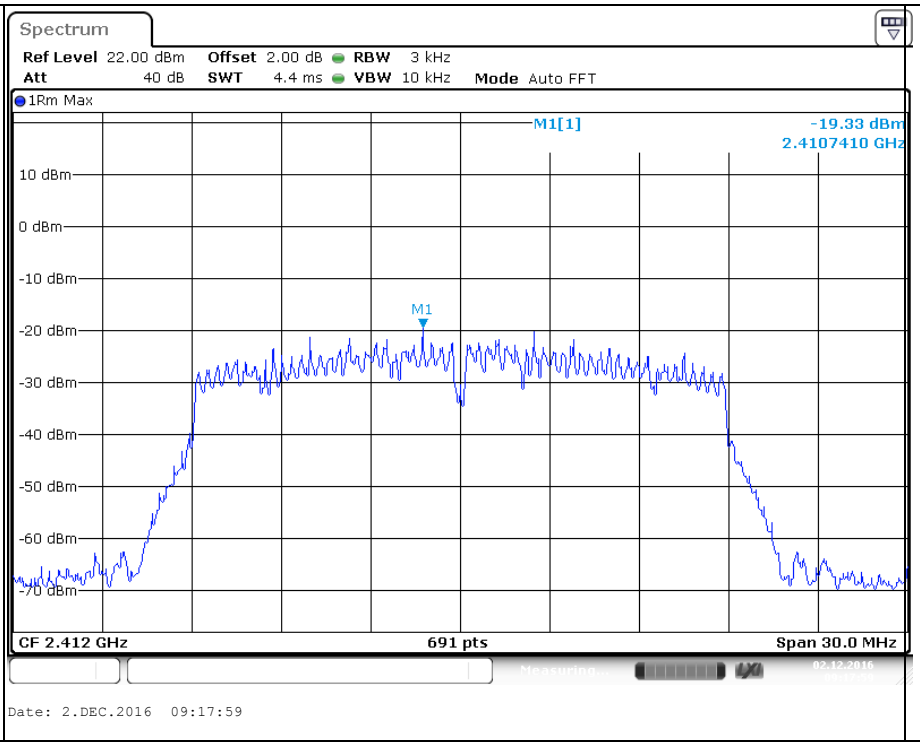
Middle Channel_ANT1



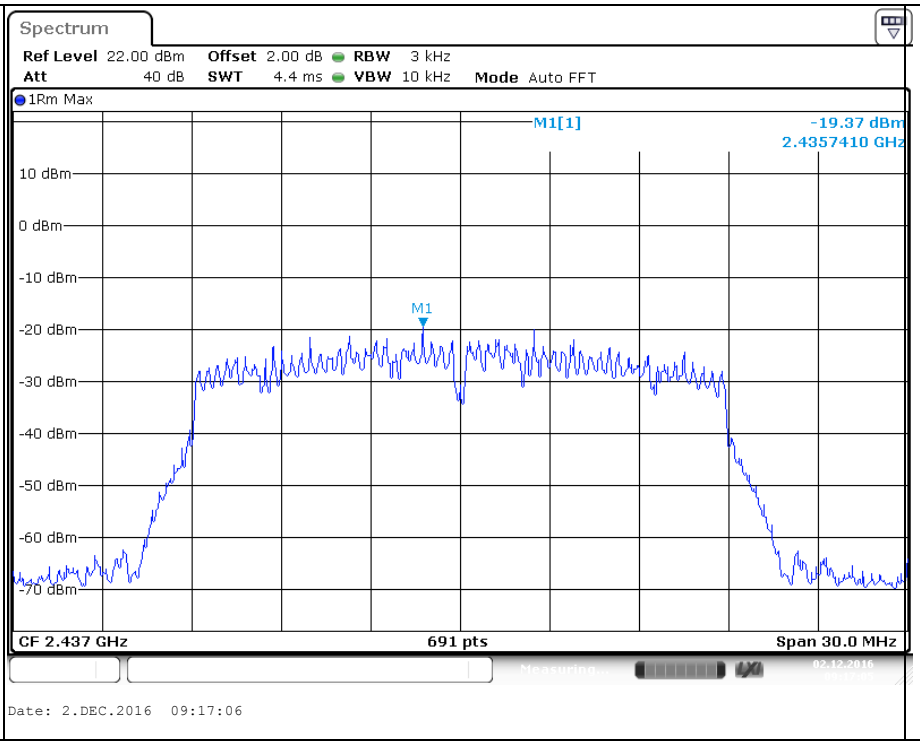
High Channel_ANT1

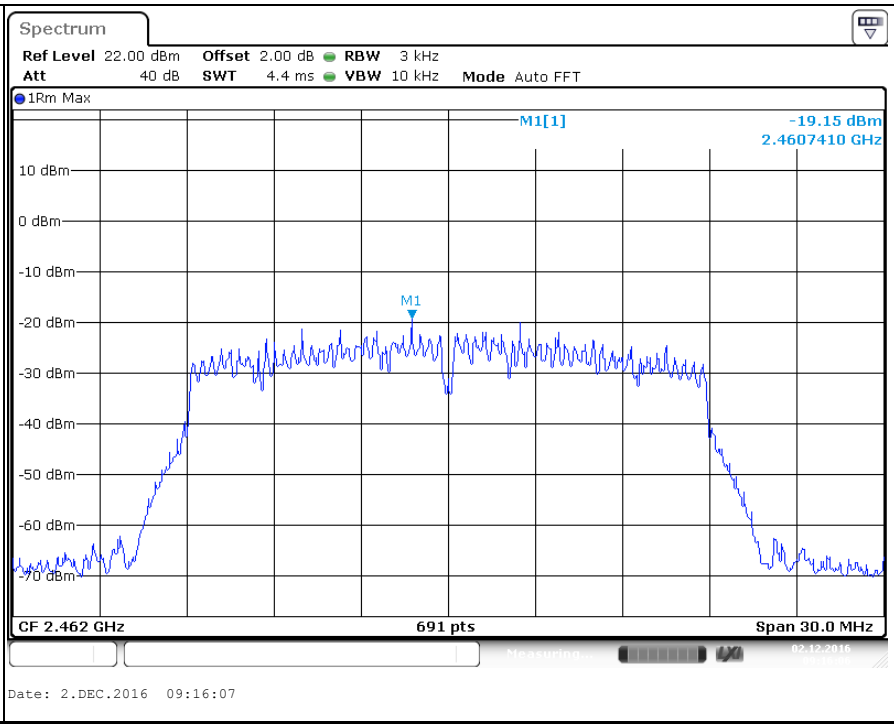


Low Channel_ANT2



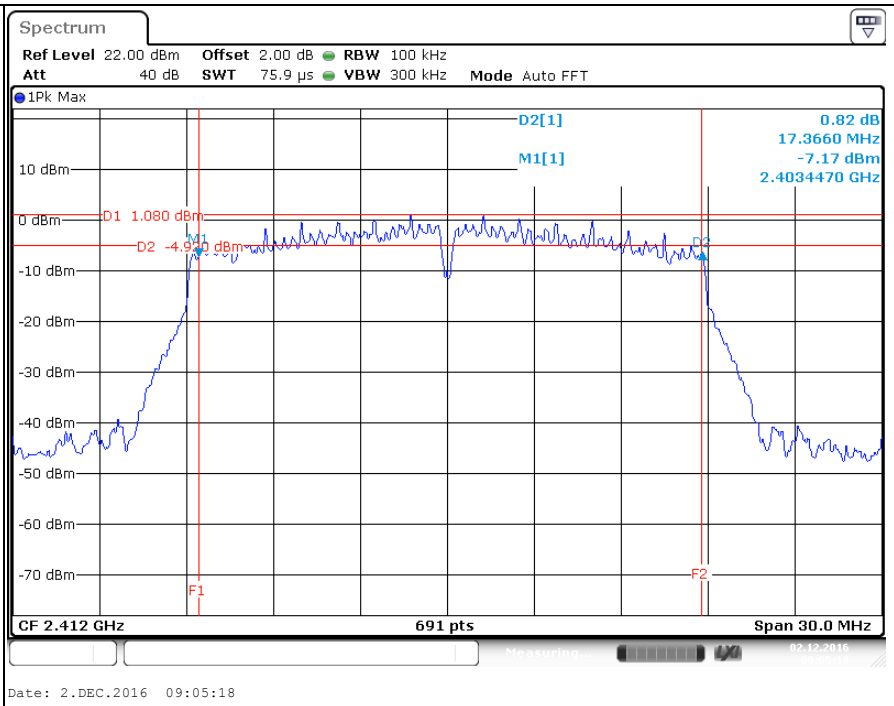
Middle Channel_ANT2



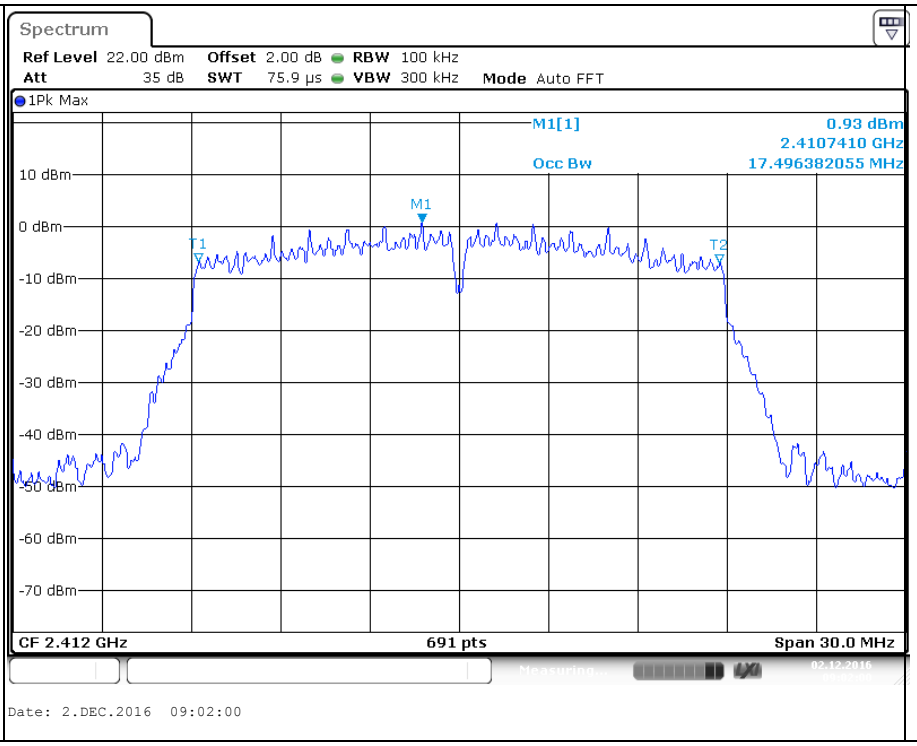
High Channel_ANT2


Appendix A.13: 6dB Bandwidth and 99% Bandwidth_802.11n HT20 (ANT2)

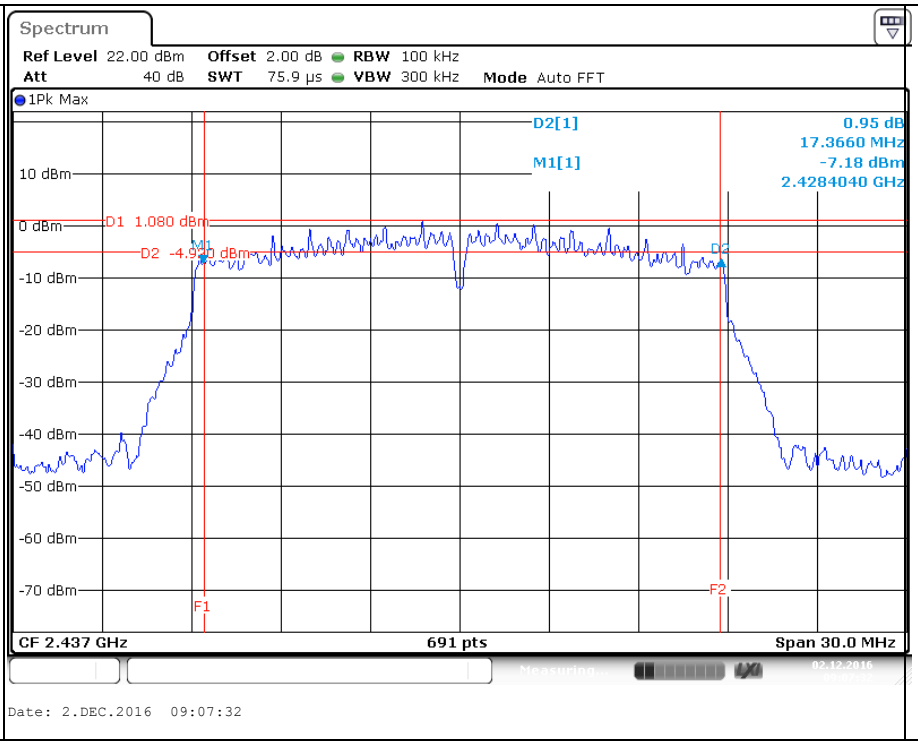
Channel	Channel Frequency (MHz)	6dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low Channel	2412	17.37	17.50
Middle Channel	2437	17.37	17.50
High Channel	2462	17.37	17.50

Low Channel 6dB Bandwidth


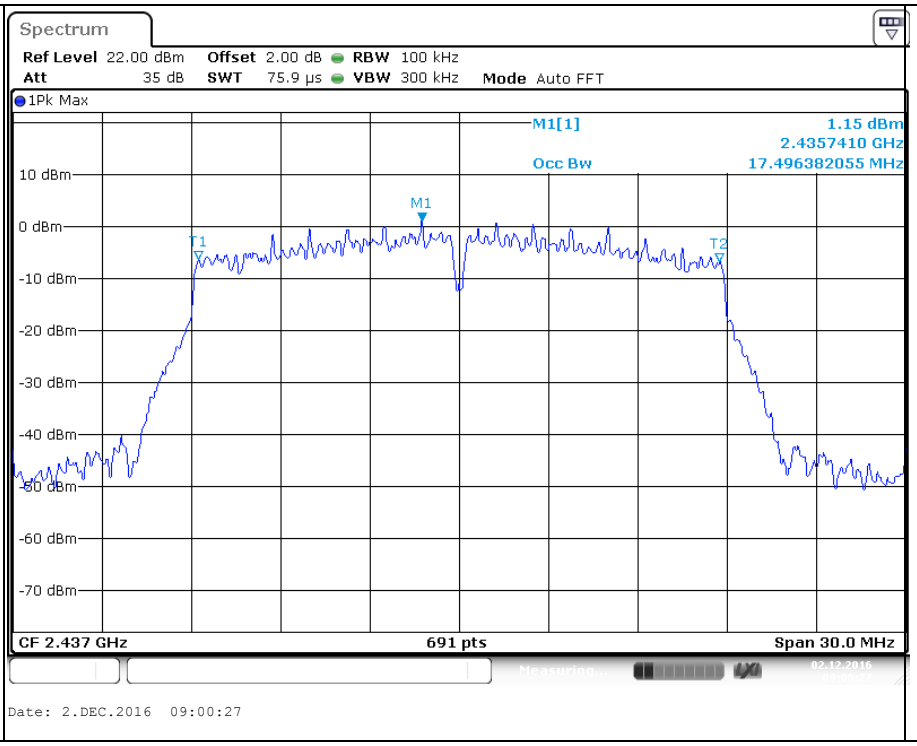
Low Channel 99% Bandwidth



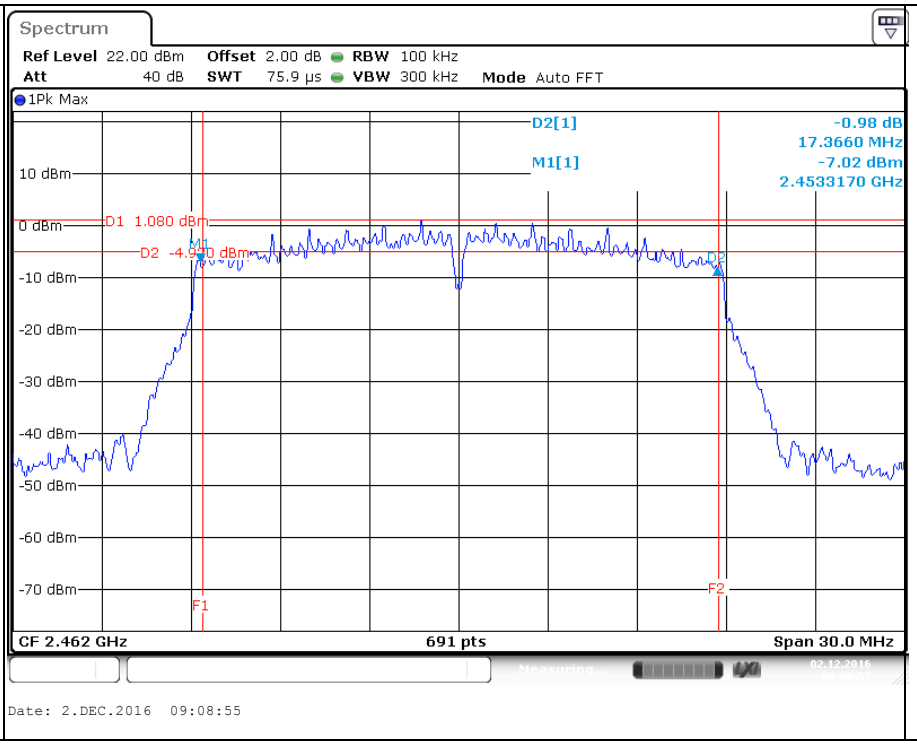
Middle Channel 6dB Bandwidth



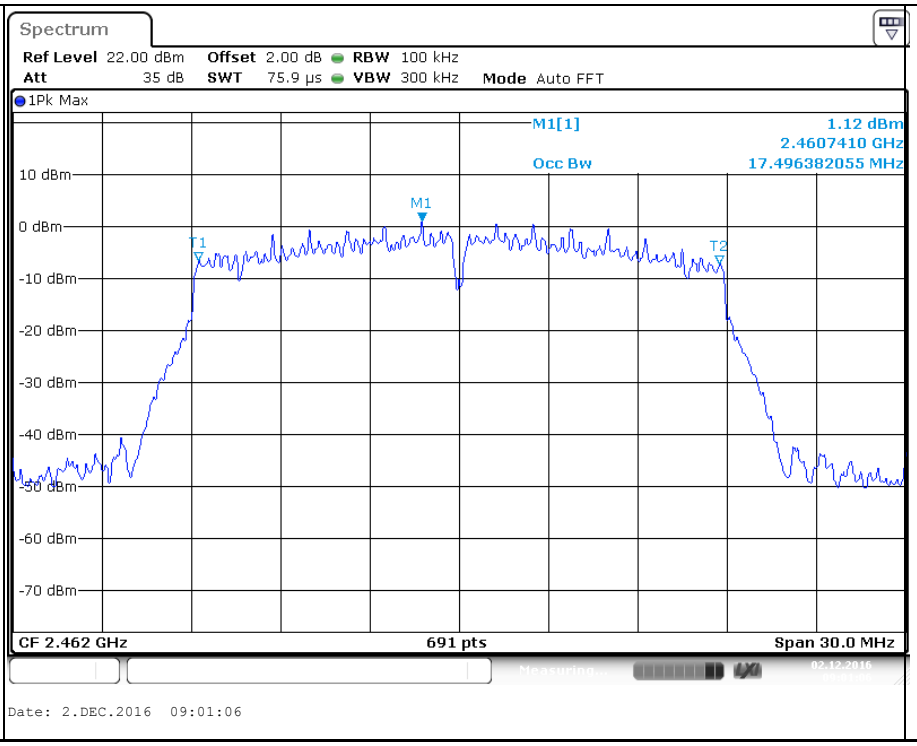
Middle Channel 99% Bandwidth



High Channel 6dB Bandwidth

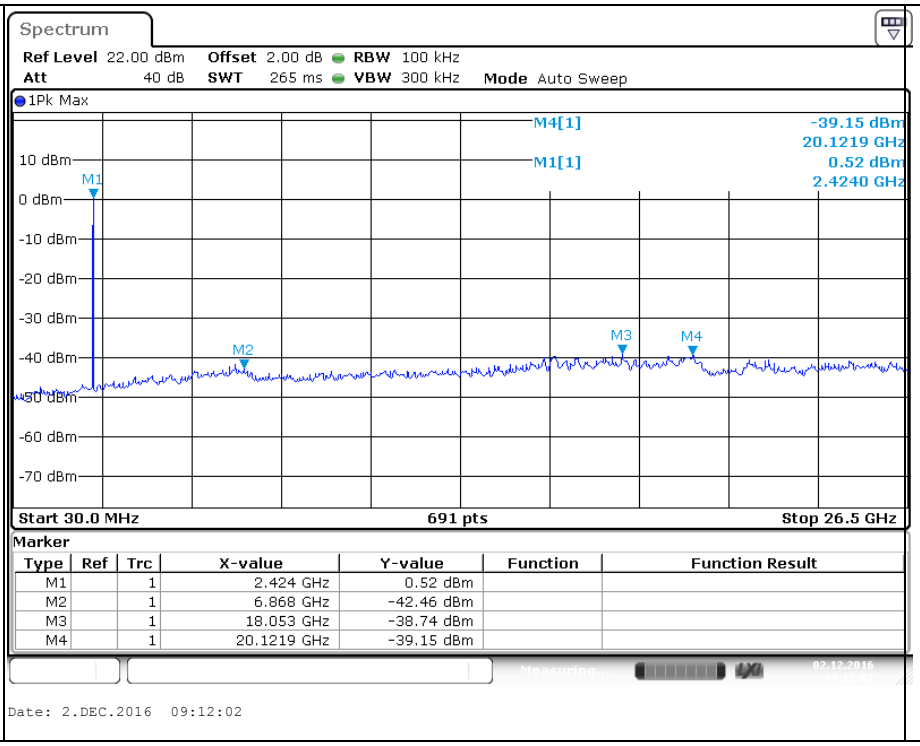


High Channel 99% Bandwidth

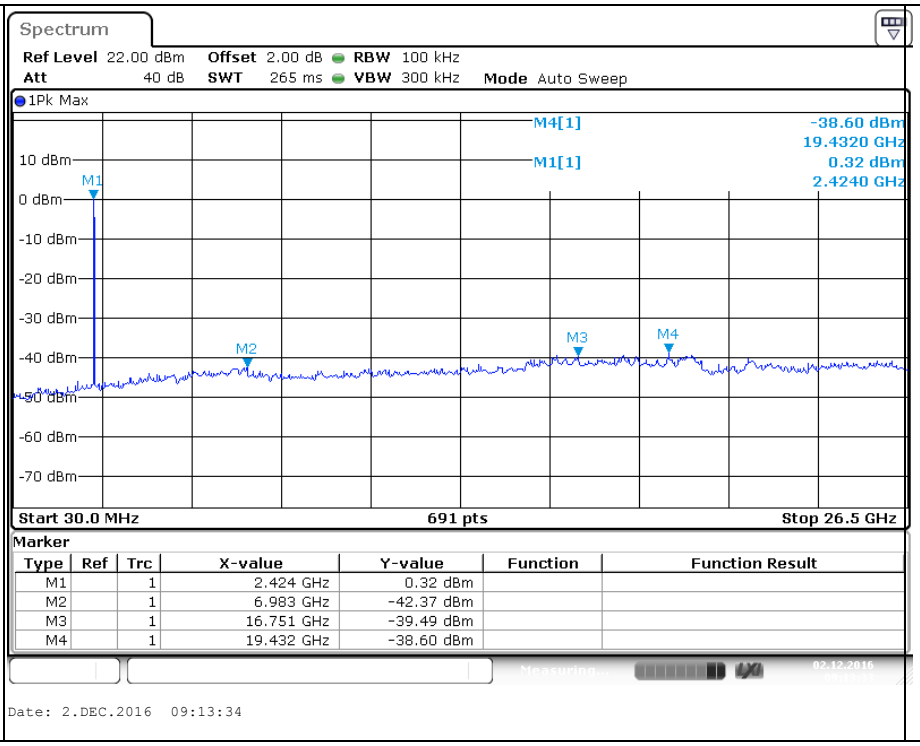


Appendix A.14: Conducted Spurious Emissions measured in 100kHz Bandwidth_802.11n HT20 (ANT2)

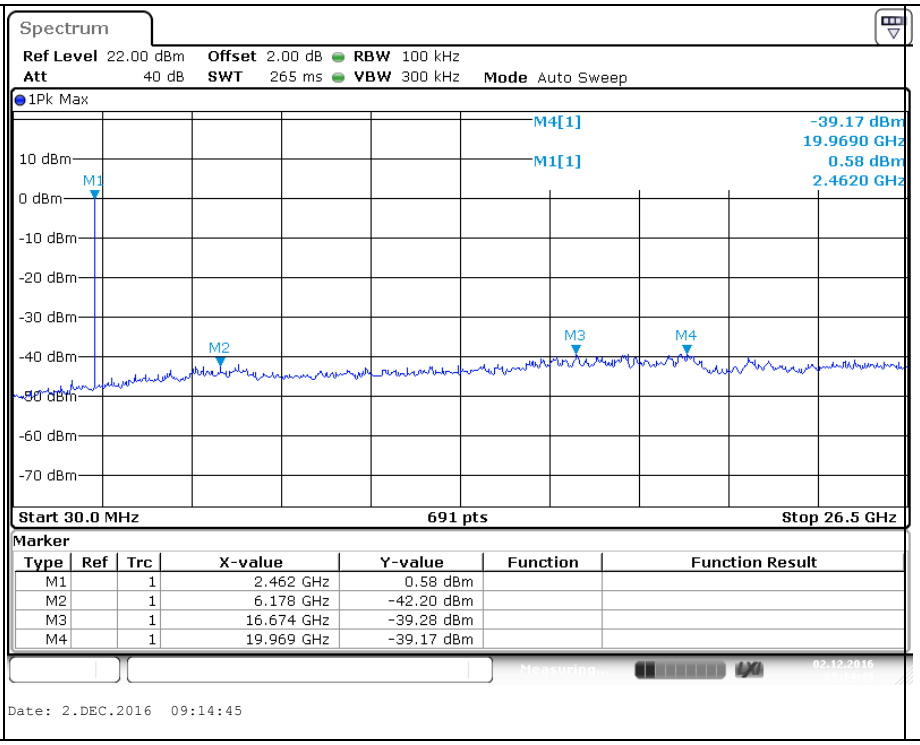
Low Channel



Middle Channel

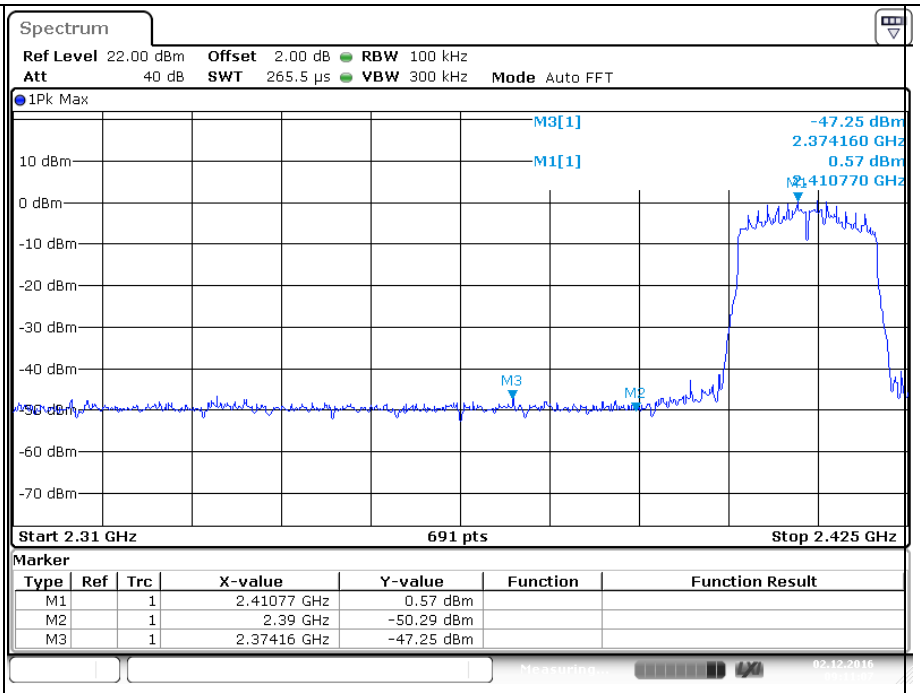


High Channel

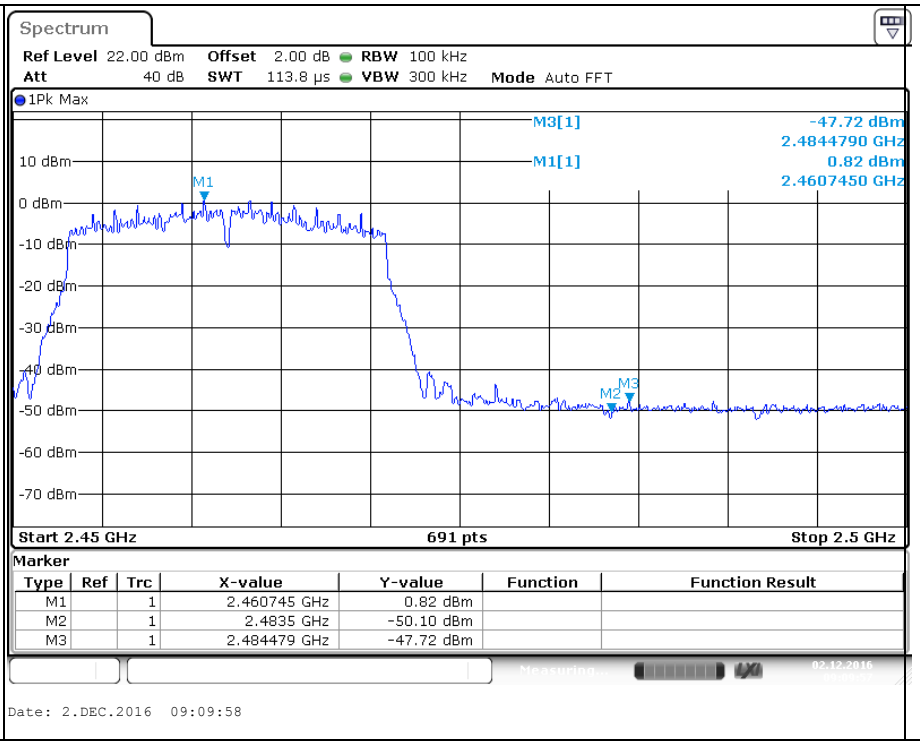


Appendix A.15: Frequency Band Edge in 100kHz Bandwidth_802.11n HT20 (ANT2)

Low Channel



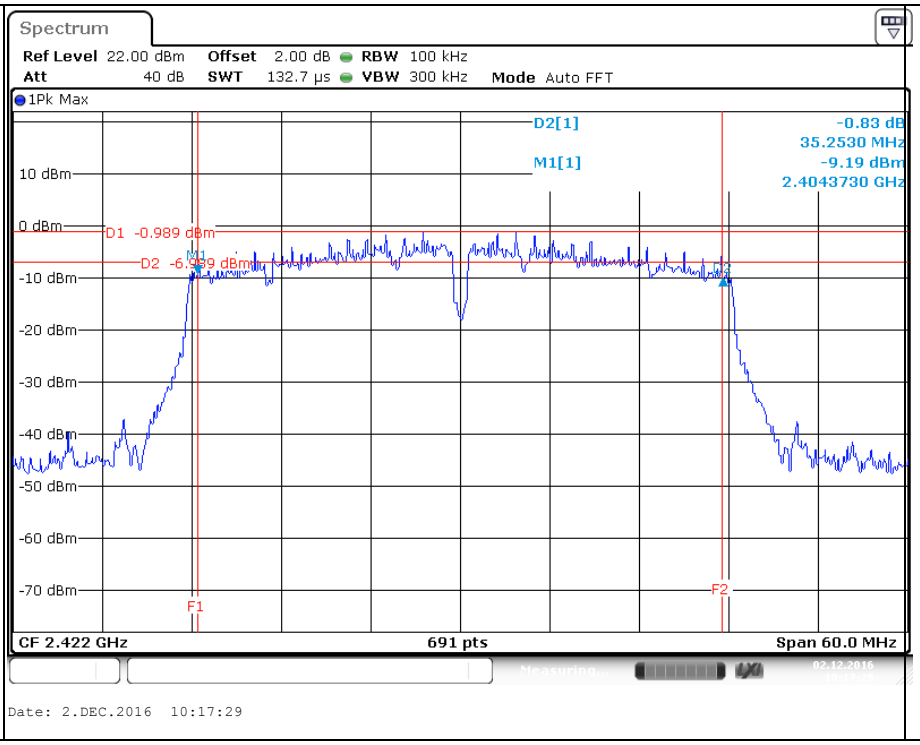
High Channel



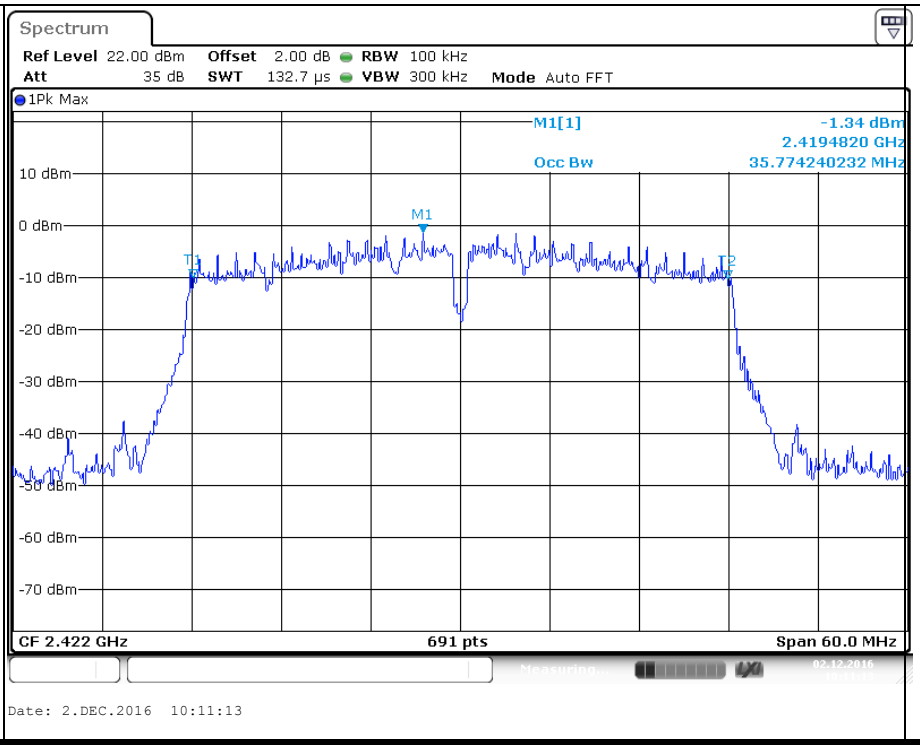
Appendix A.16: 6dB Bandwidth and 99% Bandwidth_802.11n HT40 (ANT1)

Channel	Channel Frequency (MHz)	6dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low Channel	2422	35.25	35.77
Middle Channel	2437	35.28	35.86
High Channel	2452	35.21	35.77

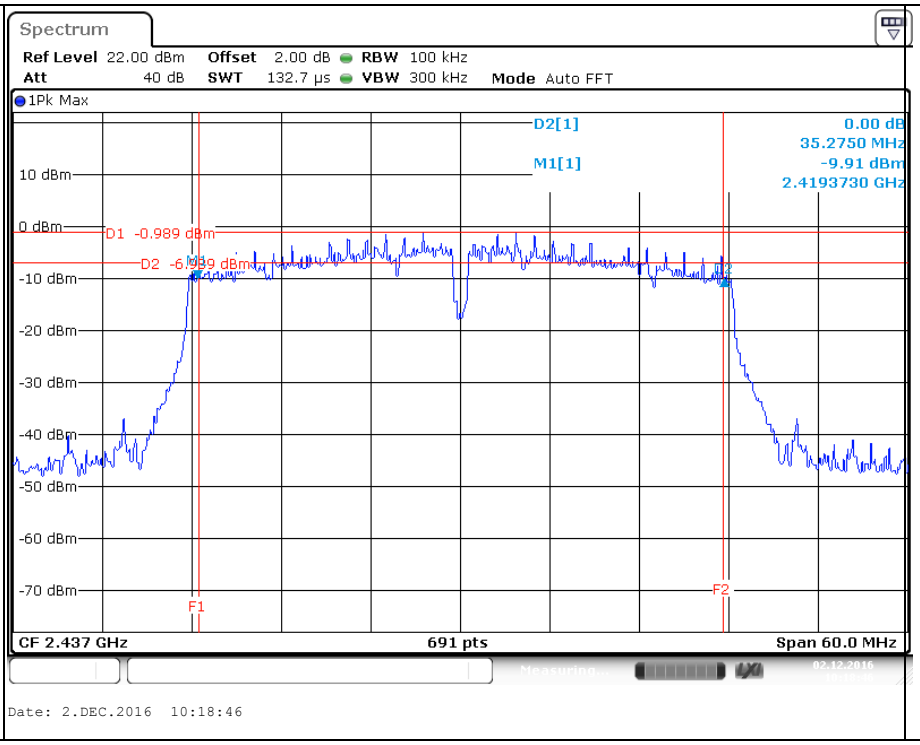
Low Channel 6dB Bandwidth



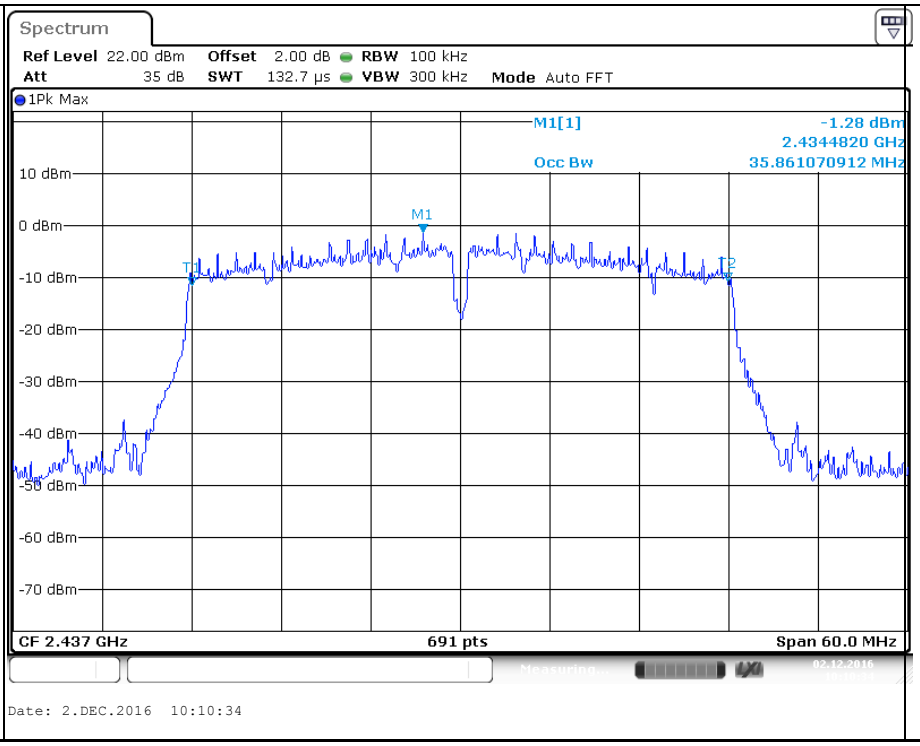
Low Channel 99% Bandwidth



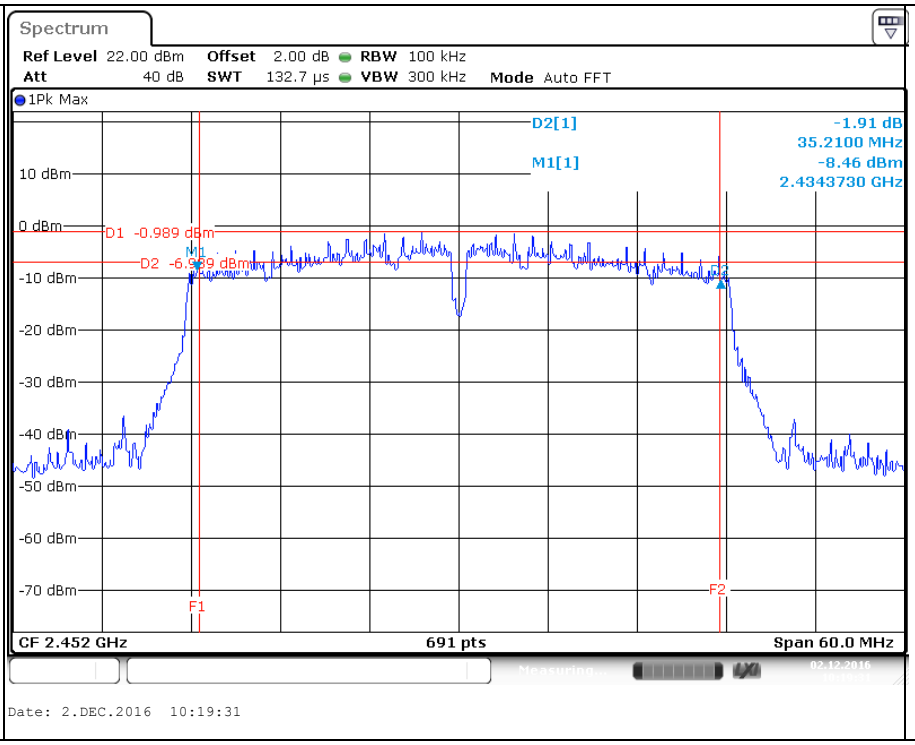
Middle Channel 6dB Bandwidth



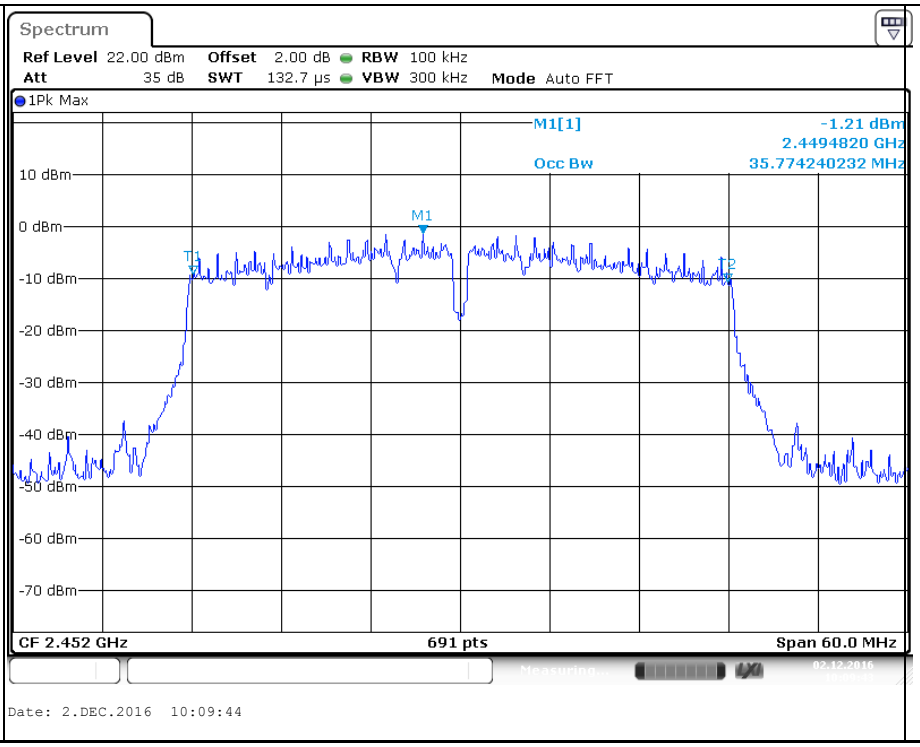
Middle Channel 99% Bandwidth



High Channel 6dB Bandwidth

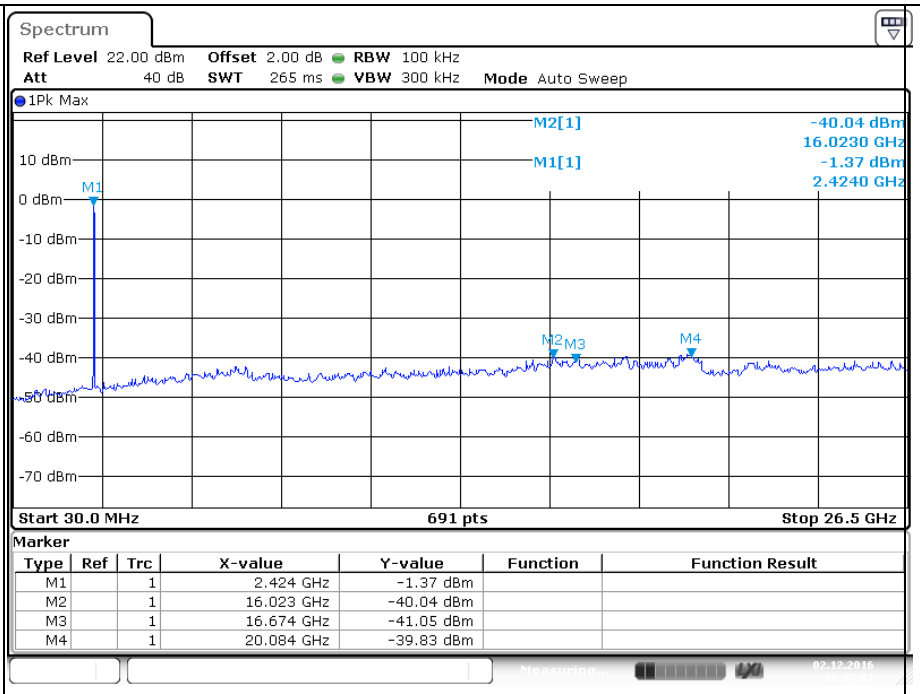


High Channel 99% Bandwidth

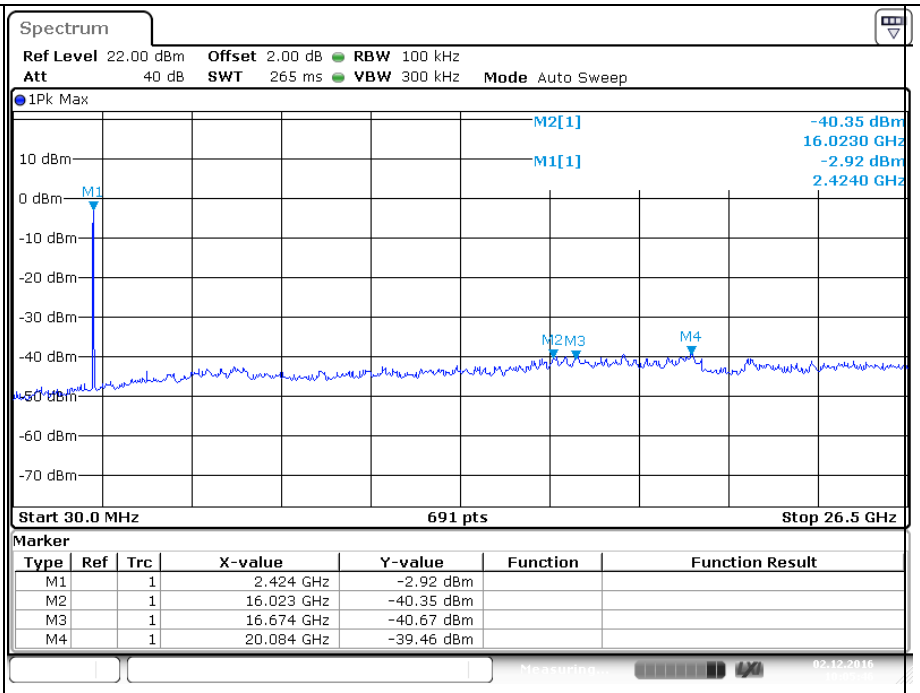


Appendix A.17: Conducted Spurious Emissions measured in 100kHz Bandwidth_802.11n HT40 (ANT1)

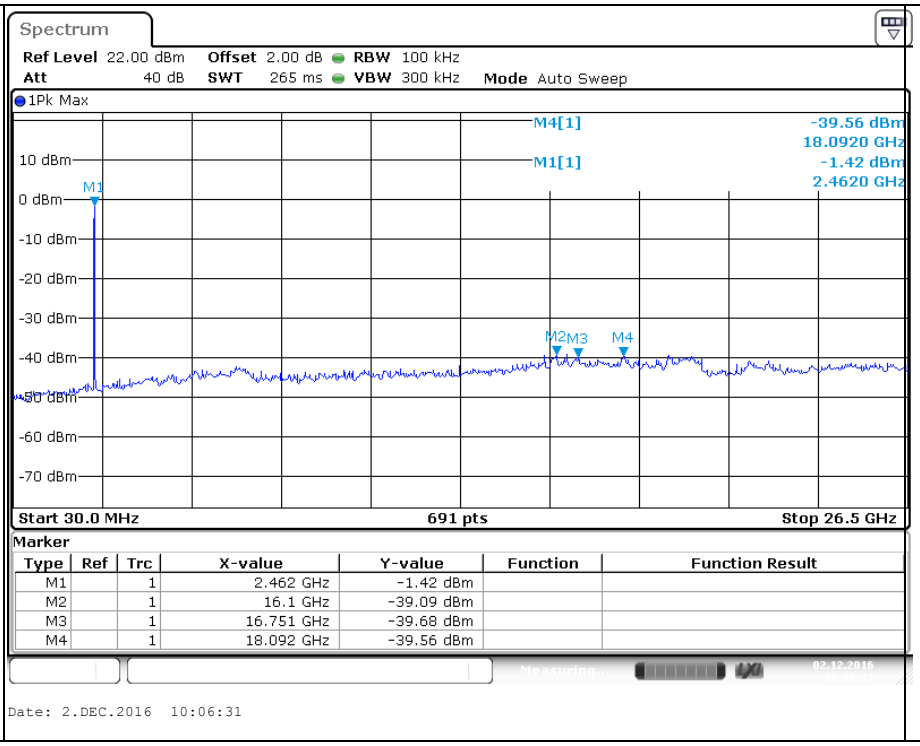
Low Channel



Middle Channel

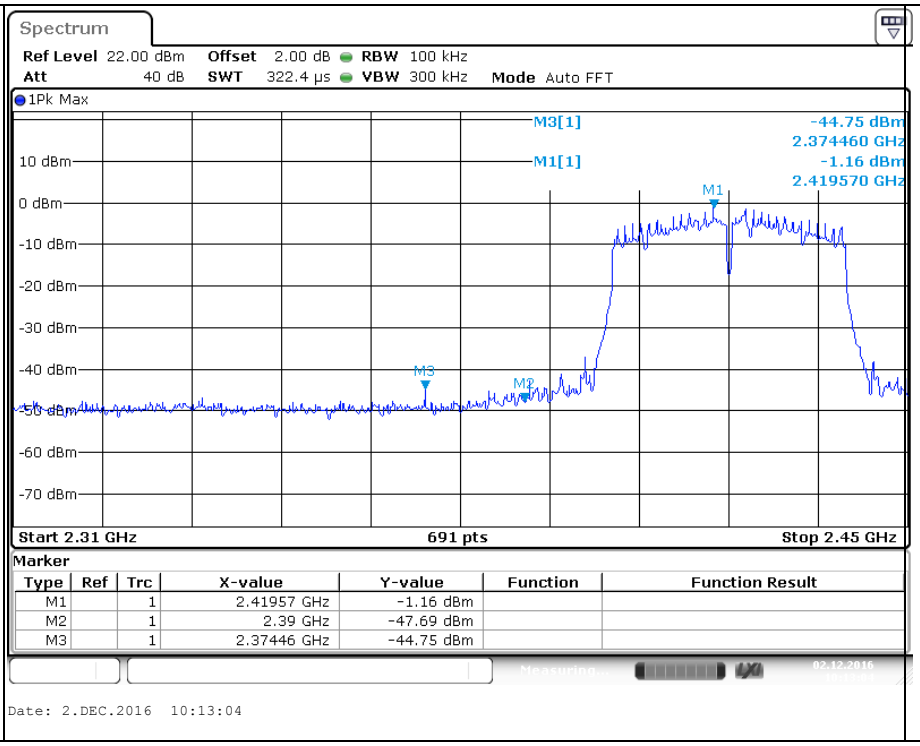


High Channel

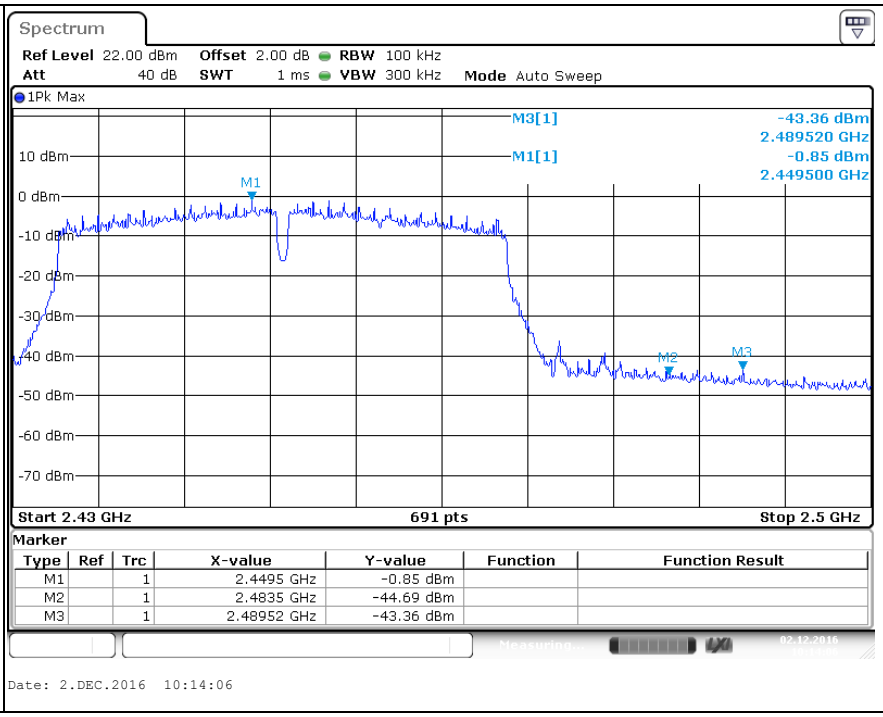


Appendix A.18: Frequency Band Edge in 100kHz Bandwidth_802.11n HT40 (ANT1)

Low Channel



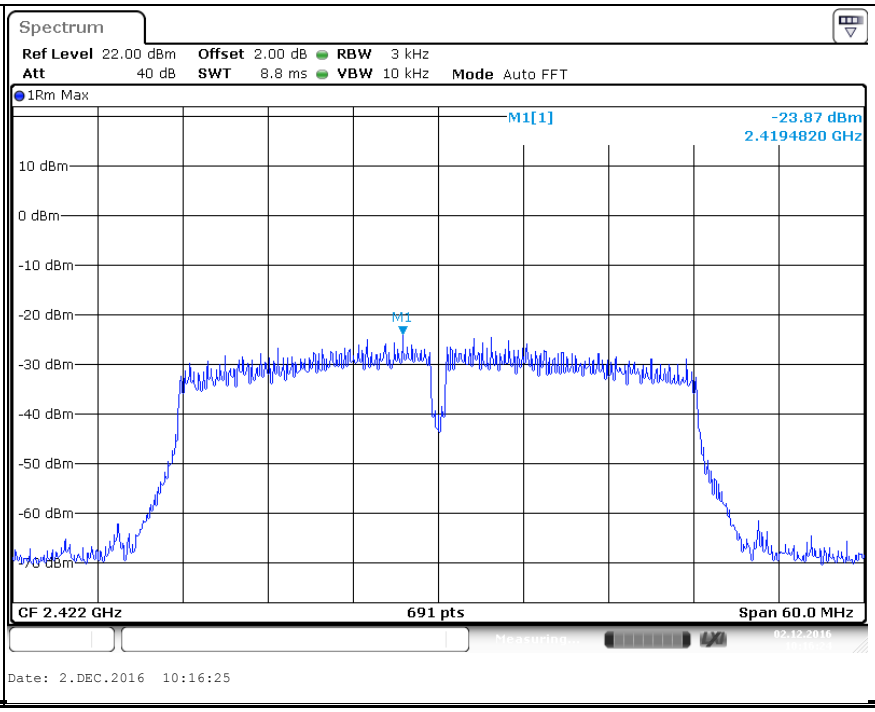
High Channel



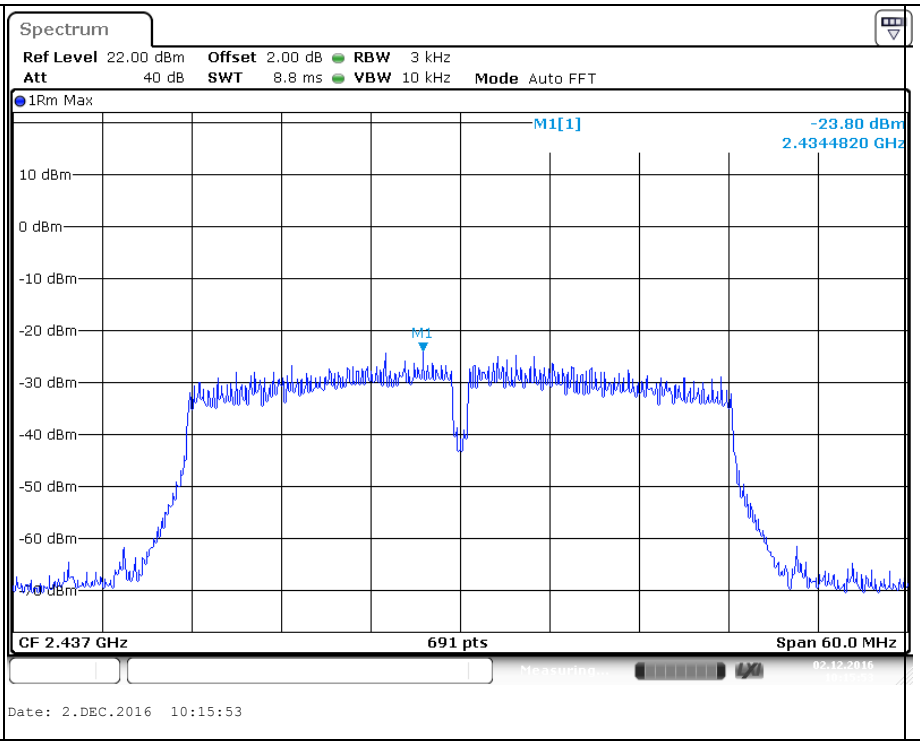
Appendix A.19: Power Spectral Density_802.11n HT40

Channel	Channel Frequency (MHz)	PSD_ANT1 (dBm/3kHz)	PSD_ANT2 (dBm/3kHz)	PSD_Total (dBm/3kHz)	Limit (dBm/3kHz)
Low Channel	2422	-23.87	-24.10	-20.97	8
Middle Channel	2437	-23.80	-24.23	-21.00	8
High Channel	2452	-24.05	-24.20	-21.11	8

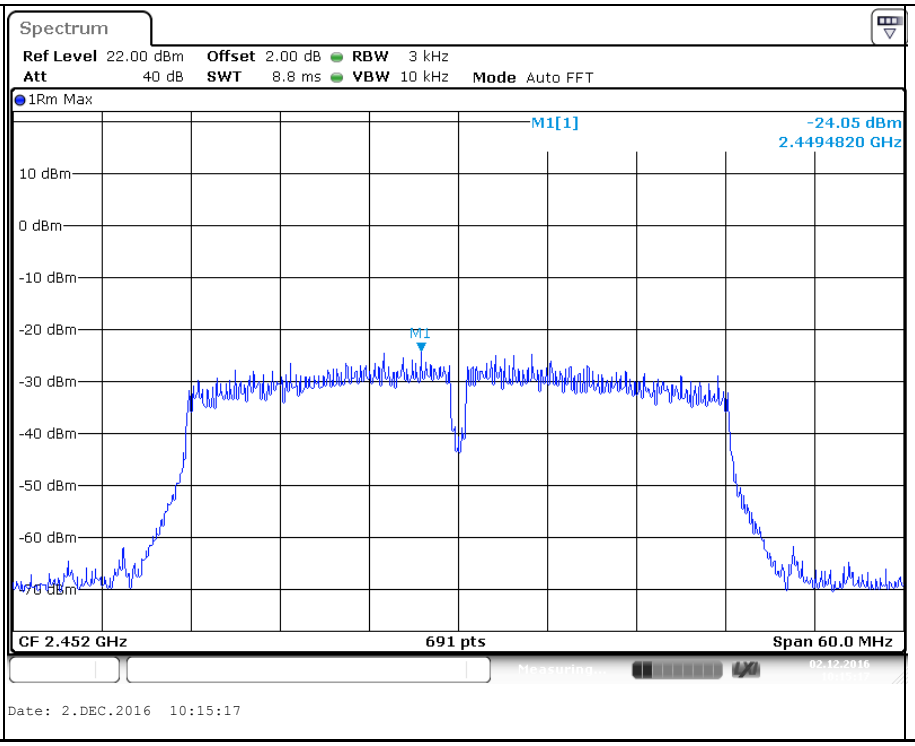
Low Channel_ANT1



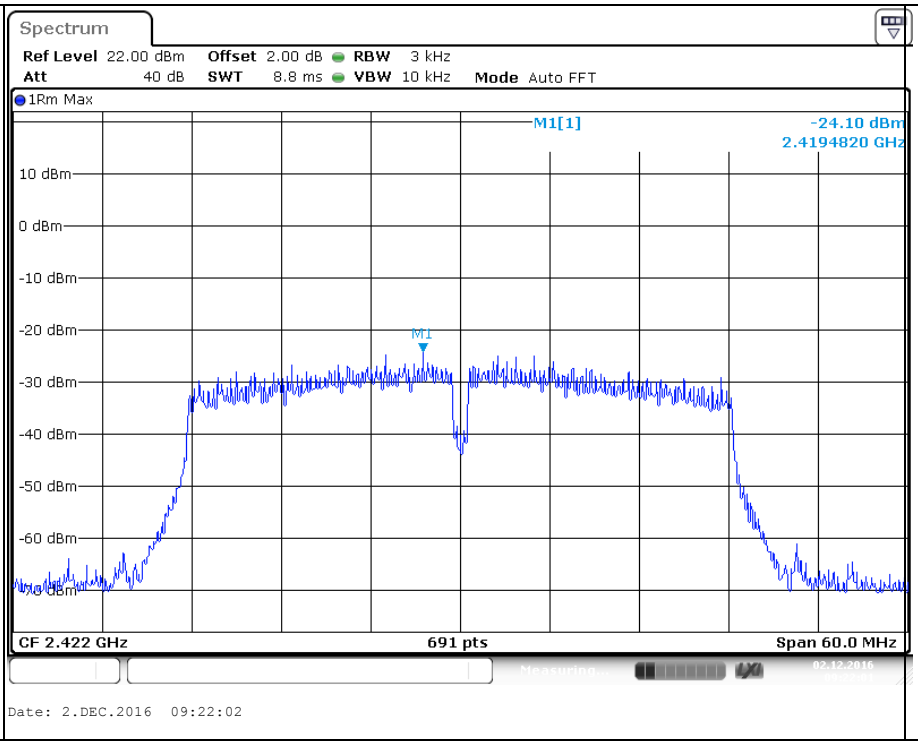
Middle Channel_ANT1



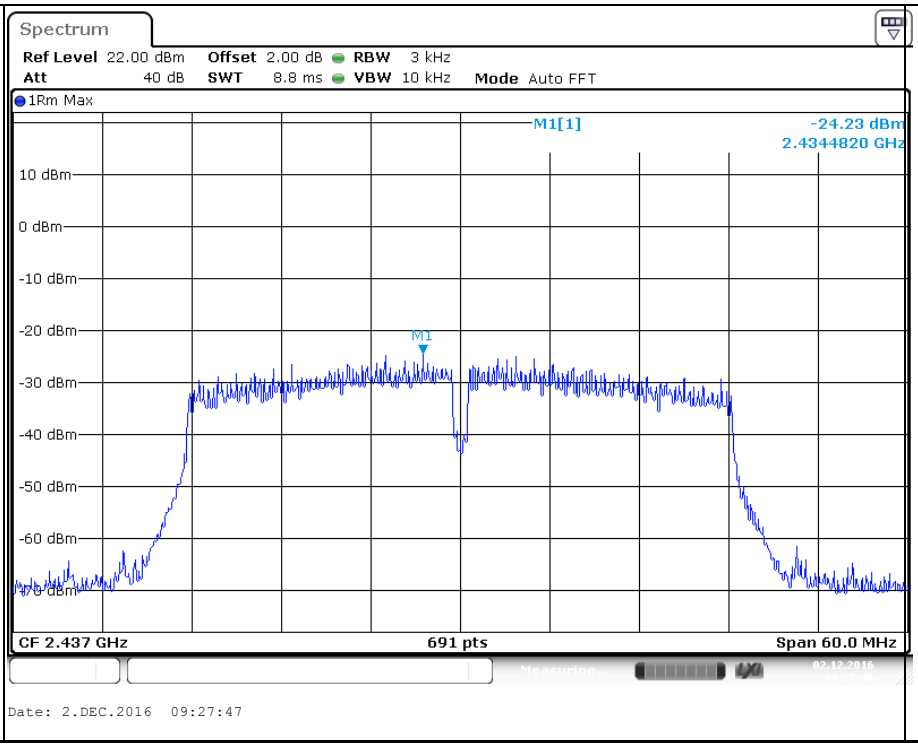
High Channel_ANT1

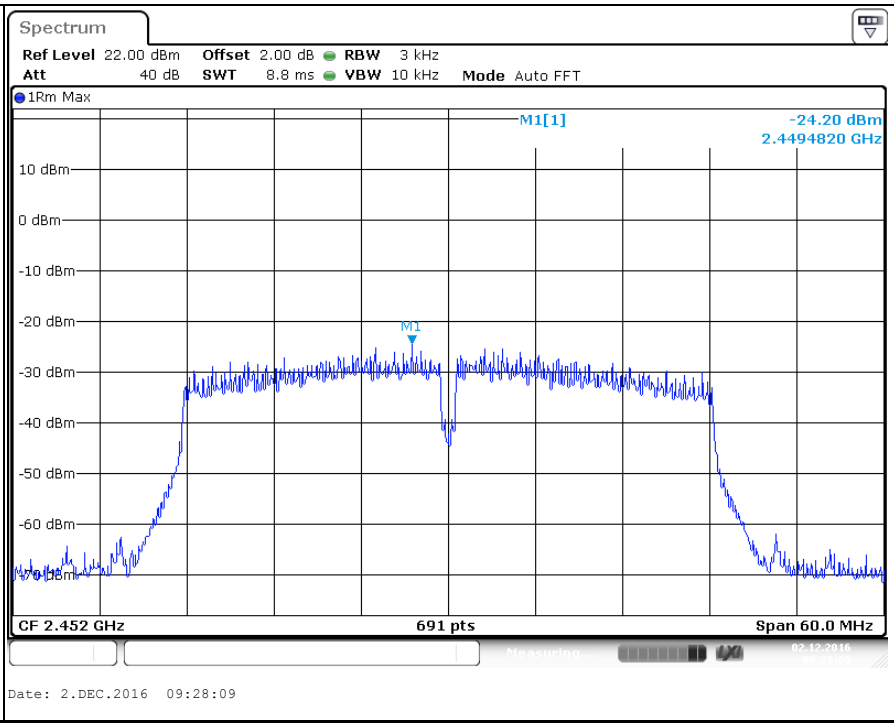


Low Channel_ANT2



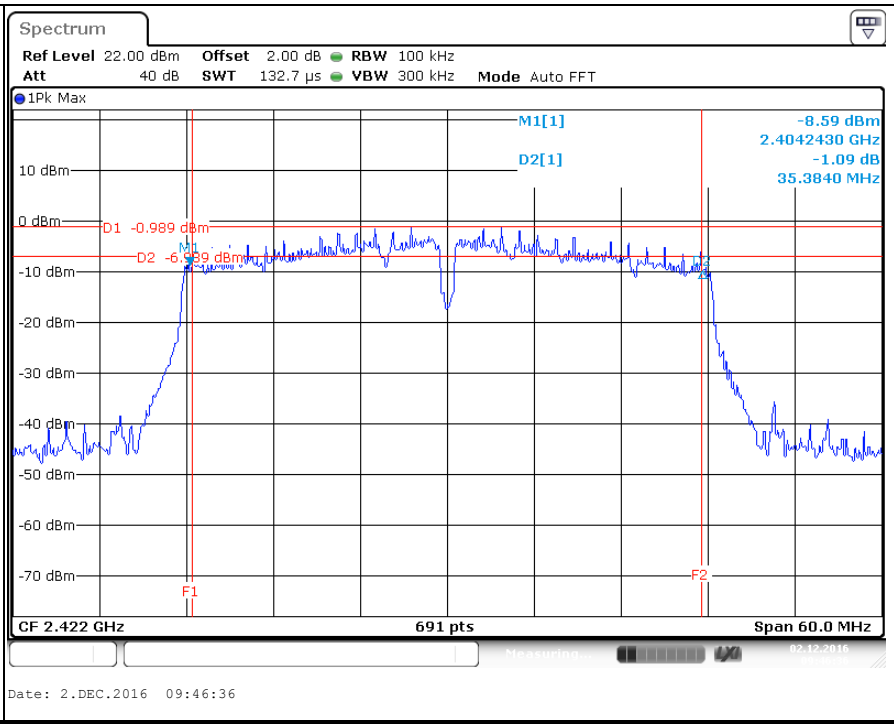
Middle Channel_ANT2



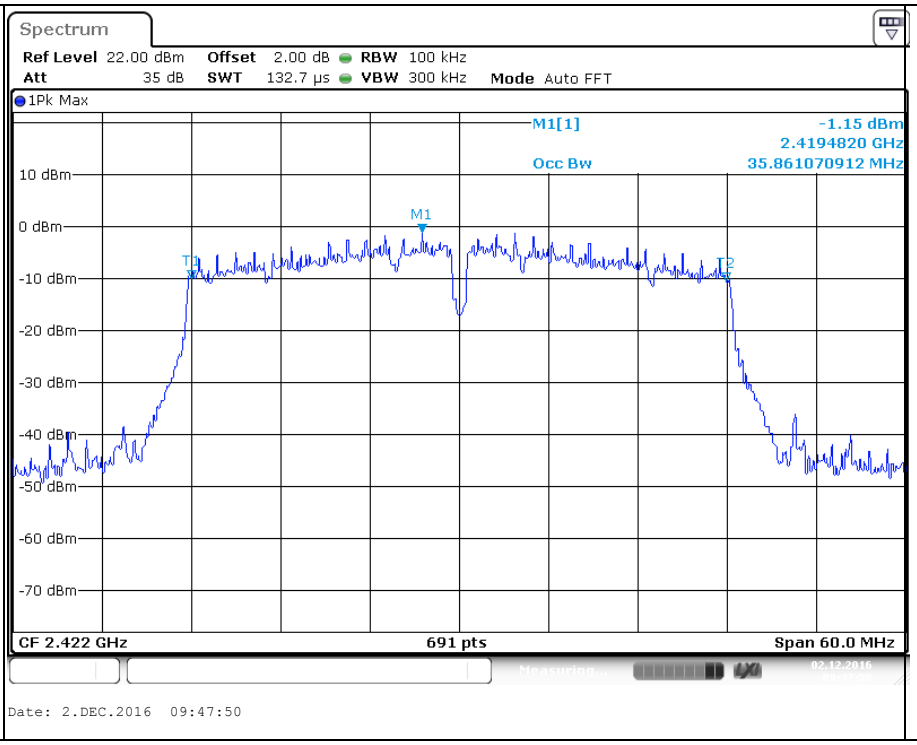
High Channel_ANT2


Appendix A.20: 6dB Bandwidth and 99% Bandwidth_802.11n HT40 (ANT2)

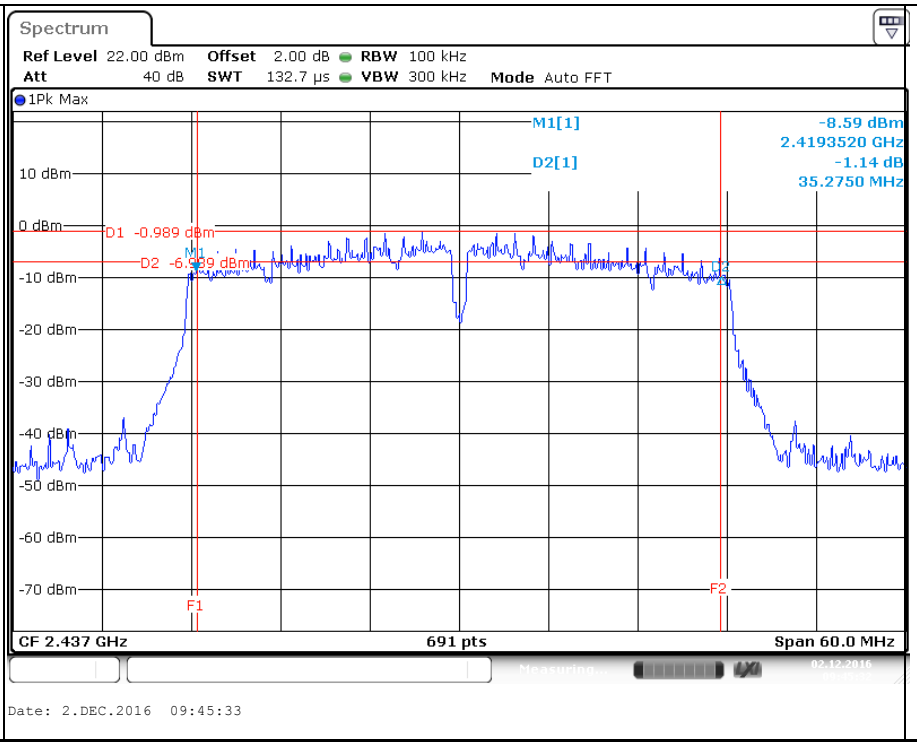
Channel	Channel Frequency (MHz)	6dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low Channel	2422	35.30	35.86
Middle Channel	2437	35.28	35.77
High Channel	2452	35.34	35.77

Low Channel 6dB Bandwidth


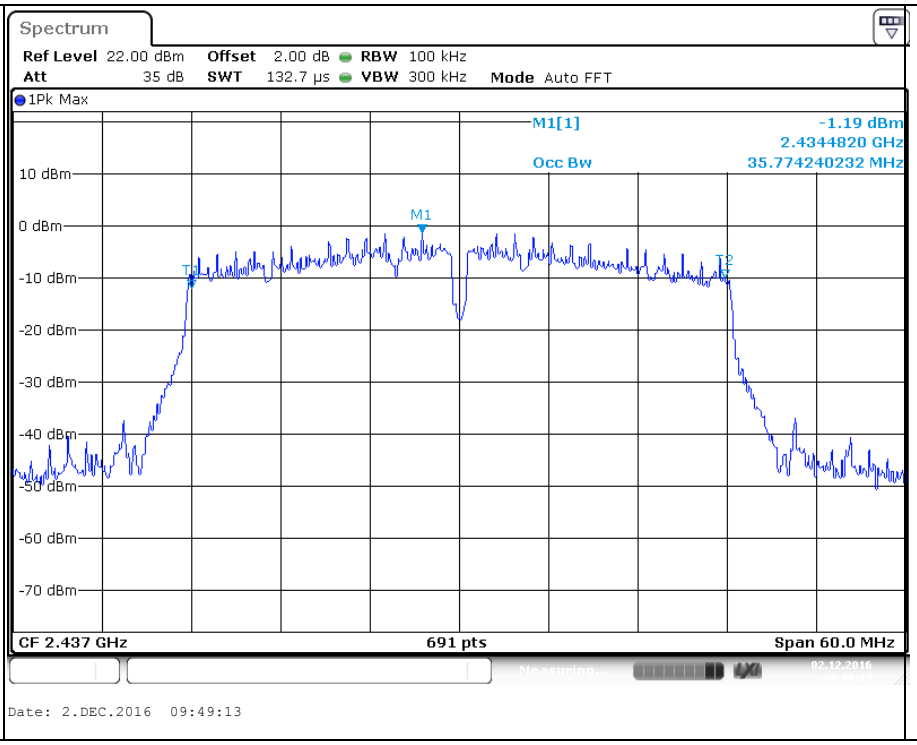
Low Channel 99% Bandwidth



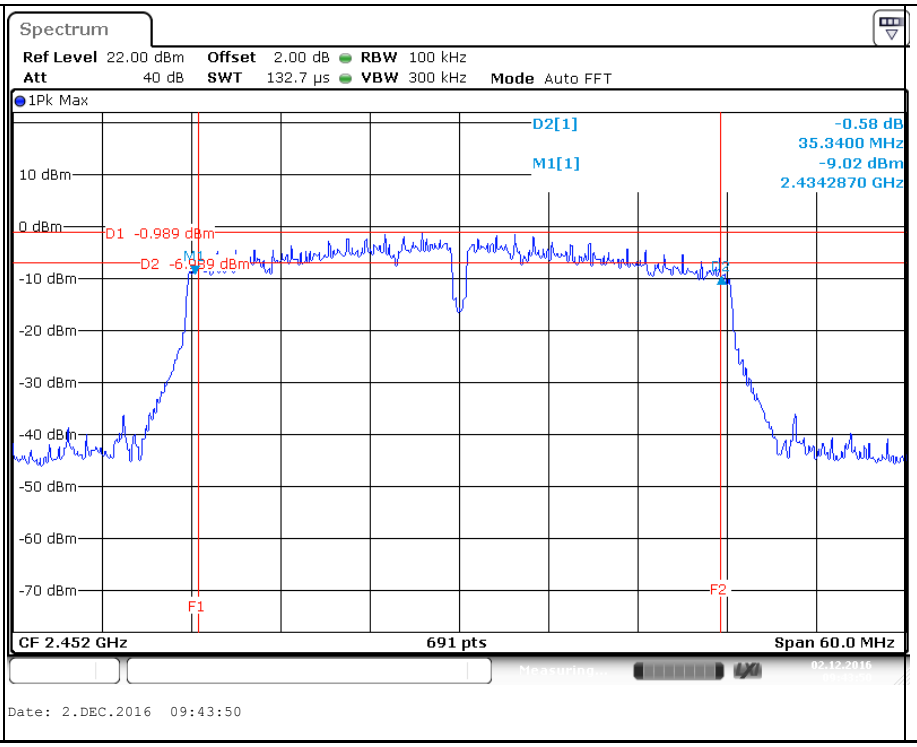
Middle Channel 6dB Bandwidth



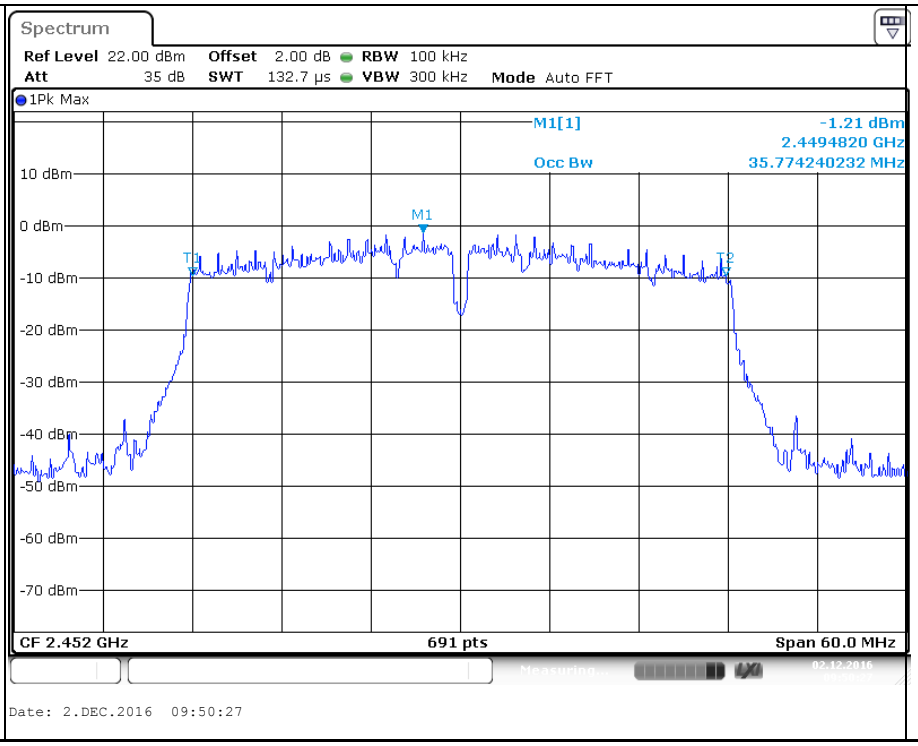
Middle Channel 99% Bandwidth



High Channel 6dB Bandwidth

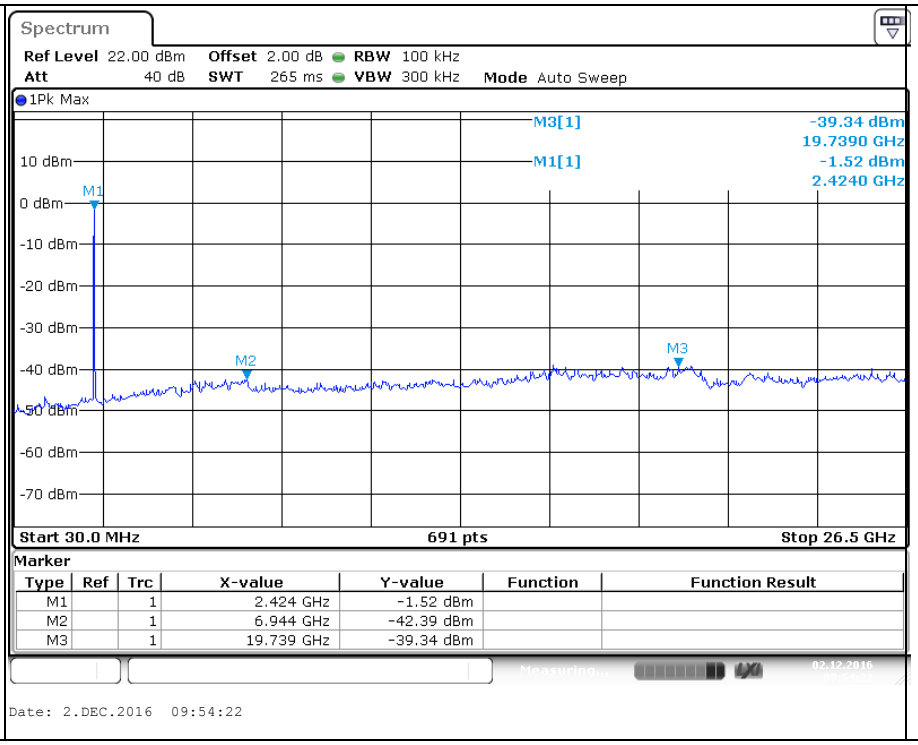


High Channel 99% Bandwidth

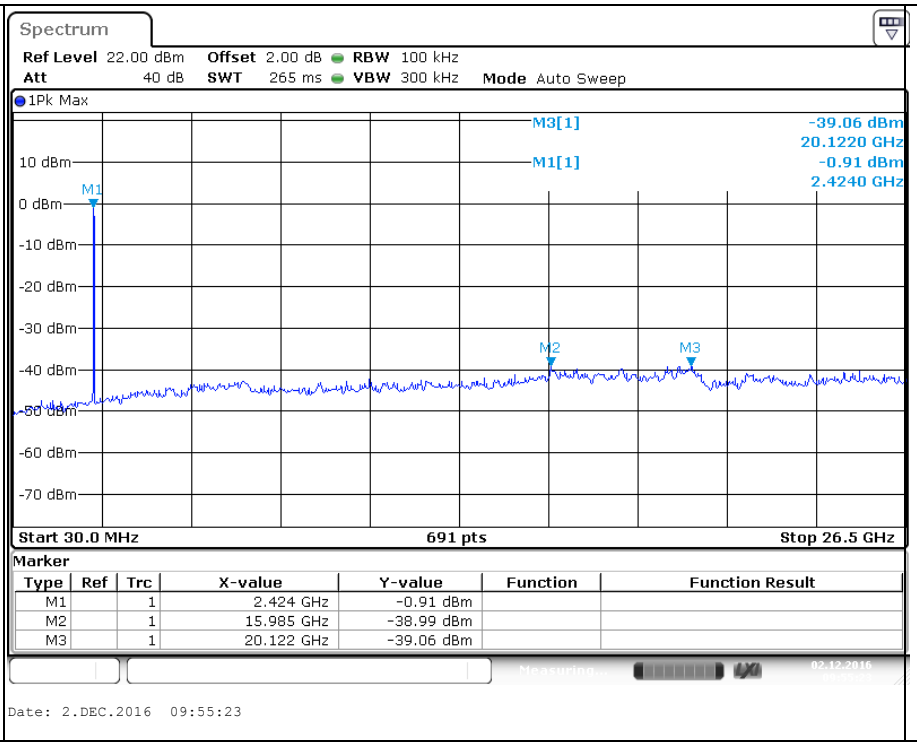


Appendix A.21: Conducted Spurious Emissions measured in 100kHz Bandwidth_802.11n HT40 (ANT2)

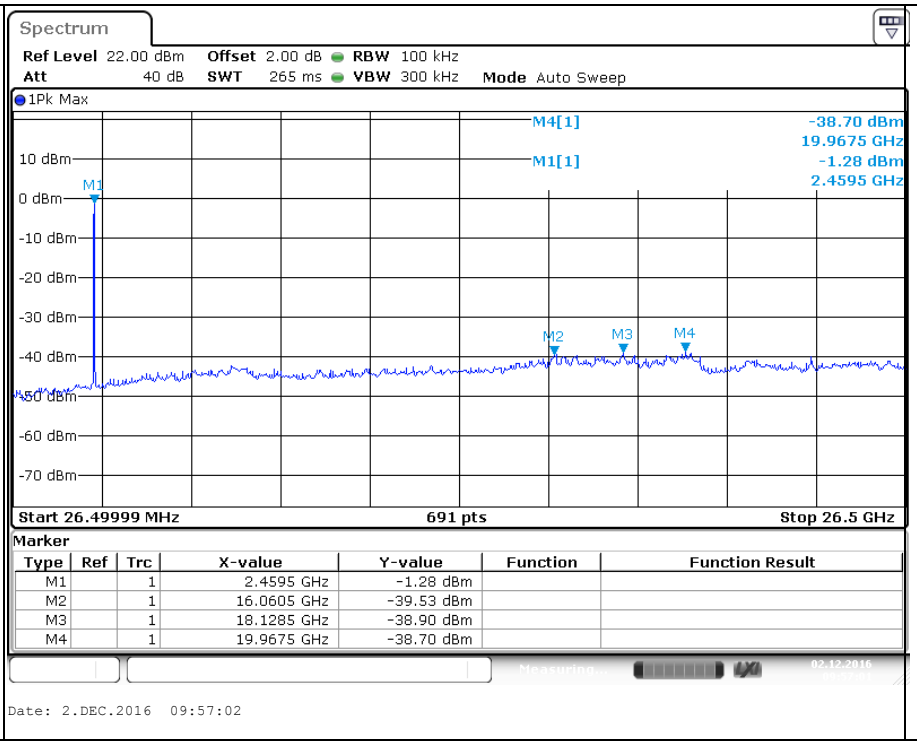
Low Channel



Middle Channel

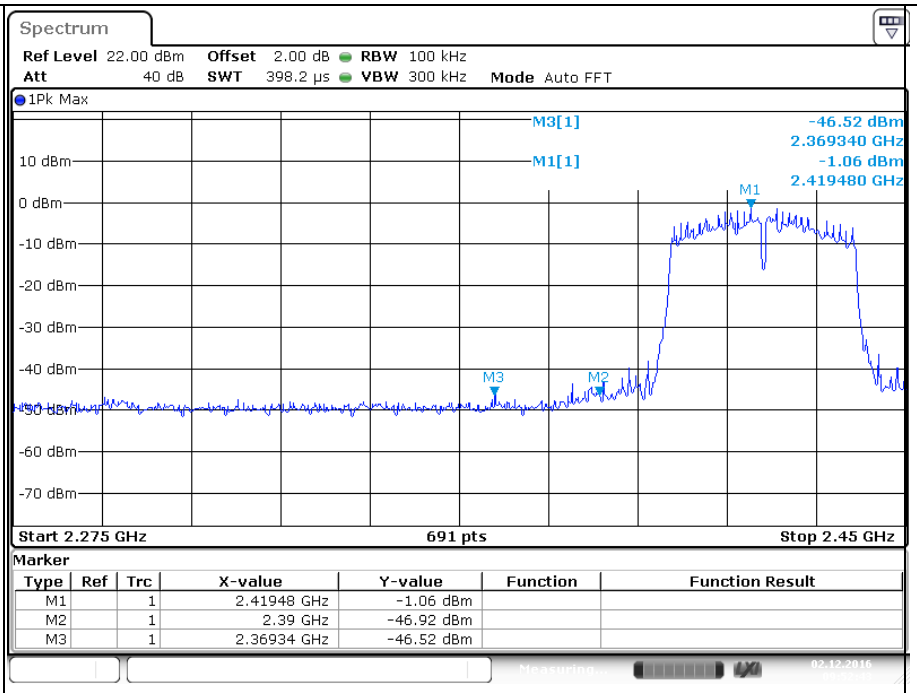


High Channel

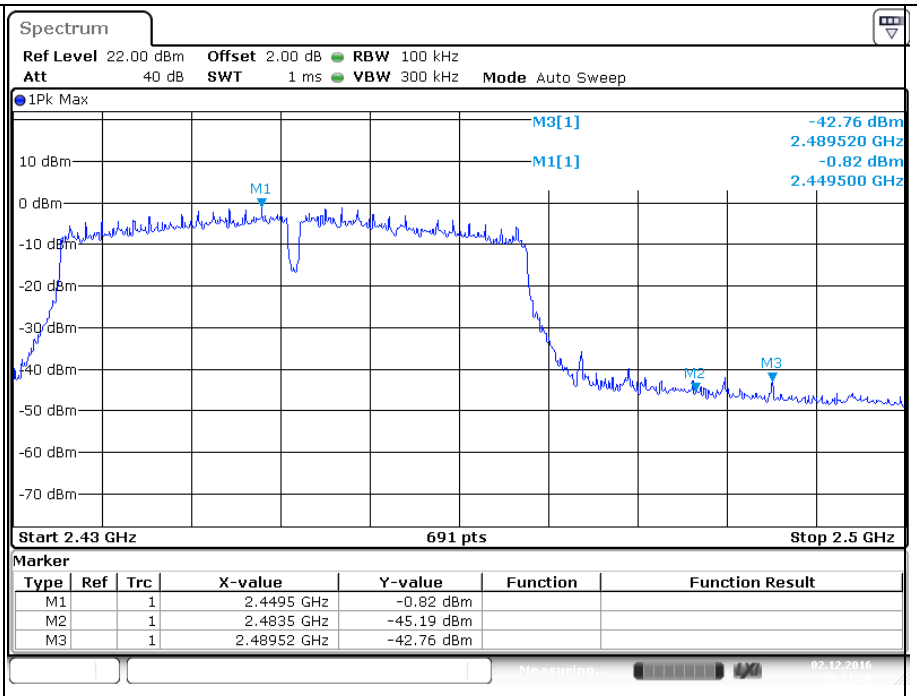


Appendix A.22: Frequency Band Edge in 100kHz Bandwidth_802.11n HT40 (ANT2)

Low Channel



High Channel



Appendix B

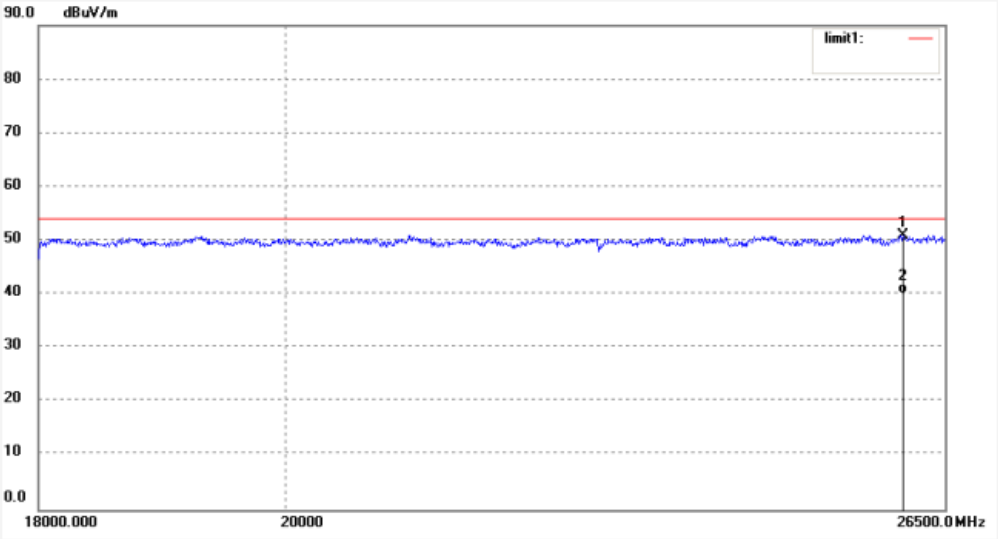
Test Results of Wi-Fi 802.11b/g/n of Radiated Testing

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

Site: 2# Chamber
Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.: Igwade #4395	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: DC 5V
Test item: Radiation Test	Date: 16/11/28/
Temp.(C)/Hum.(%) 23 C / 48 %	Time:
EUT: IEEE 802.11 b/g/n 2.4GHz 1T1R USB Module	Engineer Signature: LGWADE
Mode: TX 2462MHz	Distance: 3m
Model: ZDWM2402	
Manufacturer: Qingdao Intelligent&Precise Electronics Co.,Ltd.	

Note: 802.11n HT20



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	26032.693	10.01	40.97	50.98	74.00	-23.02	peak			
2	26032.693	-0.76	40.97	40.21	54.00	-13.79	AVG			

Appendix B.1: Test Results of Radiated Spurious Emissions

802.11 b mode, 1 Mbps

9KHz - 30MHz

ACCURATE TECHNOLOGY CO.,LTD

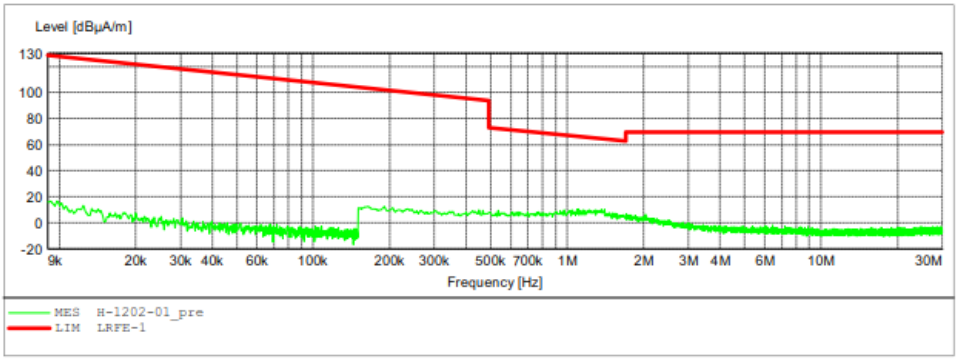
FCC Class B 3M Radiated

```
EUT:                  IEEE 802.11 b/g/n 2.4GHz 1T1R USB Module M/N:ZDWM2402
Manufacturer:         Qingdao Intelligent&Precise Electronics Co.,Ltd.
Operating Condition:  TX 2412MHz
Test Site:            2# Chamber
Operator:             LGWADE
Test Specification:   DC 5V
Comment:              X
Start of Test:        2016-12-8 /
```

SCAN TABLE: "LFRE Fin"

Short Description: SUB STD VTERM2 1.70

Start Frequency	Stop Frequency	Step Width	Detector	Meas. Time	IF Bandw.	Transducer
9.0 kHz	150.0 kHz	100.0 Hz	QuasiPeak	1.0 s	200 Hz	1516M
150.0 kHz	30.0 MHz	5.0 kHz	QuasiPeak	1.0 s	9 kHz	1516M



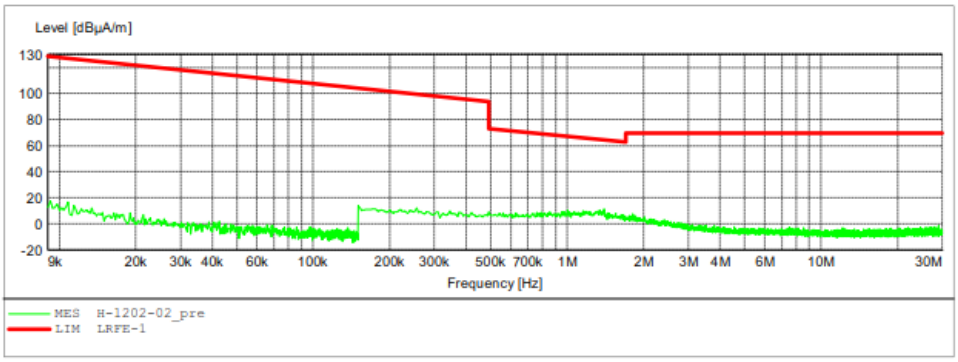
ACCURATE TECHNOLOGY CO.,LTD

FCC Class B 3M Radiated

```
EUT:                  IEEE 802.11 b/g/n 2.4GHz 1T1R USB Module M/N:ZDWM2402
Manufacturer:         Qingdao Intelligent&Precise Electronics Co.,Ltd.
Operating Condition:  TX 2412MHz
Test Site:            2# Chamber
Operator:             LGWADE
Test Specification:   DC 5V
Comment:              Y
Start of Test:        2016-12-8 /
```

SCAN TABLE: "LFRE Fin"

```
  Short Description:                    SUB STD VTERM2 1.70
  Start       Stop        Step          Detector  Meas.     IF       Transducer
  Frequency   Frequency   Width                   Time      Bandw.
  9.0 kHz     150.0 kHz   100.0 Hz      QuasiPeak 1.0 s     200 Hz   1516M
  150.0 kHz   30.0 MHz    5.0 kHz       QuasiPeak 1.0 s     9 kHz    1516M
```



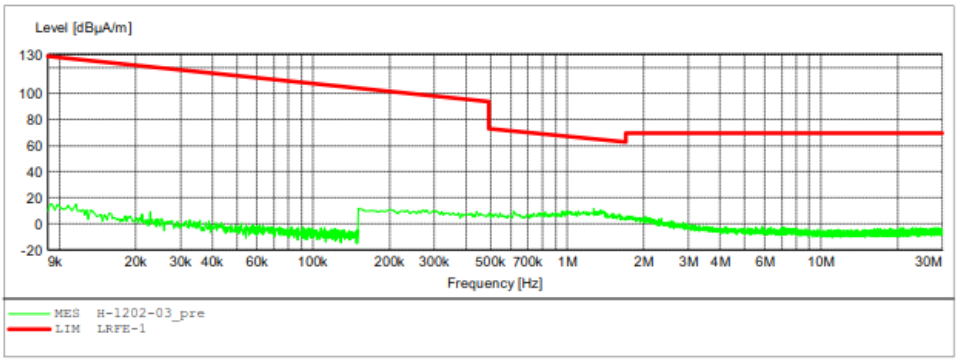
ACCURATE TECHNOLOGY CO.,LTD

FCC Class B 3M Radiated

```
EUT:                  IEEE 802.11 b/g/n 2.4GHz 1T1R USB Module M/N:ZDWM2402
Manufacturer:         Qingdao Intelligent&Precise Electronics Co.,Ltd.
Operating Condition:  TX 2412MHz
Test Site:            2# Chamber
Operator:             LGWADE
Test Specification:   DC 5V
Comment:              Z
Start of Test:        2016-12-8 /
```

SCAN TABLE: "LFRE Fin"

```
  Short Description:                    SUB STD VTERM2 1.70
  Start      Stop       Step       Detector  Meas.     IF       Transducer
  Frequency  Frequency  Width                Time      Bandw.
  9.0 kHz    150.0 kHz  100.0 Hz   QuasiPeak 1.0 s     200 Hz   1516M
  150.0 kHz  30.0 MHz   5.0 kHz    QuasiPeak 1.0 s     9 kHz    1516M
```



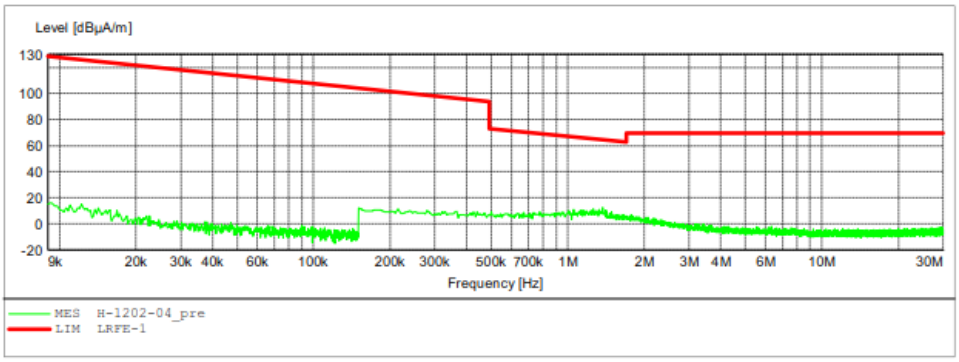
ACCURATE TECHNOLOGY CO.,LTD

FCC Class B 3M Radiated

```
EUT:                  IEEE 802.11 b/g/n 2.4GHz 1T1R USB Module M/N:ZDWM2402
Manufacturer:         Qingdao Intelligent&Precise Electronics Co.,Ltd.
Operating Condition:  TX 2437MHz
Test Site:            2# Chamber
Operator:             LGWADE
Test Specification:   DC 5V
Comment:              X
Start of Test:        2016-12-8 /
```

SCAN TABLE: "LFRE Fin"

```
Short Description:                    SUB STD VTERM2 1.70
Start      Stop       Step       Detector  Meas.     IF       Transducer
Frequency  Frequency  Width                Time      Bandw.
9.0 kHz    150.0 kHz  100.0 Hz   QuasiPeak 1.0 s     200 Hz   1516M
150.0 kHz  30.0 MHz   5.0 kHz    QuasiPeak 1.0 s     9 kHz    1516M
```



ACCURATE TECHNOLOGY CO.,LTD

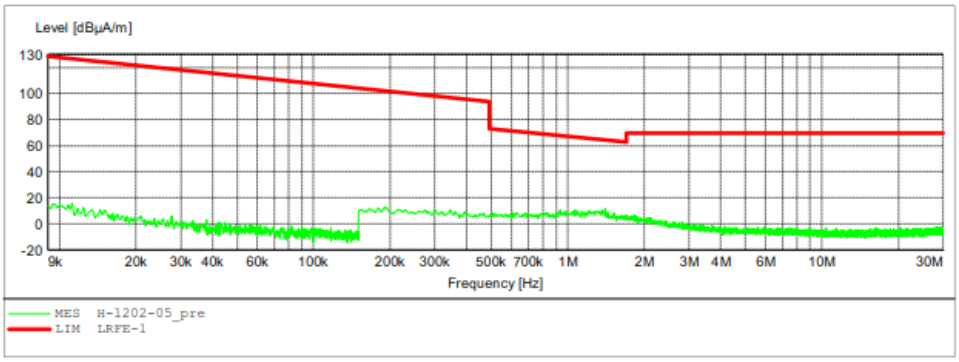
FCC Class B 3M Radiated

EUT: IEEE 802.11 b/g/n 2.4GHz 1T1R USB Module M/N:ZDWM2402
Manufacturer: Qingdao Intelligent&Precise Electronics Co.,Ltd.
Operating Condition: TX 2437MHz
Test Site: 2# Chamber
Operator: LGWADE
Test Specification: DC 5V
Comment: Y
Start of Test: 2016-12-8 /

SCAN TABLE: "LFRE Fin"

Short Description: SUB STD VTERM2 1.70

Start Frequency	Stop Frequency	Step Width	Detector	Meas. Time	IF Bandw.	Transducer
9.0 kHz	150.0 kHz	100.0 Hz	QuasiPeak	1.0 s	200 Hz	1516M
150.0 kHz	30.0 MHz	5.0 kHz	QuasiPeak	1.0 s	9 kHz	1516M



ACCURATE TECHNOLOGY CO.,LTD

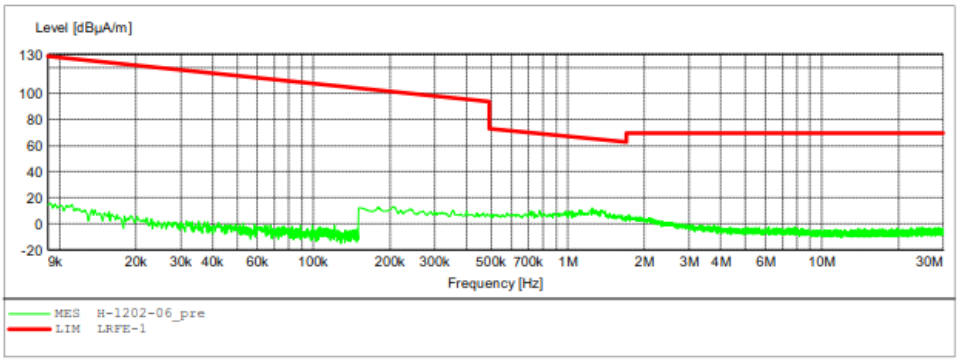
FCC Class B 3M Radiated

EUT: IEEE 802.11 b/g/n 2.4GHz 1T1R USB Module M/N:ZDWM2402
Manufacturer: Qingdao Intelligent&Precise Electronics Co.,Ltd.
Operating Condition: TX 2437MHz
Test Site: 2# Chamber
Operator: LGWADE
Test Specification: DC 5V
Comment: Z
Start of Test: 2016-12-8 /

SCAN TABLE: "LFRE Fin"

Short Description: SUB STD VTERM2 1.70

Start Frequency	Stop Frequency	Step Width	Detector	Meas. Time	IF Bandw.	Transducer
9.0 kHz	150.0 kHz	100.0 Hz	QuasiPeak	1.0 s	200 Hz	1516M
150.0 kHz	30.0 MHz	5.0 kHz	QuasiPeak	1.0 s	9 kHz	1516M



ACCURATE TECHNOLOGY CO.,LTD

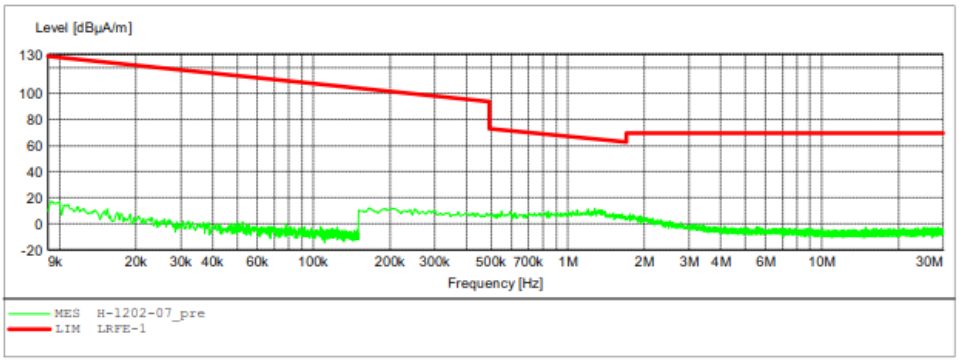
FCC Class B 3M Radiated

EUT: IEEE 802.11 b/g/n 2.4GHz 1T1R USB Module M/N:ZDWM2402
Manufacturer: Qingdao Intelligent&Precise Electronics Co.,Ltd.
Operating Condition: TX 2462MHz
Test Site: 2# Chamber
Operator: LGWADE
Test Specification: DC 5V
Comment: X
Start of Test: 2016-12-8 /

SCAN TABLE: "LFRE Fin"

Short Description: SUB STD VTERM2 1.70

Start Frequency	Stop Frequency	Step Width	Detector	Meas. Time	IF Bandw.	Transducer
9.0 kHz	150.0 kHz	100.0 Hz	QuasiPeak	1.0 s	200 Hz	1516M
150.0 kHz	30.0 MHz	5.0 kHz	QuasiPeak	1.0 s	9 kHz	1516M



ACCURATE TECHNOLOGY CO.,LTD

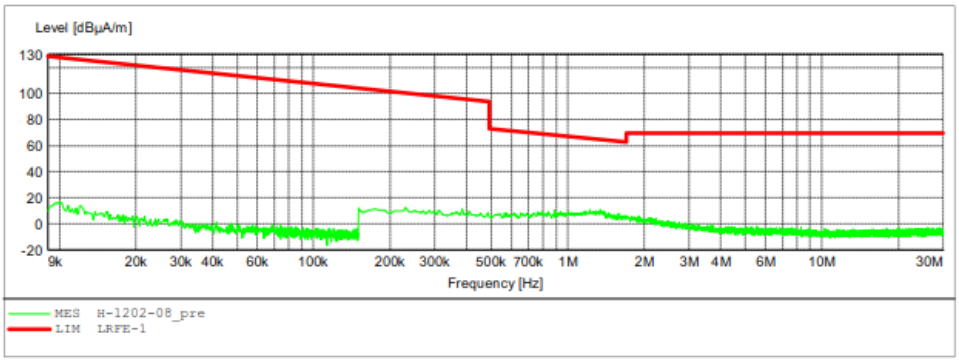
FCC Class B 3M Radiated

EUT: IEEE 802.11 b/g/n 2.4GHz 1T1R USB Module M/N:ZDWM2402
Manufacturer: Qingdao Intelligent&Precise Electronics Co.,Ltd.
Operating Condition: TX 2462MHz
Test Site: 2# Chamber
Operator: LGWADE
Test Specification: DC 5V
Comment: Y
Start of Test: 2016-12-8 /

SCAN TABLE: "LFRE Fin"

Short Description: SUB STD VTERM2 1.70

Start Frequency	Stop Frequency	Step Width	Detector	Meas. Time	IF Bandw.	Transducer
9.0 kHz	150.0 kHz	100.0 Hz	QuasiPeak	1.0 s	200 Hz	1516M
150.0 kHz	30.0 MHz	5.0 kHz	QuasiPeak	1.0 s	9 kHz	1516M



ACCURATE TECHNOLOGY CO.,LTD

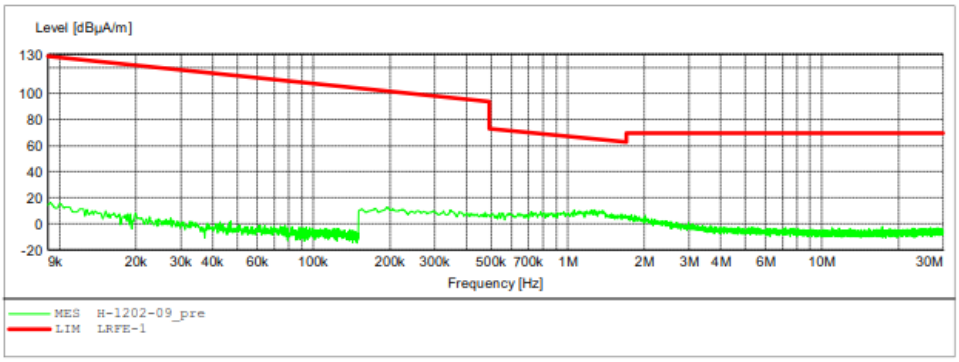
FCC Class B 3M Radiated

EUT: IEEE 802.11 b/g/n 2.4GHz 1T1R USB Module M/N:ZDWM2402
Manufacturer: Qingdao Intelligent&Precise Electronics Co.,Ltd.
Operating Condition: TX 2462MHz
Test Site: 2# Chamber
Operator: LGWADE
Test Specification: DC 5V
Comment: Z
Start of Test: 2016-12-8 /

SCAN TABLE: "LFRE Fin"

Short Description: SUB STD VTERM2 1.70

Start Frequency	Stop Frequency	Step Width	Detector	Meas. Time	IF Bandw.	Transducer
9.0 kHz	150.0 kHz	100.0 Hz	QuasiPeak	1.0 s	200 Hz	1516M
150.0 kHz	30.0 MHz	5.0 kHz	QuasiPeak	1.0 s	9 kHz	1516M



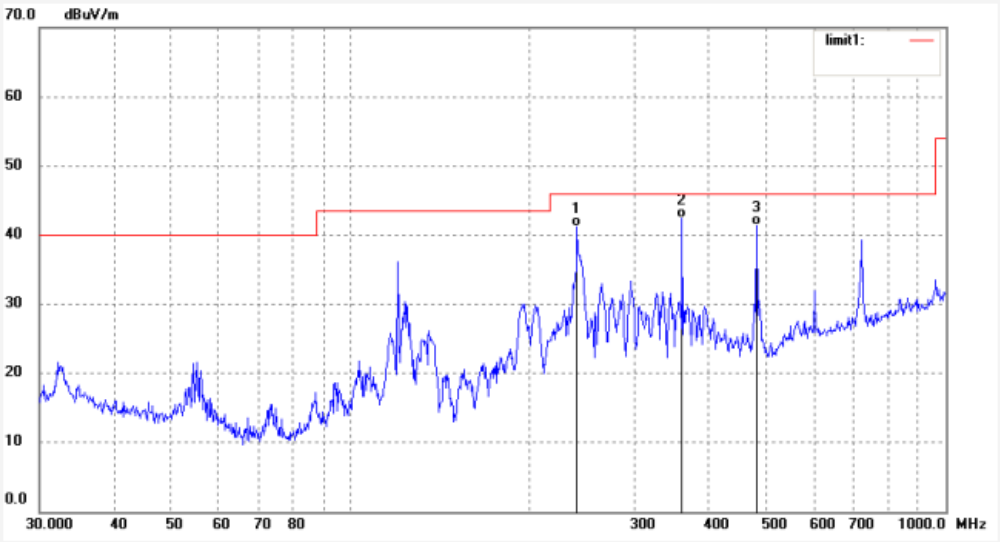
30MHz - 1GHz

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

Site: 2# Chamber
Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.: lgwade #4413	Polarization: Horizontal
Standard: FCC Class B 3M Radiated	Power Source: DC 5V
Test item: Radiation Test	Date: 16/11/28/
Temp.(C)/Hum.(%) 23 C / 48 %	Time:
EUT: IEEE 802.11 b/g/n 2.4GHz 1T1R USB Module	Engineer Signature: LGWADE
Mode: TX 2412MHz	Distance: 3m
Model: ZDWM2402	
Manufacturer: Qingdao Intelligent&Precise Electronics Co.,Ltd.	

Note: 802.11b



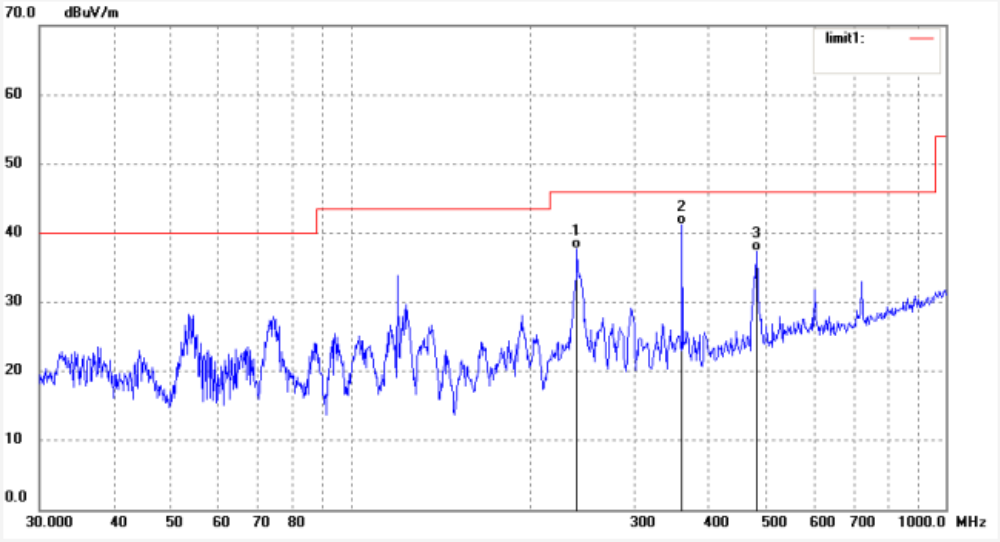
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	239.9874	51.77	-10.62	41.15	46.00	-4.85	QP			
2	360.4476	49.71	-7.26	42.45	46.00	-3.55	QP			
3	480.5276	46.23	-4.88	41.35	46.00	-4.65	QP			

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

Site: 2# Chamber
Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.: lgwade #4414	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: DC 5V
Test item: Radiation Test	Date: 16/11/28/
Temp.(C)/Hum.(%) 23 C / 48 %	Time:
EUT: IEEE 802.11 b/g/n 2.4GHz 1T1R USB Module	Engineer Signature: LGWADE
Mode: TX 2412MHz	Distance: 3m
Model: ZDWM2402	
Manufacturer: Qingdao Intelligent&Precise Electronics Co.,Ltd.	

Note: 802.11b



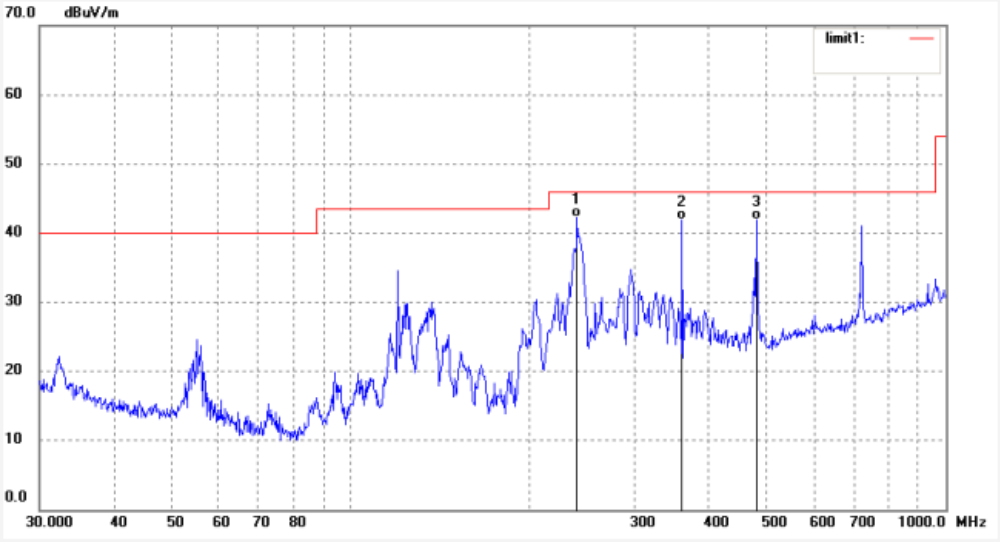
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	239.9874	48.41	-10.62	37.79	46.00	-8.21	QP			
2	360.4476	48.53	-7.26	41.27	46.00	-4.73	QP			
3	480.5276	42.19	-4.88	37.31	46.00	-8.69	QP			

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

Site: 2# Chamber
Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.: lgwade #4416	Polarization: Horizontal
Standard: FCC Class B 3M Radiated	Power Source: DC 5V
Test item: Radiation Test	Date: 16/11/28/
Temp.(C)/Hum.(%) 23 C / 48 %	Time:
EUT: IEEE 802.11 b/g/n 2.4GHz 1T1R USB Module	Engineer Signature: LGWADE
Mode: TX 2437MHz	Distance: 3m
Model: ZDWM2402	
Manufacturer: Qingdao Intelligent&Precise Electronics Co.,Ltd.	

Note: 802.11b



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	239.9874	52.95	-10.62	42.33	46.00	-3.67	QP			
2	360.4476	49.20	-7.26	41.94	46.00	-4.06	QP			
3	480.5276	46.74	-4.88	41.86	46.00	-4.14	QP			

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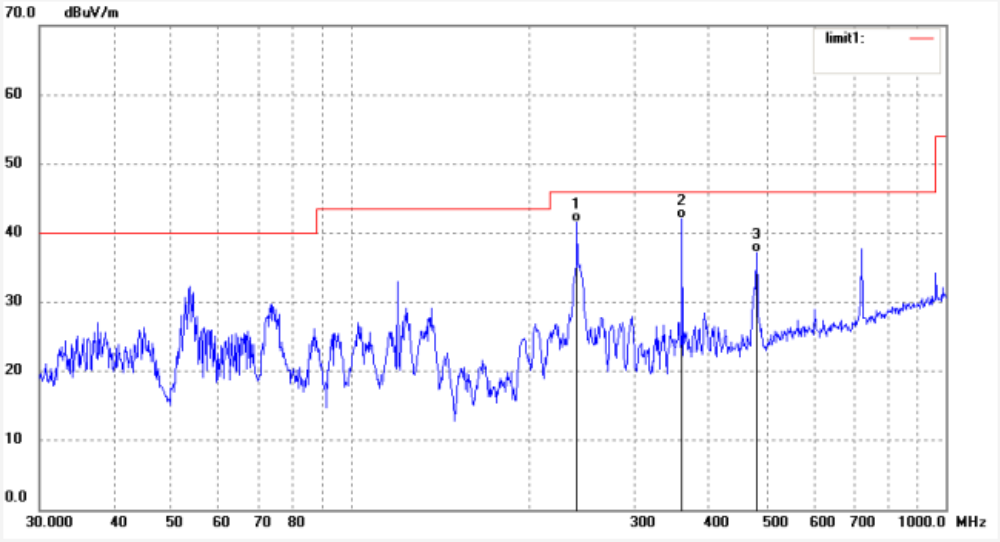
Job No.: lgwade #4415	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: DC 5V
Test item: Radiation Test	Date: 16/11/28/
Temp.(C)/Hum.(%) 23 C / 48 %	Time:
EUT: IEEE 802.11 b/g/n 2.4GHz 1T1R USB Module	Engineer Signature: LGWADE
Mode: TX 2437MHz	Distance: 3m
Model: ZDWM2402	
Manufacturer: Qingdao Intelligent&Precise Electronics Co.,Ltd.	

Note: 802.11b



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	239.9874	52.24	-10.62	41.62	46.00	-4.38	QP			
2	360.4476	49.39	-7.26	42.13	46.00	-3.87	QP			
3	480.5276	42.03	-4.88	37.15	46.00	-8.85	QP			

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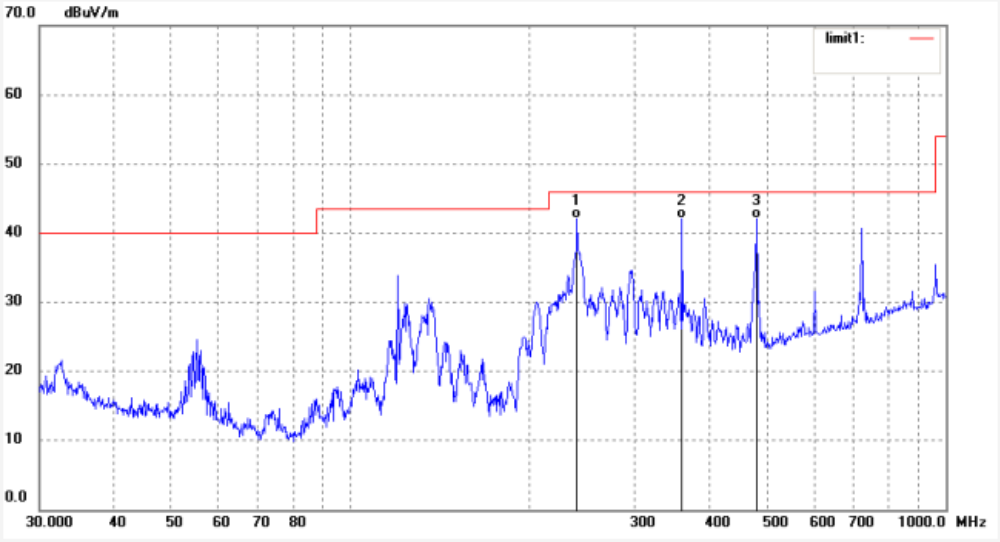
Job No.: lgwade #4417	Polarization: Horizontal
Standard: FCC Class B 3M Radiated	Power Source: DC 5V
Test item: Radiation Test	Date: 16/11/28/
Temp.(C)/Hum.(%) 23 C / 48 %	Time:
EUT: IEEE 802.11 b/g/n 2.4GHz 1T1R USB Module	Engineer Signature: LGWADE
Mode: TX 2462MHz	Distance: 3m
Model: ZDWM2402	
Manufacturer: Qingdao Intelligent&Precise Electronics Co.,Ltd.	

Note: 802.11b



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	239.9874	52.66	-10.62	42.04	46.00	-3.96	QP			
2	360.4476	49.30	-7.26	42.04	46.00	-3.96	QP			
3	480.5276	46.98	-4.88	42.10	46.00	-3.90	QP			

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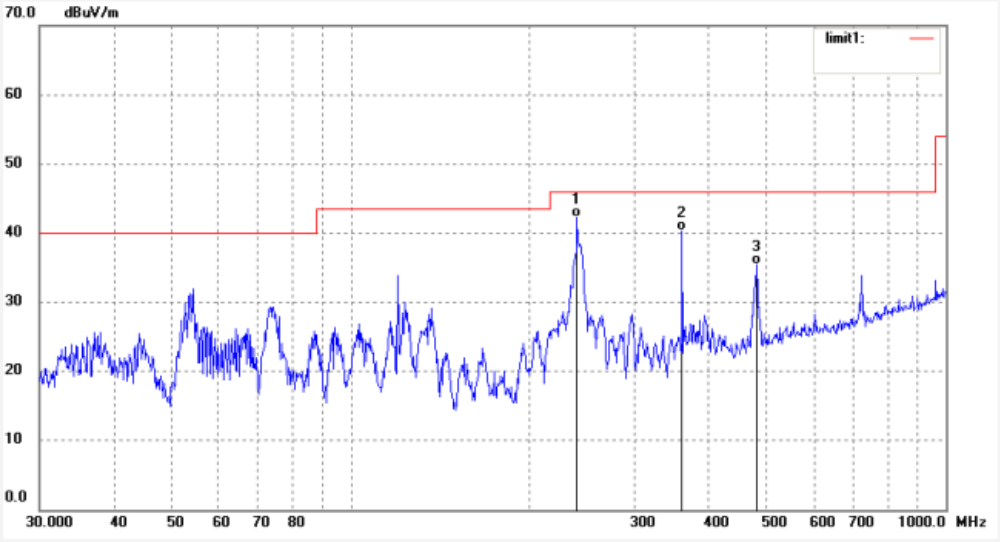
Job No.: lgwade #4418	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: DC 5V
Test item: Radiation Test	Date: 16/11/28/
Temp.(C)/Hum.(%) 23 C / 48 %	Time:
EUT: IEEE 802.11 b/g/n 2.4GHz 1T1R USB Module	Engineer Signature: LGWADE
Mode: TX 2462MHz	Distance: 3m
Model: ZDWM2402	
Manufacturer: Qingdao Intelligent&Precise Electronics Co.,Ltd.	

Note: 802.11b



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	239.9874	52.80	-10.62	42.18	46.00	-3.82	QP			
2	360.4476	47.52	-7.26	40.26	46.00	-5.74	QP			
3	480.5276	40.26	-4.88	35.38	46.00	-10.62	QP			

1GHz - 18GHz

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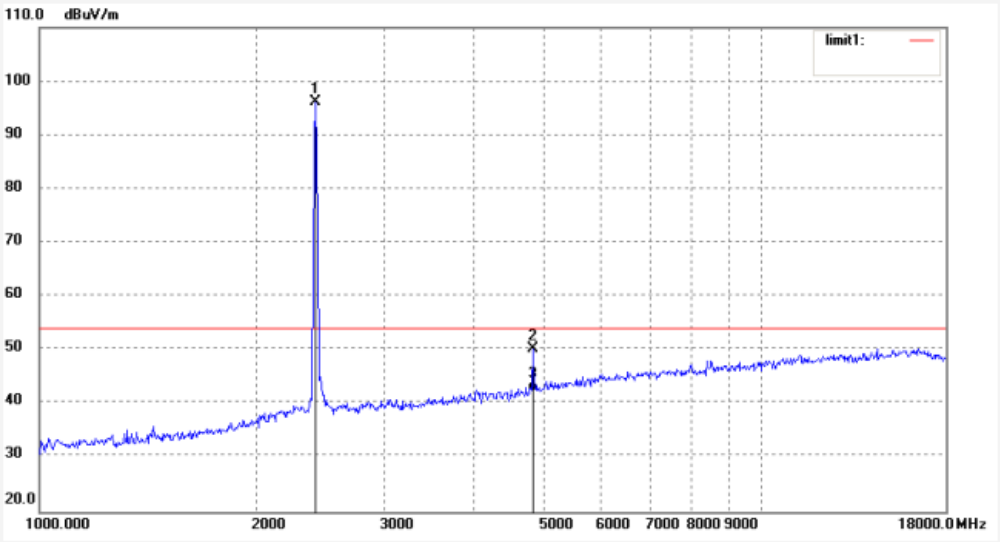
Job No.: lgwade #4349
Standard: FCC Class B 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 23 C / 48 %
EUT: IEEE 802.11 b/g/n 2.4GHz 1T1R USB Module
Mode: TX 2412MHz
Model: ZDWM2402
Manufacturer: Qingdao Intelligent&Precise Electronics Co.,Ltd.

Polarization: Horizontal
Power Source: DC 5V
Date: 16/11/28/
Time:
Engineer Signature: LGWADE
Distance: 3m

Note: 802.11b



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2412.000	97.83	-1.57	96.26	/	/	peak			
2	4824.245	45.25	5.08	50.33	74.00	-23.67	peak			
3	4824.245	37.27	5.08	42.35	54.00	-11.65	AVG			

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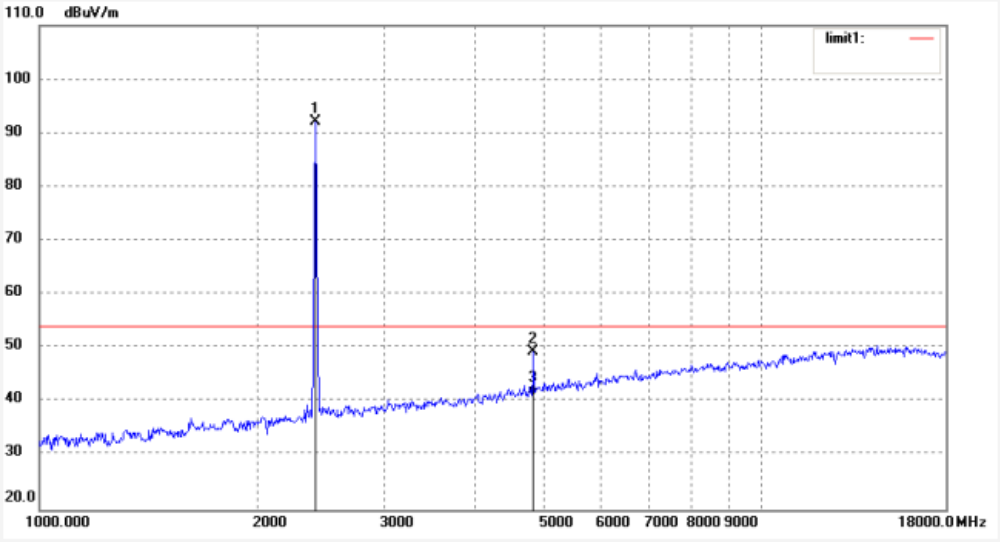
Job No.: lgwade #4350	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: DC 5V
Test item: Radiation Test	Date: 16/11/28/
Temp.(C)/Hum.(%) 23 C / 48 %	Time:
EUT: IEEE 802.11 b/g/n 2.4GHz 1T1R USB Module	Engineer Signature: LGWADE
Mode: TX 2412MHz	Distance: 3m
Model: ZDWM2402	
Manufacturer: Qingdao Intelligent&Precise Electronics Co.,Ltd.	

Note: 802.11b



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2412.000	93.78	-1.57	92.21	/	/	peak			
2	4824.260	44.20	5.08	49.28	74.00	-24.72	peak			
3	4824.260	36.17	5.08	41.25	54.00	-12.75	AVG			

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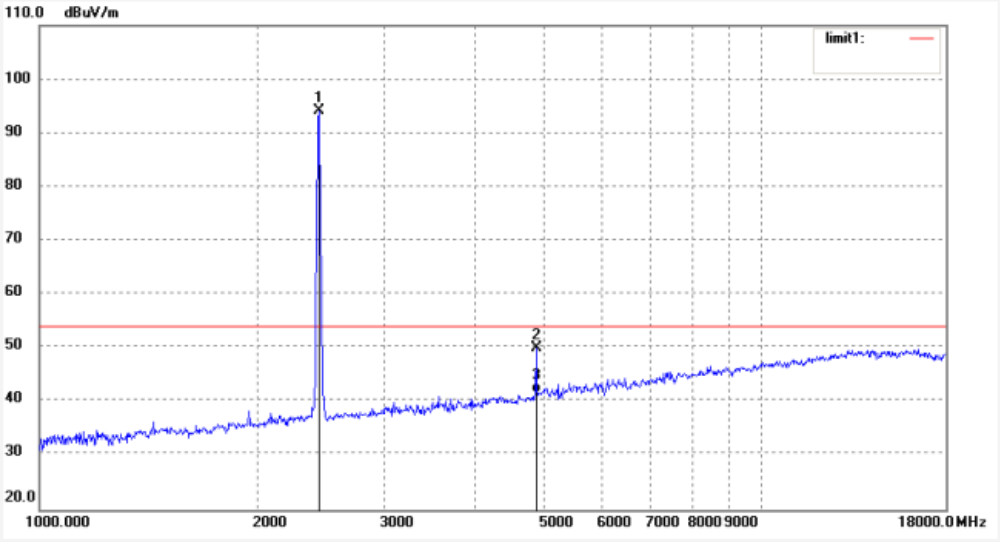
Job No.: lgwade #4353	Polarization: Horizontal
Standard: FCC Class B 3M Radiated	Power Source: DC 5V
Test item: Radiation Test	Date: 16/11/28/
Temp.(C)/Hum.(%) 23 C / 48 %	Time:
EUT: IEEE 802.11 b/g/n 2.4GHz 1T1R USB Module	Engineer Signature: LGWADE
Mode: TX 2437MHz	Distance: 3m
Model: ZDWM2402	
Manufacturer: Qingdao Intelligent&Precise Electronics Co.,Ltd.	

Note: 802.11b



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2437.000	95.63	-1.46	94.17	/	/	peak			
2	4874.257	44.43	5.54	49.97	74.00	-24.03	peak			
3	4874.257	36.21	5.54	41.75	54.00	-12.25	AVG			

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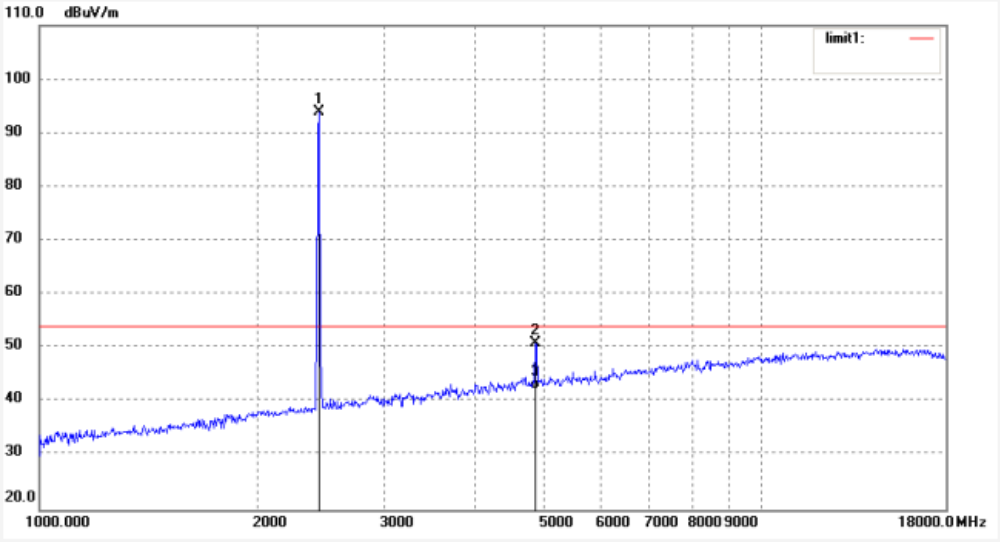
Job No.: lgwade #4354	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: DC 5V
Test item: Radiation Test	Date: 16/11/28/
Temp.(C)/Hum.(%) 23 C / 48 %	Time:
EUT: IEEE 802.11 b/g/n 2.4GHz 1T1R USB Module	Engineer Signature: LGWADE
Mode: TX 2437MHz	Distance: 3m
Model: ZDWM2402	
Manufacturer: Qingdao Intelligent&Precise Electronics Co.,Ltd.	

Note: 802.11b



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2437.000	95.40	-1.46	93.94	/	/	peak			
2	4874.255	45.32	5.54	50.86	74.00	-23.14	peak			
3	4874.255	36.77	5.54	42.31	54.00	-11.69	AVG			

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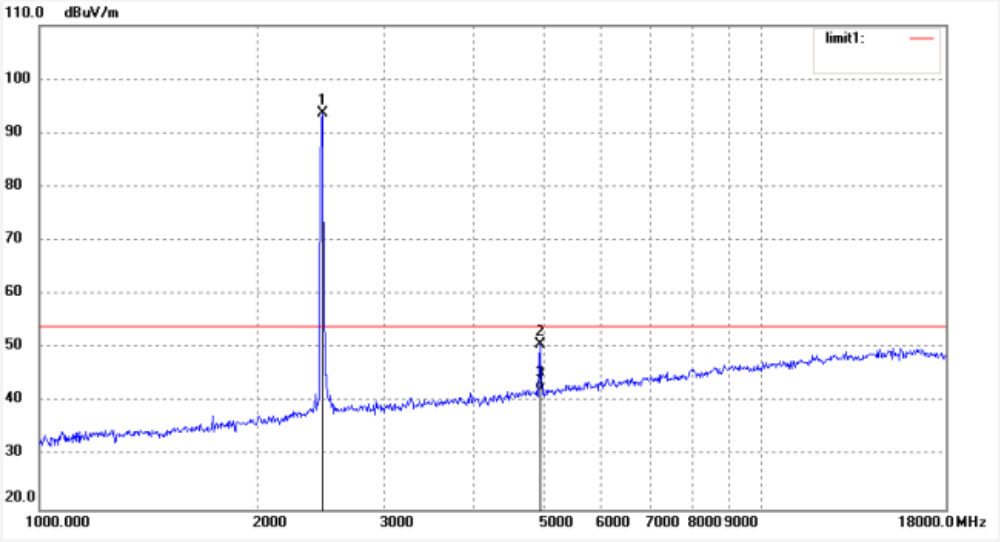
Job No.: lgwade #4356	Polarization: Horizontal
Standard: FCC Class B 3M Radiated	Power Source: DC 5V
Test item: Radiation Test	Date: 16/11/28/
Temp.(C)/Hum.(%) 23 C / 48 %	Time:
EUT: IEEE 802.11 b/g/n 2.4GHz 1T1R USB Module	Engineer Signature: LGWADE
Mode: TX 2462MHz	Distance: 3m
Model: ZDWM2402	
Manufacturer: Qingdao Intelligent&Precise Electronics Co.,Ltd.	

Note: 802.11b



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2462.000	95.12	-1.41	93.71	/	/	peak			
2	4924.248	44.92	5.90	50.82	74.00	-23.18	peak			
3	4924.248	36.35	5.90	42.25	54.00	-11.75	AVG			

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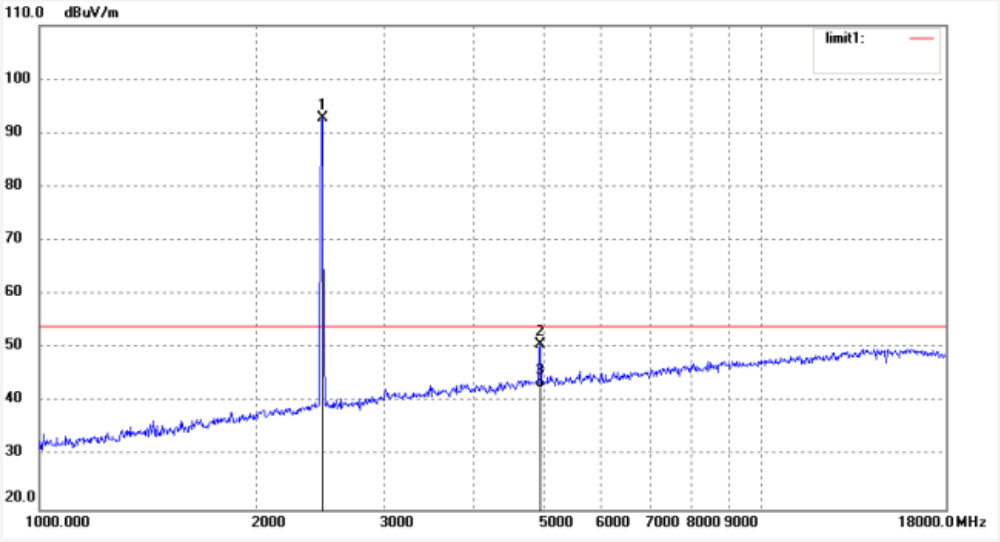
Job No.: lgwade #4355	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: DC 5V
Test item: Radiation Test	Date: 16/11/28/
Temp.(C)/Hum.(%) 23 C / 48 %	Time:
EUT: IEEE 802.11 b/g/n 2.4GHz 1T1R USB Module	Engineer Signature: LGWADE
Mode: TX 2462MHz	Distance: 3m
Model: ZDWM2402	
Manufacturer: Qingdao Intelligent&Precise Electronics Co.,Ltd.	

Note: 802.11b



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2462.000	94.22	-1.41	92.81	/	/	peak			
2	4924.264	44.91	5.90	50.81	74.00	-23.19	peak			
3	4924.264	36.77	5.90	42.67	54.00	-11.33	AVG			

18GHz - 26.5GHz

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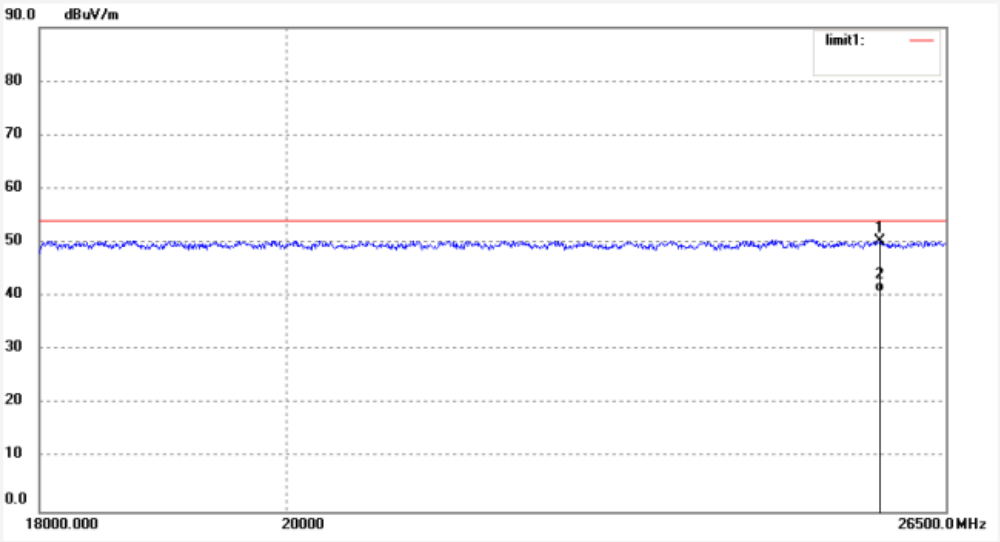
Job No.: lgwade #4360	Polarization: Horizontal
Standard: FCC Class B 3M Radiated	Power Source: DC 5V
Test item: Radiation Test	Date: 16/11/28/
Temp.(C)/Hum.(%) 23 C / 48 %	Time:
EUT: IEEE 802.11 b/g/n 2.4GHz 1T1R USB Module	Engineer Signature: LGWADE
Mode: TX 2412MHz	Distance: 3m
Model: ZDWM2402	
Manufacturer: Qingdao Intelligent&Precise Electronics Co.,Ltd.	

Note: 802.11b



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	25762.251	10.24	40.13	50.37	74.00	-23.63	peak			
2	25762.251	0.61	40.13	40.74	54.00	-13.26	AVG			

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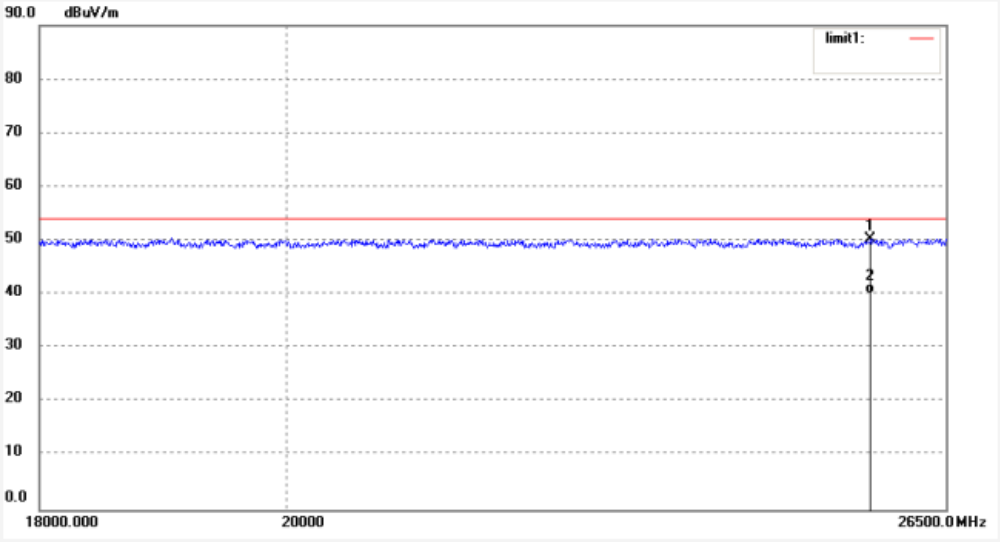
Job No.: lgwade #4359	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: DC 5V
Test item: Radiation Test	Date: 16/11/28/
Temp.(C)/Hum.(%) 23 C / 48 %	Time:
EUT: IEEE 802.11 b/g/n 2.4GHz 1T1R USB Module	Engineer Signature: LGWADE
Mode: TX 2412MHz	Distance: 3m
Model: ZDWM2402	
Manufacturer: Qingdao Intelligent&Precise Electronics Co.,Ltd.	

Note: 802.11b



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	25662.803	9.17	41.04	50.21	74.00	-23.79	peak			
2	25662.803	-0.80	41.04	40.24	54.00	-13.76	AVG			