

## FCC/IC - TEST REPORT

Report Number : **64.790.17.06051.01** Date of Issue: December 13, 2017

Model : GRJW05-J

Product Type : Wireless Gateway

Applicant : Gree Electric Appliances, Inc.of Zhuhai

Address : JinJi West Rd, QianShan, Zhuhai, GuangDong, 519070, P.R.China

Manufacturer : Gree Electric Appliances, Inc.of Zhuhai

Address : JinJi West Rd, QianShan, Zhuhai, GuangDong, 519070, P.R.China

Test Result :  Positive  Negative



Total pages including Appendices : 44

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## 2 Details about the Test Laboratory

### Details about the Test Laboratory

#### Test Site 1

Company name: TÜV SÜD Certification and Testing (China) Co., Ltd. Shenzhen Branch  
Building 12&13, Zhiheng Wisdomland Business Park,  
Nantou Checkpoint Road 2, Nanshan District,  
Shenzhen City, 518052,  
P. R. China

Telephone: 86 755 8828 6998

Fax: 86 755 8828 5299

FCC Accredited test firm : Designation Number- CN5009

IC registration number: 10320A

### 3 Description of the Equipment Under Test

Product:	Wireless Gateway
Model no.:	GRJW05-J
FCC ID:	2ADAP-W05AGL
IC	12478A-W05AGL
Options and accessories:	Nil
Rating Input:	100-240V~ 50/60Hz
RF Transmission Frequency:	2412MHz-2462MHz
No. of Operated Channel:	802.11b/g/n20: 11 channel 802.11n40: 7 channel
Modulation:	802.11b: CCK DSSS 802.11g: OFDM 802.11n20: OFDM 802.11n40: OFDM
Antenna Type:	Internal Printed PCB antenna
Antenna Gain:	1.0dBi
Description of the EUT:	The EUT is a Wireless Gateway.

## 4 Summary of Test Standards

Test Standards	
FCC Part 15 Subpart C 10-1-2016 Edition	PART 15 - RADIO FREQUENCY DEVICES Subpart C - Intentional Radiators
RSS-247 Issue 2 February 2017	Digital Transmission Systems (DTSs), Frequency Hopping Systems (FHSS) and Licence-Exempt Local Area Network (LE-LAN) Devices

All the test methods were according to KDB558074 D01 DTS Meas Guidance issued by April 8, 2016 and ANSI C63.10 (2013).

## 5 Summary of Test Results

Technical Requirements				
FCC Part 15 Subpart C				
Test Condition			Pages	Test Result
§15.207	RSS-GEN 8.8	Conducted emission AC power port	10	Pass
§15.247(b)(1)	RSS-247 Clause 5.4(2)	Conducted peak output power	13	Pass
§15.247(e)	RSS-247 Clause 5.2(2)	Power spectral density*	14	Pass
§15.247(a)(2)	RSS-247 Clause 5.2(1)	6dB bandwidth	15	Pass
§15.247(a)(1)	RSS-247 Clause 5.1(1)	20dB bandwidth and 99% Occupied Bandwidth	--	N/A
§15.247(a)(1)	RSS-247 Clause 5.1(2)	Carrier frequency separation	--	N/A
§15.247(a)(1)(iii)	RSS-247 Clause 5.1(4)	Number of hopping frequencies	--	N/A
§15.247(a)(1)(iii)	RSS-247 Clause 5.1(4)	Dwell Time	--	N/A
§15.247(d)	RSS-247 Clause 5.5	Spurious RF conducted emissions	22	Pass
§15.247(d)	RSS-247 Clause 5.5	Band edge	35	Pass
§15.247(d) & §15.209 &	RSS-247 Clause 5.5 & RSS-GEN 6.13	Spurious radiated emissions for transmitter	40	Pass
§15.203	RSS-GEN 8.3	Antenna requirement	See note 1	Pass

Note 1: N/A=Not Applicable.

Note 2: The EUT uses Internal Printed ANT antenna, which gain is 1dBi. In accordance to §15.203, it is considered sufficiently to comply with the provisions of this section.



## 6 General Remarks

### Remarks

This submittal(s) (test report) is intended for FCC ID:2ADAP-W05AGL, IC:12478A-W05AGL complies with Section 15.207, 15.209, 15.247 of the FCC Part 15, Subpart C, RSS- 247 and RSS-Gen rules.

### SUMMARY:

All tests according to the regulations cited on page 5 were

- Performed

- Not Performed

The Equipment under Test

- **Fulfills** the general approval requirements.

- **Does not** fulfill the general approval requirements.

Testing Start Date: November 14, 2017

Testing End Date: November 22, 2017

TÜV SÜD Certification and Testing (China) Co., Ltd. Guangzhou Branch

Reviewed by:

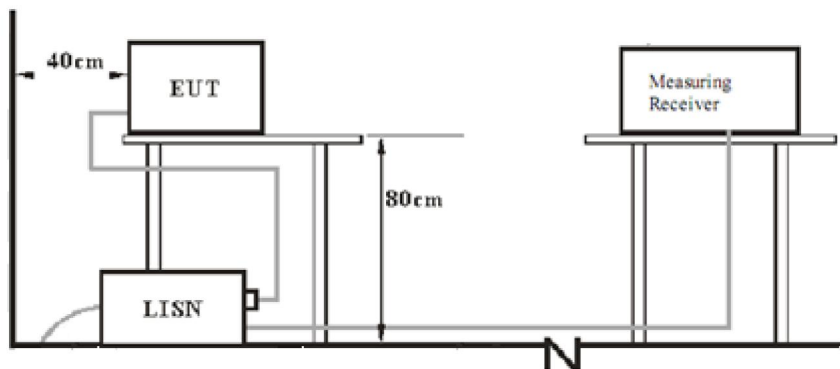
Prepared by:

Celia Xiang

Kevin Ouyang

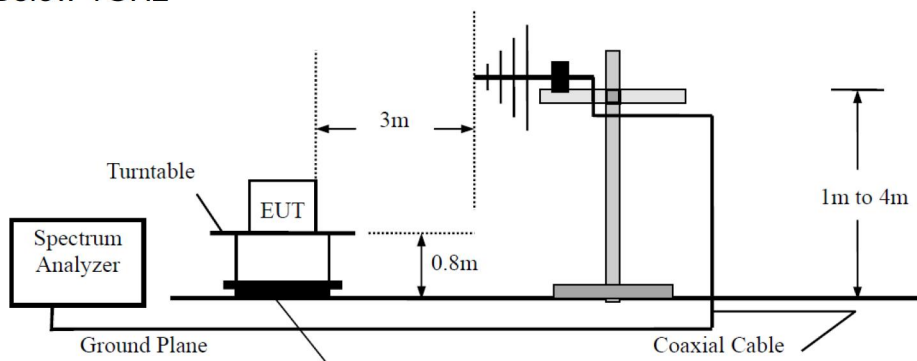
## 7 Test Setups

### 7.1 AC Power Line Conducted Emission test setups

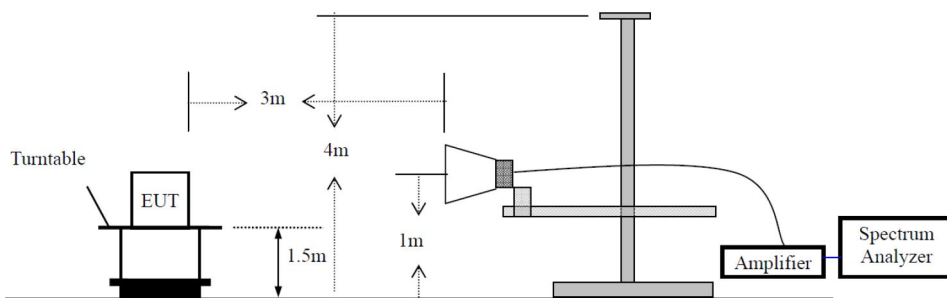


### 7.2 Radiated test setups

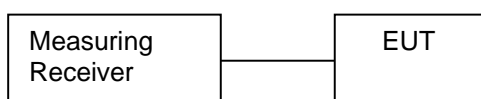
#### Below 1GHz



#### Above 1GHz



### 7.3 Conducted RF test setups





## 8 Systems test configuration

Auxiliary Equipment Used during Test:

DESCRIPTION	MANUFACTURER	MODEL NO.(SHIELD)
Mainboard of air-conditioner	GREE	/
Software	/	ART2

## 9 Technical Requirement

### 9.1 Conducted Emission

#### Test Method

1. The EUT was placed on a table, which is 0.8m above ground plane
2. The power line of the EUT is connected to the AC mains through a Artificial Mains Network (A.M.N.).
3. Maximum procedure was performed to ensure EUT compliance
4. A EMI test receiver is used to test the emissions from both sides of AC line

#### Limit

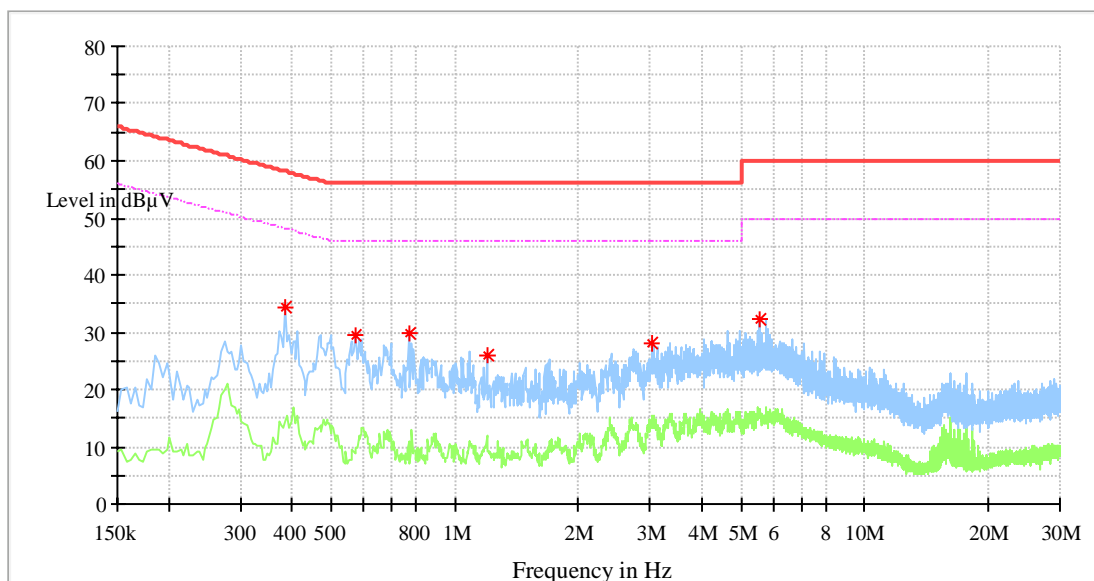
Frequency MHz	QP Limit dB $\mu$ V	AV Limit dB $\mu$ V
0.150-0.500	66-56*	56-46*
0.500-5	56	46
5-30	60	50

Decreasing linearly with logarithm of the frequency

Test data:

### Conducted Emission

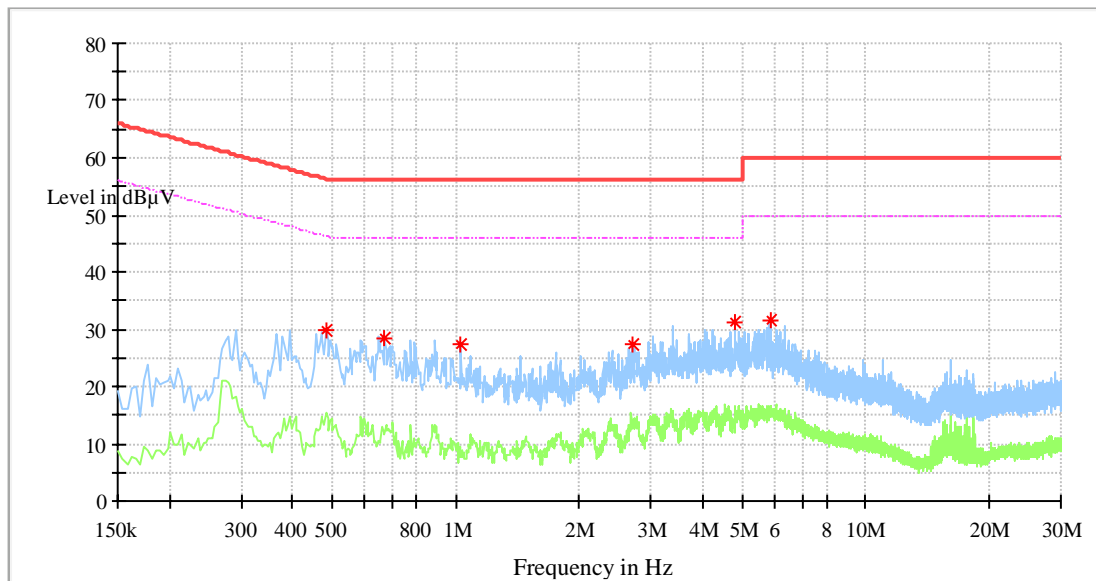
Product Type : Wireless Gateway  
M/N : GRJW05-J  
Operating Condition : WiFi function on.  
Test Specification : L  
Comment : AC 120V/60Hz  
Test date : 2017-11-22



No significant emission was detected within 10 dB to limit

## Conducted Emission

Product Type : Wireless Gateway  
M/N : GRJW05-J  
Operating Condition : WiFi function on.  
Test Specification : N  
Comment : AC 120V/60Hz  
Test date : 2017-11-22



No significant emission was detected within 10 dB to limit

## 9.2 Conducted peak output power

### Test Method

1. Use the following spectrum analyzer settings:  
Span = approximately 5 times the 20 dB bandwidth, centered on a hopping channel  
RBW > the 20 dB bandwidth of the emission being measured, VBW ≥ RBW,  
Sweep = auto, Detector function = peak, Trace = max hold
2. Add a correction factor to the display.
3. Allow the trace to stabilize. Use the marker-to-peak function to set the marker to the peak of the emission. The indicated level is the peak output power

### Limits

Frequency Range MHz	Limit W	Limit dBm
2400-2483.5	≤1	≤30

## Conducted peak output power

### 802.11b modulation Test Result

Frequency MHz	Conducted Peak Output Power dBm	Result
Low channel 2412MHz	16.7	Pass
Middle channel 2437MHz	16.6	Pass
High channel 2462MHz	16.5	Pass

### 802.11g modulation Test Result

Frequency MHz	Conducted Peak Output Power dBm	Result
Low channel 2412MHz	12.7	Pass
Middle channel 2437MHz	12.5	Pass
High channel 2462MHz	12.5	Pass

### 802.11n20 modulation Test Result

Frequency MHz	Conducted Peak Output Power dBm	Result
Low channel 2412MHz	10.7	Pass
Middle channel 2437MHz	10.0	Pass
High channel 2462MHz	10.0	Pass

### 802.11n40 modulation Test Result

Frequency MHz	Conducted Peak Output Power dBm	Result
Low channel 2422MHz	10.7	Pass
Middle channel 2437MHz	9.9	Pass
High channel 2452MHz	10.7	Pass

## 9.3 Power spectral density

### Test Method

This procedure shall be used if maximum peak conducted output power was used to demonstrate compliance:

1. Set analyzer center frequency to DTS channel center frequency.  
RBW=3kHz,VBW≥3RBW,Span=1.5 times DTS bandwidth, Detector=Peak, Sweep=auto, Trace= max hold
2. Allow trace to fully stabilize, use the peak marker function to determine the maximum amplitude level within the RBW.
3. Repeat above procedures until other frequencies measured were completed

### Limit

#### Limit

$$\leq 8 \text{ dBm/3KHz}$$

#### 802.11b modulation Test Result

Frequency MHz	Power spectral density	Limit dBm/3KHz	Result
2412	-5.05	8	Pass
2437	-6.64	8	Pass
2462	-7.08	8	Pass

#### 802.11g modulation Test Result

Frequency MHz	Power spectral density	Limit dBm/3KHz	Result
2412	-9.44	8	Pass
2437	-10.24	8	Pass
2462	-10.99	8	Pass

#### 802.11n20 modulation Test Result

Frequency MHz	Power spectral density	Limit dBm/3KHz	Result
2412	-12.02	8	Pass
2437	-13.21	8	Pass
2462	-14.05	8	Pass

#### 802.11n40 modulation Test Result

Frequency MHz	Power spectral density	Limit dBm/3KHz	Result
2422	-15.36	8	Pass
2437	-16.15	8	Pass
2452	-15.53	8	Pass

## 9.4 6 dB Bandwidth

### Test Method

1. Use the following spectrum analyzer settings:  
RBW=100K, VBW $\geq$ 3RBW, Sweep = auto, Detector function = peak, Trace = max hold
2. Use the automatic bandwidth measurement capability of an instrument, may be employed using the X dB bandwidth mode with X set to 6, care shall be taken so that the bandwidth measurement is not influenced by any intermediate power nulls in the fundamental emission that might be  $\geq 6$  dB.
3. Allow the trace to stabilize, record the X dB Bandwidth value.

### Limit

Limit [kHz]

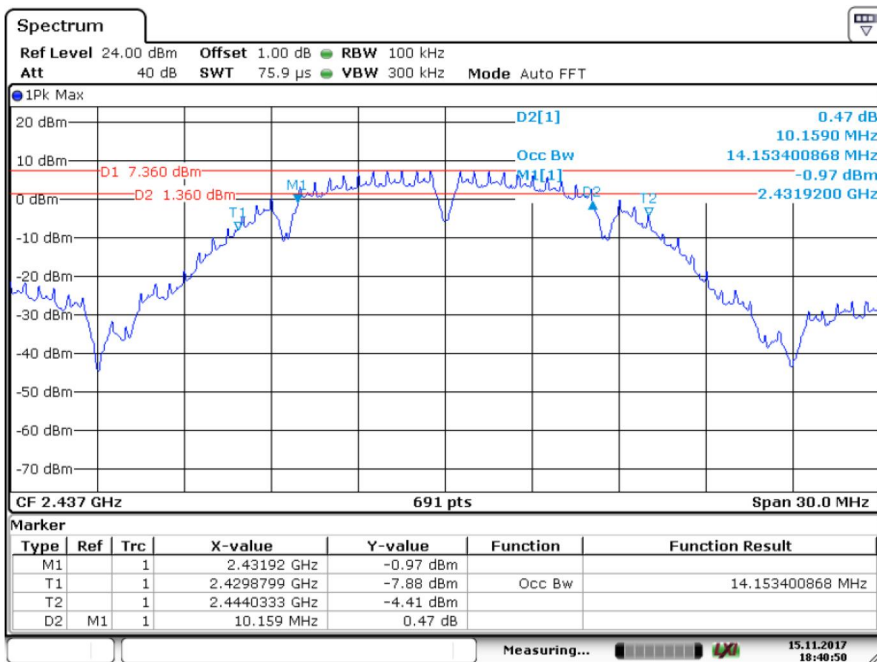
$\geq 500$

### 802.11b modulation Test Result

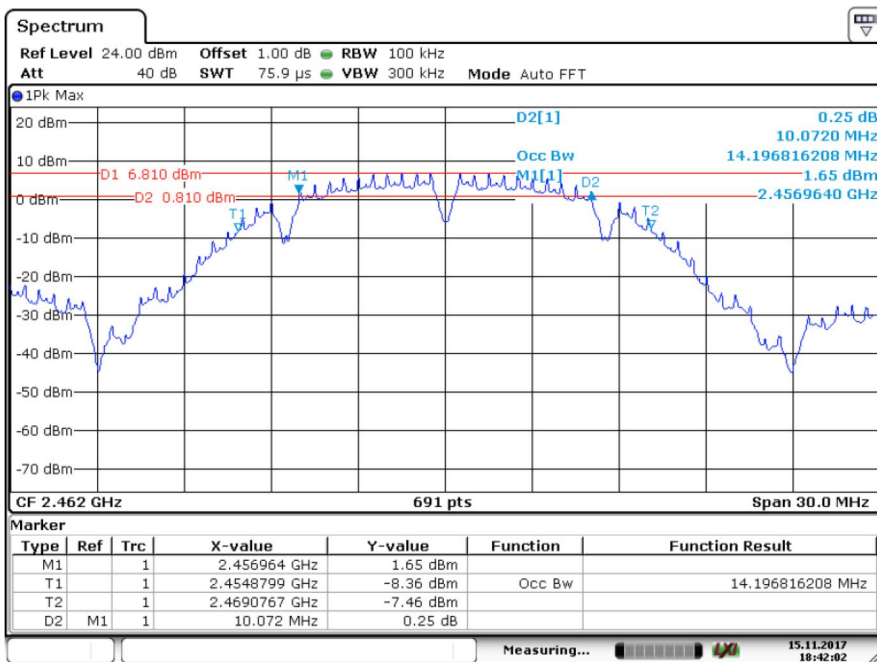
Frequency MHz	6 dB Bandwidth MHz	Limit kHz	Result
2412	14.3271	500	Pass
2437	14.1534	500	Pass
2462	14.1968	500	Pass



Date: 15.NOV.2017 18:38:56



Date: 15.NOV.2017 18:40:49

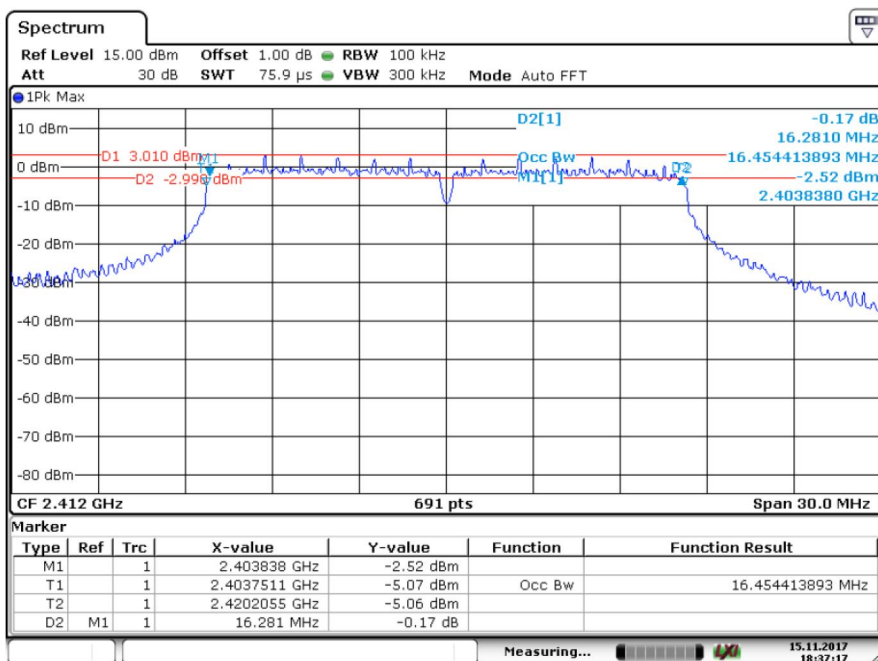


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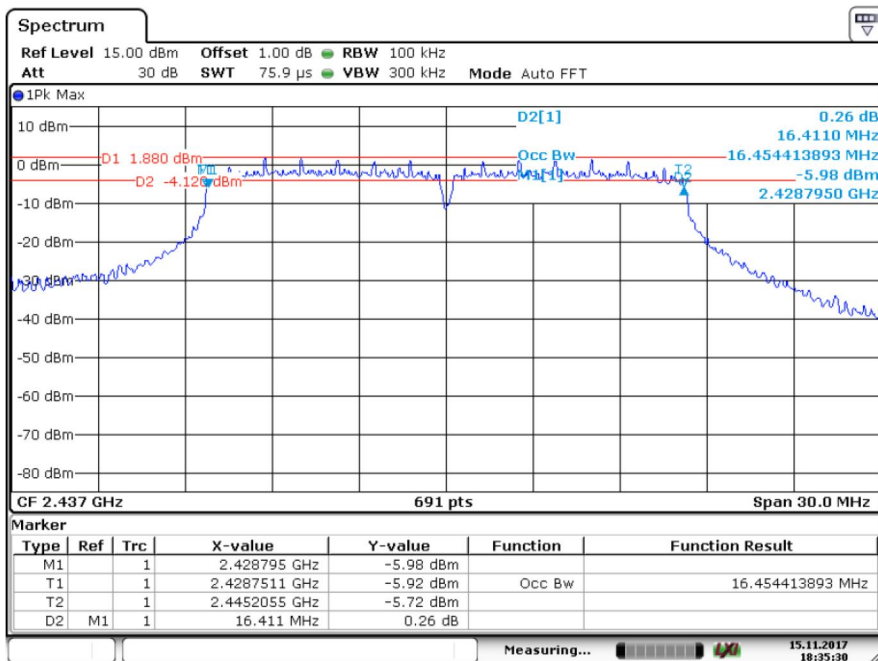


# 802.11g modulation Test Result

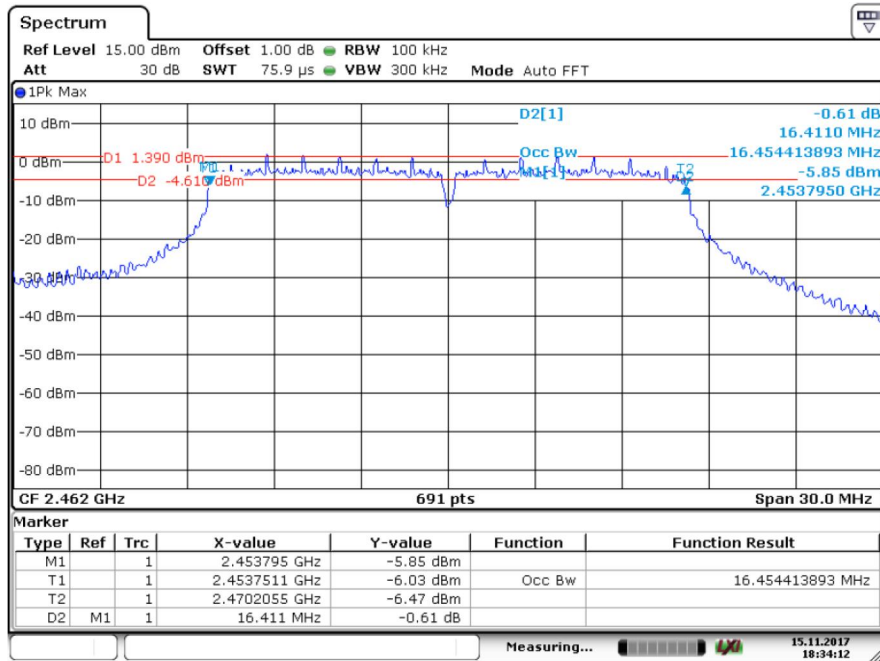
Frequency MHz	6 dB Bandwidth MHz	Limit kHz	Result
2412	16.4544	500	Pass
2437	16.4544	500	Pass
2462	16.4544	500	Pass



Date: 15.NOV.2017 18:37:17



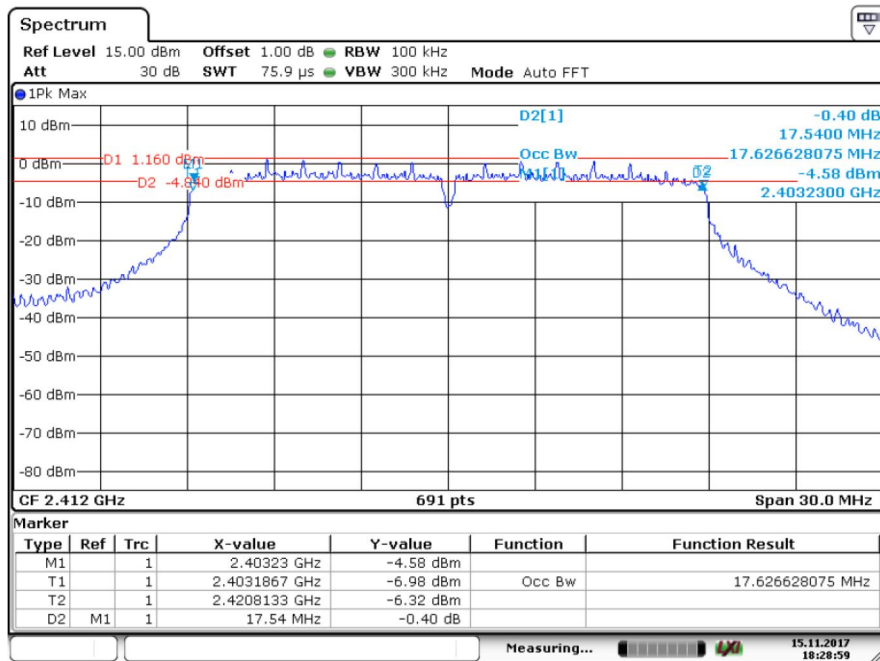
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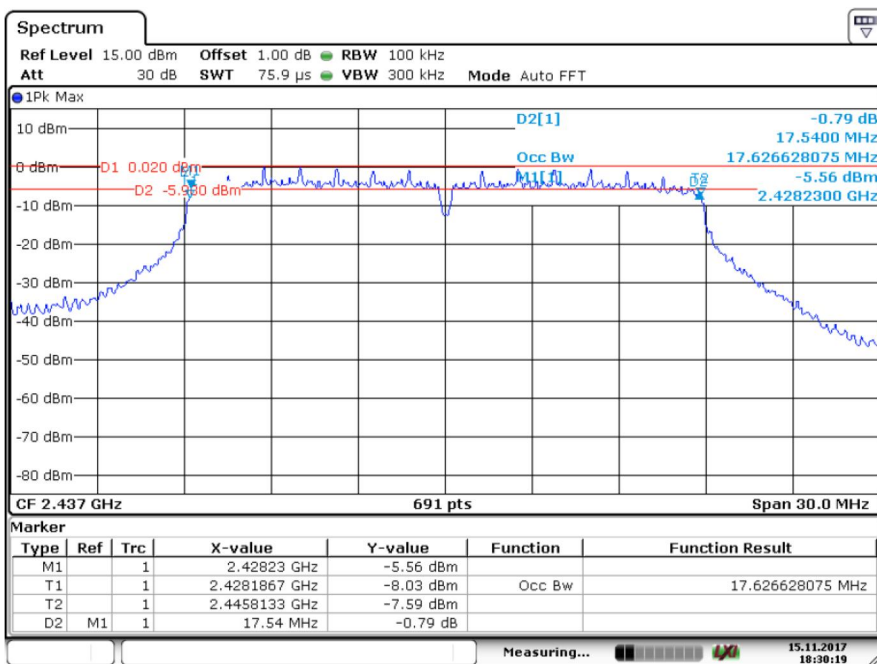
Date: 15.NOV.2017 18:34:12

### 802.11n20 modulation Test Result

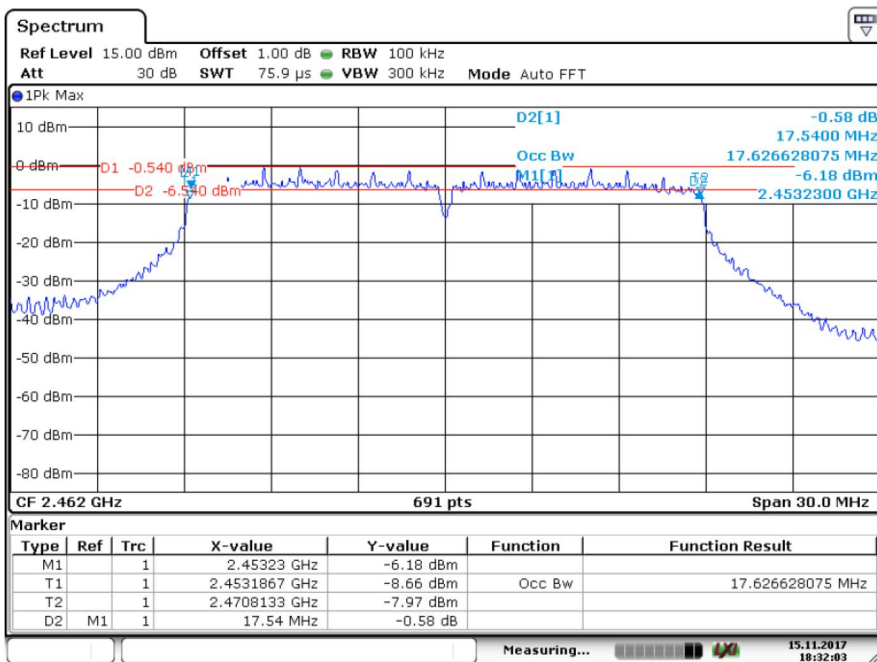
Frequency MHz	6 dB Bandwidth MHz	Limit kHz	Result
2412	17.6266	500	Pass
2437	17.6266	500	Pass
2462	17.6266	500	Pass



Date: 15.NOV.2017 18:28:59



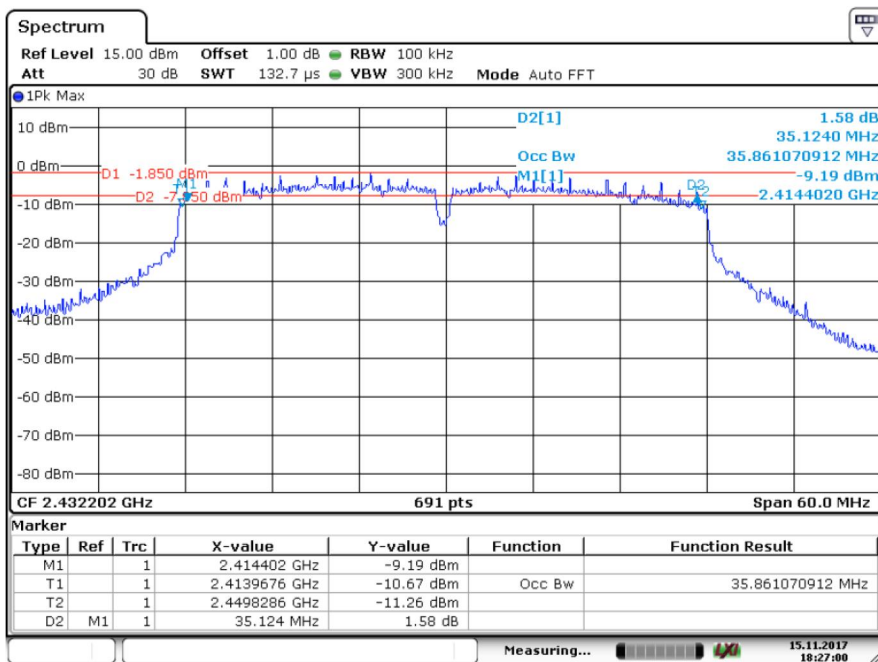
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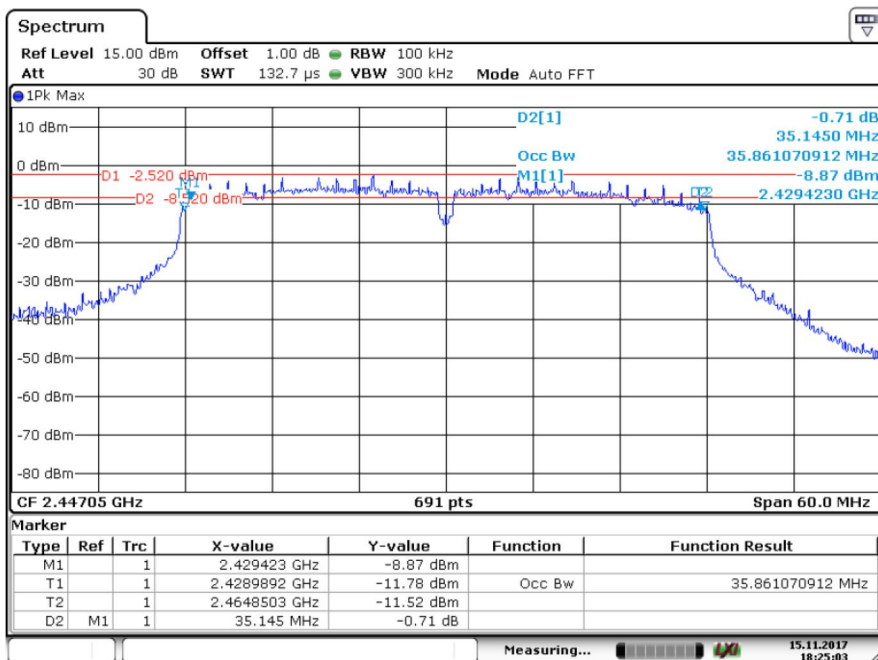
Date: 15.NOV.2017 18:32:03

# 802.11n40 modulation Test Result

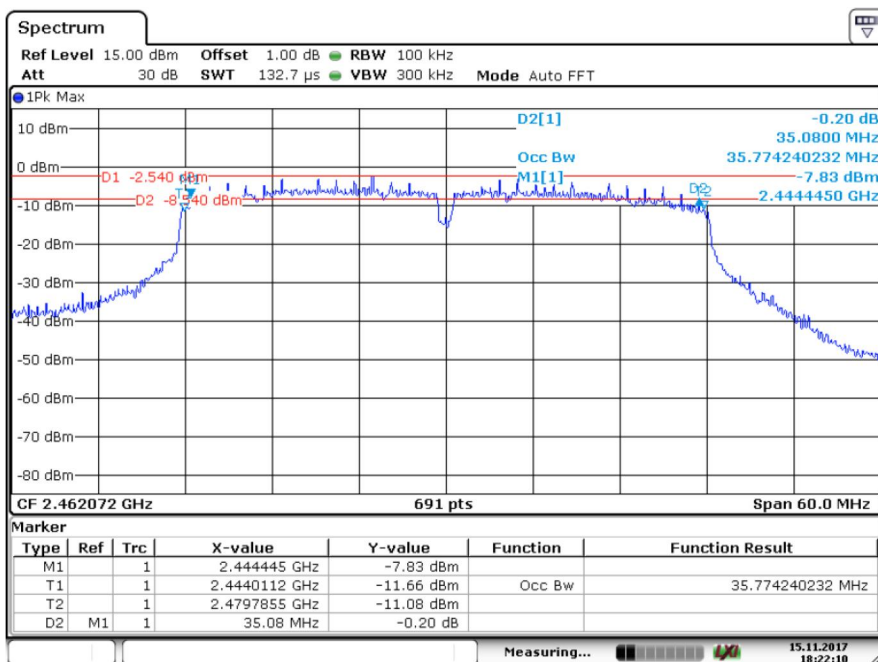
Frequency MHz	6 dB Bandwidth MHz	Limit kHz	Result
2422	35.8611	500	Pass
2437	35.8611	500	Pass
2452	35.7742	500	Pass



Date: 15.NOV.2017 18:27:01



Date: 15.NOV.2017 18:25:03



Date: 15.NOV.2017 18:22:11

## 9.5 Spurious RF conducted emissions

### Test Method

1. Use the following spectrum analyzer settings:  
Span = wide enough to capture the peak level of the in-band emission and all spurious emissions (e.g., harmonics) from the lowest frequency generated in the EUT up through the 10<sup>th</sup> harmonic. Typically, several plots are required to cover this entire span.  
RBW = 100 kHz, VBW $\geq$ RBW, Sweep = auto, Detector function = peak, Trace = max hold
2. Allow the trace to stabilize. Set the marker on the peak of any spurious emission recorded.
3. The level displayed must comply with the limit specified in this Section. Submit these plots.
4. Repeat above procedures until all frequencies measured were complete.

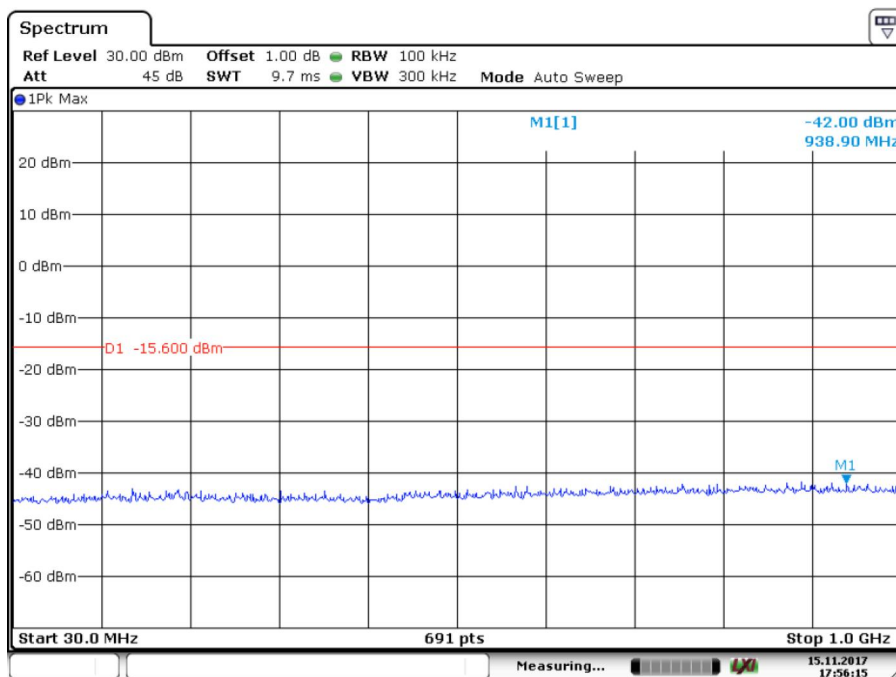
### Limit

Frequency Range MHz	Limit (dBc)
30-25000	-20

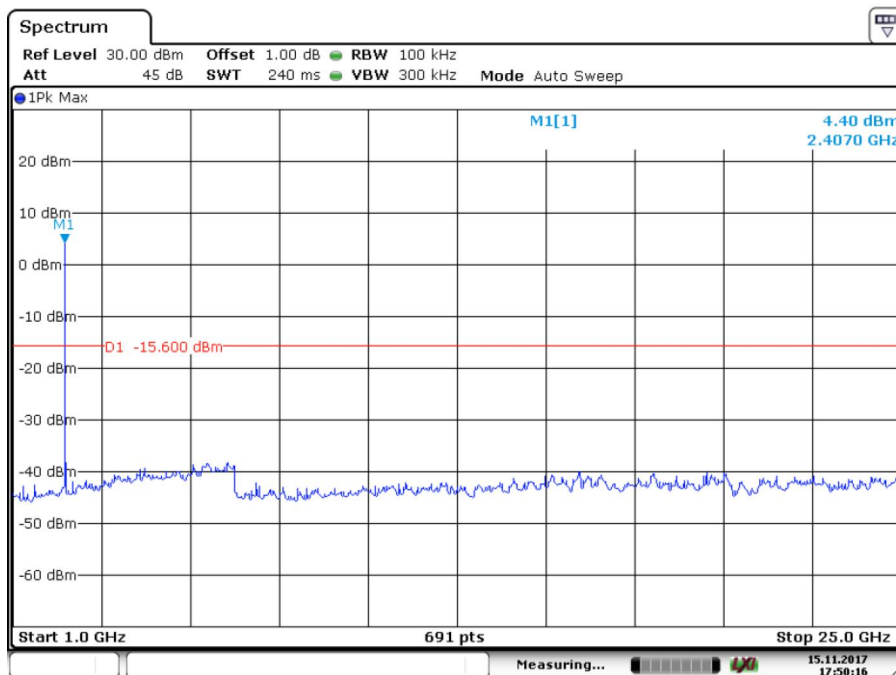
## Spurious RF conducted emissions

802.11b Modulation:

2412MHz

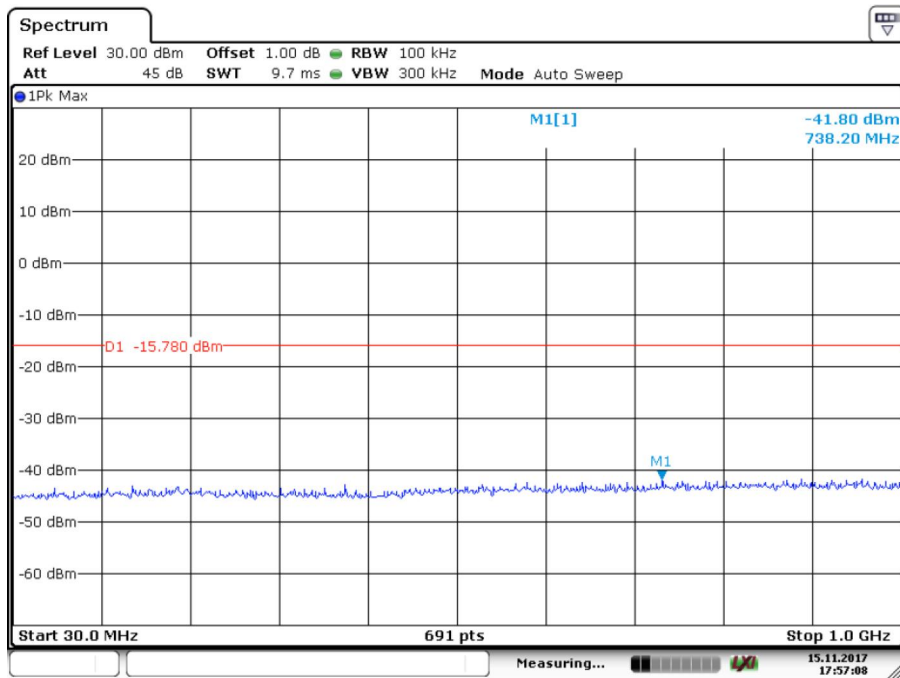


Date: 15.NOV.2017 17:56:15

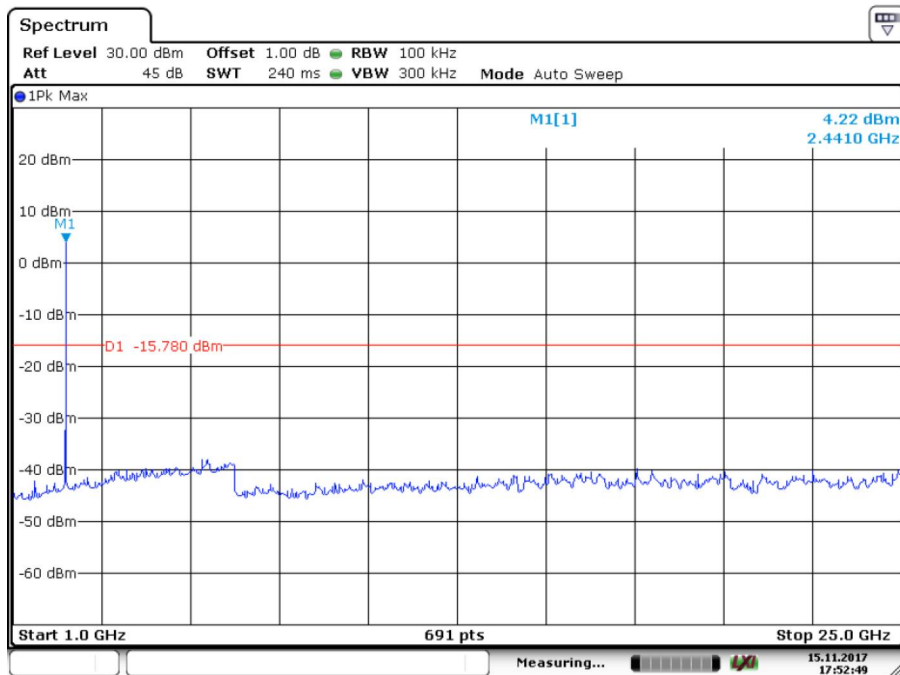


Date: 15.NOV.2017 17:50:16

# 2437MHz



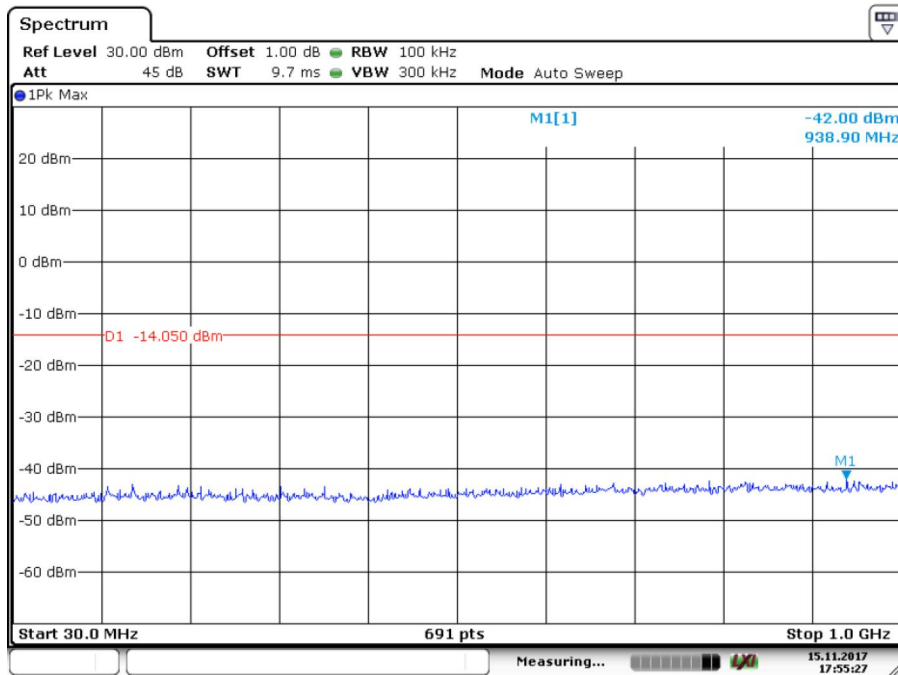
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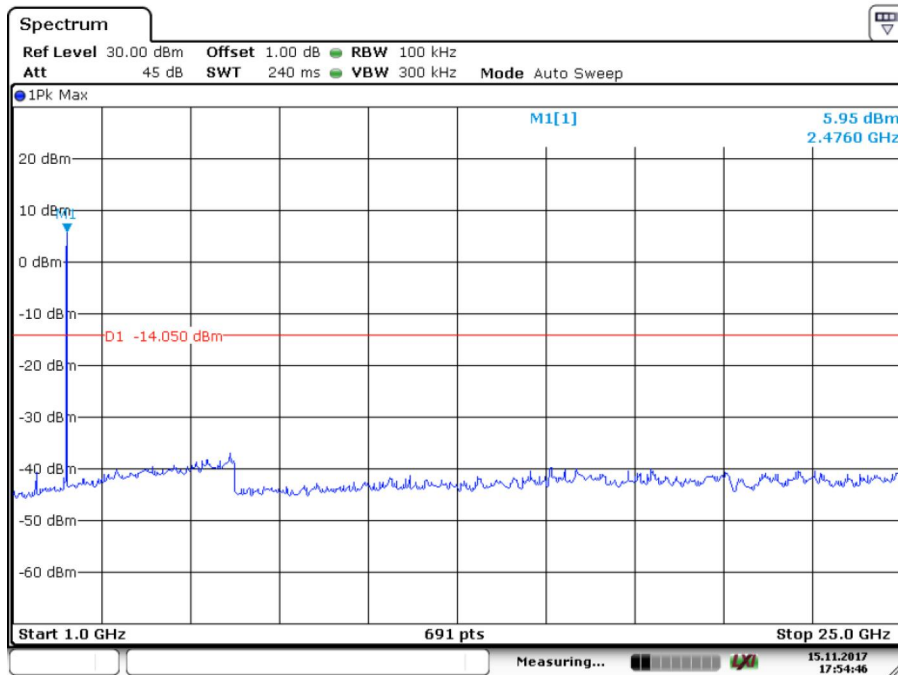
Date: 15.NOV.2017 17:52:49



## 2462MHz

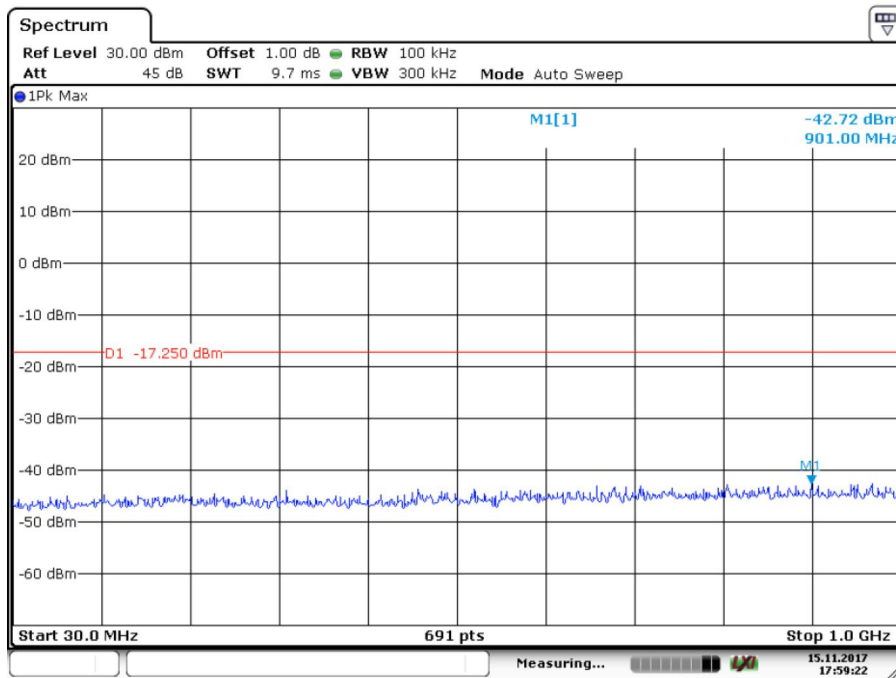


Date: 15.NOV.2017 17:55:28

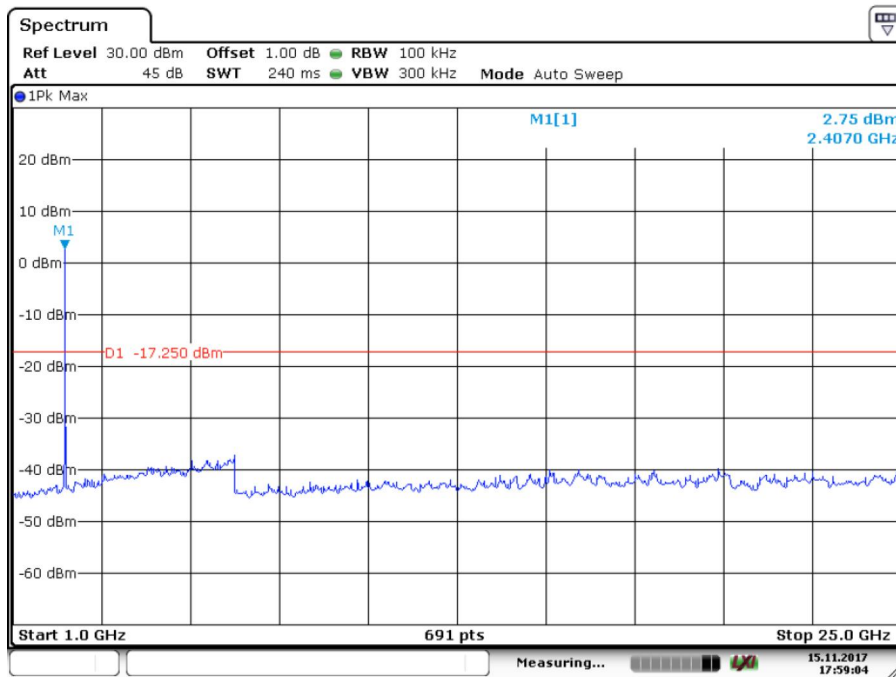


Date: 15.NOV.2017 17:54:46

# 802.11G Modulation: 2412MHz

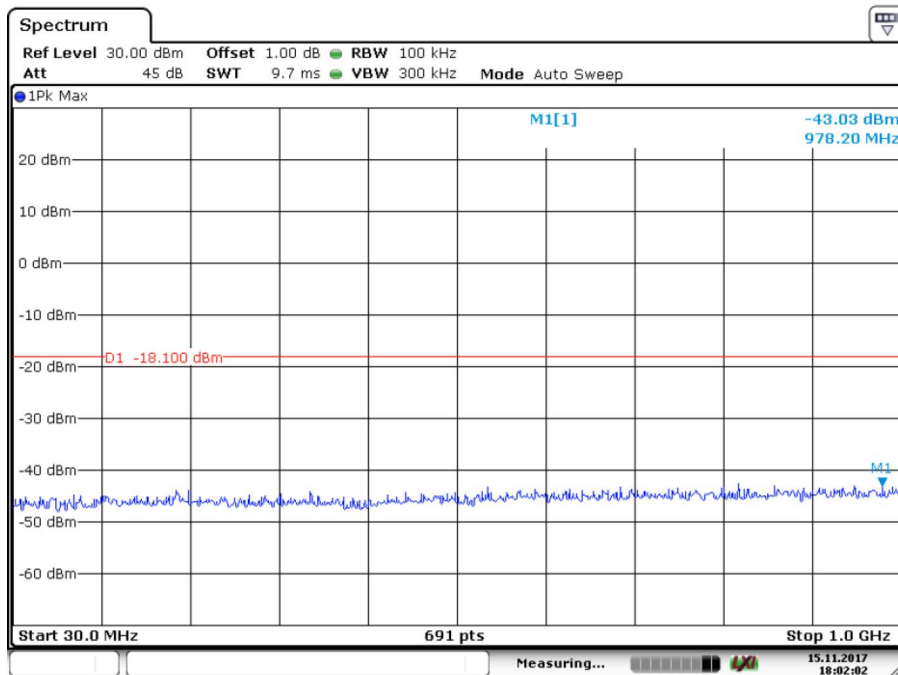


Date: 15.NOV.2017 17:59:22

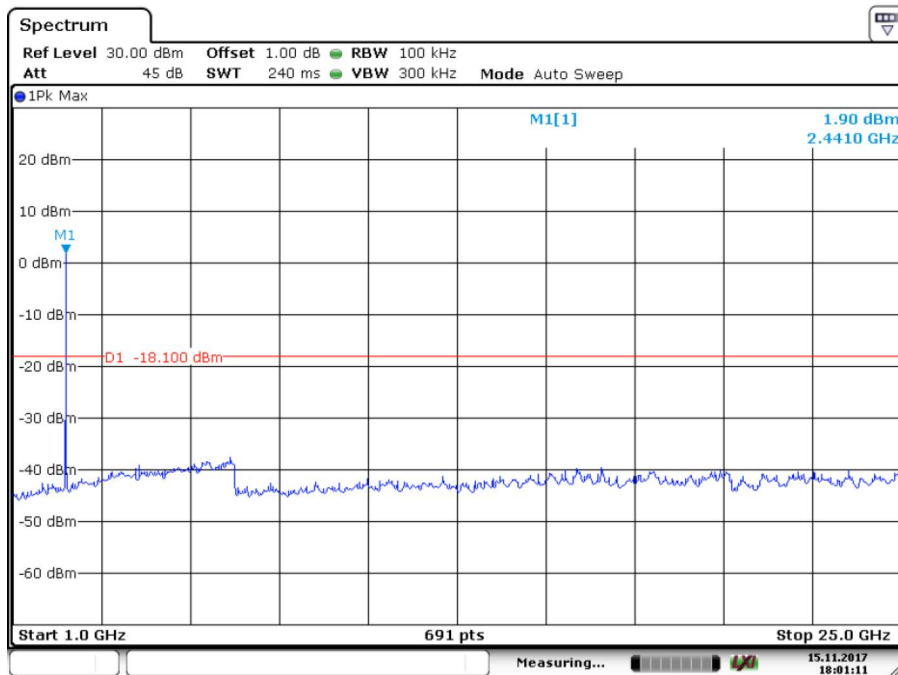


Date: 15.NOV.2017 17:59:05

# 2437MHz

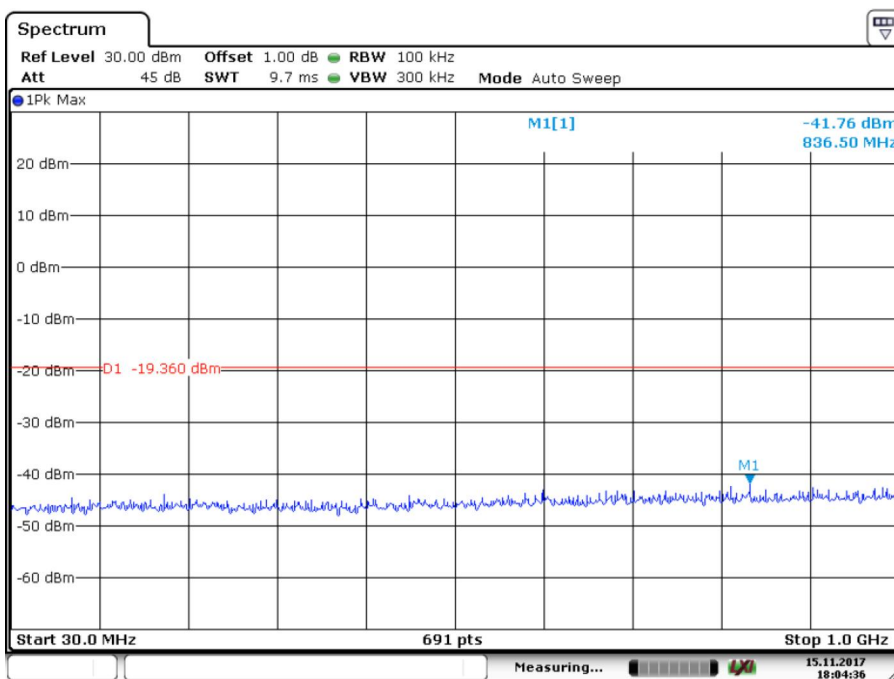


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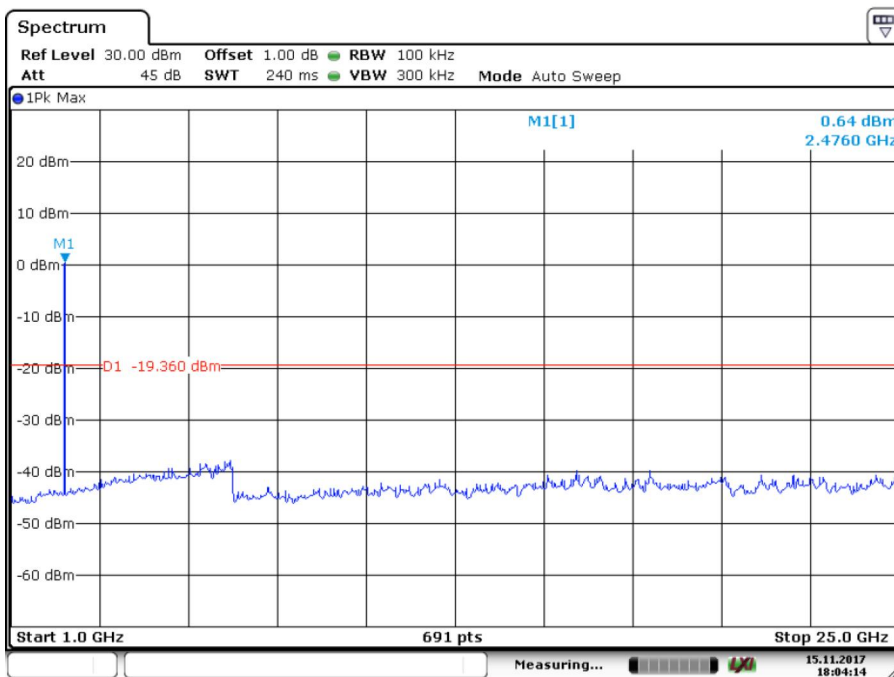


Date: 15.NOV.2017 18:01:11

# 2462MHz

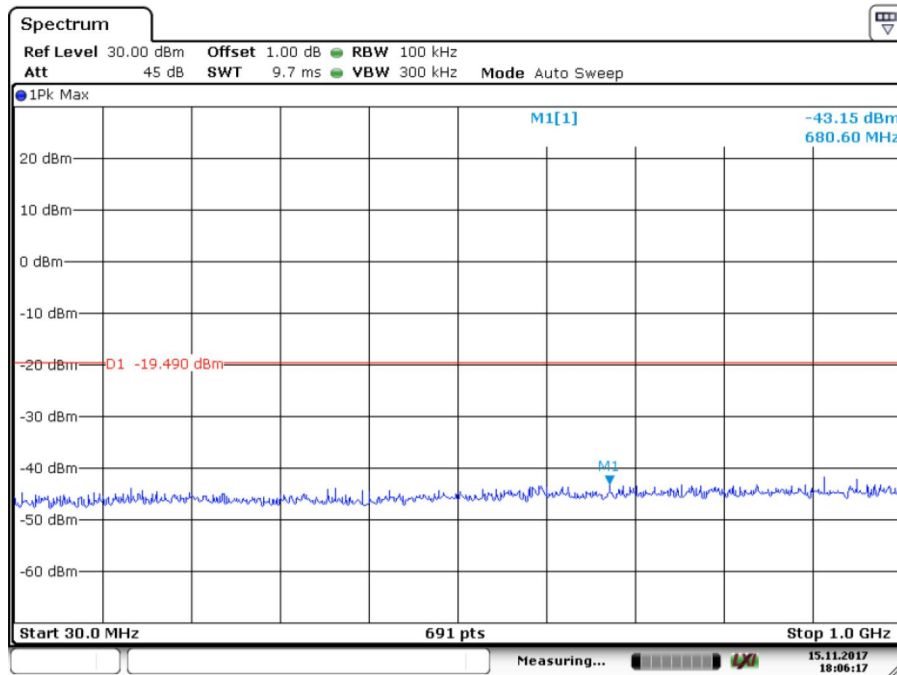


Date: 15.NOV.2017 18:04:36

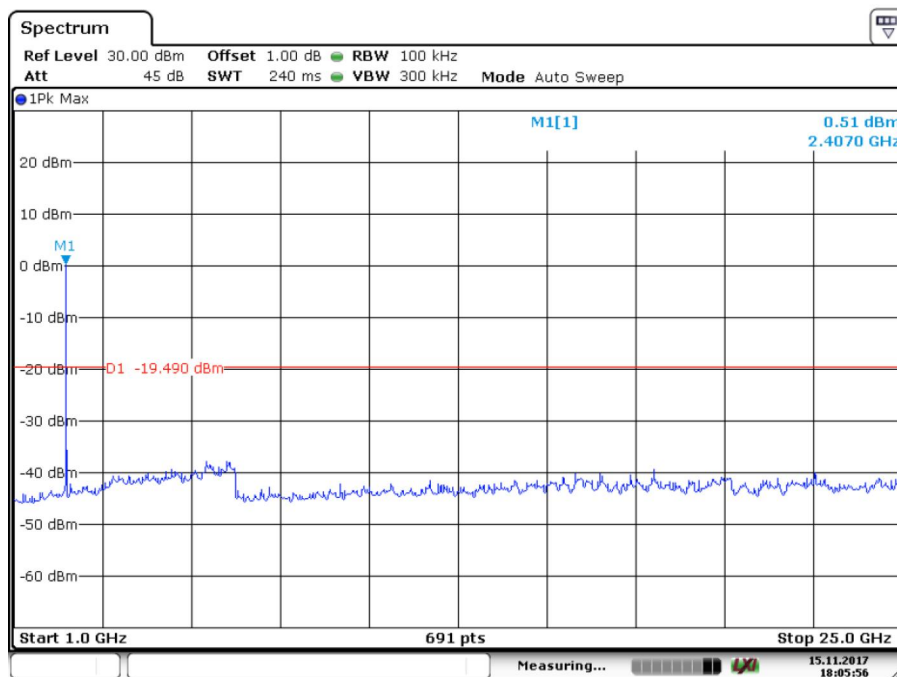


Date: 15.NOV.2017 18:04:15

## 802.11N(20) Modulation: 2412MHz

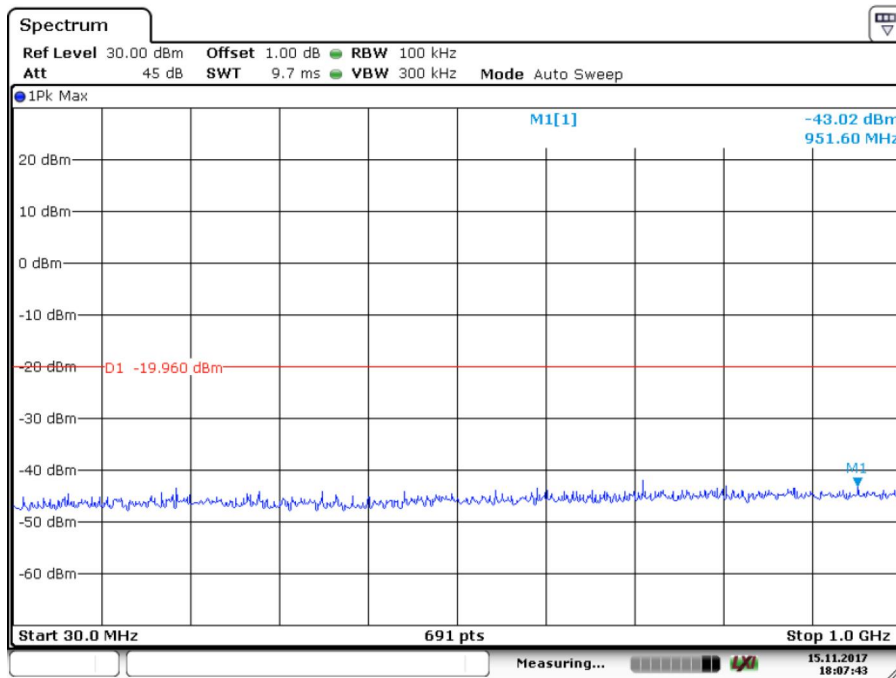


Date: 15.NOV.2017 18:06:17

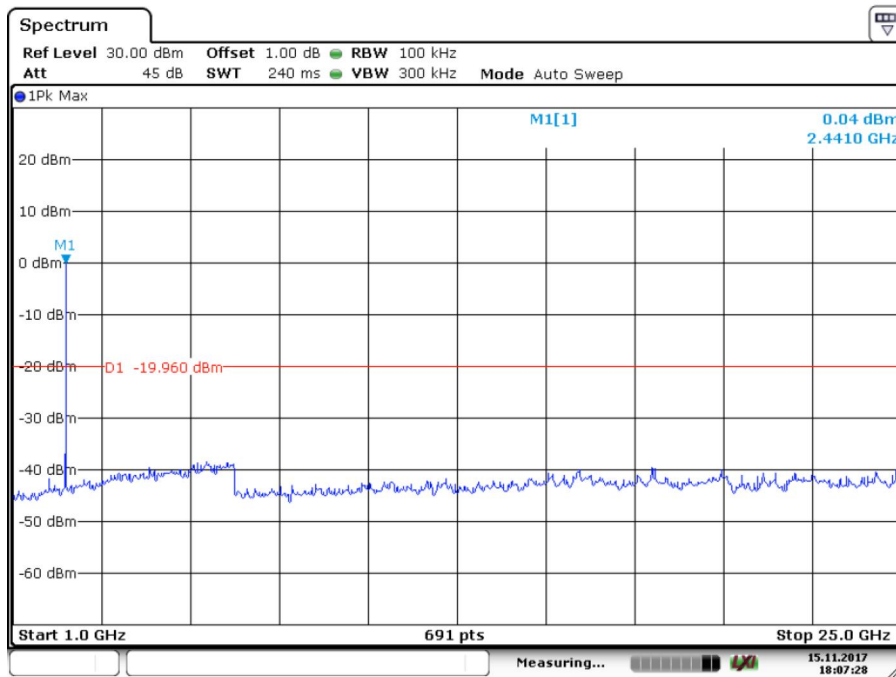


Date: 15.NOV.2017 18:05:56

# 2437MHz

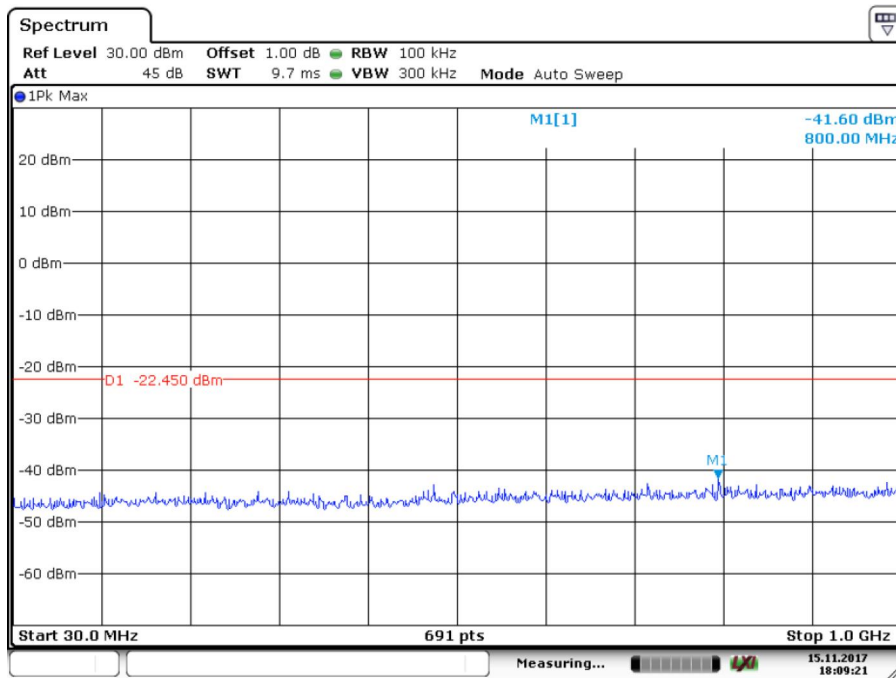


Date: 15.NOV.2017 18:07:43

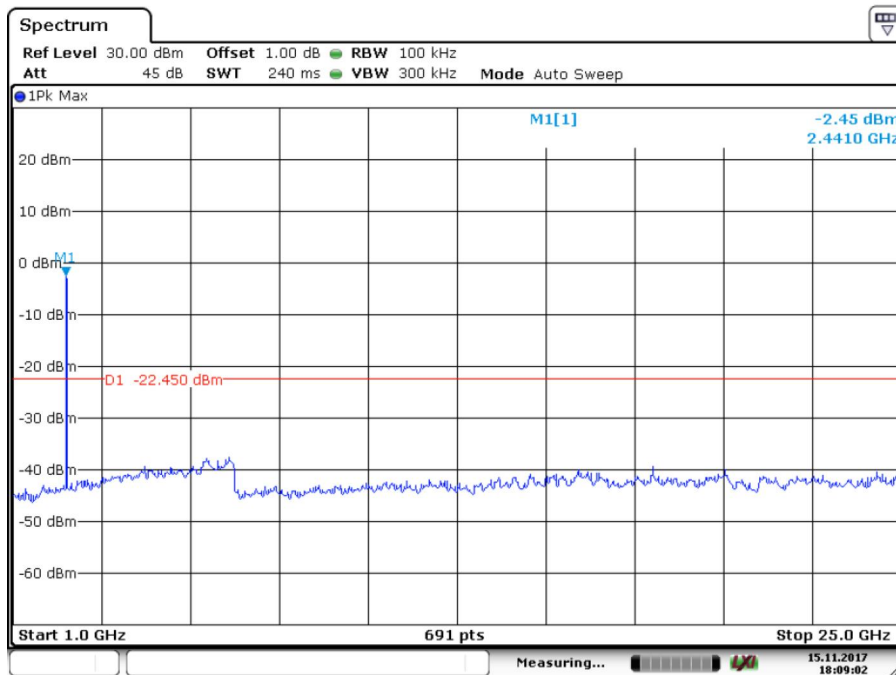


Date: 15.NOV.2017 18:07:29

# 2462MHz

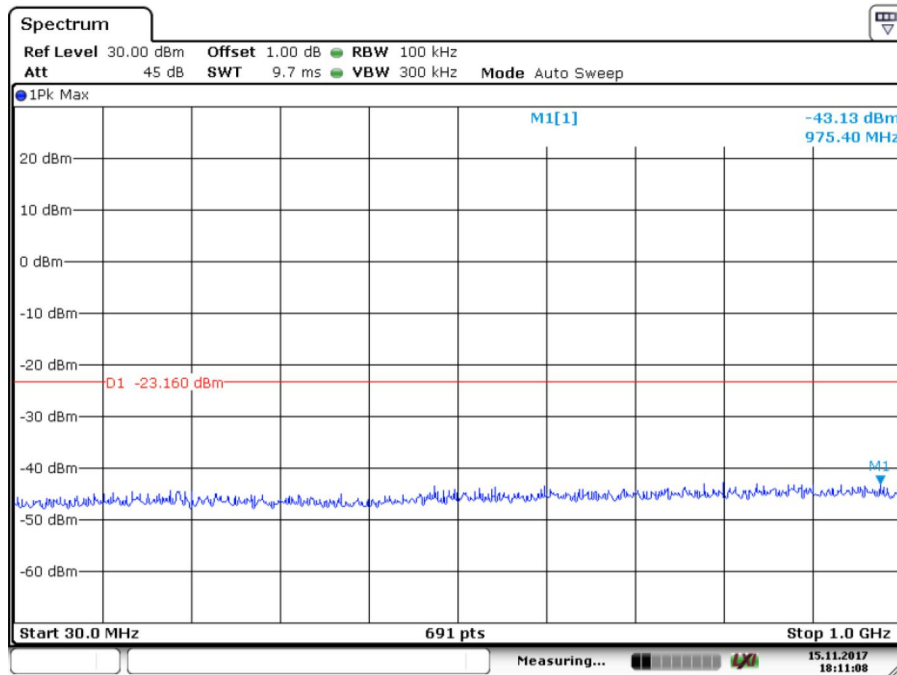


Date: 15.NOV.2017 18:09:21

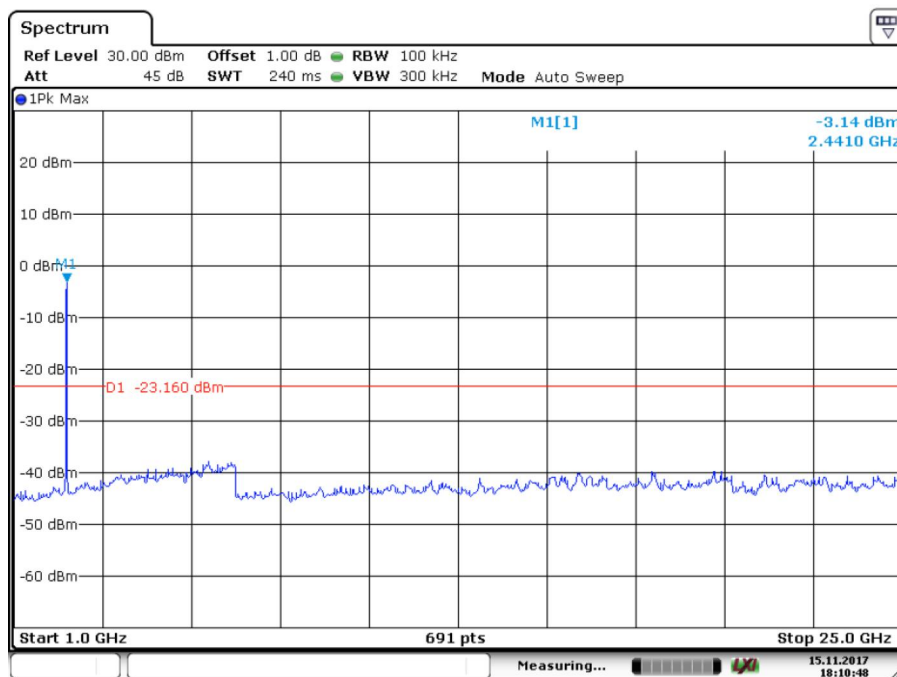


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## 802.11N(40) Modulation: 2422MHz



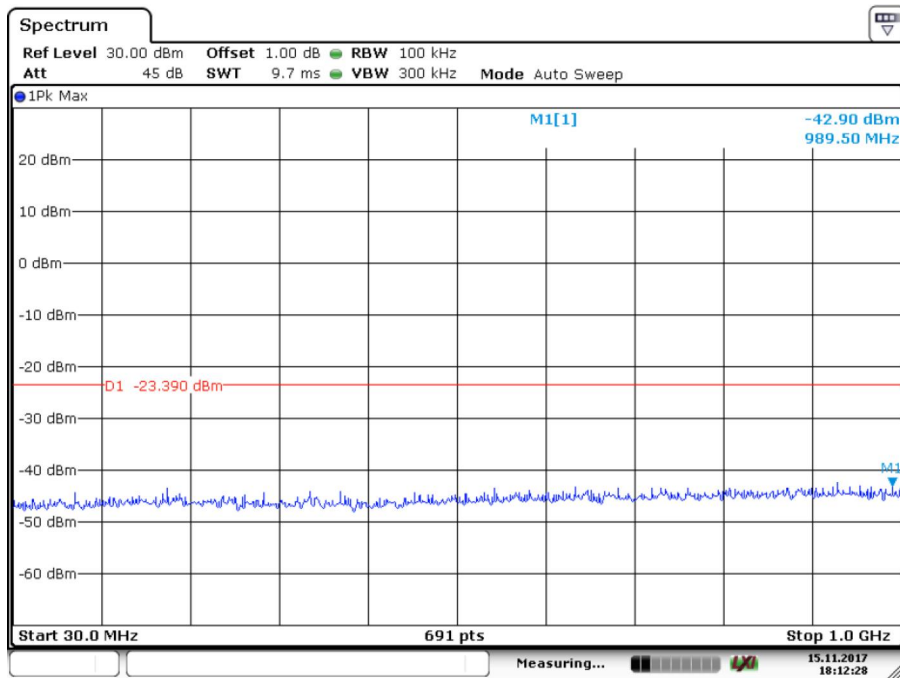
Date: 15.NOV.2017 18:11:08



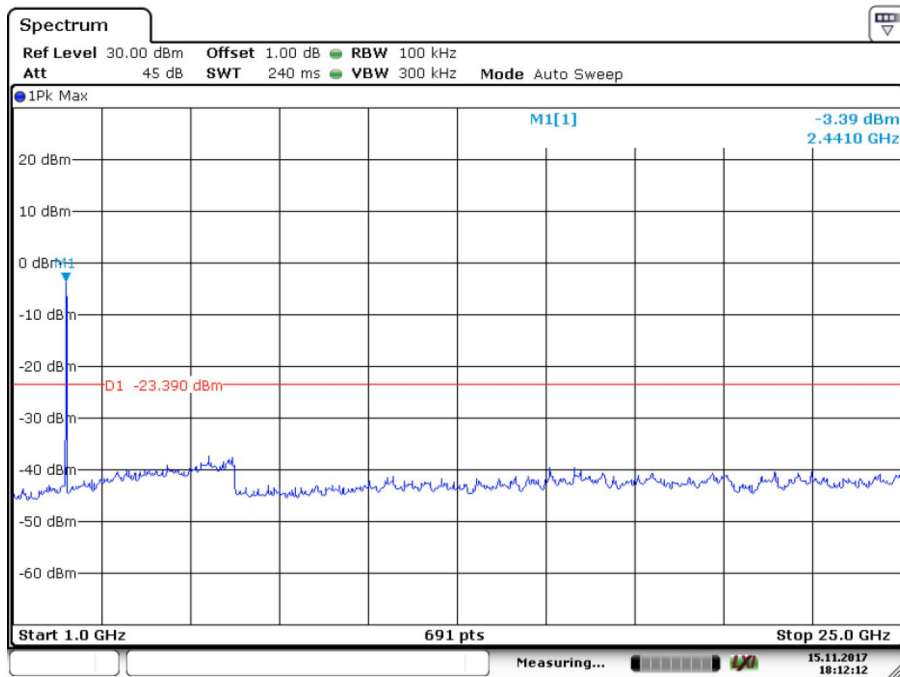
Date: 15.NOV.2017 18:10:48



# 2437MHz

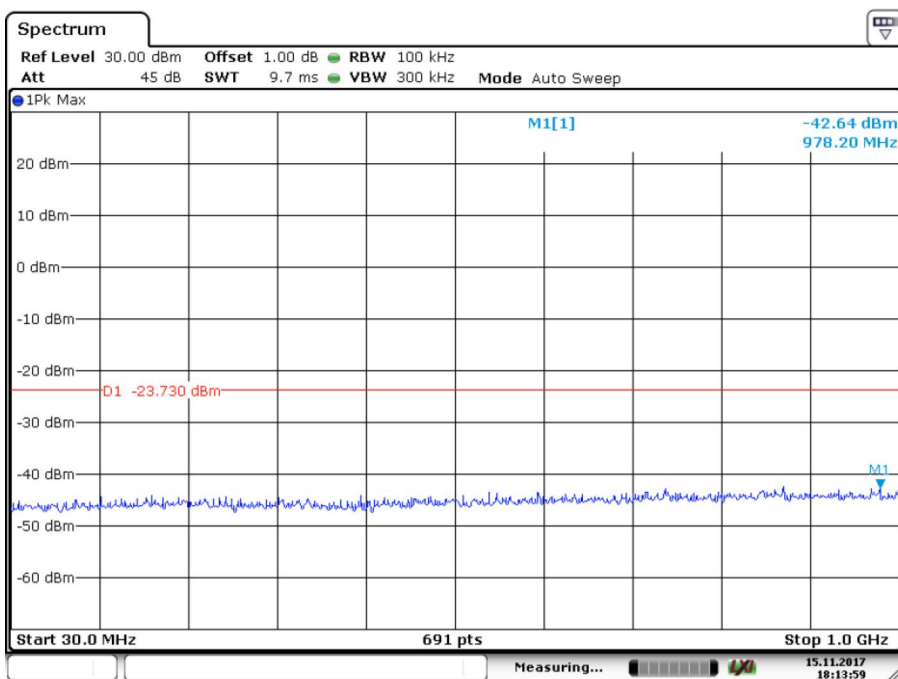


Date: 15.NOV.2017 18:12:28

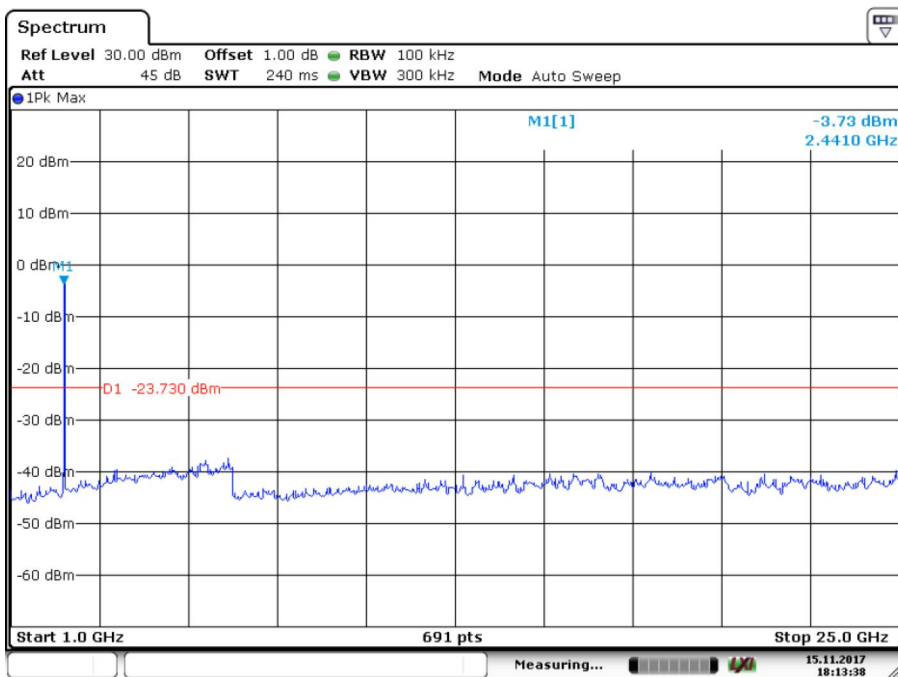


Date: 15.NOV.2017 18:12:12

# 2452MHz



Date: 15.NOV.2017 18:13:59



Date: 15.NOV.2017 18:13:39

## 9.6 Band edge testing

### Test Method

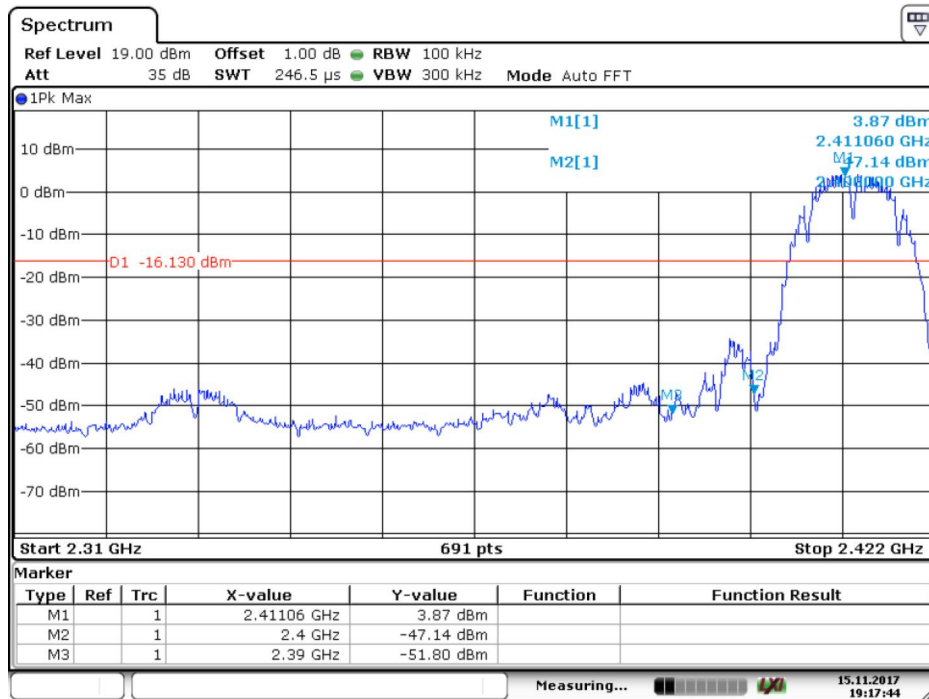
- 1 Use the following spectrum analyzer settings:  
Span = wide enough to capture the peak level of the in-band emission and all spurious  
RBW = 100 kHz, VBW  $\geq$  RBW, Sweep = auto, Detector function = peak, Trace = max hold
- 2 Allow the trace to stabilize, use the peak and delta measurement to record the result.
- 3 The level displayed must comply with the limit specified in this Section. .
- 4 Repeat the test at the hopping off and hopping on mode, submit all the plots.

### Limit:

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated device is operating, the RF power that is produced 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 that the transmitter demonstrates compliance with the peak conducted power limits.

# Band edge testing

## 802.11b Modulation Test Result

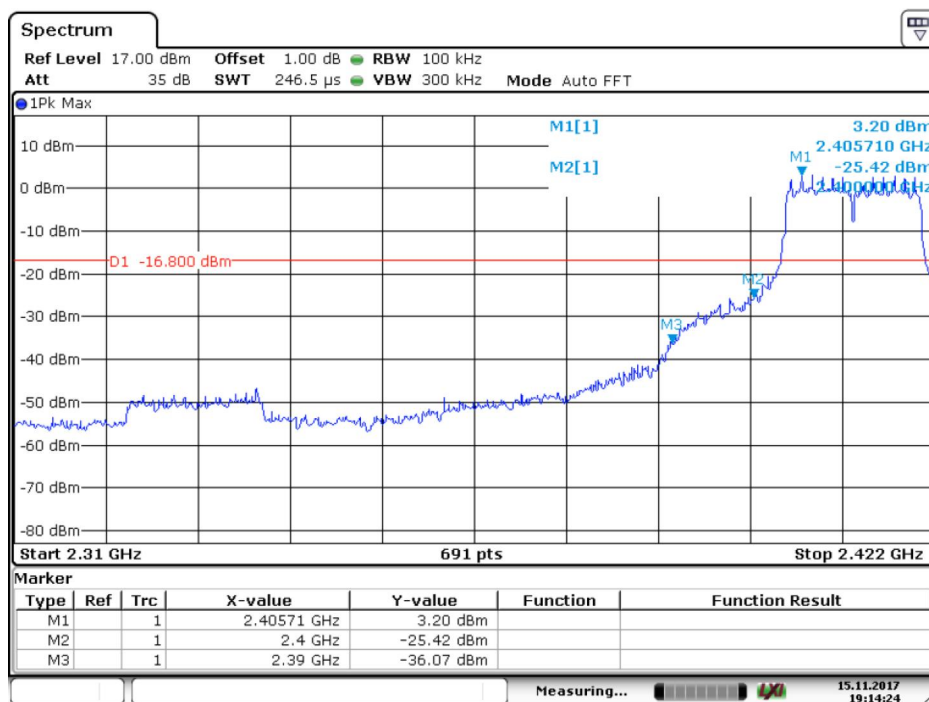


Date: 15.NOV.2017 19:17:44

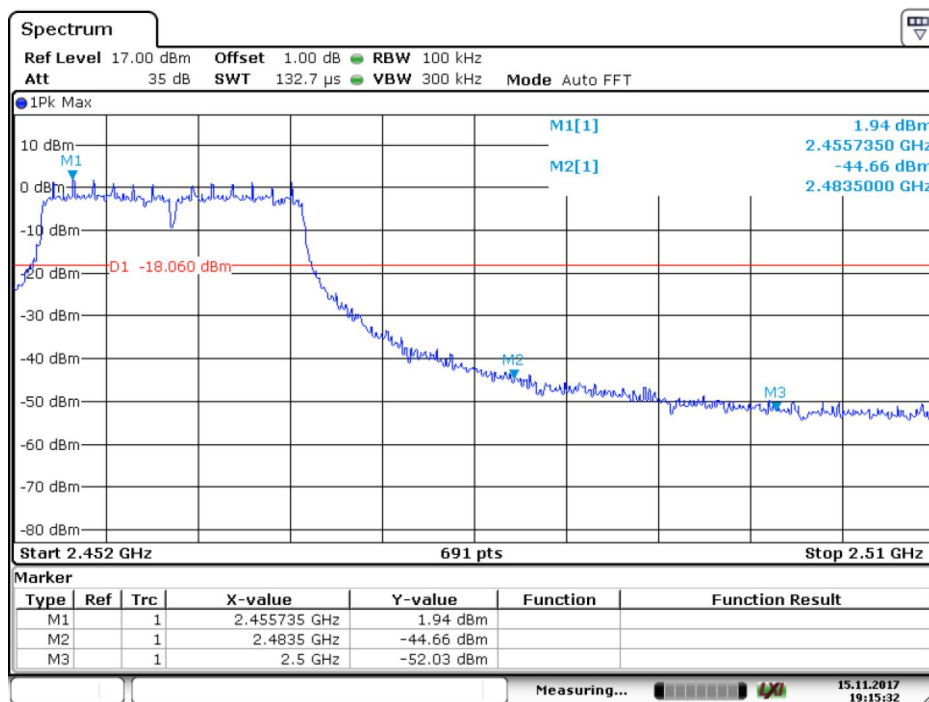


Date: 15.NOV.2017 19:16:33

### 802.11g Modulation Test Result

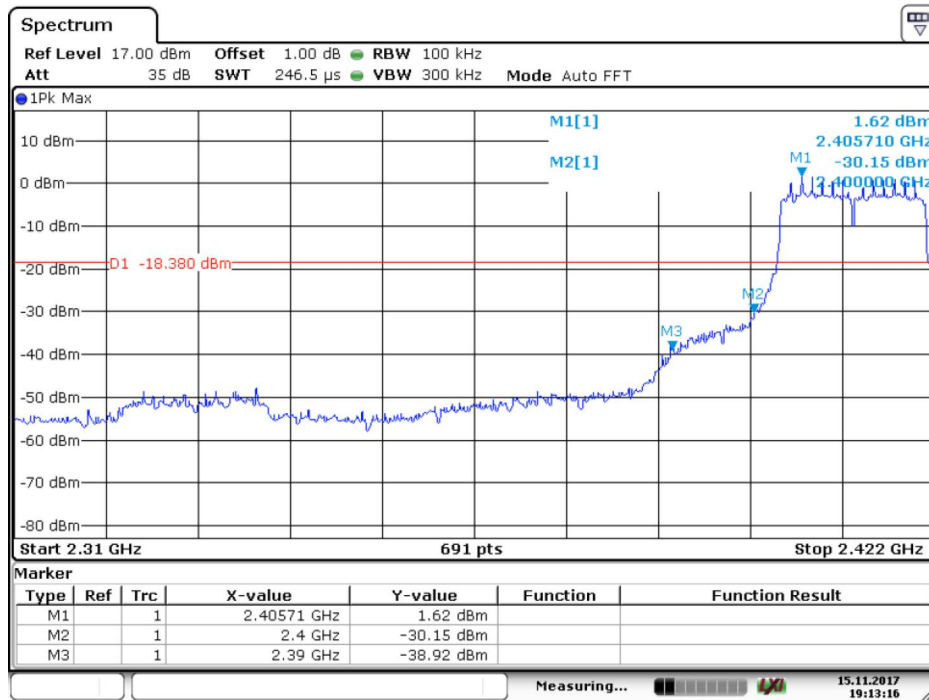


Date: 15.NOV.2017 19:14:23

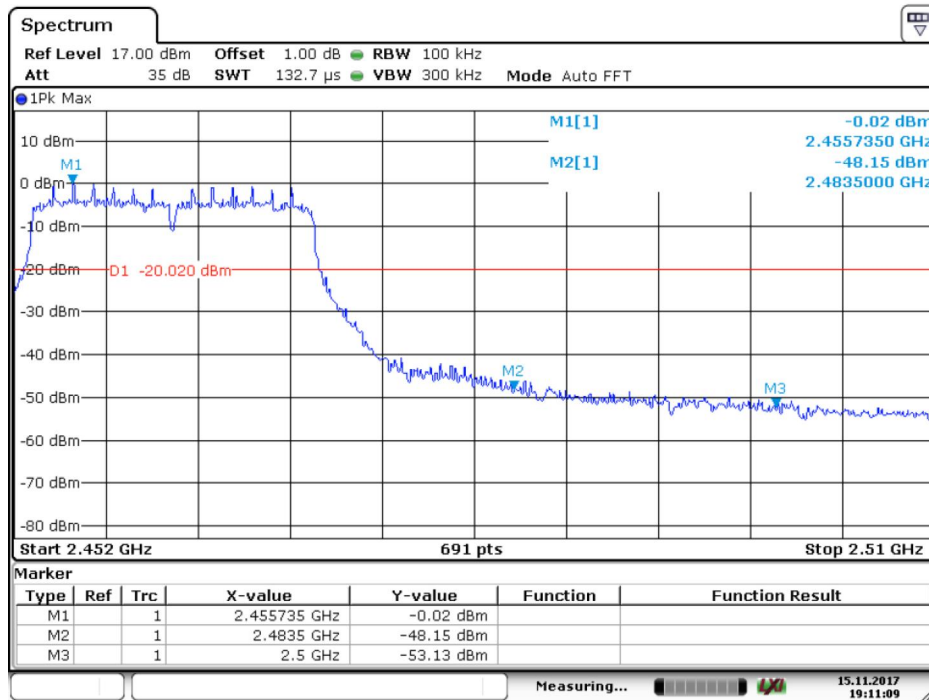


Date: 15.NOV.2017 19:15:32

### 802.11n(20) Modulation Test Result

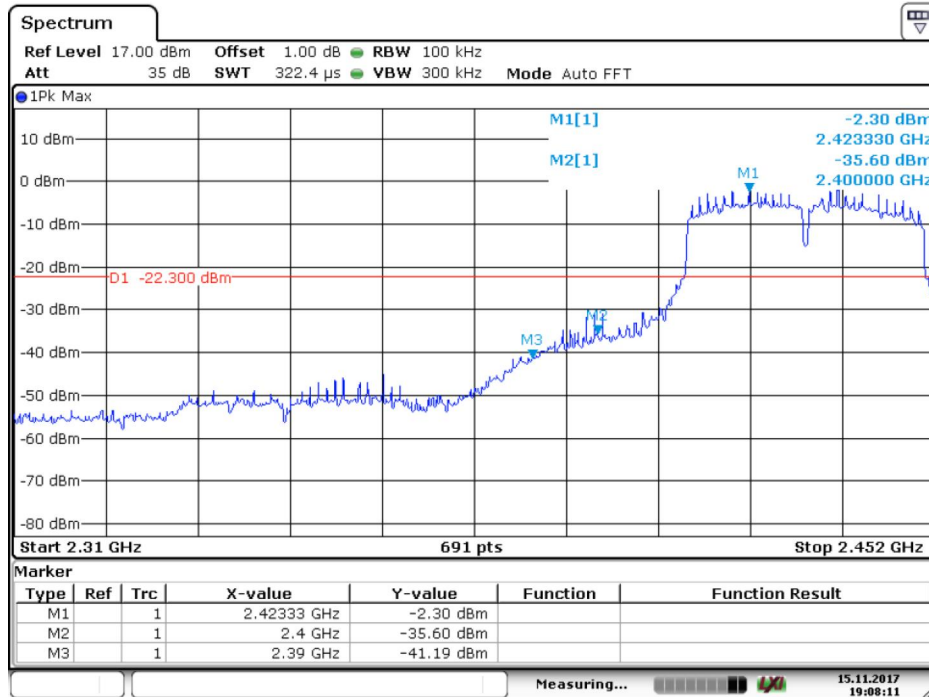


Date: 15.NOV.2017 19:13:16

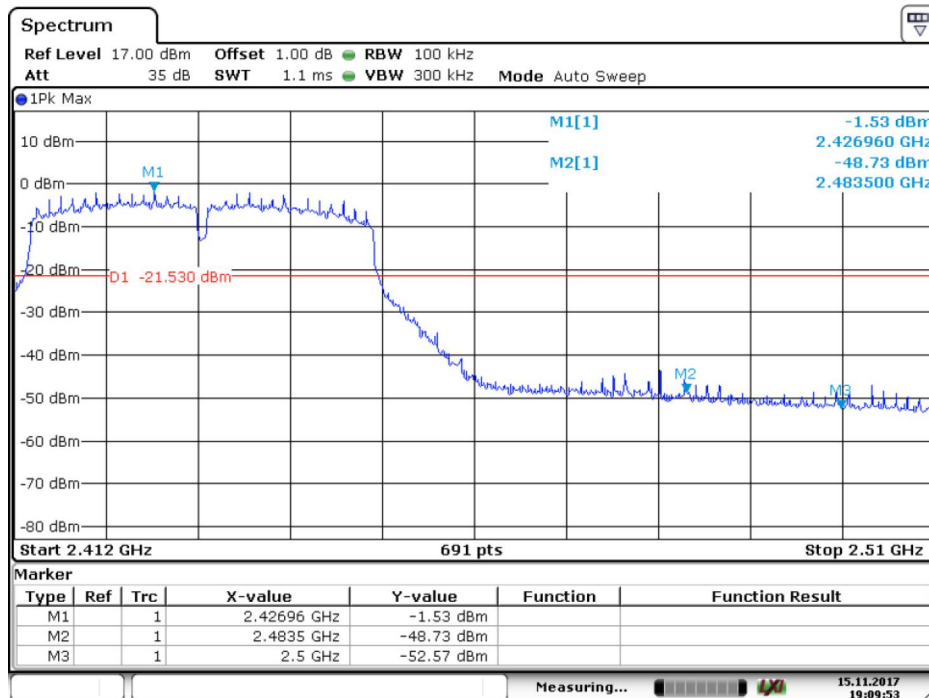


Date: 15.NOV.2017 19:11:09

### 802.11n(40) Modulation Test Result



Date: 15.NOV.2017 19:08:12



Date: 15.NOV.2017 19:09:53

## 9.7 Spurious radiated emissions for transmitter

### Test Method

- 1: The EUT was placed on a turn table which is 1.5m above ground plane for above 1GHz and 0.8m above ground for below 1GHz at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- 2: The EUT was set 3 meters away from the interference – receiving antenna, which was mounted on the top of a variable – height antenna tower.
- 3: The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- 4: For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- 5: Use the following spectrum analyzer settings According to C63.10:

For Above 1GHz

Span = wide enough to capture the peak level of the in-band emission and all spurious  
 RBW = 1MHz, VBW ≥ RBW for peak measurement and VBW = 10Hz for average measurement, Sweep = auto, Detector function = peak, Trace = max hold.

For Below 1GHz

Use the following spectrum analyzer settings:

Span = wide enough to capture the peak level of the in-band emission and all spurious  
 RBW = 100 KHz, VBW ≥ RBW for peak measurement, Sweep = auto, Detector function = peak, Trace = max hold.

### Note:

- 1: The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120 KHz for Quasi-peak detection (QP) at frequency below 1GHz.
- 2: The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 3MHz for peak detection (PK) at frequency above 1GHz.
- 3: The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 3MHz for RMS Average ((duty cycle < 98%) for Average detection (AV) at frequency above 1GHz, then the measurement results was added to a correction factor ( $20\log(1/\text{duty cycle})$ ).
- 4: The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 10Hz (duty cycle > 98%) for Average detection (AV) at frequency above 1GHz.

### Limit

The radio emission outside the operating frequency band 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. Radiated emissions which fall in the restricted bands, as defined in section 15.205, must comply with the radiated emission limits specified in section 15.209.

Frequency MHz	Field Strength uV/m	Field Strength dBuV/m	Detector
30-88	100	40	QP
88-216	150	43.5	QP
216-960	200	46	QP
960-1000	500	54	QP
Above 1000	500	54	AV
Above 1000	5000	74	PK



## Spurious radiated emissions for transmitter

According to C63.10, if the peak (or quasi-peak) measured value complies with the average limit, it is unnecessary to perform an average measurement, so AV emission value did not show in below table if the peak value complies with average limit.

Pretest all modulation type, report the data of the worst case.

**Transmitting spurious emission test result as below:**

### Emission below 1GHz

Frequency band	Frequency	Emission Level	Polarization	Limit	Detector	Margin	Result
	MHz	dBuV/m		dBuV/m		dBuV/m	
30-1000MHz	36.197222	14.67	H	40.00	QP	3.64	Pass
	44.280556	15.32	H	40.00	QP	9.39	Pass
	61.040000	18.43	H	40.00	QP	10.00	Pass
	270.075000	19.80	H	43.50	QP	8.59	Pass
	439.124444	21.36	H	46.00	QP	6.21	Pass
	877.241111	31.88	H	46.00	QP	11.92	Pass
	38.298889	22.03	V	40.00	QP	0.56	Pass
	59.800556	16.15	V	40.00	QP	0.09	Pass
	75.536111	21.81	V	40.00	QP	5.48	Pass
	85.236111	19.23	V	43.50	QP	9.04	Pass
	437.992778	19.21	V	46.00	QP	2.86	Pass
	872.983889	35.84	V	46.00	QP	6.75	Pass

### Emission between 1G-25GHz

802.11b Modulation:

#### 2412MHz Test Result

Frequency (MHz)	MaxPeak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Pol	Corr. (dB)
1599.687500	38.24	74.00	35.76	H	-9.6
2335.562500	44.46	74.00	29.54	H	-6.2
2416.562500	46.06	74.00	27.94	H	-5.9
2707.750000	29.66	74.00	44.34	H	-4.1
4823.906250	46.10	74.00	27.90	H	2.6
7520.625000	39.11	74.00	34.89	H	6.5
12453.750000	42.51	74.00	31.49	H	12.7

Frequency (MHz)	MaxPeak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Pol	Corr. (dB)
1592.125000	35.24	74.00	38.76	V	-9.8
2330.000000	44.19	74.00	29.81	V	-6.2
2409.062500	46.19	74.00	27.81	V	-5.9
2655.250000	29.26	74.00	44.74	V	-4.7
4823.906250	49.38	74.00	24.62	V	2.7
7235.156250	40.25	74.00	33.75	V	5.3
11918.90625	43.80	74.00	30.20	V	12.0

#### 2437MHz Test Result

Frequency (MHz)	MaxPeak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Pol	Corr. (dB)
1599.625000	32.85	74.00	41.15	H	-9.6
2356.312500	43.57	74.00	30.43	H	-6.1
2435.062500	46.21	74.00	27.79	H	-5.9
2514.062500	37.29	74.00	36.71	H	-5.4
4874.062500	44.89	74.00	29.11	H	2.5
8753.437500	40.65	74.00	33.35	H	8.8
14996.25000	47.78	74.00	26.22	H	18.7

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Pol	Corr. (dB)
1592.187500	35.68	74.00	38.32	V	-9.8
2354.500000	42.87	74.00	31.13	V	-6.1
2434.062500	46.00	74.00	28.00	V	-5.9
2521.000000	38.05	74.00	35.95	V	-5.4
4874.062500	46.73	74.00	27.27	V	2.6
7360.312500	38.67	74.00	35.33	V	6.2
15049.687500	47.30	74.00	26.70	V	18.6

## 2462MHz Test Result

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Pol	Corr. (dB)
1599.875000	36.72	74.00	37.28	H	-9.6
2378.500000	41.46	74.00	32.54	H	-6.1
2462.625000	49.08	74.00	24.92	H	-5.7
2510.000000	43.88	74.00	30.12	H	-5.4
4923.750000	46.16	74.00	27.84	H	2.6
7389.843750	39.76	74.00	34.24	H	6.1
14988.750000	46.81	74.00	27.19	H	18.6

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Pol	Corr. (dB)
1599.187500	39.84	74.00	34.16	V	-9.7
2378.562500	40.86	74.00	33.14	V	-6.1
2463.062500	50.41	74.00	23.59	V	-5.7
2508.812500	41.97	74.00	32.03	V	-5.4
4923.750000	47.86	74.00	26.14	V	2.7
7387.500000	44.07	74.00	29.93	V	6.3
15041.250000	48.43	74.00	25.57	V	18.6

## 10 Test Equipment List

### List of Test Instruments

	DESCRIPTION	MANUFACTURER	MODEL NO.	SERIAL NO.	CAL. DUE DATE
CE	EMI Test Receiver	Rohde & Schwarz	ESR 3	101782	2018-7-14
	LISN	Rohde & Schwarz	ENV4200	100249	2018-7-14
	LISN	Rohde & Schwarz	ENV432	101318	2018-7-14
	LISN	Rohde & Schwarz	ENV216	100326	2018-7-14
	ISN	Rohde & Schwarz	ENY81	100177	2018-7-14
	ISN	Rohde & Schwarz	ENY81-CA6	101664	2018-7-14
	High Voltage Probe	Rohde & Schwarz	TK9420(VT9420)	9420-584	2018-7-14
	RF Current Probe	Rohde & Schwarz	EZ-17	100816	2018-7-14
	Attenuator	Shanghai Huaxiang	TS2-26-3	080928189	2018-7-7
	Test software	Rohde & Schwarz	EMC32	Version9.15.00	N/A
C	Signal Generator	Rohde & Schwarz	SMB100A	108272	2018-7-7
	Signal Analyzer	Rohde & Schwarz	FSV40	101030	2018-7-7
	Vector Signal Generator	Rohde & Schwarz	SMU 200A	105324	2018-7-7
	RF Switch Module	Rohde & Schwarz	OSP120/OSP-B157	101226/100851	2018-7-7
RE	EMI Test Receiver	Rohde & Schwarz	ESR 26	101269	2018-7-14
	Trilog Super Broadband Test Antenna	Schwarzbeck	VULB 9163	707	2018-7-14
	Horn Antenna	Rohde & Schwarz	HF907	102294	2018-7-14
	Pre-amplifier	Rohde & Schwarz	SCU 18	102230	2018-7-14
	Signal Generator	Rohde & Schwarz	SMY01	839369/005	2018-7-7
	Attenuator	Agilent	8491A	MY39264334	2018-7-7
	3m Semi-anechoic chamber	TDK	9X6X6	----	2020-7-14
	Test software	Rohde & Schwarz	EMC32	Version 9.15.00	N/A

#### C - Conducted RF tests

- Conducted peak output power
- 6dB bandwidth
- 20dB bandwidth and 99% Occupied Bandwidth
- Carrier frequency separation
- Number of hopping frequencies
- Dwell Time
- Power spectral density
- Spurious RF conducted emissions
- Band edge

## 11 System Measurement Uncertainty

For a 95% confidence level, the measurement expanded uncertainties for defined systems, in accordance with the recommendations of ISO 17025 were:

System Measurement Uncertainty	
Test Items	Extended Uncertainty
Uncertainty for Radiated Emission in 3m chamber 30MHz-1000MHz	Horizontal: 4.83dB; Vertical: 4.91dB;
Uncertainty for Radiated Emission in 3m chamber 1000MHz-25000MHz	Horizontal: 4.89dB; Vertical: 4.88dB;
Uncertainty for Conducted Emission 150KHz-30MHz	U=3.5dB(k=2)