

FCC TEST REPORT

For

Wearable Data Terminal

Model Number: WD100

FCC ID: HLEWD100BTNL

Report Number : WT188005267

Test Laboratory : Shenzhen Academy of Metrology and Quality Inspection

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TEST REPORT DECLARATION

Applicant : unitech Electronics Co., LTD.
Address : 5F., No.136, Ln. 235, Baoqiao Rd., Xindian Dist., New Taipei City, Taiwan
Manufacturer : unitech Electronics Co., LTD.
Address : 5F., No.136, Ln. 235, Baoqiao Rd., Xindian Dist., New Taipei City, Taiwan
EUT Description : Wearable Data Terminal
Model No : WD100
Trade mark : unitech
Serial Number : /
FCC ID : HLEWD100BTNL

Test Standards:

FCC Part 15 15.207, 15.209, 15.247(2017)

The EUT described above is tested by Shenzhen Academy of Metrology and Quality Inspection EMC Laboratory to determine the maximum emissions from the EUT. Shenzhen Academy of Metrology and Quality Inspection EMC Laboratory is assumed full responsibility for the accuracy of the test results. The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.10 (2013) and the energy emitted by the sample EUT tested as described in this report is in compliance with FCC Rules Part 15.207, 15.209, 15.247 .

The test report is valid for above tested sample only and shall not be reproduced in part without written approval of the laboratory.

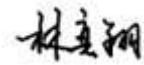
Project
Engineer:



(Chen Silin 陈司林)

Date: Nov.14, 2018

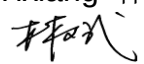
Checked by:



(Lin Yixiang 林奕翔)

Date: Nov.14, 2018

Approved by:



(Lin Bin 林斌)

Date: Nov.14, 2018

TABLE OF CONTENTS

TEST REPORT DECLARATION.....	2
1. TEST RESULTS SUMMARY.....	5
2. GENERAL INFORMATION.....	6
2.1. Report information.....	6
2.2. Laboratory Accreditation and Relationship to Customer	6
2.3. Measurement Uncertainty	7
3. PRODUCT DESCRIPTION.....	8
3.1. EUT Description	8
3.2. Related Submittal(s) / Grant (s)	8
3.3. Block Diagram of EUT Configuration	9
3.4. Operating Condition of EUT	9
3.5. Directional Antenna Gain	9
3.6. Support Equipment List.....	10
3.7. Test Conditions.....	10
3.8. Special Accessories.....	10
3.9. Equipment Modifications	10
4. TEST EQUIPMENT USED.....	11
5. DUTY CYCLE	12
5.1. LIMITS OF DUTY CYCLE.....	12
5.2. TEST PROCEDURE.....	12
5.3. TEST SETUP	12
5.4. TEST DATA.....	12
6. 6DB BANDWIDTH MEASUREMENT	15
6.1. LIMITS OF 6dB BANDWIDTH MEASUREMENT	15
6.2. TEST PROCEDURE.....	15
6.3. TEST SETUP	15
7. MAXIMUM CONDUCTED OUTPUT POWER MEASUREMENT	21
7.1. LIMITS OF Maximum Conducted Output Power Measurement.....	21
7.2. TEST PROCEDURE.....	21
7.3. TEST SETUP	21
7.4. TEST DATA.....	21

8.	MAXIMUM POWER SPECTRAL DENSITY LEVEL MEASUREMENT.....	27
8.1.	LIMITS OF Maximum Power Spectral Density Level Measurement	27
8.2.	TEST PROCEDURE.....	27
8.3.	TEST DATA.....	27
9.	CONDUCTED BANDEDGE AND SPURIOUS MEASUREMENT	33
9.1.	LIMITS OF Conducted Bandedge and Spurious Measurement.....	33
9.2.	TEST PROCEDURE.....	33
9.3.	TEST DATA.....	33
10.	RADIATED BANDEDGE AND SPURIOUS MEASUREMENT	50
10.1.	LIMITS OF Radiated Bandedge and Spurious Measurement.....	50
10.2.	TEST PROCEDURE.....	50
10.3.	TEST DATA.....	51
11.	CONDUCTED EMISSION TEST FOR AC POWER PORT MEASUREMENT	111
11.1.	Test Standard and Limit	111
11.2.	Test Procedure	111
11.3.	Test Arrangement	111
11.4.	Test Data	111
12.	ANTENNA REQUIREMENTS.....	115
12.1.	Applicable requirements.....	115
12.2.	Antenna Connector	115
12.3.	Antenna Gain	115

1. TEST RESULTS SUMMARY

Table 1 Test Results Summary

Test Items	FCC Rules	Test Results
6dB DTS bandwidth measurement	15.247 (a) (2)	Pass
Maximum Peak Conducted Power	15.247 (b) (3)	Pass
Maximum Power Spectral Density Level	15.247 (3)	Pass
Conducted Bandedge and Spurious	15.247 (d)	Pass
Radiated Bandedge and Spurious	15.247 (d) 15.209 15.205	Pass
Conducted emission test for AC power port	15.207	Pass
Antenna Requirment	15.203	Pass

Remark: "N/A" means "Not applicable."

2. GENERAL INFORMATION

2.1. Report information

This report is not a certificate of quality; it only applies to the sample of the specific product/equipment given at the time of its testing. The results are not used to indicate or imply that they are application to the similar items. In addition, such results must not be used to indicate or imply that SMQ approves recommends or endorses the manufacture, supplier or use of such product/equipment, or that SMQ in any way guarantees the later performance of the product/equipment.

The sample/s mentioned in this report is/are supplied by Applicant, SMQ therefore assumes no responsibility for the accuracy of information on the brand name, model number, origin of manufacture or any information supplied.

Additional copies of the report are available to the Applicant at an additional fee. No third part can obtain a copy of this report through SMQ, unless the applicant has authorized SMQ in writing to do so.

2.2. Laboratory Accreditation and Relationship to Customer

The testing report were performed by the Shenzhen Academy of Metrology and quality Inspection EMC Laboratory (Guangdong EMC compliance testing center), in their facilities located at NETC Building, No.4 Tongfa Rd., Xili, Nanshan, Shenzhen, China. At the time of testing, Laboratory is accredited by the following organizations:

China National Accreditation Service for Conformity Assessment (CNAS) accredits the Laboratory for conformance to FCC standards, EMC international standards and EN standards. The Registration Number is CNAS L0579.

The Laboratory is Accredited Testing Laboratory of FCC with Designation number CN1165 and Site registration number 582918.

The Laboratory is registered to perform emission tests with Industry Canada (IC), and the registration number is 11177A.

2.3.Measurement Uncertainty

Conducted Emission

9kHz~30MHz 3.5dB

Radiated Emission

30MHz~1000MHz 4.5dB

1GHz~26.5GHz 4.6dB

3. PRODUCT DESCRIPTION

3.1.EUT Description

Description : Wearable Data Terminal

Manufacturer : unitech Electronics Co., LTD.

Model Number : WD100

Operate Frequency : 2.412GHz~2.462GHz

Antenna Designation : PIFA Antenna -1.0dBi,

Remark: /

WLAN :

Table 2 Working Frequency List(802.11b, 802.11g,802.11n HT20)

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

Table 3 Working Frequency List(802.11n HT40)

Channel	Frequency	Channel	Frequency
3	2422MHz	8	2447MHz
4	2427MHz	9	2452MHz
5	2432MHz	---	---
6	2437MHz	---	---
7	2442MHz	---	---

3.2.Related Submittal(s) / Grant (s)

This submittal(s) (test report) is intended for FCC ID: **HLEWD100BTNL** filing to comply with Section 15.207, 15.209, 15.247 of the FCC Part 15, Subpart C Rules.

3.3. Block Diagram of EUT Configuration



Figure 1 EUT setup

3.4. Operating Condition of EUT

The Radiated spurious emission measurements were carried out in semi-anechoic chamber with 3-meter test range, and EUT is rotated on three test planes to find out the worst emission (X plane).

Worst-case mode and channel used for 30-1000 MHz radiated and power line conducted emissions was the mode and channel with the highest output power.

Worst-case data rates as provided by the client were:

802.11b mode: 1 Mbps

802.11g mode: 6 Mbps

802.11n HT20 mode: MCS0

802.11n HT40 mode: MCS0

802.11b and 802.11g operates in SISO mode. For SISO conducted measurements, the modes tested in this report will be considered as a worst case mode.

802.11n operate in SISO mode. For SISO conducted measurements, the modes tested in this report will be considered as a worst case mode.

3.5. Directional Antenna Gain

The EUT does NOT support a WIFI MIMO function.
Directional gain need NOT to be considered.

3.6.Support Equipment List

Table 4 Support Equipment List

Name	Model No	S/N	Manufacturer
Adaptor for EUT	ZAU-A050150A-02	--	ShenZhen Zhongling Electronics Technology CO.,Ltd
Battery for EUT	HBLU2	--	ICON ENERGY SYSTEM(SHEN ZHEN) CO.,LTD.
Notebook	T400	---	Lenovo

3.7.Test Conditions

Date of test : Sep.04, 2018 – Nov.04, 2018

Date of EUT Receive : Sep.04, 2018

Temperature: 21 ~ 25 °C

Relative Humidity: 39-52 %

3.8.Special Accessories

Not available for this EUT intended for grant.

3.9.Equipment Modifications

Not available for this EUT intended for grant.

4. TEST EQUIPMENT USED

Table 5 Test Equipment

No.	Equipment	Manufacturer	Model No.	Last Cal.	Cal. Interval
SB2603	EMI Test Receiver	R&S	ESCS30	Mar.05,2018	1 Year
SB2604	AMN	R&S	ESH3-Z5	Mar.05,2018	1 Year
SB9054/07	Broad-band Antenna	Schwarzbeck	VULB 9163	Jun.12,2018	1 Year
SB8501/09	EMI Test Receiver	Rohde & Schwarz	ESU40	Mar.20,2018	1 Year
SB8501/04	Bilog Antenna	Schwarzbeck	VULB9163	Jun.12,2018	1 Year
SB3435	Horn Antenna	Rohde & Schwarz	HF906	Jan.02, 2018	1 Year
SB8501/01	Horn Antenna	Rohde & Schwarz	HF907	Mar.08,2018	1 Year
SB8501/11	Horn Antenna	ETS-Lindgren	3160-09	Mar.21,2017	3 Years
SB3345	Loop Antenna	Schwarzbeck	FMZB1516	Mar.22, 2017	2 Years
SB8501/14	Preamplifier	Rohde & Schwarz	SCU-03	Mar.08,2018	1 Year
SB8501/16	Preamplifier	Rohde & Schwarz	SCU-26	Mar.05,2018	1 Year
SB8501/17	Preamplifier	Rohde & Schwarz	SCU-18	Mar.05,2018	1 Year
SB9054/07	Broad-band Antenna	Schwarzbeck	VULB 9163	Jun.12,2018	1 Year
SB11873/01	Power Sensor	Rohde & Schwarz	OSP120+OSP-B157	Feb.27, 2018	1 Year
SB9060	Signal Analyzer	Rohde & Schwarz	FSQ40	Feb.27,2018	1 Year
--	Radiated Test Software	Rohde & Schwarz	ES-K1 V1.71	--	--
--	Radiated Test Software	Rohde & Schwarz	EMC 32 8.50.0	--	--
--	AC Line Conducted Test Software	Rohde & Schwarz	ES-K1 V1.71	--	--

5. DUTY CYCLE

5.1.LIMITS OF DUTY CYCLE

None; for reporting purposes only

5.2.TEST PROCEDURE

1. Set span = Zero
2. RBW = 10MHz
3. VBW = 10MHz,
4. Detector = RMS

5.3.TEST SETUP

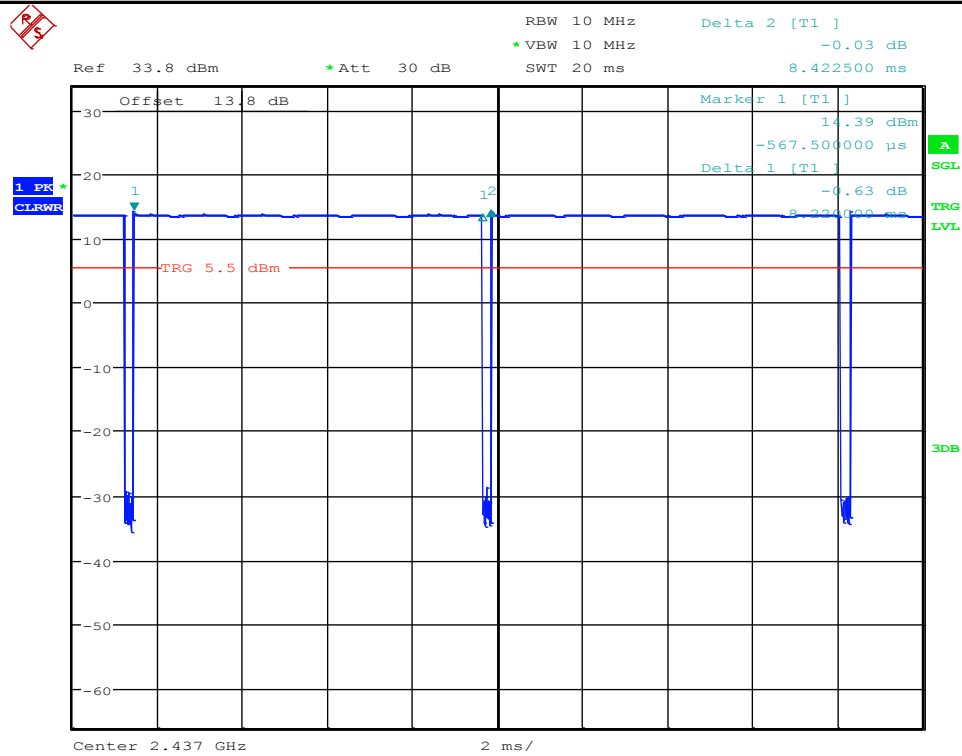


5.4.TEST DATA

Table 6 Duty Cycle Test Data

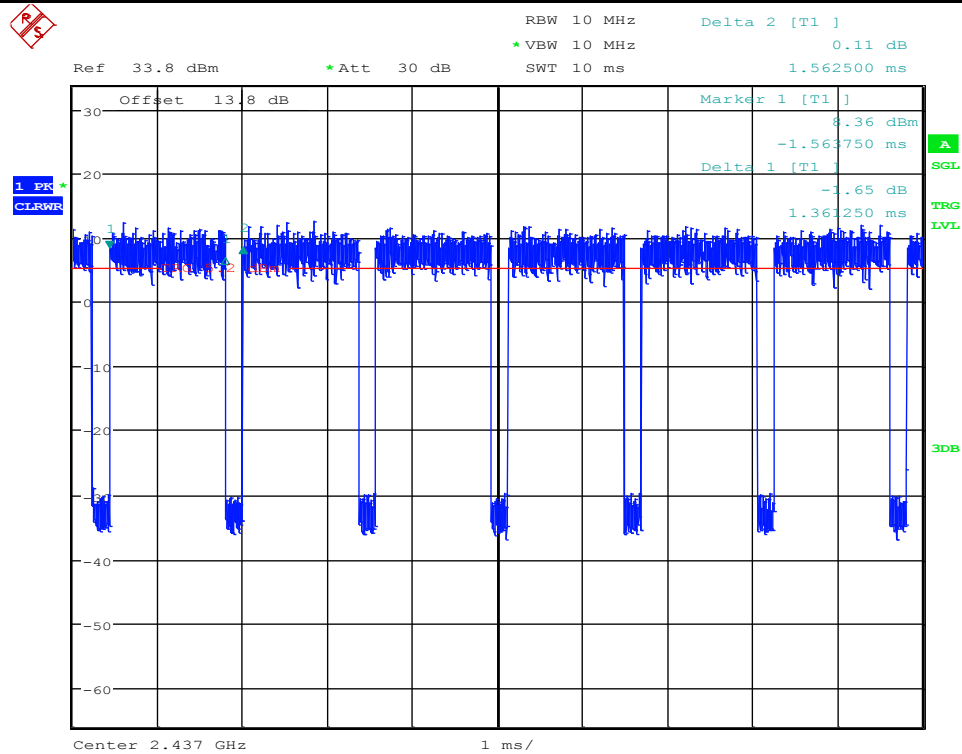
Test Mode	On Time (ms)	Duty Cycle(%)	Duty Factor	1/T Minimum VBW (kHz)
802.11b	8.22	97.6%	0.11	0.01
802.11g	1.36	87.12%	0.60	1
802.11n HT20	1.27	86.43%	0.63	1
802.11n HT40	0.63	75.75%	1.21	1

Duty Cycle_11b_2437



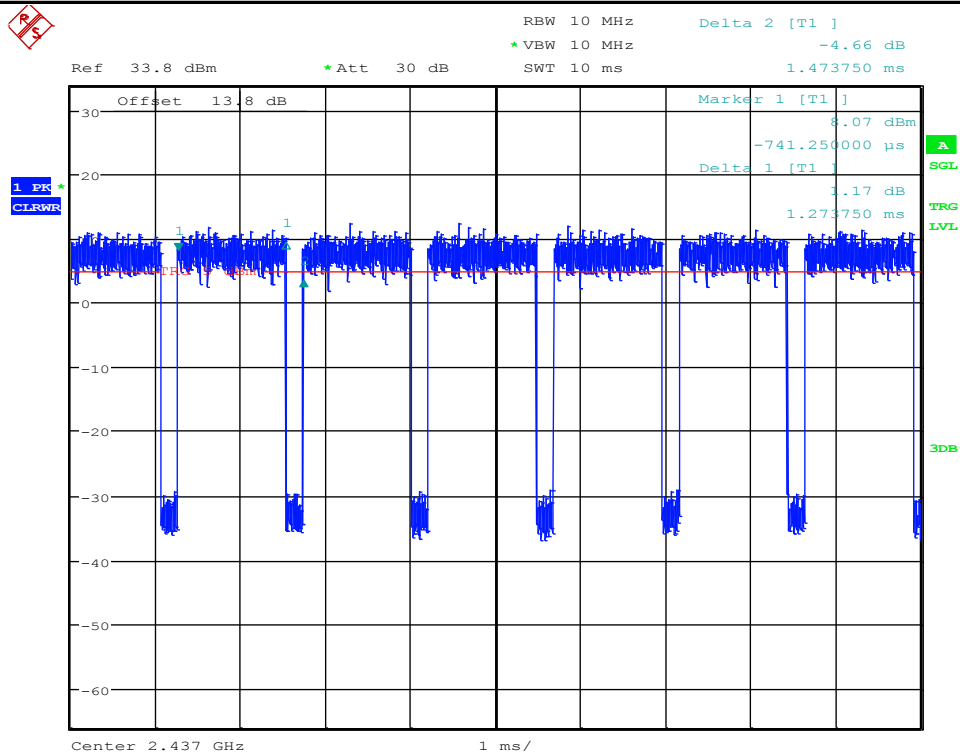
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Duty Cycle_11g_2437



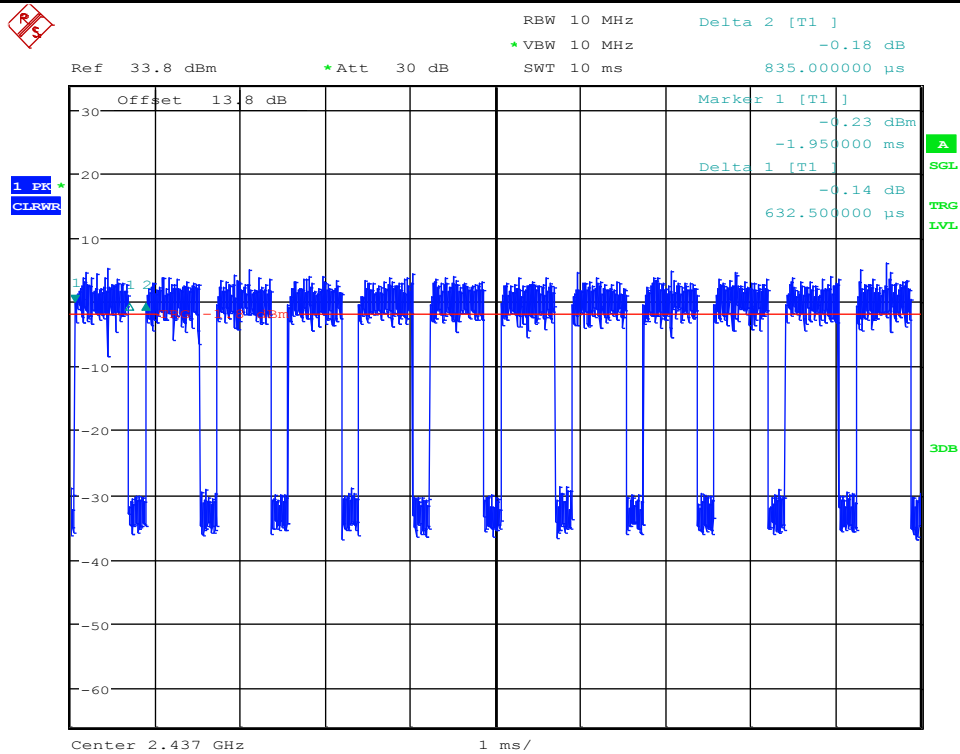
Date: 2.NOV.2018 11:03:01

Duty Cycle_11n HT20_2437



Date: 2.NOV.2018 11:23:01

Duty Cycle_11n HT40_2437



Date: 2.NOV.2018 13:53:42

6. 6DB BANDWIDTH MEASUREMENT

6.1.LIMITS OF 6dB BANDWIDTH MEASUREMENT

CFR 47 (FCC) part 15.247 (a) (2) , ANSI C63.10-2013 Clause 11.8

6.2.TEST PROCEDURE

The transmitter output was connected to the spectrum analyzer.

a) Set RBW = 100 kHz.

b) Set the VBW $\geq$ $[3 \times \text{RBW}]$.

c)Detector = Peak.

d)Trace mode = max hold.

e)Sweep = auto couple.

f)Allow the trace to stabilize.

g)Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

6.3.TEST SETUP

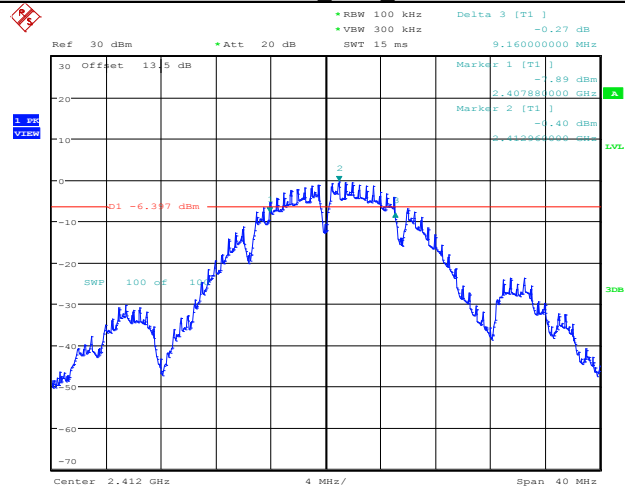


Test Data

Table 7 6dB Bandwidth Test Data

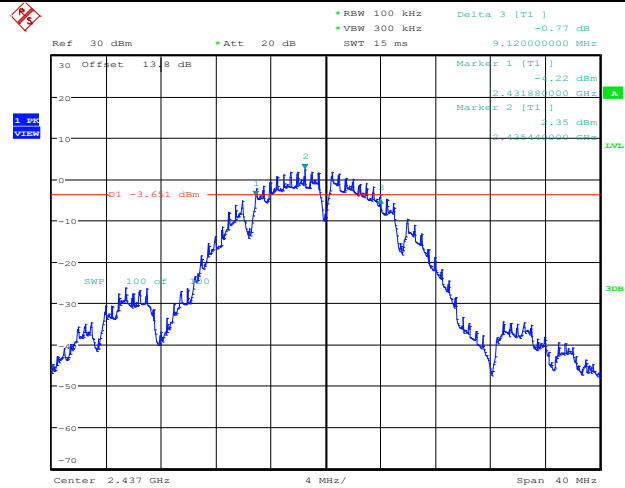
Mode	Channel	6dB Bandwidth [MHz]	Verdict
8.02.11b	LCH	9.160	PASS
8.02.11b	MCH	9.120	PASS
8.02.11b	HCH	8.120	PASS
8.02.11g	LCH	15.800	PASS
8.02.11g	MCH	15.880	PASS
8.02.11g	HCH	15.760	PASS
8.02.11n HT20	LCH	16.400	PASS
8.02.11n HT20	MCH	16.480	PASS
8.02.11n HT20	HCH	16.360	PASS
8.02.11n HT40	LCH	18.960	PASS
8.02.11n HT40	MCH	15.120	PASS
8.02.11n HT40	HCH	35.520	PASS

11B Ant1_2412



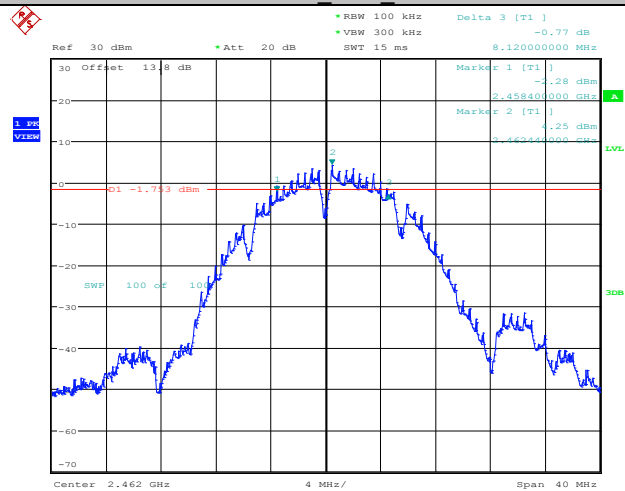
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11B Ant1_2437



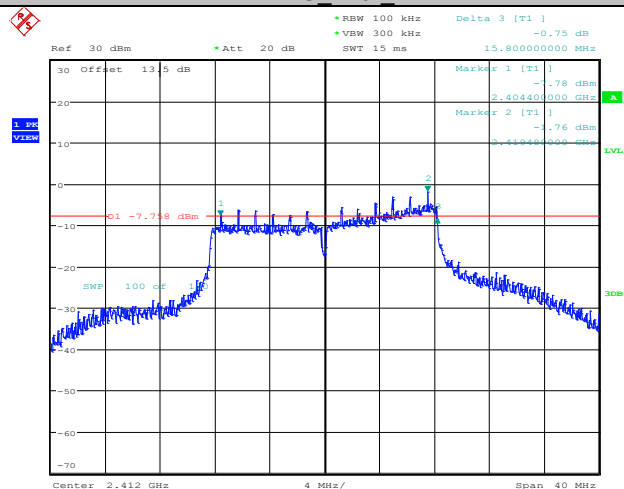
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11B Ant1_2462



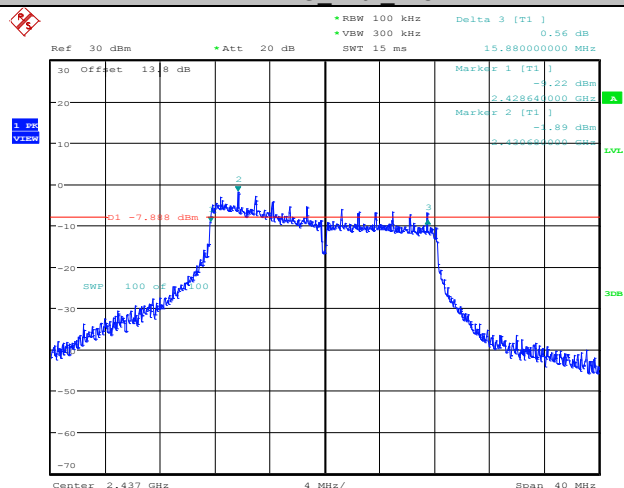
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11G_Ant1_2412



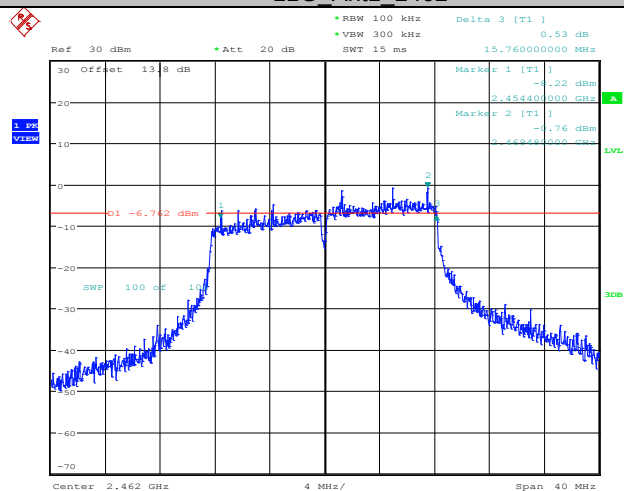
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11G_Ant1_2437



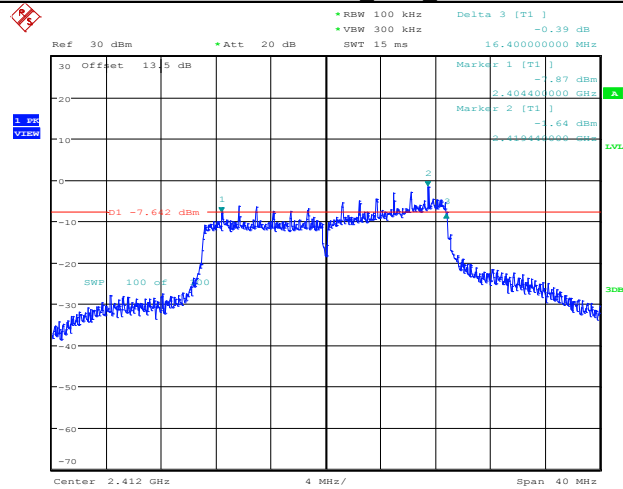
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11G_Ant1_2462



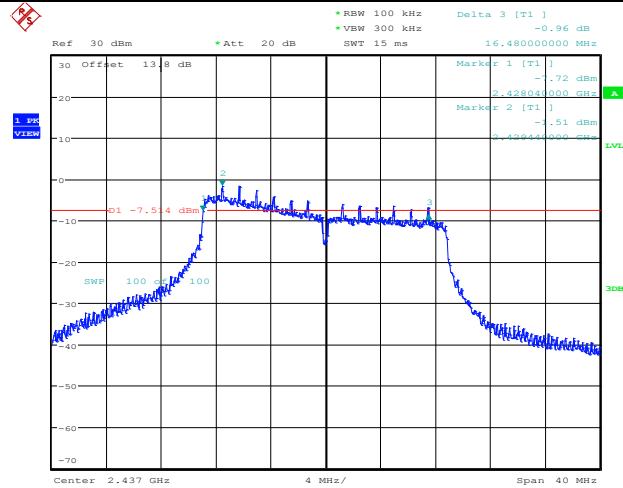
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11N20SISO_Ant1_2412



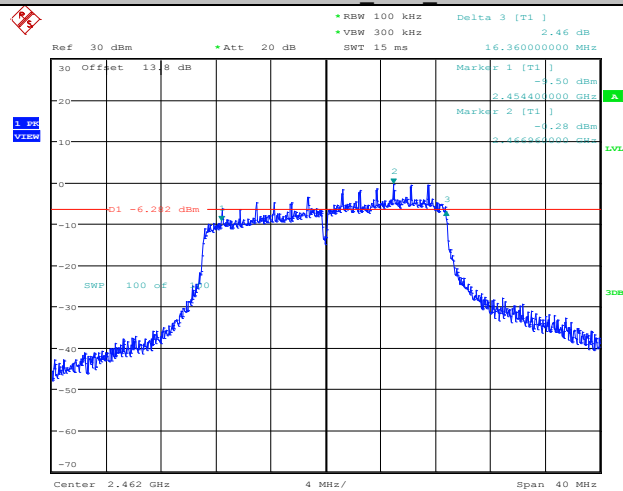
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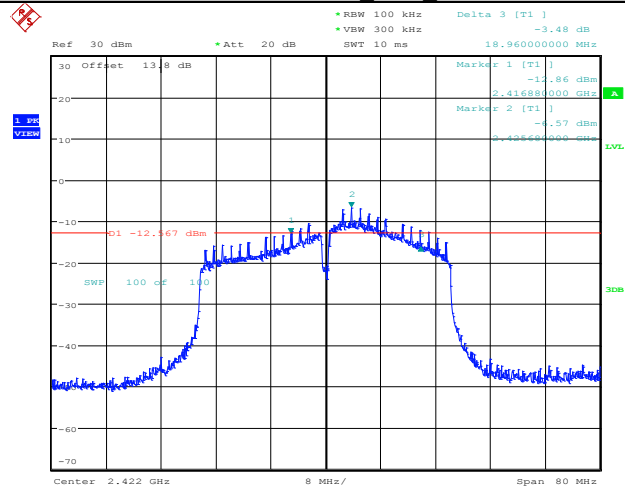
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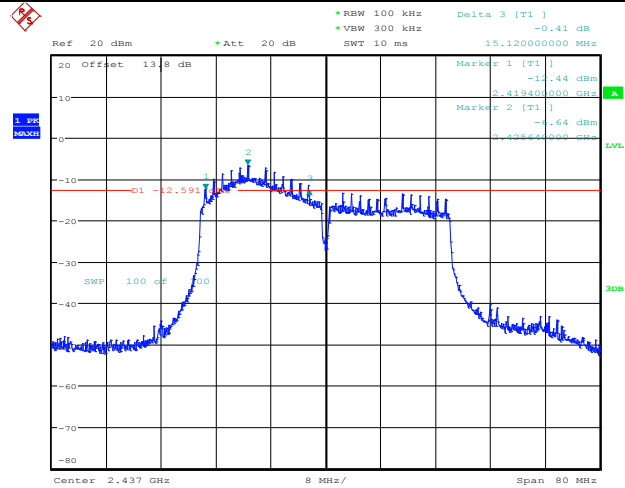
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11N40SISO_Ant1_2422



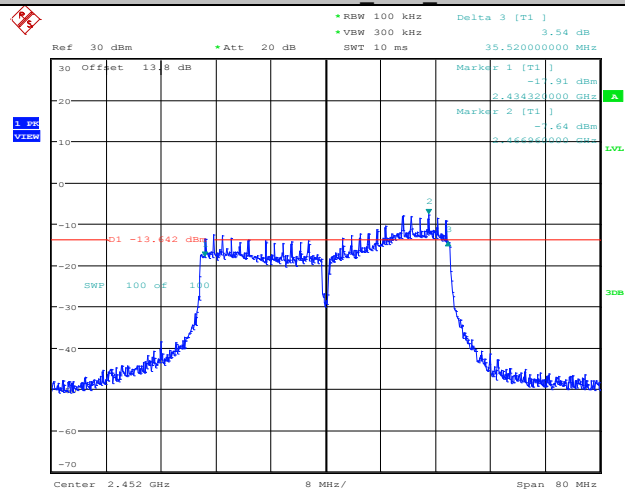
Date: 2.NOV.2018 13:47:05

11N40SISO_Ant1_2437



Date: 2.NOV.2018 14:16:27

11N40SISO_Ant1_2452



Date: 2.NOV.2018 14:07:45

7. MAXIMUM CONDUCTED OUTPUT POWER MEASUREMENT

7.1.LIMITS OF Maximum Conducted Output Power Measurement

CFR 47 (FCC) part 15.247 (b) (3), ANSI C63.10-2013 Clause 11.9

7.2.TEST PROCEDURE

The following procedure can be used when the maximum available RBW of the instrument is less than the

DTS bandwidth:

- a) Set the RBW = 1 MHz.
- b) Set the VBW $\geq [3 \times \text{RBW}]$.
- c) Set the span $\geq [1.5 \times \text{DTS bandwidth}]$.
- d) Detector = peak.
- e) Sweep time = auto couple.
- f) Trace mode = max hold.
- g) Allow trace to fully stabilize.
- h) Use the instrument's band/channel power measurement function with the band limits set equal to the DTS bandwidth edges (for some instruments, this may require a manual override to select the peak detector). If the instrument does not have a band power function, then sum the spectrum levels (in linear power units) at intervals equal to the RBW extending across the DTS channel bandwidth.

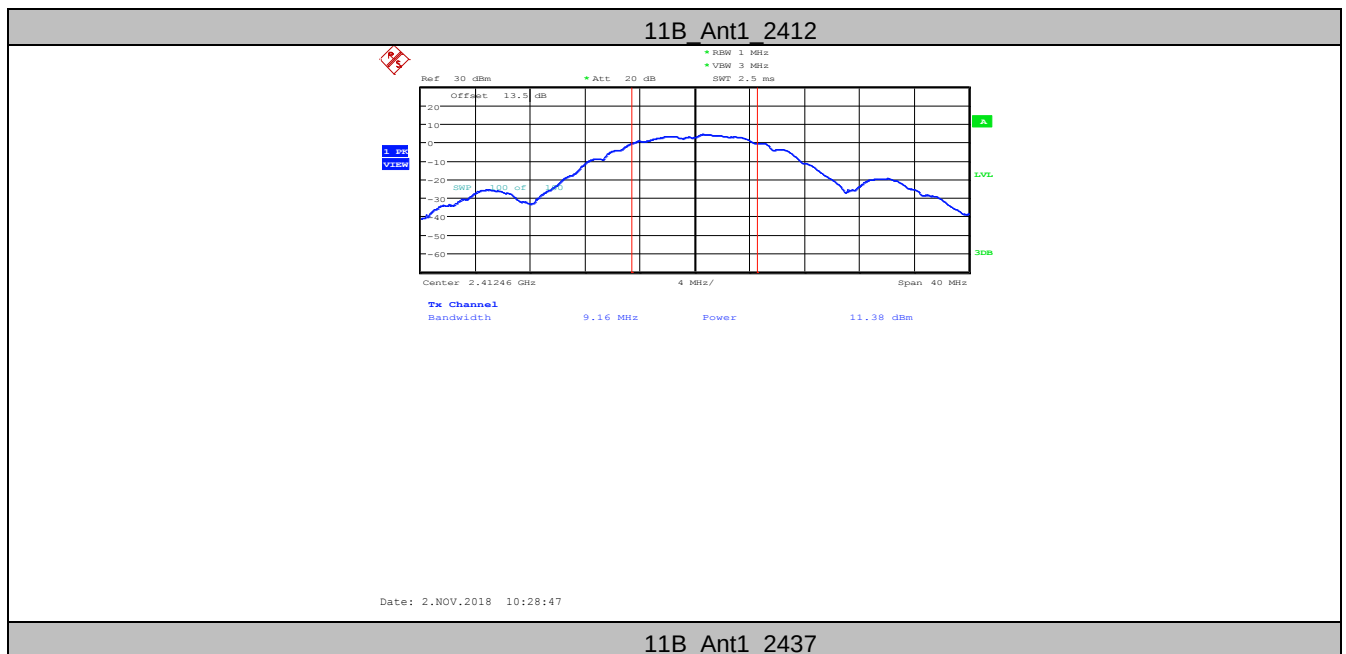
7.3.TEST SETUP

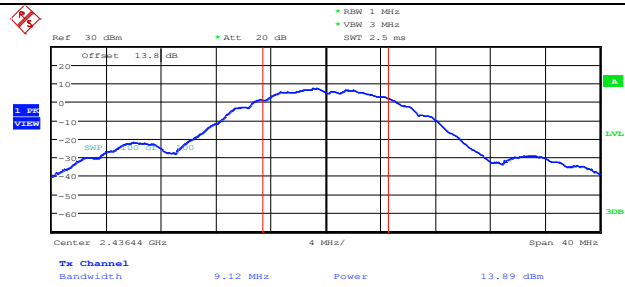


7.4.TEST DATA

Table 8 Maximum Conducted Output Power

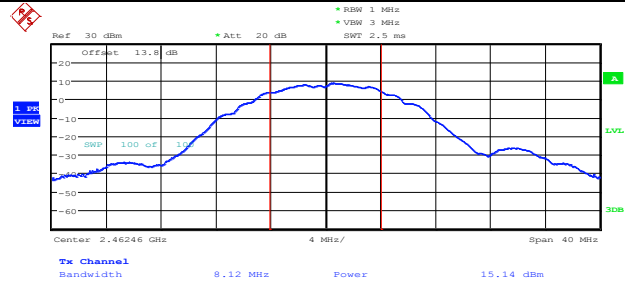
Mode	Channel	Meas.Level [dBm]	Verdict
8.02.11b	LCH	11.38	PASS
8.02.11b	MCH	13.89	PASS
8.02.11b	HCH	15.14	PASS
8.02.11g	LCH	14.30	PASS
8.02.11g	MCH	15.06	PASS
8.02.11g	HCH	17.21	PASS
8.02.11n HT20	LCH	14.48	PASS
8.02.11n HT20	MCH	15.17	PASS
8.02.11n HT20	HCH	17.16	PASS
8.02.11n HT40	LCH	11.02	PASS
8.02.11n HT40	MCH	10.80	PASS
8.02.11n HT40	HCH	11.47	PASS





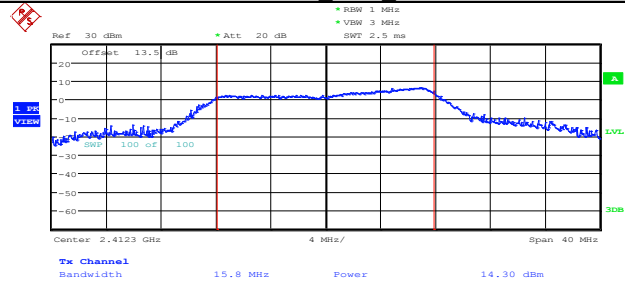
Date: 2.NOV.2018 10:34:09

11B Ant1 2462



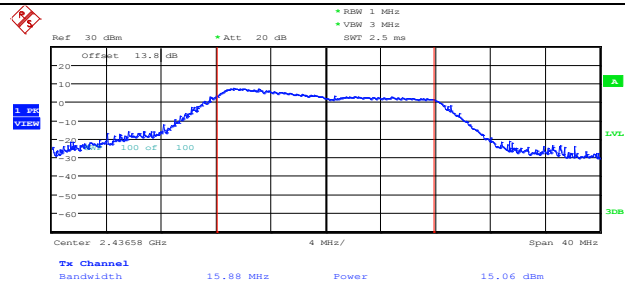
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11G Ant1 2412



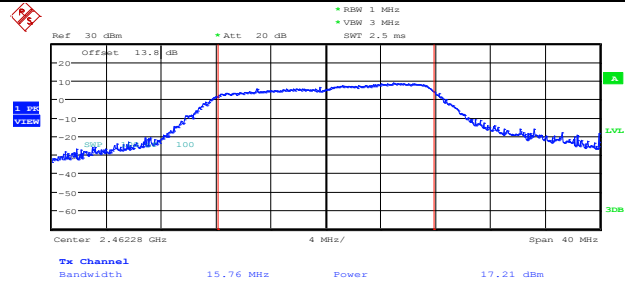
Date: 2.NOV.2018 10:54:17

11G Ant1 2437



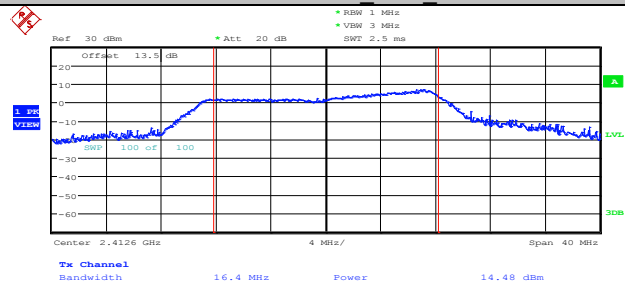
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11G Ant1_2462



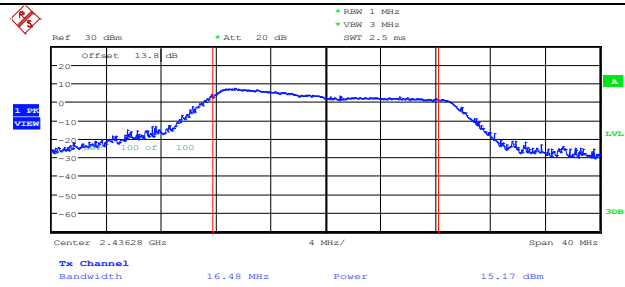
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11N20SISO_Ant1_2412



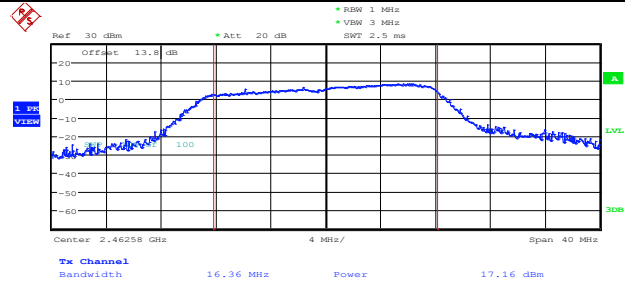
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11N20SISO_Ant1_2437



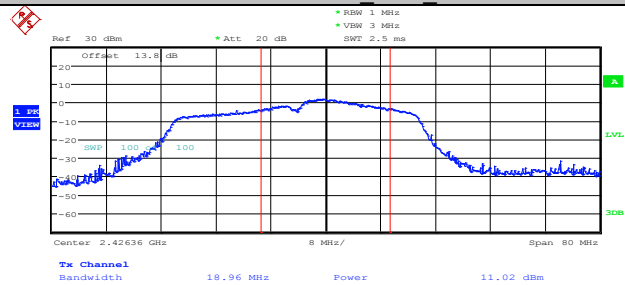
Date: 2.NOV.2018 11:28:14

11N20SISO_Ant1_2462



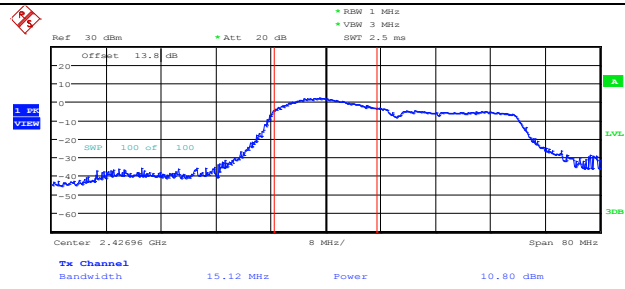
Date: 2.NOV.2018 11:32:07

11N40SISO_Ant1_2422



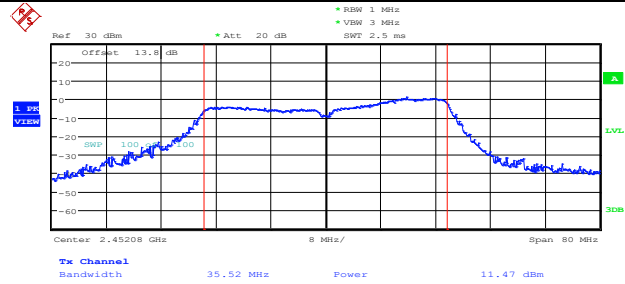
Date: 2.NOV.2018 13:47:31

11N40SISO_Ant1_2437



Date: 2.NOV.2018 14:16:37

11N40SISO Ant1 2452



Date: 2.NOV.2018 14:08:11

8. MAXIMUM POWER SPECTRAL DENSITY LEVEL MEASUREMENT

8.1.LIMITS OF Maximum Power Spectral Density Level Measurement

CFR 47 (FCC) part 15.247 (e), ANSI C63.10-2013 Clause 11.10

8.2.TEST PROCEDURE

The transmitter output was connected to the spectrum analyzer.

a)Set analyzer center frequency to DTS channel center frequency.

b) Set the span to 1.5 times the DTS bandwidth.

c) Set RBW to: $3\text{kHz} \leq \text{RBW} \leq 100\text{ kHz}$.

d) Set VBW $\geq 3 \times \text{RBW}$.

e) Detector = peak.

f) Sweep time = auto couple.

g) Trace mode = max hold.

h)Allow trace to fully stabilize.

i)Use the peak marker function to determine the maximum amplitude level within the RBW.

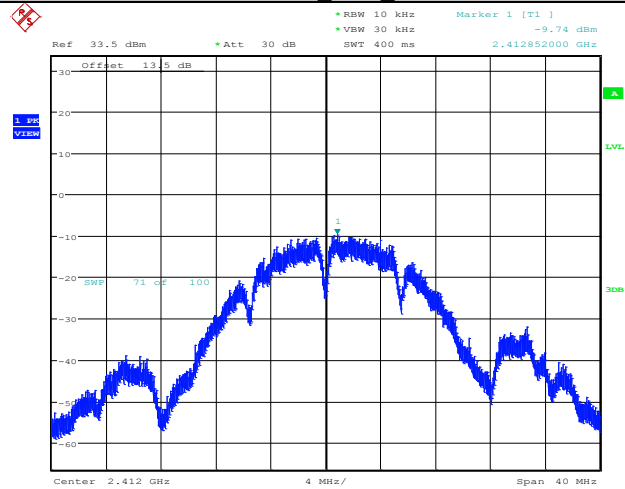
j)If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

8.3.TEST DATA

Table 9 Maximum Power Spectral Density Level

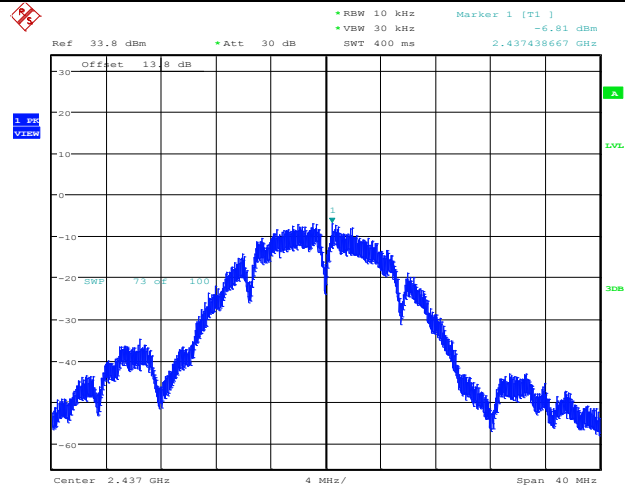
Mode	Channel	Maximum Power Spectral Density Level [dBm]	Limit	Verdict
8.02.11b	LCH	-9.74	8	PASS
8.02.11b	MCH	-6.81	8	PASS
8.02.11b	HCH	-5.01	8	PASS
8.02.11g	LCH	-11.62	8	PASS
8.02.11g	MCH	-10.03	8	PASS
8.02.11g	HCH	-8.36	8	PASS
8.02.11n HT20	LCH	-10.9	8	PASS
8.02.11n HT20	MCH	-10.47	8	PASS
8.02.11n HT20	HCH	-9.4	8	PASS
8.02.11n HT40	LCH	-15.11	8	PASS
8.02.11n HT40	MCH	-15.62	8	PASS
8.02.11n HT40	HCH	-17.42	8	PASS

11B Ant1_2412



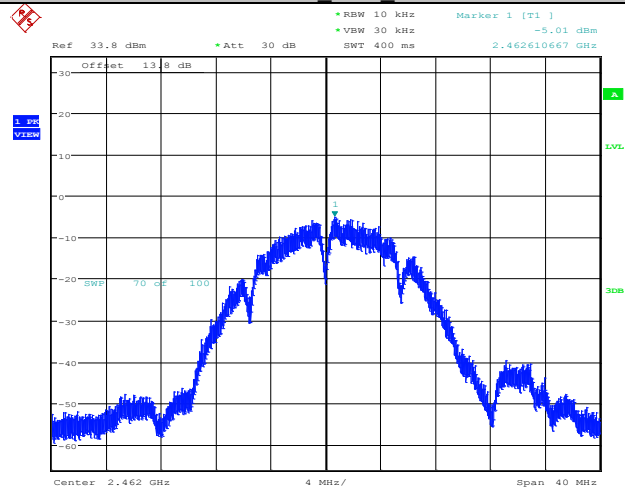
Date: 2.NOV.2018 10:29:47

11B Ant1_2437



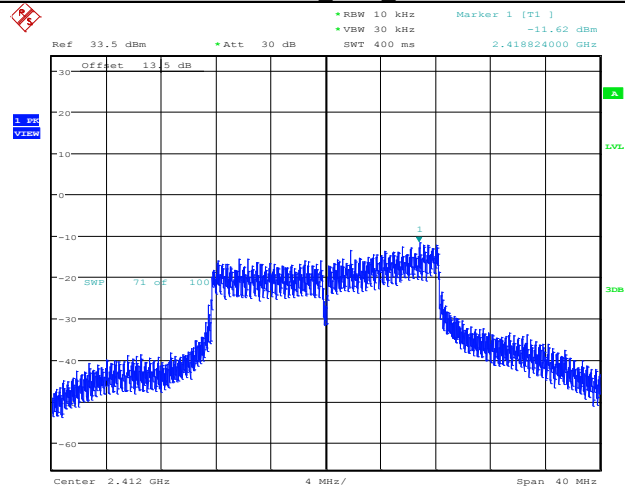
Date: 2.NOV.2018 10:35:10

11B Ant1_2462



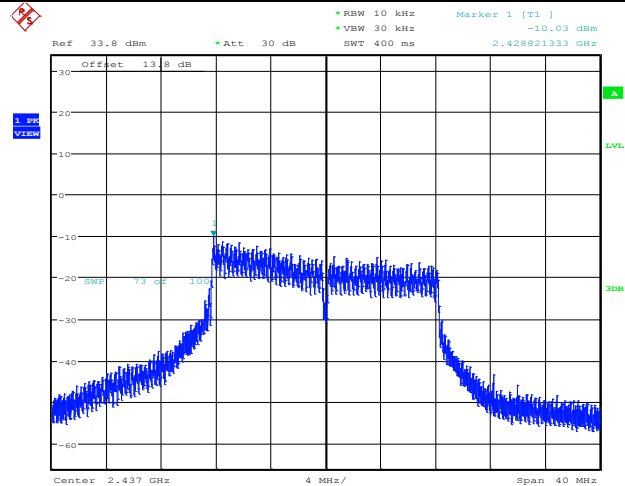
Date: 2.NOV.2018 10:47:01

11G_Ant1_2412



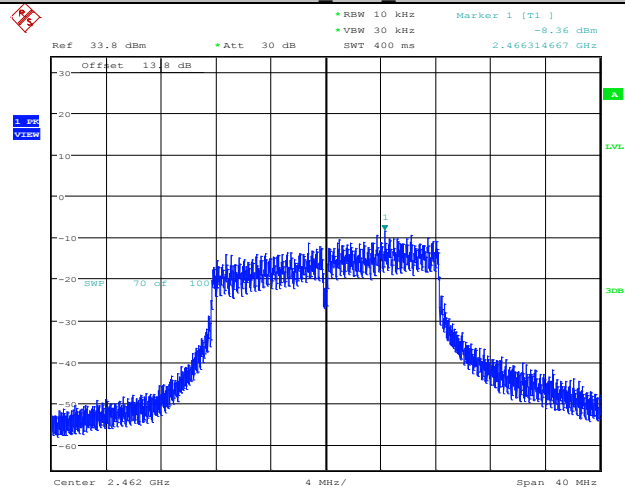
Date: 2.NOV.2018 10:55:17

11G_Ant1_2437



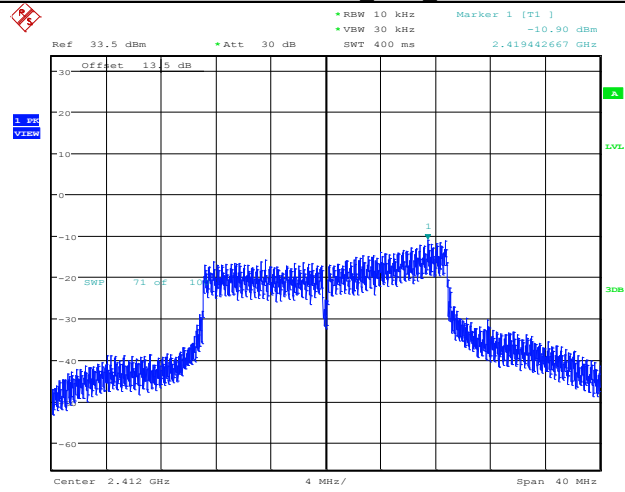
Date: 2.NOV.2018 11:06:57

11G_Ant1_2462



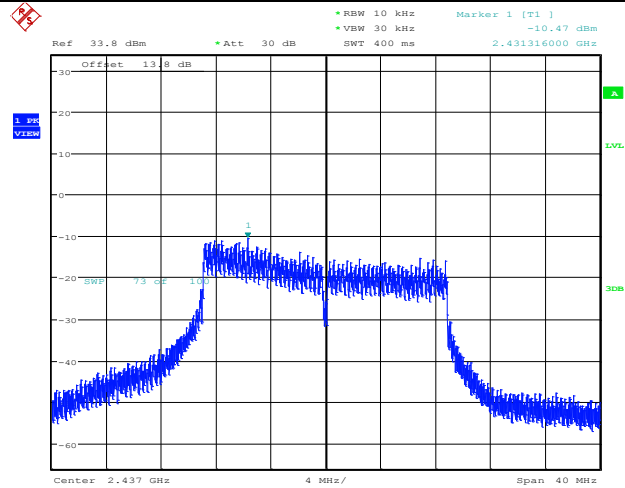
Date: 2.NOV.2018 11:10:27

11N20SISO_Ant1_2412



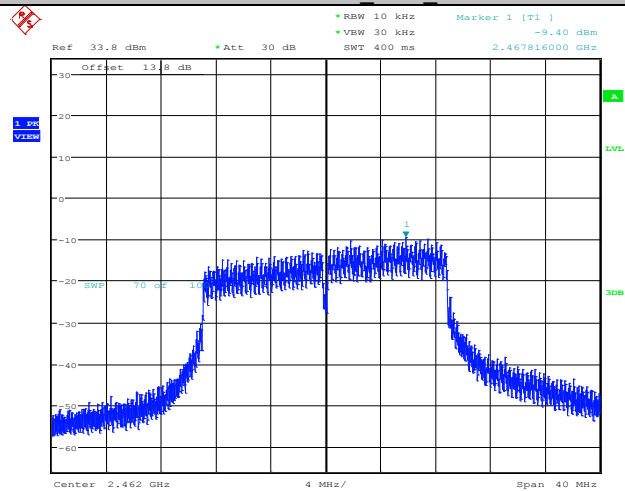
Date: 2.NOV.2018 11:19:38

11N20SISO_Ant1_2437



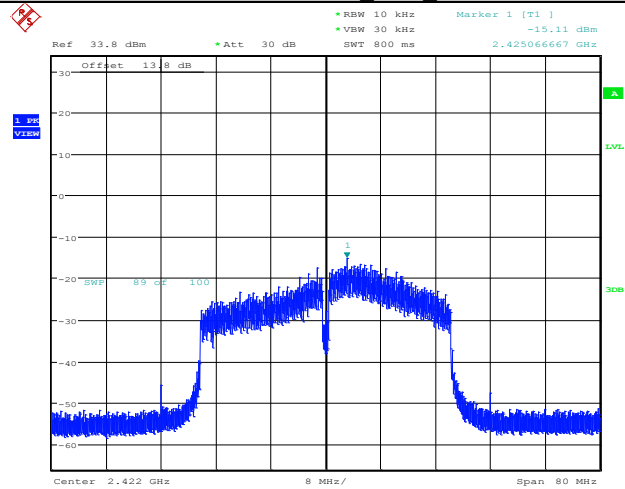
Date: 2.NOV.2018 11:29:14

11N20SISO_Ant1_2462



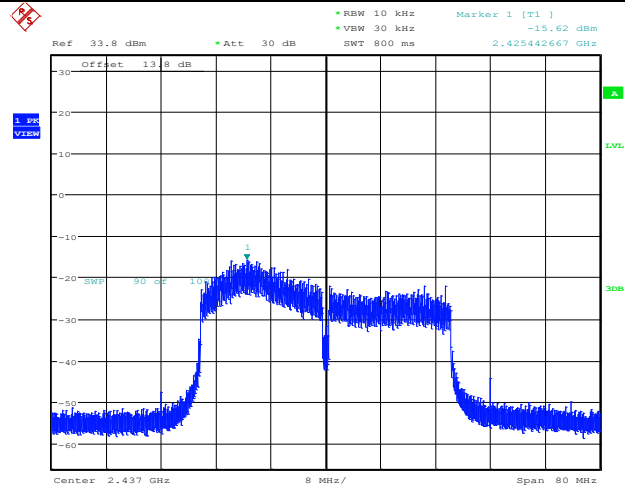
Date: 2.NOV.2018 11:33:07

11N40SISO_Ant1_2422



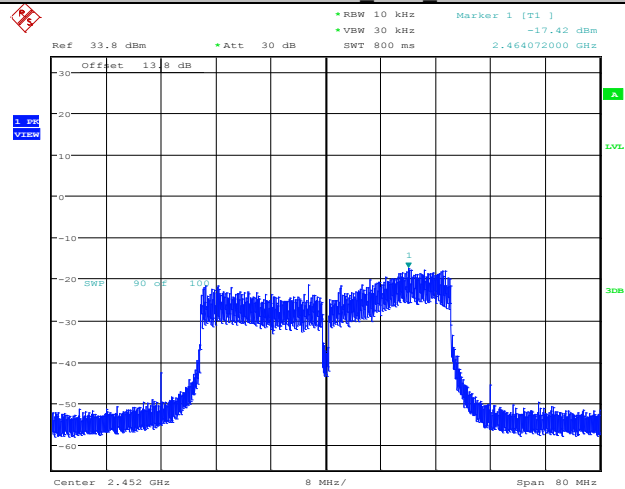
Date: 2.NOV.2018 13:49:24

11N40SISO_Ant1_2437



Date: 2.NOV.2018 13:56:32

11N40SISO_Ant1_2452



Date: 2.NOV.2018 14:10:03

9. CONDUCTED BANDEGE AND SPURIOUS MEASUREMENT

9.1.LIMITS OF Conducted Bandedge and Spurious Measurement

CFR 47 (FCC) part 15.247 (d), ANSI C63.10-2013 Clause 11.11

9.2.TEST PROCEDURE

The transmitter output was connected to the spectrum analyzer.

Establish a reference level by using the following procedure:

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

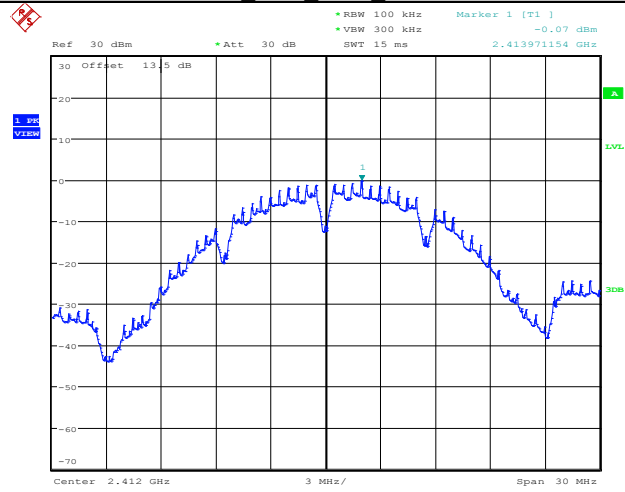
Emission level measurement

- a)Set the center frequency and span to encompass frequency range to be measured.
- b)Set the RBW = 100 kHz.
- c)Set the VBW $\geq 3 \times$ RBW.
- d)Detector = peak.
- e)Sweep time = auto couple.
- f)Trace mode = max hold.
- g)Allow trace to fully stabilize.
- h)Use the peak marker function to determine the maximum amplitude level.

Test Result : ALL emission outside of 2400-2483.5 are lower at least 20dB than fundamental frequency.

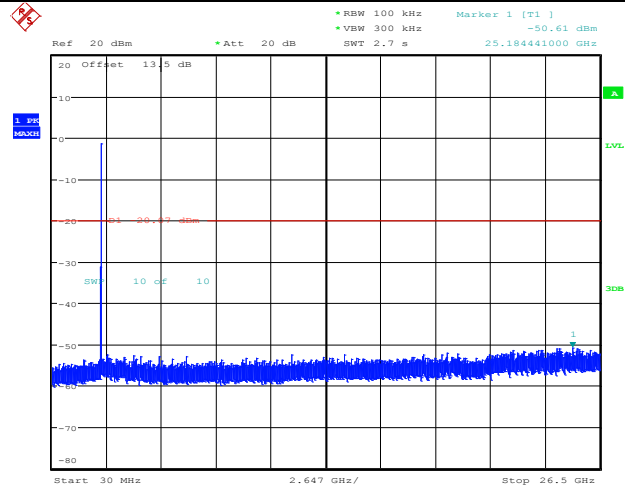
9.3.TEST DATA

11B_Ant1_2412_0-Reference



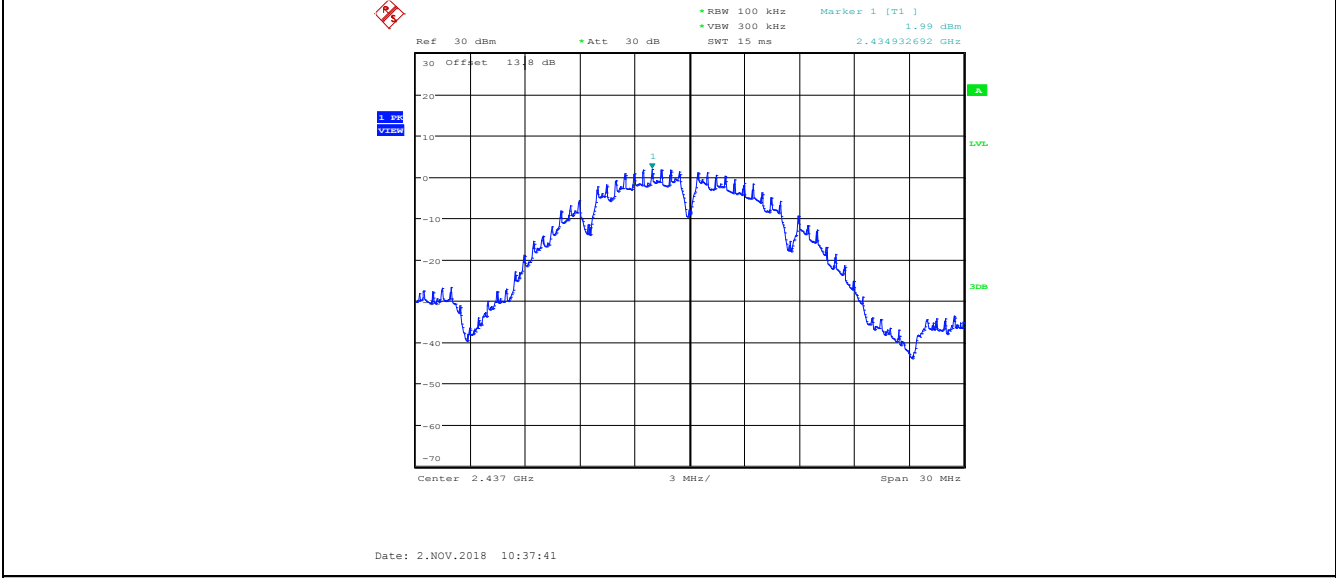
Date: 2.NOV.2018 10:31:20

11B_Ant1_2412_30~26500



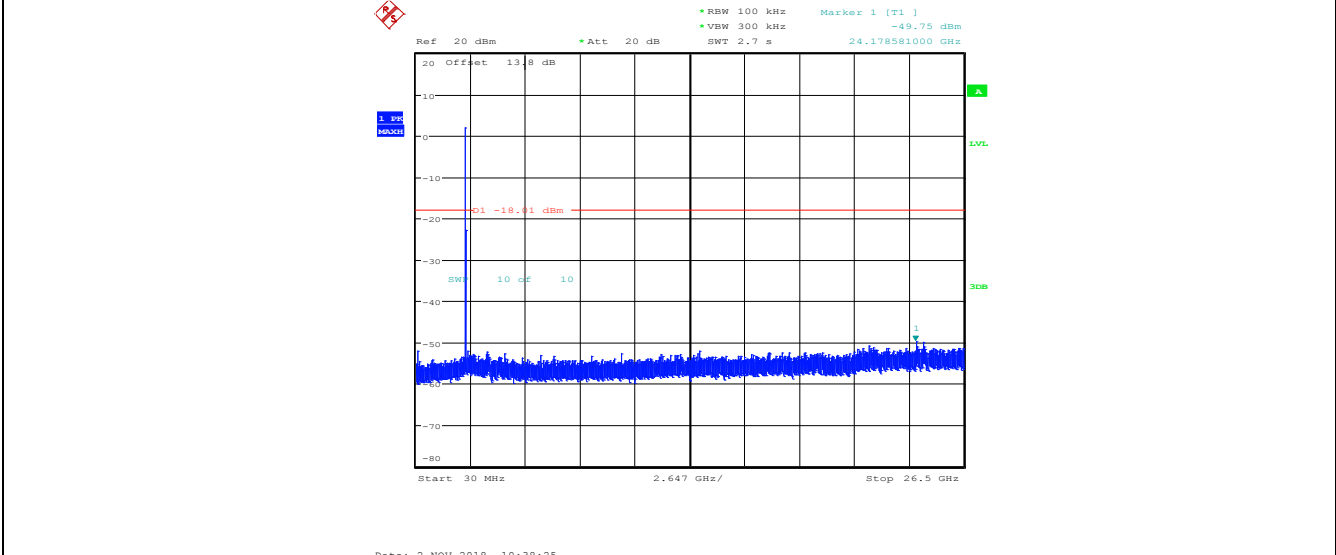
Date: 2.NOV.2018 10:32:04

11B_Ant1_2437_0~Reference



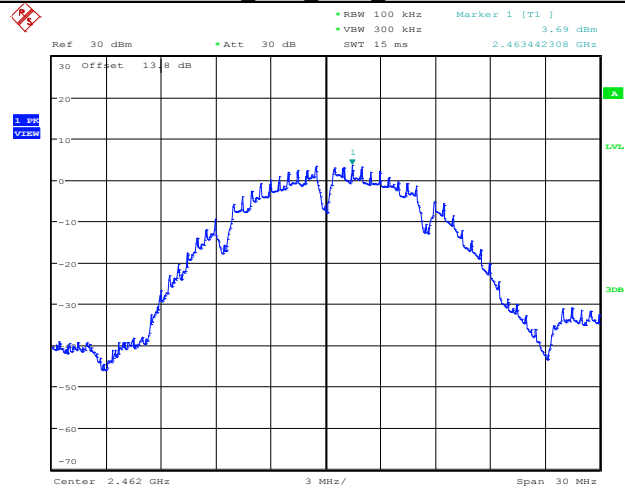
Date: 2.NOV.2018 10:37:41

11B_Ant1_2437_30~26500



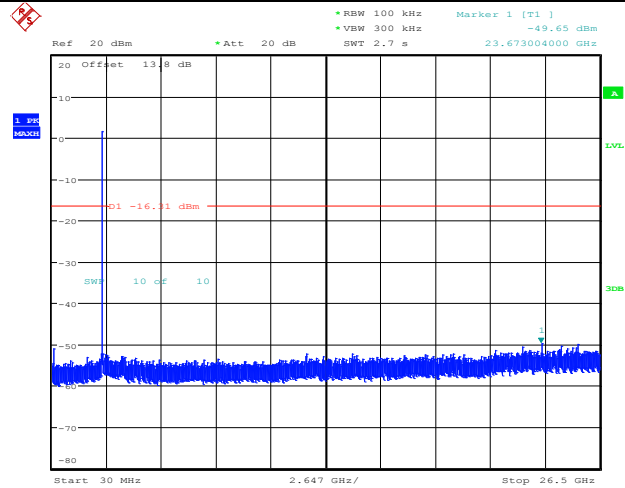
Date: 2.NOV.2018 10:38:25

11B_Ant1_2462_0-Reference



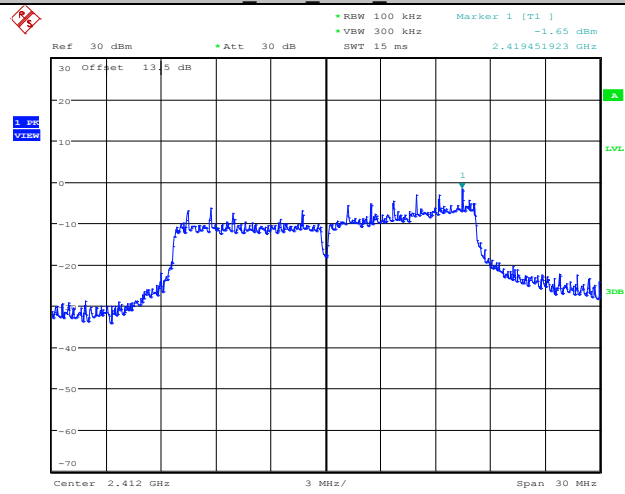
Date: 2.NOV.2018 10:48:32

11B_Ant1_2462_30~26500



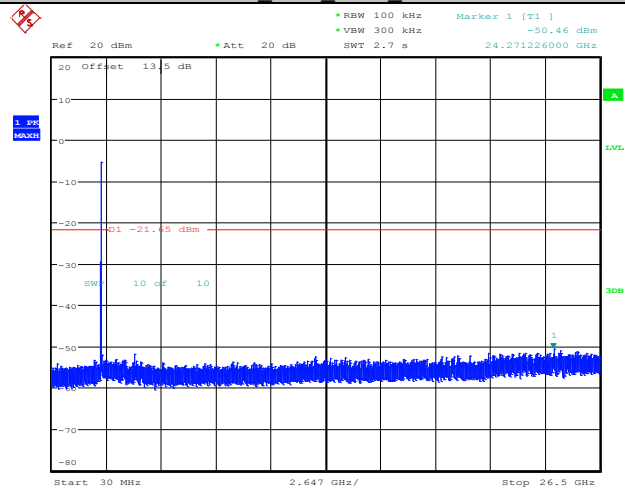
Date: 2.NOV.2018 10:49:16

11G_Ant1_2412_0-Reference



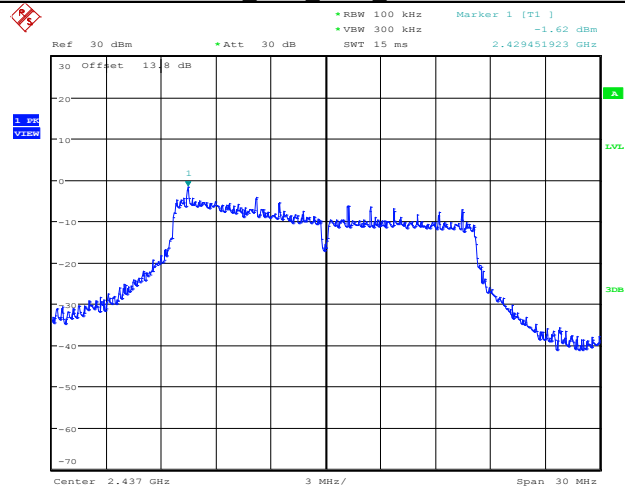
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11G_Ant1_2412_30~26500



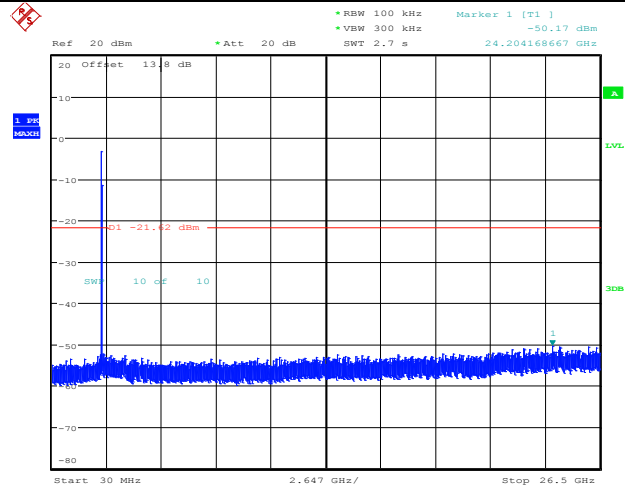
Date: 2.NOV.2018 10:57:34

11G_Ant1_2437_0-Reference



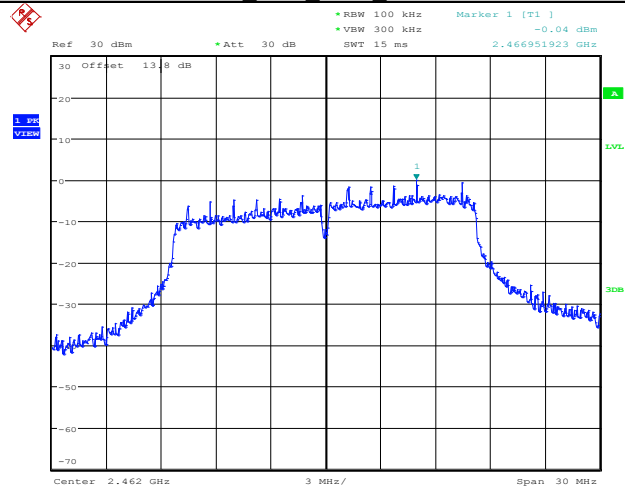
Date: 2.NOV.2018 11:07:09

11G_Ant1_2437_30~26500



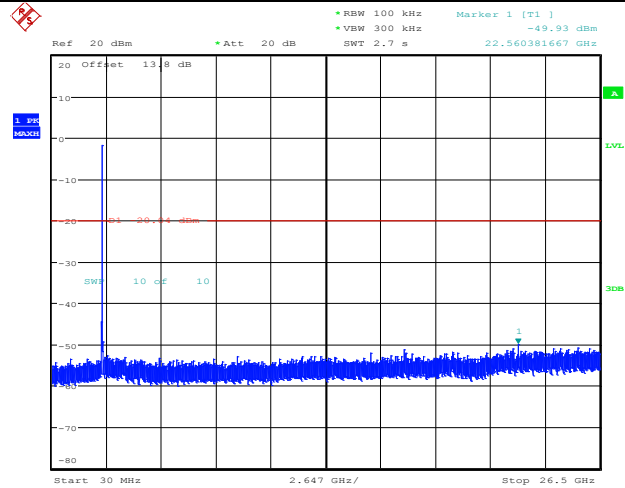
Date: 2.NOV.2018 11:07:53

11G_Ant1_2462_0-Reference



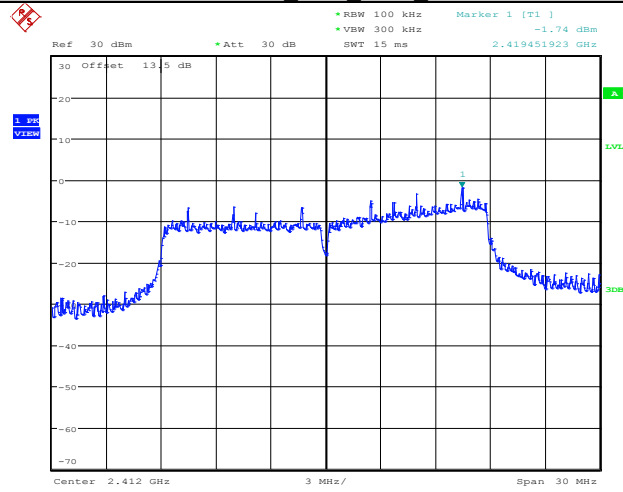
Date: 2.NOV.2018 11:11:58

11G_Ant1_2462_30-26500



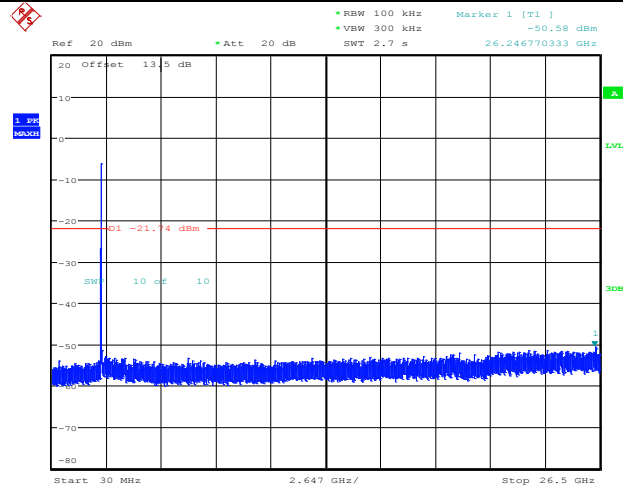
Date: 2.NOV.2018 11:12:42

11N20SISO_Ant1_2412_0~Reference



Date: 2.NOV.2018 11:21:10

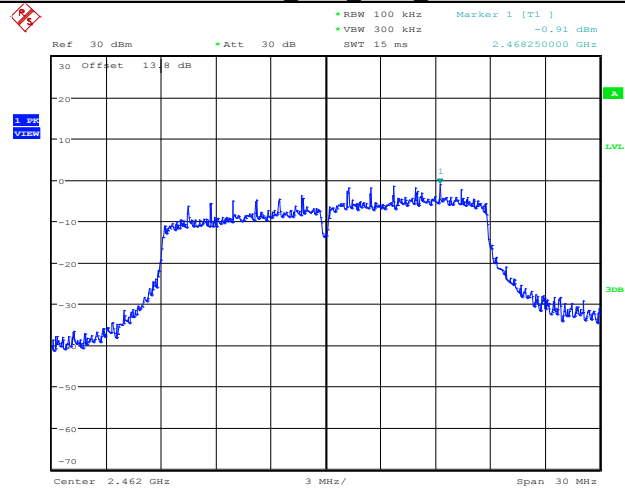
11N20SISO_Ant1_2412_30~26500



Date: 2.NOV.2018 11:21:54

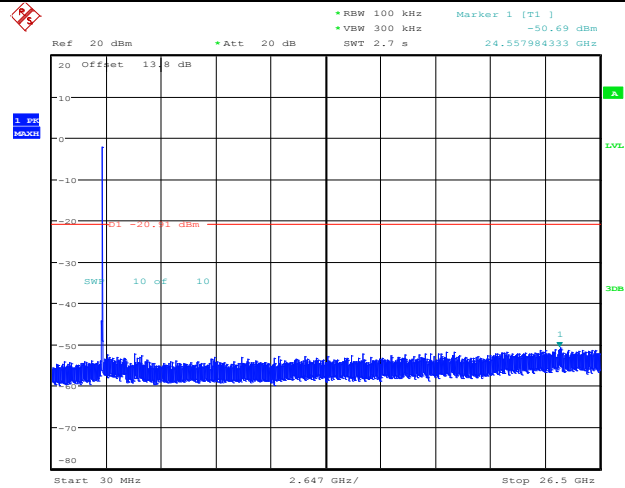


11N20SISO_Ant1_2462_0~Reference

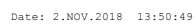


Date: 2.NOV.2018 11:34:37

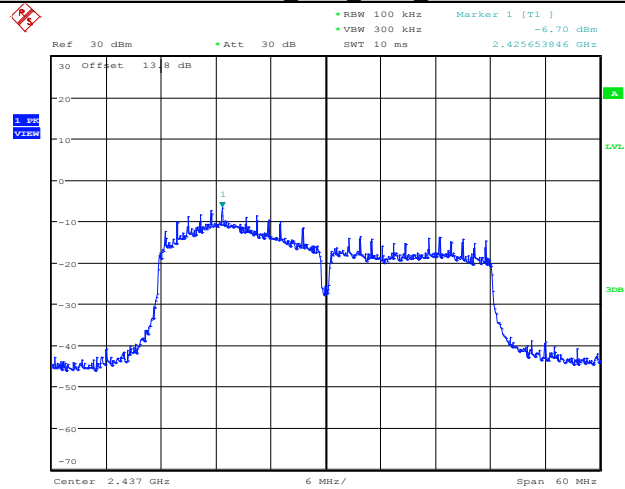
11N20SISO_Ant1_2462_30~26500



Date: 2.NOV.2018 11:35:22

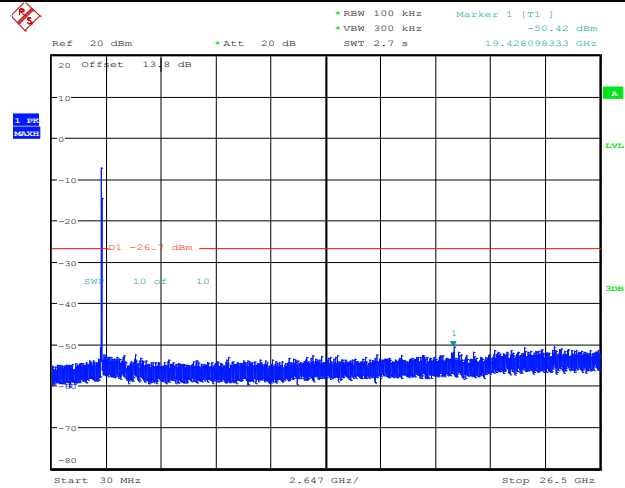


11N40SISO_Ant1_2437_0~Reference



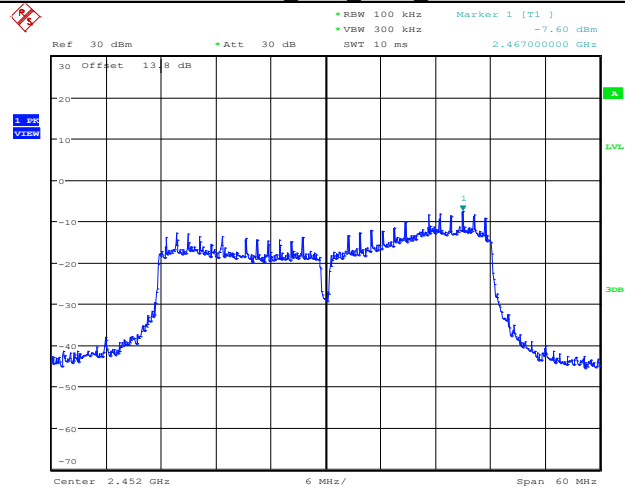
Date: 2.NOV.2018 13:56:44

11N40SISO_Ant1_2437_30~26500



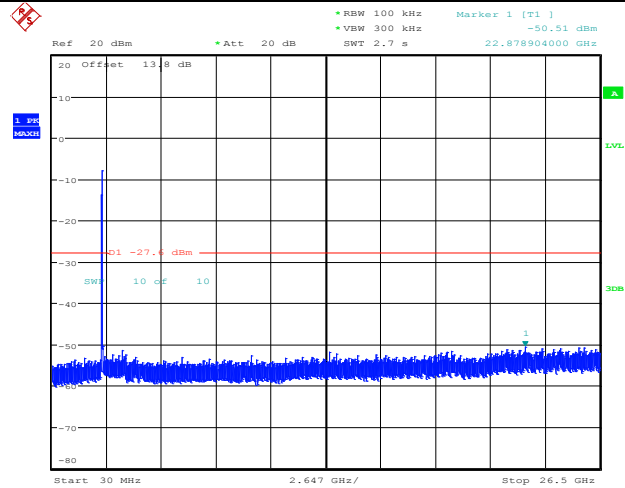
Date: 2.NOV.2018 13:57:28

11N40SISO_Ant1_2452_0~Reference



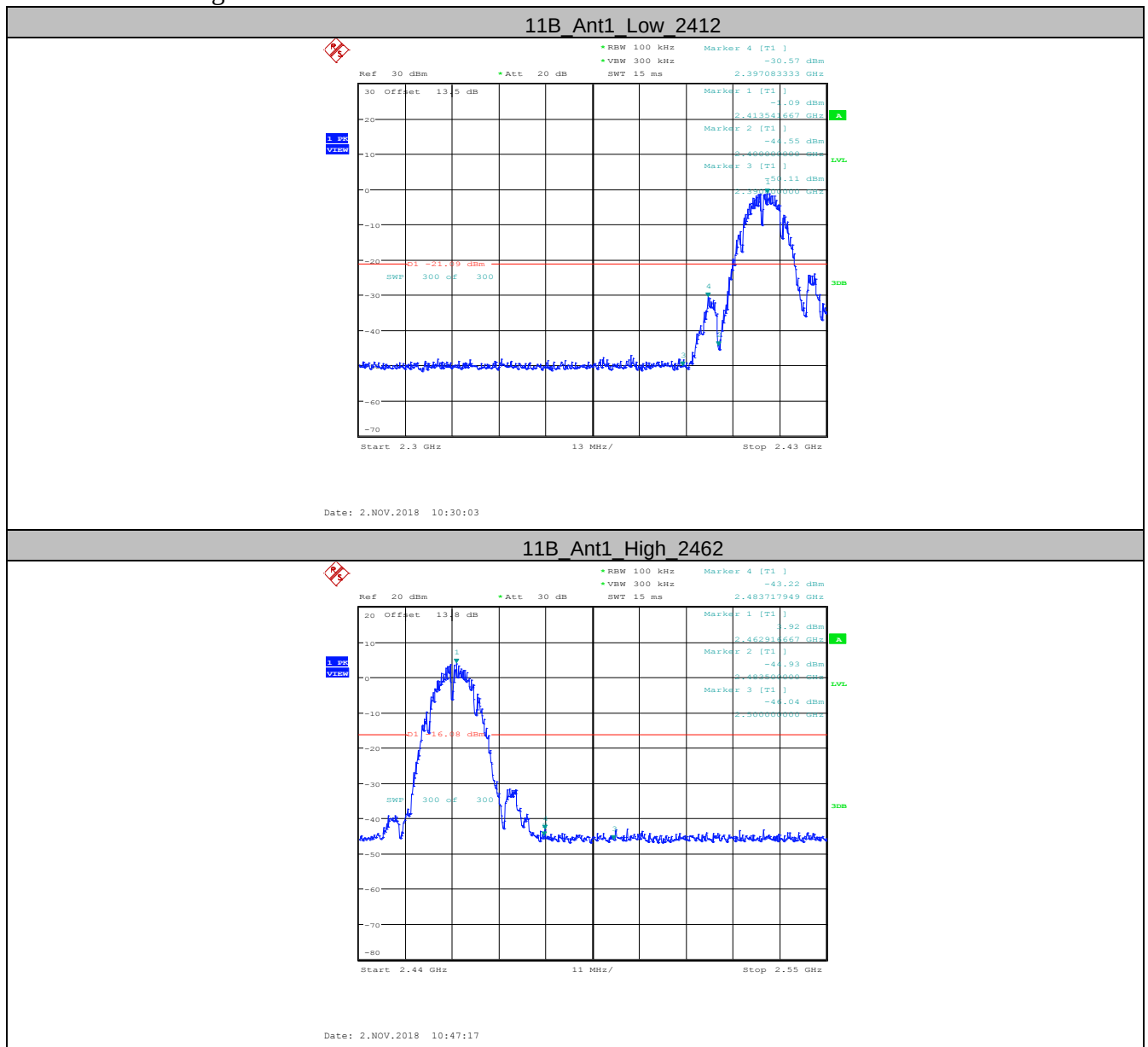
Date: 2.NOV.2018 14:11:28

11N40SISO_Ant1_2452_30~26500

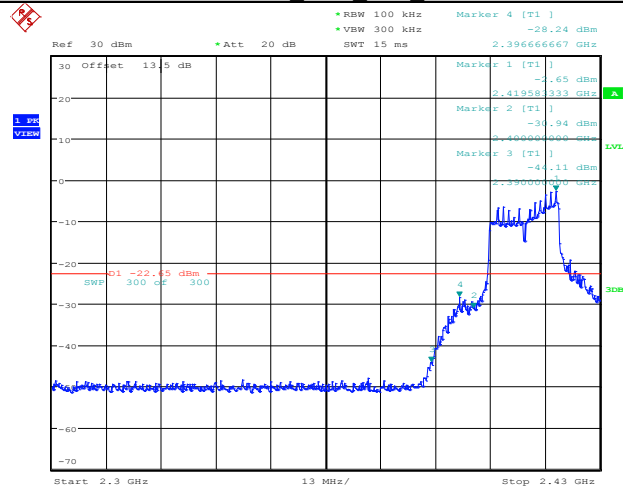


Date: 2.NOV.2018 14:12:13

Bandedge:

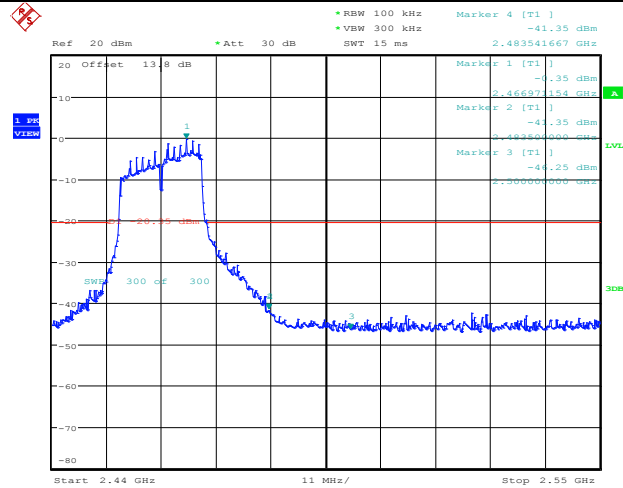


11G_Ant1_Low_2412



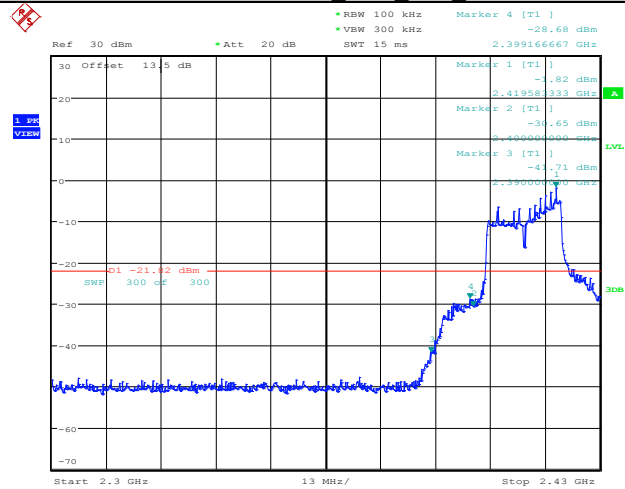
Date: 2.NOV.2018 10:55:33

11G_Ant1_High_2462



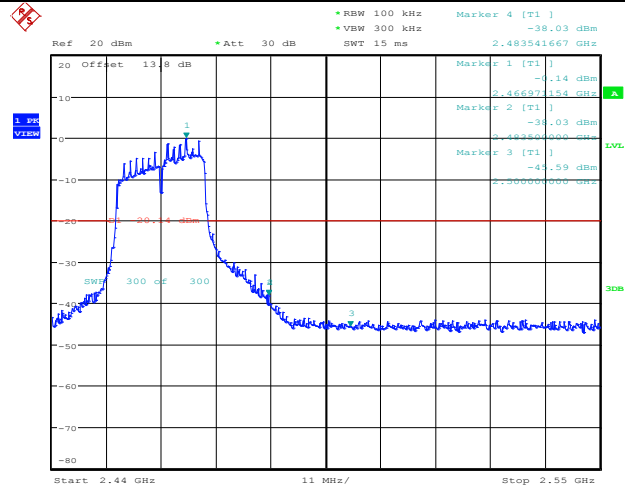
Date: 2.NOV.2018 11:10:43

11N20SISO Ant1 Low 2412



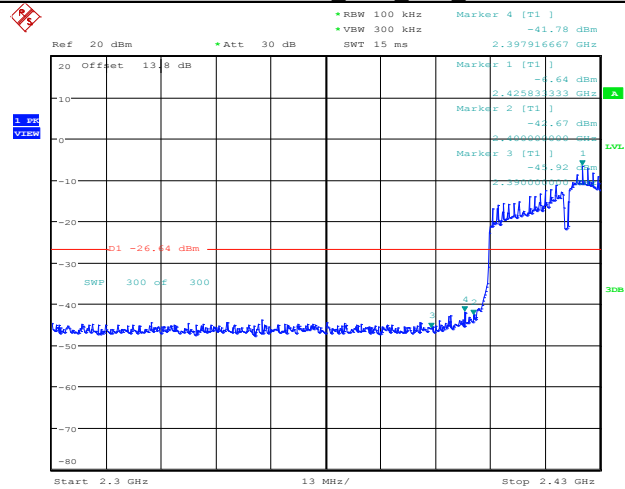
Date: 2.NOV.2018 11:19:54

11N20SISO Ant1 High 2462



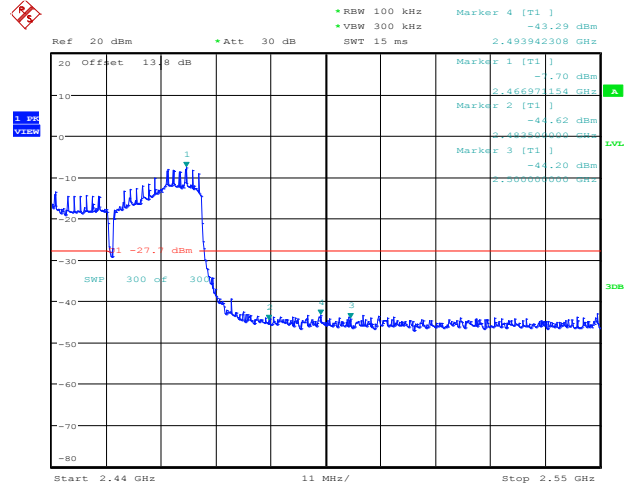
Date: 2.NOV.2018 11:33:23

11N40SISO Ant1 Low 2422



Date: 2.NOV.2018 13:49:39

11N40SISO Ant1 High 2452



Date: 2.NOV.2018 14:10:19

10. RADIATED BANDEDGE AND SPURIOUS MEASUREMENT

10.1. LIMITS OF Radiated Bandedge and Spurious Measurement

CFR 47 (FCC) part 15.247 (d), ANSI C63.10-2013 Clause 11.12

10.2. TEST PROCEDURE

1. The testing follows the guidelines in ANSI C63.10-2013.
2. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level.
3. For measurement below 1GHz, the EUT was placed on a turntable with 0.8 meter, above ground. For measurement above 1 GHz, test at FAR, the EUT is placed on a non-conductive table, which is 1.5 meter above ground.
4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
5. Corrected Reading: $\text{Antenna Factor} + \text{Cable Loss} + \text{Read Level} - \text{Preamp Factor} = \text{Level}$
6. For measurement below 1GHz, If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.
7. Use the following spectrum analyzer settings:
 - (1) Span shall wide enough to fully capture the emission being measured;
 - (2) Set RBW=100 kHz for $f < 1 \text{ GHz}$; VBW $\geq$ RBW; Sweep = auto; Detector function = peak; Trace = max hold;
 - (3) Set RBW = 1 MHz, VBW= 3MHz for $f > 1 \text{ GHz}$ for peak measurement. Set RBW = 1 MHz, and 1/T (on time) for average measurement.

10.3.TEST DATA

9KHz-30MHz

The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line per 15.31(o) was not reported.

Table 10 Radiated Emission Test Data 9k Hz-30MHz

Frequency MHz	Cable Loss(dB)	Antenna Factor(dB)	Readings(dBμV/m)	Level(dBμV/m)	Polarity(H/V)	Turntable Angle(deg)	Antenna Height(m)	Limits(dBμV/m)	Margin(dB)
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

30MHz-1GHz

Worst case is shown below for 30MHz-1GHz only.

The emissions don't show in following result tables are more than 20dB below the limits.

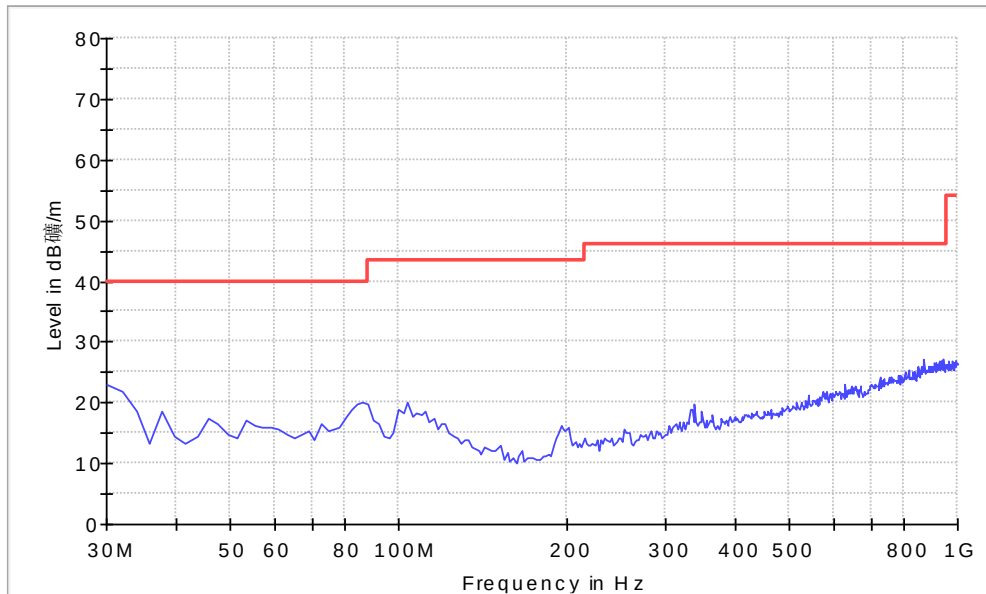
Table 11 Radiated Emission Test Data 30MHz-1GHz

Frequency (MHz)	Cable Loss +preamp (dB)	Antenna Factor (dB)	Readings (dBμV/m)	Level (dBμV/m)	Polarity (H/V)	Limits (dBμV/m)	Margin (dB)	Note
31.573	0.6	12.3	21.3	34.2	V	40	5.8	QP
38.269	0.7	12.3	14.6	27.6	V	40	12.4	QP
45.571	0.8	13.6	12.7	27.1	V	40	12.9	QP
57.161	0.8	13.0	12.4	26.2	V	40	13.8	QP
103.816	1.2	13.2	1.7	16.1	V	43.5	27.4	QP
119.416	1.3	12.3	5.8	19.4	V	43.5	24.1	QP
30.171	0.6	12.3	5.7	18.6	H	40	21.4	QP
38.190	0.7	12.3	2.5	15.5	H	40	24.5	QP
45.526	0.8	13.6	0.5	14.9	H	40	25.1	QP
103.877	1.3	13.2	0.5	15.0	H	43.5	28.5	QP
119.410	1.3	12.3	-0.4	13.2	H	43.5	30.3	QP
193.210	1.7	10.6	0.1	12.4	H	43.5	31.1	QP

REMARK: Emission level(dBuV)=Read Value(dBuV/m) + Antenna Factor(dB)+ Cable Loss +preamp(dB)

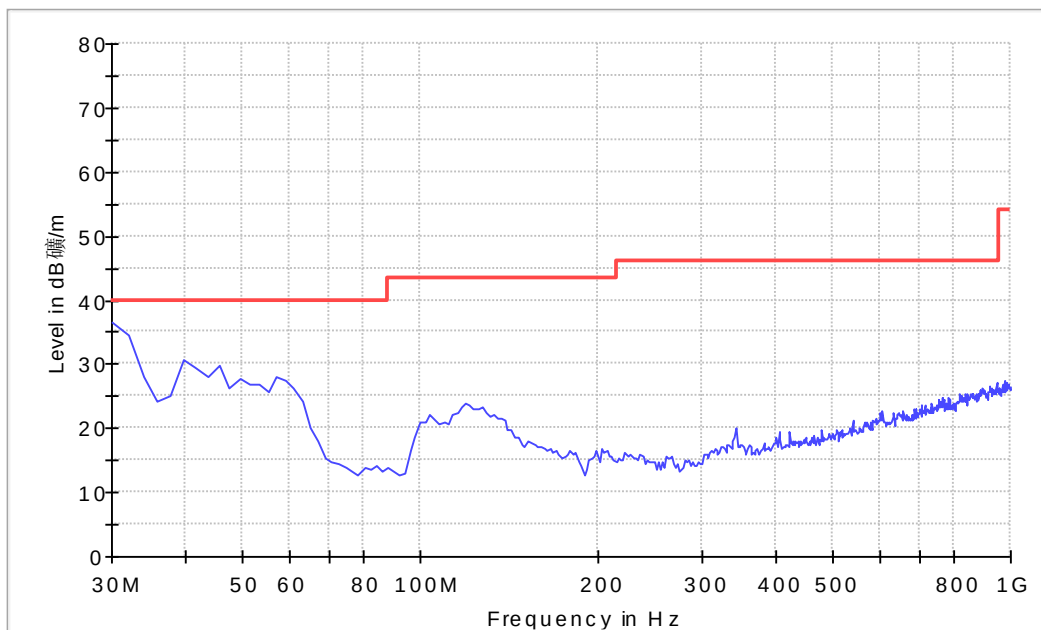
EUT Name: WD100
 Operating Condition: Charging and Transmitting
 Test site: SMQ NETC EMC Lab.
 Antenna Position: Vertical & Horizontal
 Comment: AC 120V/60Hz

Normal_RE_TT 3m distance



(Horizontal)

Normal_RE_TT 3m distance



(Vertical)

1-18G

11b

Ch1

Radiated Emission

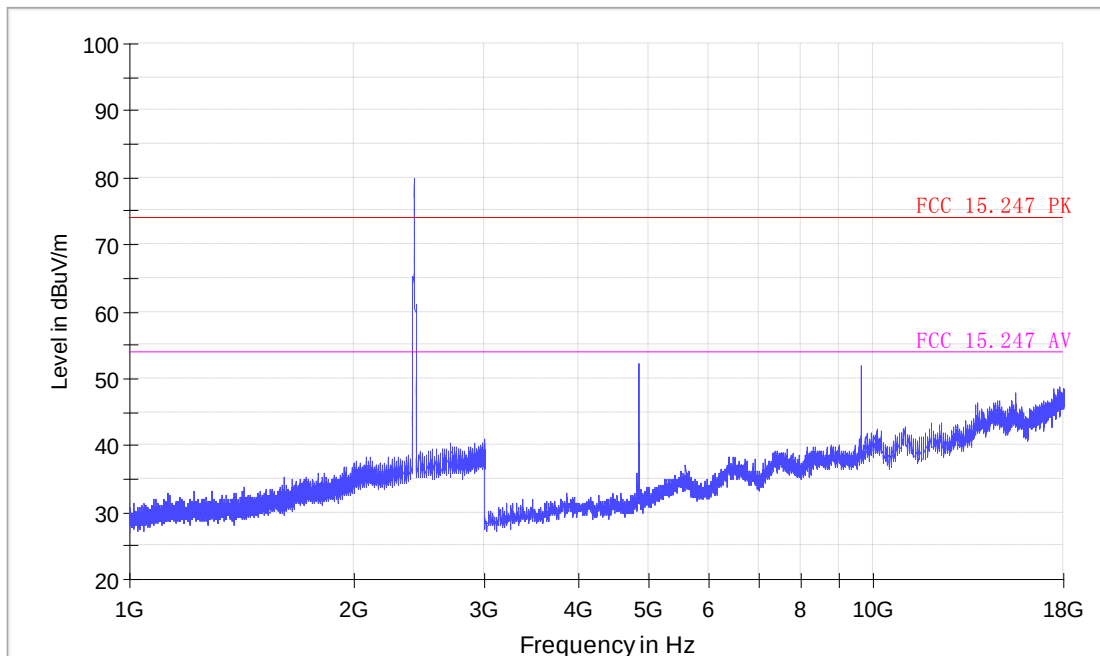
EUT Information

EUT Model Name: WD100
Operation mode: Wifi 11b CH1
Test Voltage:
Comment:

Common Information

Test Site: SMO EMC Lab.
Environment
Antenna Polarization: Horizontal
Operator Name:
Comment:

FCC Electric Field Strength 1-18GHz operate on 2.4GHz



Radiated Emission

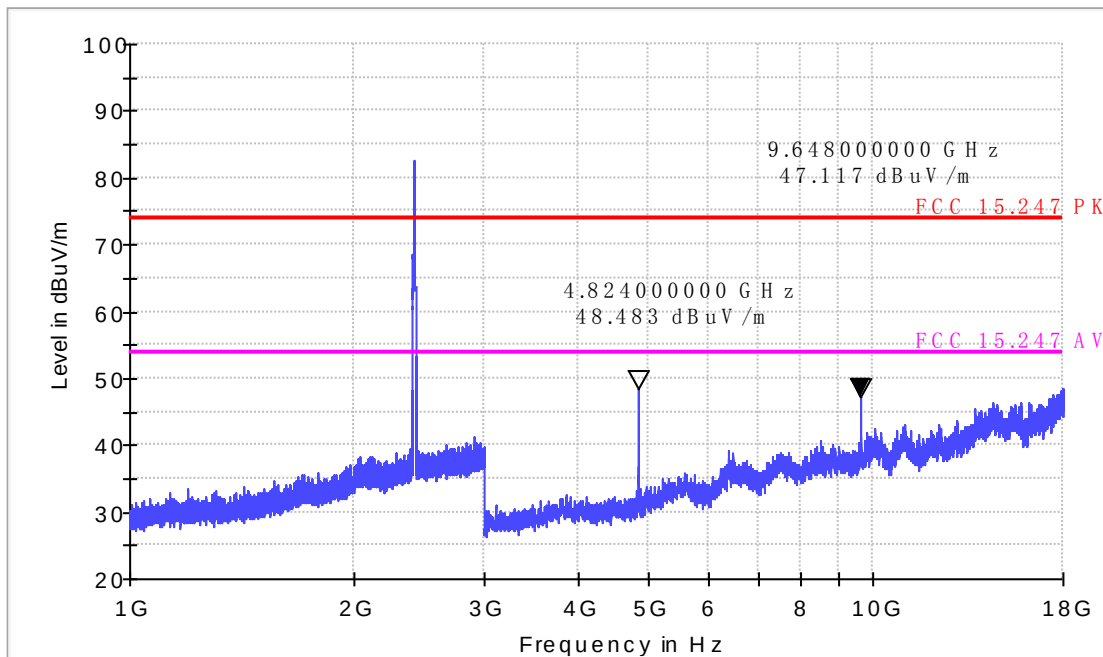
EUT Information

EUT Model Name: WD100
Operation mode: Wifi 11b CH1
Test Voltage:
Comment:

Common Information

Test Site: SMO EMC Lab.
Environment
Antenna Polarization: Vertical
Operator Name:
Comment:

FCC Electric Field Strength 1-18GHz operate on 2.4GHz



1-18G

11b

CH6

Radiated Emission

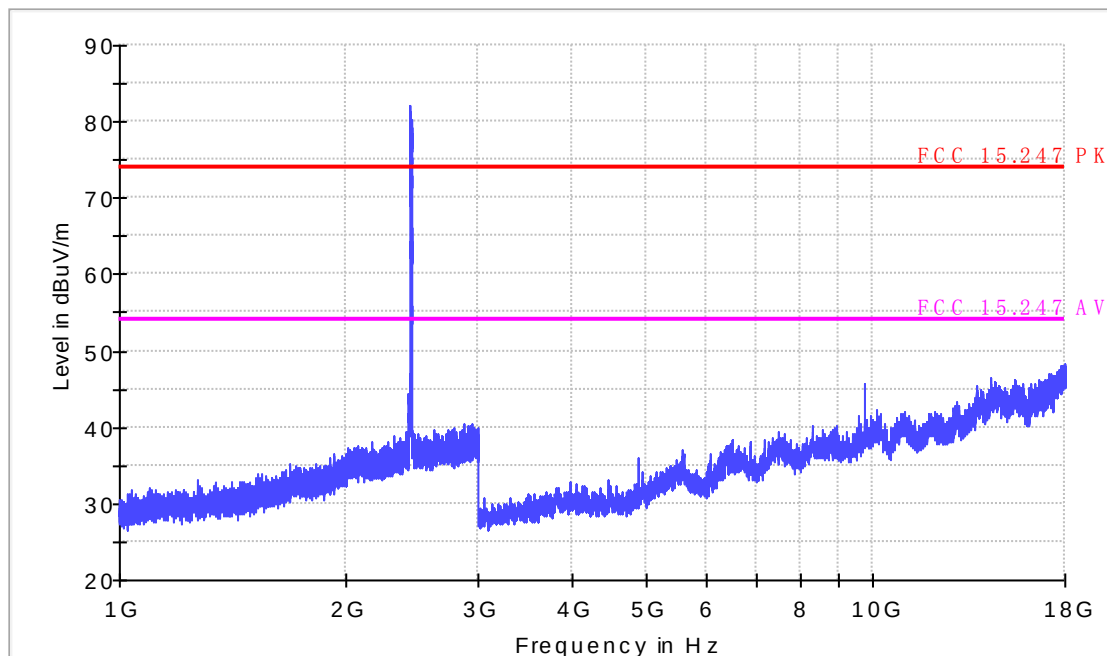
EUT Information

EUT Model Name: WD100
Operation mode: Wifi 11b CH6
Test Voltage:
Comment:

Common Information

Test Site: SMO EMC Lab.
Environment
Antenna Polarization: Horizontal
Operator Name:
Comment:

FCC Electric Field Strength 1-18GHz operate on 2.4GHz



Radiated Emission

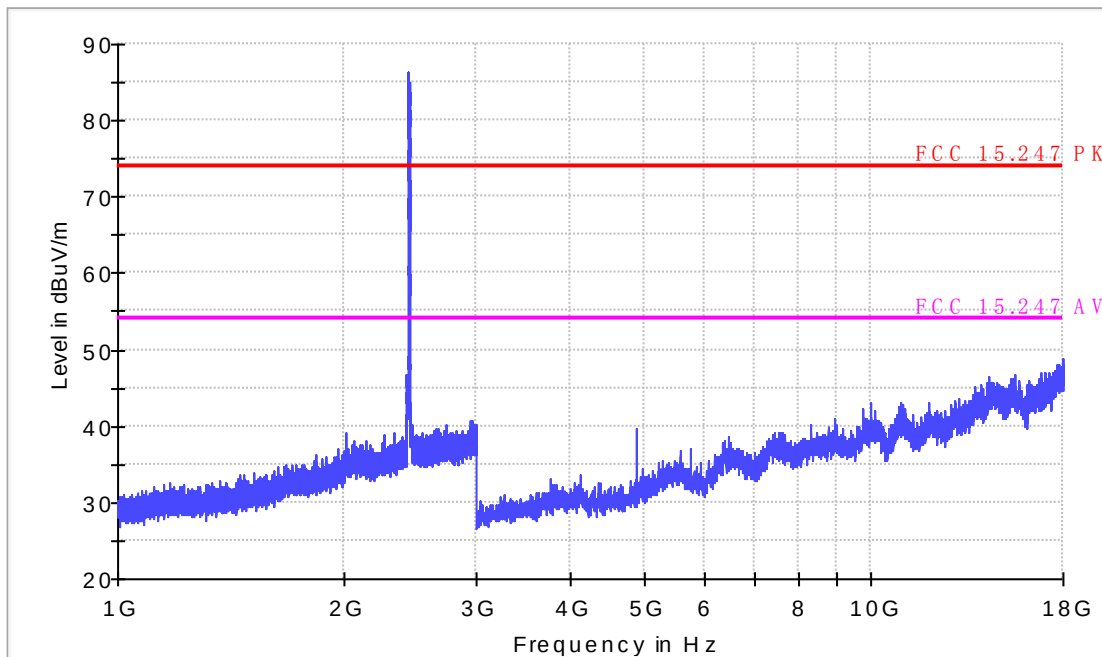
EUT Information

EUT Model Name: WD100
Operation mode: Wifi 11b CH6
Test Voltage:
Comment:

Common Information

Test Site: SMO EMC Lab.
Environment
Antenna Polarization: Vertical
Operator Name:
Comment:

FCC Electric Field Strength 1-18GHz operate on 2.4GHz



1-18G

11b

CH11

Radiated Emission

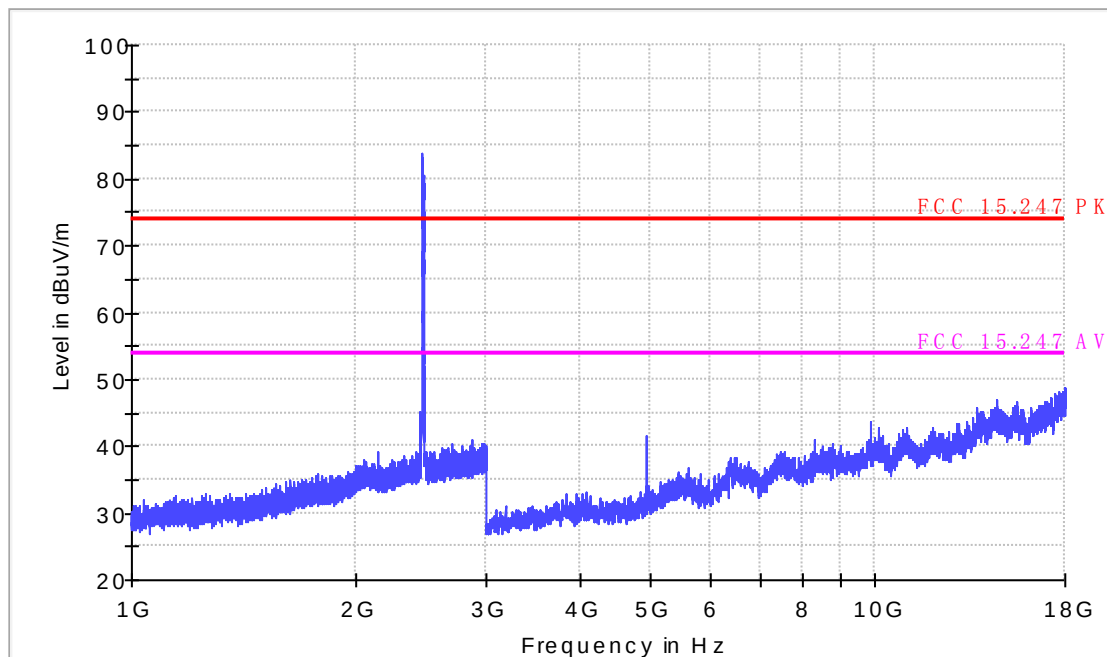
EUT Information

EUT Model Name: WD100
Operation mode: Wifi 11b CH11
Test Voltage:
Comment:

Common Information

Test Site: SMO EMC Lab.
Environment
Antenna Polarization: Horizontal
Operator Name:
Comment:

FCC Electric Field Strength 1-18GHz operate on 2.4GHz



Radiated Emission

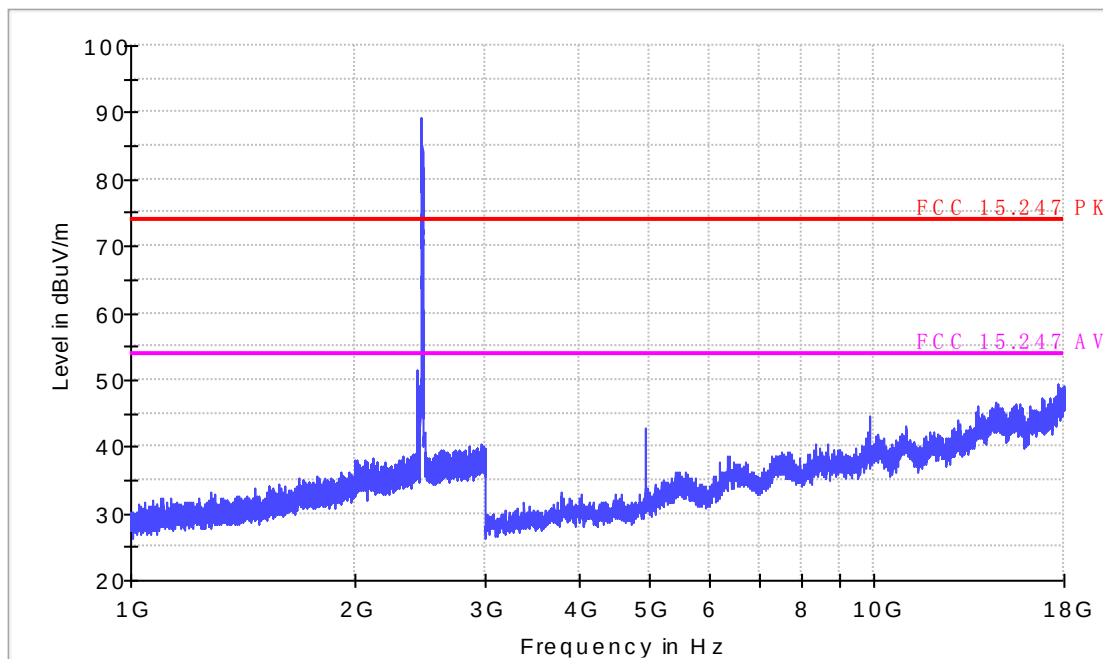
EUT Information

EUT Model Name: WD100
Operation mode: Wifi 11b CH11
Test Voltage:
Comment:

Common Information

Test Site: SMQ EMC Lab.
Environment
Antenna Polarization: Vertical
Operator Name:
Comment:

FCC Electric Field Strength 1-18GHz operate on 2.4GHz



1-18G

11g

CH1

Radiated Emission

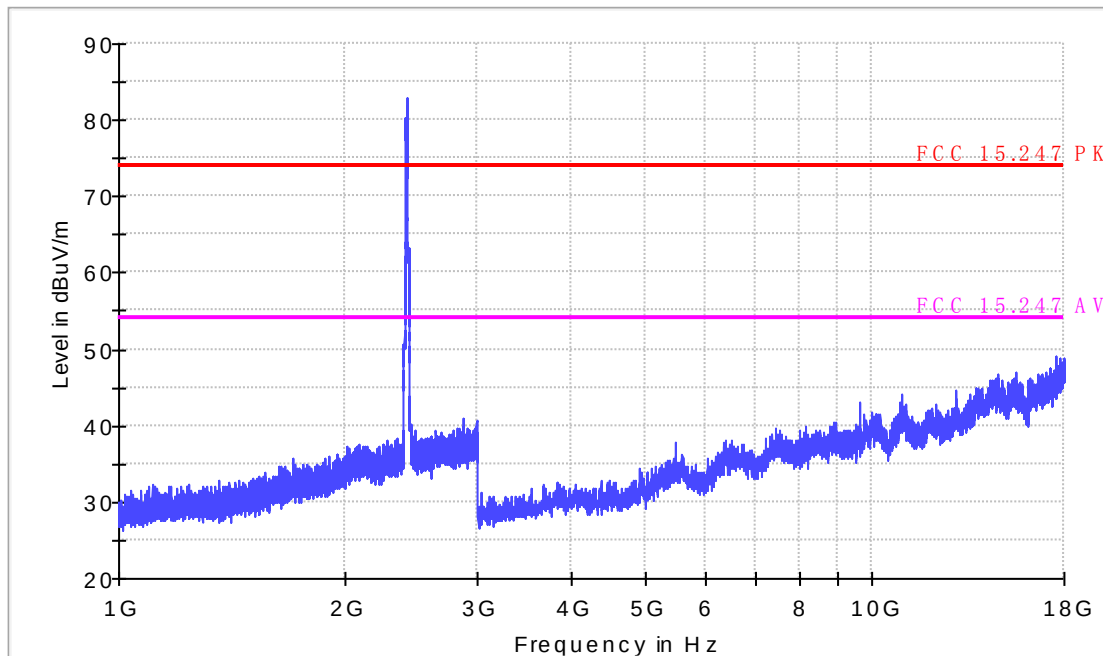
EUT Information

EUT Model Name: WD100
Operation mode: Wifi 11g CH1
Test Voltage:
Comment:

Common Information

Test Site: SMO EMC Lab.
Environment
Antenna Polarization: Horizontal
Operator Name:
Comment:

FCC Electric Field Strength 1-18GHz operate on 2.4GHz



Radiated Emission

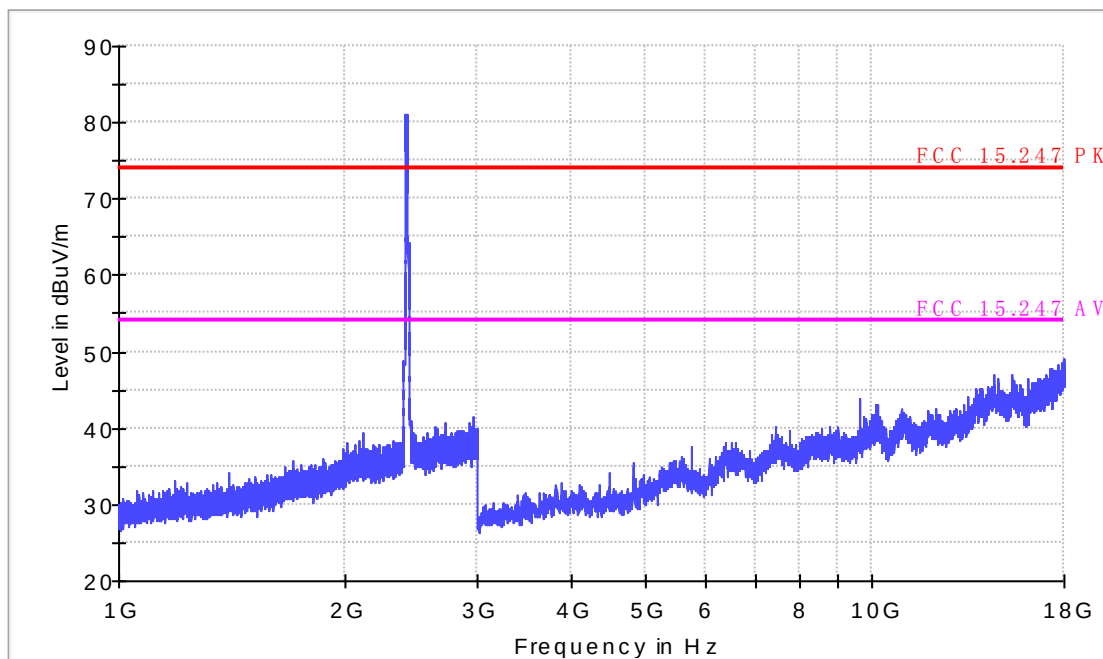
EUT Information

EUT Model Name: WD100
Operation mode: Wifi 11a CH1
Test Voltage:
Comment:

Common Information

Test Site: SMO EMC Lab.
Environment
Antenna Polarization: Vertical
Operator Name:
Comment:

FCC Electric Field Strength 1-18GHz operate on 2.4GHz



1-18G

11g

CH6

Radiated Emission

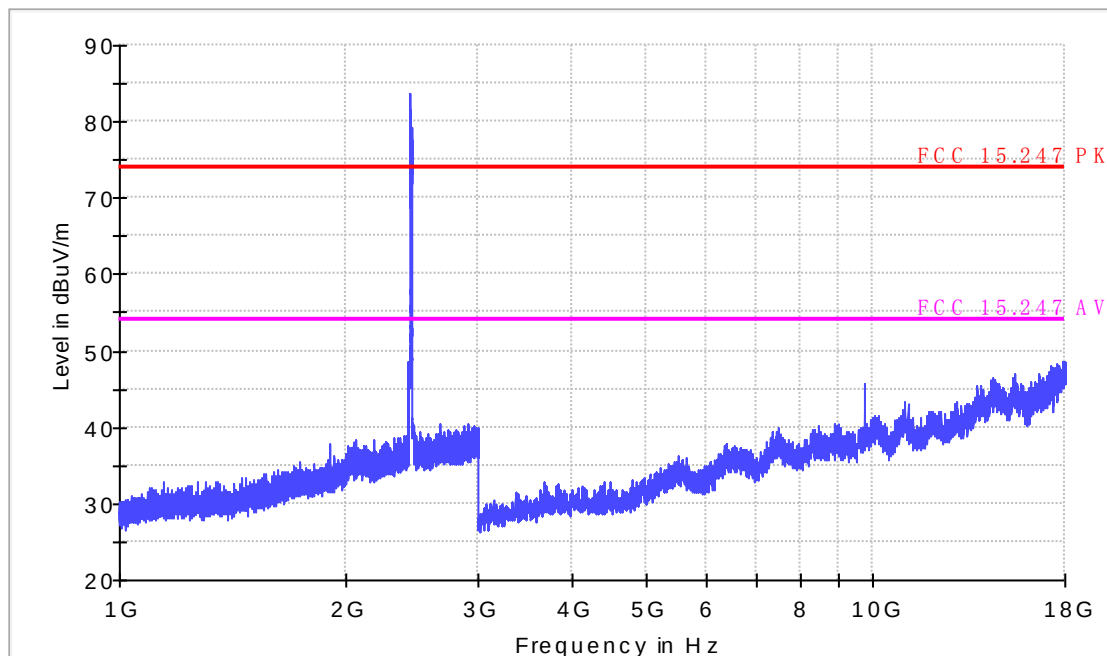
EUT Information

EUT Model Name: WD100
Operation mode: Wifi 11g CH6
Test Voltage:
Comment:

Common Information

Test Site: SMO EMC Lab.
Environment
Antenna Polarization: Horizontal
Operator Name:
Comment:

FCC Electric Field Strength 1-18GHz operate on 2.4GHz



Radiated Emission

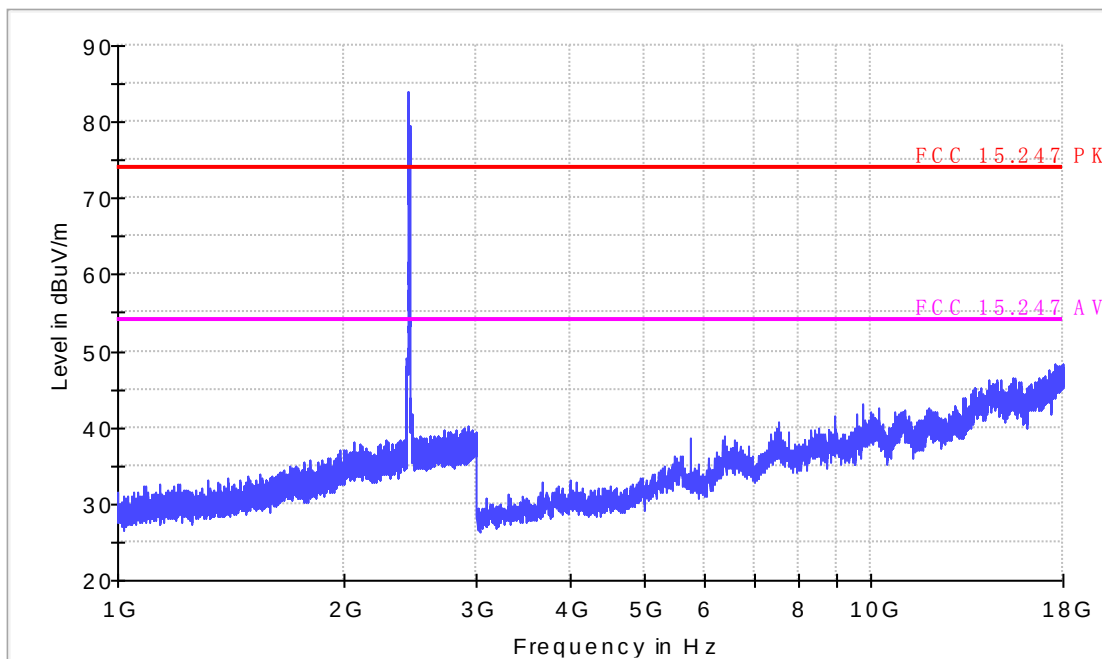
EUT Information

EUT Model Name: WD100
Operation mode: Wifi 11g CH6
Test Voltage:
Comment:

Common Information

Test Site: SMQ EMC Lab.
Environment
Antenna Polarization: Vertical
Operator Name:
Comment:

FCC Electric Field Strength 1-18GHz operate on 2.4GHz



1-18G

11g

CH11

Radiated Emission

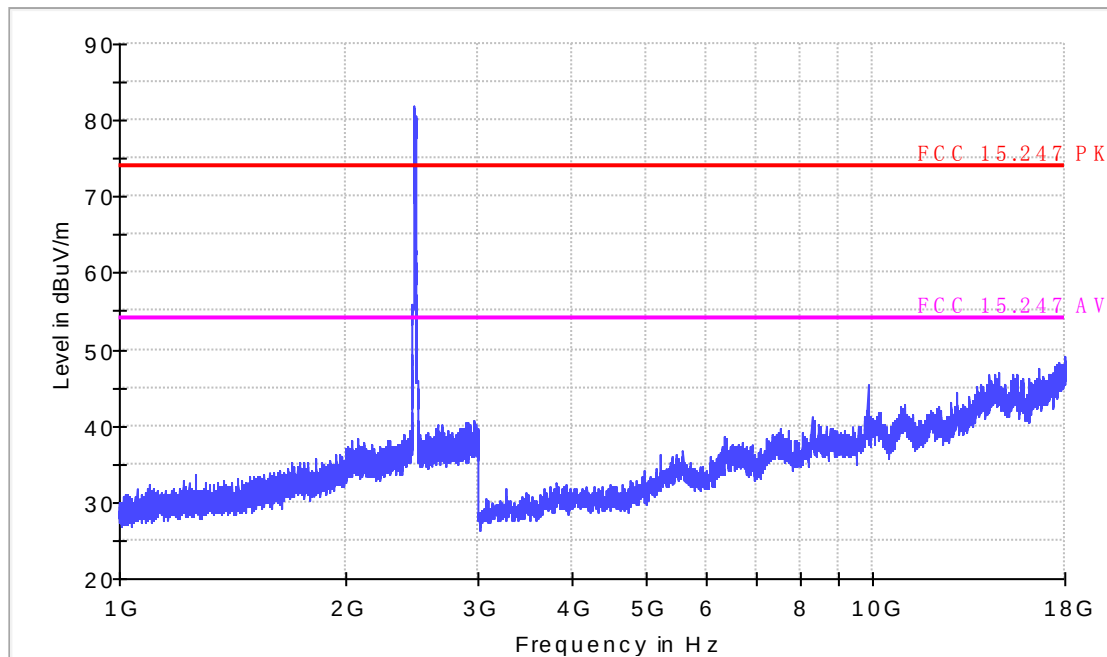
EUT Information

EUT Model Name: WD100
Operation mode: Wifi 11a CH11
Test Voltage:
Comment:

Common Information

Test Site: SMO EMC Lab.
Environment
Antenna Polarization: Horizontal
Operator Name:
Comment:

FCC Electric Field Strength 1-18GHz operate on 2.4GHz



Radiated Emission

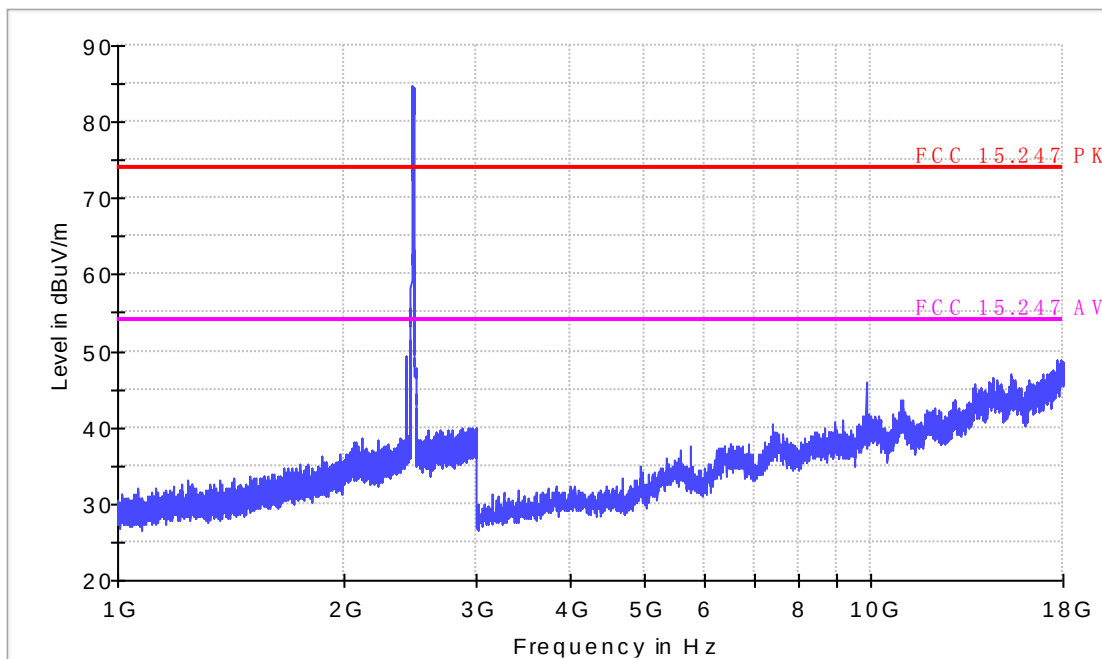
EUT Information

EUT Model Name: M WD100
Operation mode: Wifi 11g CH11
Test Voltage:
Comment:

Common Information

Test Site: SMQ EMC Lab.
Environment
Antenna Polarization: Vertical
Operator Name:
Comment:

FCC Electric Field Strength 1-18GHz operate on 2.4GHz



1-18G

11n-HT20

CH1

Radiated Emission

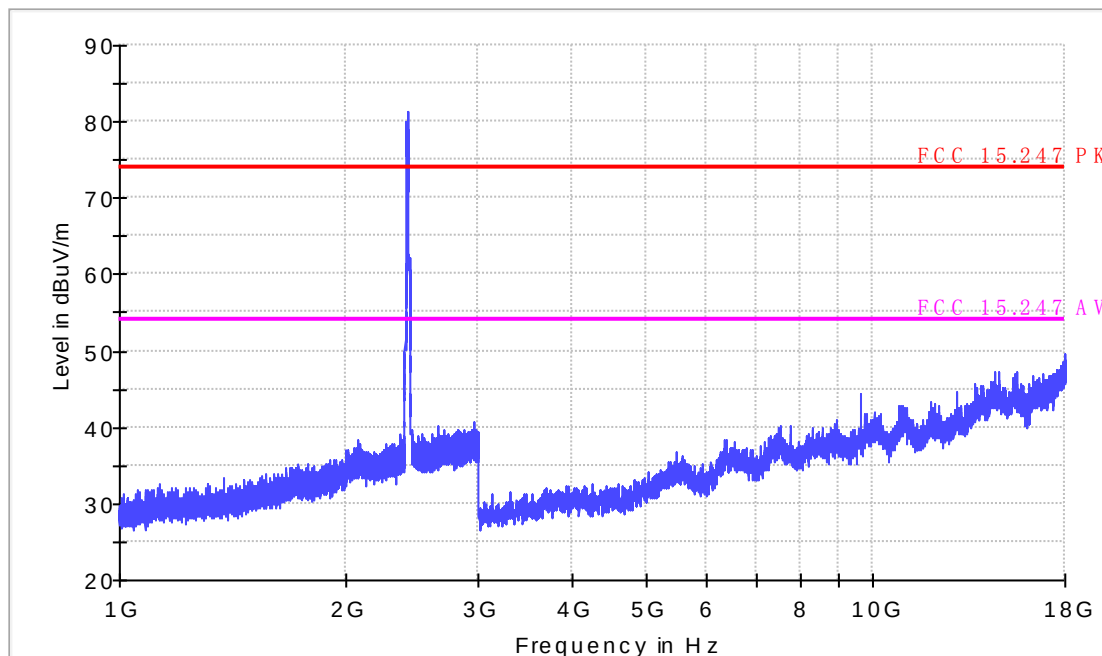
EUT Information

EUT Model Name: WD100
Operation mode: Wifi 11n HT20 CH1
Test Voltage:
Comment:

Common Information

Test Site: SMO EMC Lab.
Environment
Antenna Polarization: Horizontal
Operator Name:
Comment:

FCC Electric Field Strength 1-18GHz operate on 2.4GHz



Radiated Emission

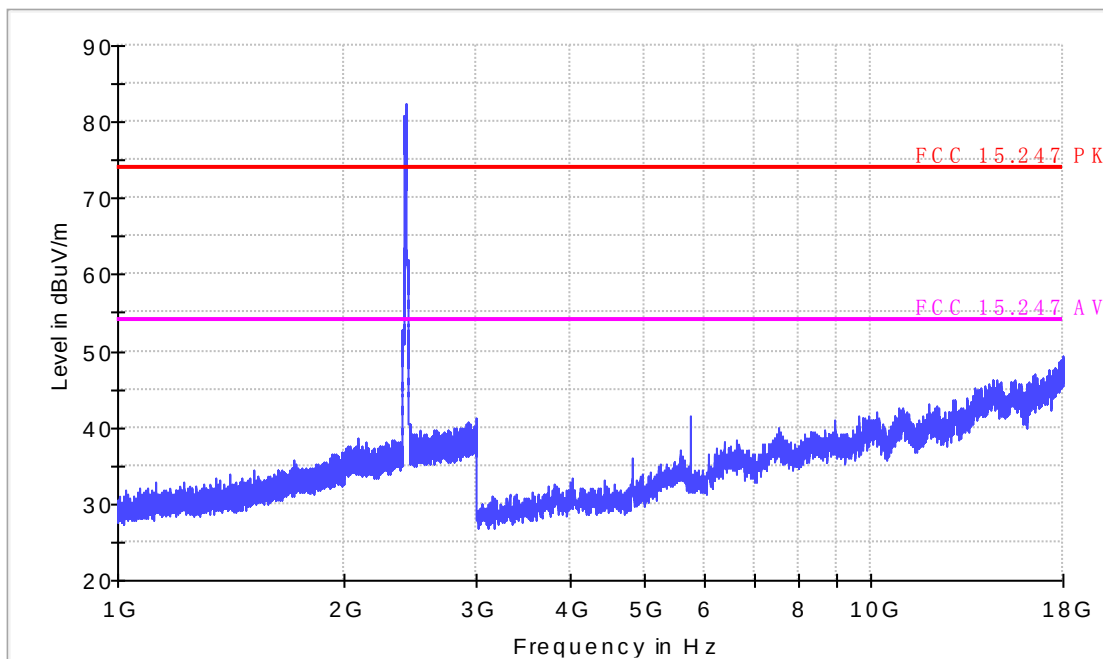
EUT Information

EUT Model Name: WD100
Operation mode: Wifi 11n HT20 CH1
Test Voltage:
Comment:

Common Information

Test Site: SMQ EMC Lab.
Environment
Antenna Polarization: Vertical
Operator Name:
Comment:

FCC Electric Field Strength 1-18GHz operate on 2.4GHz



1-18G

11n-HT20

CH6

Radiated Emission

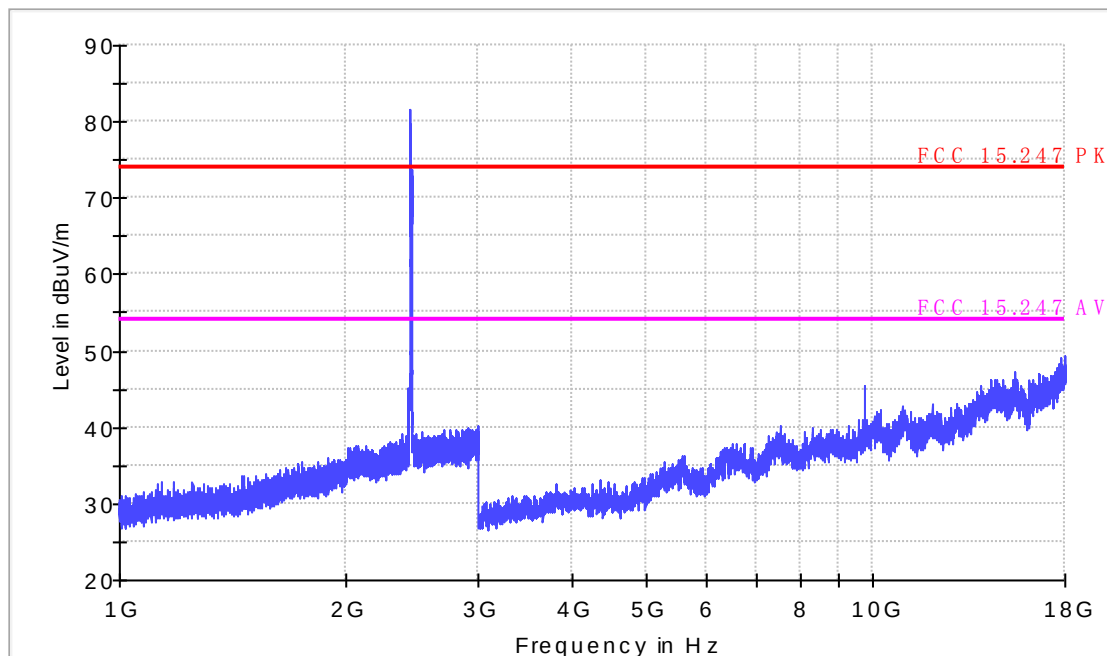
EUT Information

EUT Model Name: WD100
Operation mode: Wifi 11n HT20 CH6
Test Voltage:
Comment:

Common Information

Test Site: SMO EMC Lab.
Environment
Antenna Polarization: Horizontal
Operator Name:
Comment:

FCC Electric Field Strength 1-18GHz operate on 2.4GHz



Radiated Emission

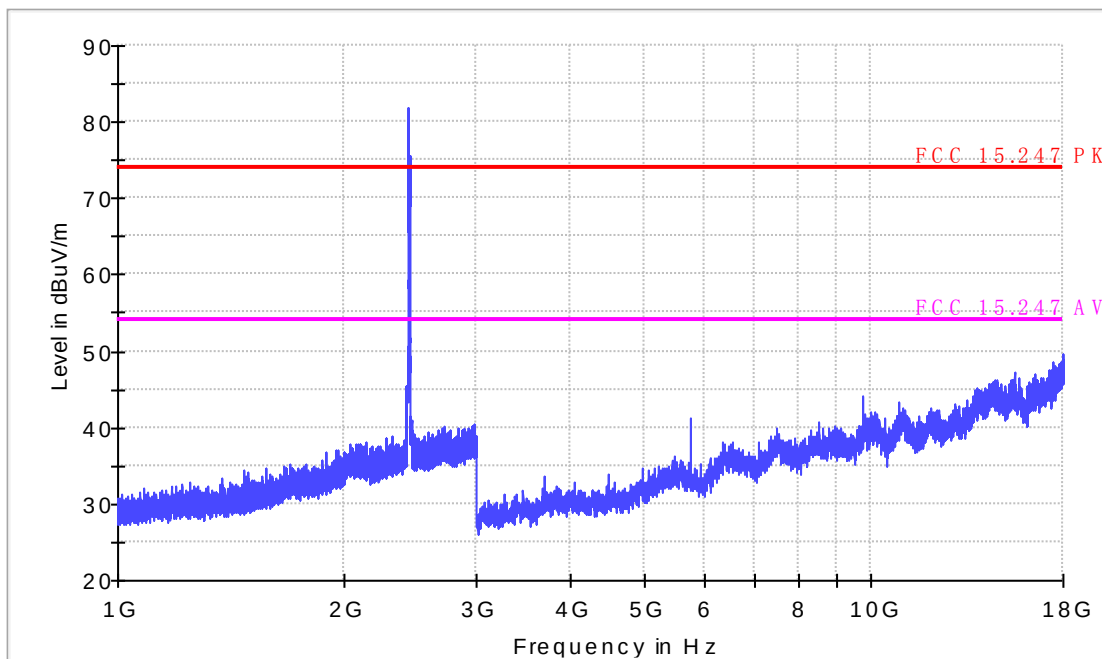
EUT Information

EUT Model Name: WD100
Operation mode: Wifi 11n HT20 CH6
Test Voltage:
Comment:

Common Information

Test Site: SMQ EMC Lab.
Environment
Antenna Polarization: Vertical
Operator Name:
Comment:

FCC Electric Field Strength 1-18GHz operate on 2.4GHz



1-18G

11n-HT20

CH11

Radiated Emission

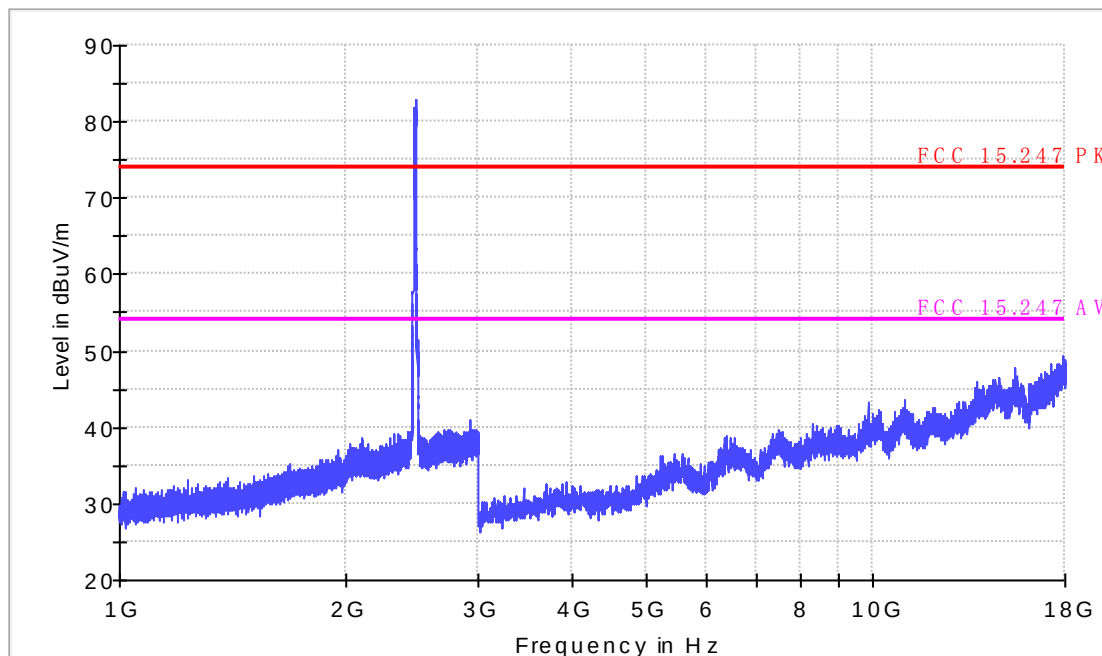
EUT Information

EUT Model Name: WD100
Operation mode: Wifi 11n HT20 CH11
Test Voltage:
Comment:

Common Information

Test Site: SMO EMC Lab.
Environment
Antenna Polarization: Horizontal
Operator Name:
Comment:

FCC Electric Field Strength 1-18GHz operate on 2.4GHz



Radiated Emission

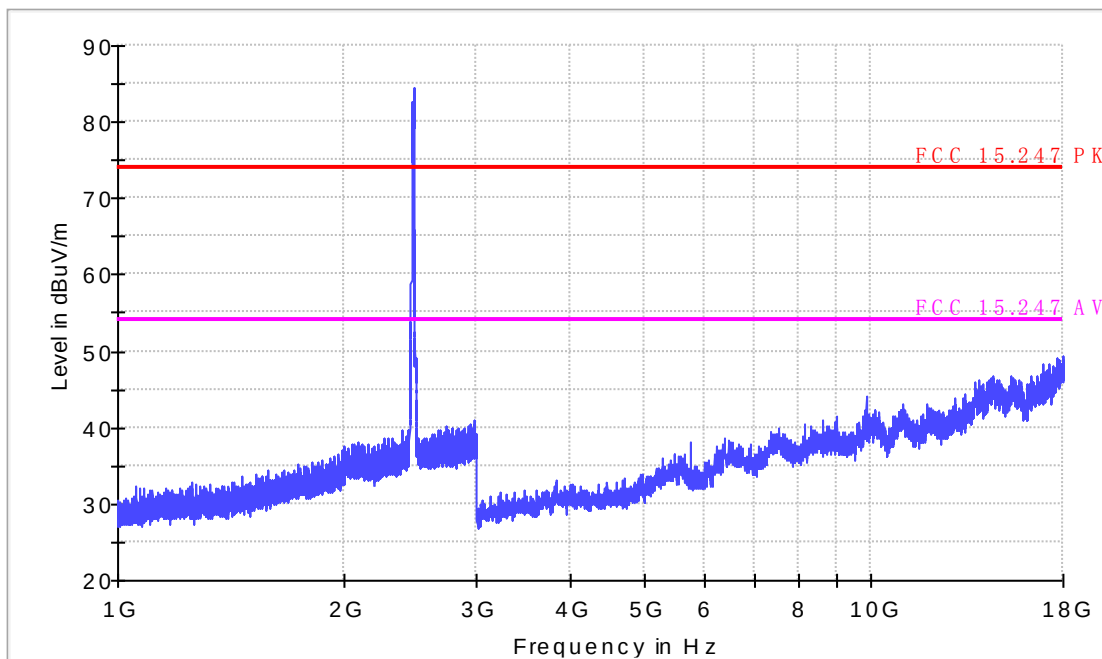
EUT Information

EUT Model Name: WD100
Operation mode: Wifi 11n HT20 CH11
Test Voltage:
Comment:

Common Information

Test Site: SMQ EMC Lab.
Environment
Antenna Polarization: Vertical
Operator Name:
Comment:

FCC Electric Field Strength 1-18GHz operate on 2.4GHz



1-18G

11n-HT40

CH3

Radiated Emission

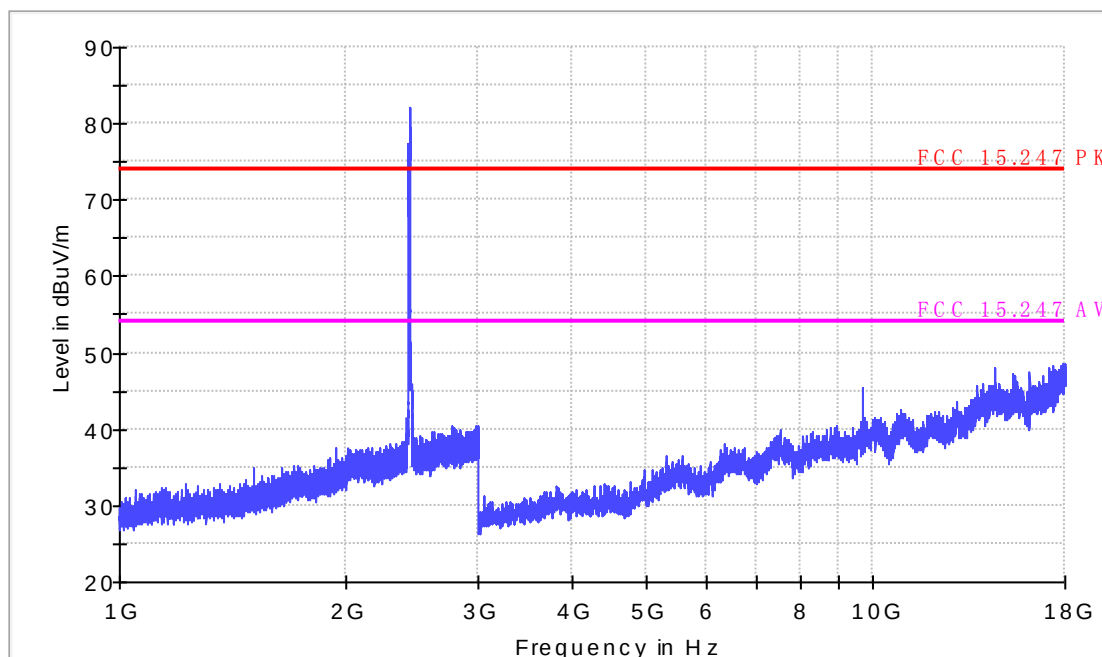
EUT Information

EUT Model Name: WD100
Operation mode: Wifi 11n HT40 CH3
Test Voltage:
Comment:

Common Information

Test Site: SMO EMC Lab.
Environment
Antenna Polarization: Horizontal
Operator Name:
Comment:

FCC Electric Field Strength 1-18GHz operate on 2.4GHz



Radiated Emission

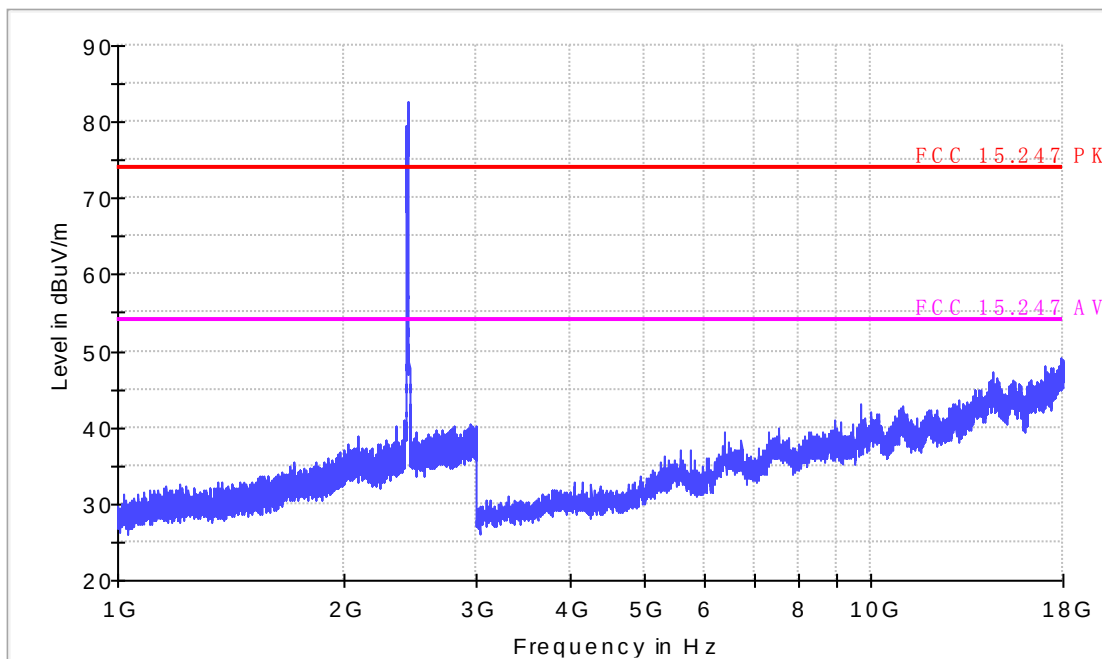
EUT Information

EUT Model Name: WD100
Operation mode: Wifi 11n HT40 CH3
Test Voltage:
Comment:

Common Information

Test Site: SMQ EMC Lab.
Environment
Antenna Polarization: Vertical
Operator Name:
Comment:

FCC Electric Field Strength 1-18GHz operate on 2.4GHz



1-18G

11n-HT40

CH6

Radiated Emission

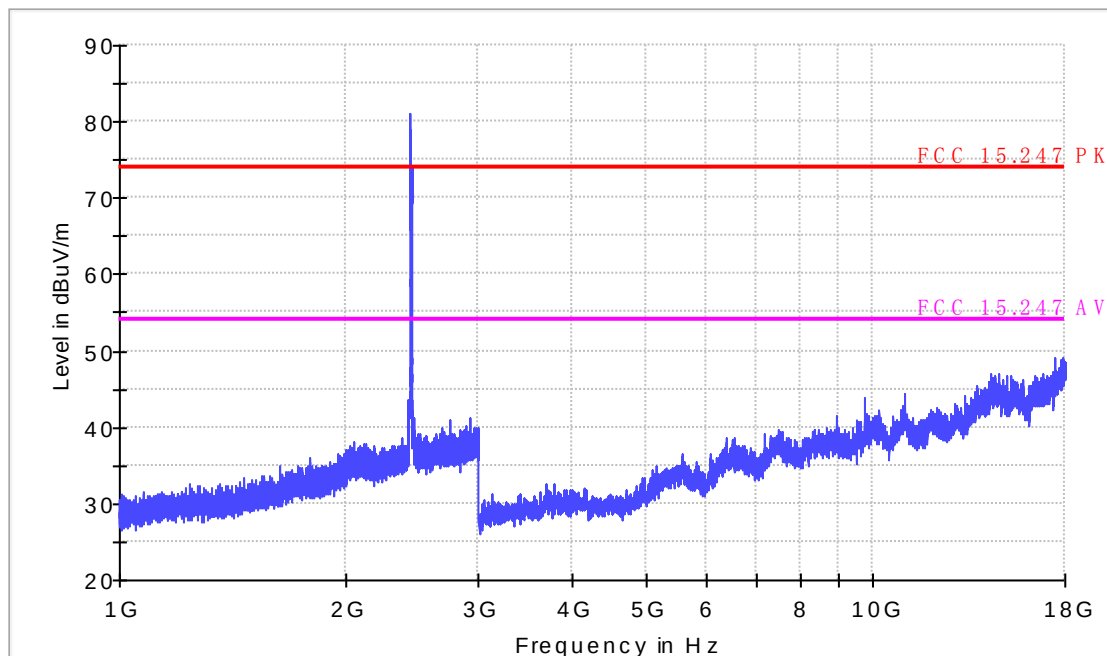
EUT Information

EUT Model Name: WD100
Operation mode: Wifi 11n HT40 CH6
Test Voltage:
Comment:

Common Information

Test Site: SMO EMC Lab.
Environment
Antenna Polarization: Horizontal
Operator Name:
Comment:

FCC Electric Field Strength 1-18GHz operate on 2.4GHz



Radiated Emission

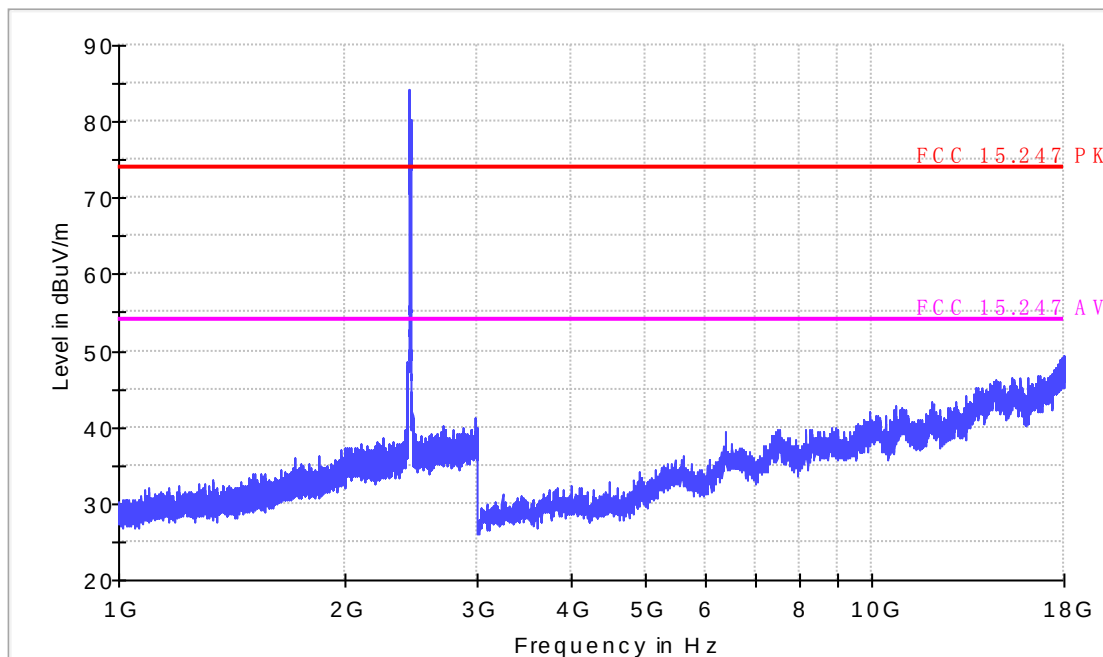
EUT Information

EUT Model Name: WD100
Operation mode: Wifi 11n HT40 CH6
Test Voltage:
Comment:

Common Information

Test Site: SMO EMC Lab.
Environment
Antenna Polarization: Vertical
Operator Name:
Comment:

FCC Electric Field Strength 1-18GHz operate on 2.4GHz



1-18G

11n-HT40

CH9

Radiated Emission

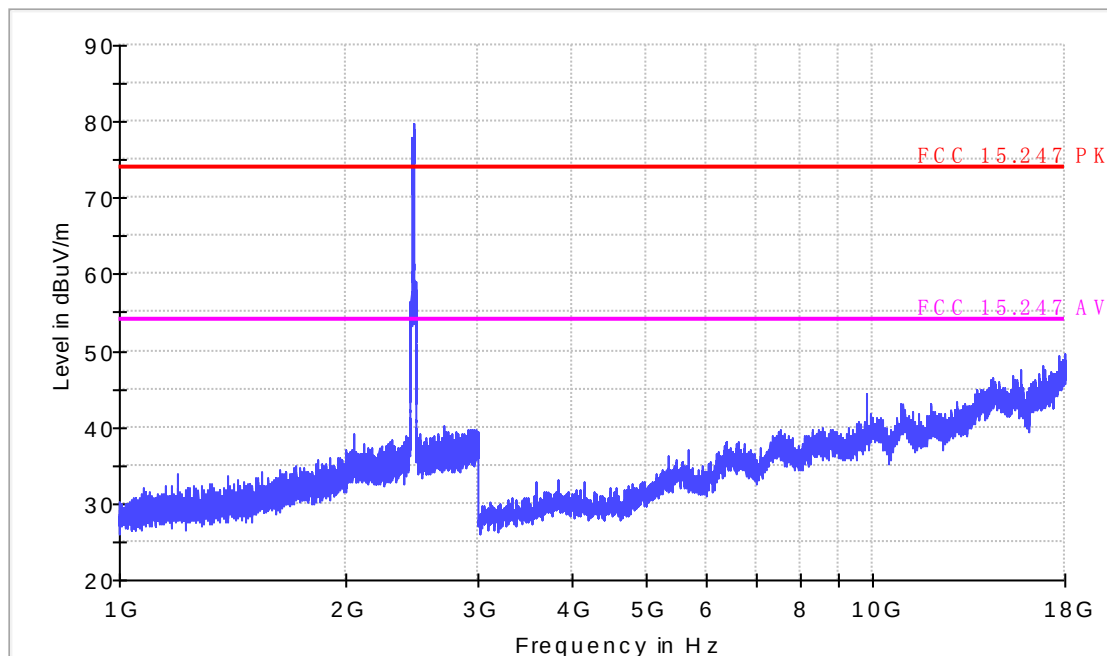
EUT Information

EUT Model Name: WD100
Operation mode: Wifi 11n HT40 CH9
Test Voltage:
Comment:

Common Information

Test Site: SMO EMC Lab.
Environment
Antenna Polarization: Horizontal
Operator Name:
Comment:

FCC Electric Field Strength 1-18GHz operate on 2.4GHz



Radiated Emission

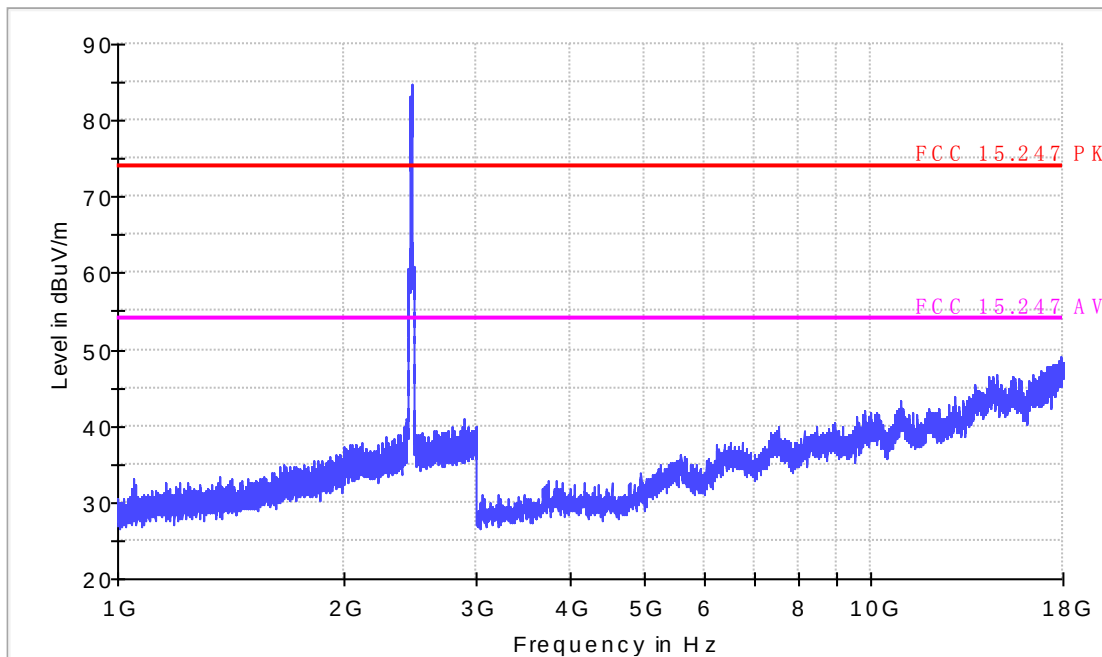
EUT Information

EUT Model Name: WD100
Operation mode: Wifi 11n HT40 CH9
Test Voltage:
Comment:

Common Information

Test Site: SMO EMC Lab.
Environment
Antenna Polarization: Vertical
Operator Name:
Comment:

FCC Electric Field Strength 1-18GHz operate on 2.4GHz



18-25G

(Worst Case at 802.11b CH6)

Radiated Emission

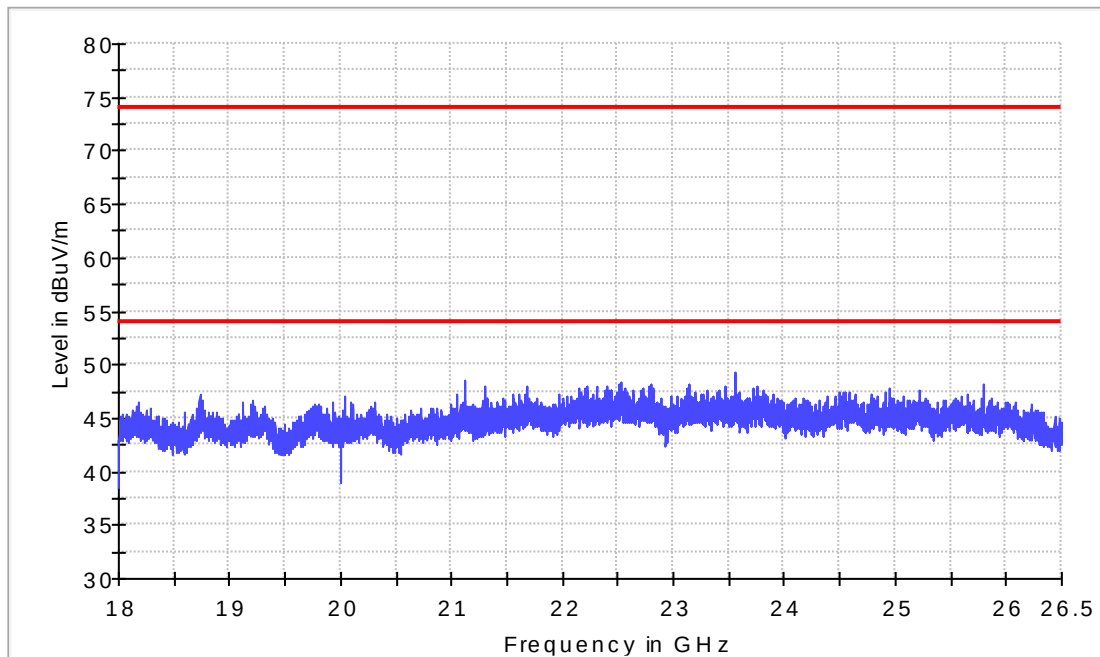
EUT Information

EUT Model Name: WD100
Operation mode: Wifi 11b CH6
Test Voltage:
Comment:

Common Information

Test Site: SMO EMC Lab.
Environment
Antenna Polarization: Horizontal
Operator Name:
Comment:

FCC Electric Field Strength 18-26.5GHz



Radiated Emission

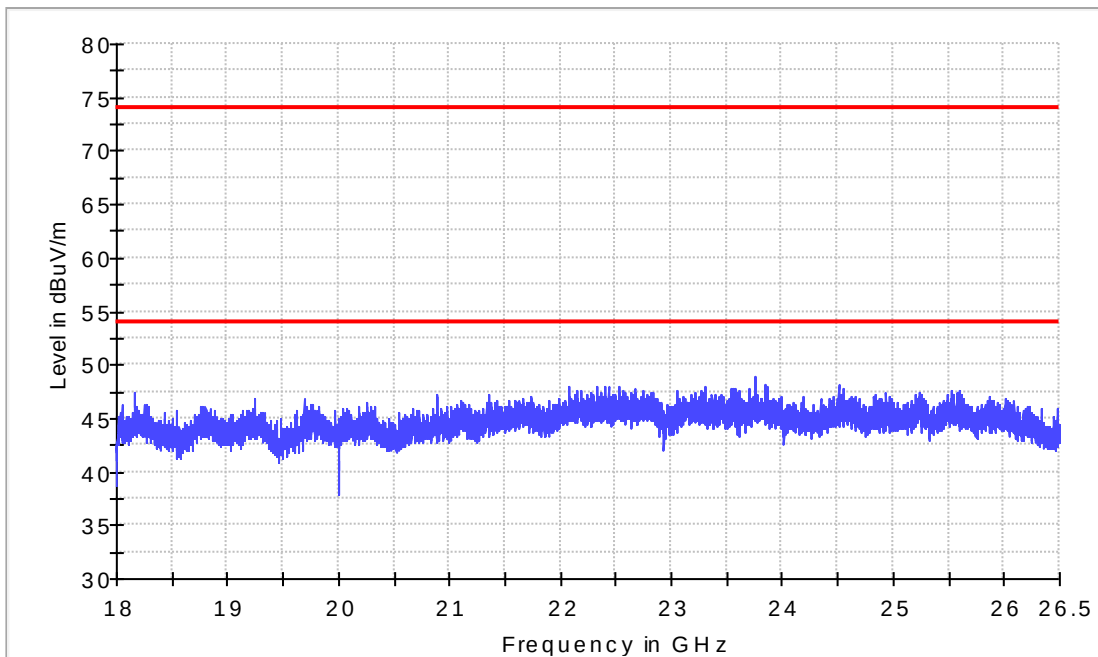
EUT Information

EUT Model Name: WD100
Operation mode: Wifi 11b CH6
Test Voltage:
Comment:

Common Information

Test Site: SMQ EMC Lab.
Environment
Antenna Polarization: Vertical
Operator Name:
Comment:

FCC Electric Field Strength 18-26.5GHz



Band edge

11b

CH1

Radiated Emission

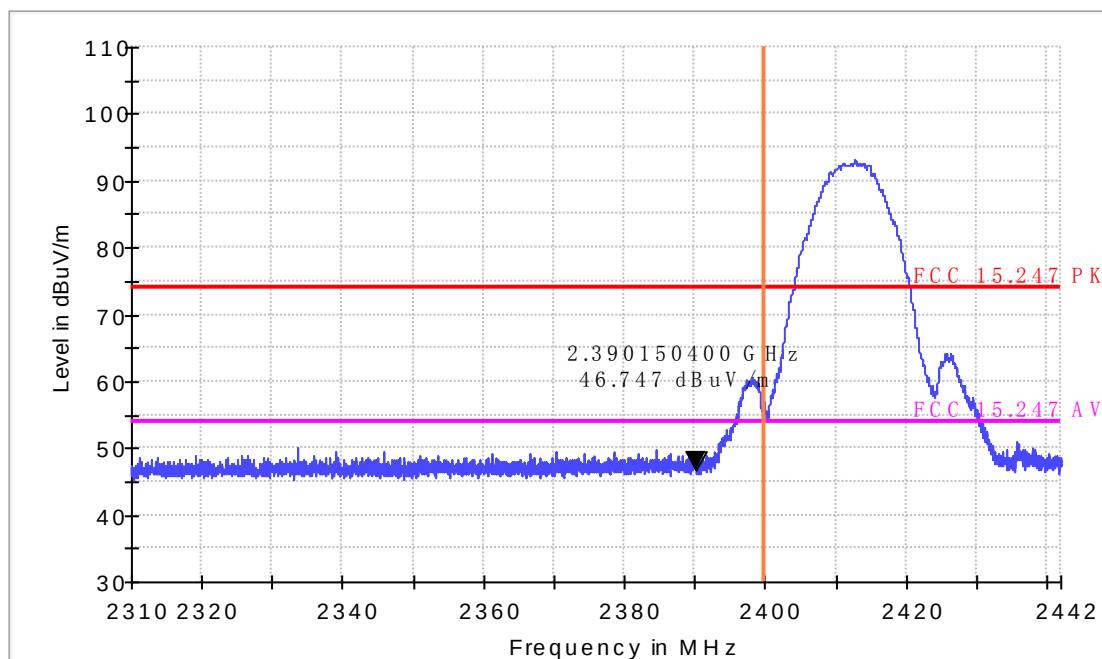
EUT Information

EUT Model Name: WD100
Operation mode: Wifi 11b CH1
Test Voltage:
Comment:

Common Information

Test Site: SMO EMC Lab.
Environment
Antenna Polarization: Horizontal
Operator Name:
Comment:

FCC Electric Field Strength 2.4GHz Bandedge-PK



Radiated Emission

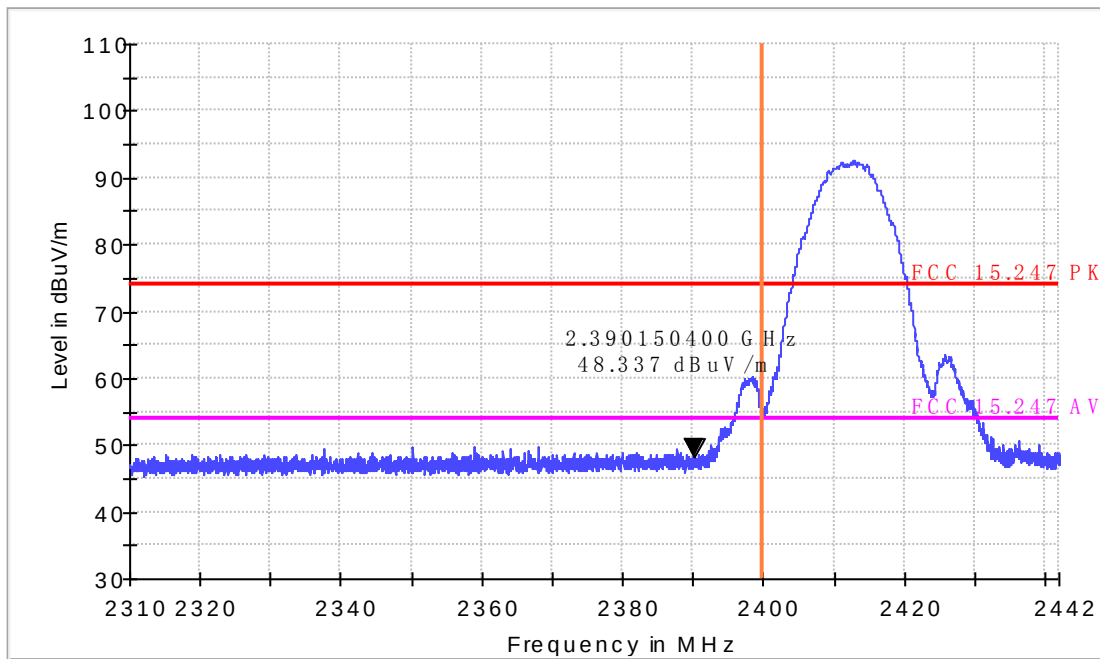
EUT Information

EUT Model Name: WD100
Operation mode: Wifi 11b CH1
Test Voltage:
Comment:

Common Information

Test Site: SMO EMC Lab.
Environment
Antenna Polarization: Vertical
Operator Name:
Comment:

FCC Electric Field Strength 2.4GHz Bandedge-PK



Radiated Emission

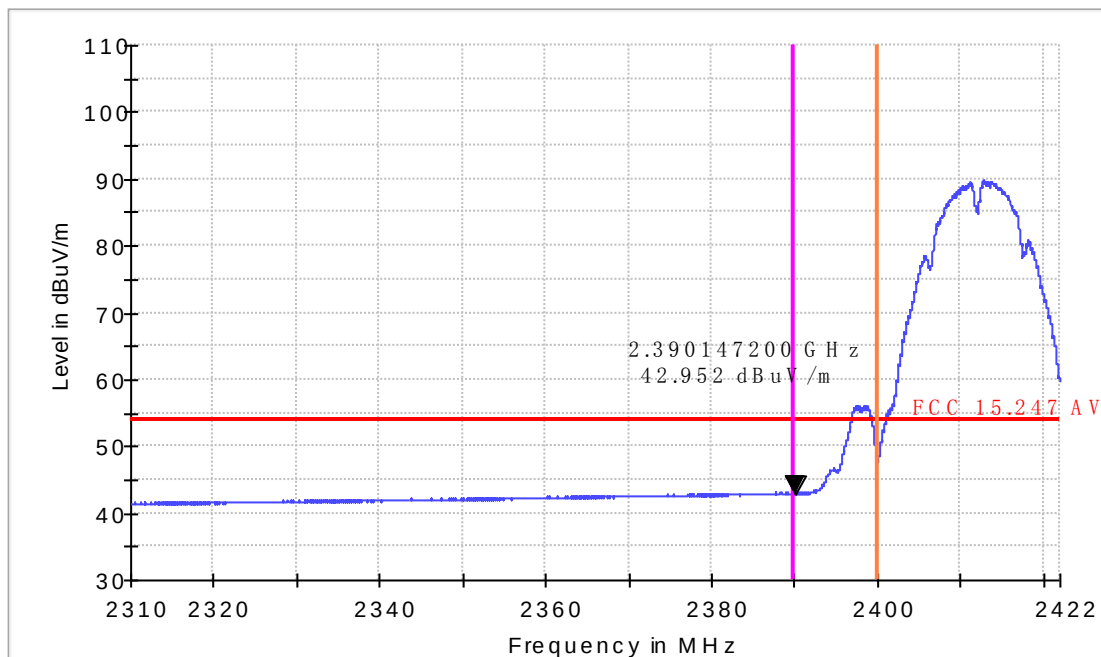
EUT Information

EUT Model Name: WD100
Operation mode: Wifi 11b CH1
Test Voltage:
Comment:

Common Information

Test Site: SMO EMC Lab.
Environment
Antenna Polarization: Horizontal
Operator Name:
Comment:

FCC Electric Field Strength 2.4GHz Bandedge-AV



Radiated Emission

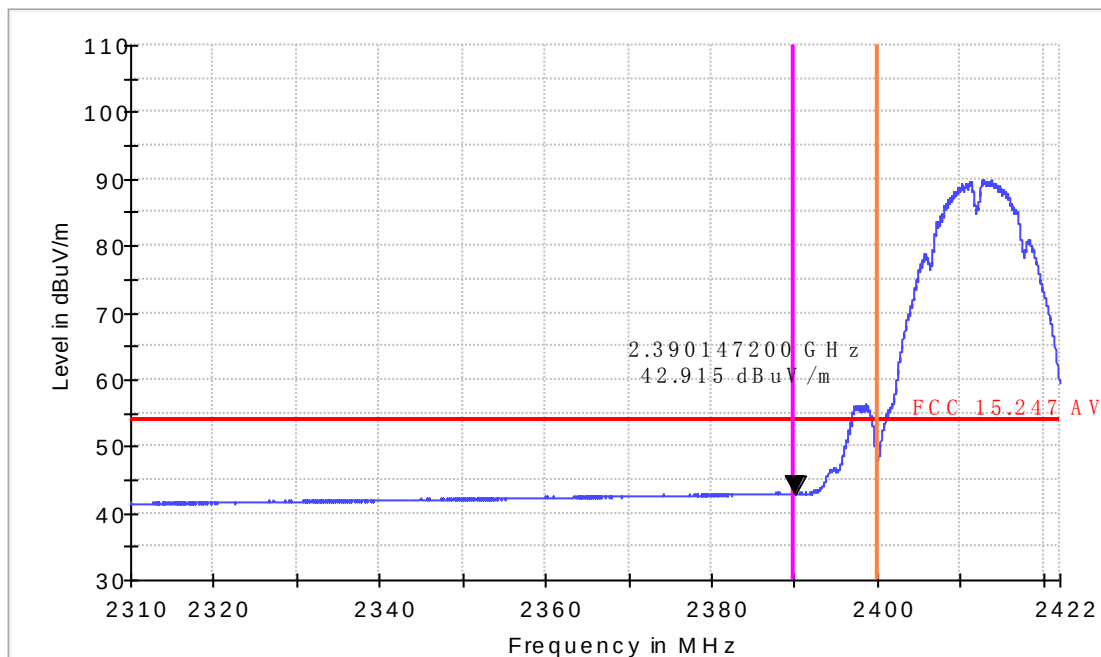
EUT Information

EUT Model Name: WD100
Operation mode: Wifi 11b CH1
Test Voltage:
Comment:

Common Information

Test Site: SMO EMC Lab.
Environment
Antenna Polarization: Vertical
Operator Name:
Comment:

FCC Electric Field Strength 2.4GHz Bandedge-AV



Band edge

11g

CH1

Radiated Emission

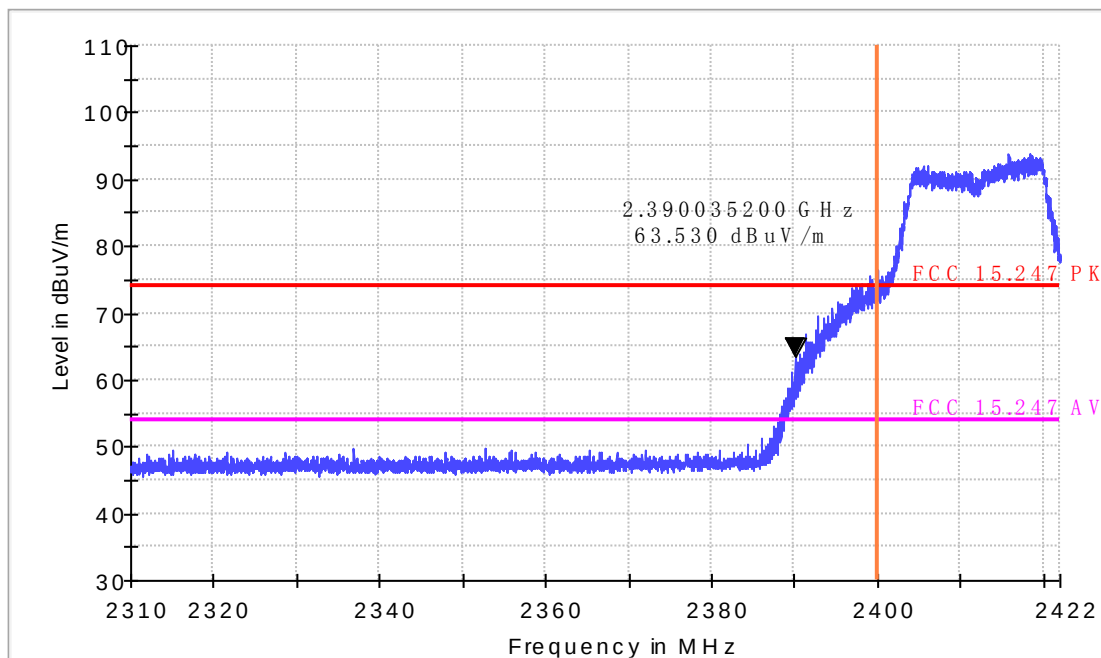
EUT Information

EUT Model Name: WD100
Operation mode: Wifi 11g CH1
Test Voltage:
Comment:

Common Information

Test Site: SMO EMC Lab.
Environment
Antenna Polarization: Horizontal
Operator Name:
Comment:

FCC Electric Field Strength 2.4GHz Bandedge-PK



Radiated Emission

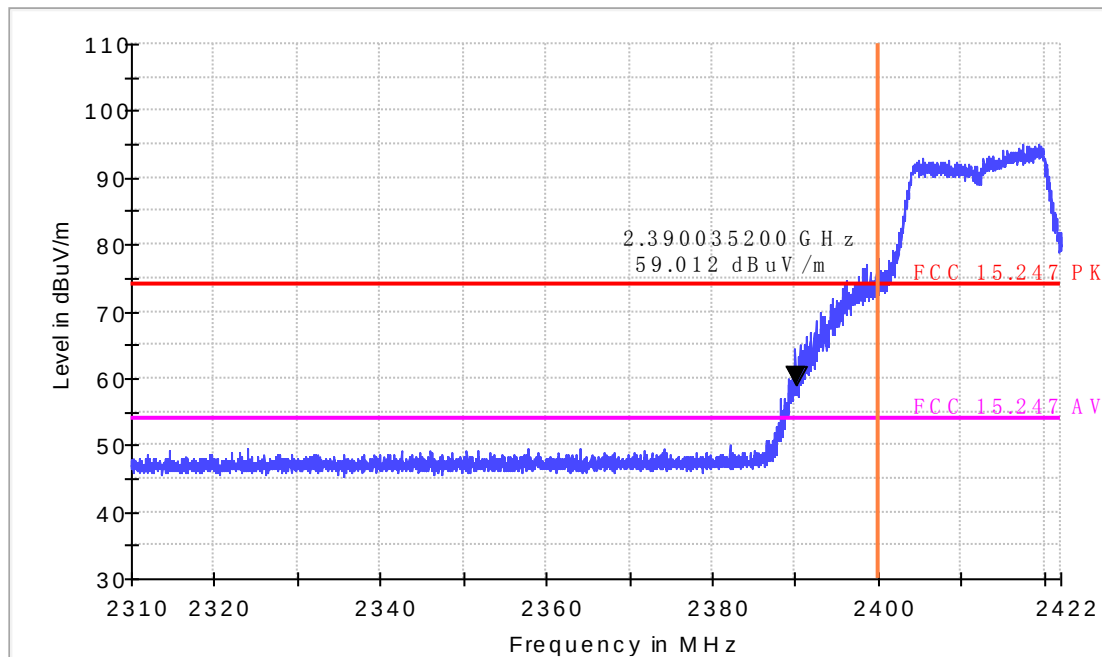
EUT Information

EUT Model Name: WD100
Operation mode: Wifi 11a CH1
Test Voltage:
Comment:

Common Information

Test Site: SMO EMC Lab.
Environment
Antenna Polarization: Vertical
Operator Name:
Comment:

FCC Electric Field Strength 2.4GHz Bandedge-PK



Radiated Emission

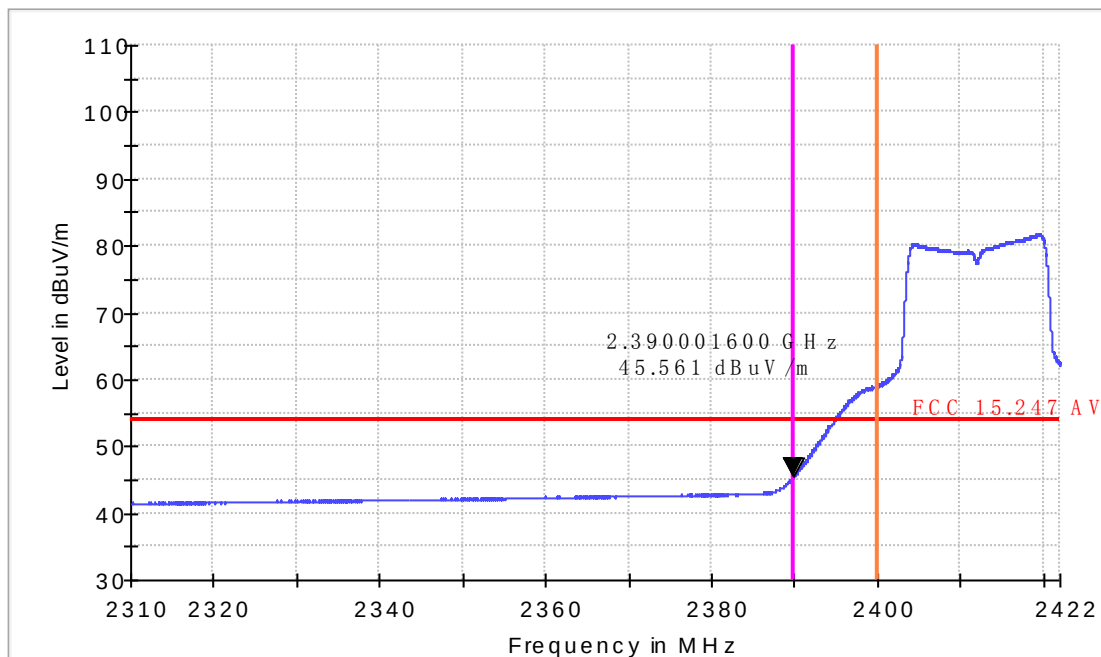
EUT Information

EUT Model Name: WD100
Operation mode: Wifi 11a CH1
Test Voltage:
Comment:

Common Information

Test Site: SMO EMC Lab.
Environment
Antenna Polarization: Horizontal
Operator Name:
Comment:

FCC Electric Field Strength 2.4GHz Bandedge-AV



Radiated Emission

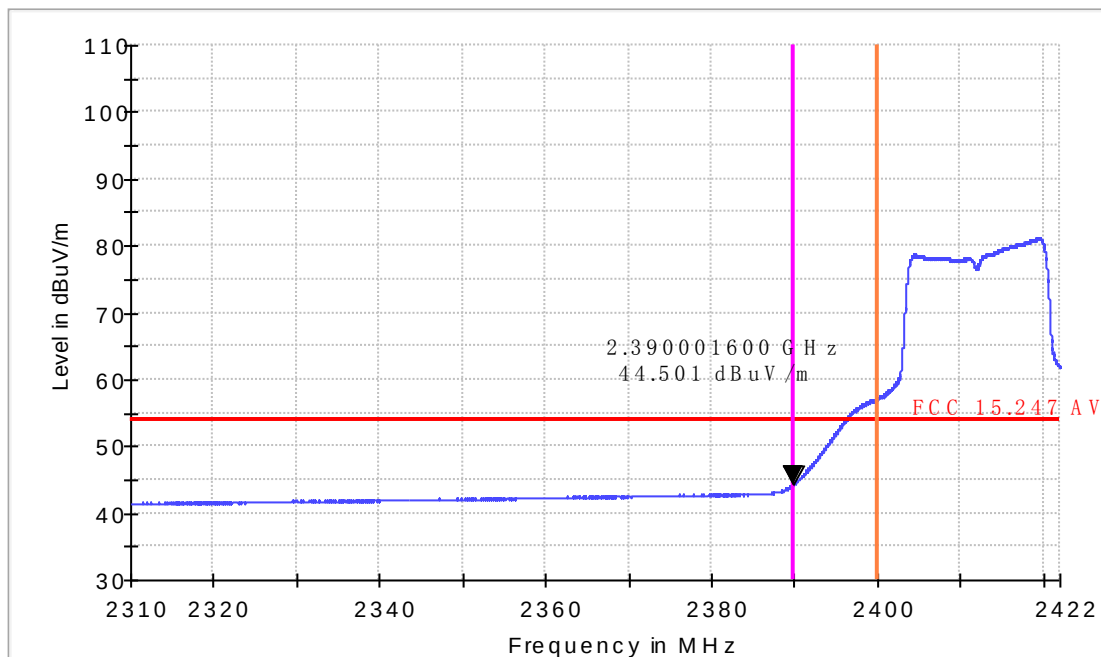
EUT Information

EUT Model Name: WD100
Operation mode: Wifi 11a CH1
Test Voltage:
Comment:

Common Information

Test Site: SMO EMC Lab.
Environment
Antenna Polarization: Vertical
Operator Name:
Comment:

FCC Electric Field Strength 2.4GHz Bandedge-AV



Band edge

11n-HT20

CH1

Radiated Emission

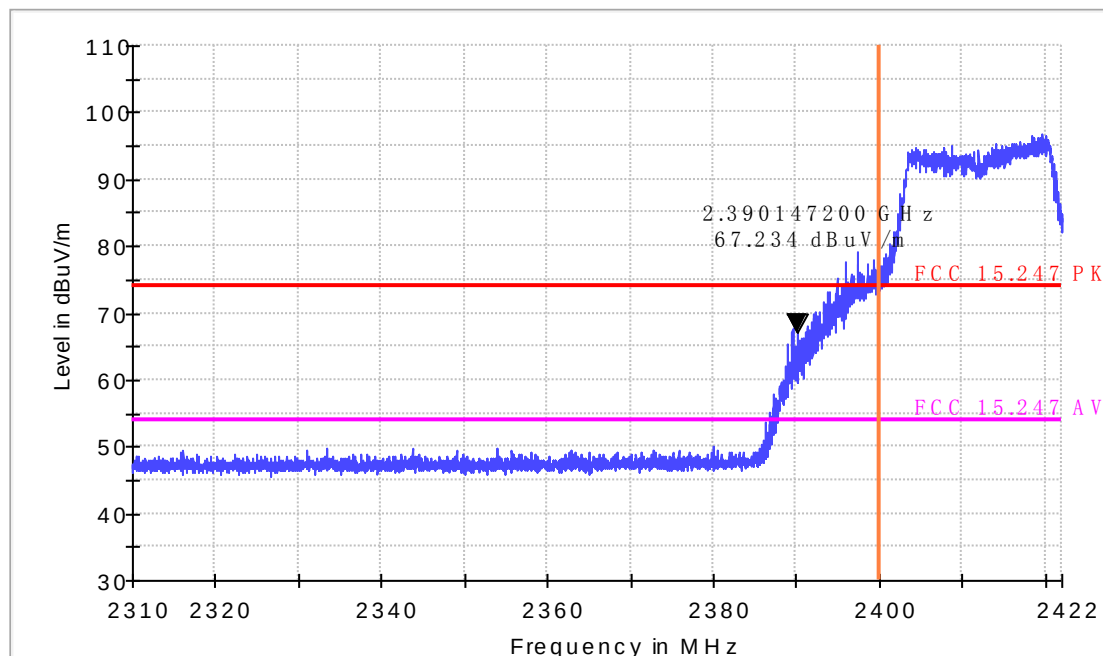
EUT Information

EUT Model Name: WD100
Operation mode: Wifi 11n20 CH1
Test Voltage:
Comment:

Common Information

Test Site: SMO EMC Lab.
Environment
Antenna Polarization: Horizontal
Operator Name:
Comment:

FCC Electric Field Strength 2.4GHz Bandedge-PK



Radiated Emission

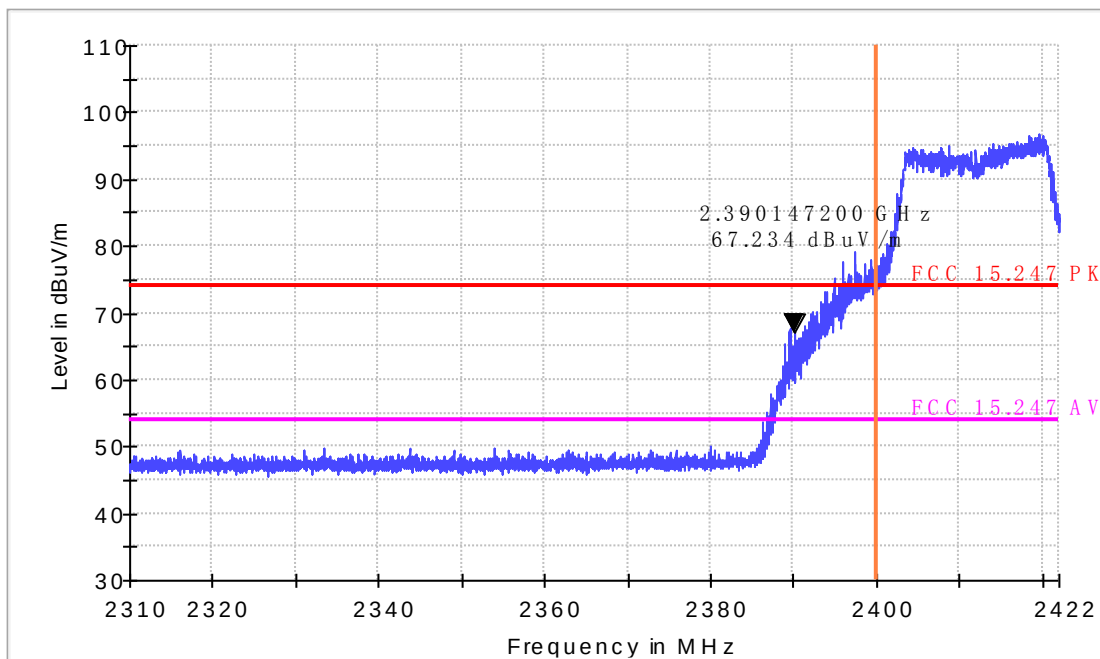
EUT Information

EUT Model Name: WD100
Operation mode: Wifi 11n20 CH1
Test Voltage:
Comment:

Common Information

Test Site: SMQ EMC Lab.
Environment
Antenna Polarization: Vertical
Operator Name:
Comment:

FCC Electric Field Strength 2.4GHz Bandedge-PK



Radiated Emission

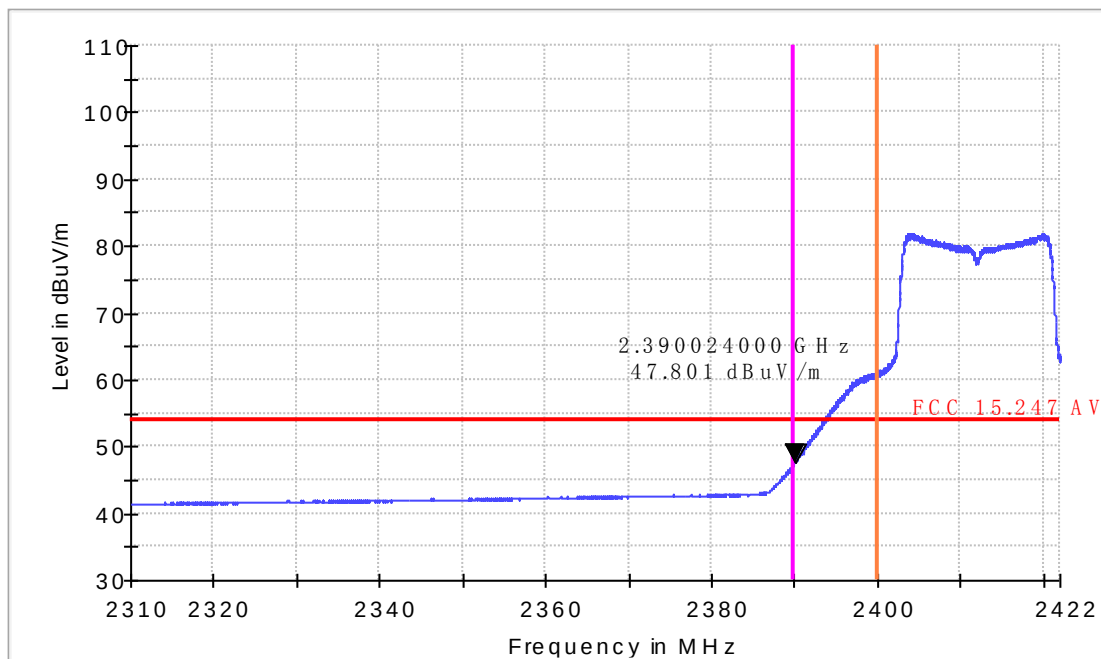
EUT Information

EUT Model Name: WD100
Operation mode: Wifi 11n20 CH1
Test Voltage:
Comment:

Common Information

Test Site: SMQ EMC Lab.
Environment
Antenna Polarization: Horizontal
Operator Name:
Comment:

FCC Electric Field Strength 2.4GHz Bandedge-AV



Radiated Emission

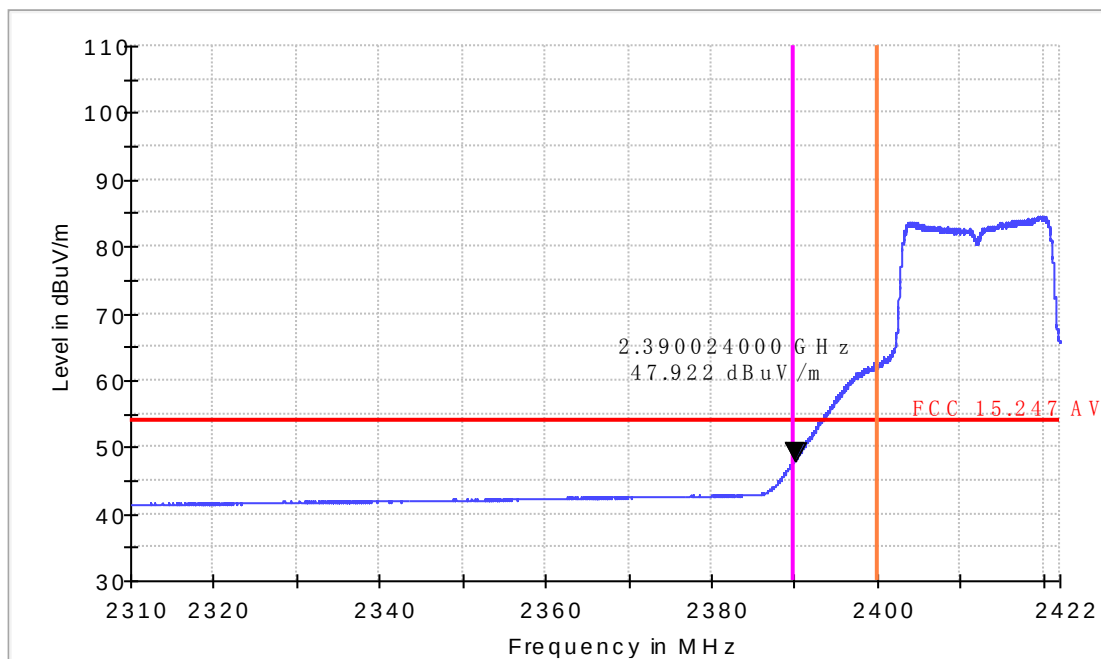
EUT Information

EUT Model Name: WD100
Operation mode: Wifi 11n20 CH1
Test Voltage:
Comment:

Common Information

Test Site: SMO EMC Lab.
Environment
Antenna Polarization: Vertical
Operator Name:
Comment:

FCC Electric Field Strength 2.4GHz Bandedge-AV



Band edge

11n-HT40

CH3

Radiated Emission

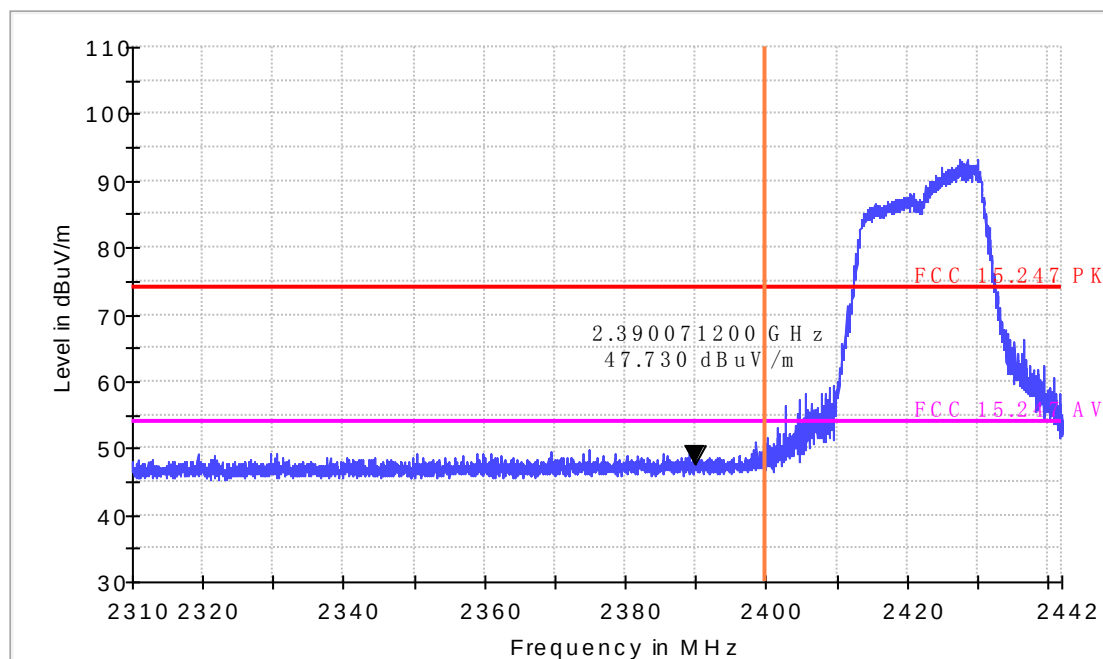
EUT Information

EUT Model Name: WD100
Operation mode: Wifi 11n40 CH3
Test Voltage:
Comment:

Common Information

Test Site: SMO EMC Lab.
Environment
Antenna Polarization: Horizontal
Operator Name:
Comment:

FCC Electric Field Strength 2.4GHz Bandedge-PK



Radiated Emission

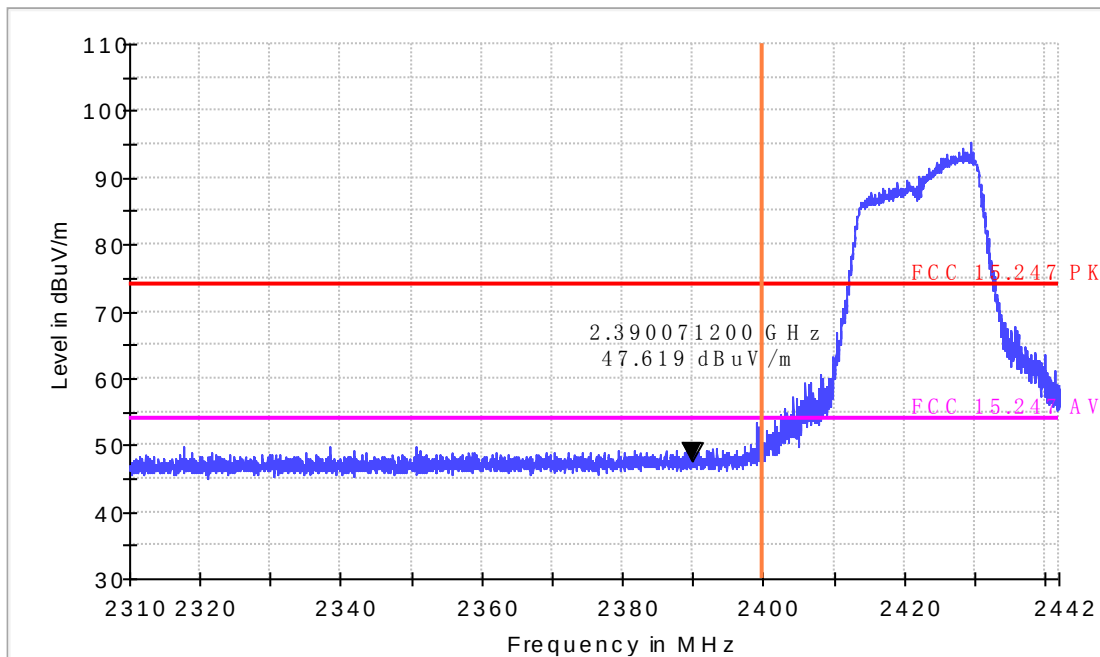
EUT Information

EUT Model Name: WD100
Operation mode: Wifi 11n40 CH3
Test Voltage:
Comment:

Common Information

Test Site: SMO EMC Lab.
Environment
Antenna Polarization: Vertical
Operator Name:
Comment:

FCC Electric Field Strength 2.4GHz Bandedge-PK



Radiated Emission

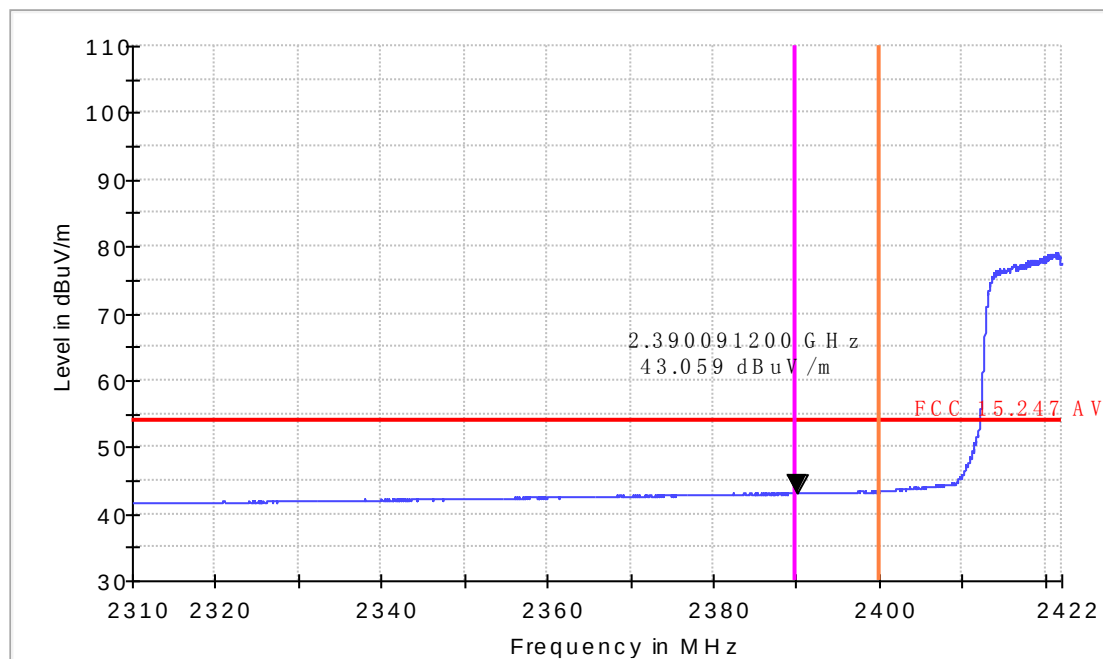
EUT Information

EUT Model Name: WD100
Operation mode: Wifi 11n40 CH3
Test Voltage:
Comment:

Common Information

Test Site: SMO EMC Lab.
Environment
Antenna Polarization: Horizontal
Operator Name:
Comment:

FCC Electric Field Strength 2.4GHz Bandedge-AV



Radiated Emission

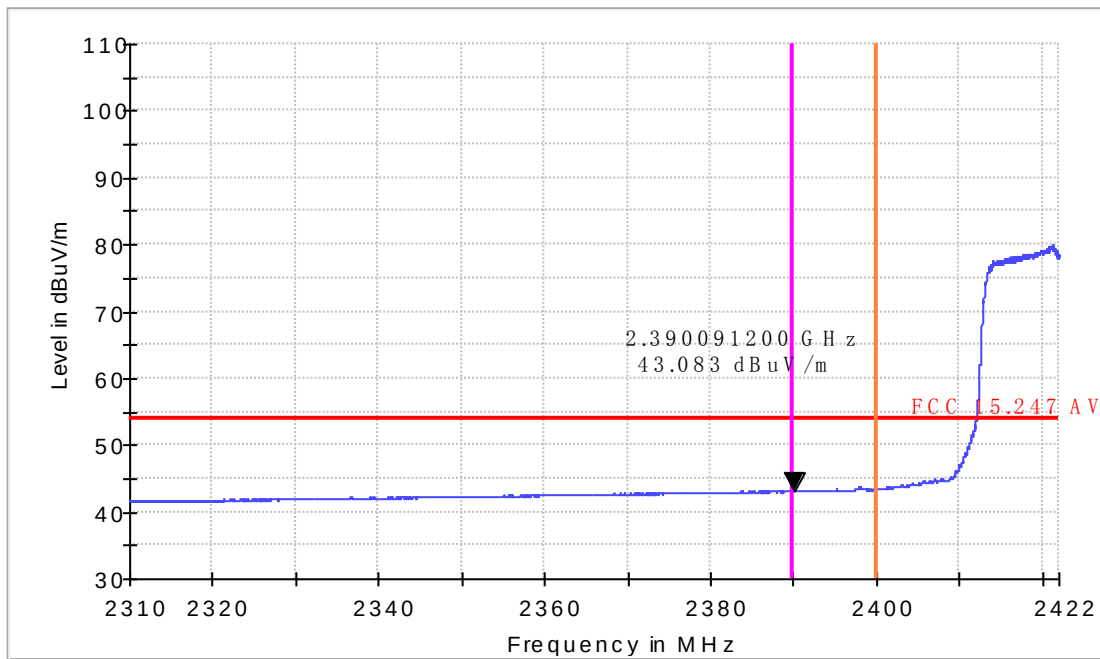
EUT Information

EUT Model Name: WD100
Operation mode: Wifi 11n40 CH3
Test Voltage:
Comment:

Common Information

Test Site: SMO EMC Lab.
Environment
Antenna Polarization: Vertical
Operator Name:
Comment:

FCC Electric Field Strength 2.4GHz Bandedge-AV



Band edge

11b

CH11

Radiated Emission

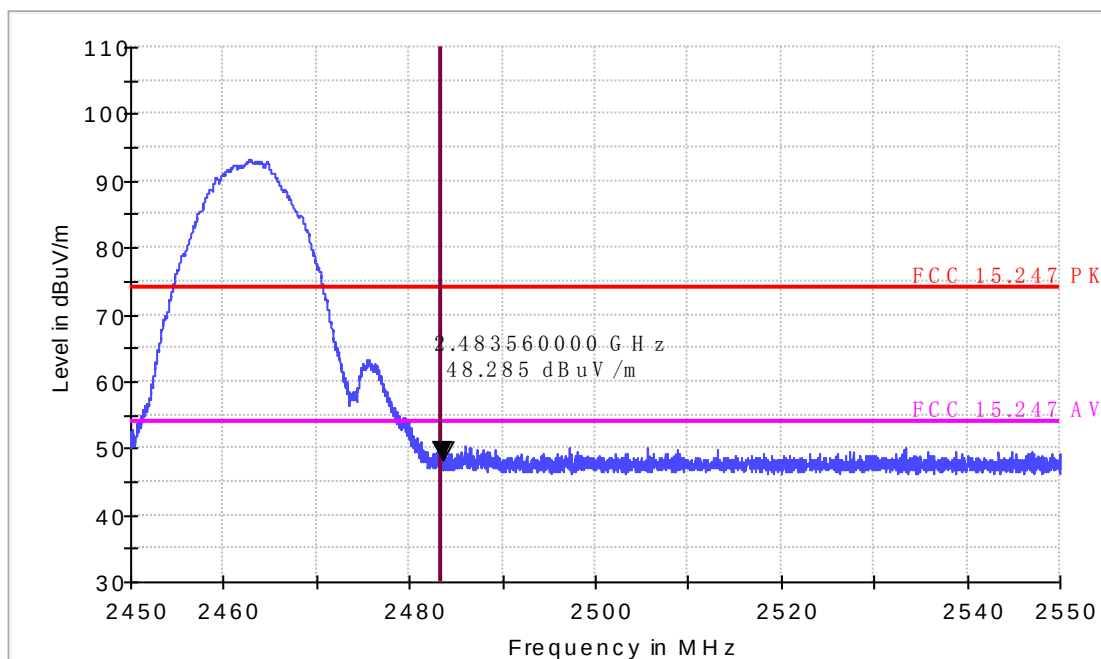
EUT Information

EUT Model Name: WD100
Operation mode: Wifi 11b CH11
Test Voltage:
Comment:

Common Information

Test Site: SMO EMC Lab.
Environment
Antenna Polarization: Horizontal
Operator Name:
Comment:

FCC Electric Field Strength 2.4GHz Bandedge-PK



Radiated Emission

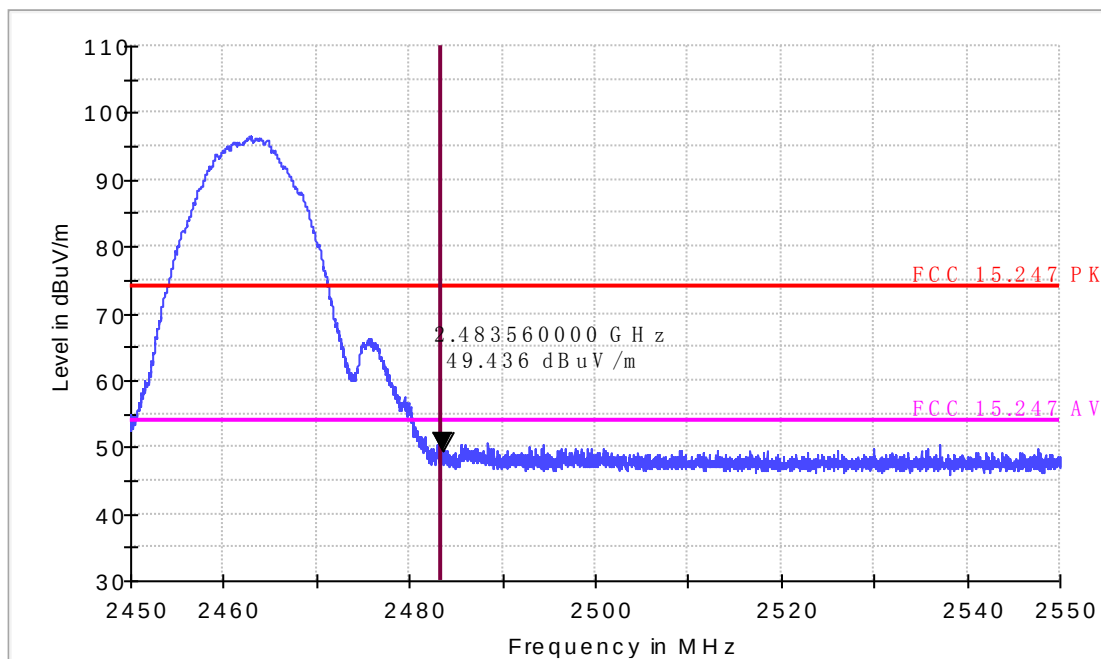
EUT Information

EUT Model Name: WD100
Operation mode: Wifi 11b CH11
Test Voltage:
Comment:

Common Information

Test Site: SMO EMC Lab.
Environment
Antenna Polarization: Vertical
Operator Name:
Comment:

FCC Electric Field Strength 2.4GHz Bandedge-PK



Radiated Emission

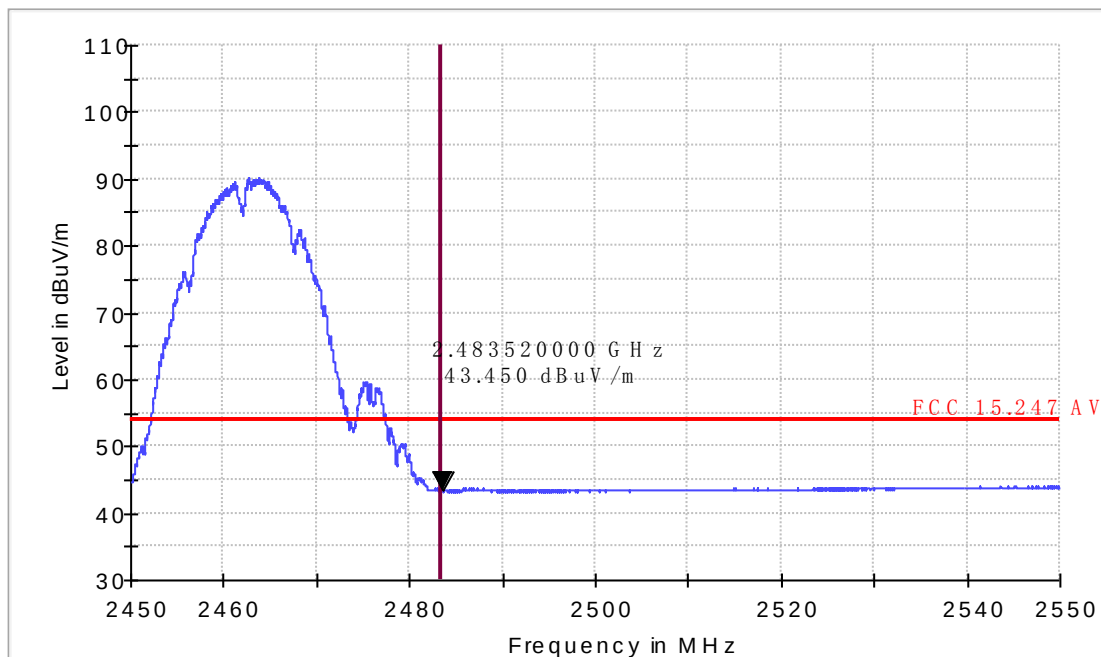
EUT Information

EUT Model Name: WD100
Operation mode: Wifi 11b CH11
Test Voltage:
Comment:

Common Information

Test Site: SMO EMC Lab.
Environment
Antenna Polarization: Horizontal
Operator Name:
Comment:

FCC Electric Field Strength 2.4GHz Bandedge-AV



Radiated Emission

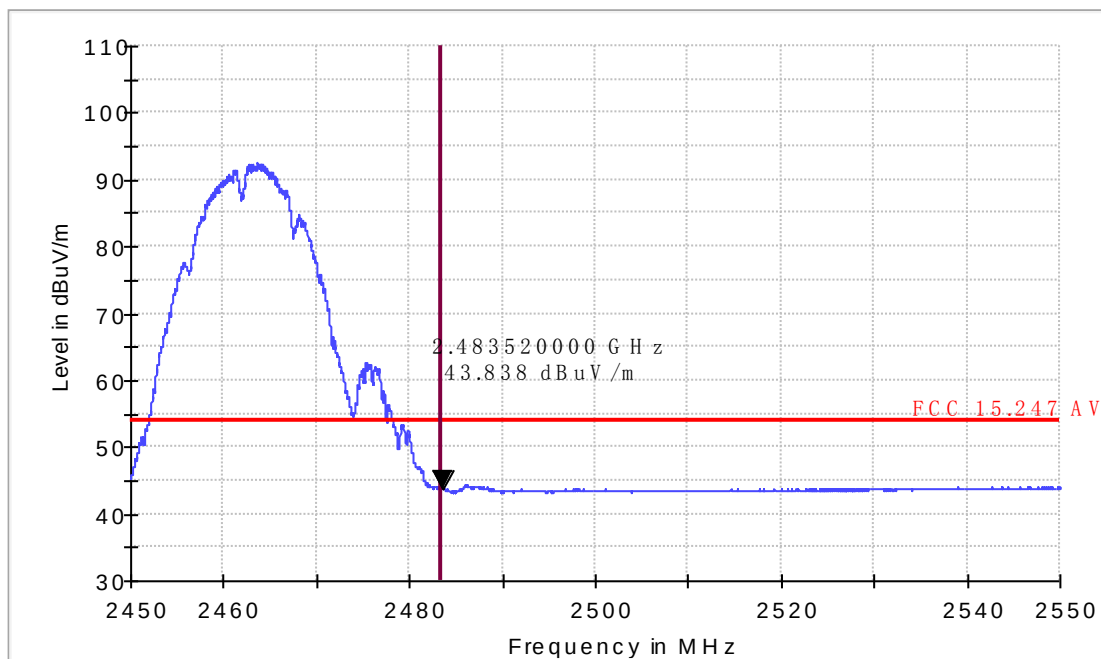
EUT Information

EUT Model Name: WD100
Operation mode: Wifi 11b CH11
Test Voltage:
Comment:

Common Information

Test Site: SMO EMC Lab.
Environment
Antenna Polarization: Vertical
Operator Name:
Comment:

FCC Electric Field Strength 2.4GHz Bandedge-AV



Band edge

11g

CH11

Radiated Emission

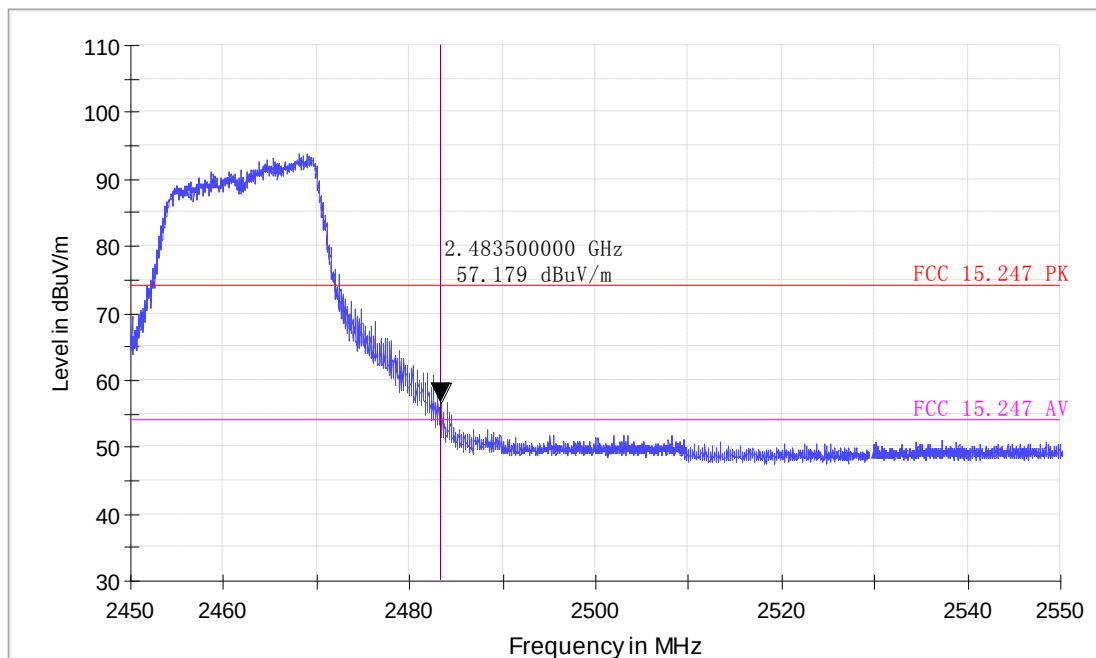
EUT Information

EUT Model Name: WD100
Operation mode: Wifi 11g CH11
Test Voltage:
Comment:

Common Information

Test Site: SMO EMC Lab.
Environment
Antenna Polarization: Horizontal
Operator Name:
Comment:

Copy of FCC Electric Field Strength 2.4GHz Bandedge-PK



Radiated Emission

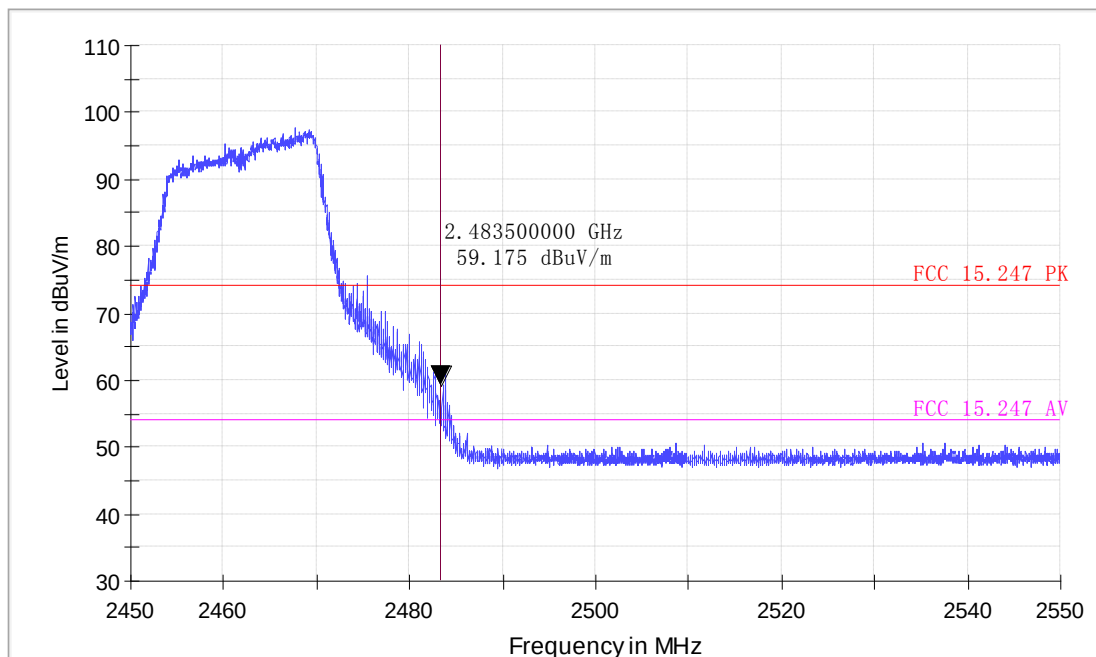
EUT Information

EUT Model Name: WD100
Operation mode: Wifi 11a CH11
Test Voltage:
Comment:

Common Information

Test Site: SMO EMC Lab.
Environment
Antenna Polarization: Vertical
Operator Name:
Comment:

Copy of FCC Electric Field Strength 2.4GHz Bandedge-PK



adiated Emission

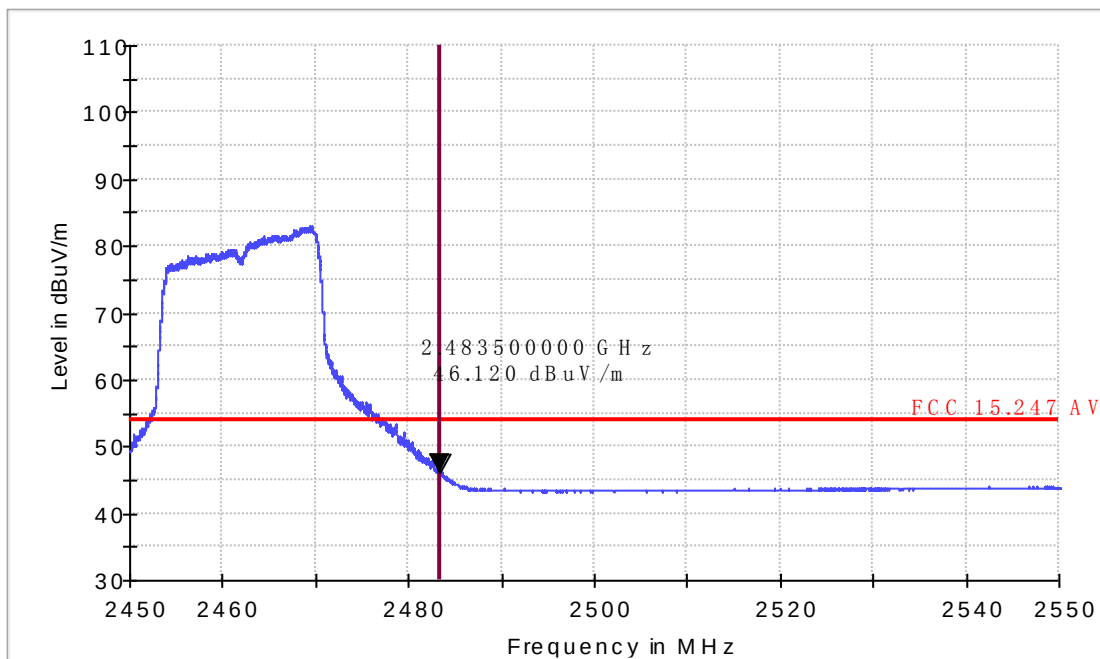
EUT Information

EUT Model Name: WD100
Operation mode: Wifi 11g CH11
Test Voltage:
Comment:

Common Information

Test Site: SMQ EMC Lab.
Environment
Antenna Polarization: Horizontal
Operator Name:
Comment:

FCC Electric Field Strength 2.4GHz Bandedge-AV



Radiated Emission

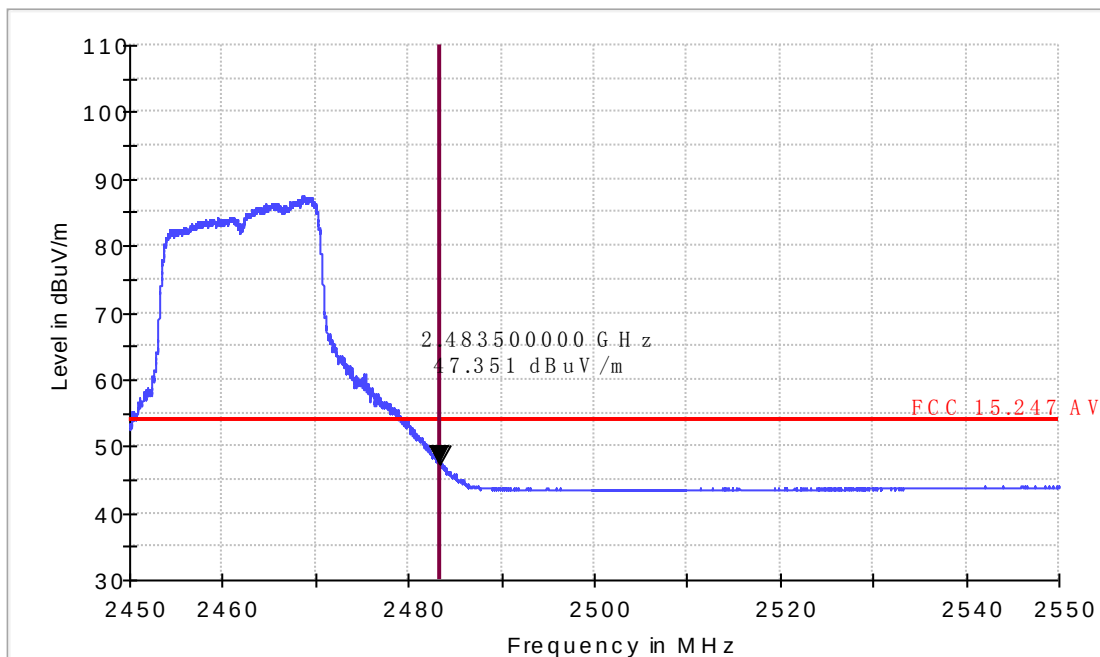
EUT Information

EUT Model Name: WD100
Operation mode: Wifi 11a CH11
Test Voltage:
Comment:

Common Information

Test Site: SMO EMC Lab.
Environment
Antenna Polarization: Vertical
Operator Name:
Comment:

FCC Electric Field Strength 2.4GHz Bandedge-AV



Band edge

11n-HT20

CH11

Radiated Emission

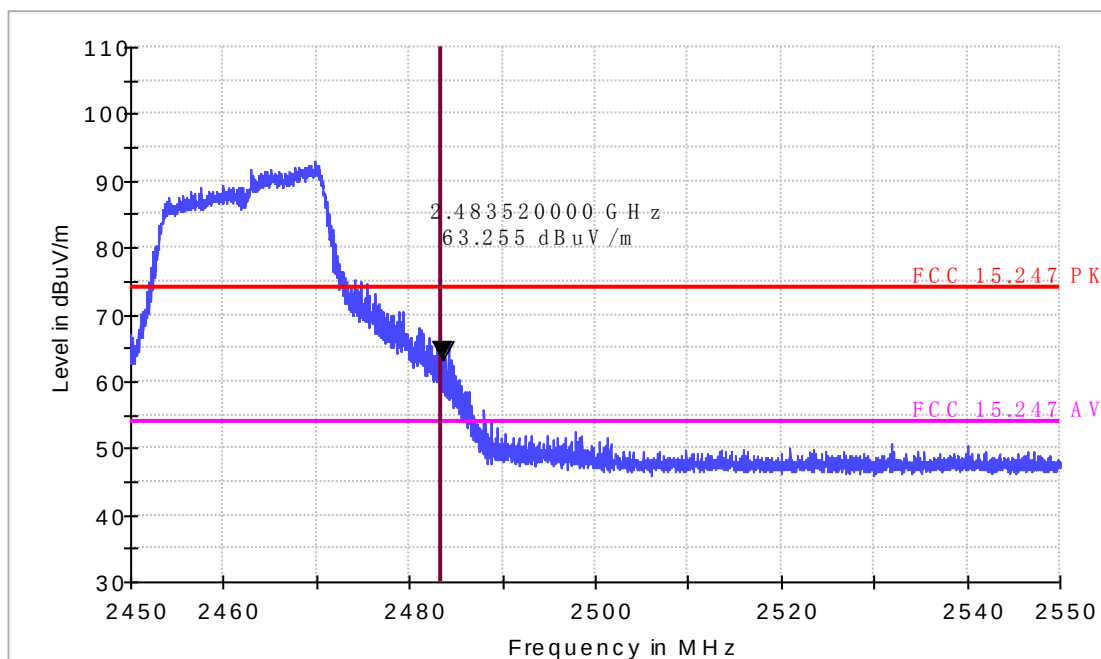
EUT Information

EUT Model Name: WD100
Operation mode: Wifi 11n20 CH11
Test Voltage:
Comment:

Common Information

Test Site: SMO EMC Lab.
Environment
Antenna Polarization: Horizontal
Operator Name:
Comment:

FCC Electric Field Strength 2.4GHz Bandedge-PK



Radiated Emission

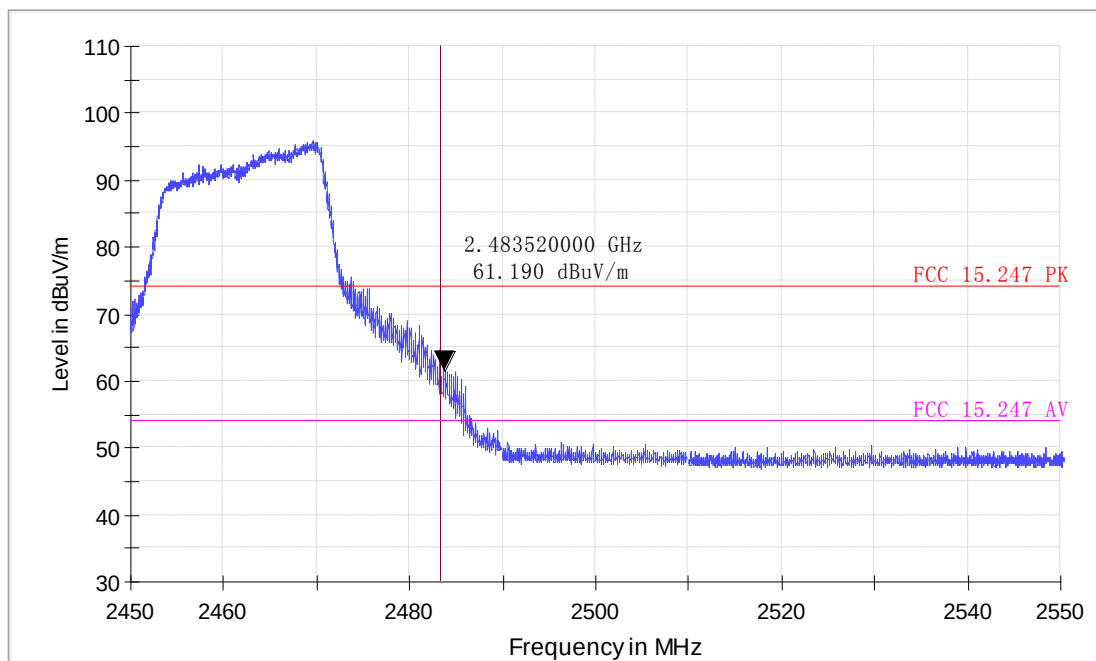
EUT Information

EUT Model Name: WD100
Operation mode: Wifi 11n20 CH11
Test Voltage:
Comment:

Common Information

Test Site: SMO EMC Lab.
Environment
Antenna Polarization: Vertical
Operator Name:
Comment:

Copy of FCC Electric Field Strength 2.4GHz Bandedge-PK



Radiated Emission

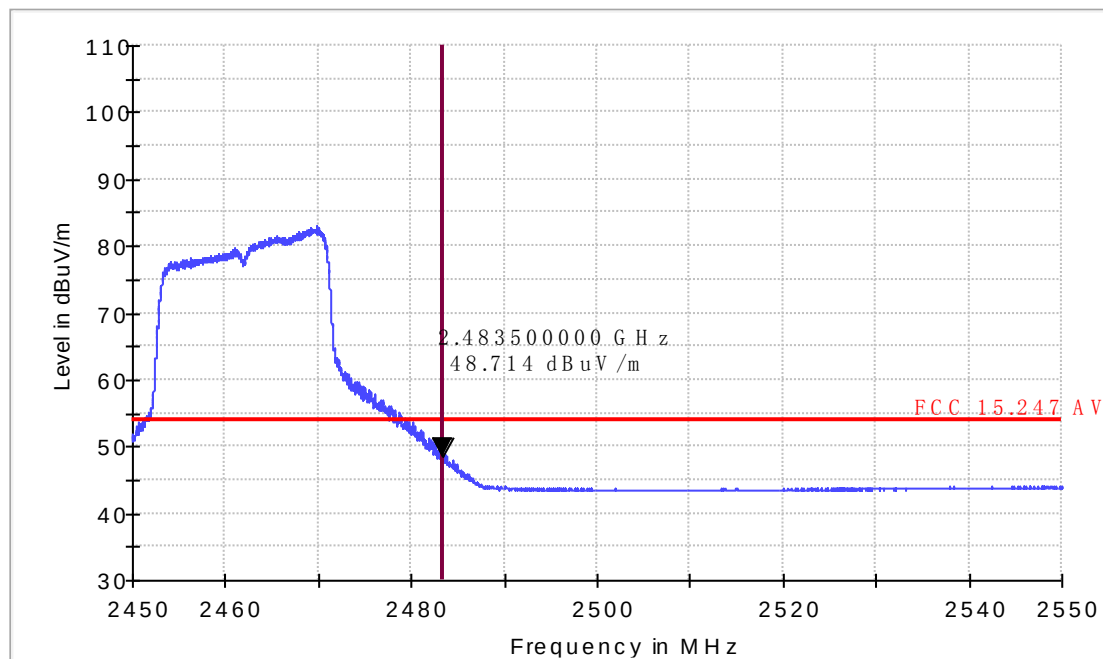
EUT Information

EUT Model Name: WD100
Operation mode: Wifi 11n20 CH11
Test Voltage:
Comment:

Common Information

Test Site: SMQ EMC Lab.
Environment
Antenna Polarization: Horizontal
Operator Name:
Comment:

FCC Electric Field Strength 2.4GHz Bandedge-AV



Radiated Emission

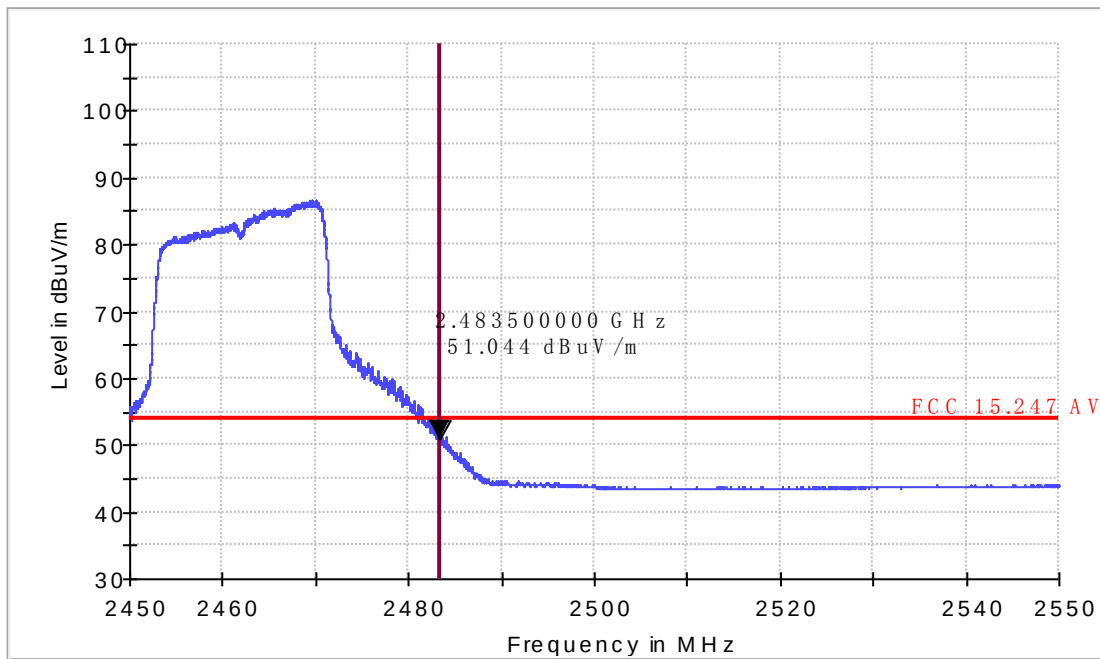
EUT Information

EUT Model Name: WD100
Operation mode: Wifi 11n20 CH11
Test Voltage:
Comment:

Common Information

Test Site: SMO EMC Lab.
Environment
Antenna Polarization: Vertical
Operator Name:
Comment:

FCC Electric Field Strength 2.4GHz Bandedge-AV



Band edge

11n-HT40

CH9

Radiated Emission

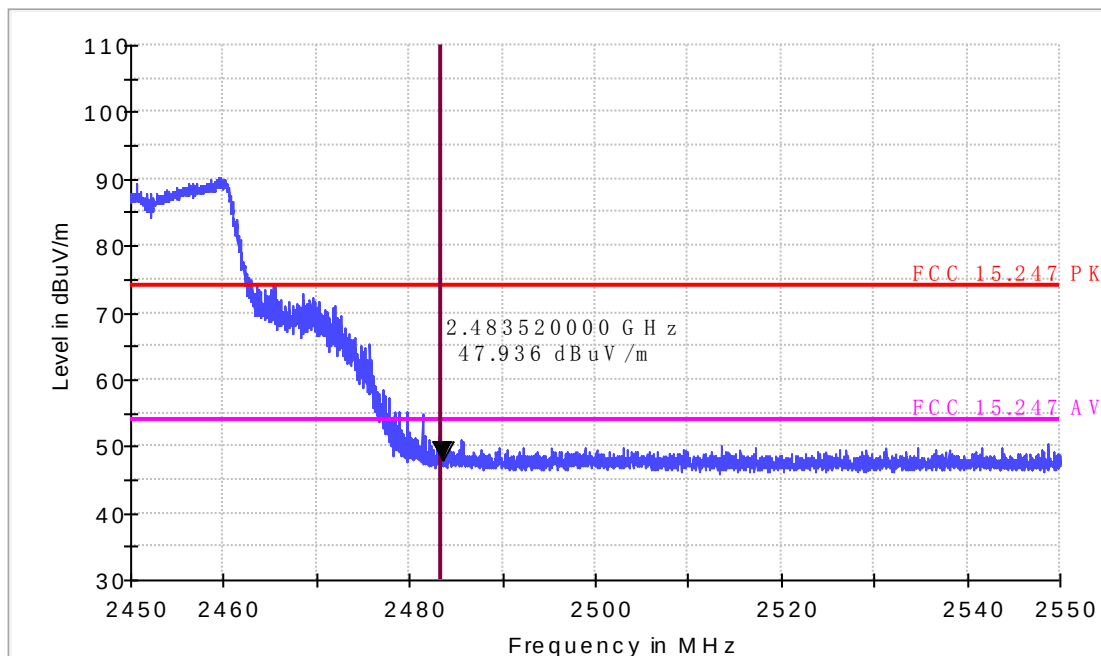
EUT Information

EUT Model Name: WD100
Operation mode: Wifi 11n40 CH9
Test Voltage:
Comment:

Common Information

Test Site: SMO EMC Lab.
Environment
Antenna Polarization: Horizontal
Operator Name:
Comment:

FCC Electric Field Strength 2.4GHz Bandedge-PK



Radiated Emission

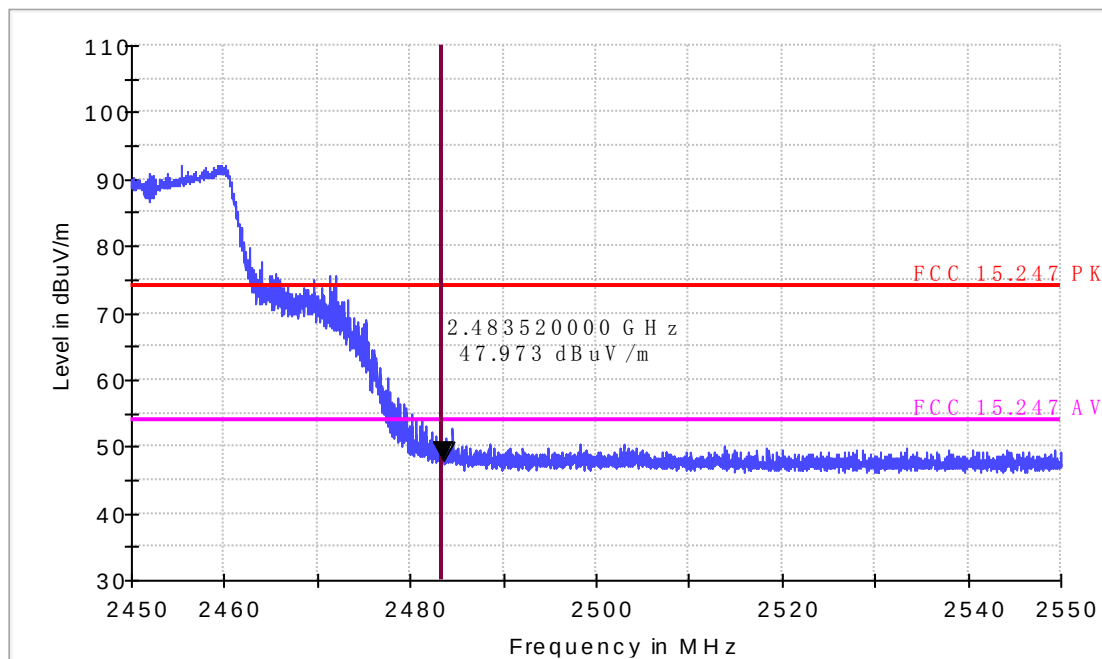
EUT Information

EUT Model Name: WD100
Operation mode: Wifi 11n40 CH9
Test Voltage:
Comment:

Common Information

Test Site: SMQ EMC Lab.
Environment
Antenna Polarization: Vertical
Operator Name:
Comment:

FCC Electric Field Strength 2.4GHz Bandedge-PK



Radiated Emission

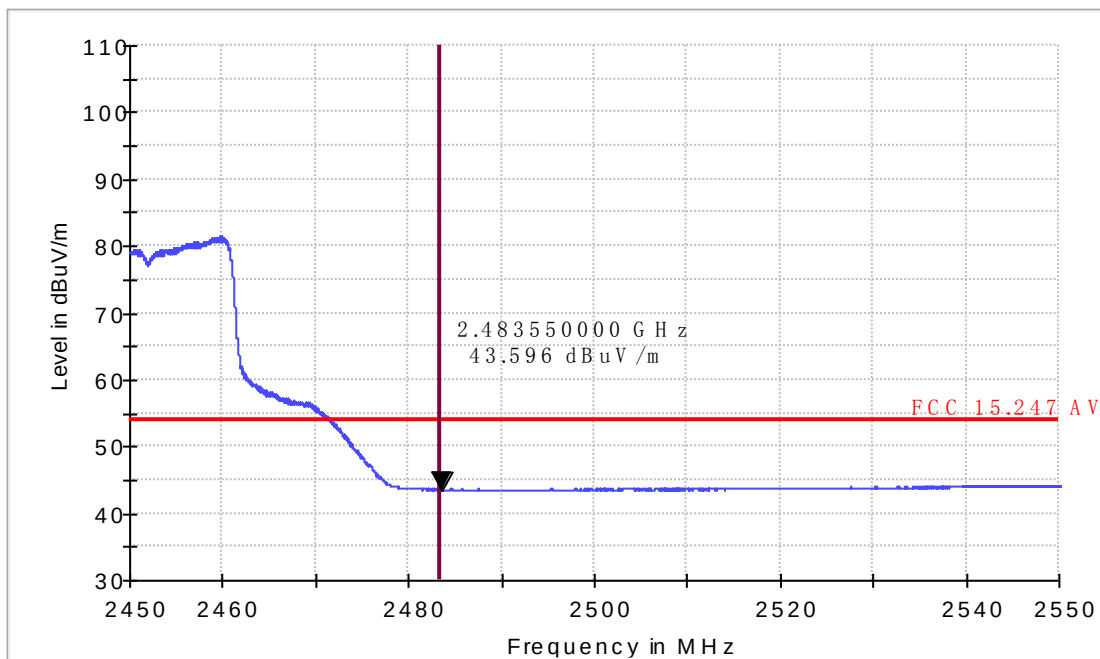
EUT Information

EUT Model Name: WD100
Operation mode: Wifi 11n40 CH9
Test Voltage:
Comment:

Common Information

Test Site: SMQ EMC Lab.
Environment
Antenna Polarization: Horizontal
Operator Name:
Comment:

FCC Electric Field Strength 2.4GHz Bandedge-AV



Radiated Emission

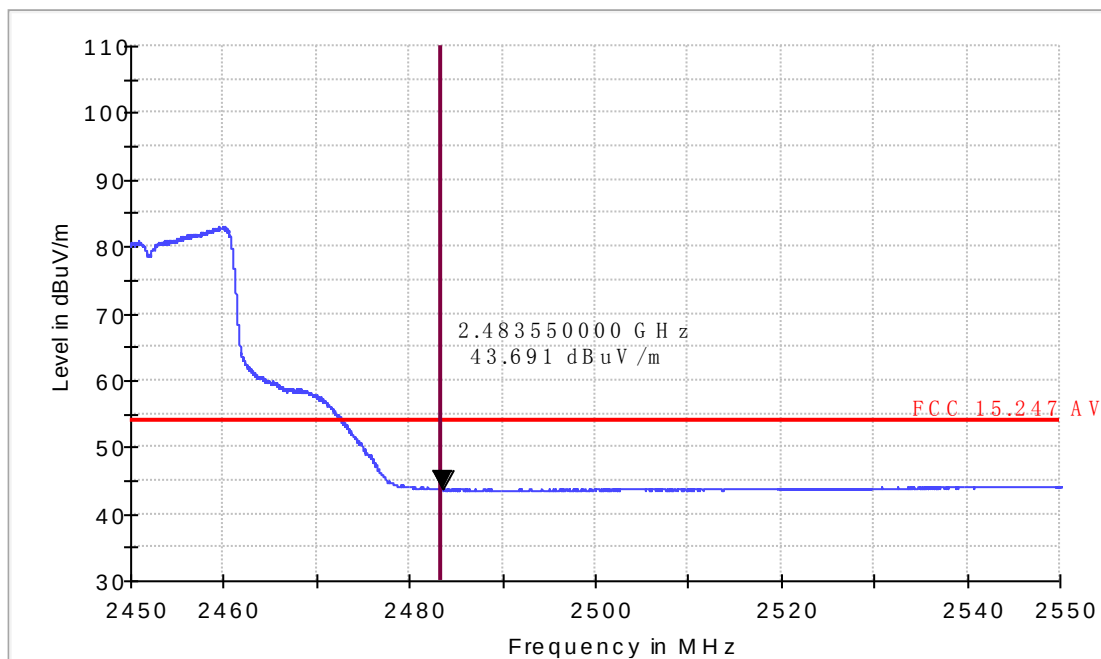
EUT Information

EUT Model Name: WD100
Operation mode: Wifi 11n40 CH9
Test Voltage:
Comment:

Common Information

Test Site: SMO EMC Lab.
Environment
Antenna Polarization: Vertical
Operator Name:
Comment:

FCC Electric Field Strength 2.4GHz Bandedge-AV



11.CONDUCTED EMISSION TEST FOR AC POWER PORT MEASUREMENT

11.1.Test Standard and Limit

11.1.1.Test Standard

FCC Part 15.207

11.1.2.Test Limit

Table 12 Conducted Disturbance Test Limit

Frequency	Maximum RF Line Voltage (dB μ V)	
	Quasi-peak Level	Average Level
150kHz~500kHz	66 ~ 56 *	56 ~ 46 *
500kHz~5MHz	56	46
5MHz~30MHz	60	50

* Decreasing linearly with logarithm of the frequency

* The lower limit shall apply at the transition frequency.

11.2.Test Procedure

The EUT is put on a table of non-conducting material that is 80cm high. The vertical conducting wall of shielding is located 40cm to the rear of the EUT. The power line of the EUT is connected to the AC mains through a Artificial Mains Network (A.M.N.). A EMI test receiver (R&S Test Receiver ESCS30) is used to test the emissions form both sides of AC line. According to the requirements of ANSI C63.10-2013.Conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30MHz using CISPR Quasi-Peak and average detector mode.

The bandwidth of EMI test receiver is set at 9kHz.

11.3.Test Arrangement

The arrangement of the equipment is installed to meet the standards and operating in a manner, which tends to maximize its emission characteristics in a normal application. The detailed information refers to test picture.

11.4.Test Data

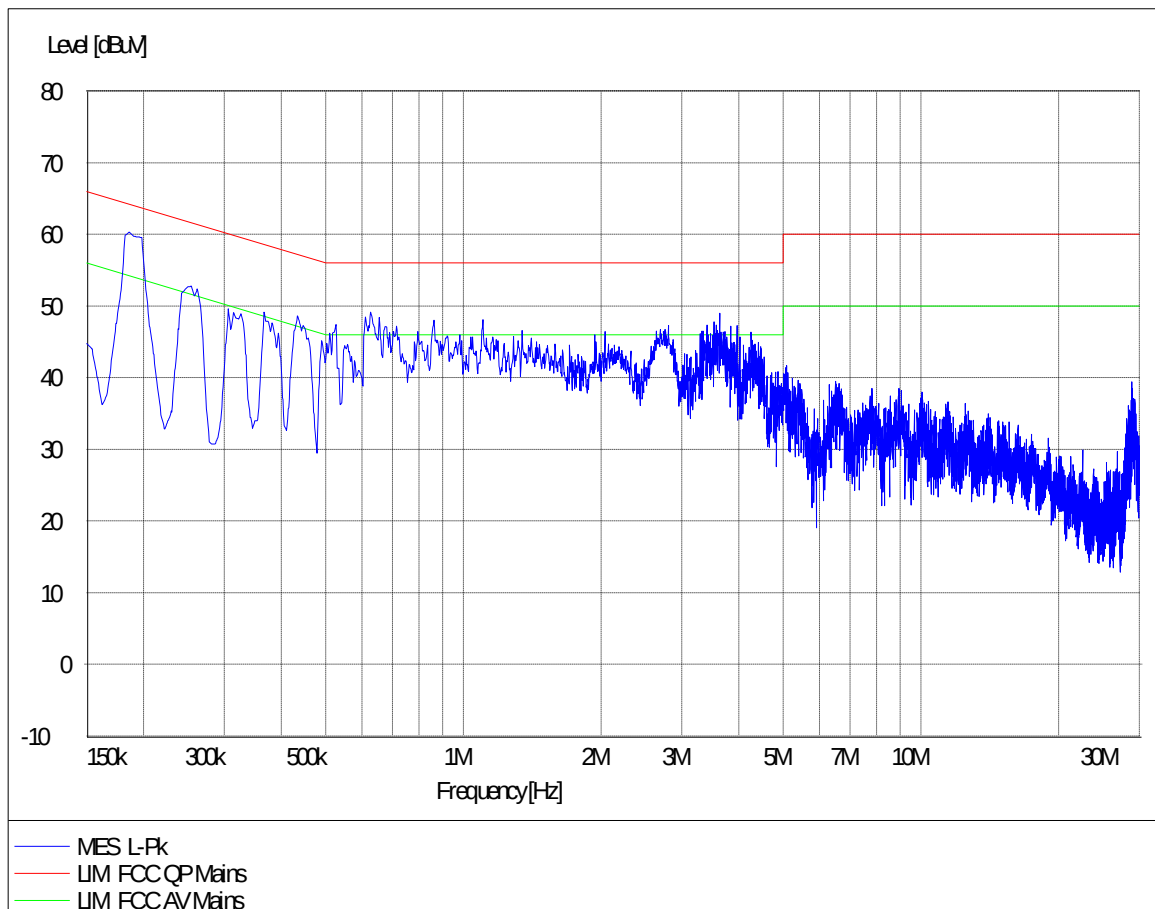
The emissions don't show in below are too low against the limits. Refer to the test curves.

Table 13 Conducted Disturbance Test Data

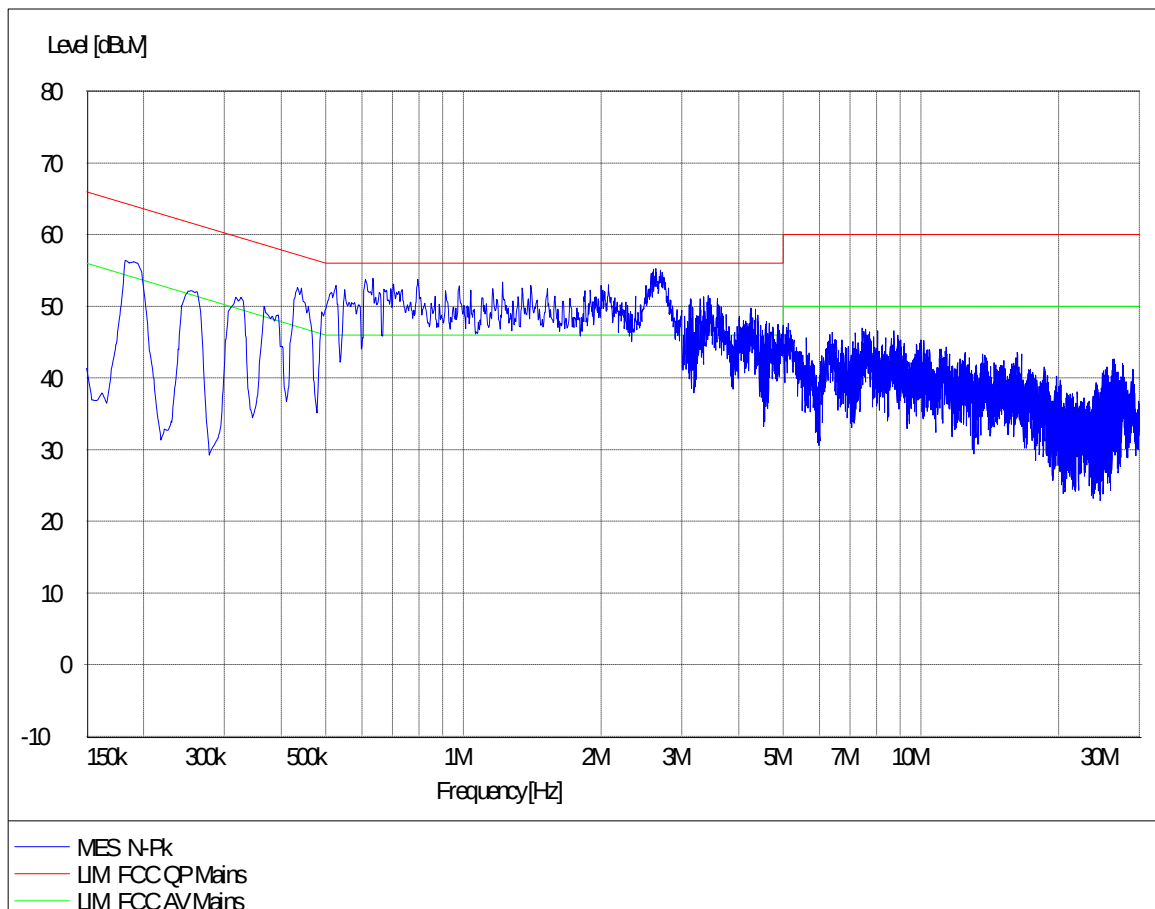
Model No.: WD100								
Test mode: Charging and Transmitting								
	Frequency (MHz)	Correction Factor (dB)	Quasi-Peak			Average		
			Reading (dB μ V)	Emission Level (dB μ V)	Limits (dB μ V)	Reading (dB μ V)	Emission Level (dB μ V)	Limits (dB μ V)
Line	0.150	9.7	34.5	44.2	66	21.5	31.2	56
	0.186	9.7	36.2	45.9	64.2	21.9	31.6	54.2
	0.206	9.7	35.0	44.7	63.4	23.8	33.5	53.4
	0.238	9.7	27.2	36.9	62.2	12.0	21.7	52.2
	0.398	9.7	21.5	31.2	57.9	9.9	19.6	47.9
	1.666	9.8	27.4	37.2	56	7.9	17.7	46
Neutral	0.150	9.7	35.4	45.1	66	21.2	30.9	56
	0.190	9.7	37.3	47.0	64.0	25.6	35.3	54.0
	0.210	9.7	35.4	45.1	63.2	22.4	32.1	53.2
	0.250	9.7	27.4	37.1	61.8	15.5	25.2	51.8
	0.318	9.7	25.6	35.3	59.8	14.1	23.8	49.8
	1.622	9.8	26.4	36.2	56	16.9	26.7	46

REMARKS: 1. Emission level(dBuV)=Read Value(dBuV) + Correction Factor(dB)
 2. Correction Factor(dB) =LISN Factor (dB) + Cable Factor (dB)+Limiter Factor(dB)
 3. The other emission levels were very low against the limit.

EUT: WD100
Manufacturer:
Operating Condition: Charging and Transmitting
Test Site:
Operator:
Test Specification: L
Comment: AC 120V/60Hz



EUT: WD100
Manufacturer:
Operating Condition: Charging and Transmitting
Test Site:
Operator:
Test Specification: N
Comment: AC 120V/60Hz



12.ANTENNA REQUIREMENTS

12.1.Applicable requirements

If directional gain of transmitting antennas is greater than 6dBi, the power shall be reduced by the same level in dB comparing to gain minus 6dBi. For the fixed point-to-point operation, the power shall be reduced by one dB for every 3 dB that the directional gain of the antenna exceeds 6 dBi. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the FCC rule.

12.2.Antenna Connector

Antenna Connector is on the PCB within enclosure and not accessible to user.

12.3.Antenna Gain

The antenna gain of EUT is less than 6 dBi.

END OF REPORT