



# 2.4 & 5.0 GHz WLAN (DTS Systems) FCC/IC Test Report

FOR:  
**Intel Corporation**

Model Name: EP110

**Product Description: Intel 4.7-inch Smartphone with GSM, GPRS, EDGE, UMTS, HSPA+, LTE, WLAN, BT and GPS radios**

**FCC ID: O2Z-EP110  
IC ID: 1000W – EP110**

**47 CFR Part 15.247**

**RSS-210 Issue 8 & RSS-GEN Issue 4**

**TEST REPORT #: EMC\_EMG\_INTEL\_054\_14001\_15.247\_DTS\_WLAN\_Rev2\_Part2  
DATE: 2014-12-15**



FCC listed  
A2LA Accredited

IC recognized #  
3462B

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**1 Assessment**

**The following device was evaluated against the applicable criteria specified in FCC rules Parts 15.247 of Title 47 of the Code of Federal Regulations and the relevant IC standard RSS-210 issue 8, Annex 8. No deviations were ascertained.**

Company	Description	Model #
Intel Corporation	Intel 4.7-inch Smartphone with GSM,GPRS,EDGE,UMTS,HSPA+,LTE, WLAN, BT and GPS radios	EP110

**Responsible for Testing Laboratory:**

Franz Engert

2014-12-15 Compliance (Manager Compliance)

Date	Section	Name	Signature
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**Responsible for the Report:**

James Donnellan

2014-12-15 Compliance (Sr. EMC Engineer)

Date	Section	Name	Signature
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The test results of this test report relate exclusively to the test item specified in Section3. CETECOM Inc. USA does not assume responsibility for any conclusions and generalizations drawn from the test results with regard to other specimens or samples of the type of the equipment represented by the test item. The test report may only be reproduced or published in full. Reproduction or publication of extracts from the report requires the prior written approval of CETECOM Inc. USA.

## 6.8 Power Spectral Density

### 6.8.1 Limits:

§ 15.247 (e) & RSS-210 A8.2 (b)

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

### 6.8.2 Test Conditions:

Tnom: 22 °C; Vnom: 3.8V

### 6.8.3 Measurement procedure:

Measurement according to FCC KDB 558074 D01 DTS v03r02 section 10.2

1. Set analyzer center frequency to DTS channel center frequency.
2. Set the span to 1.5 x the DTS BW
3. Set the RBW=3 kHz, VBW ≥ 3 x RBW and sweep time = auto.
4. Trace mode = max hold
5. Detector = Peak
6. Allow trace to fully stabilize and use peak marker function to determine the highest level as the PSD.

### 6.8.4 Test Data: 2.4 GHz Band

Power Spectral Density (dBm)						
Mode	Frequency (MHz)					
	2412 Channel 1	Diagram no.	2437 Channel 6	Diagram no.	2462 Channel 11	Diagram no.
802.11b	-5.87	<u>psd_c1_2412_11b</u>	-6.74	<u>psd_c6_2437_11b</u>	-5.66	<u>psd_c11_2462_11b</u>
802.11g	-9.41	<u>psd_c1_2412_11g</u>	-11.58	<u>psd_c6_2437_11g</u>	-10.48	<u>psd_c11_2462_11g</u>
802.11n	-8.51	<u>psd_c1_2412_11n</u>	-11.03	<u>psd_c6_2437_11n</u>	-10.83	<u>psd_c11_2462_11n</u>

**6.8.5 Test Data: 5725-5850 MHz band**

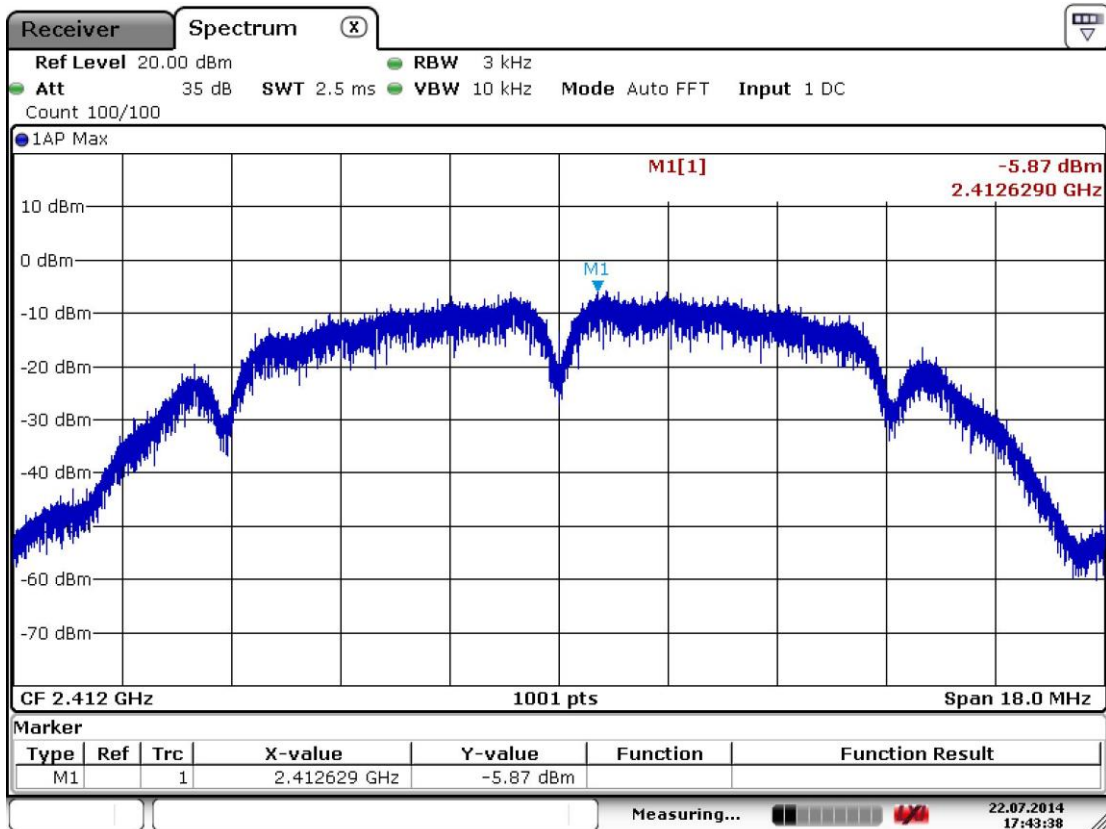
Power Spectral Density (dBm)						
Mode	Frequency (MHz)					
	5745 Channel 149	Diagram no.	5785 Channel 157	Diagram no.	5825 Channel 165	Diagram no.
802.11a	-14.59	<u>psd_c149_57</u> <u>45_11a</u>	-14.51	<u>psd_c157_57</u> <u>85_11a</u>	-14.90	<u>psd_c165_58</u> <u>25_11a</u>
802.11n[20]	-12.81	<u>psd_c149_57</u> <u>45_11n</u>	-12.86	<u>psd_c157_57</u> <u>85_11n</u>	-13.15	<u>psd_c165_58</u> <u>25_11n</u>

**6.8.6 Measurement Result**

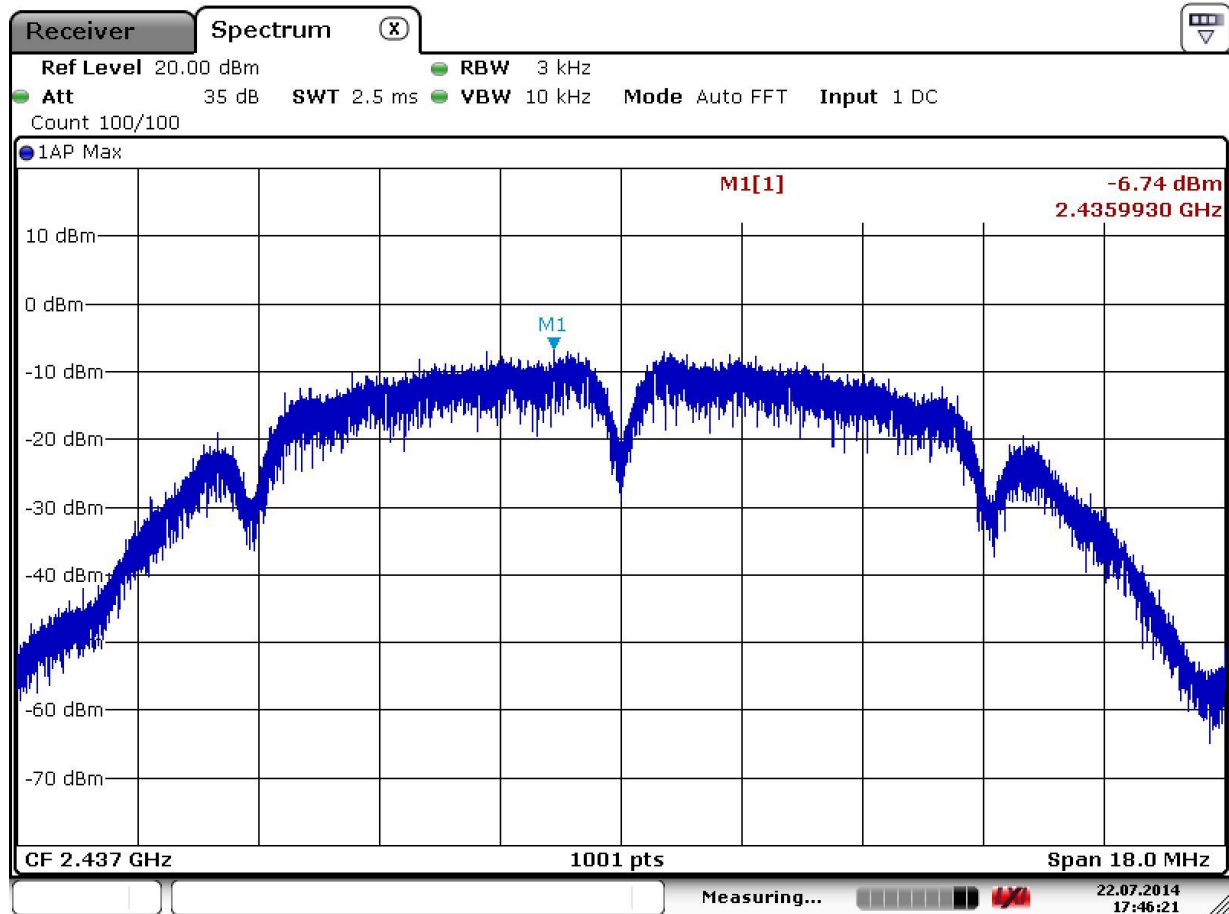
Pass.

### 6.8.7 Measurement Plots: 2.4 GHz Band

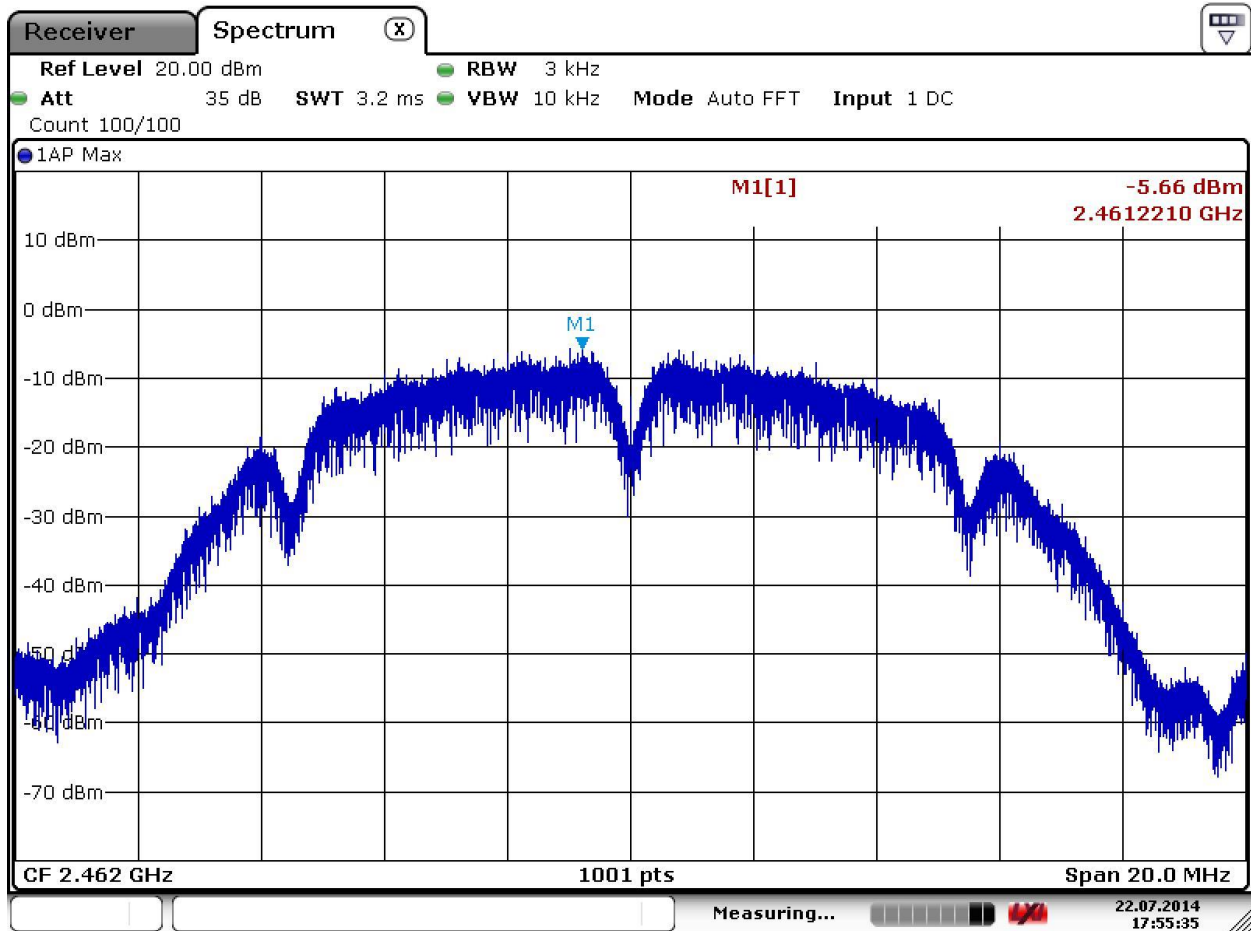
#### Power Spectral Density 802.11b 2412 MHz



### Power Spectral Density 802.11b 2437 MHz

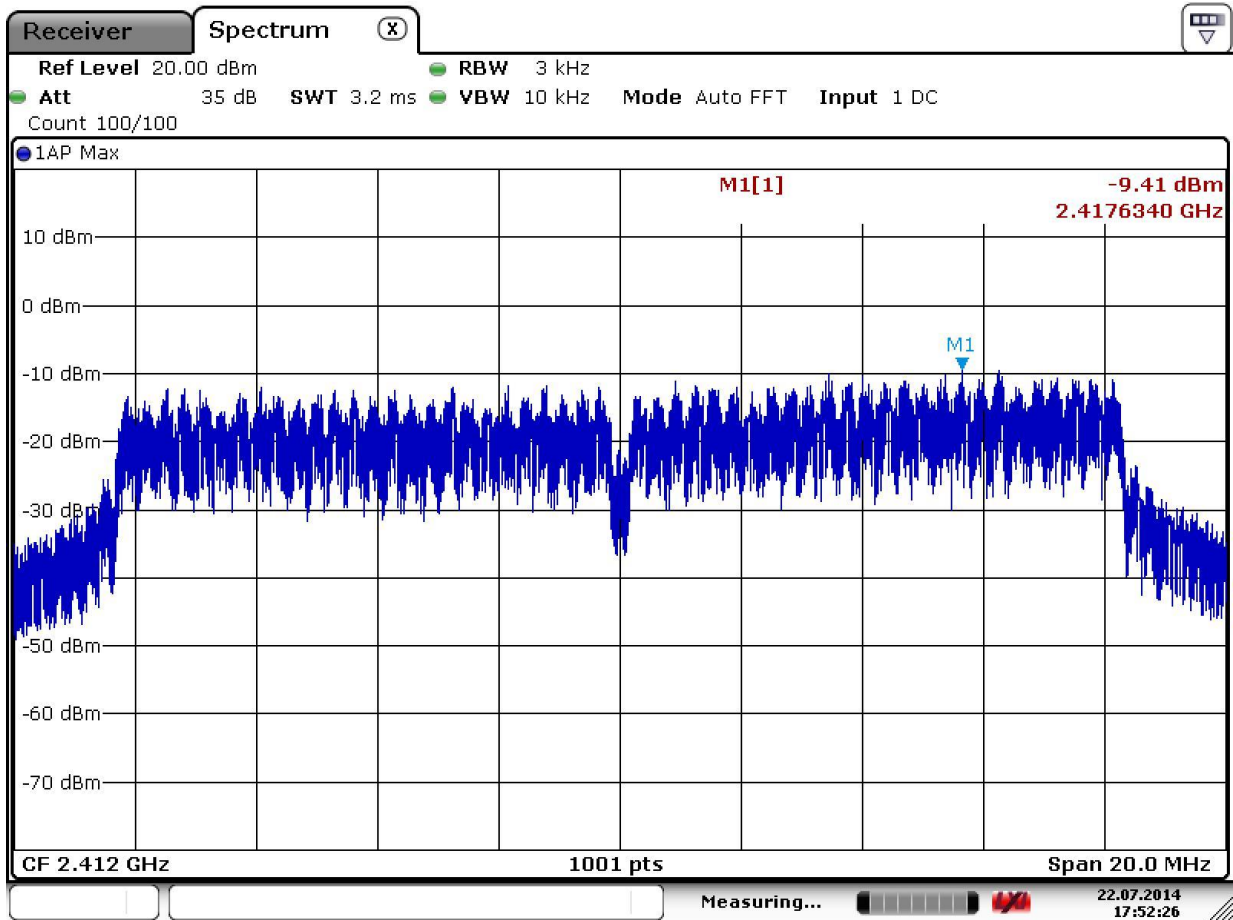


### Power Spectral Density 802.11b 2462 MHz

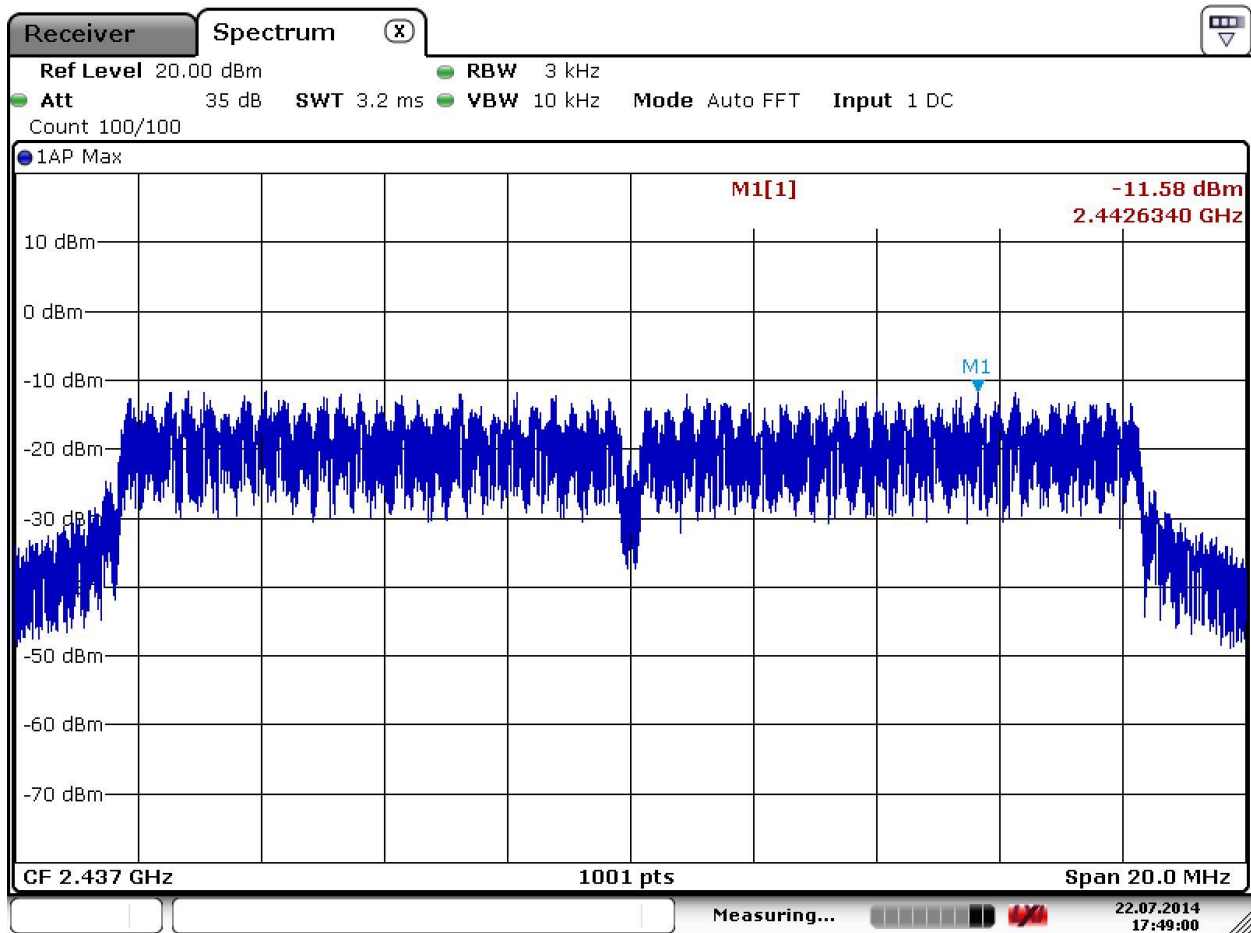




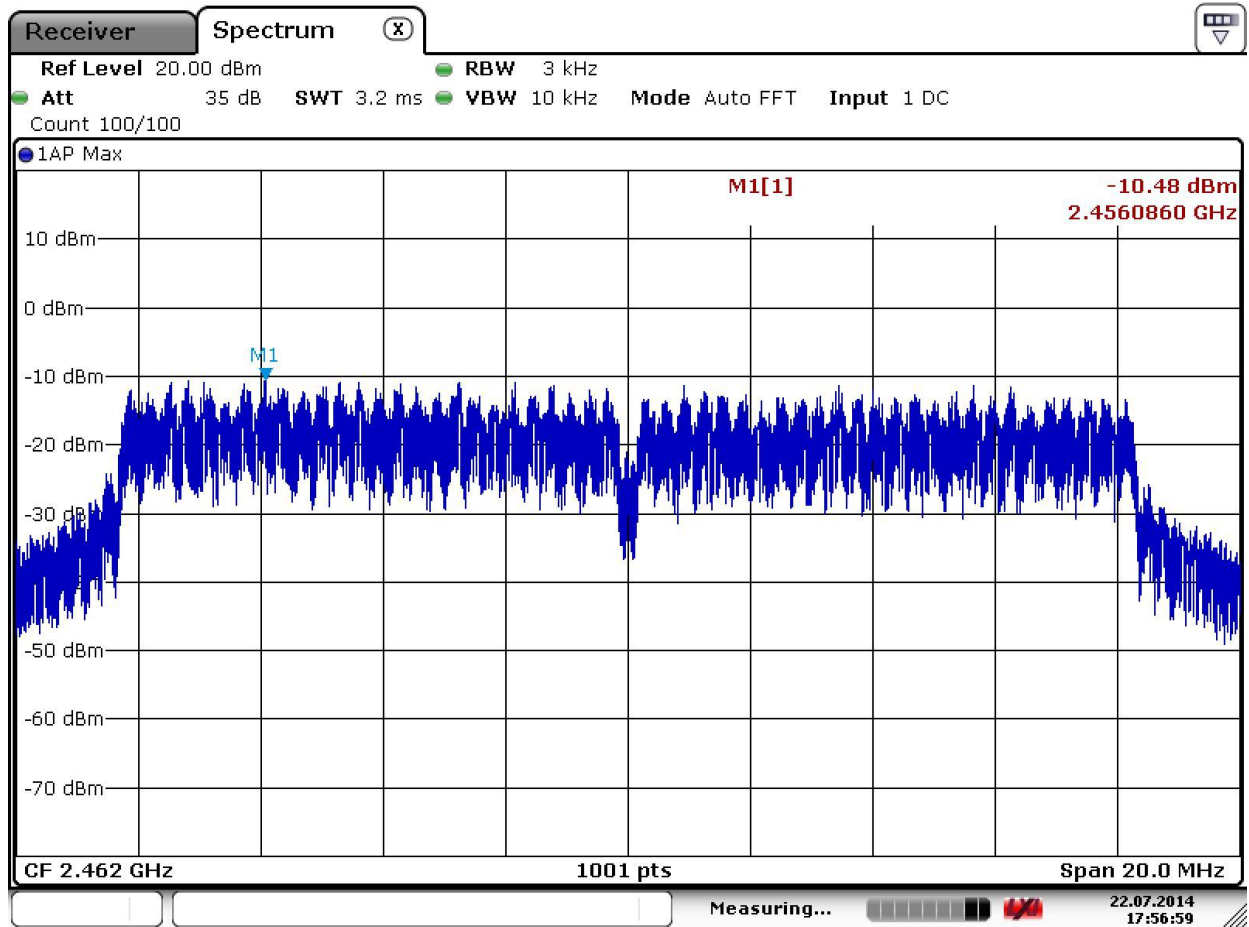
### Power Spectral Density 802.11g 2412 MHz



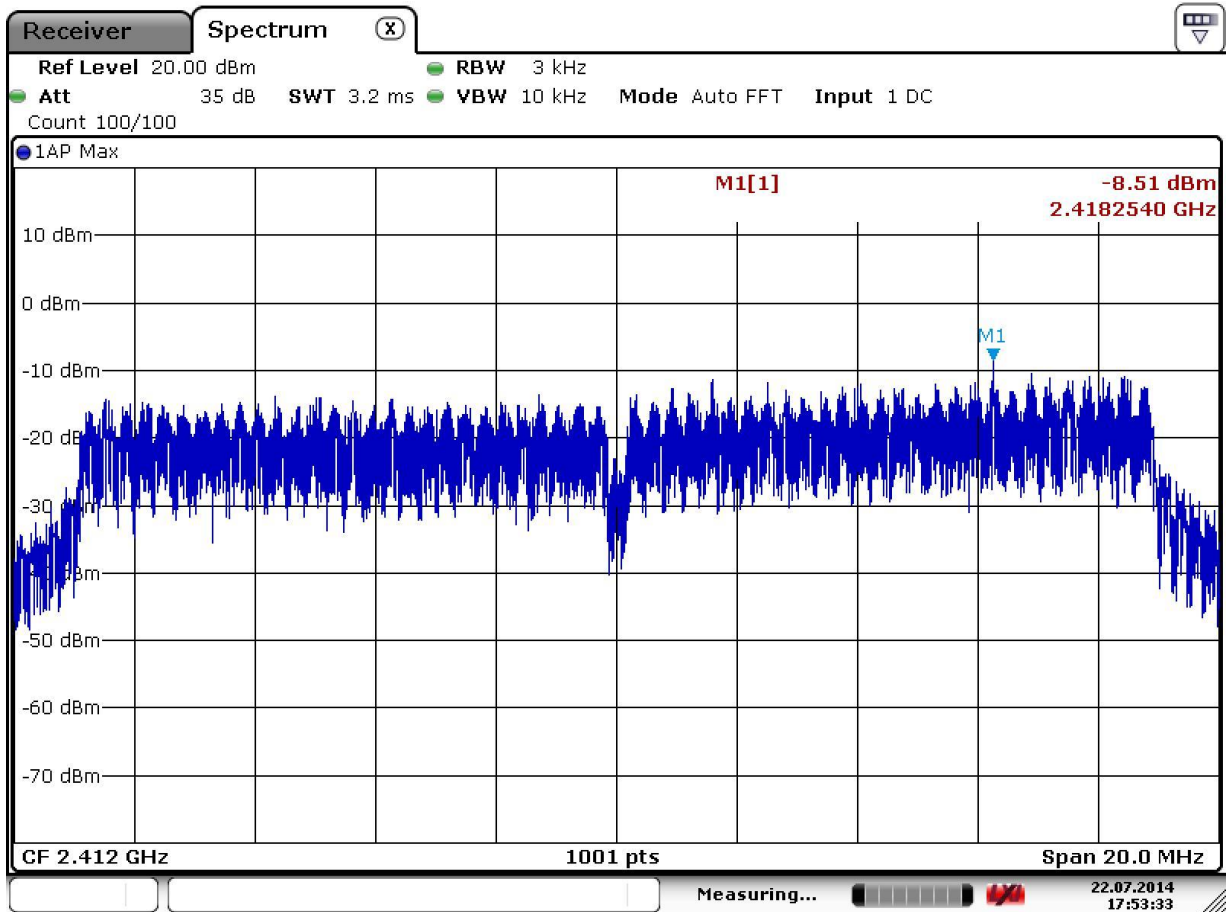
### Power Spectral Density 802.11g 2437 MHz



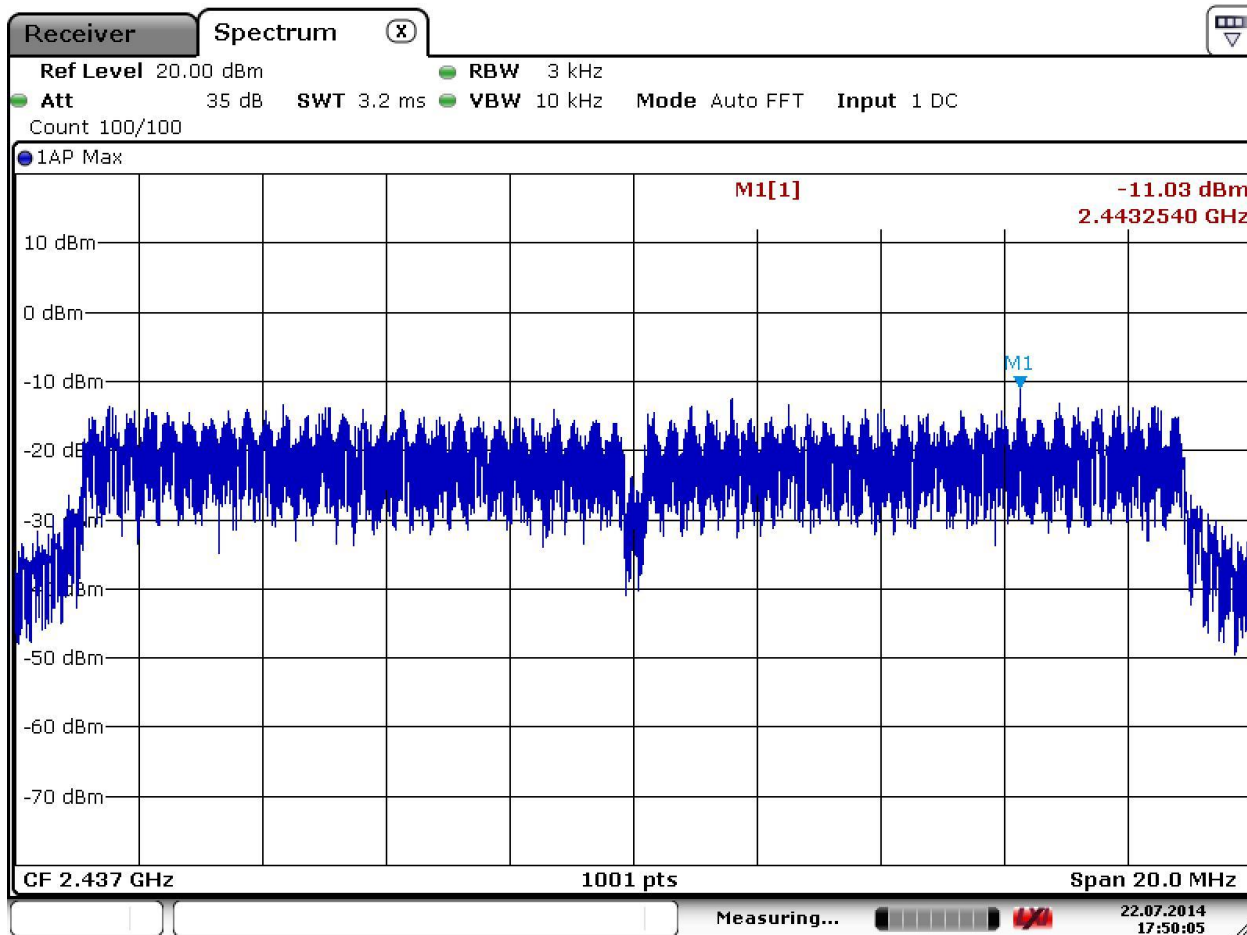
### Power Spectral Density 802.11g 2462 MHz



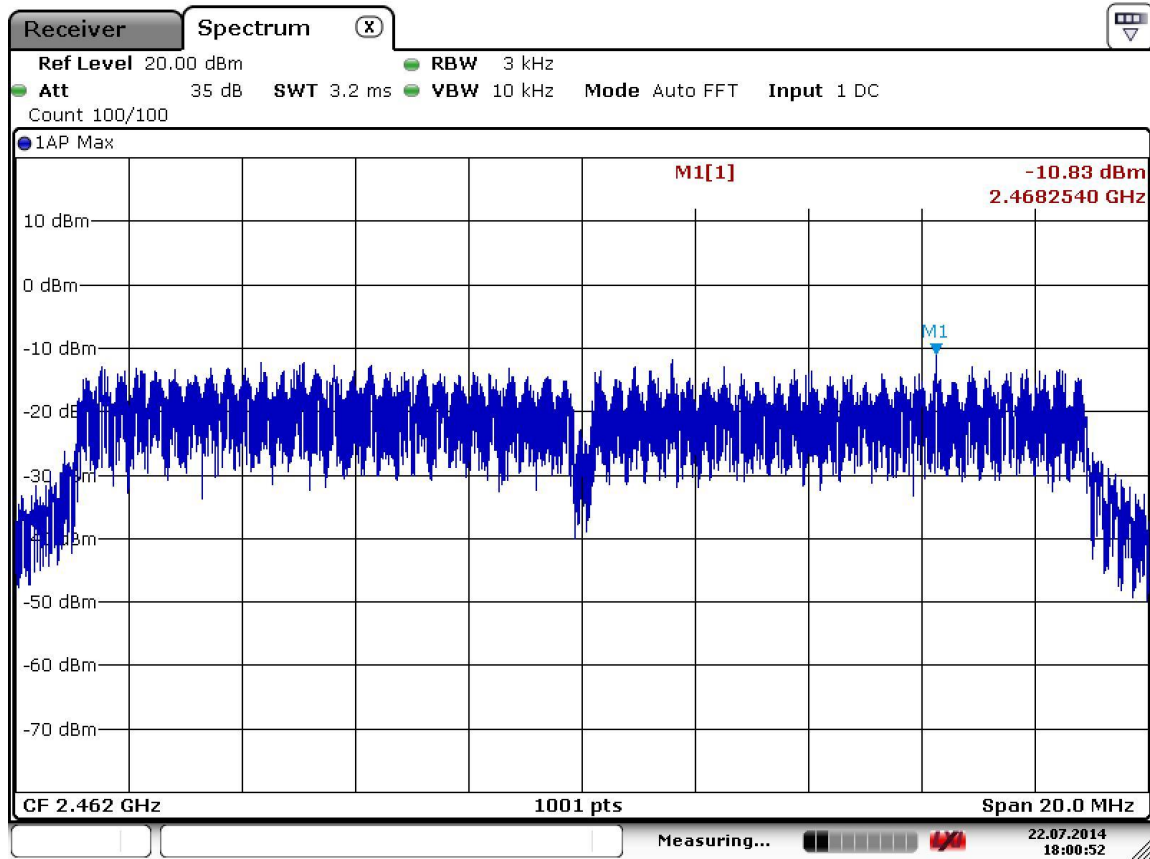
### Power Spectral Density 802.11n -MCS0 (20MHz) 2412 MHz



### Power Spectral Density 802.11n -MCS0 (20MHz) 2437 MHz

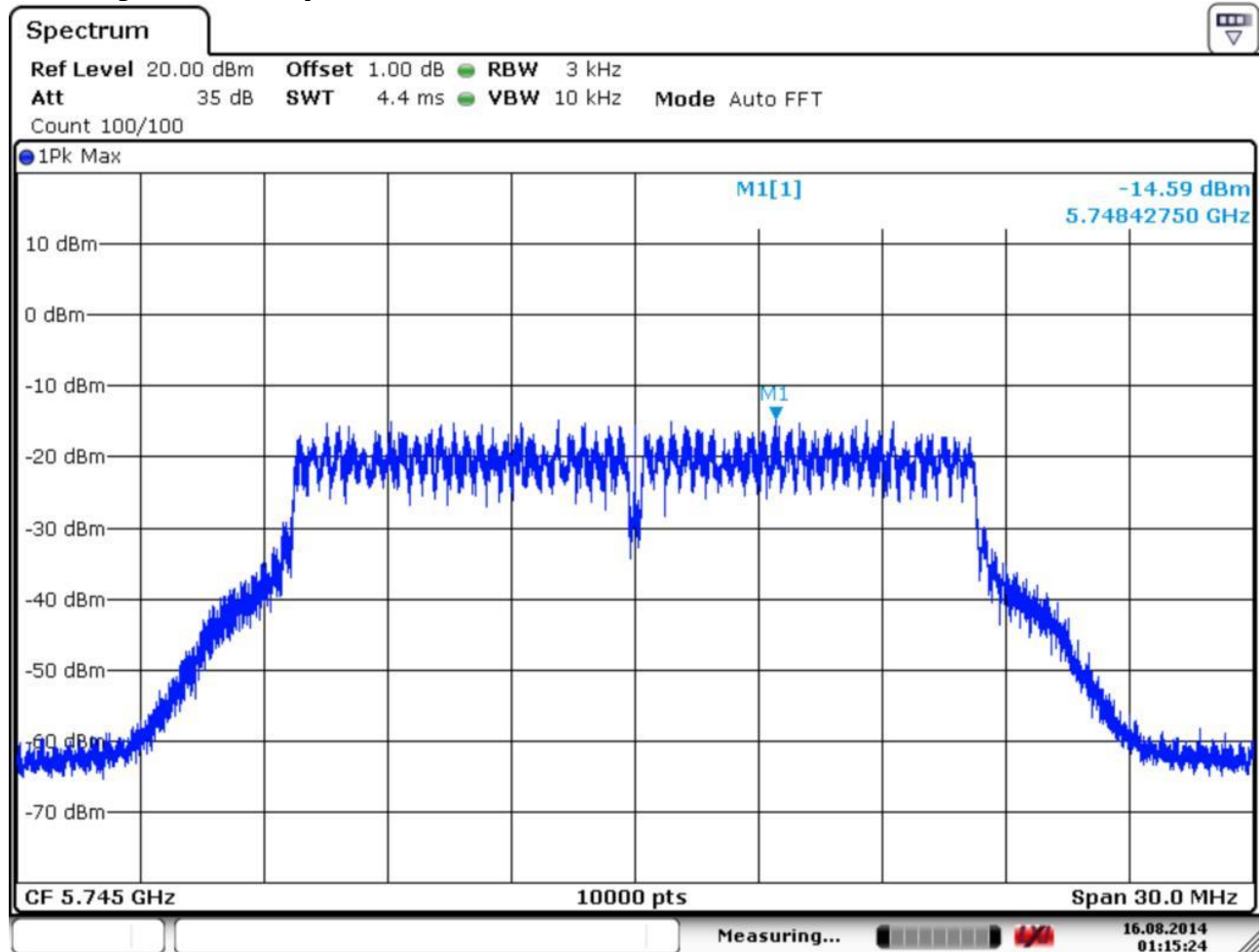


### Power Spectral Density 802.11n -MCS0 (20MHz) 2462 MHz



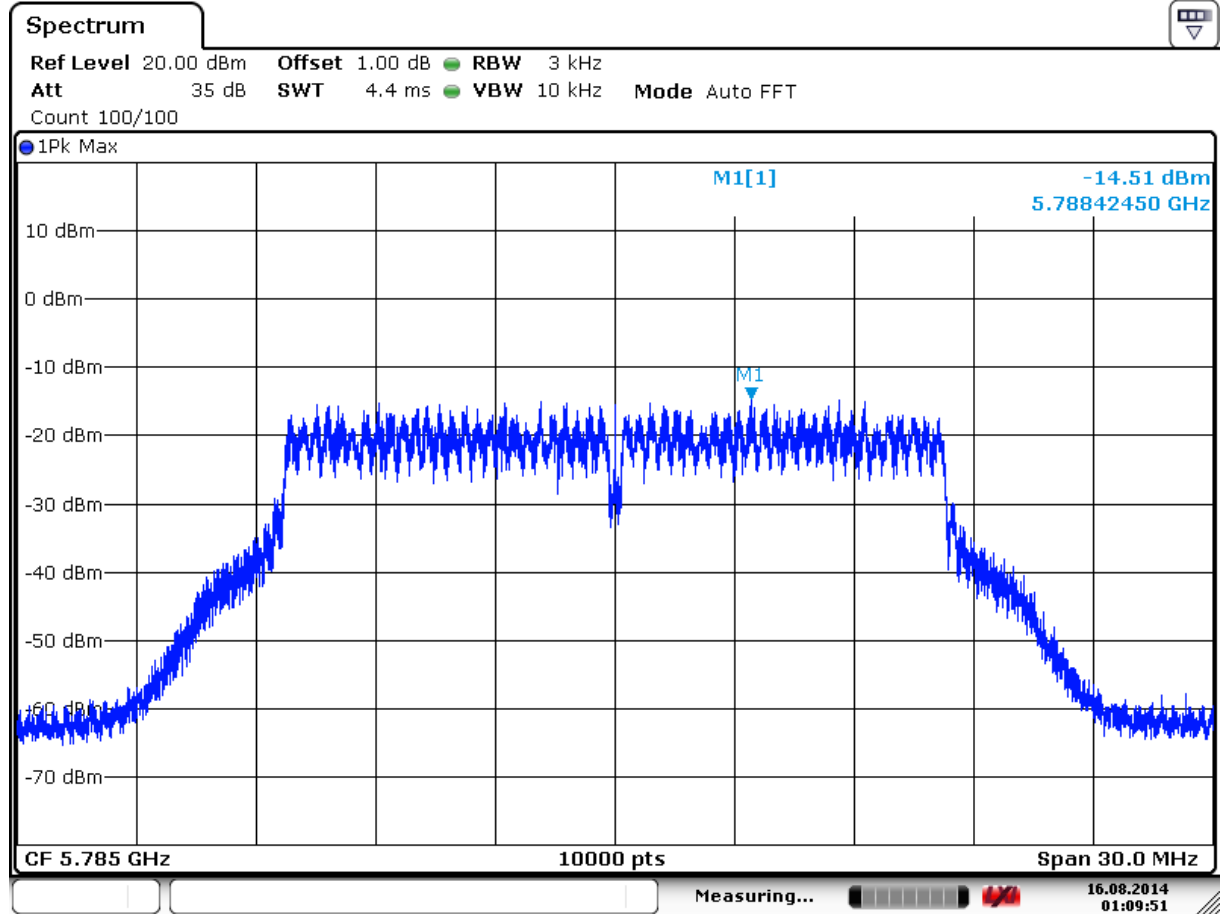
### 6.8.8 Measurement Plots: 5 GHz Band UNII 3

#### Power Spectral Density 802.11a 5745 MHz



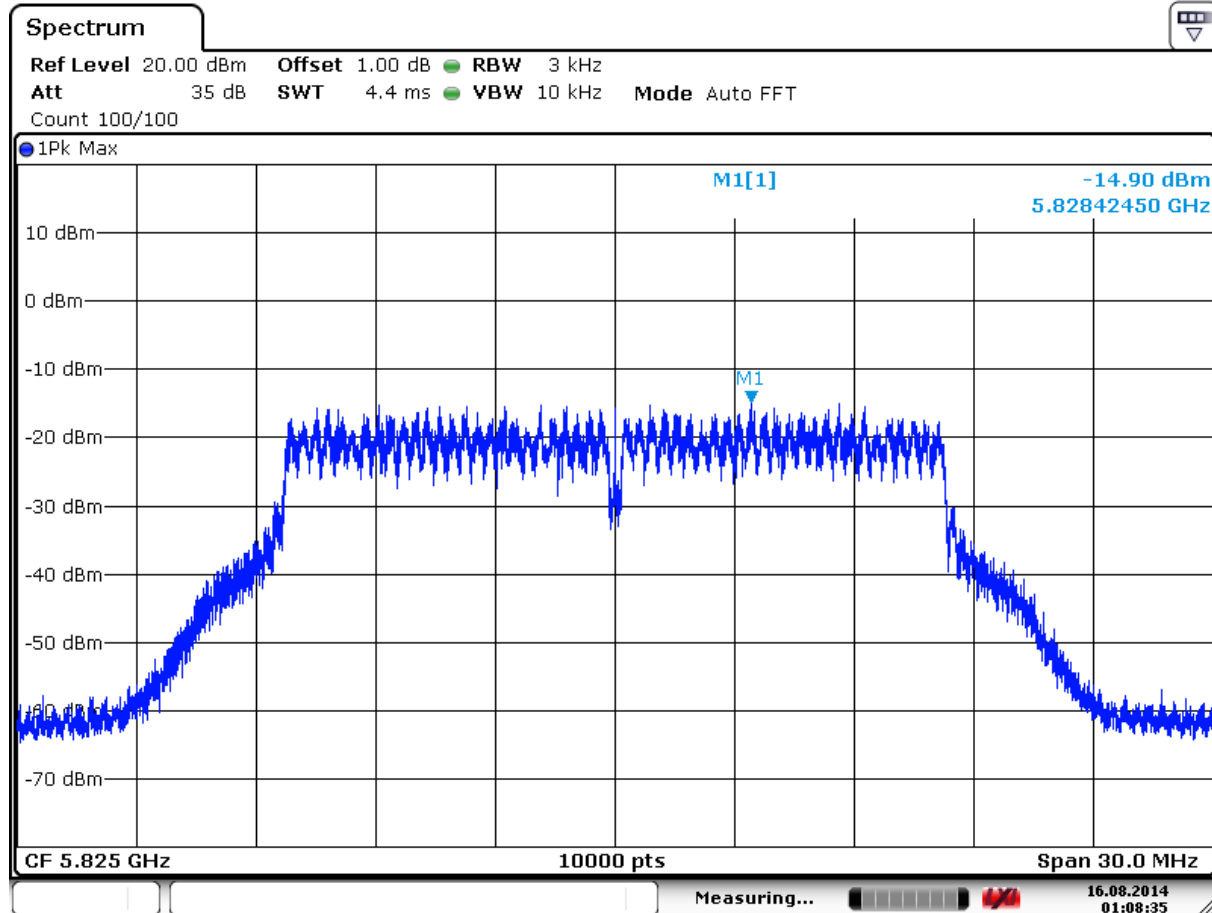
Date: 16 AUG 2014 01:15:24

### Power Spectral Density 802.11a 5785 MHz



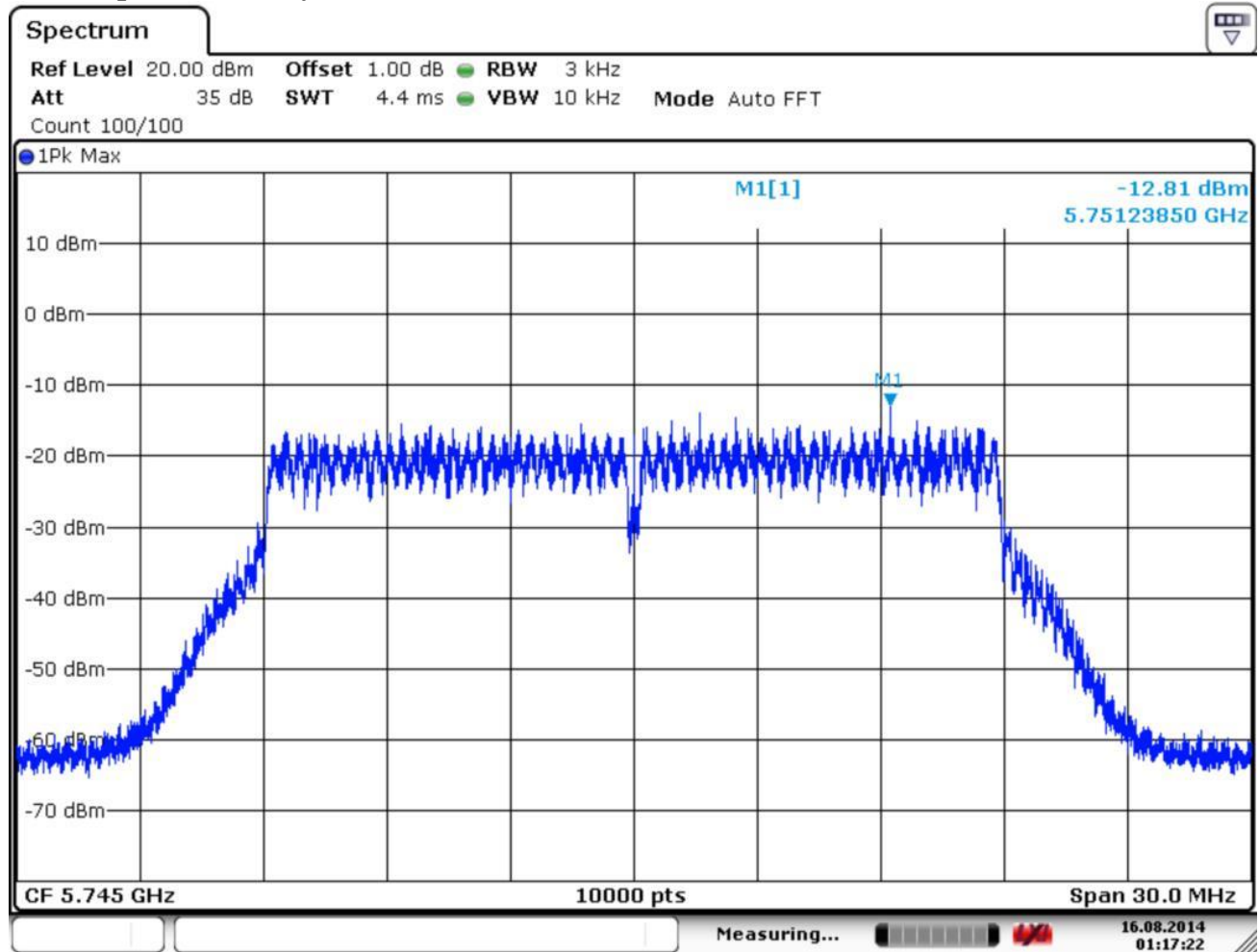


### Power Spectral Density 802.11a 5825 MHz



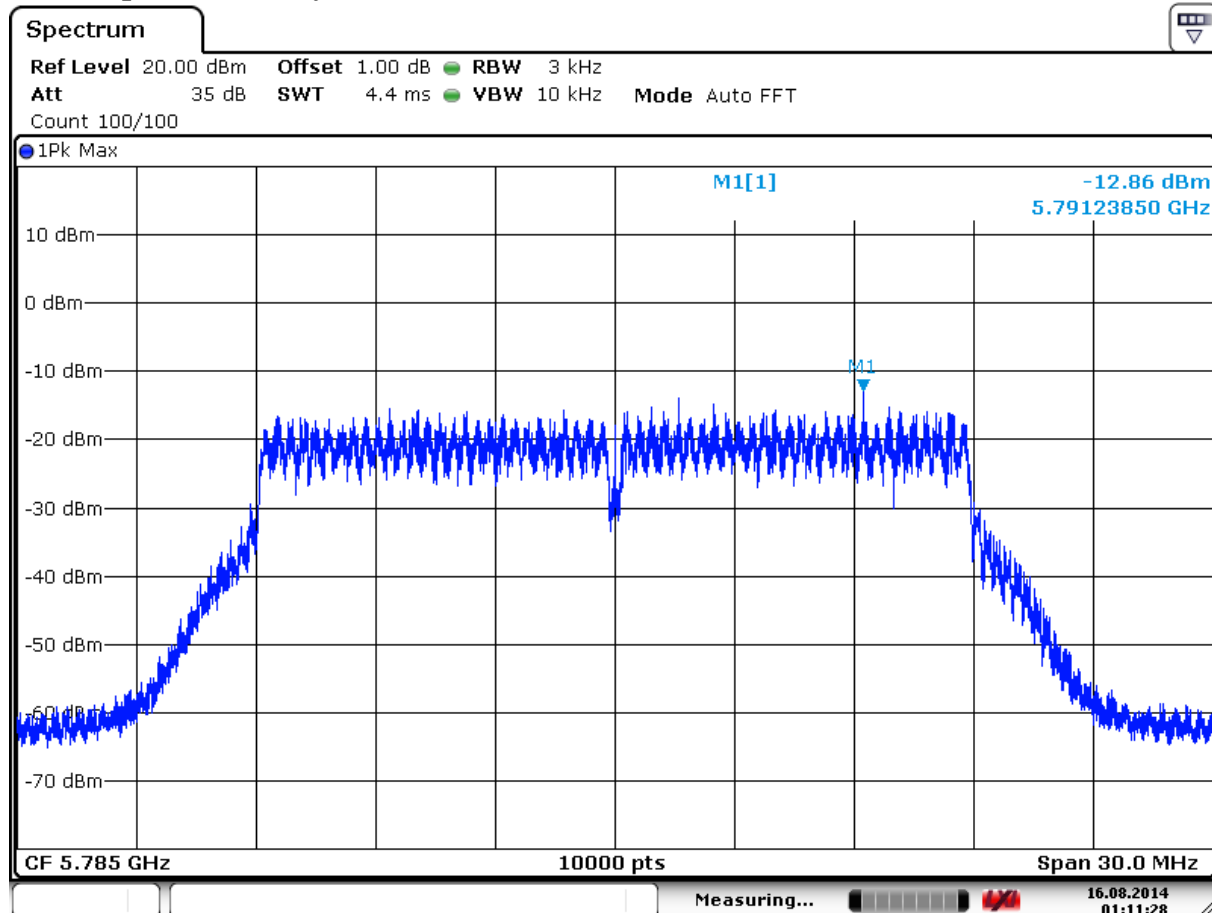
Date: 16.AUG.2014 01:08:35

### Power Spectral Density 802.11n[20] 5745 MHz



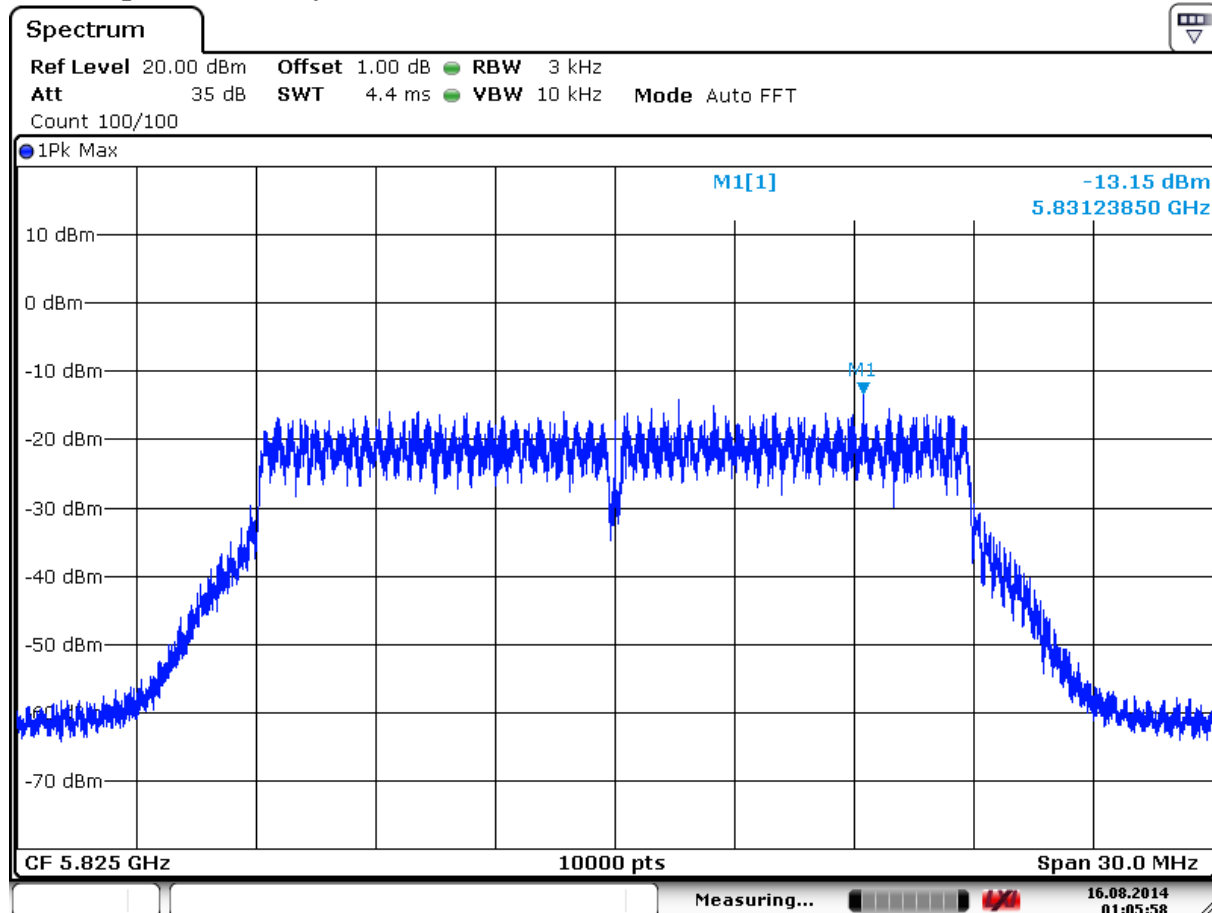
Date: 16 AUG 2014 01:17:23

### Power Spectral Density 802.11n[20] 5785 MHz



Date: 16 AUG 2014 01:11:28

### Power Spectral Density 802.11n[20] 5825 MHz



Date: 16.AUG.2014 01:05:57

**6.9 Radiated Transmitter Spurious Emissions & Restricted Band Limits**

**6.9.1 Limits:**

§15.247/15.205/15.209 & RSS-210 A8.5 / RSS-GEN issue 4, sec. 8.9/8.10

Only spurious emissions are permitted in anyof the frequency bands listed below:

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

Frequency of emission (MHz)	Field strength ( $\mu\text{V/m}$ )
30–88	100 (40dB $\mu\text{V/m}$ )
88–216	150 (43.5 dB $\mu\text{V/m}$ )
216–960	200 (46 dB $\mu\text{V/m}$ )
Above 960	500 (54 dB $\mu\text{V/m}$ , average) (Peak limit: 54 dB $\mu\text{V/m}$ ,)

Frequency of emission (MHz)	Field strength ( $\mu\text{V/m}$ )	Measurement Distance (m)
0.009–0.490	2400/F(kHz)	300
0.490–1.705	24000/F(kHz)	30
1.705–30.0	30	30

Radiated spurious emissions shall be measured for the transmit frequencies, transmit power, and data rate for the lowest, middle and highest channel in each frequency band of operation and for the highest gain antenna for each antenna type, and using the appropriate parameters and test requirements described in 5.4.

**The highest (or worst-case) data rate shall be recorded for each measurement.**

When testing at other than specified distance the limits in dB $\mu\text{V/m}$  are converted according to the following rule:

Below 30MHz:

acc. to FCC §15.31 (f) (2) 40dB/decade. This means that limits are relaxed by 40dB in case the measurement distance is reduced by factor 10.

Above 30MHz:

acc. to FCC §15.31 (f) (1) 20dB/decade. This means that limits are relaxed by 20dB in case the measurement distance is reduced by factor 10.

### 6.9.2 Test Conditions:

Tnom: 23 °C; Vnom: 3.8V

### 6.9.3 Measurement procedure:

Measurement according to ANSI C63.4 (2009) (also refer to section 6.1 in this test report)

#### **6.9.4 Test Result:**

**Test mode:** *Modulation:* 802.11a, b, g & n- according to the table in section 3 of this test report.

Unless mentioned otherwise, the emissions outside the limit lines in the plots are from the transmit signal.

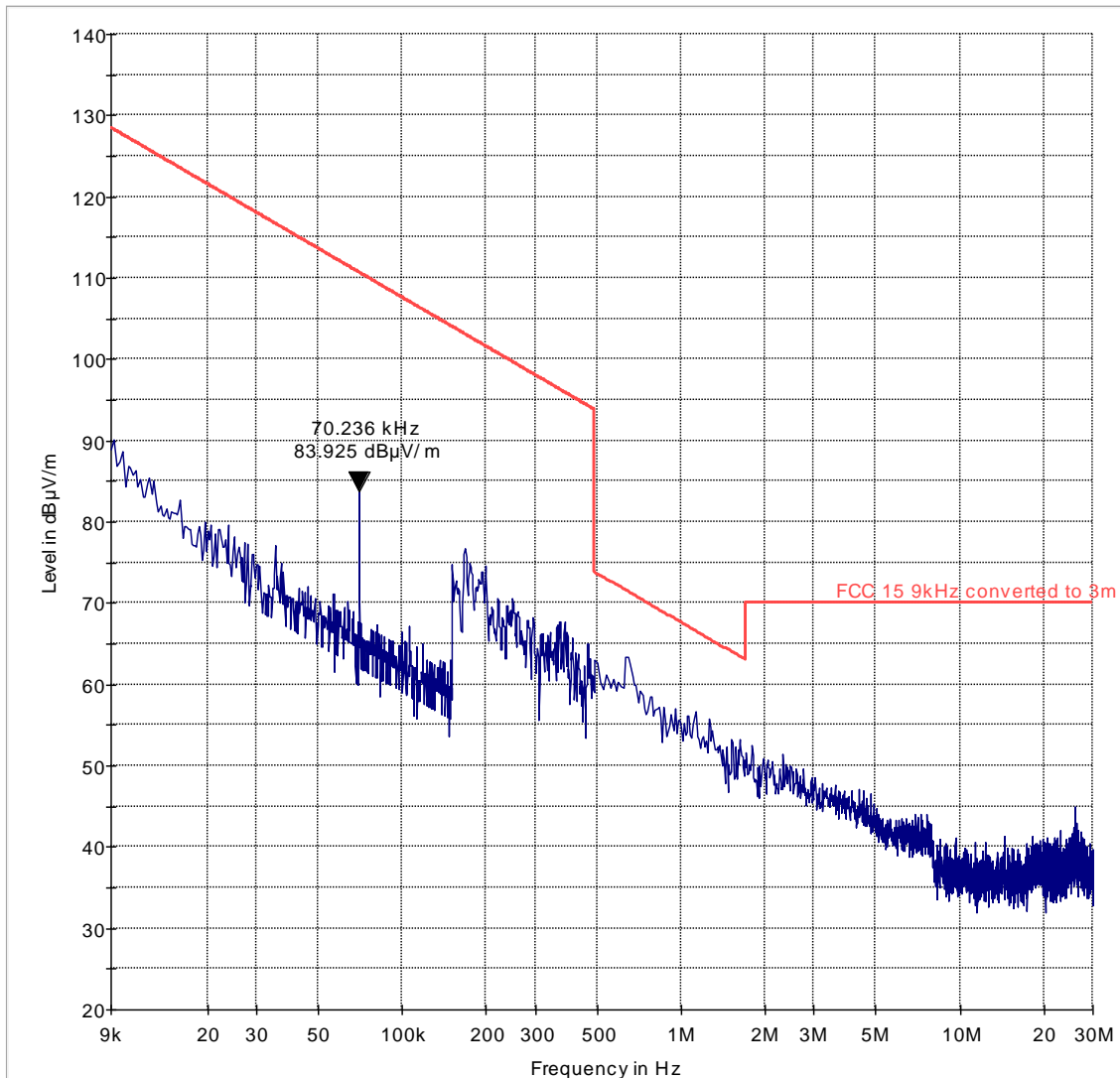
Plots reported here represent the worst case emissions for horizontal and vertical antenna polarizations and for three orientations of the EUT.

#### **6.9.5 Measurement Result**

Pass.

### 6.9.6 Test data/ plots: 2.4 GHz Band

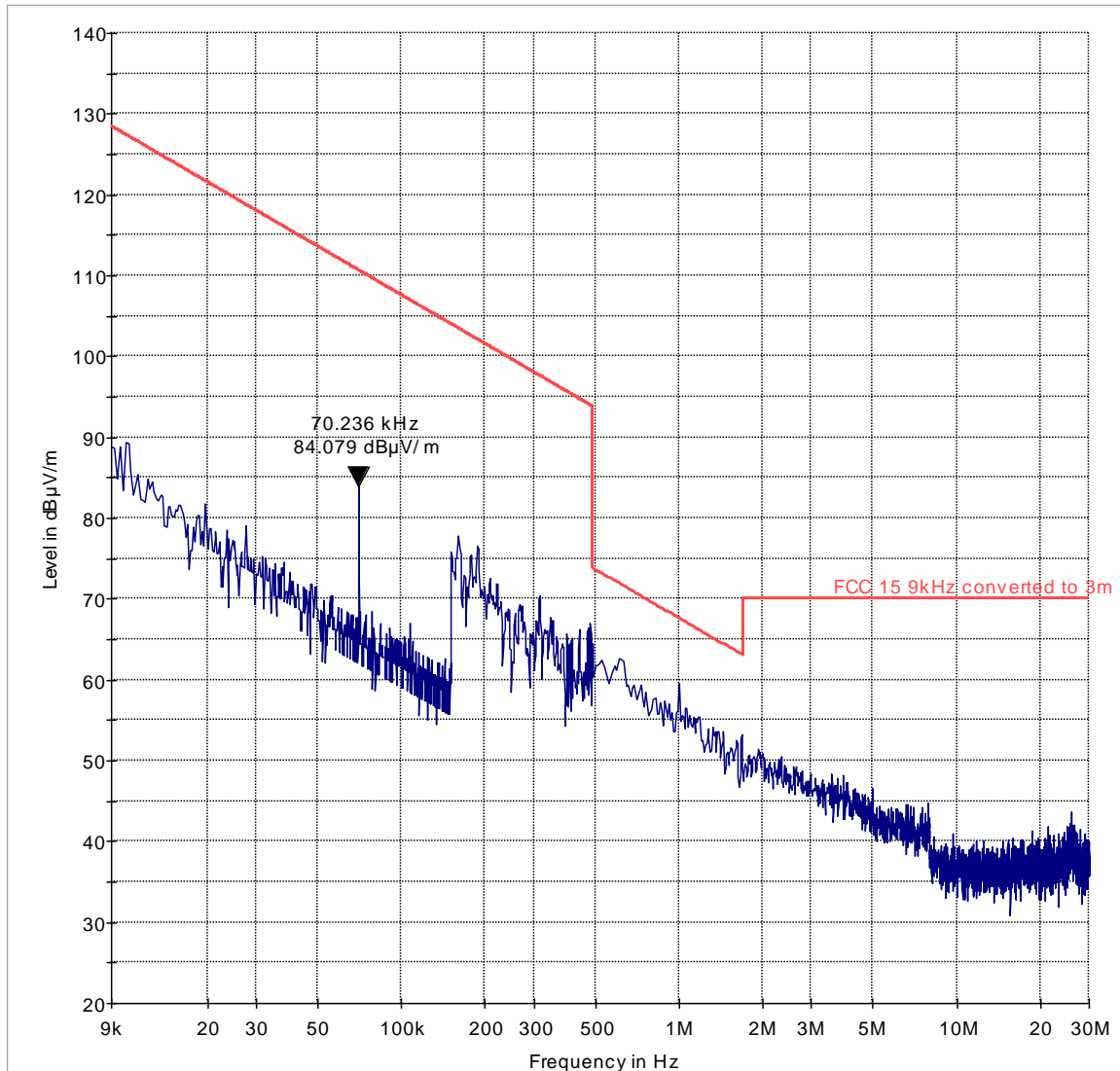
#### Transmitter Radiated Spurious Emission: Ch Mid- 9kHz – 30MHz- 802.11b-mode



— FCC 15 9kHz converted to 3m — Preview Result 1-PK+

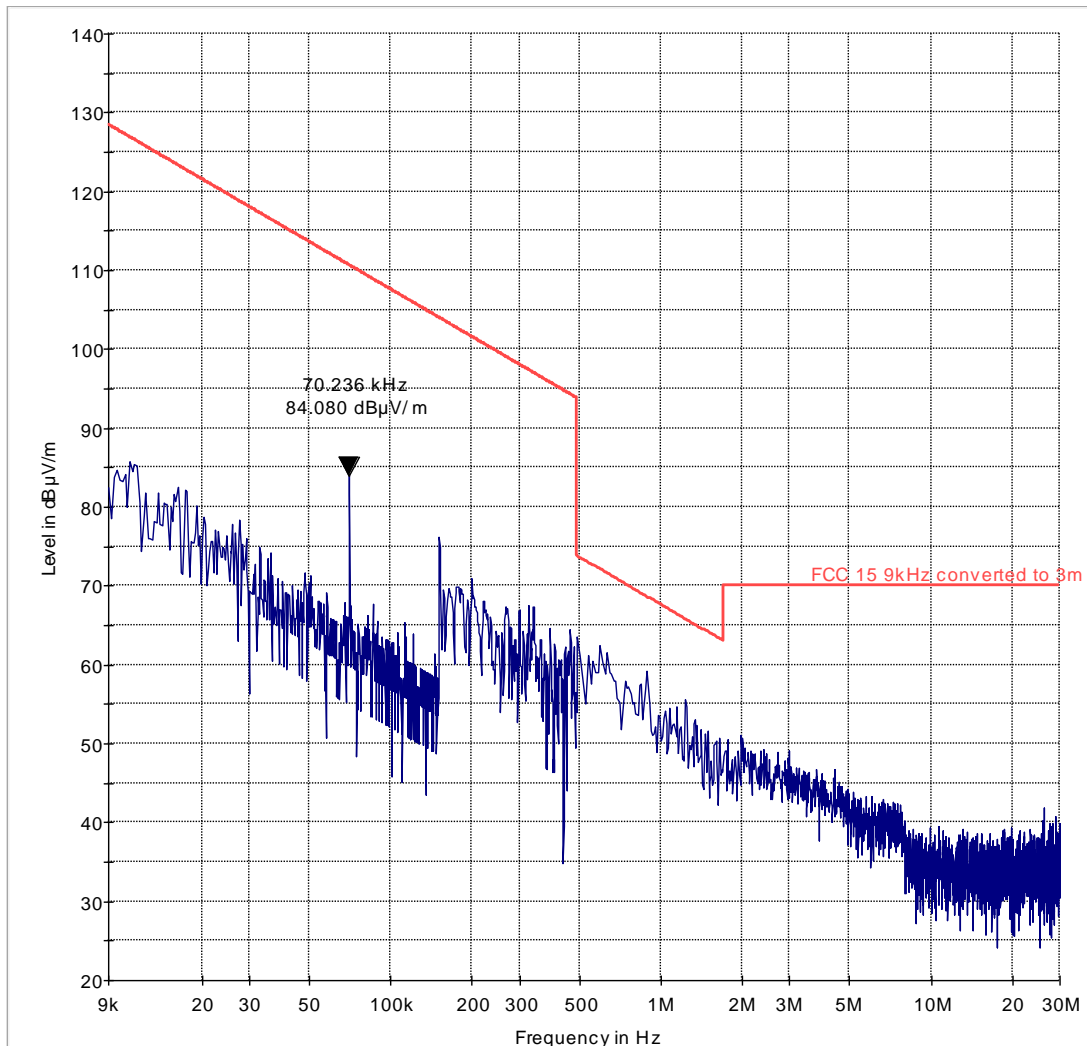


### Transmitter Radiated Spurious Emission: Ch Mid- 9kHz – 30MHz- 802.11g-mode



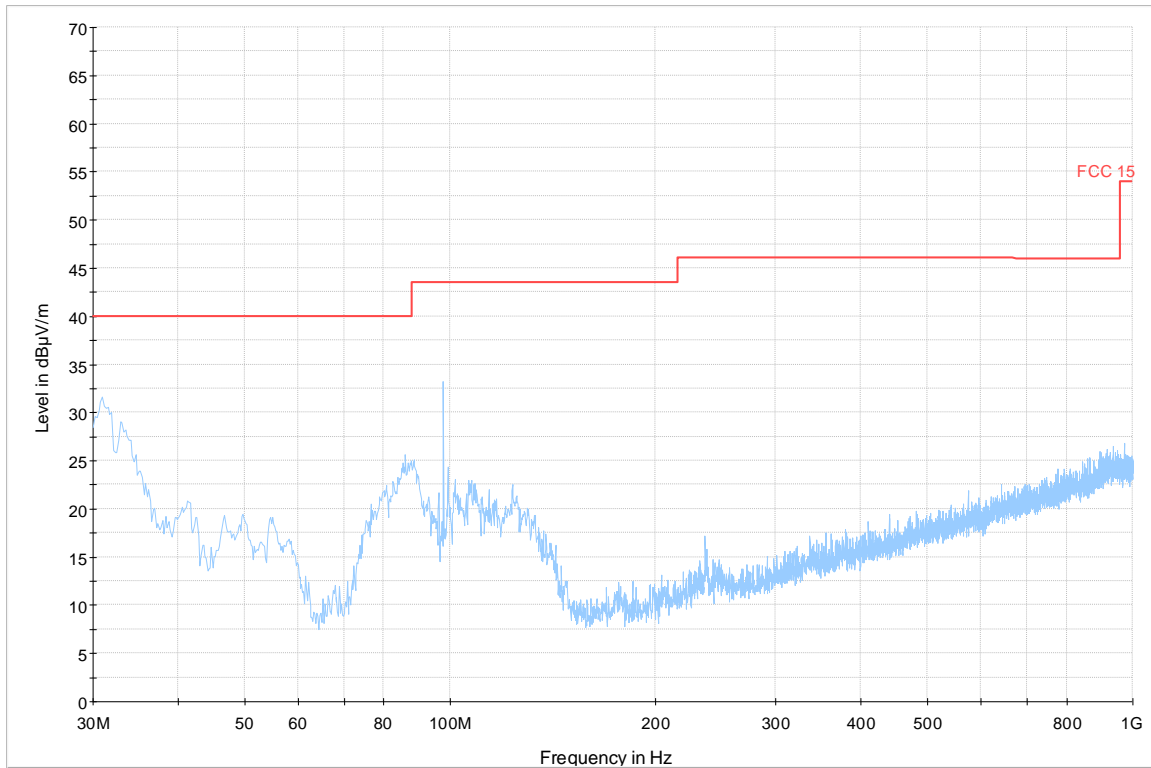
— FCC 15 9kHz converted to 3m — Preview Result 1-PK+

### Transmitter Radiated Spurious Emission: Ch Mid- 9kHz – 30MHz- 802.11n-mode



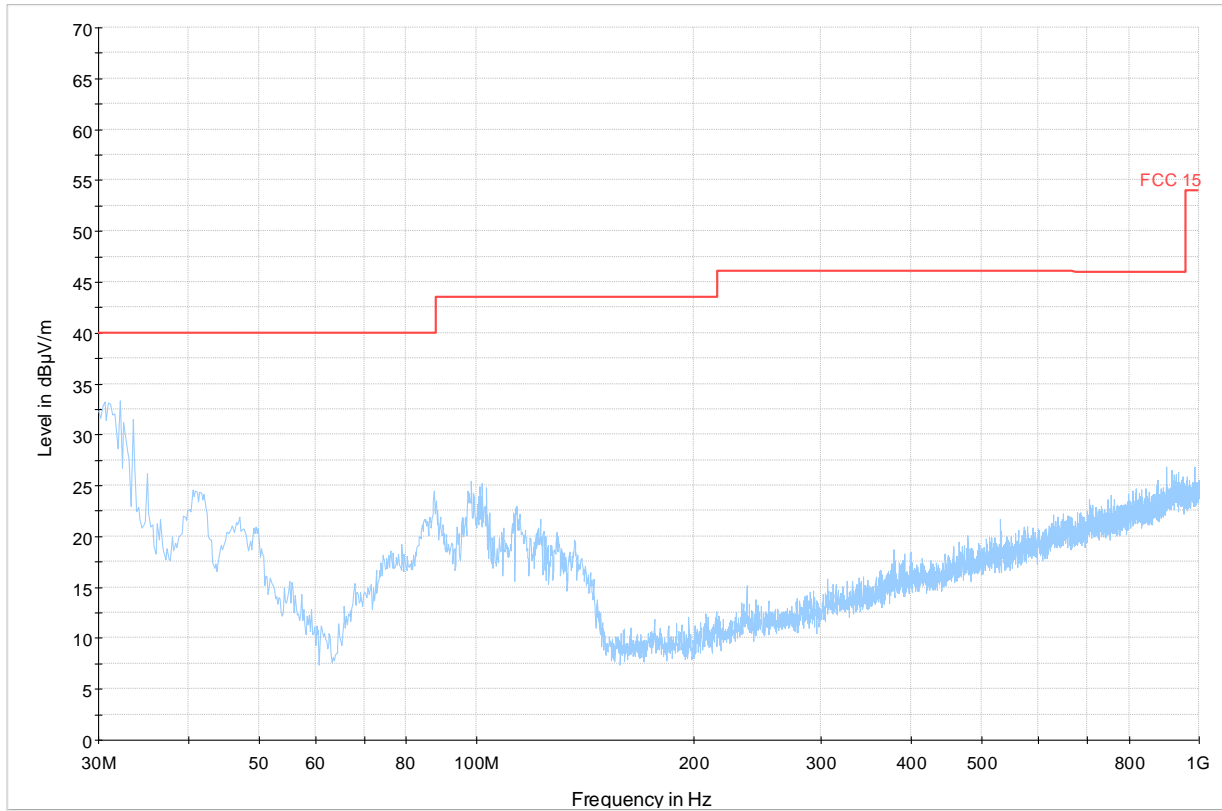
— FCC 15 9kHz converted to 3m — Preview Result 1-PK+

### Transmitter Radiated Spurious Emission: Ch Low- 30 MHz – 1GHz- 802.11b-mode



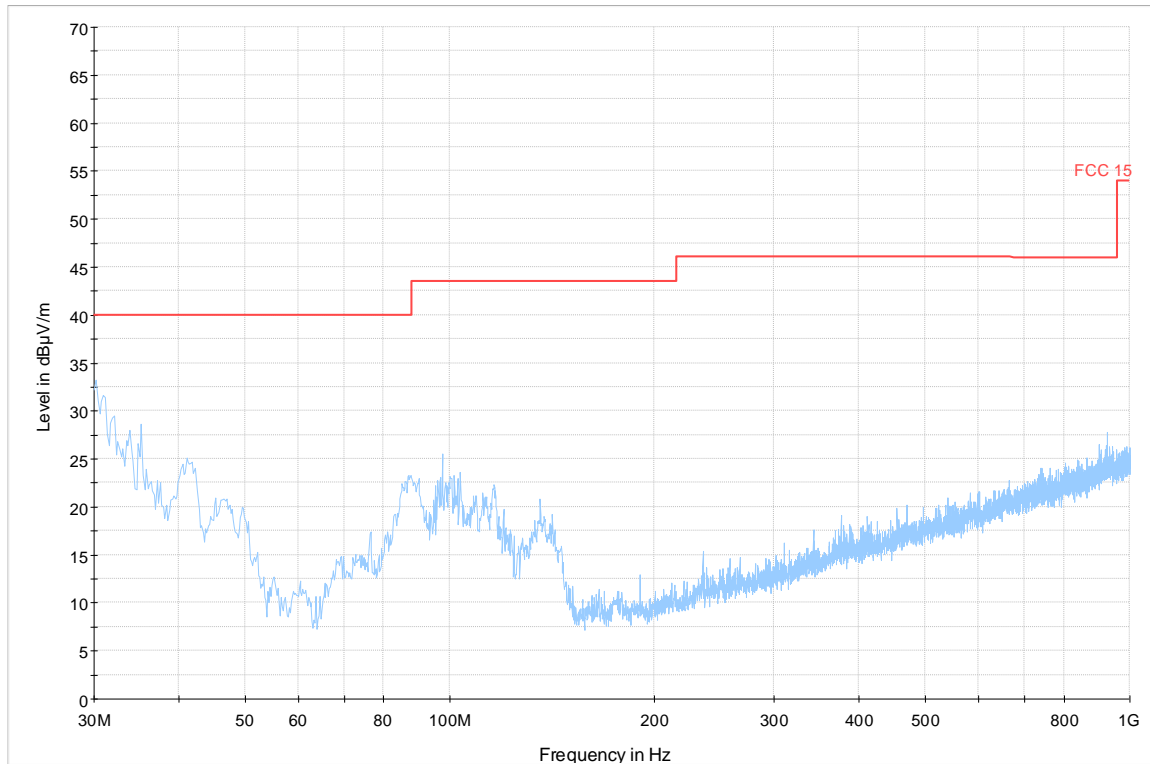
— FCC 15      — Preview Result 1-PK+

### Transmitter Radiated Spurious Emission: Ch Low- 30 MHz – 1GHz- 802.11g-mode



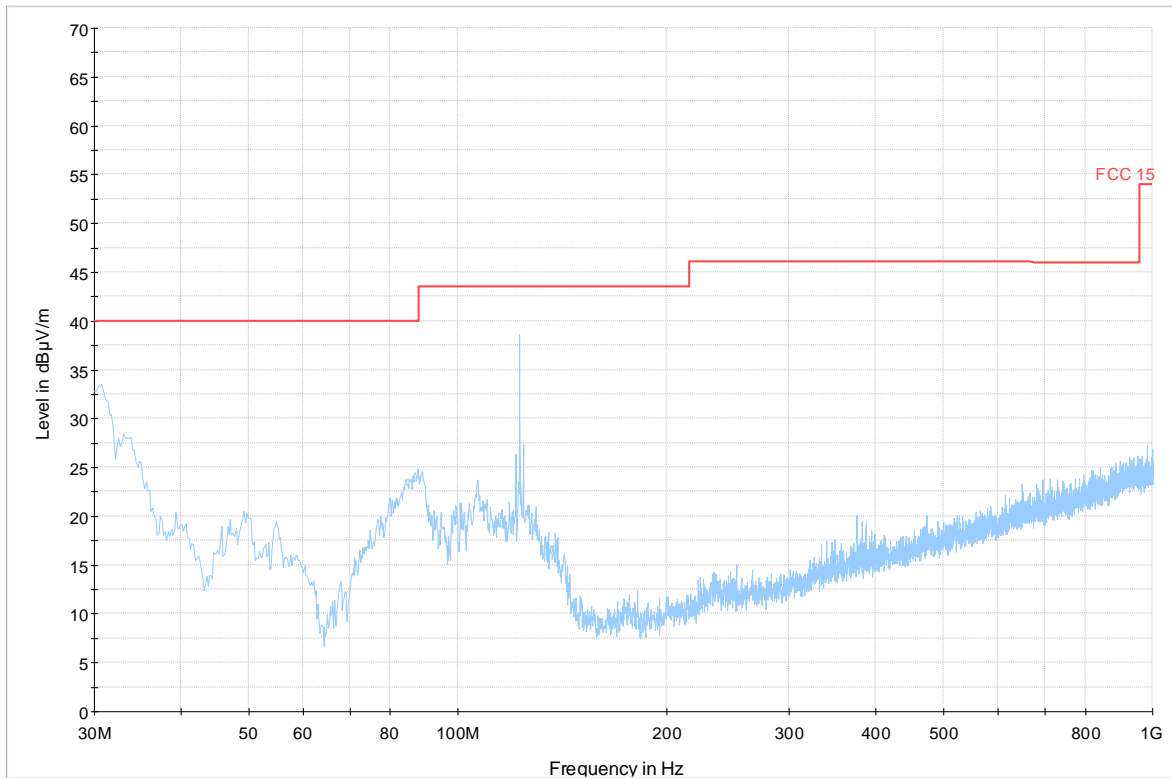
— FCC 15      — Preview Result 1-PK+

### Transmitter Radiated Spurious Emission: Ch Low- 30 MHz – 1GHz- 802.11n-mode



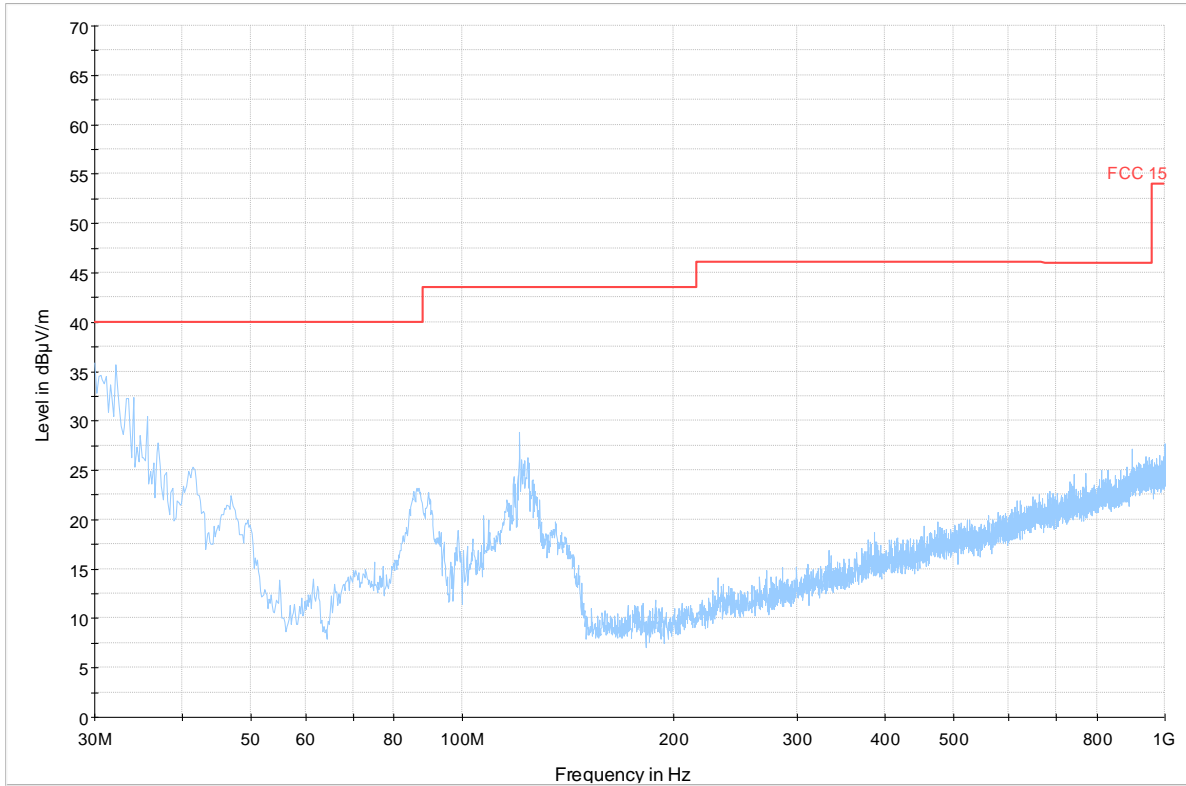
— FCC 15      — Preview Result 1-PK+

### Transmitter Radiated Spurious Emission: Ch Mid- 30 MHz – 1GHz- 802.11b-mode



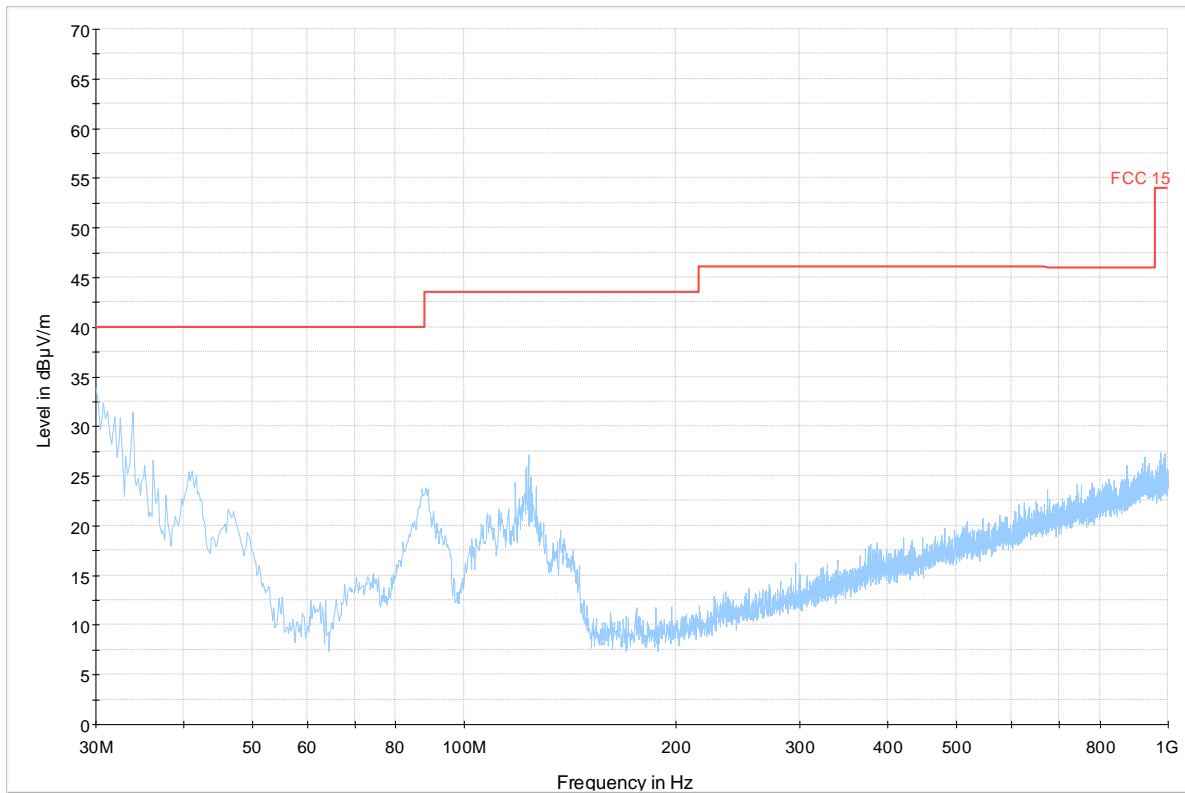
— FCC 15    — Preview Result 1-PK+

### Transmitter Radiated Spurious Emission: Ch Mid- 30 MHz – 1GHz- 802.11g-mode



— FCC 15    — Preview Result 1-PK+

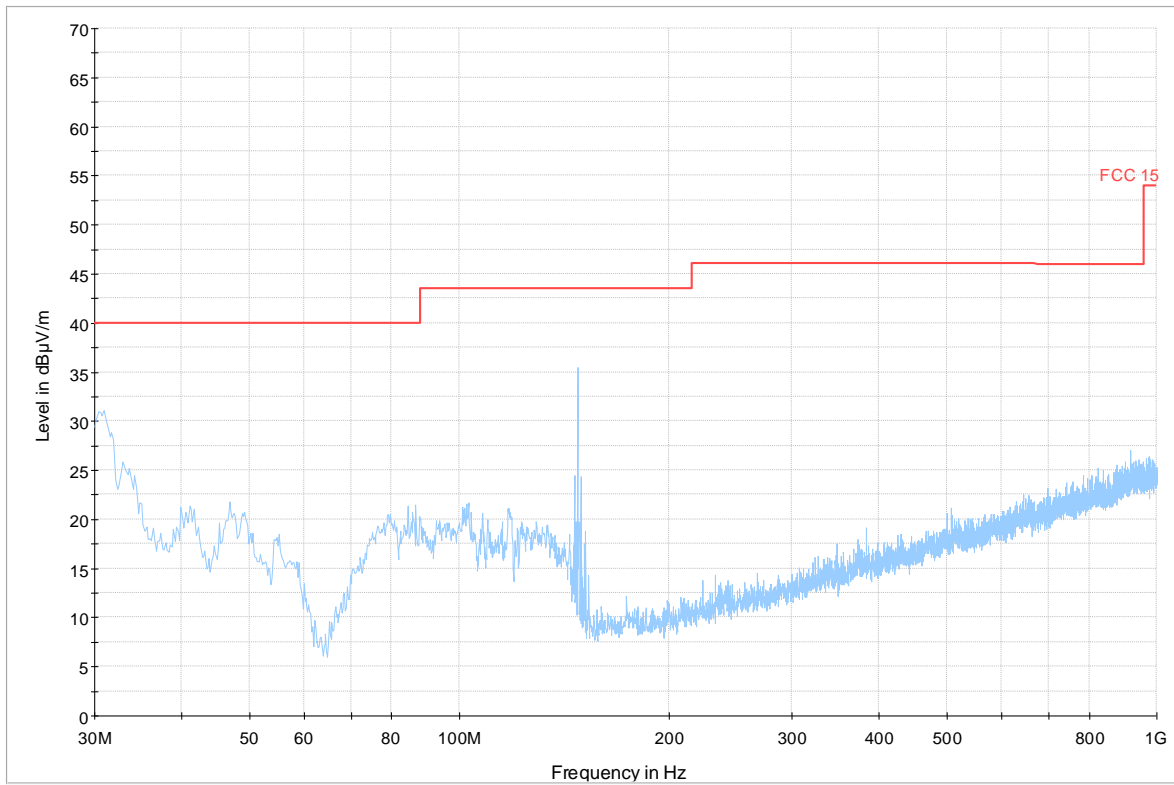
### Transmitter Radiated Spurious Emission: Ch Mid- 30 MHz – 1GHz- 802.11n-mode



— FCC 15      — Preview Result 1-PK+

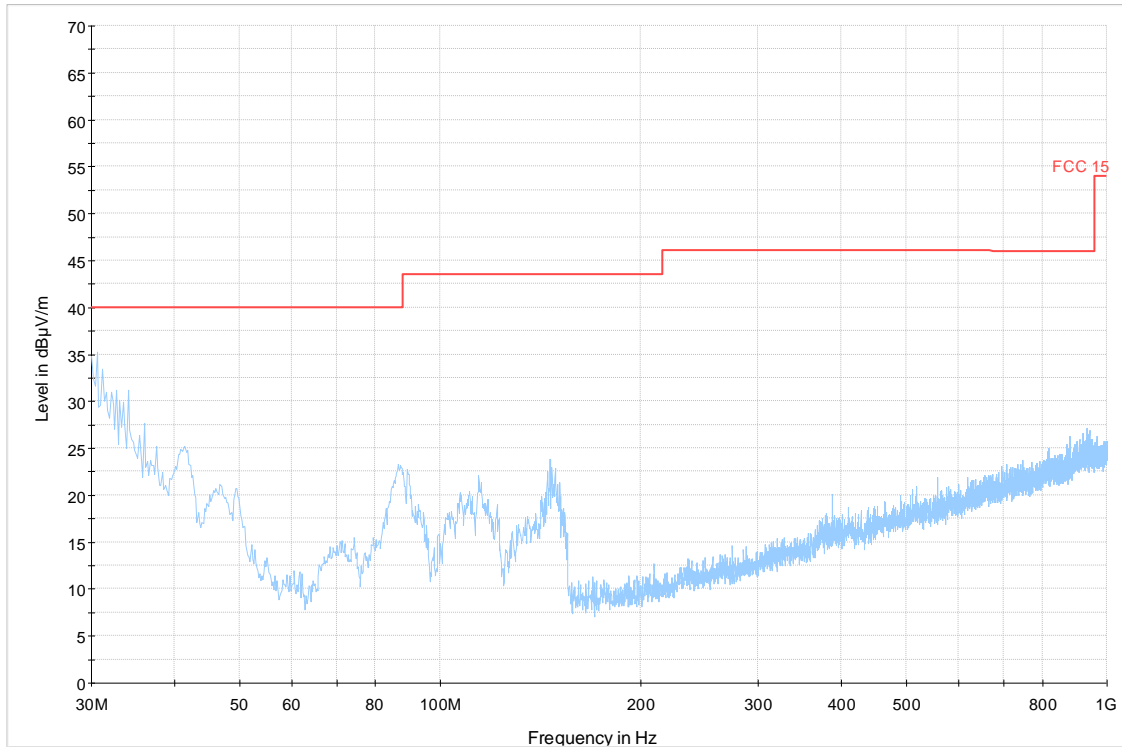


### Transmitter Radiated Spurious Emission: Ch High- 30 MHz – 1GHz- 802.11b-mode



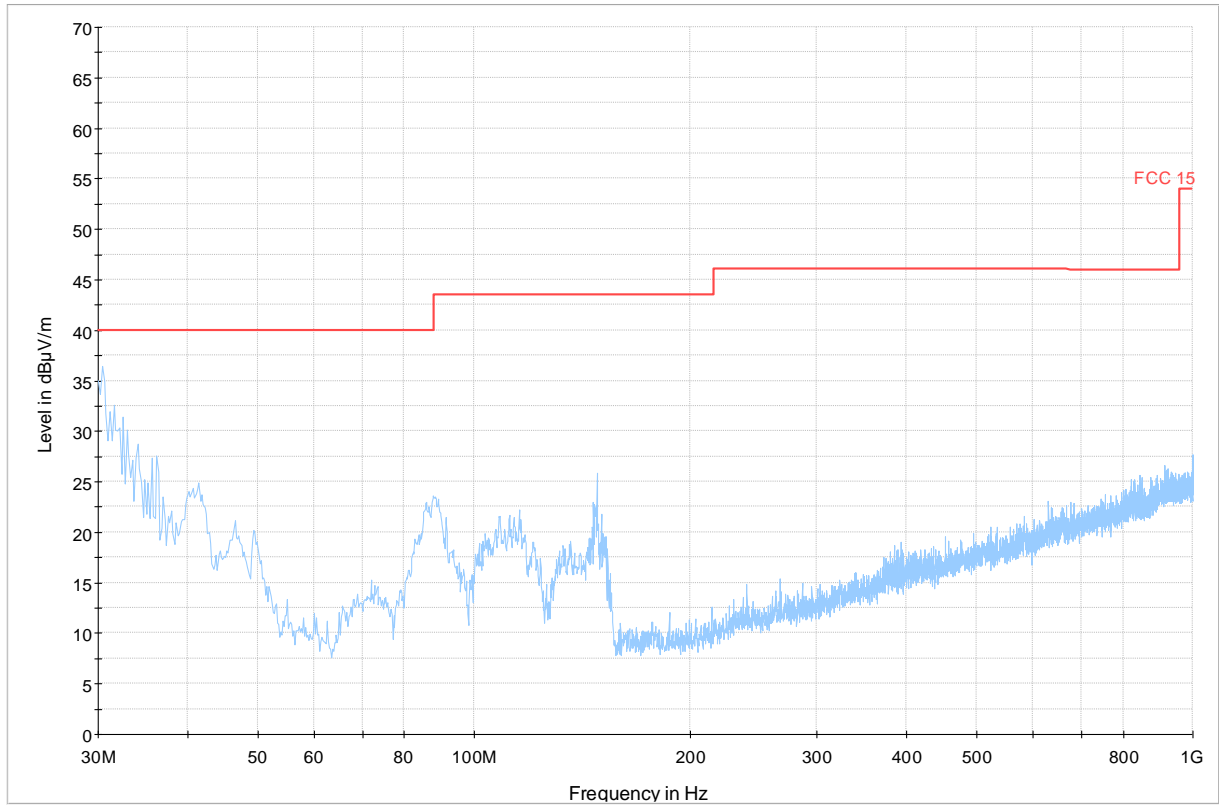
— FCC 15      — Preview Result 1-PK+

### Transmitter Radiated Spurious Emission: Ch High- 30 MHz – 1GHz- 802.11g-mode



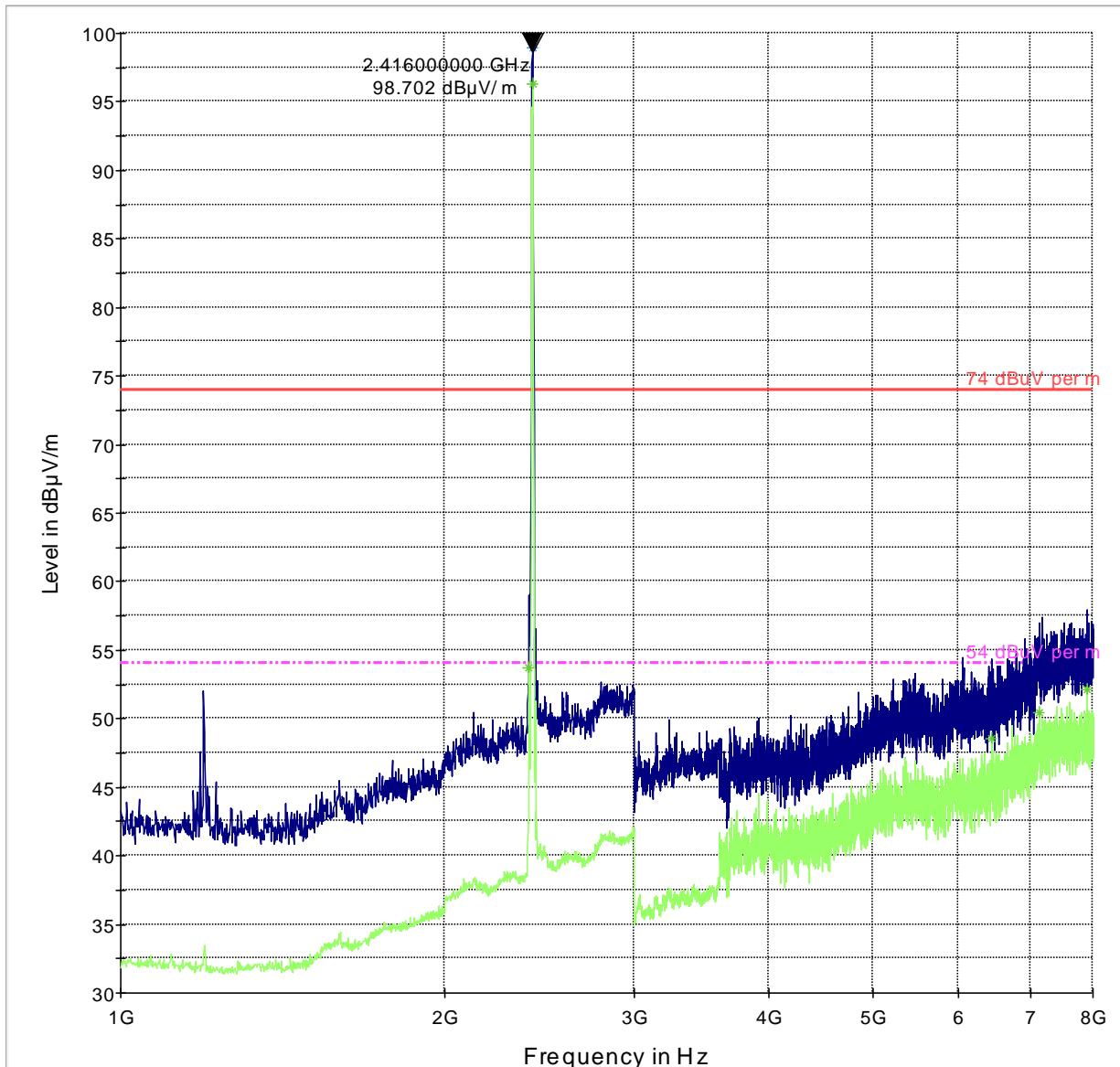
— FCC 15    — Preview Result 1-PK+

### Transmitter Radiated Spurious Emission: Ch High- 30 MHz – 1GHz- 802.11n-mode



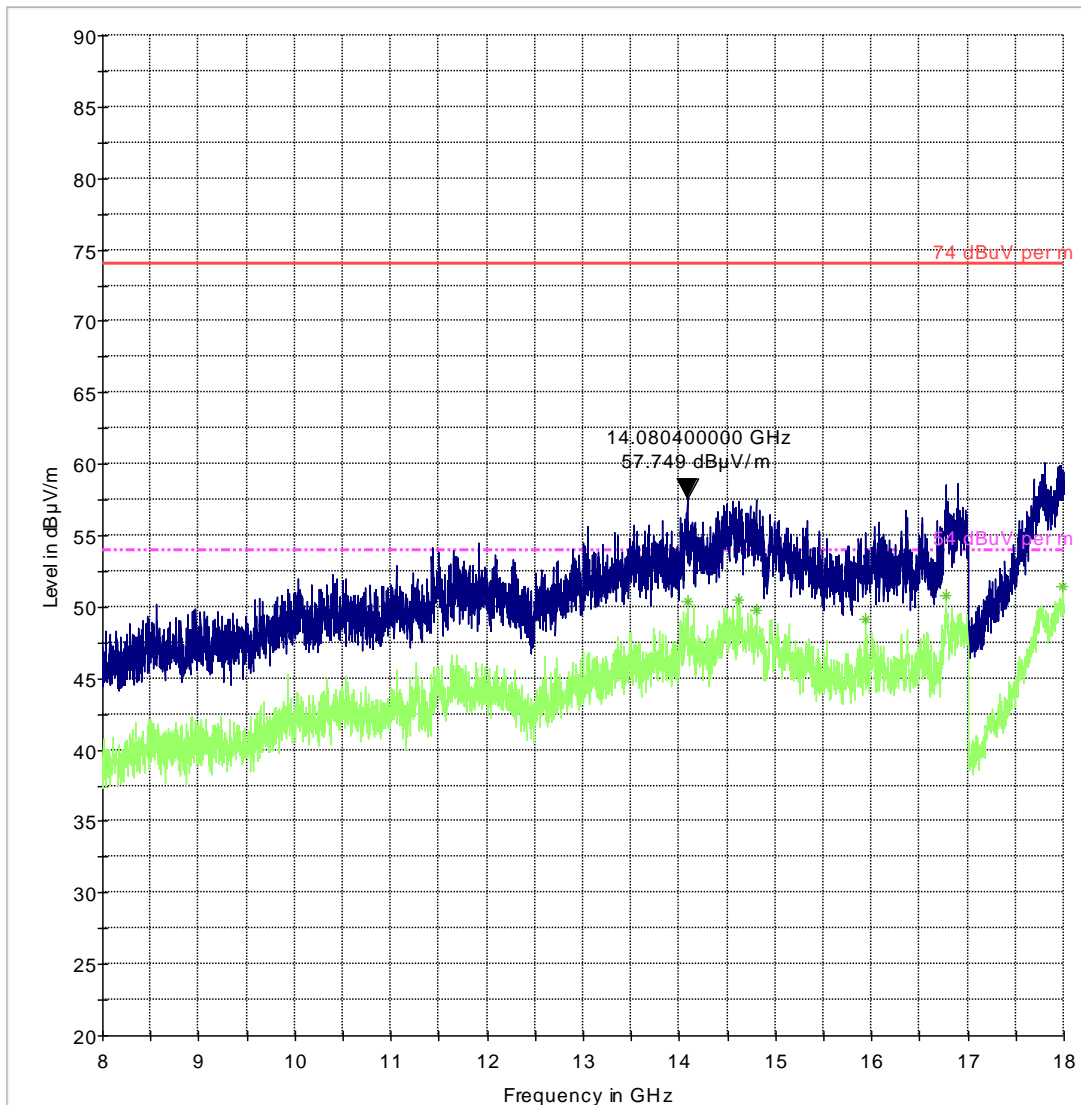
— FCC 15    — Preview Result 1-PK+

### Transmitter Radiated Spurious Emission: Ch Low- 1 GHz – 8GHz- 802.11b-mode



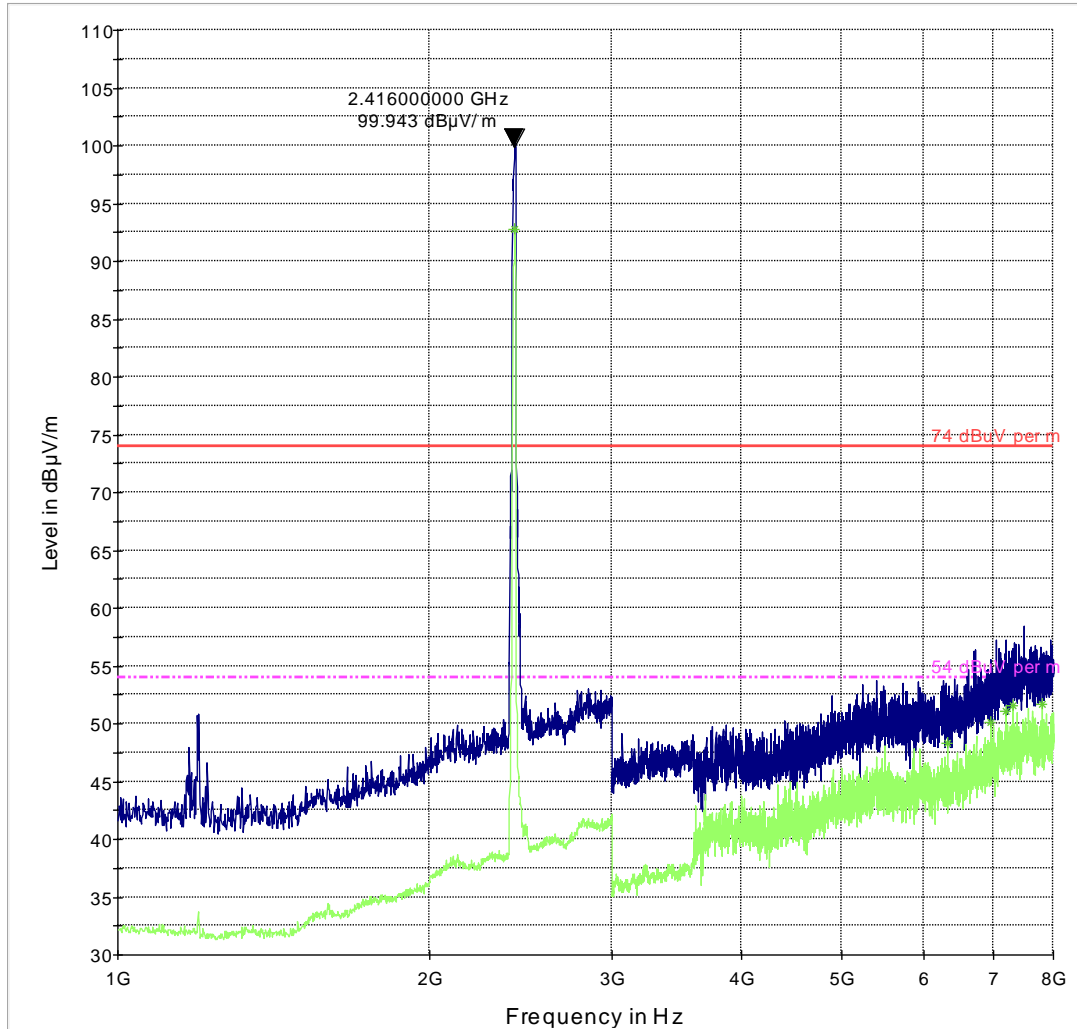
- 74 dBµV per m
- 54 dBµV per m
- Preview Result 1-PK+
- Preview Result 2-AVG
- \* Data Reduction Result 1 [4]-PK+
- \* Data Reduction Result 2 [4]-AVG

### Transmitter Radiated Spurious Emission: Ch Low- 8 GHz – 18GHz- 802.11b-mode



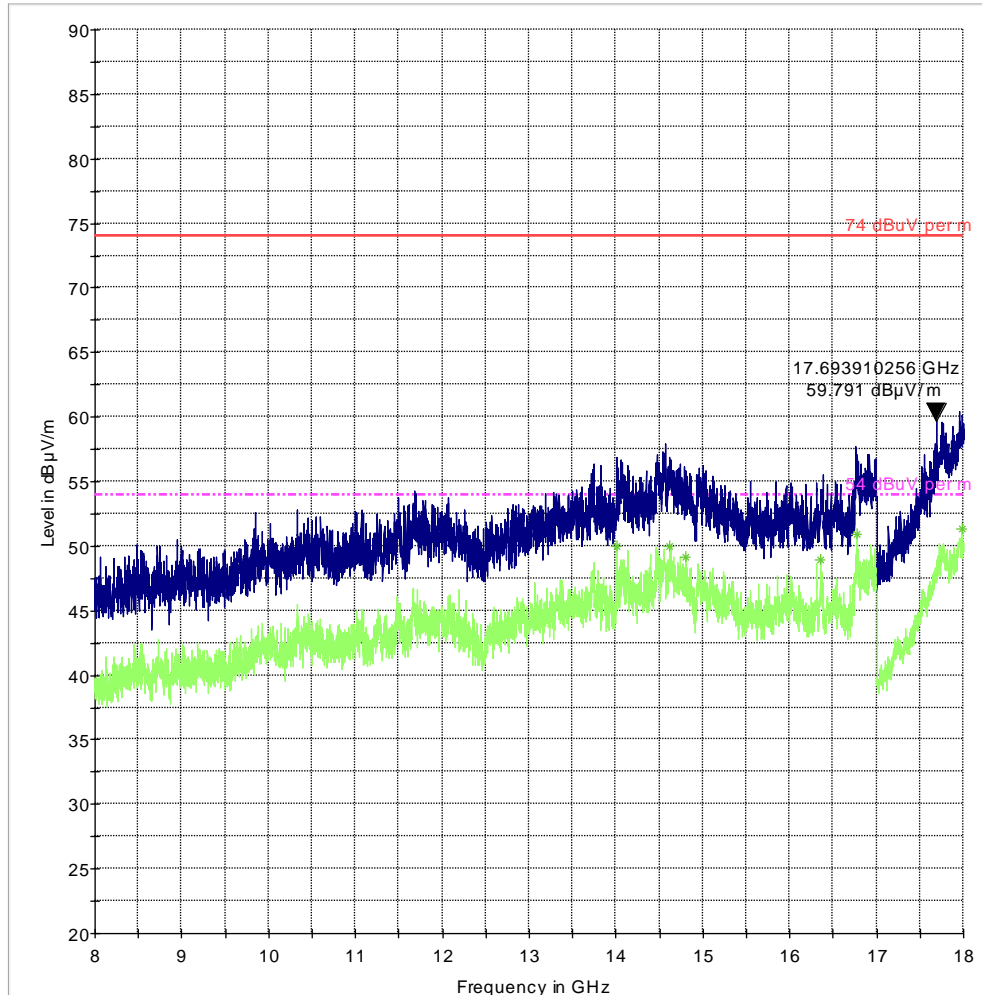
- 74 dBuV per m
- Preview Result 1-PK+
- \* Data Reduction Result 2 [6]-AVG
- 54 dBuV per m
- Preview Result 2-AVG

### Transmitter Radiated Spurious Emission: Ch Low- 1 GHz – 8GHz- 802.11g-mode



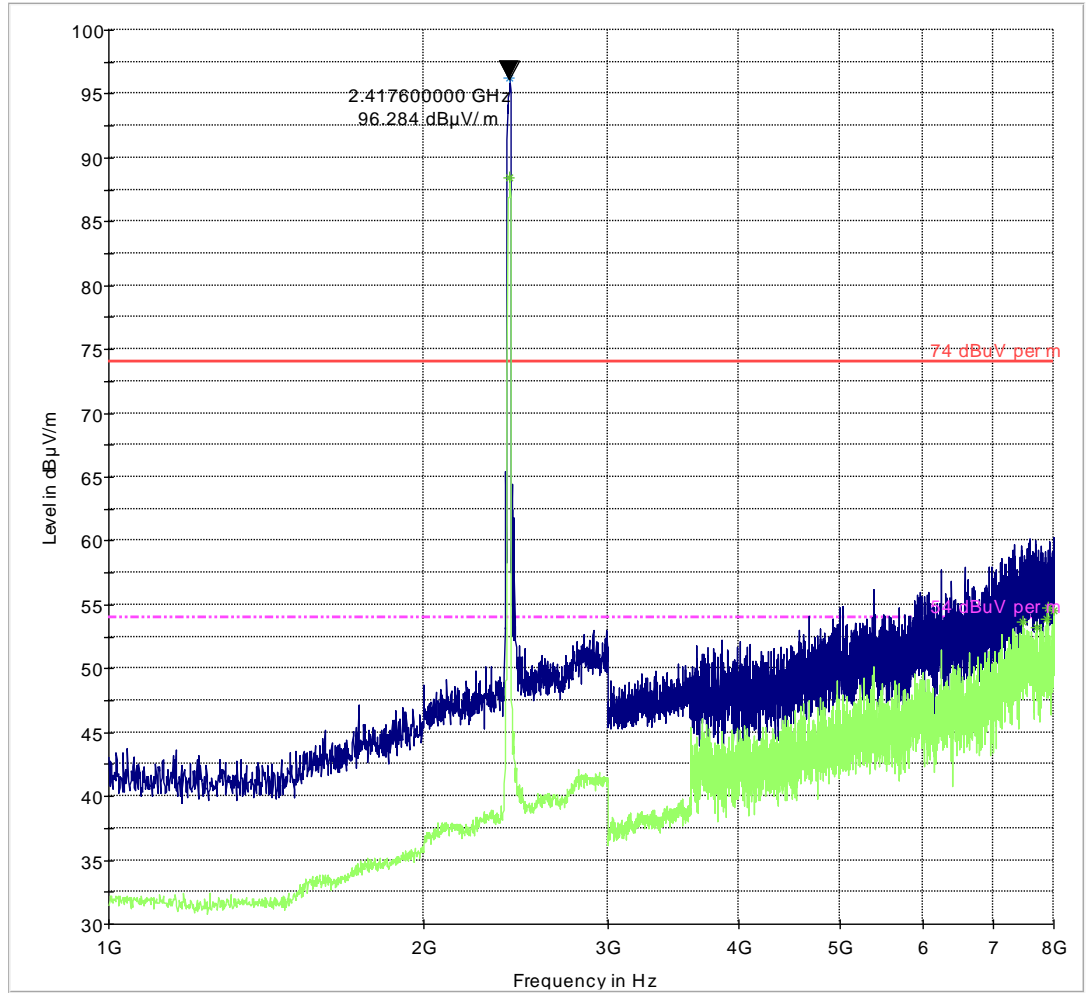
- 74 dBuV per m
- 54 dBuV per m
- \* Preview Result 1-PK+
- \* Preview Result 2-AVG
- \* Data Reduction Result 1 [4]-PK+
- \* Data Reduction Result 2 [4]-AVG

### Transmitter Radiated Spurious Emission: Ch Low- 8 GHz – 18GHz- 802.11g-mode



- 74 dBuV per m
- Preview Result 1-PK+
- \* Data Reduction Result 2 [6]-AVG
- 54 dBuV per m
- Preview Result 2-AVG

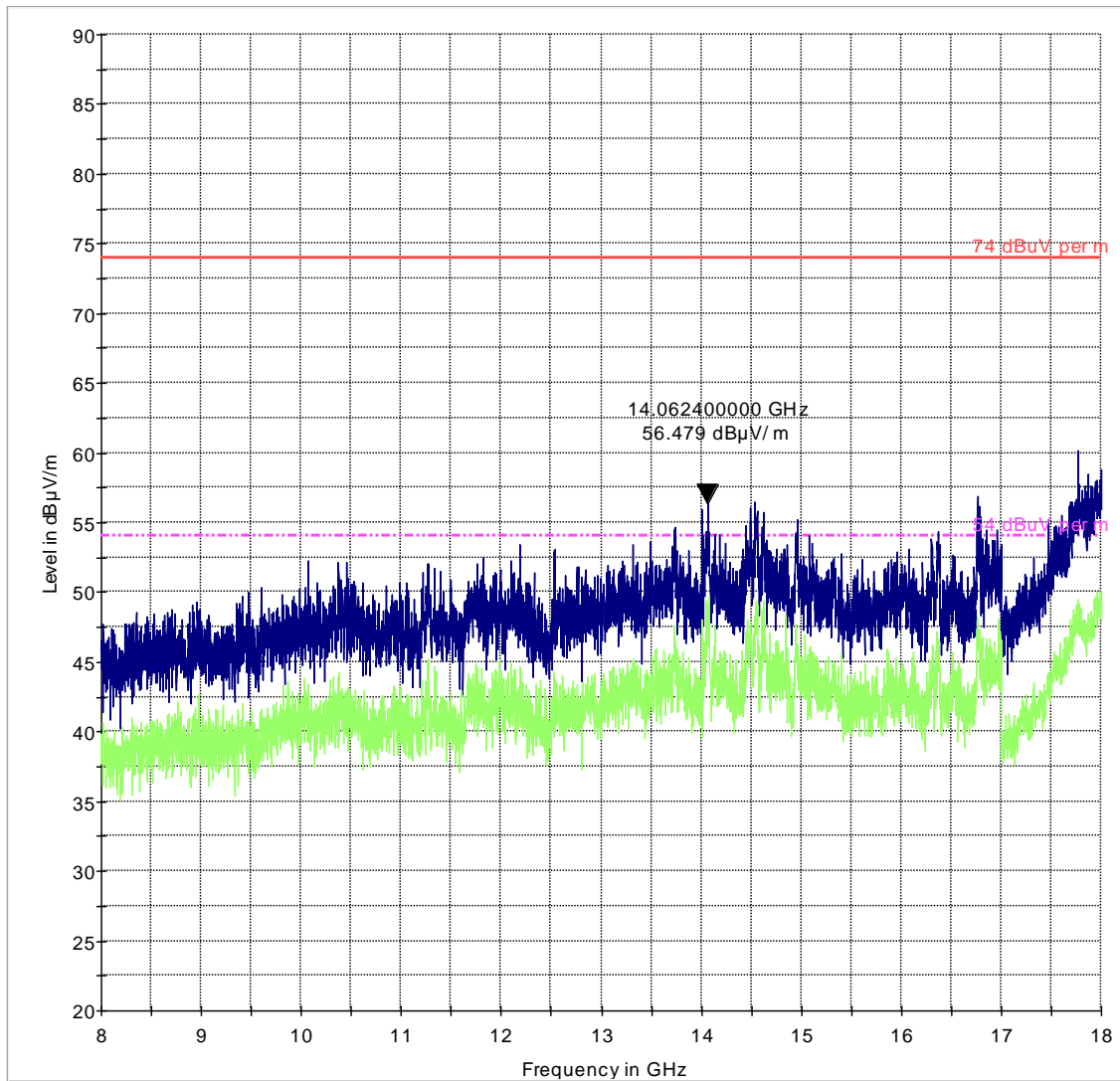
### Transmitter Radiated Spurious Emission: Ch Low- 1 GHz – 8GHz- 802.11n-mode



- 74 dBuV per m
- 54 dBuV per m
- \* Preview Result 1-PK+
- \* Preview Result 2-AVG
- \* Data Reduction Result 1 [4]-PK+
- \* Data Reduction Result 2 [4]-AVG

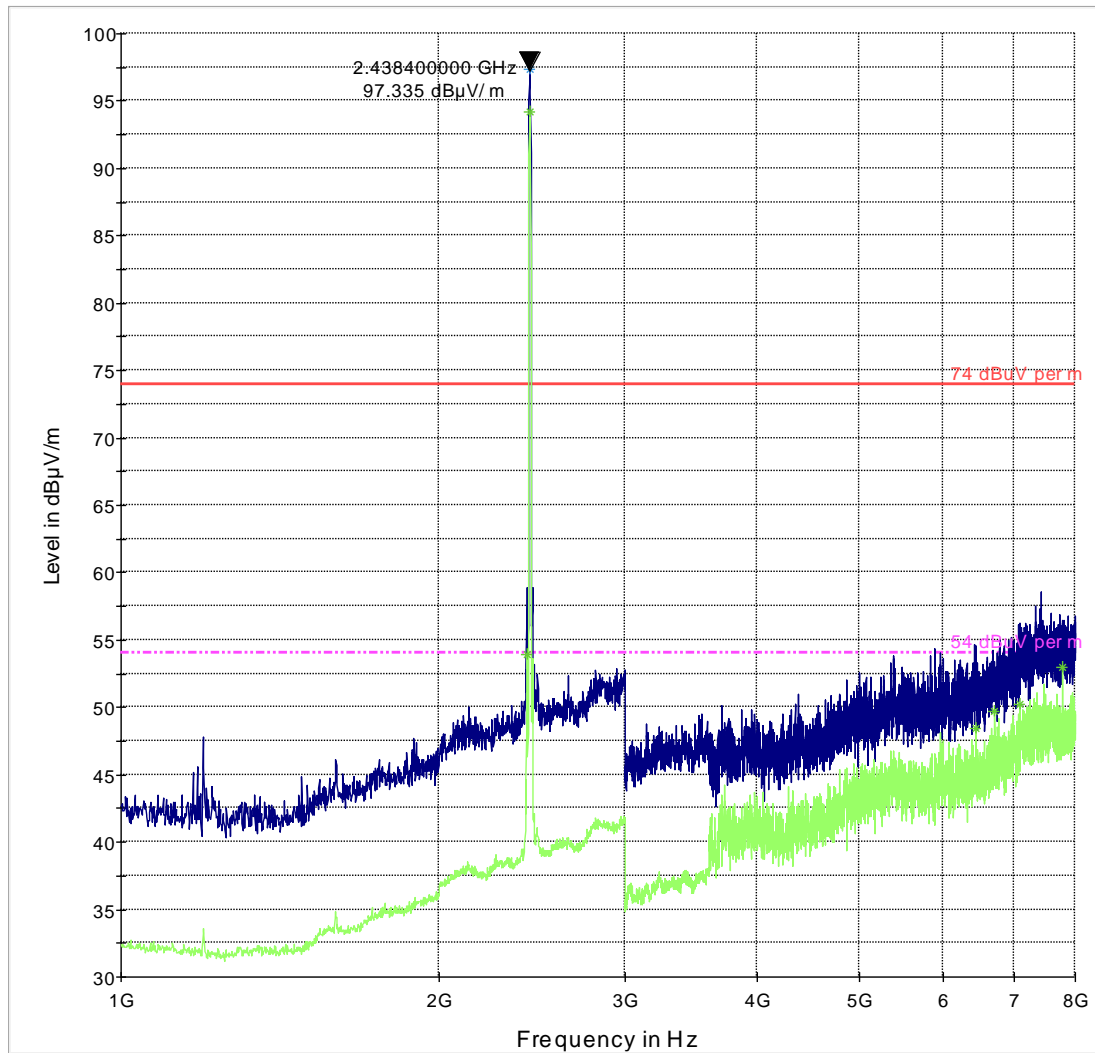


### Transmitter Radiated Spurious Emission: Ch Low- 8 GHz – 18GHz- 802.11n-mode



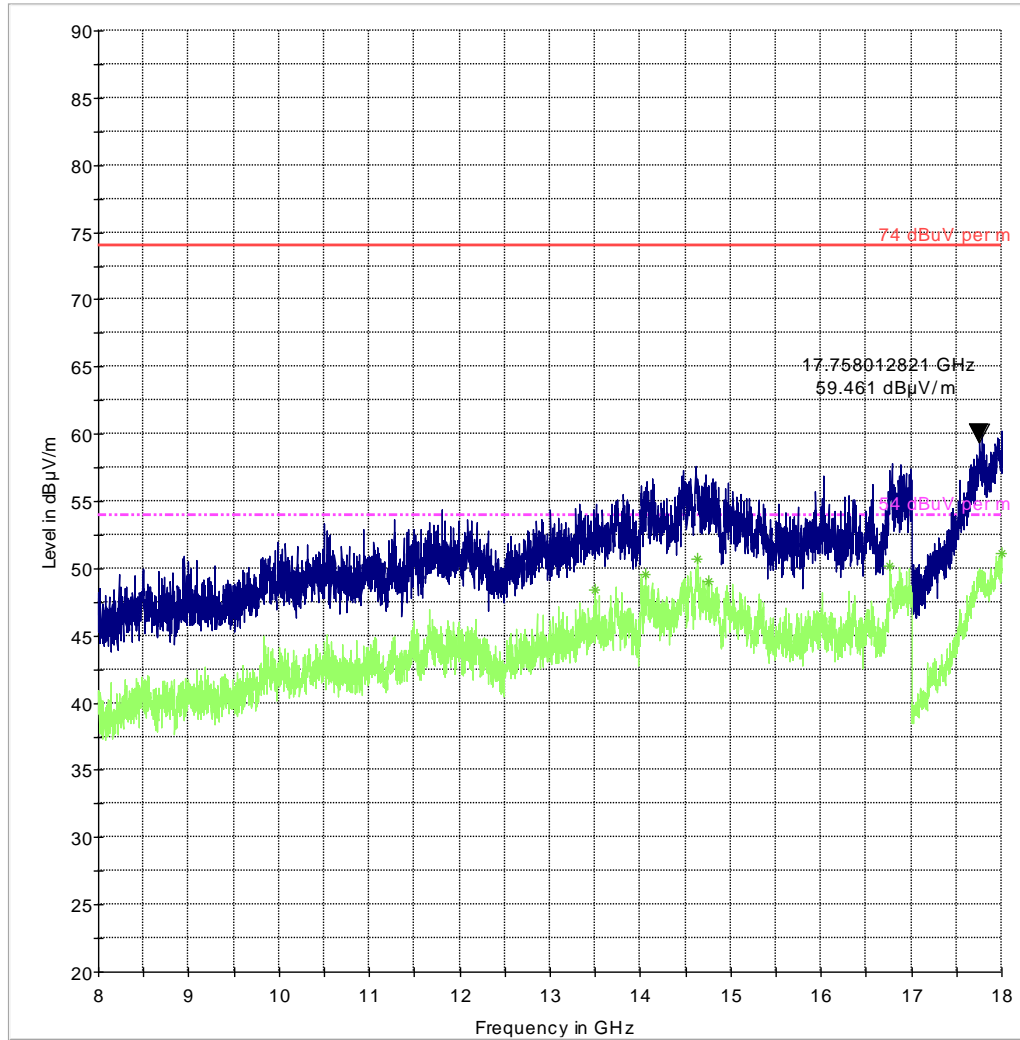
— 74 dBuV per m    - - - - 54 dBuV per m    — Preview Result 1-PK+    — Preview Result 2-AVG

### Transmitter Radiated Spurious Emission: Ch Mid- 1 GHz – 8GHz- 802.11b-mode



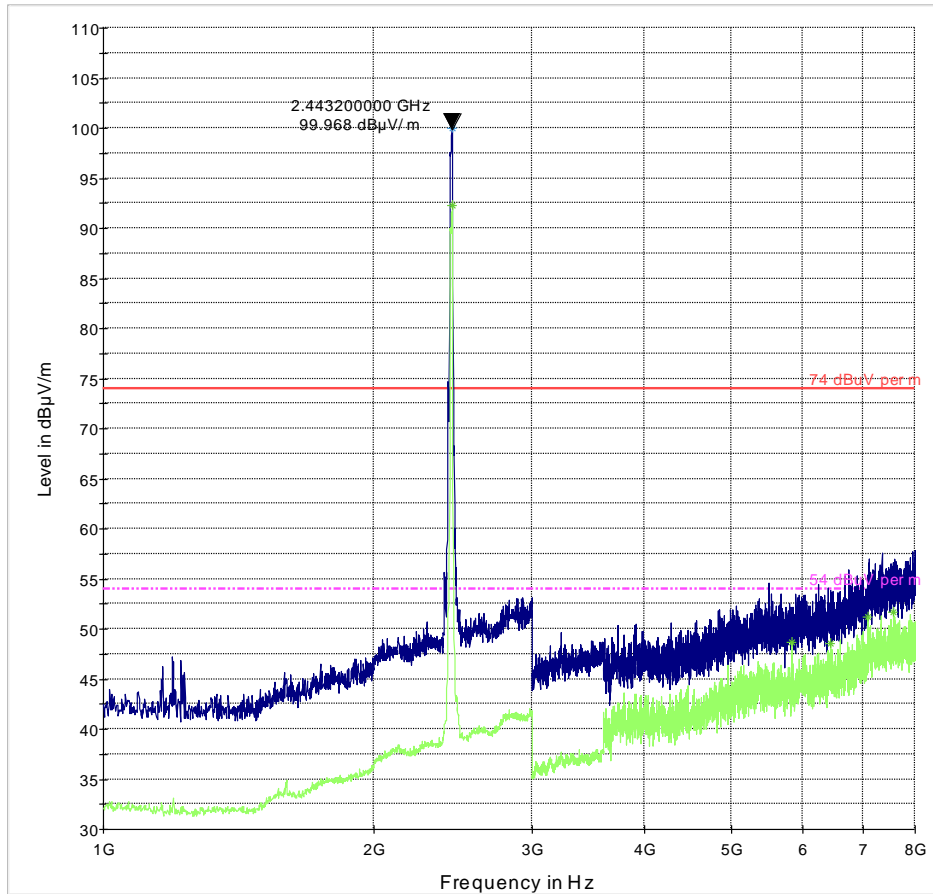
- 74 dBuV per m
- 54 dBuV per m
- \* Preview Result 1-PK+
- \* Preview Result 2-AVG
- \* Data Reduction Result 1 [4]-PK+
- \* Data Reduction Result 2 [4]-AVG

### Transmitter Radiated Spurious Emission: Ch Mid- 8 GHz – 18GHz- 802.11b-mode



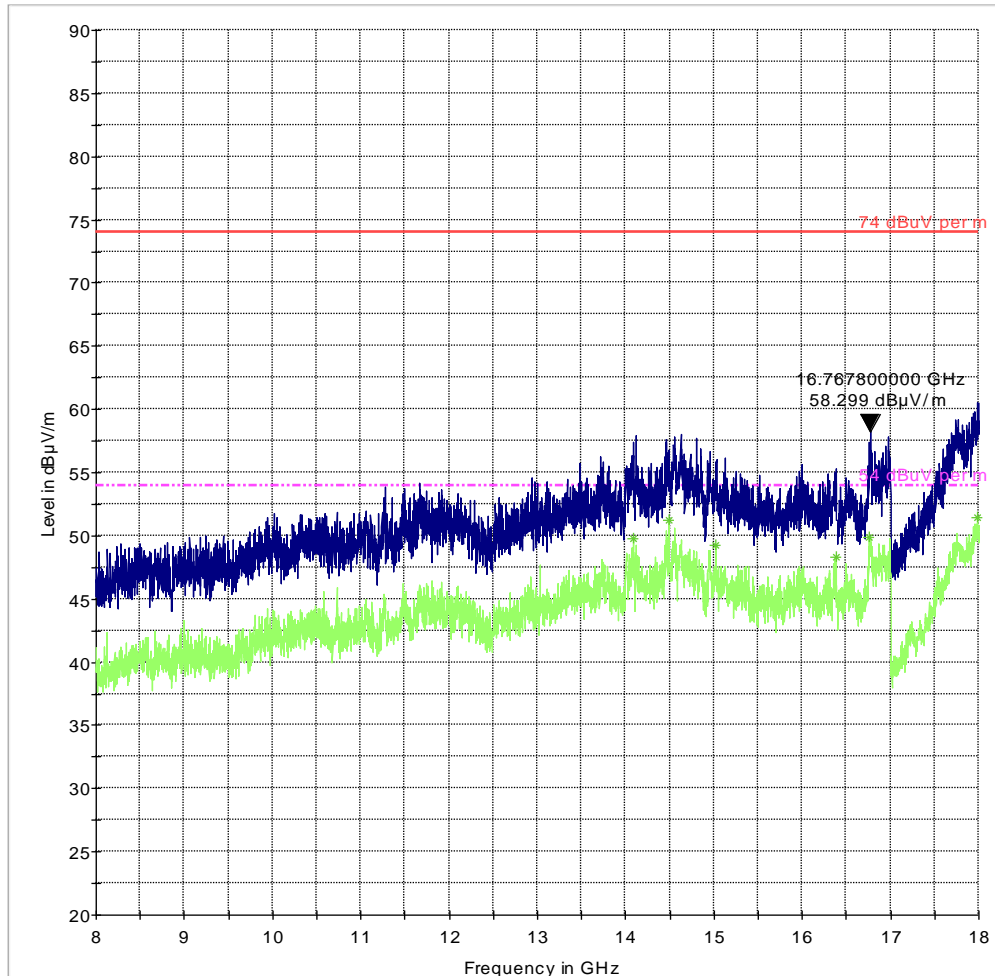
- 74 dBuV per m
- Preview Result 1-PK+
- \* Data Reduction Result 2 [6]-AVG
- 54 dBuV per m
- Preview Result 2-AVG

### Transmitter Radiated Spurious Emission: Ch Mid- 1 GHz – 8GHz- 802.11g-mode



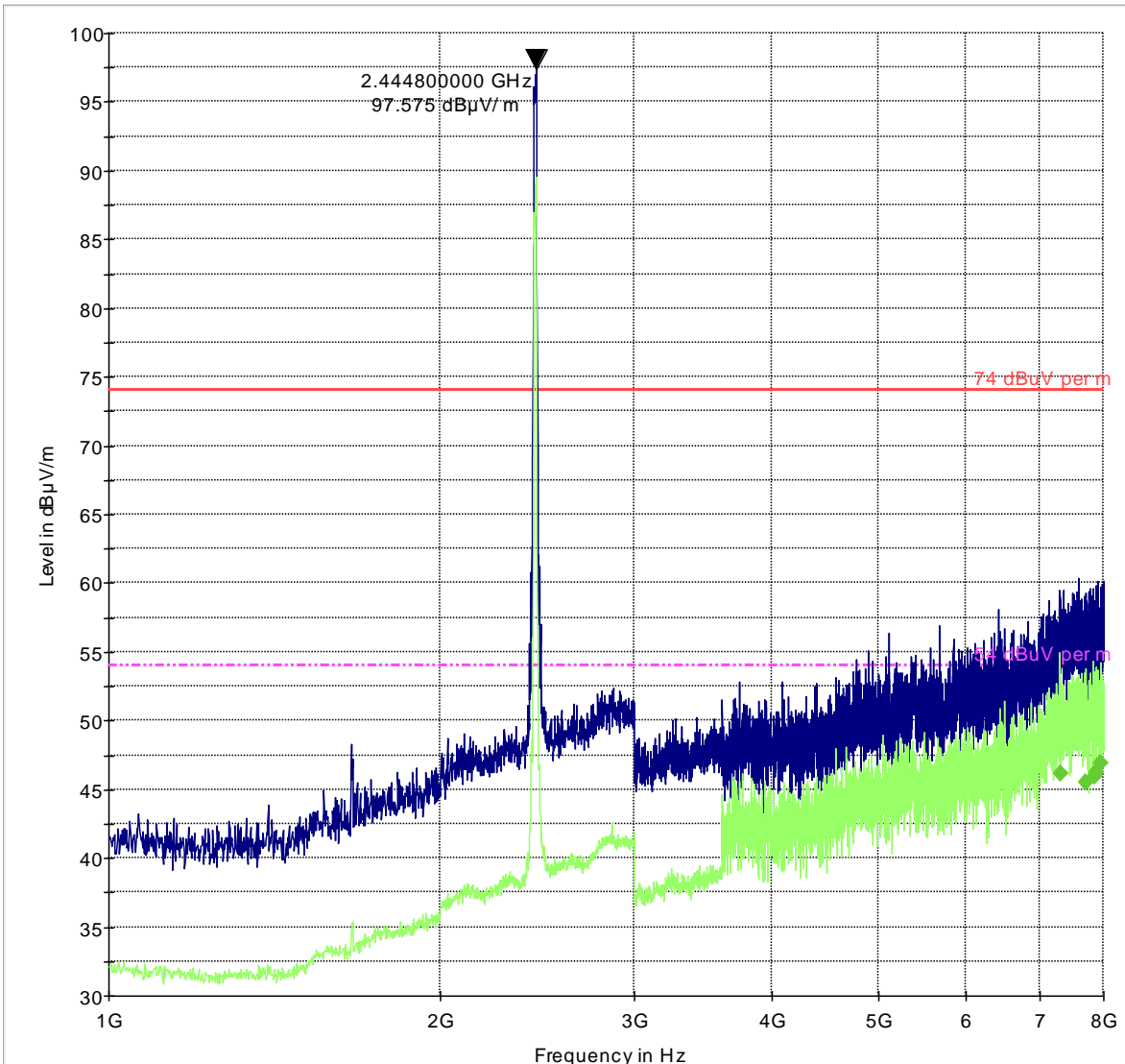
- 74 dBµV per m
- 54 dBµV per m
- Preview Result 1-PK+
- Preview Result 2-AVG
- \* Data Reduction Result 1 [4]-PK+
- \* Data Reduction Result 2 [4]-AVG

### Transmitter Radiated Spurious Emission: Ch Mid- 8 GHz – 18GHz- 802.11g-mode



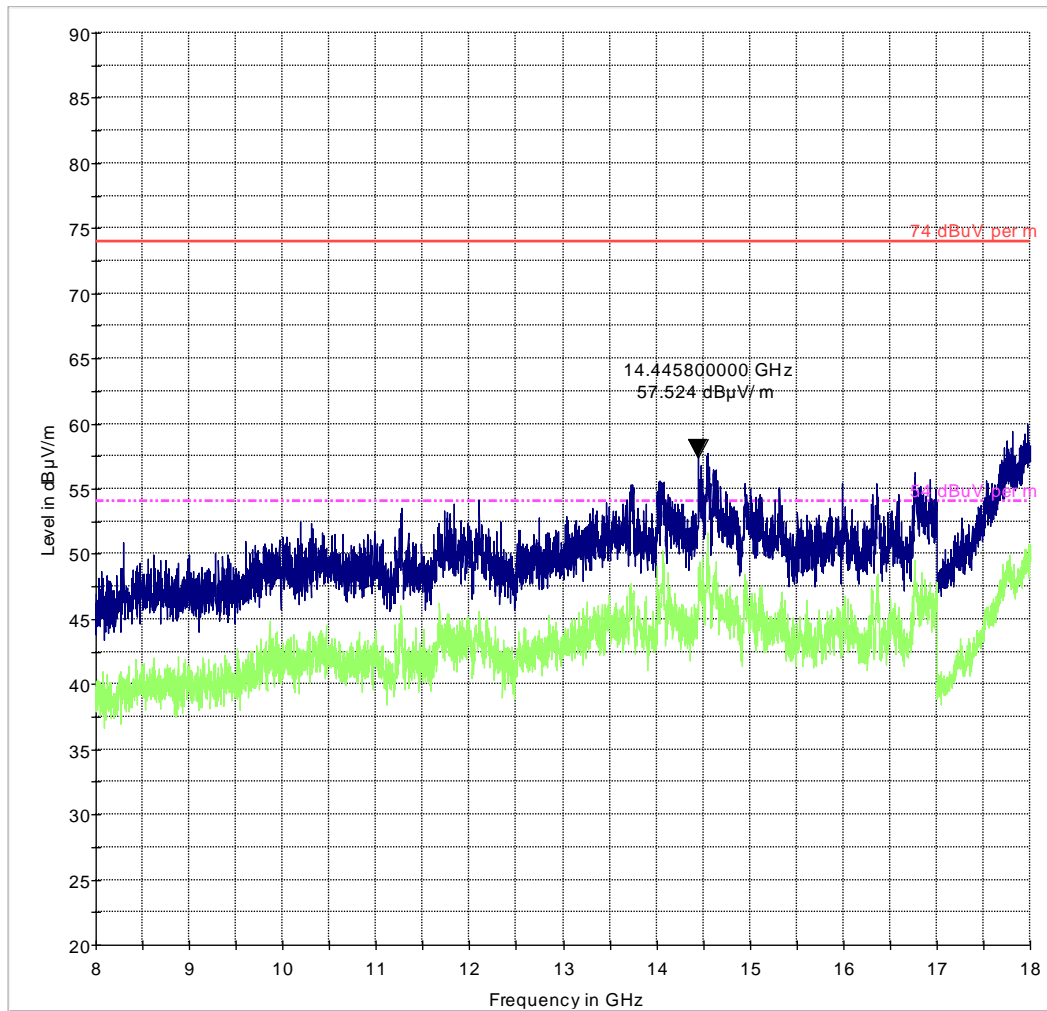
- 74 dBuV per m
- Preview Result 1-PK+
- \* Data Reduction Result 2 [6]-AVG
- 54 dBuV per m
- Preview Result 2-AVG

### Transmitter Radiated Spurious Emission: Ch Mid- 1 GHz – 8GHz- 802.11n-mode



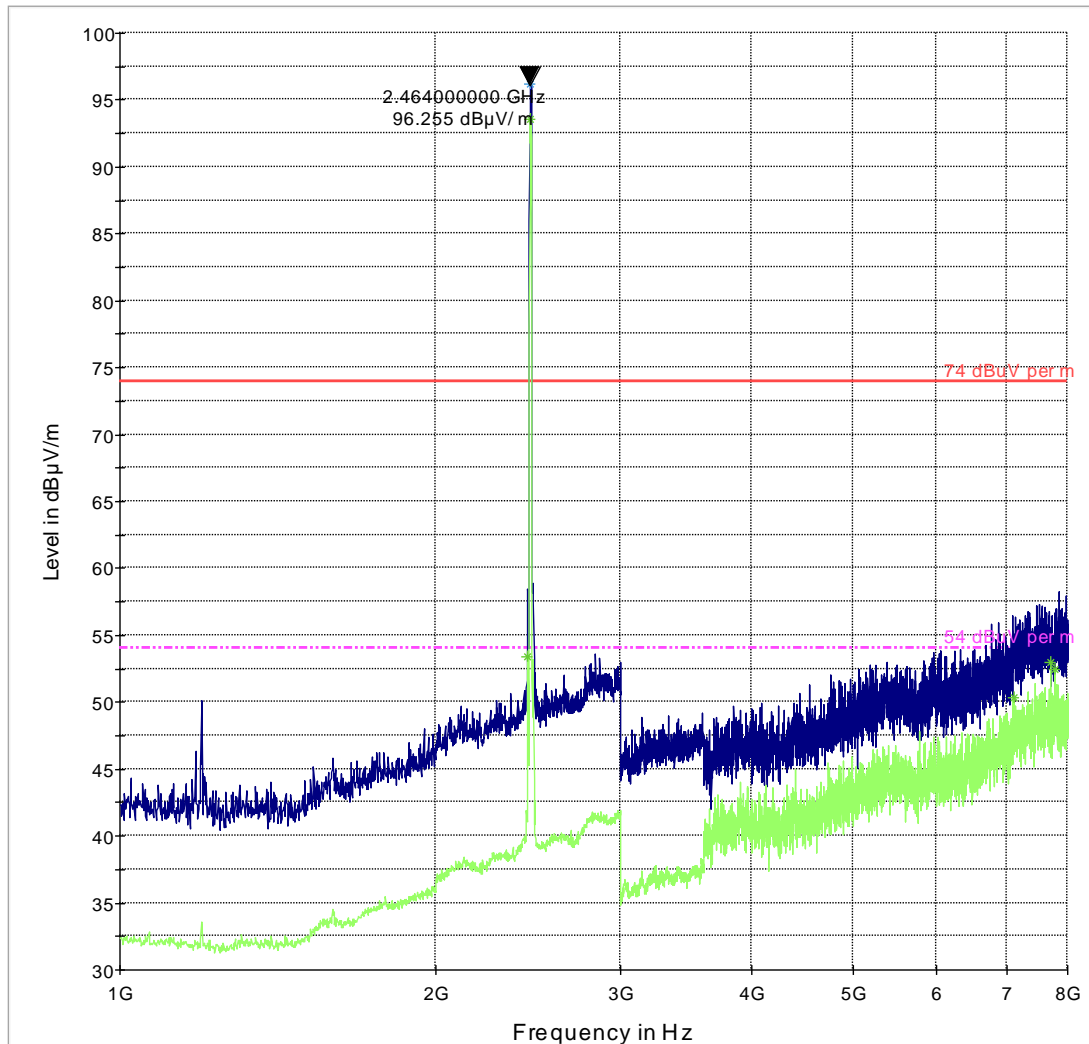
- 74 dBµV per m
- 54 dBµV per m
- Preview Result 1-PK+
- Preview Result 2-AVG
- Final Result 2-AVG

### Transmitter Radiated Spurious Emission: Ch Mid- 8 GHz – 18GHz- 802.11n-mode



— 74 dBuV per m    - - - - 54 dBuV per m    — Preview Result 1-PK+    — Preview Result 2-AVG

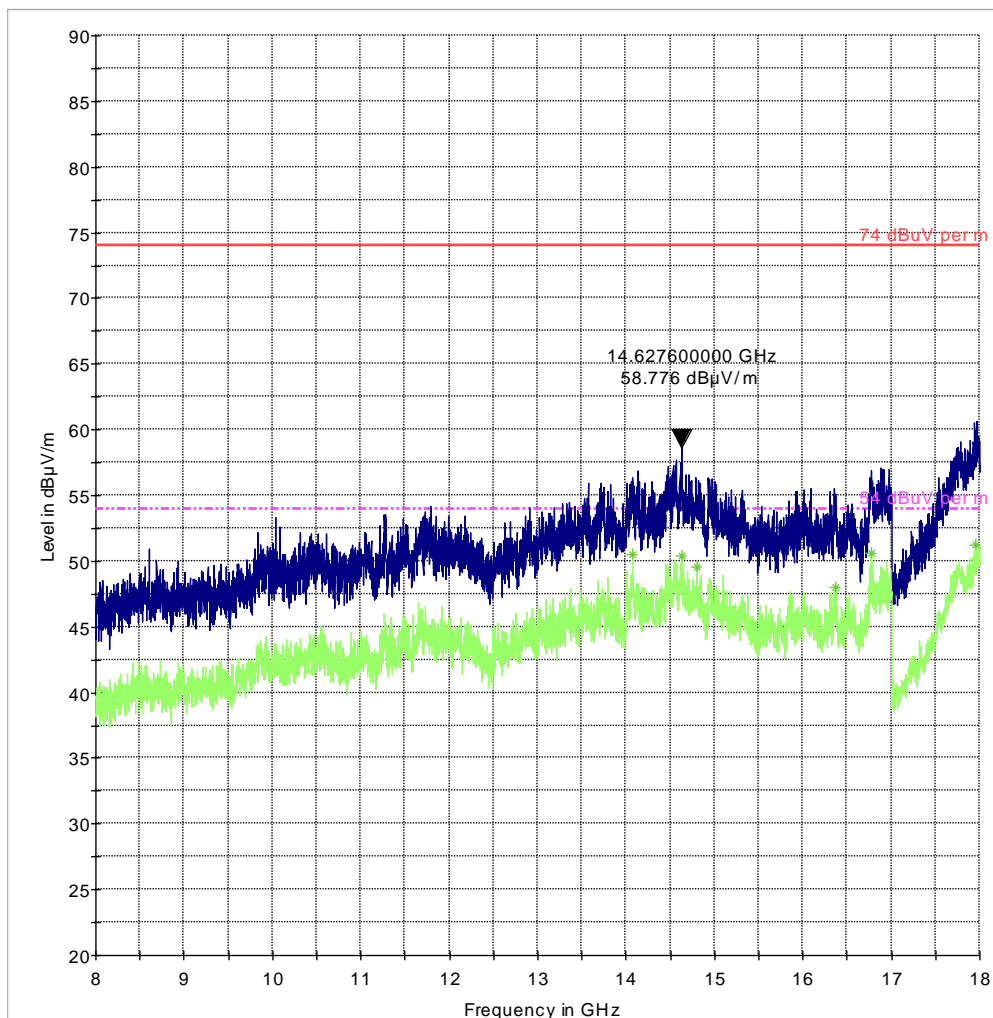
### Transmitter Radiated Spurious Emission: Ch High- 1 GHz – 8GHz- 802.11b-mode



- 74 dBµV per m
- Preview Result 1-PK+
- \* Data Reduction Result 1 [4]-PK+
- 54 dBµV per m
- Preview Result 2-AVG
- \* Data Reduction Result 2 [4]-AVG

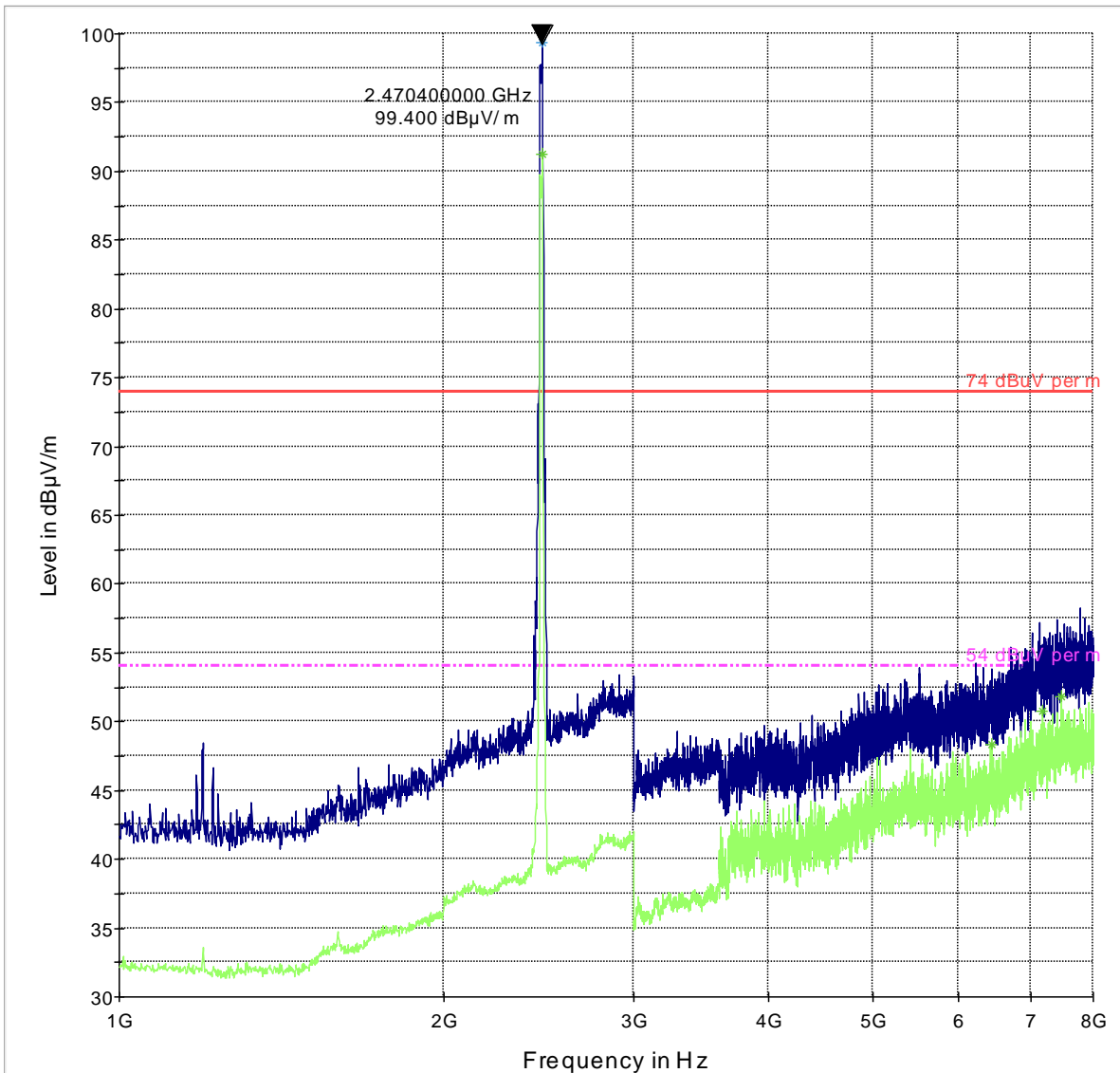


### Transmitter Radiated Spurious Emission: Ch High- 8 GHz – 18GHz- 802.11b-mode



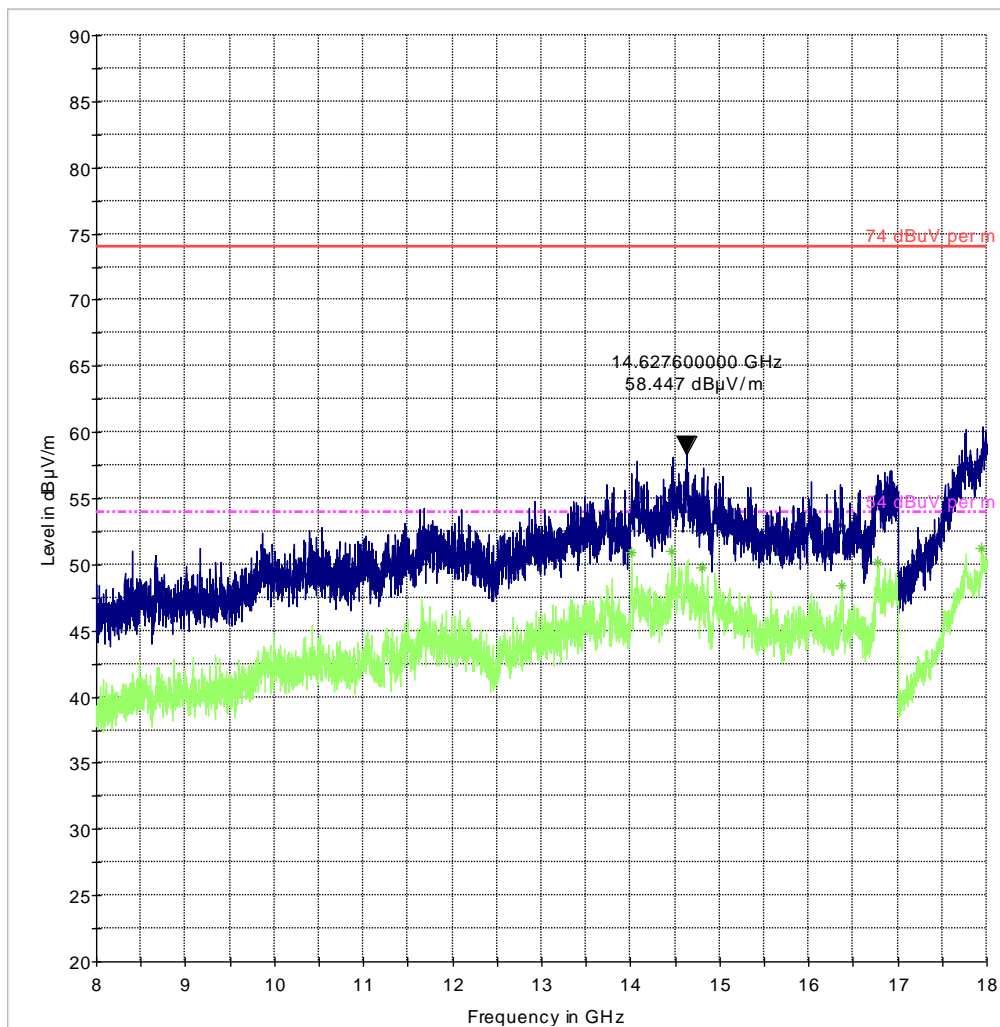
- 74 dBuV per m
- Preview Result 1-PK+
- \* Data Reduction Result 2 [6]-AVG
- - - 54 dBuV per m
- Preview Result 2-AVG

### Transmitter Radiated Spurious Emission: Ch High- 1 GHz – 8GHz- 802.11g-mode



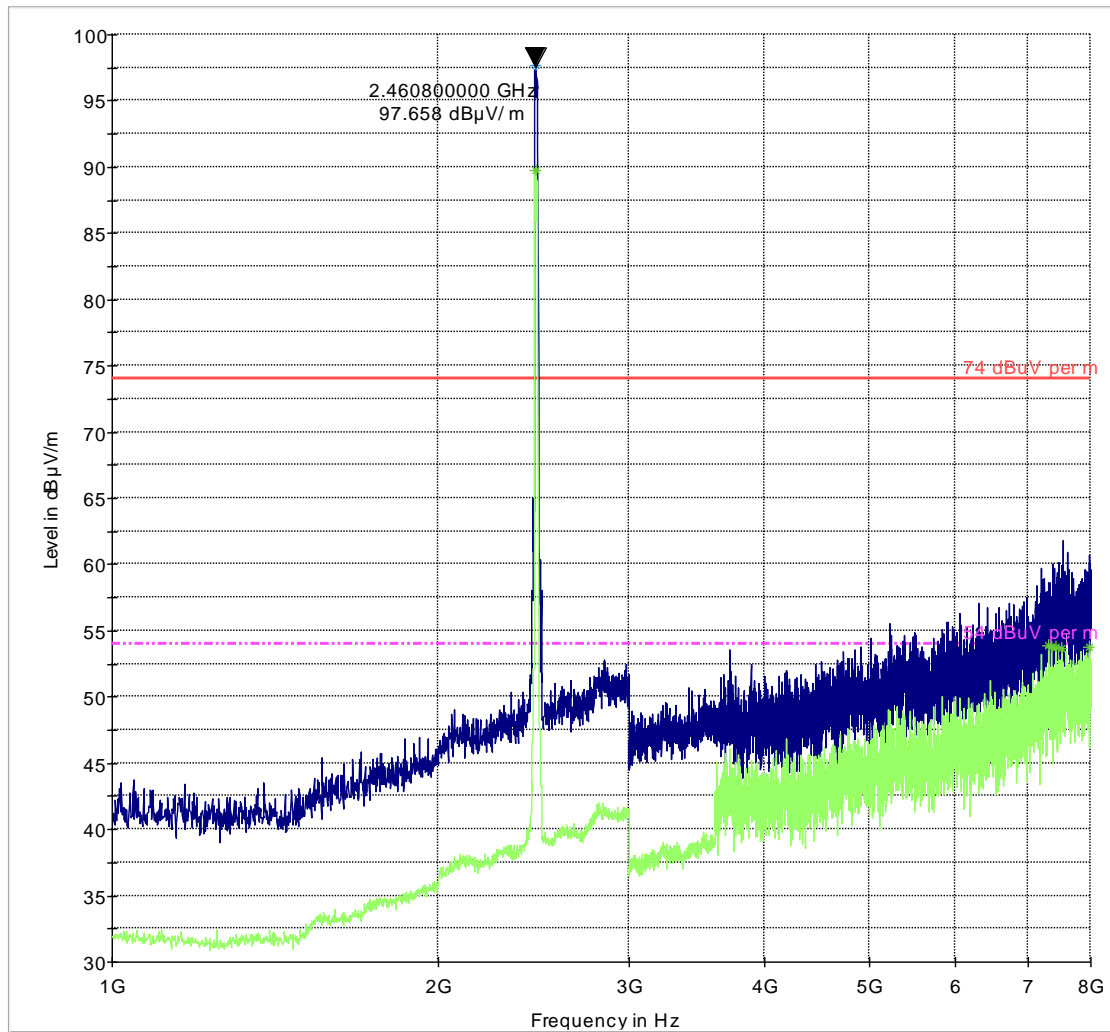
- 74 dBµV per m
- 54 dBµV per m
- Preview Result 1-PK+
- Preview Result 2-AVG
- \* Data Reduction Result 1 [4]-PK+
- \* Data Reduction Result 2 [4]-AVG

### Transmitter Radiated Spurious Emission: Ch High- 8 GHz – 18GHz- 802.11g-mode



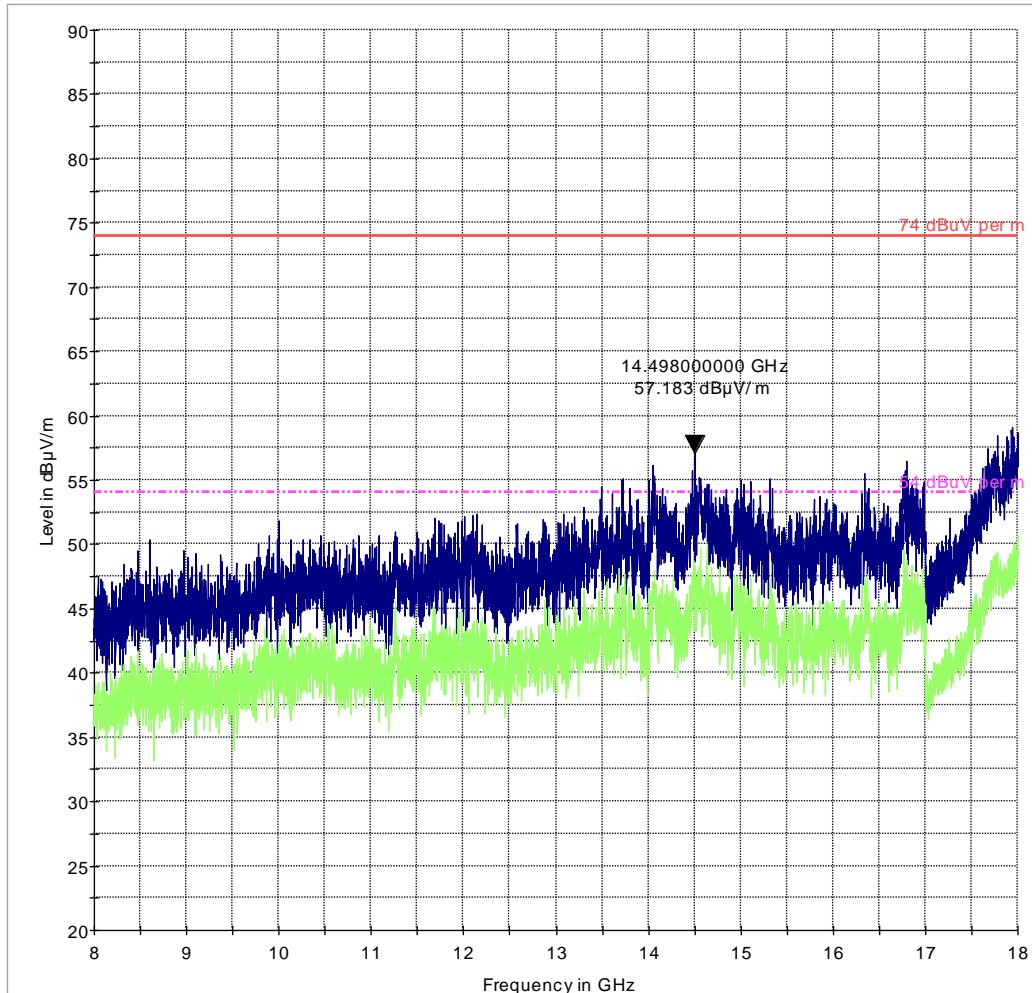
- 74 dBuV per m
- Preview Result 1-PK+
- \* Data Reduction Result 2 [6]-AVG
- - - - 54 dBuV per m
- Preview Result 2-AVG

### Transmitter Radiated Spurious Emission: Ch High- 1 GHz – 8GHz- 802.11n-mode



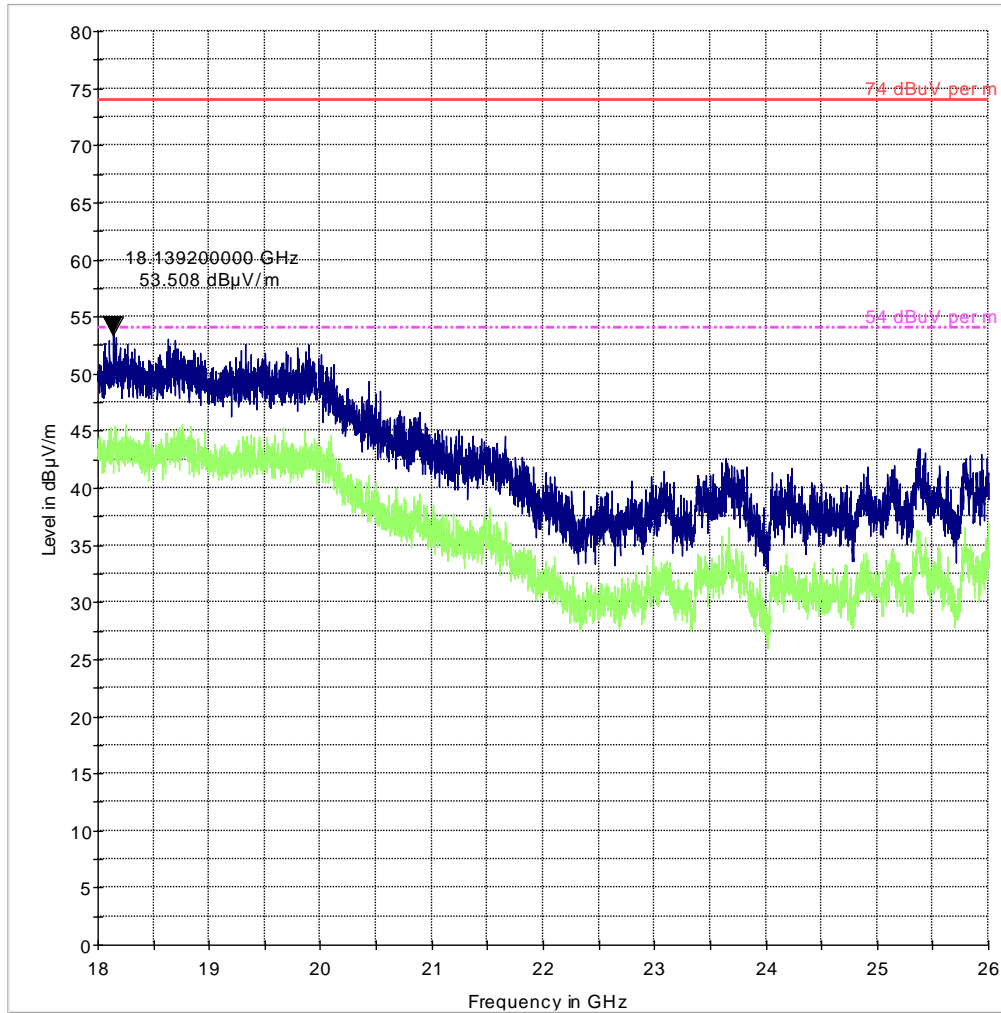
- 74 dBuV per m
- Preview Result 1-PK+
- \* Data Reduction Result 1 [4]-PK+
- - - 54 dBuV per m
- Preview Result 2-AVG
- \* Data Reduction Result 2 [4]-AVG

### Transmitter Radiated Spurious Emission: Ch High- 8 GHz – 18GHz- 802.11n-mode



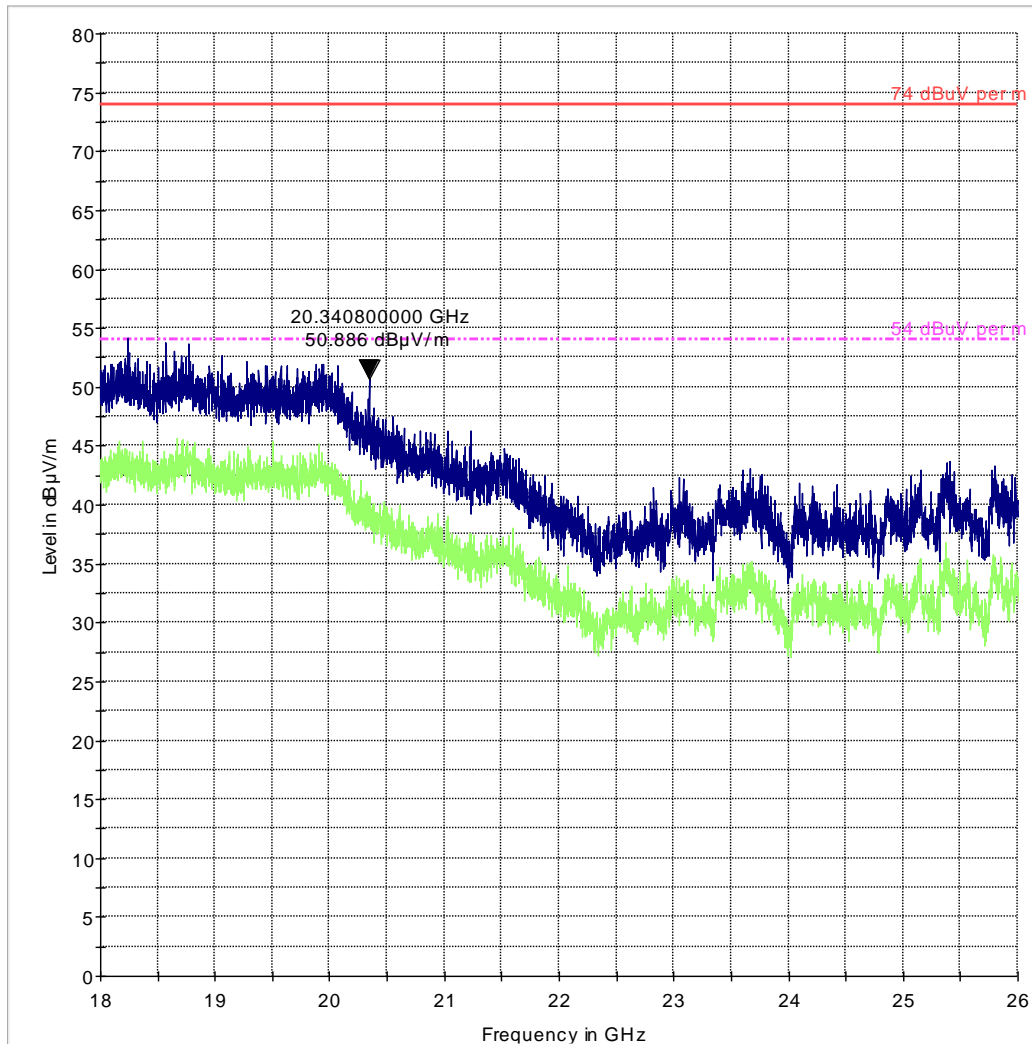
— 74 dBµV per m    - - - - 54 dBµV per m    — Preview Result 1-PK+    — Preview Result 2-AVG

### Transmitter Radiated Spurious Emission: Ch Mid- 18 GHz – 26 GHz- 802.11b-mode



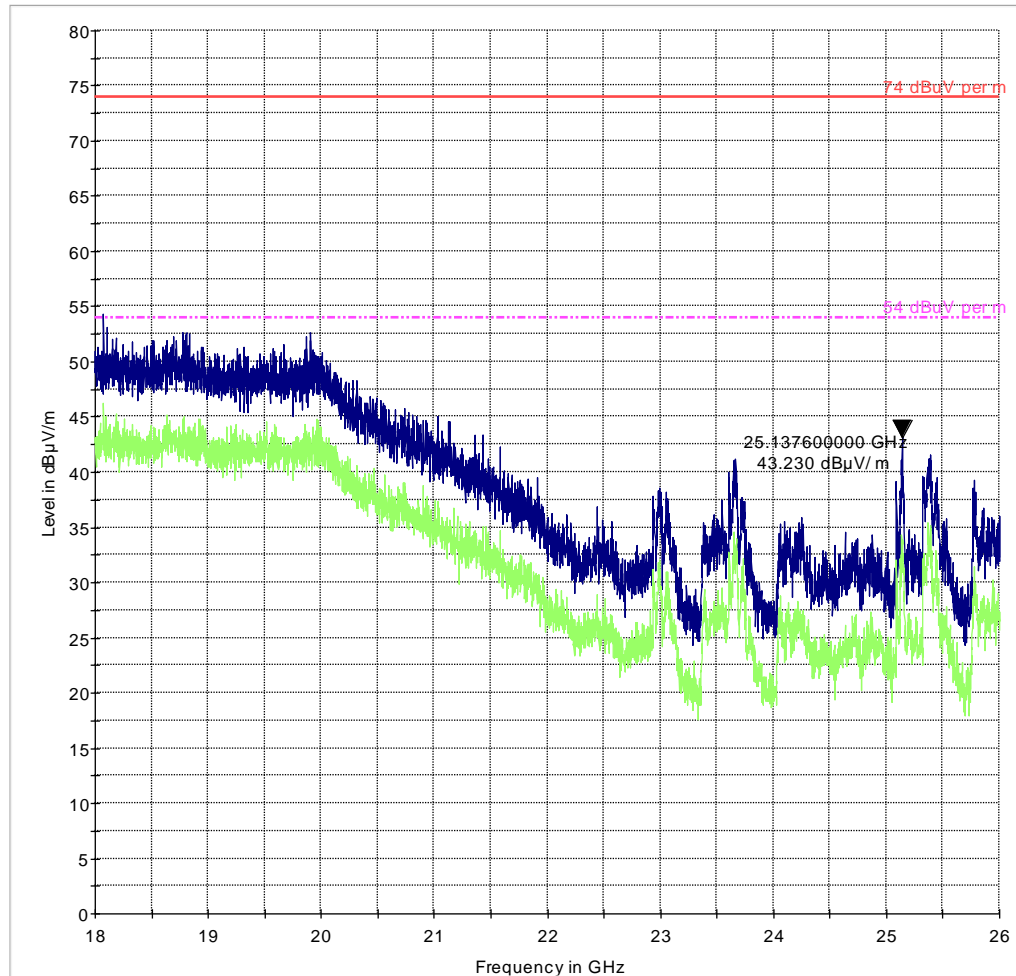
— 74 dBuV per m      - - - - 54 dBuV per m  
— Preview Result 1-PK+      — Preview Result 2-AVG

### Transmitter Radiated Spurious Emission: Ch Mid- 18 GHz – 26 GHz- 802.11g-mode



- 74 dBuV per m
- 54 dBuV per m
- Preview Result 1-PK+
- Preview Result 2-AVG

### Transmitter Radiated Spurious Emission: Ch Mid- 18 GHz – 26 GHz- 802.11n-mode

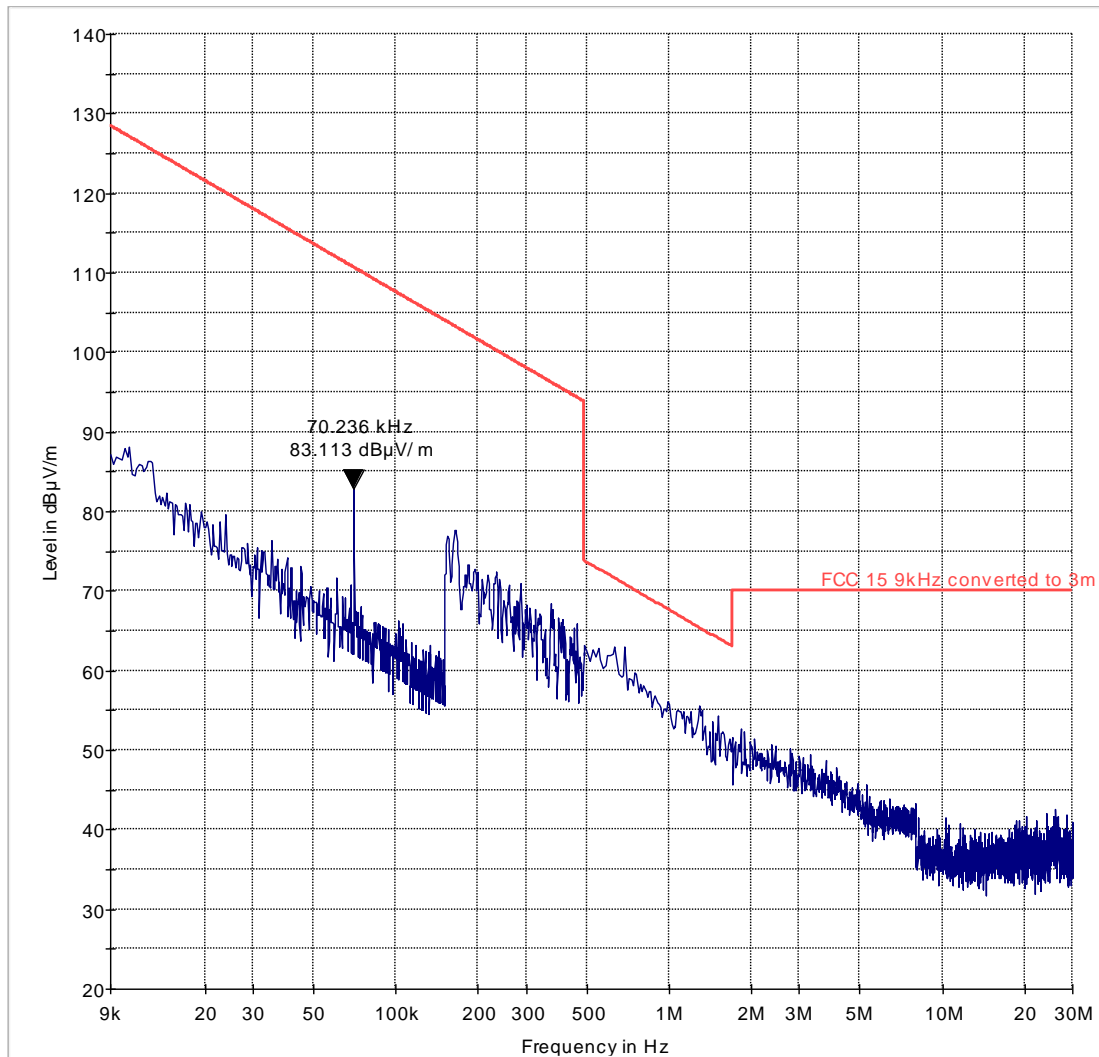


— 74 dBuV per m    - - - 54 dBuV per m    — Preview Result 1-PK+    — Preview Result 2-AVG



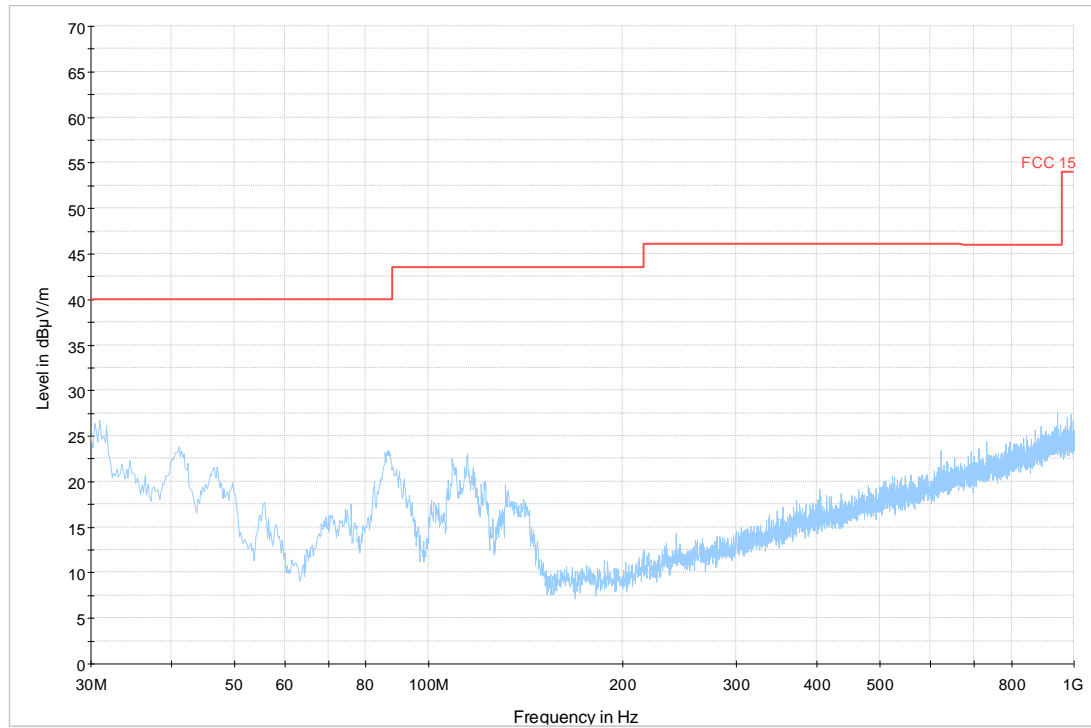
### 6.9.7 Test data/ plots: 5GHz Band U-NII-3

Transmitter Radiated Spurious Emission: Ch153, 9kHz – 30MHz, 802.11a-mode



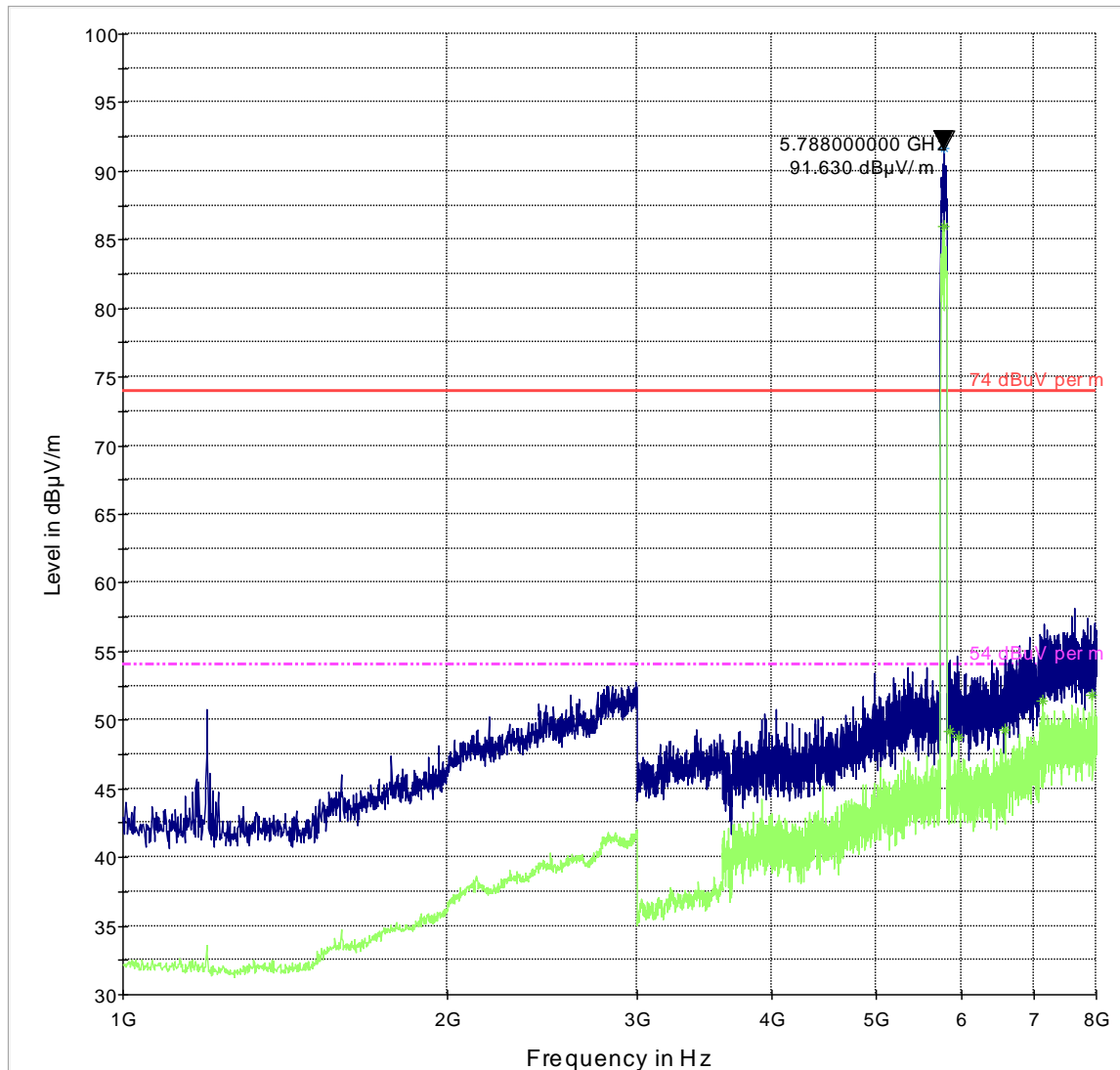
— FCC 15 9kHz converted to 3m — Preview Result 1-PK+

### Transmitter Radiated Spurious Emission: Ch153, 30MHz – 1GHz, 802.11a-mode



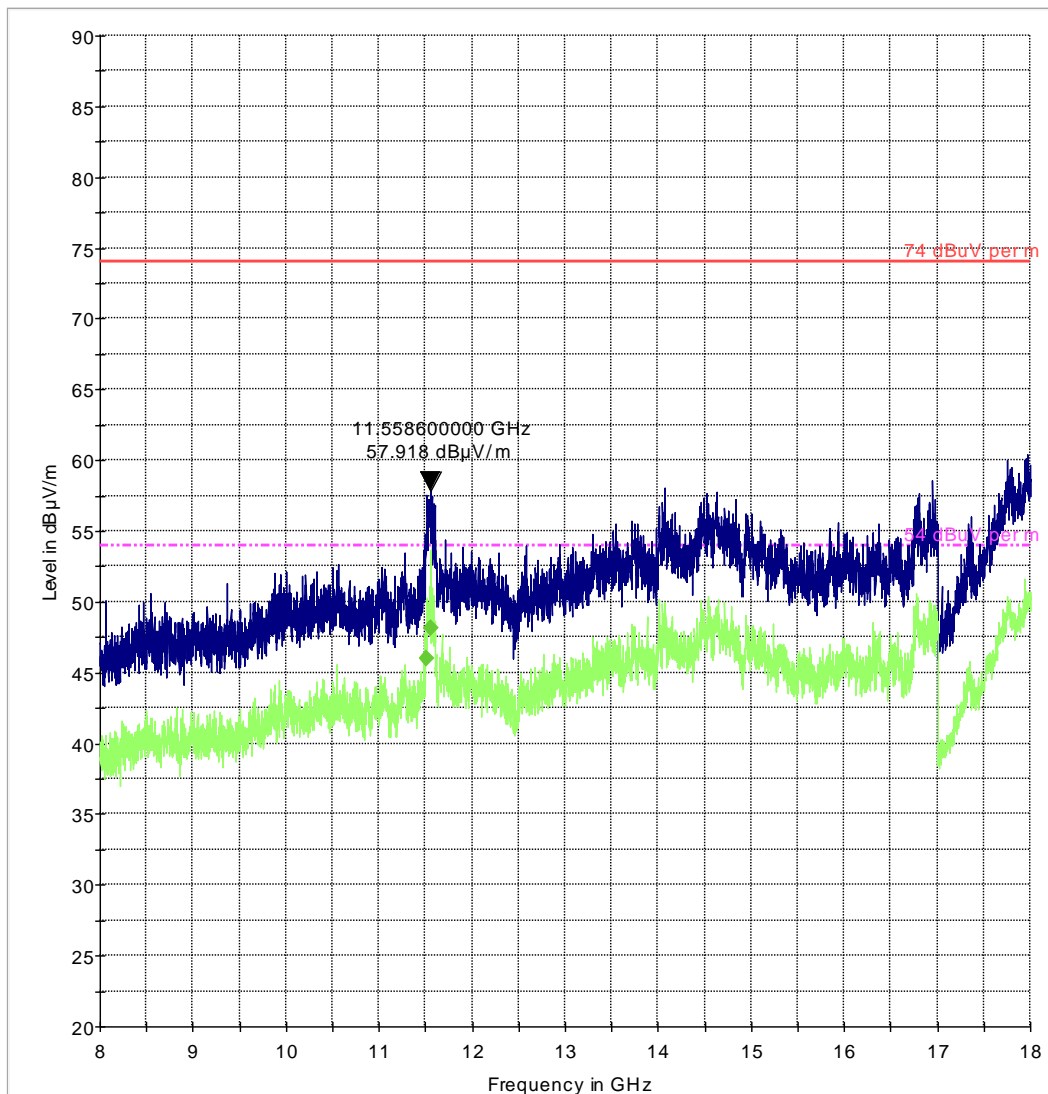
— FCC 15      — Preview Result 1-PK+

### Transmitter Radiated Spurious Emission: Ch153, 1GHz – 8GHz, 802.11a-mode



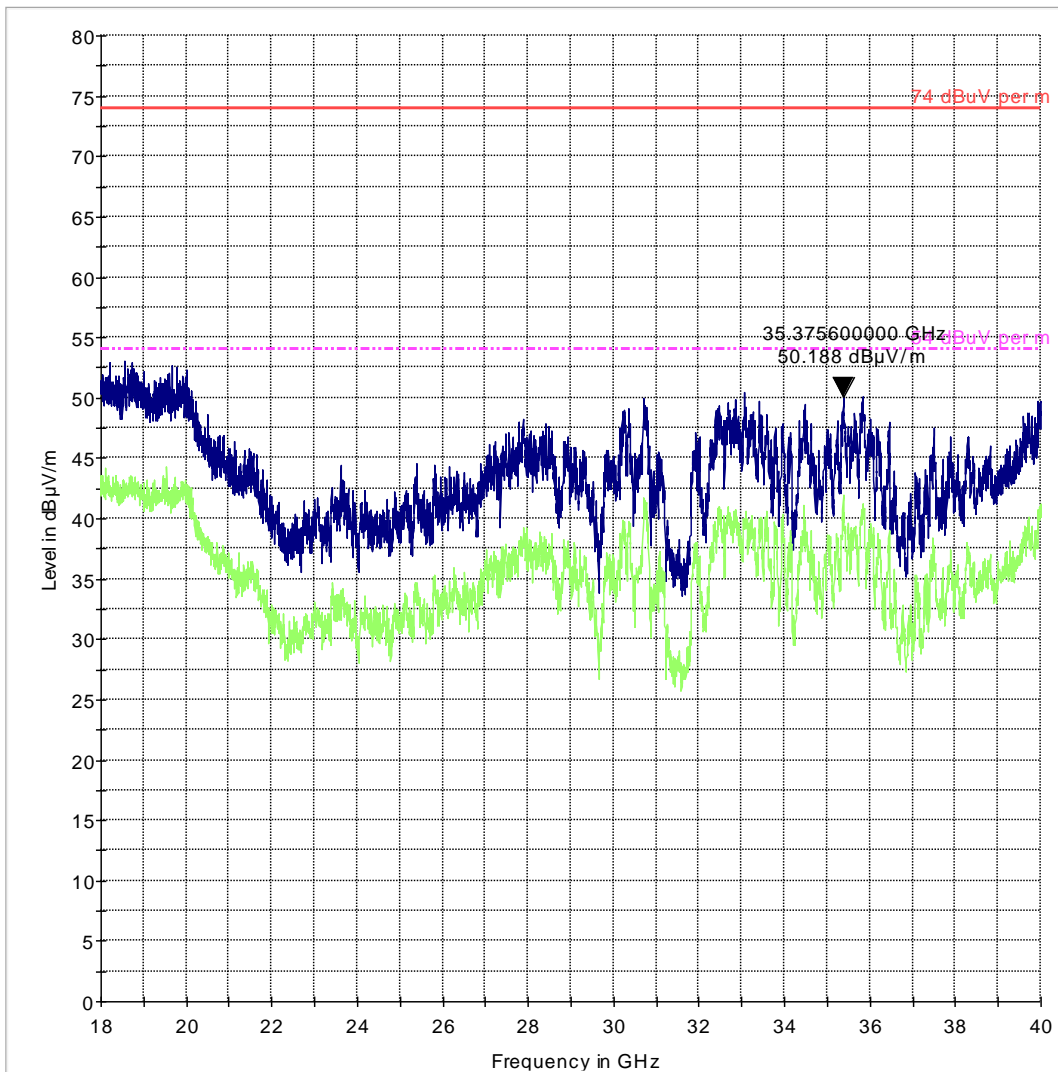
- 74 dBµV per m
- 54 dBµV per m
- Preview Result 1-PK+
- Preview Result 2-AVG
- \* Data Reduction Result 1 [4]-PK+
- \* Data Reduction Result 2 [4]-AVG

Transmitter Radiated Spurious Emission: Ch153, 8GHz – 18GHz, 802.11a-mode



— 74 dBuV per m      - - - - 54 dBuV per m      — Preview Result 1-PK+  
— Preview Result 2-AVG      ◆ Final Result 2-AVG

Transmitter Radiated Spurious Emission: Ch153, 18GHz – 18GHz, 802.11a-mode



- 74 dBuV per m
- 54 dBuV per m
- Preview Result 1-PK+
- Preview Result 2-AVG

**6.10 AC Power Line Conducted Emissions**

The purpose of this test is to measure unwanted radio frequency currents induced in any AC conductor external to the equipment which could conduct interference to other equipment via the AC electrical network.

**6.10.1 Limits:**

§15.207 & RSS-GEN issue 4, sec. 8.8

(a) Except as shown in paragraphs (b) and (c) of this section of the CFR, for an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies, within the band 150 kHz to 30 MHz, shall not exceed the limits in the following table (1), as measured using a 50 μH/50 ohms line impedance stabilization network (LISN). Compliance with the provisions of this paragraph shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminal. The lower limit applies at the boundary between the frequencies ranges.

**Table 1:**

Frequency of emission (MHz)	Conducted limit (dBμV)	
	Quasi-peak	Average
0.15–0.5	66 to 56*	56 to 46*
0.5–5	56	46
5–30	60	50

\*Decreases with the logarithm of the frequency.

**6.10.2 Test Conditions:**

Tnom: 23 °C; Vnom: 3.8V

Modulation: 2.4GHz: 802.11g- Transmit and Receive modes of operation.

**6.10.3 Measurement procedure:**

Measurement according to ANSI C63.10:2009 section 6.2 (also refer to section 6, 6.2 in this test report)

**Analyzer Settings:**

CISPR Bandwidth- 9KHz.

Detector = Qusi-peak / Average

**6.10.4 Results**

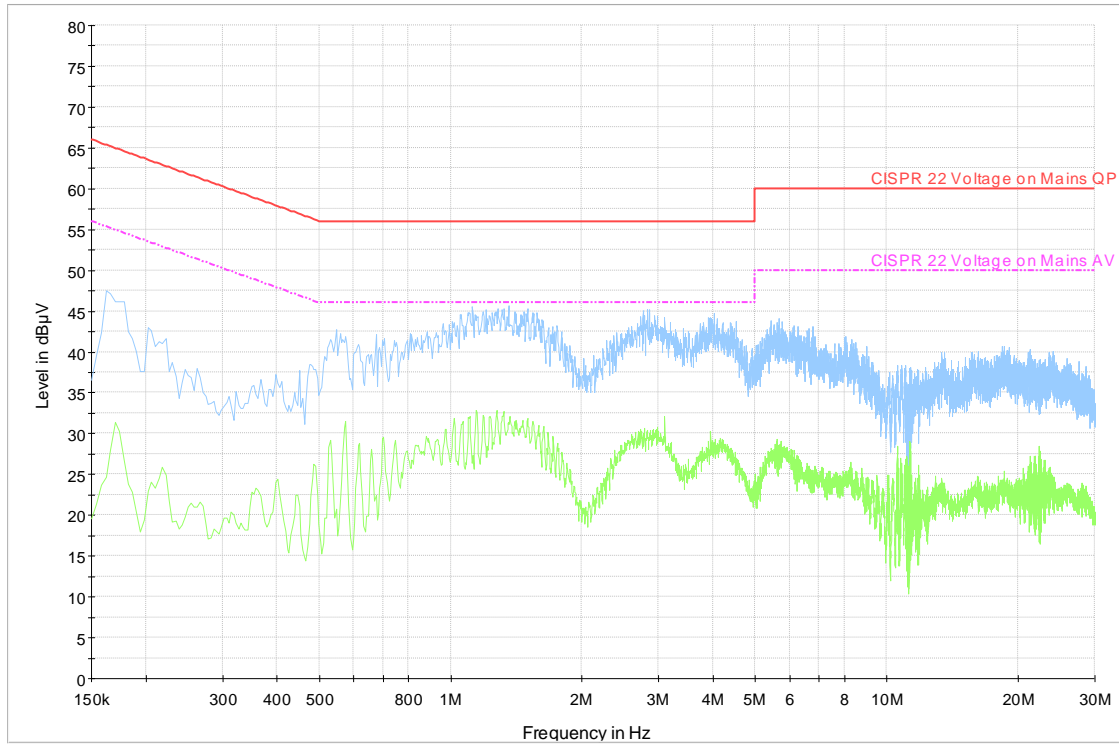
Plots shown here represent the combined worse case emissions for phases and neutral line.

**6.10.4.1 Measurement Result**

Pass.

### 6.10.5 Test Results WLAN 2.4 GHz:

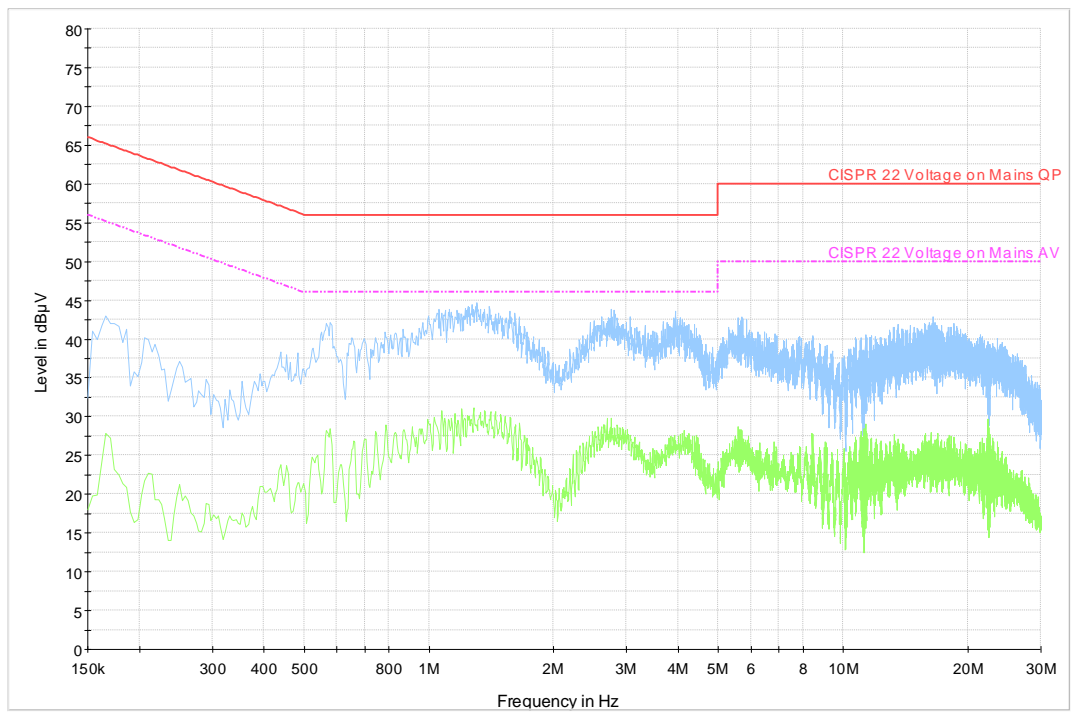
#### 6.10.5.1 TX mode (802.11g):



— CISPR 22 Voltage on Mains QP    - - - CISPR 22 Voltage on Mains AV    — Preview Result 1-PK+    — Preview Result 2-AVG

### 6.10.6 Test Results WLAN 5 GHz U-NII-3:

#### 6.10.6.1 TX mode (802.11a):



— CISPR 22 Voltage on Mains QP    - - - CISPR 22 Voltage on Mains AV    — Preview Result 1-PK+    — Preview Result 2-AVG



## 7 Test Equipment and Ancillaries used for tests

### 7.8 Milpitas EMC Lab

No.	Equipment Name	Manufacturer	Type/model	Serial No.	Cal Date	Cal Interval
	Turn table	EMCO	2075	N/A	N/A	N/A
	MAPS Position Controller	ETS Lindgren	2092	0004-1510	N/A	N/A
	Antenna Mast	EMCO	2075	N/A	N/A	N/A
	Relay Switch Unit	Rohde&Schwarz	RSU	338964/001	N/A	N/A
	EMI Receiver/Analyzer	Rohde&Schwarz	ESU 40	100251	Sept 2013	2 Year
	Spectrum Analyzer	Rohde&Schwarz	FSU	200302	Jun 2013	2 Years
	1500MHz HP Filter	Filtek	HP12/1700	14c48	N/A	N/A
	2800 MHZ HP Filter	Filtek	HP12/2800	14C47	N/A	N/A
	Pre-Amplifier	Miteq	JS40010260	340125	N/A	N/A
	Binconilog Antenna	EMCO	3141	0005-1186	Apr 2012	3 Years
	Binconilog Antenna	ETS	3149	J000123908	Feb 2012	3 years
	Horn Antenna	EMCO	3115	35114	Mar 2012	3 Years
	LISN	Rohde and Schwarz	ESV 216	101129	Mar 2013	2 years
	Spectrum Analyzer	Rohde&Schwarz	FSU	200302	Jun 2013	2 Years
	Power Splitter	Agilent	11667B	52565	N/A	N/A

### 7.9 San Diego EMC Lab

Equipment Name	Manufacturer	Type/Model	Serial No.	Cal Date	Cal Interval	Next cal date
<b>3m Semi- Anechoic Chamber:</b>						
Spectrum Analyzer	Rohde und Schwarz	FSU 26	200302	6/2013	2 years	6/2015
Receiver	Rohde und Schwarz	ESR3	101663	2/2013	2 years	2/2015
LISN	Rohde und Schwarz	ESV 216	101129	1/2013	2 years	1/2015
Radiocommunication Tester	Rohde and Schwarz	CMU 200	121672	7/2013	2 years	7/2015
Log Periodic Antenna	Rohde and Schwarz	HL 050	100515	4/2013	3 year	4/2016
Ultralog Antenna	Rohde and Schwarz	HL 562	100495	2/2012	3 year	2/2015
Open Switch Control Unit	Rohde and Schwarz	OPS 130	10085	n/a		
Extention Unit Open Switch Control Unit	Rohde and Schwarz	OSP 150	10086	n/a		
Turn Table TT	Maturo	1.5 SI	TT 1.5SI/204/60709 10	n/a		
Compact antenna Mast	Maturo	CAM 4.0-P	CAM4.0- P/067/6000910	n/a		
Multiple Control Unit	Maturo	MCU	2140910	n/a		
Pre-Amplifier	Rohde and Schwarz	TS-PR 18	100072	Part of the system calibration		
High Pass Filter	Mini-Circuits	SHP-1200+	RUU11201224			
High Pass Filter	Wainwright Instr.	WHKX 3.0/18	109			

**8 Revision History**

<b>Date</b>	<b>Report Name</b>	<b>Changes to report</b>	<b>Report prepared by</b>
2014-10-06	EMC_INTEL_054_14001_15.247_DTS_WLAN	First official version	Jennifer Huang
2014-11-21	EMC_INTEL_054_14001_15.247_DTS_WLAN_Rev1	Corrected KDB references, added 20MHz channels for the U-NII-3 band.	Franz Engert
2014-12-15	EMC_INTEL_054_14001_15.247_DTS_WLAN_Rev2	Split report in 2 parts due to size limitations. Add reference to FCC 15.31 for limits below 30MHz	Franz Engert

