FCC / ISED Test Report

For:
Collins Aerospace

Marketing Name:
CCR-3000

Model Name:
AP-151 Rev A

Product Description:
Cabin Connect Router

FCC ID: Contain N7NEM91
Contain TK4WLE3002HX
IC: Contain 2417C-EM91
Contain 7849A-WLE3002HX

Applied Rules and Standards:
47 CFR Part 15.407 (NII) & 5 GHz (UNII)
RSS-247 Issue 2 (DTSs) & (LE-LAN), and RSS-Gen Issue 5

REPORT #: EMC_ARINC_001_23001_FCC_15_407

DATE: 2024-07-25

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 15.407 of Title 47 of the Code of Federal Regulations and the relevant ISED Canada standard RSS-247.

No deviations were ascertained.

Company	Description	Model #
Collins Aerospace	Cabin Connect Router	AP-151 Rev A

Responsible for the Report:

Date	Section	Name	Signature
2024-07-25	Compliance	Cheng Song (EMC Engineer)	cheng.song@cetecom.com Digitally signed by: cheng.song@cetecom.com DN: CN = cheng.song@cetecom.com Date: 2024.07.25 12:19:28 -07'00'

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.

2 Administrative Data

2.1 Identification of the Testing Laboratory Issuing the EMC Test Report

Company Name:	CETECOM Inc.
Department:	Compliance
Street Address:	411 Dixon Landing Road
City/Zip Code	Milpitas, CA 95035
Country	USA
Telephone:	+1 (408) 586 6200
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EMC Lab Manager:	Alvin Ilarina
Responsible Project Leader:	Rami Saman

2.2 Identification of the Client

Client's Name:	Collins Aerospace
Street Address:	1901 W 143rd St.
City/Zip Code	Burnsville MN 55306
Country	USA

2.3 Identification of the Manufacturer

Manufacturer's Name:	CCX Technologies Inc.
Manufacturers Address:	1565 Carling Ave, Suite 700
City/Zip Code	Ottawa, Ontario
Country	Canada

3 Equipment Under Test (EUT)

3.1 EUT Specifications

Model No:	AP-151 Rev A
Marketing Name:	CCR-3000
HW Version :	822-3742-00x
SW Version :	1.9.0.2
FCC ID :	Contain N7NEM91 Contain TK4WLE3002HX
IC :	Contain 2417C-EM91 Contain 7849A-WLE3002HX
FWIN:	N/A
HVIN:	WLE3002HX
PMN:	N/A
Product Description:	Cabin Connect Router
Power Supply / Rated operating Voltage Range:	20.5/28/32.2 VDC
Operating Temperature Range	-40C +70C
Sample Revision	production-red label
EUT Dimensions	5.18 inches x 4.64 inches x 1.90 inches (L x W x H) (132 mm x 118mm x 49mm)
Note: All information provided by the client.	

3.2 Radio Specifications

Embedded Radio Technologies	Sierra Wireless EM9191, Compex Systems WLE3002HX
Frequency Range / number of channels:	Cell LTE/3G/4G: 1, 2, 3, 4, 5, 7, 8, 12, 13, 14, 17, 18, 19, 20, 25, 26, 28, 29, 30, 32, 34, 38, 39, 40, 41, 42, 43, 46, 48, 66, 7 5G NR: n2, n5, n7, n25, n38, n41, n48, n66, n71, n77, n78 WiFi: 2.4GHz/5GHz
Antenna Type / Gain	IK-201, IK -200; The antenna specifications and gain details can be found in the datasheets provided by the client.
Note: All information provided by the client.	

3.3 EUT Sample details

EUT #	Serial Number	HW Version	SW Version	Notes/Comments
1	4TLTR1	822-3742-00x	1.9.0.2	-

3.4 Accessory Equipment (AE) details

AE #	Type	Model	Manufacturer	Serial Number
1	Gnd/Discrete Box	663-0089-936	-	-
2	Laptop	Dell Latitude	-	-

3.5 Test Sample Configuration

EUT Set-up #	Combination of AE used for test set up	Comments
1	EUT#1 + AE#1 + AE#2	-

3.6 Mode of Operation

Mode of Operation	Description of Operating modes	Additional Information
Op. 1	WiFi 5GHz UNII-1, UNII-2a, UNII-2c 802.11ax-HE40 MCS0 Power Setting: • 30 • 20 (Only for Channel 38)	WiFi was tested on Low, Mid, and High channels at the maximum allowed power setting. The client provides a Ground/Discrete Box and a laptop for communicating with the device and sending commands to configure the WiFi radio into a specific mode. The iPerf3 command was used to simulate a scenario with the highest traffic communication between the server and client device. This mode configuration, designed for worst-case scenarios, is not intended for end-user applications.
Op. 2	WiFi 5GHz UNII-3 802.11ac-VHT40 MCS0 Power Setting: • 30	WiFi was tested on Low, Mid, and High channels at the maximum allowed power setting. The client provides a Ground/Discrete Box and a laptop for communicating with the device and sending commands to configure the WiFi radio into a specific mode. The iPerf3 command was used to simulate a scenario with the highest traffic communication between the server and client device. This mode configuration, designed for worst-case scenarios, is not intended for end-user applications.

3.7 Justification for Worst Case Mode of Operation

During the testing process the WiFi radio was tested with transmitter sets to low, mid and high channels at the maximum power, as it is described in section 3.6 of this document; representing the worst case mode of operation.

For radiated measurements, all data in this report shows the worst case between horizontal and vertical antenna polarizations and for all orientations of the EUT.

4 Subject of Investigation

The objective of the measurements done by CETECOM Inc. was to evaluate the compliance of the EUT against the relevant requirements specified in section 1.

5 Measurement Results Summary

Test Specification	Test Case	Temperature and Voltage Conditions	Mode	Pass	NA	NP	Result
§15.407(e) RSS-247 6.2.4.1	Emission Bandwidth	Nominal	-	☐	☐	■	Note 1 Note 2
§15.407(a) RSS-247 6	Power Spectral Density	Nominal	-	☐	☐	■	Note 1 Note 2
§15.407(a) RSS-247 6	Maximum Output Power	Nominal	-	☐	☐	■	Note 1 Note 2
§15.407; 15.205 RSS-247 6; RSS-Gen 8.10	Band Edge Compliance	Nominal	-	☐	☐	■	Note 1 Note 2
§15.407(b); §15.209; 15.205 RSS-247 6; RSS-Gen 8.9; 8.10	Radiated TX Spurious Emissions	Nominal	Op. 1 Op. 2	■	☐	☐	Complies
§15.207(a) RSS Gen 8.8	AC Conducted Emissions	Nominal	-	☐	☐	■	Note 1 Note 3

Note 1: NA= Not Applicable; NP= Not Performed.
Note 2: The WiFi test results are leveraged from Report # 2301RSU014-U2, corresponding to FCC ID: TK4WLE3002HX; IC: 7849A-WLE3002HX.
Note 3: The EUT does not utilize power from public mains, hence testing for AC line conducted emissions is not applicable in this case.

6 Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus, with 95% confidence interval (in dB delta to result), based on a coverage factor k=2.

Measurement System		EMC 1	EMC 2
Conducted emissions (mains port)	150 kHz – 30 MHz	2.47 dB	N/A
Radiated emissions	9 kHz – 30 MHz	2.68 dB	2.53 dB
	30 – 100 MHz	4.21 dB	3.85 dB
	100 MHz – 1 GHz	5.51 dB	5.24 dB
	1 – 6 GHz	5.0 dB	4.88 dB
	6 – 18 GHz	4.76 dB	4.58 dB
	18 – 40 GHz	4.65 dB	4.61 dB

6.1 Environmental Conditions during Testing:

The following environmental conditions were maintained during the course of testing:

- Ambient Temperature: 20-25°C
- Relative humidity: 40-60%

Deviating test conditions are indicated at individual test description where applicable.+

6.2 Date of Testing:

2024-06-06 – 2024-07-15

6.3 Decision Rule:

Cetecom advanced follows ILAC G8:2019 chapter 4.2.1 (Simple Acceptance Rule).

Only the measured values related to their corresponding limits will be used to decide whether the equipment under test meets the requirements of the test standards listed in chapter 3. The measurement uncertainty is mentioned in this test report, See chapter 9, but is not taken into account – neither to the limits nor to the measurement results. Measurement results with a smaller margin to the corresponding limits than the measurement uncertainty have a potential risk of more than 5% that the decision might be wrong.

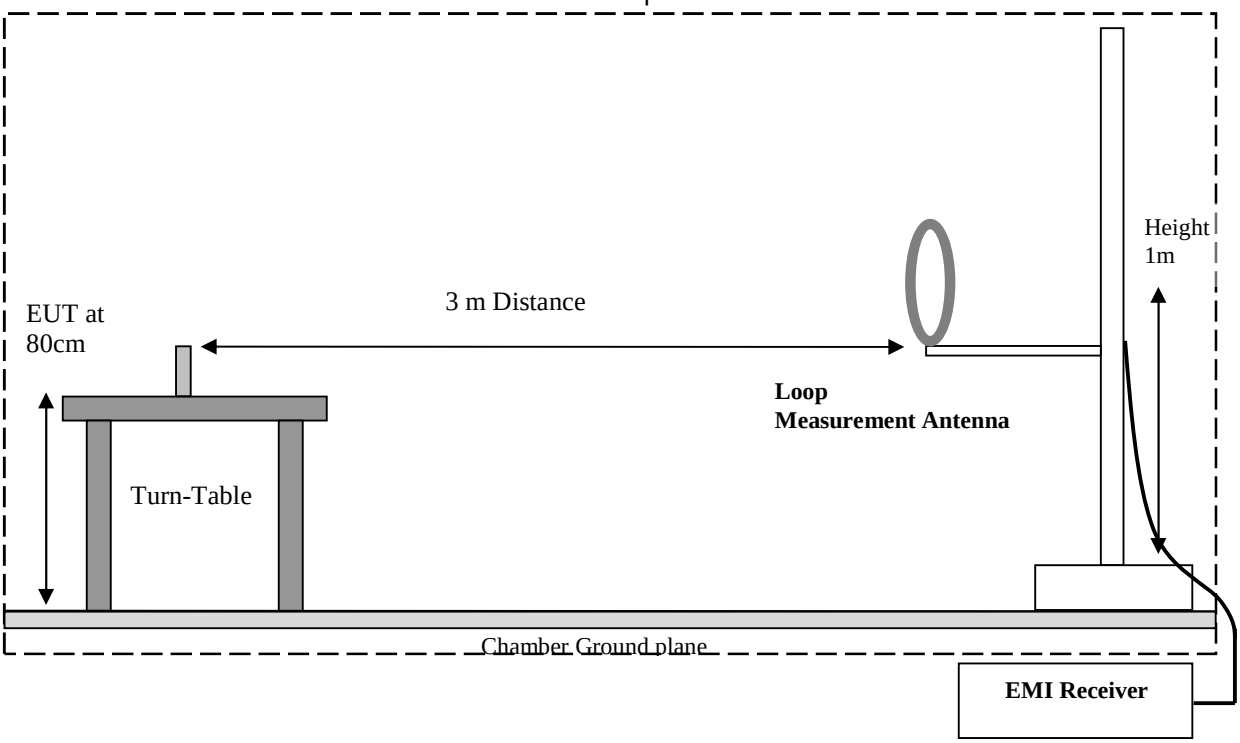
7 Measurement Procedures

7.1 Radiated Measurement

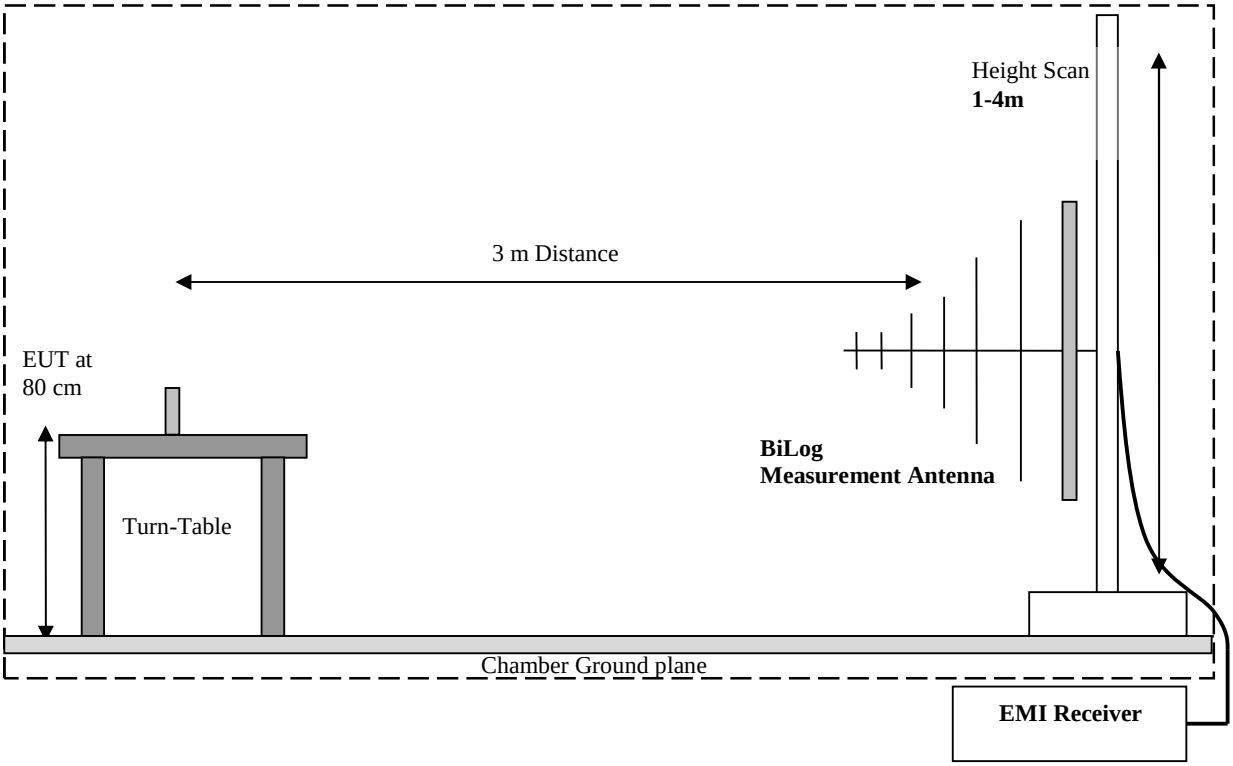
The radiated measurement is performed according to ANSI C63.10 (2013)

- The exploratory measurement is accomplished by running a matrix of 16 sweeps over the required frequency range with R&S Test-SW EMC32 for 4 positions of the turntable, two orthogonal positions of the EUT and both antenna polarizations. This procedure exceeds the requirement of the above standards to cover the 3 orthogonal axis of the EUT. A max peak detector is utilized during the exploratory measurement. The Test-SW creates an overall maximum trace for all 12 sweeps and saves the settings for each point of this trace. The maximum trace is part of the test report.
- The 10 highest emissions are selected with an automatic algorithm of EMC32 searching for peaks in the noise floor and ensuring that broadband signals are not selected multiple times.
- The maxima are then put through the final measurement and again maximized in a 90deg range of the turntable, fine search in frequency domain and height scan between 1m and 4m.
- The above procedure is repeated for all possible ways of power supply to EUT and for all supported modulations.
- In case there are no emissions above noise floor level only the maximum trace is reported as described above.
- The results are split up into up to 4 frequency ranges due to antenna bandwidth restrictions. A magnetic loop is used from 9 kHz to 30 MHz, a Biconilog antenna is used from 30 MHz to 1 GHz, and two different horn antennas are used to cover frequencies up to 40 GHz.

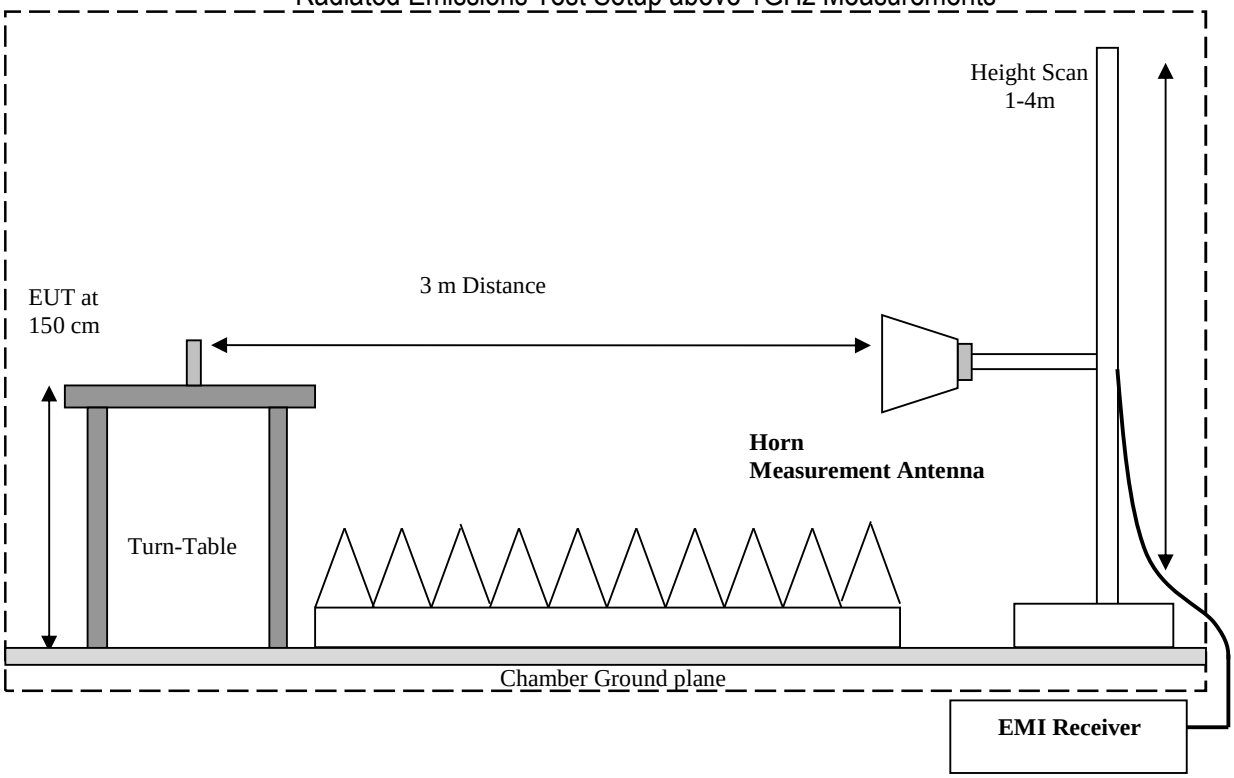
Radiated Emissions Test Setup below 30MHz Measurements



Radiated Emissions Test Setup 30MHz-1GHz Measurements



Radiated Emissions Test Setup above 1GHz Measurements



7.1.1 Sample Calculations for Field Strength Measurements

Field Strength is calculated from the Spectrum Analyzer/ Receiver readings, taking into account the following parameters:

1. Measured reading in dBµV
2. Cable Loss between the receiving antenna and SA in dB and
3. Antenna Factor in dB/m

All radiated measurement plots in this report are taken from a test SW that calculates the Field Strength based on the following equation:

FS (dBµV/m) = Measured Value on SA (dBµV) + Cable Loss (dB) + Antenna Factor (dB/m)

Example:

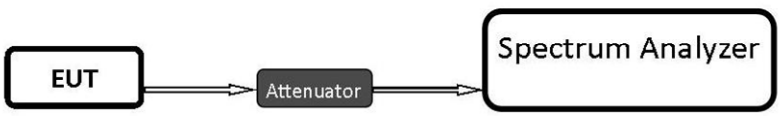
Frequency (MHz)	Measured SA (dBµV)	Cable Loss (dB)	Antenna Factor Correction (dB)	Field Strength Result (dBµV/m)
1000	80.5	3.5	14	98.0

7.2 Power Line Conducted Measurement Procedure

AC Power Line conducted emissions measurements performed according to: ANSI C63.4 (2014)

7.3 RF Conducted Measurement Procedure

Testing procedures are based on 558074 D01 15.247 Meas Guidance v05r02 – "GUIDANCE FOR COMPLIANCE MEASUREMENTS ON DIGITAL TRANSMISSION SYSTEM, FREQUENCY HOPPING SPREAD SPECTRUM SYSTEM, AND HYBRID SYSTEM DEVICES OPERATING UNDER SECTION 15.247 OF THE FCC RULES" - April 2, 2019, by the Federal Communications Commission, Office of Engineering and Technology, Laboratory Division.



- Connect the equipment as shown in the above diagram.
- Adjust the settings of the SA (Rohde-Schwarz Spectrum Analyzer) to connect the EUT at the required mode of test.
- Measurements are to be performed with the EUT set to the low, middle and high channels and for worst case modulation schemes.

8 Test Result Data

8.1 Radiated Transmitter Spurious Emissions

8.1.1 Measurement according to ANSI C63.10 (2013)

Spectrum Analyzer Settings:

- Frequency = 9 KHz – 30 MHz
- RBW = 9 KHz
- Detector: Peak

- Frequency = 30 MHz – 1 GHz
- Detector = Peak / Quasi-Peak
- RBW= 120 KHz (<1GHz)

- Frequency > 1 GHz
- Detector = Peak / Average
- RBW = 1 MHz

- 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.
- The highest (or worst-case) data rate shall be recorded for each measurement.
- For testing frequencies below 30 MHz at distance other than the specified in the standard, the limit conversion is calculated by using the FCC materials for the ANSI 63 committee issued on January, 27 1991.

8.1.2 Limits:

FCC §15.407

- Unwanted emissions below 1 GHz must comply with the general field strength limits set forth in §15.209.
- The provisions of §15.205 apply to intentional radiators operating under this section.

FCC §15.209 & RSS-Gen 8.9

- Except as provided elsewhere in this subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Frequency of emission (MHz)	Field strength (µV/m)	Measurement Distance (m)	Field strength @ 3m (dBµV/m)
0.009–0.490	2400/F(kHz) / ---------	300	-
0.490–1.705	24000/F(kHz) / --------	30	-
1.705–30.0	30 / (29.5)	30	-
30–88	100	3	40 dBµV/m
88–216	150	3	43.5 dBµV/m
216–960	200	3	46 dBµV/m
Above 960	500	3	54 dBµV/m

FCC §15.205 & RSS-Gen 8.10

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

MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
[1]0.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	Above 38.6
13.36-13.41			

- Radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).
  *PEAK LIMIT= 74 dBµV/m
  *AVG. LIMIT= 54 dBµV/m

8.1.3 Test conditions and setup:

Ambient Temperature	EUT Set-Up #	EUT operating mode	Power Setting
22° C	1	Op. 1 & Op. 2	See section 8.1.4

8.1.4 Measurement result:

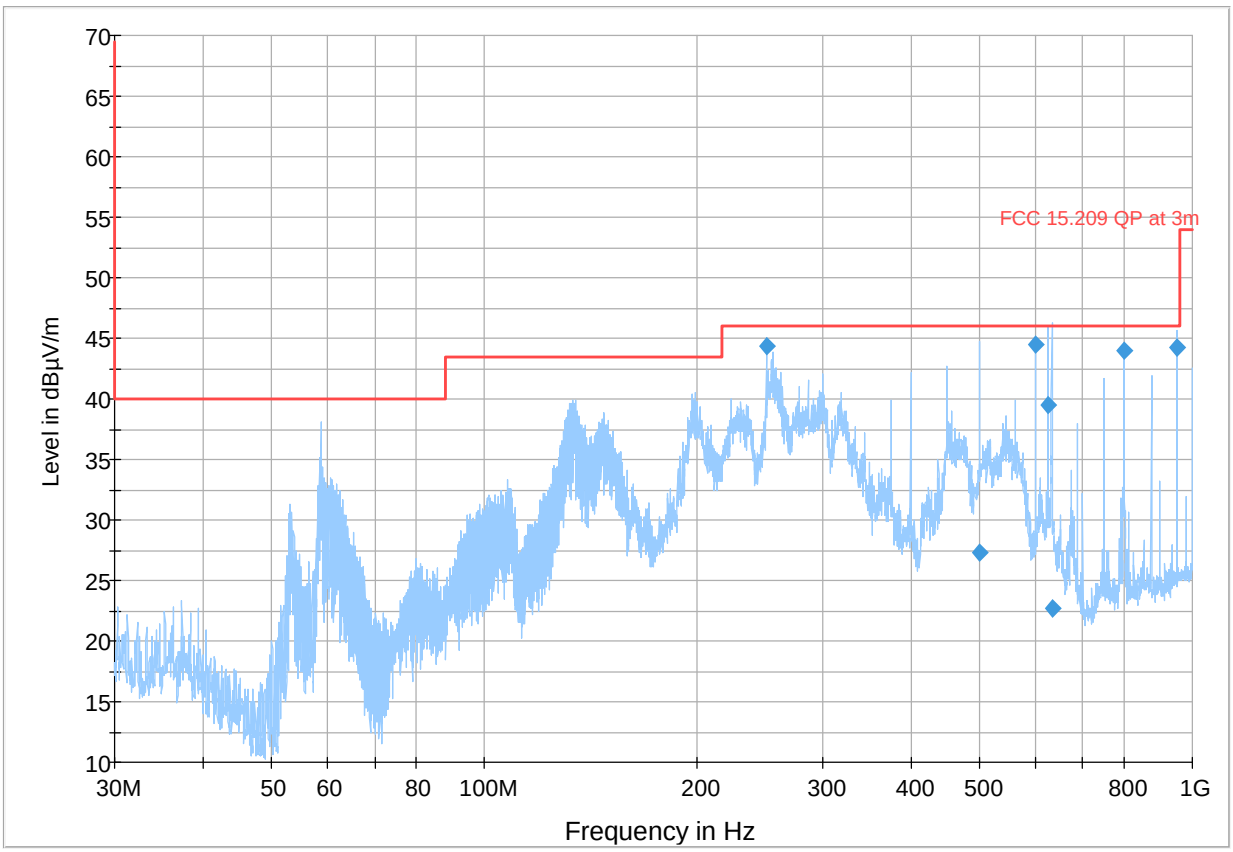
Plot #	Channel #	Power Setting	Scan Frequency	Limit	Result
1-5	38	20	9 kHz – 40 GHz	See section 8.1.2	Pass
6-10	46	30	9 kHz – 40 GHz	See section 8.1.2	Pass
11-15	54	30	9 kHz – 40 GHz	See section 8.1.2	Pass
16-20	62	30	9 kHz – 40 GHz	See section 8.1.2	Pass
21-25	102	30	9 kHz – 40 GHz	See section 8.1.2	Pass
26-30	110	30	9 kHz – 40 GHz	See section 8.1.2	Pass
31-35	134	30	9 kHz – 40 GHz	See section 8.1.2	Pass
36-40	142	30	9 kHz – 40 GHz	See section 8.1.2	Pass
41-45	151	30	9 kHz – 40 GHz	See section 8.1.2	Pass
46-50	159	30	9 kHz – 40 GHz	See section 8.1.2	Pass

8.1.5 Measurement Plots:

IDLE

Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB/m)	Raw Rec (dBµV)	Comment
249.972	44.298	46.02	1.72	500.0	120.000	107.0	H	79.0	-11.0	-33.8	0.0	22.8	55.3	
499.965	27.328	46.02	18.69	500.0	120.000	134.0	H	267.0	-8.9	-32.8	0.0	23.9	36.2	
599.996	44.466	46.02	1.55	500.0	120.000	134.0	H	313.0	-7.5	-32.6	0.0	25.0	52.0	
624.974	39.540	46.02	6.48	500.0	120.000	100.0	H	255.0	-6.7	-32.4	0.0	25.6	46.3	
633.364	22.751	46.02	23.27	500.0	120.000	107.0	V	28.0	-6.2	-32.3	0.0	26.1	28.9	
800.010	43.990	46.02	2.03	500.0	120.000	156.0	H	118.0	-4.1	-32.0	0.0	27.9	48.1	
950.021	44.262	46.02	1.76	500.0	120.000	107.0	V	243.0	-2.2	-31.5	0.0	29.3	46.4	



Preview Result 1-PK+ — FCC 15.209 QP at 3m — Final_Result QPK

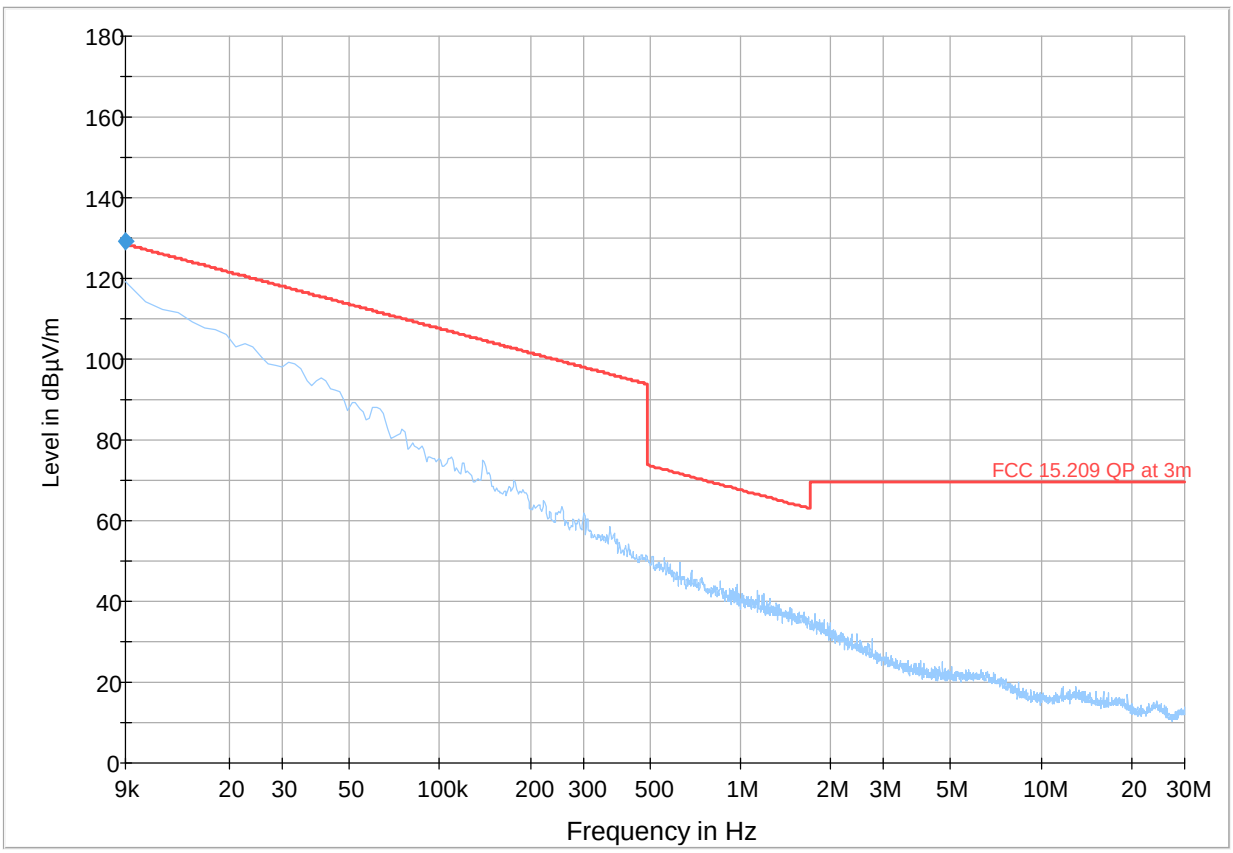
Note: The plot above illustrates the radiated emissions levels of the EUT operating in full function mode with all radios disabled. As shown in the plots and final measurement results, the emissions from the unintentional radiator comply with the FCC 15.209 limit. Consequently, frequencies outside the restricted band of operation as per FCC 15.205, but with emissions levels exceeding the FCC 15.209 limit, are attributed to the intentional radiator. Therefore, these test results cannot be judged as a fail verdict.

802.11ax-HE40 MCS0
UNII-1 Channel 38

Plot # 1

Final_Result

Frequency (MHz)	MaxPeak (dBµV/m)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB/m)	Raw Rec (dBµV)	Comment
0.009	129.173	---	128.50	-0.67	500.0	9.000	100.0	V	28.0	60.5	0.2	-25.7	86.0	68.6	

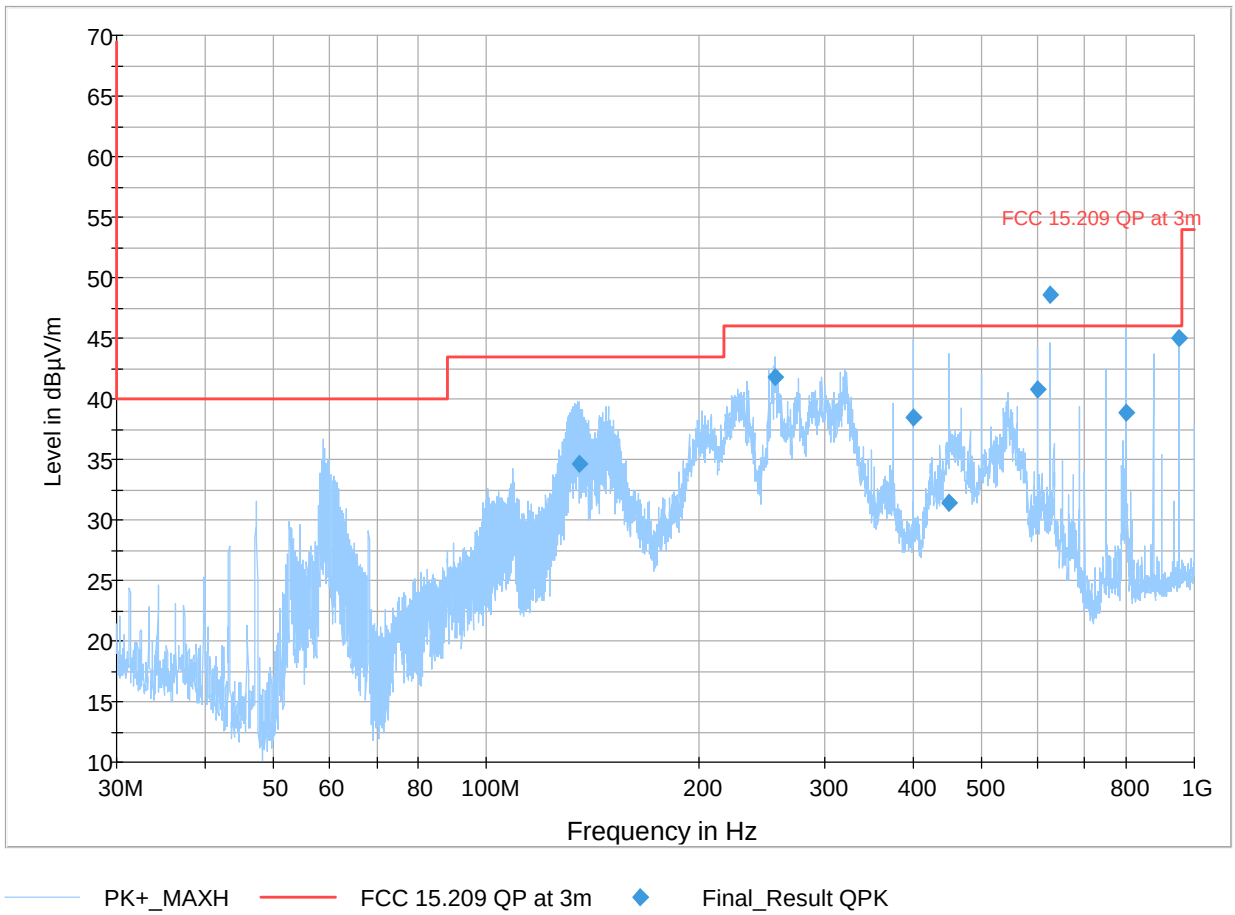


Preview Result 1-PK+ — FCC 15.209 QP at 3m — Final_Result PK+ — Final_Result QPK

Plot # 2

Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB/m)	Raw Rec (dBµV)
135.027	34.558	43.50	8.94	500.0	120.000	195.0	H	44.0	-9.4	-34.2	0.0	24.9	43.9
255.549	41.844	46.02	4.18	500.0	120.000	125.0	H	75.0	-14.4	-33.7	0.0	19.3	56.3
399.982	38.438	46.02	7.58	500.0	120.000	100.0	H	105.0	-10.5	-33.2	0.0	22.7	48.9
449.986	31.348	46.02	14.67	500.0	120.000	168.0	H	244.0	-9.7	-33.0	0.0	23.2	41.1
599.996	40.781	46.02	5.24	500.0	120.000	117.0	H	144.0	-7.5	-32.6	0.0	25.0	48.3
624.998	48.587	46.02	-2.57	500.0	120.000	125.0	H	146.0	-6.7	-32.4	0.0	25.6	55.3
800.010	38.890	46.02	7.13	500.0	120.000	100.0	H	77.0	-4.1	-32.0	0.0	27.9	43.0
950.021	45.039	46.02	0.98	500.0	120.000	107.0	V	246.0	-2.2	-31.5	0.0	29.3	47.2

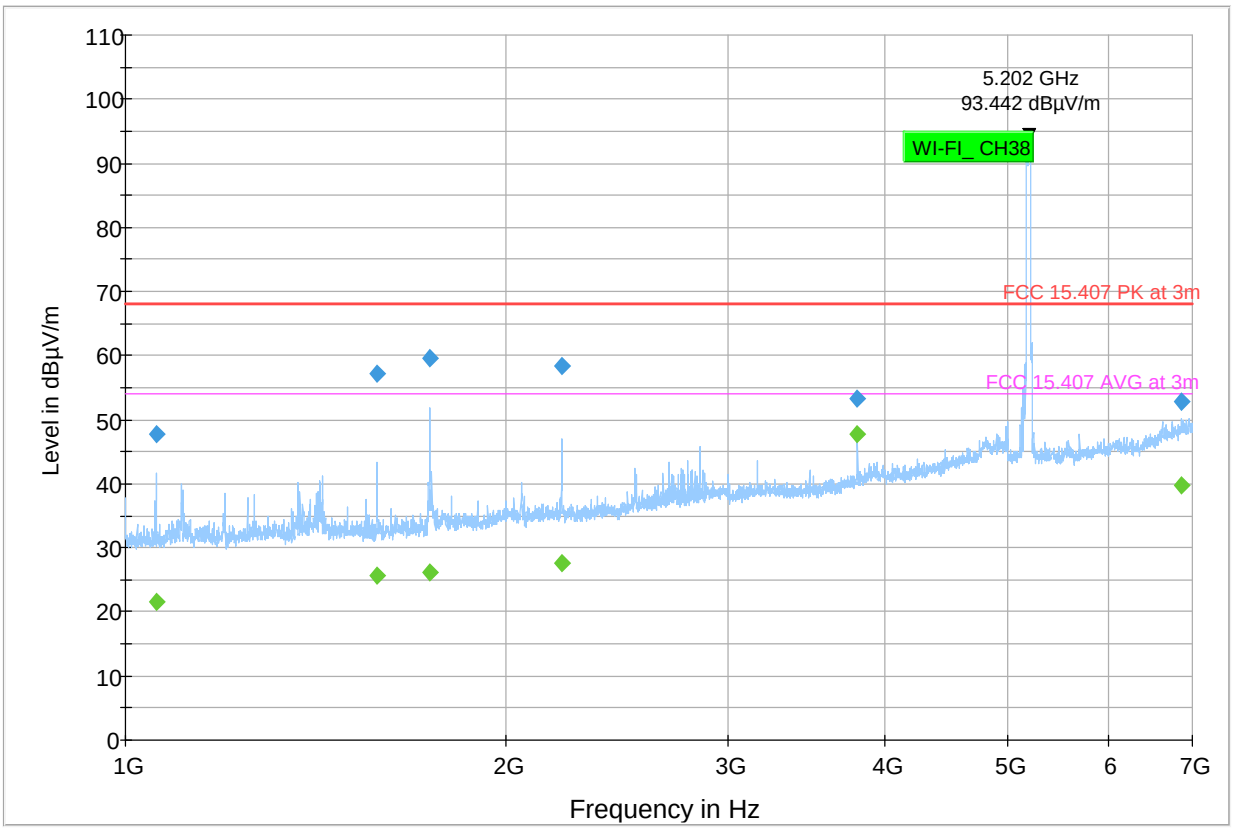


Note: The frequency 624.998 MHz does not fall within the restricted bands of operation as defined in FCC 15.205. Therefore, the FCC 15.209 radiated emission limits do not apply to emissions at 624.998 MHz.

Plot # 3

Final_Result

Frequency (MHz)	MaxPeak (dBµV/m)	CAverage (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB/m)	Raw Rec (dBµV)
1057.563	47.776	---	68.00	20.22	500.0	1000.000	150.0	V	352.0	1.5	-23.1	0.0	24.5	46.3
1057.563	---	21.449	53.98	32.53	500.0	1000.000	150.0	V	352.0	1.5	-23.1	0.0	24.5	20.0
1583.125	---	25.576	53.98	28.40	500.0	1000.000	220.0	V	283.0	2.8	-22.6	0.0	25.4	22.7
1583.125	57.203	---	68.00	10.80	500.0	1000.000	220.0	V	283.0	2.8	-22.6	0.0	25.4	54.4
1741.750	---	26.228	53.98	27.75	500.0	1000.000	134.0	V	281.0	3.9	-22.4	0.0	26.2	22.3
1741.750	59.606	---	68.00	8.39	500.0	1000.000	134.0	V	281.0	3.9	-22.4	0.0	26.2	55.7
2216.875	58.463	---	68.00	9.54	500.0	1000.000	210.0	V	272.0	5.4	-22.1	0.0	27.5	53.0
2216.875	---	27.709	53.98	26.27	500.0	1000.000	210.0	V	272.0	5.4	-22.1	0.0	27.5	22.3
3800.125	53.330	---	68.00	14.67	500.0	1000.000	261.0	V	267.0	11.2	-20.9	0.0	32.2	42.1
3800.125	---	47.709	53.98	6.27	500.0	1000.000	261.0	V	267.0	11.2	-20.9	0.0	32.2	36.5
6865.375	52.728	---	68.00	15.27	500.0	1000.000	283.0	H	158.0	17.3	-17.7	0.0	35.1	35.4
6865.375	---	39.684	53.98	14.30	500.0	1000.000	283.0	H	158.0	17.3	-17.7	0.0	35.1	22.3

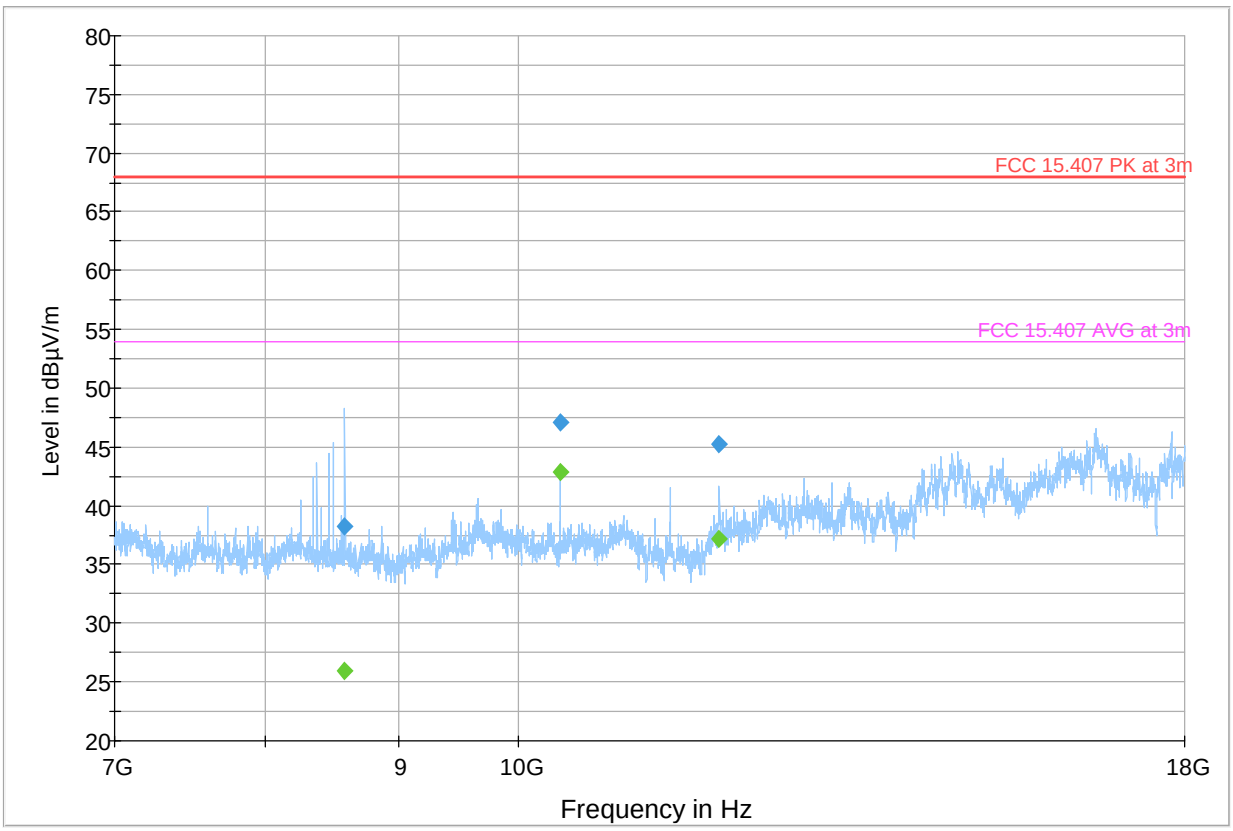


Preview Result 1-PK+ | FCC 15.407 PK at 3m | FCC 15.407 AVG at 3m
Final_Result PK+ | Final_Result CAV

Plot # 4

Final_Result

Frequency (MHz)	MaxPeak (dBµV/m)	CAverage (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB/m)	Raw Rec (dBµV)
8579.875	38.244	---	68.00	29.76	500.0	1000.000	244.0	V	296.0	-2.6	9.4	-47.9	35.8	40.9
8579.875	---	25.918	53.98	28.06	500.0	1000.000	244.0	V	296.0	-2.6	9.4	-47.9	35.8	28.6
10379.750	---	42.808	53.98	11.17	500.0	1000.000	400.0	V	280.0	2.3	10.5	-46.1	37.9	40.5
10379.750	47.105	---	68.00	20.90	500.0	1000.000	400.0	V	280.0	2.3	10.5	-46.1	37.9	44.8
11937.969	45.236	---	68.00	22.76	500.0	1000.000	362.0	V	271.0	4.4	12.0	-46.1	38.5	40.9
11937.969	---	37.132	53.98	16.85	500.0	1000.000	362.0	V	271.0	4.4	12.0	-46.1	38.5	32.8

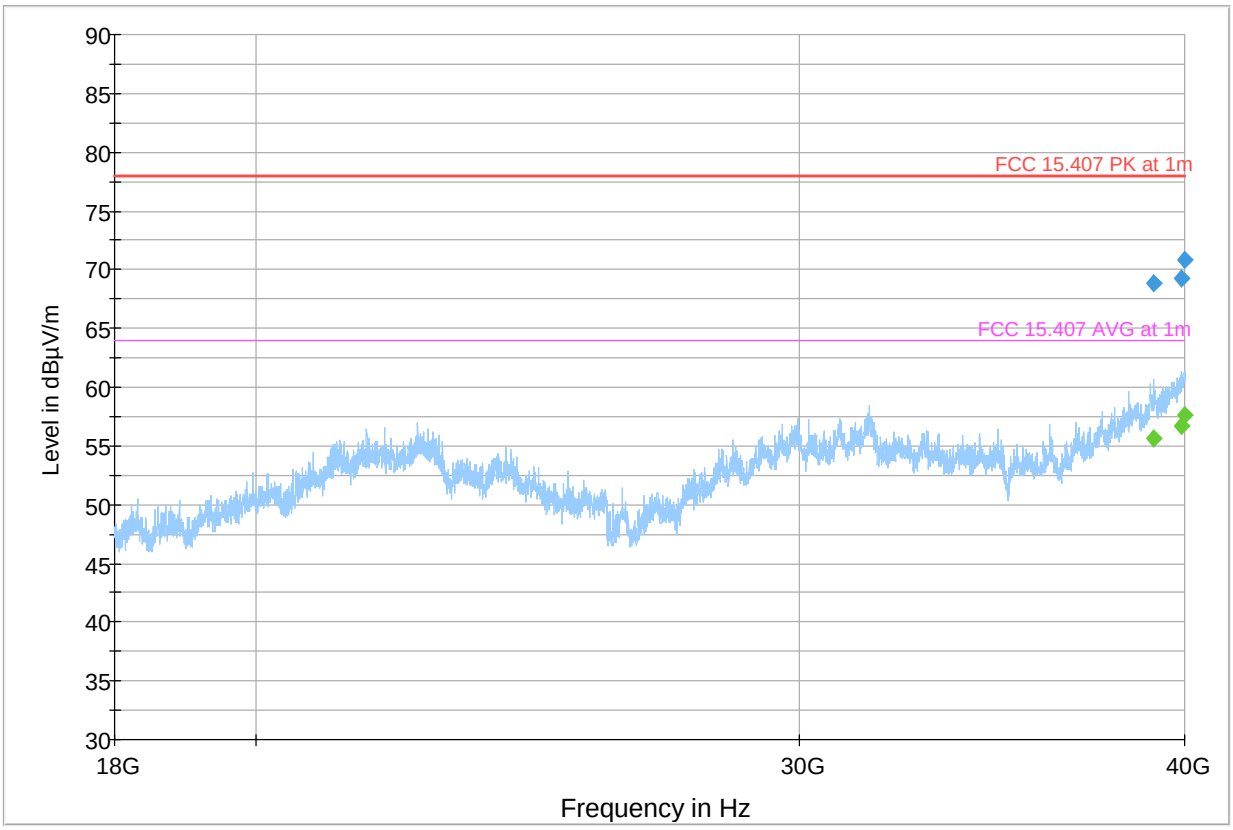


Preview Result 1-PK+ | FCC 15.407 PK at 3m | FCC 15.407 AVG at 3m
Final_Result PK+ | Final_Result CAV

Plot # 5

Final_Result

Frequency (MHz)	MaxPeak (dBµV/m)	CAverage (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB/m)	Raw Rec (dBµV)
39093.813	68.809	---	78.00	9.19	500.0	1000.000	150.0	H	172.0	23.6	12.4	0.0	11.1	45.2
39093.813	---	55.595	63.98	8.38	500.0	1000.000	150.0	H	172.0	23.6	12.4	0.0	11.1	32.0
39903.063	69.268	---	78.00	8.73	500.0	1000.000	150.0	H	-1.0	24.3	12.7	0.0	11.6	45.0
39903.063	---	56.680	63.98	7.30	500.0	1000.000	150.0	H	-1.0	24.3	12.7	0.0	11.6	32.4
39977.125	---	57.566	63.98	6.41	500.0	1000.000	150.0	V	197.0	24.5	12.7	0.0	11.8	33.0
39977.125	70.835	---	78.00	7.16	500.0	1000.000	150.0	V	197.0	24.5	12.7	0.0	11.8	46.3



Preview Result 1-PK+ | FCC 15.407 PK at 1m | FCC 15.407 AVG at 1m
Final_Result PK+ | Final_Result CAV

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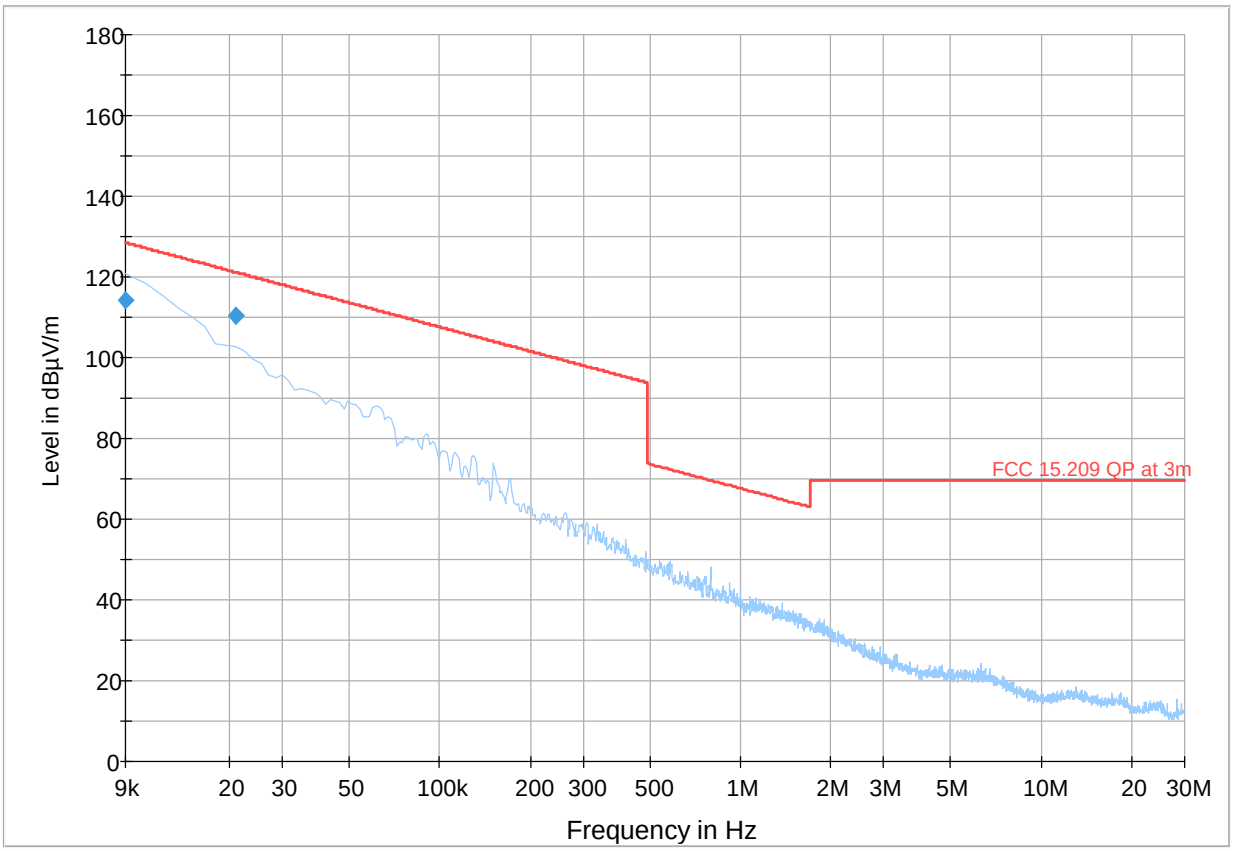
UNII-1 Channel 46

Plot # 6

Final_Result

Frequency (MHz)	MaxPeak (dBµV/m)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB/m)	Raw Rec (dBµV)	Comment
0.009	114.101	---	128.50	14.40	500.0	9.000	100.0	V	180.0	60.5	0.2	-25.7	86.0	53.6	
0.021	110.313	---	121.15	10.83	500.0	9.000	100.0	H	90.0	53.6	0.2	-27.2	80.6	56.7	

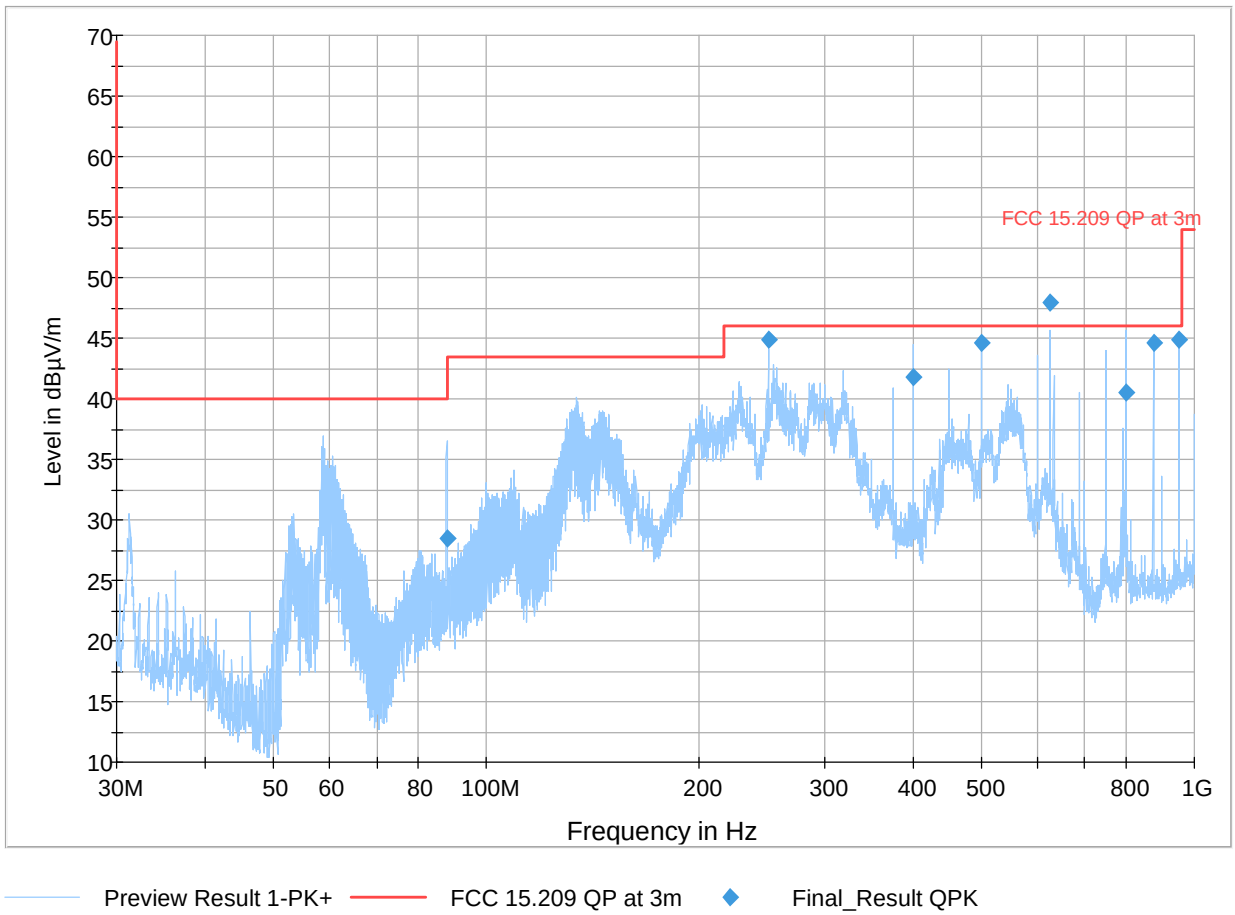


Preview Result 1-PK+ — FCC 15.209 QP at 3m — Final_Result PK+ — Final_Result QPK

Plot # 7

Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB/m)	Raw Rec (dBµV)
87.836	28.437	40.00	11.56	500.0	120.000	400.0	H	40.0	-17.5	-34.5	0.0	17.0	46.0
249.972	44.876	46.02	1.15	500.0	120.000	117.0	H	75.0	-11.0	-33.8	0.0	22.8	55.8
399.982	41.818	46.02	4.20	500.0	120.000	100.0	H	152.0	-10.5	-33.2	0.0	22.7	52.3
499.989	44.639	46.02	1.38	500.0	120.000	100.0	H	170.0	-8.9	-32.8	0.0	23.9	53.6
624.998	47.937	46.02	-1.92	500.0	120.000	117.0	H	149.0	-6.7	-32.4	0.0	25.6	54.7
800.010	40.527	46.02	5.49	500.0	120.000	151.0	H	170.0	-4.1	-32.0	0.0	27.9	44.6
874.967	44.618	46.02	1.40	500.0	120.000	100.0	H	164.0	-3.0	-31.7	0.0	28.7	47.6
950.021	44.826	46.02	1.19	500.0	120.000	100.0	V	251.0	-2.2	-31.5	0.0	29.3	47.0

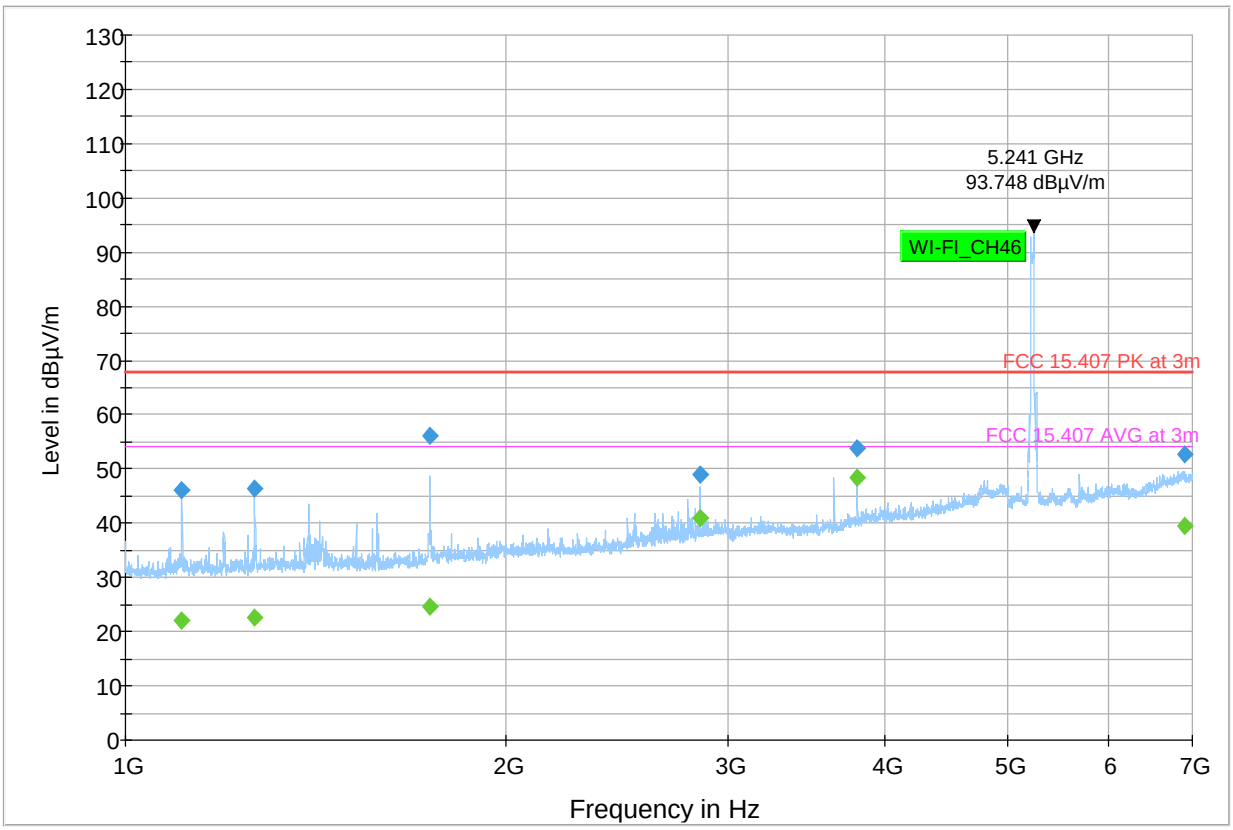


Note: The frequency 624.998 MHz does not fall within the restricted bands of operation as defined in FCC 15.205. Therefore, the FCC 15.209 radiated emission limits do not apply to emissions at 624.998 MHz.

Plot # 8

Final_Result

Frequency (MHz)	MaxPeak (dBµV/m)	CAverage (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB/m)	Raw Rec (dBµV)
1108.188	---	22.106	53.98	31.87	500.0	1000.000	284.0	V	98.0	1.9	-23.0	0.0	24.8	20.3
1108.188	46.081	---	68.00	21.92	500.0	1000.000	284.0	V	98.0	1.9	-23.0	0.0	24.8	44.2
1266.438	46.381	---	68.00	21.62	500.0	1000.000	219.0	H	-24.0	2.4	-22.7	0.0	25.1	44.0
1266.438	---	22.587	53.98	31.39	500.0	1000.000	219.0	H	-24.0	2.4	-22.7	0.0	25.1	20.2
1741.375	---	24.670	53.98	29.31	500.0	1000.000	193.0	V	298.0	3.9	-22.4	0.0	26.2	20.8
1741.375	56.129	---	68.00	11.87	500.0	1000.000	193.0	V	298.0	3.9	-22.4	0.0	26.2	52.3
2849.875	48.903	---	68.00	19.10	500.0	1000.000	203.0	V	292.0	7.4	-21.7	0.0	29.1	41.5
2849.875	---	40.978	53.98	13.00	500.0	1000.000	203.0	V	292.0	7.4	-21.7	0.0	29.1	33.6
3800.125	53.800	---	68.00	14.20	500.0	1000.000	287.0	V	270.0	11.2	-20.9	0.0	32.2	42.6
3800.125	---	48.406	53.98	5.57	500.0	1000.000	287.0	V	270.0	11.2	-20.9	0.0	32.2	37.2
6896.500	52.682	---	68.00	15.32	500.0	1000.000	121.0	V	132.0	17.3	-17.7	0.0	35.0	35.4
6896.500	---	39.639	53.98	14.34	500.0	1000.000	121.0	V	132.0	17.3	-17.7	0.0	35.0	22.3

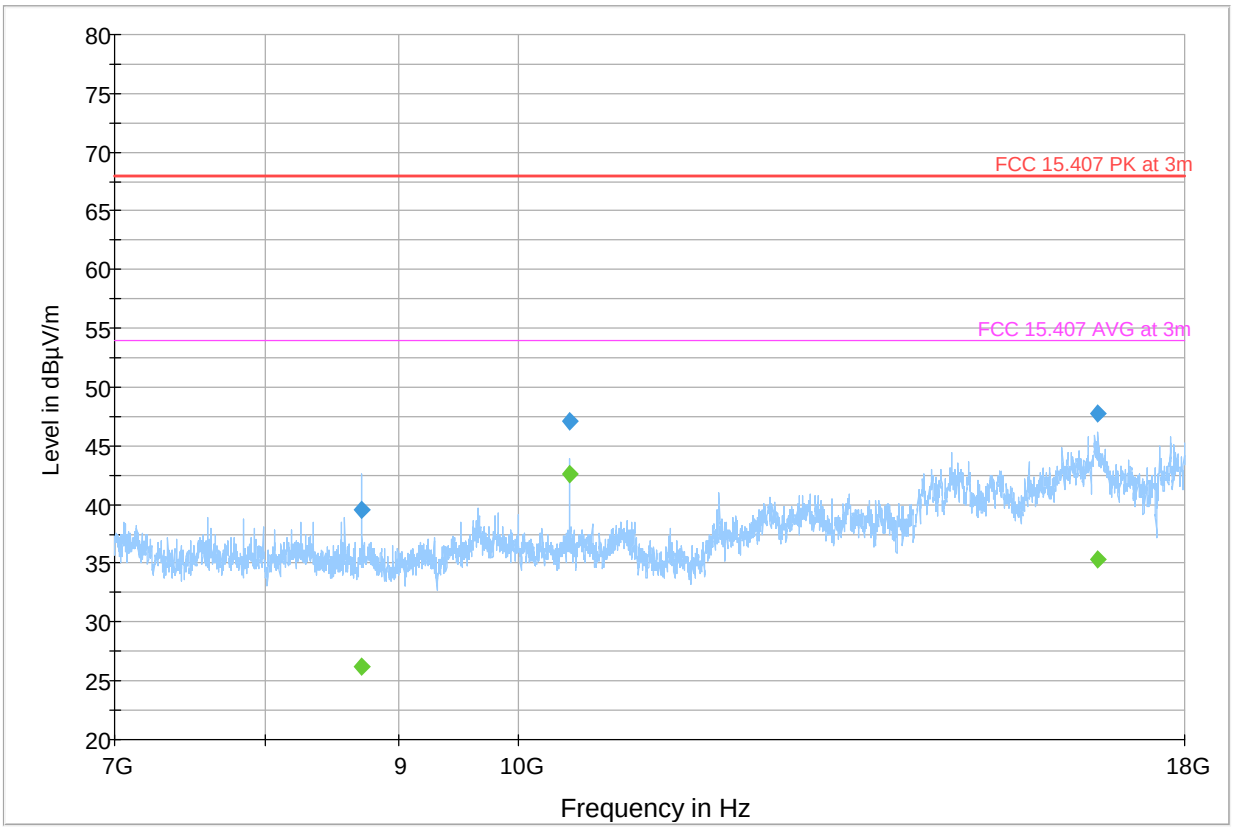


Preview Result 1-PK+ | FCC 15.407 PK at 3m | FCC 15.407 AVG at 3m
Final_Result PK+ | Final_Result CAV

Plot # 9

Final_Result

Frequency (MHz)	MaxPeak (dBµV/m)	CAverage (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB/m)	Raw Rec (dBµV)
8707.063	39.541	---	68.00	28.46	500.0	1000.000	370.0	V	332.0	-2.5	9.5	-47.8	35.9	42.0
8707.063	---	26.228	53.98	27.75	500.0	1000.000	370.0	V	332.0	-2.5	9.5	-47.8	35.9	28.7
10459.844	47.112	---	68.00	20.89	500.0	1000.000	242.0	V	281.0	2.4	10.5	-46.0	37.9	44.7
10459.844	---	42.570	53.98	11.41	500.0	1000.000	242.0	V	281.0	2.4	10.5	-46.0	37.9	40.2
16679.313	---	35.275	53.98	18.70	500.0	1000.000	395.0	V	230.0	14.0	15.2	-42.5	41.3	21.3
16679.313	47.796	---	68.00	20.20	500.0	1000.000	395.0	V	230.0	14.0	15.2	-42.5	41.3	33.8

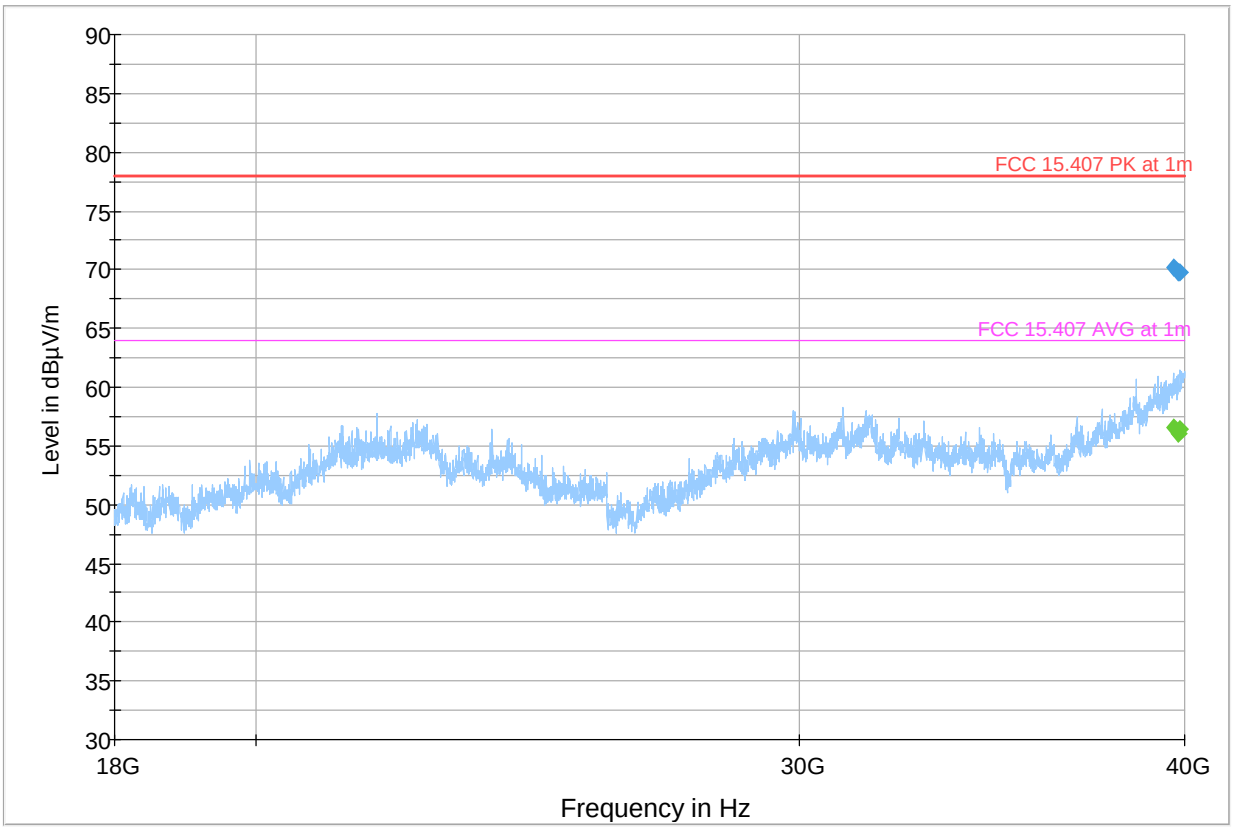


Preview Result 1-PK+ | FCC 15.407 PK at 3m | FCC 15.407 AVG at 3m
Final_Result PK+ | Final_Result CAV

Plot # 10

Final_Result

Frequency (MHz)	MaxPeak (dBµV/m)	CAverage (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB/m)	Raw Rec (dBµV)
39658.750	70.217	---	78.00	7.78	500.0	1000.000	150.0	H	329.0	23.4	12.6	0.0	10.8	46.8
39658.750	---	56.589	63.98	7.39	500.0	1000.000	150.0	H	329.0	23.4	12.6	0.0	10.8	33.2
39828.625	---	56.001	63.98	7.98	500.0	1000.000	150.0	H	220.0	24.0	12.7	0.0	11.3	32.0
39828.625	69.795	---	78.00	8.21	500.0	1000.000	150.0	H	220.0	24.0	12.7	0.0	11.3	45.8
39880.000	69.767	---	78.00	8.23	500.0	1000.000	150.0	H	-3.0	24.2	12.7	0.0	11.5	45.6
39880.000	---	56.470	63.98	7.51	500.0	1000.000	150.0	H	-3.0	24.2	12.7	0.0	11.5	32.3



Preview Result 1-PK+ | FCC 15.407 PK at 1m | FCC 15.407 AVG at 1m
Final_Result PK+ | Final_Result CAV

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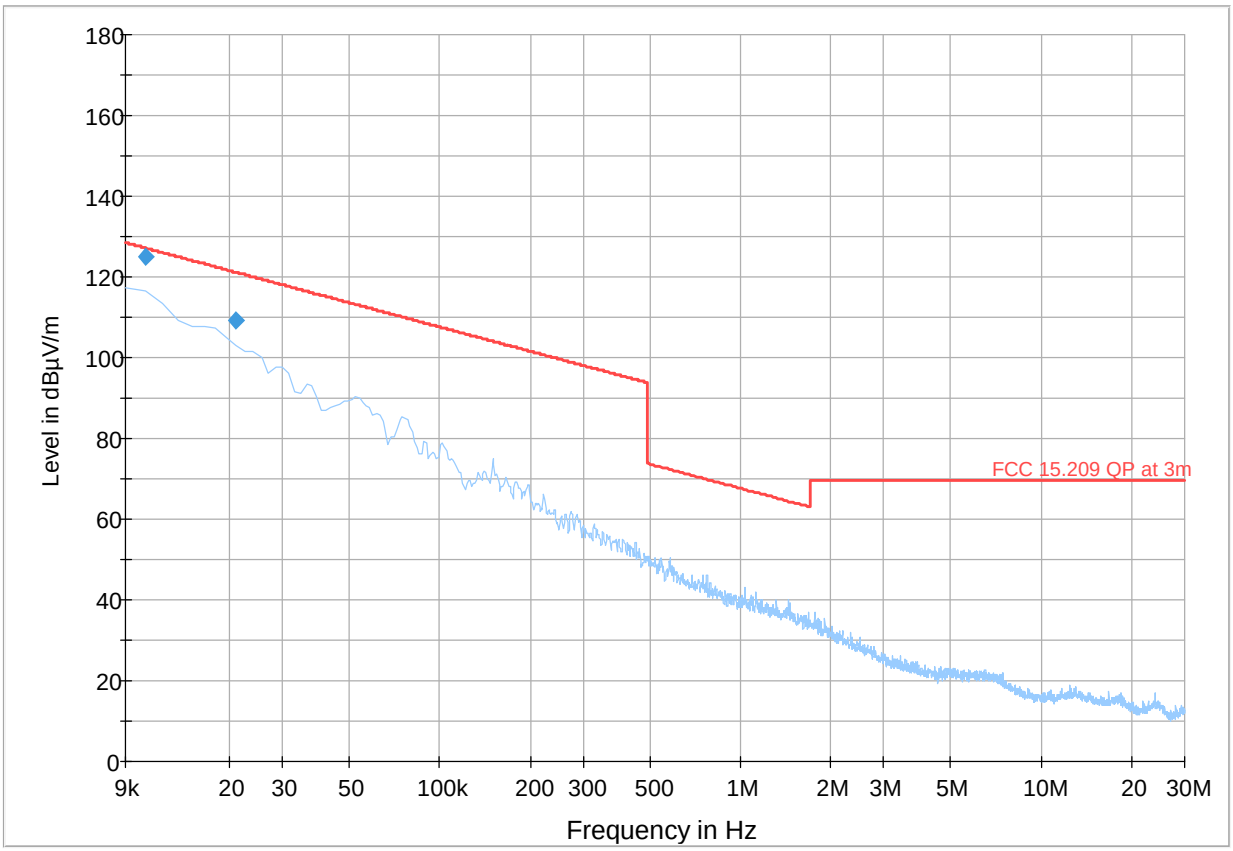
Plot # 11

Final_Result

Frequency (MHz)	MaxPeak (dBµV/m)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB/m)	Raw Rec (dBµV)	Comment
0.010	125.157	---	127.16	2.00	500.0	9.000	100.0	H	-37.0	59.9	0.2	-25.9	85.7	65.2	
0.021	109.201	---	121.15	11.95	500.0	9.000	100.0	V	-30.0	53.6	0.2	-27.2	80.6	55.6	

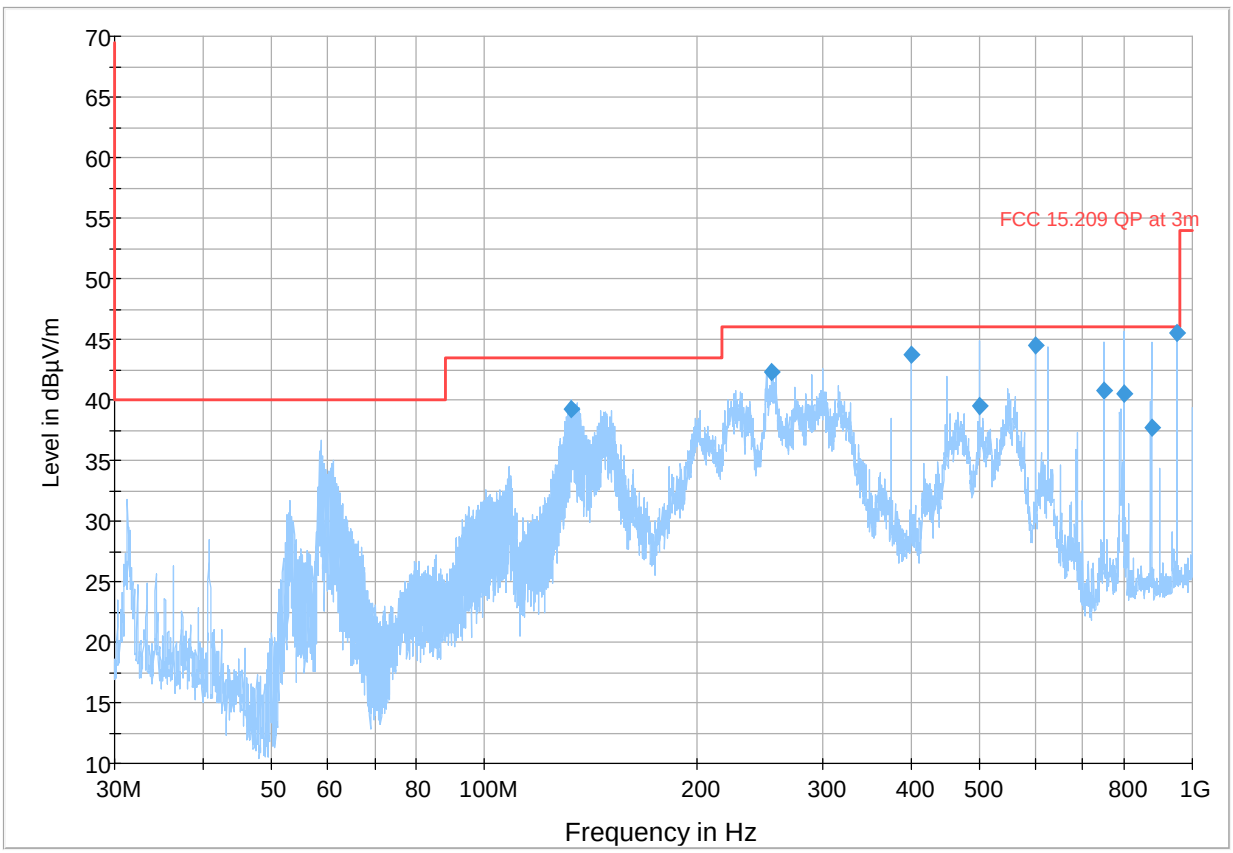


Preview Result 1-PK+ — FCC 15.209 QP at 3m — Final_Result PK+ — Final_Result QPK

Plot # 12

Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB/m)	Raw Rec (dBµV)	Comment
132.335	39.262	43.50	4.24	500.0	120.000	251.0	H	51.0	-9.5	-34.2	0.0	24.8	48.7	
253.973	42.323	46.02	3.70	500.0	120.000	117.0	H	83.0	-13.6	-33.8	0.0	20.1	56.0	
400.007	43.780	46.02	2.24	500.0	120.000	100.0	H	149.0	-10.5	-33.2	0.0	22.7	54.3	
499.965	39.532	46.02	6.49	500.0	120.000	100.0	H	292.0	-8.9	-32.8	0.0	23.9	48.5	
599.996	44.504	46.02	1.52	500.0	120.000	150.0	H	313.0	-7.5	-32.6	0.0	25.0	52.0	
749.983	40.779	46.02	5.24	500.0	120.000	107.0	H	326.0	-4.5	-31.9	0.0	27.4	45.3	
800.010	40.519	46.02	5.50	500.0	120.000	227.0	H	117.0	-4.1	-32.0	0.0	27.9	44.6	
874.967	37.723	46.02	8.30	500.0	120.000	100.0	H	244.0	-3.0	-31.7	0.0	28.7	40.7	
950.021	45.575	46.02	0.45	500.0	120.000	107.0	V	259.0	-2.2	-31.5	0.0	29.3	47.7	

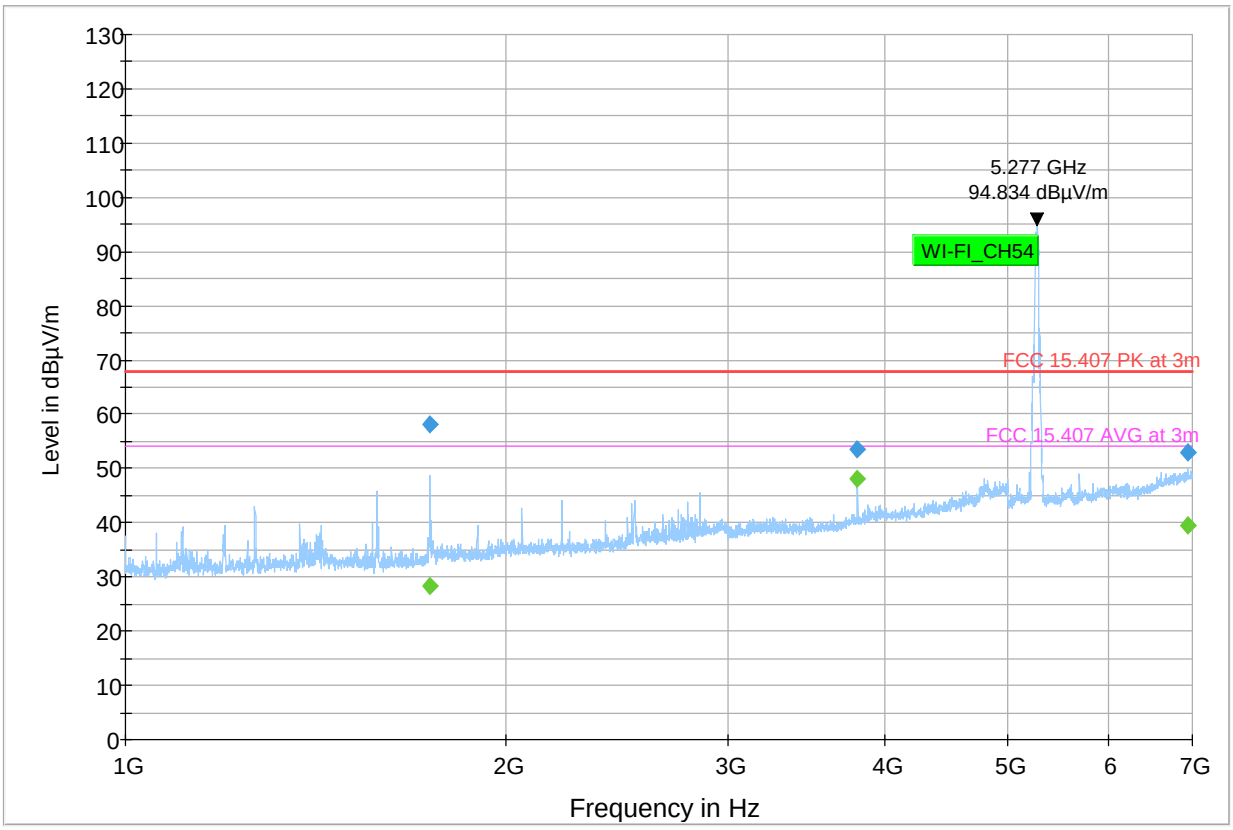


Preview Result 1-PK+ — FCC 15.209 QP at 3m ◆ Final_Result QPK

Plot # 13

Final_Result

Frequency (MHz)	MaxPeak (dBµV/m)	CAverage (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB/m)	Raw Rec (dBµV)
1742.500	58.012	---	68.00	9.99	500.0	1000.000	134.0	V	295.0	3.9	-22.4	0.0	26.2	54.1
1742.500	---	28.312	53.98	25.67	500.0	1000.000	134.0	V	295.0	3.9	-22.4	0.0	26.2	24.4
3800.125	53.423	---	68.00	14.58	500.0	1000.000	238.0	V	278.0	11.2	-20.9	0.0	32.2	42.2
3800.125	---	48.017	53.98	5.96	500.0	1000.000	238.0	V	278.0	11.2	-20.9	0.0	32.2	36.8
6932.500	---	39.577	53.98	14.40	500.0	1000.000	372.0	V	52.0	17.1	-18.0	0.0	35.1	22.5
6932.500	52.857	---	68.00	15.14	500.0	1000.000	372.0	V	52.0	17.1	-18.0	0.0	35.1	35.8

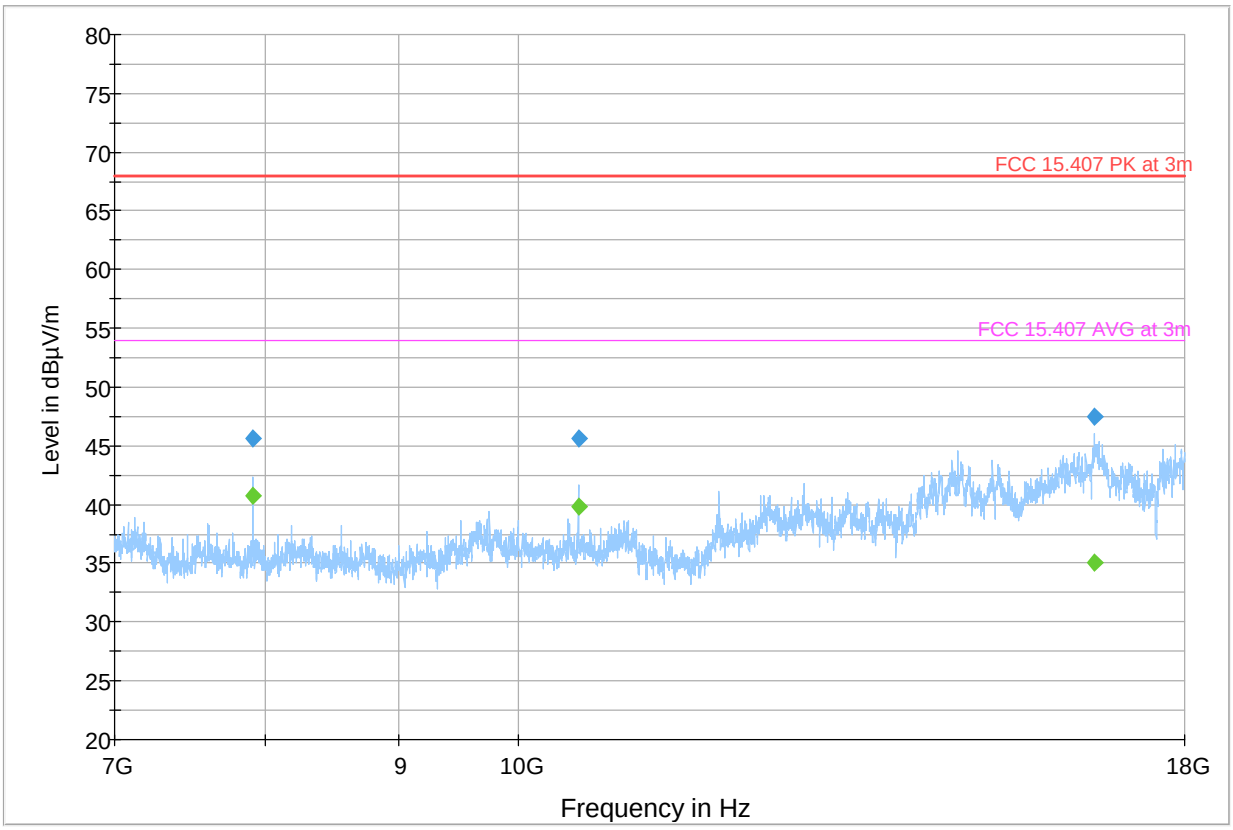


Preview Result 1-PK+ — FCC 15.407 PK at 3m — FCC 15.407 AVG at 3m
Final_Result PK+ — Final_Result CAV

Plot # 14

Final_Result

Frequency (MHz)	MaxPeak (dBµV/m)	CAverage (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB/m)	Raw Rec (dBµV)
7904.750	---	40.756	53.98	13.22	500.0	1000.000	400.0	V	279.0	-1.1	9.0	-46.2	36.1	41.8
7904.750	45.677	---	68.00	22.32	500.0	1000.000	400.0	V	279.0	-1.1	9.0	-46.2	36.1	46.7
10539.594	45.687	---	68.00	22.31	500.0	1000.000	236.0	V	284.0	2.1	10.2	-46.0	37.9	43.6
10539.594	---	39.863	53.98	14.12	500.0	1000.000	236.0	V	284.0	2.1	10.2	-46.0	37.9	37.8
16627.406	47.452	---	68.00	20.55	500.0	1000.000	400.0	H	145.0	13.5	15.2	-42.9	41.2	34.0
16627.406	---	35.080	53.98	18.90	500.0	1000.000	400.0	H	145.0	13.5	15.2	-42.9	41.2	21.6

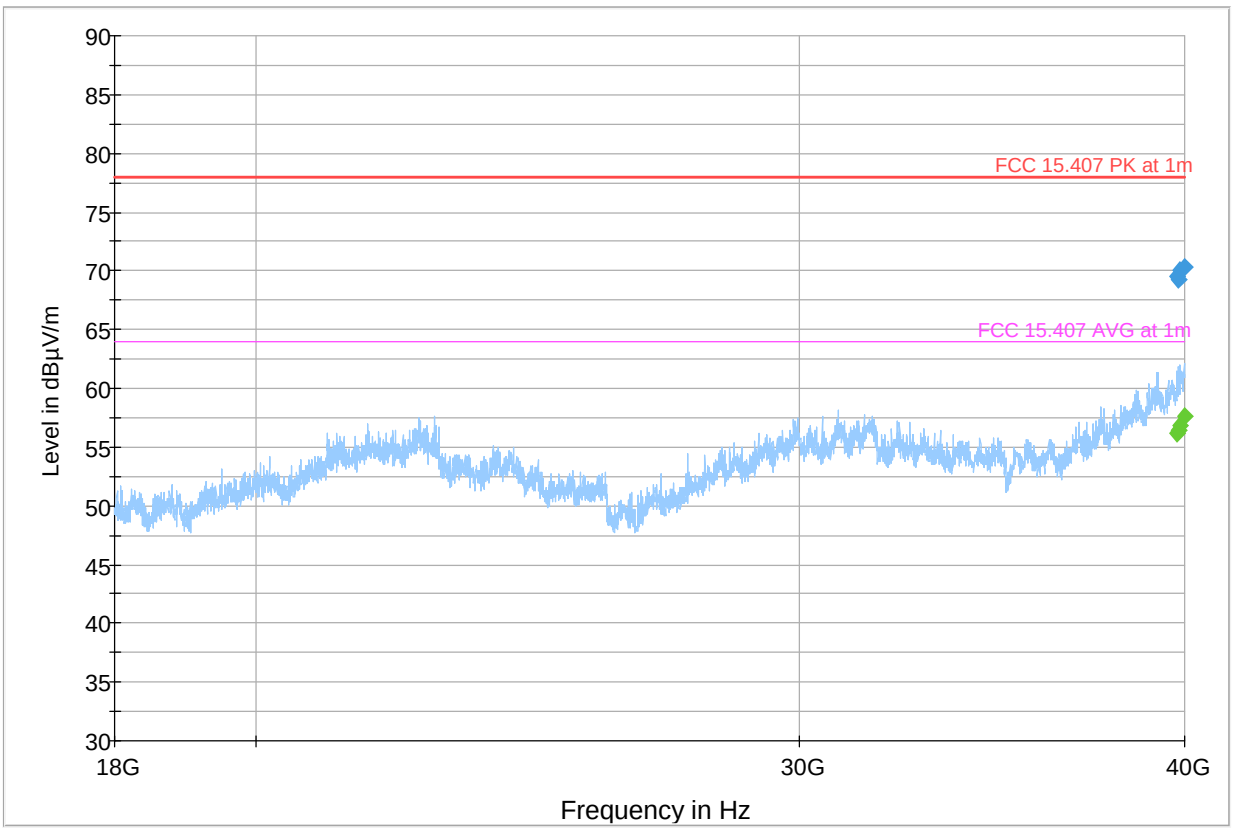


Preview Result 1-PK+ | FCC 15.407 PK at 3m | FCC 15.407 AVG at 3m
Final_Result PK+ | Final_Result CAV

Plot # 15

Final_Result

Frequency (MHz)	MaxPeak (dBµV/m)	CAverage (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB/m)	Raw Rec (dBµV)
39763.000	69.532	---	78.00	8.47	500.0	1000.000	150.0	V	275.0	23.9	12.7	0.0	11.2	45.6
39763.000	---	56.221	63.98	7.76	500.0	1000.000	150.0	V	275.0	23.9	12.7	0.0	11.2	32.3
39836.500	---	56.383	63.98	7.60	500.0	1000.000	150.0	V	188.0	24.2	12.7	0.0	11.5	32.2
39836.500	69.219	---	78.00	8.78	500.0	1000.000	150.0	V	188.0	24.2	12.7	0.0	11.5	45.0
39870.063	70.043	---	78.00	7.96	500.0	1000.000	150.0	H	225.0	24.2	12.7	0.0	11.5	45.9
39870.063	---	56.835	63.98	7.14	500.0	1000.000	150.0	H	225.0	24.2	12.7	0.0	11.5	32.7
39979.188	---	57.562	63.98	6.42	500.0	1000.000	150.0	V	271.0	24.5	12.7	0.0	11.8	33.0
39979.188	70.344	---	78.00	7.66	500.0	1000.000	150.0	V	271.0	24.5	12.7	0.0	11.8	45.8



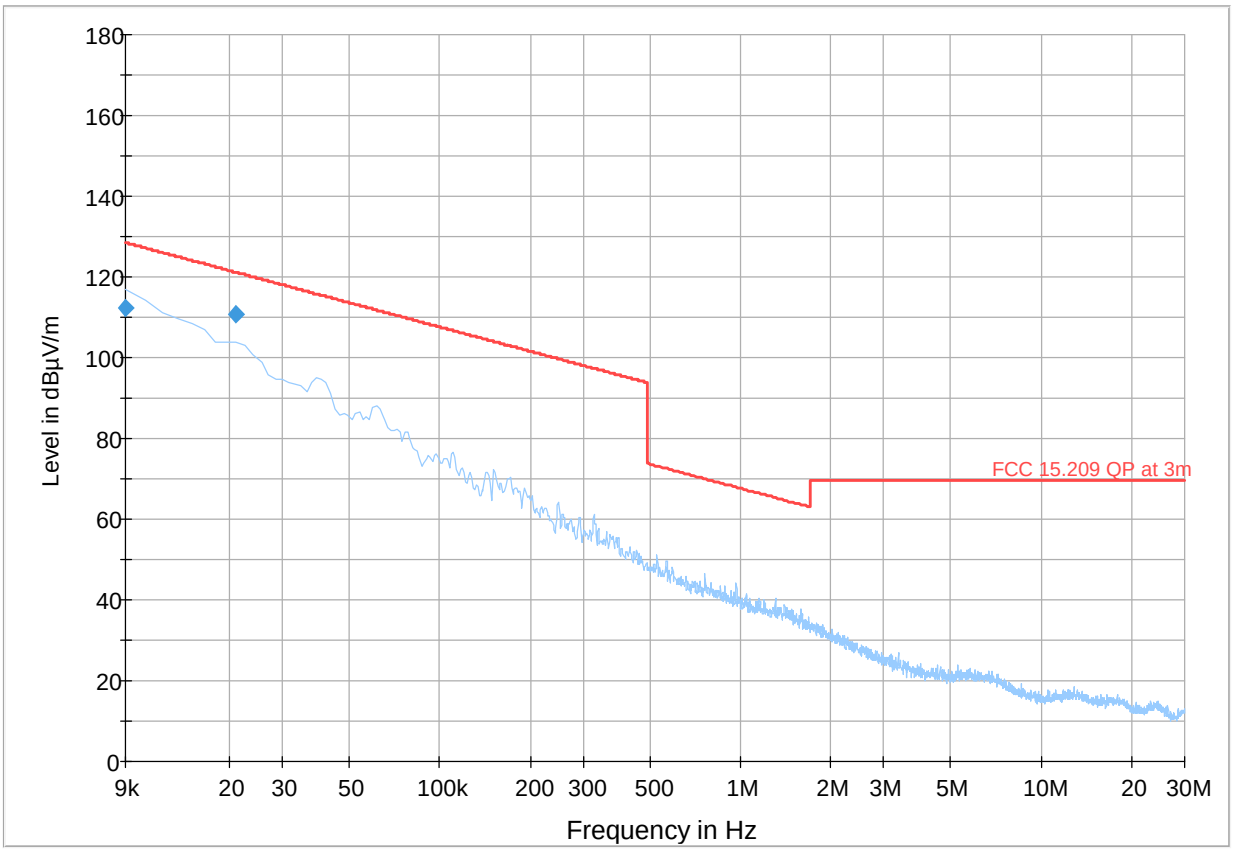
Preview Result 1-PK+
Final_Result PK+
FCC 15.407 PK at 1m
Final_Result CAV
FCC 15.407 AVG at 1m

802.11ax-HE40 MCS0
UNII-2a Channel 62

Plot # 16

Final_Result

Frequency (MHz)	MaxPeak (dBµV/m)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB/m)	Raw Rec (dBµV)	Comment
0.009	112.141	---	128.50	16.36	500.0	9.000	100.0	V	206.0	60.5	0.2	-25.7	86.0	51.6	
0.021	110.668	---	121.15	10.48	500.0	9.000	100.0	V	271.0	53.6	0.2	-27.2	80.6	57.1	

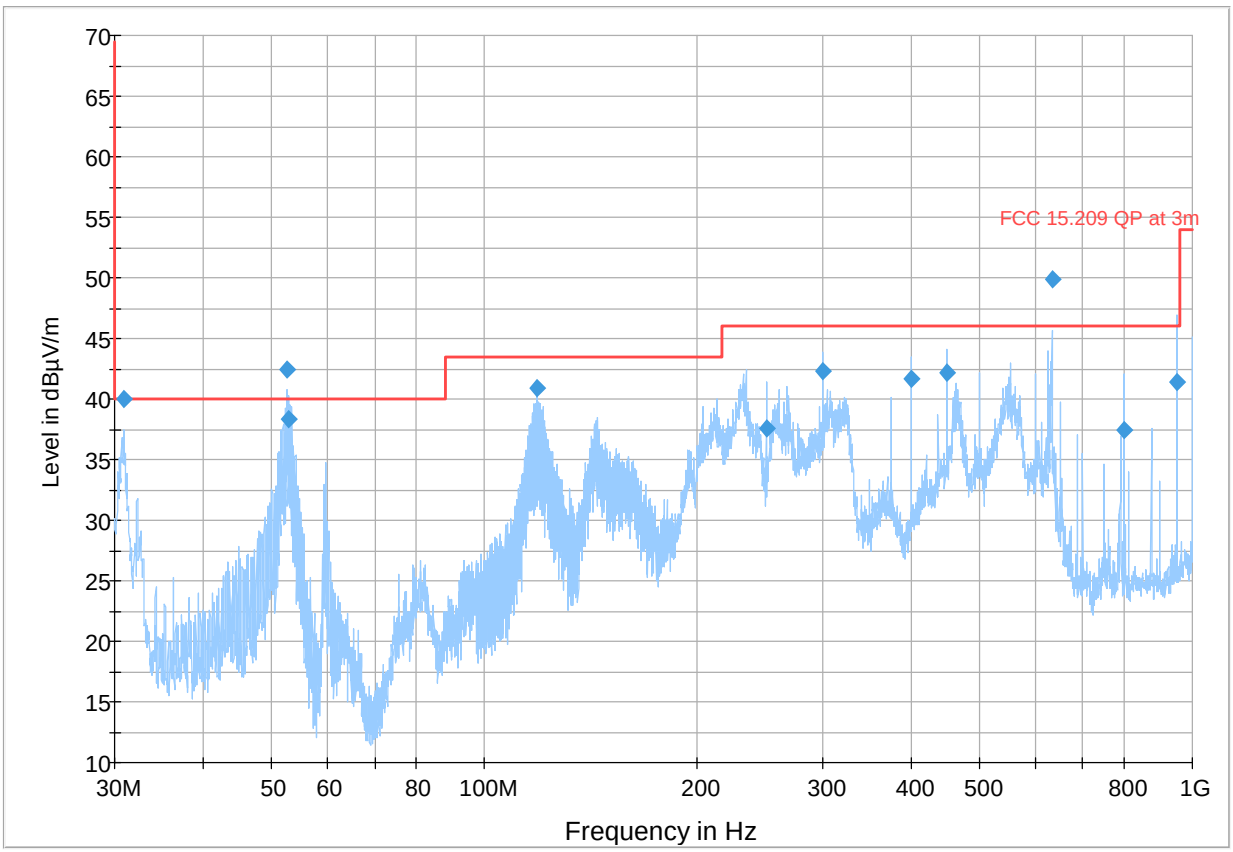


Preview Result 1-PK+ — FCC 15.209 QP at 3m — Final_Result PK+ — Final_Result QPK

Plot # 17

Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB/m)	Raw Rec (dBµV)	Comment
30.946	39.950	40.00	0.05	500.0	120.000	150.0	H	300.0	-10.3	-34.8	0.0	24.5	50.2	
52.528	42.407	40.00	-2.41	500.0	120.000	100.0	V	26.0	-21.2	-34.7	0.0	13.5	63.6	
52.844	38.394	40.00	1.61	500.0	120.000	100.0	V	26.0	-21.3	-34.7	0.0	13.4	59.7	
118.537	40.866	43.50	2.63	500.0	120.000	255.0	H	80.0	-11.1	-34.4	0.0	23.3	51.9	
249.972	37.513	46.02	8.51	500.0	120.000	184.0	H	295.0	-11.0	-33.8	0.0	22.8	48.5	
299.975	42.322	46.02	3.70	500.0	120.000	100.0	H	199.0	-13.7	-33.6	0.0	19.9	56.0	
399.982	41.640	46.02	4.38	500.0	120.000	210.0	H	296.0	-10.5	-33.2	0.0	22.7	52.1	
449.986	42.135	46.02	3.89	500.0	120.000	107.0	H	265.0	-9.7	-33.0	0.0	23.2	51.9	
633.413	49.931	46.02	-3.91	500.0	120.000	100.0	H	206.0	-6.6	-32.3	0.0	25.7	56.6	
800.010	37.449	46.02	8.57	500.0	120.000	134.0	H	306.0	-4.1	-32.0	0.0	27.9	41.5	
950.021	41.356	46.02	4.66	500.0	120.000	143.0	H	201.0	-2.1	-31.5	0.0	29.4	43.4	



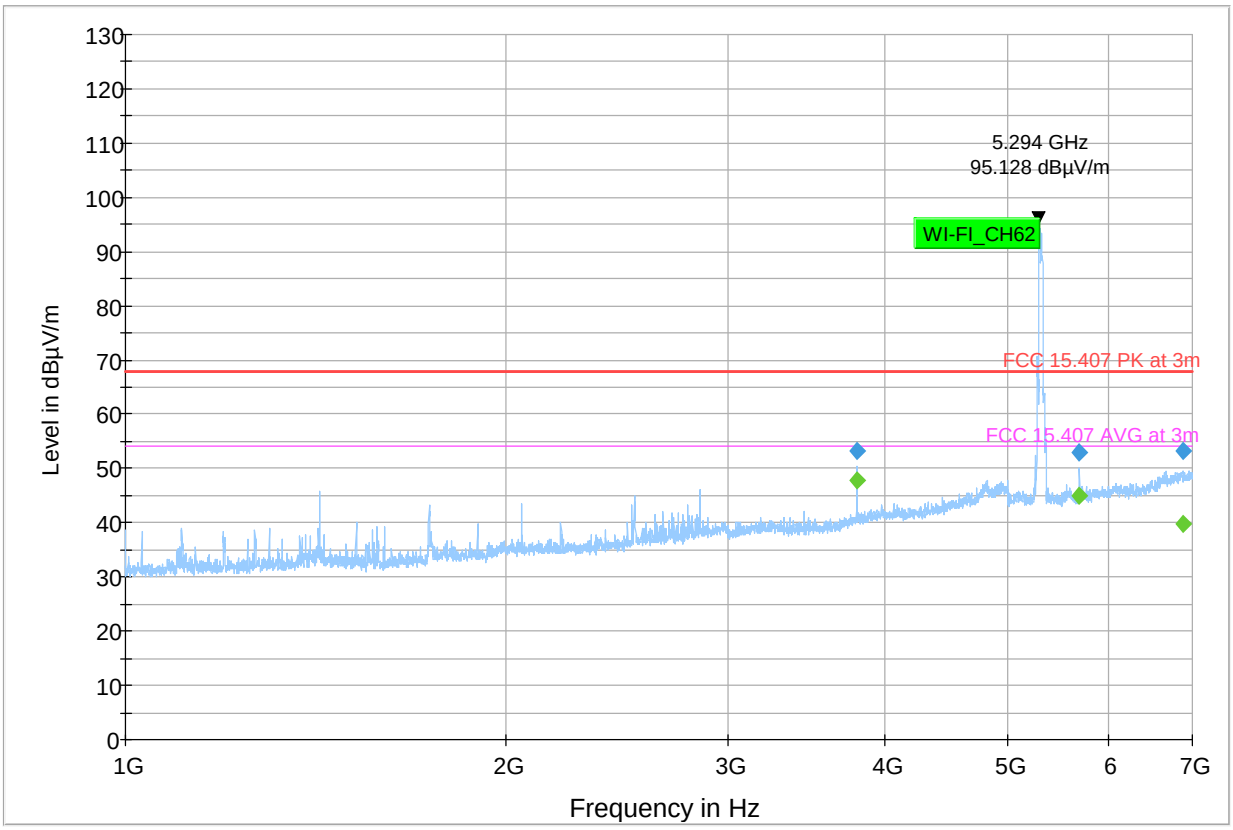
Preview Result 1-PK+ — FCC 15.209 QP at 3m ◆ Final_Result QPK

Note 1: The frequency 52.528 MHz does not fall within the restricted bands of operation as defined in FCC 15.205. Therefore, the FCC 15.209 radiated emission limits do not apply to emissions at 52.528 MHz.
Note 2: The frequency 633.413 MHz does not fall within the restricted bands of operation as defined in FCC 15.205. Therefore, the FCC 15.209 radiated emission limits do not apply to emissions at 633.413 MHz.

Plot # 18

Final_Result

Frequency (MHz)	MaxPeak (dBµV/m)	CAverage (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB/m)	Raw Rec (dBµV)
3800.125	---	47.697	53.98	6.28	500.0	1000.000	267.0	V	272.0	11.2	-20.9	0.0	32.2	36.5
3800.125	53.381	---	68.00	14.62	500.0	1000.000	267.0	V	272.0	11.2	-20.9	0.0	32.2	42.2
5700.063	53.002	---	68.00	15.00	500.0	1000.000	188.0	V	302.0	14.4	-19.4	0.0	33.7	38.6
5700.063	---	45.027	53.98	8.95	500.0	1000.000	188.0	V	302.0	14.4	-19.4	0.0	33.7	30.6
6887.500	53.378	---	68.00	14.62	500.0	1000.000	344.0	V	300.0	17.4	-17.7	0.0	35.0	36.0
6887.500	---	39.747	53.98	14.23	500.0	1000.000	344.0	V	300.0	17.4	-17.7	0.0	35.0	22.4

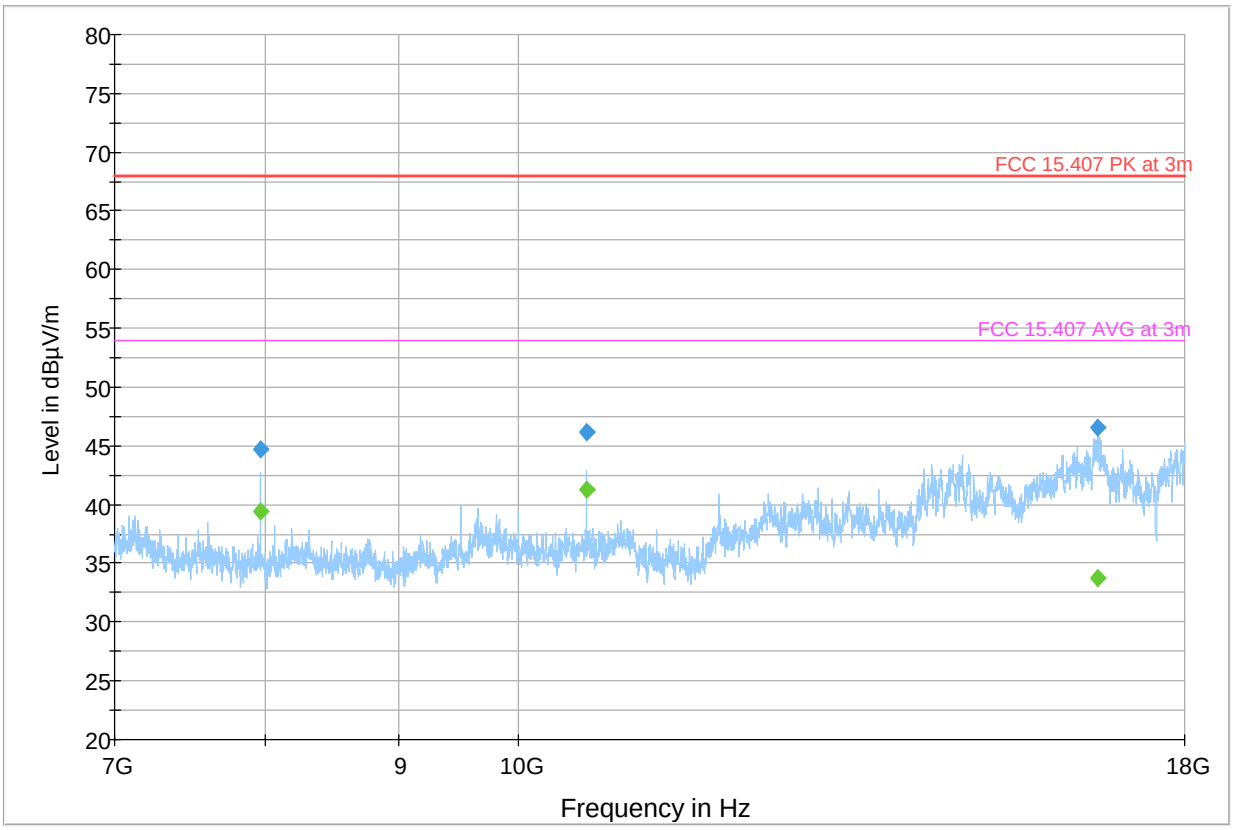


Preview Result 1-PK+ — FCC 15.407 PK at 3m — FCC 15.407 AVG at 3m
Final_Result PK+ — Final_Result CAV

Plot # 19

Final_Result

Frequency (MHz)	MaxPeak (dBµV/m)	CAverage (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB/m)	Raw Rec (dBµV)
7964.563	44.712	---	68.00	23.29	500.0	1000.000	226.0	V	286.0	-1.0	9.0	-46.2	36.1	45.8
7964.563	---	39.448	53.98	14.53	500.0	1000.000	226.0	V	286.0	-1.0	9.0	-46.2	36.1	40.5
10619.688	46.127	---	68.00	21.87	500.0	1000.000	335.0	V	282.0	1.7	10.1	-46.3	37.8	44.4
10619.688	---	41.245	53.98	12.73	500.0	1000.000	335.0	V	282.0	1.7	10.1	-46.3	37.8	39.5
16667.969	---	33.729	53.98	20.25	500.0	1000.000	243.0	H	251.0	13.9	15.2	-42.6	41.3	19.8
16667.969	46.594	---	68.00	21.41	500.0	1000.000	243.0	H	251.0	13.9	15.2	-42.6	41.3	32.7

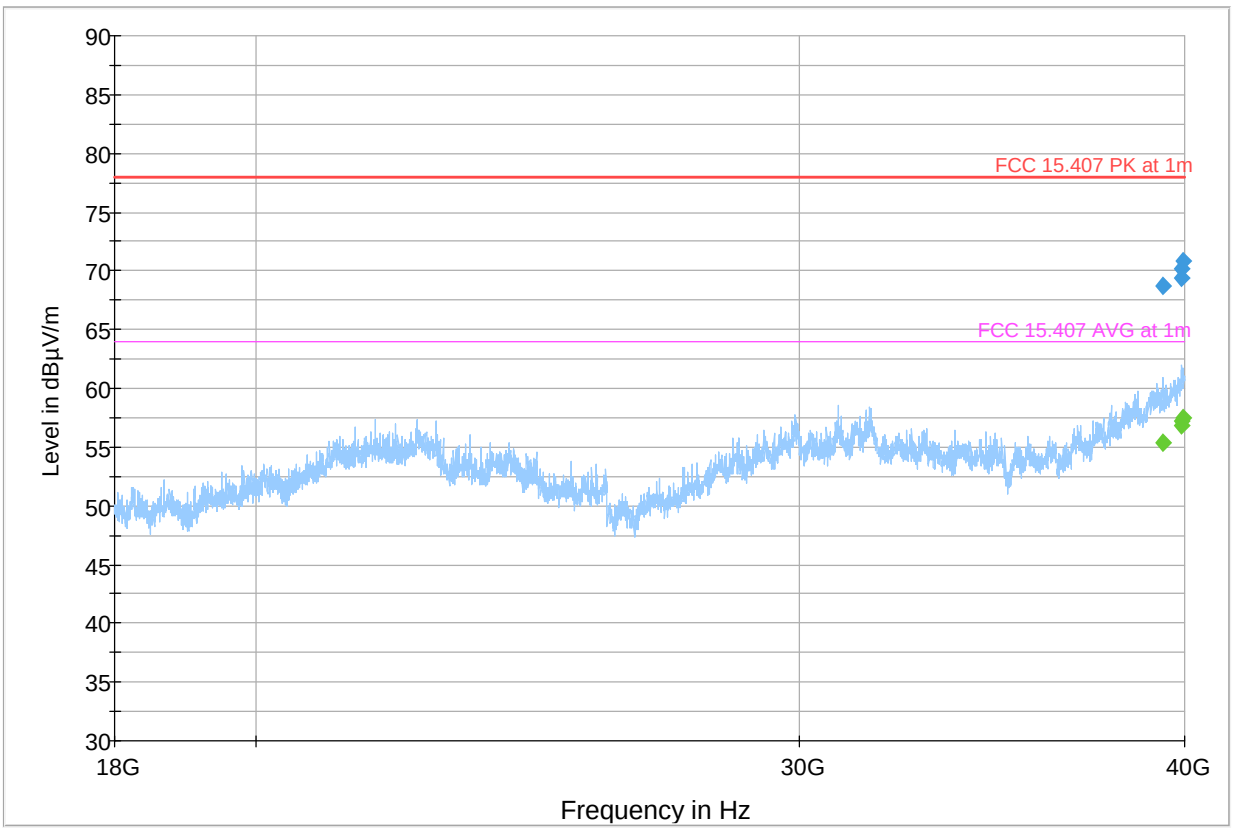


Preview Result 1-PK+ | FCC 15.407 PK at 3m | FCC 15.407 AVG at 3m
Final_Result PK+ | Final_Result CAV

Plot # 20

Final_Result

Frequency (MHz)	MaxPeak (dBµV/m)	CAverage (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB/m)	Raw Rec (dBµV)
39364.375	68.698	---	78.00	9.30	500.0	1000.000	150.0	V	150.0	23.6	12.5	0.0	11.1	45.1
39364.375	---	55.357	63.98	8.62	500.0	1000.000	150.0	V	150.0	23.6	12.5	0.0	11.1	31.7
39901.000	69.411	---	78.00	8.59	500.0	1000.000	150.0	V	1.0	24.4	12.7	0.0	11.7	45.0
39901.000	---	56.852	63.98	7.13	500.0	1000.000	150.0	V	1.0	24.4	12.7	0.0	11.7	32.4
39925.938	70.147	---	78.00	7.85	500.0	1000.000	150.0	H	11.0	24.3	12.7	0.0	11.6	45.8
39925.938	---	57.232	63.98	6.75	500.0	1000.000	150.0	H	11.0	24.3	12.7	0.0	11.6	32.9
39958.375	70.793	---	78.00	7.21	500.0	1000.000	150.0	V	26.0	24.5	12.7	0.0	11.8	46.3
39958.375	---	57.453	63.98	6.53	500.0	1000.000	150.0	V	26.0	24.5	12.7	0.0	11.8	32.9



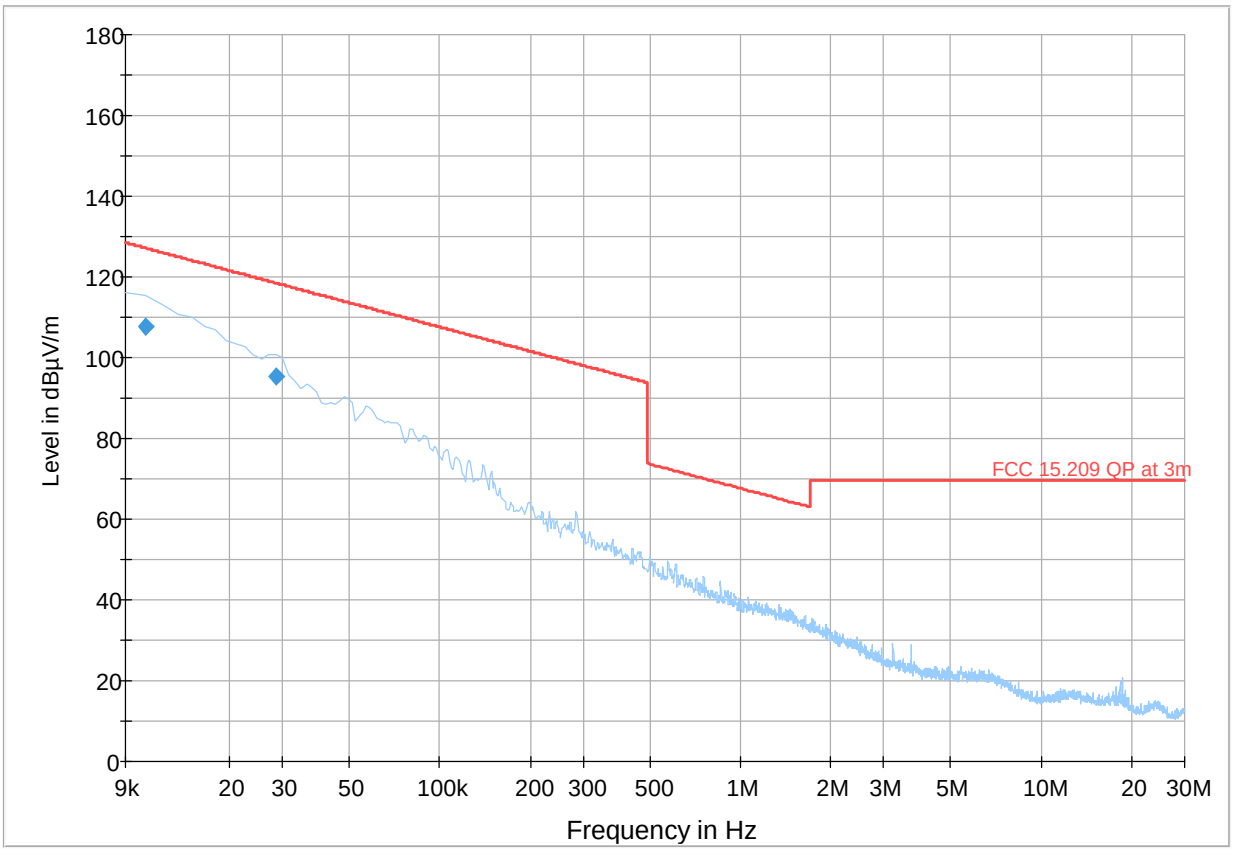
Preview Result 1-PK+
Final_Result PK+
FCC 15.407 PK at 1m
Final_Result CAV
FCC 15.407 AVG at 1m

802.11ax-HE40 MCS0
UNII-2c Channel 102

Plot # 21

Final_Result

Frequency (MHz)	MaxPeak (dBµV/m)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB/m)	Raw Rec (dBµV)	Comment
0.010	107.688	---	127.16	19.47	500.0	9.000	100.0	V	320.0	59.9	0.2	-25.9	85.7	47.7	
0.028	95.266	---	118.50	23.23	500.0	9.000	100.0	H	65.0	50.6	0.2	-27.6	78.0	44.7	

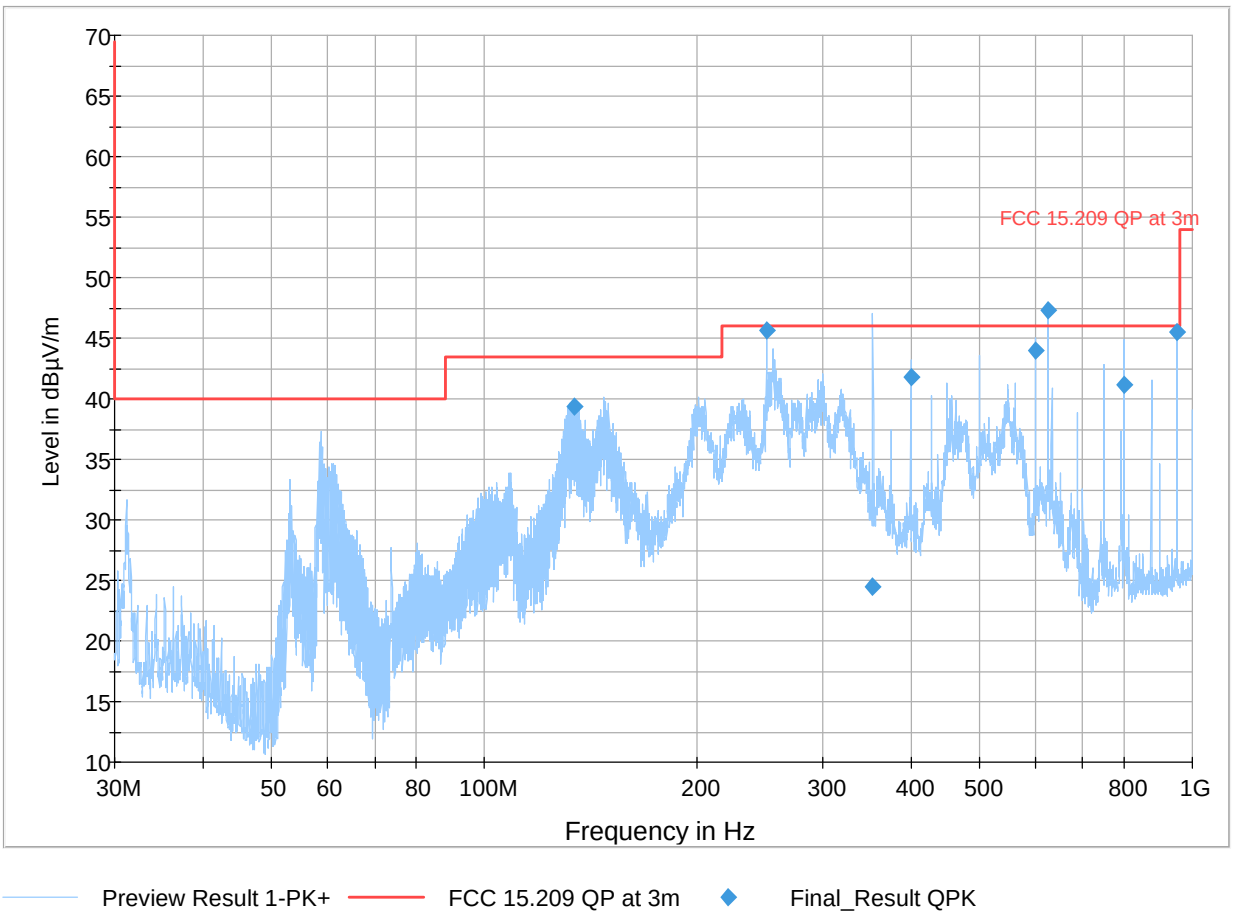


Preview Result 1-PK+ — FCC 15.209 QP at 3m — Final_Result PK+ — Final_Result QPK

Plot # 22

Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB/m)	Raw Rec (dBµV)	Comment
134.081	39.332	43.50	4.17	500.0	120.000	220.0	H	49.0	-9.4	-34.2	0.0	24.9	48.7	
249.996	45.584	46.02	0.44	500.0	120.000	116.0	H	73.0	-11.0	-33.8	0.0	22.8	56.6	
354.029	24.454	46.02	21.57	500.0	120.000	107.0	V	30.0	-13.0	-33.4	0.0	20.4	37.4	
399.982	41.855	46.02	4.17	500.0	120.000	100.0	H	150.0	-10.5	-33.2	0.0	22.7	52.4	
599.996	44.017	46.02	2.00	500.0	120.000	150.0	H	312.0	-7.5	-32.6	0.0	25.0	51.5	
624.998	47.256	46.02	-1.24	500.0	120.000	100.0	H	258.0	-6.7	-32.4	0.0	25.6	54.0	
800.010	41.119	46.02	4.90	500.0	120.000	160.0	H	108.0	-4.1	-32.0	0.0	27.9	45.2	
950.021	45.502	46.02	0.52	500.0	120.000	107.0	V	257.0	-2.2	-31.5	0.0	29.3	47.7	

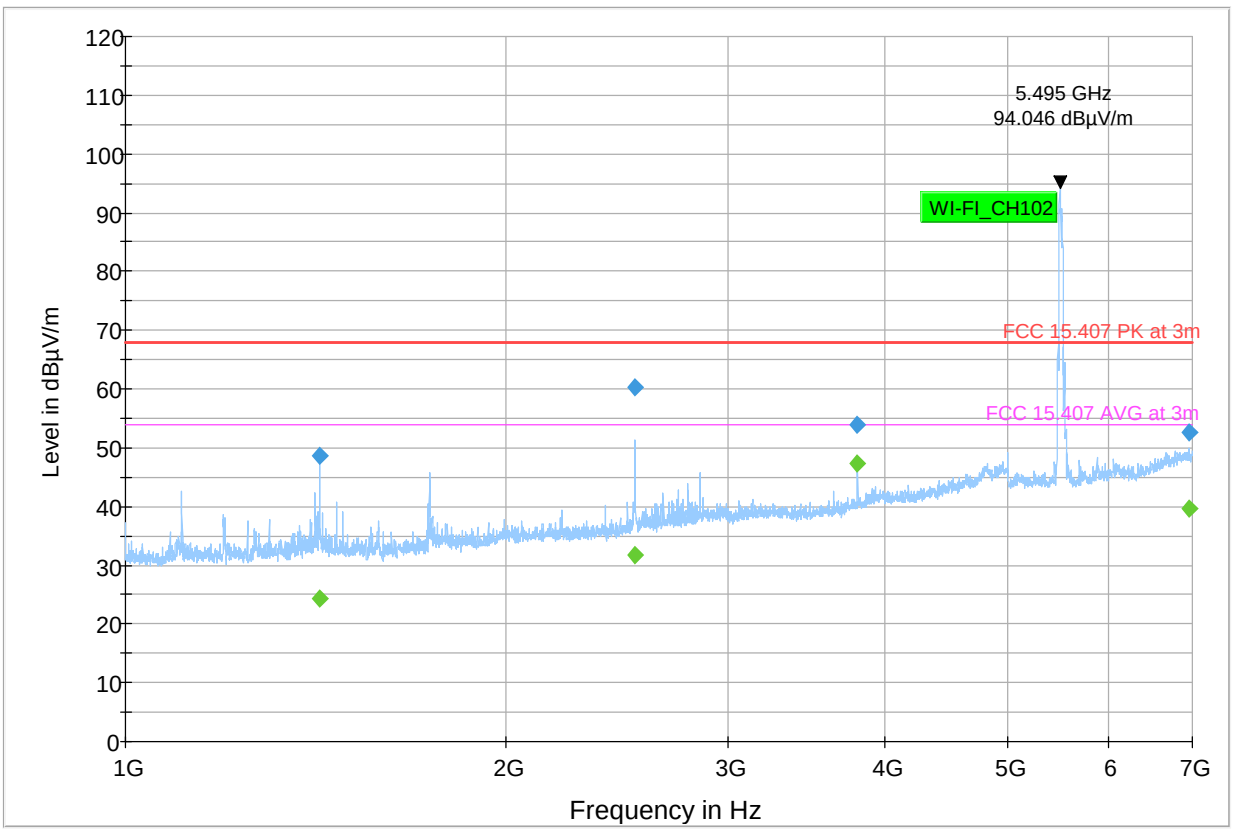


Note: The frequency 624.998 MHz does not fall within the restricted bands of operation as defined in FCC 15.205. Therefore, the FCC 15.209 radiated emission limits do not apply to emissions at 624.998 MHz.

Plot # 23

Final_Result

Frequency (MHz)	MaxPeak (dBµV/m)	CAverage (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB/m)	Raw Rec (dBµV)
1424.875	48.532	---	68.00	19.47	500.0	1000.000	321.0	V	275.0	2.4	-22.7	0.0	25.1	46.2
1424.875	---	24.328	53.98	29.65	500.0	1000.000	321.0	V	275.0	2.4	-22.7	0.0	25.1	22.0
2533.375	---	31.682	53.98	22.30	500.0	1000.000	282.0	V	268.0	6.4	-22.1	0.0	28.5	25.3
2533.375	60.231	---	68.00	7.77	500.0	1000.000	282.0	V	268.0	6.4	-22.1	0.0	28.5	53.8
3800.125	53.840	---	68.00	14.16	500.0	1000.000	210.0	V	279.0	11.2	-20.9	0.0	32.2	42.6
3800.125	---	47.248	53.98	6.73	500.0	1000.000	210.0	V	279.0	11.2	-20.9	0.0	32.2	36.0
6953.500	---	39.603	53.98	14.38	500.0	1000.000	179.0	V	74.0	17.0	-18.1	0.0	35.1	22.6
6953.500	52.716	---	68.00	15.28	500.0	1000.000	179.0	V	74.0	17.0	-18.1	0.0	35.1	35.7

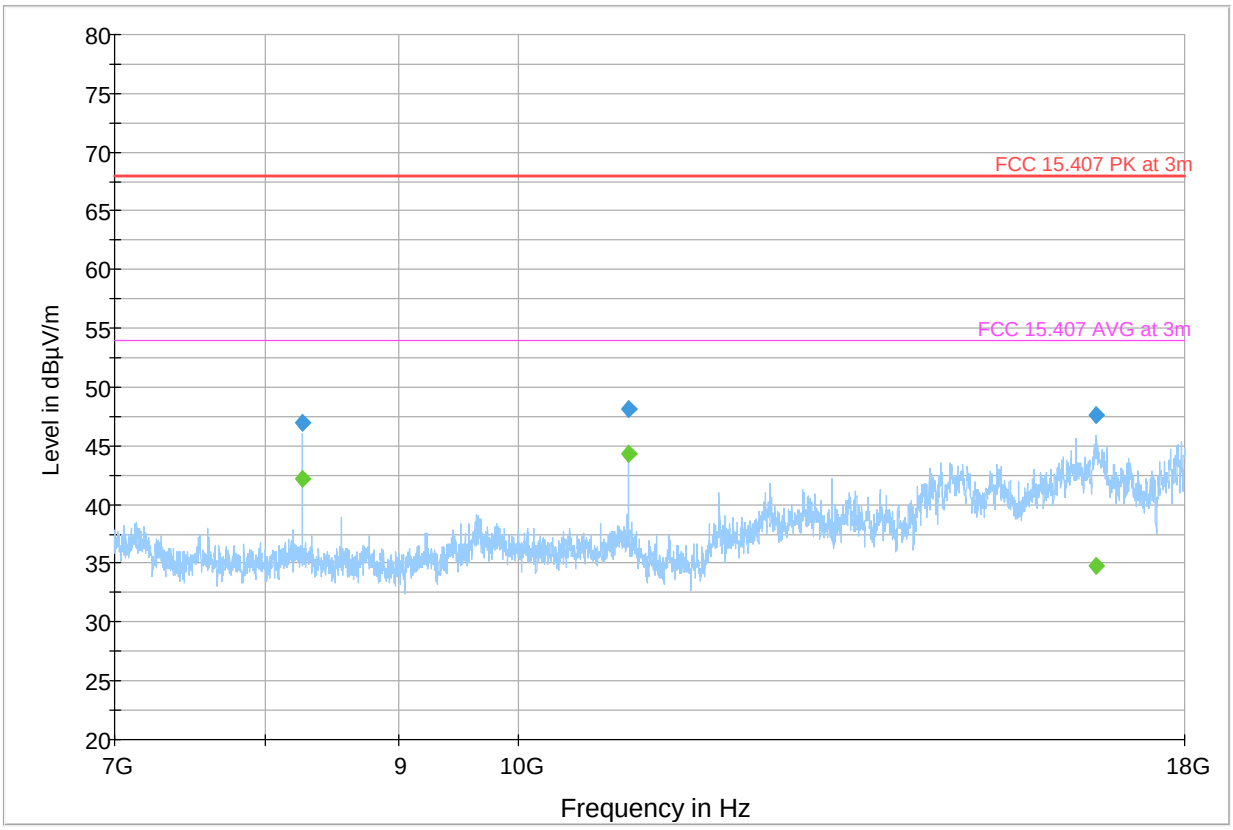


Preview Result 1-PK+ — FCC 15.407 PK at 3m — FCC 15.407 AVG at 3m
Final_Result PK+ — Final_Result CAV

Plot # 24

Final_Result

Frequency (MHz)	MaxPeak (dBµV/m)	CAverage (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB/m)	Raw Rec (dBµV)
8264.656	46.913	---	68.00	21.09	500.0	1000.000	269.0	V	268.0	-2.3	8.9	-47.3	36.0	49.2
8264.656	---	42.226	53.98	11.75	500.0	1000.000	269.0	V	268.0	-2.3	8.9	-47.3	36.0	44.6
11019.813	48.212	---	68.00	19.79	500.0	1000.000	286.0	V	283.0	2.3	10.7	-46.4	38.1	45.9
11019.813	---	44.270	53.98	9.71	500.0	1000.000	286.0	V	283.0	2.3	10.7	-46.4	38.1	42.0
16658.344	---	34.793	53.98	19.19	500.0	1000.000	362.0	V	348.0	13.8	15.2	-42.7	41.3	21.0
16658.344	47.624	---	68.00	20.38	500.0	1000.000	362.0	V	348.0	13.8	15.2	-42.7	41.3	33.8

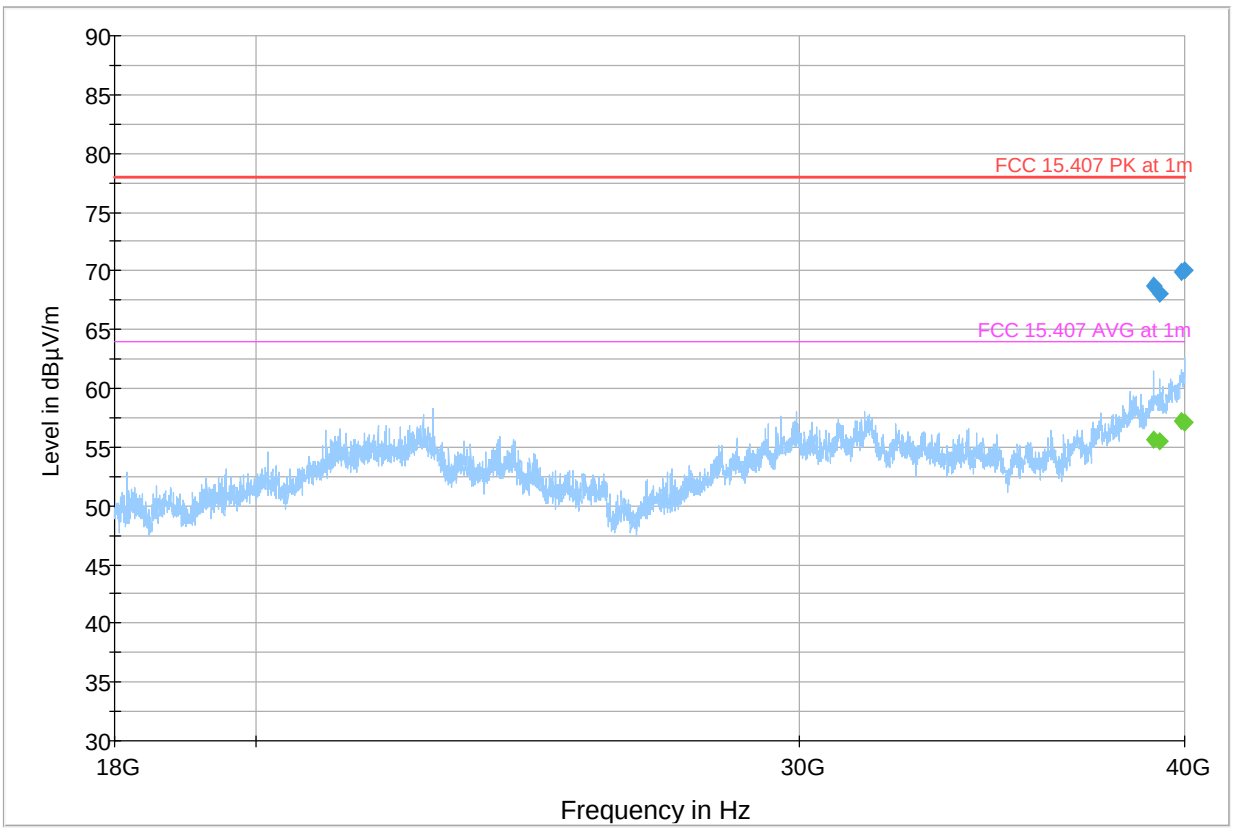


Preview Result 1-PK+ | FCC 15.407 PK at 3m | FCC 15.407 AVG at 3m
Final_Result PK+ | Final_Result CAV

Plot # 25

Final_Result

Frequency (MHz)	MaxPeak (dBµV/m)	CAverage (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB/m)	Raw Rec (dBµV)
39093.063	---	55.646	63.98	8.33	500.0	1000.000	150.0	H	252.0	23.6	12.4	0.0	11.1	32.1
39093.063	68.661	---	78.00	9.34	500.0	1000.000	150.0	H	252.0	23.6	12.4	0.0	11.1	45.1
39259.188	---	55.486	63.98	8.49	500.0	1000.000	150.0	H	300.0	23.9	12.5	0.0	11.3	31.6
39259.188	68.104	---	78.00	9.90	500.0	1000.000	150.0	H	300.0	23.9	12.5	0.0	11.3	44.3
39917.313	---	57.273	63.98	6.71	500.0	1000.000	150.0	H	40.0	24.3	12.7	0.0	11.6	33.0
39917.313	69.900	---	78.00	8.10	500.0	1000.000	150.0	H	40.0	24.3	12.7	0.0	11.6	45.6
39989.500	---	57.081	63.98	6.90	500.0	1000.000	150.0	V	161.0	24.5	12.8	0.0	11.8	32.5
39989.500	70.049	---	78.00	7.95	500.0	1000.000	150.0	V	161.0	24.5	12.8	0.0	11.8	45.5



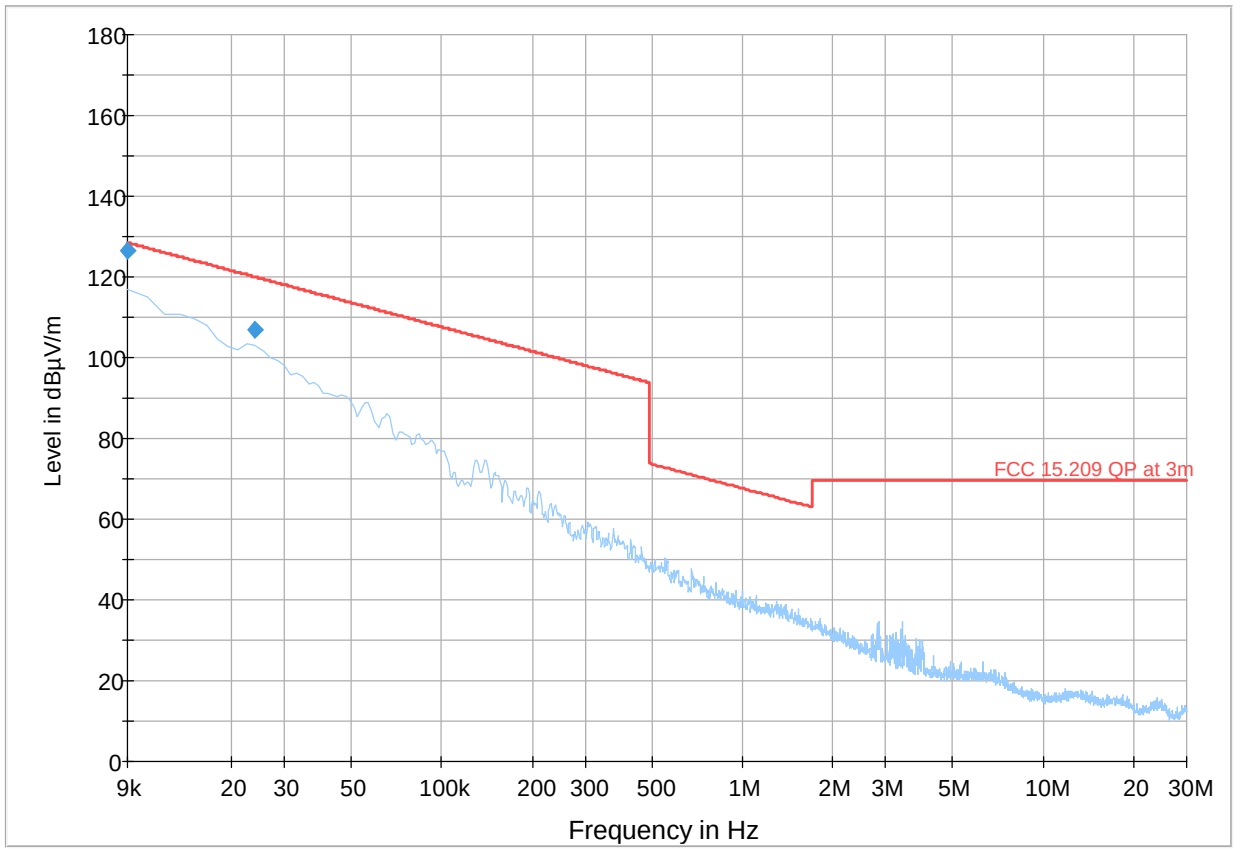
Preview Result 1-PK+
Final_Result PK+
FCC 15.407 PK at 1m
Final_Result CAV
FCC 15.407 AVG at 1m

802.11ax-HE40 MCS0
UNII-2c Channel 110

Plot # 26

Final_Result

Frequency (MHz)	MaxPeak (dBµV/m)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB/m)	Raw Rec (dBµV)	Comment
0.009	126.513	---	128.50	1.99	500.0	9.000	100.0	H	135.0	60.5	0.2	-25.7	86.0	66.0	
0.024	107.103	---	119.99	12.88	500.0	9.000	100.0	H	281.0	52.4	0.2	-27.4	79.6	54.7	

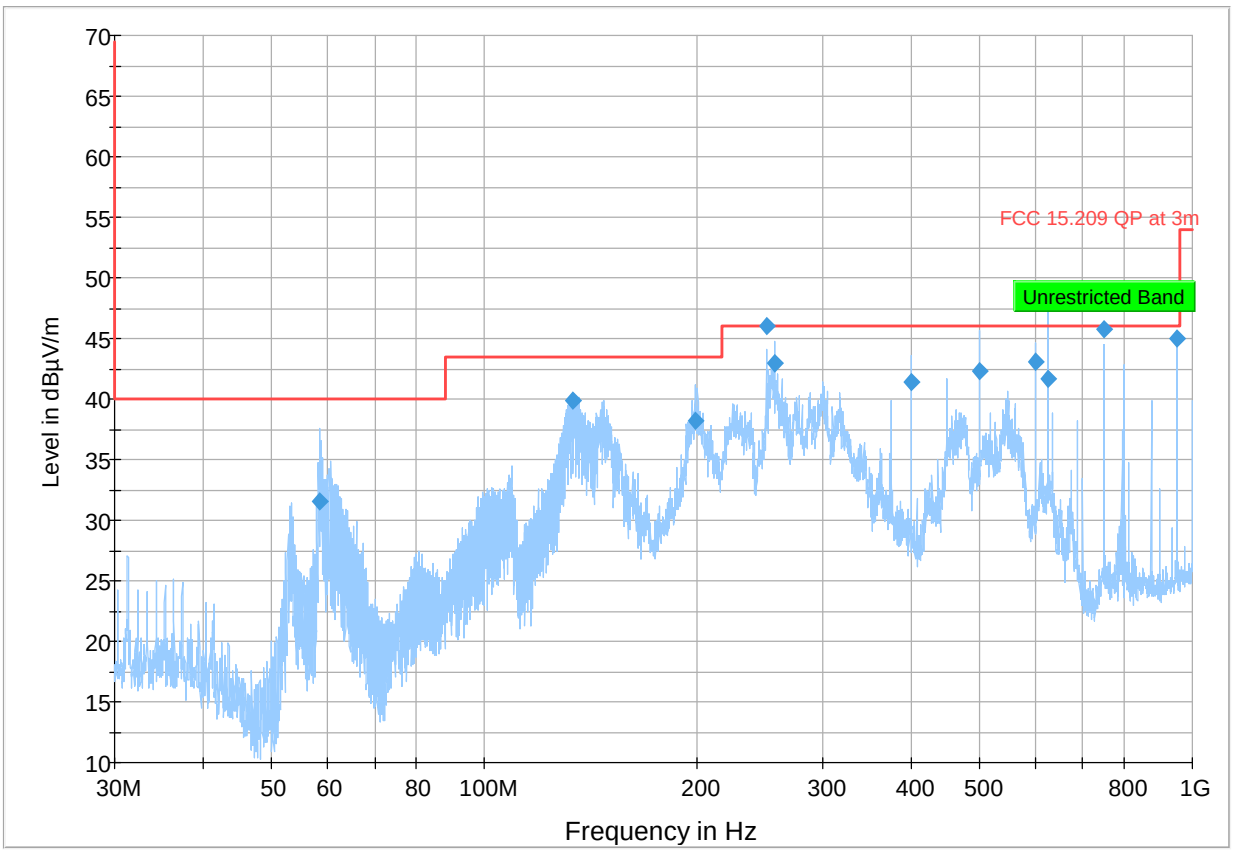


Preview Result 1-PK+ — FCC 15.209 QP at 3m — Final_Result PK+ — Final_Result QPK

Plot # 27

Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB/m)	Raw Rec (dBµV)	Comment
58.518	31.526	40.00	8.47	500.0	120.000	371.0	H	116.0	-22.0	-34.7	0.0	12.7	53.5	
133.014	39.865	43.50	3.63	500.0	120.000	260.0	H	40.0	-9.4	-34.2	0.0	24.8	49.3	
198.053	38.264	43.50	5.24	500.0	120.000	133.0	V	246.0	-15.1	-34.0	0.0	18.9	53.4	
249.996	46.001	46.02	0.02	500.0	120.000	125.0	H	68.0	-11.0	-33.8	0.0	22.8	57.0	
256.665	43.007	46.02	3.01	500.0	120.000	107.0	H	74.0	-14.7	-33.7	0.0	19.0	57.7	
399.982	41.437	46.02	4.58	500.0	120.000	100.0	H	151.0	-10.5	-33.2	0.0	22.7	51.9	
499.965	42.267	46.02	3.75	500.0	120.000	107.0	H	246.0	-8.9	-32.8	0.0	23.9	51.2	
599.996	43.110	46.02	2.91	500.0	120.000	160.0	H	312.0	-7.5	-32.6	0.0	25.0	50.6	
624.974	41.692	46.02	4.33	500.0	120.000	100.0	H	255.0	-6.7	-32.4	0.0	25.6	48.4	
750.007	45.808	46.02	0.21	500.0	120.000	107.0	H	145.0	-4.5	-31.9	0.0	27.4	50.3	
950.021	44.977	46.02	1.04	500.0	120.000	107.0	V	247.0	-2.2	-31.5	0.0	29.3	47.1	

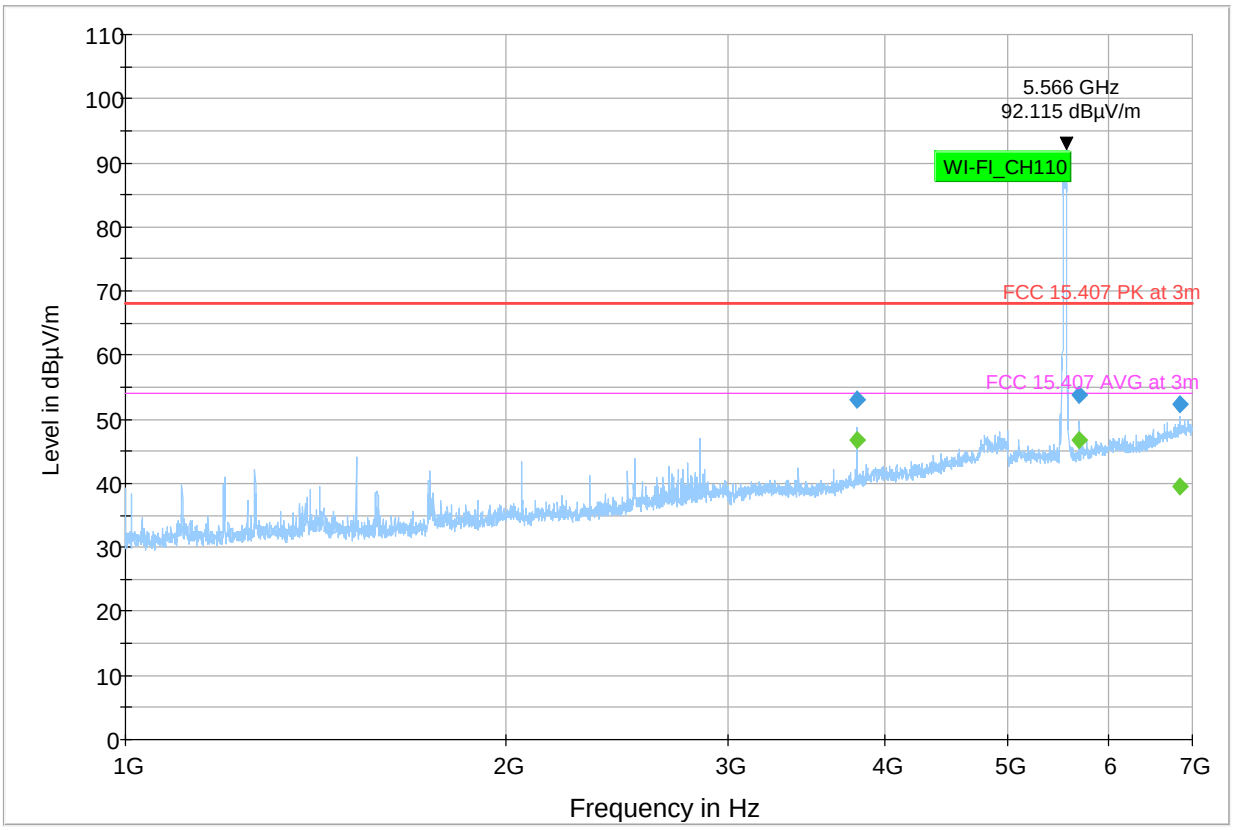


Preview Result 1-PK+ — FCC 15.209 QP at 3m ◆ Final_Result QPK

Plot # 28

Final_Result

Frequency (MHz)	MaxPeak (dBµV/m)	CAverage (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB/m)	Raw Rec (dBµV)
3800.125	53.113	---	68.00	14.89	500.0	1000.000	202.0	V	280.0	11.2	-20.9	0.0	32.2	41.9
3800.125	---	46.722	53.98	7.26	500.0	1000.000	202.0	V	280.0	11.2	-20.9	0.0	32.2	35.5
5700.250	---	46.801	53.98	7.18	500.0	1000.000	107.0	V	304.0	14.4	-19.4	0.0	33.7	32.4
5700.250	53.748	---	68.00	14.25	500.0	1000.000	107.0	V	304.0	14.4	-19.4	0.0	33.7	39.4
6842.500	52.433	---	68.00	15.57	500.0	1000.000	325.0	V	162.0	17.0	-18.0	0.0	35.0	35.4
6842.500	---	39.466	53.98	14.51	500.0	1000.000	325.0	V	162.0	17.0	-18.0	0.0	35.0	22.5

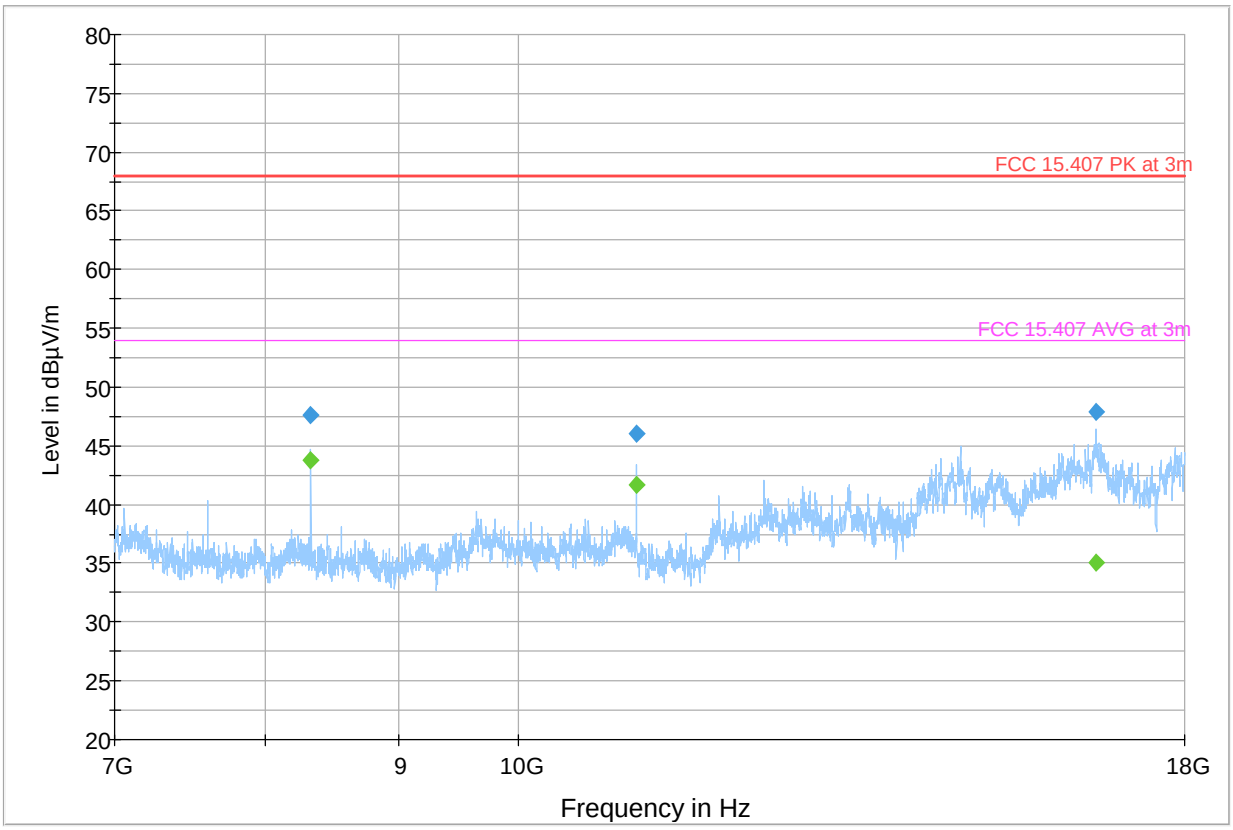


Preview Result 1-PK+ | FCC 15.407 PK at 3m | FCC 15.407 AVG at 3m
Final_Result PK+ | Final_Result CAV

Plot # 29

Final_Result

Frequency (MHz)	MaxPeak (dBµV/m)	CAverage (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB/m)	Raw Rec (dBµV)
8324.813	---	43.742	53.98	10.24	500.0	1000.000	192.0	V	309.0	-2.3	9.1	-47.3	36.0	46.0
8324.813	47.569	---	68.00	20.43	500.0	1000.000	192.0	V	309.0	-2.3	9.1	-47.3	36.0	49.9
11099.563	46.091	---	68.00	21.91	500.0	1000.000	287.0	V	290.0	2.1	10.7	-46.5	37.9	44.0
11099.563	---	41.613	53.98	12.37	500.0	1000.000	287.0	V	290.0	2.1	10.7	-46.5	37.9	39.5
16652.156	47.935	---	68.00	20.07	500.0	1000.000	338.0	H	357.0	13.7	15.2	-42.7	41.2	34.2
16652.156	---	35.027	53.98	18.95	500.0	1000.000	338.0	H	357.0	13.7	15.2	-42.7	41.2	21.3

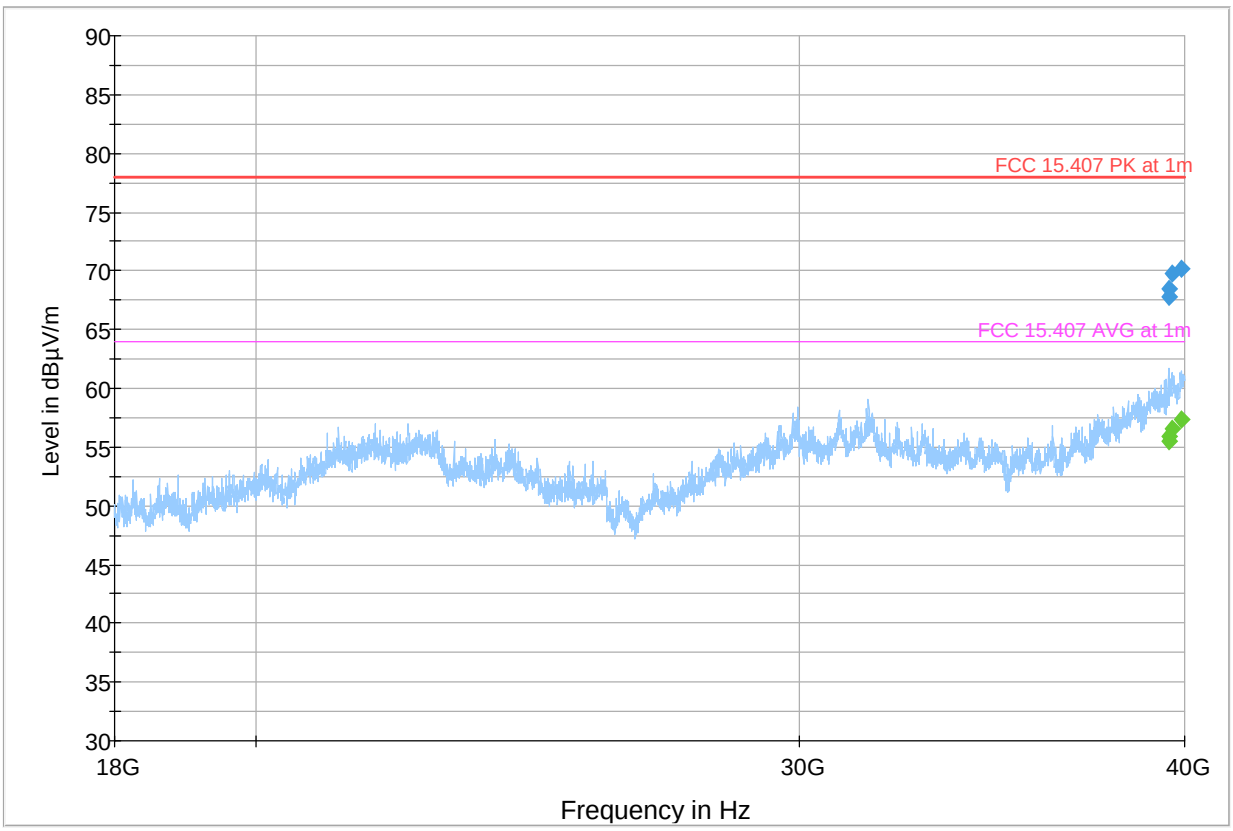


Preview Result 1-PK+ — FCC 15.407 PK at 3m — FCC 15.407 AVG at 3m
Final_Result PK+ — Final_Result CAV

Plot # 30

Final_Result

Frequency (MHz)	MaxPeak (dBµV/m)	CAverage (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB/m)	Raw Rec (dBµV)
39522.438	68.446	---	78.00	9.55	500.0	1000.000	150.0	V	1.0	23.3	12.6	0.0	10.7	45.1
39522.438	---	55.850	63.98	8.13	500.0	1000.000	150.0	V	1.0	23.3	12.6	0.0	10.7	32.5
39552.813	---	55.502	63.98	8.48	500.0	1000.000	150.0	H	293.0	23.2	12.6	0.0	10.6	32.3
39552.813	67.845	---	78.00	10.16	500.0	1000.000	150.0	H	293.0	23.2	12.6	0.0	10.6	44.6
39635.875	---	56.508	63.98	7.47	500.0	1000.000	150.0	H	15.0	23.3	12.6	0.0	10.7	33.2
39635.875	69.790	---	78.00	8.21	500.0	1000.000	150.0	H	15.0	23.3	12.6	0.0	10.7	46.5
39895.563	70.175	---	78.00	7.83	500.0	1000.000	150.0	V	271.0	24.4	12.7	0.0	11.7	45.8
39895.563	---	57.334	63.98	6.65	500.0	1000.000	150.0	V	271.0	24.4	12.7	0.0	11.7	32.9



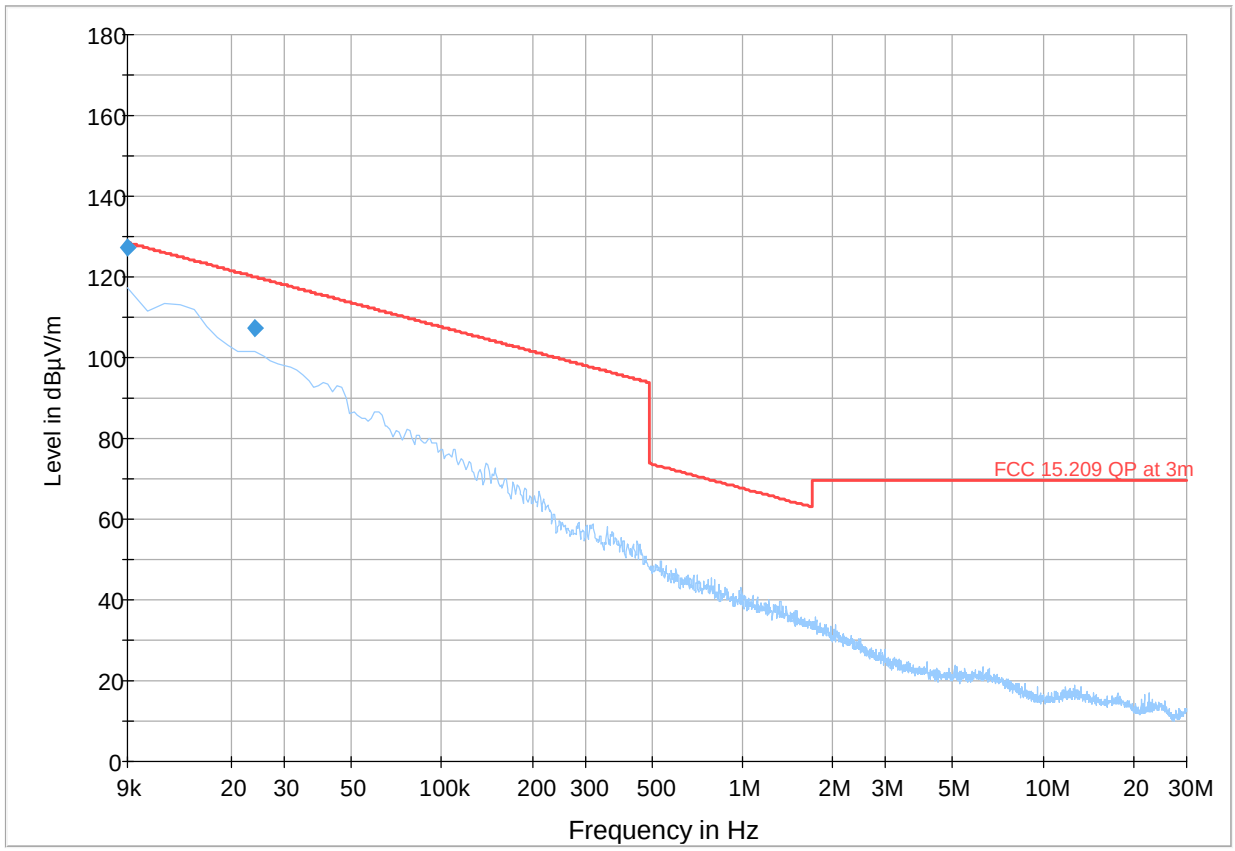
Preview Result 1-PK+
Final_Result PK+
FCC 15.407 PK at 1m
Final_Result CAV
FCC 15.407 AVG at 1m

802.11ax-HE40 MCS0
UNII-2c Channel 134

Plot # 31

Final_Result

Frequency (MHz)	MaxPeak (dBµV/m)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB/m)	Raw Rec (dBµV)	Comment
0.009	127.272	---	128.50	1.23	500.0	9.000	100.0	H	52.0	60.5	0.2	-25.7	86.0	66.7	
0.024	107.171	---	119.99	12.82	500.0	9.000	100.0	V	333.0	52.4	0.2	-27.4	79.6	54.8	

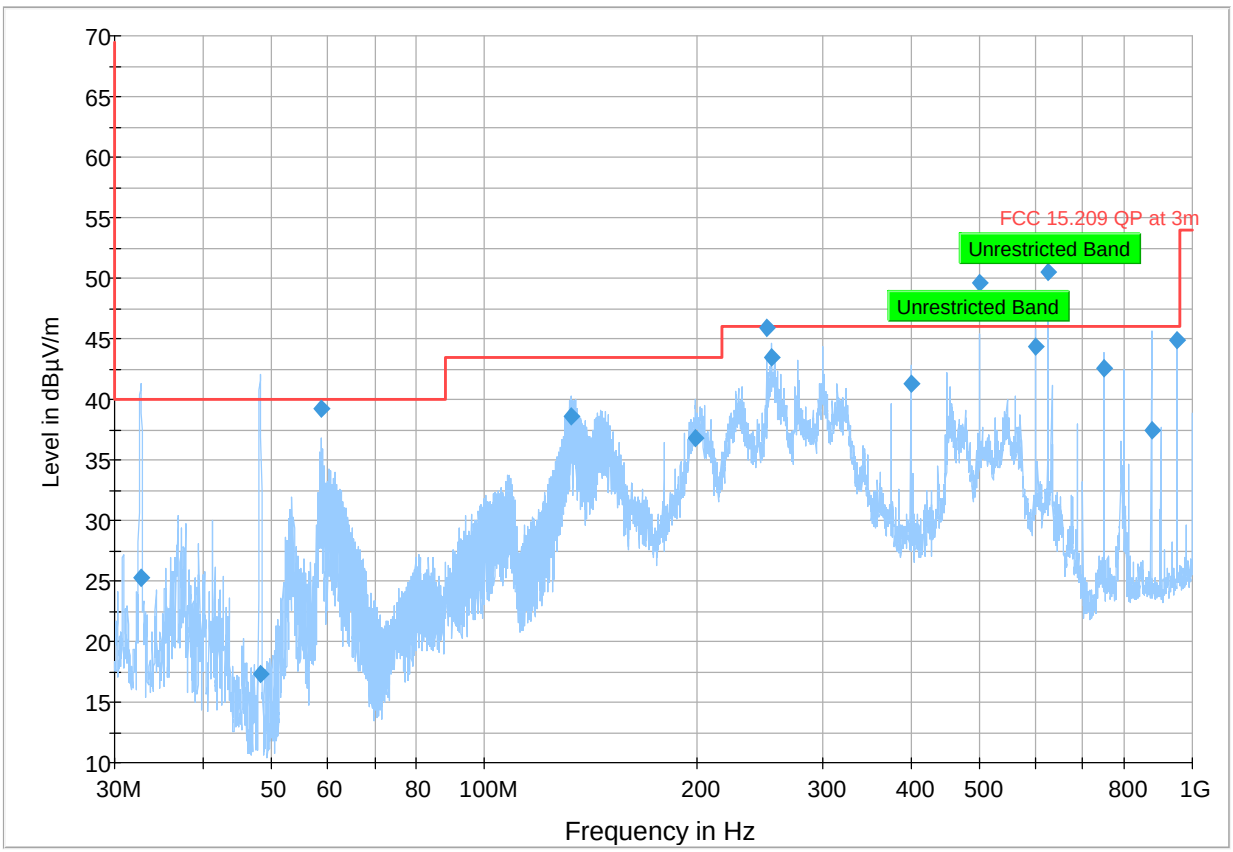


Preview Result 1-PK+ — FCC 15.209 QP at 3m — Final_Result PK+ — Final_Result QPK

Plot # 32

Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB/m)	Raw Rec (dBµV)	Comment
32.668	25.247	40.00	14.75	500.0	120.000	100.0	V	260.0	-12.9	-34.8	0.0	21.9	38.1	
48.188	17.250	40.00	22.75	500.0	120.000	100.0	V	293.0	-19.7	-34.8	0.0	15.1	36.9	
58.664	39.259	40.00	0.74	500.0	120.000	400.0	H	150.0	-22.0	-34.7	0.0	12.7	61.3	
132.359	38.603	43.50	4.90	500.0	120.000	264.0	H	40.0	-9.5	-34.2	0.0	24.8	48.1	
198.659	36.785	43.50	6.71	500.0	120.000	211.0	H	210.0	-16.0	-34.0	0.0	18.0	52.7	
249.972	45.924	46.02	0.10	500.0	120.000	121.0	H	76.0	-11.0	-33.8	0.0	22.8	56.9	
254.337	43.501	46.02	2.52	500.0	120.000	107.0	H	76.0	-13.8	-33.7	0.0	19.9	57.3	
399.982	41.240	46.02	4.78	500.0	120.000	100.0	H	165.0	-10.5	-33.2	0.0	22.7	51.7	
499.989	49.597	46.02	-3.58	500.0	120.000	100.0	V	158.0	-9.1	-32.8	0.0	23.6	58.7	
599.996	44.401	46.02	1.62	500.0	120.000	135.0	H	312.0	-7.5	-32.6	0.0	25.0	51.9	
624.998	50.489	46.02	-4.47	500.0	120.000	117.0	H	144.0	-6.7	-32.4	0.0	25.6	57.2	
749.983	42.533	46.02	3.49	500.0	120.000	107.0	H	312.0	-4.5	-31.9	0.0	27.4	47.0	
874.967	37.433	46.02	8.59	500.0	120.000	100.0	H	162.0	-3.0	-31.7	0.0	28.7	40.4	
950.021	44.843	46.02	1.18	500.0	120.000	100.0	V	254.0	-2.2	-31.5	0.0	29.3	47.0	



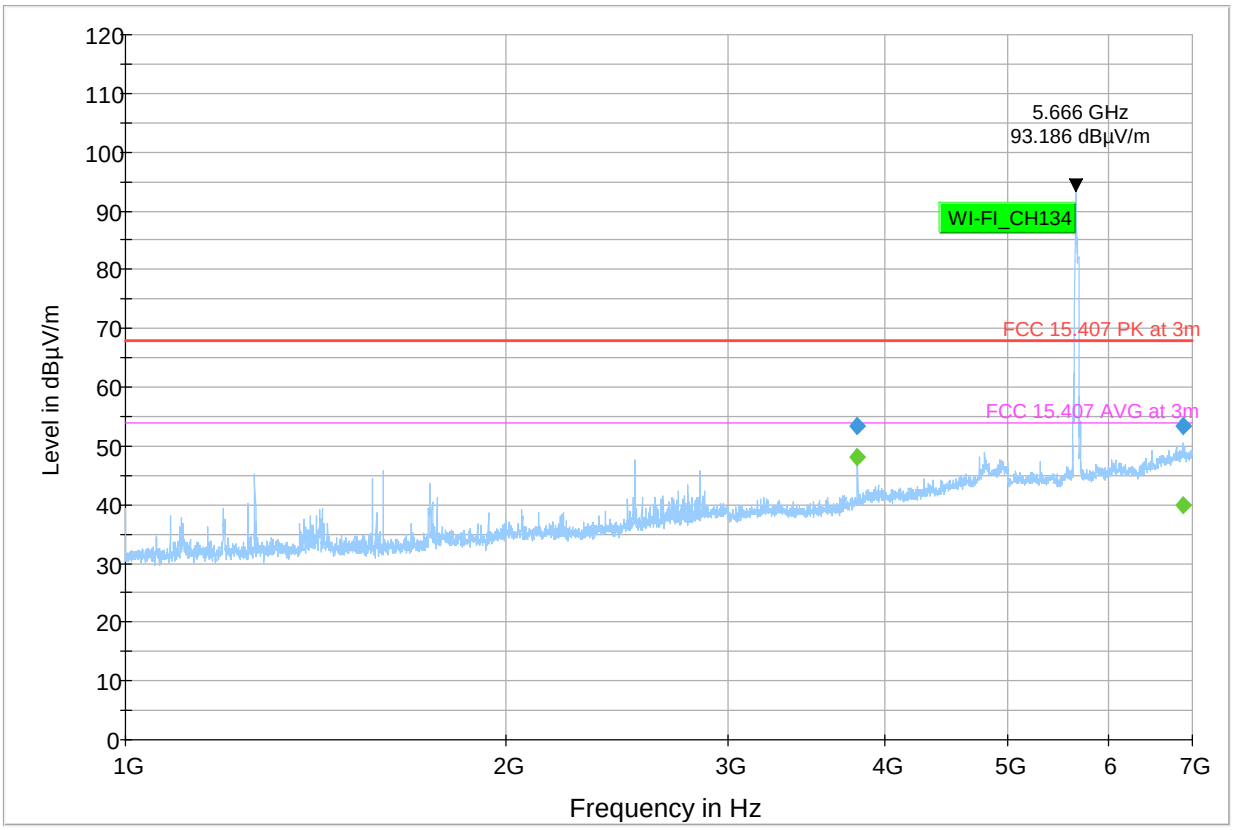
Preview Result 1-PK+ — FCC 15.209 QP at 3m — Final_Result QPK

Note 1: The frequency 499.989 MHz does not fall within the restricted bands of operation as defined in FCC 15.205. Therefore, the FCC 15.209 radiated emission limits do not apply to emissions at 499.989 MHz.
Note 2: The frequency 624.998 MHz does not fall within the restricted bands of operation as defined in FCC 15.205. Therefore, the FCC 15.209 radiated emission limits do not apply to emissions at 624.998 MHz.

Plot # 33

Final_Result

Frequency (MHz)	MaxPeak (dBµV/m)	CAverage (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB/m)	Raw Rec (dBµV)
3800.125	53.323	---	68.00	14.68	500.0	1000.000	400.0	V	278.0	11.2	-20.9	0.0	32.2	42.1
3800.125	---	48.077	53.98	5.90	500.0	1000.000	400.0	V	278.0	11.2	-20.9	0.0	32.2	36.9
6884.313	53.298	---	68.00	14.70	500.0	1000.000	116.0	H	301.0	17.5	-17.6	0.0	35.1	35.8
6884.313	---	39.797	53.98	14.18	500.0	1000.000	116.0	H	301.0	17.5	-17.6	0.0	35.1	22.3

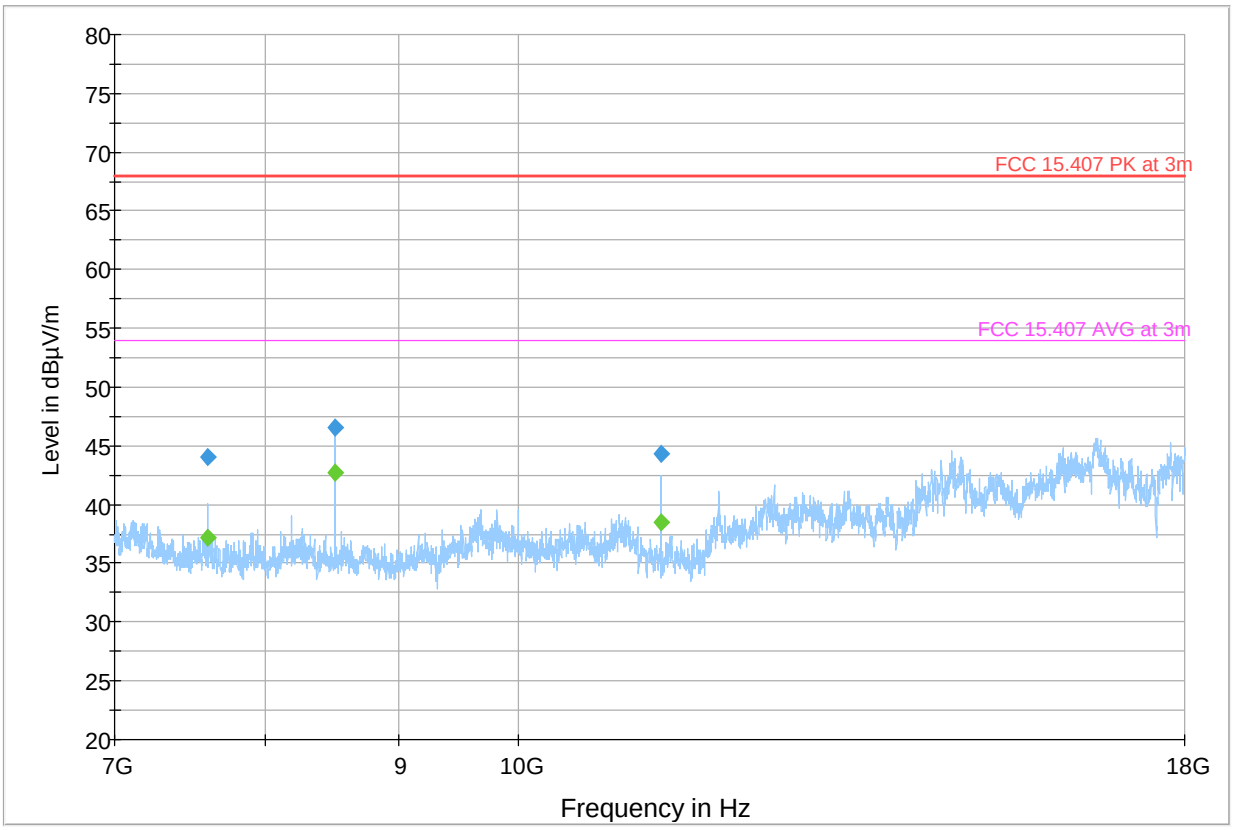


Preview Result 1-PK+ | FCC 15.407 PK at 3m | FCC 15.407 AVG at 3m
Final_Result PK+ | Final_Result CAV

Plot # 34

Final_Result

Frequency (MHz)	MaxPeak (dBµV/m)	CAverage (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB/m)	Raw Rec (dBµV)
7600.188	---	37.163	53.98	16.82	500.0	1000.000	228.0	V	244.0	-0.5	9.7	-46.1	35.9	37.6
7600.188	44.019	---	68.00	23.98	500.0	1000.000	228.0	V	244.0	-0.5	9.7	-46.1	35.9	44.5
8504.594	46.507	---	68.00	21.49	500.0	1000.000	286.0	V	295.0	-2.5	9.4	-47.7	35.8	49.0
8504.594	---	42.710	53.98	11.27	500.0	1000.000	286.0	V	295.0	-2.5	9.4	-47.7	35.8	45.2
11339.500	44.325	---	68.00	23.67	500.0	1000.000	261.0	V	279.0	1.4	10.7	-46.9	37.7	42.9
11339.500	---	38.478	53.98	15.50	500.0	1000.000	261.0	V	279.0	1.4	10.7	-46.9	37.7	37.1

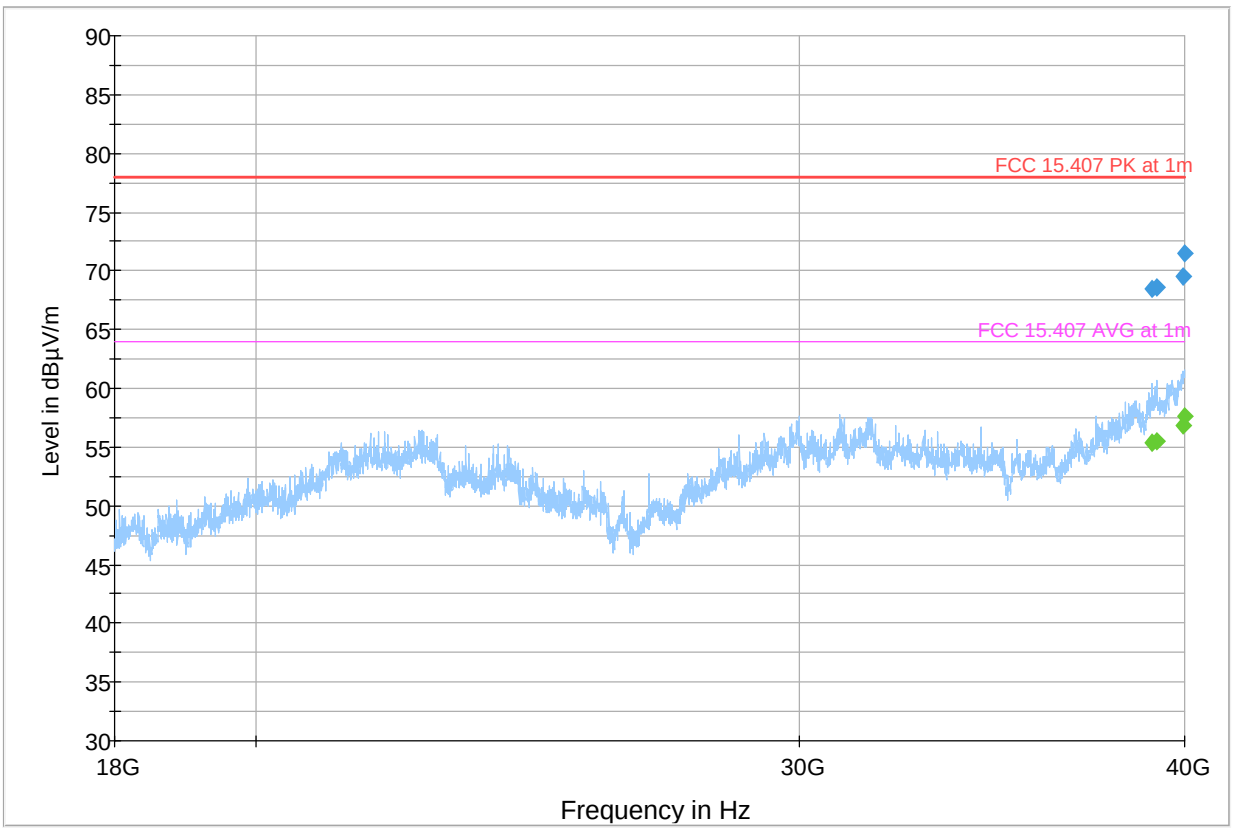


Preview Result 1-PK+ | FCC 15.407 PK at 3m | FCC 15.407 AVG at 3m
Final_Result PK+ | Final_Result CAV

Plot # 35

Final_Result

Frequency (MHz)	MaxPeak (dBµV/m)	CAverage (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB/m)	Raw Rec (dBµV)
39050.875	---	55.367	63.98	8.61	500.0	1000.000	150.0	V	211.0	23.4	12.4	0.0	10.9	32.0
39050.875	68.477	---	78.00	9.52	500.0	1000.000	150.0	V	211.0	23.4	12.4	0.0	10.9	45.1
39174.625	68.645	---	78.00	9.36	500.0	1000.000	150.0	V	-44.0	23.7	12.5	0.0	11.2	44.9
39174.625	---	55.467	63.98	8.51	500.0	1000.000	150.0	V	-44.0	23.7	12.5	0.0	11.2	31.8
39932.875	---	56.848	63.98	7.13	500.0	1000.000	150.0	V	146.0	24.5	12.7	0.0	11.8	32.4
39932.875	69.497	---	78.00	8.50	500.0	1000.000	150.0	V	146.0	24.5	12.7	0.0	11.8	45.0
39993.625	71.542	---	78.00	6.46	500.0	1000.000	150.0	V	245.0	24.5	12.8	0.0	11.8	47.0
39993.625	---	57.600	63.98	6.38	500.0	1000.000	150.0	V	245.0	24.5	12.8	0.0	11.8	33.1



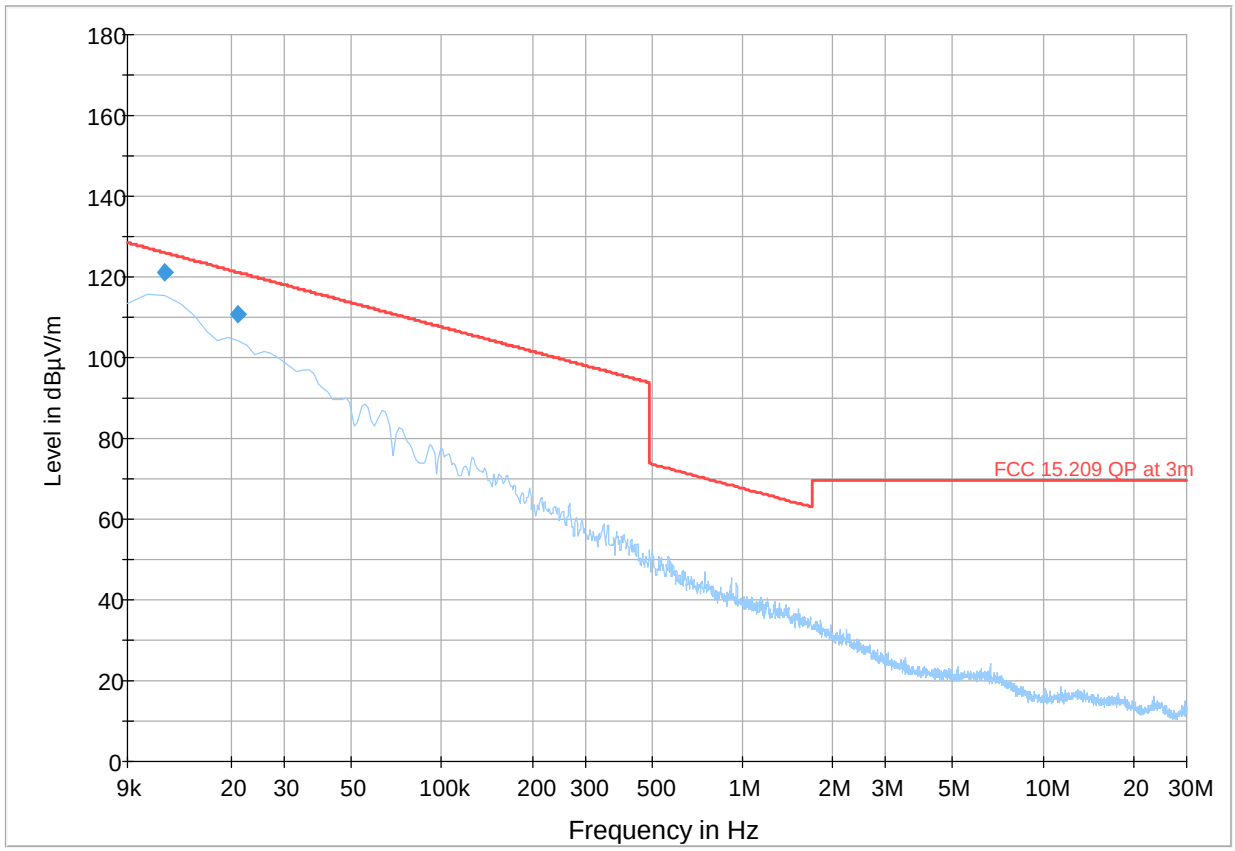
Preview Result 1-PK+
Final_Result PK+
FCC 15.407 PK at 1m
Final_Result CAV
FCC 15.407 AVG at 1m

802.11ax-HE40 MCS0
UNII-2c Channel 142

Plot # 36

Final_Result

Frequency (MHz)	MaxPeak (dBµV/m)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB/m)	Raw Rec (dBµV)	Comment
0.012	121.076	---	126.00	4.93	500.0	9.000	100.0	H	1.0	58.9	0.2	-26.2	84.9	62.2	
0.021	110.865	---	121.15	10.28	500.0	9.000	100.0	H	205.0	53.6	0.2	-27.2	80.6	57.3	

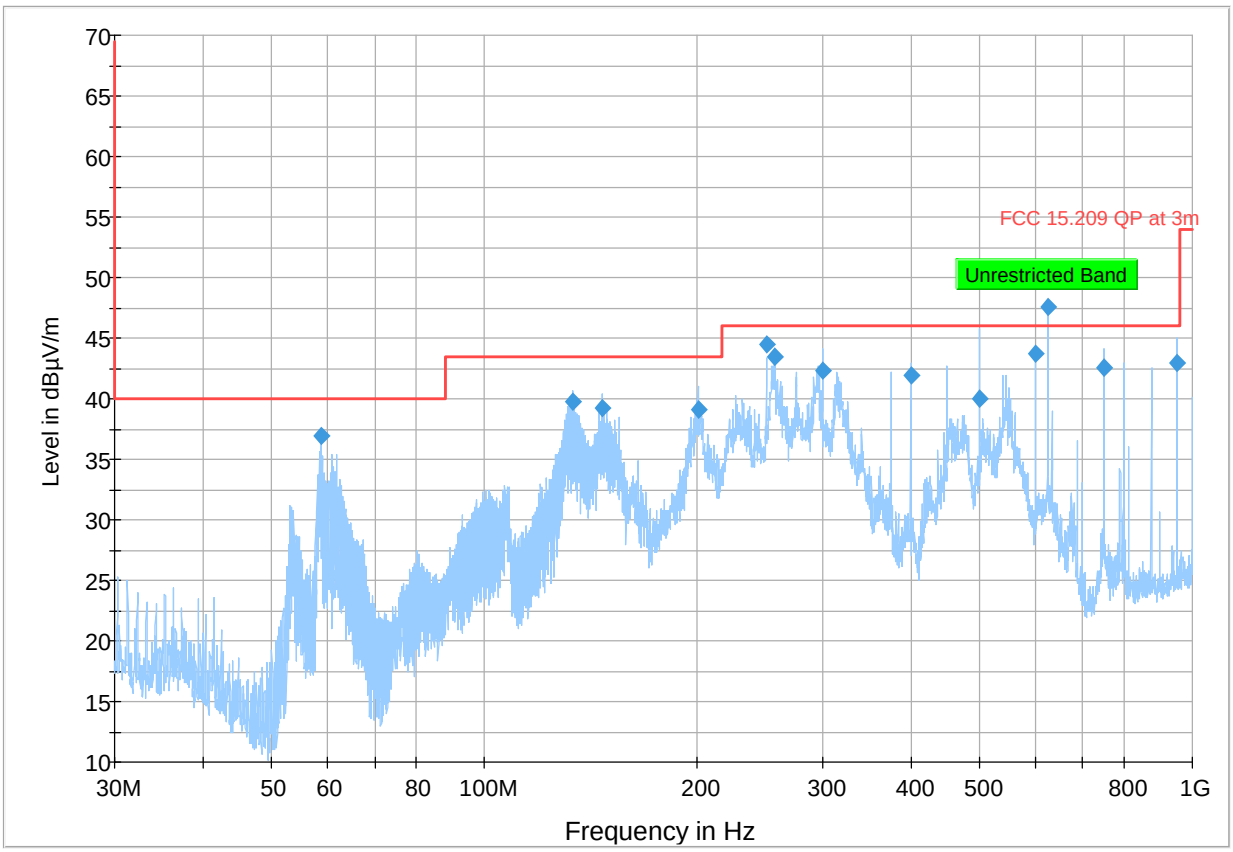


Preview Result 1-PK+ — FCC 15.209 QP at 3m — Final_Result PK+ — Final_Result QPK

Plot # 37

Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB/m)	Raw Rec (dBµV)	Comment
58.639	36.898	40.00	3.10	500.0	120.000	235.0	V	49.0	-22.7	-34.7	0.0	12.0	59.6	
133.208	39.719	43.50	3.78	500.0	120.000	243.0	H	38.0	-9.4	-34.2	0.0	24.8	49.1	
146.327	39.288	43.50	4.21	500.0	120.000	177.0	H	30.0	-9.0	-34.2	0.0	25.2	48.3	
200.114	39.117	43.50	4.38	500.0	120.000	168.0	H	223.0	-15.9	-34.0	0.0	18.1	55.0	
249.972	44.444	46.02	1.58	500.0	120.000	117.0	H	67.0	-11.0	-33.8	0.0	22.8	55.4	
256.835	43.418	46.02	2.60	500.0	120.000	107.0	H	79.0	-14.8	-33.7	0.0	18.9	58.2	
299.975	42.256	46.02	3.76	500.0	120.000	100.0	H	191.0	-13.7	-33.6	0.0	19.9	55.9	
399.982	41.929	46.02	4.09	500.0	120.000	100.0	H	157.0	-10.5	-33.2	0.0	22.7	52.4	
499.965	40.018	46.02	6.00	500.0	120.000	100.0	H	-45.0	-8.9	-32.8	0.0	23.9	48.9	
599.996	43.673	46.02	2.35	500.0	120.000	133.0	H	310.0	-7.5	-32.6	0.0	25.0	51.2	
624.974	47.551	46.02	-1.53	500.0	120.000	100.0	H	255.0	-6.7	-32.4	0.0	25.6	54.3	
749.983	42.602	46.02	3.42	500.0	120.000	107.0	H	323.0	-4.5	-31.9	0.0	27.4	47.1	
950.021	42.941	46.02	3.08	500.0	120.000	117.0	V	244.0	-2.2	-31.5	0.0	29.3	45.1	



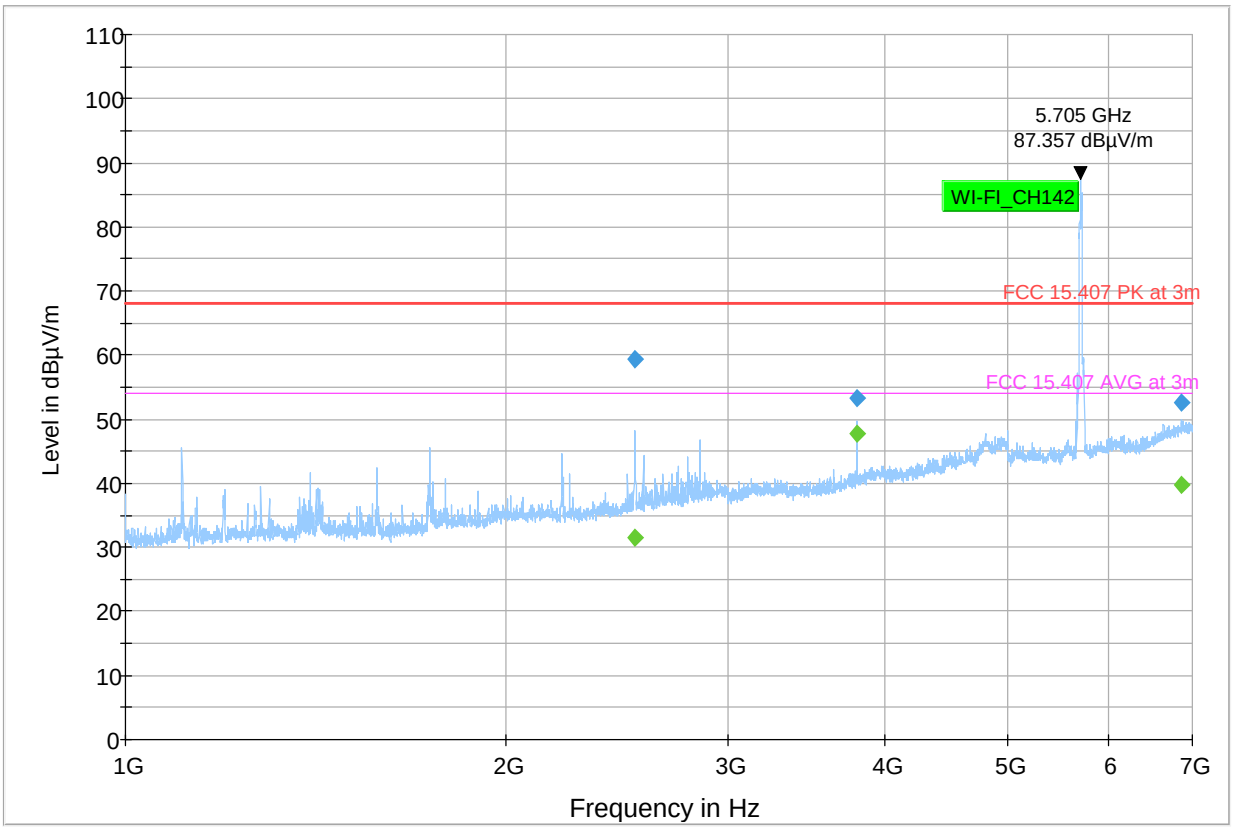
Preview Result 1-PK+ — FCC 15.209 QP at 3m — Final_Result QPK

Note: The frequency 624.974 MHz does not fall within the restricted bands of operation as defined in FCC 15.205. Therefore, the FCC 15.209 radiated emission limits do not apply to emissions at 624.974 MHz.

Plot # 38

Final_Result

Frequency (MHz)	MaxPeak (dBµV/m)	CAverage (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB/m)	Raw Rec (dBµV)
2533.000	59.351	---	68.00	8.65	500.0	1000.000	280.0	V	276.0	6.4	-22.1	0.0	28.5	52.9
2533.000	---	31.409	53.98	22.57	500.0	1000.000	280.0	V	276.0	6.4	-22.1	0.0	28.5	25.0
3800.125	53.237	---	68.00	14.76	500.0	1000.000	237.0	V	278.0	11.2	-20.9	0.0	32.2	42.0
3800.125	---	47.745	53.98	6.23	500.0	1000.000	237.0	V	278.0	11.2	-20.9	0.0	32.2	36.5
6857.875	---	39.635	53.98	14.34	500.0	1000.000	364.0	H	8.0	17.2	-17.8	0.0	35.1	22.4
6857.875	52.485	---	68.00	15.51	500.0	1000.000	364.0	H	8.0	17.2	-17.8	0.0	35.1	35.2

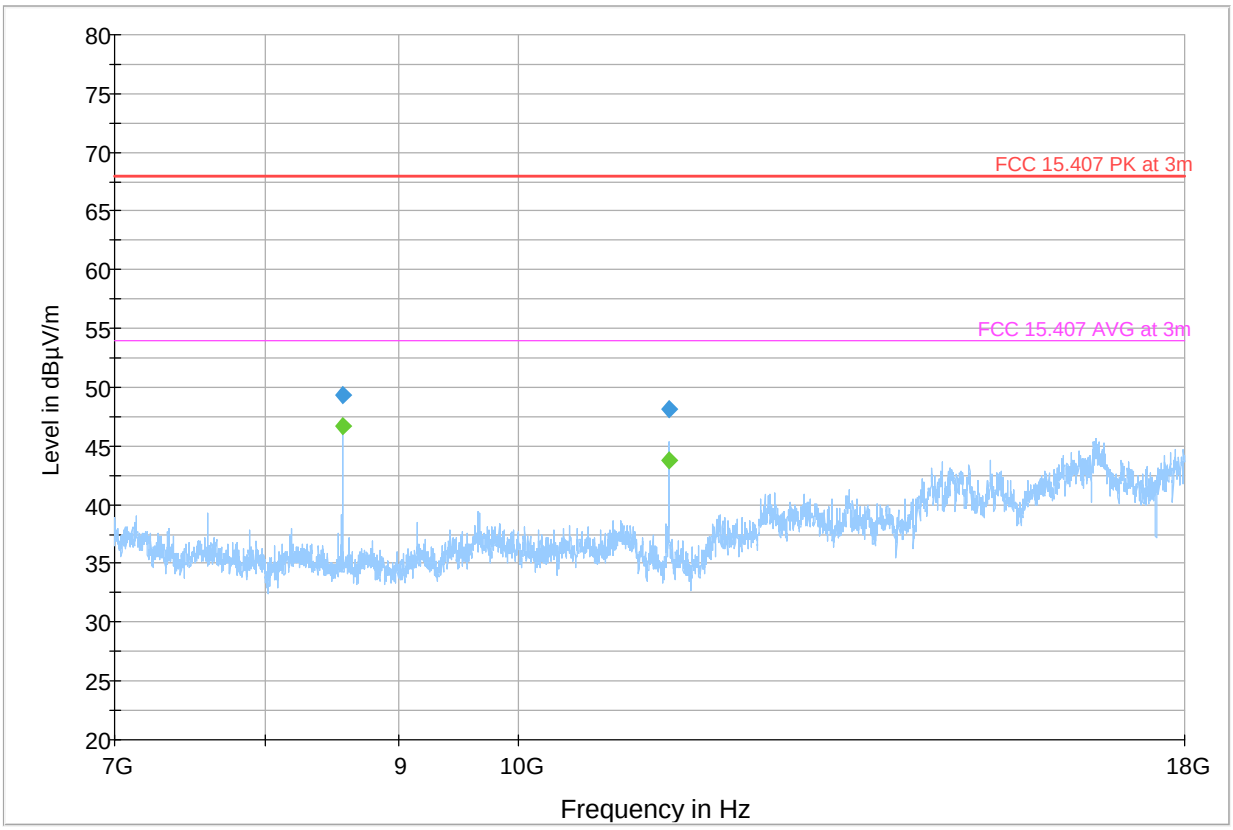


Preview Result 1-PK+ — FCC 15.407 PK at 3m — FCC 15.407 AVG at 3m
Final_Result PK+ — Final_Result CAV

Plot # 39

Final_Result

Frequency (MHz)	MaxPeak (dBµV/m)	CAverage (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB/m)	Raw Rec (dBµV)
8564.750	49.329	---	68.00	18.67	500.0	1000.000	277.0	V	279.0	-2.6	9.4	-47.9	35.8	51.9
8564.750	---	46.733	53.98	7.25	500.0	1000.000	277.0	V	279.0	-2.6	9.4	-47.9	35.8	49.3
11419.938	48.159	---	68.00	19.84	500.0	1000.000	258.0	V	278.0	1.9	11.0	-46.9	37.8	46.3
11419.938	---	43.841	53.98	10.14	500.0	1000.000	258.0	V	278.0	1.9	11.0	-46.9	37.8	42.0

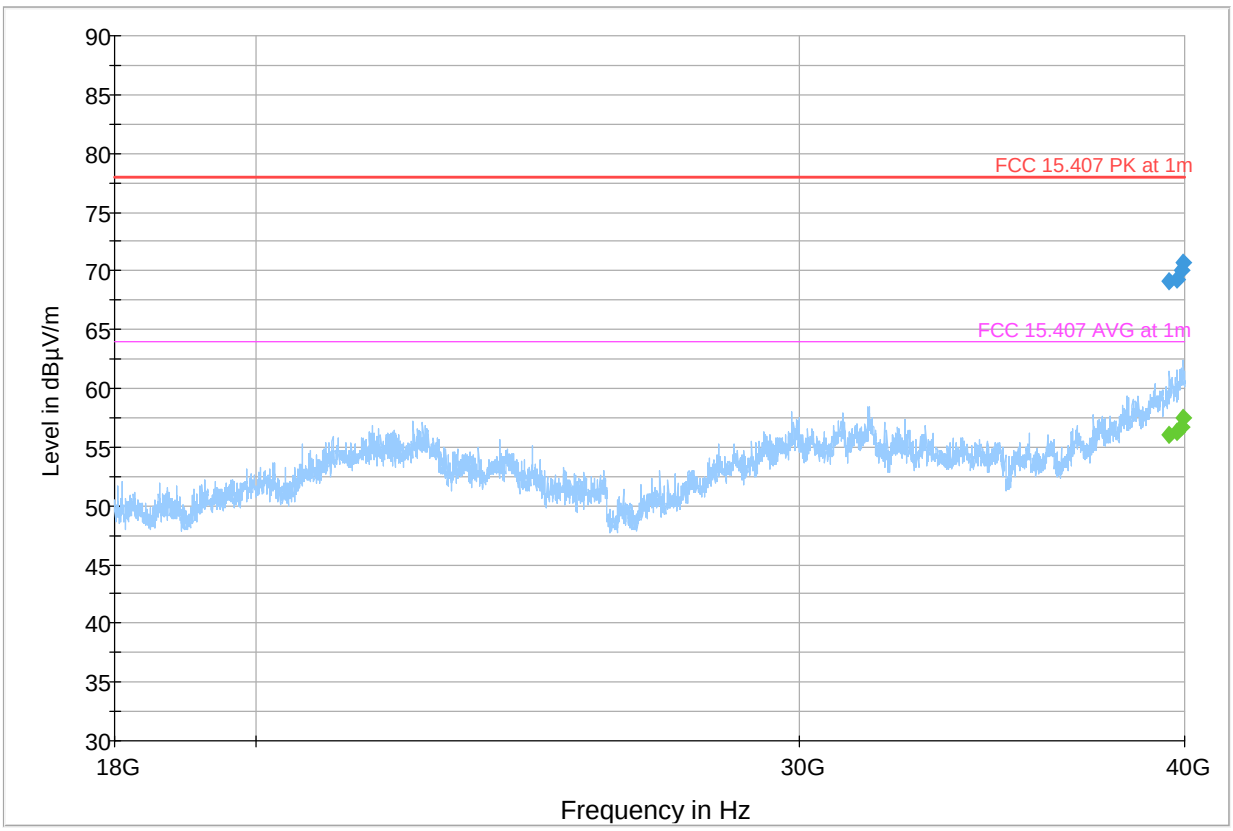


Preview Result 1-PK+
Final_Result PK+
FCC 15.407 PK at 3m
Final_Result CAV
FCC 15.407 AVG at 3m

Plot # 40

Final_Result

Frequency (MHz)	MaxPeak (dBµV/m)	CAverage (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB/m)	Raw Rec (dBµV)
39556.000	69.056	---	78.00	8.94	500.0	1000.000	150.0	H	237.0	23.2	12.6	0.0	10.6	45.8
39556.000	---	56.025	63.98	7.95	500.0	1000.000	150.0	H	237.0	23.2	12.6	0.0	10.6	32.8
39791.313	69.222	---	78.00	8.78	500.0	1000.000	150.0	V	259.0	24.0	12.7	0.0	11.3	45.2
39791.313	---	56.356	63.98	7.62	500.0	1000.000	150.0	V	259.0	24.0	12.7	0.0	11.3	32.3
39916.000	---	56.673	63.98	7.31	500.0	1000.000	150.0	H	93.0	24.3	12.7	0.0	11.6	32.4
39916.000	70.044	---	78.00	7.96	500.0	1000.000	150.0	H	93.0	24.3	12.7	0.0	11.6	45.7
39961.750	---	57.511	63.98	6.47	500.0	1000.000	150.0	V	309.0	24.5	12.7	0.0	11.8	33.0
39961.750	70.641	---	78.00	7.36	500.0	1000.000	150.0	V	309.0	24.5	12.7	0.0	11.8	46.1



Preview Result 1-PK+
Final_Result PK+
FCC 15.407 PK at 1m
Final_Result CAV
FCC 15.407 AVG at 1m

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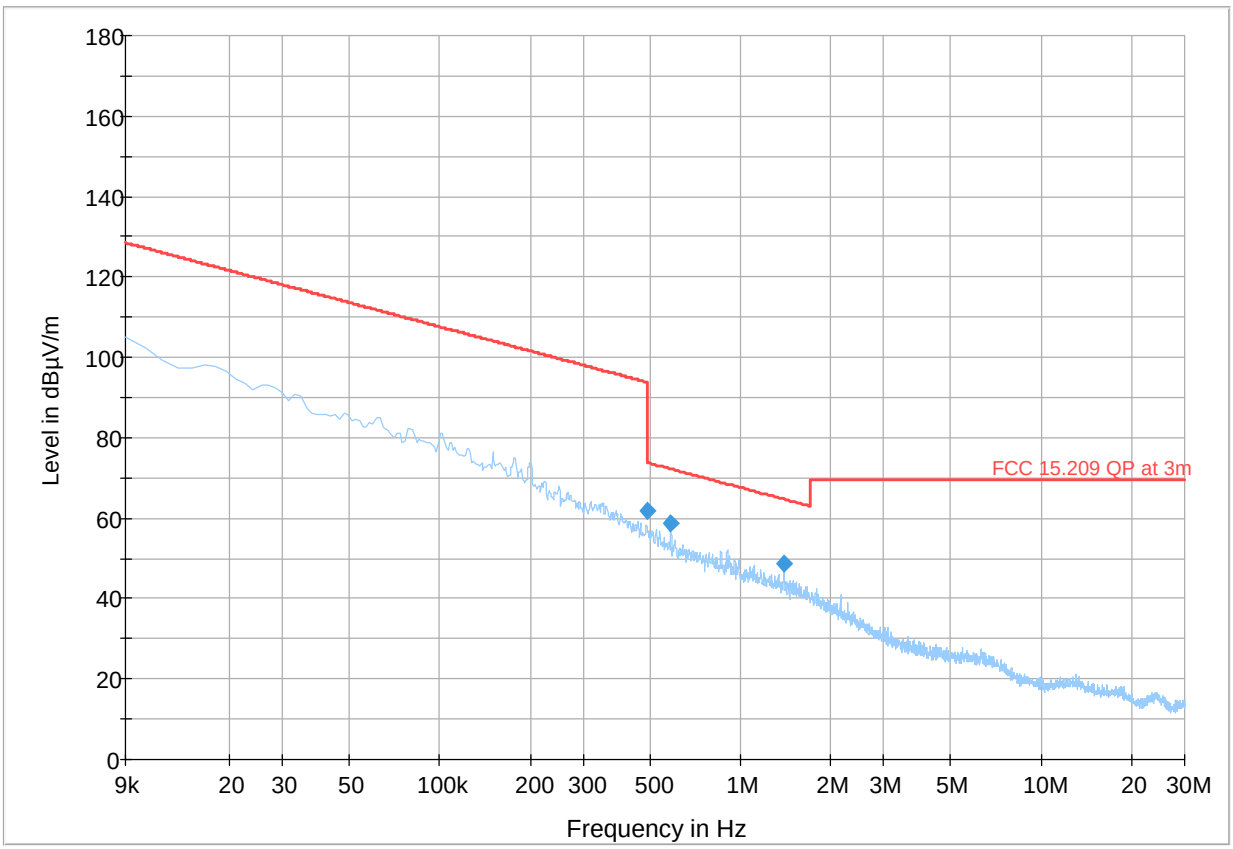
UNII-3 Channel 151

Plot # 41

Final_Result

Frequency (MHz)	MaxPeak (dBµV/m)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB/m)	Raw Rec (dBµV)	Comment
0.490	61.894	---	73.79	11.90	500.0	9.000	100.0	H	78.0	25.4	0.3	-28.3	53.3	36.5	
0.588	58.587	---	72.22	13.64	500.0	9.000	100.0	H	268.0	23.6	0.3	-28.3	51.6	35.0	
1.396	48.826	---	64.73	15.91	500.0	9.000	100.0	V	153.0	16.8	0.3	-28.3	44.7	32.1	

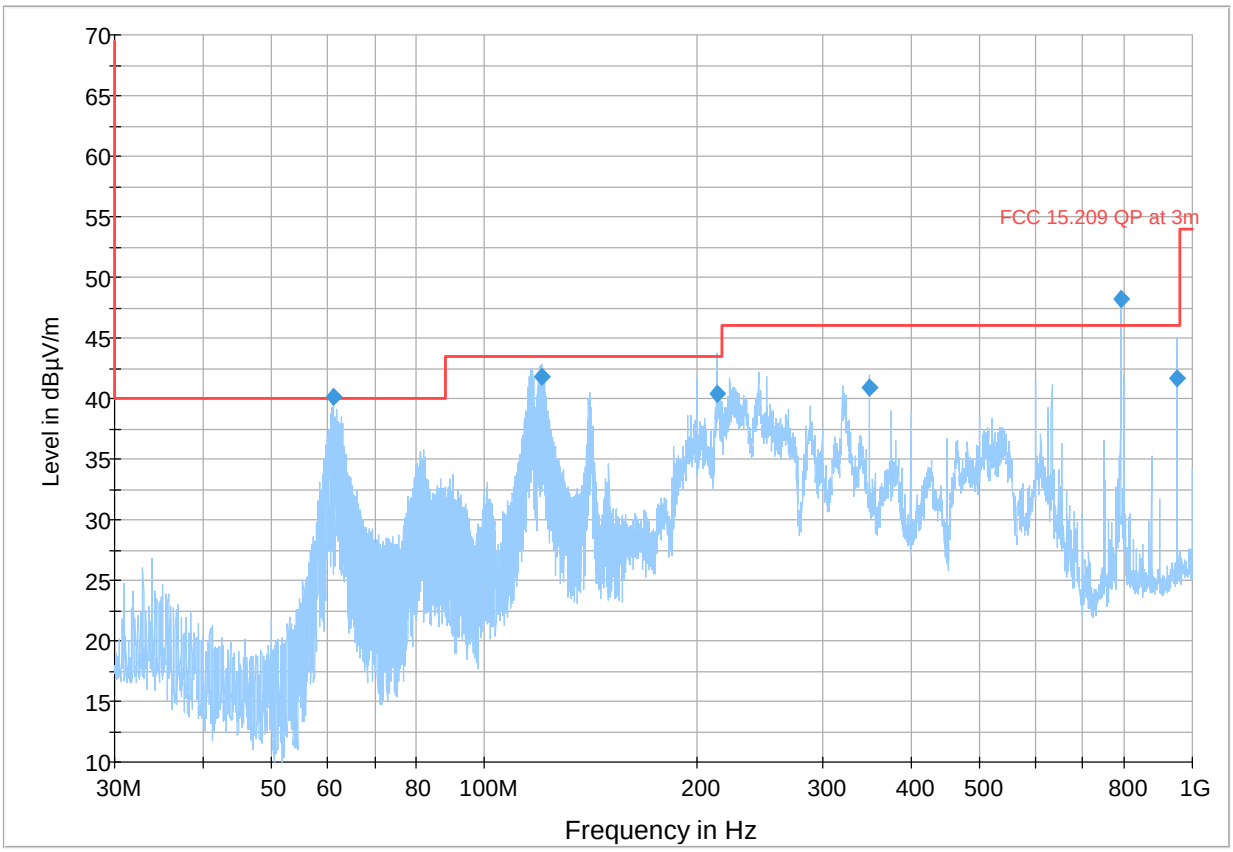


PK+_MAXH — FCC 15.209 QP at 3m — Final_Result PK+ — Final_Result QPK

Plot # 42

Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB/m)	Raw Rec (dBµV)	Comment
61.258	40.191	40.00	-0.19	500.0	120.000	329.0	H	175.0	-22.4	-34.7	0.0	12.3	62.6	
120.113	41.856	43.50	1.64	500.0	120.000	246.0	H	243.0	-10.8	-34.4	0.0	23.6	52.7	
212.578	40.388	43.50	3.11	500.0	120.000	142.0	H	266.0	-16.5	-34.0	0.0	17.4	56.9	
349.955	40.939	46.02	5.08	500.0	120.000	100.0	H	44.0	-12.4	-33.4	0.0	20.9	53.3	
791.765	48.186	46.02	-2.17	500.0	120.000	117.0	V	318.0	-4.1	-32.0	0.0	27.8	52.3	
949.997	41.714	46.02	4.31	500.0	120.000	107.0	V	-6.0	-2.2	-31.5	0.0	29.3	43.9	



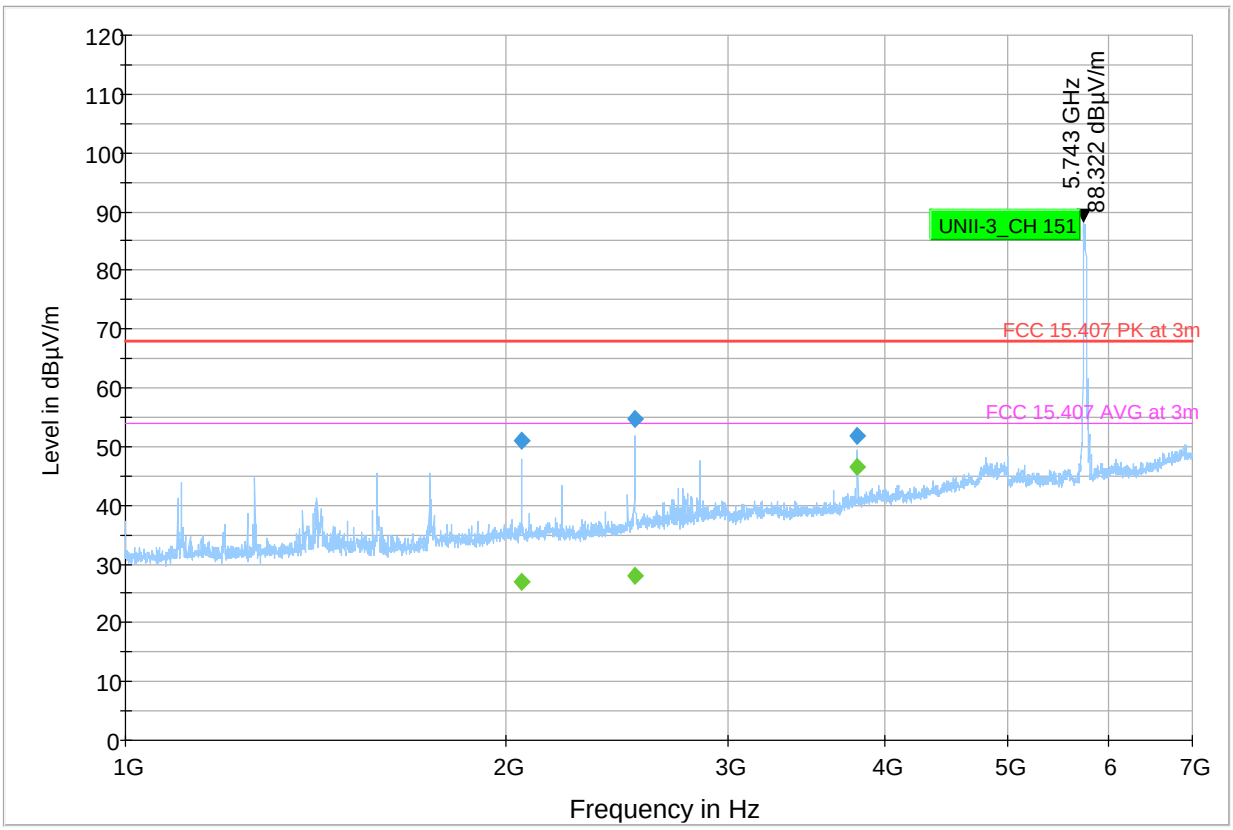
Preview Result 1-PK+ — FCC 15.209 QP at 3m ◆ Final_Result QPK

Note 1: The frequency 61.258 MHz does not fall within the restricted bands of operation as defined in FCC 15.205. Therefore, the FCC 15.209 radiated emission limits do not apply to emissions at 61.258 MHz.
Note 2: The frequency 791.765 MHz does not fall within the restricted bands of operation as defined in FCC 15.205. Therefore, the FCC 15.209 radiated emission limits do not apply to emissions at 791.765 MHz.

Plot # 43

Final_Result

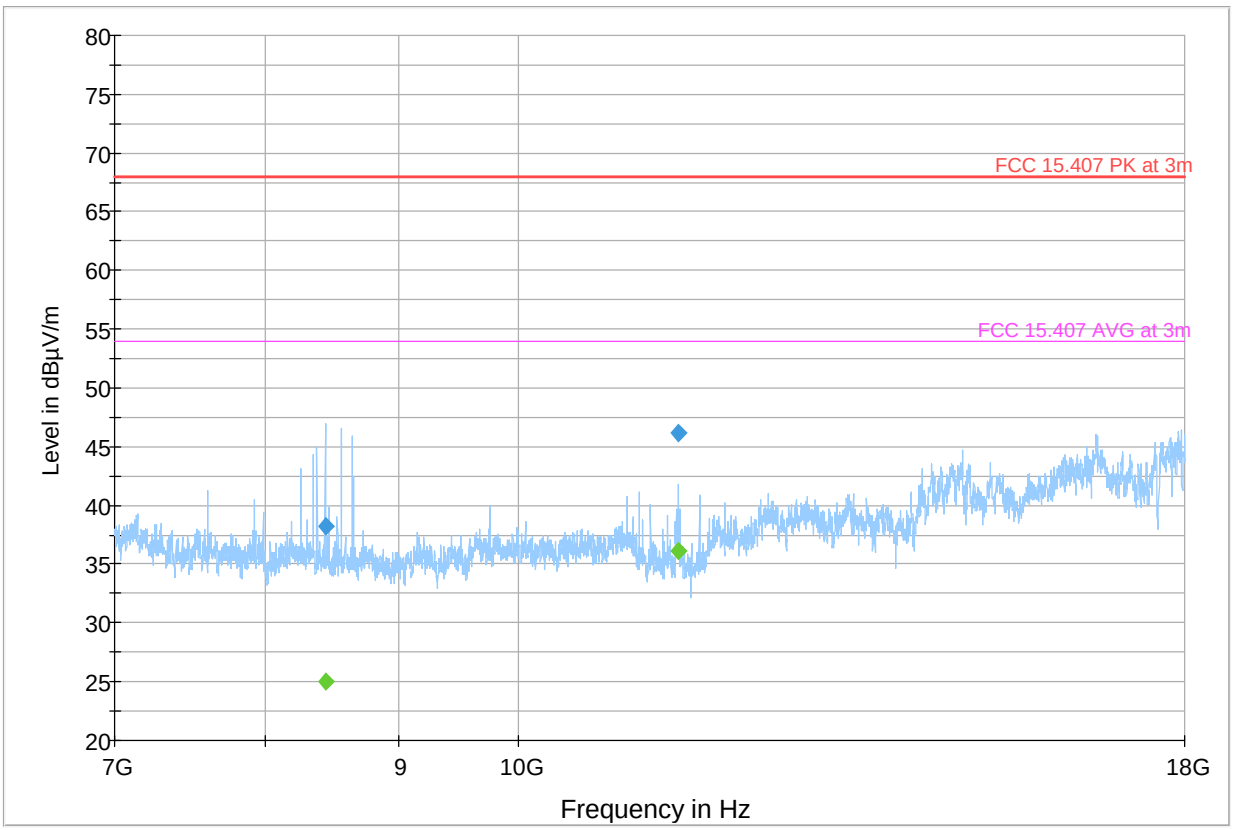
Frequency (MHz)	MaxPeak (dBµV/m)	CAverage (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB/m)	Raw Rec (dBµV)	Comment
2058.250	50.932	---	68.00	17.07	500.0	1000.000	185.0	V	353.0	5.3	-	0.0	27.5	45.6	
2058.250	---	26.855	53.98	27.12	500.0	1000.000	185.0	V	353.0	5.3	-	0.0	27.5	21.5	
2533.375	54.684	---	68.00	13.32	500.0	1000.000	150.0	V	182.0	6.4	-	0.0	28.5	48.3	
2533.375	---	28.035	53.98	25.94	500.0	1000.000	150.0	V	182.0	6.4	-	0.0	28.5	21.6	
3800.125	---	46.519	53.98	7.46	500.0	1000.000	210.0	V	357.0	11.2	-	0.0	32.2	35.3	
3800.125	51.874	---	68.00	16.13	500.0	1000.000	210.0	V	357.0	11.2	-	0.0	32.2	40.7	



Plot # 44

Final_Result

Frequency (MHz)	MaxPeak (dBµV/m)	CAverage (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB/m)	Raw Rec (dBµV)	Comment
8429.656	38.263	---	68.00	29.74	500.0	1000.000	186.0	V	-8.0	-2.6	9.1	-47.6	35.9	40.9	
8429.656	---	25.078	53.98	28.90	500.0	1000.000	186.0	V	-8.0	-2.6	9.1	-47.6	35.9	27.7	
11509.656	46.130	---	68.00	21.87	500.0	1000.000	379.0	V	26.0	2.2	11.1	-46.8	37.9	44.0	
11509.656	---	36.111	53.98	17.87	500.0	1000.000	379.0	V	26.0	2.2	11.1	-46.8	37.9	33.9	

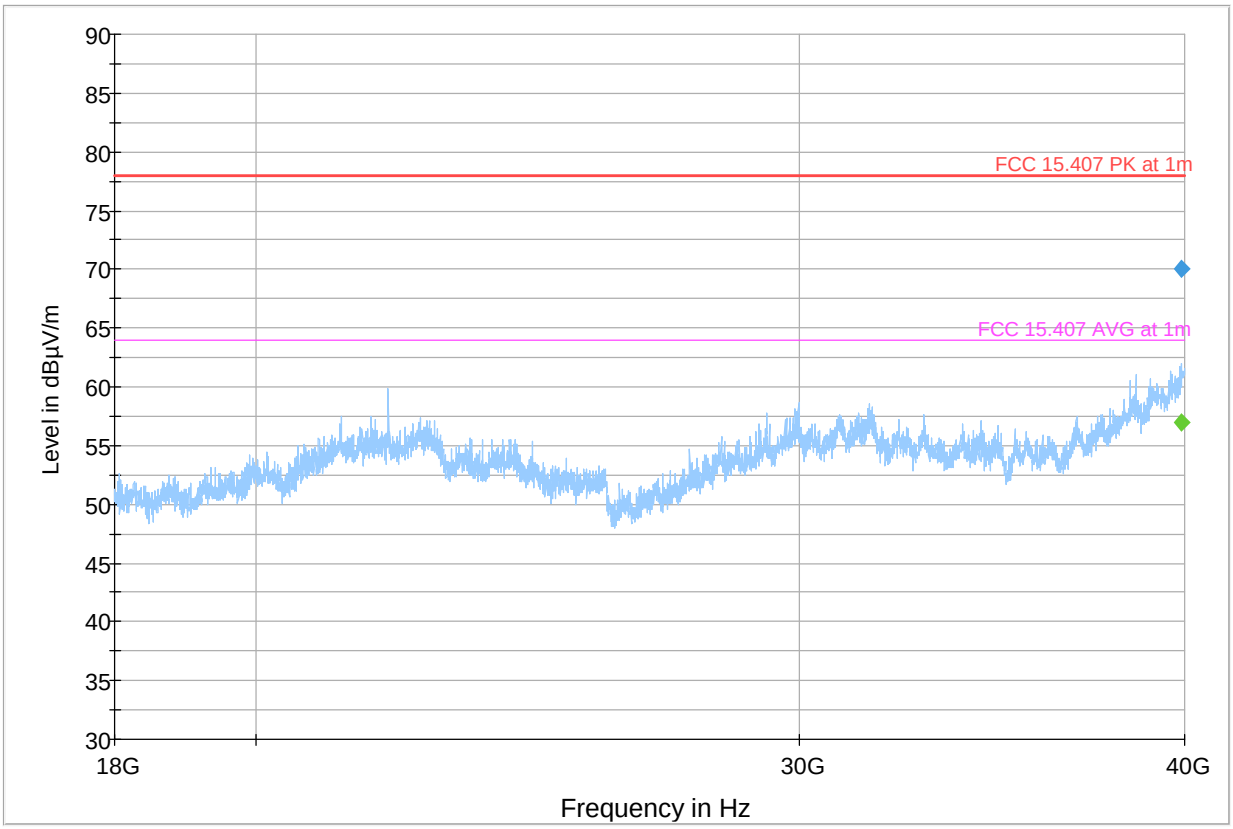


Preview Result 1-PK+ | FCC 15.407 PK at 3m | FCC 15.407 AVG at 3m
Final_Result PK+ | Final_Result CAV

Plot # 45

Final_Result

Frequency (MHz)	MaxPeak (dBµV/m)	CAverage (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB/m)	Raw Rec (dBµV)	Comment
39912.813	---	56.908	63.98	7.07	500.0	1000.000	150.0	H	214.0	24.3	12.7	0.0	11.6	32.6	
39912.813	70.107	---	78.00	7.89	500.0	1000.000	150.0	H	214.0	24.3	12.7	0.0	11.6	45.8	



Preview Result 1-PK+
Final_Result PK+
FCC 15.407 PK at 1m
Final_Result CAV
FCC 15.407 AVG at 1m

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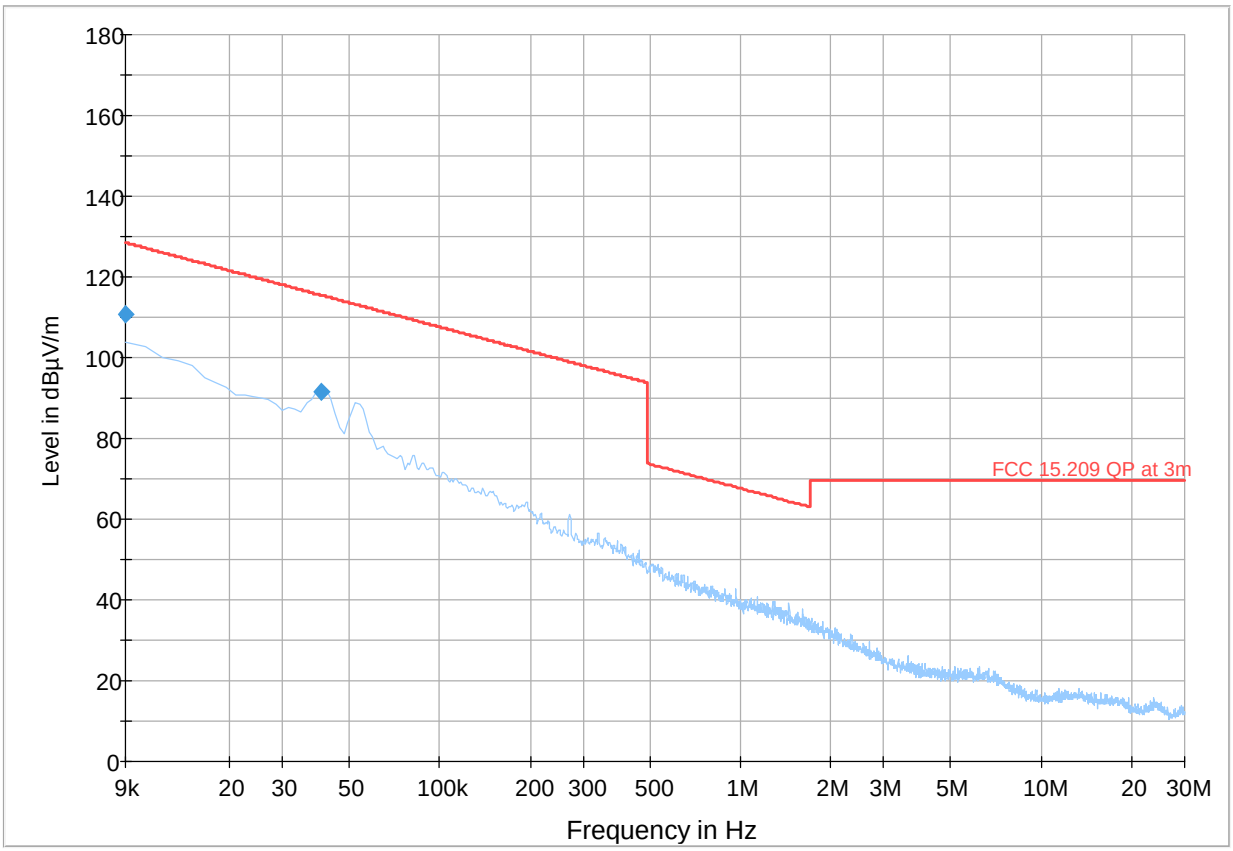
Plot # 46

Final_Result

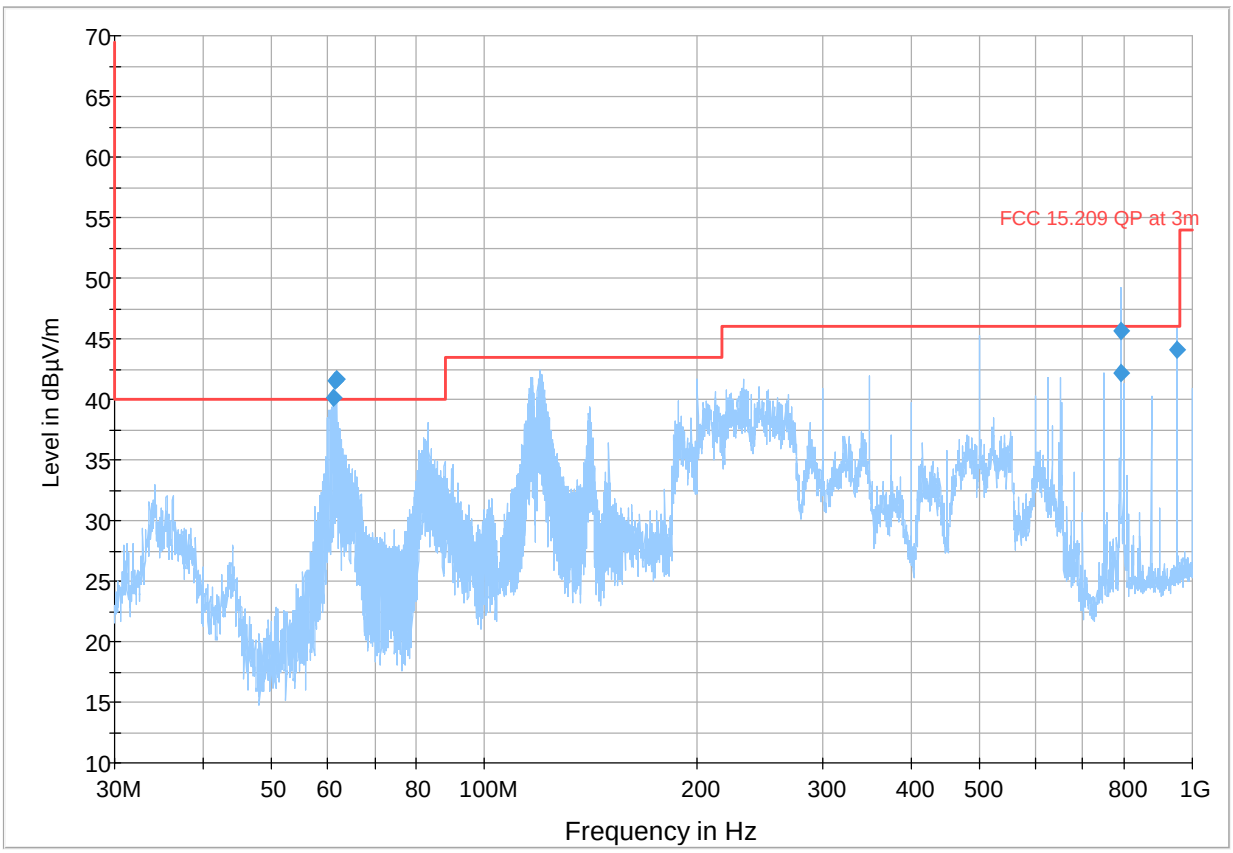
Frequency (MHz)	MaxPeak (dBµV/m)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB/m)	Raw Rec (dBµV)	Comment
0.009	110.789	---	128.50	17.71	500.0	9.000	100.0	H	-2.0	60.5	0.2	-25.7	86.0	50.3	
0.040	91.639	---	115.45	23.81	500.0	9.000	100.0	V	313.0	47.1	0.2	-27.9	74.8	44.6	



Preview Result 1-PK+ — FCC 15.209 QP at 3m — Final_Result PK+ — Final_Result QPK

Plot # 47

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB/m)	Raw Rec (dBuV)	Comment
61.258	40.164	40.00	-0.16	500.0	120.000	338.0	H	182.0	-22.4	-34.7	0.0	12.3	62.6	
61.574	41.483	40.00	-1.48	500.0	120.000	323.0	H	179.0	-22.4	-34.7	0.0	12.3	63.9	
61.889	41.724	40.00	-1.72	500.0	120.000	328.0	H	186.0	-22.5	-34.7	0.0	12.2	64.2	
791.693	45.659	46.02	0.36	500.0	120.000	137.0	V	304.0	-4.1	-32.0	0.0	27.8	49.8	
791.887	42.217	46.02	3.80	500.0	120.000	134.0	V	305.0	-4.1	-32.0	0.0	27.8	46.4	
950.021	44.064	46.02	1.96	500.0	120.000	133.0	H	216.0	-2.1	-31.5	0.0	29.4	46.2	



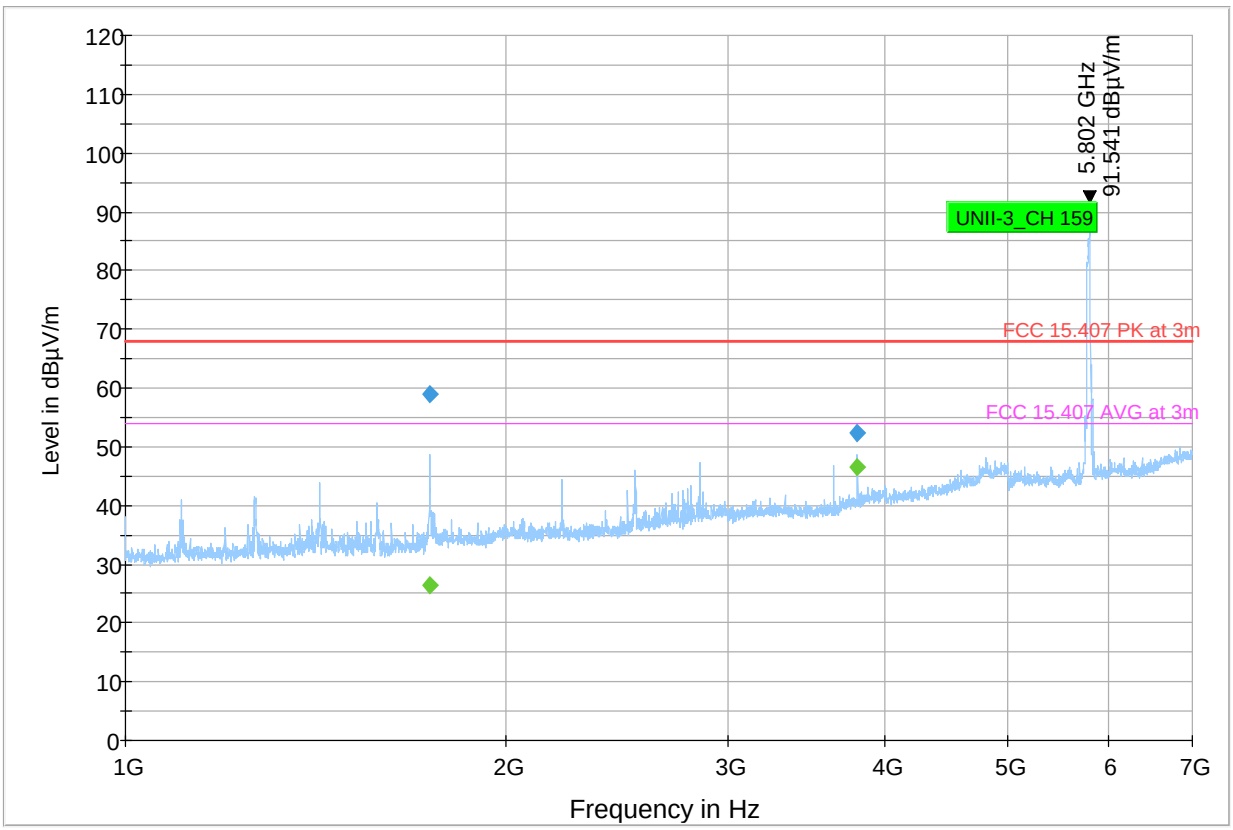
Preview Result 1-PK+ — FCC 15.209 QP at 3m ◆ Final_Result QPK

Note 1: The frequency 61.258 MHz does not fall within the restricted bands of operation as defined in FCC 15.205. Therefore, the FCC 15.209 radiated emission limits do not apply to emissions at 61.258 MHz.
Note 2: The frequency 61.574 MHz does not fall within the restricted bands of operation as defined in FCC 15.205. Therefore, the FCC 15.209 radiated emission limits do not apply to emissions at 61.574 MHz.
Note 3: The frequency 61.889 MHz does not fall within the restricted bands of operation as defined in FCC 15.205. Therefore, the FCC 15.209 radiated emission limits do not apply to emissions at 61.889 MHz.

Plot # 48

Final_Result

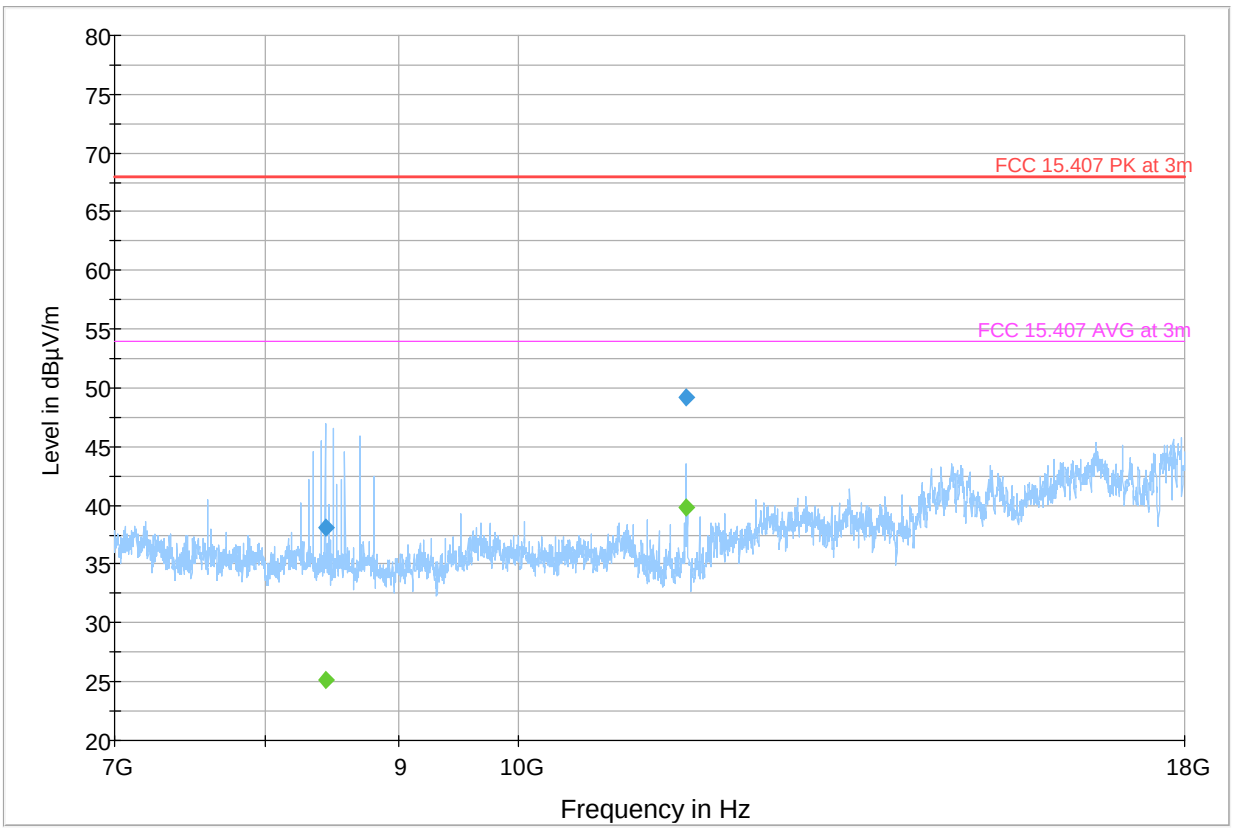
Frequency (MHz)	MaxPeak (dBµV/m)	CAverage (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB/m)	Raw Rec (dBµV)	Comment
1741.563	---	26.435	53.98	27.54	500.0	1000.000	218.0	V	3.0	3.9	-	0.0	26.2	22.6	
1741.563	59.071	---	68.00	8.93	500.0	1000.000	218.0	V	3.0	3.9	-	0.0	26.2	55.2	
3800.125	---	46.633	53.98	7.35	500.0	1000.000	197.0	V	-11.0	11.2	-	0.0	32.2	35.4	
3800.125	52.427	---	68.00	15.57	500.0	1000.000	197.0	V	-11.0	11.2	-	0.0	32.2	41.2	



Plot # 49

Final_Result

Frequency (MHz)	MaxPeak (dBµV/m)	CAverage (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB/m)	Raw Rec (dBµV)	Comment
8429.656	38.139	---	68.00	29.86	500.0	1000.000	193.0	V	2.0	-2.6	9.1	-47.6	35.9	40.7	
8429.656	---	25.136	53.98	28.84	500.0	1000.000	193.0	V	2.0	-2.6	9.1	-47.6	35.9	27.7	
11589.750	49.190	---	68.00	18.81	500.0	1000.000	391.0	V	11.0	2.3	11.0	-46.7	38.0	46.9	
11589.750	---	39.849	53.98	14.13	500.0	1000.000	391.0	V	11.0	2.3	11.0	-46.7	38.0	37.5	

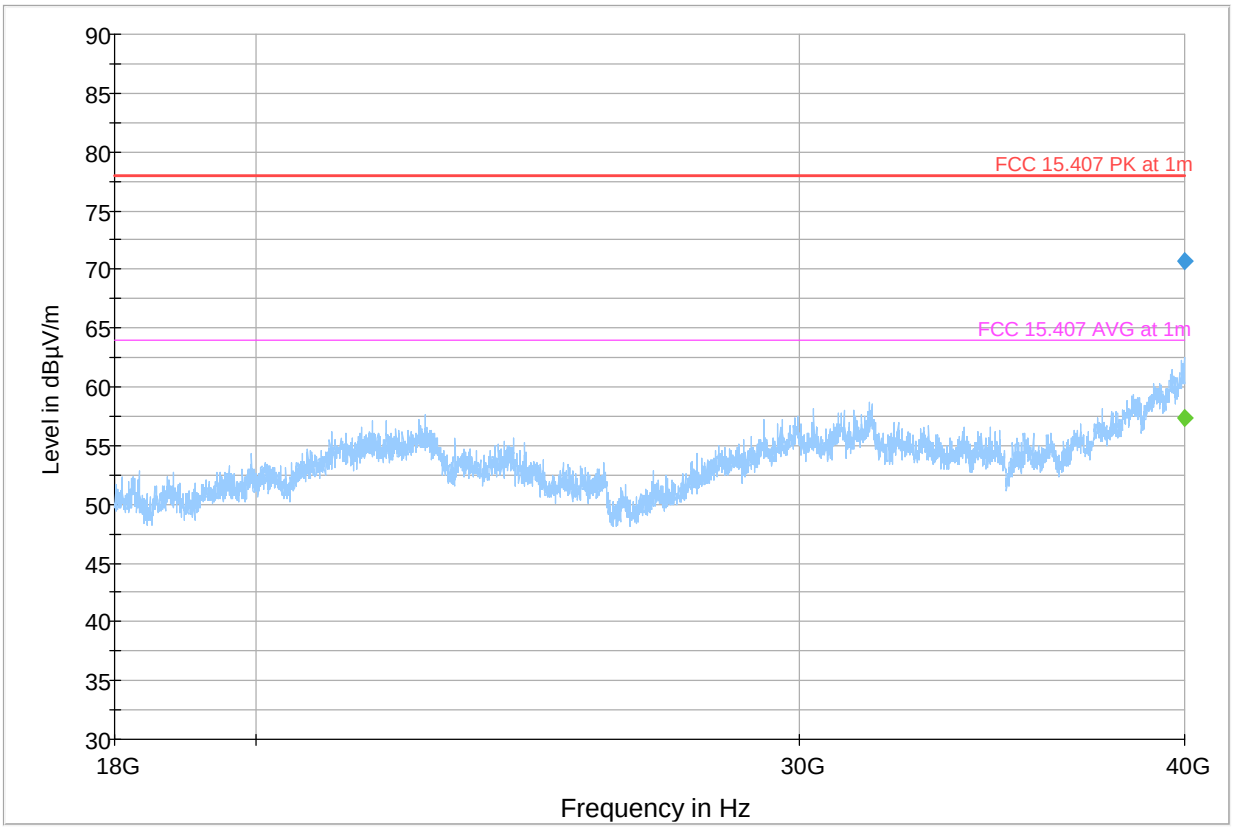


Preview Result 1-PK+ | FCC 15.407 PK at 3m | FCC 15.407 AVG at 3m
Final_Result PK+ | Final_Result CAV

Plot # 50

Final_Result

Frequency (MHz)	MaxPeak (dBµV/m)	CAverage (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB/m)	Raw Rec (dBµV)	Comment
39979.188	---	57.400	63.98	6.58	500.0	1000.000	150.0	H	80.0	24.4	12.7	0.0	11.6	33.0	
39979.188	70.746	---	78.00	7.25	500.0	1000.000	150.0	H	80.0	24.4	12.7	0.0	11.6	46.4	



Preview Result 1-PK+
Final_Result PK+
FCC 15.407 PK at 1m
Final_Result CAV
FCC 15.407 AVG at 1m

8.2 EIRP / Output Power Verification

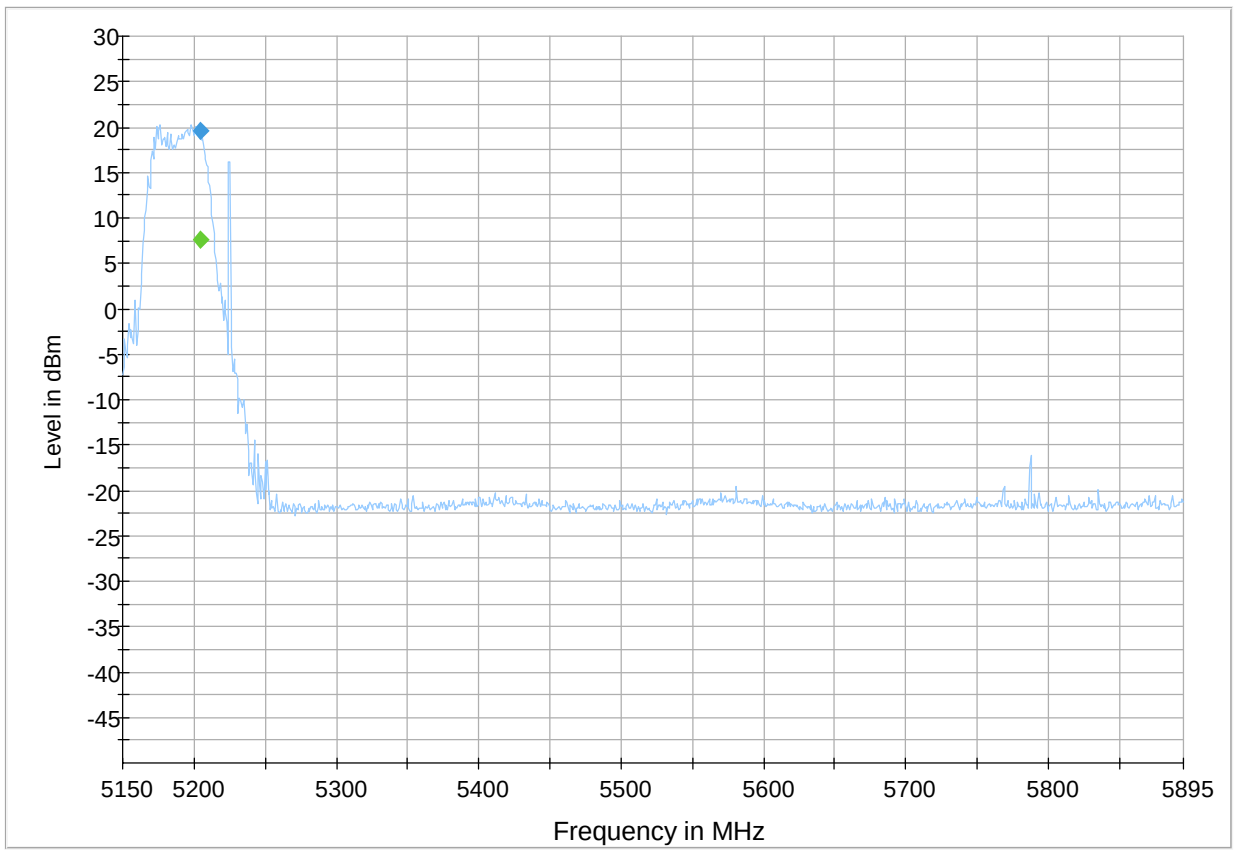
The measurement results presented in this section are intended solely to verify if the radio specifications of the EUT have any significant deviations from the original measurement results documented in the initial reports or grants.

The EIRP / Output Power Verification results will not be used for RF exposure evaluation or certification purposes.

EIRP 802.11ax-HE40 MCS0
Channel: 36 Power Setting: 20

Final_Result

Frequency (MHz)	MaxPeak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Comment
5204.425	---	7.606	---	---	500.0	50000.000	145.0	H	308.0	-54.2	
5204.425	19.502	---	---	---	500.0	50000.000	145.0	H	308.0	-54.2	

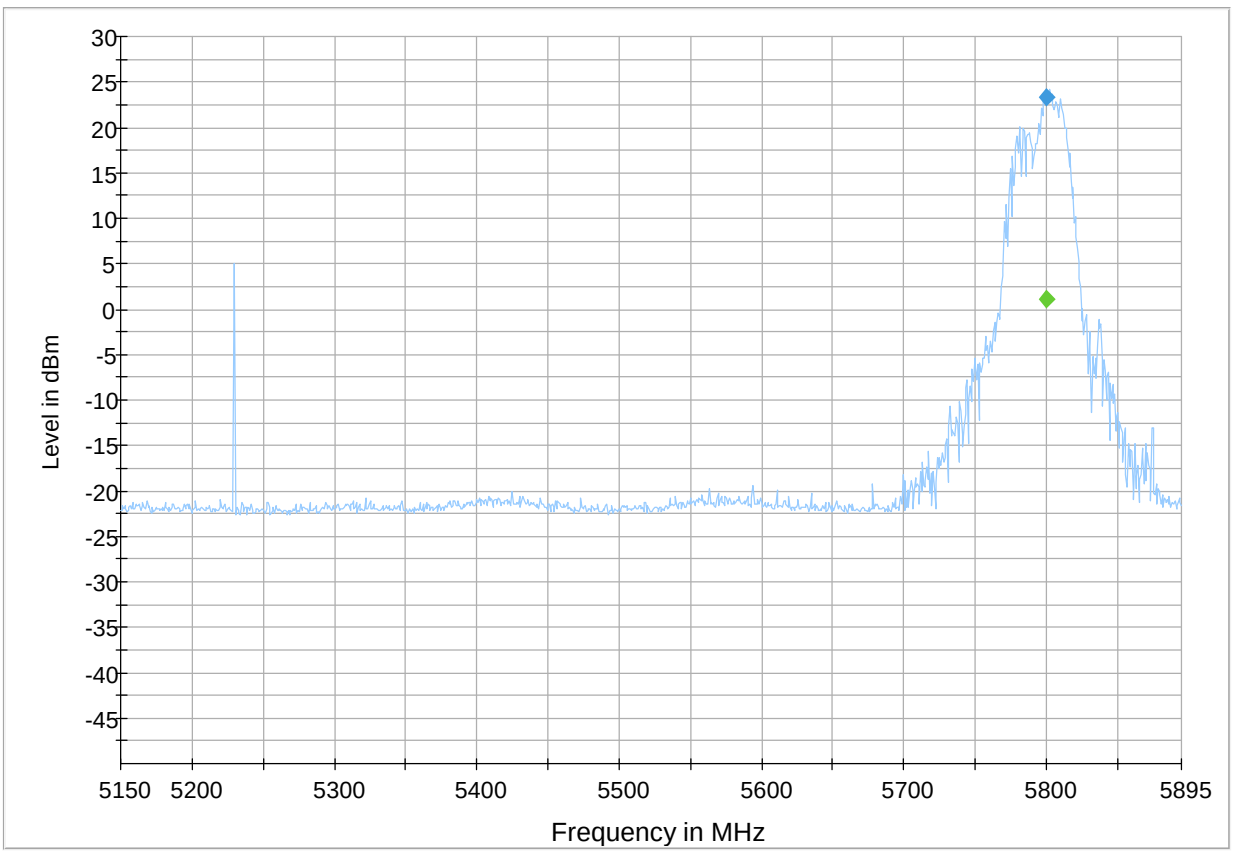


Preview Result 1-PK+ ◆ Final_Result PK+ ◆ Final_Result RMS

EIRP 802.11ac-VHT40 MCS0
Channel: 159 Power Setting: 30

Final_Result

Frequency (MHz)	MaxPeak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Comment
5800.620	---	1.074	---	---	500.0	50000.000	150.0	H	288.0	-53.7	
5800.620	23.319	---	---	---	500.0	50000.000	150.0	H	288.0	-53.7	



Preview Result 1-PK+ ◆ Final_Result PK+ ◆ Final_Result RMS

9 Test setup photos

Setup photos are included in supporting file name: “EMC_ARINC_001_23001_Setup_Photos_WiFi”

10 Test Equipment And Ancillaries Used For Testing

Equipment Type	Manufacturer	Model	Serial #	Calibration Cycle	Last Calibration Date
Passive Loop Antenna	EMCO	6512	00164698	3 Years	9/6/2023
BILOG ANTENNA	A.H. SYSTEMS	BiLA2G	569	3 Years	10/30/2023
HORN ANTENNA	EMCO	3115	00035111	3 Years	10/26/2023
HORN ANTENNA	ETS LINDGREN	3117-PA	00167061	3 Years	9/25/2023
HORN ANTENNA	ETS LINDGREN	3116C-PA	00166821	3 Years	10/26/2023
ESW.EMI TEST RECEIVER	ROHDE & SCHWARZ	ESW44	101715	3 Years	10/24/2023
DIGITAL THERMOMETER	Control Company	4410,90080-03	230712972	3 Years	10/18/2023

Note: Equipment used meets the measurement uncertainty requirements as required per applicable standards for 95% confidence levels. Calibration due dates, unless defined specifically, falls on the last day of the month. Items indicated “N/A” for cal status either do not specifically require calibration or is internally characterized before use.

11 History

Date	Report Name	Changes to report	Prepared by
2024-07-25	EMC_ARINC_001_23001_FCC_15_407	Initial Version	Cheng Song

<<< The End >>>