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:
KDB 996369 D04 Module Integration Guide V02

REPORT #: EMC_ARINC_001_23001_KDB996369

DATE: 2024-07-25

A2LA Accredited

IC recognized # 3462B

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1 Assessment

The following device as further described in section 3 of this report was evaluated against the applicable criteria specified in KDB 996369 D04 Module Integration Guide V02

No deficiencies 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 12:25:17 -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
Fax:	+1 (408) 586 6299
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 details

Mode of Operation	Description of Operating modes	Additional Information
Op. 1	Cellular Radio simultaneous transmission with 802.11g 6Mbps on channel 6 (2.4GHz WiFi)	During testing, WiFi was tested on 802.11g at 6 Mbps on channel 6 (2.4 GHz). Selected cellular bands were also transmitting simultaneously with the 2.4 GHz WiFi radio to represent the worst-case scenario. The client provided 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. The cellular radio of the EUT was enabled by connecting it to the base station simulator.

3.7 Justification for Worst Case Mode of Operation

During the testing process, the EUT was tested with transmitters set to 802.11g 6Mbps on channel 6 (2.4GHz WiFi) at maximum power, simultaneously transmitting with the cellular radio. This setup represents the worst-case scenario for the radios supported, based on the maximum average conducted output power from the reports.

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 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

5.1 Environmental Conditions During Testing:

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

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

5.2 Dates of Testing:

6/6/2024 - 7/15/2024

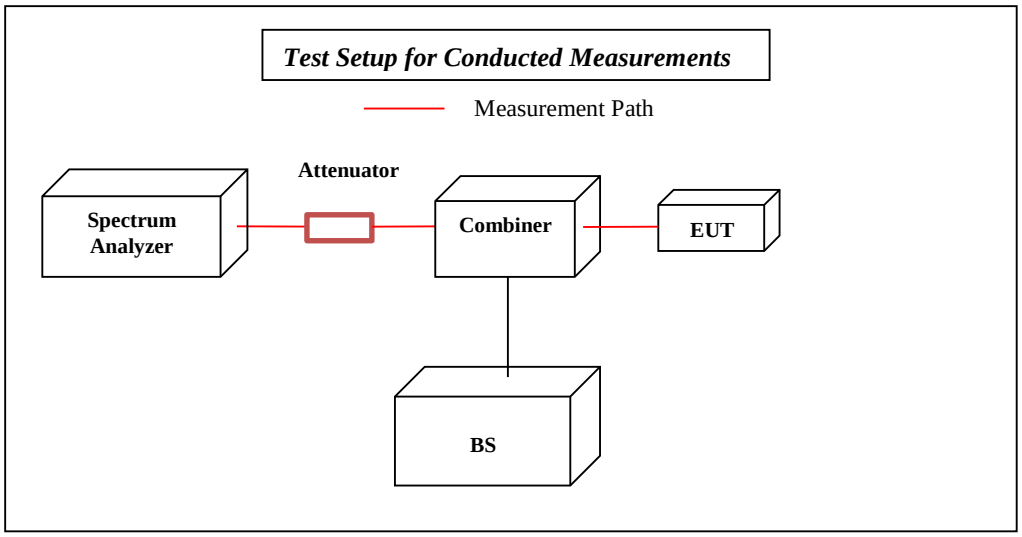
5.3 Decision Rule:

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.

6 Measurement Procedures

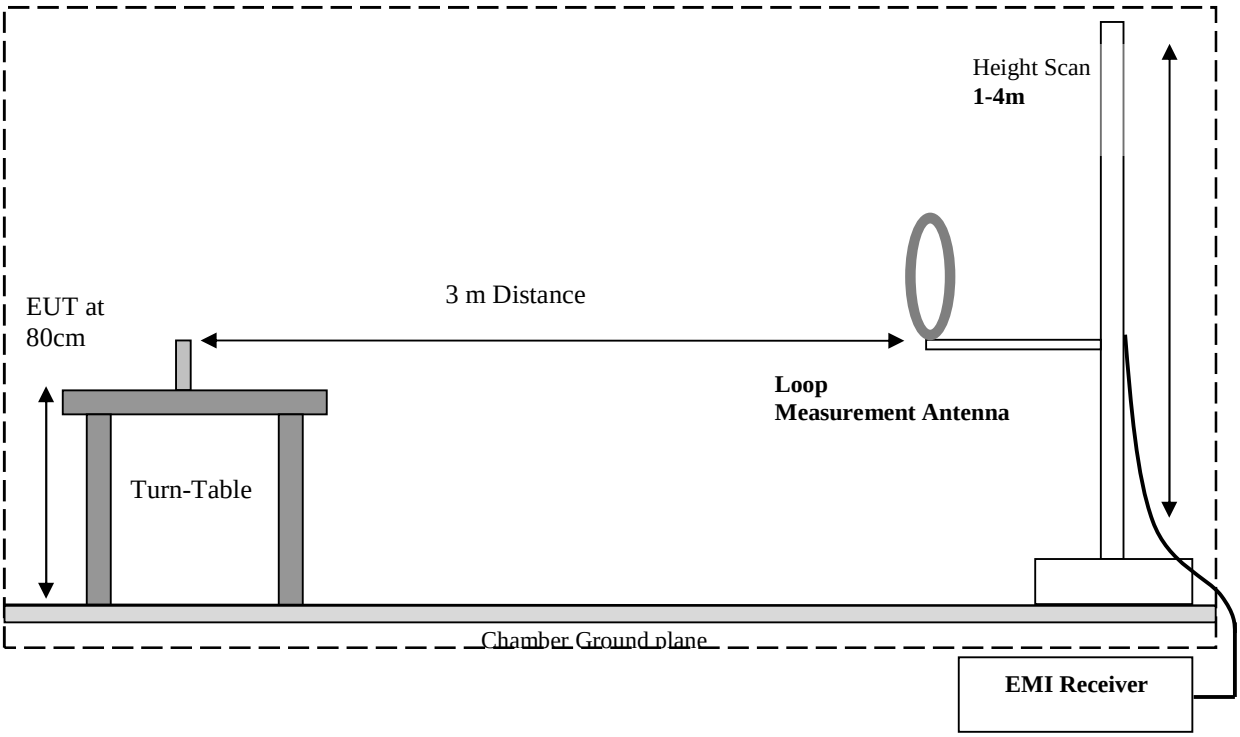
Testing is performed according to the guidelines provided in FCC publication (KDB) 971168 D01 v03r01 – "Measurement Guidance for Certification of Licensed Digital Transmitters" and according to relevant parts of ANSI/TIA-603-D-2010 as detailed below.



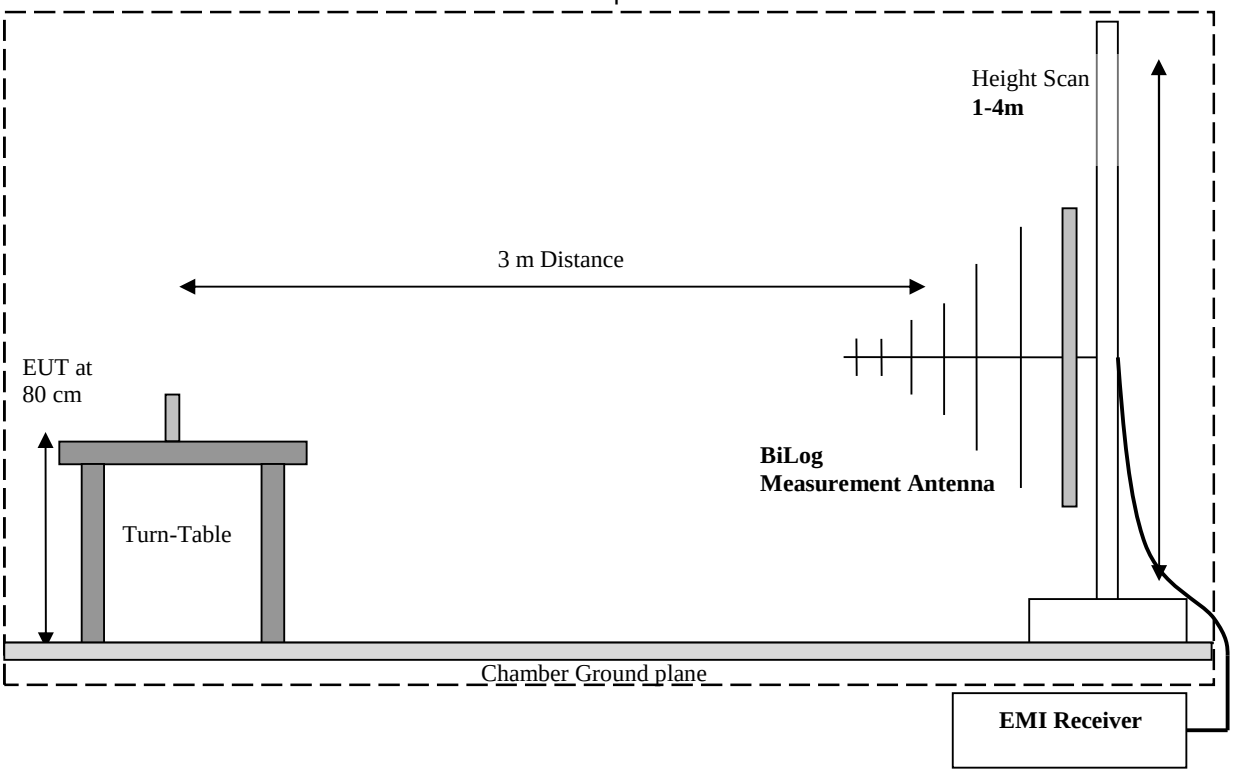
6.1 Radiated Measurement

- 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.

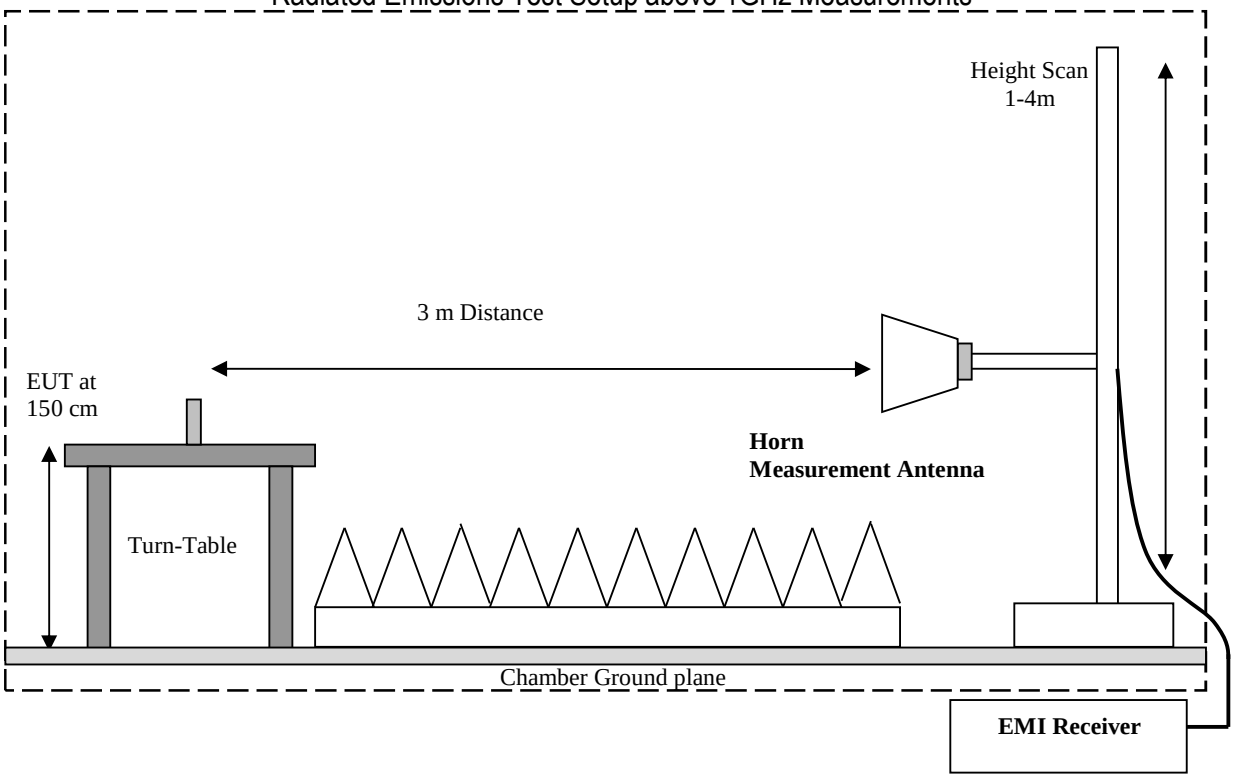
Radiated Emissions Test Setup below 30MHz Measurements



Radiated Emissions Test Setup 30MHz-1GHz Measurements



Radiated Emissions Test Setup above 1GHz Measurements



6.2 Sample Calculations for Field Strength Measurements

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

- Measured reading in dBµV
- Cable Loss between the receiving antenna and SA in dB and
- 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 Measurement Results Summary

7.1 KDB 996369 D04 Module Integration Guide V02

Test Specification	Test Case	Temperature and Voltage Conditions	Mode	Pass	Fail	NA	NP	Result
KDB 996369 D04 Module Integration Guide V02	Radiated Spurious Emissions	Nominal	Op. 1	■	☐	☐	☐	Note 1 Note 2

Note 1: NA= Not Applicable; NP= Not Performed.
Note 2: The specific testing performed, including the chosen combination of radios for simultaneous transmissions, was based on the worst-case scenario during the operation of the host device with module integration. This judgment was made by reviewing the modular transmitter test reports.

8 Test Result Data

8.1 Radiated Spurious Emissions

8.1.1 Measurement utilizing KDB 971168 D01 Power Meas License Digital Systems v03r01, and according to ANSI/TIA-603-D-2010

Spectrum Analyzer Settings for FCC 22

Frequency Range	30MHz – 1 GHz	1 – 1.58 GHz	1.58 – 9 GHz
Resolution Bandwidth	100 kHz	1 MHz	1 MHz
Video Bandwidth	100 kHz	1 MHz	1 MHz
Detector	Peak	Peak	Peak
Trace Mode	Max Hold	Max Hold	Max Hold
Sweep Time	Auto	Auto	Auto

Spectrum Analyzer Settings for FCC 24, 27, 90, and 96

Frequency Range	30MHz – 1 GHz	1 – 2.7 GHz	2.7 – 18 GHz	18 – 19.1 GHz
Resolution Bandwidth	100 kHz	1 MHz	1 MHz	1 MHz
Video Bandwidth	100 kHz	1 MHz	1 MHz	1 MHz
Detector	Peak	Peak	Peak	Peak
Trace Mode	Max Hold	Max Hold	Max Hold	Max Hold
Sweep Time	Auto	Auto	Auto	Auto

8.1.2 Limits:

8.1.2.1 FCC Part 22.917 (a); FCC Part 24.238 (a); FCC Part 27.53 (h); FCC Part 90.669(a); FCC Part 90.543 (c); FCC Part 96.41 (e).

Out of band emissions. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB.

For Band 7 & 41, the minimum permissible attenuation level of any spurious emission is at least 55 + log10 (P) [Watts]) on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section.

8.1.2.2 RSS-132 Part 5.5; RSS-133 Part 6.5; RSS-139 Part 5.6; RSS-140 Part 4.4, RSS-192 Part 5.6, RSS-199 Part 5.6 Transmitter Unwanted Emissions

Mobile and base station equipment shall comply with the limits in (i) and (ii) below.

i.In the first 1.0 MHz band immediately outside and adjacent to each of the sub-bands specified in Section 5.1, the power of emissions per any 1% of the occupied bandwidth shall be attenuated (in dB) below the transmitter output power P (dBW) by at least 43 + 10 log10p (watts).

ii.After the first 1.0 MHz immediately outside and adjacent to each of the sub-bands, the power of emissions in any 100 kHz bandwidth shall be attenuated (in dB) below the transmitter output power P (dBW) by at least 43 + 10 log10 p (watts). If the measurement is performed using 1% of the occupied bandwidth, power integration over 100 kHz is required.

Note: The limit calculation result is a constant of -13 dBm.
Note: For LTE Band 7 and 41, the limit calculation result is a constant of -25 dBm

8.1.3 Test conditions and setup:

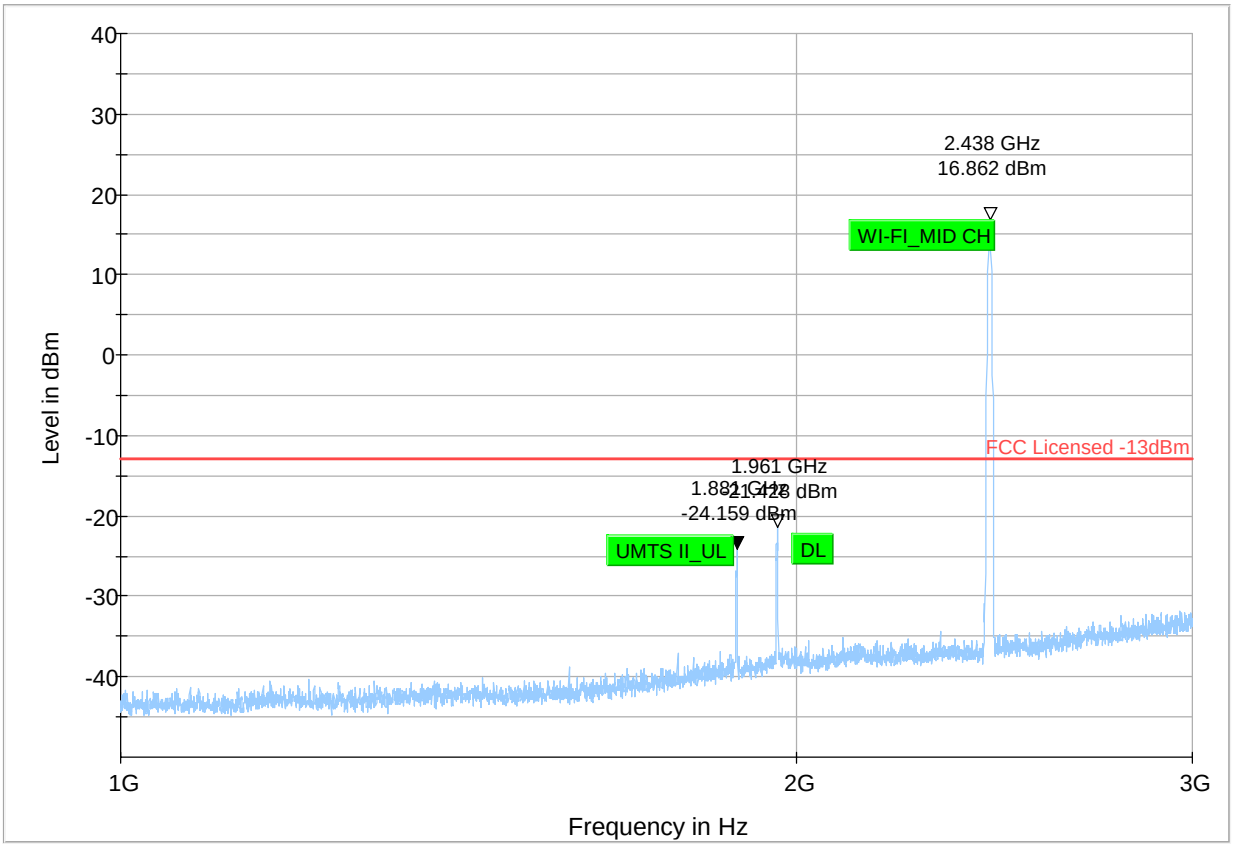
Ambient Temperature (°C)	EUT Set-Up #	EUT operating mode	Power Input
22.0	1	Op. 1	120 VAC

8.1.4 Measurement result:

Plot #	Channel	Cellular operating band	Scan Frequency	Limit (dBm)	Result
1-3	Mid	UMTS II	1 GHz – 22 GHz	-13	Pass
4-6	Mid	5G NR FR1 A12 – n2	1 GHz – 22 GHz	-13	Pass
7	Low	UMTS V	1 GHz – 3 GHz	-13	Pass
8-9	Mid		1 GHz – 9 GHz		Pass
10-11	Mid	LTE 5	1 GHz – 9 GHz	-13	Pass
12-13	Mid	UMTS IV	1 GHz – 18 GHz	-13	Pass
14-16	Mid	LTE 7	1 GHz – 26 GHz	-25	Pass
17-19	Mid	LTE 41	1 GHz – 26 GHz	-25	Pass
20-21	Mid	5G NR FR1 A5 – n66	1 GHz – 18 GHz	-13	Pass
22	Low	LTE 12	1 GHz – 3 GHz	-13	Pass
23-24	Mid		1 GHz – 8 GHz		Pass
25	High		1 GHz – 3 GHz		Pass
26	Low	LTE 13	1 GHz – 3 GHz	-13	Pass
27-28	Mid		1 GHz – 8 GHz		Pass
29	High		1 GHz – 3 GHz		Pass
30-31	Mid	5G NR FR1 A7 – n71	1 GHz – 8 GHz	-13	Pass
32-24	Mid	LTE 38	1 GHz – 26 GHz	-13	Pass
35-36	Mid	LTE 14	1 GHz – 9 GHz	-13	Pass
37	Low	LTE 26	1 GHz – 3 GHz	-13	Pass
38-39	Mid		1 GHz – 9 GHz		Pass
40	High		1 GHz – 3 GHz		Pass
41-43	Mid	LTE 48	1 GHz – 30 GHz	-13	Pass

8.1.5 Measurement Plots:

Plot # 1

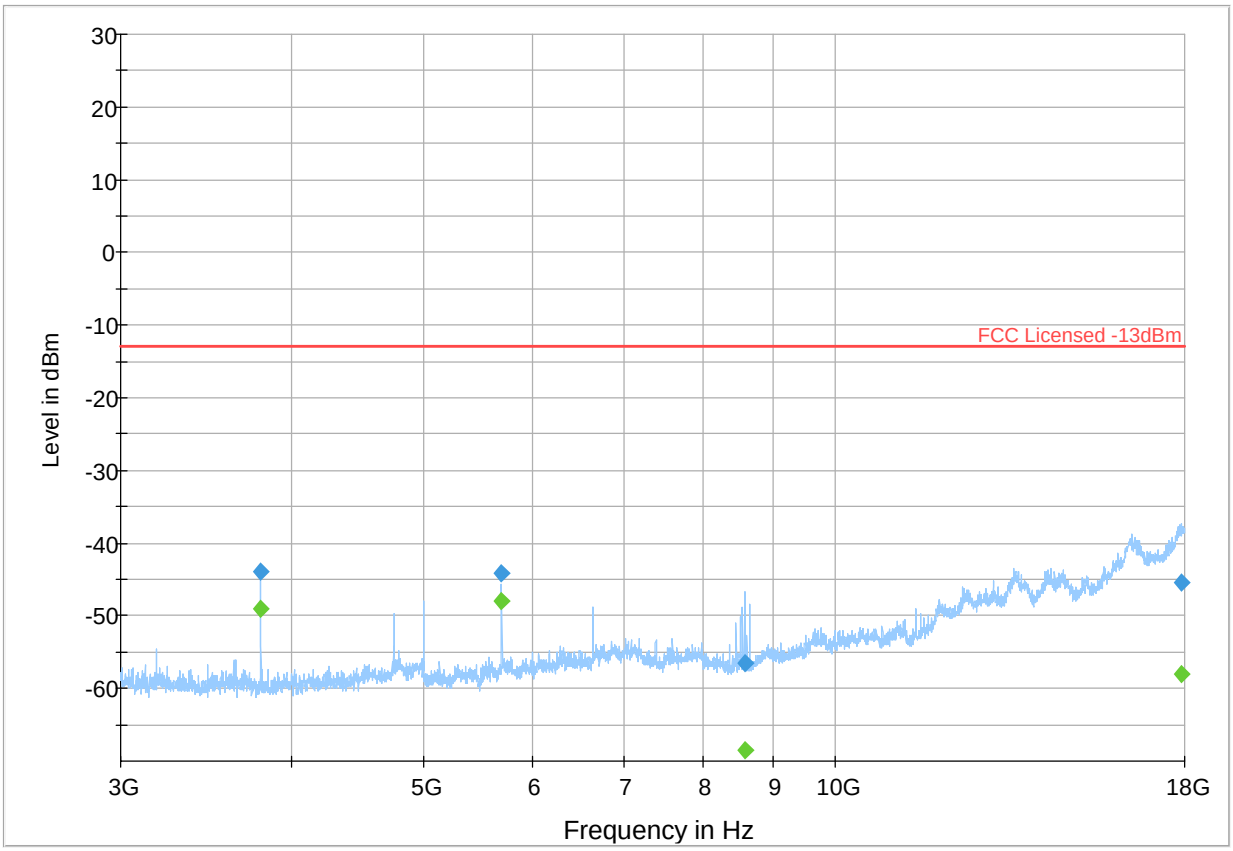


PK+_MAXH FCC Licensed -13dBm Final_Result PK+ Final_Result RMS

Plot # 2

Final_Result

Frequency (MHz)	MaxPeak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB)	Raw Rec (dBµV)
3799.688	---	-48.977	---	---	500.0	1000.000	100.0	V	341.0	-101.8	6.2	-45.9	-62.1	52.8
3799.688	-43.972	---	-13.00	30.97	500.0	1000.000	100.0	V	341.0	-101.8	6.2	-45.9	-62.1	57.8
5700.000	-44.045	---	-13.00	31.05	500.0	1000.000	198.0	V	26.0	-97.8	7.7	-45.4	-60.2	53.8
5700.000	---	-48.007	---	---	500.0	1000.000	198.0	V	26.0	-97.8	7.7	-45.4	-60.2	49.8
8579.531	---	-68.464	---	---	500.0	1000.000	194.0	V	7.0	-97.7	9.4	-47.7	-59.4	29.2
8579.531	-56.588	---	-13.00	43.59	500.0	1000.000	194.0	V	7.0	-97.7	9.4	-47.7	-59.4	41.1
17911.406	-45.448	---	-13.00	32.45	500.0	1000.000	286.0	H	65.0	-79.0	16.9	-42.3	-53.6	33.5
17911.406	---	-58.001	---	---	500.0	1000.000	286.0	H	65.0	-79.0	16.9	-42.3	-53.6	21.0

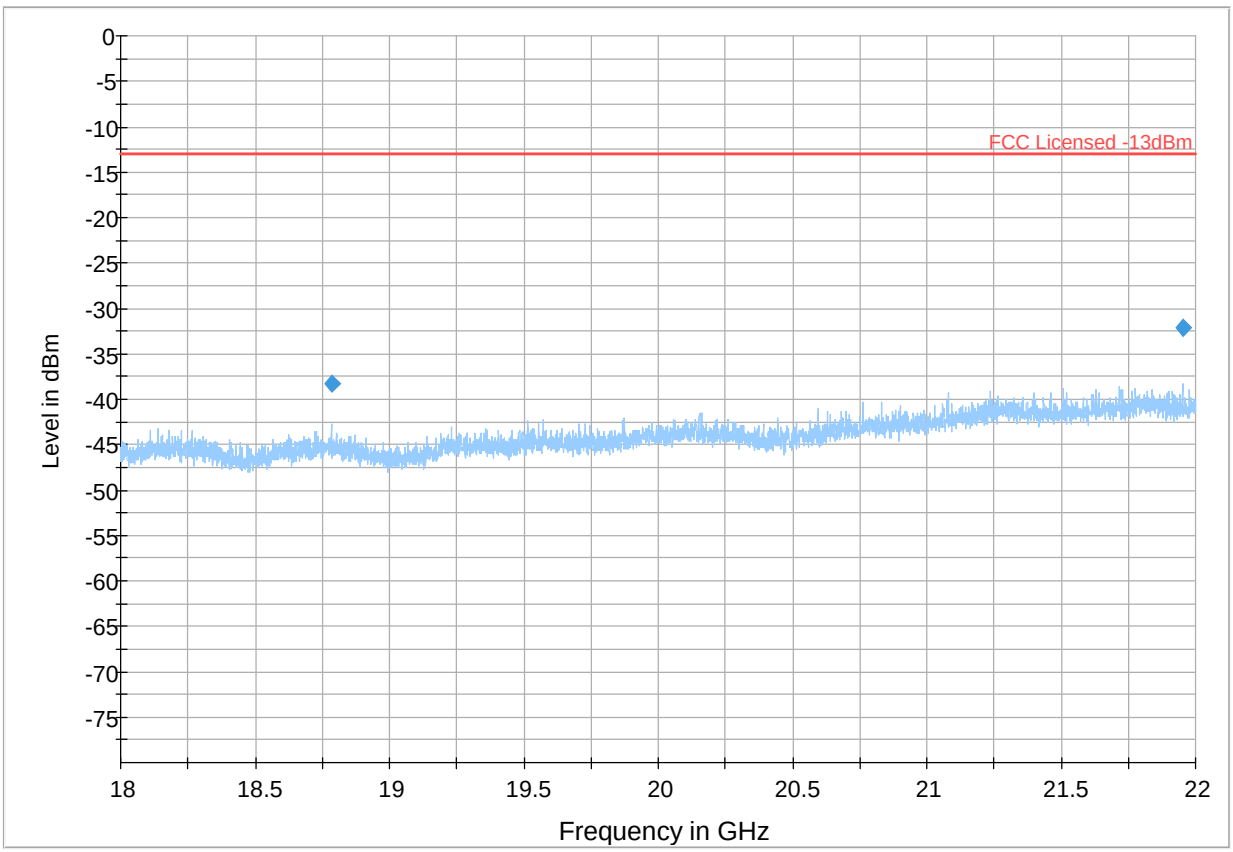


PK+_MAXH — FCC Licensed -13dBm — Final_Result PK+ — Final_Result RMS

Plot # 3

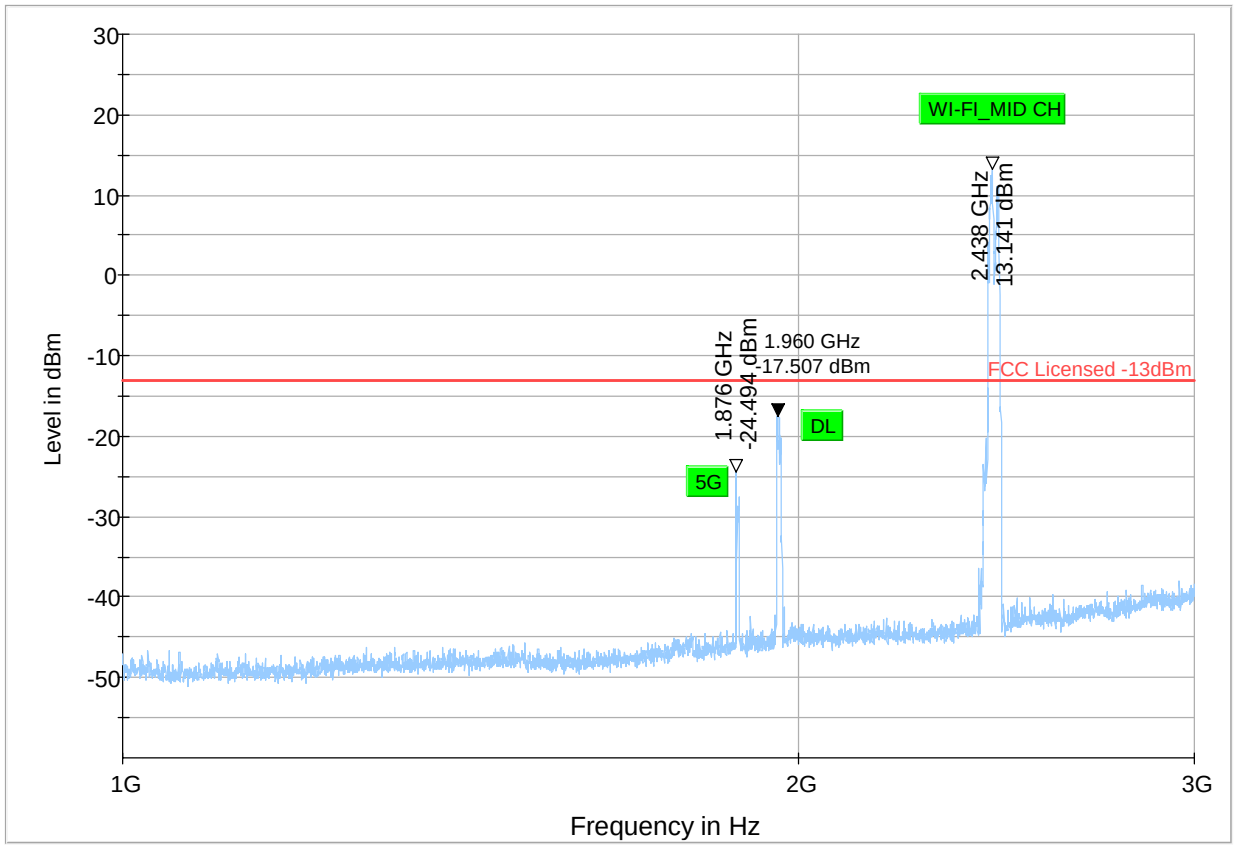
Final_Result

Frequency (MHz)	MaxPeak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB)	Raw Rec (dBµV)
18783.250	-38.209	---	-13.00	25.21	500.0	1000.000	150.0	V	205.0	-81.5	9.2	0.0	-90.8	43.3
21951.250	-32.221	---	-13.00	19.22	500.0	1000.000	150.0	H	209.0	-76.0	9.7	0.0	-85.7	43.8



Preview Result 1-PK+ FCC Licensed -13dBm Final_Result PK+ Final_Result RMS

Plot # 4

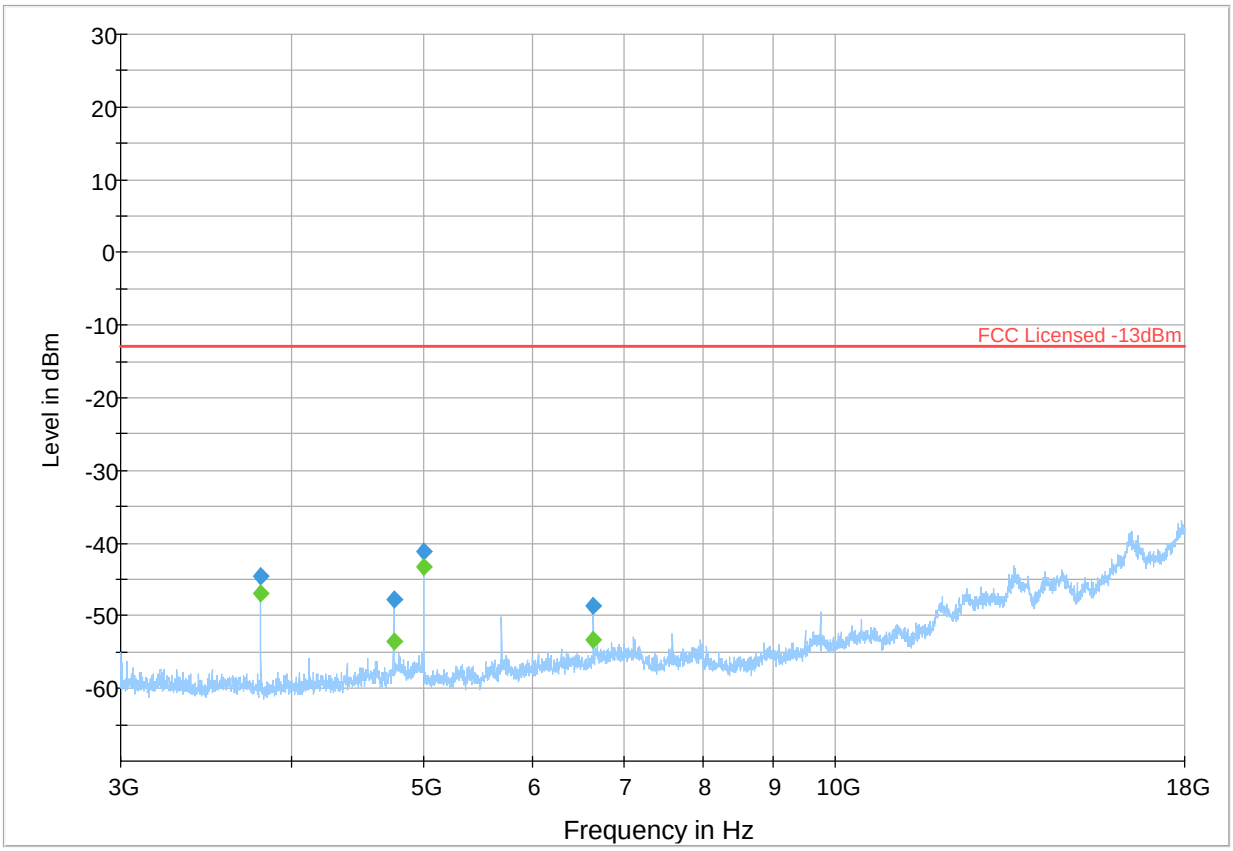


PK+_MAXH FCC Licensed -13dBm Final_Result PK+ Final_Result RMS

Plot # 5

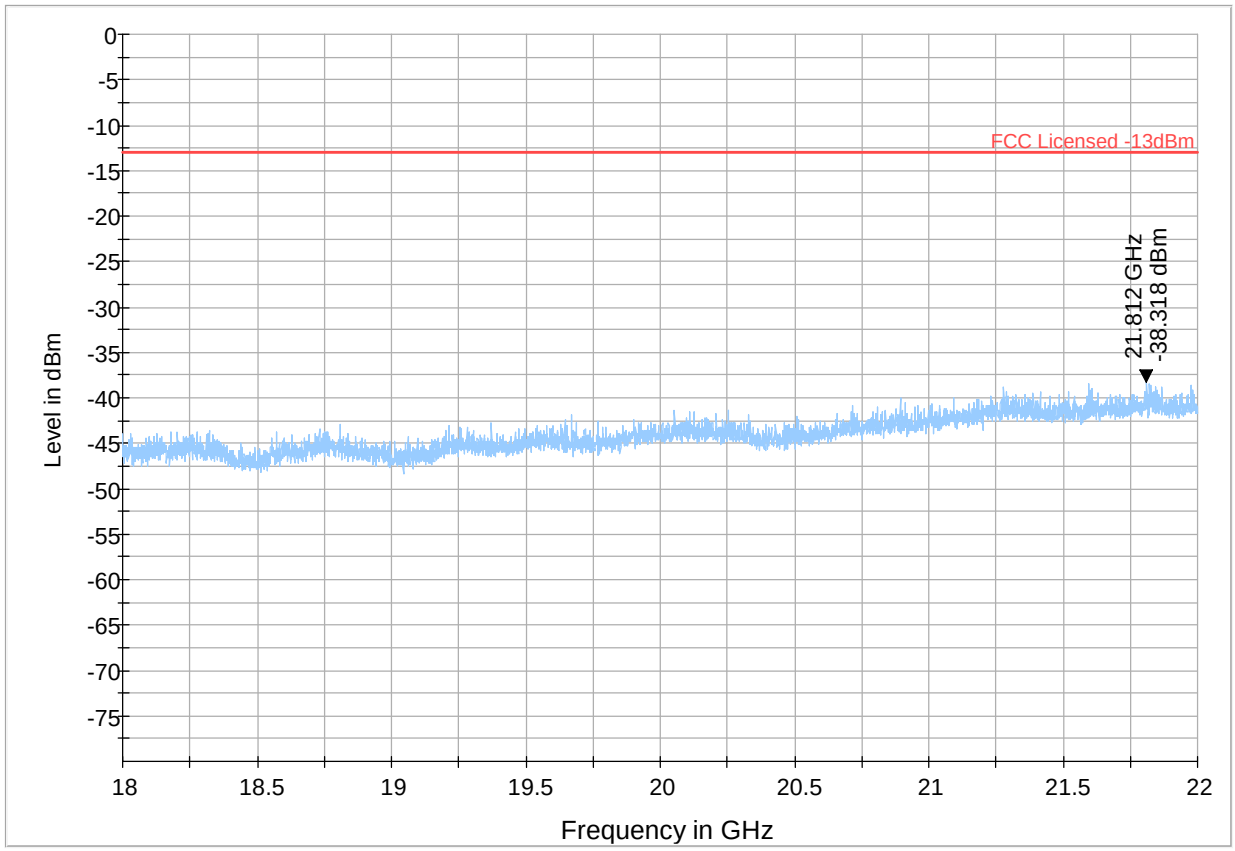
Final_Result

Frequency (MHz)	MaxPeak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB)	Raw Rec (dBµV)
3800.156	---	-46.925	---	---	500.0	1000.000	219.0	V	10.0	-101.8	6.2	-45.9	-62.1	54.9
3800.156	-44.483	---	-13.00	31.48	500.0	1000.000	219.0	V	10.0	-101.8	6.2	-45.9	-62.1	57.3
4749.844	-47.710	---	-13.00	34.71	500.0	1000.000	100.0	V	44.0	-99.6	7.0	-45.5	-61.1	51.8
4749.844	---	-53.497	---	---	500.0	1000.000	100.0	V	44.0	-99.6	7.0	-45.5	-61.1	46.1
5000.156	---	-43.268	---	---	500.0	1000.000	134.0	V	27.0	-99.4	7.5	-45.8	-61.1	56.2
5000.156	-41.136	---	-13.00	28.14	500.0	1000.000	134.0	V	27.0	-99.4	7.5	-45.8	-61.1	58.3
6650.156	-48.671	---	-13.00	35.67	500.0	1000.000	100.0	V	349.0	-97.5	8.4	-46.6	-59.3	48.9
6650.156	---	-53.284	---	---	500.0	1000.000	100.0	V	349.0	-97.5	8.4	-46.6	-59.3	44.3



PK+_MAXH — FCC Licensed -13dBm — Final_Result PK+ — Final_Result RMS

Plot # 6

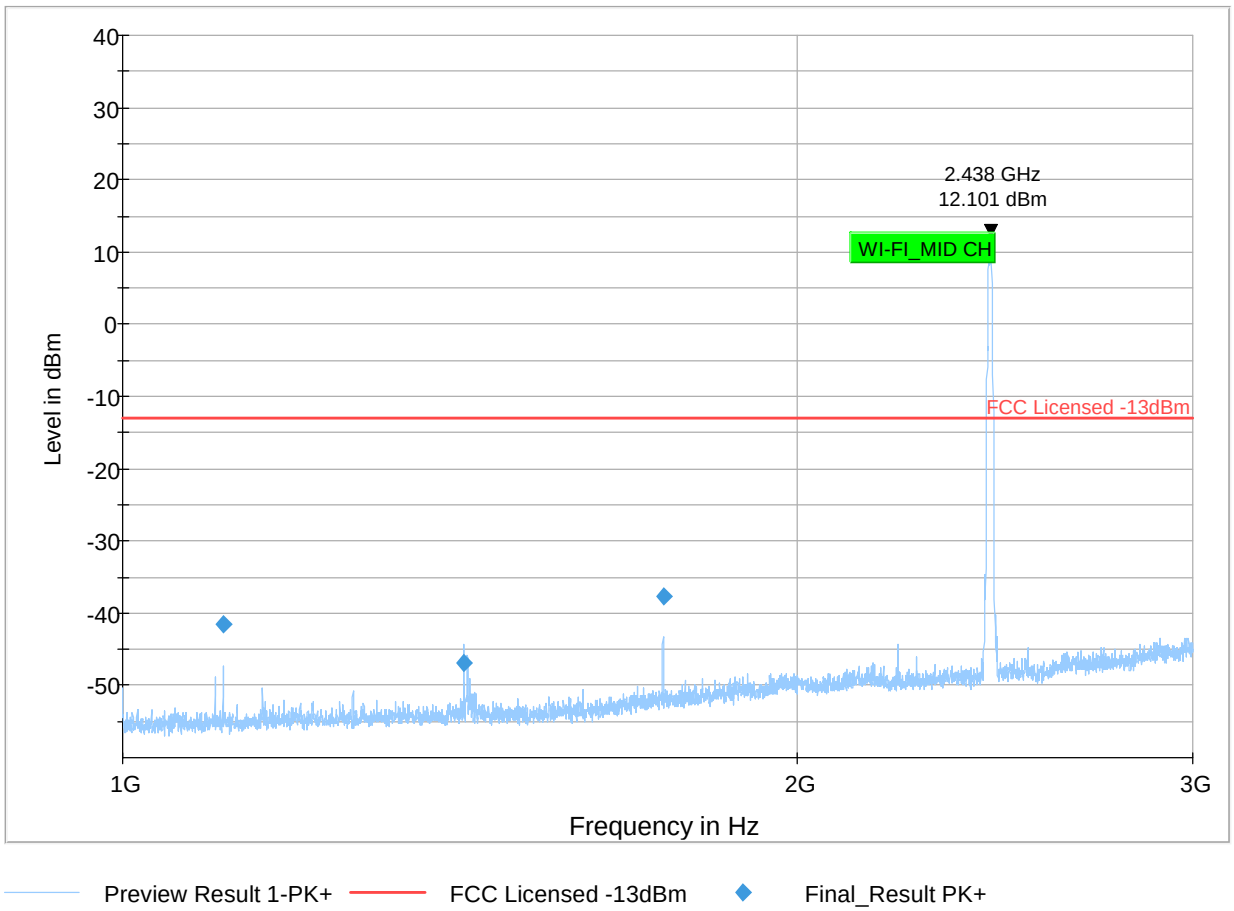


Preview Result 1-PK+ FCC Licensed -13dBm Final_Result PK+ Final_Result RM

Plot # 7

Final_Result

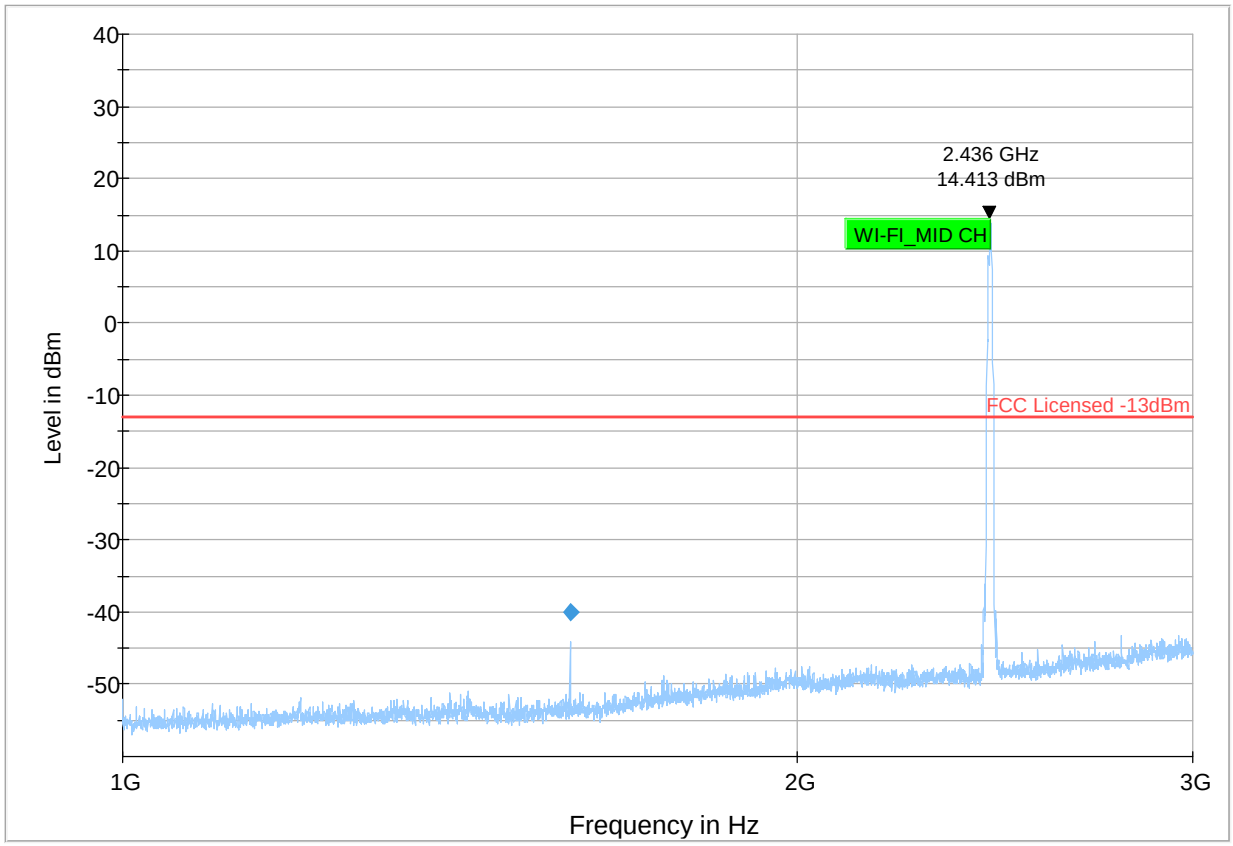
Frequency (MHz)	MaxPeak (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Comment
1108.500	-41.50	-13.00	28.50	500.0	1000.0	128.0	V	269.0	-93.4	
1420.000	-47.00	-13.00	34.00	500.0	1000.0	117.0	V	3.0	-92.5	
1741.750	-37.75	-13.00	24.75	500.0	1000.0	217.0	V	11.0	-90.7	



Plot # 8

Final_Result

Frequency (MHz)	MaxPeak (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Comment
1583.250	-40.09	-13.00	27.09	500.0	1000.0	100.0	V	324.0	-92.1	

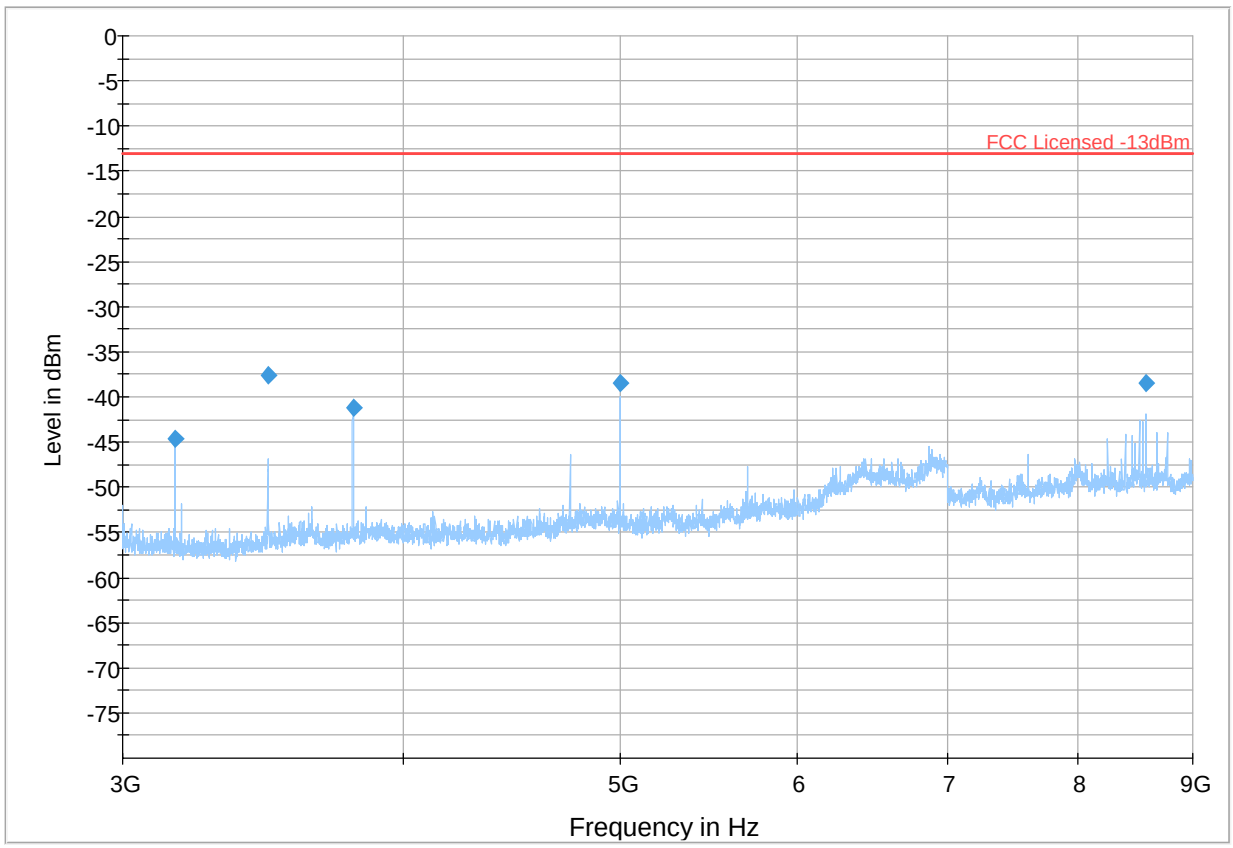


Preview Result 1-PK+ FCC Licensed -13dBm Final_Result PK+

Plot # 9

Final_Result

Frequency (MHz)	MaxPeak (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Comment
3167.000	-44.63	-13.00	31.63	500.0	1000.0	100.0	V	318.0	-101.9	
3483.750	-37.65	-13.00	24.65	500.0	1000.0	151.0	V	-19.0	-101.4	
3800.250	-41.15	-13.00	28.15	500.0	1000.0	127.0	V	0.0	-100.2	
5000.250	-38.52	-13.00	25.52	500.0	1000.0	100.0	V	33.0	-99.1	
8580.000	-38.48	-13.00	25.48	500.0	1000.0	185.0	V	-6.0	-92.6	

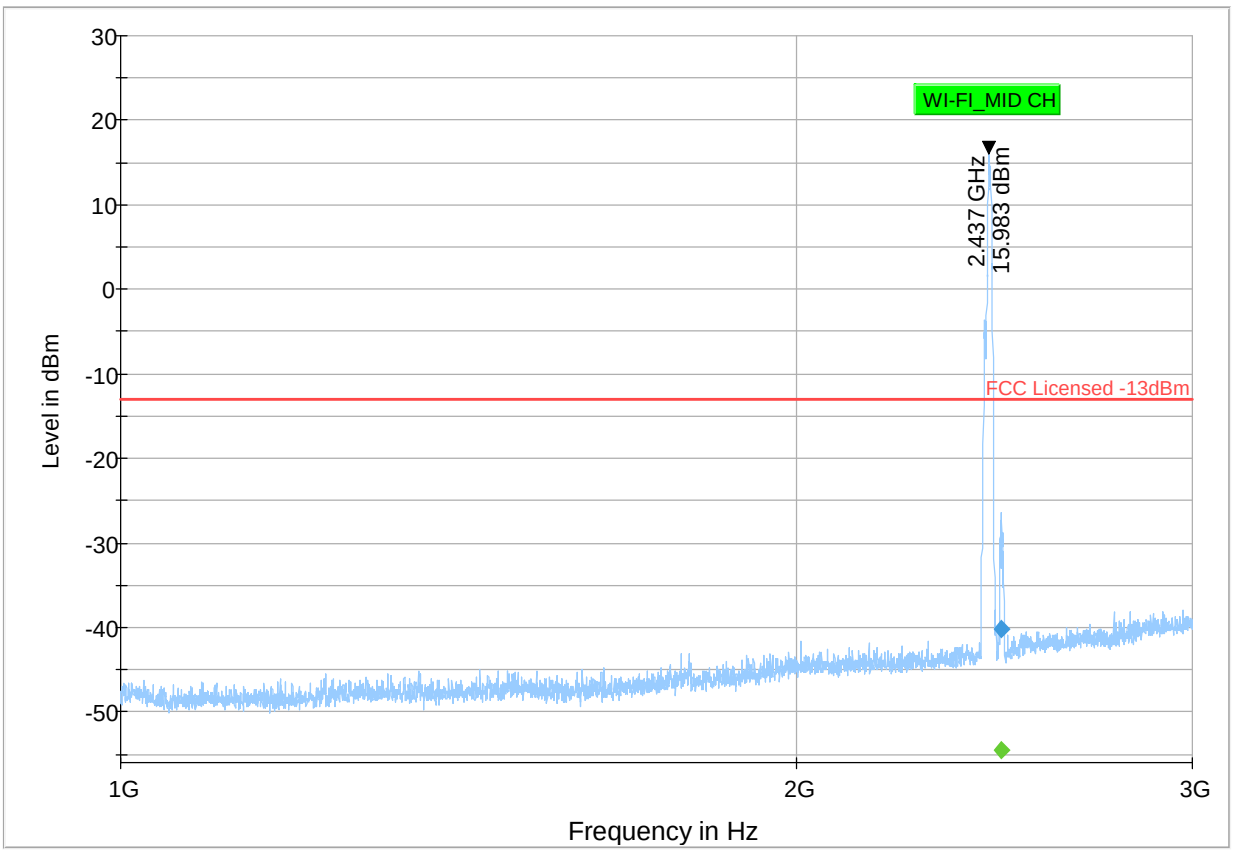


Preview Result 1-PK+ FCC Licensed -13dBm Final_Result PK+

Plot # 10

Final_Result

Frequency (MHz)	MaxPeak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB)	Raw Rec (dBµV)
2468.000	---	-54.542	---	---	500.0	1000.000	284.0	H	301.0	-61.4	5.5	0.0	-66.9	6.9
2468.000	-40.230	---	-13.00	27.23	500.0	1000.000	284.0	H	301.0	-61.4	5.5	0.0	-66.9	21.2

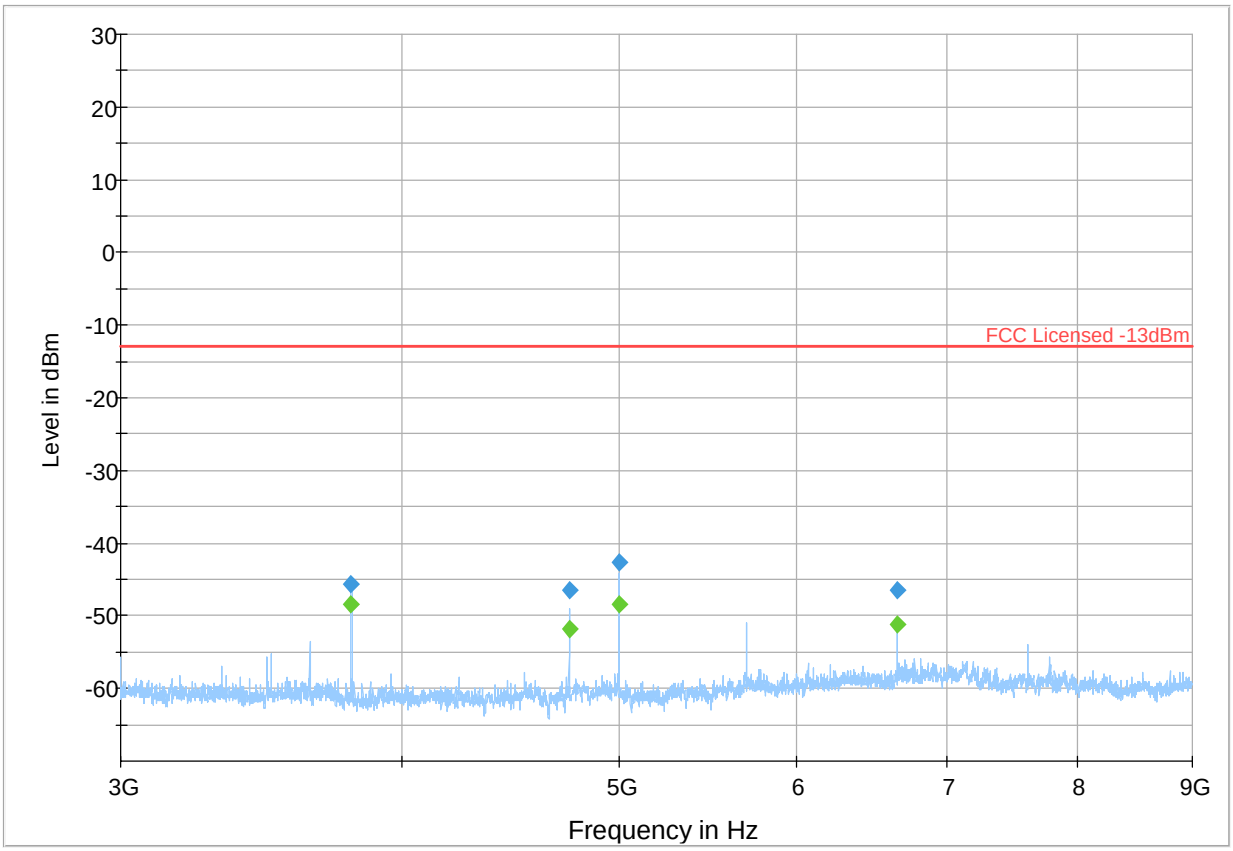


Preview Result 1-PK+ FCC Licensed -13dBm Final_Result PK+ Final_Result RMS

Plot # 11

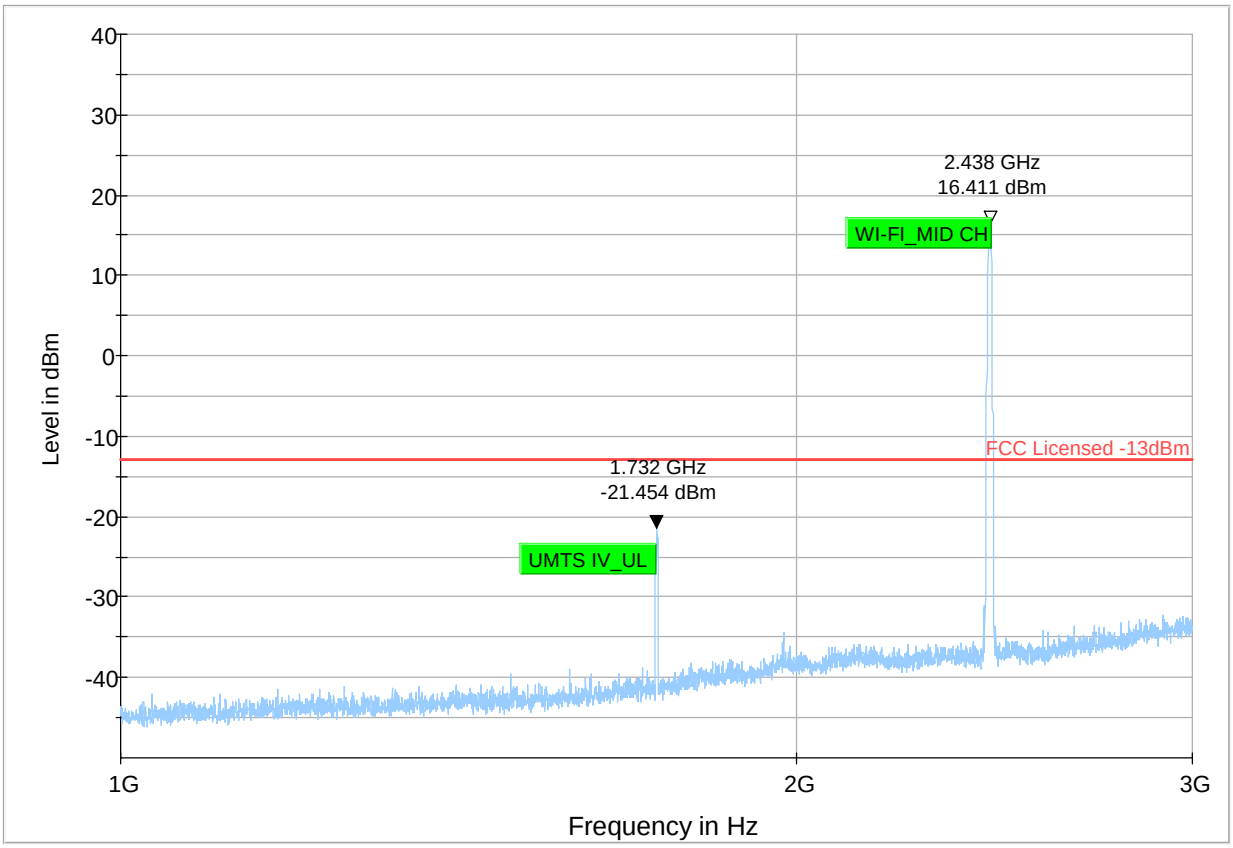
Final_Result

Frequency (MHz)	MaxPeak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB)	Raw Rec (dBµV)
3800.000	---	-48.422	---	---	500.0	1000.000	345.0	V	350.0	-101.8	6.2	-45.9	-62.1	53.4
3800.000	-45.706	---	-13.00	32.71	500.0	1000.000	345.0	V	350.0	-101.8	6.2	-45.9	-62.1	56.1
4750.000	-46.544	---	-13.00	33.54	500.0	1000.000	158.0	V	30.0	-99.6	7.0	-45.5	-61.1	53.0
4750.000	---	-51.738	---	---	500.0	1000.000	158.0	V	30.0	-99.6	7.0	-45.5	-61.1	47.8
4999.750	---	-48.378	---	---	500.0	1000.000	134.0	V	29.0	-99.4	7.5	-45.8	-61.1	51.1
4999.750	-42.723	---	-13.00	29.72	500.0	1000.000	134.0	V	29.0	-99.4	7.5	-45.8	-61.1	56.7
6650.250	-46.408	---	-13.00	33.41	500.0	1000.000	285.0	V	-19.0	-97.5	8.4	-46.6	-59.3	51.1
6650.250	---	-51.112	---	---	500.0	1000.000	285.0	V	-19.0	-97.5	8.4	-46.6	-59.3	46.4



Preview Result 1-PK+ FCC Licensed -13dBm Final_Result PK+ Final_Result RM

Plot # 12

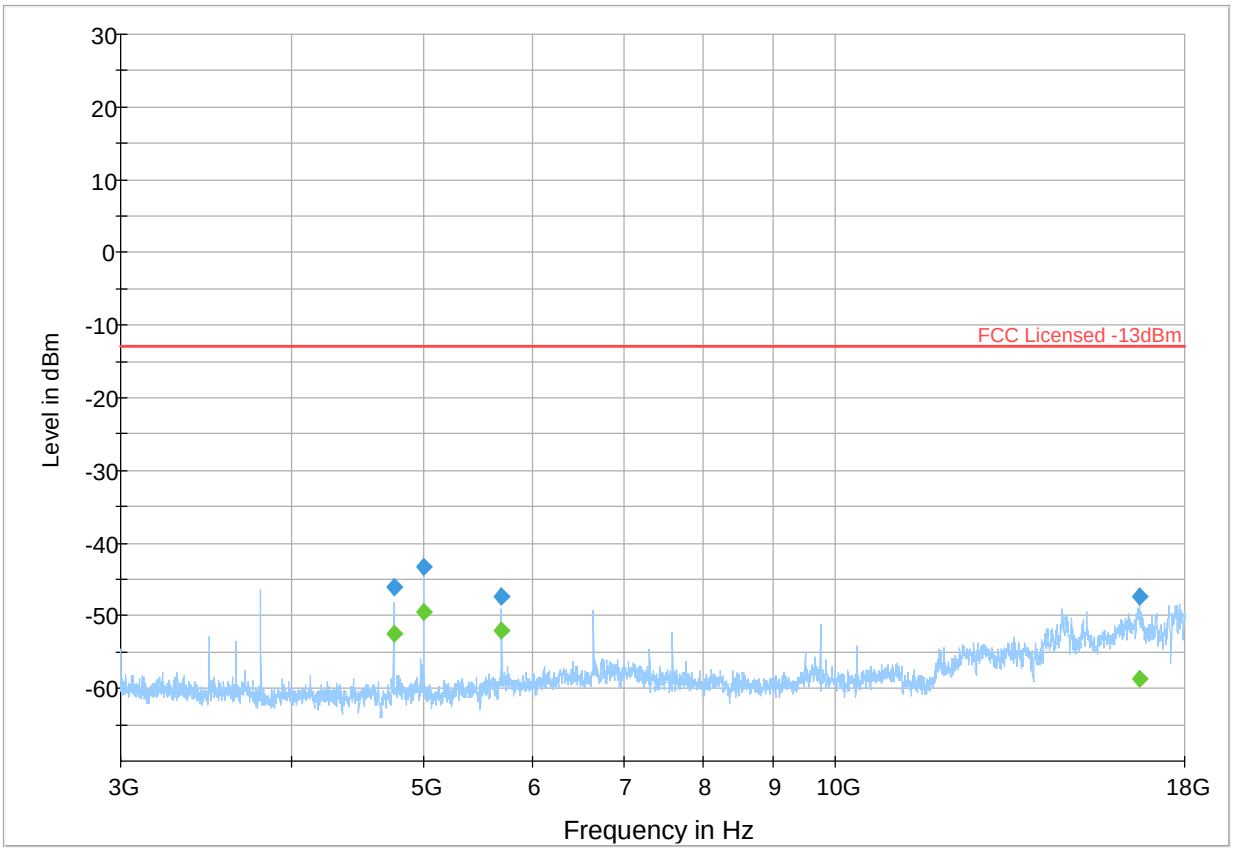


PK+_MAXH FCC Licensed -13dBm Final_Result PK+ Final_Result RMS

Plot # 13

Final_Result

Frequency (MHz)	MaxPeak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB)	Raw Rec (dBµV)
4749.844	-46.033	---	-13.00	33.03	500.0	1000.000	117.0	V	26.0	-99.6	7.0	-45.5	-61.1	53.5
4749.844	---	-52.440	-13.00	39.44	500.0	1000.000	117.0	V	26.0	-99.6	7.0	-45.5	-61.1	47.1
4999.688	-43.234	---	-13.00	30.23	500.0	1000.000	133.0	V	29.0	-99.4	7.5	-45.8	-61.1	56.2
4999.688	---	-49.446	-13.00	36.45	500.0	1000.000	133.0	V	29.0	-99.4	7.5	-45.8	-61.1	50.0
5700.000	---	-52.092	-13.00	39.09	500.0	1000.000	289.0	V	337.0	-97.8	7.7	-45.4	-60.2	45.7
5700.000	-47.363	---	-13.00	34.36	500.0	1000.000	289.0	V	337.0	-97.8	7.7	-45.4	-60.2	50.5
16681.406	---	-58.659	-13.00	45.66	500.0	1000.000	305.0	V	3.0	-81.0	15.2	-42.2	-54.0	22.3
16681.406	-47.446	---	-13.00	34.45	500.0	1000.000	305.0	V	3.0	-81.0	15.2	-42.2	-54.0	33.5

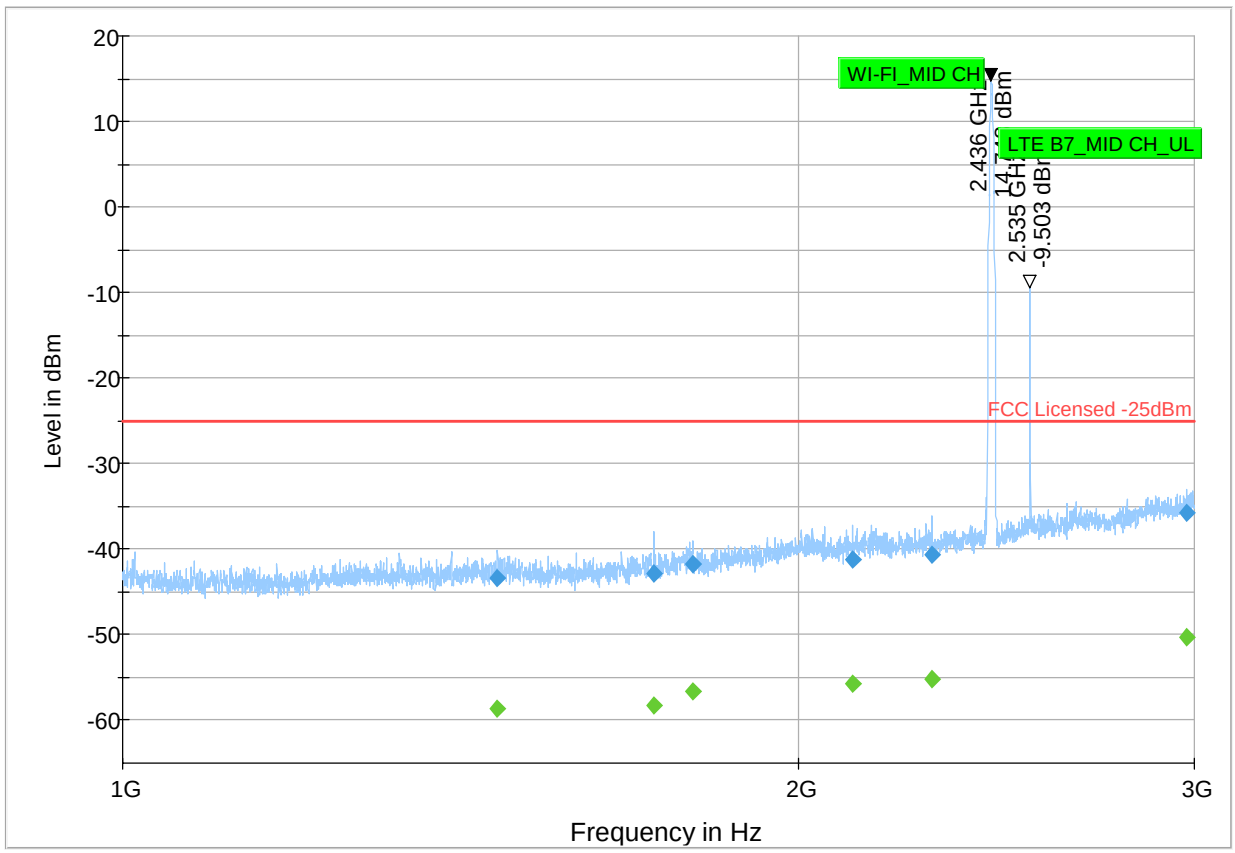


Preview Result 1-PK+ FCC Licensed -13dBm Final_Result PK+ Final_Result RMS

Plot # 14

Final_Result

Frequency (MHz)	MaxPeak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB)	Raw Rec (dBµV)
1468.750	-43.326	---	-25.00	18.33	500.0	1000.000	227.0	H	48.0	-65.5	4.5	0.0	-70.0	22.2
1468.750	---	-58.707	---	---	500.0	1000.000	227.0	H	48.0	-65.5	4.5	0.0	-70.0	6.8
1724.500	---	-58.297	---	---	500.0	1000.000	100.0	V	32.0	-64.1	5.0	0.0	-69.1	5.8
1724.500	-42.792	---	-25.00	17.79	500.0	1000.000	100.0	V	32.0	-64.1	5.0	0.0	-69.1	21.3
1793.250	-41.745	---	-25.00	16.75	500.0	1000.000	129.0	V	32.0	-63.7	5.0	0.0	-68.7	22.0
1793.250	---	-56.690	---	---	500.0	1000.000	129.0	V	32.0	-63.7	5.0	0.0	-68.7	7.0
2113.500	---	-55.717	---	---	500.0	1000.000	259.0	H	83.0	-62.5	5.3	0.0	-67.8	6.8
2113.500	-41.147	---	-25.00	16.15	500.0	1000.000	259.0	H	83.0	-62.5	5.3	0.0	-67.8	21.4
2292.000	-40.587	---	-25.00	15.59	500.0	1000.000	236.0	V	308.0	-62.1	5.5	0.0	-67.6	21.5
2292.000	---	-55.260	---	---	500.0	1000.000	236.0	V	308.0	-62.1	5.5	0.0	-67.6	6.8
2976.500	-35.829	---	-25.00	10.83	500.0	1000.000	315.0	V	96.0	-59.4	6.0	0.0	-65.5	23.6
2976.500	---	-50.270	---	---	500.0	1000.000	315.0	V	96.0	-59.4	6.0	0.0	-65.5	9.1

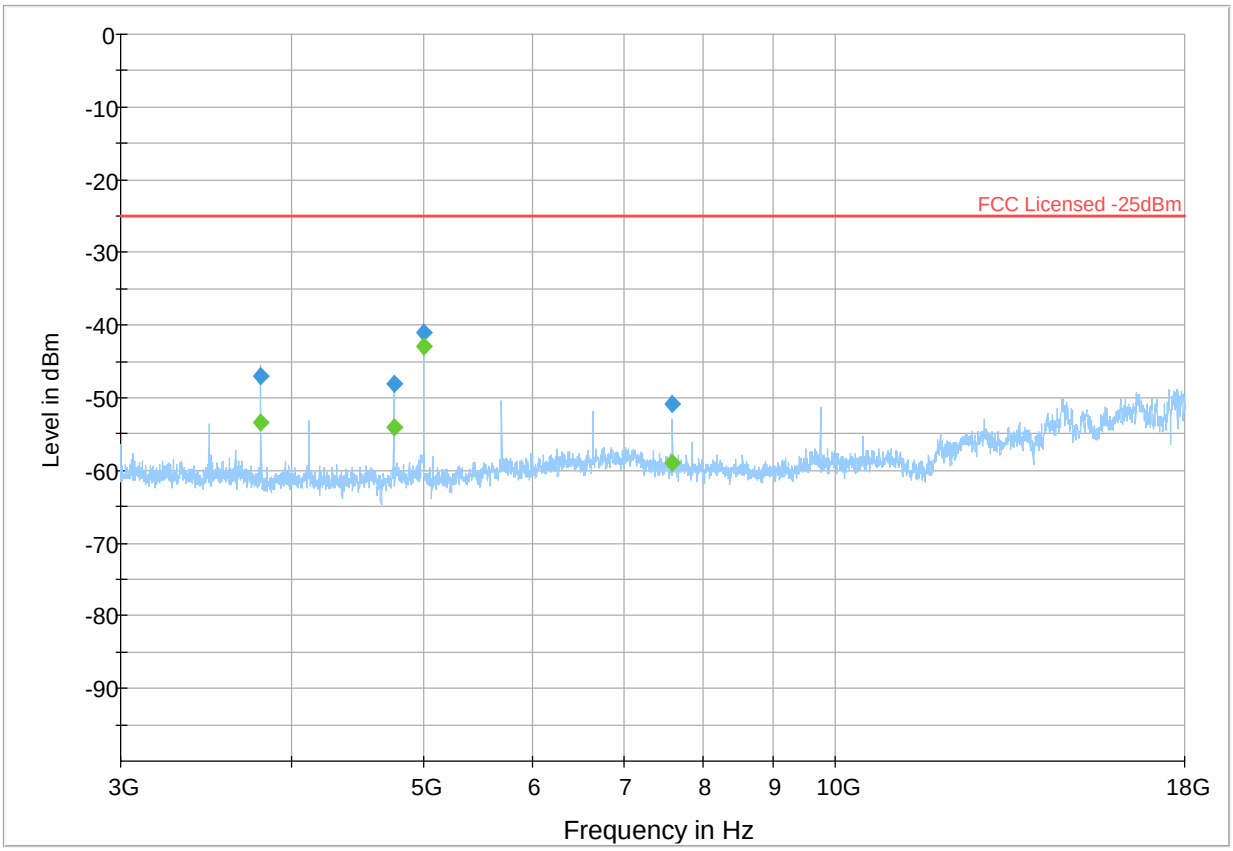


Preview Result 1-PK+ FCC Licensed -25dBm Final_Result PK+ Final_Result RM

Plot # 15

Final_Result

Frequency (MHz)	MaxPeak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB)	Raw Rec (dBµV)
3799.688	---	-53.469	---	---	500.0	1000.000	278.0	V	8.0	-101.8	6.2	-45.9	-62.1	48.3
3799.688	-46.965	---	-25.00	21.97	500.0	1000.000	278.0	V	8.0	-101.8	6.2	-45.9	-62.1	54.8
4749.844	-47.986	---	-25.00	22.99	500.0	1000.000	100.0	V	26.0	-99.6	7.0	-45.5	-61.1	51.6
4749.844	---	-53.955	---	---	500.0	1000.000	100.0	V	26.0	-99.6	7.0	-45.5	-61.1	45.6
5000.156	---	-42.954	---	---	500.0	1000.000	370.0	V	22.0	-99.4	7.5	-45.8	-61.1	56.5
5000.156	-41.104	---	-25.00	16.10	500.0	1000.000	370.0	V	22.0	-99.4	7.5	-45.8	-61.1	58.3
7599.844	-50.882	---	-25.00	25.88	500.0	1000.000	186.0	V	29.0	-96.2	9.7	-46.6	-59.3	45.3
7599.844	---	-58.889	---	---	500.0	1000.000	186.0	V	29.0	-96.2	9.7	-46.6	-59.3	37.3

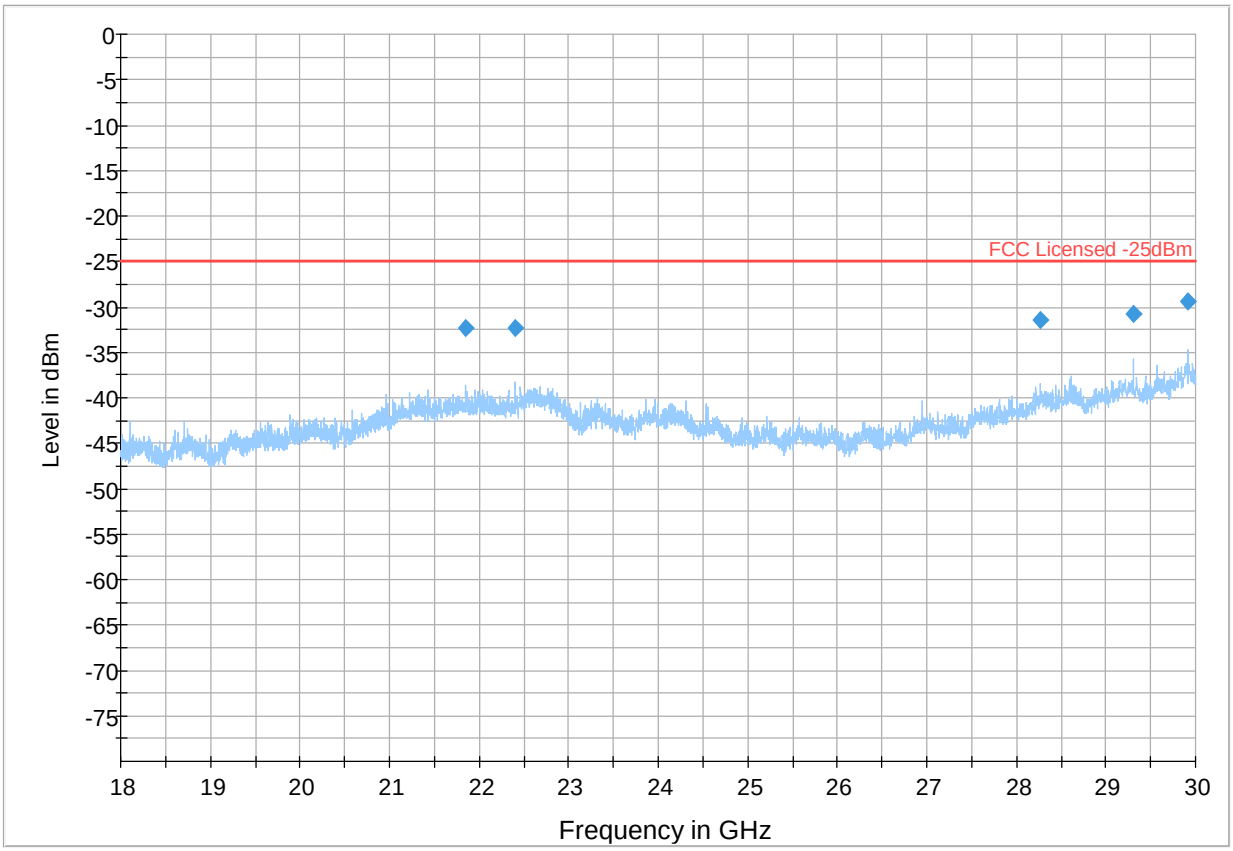


Preview Result 1-PK+ FCC Licensed -25dBm Final_Result PK+ Final_Result RMS

Plot # 16

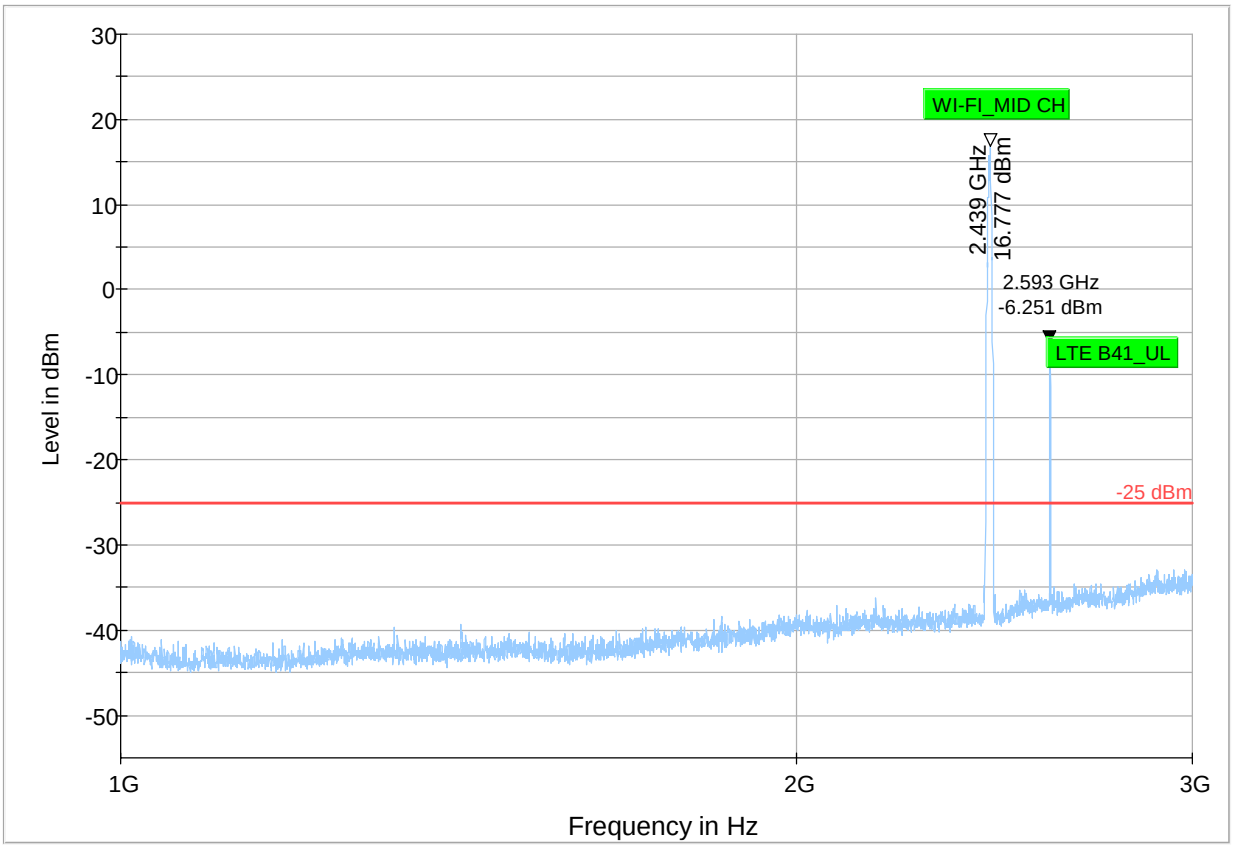
Final_Result

Frequency (MHz)	MaxPeak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB)	Raw Rec (dBµV)
21851.250	-32.274	---	-25.00	7.27	500.0	1000.000	208.0	H	22.0	-76.0	9.6	0.0	-85.6	43.7
22404.750	-32.327	---	-25.00	7.33	500.0	1000.000	301.0	V	293.0	-75.9	9.8	0.0	-85.7	43.5
28270.500	-31.515	---	-25.00	6.52	500.0	1000.000	208.0	V	358.0	-75.1	10.5	0.0	-85.6	43.6
29305.125	-30.705	---	-25.00	5.71	500.0	1000.000	145.0	V	7.0	-73.1	10.4	0.0	-83.5	42.4
29916.000	-29.476	---	-25.00	4.48	500.0	1000.000	315.0	H	140.0	-72.1	10.4	0.0	-82.5	42.6



Preview Result 1-PK+ FCC Licensed -25dBm Final_Result PK+ Final_Result RM

Plot # 17

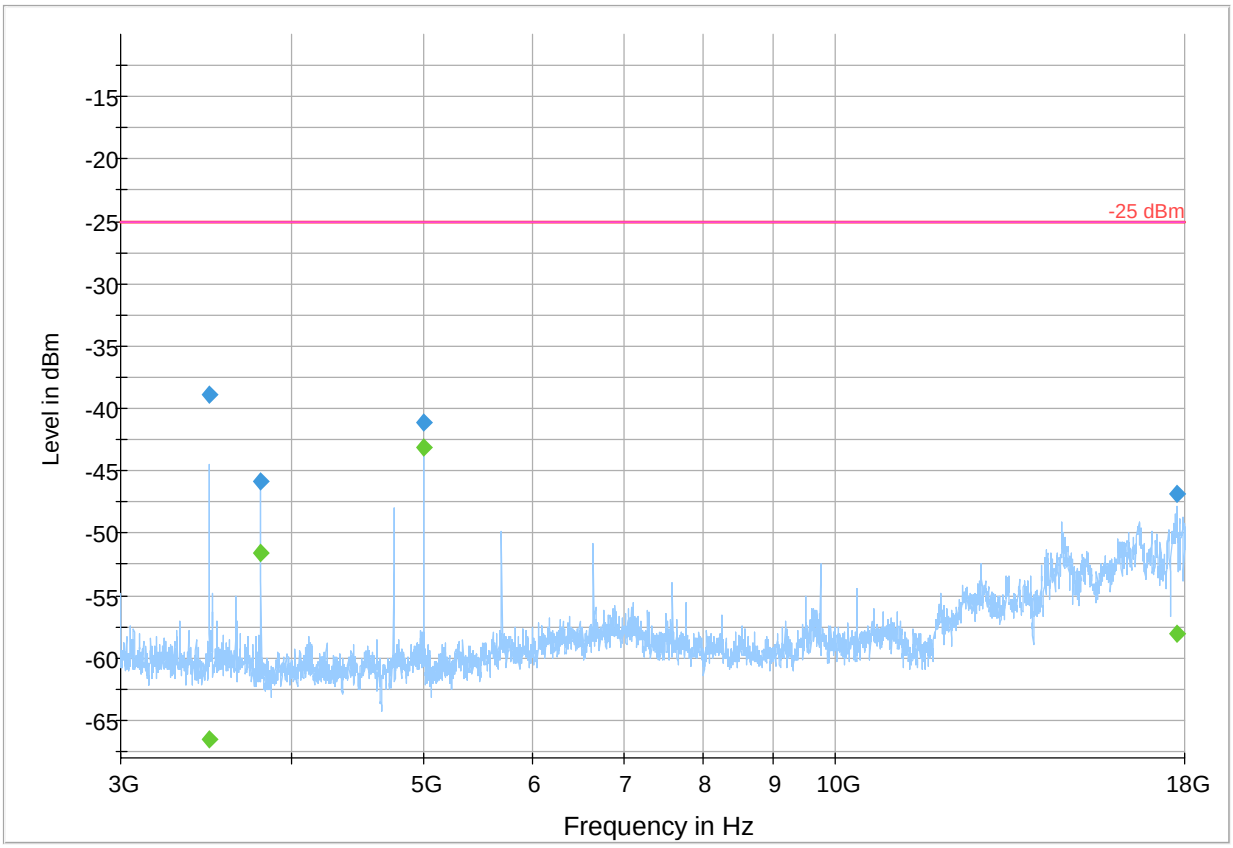


PK+_MAXH -25 dBm Final_Result PK+ Final_Result RMS

Plot # 18

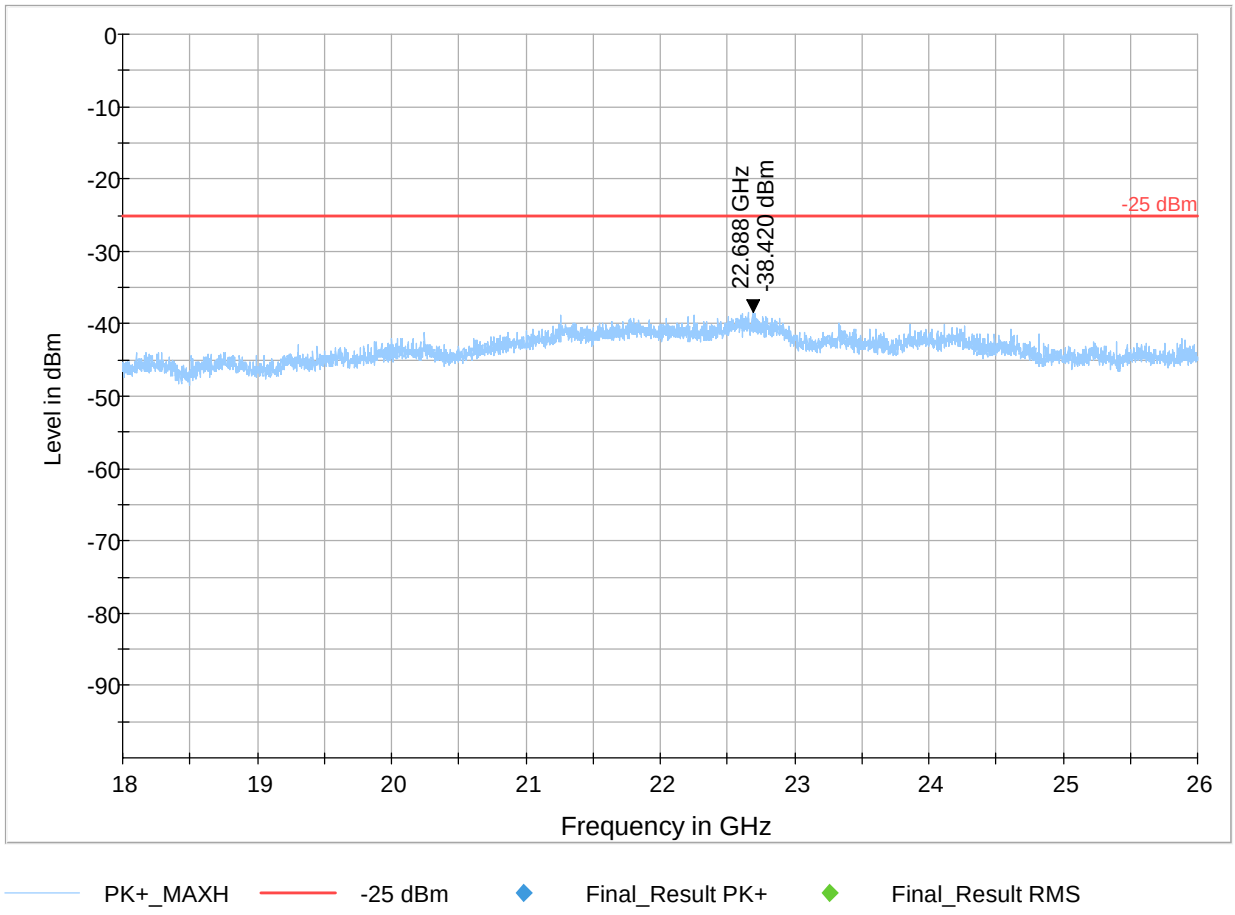
Final_Result

Frequency (MHz)	MaxPeak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB)	Raw Rec (dBµV)
3483.281	---	-66.543	-25.00	41.54	500.0	1000.000	100.0	V	-23.0	-102.4	6.1	-46.1	-62.4	35.9
3483.281	-38.920	---	-25.00	13.92	500.0	1000.000	100.0	V	-23.0	-102.4	6.1	-46.1	-62.4	63.5
3799.688	---	-51.607	-25.00	26.61	500.0	1000.000	208.0	V	358.0	-101.8	6.2	-45.9	-62.1	50.2
3799.688	-45.839	---	-25.00	20.84	500.0	1000.000	208.0	V	358.0	-101.8	6.2	-45.9	-62.1	56.0
5000.156	-41.123	---	-25.00	16.12	500.0	1000.000	125.0	V	28.0	-99.4	7.5	-45.8	-61.1	58.3
5000.156	---	-43.046	-25.00	18.05	500.0	1000.000	125.0	V	28.0	-99.4	7.5	-45.8	-61.1	56.4
17774.531	-46.806	---	-25.00	21.81	500.0	1000.000	244.0	V	46.0	-80.0	16.4	-42.6	-53.7	33.2
17774.531	---	-58.069	-25.00	33.07	500.0	1000.000	244.0	V	46.0	-80.0	16.4	-42.6	-53.7	21.9

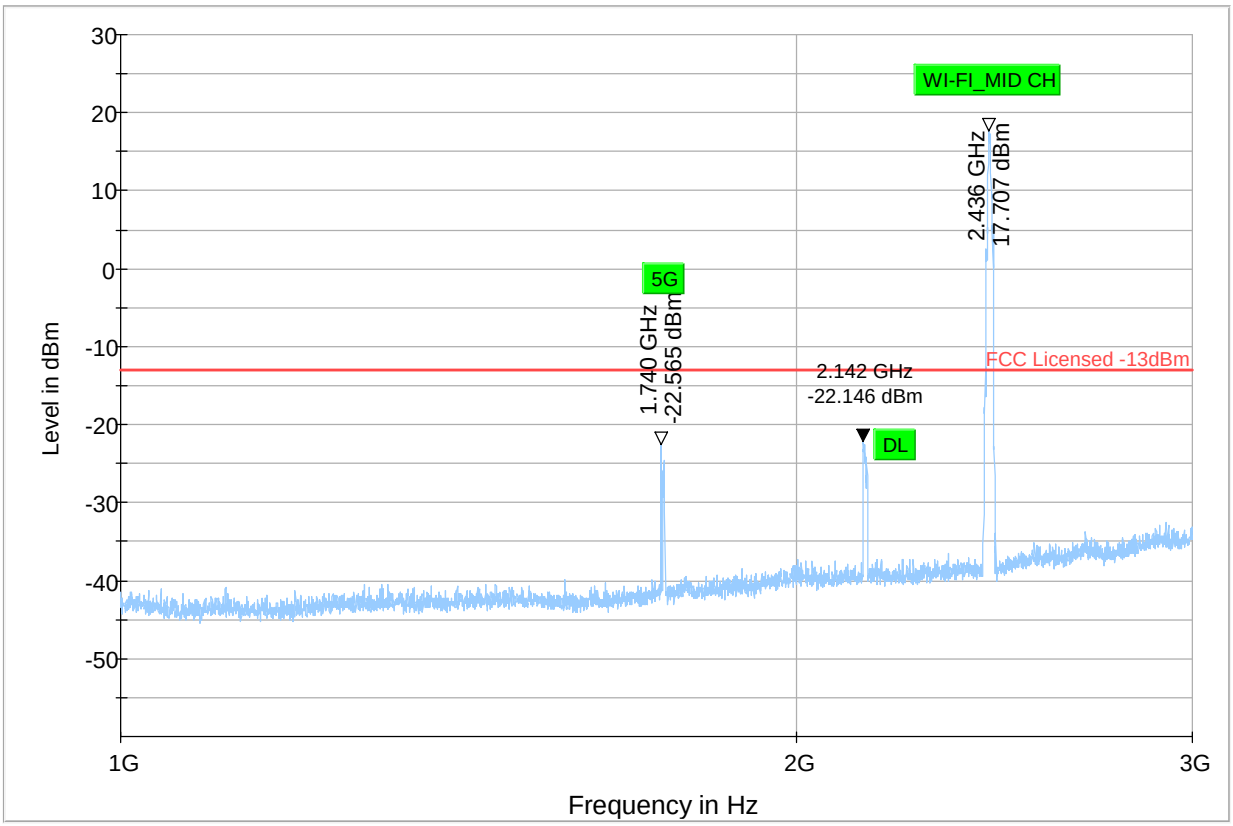


PK+_MAXH -25 dBm -25 dBm Final_Result PK+ Final_Result RM

Plot # 19


0
-10
-20
-30
-40
-50
-60
-70
-80
-90
Level in dBm
22.688 GHz
-38.420 dBm
-25 dBm
18
19
20
21
22
23
24
25
26
Frequency in GHz
PK+_MAXH
-25 dBm
Final_Result PK+
Final_Result RMS

Plot # 20

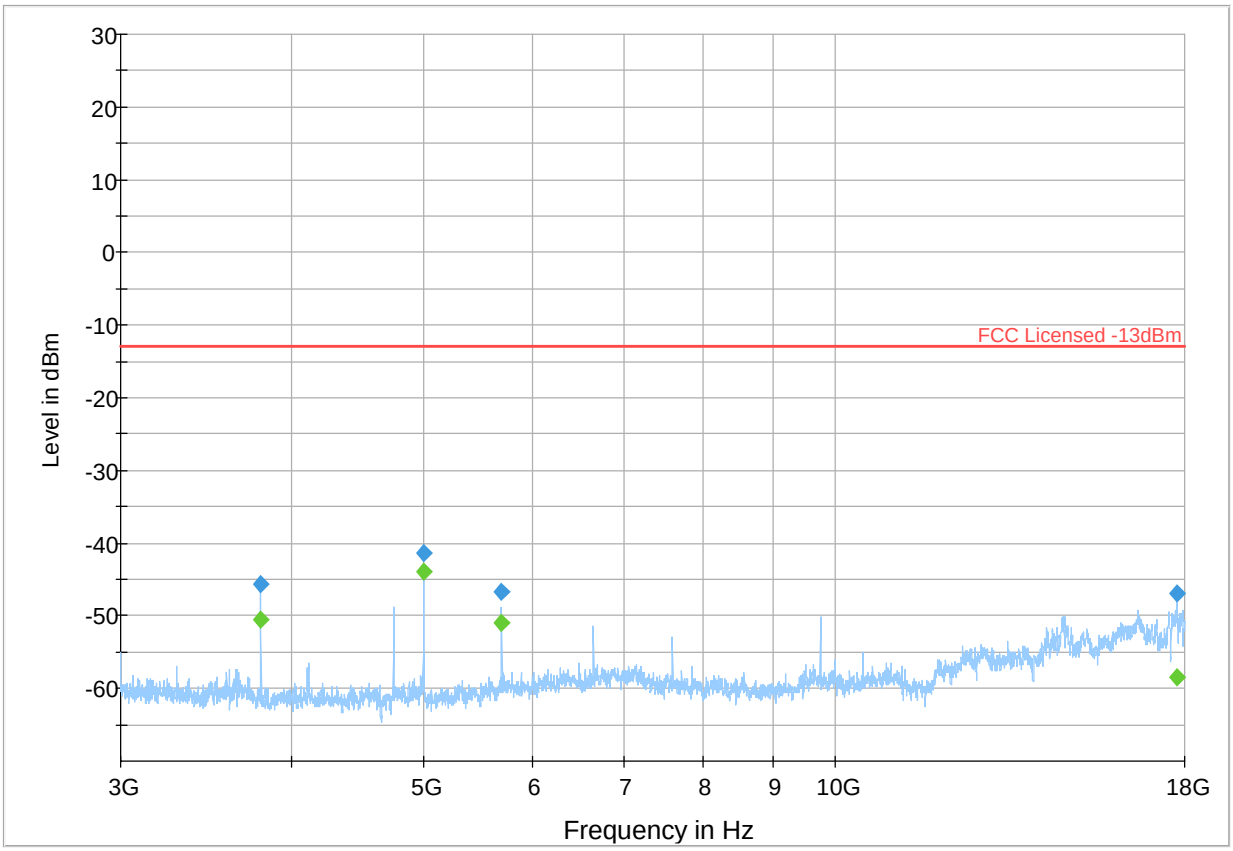


PK+_MAXH
Final_Result PK+
PK+
Final_Result RMS
FCC Licensed -13dBm

Plot # 21

Final_Result

Frequency (MHz)	MaxPeak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB)	Raw Rec (dBµV)
3799.688	-45.738	---	-13.00	32.74	500.0	1000.000	243.0	V	357.0	-101.8	6.2	-45.9	-62.1	56.1
3799.688	---	-50.627	-13.00	37.63	500.0	1000.000	243.0	V	357.0	-101.8	6.2	-45.9	-62.1	51.2
5000.156	-41.393	---	-13.00	28.39	500.0	1000.000	100.0	V	34.0	-99.4	7.5	-45.8	-61.1	58.1
5000.156	---	-43.867	-13.00	30.87	500.0	1000.000	100.0	V	34.0	-99.4	7.5	-45.8	-61.1	55.6
5700.000	-46.676	---	-13.00	33.68	500.0	1000.000	348.0	V	343.0	-97.8	7.7	-45.4	-60.2	51.2
5700.000	---	-50.983	-13.00	37.98	500.0	1000.000	348.0	V	343.0	-97.8	7.7	-45.4	-60.2	46.9
17774.063	-46.887	---	-13.00	33.89	500.0	1000.000	117.0	V	273.0	-80.0	16.4	-42.6	-53.7	33.1
17774.063	---	-58.390	-13.00	45.39	500.0	1000.000	117.0	V	273.0	-80.0	16.4	-42.6	-53.7	21.6

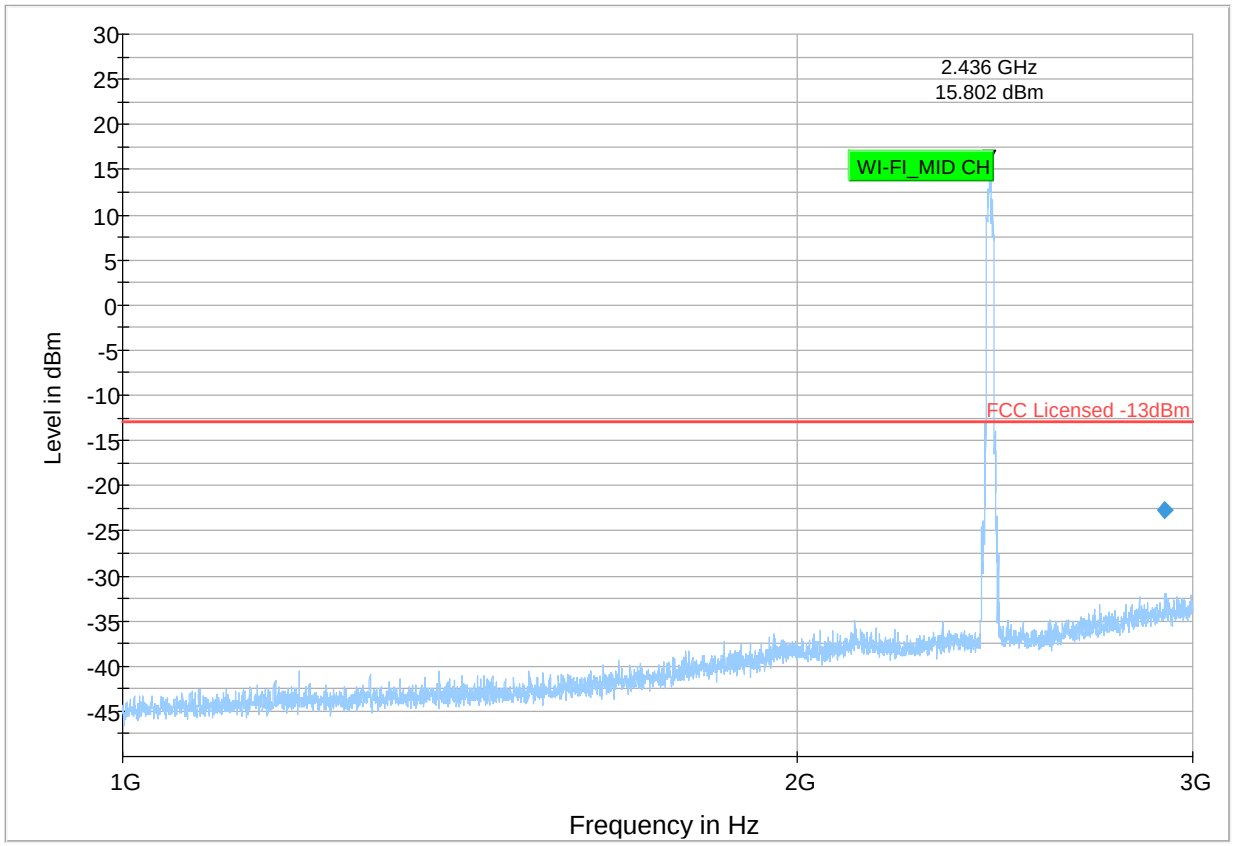


Preview Result 1-PK+ FCC Licensed -13dBm Final_Result PK+ Final_Result RM

Plot # 22

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
2915.750	-22.71	---	-13.00	9.71	500.0	1000.0	171.0	V	224.0	-60.1	

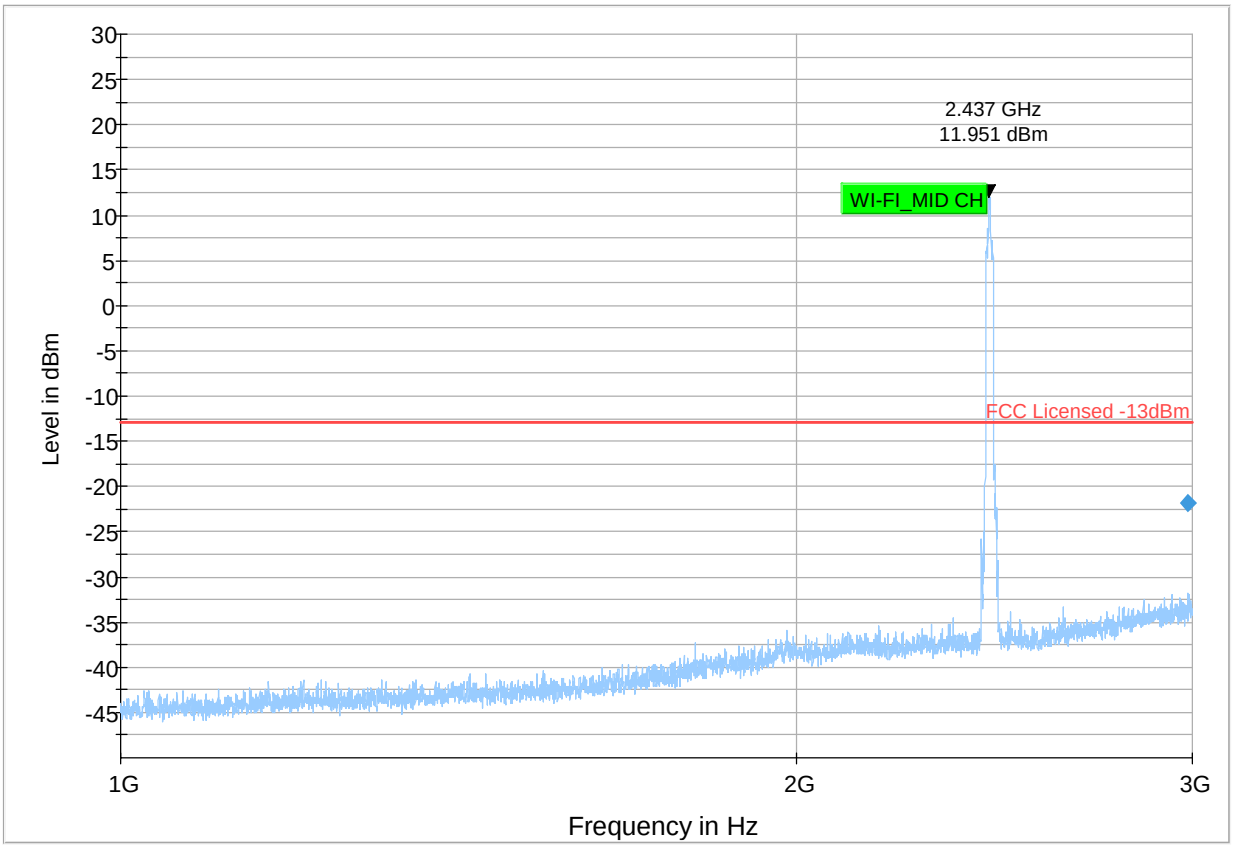


Preview Result 1-PK+ FCC Licensed -13dBm Final_Result PK+ Final_Result RMS

Plot # 23

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
2985.250	-21.80	---	-13.00	8.80	500.0	1000.0	350.0	V	304.0	-59.8	

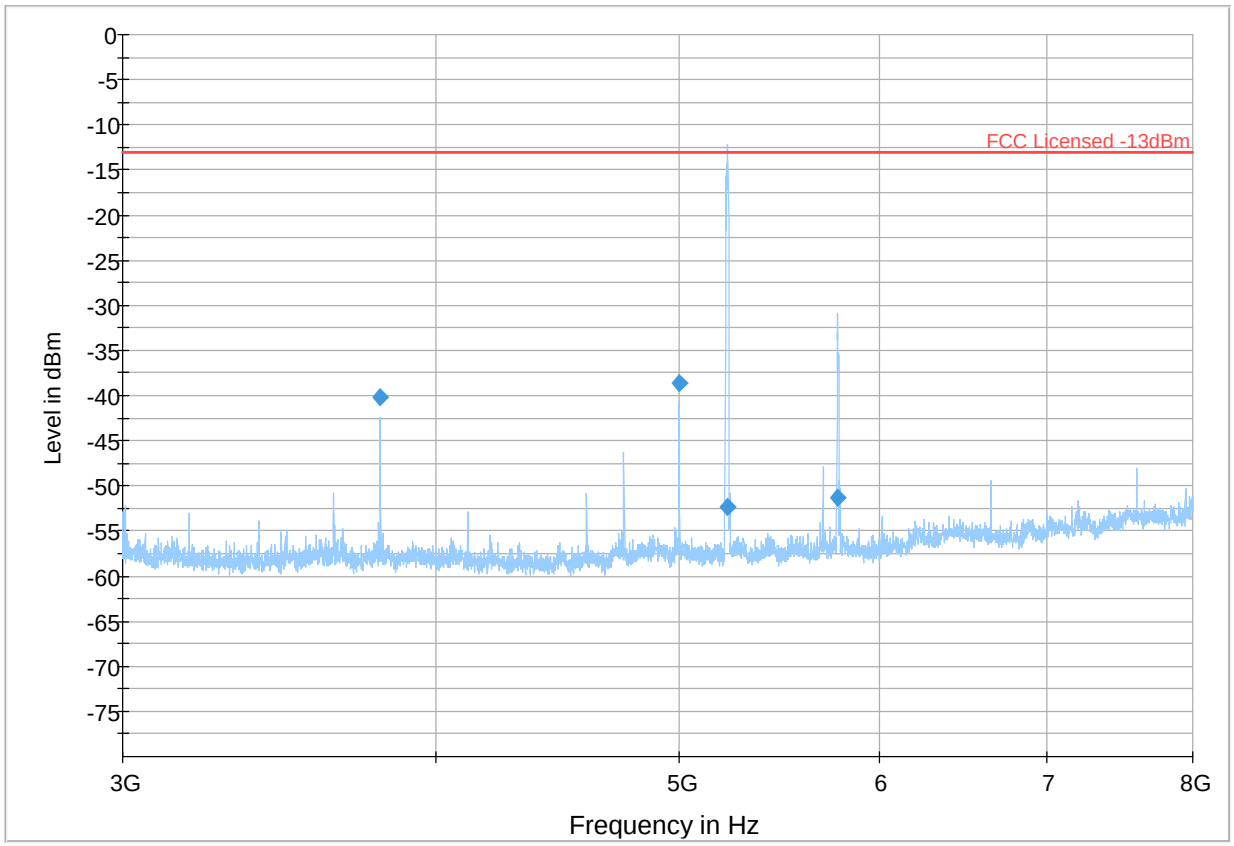


PK+_MAXH FCC Licensed -13dBm Final_Result PK+ Final_Result RMS

Plot # 24

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
3800.156	-40.21	---	-13.00	27.21	500.0	1000.0	152.0	V	346.0	-100.2	
5000.313	-38.70	---	-13.00	25.70	500.0	1000.0	139.0	V	37.0	-99.1	
5225.469	-52.28	---	-13.00	39.28	500.0	1000.0	335.0	V	153.0	-99.2	
5776.250	-51.34	---	-13.00	38.34	500.0	1000.0	375.0	V	224.0	-98.2	

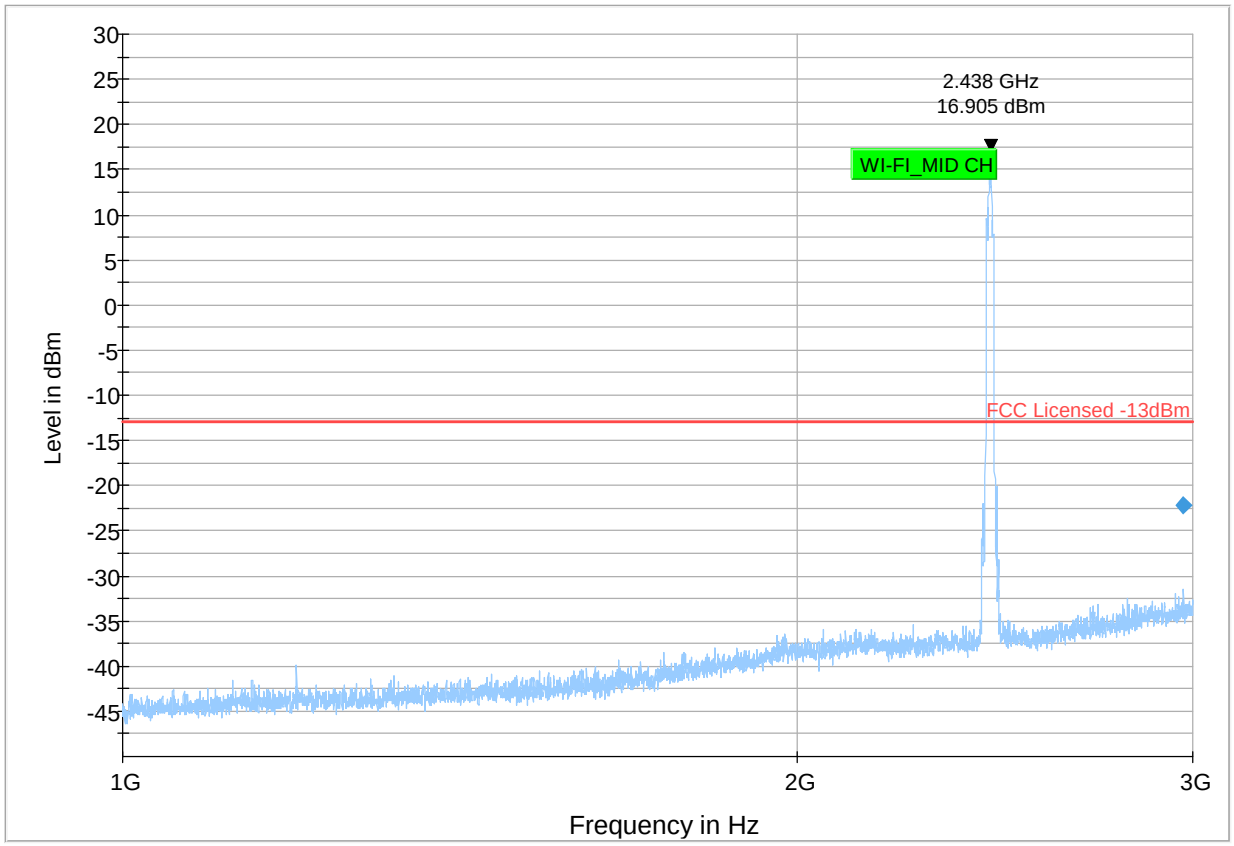


Preview Result 1-PK+ FCC Licensed -13dBm Final_Result PK+ Final_Result RMS

Plot # 25

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
2973.250	-22.20	---	-13.00	9.20	500.0	1000.0	339.0	H	266.0	-60.3	

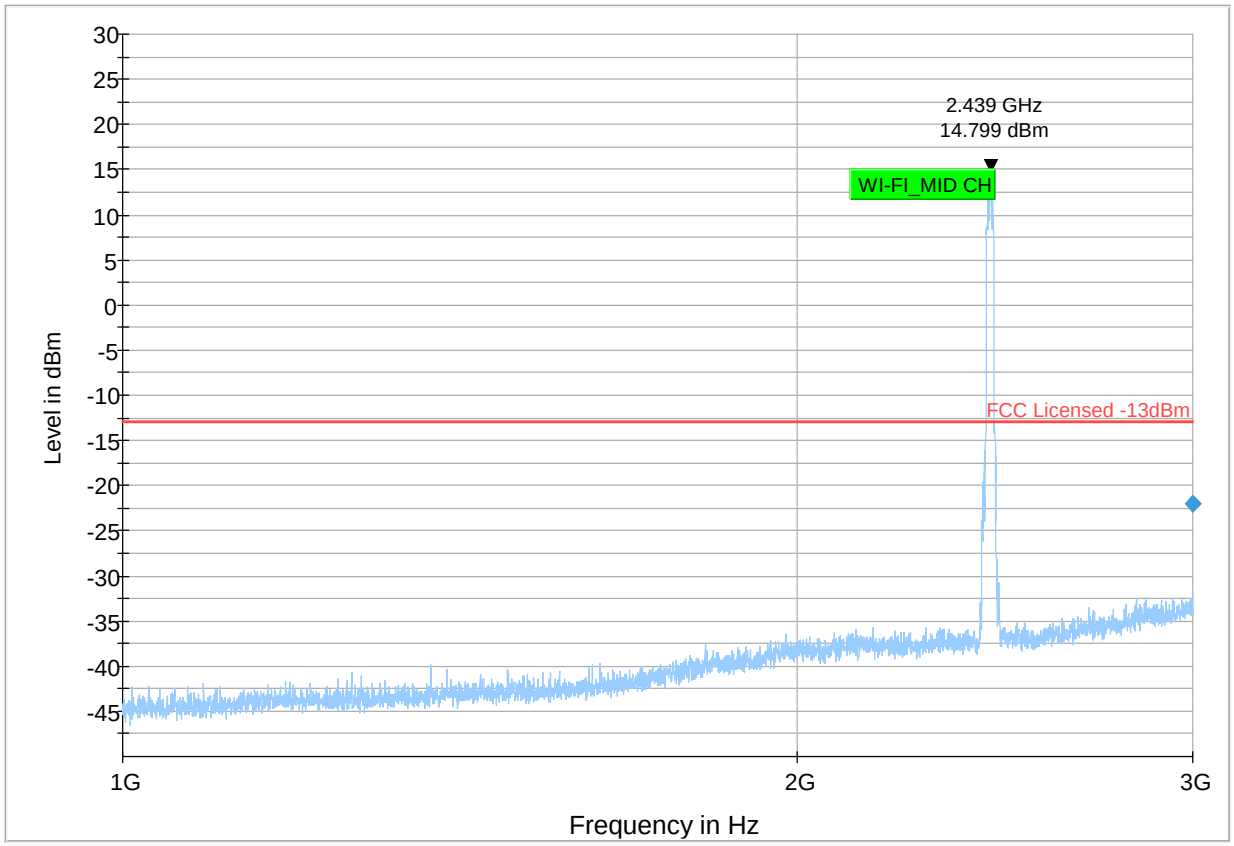


Preview Result 1-PK+ FCC Licensed -13dBm Final_Result PK+ Final_Result RMS

Plot # 26

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
2997.750	-21.97	---	-13.00	8.97	500.0	1000.0	372.0	V	334.0	-59.7	

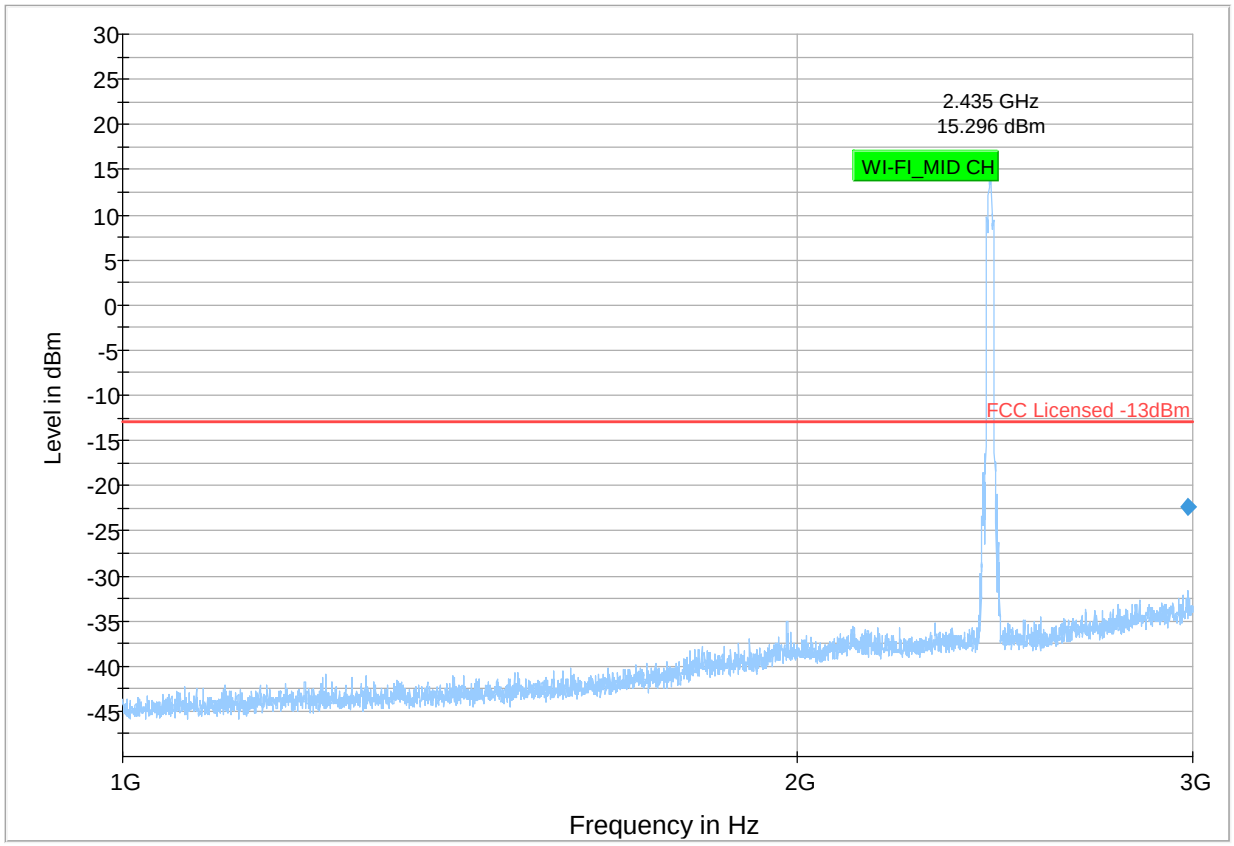


Preview Result 1-PK+ FCC Licensed -13dBm Final_Result PK+ Final_Result RMS

Plot # 27

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
2985.750	-22.32	---	-13.00	9.32	500.0	1000.0	163.0	V	236.0	-59.8	

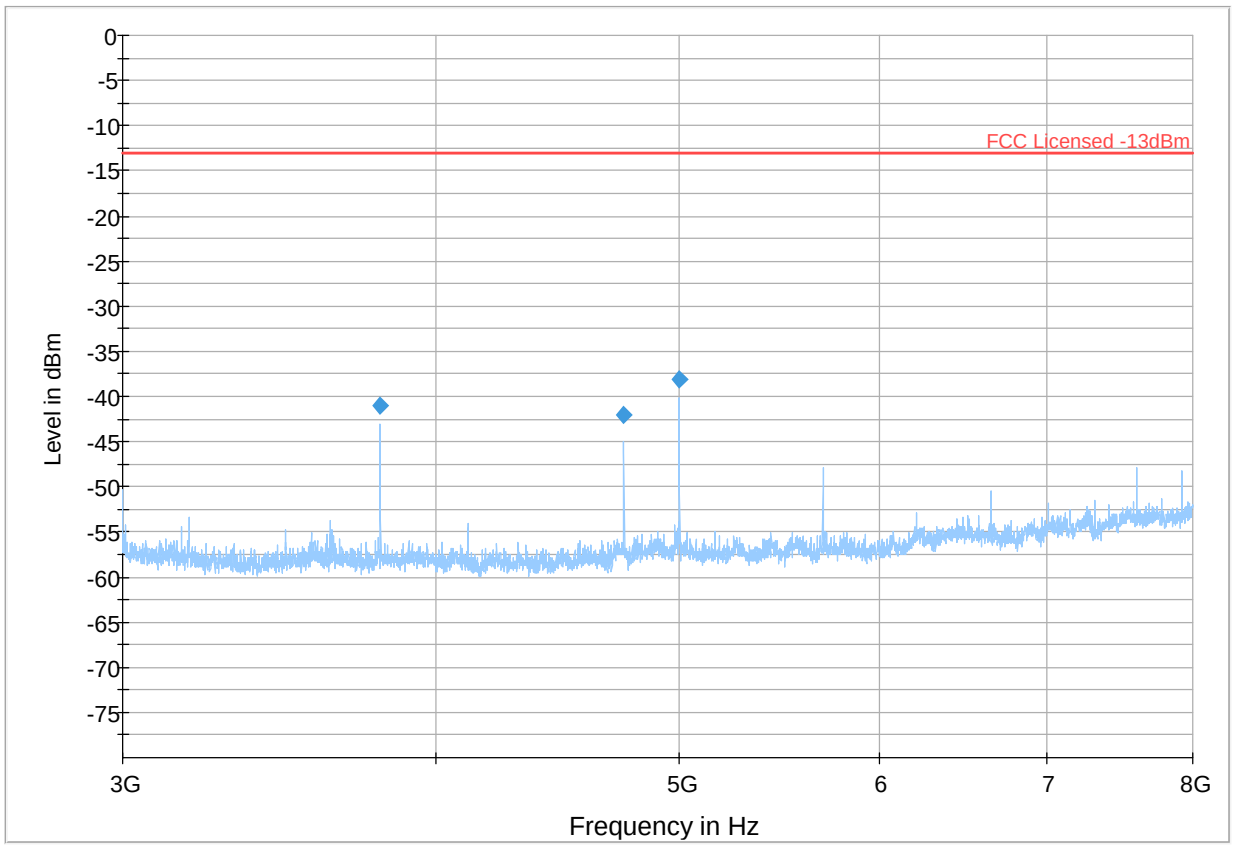


Preview Result 1-PK+ FCC Licensed -13dBm Final_Result PK+ Final_Result RMS

Plot # 28

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
3800.156	-41.08	---	-13.00	28.08	500.0	1000.0	127.0	V	349.0	-100.2	
4750.156	-42.06	---	-13.00	29.06	500.0	1000.0	127.0	V	17.0	-99.1	
5000.156	-38.17	---	-13.00	25.17	500.0	1000.0	100.0	V	32.0	-99.1	

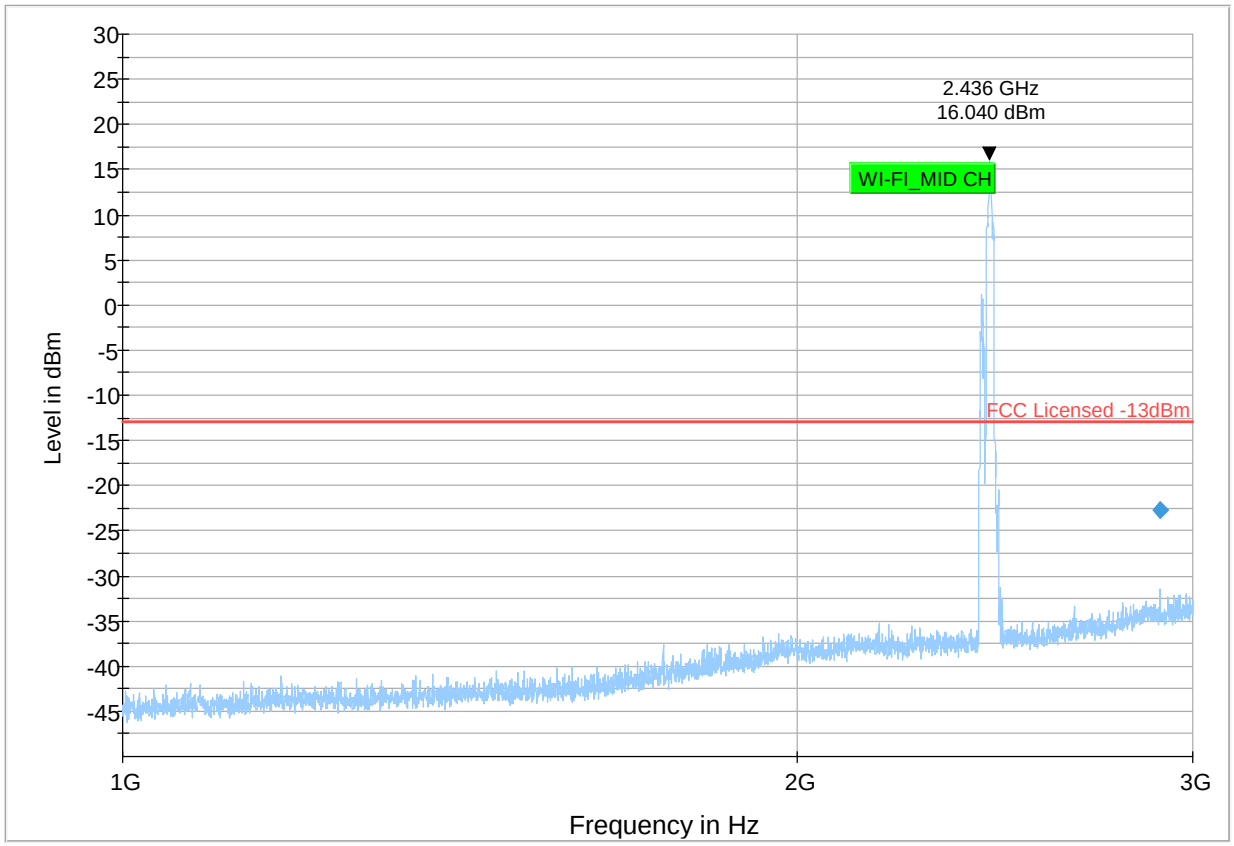


Preview Result 1-PK+ FCC Licensed -13dBm Final_Result PK+ Final_Result RMS

Plot # 29

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
2902.250	-22.71	---	-13.00	9.71	500.0	1000.0	396.0	V	66.0	-60.1	

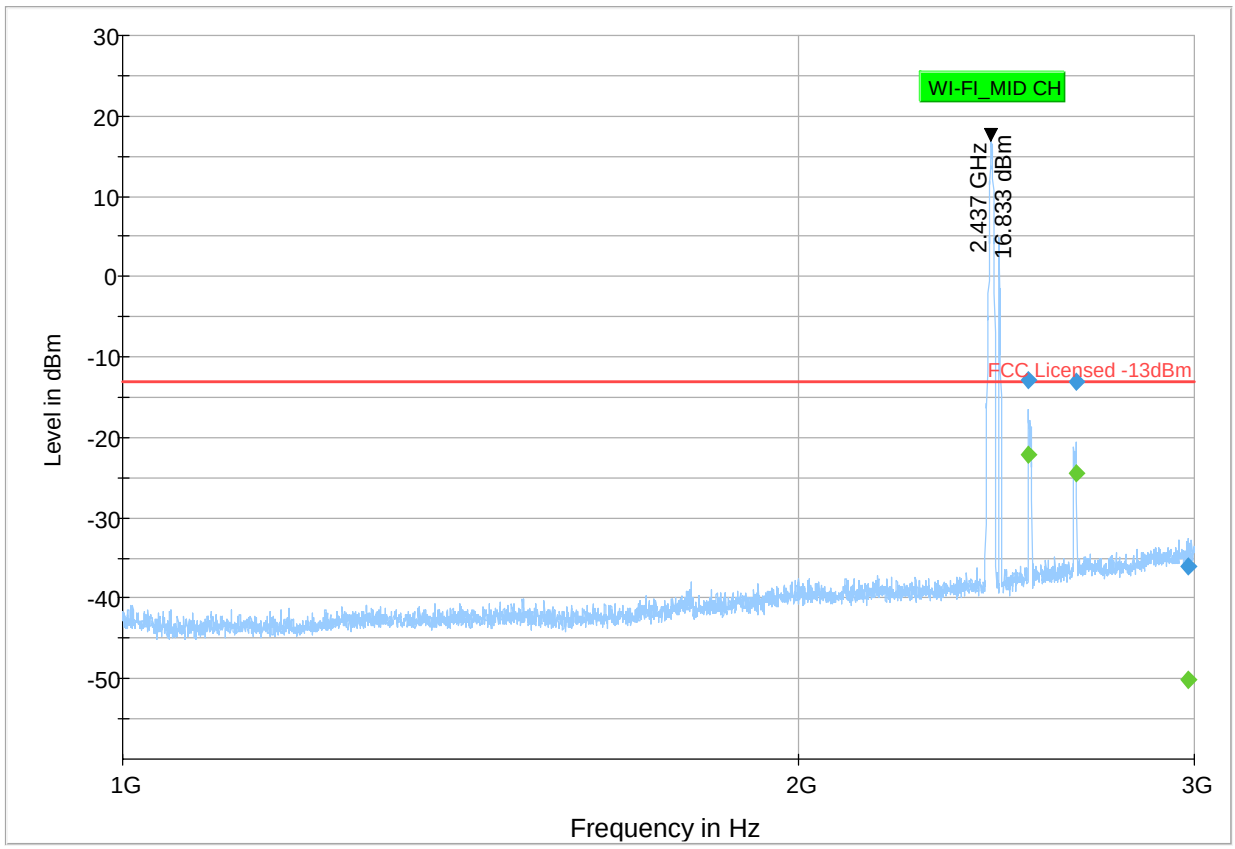


Preview Result 1-PK+ FCC Licensed -13dBm Final_Result PK+ Final_Result RMS

Plot # 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)	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB)	Raw Rec (dBµV)
2531.250	---	-22.102	---	---	500.0	1000.000	116.0	H	308.0	-61.0	5.7	0.0	-66.7	38.9
2531.250	-12.881	---	-13.00	-0.12	500.0	1000.000	116.0	H	308.0	-61.0	5.7	0.0	-66.7	48.2
2656.750	---	-24.427	---	---	500.0	1000.000	290.0	V	87.0	-60.3	6.1	0.0	-66.4	35.8
2656.750	-13.155	---	-13.00	0.16	500.0	1000.000	290.0	V	87.0	-60.3	6.1	0.0	-66.4	47.1
2982.000	---	-50.241	---	---	500.0	1000.000	400.0	V	111.0	-59.4	6.0	0.0	-65.4	9.2
2982.000	-35.979	---	-13.00	22.98	500.0	1000.000	400.0	V	111.0	-59.4	6.0	0.0	-65.4	23.4

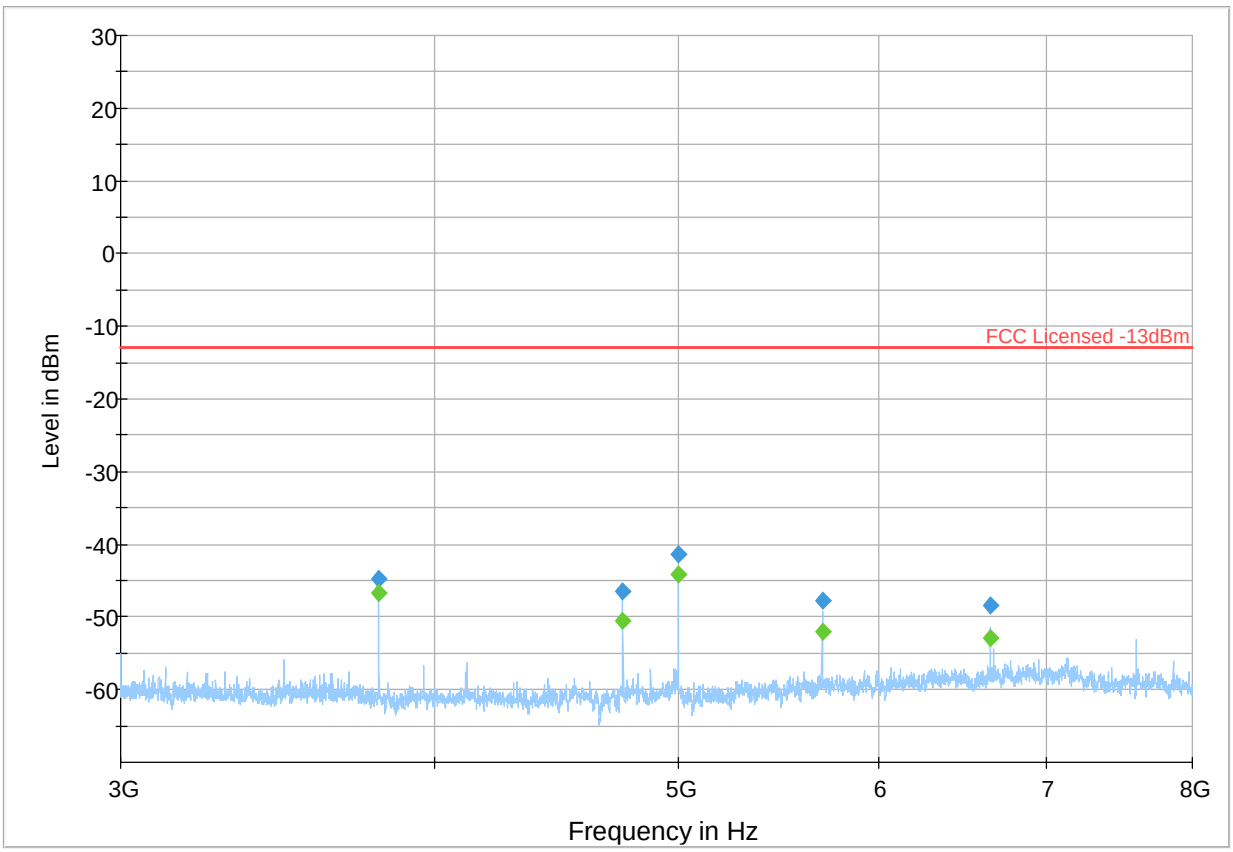


PK+_MAXH — FCC Licensed -13dBm — Final_Result PK+ — Final_Result RMS

Plot # 31

Final_Result

Frequency (MHz)	MaxPeak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB)	Raw Rec (dBµV)
3800.156	-44.768	---	-13.00	31.77	500.0	1000.000	117.0	V	346.0	-101.8	6.2	-45.9	-62.1	57.0
3800.156	---	-46.767	-13.00	33.77	500.0	1000.000	117.0	V	346.0	-101.8	6.2	-45.9	-62.1	55.0
4750.000	---	-50.497	-13.00	37.50	500.0	1000.000	126.0	V	29.0	-99.6	7.0	-45.5	-61.1	49.1
4750.000	-46.432	---	-13.00	33.43	500.0	1000.000	126.0	V	29.0	-99.6	7.0	-45.5	-61.1	53.1
5000.313	-41.431	---	-13.00	28.43	500.0	1000.000	100.0	V	35.0	-99.4	7.5	-45.8	-61.1	58.0
5000.313	---	-44.108	-13.00	31.11	500.0	1000.000	100.0	V	35.0	-99.4	7.5	-45.8	-61.1	55.3
5700.156	---	-52.036	-13.00	39.04	500.0	1000.000	152.0	V	31.0	-97.8	7.7	-45.4	-60.2	45.8
5700.156	-47.812	---	-13.00	34.81	500.0	1000.000	152.0	V	31.0	-97.8	7.7	-45.4	-60.2	50.0
6650.313	---	-52.958	-13.00	39.96	500.0	1000.000	228.0	V	-17.0	-97.5	8.4	-46.6	-59.3	44.6
6650.313	-48.451	---	-13.00	35.45	500.0	1000.000	228.0	V	-17.0	-97.5	8.4	-46.6	-59.3	49.1

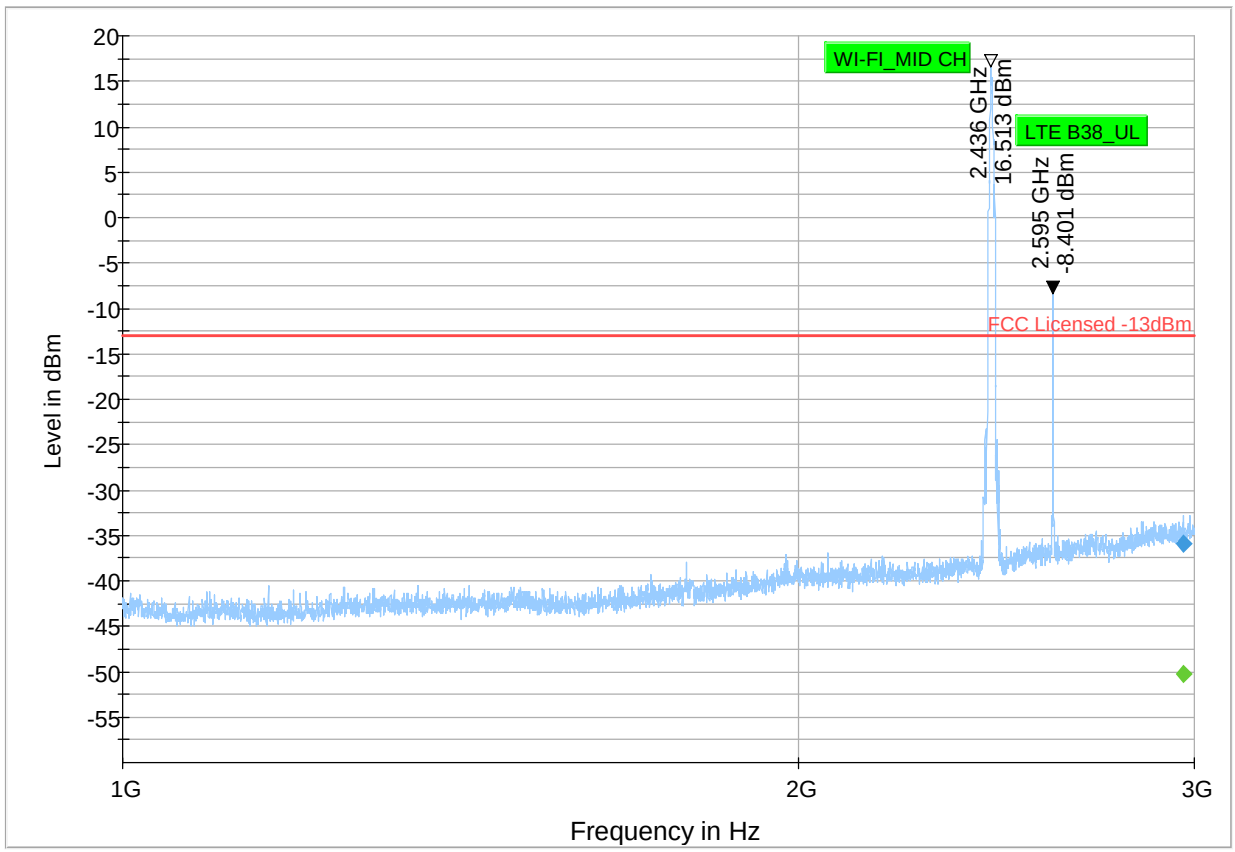


Preview Result 1-PK+ FCC Licensed -13dBm Final_Result PK+ Final_Result RM

Plot # 32

Final_Result

Frequency (MHz)	MaxPeak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB)	Raw Rec (dBµV)
2965.500	---	-50.275	---	---	500.0	1000.000	324.0	H	143.0	-59.4	6.1	0.0	-65.5	9.1
2965.500	-35.969	---	-13.00	22.97	500.0	1000.000	324.0	H	143.0	-59.4	6.1	0.0	-65.5	23.4

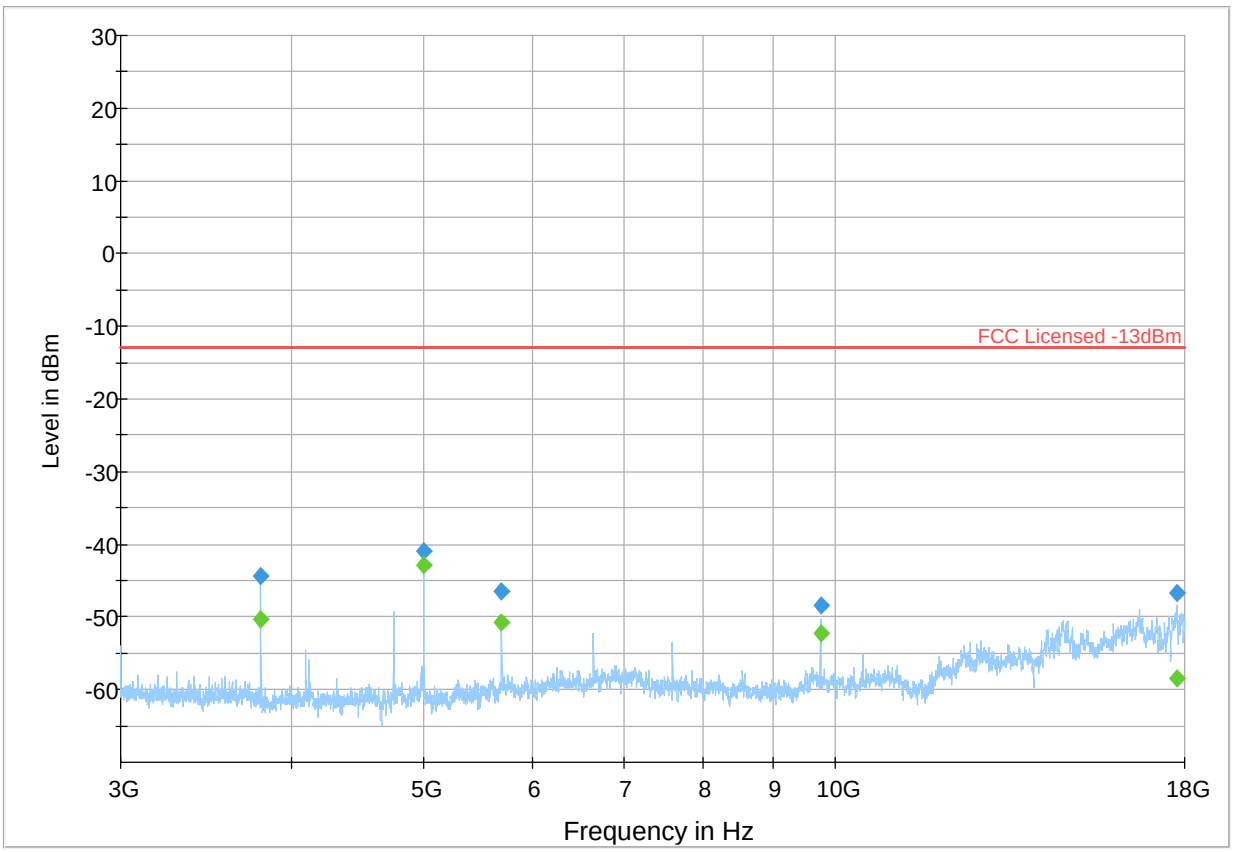


Preview Result 1-PK+ — FCC Licensed -13dBm — Final_Result PK+ — Final_Result RMS

Plot # 33

Final_Result

Frequency (MHz)	MaxPeak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB)	Raw Rec (dBµV)
3799.688	-44.273	---	-13.00	31.27	500.0	1000.000	100.0	V	346.0	-101.8	6.2	-45.9	-62.1	57.5
3799.688	---	-50.442	-13.00	37.44	500.0	1000.000	100.0	V	346.0	-101.8	6.2	-45.9	-62.1	51.4
5000.156	-41.002	---	-13.00	28.00	500.0	1000.000	371.0	V	22.0	-99.4	7.5	-45.8	-61.1	58.4
5000.156	---	-42.951	-13.00	29.95	500.0	1000.000	371.0	V	22.0	-99.4	7.5	-45.8	-61.1	56.5
5700.000	-46.487	---	-13.00	33.49	500.0	1000.000	347.0	V	341.0	-97.8	7.7	-45.4	-60.2	51.4
5700.000	---	-50.852	-13.00	37.85	500.0	1000.000	347.0	V	341.0	-97.8	7.7	-45.4	-60.2	47.0
9747.656	---	-52.235	-13.00	39.24	500.0	1000.000	201.0	V	301.0	-94.2	10.7	-46.8	-58.1	42.0
9747.656	-48.314	---	-13.00	35.31	500.0	1000.000	201.0	V	301.0	-94.2	10.7	-46.8	-58.1	45.9
17762.344	-46.662	---	-13.00	33.66	500.0	1000.000	142.0	V	14.0	-80.1	16.3	-42.7	-53.7	33.4
17762.344	---	-58.493	-13.00	45.49	500.0	1000.000	142.0	V	14.0	-80.1	16.3	-42.7	-53.7	21.6

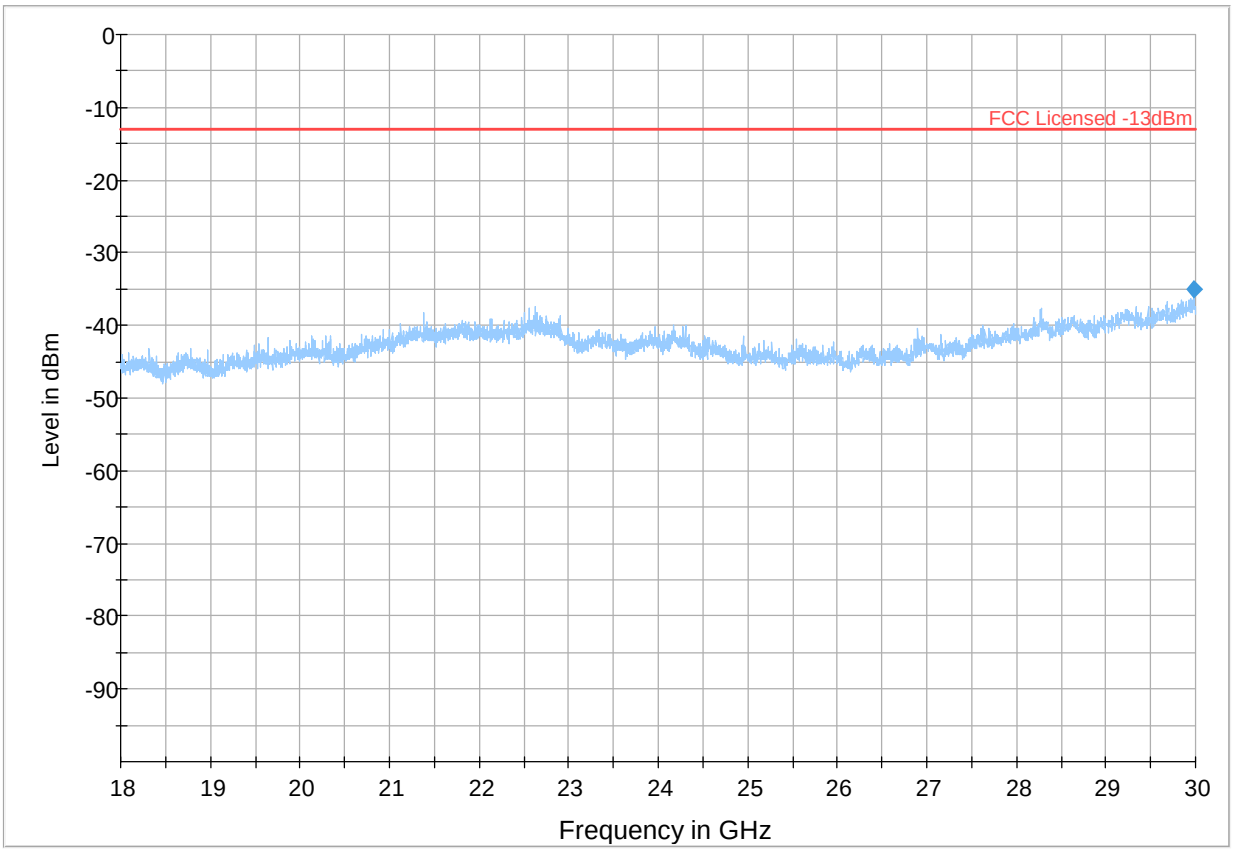


Preview Result 1-PK+ FCC Licensed -13dBm Final_Result PK+ Final_Result RM

Plot # 34

Final_Result

Frequency (MHz)	MaxPeak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB)	Raw Rec (dBµV)
29985.375	-35.103	---	-13.00	22.10	500.0	1000.000	150.0	H	41.0	-71.9	10.4	0.0	-82.3	36.8

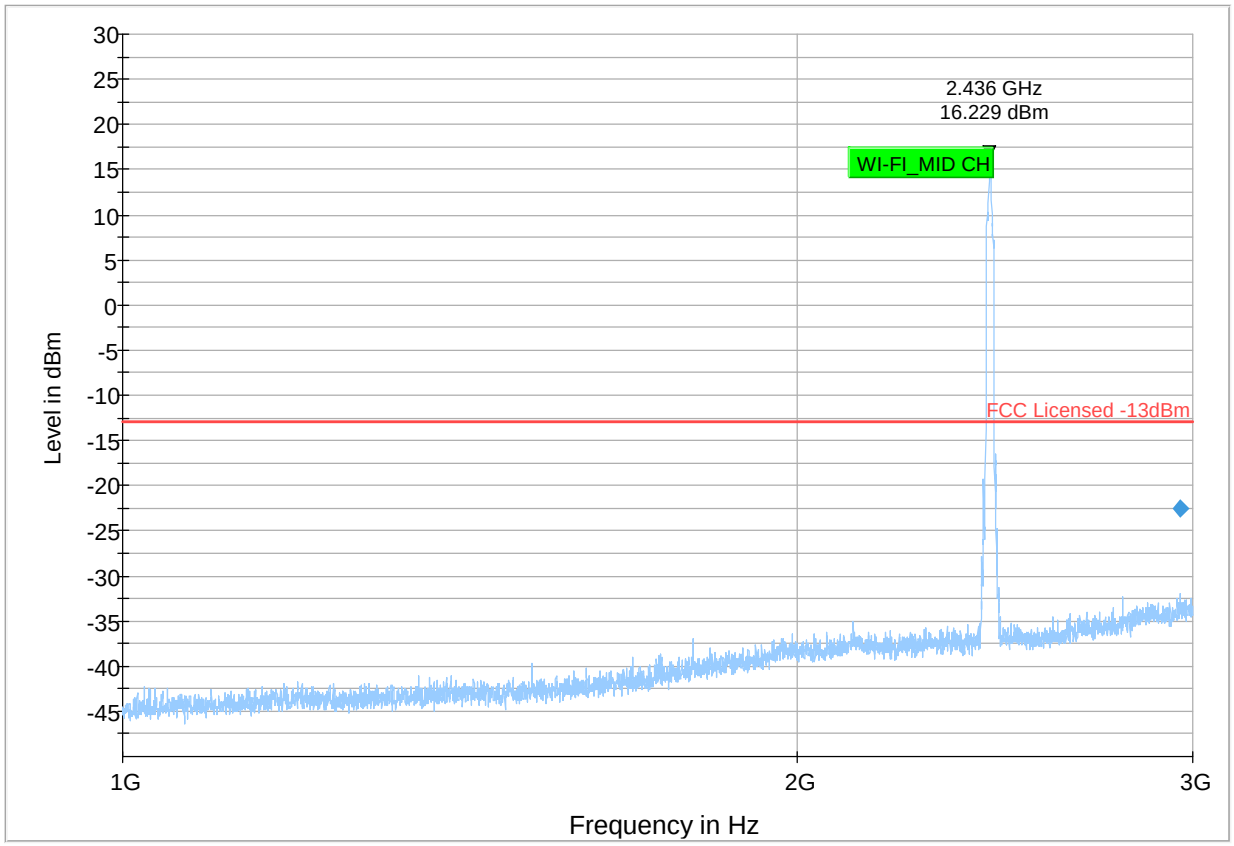


Preview Result 1-PK+ FCC Licensed -13dBm Final_Result PK+ Final_Result RMS

Plot # 35

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
2962.000	-22.56	---	-13.00	9.56	500.0	1000.0	348.0	V	283.0	-59.9	

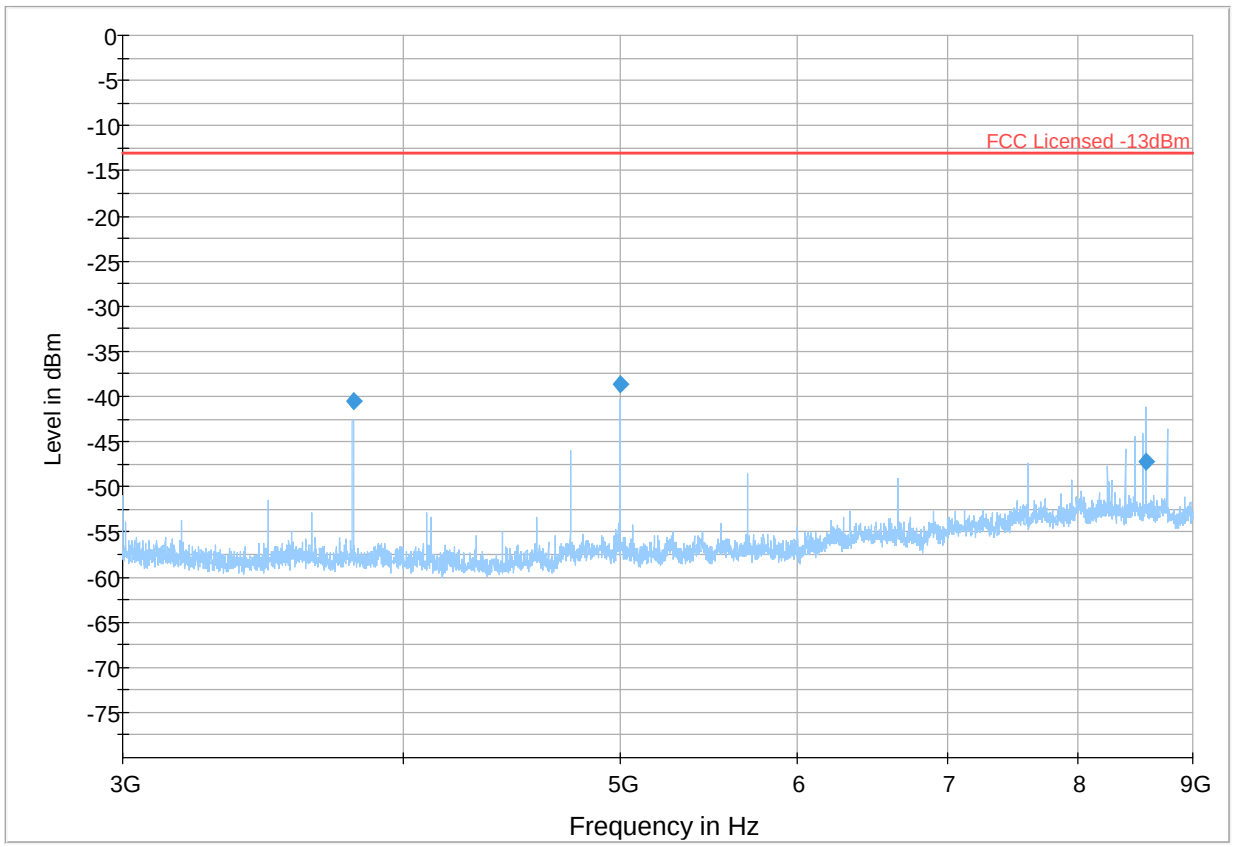


Preview Result 1-PK+ FCC Licensed -13dBm Final_Result PK+ Final_Result RMS

Plot # 36

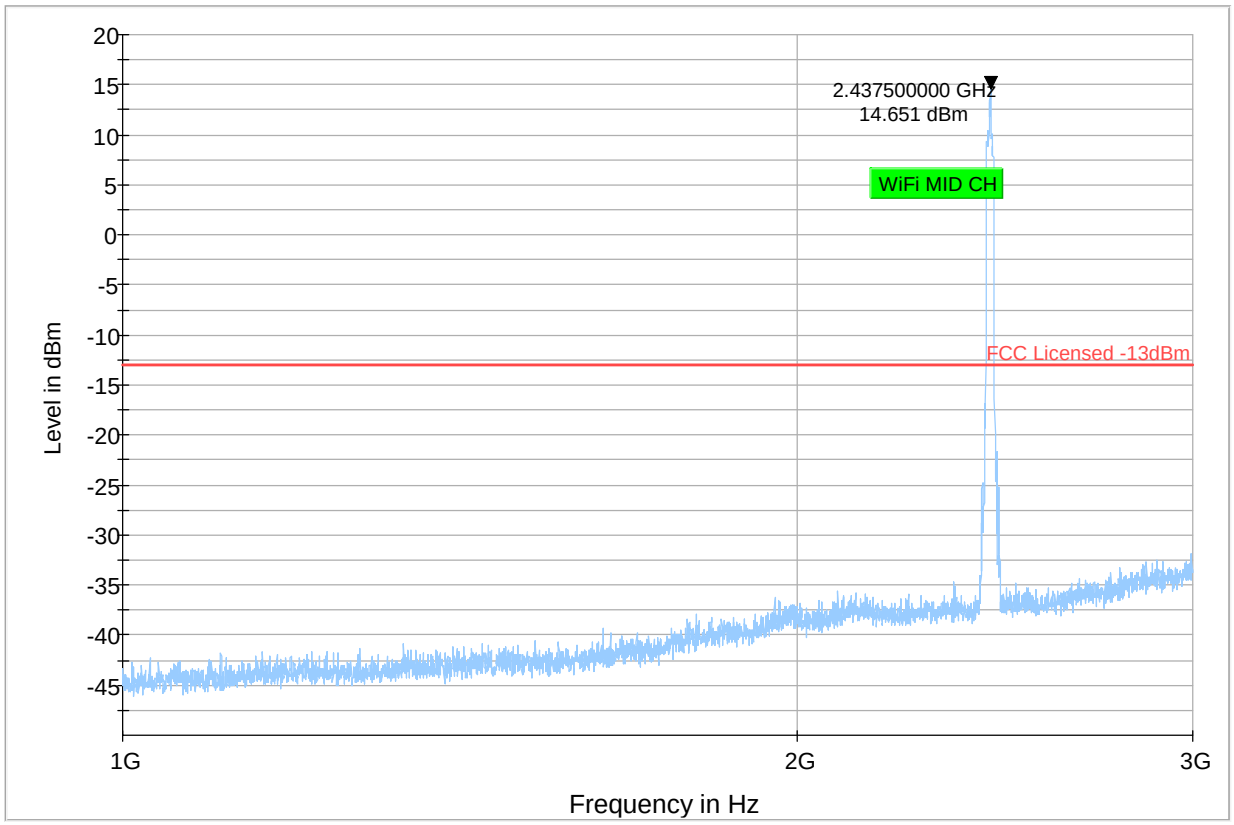
Final_Result

Frequency (MHz)	MaxPeak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Comment
3800.250	-40.57	---	-13.00	27.57	500.0	1000.0	107.0	V	6.0	-100.2	
5000.063	-38.59	---	-13.00	25.59	500.0	1000.0	139.0	V	40.0	-99.1	
8580.000	-47.15	---	-13.00	34.15	500.0	1000.0	186.0	V	357.0	-92.6	



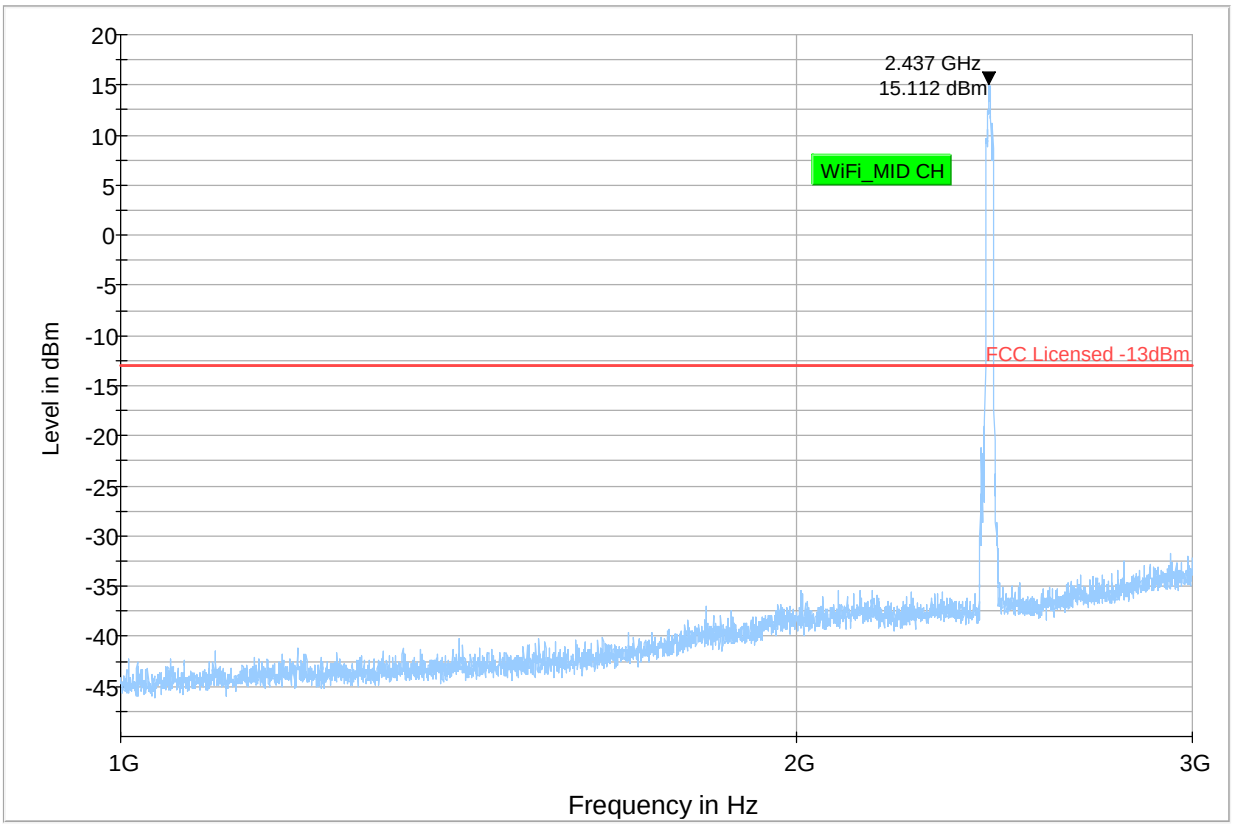
Preview Result 1-PK+ FCC Licensed -13dBm Final_Result PK+ Final_Result RMS

Plot # 37



Preview Result 1-PK+
Final_Result PK+
Critical_Freqs PK+
Final_Result RMS
FCC Licensed -13dBm

Plot # 38

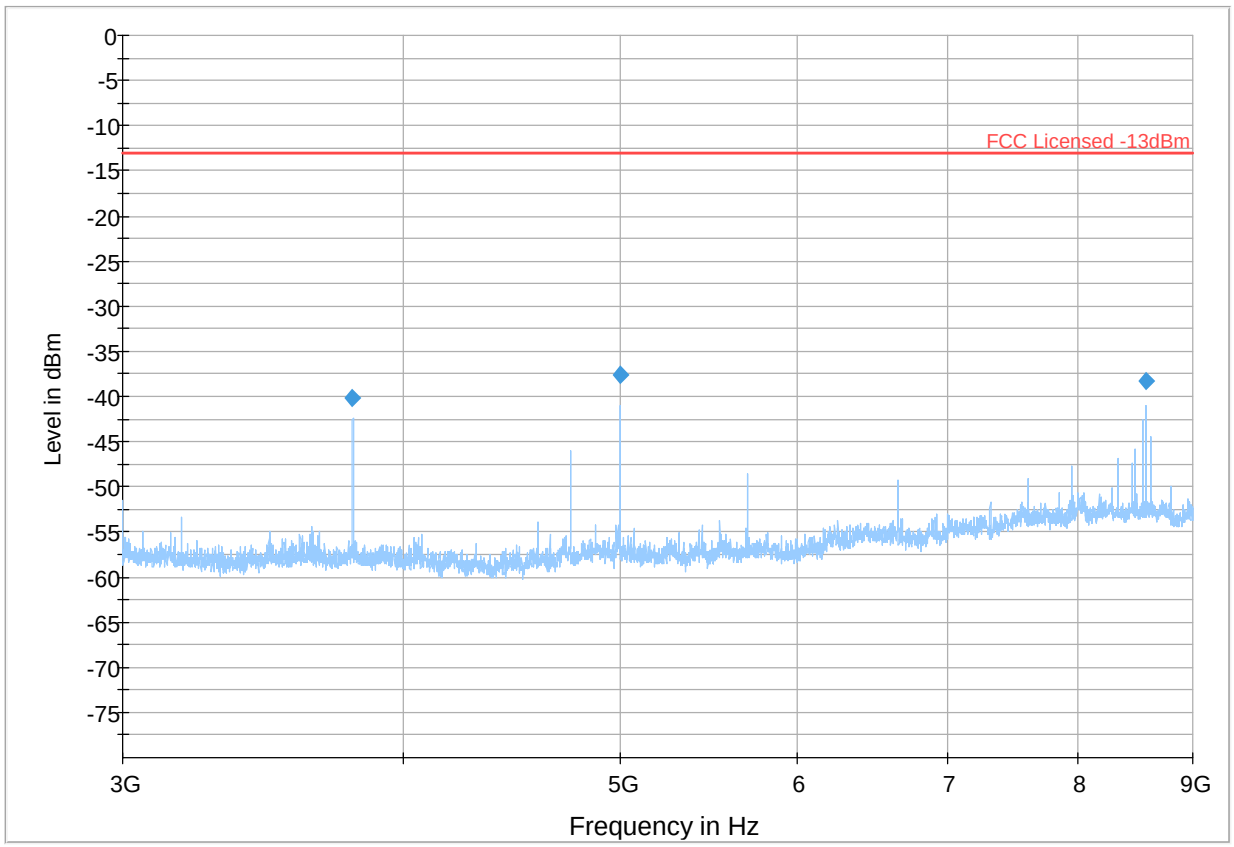


Preview Result 1-PK+ | Critical_Freqs PK+ | FCC Licensed -13dBm
Final_Result PK+ | Final_Result RMS

Plot # 39

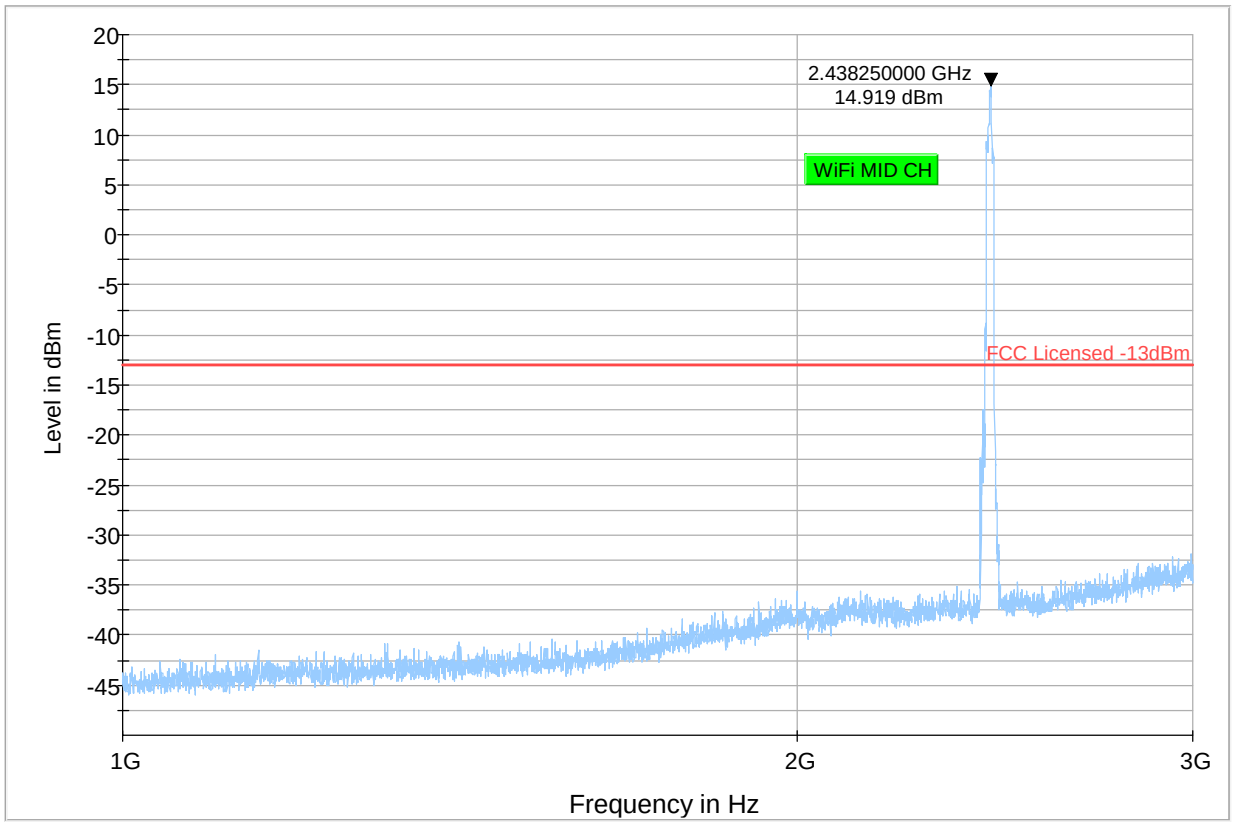
Final_Result

Frequency (MHz)	MaxPeak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Comment
3800.063	-40.13	---	-13.00	27.13	500.0	1000.0	100.0	V	0.0	-100.2	
5000.250	-37.54	---	-13.00	24.54	500.0	1000.0	100.0	V	35.0	-99.1	
8580.000	-38.23	---	-13.00	25.23	500.0	1000.0	184.0	V	357.0	-92.6	



Preview Result 1-PK+ FCC Licensed -13dBm Final_Result PK+ Final_Result RMS

Plot # 40

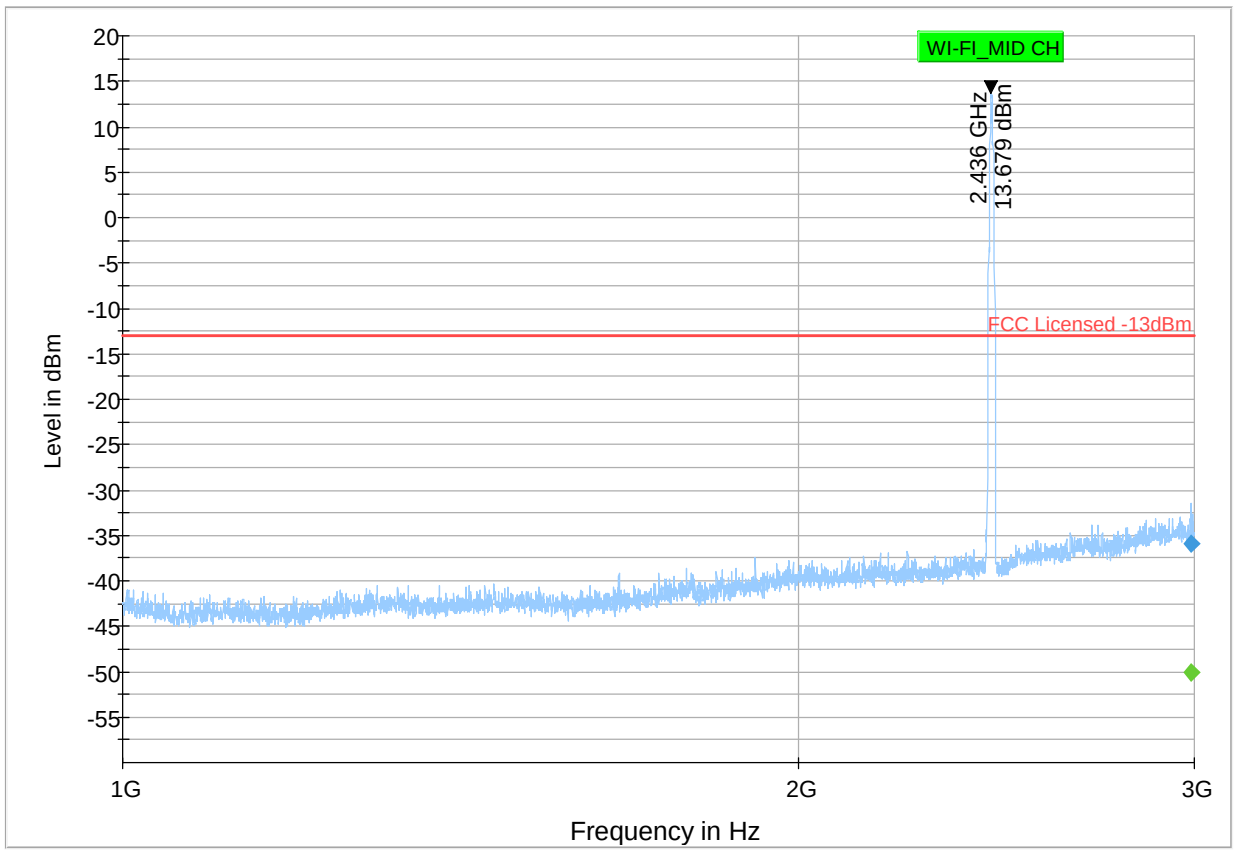


Preview Result 1-PK+
Final_Result PK+
Critical_Freqs PK+
Final_Result RMS
FCC Licensed -13dBm

Plot # 41

Final_Result

Frequency (MHz)	MaxPeak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB)	Raw Rec (dBµV)
2989.750	---	-50.070	---	---	500.0	1000.000	199.0	V	32.0	-59.4	6.0	0.0	-65.4	9.3
2989.750	-35.979	---	-13.00	22.98	500.0	1000.000	199.0	V	32.0	-59.4	6.0	0.0	-65.4	23.4

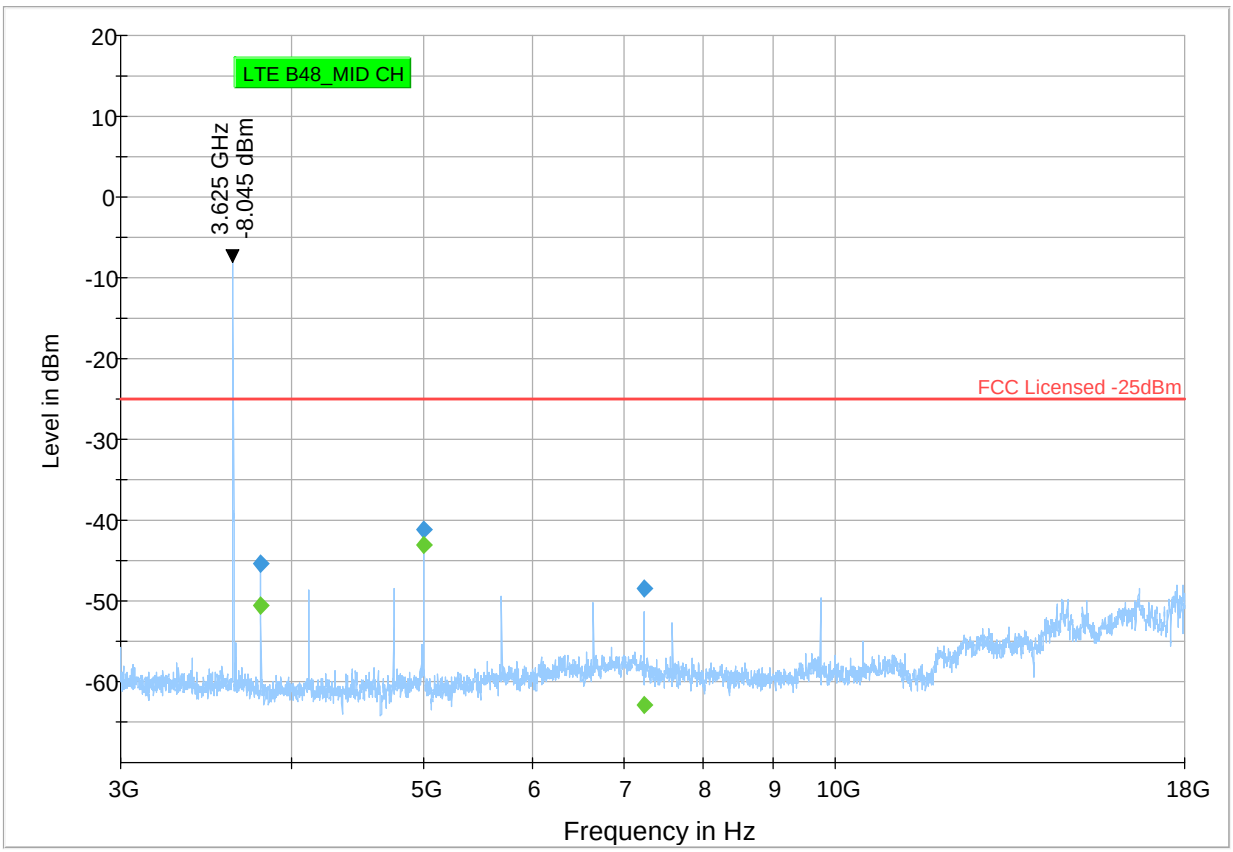


Preview Result 1-PK+ FCC Licensed -13dBm Final_Result PK+ Final_Result RMS

Plot # 42

Final_Result

Frequency (MHz)	MaxPeak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB)	Raw Rec (dBµV)
3799.688	-45.471	---	-25.00	20.47	500.0	1000.000	100.0	V	344.0	-101.8	6.2	-45.9	-62.1	56.3
3799.688	---	-50.610	---	---	500.0	1000.000	100.0	V	344.0	-101.8	6.2	-45.9	-62.1	51.2
5000.156	-41.139	---	-25.00	16.14	500.0	1000.000	322.0	V	22.0	-99.4	7.5	-45.8	-61.1	58.3
5000.156	---	-43.133	---	---	500.0	1000.000	322.0	V	22.0	-99.4	7.5	-45.8	-61.1	56.3
7250.156	---	-62.858	---	---	500.0	1000.000	100.0	H	291.0	-97.1	9.1	-46.9	-59.3	34.2
7250.156	-48.492	---	-25.00	23.49	500.0	1000.000	100.0	H	291.0	-97.1	9.1	-46.9	-59.3	48.6

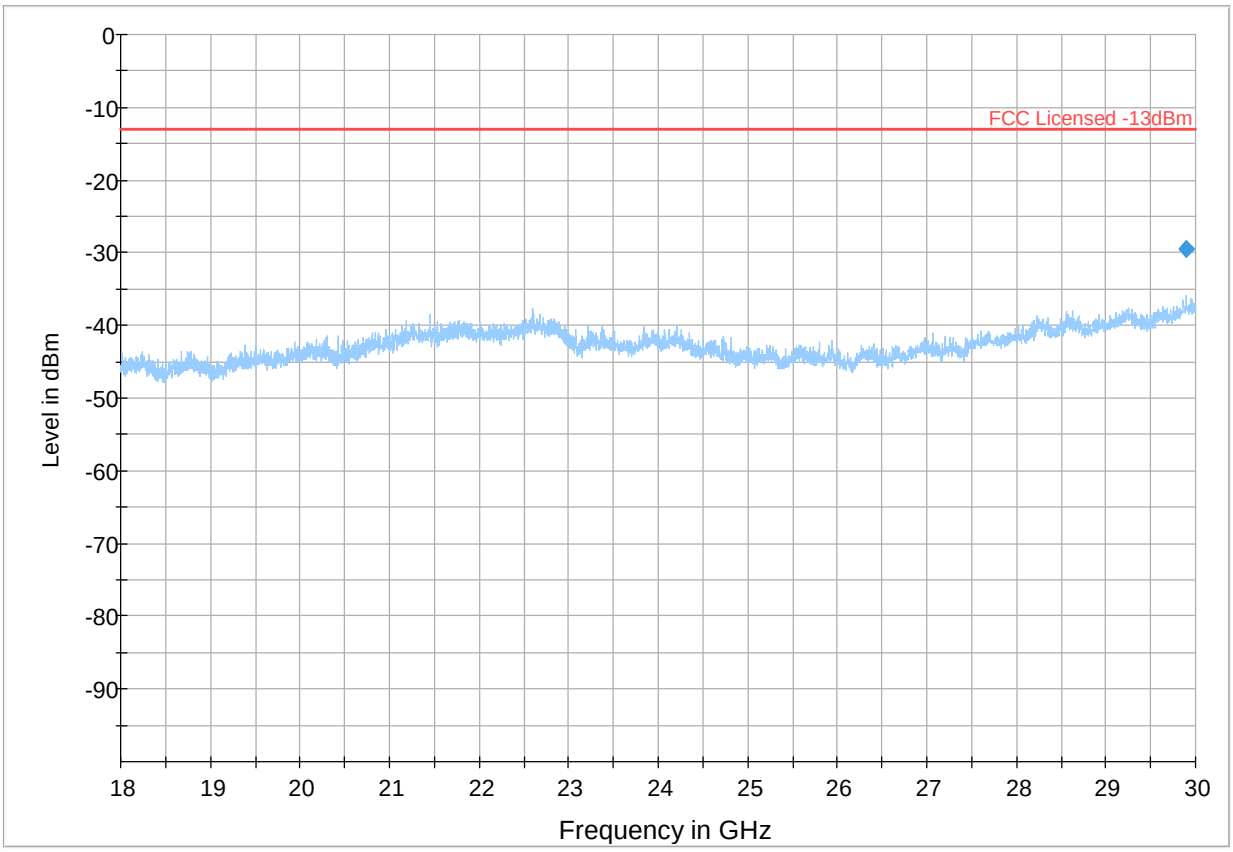


Preview Result 1-PK+ FCC Licensed -25dBm Final_Result PK+ Final_Result RMS

Plot # 43

Final_Result

Frequency (MHz)	MaxPeak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB)	Raw Rec (dBµV)
29894.625	-29.390	---	-13.00	16.39	500.0	1000.000	150.0	H	131.0	-72.1	10.4	0.0	-82.5	42.7



Preview Result 1-PK+ FCC Licensed -13dBm Final_Result PK+ Final_Result RM

9 Test setup photos

Setup photos are included in supporting file name: “EMC_ARINC_001_23001_KDB996369_Setup_Photos”

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 Revision History

Date	Report Name	Changes to report	Prepared by
7/25/2024	EMC_ARINC_001_23001_KDB996369	Initial Version	Cheng Song

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