FCC / ISED & Test Report

For:
Particle Industries, Inc.

Model:
BRN404X
BORON 404X with BQ24195L (PMIC)

Product Description:
LTE Development Board with EtherSIM

Applied Rules and Standards:
47 CFR Parts 22, 24, and 27
RSS: 132 Issue 3, 133 Issue 6, 139 Issue 4

FCC ID: 2AEMI-BRN404X
IC: 20127-BRN404X

REPORT #: EMC_PARTI-001-21001_FCC_22_24_27_Rev1

DATE: 2023-02-28

A2LA Accredited

IC recognized #
3462B-1

***CETECOM* Inc.**
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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 the Code of Federal Regulations Title 47 parts 22, 24 and 27, and Industry Canada Standards RSS-GEN issue 3, RSS-132 issue 3, RSS-133 issue 6, and RSS-139 issue 4.

No deficiencies were ascertained.

Company Name	Product Description	Model
Particle Industries, Inc.	LTE Development Board with EtherSIM	BRN404X BORON 404X with BQ24195L (PMIC)

Responsible for Testing Laboratory:

Date	Section	Name	Signature
2023-02-28	Compliance	Arndt Stoecker (Director of Regulatory Services)	

Responsible for the Report:

Date	Section	Name	Signature
2023-02-28	Compliance	Cheng Song (EMC Engineer)	cheng.song@cetecom.com Digitally signed by: cheng.song@cetecom.com DN: CN = cheng.song@cetecom.com Date: 2023.02.28 15:16:52 -08'00'

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:	Arndt Stoecker
Responsible Project Leader:	Phillip Quintal

2.2 Identification of the Client

Client's Name:	Particle Industries, Inc.
Street Address:	325 9th St
City/Zip Code	San Francisco, CA 94103
Country	USA

2.3 Identification of the Manufacturer

Manufacturer's Name:	Same as Client
Manufacturers Address:	
City/Zip Code	
Country	

3 Equipment Under Test (EUT)

3.1 EUT Specifications

Model No	BRN404X, BORON 404X with BQ24195L (PMIC)
HW Version	V1.5.0
SW Version	V4.0.0
FCC-ID	2AEMI-BRN404X
IC:	20127-BRN404X
PMN:	Boron
Product Description	LTE Development Board with EtherSIM
Radio Information:	**Cellular:** • u-blox SARA-R510S • FCC ID: XPYUBX19KM01; IC: 8595A-UBX19KM01 **Bluetooth:** • Nordic Semiconductor nRF52840 SoC • Bluetooth 5 LE
Antenna Information:	**Cellular:** • G142-10006-A antenna • Wide band FPC antenna: 3.86dBi max gain **Bluetooth:** • PCB antenna: 2dBi max gain
Power Supply/ Rated Operating Voltage Range	DC 5V from Host Unit or DC 3.7V from Li-ion battery Vmin = 3.4V, Vmax = 4.4V, Vnom = 3.7V
Operating Temperature Range	Tmin: -20 °C / Tmax: 60 °C / Tnom: 25 °C
Sample Revision	☐Prototype ☐Production ■Pre-Production

3.2 EUT Sample details

EUT #	Model Number	HW Version	SW Version	Comments
1	BRN404X	V1.5.0	V4.0.0	

3.3 Accessory Equipment (AE) details

AE #	Type	Model	Manufacturer	Serial Number
1				

3.4 Test Sample Configuration

Set-up #	EUT / AE used for set-up	Comments
1	EUT#1	Radiated Emissions

3.5 Mode of Operation

Operating Mode	Note	Comments
Op. 1	Cellular + BLE	During the testing process, the EUT was tested with Cellular sets on low, mid and high channels, and highest possible duty cycle. 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. Cellular transmits simultaneously with BLE.

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 the Code of Federal Regulations Title 47 parts 22, 24, 27 and ISED Standards RSS-132 issue 3, RSS-133 issue 6, and RSS-139 issue 4.

4.1 Dates of Testing:

09/03/2022 - 09/08/2022

4.2 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)	1.12 dB	0.46 dB
Radiated Emissions		
(<30 MHz)	3.66 dB	3.88 dB
(30 MHz – 1 GHz)	3.17 dB	3.34 dB
(1 GHz – 3 GHz)	5.01 dB	4.45 dB
(> 3 GHz)	4.0 dB	4.79 dB

4.3 Environmental Conditions during Testing:

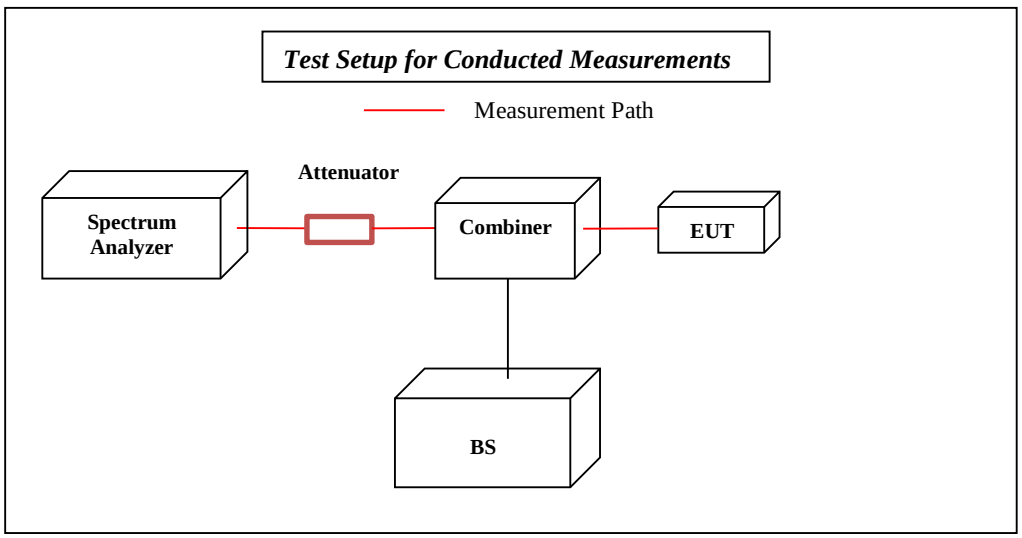
The following environmental conditions were maintained during the course of testing:

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

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

5 Measurement Procedures

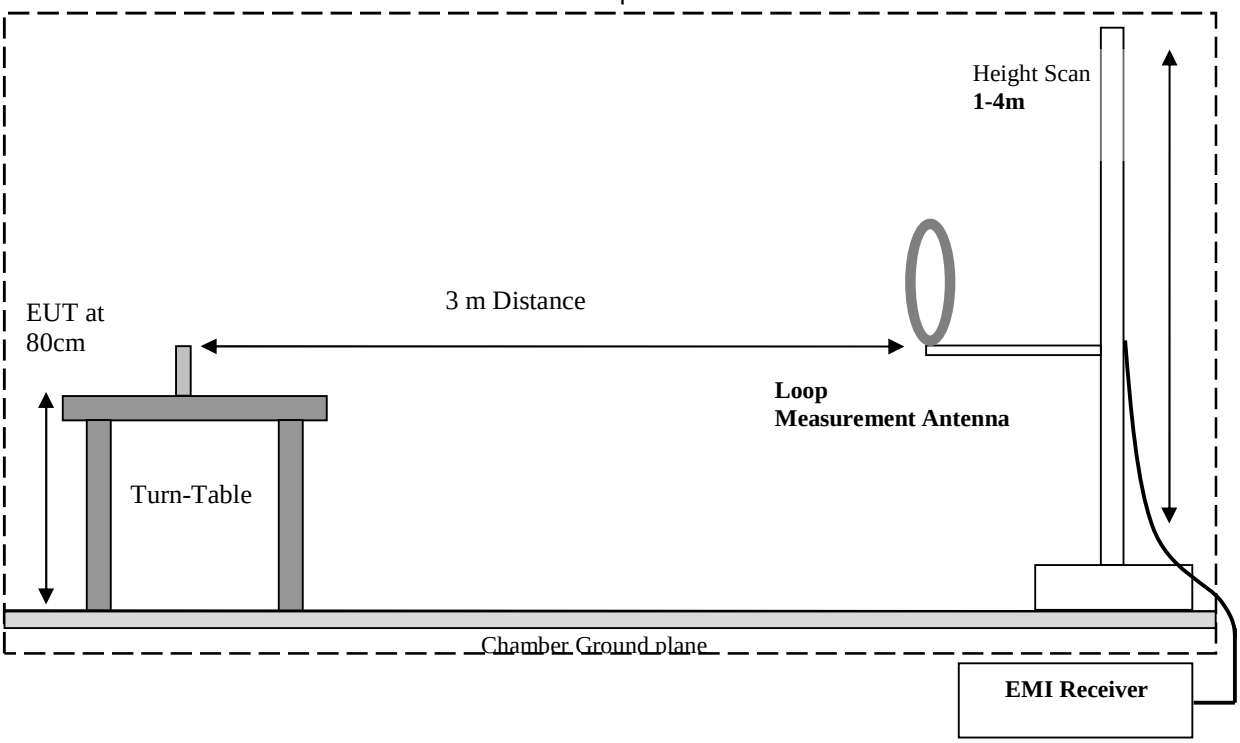
Testing is performed according to the guidelines provided in FCC publication (KDB) 971168 D01 v03r01 – "Measurement Guidance for Certification of Licensed Digital Transmitters" and according to relevant parts of ANSI/TIA-603-D-2010 as detailed below.



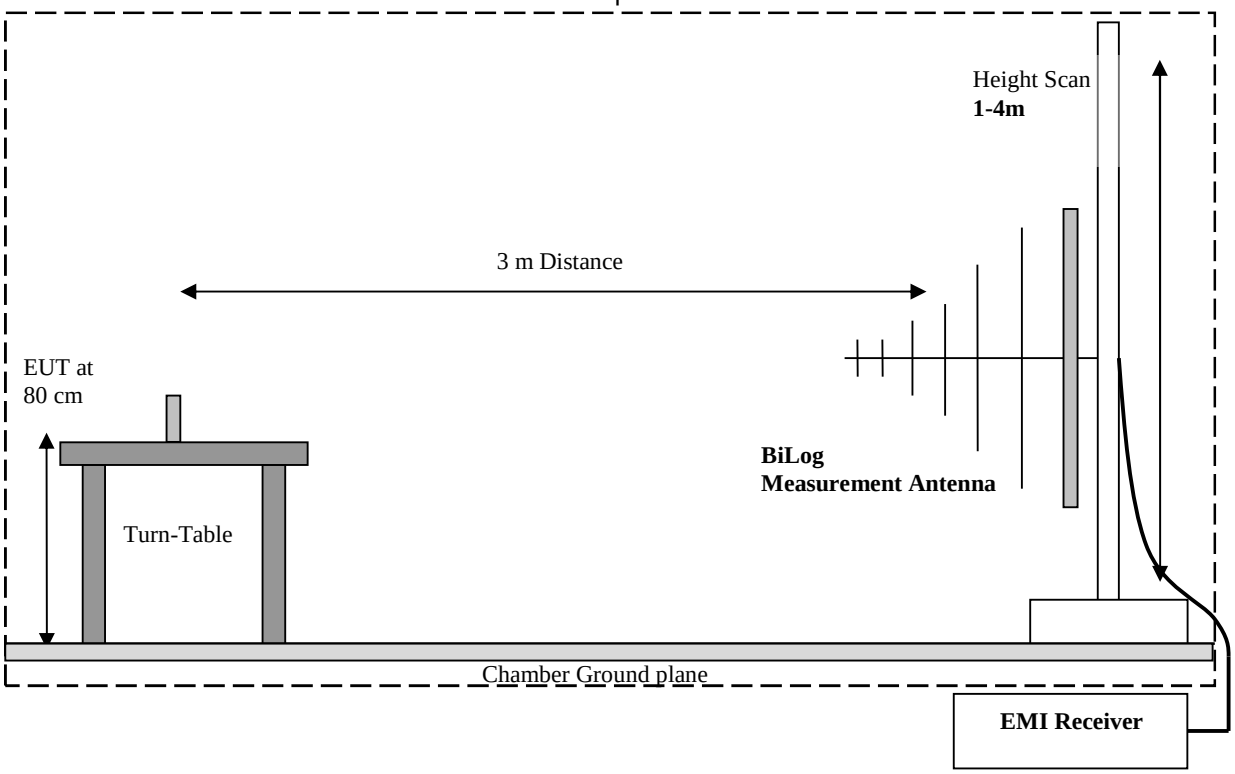
5.1 Radiated Measurement

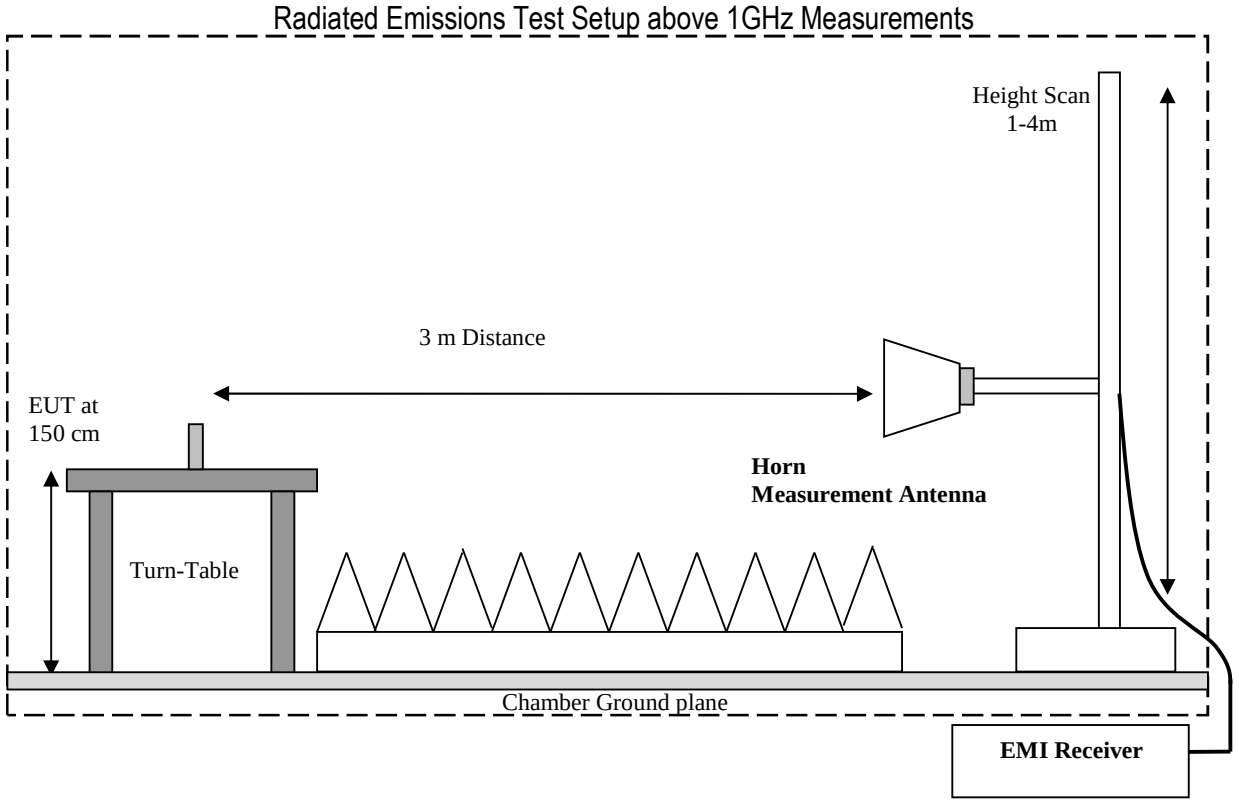
- The exploratory measurement is accomplished by running a matrix of 16 sweeps over the required frequency range with R&S Test-SW EMC32 for 4 positions of the turntable, two orthogonal positions of the EUT and both antenna polarizations. This procedure exceeds the requirement of the above standards to 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





5.2 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

6 Measurement Results Summary

6.1 Part 22 / RSS-132

Test Specification	Test Case	Temperature and Voltage Conditions	Mode	Pass	Fail	NA	NP	Result
§2.1046; §22.913 (a)	RF Output Power	Nominal		☐	☐	☐	■	Note 3
§2.1055; §22.355	Frequency Stability	Extreme Temperature and Voltage		☐	☐	☐	■	Note 4
§2.1049; §22.917	Occupied Bandwidth	Nominal		☐	☐	☐	■	Note 5
§2.1051; §22.917	Band Edge Compliance	Nominal		☐	☐	☐	■	Note 6
§2.1051; §22.917	Conducted Spurious Emissions	Nominal		☐	☐	☐	■	Note 2
§2.1053; §22.917	Radiated Spurious Emissions	Nominal	Op. 1	■	☐	☐	☐	Complies

Note 1: NA= Not Applicable; NP= Not Performed.
Note 2: Spurious emissions were evaluated with radiated measurement.
Note 3: Leveraged from module certification report # MDE_UBLOX_2105_FCC_01 section 5.1 (FCC ID: XPYUBX19KM01)
Note 4: Leveraged from module certification report # MDE_UBLOX_2105_FCC_01 section 5.2 (FCC ID: XPYUBX19KM01)
Note 5: Leveraged from module certification report # MDE_UBLOX_2105_FCC_01 section 5.5 (FCC ID: XPYUBX19KM01)
Note 6: Leveraged from module certification report # MDE_UBLOX_2105_FCC_01 section 5.6 (FCC ID: XPYUBX19KM01)
Note 7: Spot check was performed on the worst case of the leveraged result. Lab takes full responsibility for data leveraging.

6.2 Part 24 / RSS-133

Test Specification	Test Case	Temperature and Voltage Conditions	Mode	Pass	Fail	NA	NP	Result
§2.1046; §24.232 (a)	RF Output Power	Nominal		☐	☐	☐	■	Note 3
§2.1055; §24.235	Frequency Stability	Extreme Temperature and Voltage		☐	☐	☐	■	Note 4
§2.1049; §24.238	Occupied Bandwidth	Nominal		☐	☐	☐	■	Note 5
§2.1051; §24.238	Band Edge Compliance	Nominal		☐	☐	☐	■	Note 6
§2.1051; §24.238	Conducted Spurious Emissions	Nominal		☐	☐	☐	■	Note 2
§2.1053; §24.238	Radiated Spurious Emissions	Nominal	Op. 1	■	☐	☐	☐	Complies

Note 1: NA= Not Applicable; NP= Not Performed.
Note 2: Spurious emissions were evaluated with radiated measurement.
Note 3: Leveraged from module certification report # MDE_UBLOX_2105_FCC_01 section 5.8 (FCC ID: XPYUBX19KM01)
Note 4: Leveraged from module certification report # MDE_UBLOX_2105_FCC_01 section 5.9 (FCC ID: XPYUBX19KM01)
Note 5: Leveraged from module certification report # MDE_UBLOX_2105_FCC_01 section 5.12 (FCC ID: XPYUBX19KM01)
Note 6: Leveraged from module certification report # MDE_UBLOX_2105_FCC_01 section 5.13 (FCC ID: XPYUBX19KM01)
Note 7: Spot check was performed on the worst case of the leveraged result. Lab takes full responsibility for data leveraging.

6.3 FCC 27 / RSS-139

Test Specification	Test Case	Temperature and Voltage Conditions	Mode	Pass	Fail	NA	NP	Result
§2.1046; §27.50	RF Output Power	Nominal		☐	☐	☐	■	Note 3
§2.1055; §27.54	Frequency Stability	Extreme Temperature and Voltage		☐	☐	☐	■	Note 4
§2.1049; §27.53	Occupied Bandwidth	Nominal		☐	☐	☐	■	Note 5
§2.1051; §27.53	Band Edge Compliance	Nominal		☐	☐	☐	■	Note 6
§2.1051; §27.53	Conducted Spurious Emissions	Nominal		☐	☐	☐	■	Note 2
§2.1053; §27.53	Radiated Spurious Emissions	Nominal	Op. 1	■	☐	☐	☐	Complies

Note 1: NA= Not Applicable; NP= Not Performed.
Note 2: Spurious emissions were evaluated with radiated measurement.
Note 3: Leveraged from module certification report # MDE_UBLOX_2105_FCC_01 section 5.15 (FCC ID: XPYUBX19KM01)
Note 4: Leveraged from module certification report # MDE_UBLOX_2105_FCC_01 section 5.16 (FCC ID: XPYUBX19KM01)
Note 5: Leveraged from module certification report # MDE_UBLOX_2105_FCC_01 section 5.19 (FCC ID: XPYUBX19KM01)
Note 6: Leveraged from module certification report # MDE_UBLOX_2105_FCC_01 section 5.20 (FCC ID: XPYUBX19KM01)
Note 7: Spot check was performed on the worst case of the leveraged result. Lab takes full responsibility for data leveraging.

7 Test Result Data

7.1 Radiated Spurious Emissions

7.1.1 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

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

7.1.2 Limits:

7.1.2.1 FCC Part 22.917 (a); FCC Part 24.238 (a); FCC Part 27.53 (h)

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.

7.1.2.2 RSS-132 Part 5.5; RSS-133 Part 6.5; RSS-139 Part 6.6 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.

7.1.3 Test conditions and setup:

Ambient Temperature (C)	EUT Set-Up #	EUT operating mode	Power Input
22	1	Op. 1	Battery

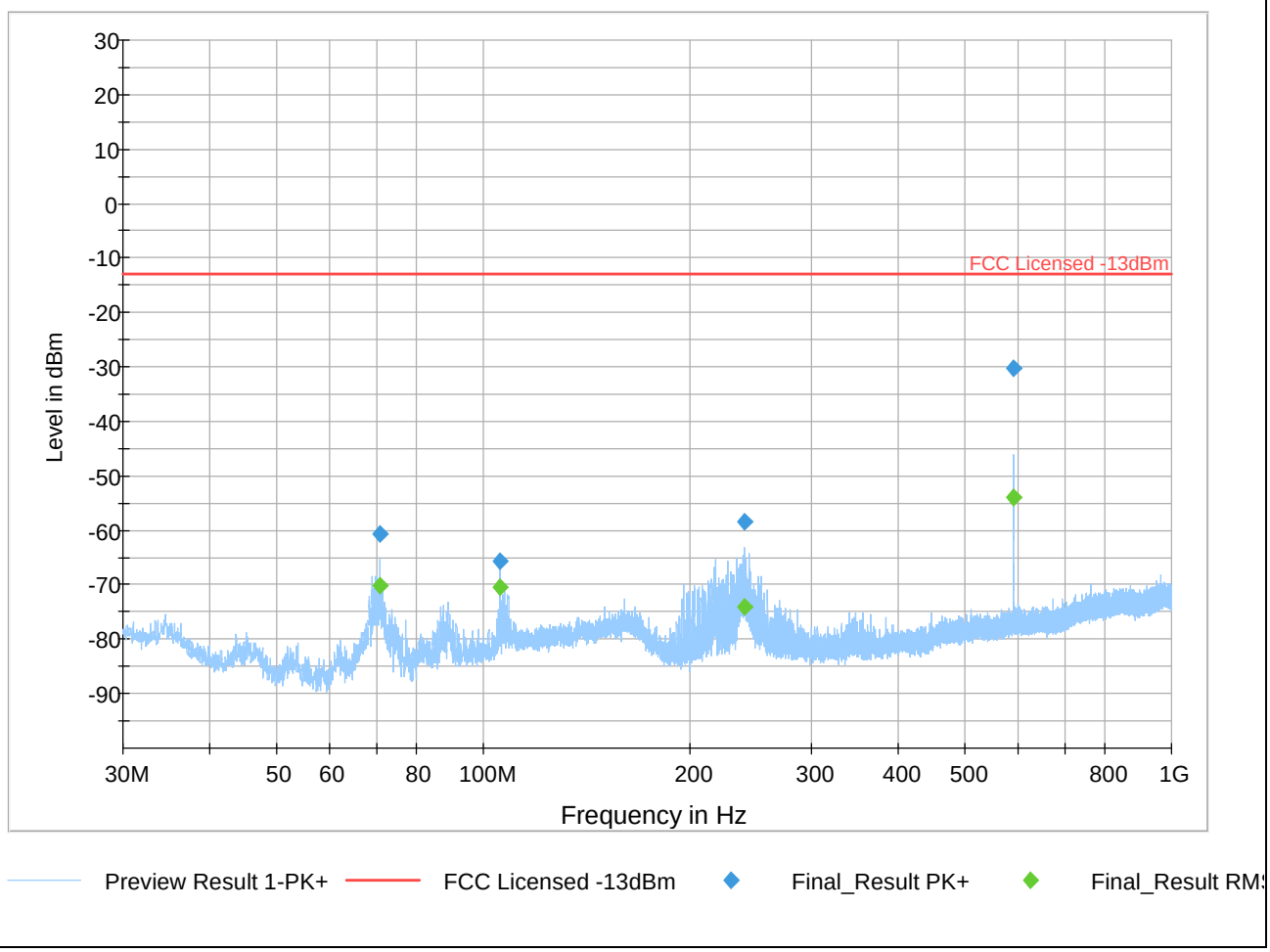
7.1.4 Measurement result:

Plot #	Channel	EUT operating mode	Scan Frequency	Limit (dBm)	Result
1-3	Low	LTE 2 + BLE	30 MHz – 18 GHz	-13	Pass
4-8	Mid	LTE 2 + BLE	9 kHz – 30 GHz	-13	Pass
9-11	High	LTE 2 + BLE	30 MHz – 18 GHz	-13	Pass
12-14	Low	LTE 4 + BLE	30 MHz – 18 GHz	-13	Pass
15-18	Mid	LTE 4 + BLE	9 kHz – 18 GHz	-13	Pass
19-21	High	LTE 4 + BLE	30 MHz – 18 GHz	-13	Pass
22-24	Low	LTE 5 + BLE	30 MHz – 9 GHz	-13	Pass
25-28	Mid	LTE 5 + BLE	9 kHz – 9 GHz	-13	Pass
29-31	High	LTE 5 + BLE	30 MHz – 9 GHz	-13	Pass
32-34	Low	LTE 12 + BLE	30 MHz – 9 GHz	-13	Pass
35-38	Mid	LTE 12 + BLE	9 kHz – 9 GHz	-13	Pass
39-41	High	LTE 12 + BLE	30 MHz – 9 GHz	-13	Pass
42-45	Mid	LTE 13 + BLE	9 kHz – 9 GHz	-13	Pass

7.1.5 Measurement Plots:

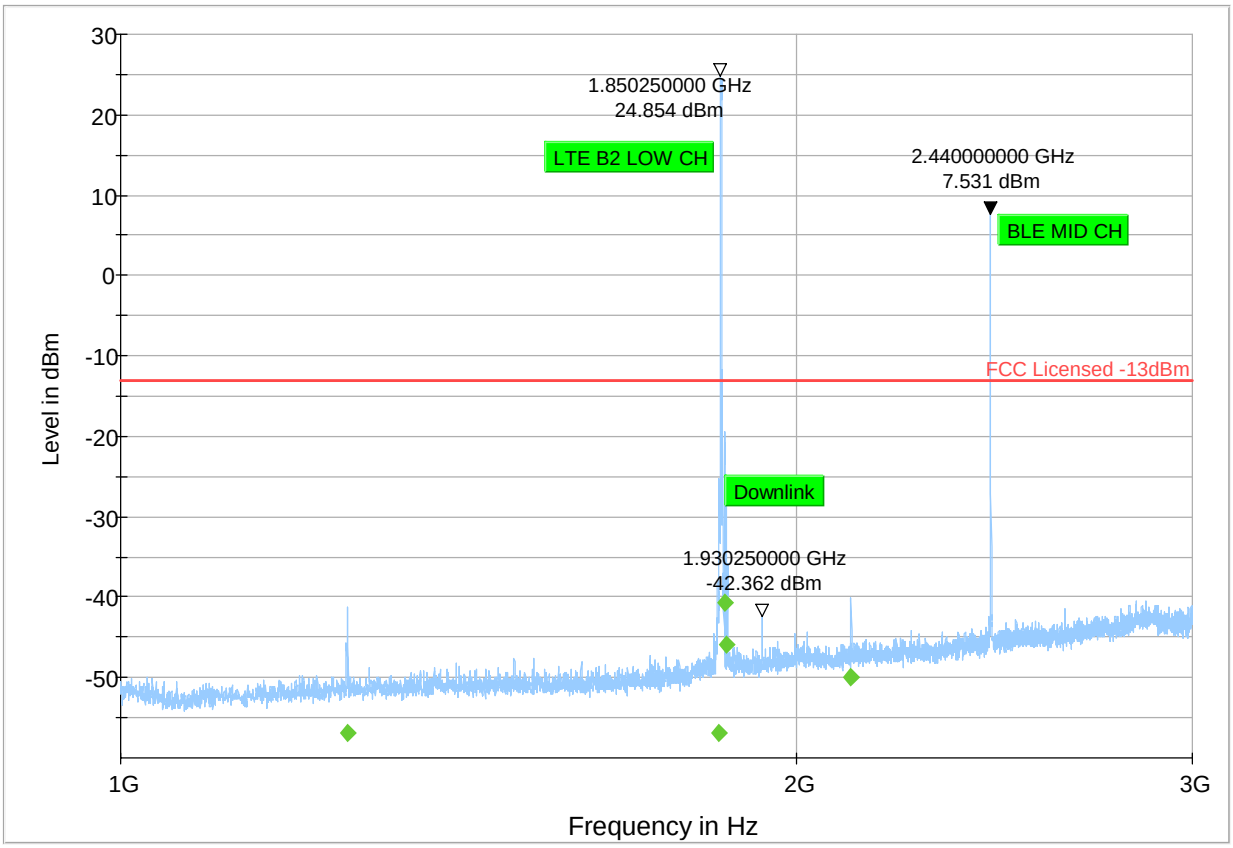
Plot # 1

Frequency (MHz)	MaxPeak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
70.84	---	-70.13	---	---	500.0	120.0	107.0	V	-3.0	-117.4
70.84	-60.64	---	-13.00	47.64	500.0	120.0	107.0	V	-3.0	-117.4
105.68	---	-70.44	---	---	500.0	120.0	100.0	V	223.0	-108.9
105.68	-65.71	---	-13.00	52.71	500.0	120.0	100.0	V	223.0	-108.9
240.05	-58.47	---	-13.00	45.47	500.0	120.0	156.0	H	281.0	-110.0
240.05	---	-74.18	---	---	500.0	120.0	156.0	H	281.0	-110.0
589.81	-30.38	---	-13.00	17.38	500.0	120.0	107.0	H	262.0	-102.4
589.81	---	-53.86	---	---	500.0	120.0	107.0	H	262.0	-102.4



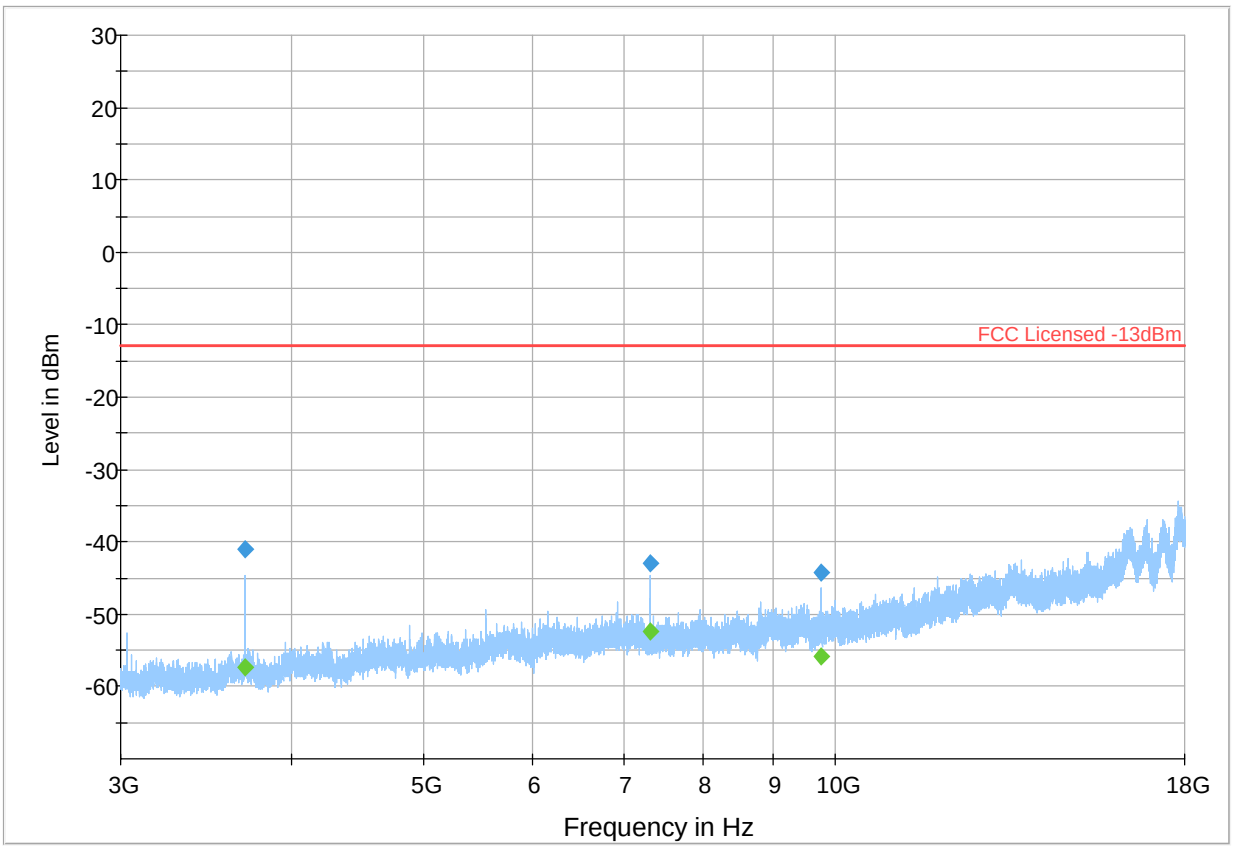
Plot # 2

Frequency (MHz)	MaxPeak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
1262.25	---	-56.92	---	---	500.0	1000.0	263.0	H	252.0	-66.7
1847.00	---	-56.94	---	---	500.0	1000.0	107.0	V	11.0	-64.3
1858.25	---	-40.69	---	---	500.0	1000.0	100.0	H	95.0	-64.2
1861.25	---	-45.95	---	---	500.0	1000.0	134.0	H	204.0	-64.2
2114.75	---	-49.88	---	---	500.0	1000.0	117.0	H	67.0	-63.5



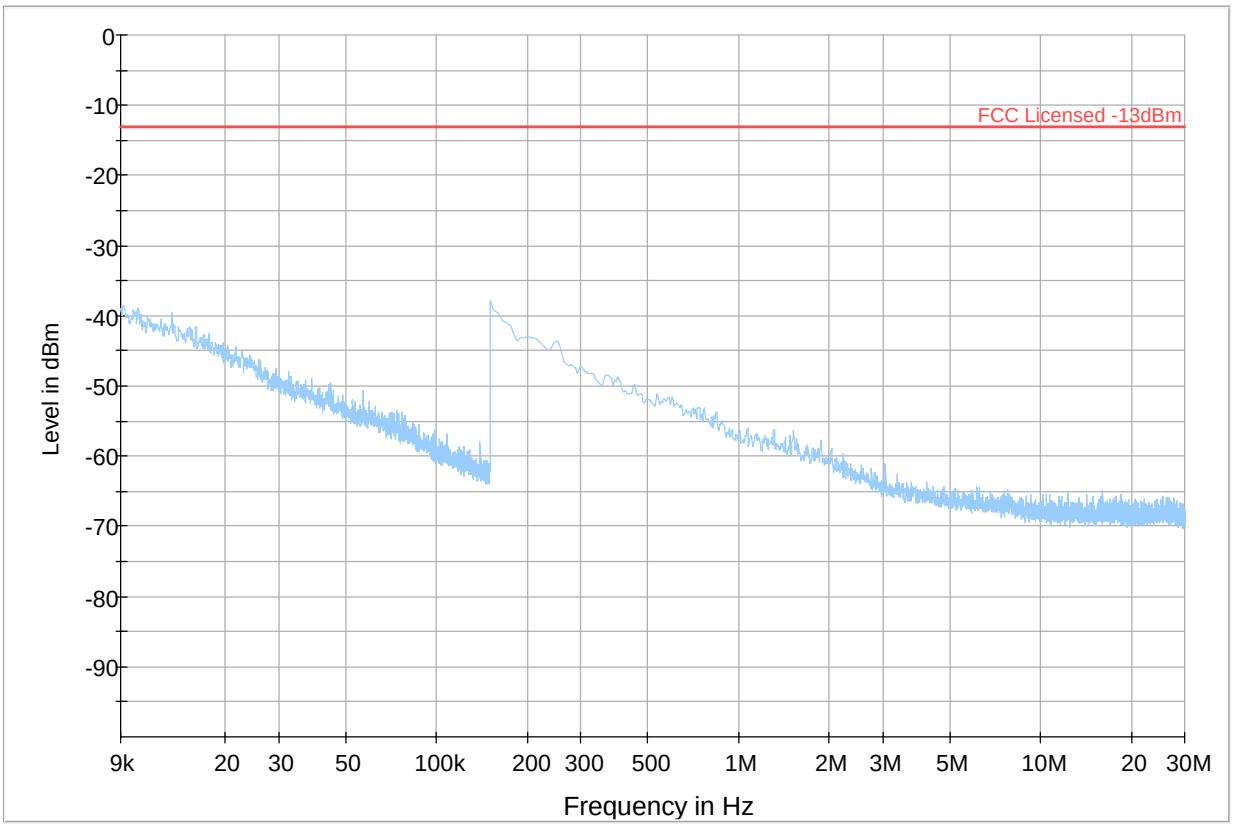
Plot # 3

Frequency (MHz)	MaxPeak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
3702.00	---	-57.42	---	---	500.0	1000.0	137.0	H	-11.0	-100.6
3702.00	-41.01	---	-13.00	28.01	500.0	1000.0	137.0	H	-11.0	-100.6
7319.25	---	-52.44	---	---	500.0	1000.0	107.0	H	26.0	-95.6
7319.25	-42.88	---	-13.00	29.88	500.0	1000.0	107.0	H	26.0	-95.6
9759.75	---	-55.92	---	---	500.0	1000.0	194.0	H	71.0	-93.1
9759.75	-44.28	---	-13.00	31.28	500.0	1000.0	194.0	H	71.0	-93.1



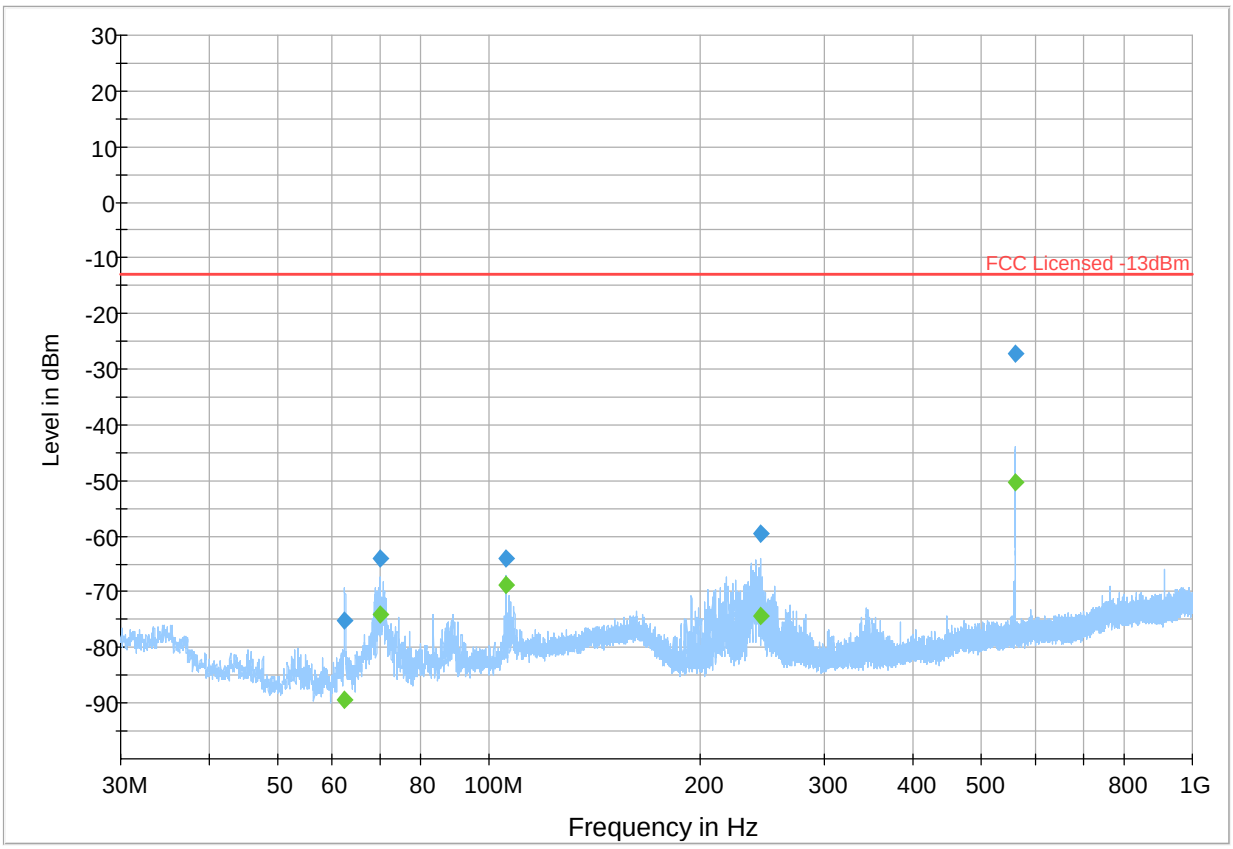
Plot # 4

Frequency (MHz)	MaxPeak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
---	---	---	---	---	---	---	---		---	---



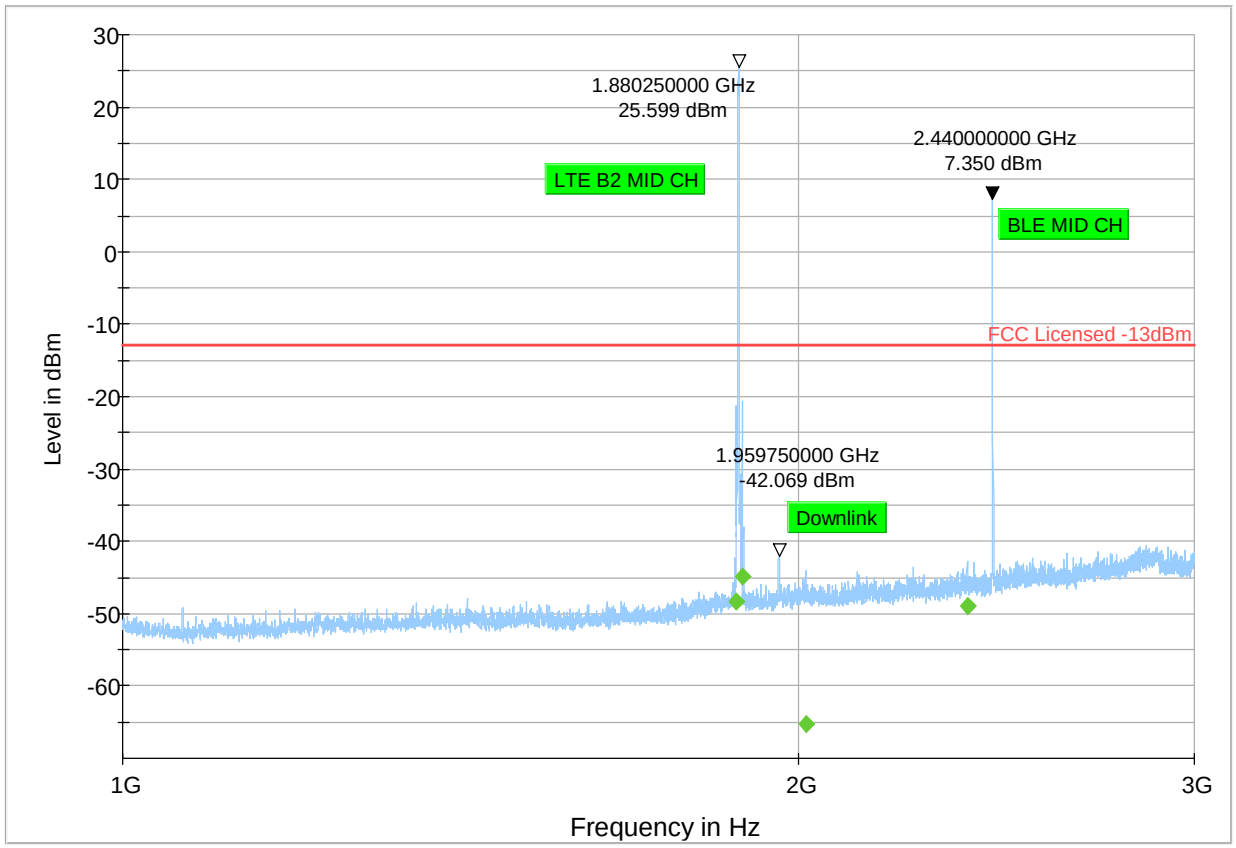
Plot # 5

Frequency (MHz)	MaxPeak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
62.45	-75.25	---	-13.00	62.25	500.0	120.0	160.0	V	-11.0	-117.8
62.45	---	-89.53	---	---	500.0	120.0	160.0	V	-11.0	-117.8
70.21	-63.95	---	-13.00	50.95	500.0	120.0	100.0	V	89.0	-117.5
70.21	---	-73.93	---	---	500.0	120.0	100.0	V	89.0	-117.5
105.71	---	-68.87	---	---	500.0	120.0	100.0	V	12.0	-108.9
105.71	-63.93	---	-13.00	50.93	500.0	120.0	100.0	V	12.0	-108.9
243.06	-59.66	---	-13.00	46.66	500.0	120.0	134.0	H	272.0	-109.4
243.06	---	-74.38	---	---	500.0	120.0	134.0	H	272.0	-109.4
559.77	-27.19	---	-13.00	14.19	500.0	120.0	107.0	H	256.0	-103.5
559.77	---	-50.34	---	---	500.0	120.0	107.0	H	256.0	-103.5



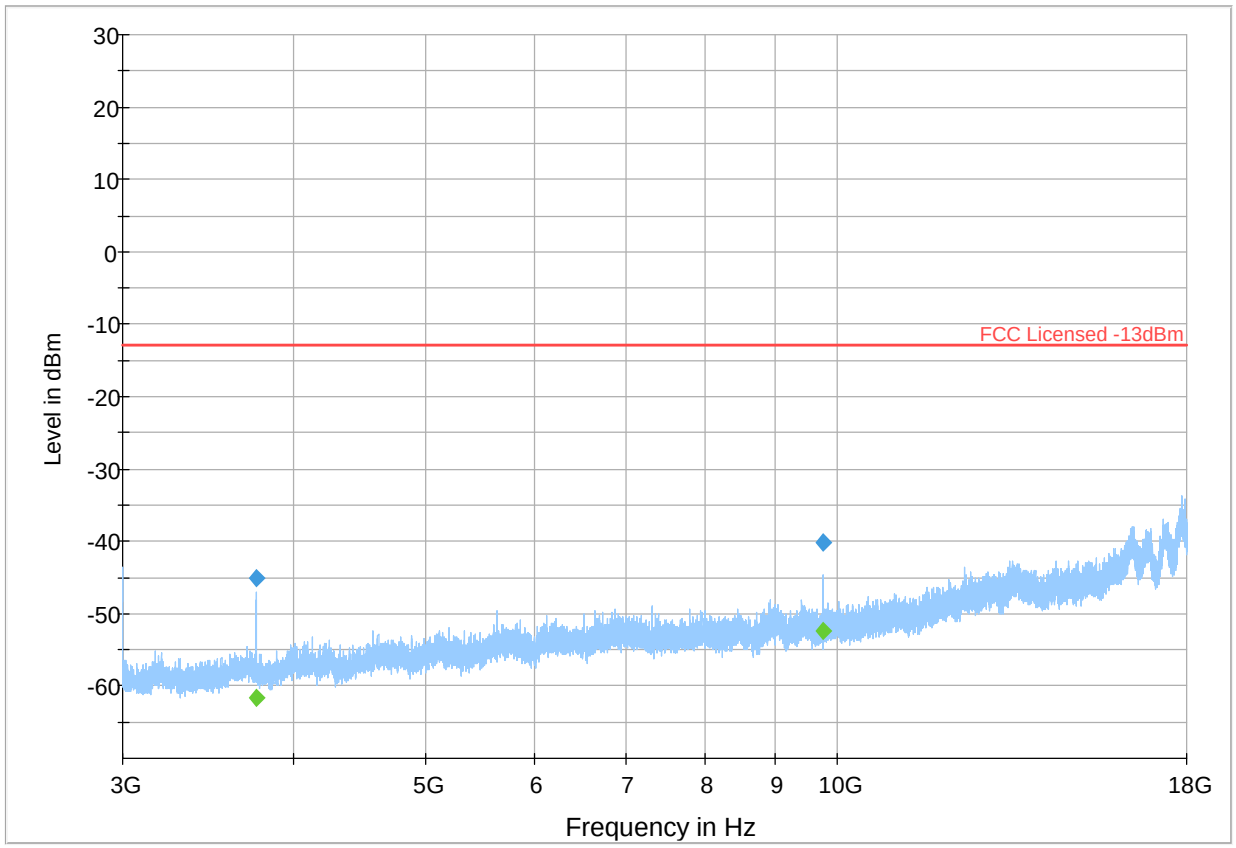
Plot # 6

Frequency (MHz)	MaxPeak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
1875.75	---	-48.26	---	---	500.0	1000.0	325.0	V	114.0	-64.1
1886.50	---	-44.86	---	---	500.0	1000.0	142.0	H	272.0	-64.1
2013.50	---	-65.38	---	---	500.0	1000.0	100.0	H	-5.0	-63.6
2376.00	---	-49.04	---	---	500.0	1000.0	125.0	H	89.0	-62.5



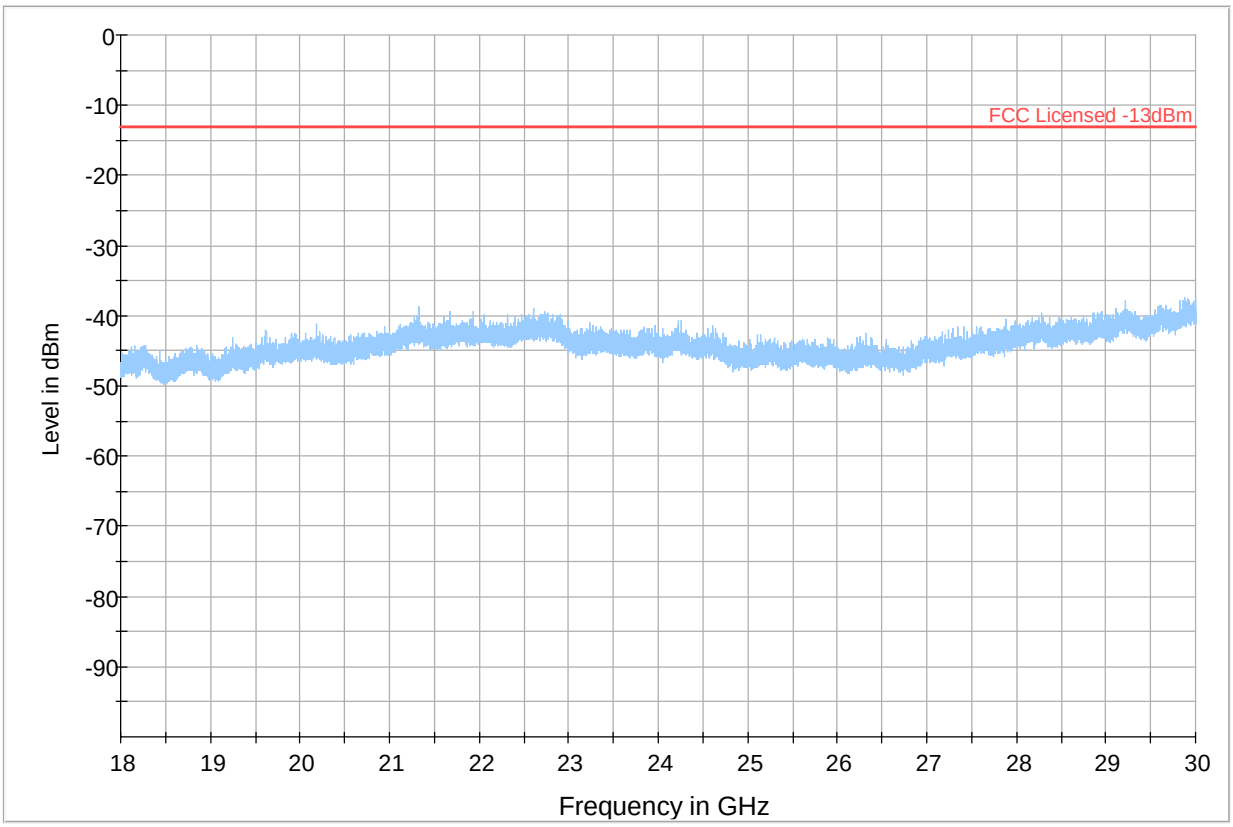
Plot # 7

Frequency (MHz)	MaxPeak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
3760.50	---	-61.58	---	---	500.0	1000.0	142.0	V	-11.0	-100.9
3760.50	-45.12	---	-13.00	32.12	500.0	1000.0	142.0	V	-11.0	-100.9
9760.00	---	-52.49	---	---	500.0	1000.0	100.0	V	138.0	-93.1
9760.00	-40.12	---	-13.00	27.12	500.0	1000.0	100.0	V	138.0	-93.1



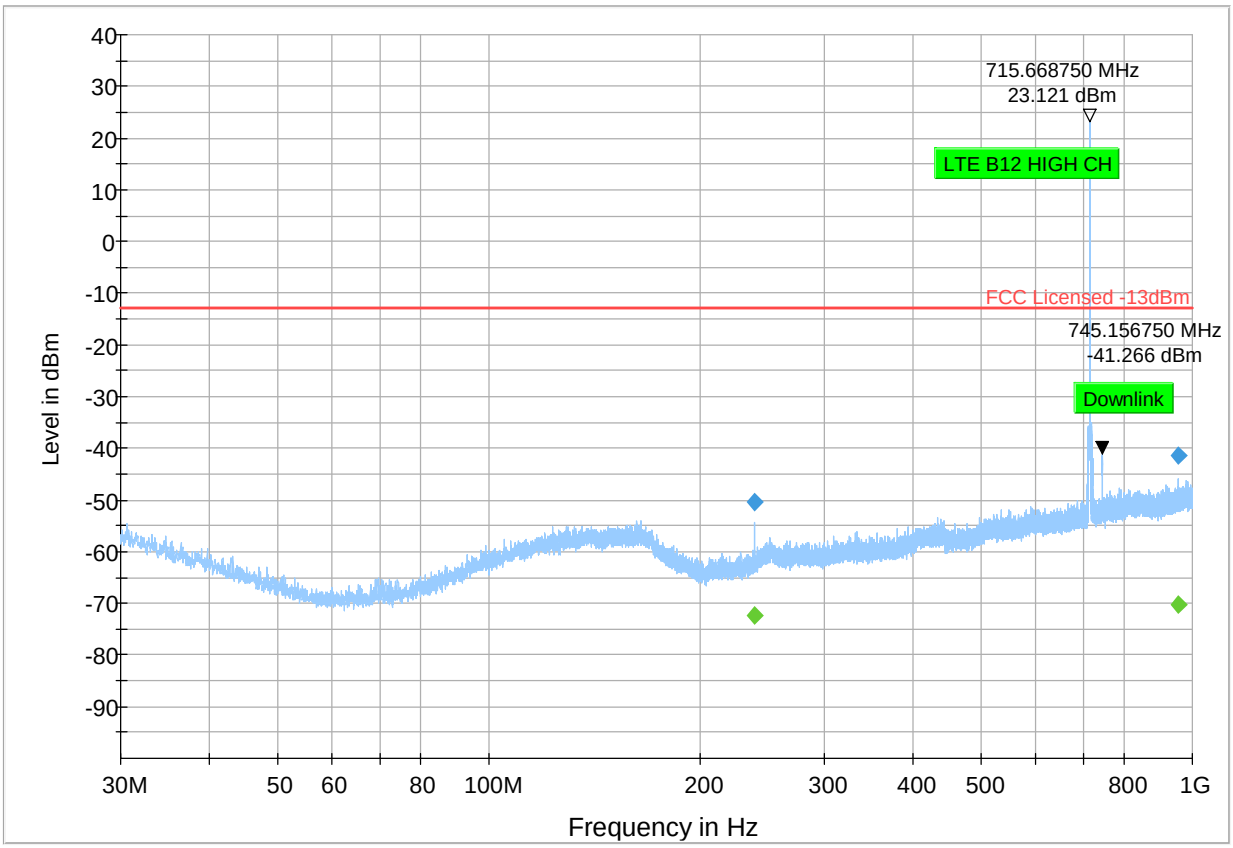
Plot # 8

Frequency (MHz)	MaxPeak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
---	---	---	---	---	---	---	---		---	---



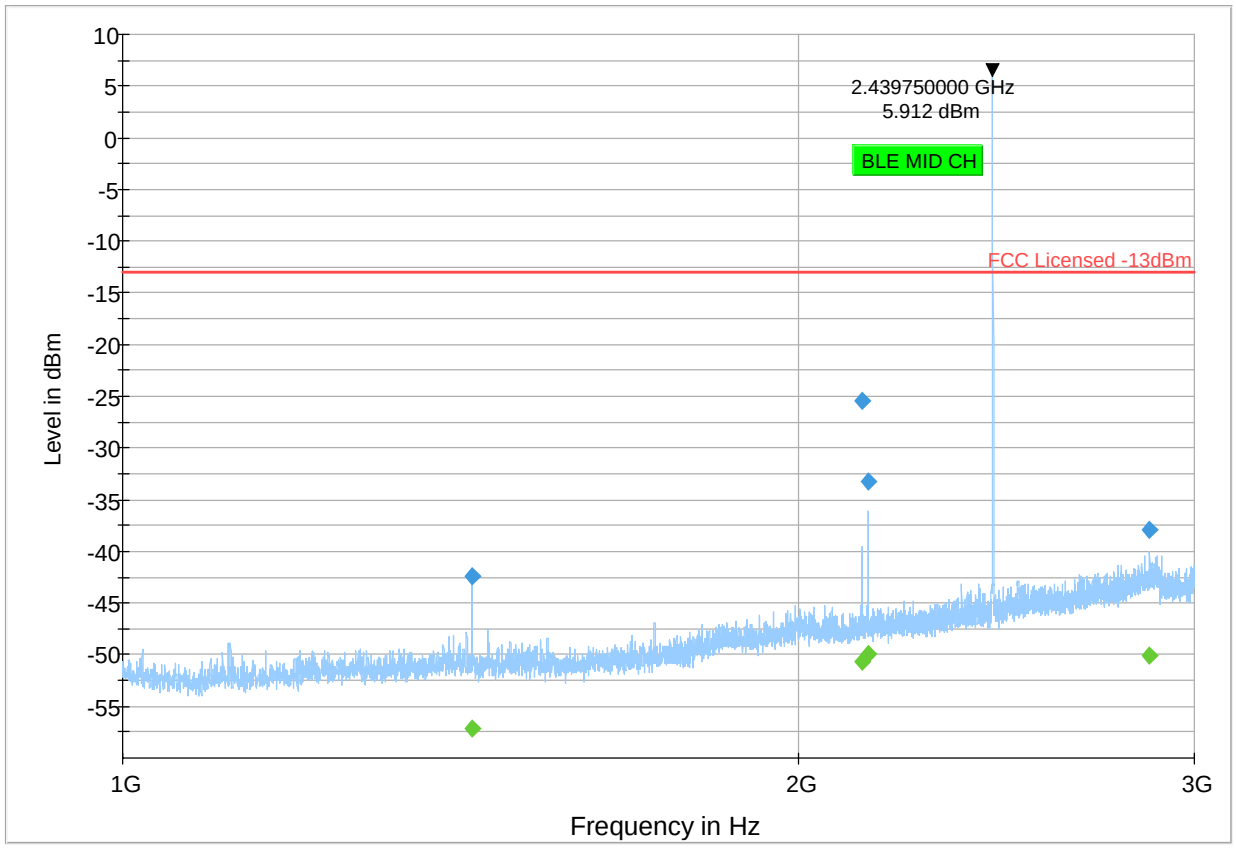
Plot # 9

Frequency (MHz)	MaxPeak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
238.43	---	-72.21	---	---	500.0	100.0	116.0	H	289.0	-75.0
238.43	-50.48	---	-13.00	37.48	500.0	100.0	116.0	H	289.0	-75.0
954.14	---	-70.12	---	---	500.0	100.0	225.0	V	158.0	-62.9
954.14	-41.37	---	-13.00	28.37	500.0	100.0	225.0	V	158.0	-62.9



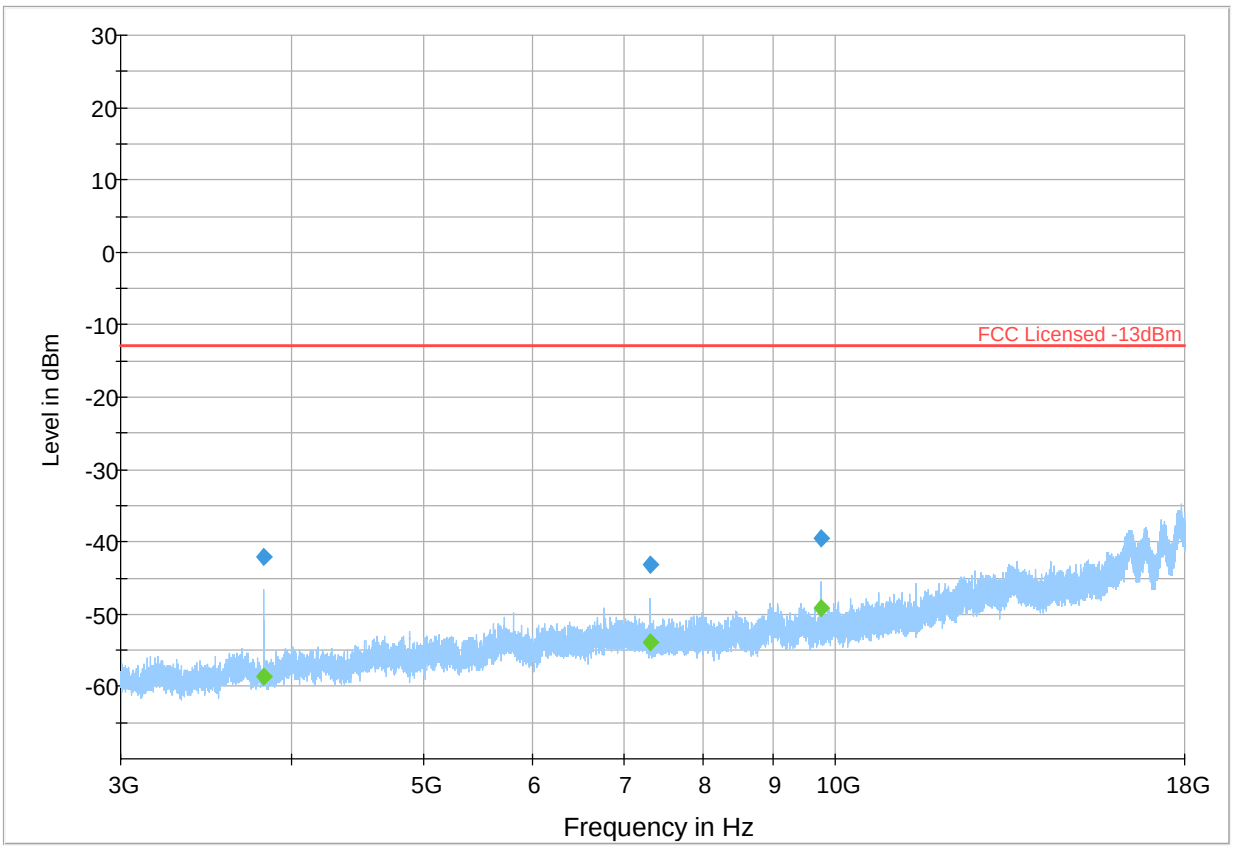
Plot # 10

Frequency (MHz)	MaxPeak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
1431.25	---	-57.07	---	---	500.0	1000.0	249.0	V	92.0	-66.4
1431.25	-42.36	---	-13.00	29.36	500.0	1000.0	249.0	V	92.0	-66.4
2134.00	---	-50.63	---	---	500.0	1000.0	125.0	H	28.0	-63.4
2134.00	-25.43	---	-13.00	12.43	500.0	1000.0	125.0	H	28.0	-63.4
2147.00	---	-49.95	---	---	500.0	1000.0	137.0	H	1.0	-63.4
2147.00	-33.20	---	-13.00	20.20	500.0	1000.0	137.0	H	1.0	-63.4
2866.75	---	-50.02	---	---	500.0	1000.0	142.0	H	286.0	-60.6
2866.75	-37.94	---	-13.00	24.94	500.0	1000.0	142.0	H	286.0	-60.6



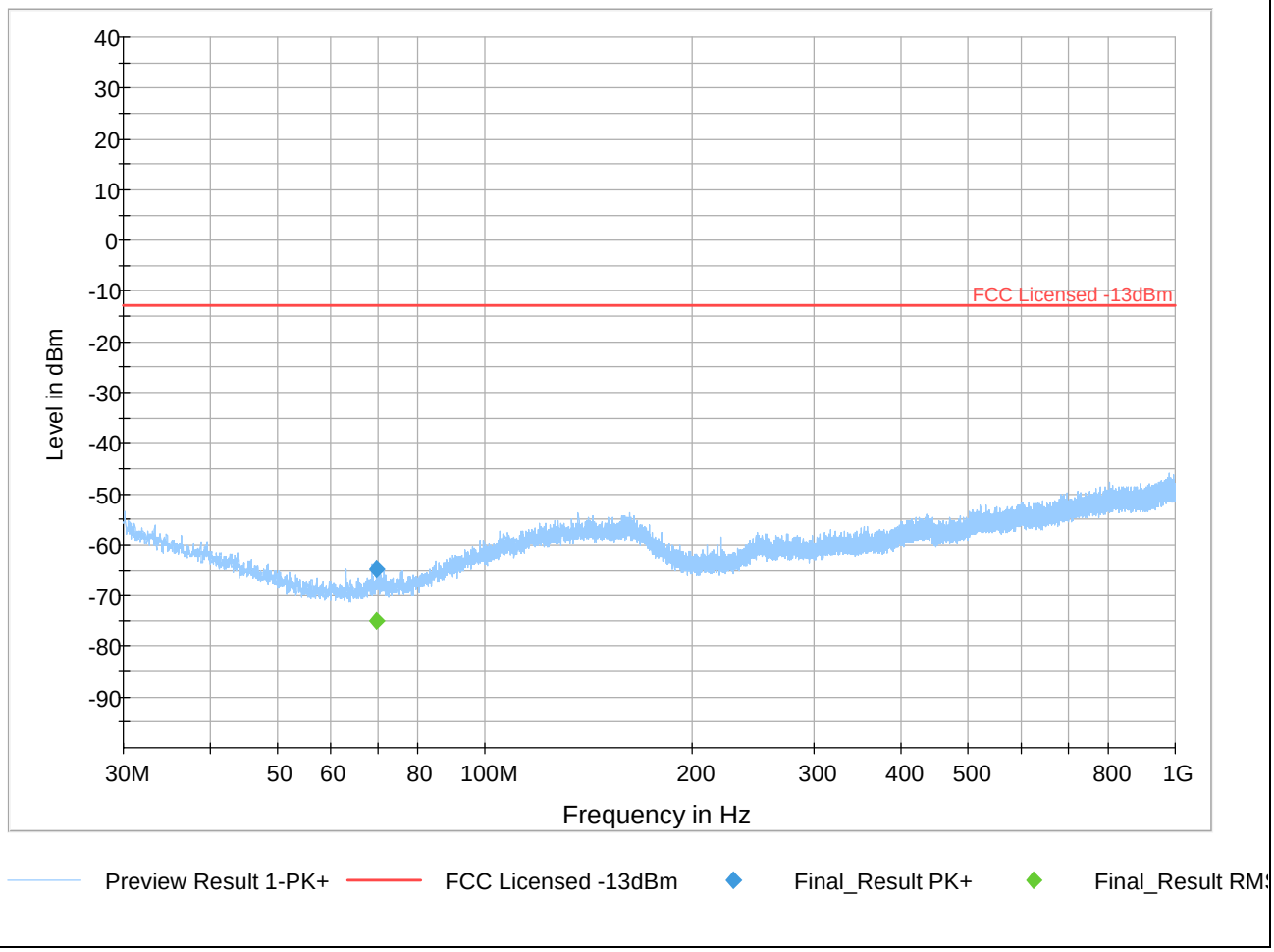
Plot # 11

Frequency (MHz)	MaxPeak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
3819.25	---	-58.55	---	---	500.0	1000.0	241.0	V	17.0	-101.4
3819.25	-42.03	---	-13.00	29.03	500.0	1000.0	241.0	V	17.0	-101.4
7319.00	---	-53.85	---	---	500.0	1000.0	126.0	H	24.0	-95.6
7319.00	-43.14	---	-13.00	30.14	500.0	1000.0	126.0	H	24.0	-95.6
9761.00	---	-49.15	---	---	500.0	1000.0	100.0	V	135.0	-93.1
9761.00	-39.50	---	-13.00	26.50	500.0	1000.0	100.0	V	135.0	-93.1



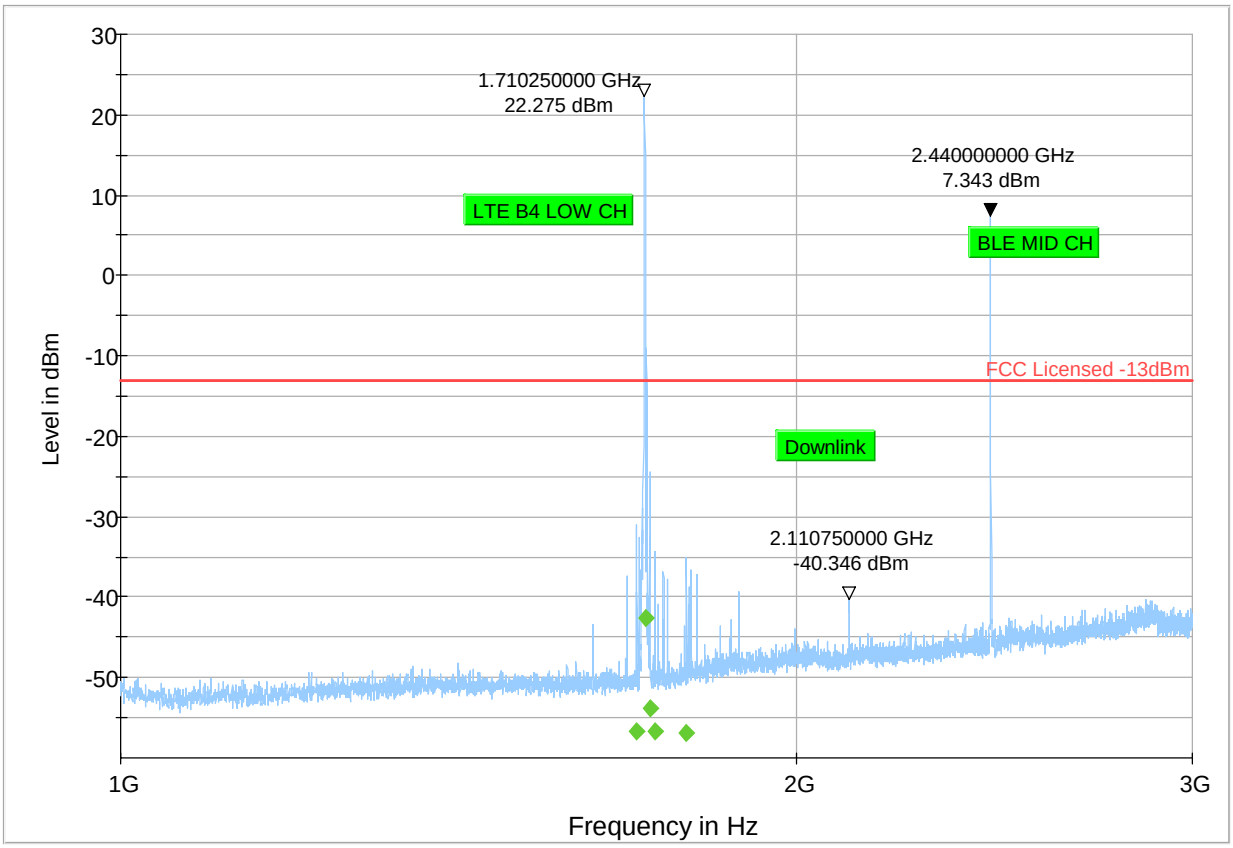
Plot # 12

Frequency (MHz)	MaxPeak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
69.67	---	-74.95	---	---	500.0	100.0	125.0	V	-56.0	-82.0
69.67	-64.85	---	-13.00	51.85	500.0	100.0	125.0	V	-56.0	-82.0



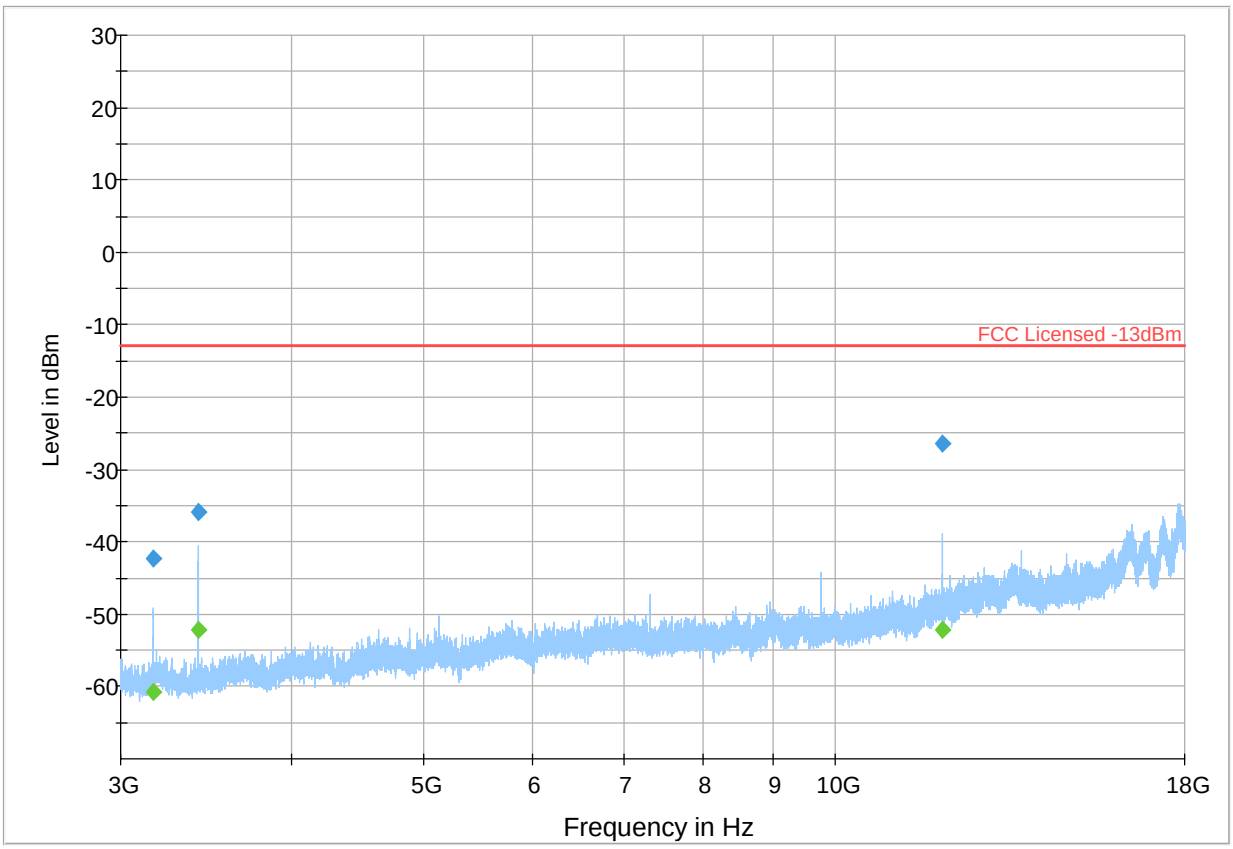
Plot # 13

Frequency (MHz)	MaxPeak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
1696.25	---	-56.64	---	---	500.0	1000.0	100.0	H	84.0	-65.3
1714.00	---	-42.59	---	---	500.0	1000.0	142.0	H	38.0	-65.2
1720.00	---	-53.80	---	---	500.0	1000.0	186.0	H	51.0	-65.2
1729.00	---	-56.62	---	---	500.0	1000.0	107.0	H	92.0	-65.1
1786.25	---	-56.97	---	---	500.0	1000.0	107.0	H	220.0	-65.0



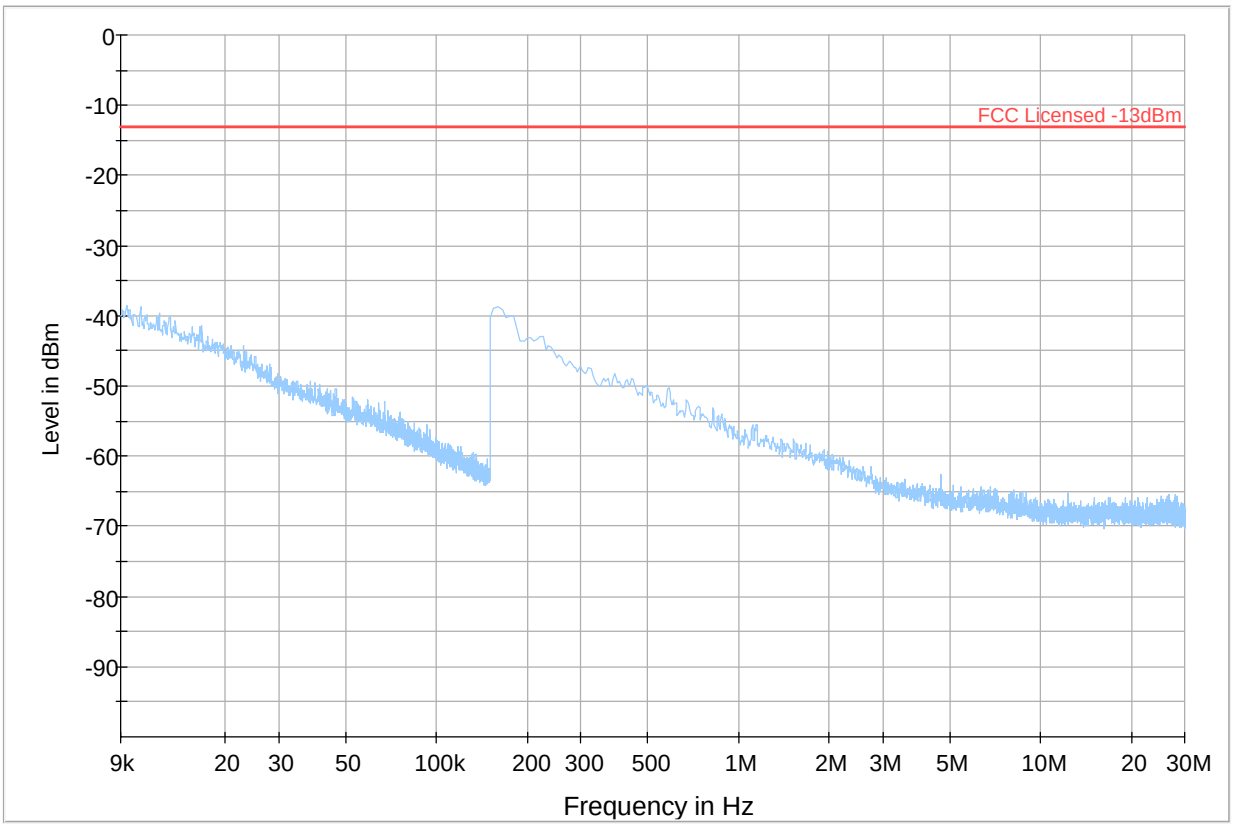
Plot # 14

Frequency (MHz)	MaxPeak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
3169.25	---	-60.77	---	---	500.0	1000.0	183.0	H	279.0	-102.7
3169.25	-42.40	---	-13.00	29.40	500.0	1000.0	183.0	H	279.0	-102.7
3422.00	---	-52.28	---	---	500.0	1000.0	134.0	H	60.0	-102.4
3422.00	-35.82	---	-13.00	22.82	500.0	1000.0	134.0	H	60.0	-102.4
11972.25	---	-52.22	---	---	500.0	1000.0	284.0	H	265.0	-90.6
11972.25	-26.54	---	-13.00	13.54	500.0	1000.0	284.0	H	265.0	-90.6



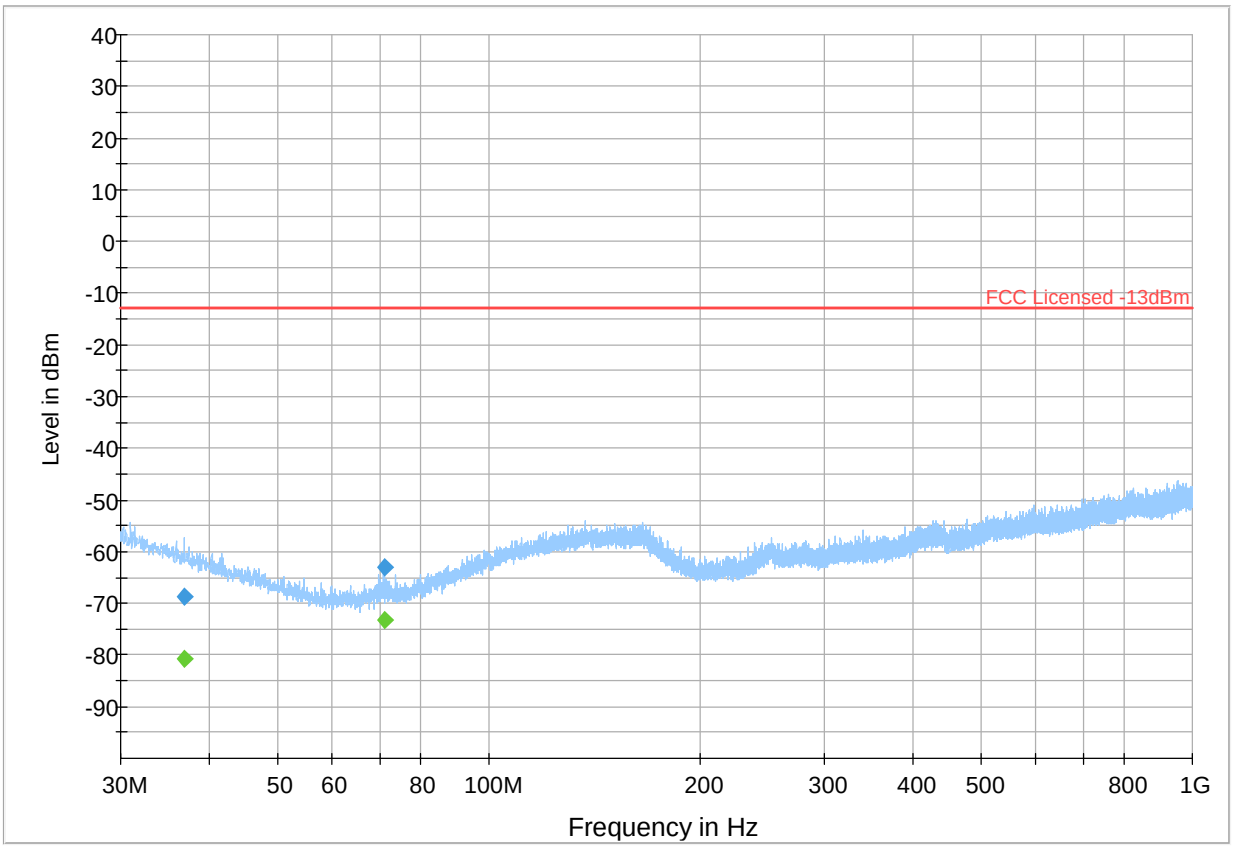
Plot # 15

Frequency (MHz)	MaxPeak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
---	---	---	---	---	---	---	---		---	---



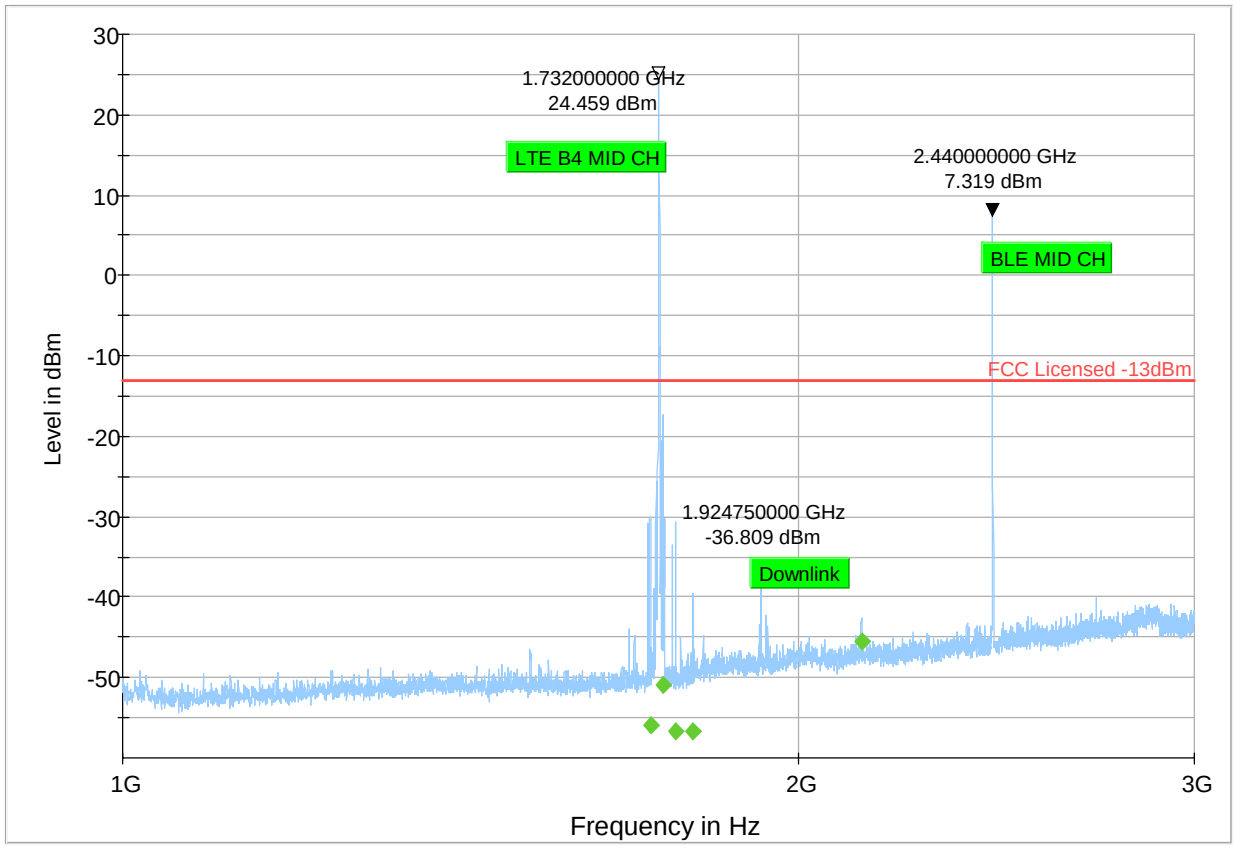
Plot # 16

Frequency (MHz)	MaxPeak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
36.91	---	-80.82	---	---	500.0	100.0	158.0	V	72.0	-74.2
36.91	-68.81	---	-13.00	55.81	500.0	100.0	158.0	V	72.0	-74.2
71.03	---	-73.25	---	---	500.0	100.0	117.0	V	23.0	-81.8
71.03	-63.05	---	-13.00	50.05	500.0	100.0	117.0	V	23.0	-81.8



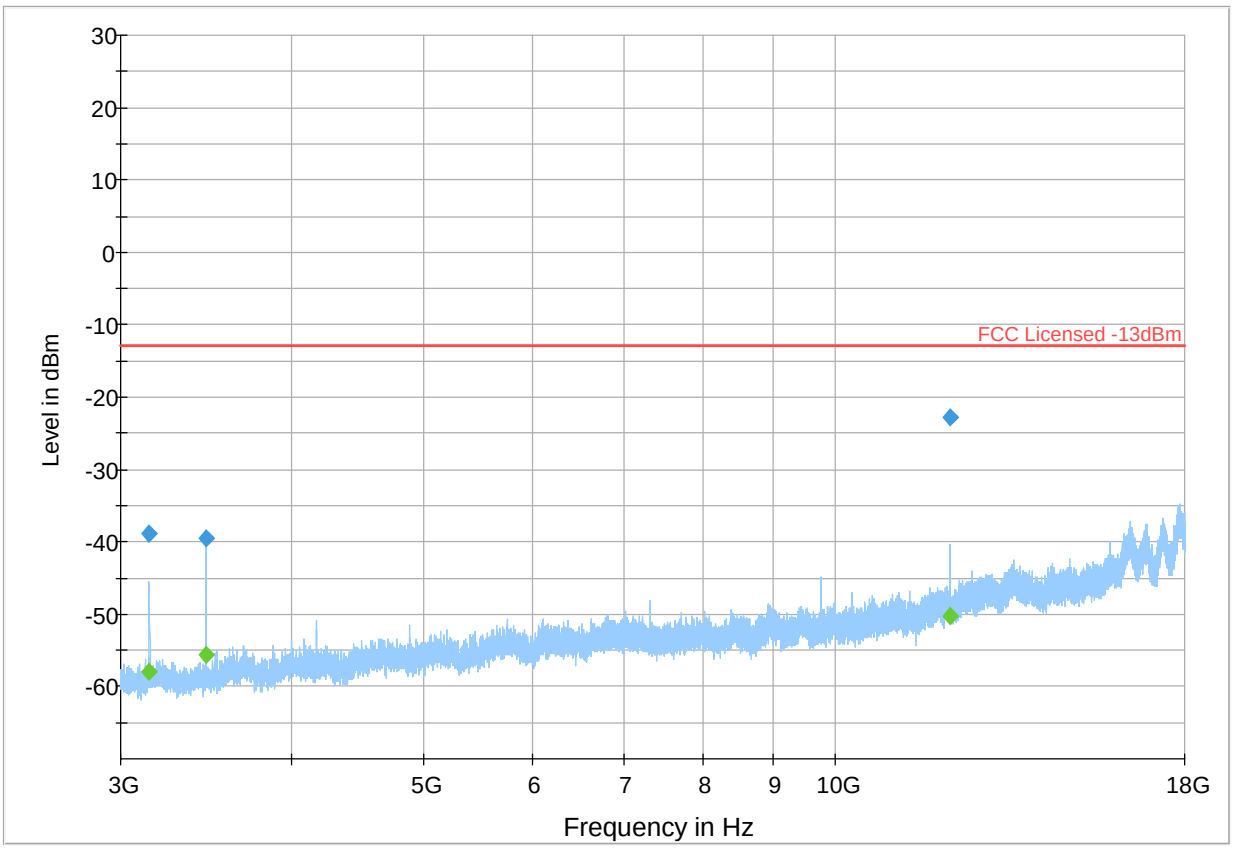
Plot # 17

Frequency (MHz)	MaxPeak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
1717.00	---	-55.99	---	---	500.0	1000.0	134.0	H	258.0	-65.2
1740.75	---	-50.83	---	---	500.0	1000.0	142.0	H	251.0	-65.1
1763.25	---	-56.70	---	---	500.0	1000.0	296.0	H	249.0	-65.0
1793.25	---	-56.62	---	---	500.0	1000.0	125.0	H	254.0	-64.9
2132.25	---	-45.58	---	---	500.0	1000.0	296.0	V	28.0	-63.4



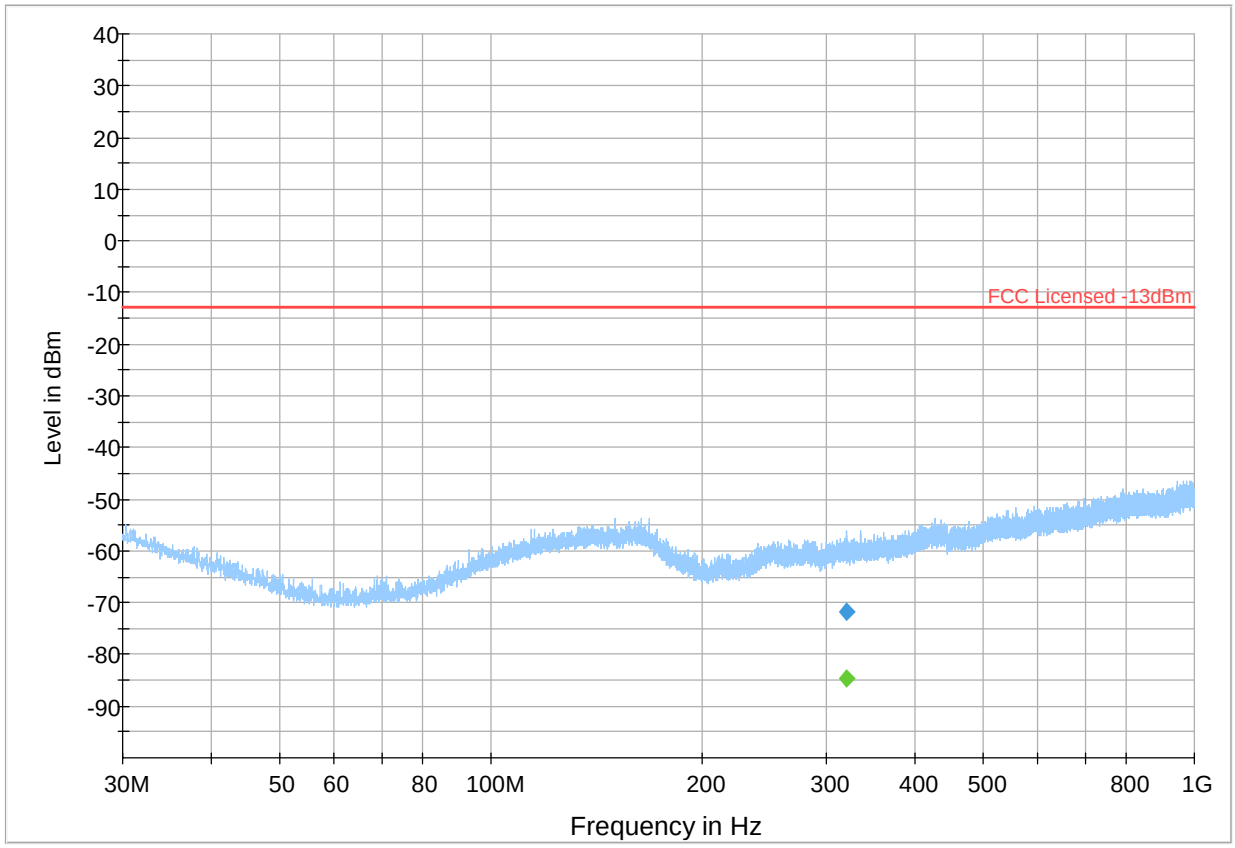
Plot # 18

Frequency (MHz)	MaxPeak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
3147.50	---	-57.94	---	---	500.0	1000.0	226.0	H	140.0	-103.0
3147.50	-38.80	---	-13.00	25.80	500.0	1000.0	226.0	H	140.0	-103.0
3465.75	---	-55.70	---	---	500.0	1000.0	100.0	H	48.0	-102.2
3465.75	-39.60	---	-13.00	26.60	500.0	1000.0	100.0	H	48.0	-102.2
12125.00	---	-50.30	---	---	500.0	1000.0	325.0	H	262.0	-90.0
12125.00	-22.76	---	-13.00	9.76	500.0	1000.0	325.0	H	262.0	-90.0



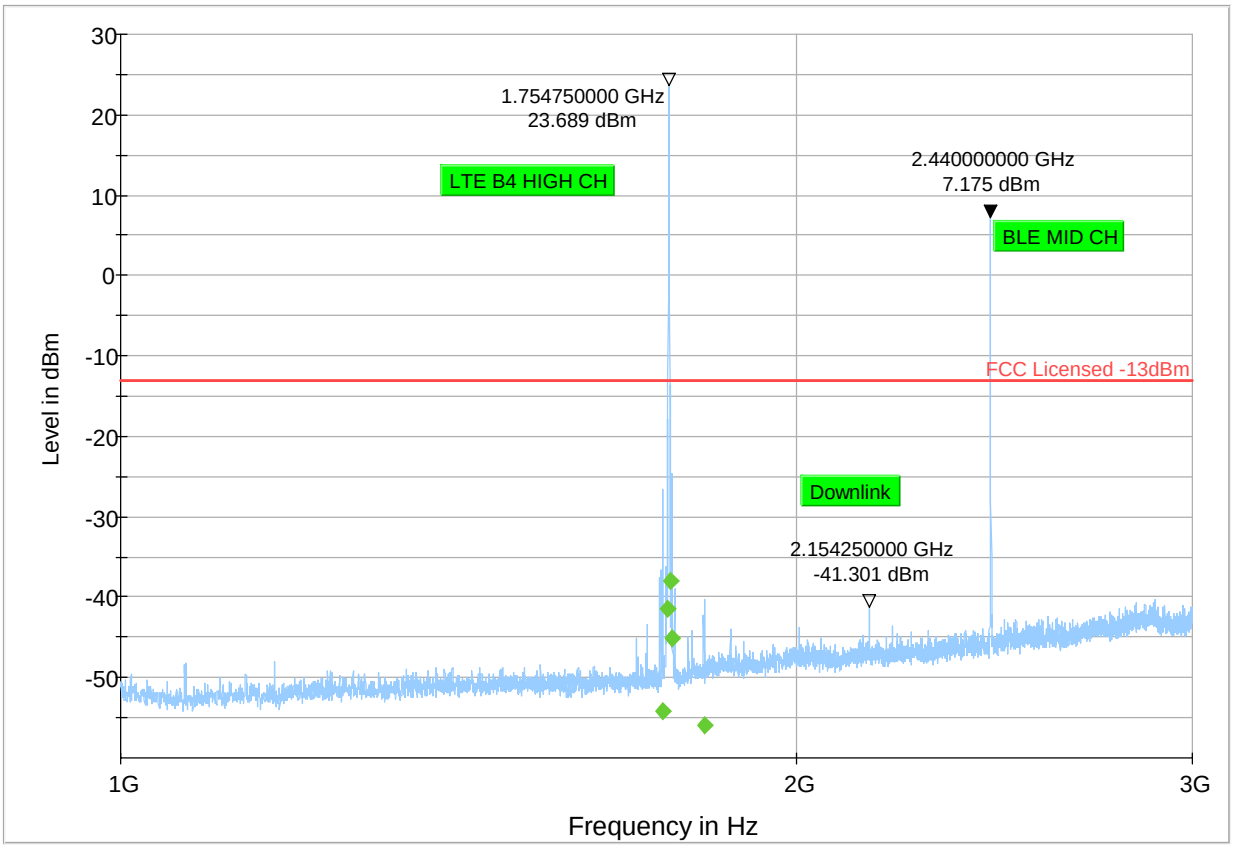
Plot # 19

Frequency (MHz)	MaxPeak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
320.39	---	-84.57	---	---	500.0	100.0	201.0	V	169.0	-73.5
320.39	-71.87	---	-13.00	58.87	500.0	100.0	201.0	V	169.0	-73.5



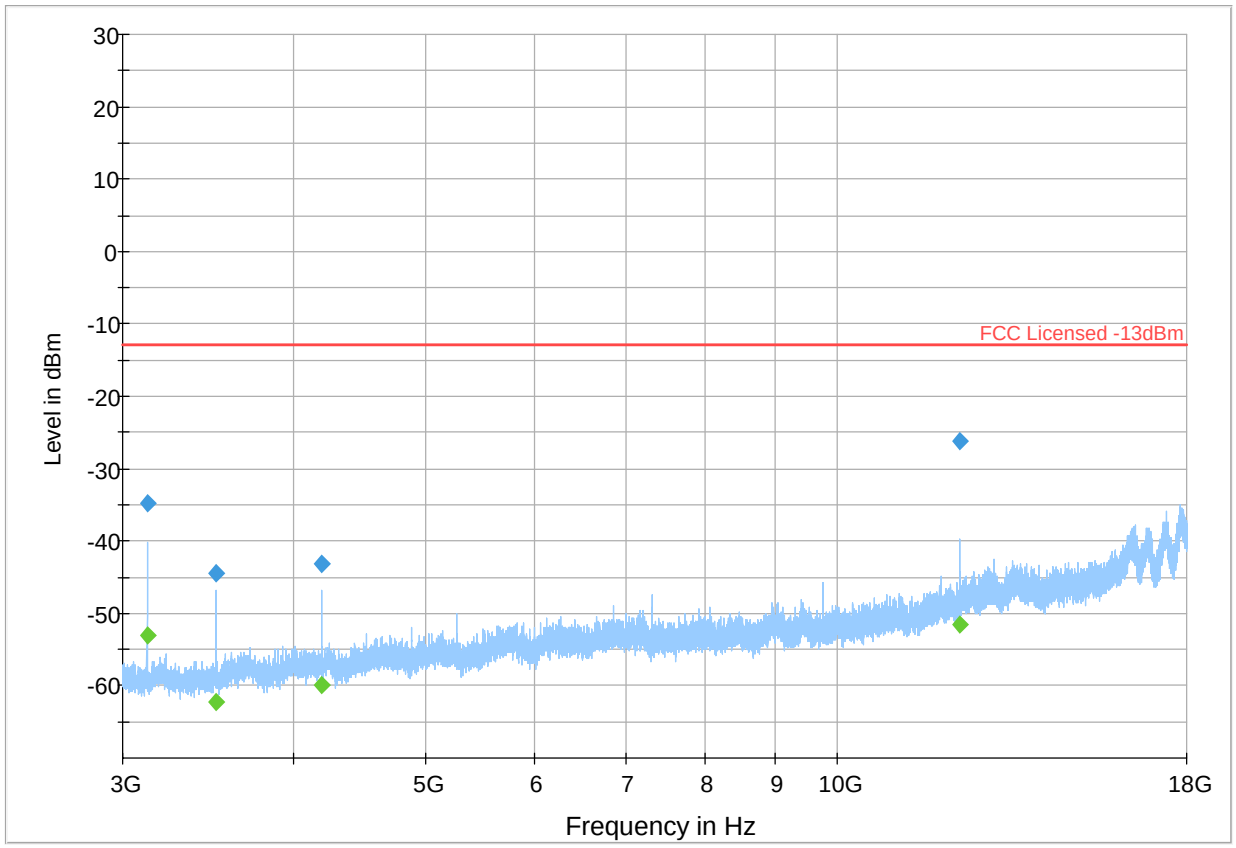
Plot # 20

Frequency (MHz)	MaxPeak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
1744.00	---	-54.19	---	---	500.0	1000.0	145.0	H	62.0	-65.1
1750.75	---	-41.52	---	---	500.0	1000.0	143.0	H	250.0	-65.1
1757.50	---	-37.95	---	---	500.0	1000.0	159.0	H	87.0	-65.0
1759.25	---	-45.05	---	---	500.0	1000.0	117.0	H	94.0	-65.0
1820.00	---	-55.97	---	---	500.0	1000.0	100.0	H	208.0	-64.6



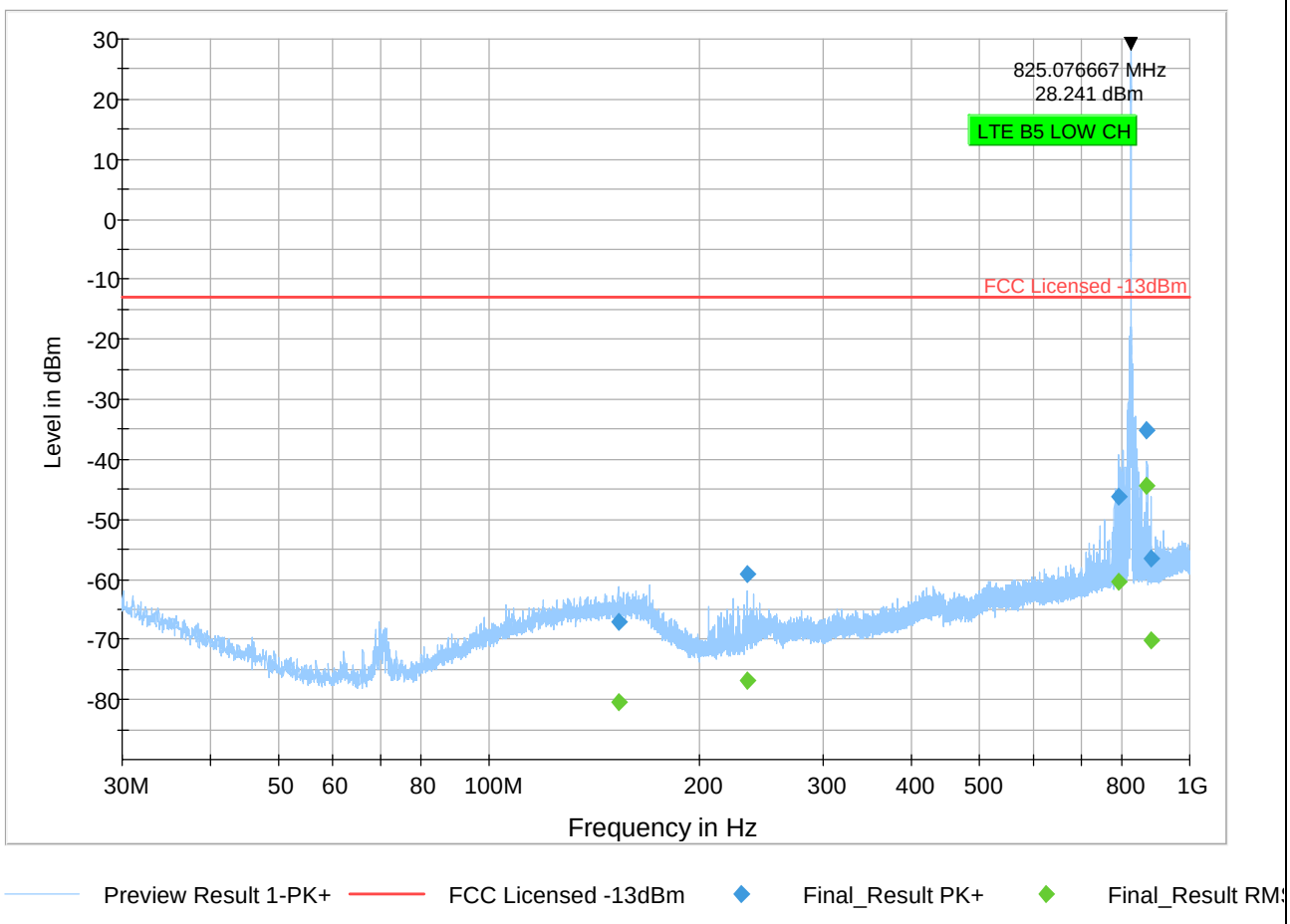
Plot # 21

Frequency (MHz)	MaxPeak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
3125.25	---	-52.99	---	---	500.0	1000.0	276.0	V	284.0	-103.3
3125.25	-34.84	---	-13.00	21.84	500.0	1000.0	276.0	V	284.0	-103.3
3507.25	---	-62.29	---	---	500.0	1000.0	143.0	H	-7.0	-102.2
3507.25	-44.51	---	-13.00	31.51	500.0	1000.0	143.0	H	-7.0	-102.2
4194.50	---	-59.89	---	---	500.0	1000.0	151.0	H	128.0	-99.2
4194.50	-43.26	---	-13.00	30.26	500.0	1000.0	151.0	H	128.0	-99.2
12277.50	---	-51.54	---	---	500.0	1000.0	325.0	H	261.0	-89.3
12277.50	-26.16	---	-13.00	13.16	500.0	1000.0	325.0	H	261.0	-89.3



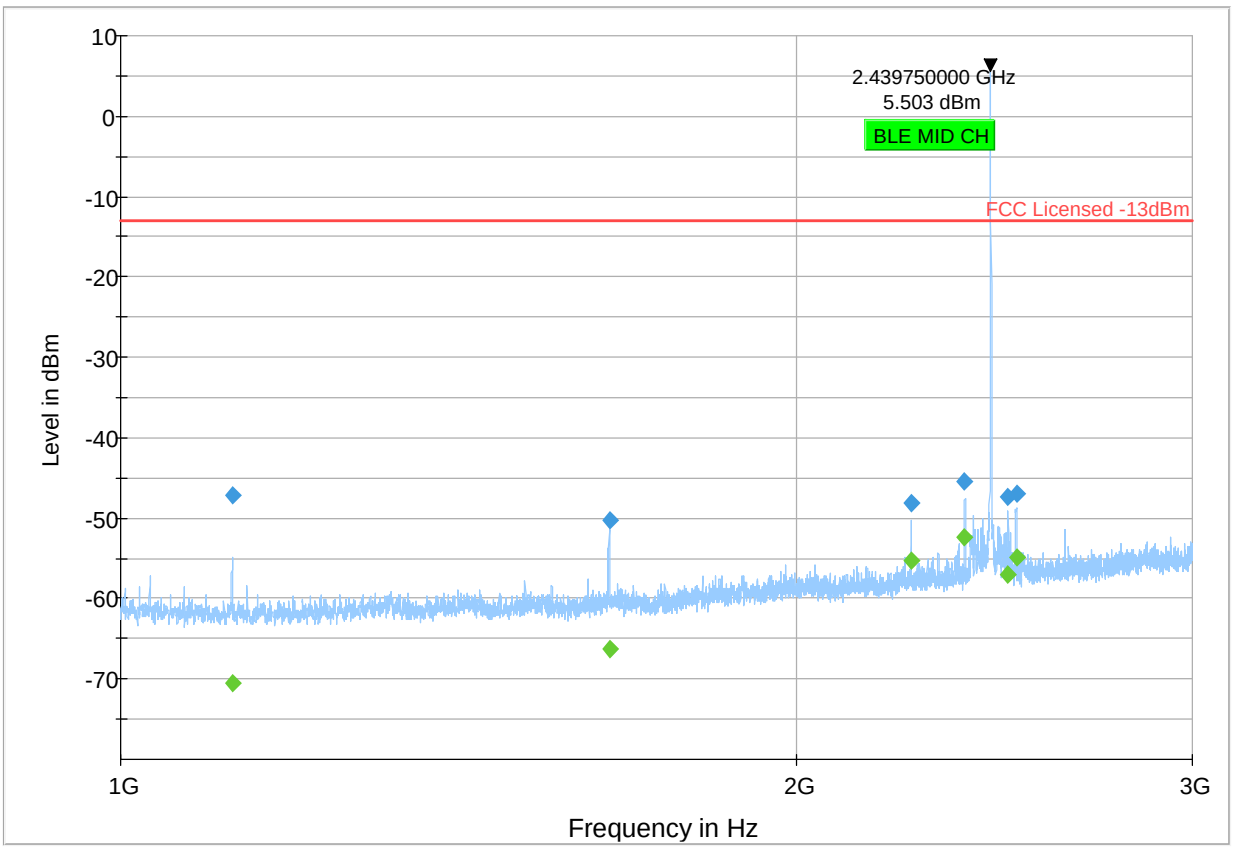
Plot # 22

Frequency (MHz)	MaxPeak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
152.93	-67.16	---	-13.00	54.16	500.0	100.0	120.0	V	77.0	-69.4
152.93	---	-80.36	---	---	500.0	100.0	120.0	V	77.0	-69.4
234.22	-59.06	---	-13.00	46.06	500.0	100.0	125.0	H	293.0	-75.3
234.22	---	-76.75	---	---	500.0	100.0	125.0	H	293.0	-75.3
790.80	---	-60.28	---	---	500.0	100.0	116.0	H	276.0	-64.4
790.80	-46.29	---	-13.00	33.29	500.0	100.0	116.0	H	276.0	-64.4
869.57	-35.20	---	-13.00	22.20	500.0	100.0	229.0	V	328.0	-64.2
869.57	---	-44.42	---	---	500.0	100.0	229.0	V	328.0	-64.2
881.98	-56.65	---	-13.00	43.65	500.0	100.0	160.0	H	139.0	-64.4
881.98	---	-70.16	---	---	500.0	100.0	160.0	H	139.0	-64.4



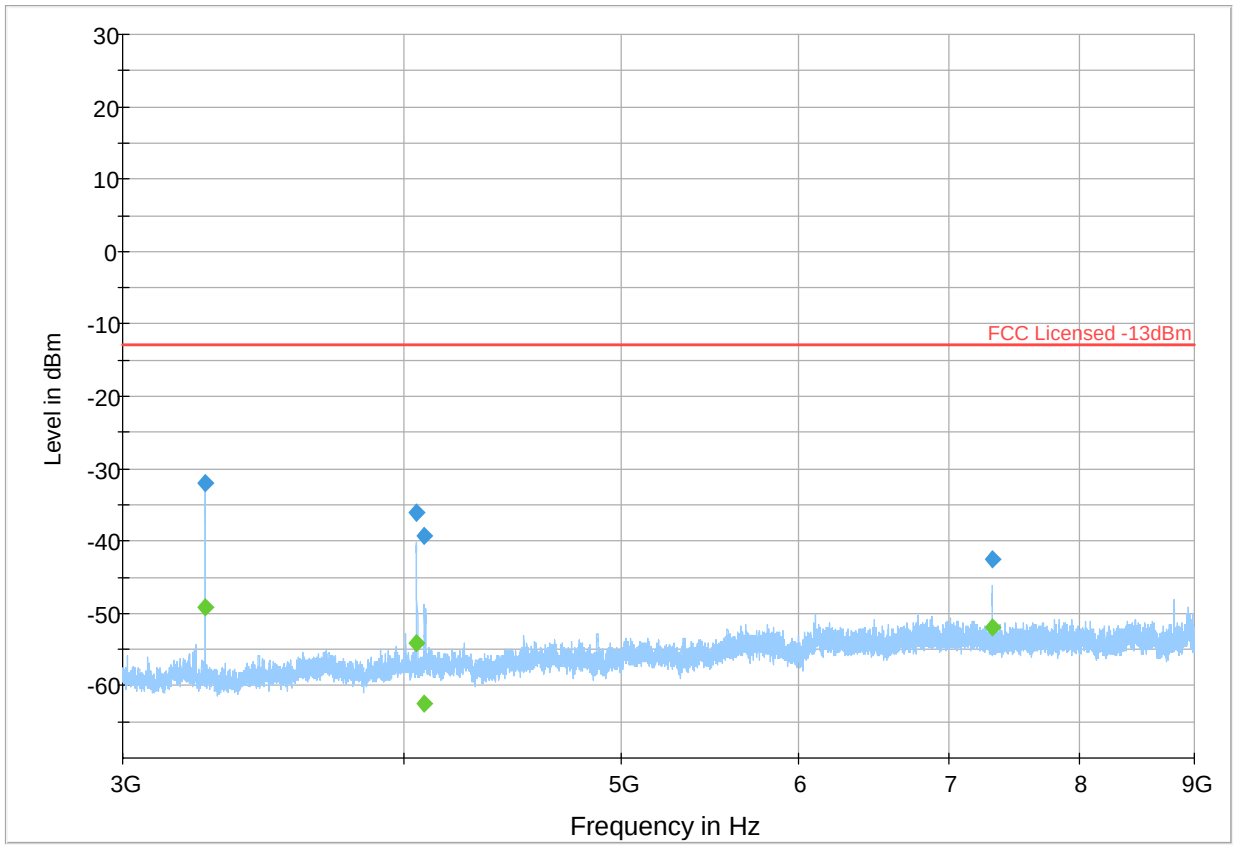
Plot # 23

Frequency (MHz)	MaxPeak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
1121.25	-47.15	---	-13.00	34.15	500.0	1000.0	227.0	H	256.0	-92.8
1121.25	---	-70.57	---	---	500.0	1000.0	227.0	H	256.0	-92.8
1650.00	-50.29	---	-13.00	37.29	500.0	1000.0	145.0	H	-3.0	-91.8
1650.00	---	-66.28	---	---	500.0	1000.0	145.0	H	-3.0	-91.8
2248.00	-48.19	---	-13.00	35.19	500.0	1000.0	100.0	H	255.0	-89.3
2248.00	---	-55.21	---	---	500.0	1000.0	100.0	H	255.0	-89.3
2375.75	---	-52.29	---	---	500.0	1000.0	129.0	H	340.0	-89.0
2375.75	-45.45	---	-13.00	32.45	500.0	1000.0	129.0	H	340.0	-89.0
2484.00	---	-57.05	---	---	500.0	1000.0	134.0	H	308.0	-88.8
2484.00	-47.27	---	-13.00	34.27	500.0	1000.0	134.0	H	308.0	-88.8
2504.25	-47.04	---	-13.00	34.04	500.0	1000.0	107.0	H	313.0	-88.7
2504.25	---	-54.82	---	---	500.0	1000.0	107.0	H	313.0	-88.7



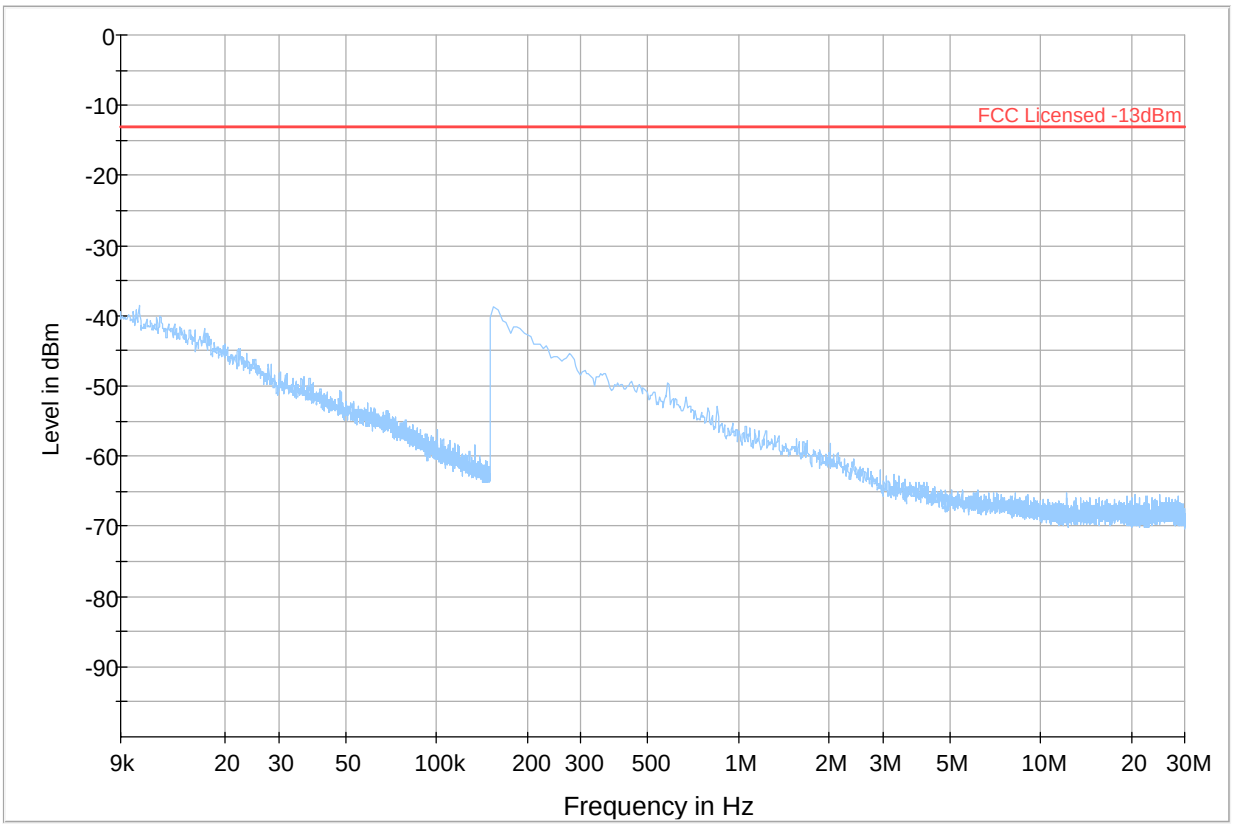
Plot # 24

Frequency (MHz)	MaxPeak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
3265.00	-31.98	---	-13.00	18.98	500.0	1000.0	142.0	H	284.0	-103.0
3265.00	---	-49.29	---	---	500.0	1000.0	142.0	H	284.0	-103.0
4054.75	-36.13	---	-13.00	23.14	500.0	1000.0	304.0	V	274.0	-100.1
4054.75	---	-54.22	---	---	500.0	1000.0	304.0	V	274.0	-100.1
4088.50	---	-62.40	---	---	500.0	1000.0	143.0	H	16.0	-99.6
4088.50	-39.31	---	-13.00	26.31	500.0	1000.0	143.0	H	16.0	-99.6
7319.25	---	-52.03	---	---	500.0	1000.0	100.0	H	27.0	-95.6
7319.25	-42.62	---	-13.00	29.62	500.0	1000.0	100.0	H	27.0	-95.6



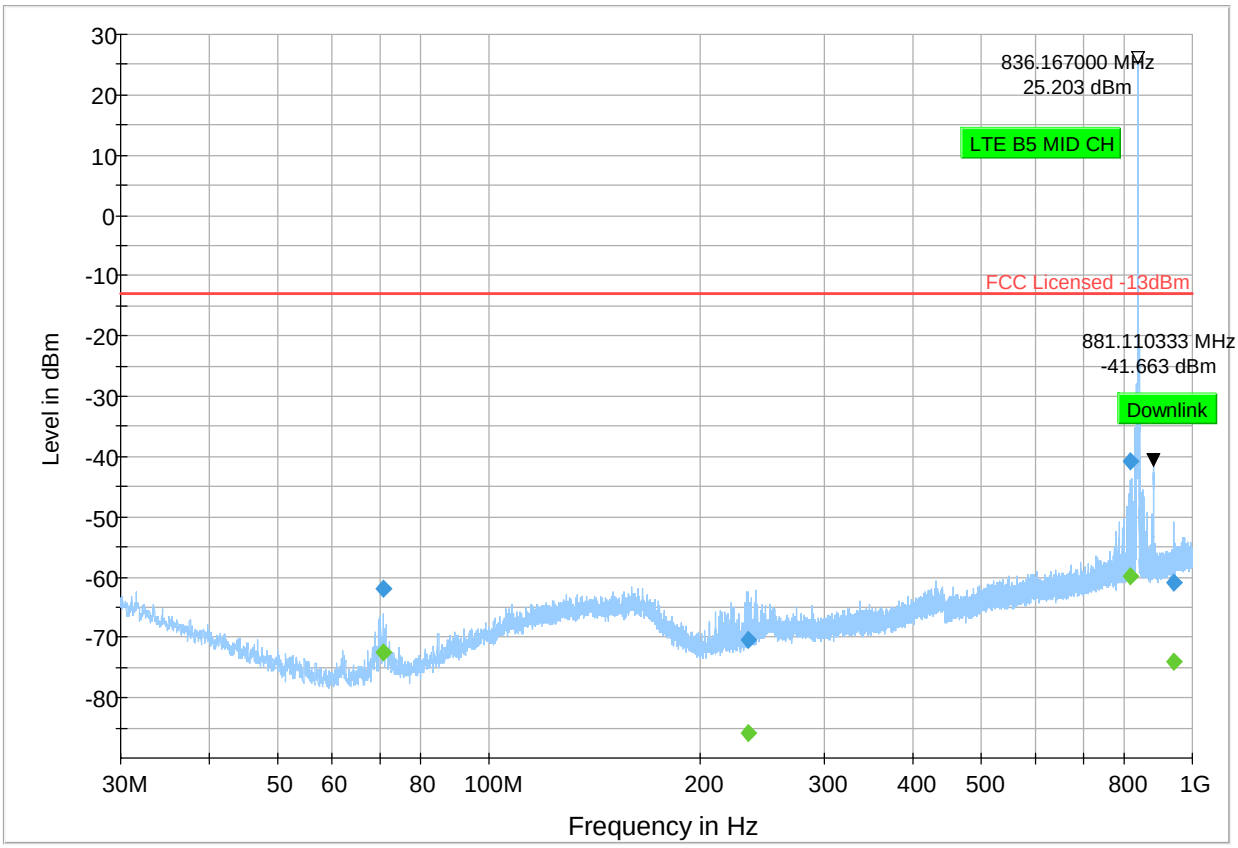
Plot # 25

Frequency (MHz)	MaxPeak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
---	---	---	---	---	---	---	---		---	---



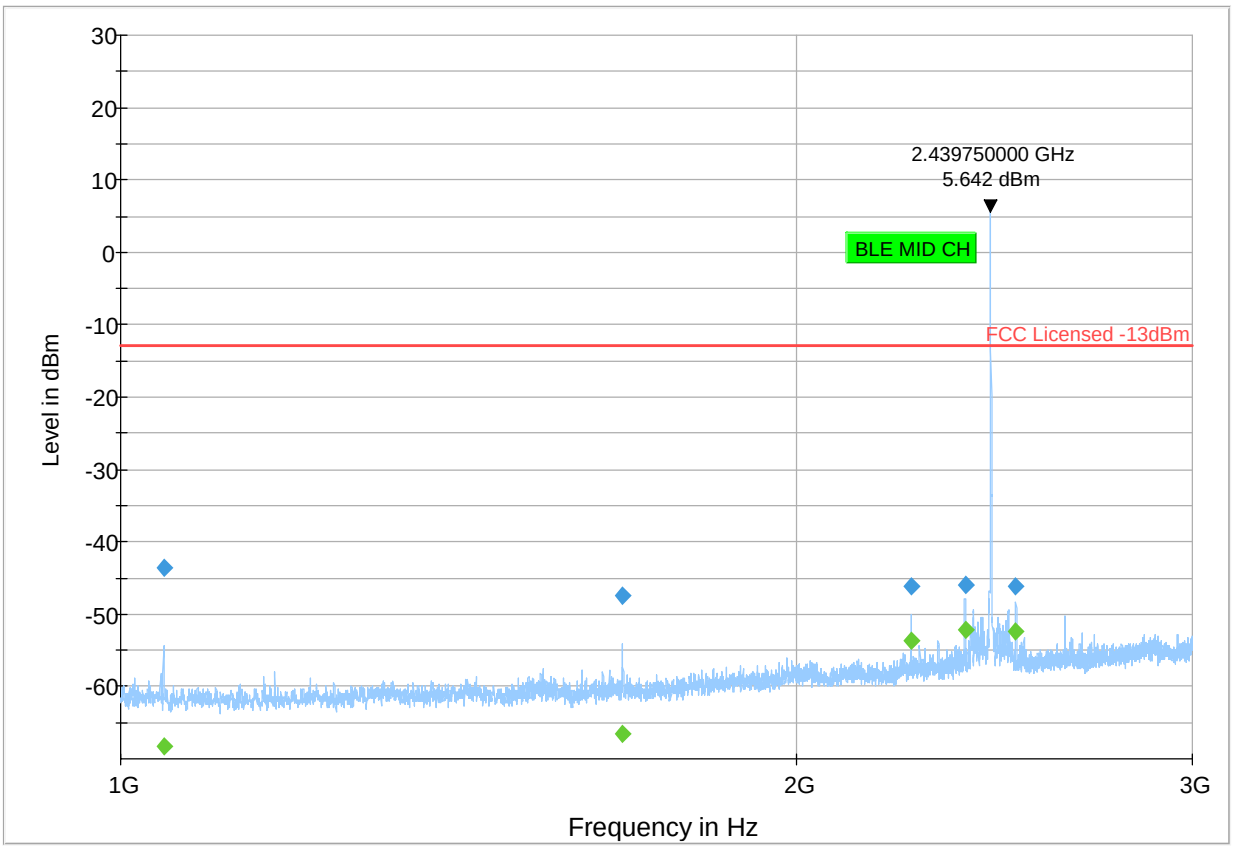
Plot # 26

Frequency (MHz)	MaxPeak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
70.80	-61.98	---	-13.00	48.99	500.0	100.0	107.0	V	-2.0	-81.8
70.80	---	-72.43	---	---	500.0	100.0	107.0	V	-2.0	-81.8
234.15	-70.34	---	-13.00	57.34	500.0	100.0	258.0	H	204.0	-75.3
234.15	---	-85.87	---	---	500.0	100.0	258.0	H	204.0	-75.3
817.70	---	-59.75	---	---	500.0	100.0	117.0	H	195.0	-64.0
817.70	-40.80	---	-13.00	27.80	500.0	100.0	117.0	H	195.0	-64.0
941.44	-60.80	---	-13.00	47.80	500.0	100.0	154.0	H	-30.0	-63.6
941.44	---	-74.11	---	---	500.0	100.0	154.0	H	-30.0	-63.6



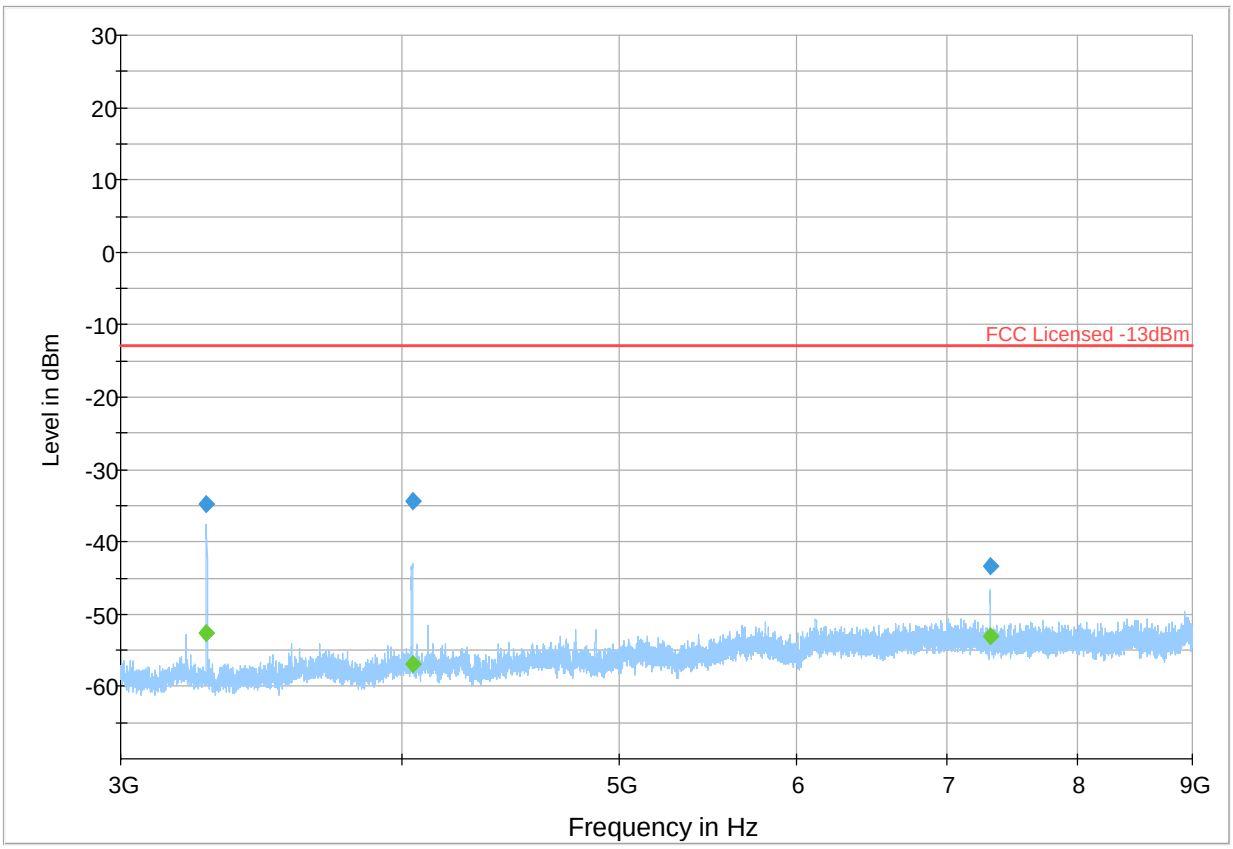
Plot # 27

Frequency (MHz)	MaxPeak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
1045.25	-43.62	---	-13.00	30.62	500.0	1000.0	210.0	H	67.0	-93.2
1045.25	---	-68.30	---	---	500.0	1000.0	210.0	H	67.0	-93.2
1671.75	-47.51	---	-13.00	34.51	500.0	1000.0	100.0	H	46.0	-91.7
1671.75	---	-66.60	---	---	500.0	1000.0	100.0	H	46.0	-91.7
2247.75	-46.15	---	-13.00	33.15	500.0	1000.0	100.0	H	150.0	-89.3
2247.75	---	-53.78	---	---	500.0	1000.0	100.0	H	150.0	-89.3
2376.00	-45.97	---	-13.00	32.97	500.0	1000.0	117.0	H	157.0	-89.0
2376.00	---	-52.12	---	---	500.0	1000.0	117.0	H	157.0	-89.0
2504.00	---	-52.43	---	---	500.0	1000.0	142.0	H	333.0	-88.7
2504.00	-46.11	---	-13.00	33.11	500.0	1000.0	142.0	H	333.0	-88.7



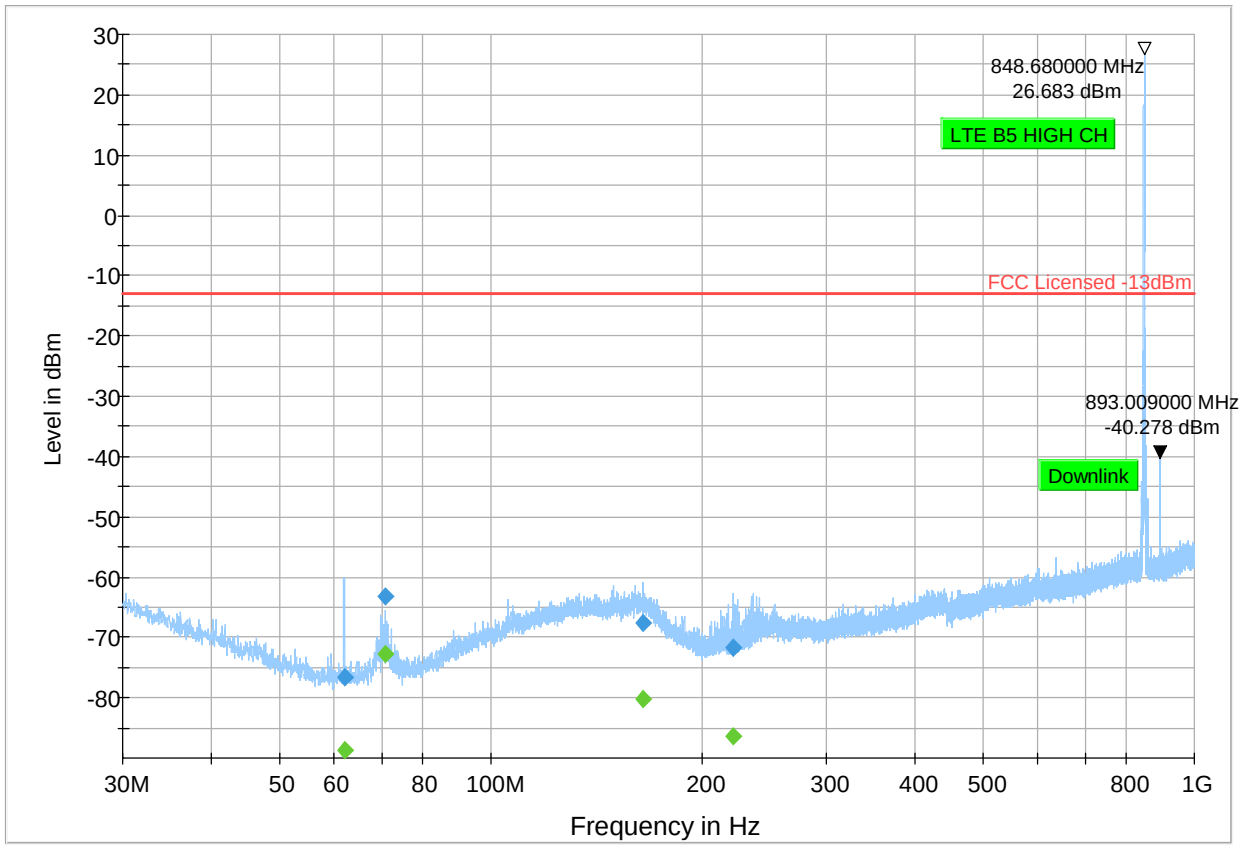
Plot # 28

Frequency (MHz)	MaxPeak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
3276.75	-34.72	---	-13.00	21.72	500.0	1000.0	169.0	H	54.0	-103.1
3276.75	---	-52.62	---	---	500.0	1000.0	169.0	H	54.0	-103.1
4044.25	-34.28	---	-13.00	21.28	500.0	1000.0	206.0	V	277.0	-100.2
4044.25	---	-56.83	---	---	500.0	1000.0	206.0	V	277.0	-100.2
7320.50	---	-53.00	---	---	500.0	1000.0	107.0	H	27.0	-95.6
7320.50	-43.49	---	-13.00	30.49	500.0	1000.0	107.0	H	27.0	-95.6



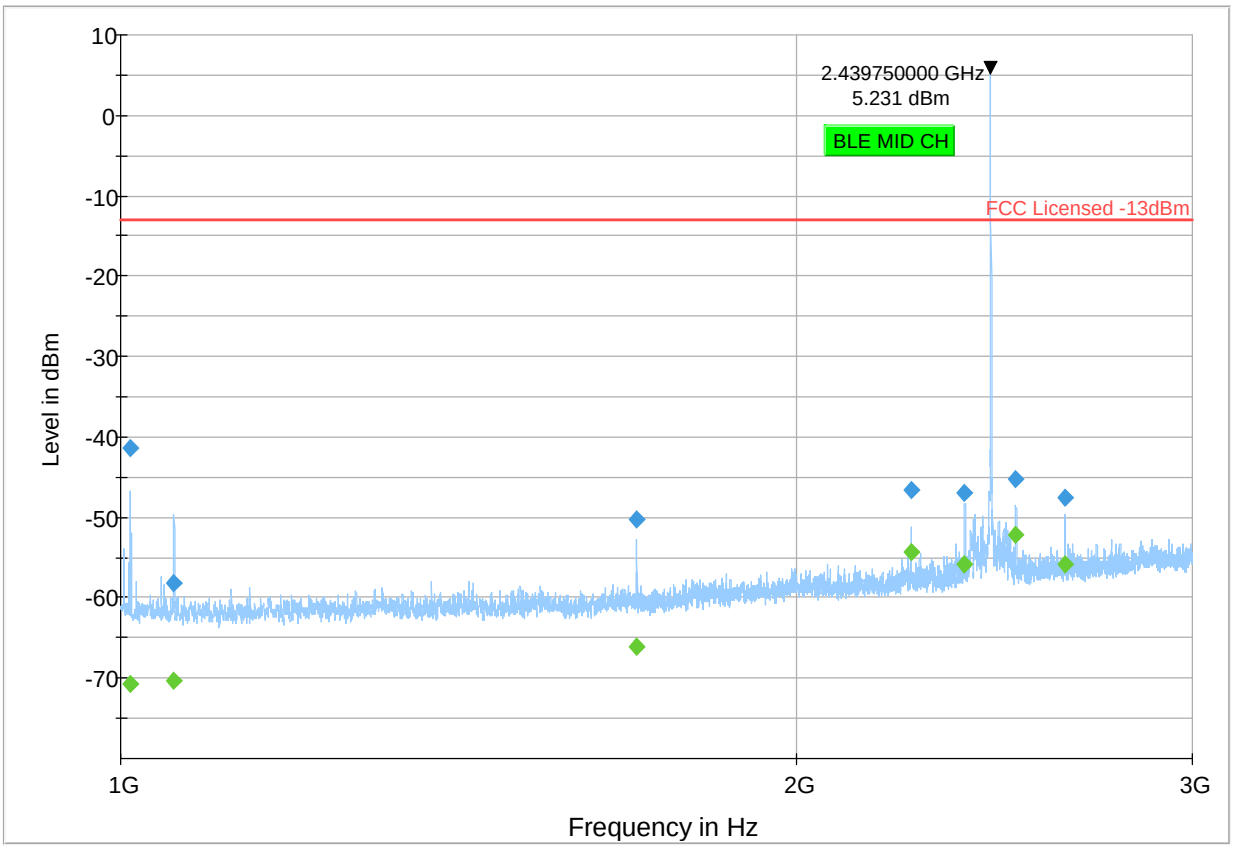
Plot # 29

Frequency (MHz)	MaxPeak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
61.91	-76.65	---	-13.00	63.65	500.0	100.0	263.0	V	90.0	-82.2
61.91	---	-88.67	---	---	500.0	100.0	263.0	V	90.0	-82.2
70.84	---	-72.79	---	---	500.0	100.0	107.0	V	-30.0	-81.8
70.84	-63.10	---	-13.00	50.10	500.0	100.0	107.0	V	-30.0	-81.8
164.54	-67.55	---	-13.00	54.55	500.0	100.0	116.0	V	107.0	-69.2
164.54	---	-80.09	---	---	500.0	100.0	116.0	V	107.0	-69.2
220.80	---	-86.37	---	---	500.0	100.0	168.0	H	12.0	-76.6
220.80	-71.79	---	-13.00	58.79	500.0	100.0	168.0	H	12.0	-76.6



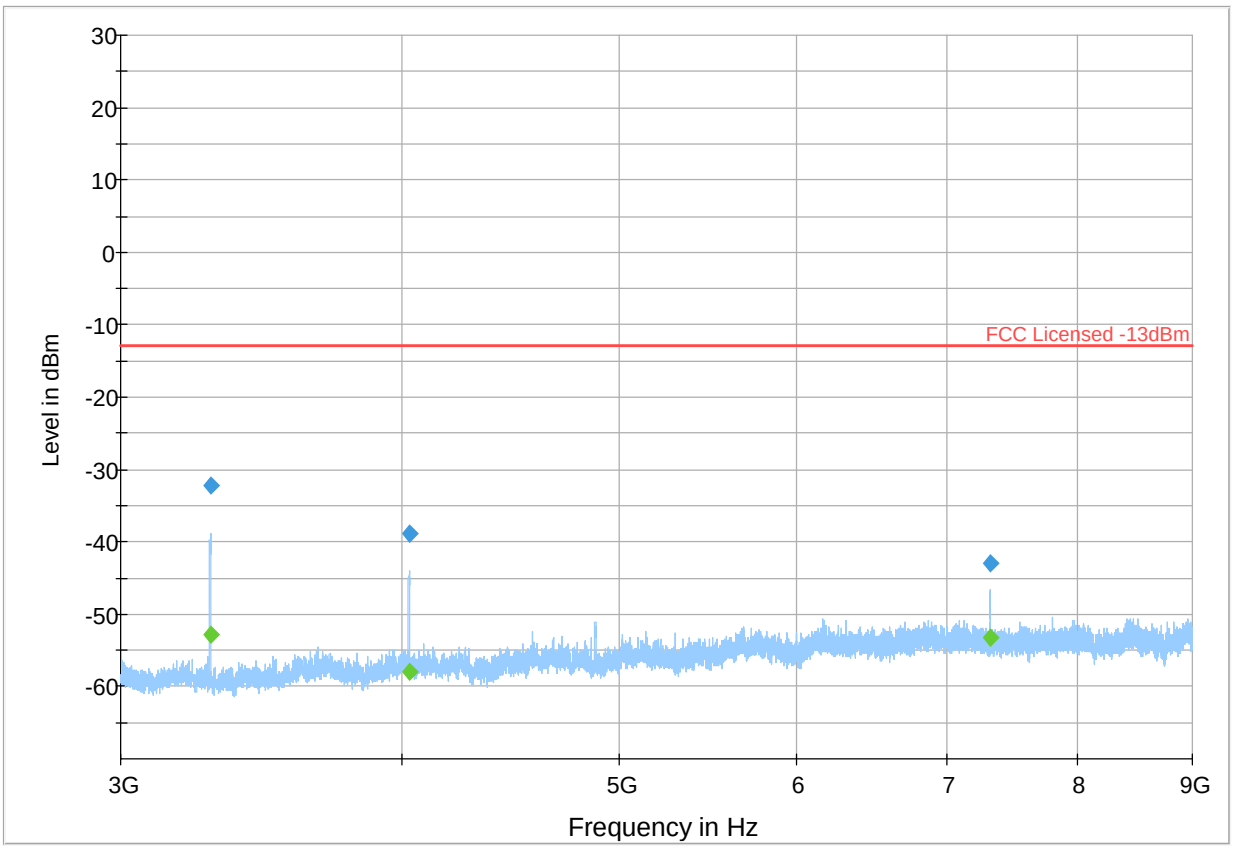
Plot # 30

Frequency (MHz)	MaxPeak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
1009.75	---	-70.72	---	---	500.0	1000.0	242.0	H	58.0	-93.0
1009.75	-41.43	---	-13.00	28.43	500.0	1000.0	242.0	H	58.0	-93.0
1056.25	-58.13	---	-13.00	45.13	500.0	1000.0	193.0	H	291.0	-93.3
1056.25	---	-70.34	---	---	500.0	1000.0	193.0	H	291.0	-93.3
1697.25	-50.18	---	-13.00	37.18	500.0	1000.0	100.0	H	275.0	-91.5
1697.25	---	-66.08	---	---	500.0	1000.0	100.0	H	275.0	-91.5
2247.75	---	-54.25	---	---	500.0	1000.0	134.0	H	153.0	-89.3
2247.75	-46.63	---	-13.00	33.63	500.0	1000.0	134.0	H	153.0	-89.3
2375.50	-47.07	---	-13.00	34.07	500.0	1000.0	125.0	H	339.0	-89.0
2375.50	---	-55.77	---	---	500.0	1000.0	125.0	H	339.0	-89.0
2503.75	-45.19	---	-13.00	32.19	500.0	1000.0	159.0	H	140.0	-88.7
2503.75	---	-52.27	---	---	500.0	1000.0	159.0	H	140.0	-88.7
2632.25	---	-55.77	---	---	500.0	1000.0	100.0	H	320.0	-88.3
2632.25	-47.55	---	-13.00	34.55	500.0	1000.0	100.0	H	320.0	-88.3



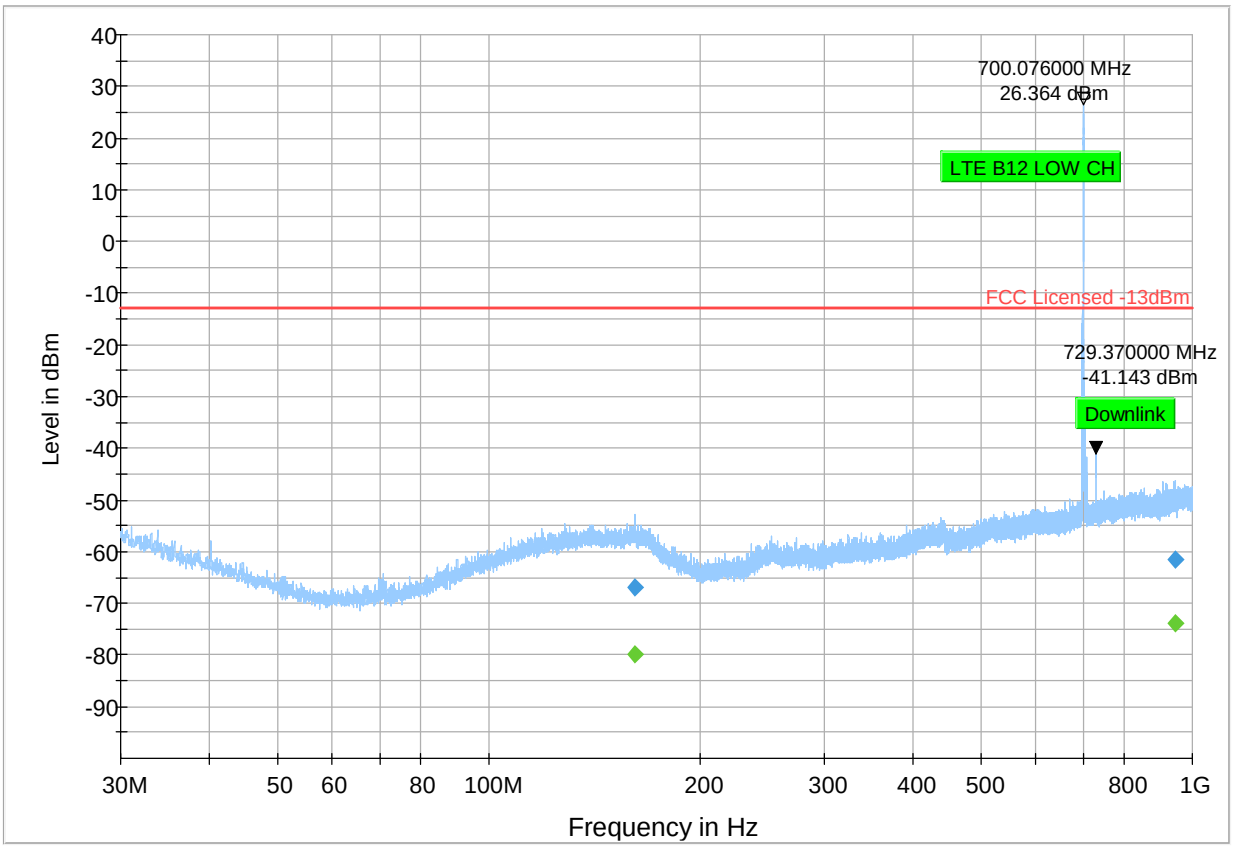
Plot # 31

Frequency (MHz)	MaxPeak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
3288.25	-32.17	---	-13.00	19.17	500.0	1000.0	125.0	H	276.0	-103.2
3288.25	---	-52.91	---	---	500.0	1000.0	125.0	H	276.0	-103.2
4031.25	-38.85	---	-13.00	25.85	500.0	1000.0	237.0	V	224.0	-100.1
4031.25	---	-58.05	---	---	500.0	1000.0	237.0	V	224.0	-100.1
7320.75	---	-53.29	---	---	500.0	1000.0	100.0	H	107.0	-95.6
7320.75	-42.90	---	-13.00	29.90	500.0	1000.0	100.0	H	107.0	-95.6



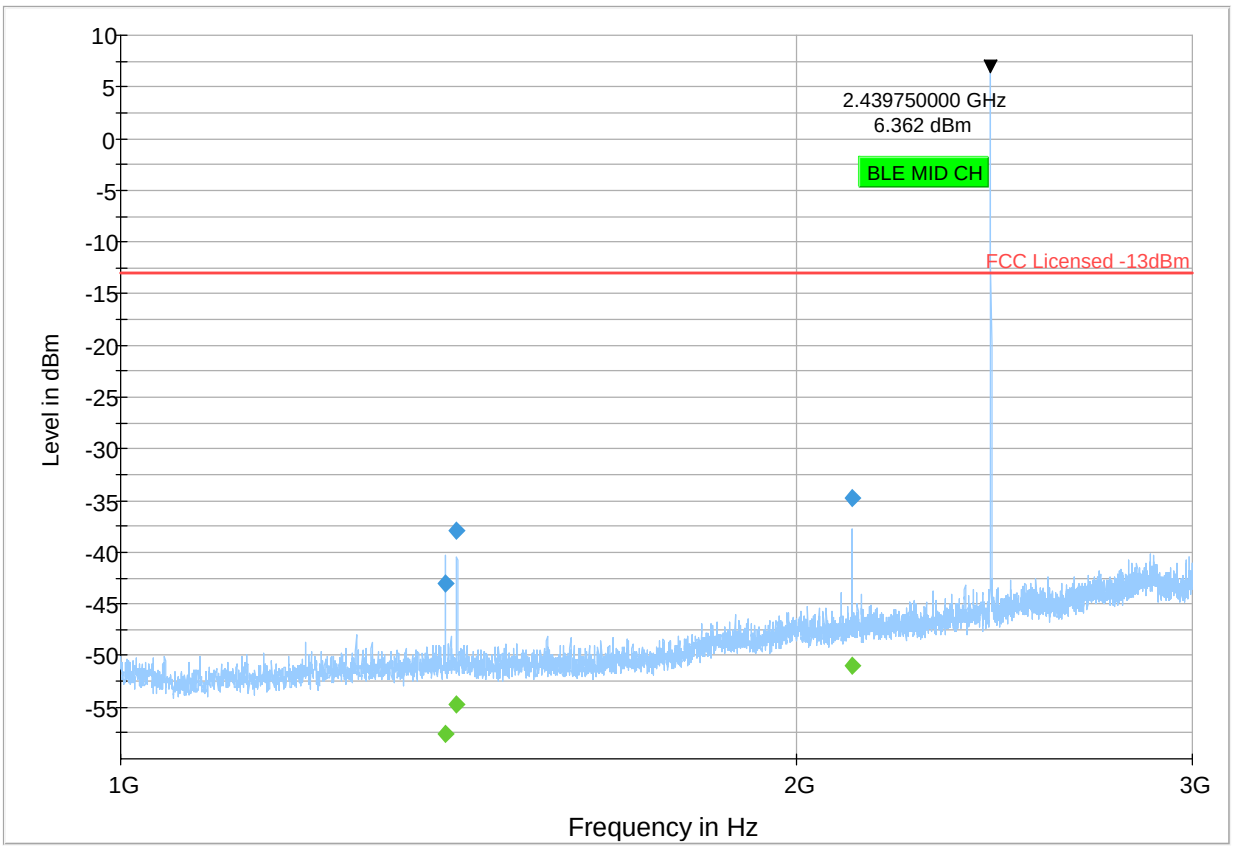
Plot # 32

Frequency (MHz)	MaxPeak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
161.27	---	-79.77	---	---	500.0	100.0	275.0	V	47.0	-68.8
161.27	-67.06	---	-13.00	54.06	500.0	100.0	275.0	V	47.0	-68.8
944.37	---	-73.79	---	---	500.0	100.0	125.0	V	40.0	-63.2
944.37	-61.62	---	-13.00	48.62	500.0	100.0	125.0	V	40.0	-63.2



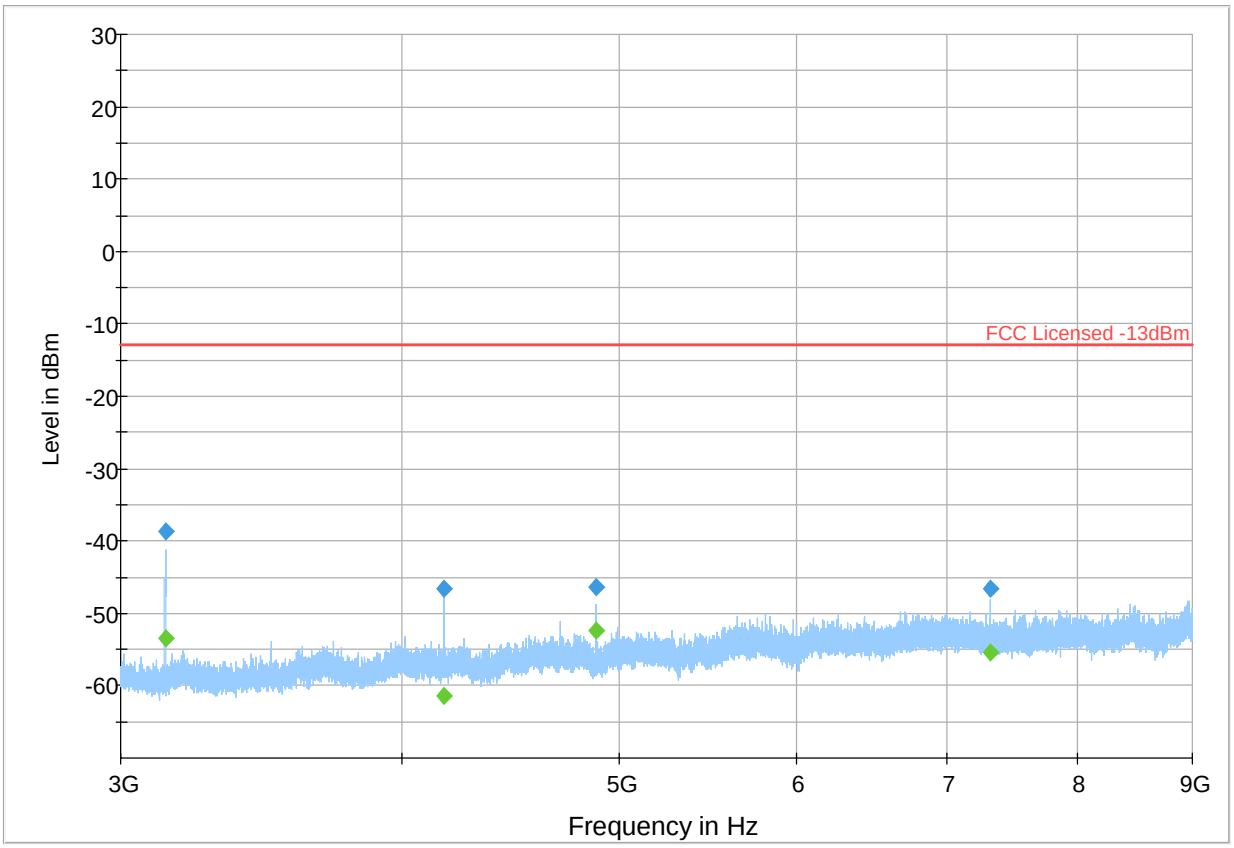
Plot # 33

Frequency (MHz)	MaxPeak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
1394.25	---	-57.55	---	---	500.0	1000.0	116.0	H	-36.0	-66.4
1394.25	-42.98	---	-13.00	29.98	500.0	1000.0	116.0	H	-36.0	-66.4
1411.50	---	-54.68	---	---	500.0	1000.0	151.0	H	63.0	-66.4
1411.50	-37.87	---	-13.00	24.87	500.0	1000.0	151.0	H	63.0	-66.4
2117.50	---	-51.06	---	---	500.0	1000.0	117.0	H	36.0	-63.4
2117.50	-34.76	---	-13.00	21.76	500.0	1000.0	117.0	H	36.0	-63.4



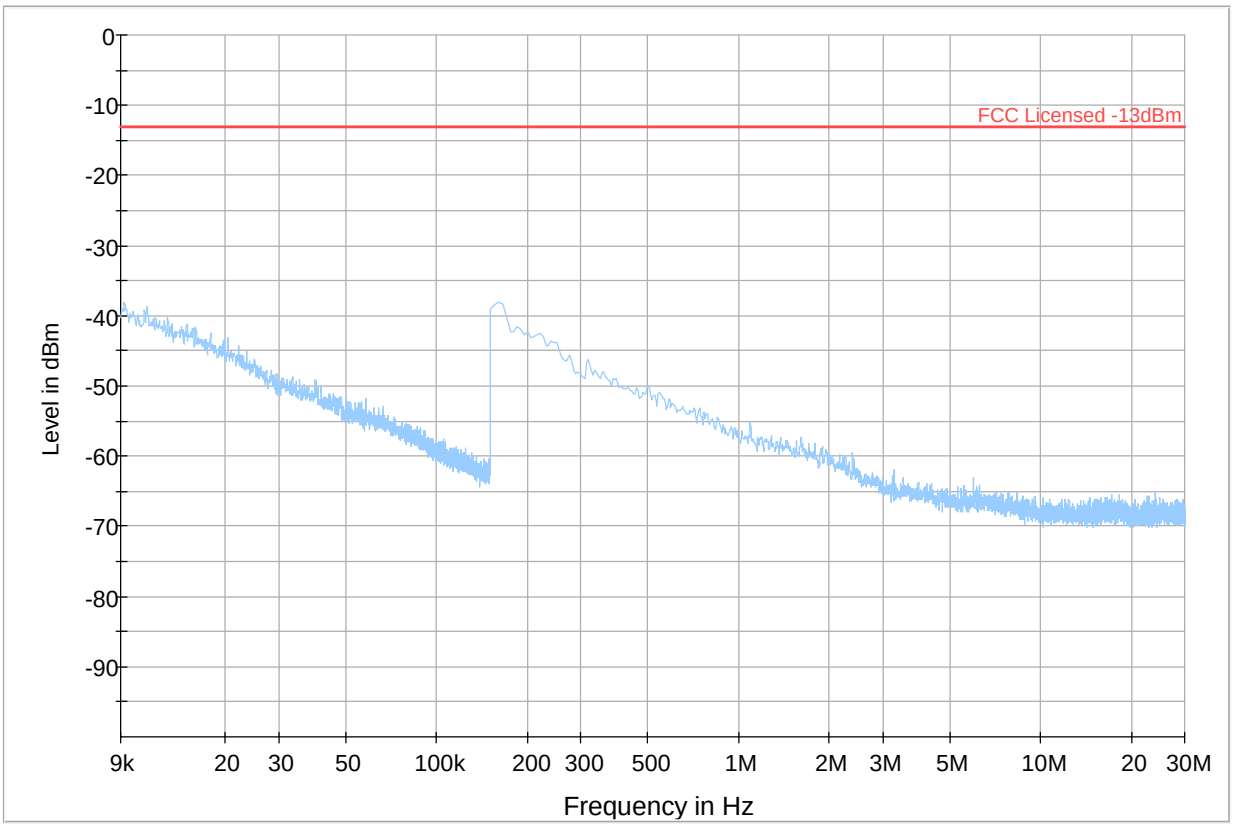
Plot # 34

Frequency (MHz)	MaxPeak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
3140.10	---	-53.58	---	---	500.0	1000.0	150.0	H	293.0	-103.1
3140.10	-38.59	---	-13.00	25.59	500.0	1000.0	150.0	H	293.0	-103.1
4179.70	---	-61.43	---	---	500.0	1000.0	117.0	V	92.0	-99.3
4179.70	-46.54	---	-13.00	33.54	500.0	1000.0	117.0	V	92.0	-99.3
4880.00	---	-52.38	---	---	500.0	1000.0	107.0	H	295.0	-99.0
4880.00	-46.49	---	-13.00	33.49	500.0	1000.0	107.0	H	295.0	-99.0
7320.00	---	-55.45	---	---	500.0	1000.0	301.0	V	144.0	-95.6
7320.00	-46.63	---	-13.00	33.63	500.0	1000.0	301.0	V	144.0	-95.6



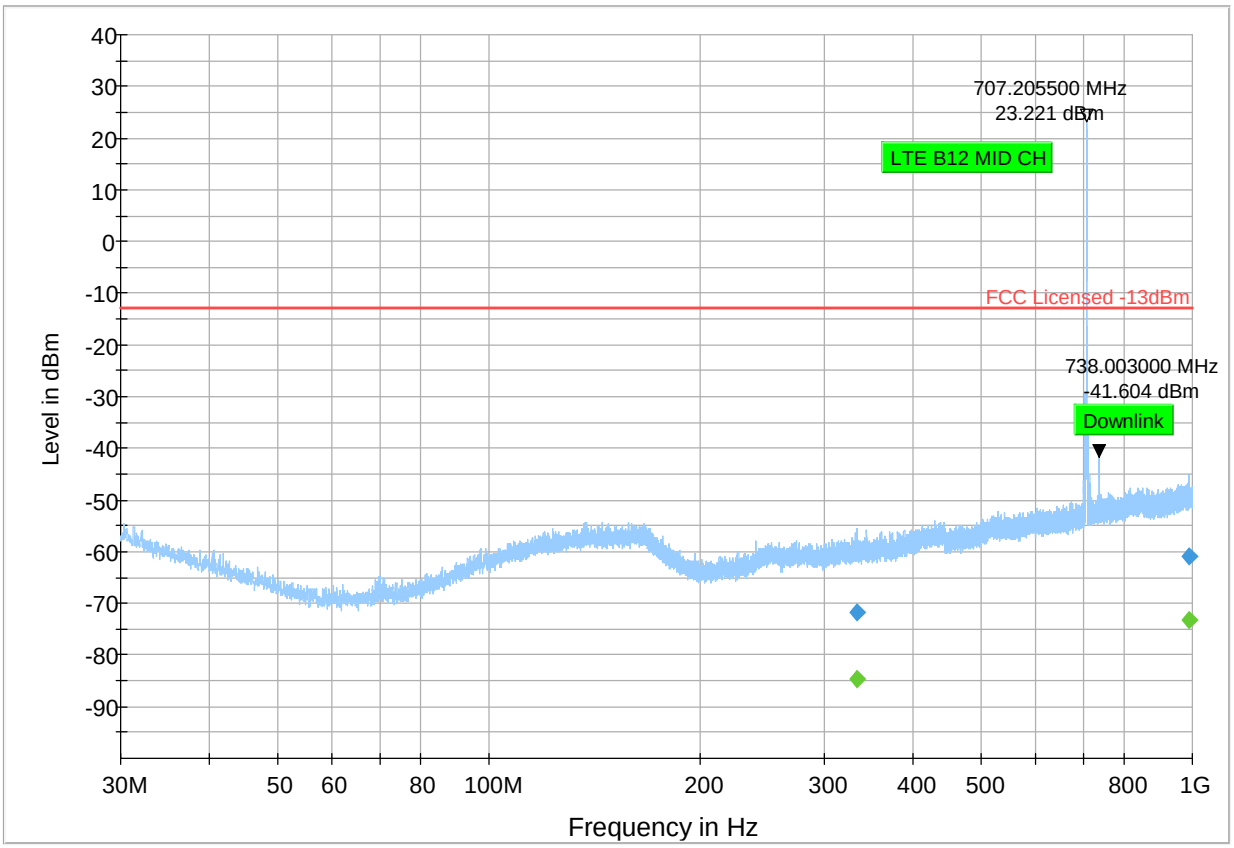
Plot # 35

Frequency (MHz)	MaxPeak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
---	---	---	---	---	---	---	---		---	---



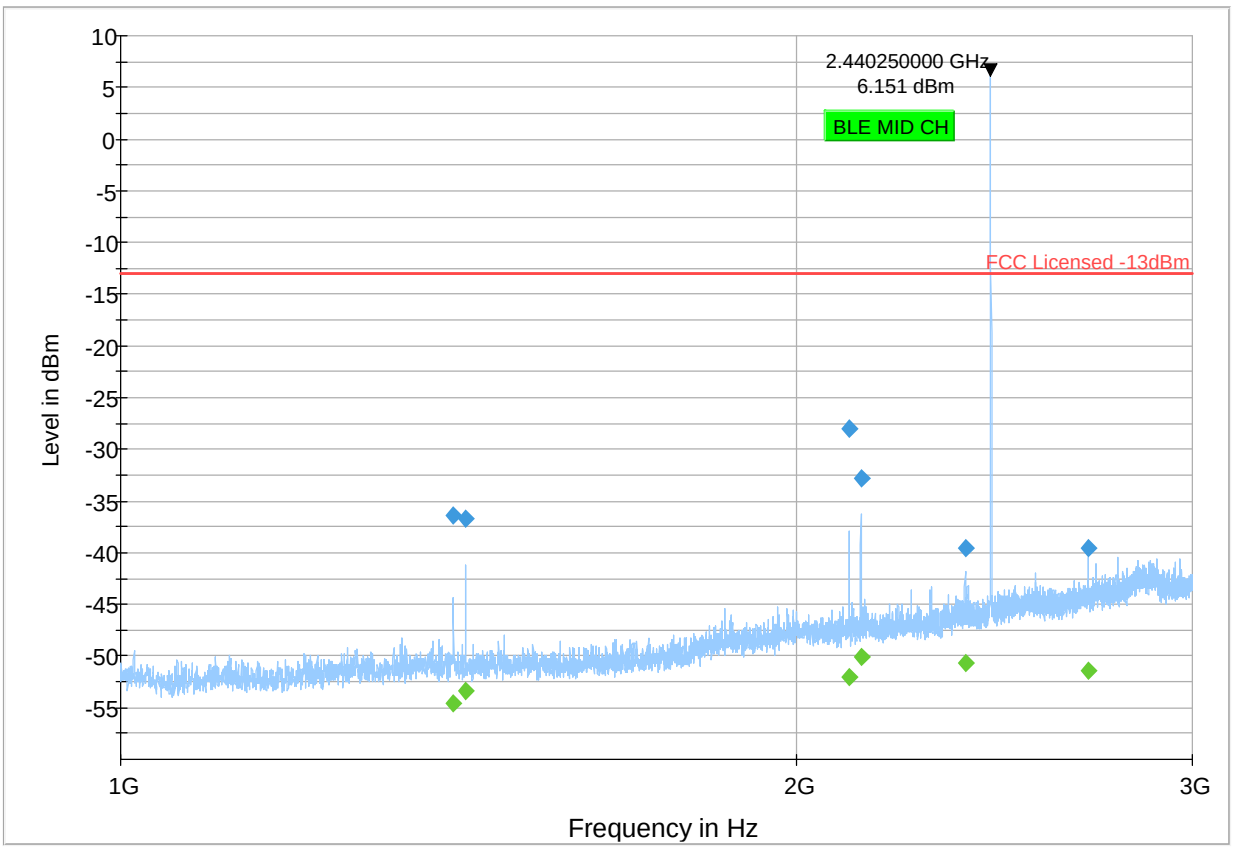
Plot # 36

Frequency (MHz)	MaxPeak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
334.10	---	-84.61	---	---	500.0	100.0	226.0	H	-84.0	-73.4
334.10	-71.71	---	-13.00	58.71	500.0	100.0	226.0	H	-84.0	-73.4
988.04	---	-73.20	---	---	500.0	100.0	107.0	V	196.0	-62.6
988.04	-60.81	---	-13.00	47.81	500.0	100.0	107.0	V	196.0	-62.6



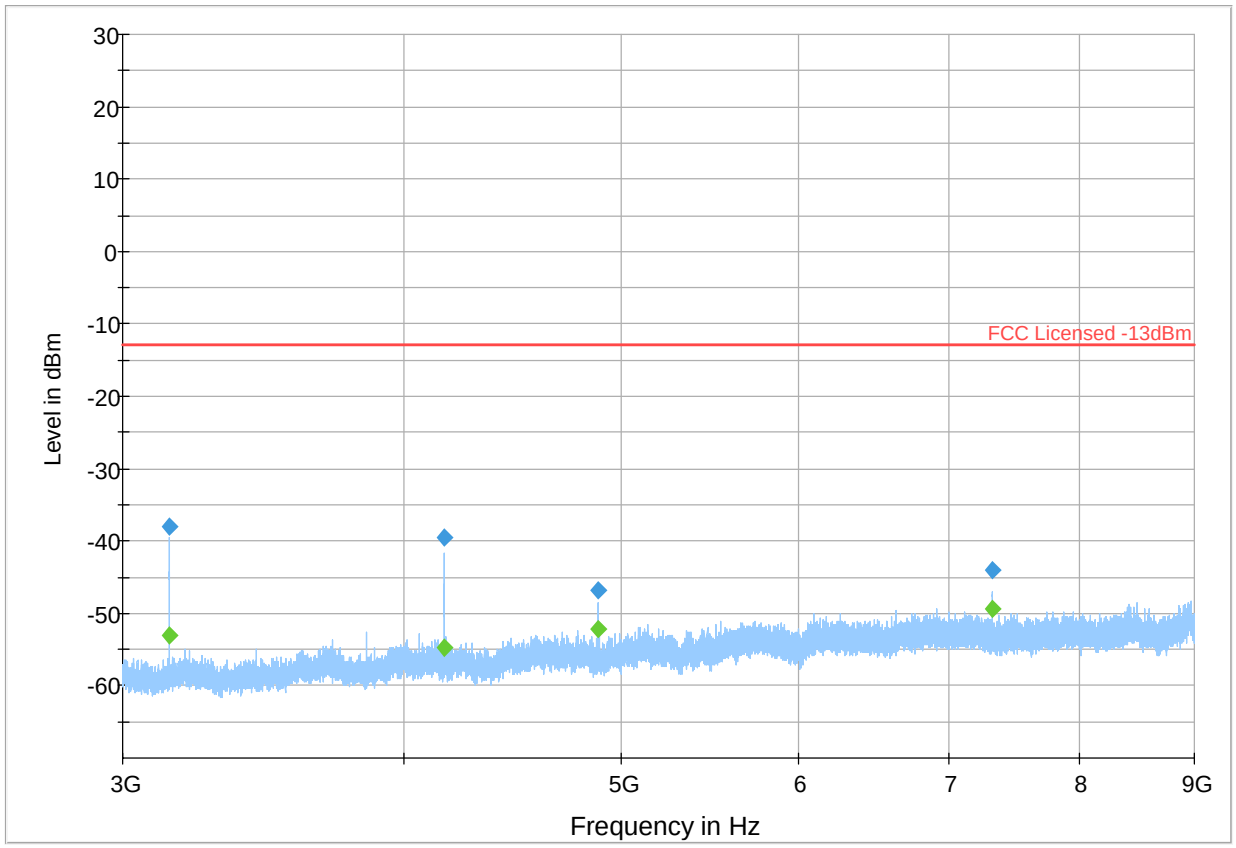
Plot # 37

Frequency (MHz)	MaxPeak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
1406.75	---	-54.61	---	---	500.0	1000.0	142.0	H	59.0	-66.4
1406.75	-36.47	---	-13.00	23.47	500.0	1000.0	142.0	H	59.0	-66.4
1423.75	---	-53.44	---	---	500.0	1000.0	107.0	H	225.0	-66.4
1423.75	-36.72	---	-13.00	23.72	500.0	1000.0	107.0	H	225.0	-66.4
2110.00	---	-52.02	---	---	500.0	1000.0	142.0	H	-1.0	-63.5
2110.00	-28.02	---	-13.00	15.02	500.0	1000.0	142.0	H	-1.0	-63.5
2135.50	---	-50.04	---	---	500.0	1000.0	134.0	H	202.0	-63.4
2135.50	-32.78	---	-13.00	19.78	500.0	1000.0	134.0	H	202.0	-63.4
2376.25	---	-50.72	---	---	500.0	1000.0	100.0	H	112.0	-62.5
2376.25	-39.57	---	-13.00	26.57	500.0	1000.0	100.0	H	112.0	-62.5
2698.25	---	-51.50	---	---	500.0	1000.0	100.0	H	346.0	-61.4
2698.25	-39.61	---	-13.00	26.61	500.0	1000.0	100.0	H	346.0	-61.4



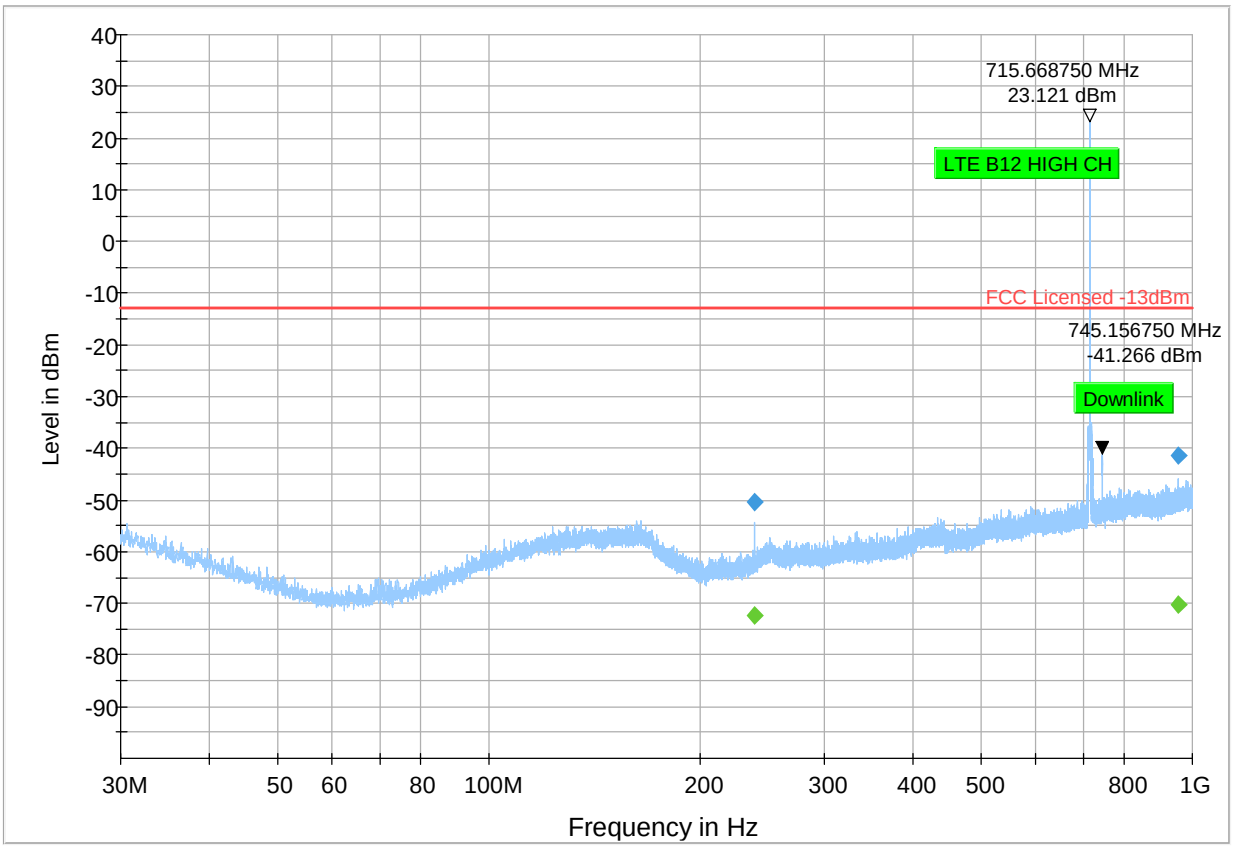
Plot # 38

Frequency (MHz)	MaxPeak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
3147.80	---	-52.98	---	---	500.0	1000.0	176.0	H	155.0	-103.0
3147.80	-38.01	---	-13.00	25.01	500.0	1000.0	176.0	H	155.0	-103.0
4171.90	---	-54.81	---	---	500.0	1000.0	134.0	H	253.0	-99.3
4171.90	-39.51	---	-13.00	26.51	500.0	1000.0	134.0	H	253.0	-99.3
4879.80	---	-52.21	---	---	500.0	1000.0	100.0	H	293.0	-99.0
4879.80	-46.85	---	-13.00	33.85	500.0	1000.0	100.0	H	293.0	-99.0
7319.90	---	-49.44	---	---	500.0	1000.0	117.0	V	268.0	-95.6
7319.90	-44.04	---	-13.00	31.04	500.0	1000.0	117.0	V	268.0	-95.6



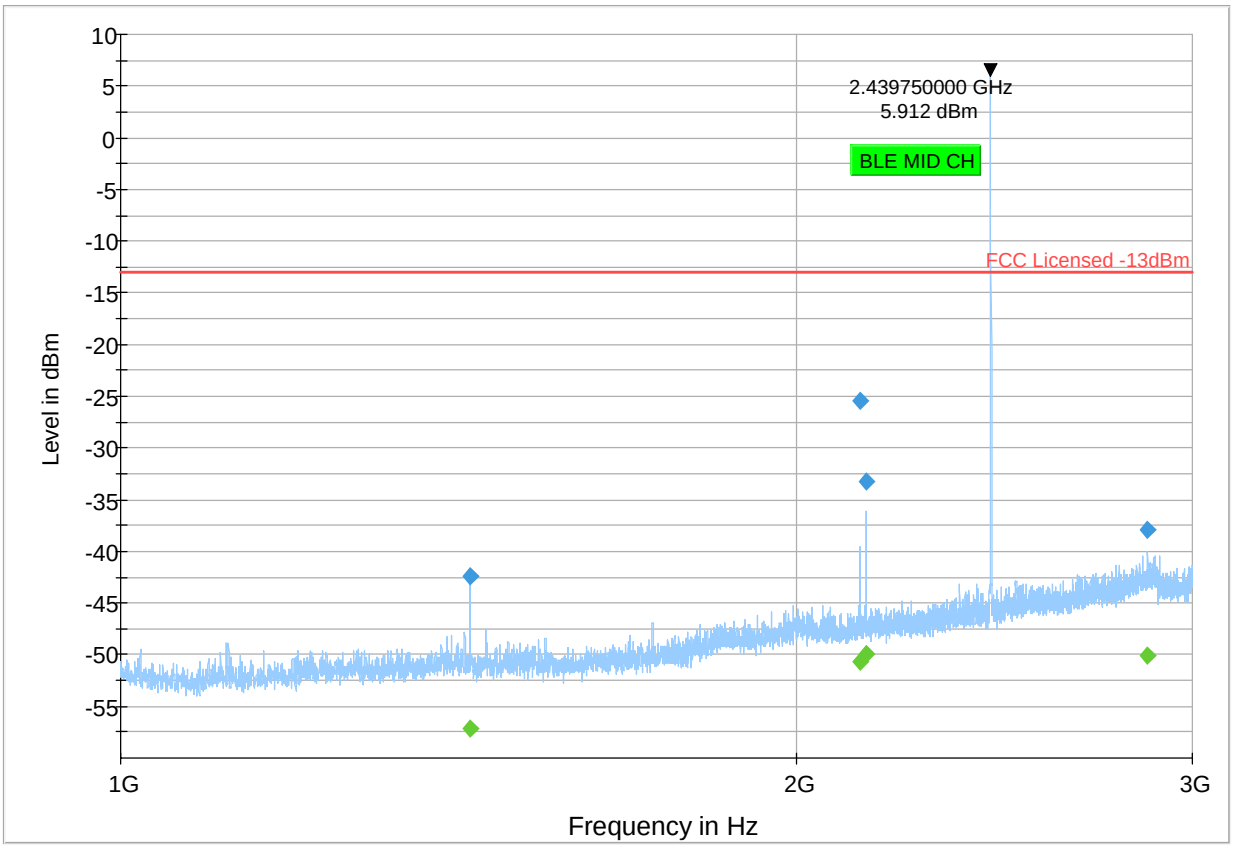
Plot # 39

Frequency (MHz)	MaxPeak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
238.43	---	-72.21	---	---	500.0	100.0	116.0	H	289.0	-75.0
238.43	-50.48	---	-13.00	37.48	500.0	100.0	116.0	H	289.0	-75.0
954.14	---	-70.12	---	---	500.0	100.0	225.0	V	158.0	-62.9
954.14	-41.37	---	-13.00	28.37	500.0	100.0	225.0	V	158.0	-62.9



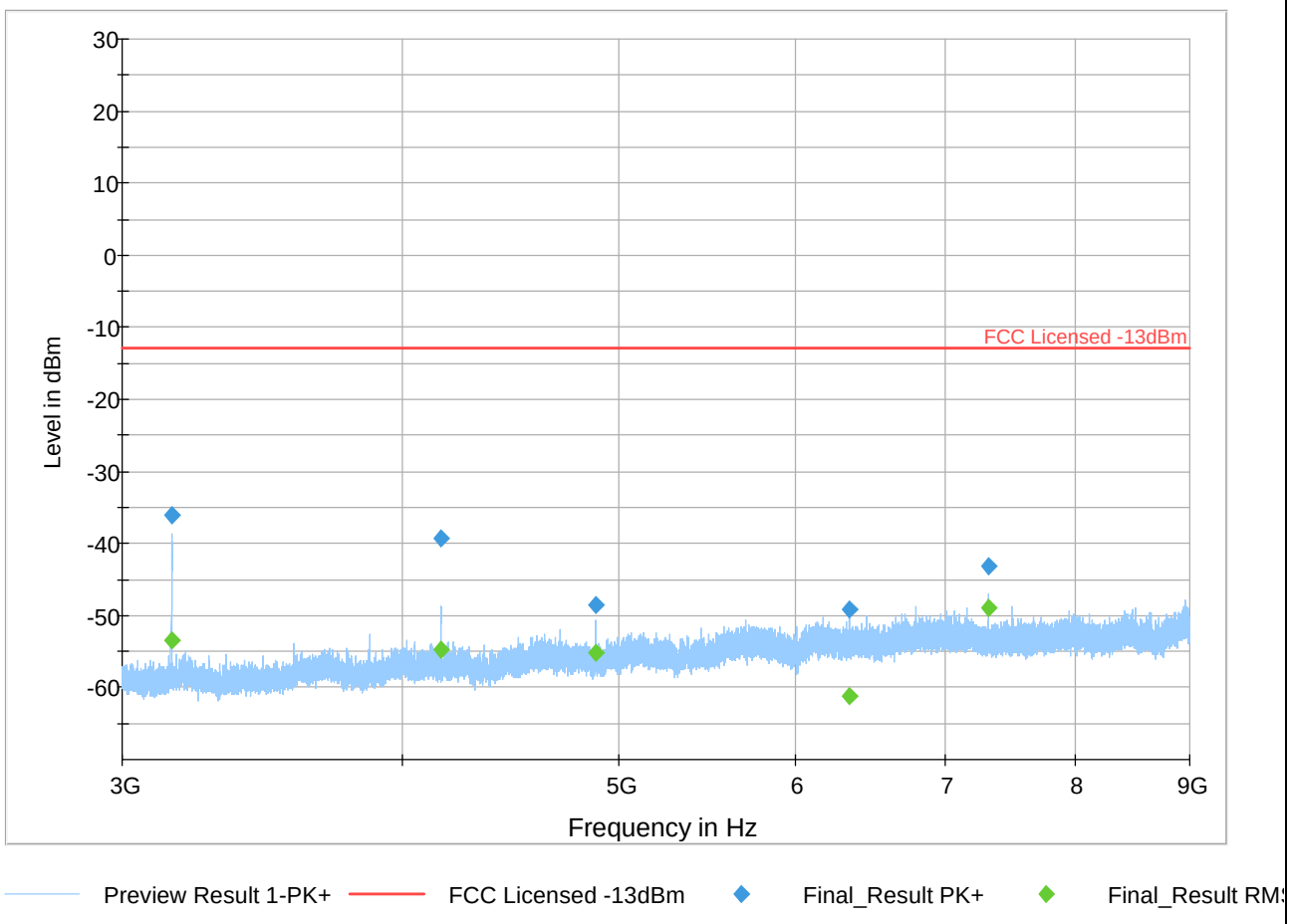
Plot # 40

Frequency (MHz)	MaxPeak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
1431.25	---	-57.07	---	---	500.0	1000.0	249.0	V	92.0	-66.4
1431.25	-42.36	---	-13.00	29.36	500.0	1000.0	249.0	V	92.0	-66.4
2134.00	---	-50.63	---	---	500.0	1000.0	125.0	H	28.0	-63.4
2134.00	-25.43	---	-13.00	12.43	500.0	1000.0	125.0	H	28.0	-63.4
2147.00	---	-49.95	---	---	500.0	1000.0	137.0	H	1.0	-63.4
2147.00	-33.20	---	-13.00	20.20	500.0	1000.0	137.0	H	1.0	-63.4
2866.75	---	-50.02	---	---	500.0	1000.0	142.0	H	286.0	-60.6
2866.75	-37.94	---	-13.00	24.94	500.0	1000.0	142.0	H	286.0	-60.6



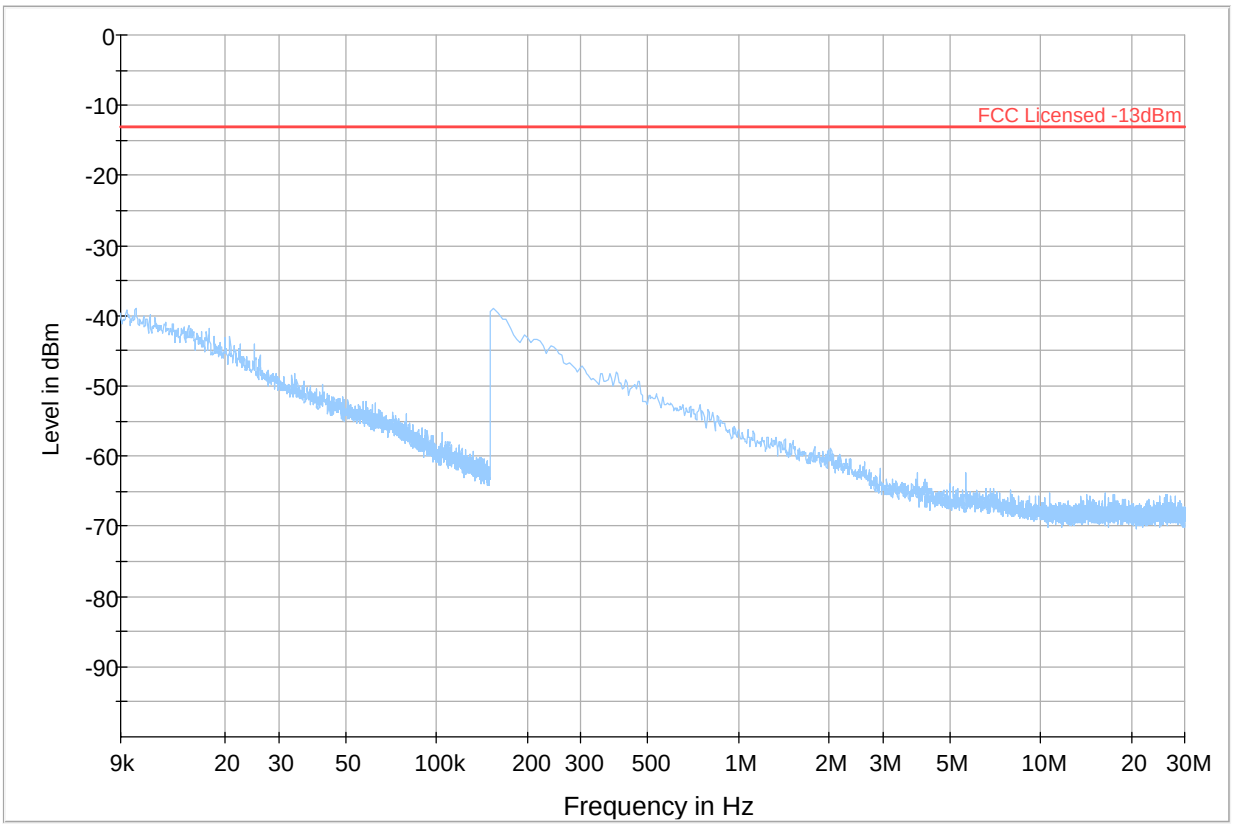
Plot # 41

Frequency (MHz)	MaxPeak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
3154.70	---	-53.40	---	---	500.0	1000.0	107.0	H	303.0	-102.9
3154.70	-36.14	---	-13.00	23.14	500.0	1000.0	107.0	H	303.0	-102.9
4164.20	---	-54.69	---	---	500.0	1000.0	100.0	H	253.0	-99.3
4164.20	-39.36	---	-13.00	26.36	500.0	1000.0	100.0	H	253.0	-99.3
4880.00	---	-55.16	---	---	500.0	1000.0	143.0	H	102.0	-99.0
4880.00	-48.49	---	-13.00	35.49	500.0	1000.0	143.0	H	102.0	-99.0
6337.90	---	-61.23	---	---	500.0	1000.0	291.0	H	318.0	-95.7
6337.90	-49.26	---	-13.00	36.26	500.0	1000.0	291.0	H	318.0	-95.7
7320.00	---	-48.90	---	---	500.0	1000.0	134.0	H	127.0	-95.6
7320.00	-43.21	---	-13.00	30.21	500.0	1000.0	134.0	H	127.0	-95.6



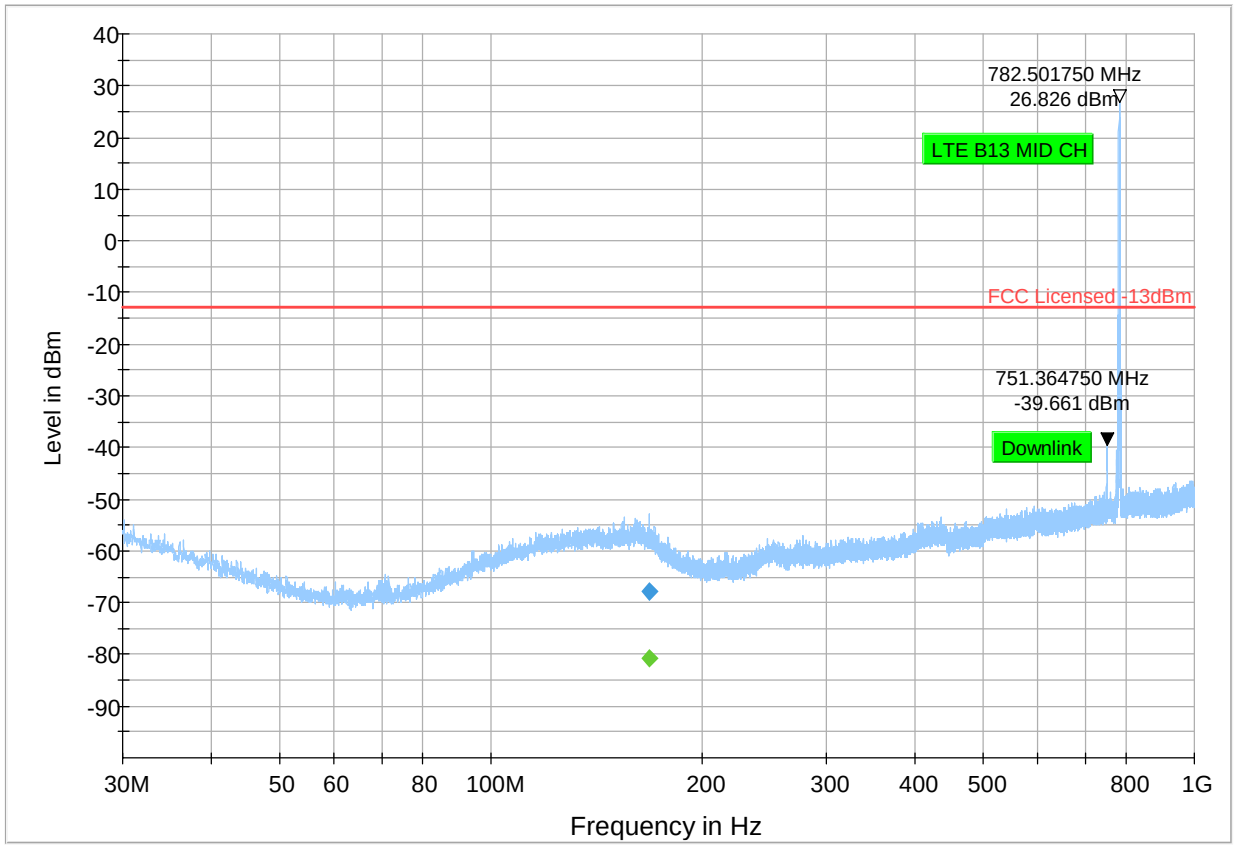
Plot # 42

Frequency (MHz)	MaxPeak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
---	---	---	---	---	---	---	---		---	---



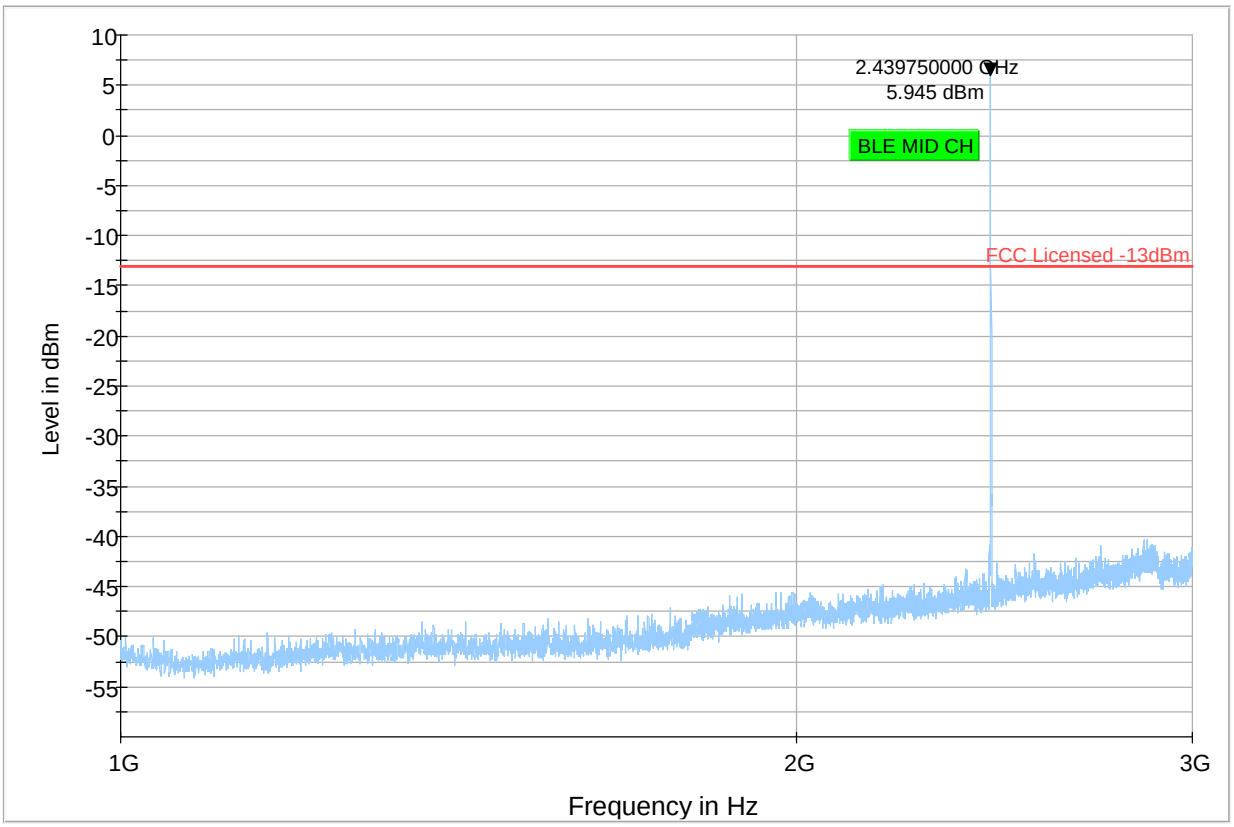
Plot # 43

Frequency (MHz)	MaxPeak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
167.64	---	-80.88	---	---	500.0	100.0	221.0	V	269.0	-69.7
167.64	-67.82	---	-13.00	54.82	500.0	100.0	221.0	V	269.0	-69.7



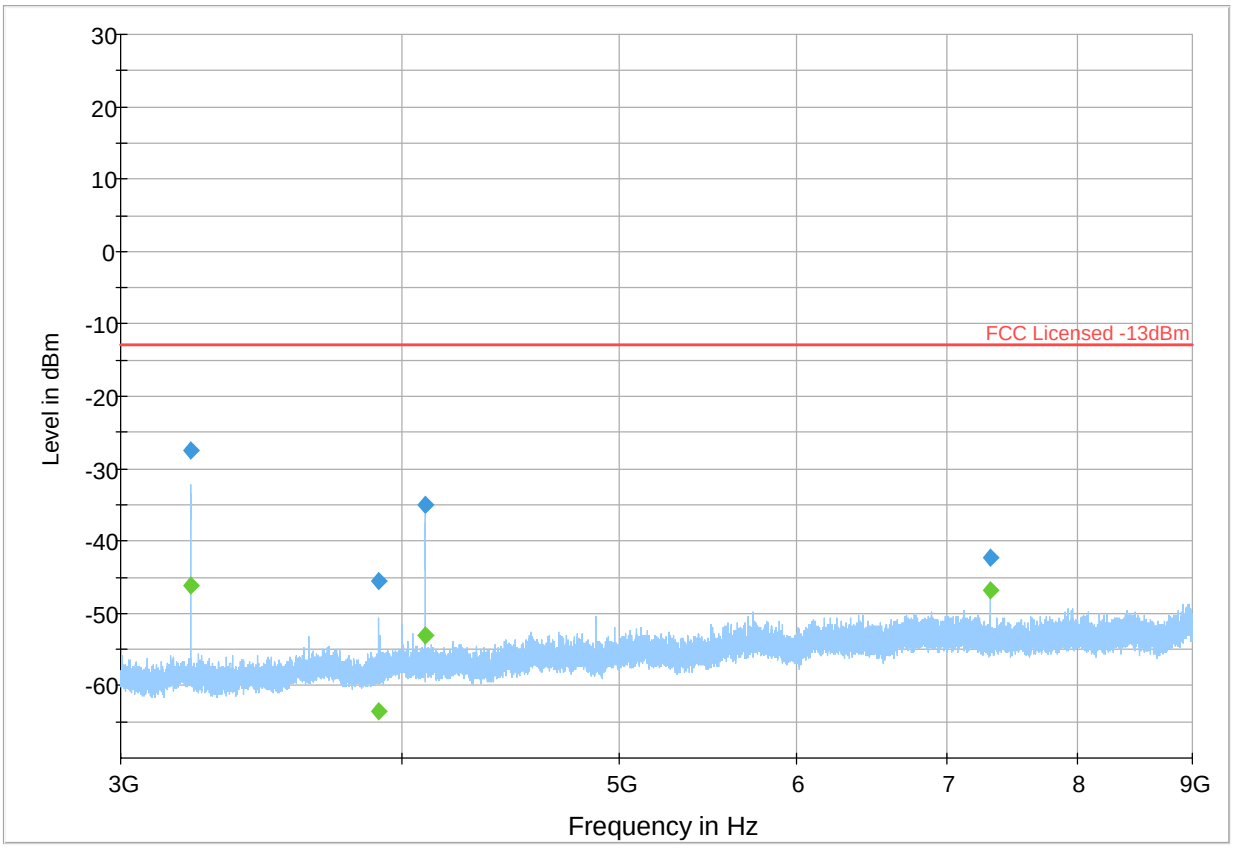
Plot # 44

Frequency (MHz)	MaxPeak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
---	---	---	---	---	---	---	---		---	---



Plot # 45

Frequency (MHz)	MaxPeak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
3221.50	---	-46.14	---	---	500.0	1000.0	120.0	H	74.0	-102.3
3221.50	-27.49	---	-13.00	14.49	500.0	1000.0	120.0	H	74.0	-102.3
3908.00	---	-63.51	---	---	500.0	1000.0	117.0	H	235.0	-100.8
3908.00	-45.58	---	-13.00	32.58	500.0	1000.0	117.0	H	235.0	-100.8
4098.40	---	-53.03	---	---	500.0	1000.0	160.0	H	164.0	-99.5
4098.40	-35.12	---	-13.00	22.12	500.0	1000.0	160.0	H	164.0	-99.5
7319.90	---	-46.81	---	---	500.0	1000.0	107.0	H	308.0	-95.6
7319.90	-42.27	---	-13.00	29.27	500.0	1000.0	107.0	H	308.0	-95.6



8 Test setup photos

Setup photos are included in supporting file name: “EMC_PARTI-001-21001_FCC_Setup_Photos”

9 Test Equipment And Ancillaries Used For Testing

Equipment Type	Manufacturer	Model	Serial #	Calibration Cycle	Last Calibration Date
ACTIVE LOOP ANTENNA	ETS LINDGREN	6507	00161344	3 YEARS	10/30/2020
BILOG ANTENNA	ETS.LINDGREN	3142E	00166067	3 YEARS	10/21/2021
HORN ANTENNA	EMCO	3115	00035111	3 YEARS	09/30/2021
HORN ANTENNA	ETS.LINDGREN	3117	00215984	3 YEARS	01/31/2021
HORN ANTENNA	ETS.LINDGREN	3116	00070497	3 YEARS	11/23/2020
TEST RECEIVER	R&S	ESU40	100251	3 YEARS	09/13/2021
PULSE LIMITER	R&S	20db Pulse Limiter	102473	3 YEARS	8/25/2020
WIDEBAND COMM. TESTER	R&S	CMW 500	109825	3 YEARS	09/23/2020
DIGITAL THRMOMETER	CONTROL COMPANY	36934-164	181230565	3 YEARS	10/20/2021

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.

10 Revision History

Date	Report Name	Changes to report	Prepared by
2022-11-28	EMC_PARTI-001-21001_FCC_22_24_27	Initial Version	Cheng Song
2023-02-28	EMC_PARTI-001-21001_FCC_22_24_27_Rev1	Updated section 6 Measurement Results Summary	Cheng Song

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