



# FCC / ISED & Test Report

**For:**  
Telular AMETEK

**Model:**  
SHB6510

**Product Description:**  
Asset tracking.

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

**FCC ID:** MTFSHB6510  
**IC ID:** 2175D-SHB6510

**REPORT #:** EMC\_TELUL-101-21001\_FCC\_24\_27

**DATE:** 2022-01-12



A2LA Accredited

IC recognized #  
3462B-1

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CETECOM Inc. is a Delaware Corporation with Corporation number: 2905571

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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 24 and 27, and Industry Canada Standards RSS-GEN issue 5, RSS-133 issue 6 and RSS 139 Issue 3.

No deficiencies were ascertained.

| Company Name   | Product Description | Model # |
|----------------|---------------------|---------|
| Telular AMETEK | Asset tracking      | SHB6510 |

### Responsible for Testing Laboratory:

| 2022-01-12 | Compliance | Kevin Wang<br>(EMC Lab Manager) |           |
|------------|------------|---------------------------------|-----------|
| Date       | Section    | Name                            | Signature |

### Responsible for the Report:

| 2022-01-12 | Compliance | Cheng Song<br>(EMC Engineer) |           |
|------------|------------|------------------------------|-----------|
| Date       | Section    | Name                         | Signature |

The test results of this test report relate exclusively to the test item specified in Section 3.  
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

|                                    |                        |
|------------------------------------|------------------------|
| <b>Company Name:</b>               | CETECOM Inc.           |
| <b>Department:</b>                 | Compliance             |
| <b>Street Address:</b>             | 411 Dixon Landing Road |
| <b>City/Zip Code</b>               | Milpitas, CA 95035     |
| <b>Country</b>                     | USA                    |
| <b>Telephone:</b>                  | +1 (408) 586 6200      |
| <b>Fax:</b>                        | +1 (408) 586 6299      |
| <b>EMC Lab Manager:</b>            | Kevin Wang             |
| <b>Responsible Project Leader:</b> | Cathy Palacios         |

### 2.2 Identification of the Client

|                        |                                 |
|------------------------|---------------------------------|
| <b>Client's Name:</b>  | Telular AMETEK                  |
| <b>Street Address:</b> | 3225 Cumberland Blvd, Suite 300 |
| <b>City/Zip Code</b>   | Atlanta, GA, 30339              |
| <b>Country</b>         | USA                             |

### 2.3 Identification of the Manufacturer

|                               |                |
|-------------------------------|----------------|
| <b>Manufacturer's Name:</b>   | Same as Client |
| <b>Manufacturers Address:</b> |                |
| <b>City/Zip Code</b>          |                |
| <b>Country</b>                |                |

### 3 Equipment Under Test (EUT)

#### 3.1 EUT Specifications

|                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-----------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Model No:</b>                                    | SHB6510                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>HW Version :</b>                                 | A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>SW Version :</b>                                 | EM.00.01.1096,BM.00.01.0061,CM.00.01.1026                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>FCC-ID :</b>                                     | MTFSHB6510                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>IC-ID:</b>                                       | 2175D-SHB6510                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>PMN:</b>                                         | Kinnect                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Product Description:</b>                         | Asset tracking.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Radio Information:</b>                           | <p><b><u>Cellular:</u></b></p> <ul style="list-style-type: none"> <li>• Module: Telit ME910G1-W1 (CAT-M1 only)</li> <li>• FCC ID: RI7ME910G1W1, IC ID: 5131A-ME910G1W1</li> <li>• Bands: LTE 1, 2, 3, 4, 5, 8, 12, 13, 18, 19, 20, 25, 26, 27, 28, 66, 71, 75</li> </ul> <p><b><u>Bluetooth:</u></b></p> <ul style="list-style-type: none"> <li>• Module: Laird BL654 (Bluetooth 5 LE)</li> <li>• FCC ID: SQGBL654, IC ID: 3147A-BL654</li> </ul> <p><b><u>ISM:</u></b></p> <ul style="list-style-type: none"> <li>• Module: EFR32FG1P131F256GM32-C0</li> <li>• Operating Frequency: 902-928 MHz</li> </ul> <p><b><u>GPS / GNSS:</u></b></p> <ul style="list-style-type: none"> <li>• Module: Quectel GNSS L86</li> </ul> |
| <b>Antenna Information:</b>                         | <p><b><u>Cellular:</u></b></p> <ul style="list-style-type: none"> <li>• Type: PCB Trace</li> <li>• Max Gain: LTE 2 (4.4 dBi), LTE 4 (4.4 dBi), LTE 12 ( 2.6 dBi)</li> </ul> <p><b><u>Bluetooth:</u></b></p> <ul style="list-style-type: none"> <li>• Type: PCB Trace</li> <li>• Max Gain: 0 dBi</li> </ul> <p><b><u>ISM:</u></b></p> <ul style="list-style-type: none"> <li>• Type: Pulse W3113, small helica</li> <li>• Max Gain: 0.8 dBi</li> </ul>                                                                                                                                                                                                                                                                     |
| <b>Power Supply/ Rated Operating Voltage Range:</b> | Battery Vmin: 6 VDC/ Vnom: 7 VDC / Vmax: 8.2 VDC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Operating Temperature Range</b>                  | -40 °C to 70 °C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Sample Revision</b>                              | <input type="checkbox"/> Prototype Unit; <input checked="" type="checkbox"/> Production Unit; <input type="checkbox"/> Pre-Production                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

### 3.2 EUT Sample details

| EUT # | Serial Number     | HW Version | SW Version                                | Comments           |
|-------|-------------------|------------|-------------------------------------------|--------------------|
| 1     | SHB7ACHI213600010 | A          | EM.00.01.1096,BM.00.01.0061,CM.00.01.1026 | Radiated Emissions |

### 3.3 Accessory Equipment (AE) details

| AE # | Type                |
|------|---------------------|
| 1    | Communication Cable |

### 3.4 Test Sample Configuration

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

#### 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 24, 27 and ISSED Standards RSS-133 issue 6, and RSS-139 issue 3.

##### 4.1 **Dates of Testing:**

11/15/2021 -11/30/2021

##### 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=1.

| <b>Measurement System</b>        | <b>EMC 1</b> | <b>EMC 2</b> |
|----------------------------------|--------------|--------------|
| 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      |

RF conducted measurement                       $\pm 0.5$  dB

##### 4.3 **Environmental Conditions during Testing:**

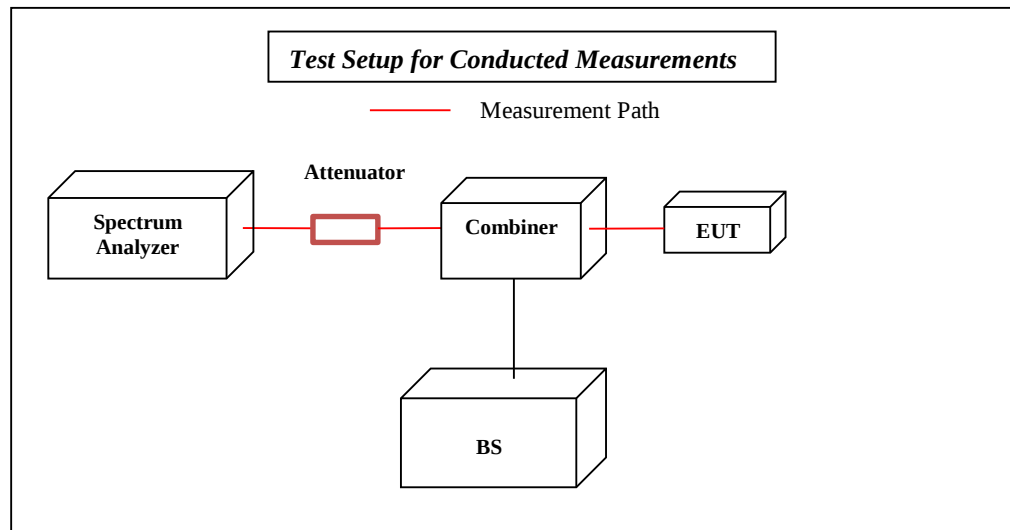
The following environmental conditions were maintained during the course of testing:

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

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

## 5 Measurement Procedures

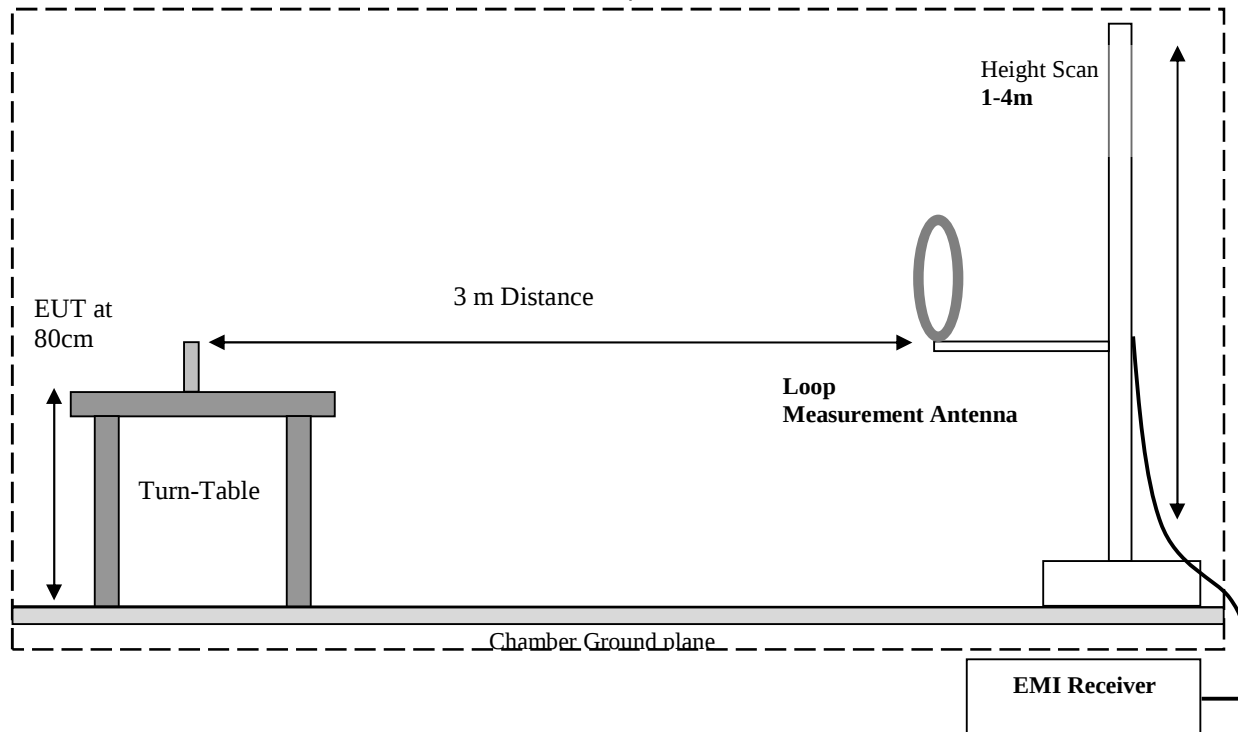
Testing is performed according to the guidelines provided in FCC publication (KDB) 971168 D01 v03r01 – “Measurement Guidance for Certification of Licensed Digital Transmitters” and according to relevant parts of ANSI/TIA-603-D-2010 as detailed below.



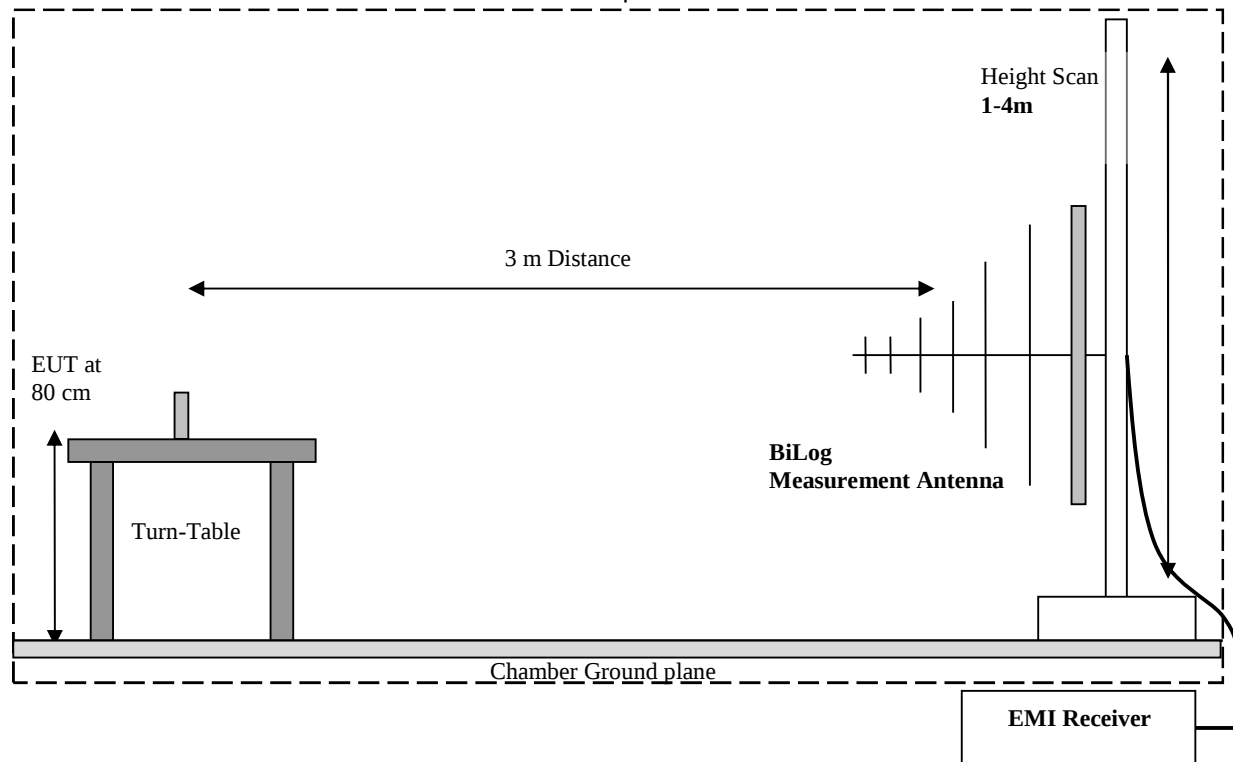
### 5.1 Radiated Measurement

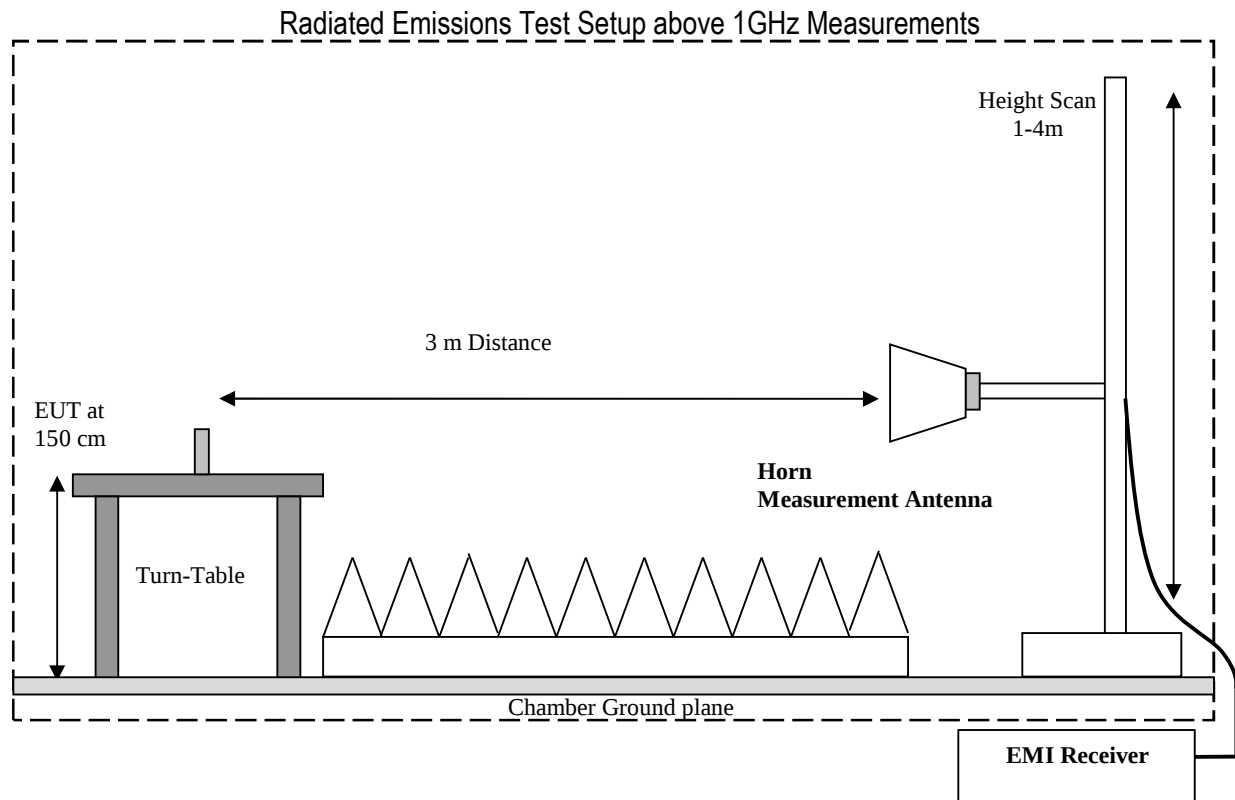
- The exploratory measurement is accomplished by running a matrix of 16 sweeps over the required frequency range with R&S Test-SW EMC32 for 4 positions of the turntable, two orthogonal positions of the EUT and both antenna polarizations. This procedure exceeds the requirement of the above standards to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

$$FS \text{ (dB}\mu\text{V/m)} = \text{Measured Value on SA (dB}\mu\text{V)} + \text{Cable Loss (dB)} + \text{Antenna Factor (dB/m)}$$

Example:

| Frequency (MHz) | Measured SA (dB $\mu$ V) | Cable Loss (dB) | Antenna Factor Correction (dB) | Field Strength Result (dB $\mu$ V/m) |
|-----------------|--------------------------|-----------------|--------------------------------|--------------------------------------|
| 1000            | 80.5                     | 3.5             | 14                             | 98.0                                 |

## 6 Measurement Results Summary

### 6.1 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                            | -                 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | ■                        | Note 3   |
| §2.1055; §24.235     | Frequency Stability          | Extreme Temperature and Voltage    | -                 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | ■                        | Note 3   |
| §2.1049; §24.238     | Occupied Bandwidth           | Nominal                            | -                 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | ■                        | Note 3   |
| §2.1051; §24.238     | Band Edge Compliance         | Nominal                            | -                 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | ■                        | Note 3   |
| §2.1051; §24.238     | Conducted Spurious Emissions | Nominal                            | -                 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | ■                        | Note 2   |
| §2.1053; §24.238     | Radiated Spurious Emissions  | Nominal                            | LTE 2 + BLE + ISM | ■                        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 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 under FCC ID: RI7ME910G1W1

### 6.2 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                            | -                                       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | ■                        | Note 3   |
| §2.1055; §27.54    | Frequency Stability          | Extreme Temperature and Voltage    | -                                       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | ■                        | Note 3   |
| §2.1049; §27.53    | Occupied Bandwidth           | Nominal                            | -                                       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | ■                        | Note 3   |
| §2.1051; §27.53    | Band Edge Compliance         | Nominal                            | -                                       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | ■                        | Note 3   |
| §2.1051; §27.53    | Conducted Spurious Emissions | Nominal                            | -                                       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | ■                        | Note 2   |
| §2.1053; §27.53    | Radiated Spurious Emissions  | Nominal                            | LTE 4 + BLE + ISM<br>LTE 12 + BLE + ISM | ■                        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 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 under FCC ID: RI7ME910G1W1

## 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  $43 + 10 \log_{10} p$  (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  $43 + 10 \log_{10} p$  (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.

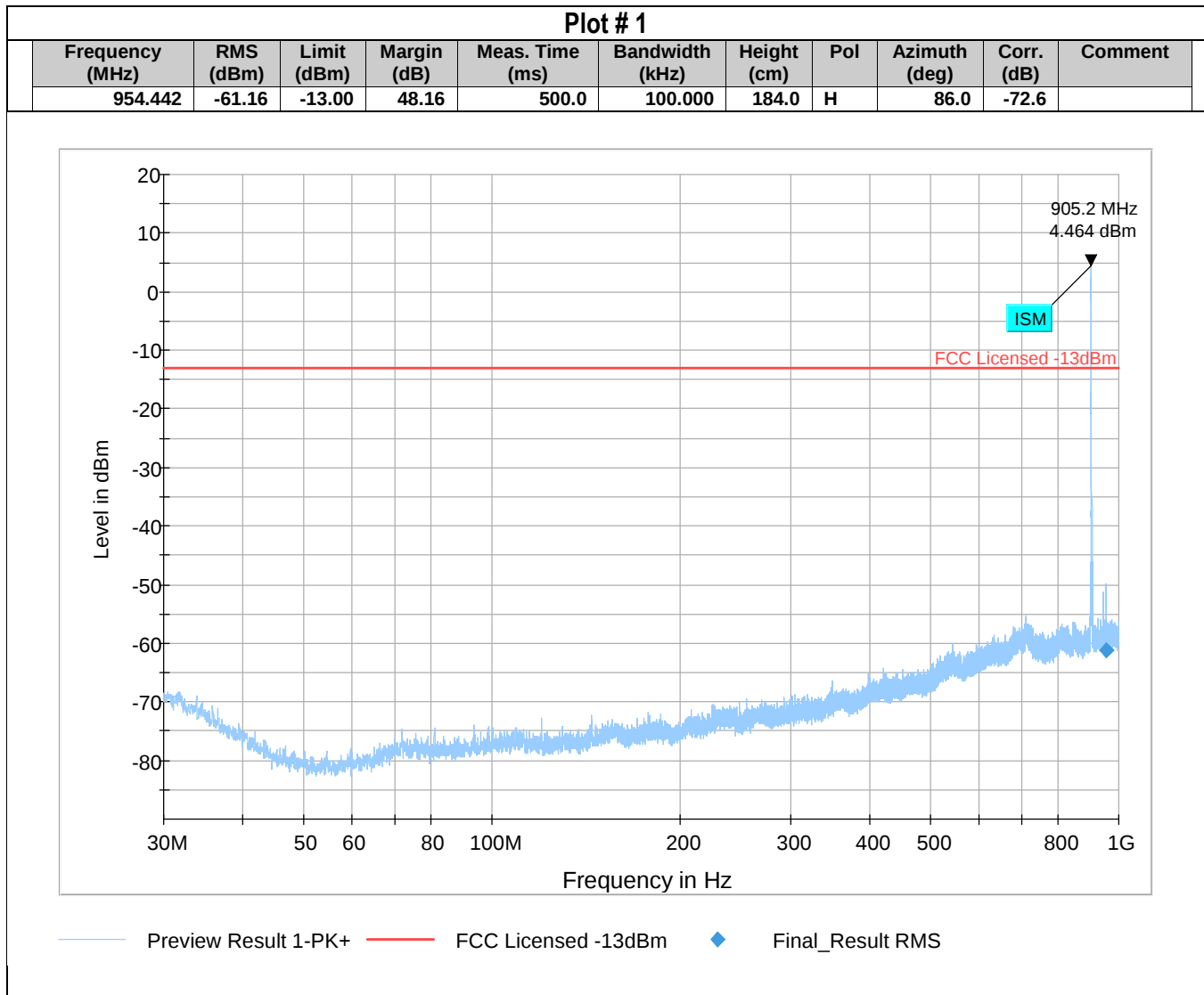
### 7.1.3 Test conditions and setup:

| Ambient Temperature (C) | EUT Set-Up # | Power Input |
|-------------------------|--------------|-------------|
| 22                      | 1            | Battery     |

### 7.1.4 Measurement result:

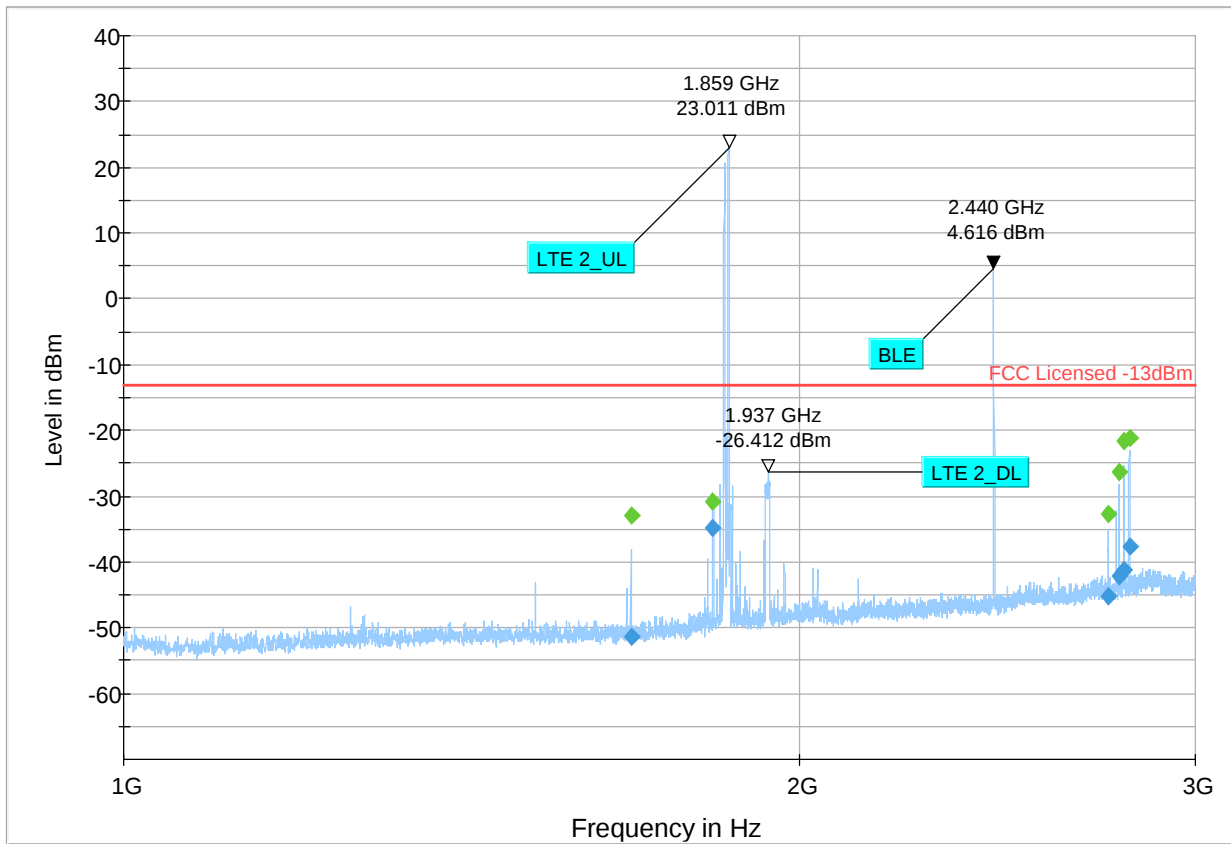
| Plot # | Cellular Channel | EUT operating mode | Scan Frequency  | Limit (dBm) | Result |
|--------|------------------|--------------------|-----------------|-------------|--------|
| 1-3    | Low              | LTE 2 + BLE + ISM  | 30 MHz – 18 GHz | -13         | Pass   |
| 4-8    | Mid              | LTE 2 + BLE + ISM  | 9 kHz – 26 GHz  | -13         | Pass   |
| 9-11   | High             | LTE 2 + BLE + ISM  | 30 MHz – 18 GHz | -13         | Pass   |
| 12-14  | Low              | LTE 4 + BLE + ISM  | 30 MHz – 18 GHz | -13         | Pass   |
| 15-18  | Mid              | LTE 4 + BLE + ISM  | 9 kHz – 18 GHz  | -13         | Pass   |
| 19-21  | High             | LTE 4 + BLE + ISM  | 30 MHz – 18 GHz | -13         | Pass   |
| 22-24  | Low              | LTE 12 + BLE + ISM | 30 MHz – 18 GHz | -13         | Pass   |
| 25-28  | Mid              | LTE 12 + BLE + ISM | 9 kHz – 18 GHz  | -13         | Pass   |
| 29-31  | High             | LTE 12 + BLE + ISM | 30 MHz – 18 GHz | -13         | Pass   |

## 7.1.5 Measurement Plots:



Plot # 2

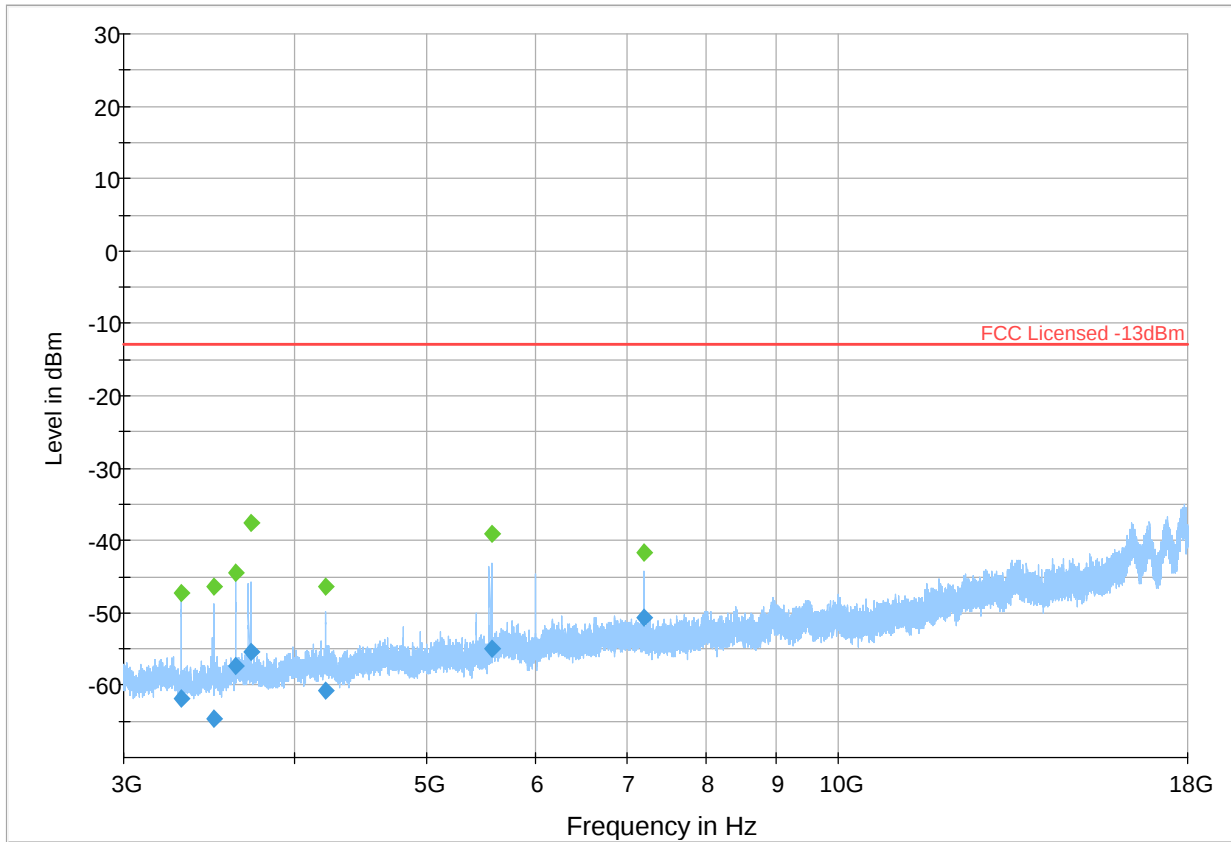
| Frequency (MHz) | RMS (dBm) | MaxPeak (dBm) | Limit (dBm) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB) |
|-----------------|-----------|---------------|-------------|-------------|-----------------|-----------------|-------------|-----|---------------|------------|
| 1682.250        | ---       | -33.03        | ---         | ---         | 500.0           | 1000.000        | 142.0       | H   | 198.0         | -65.4      |
| 1682.250        | -51.38    | ---           | -13.00      | 38.38       | 500.0           | 1000.000        | 142.0       | H   | 198.0         | -65.4      |
| 1829.750        | ---       | -30.86        | ---         | ---         | 500.0           | 1000.000        | 107.0       | V   | 322.0         | -64.5      |
| 1829.750        | -34.81    | ---           | -13.00      | 21.81       | 500.0           | 1000.000        | 107.0       | V   | 322.0         | -64.5      |
| 2745.750        | ---       | -32.73        | ---         | ---         | 500.0           | 1000.000        | 236.0       | H   | 348.0         | -61.2      |
| 2745.750        | -45.21    | ---           | -13.00      | 32.21       | 500.0           | 1000.000        | 236.0       | H   | 348.0         | -61.2      |
| 2774.500        | -42.11    | ---           | -13.00      | 29.11       | 500.0           | 1000.000        | 151.0       | H   | 0.0           | -61.1      |
| 2774.500        | ---       | -26.43        | ---         | ---         | 500.0           | 1000.000        | 151.0       | H   | 0.0           | -61.1      |
| 2787.250        | -41.26    | ---           | -13.00      | 28.26       | 500.0           | 1000.000        | 142.0       | H   | 359.0         | -61.0      |
| 2787.250        | ---       | -21.72        | ---         | ---         | 500.0           | 1000.000        | 142.0       | H   | 359.0         | -61.0      |
| 2803.750        | ---       | -21.22        | ---         | ---         | 500.0           | 1000.000        | 134.0       | H   | 4.0           | -60.9      |
| 2803.750        | -37.58    | ---           | -13.00      | 24.58       | 500.0           | 1000.000        | 134.0       | H   | 4.0           | -60.9      |



Preview Result 1-PK+    FCC Licensed -13dBm    Final\_Result RMS    Final\_Result PK

Plot # 3

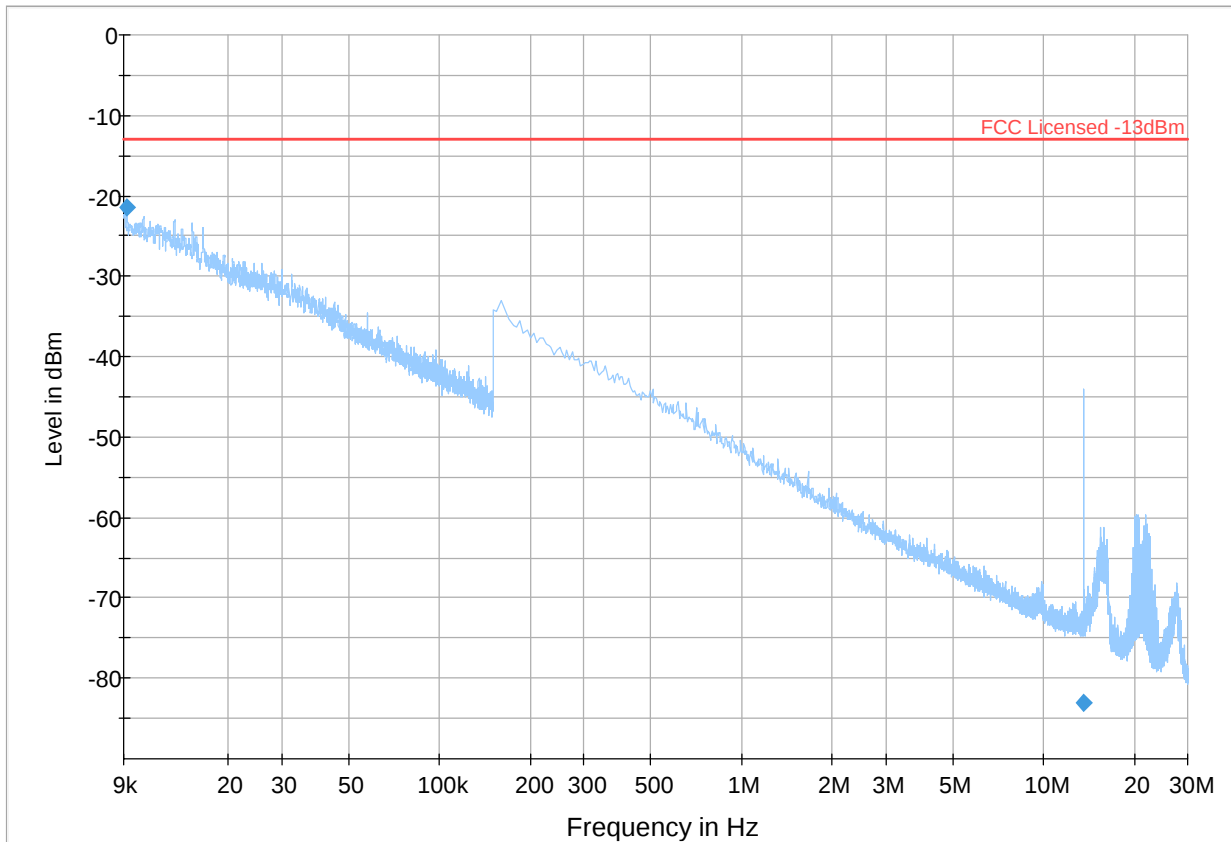
| Frequency (MHz) | RMS (dBm) | MaxPeak (dBm) | Limit (dBm) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB) |
|-----------------|-----------|---------------|-------------|-------------|-----------------|-----------------|-------------|-----|---------------|------------|
| 3306.250        | ---       | -47.35        | ---         | ---         | 500.0           | 1000.000        | 158.0       | H   | 20.0          | -103.3     |
| 3306.250        | -61.92    | ---           | -13.00      | 48.92       | 500.0           | 1000.000        | 158.0       | H   | 20.0          | -103.3     |
| 3487.750        | ---       | -46.30        | ---         | ---         | 500.0           | 1000.000        | 146.0       | H   | 176.0         | -102.2     |
| 3487.750        | -64.74    | ---           | -13.00      | 51.74       | 500.0           | 1000.000        | 146.0       | H   | 176.0         | -102.2     |
| 3619.000        | ---       | -44.38        | ---         | ---         | 500.0           | 1000.000        | 307.0       | H   | 28.0          | -101.2     |
| 3619.000        | -57.31    | ---           | -13.00      | 44.31       | 500.0           | 1000.000        | 307.0       | H   | 28.0          | -101.2     |
| 3718.500        | ---       | -37.66        | ---         | ---         | 500.0           | 1000.000        | 195.0       | H   | 18.0          | -100.8     |
| 3718.500        | -55.33    | ---           | -13.00      | 42.33       | 500.0           | 1000.000        | 195.0       | H   | 18.0          | -100.8     |
| 4212.250        | ---       | -46.47        | ---         | ---         | 500.0           | 1000.000        | 143.0       | H   | 342.0         | -99.2      |
| 4212.250        | -60.82    | ---           | -13.00      | 47.82       | 500.0           | 1000.000        | 143.0       | H   | 342.0         | -99.2      |
| 5578.250        | ---       | -39.12        | ---         | ---         | 500.0           | 1000.000        | 325.0       | V   | 269.0         | -97.0      |
| 5578.250        | -55.04    | ---           | -13.00      | 42.04       | 500.0           | 1000.000        | 325.0       | V   | 269.0         | -97.0      |
| 7206.500        | ---       | -41.61        | ---         | ---         | 500.0           | 1000.000        | 164.0       | H   | 6.0           | -95.8      |
| 7206.500        | -50.59    | ---           | -13.00      | 37.59       | 500.0           | 1000.000        | 164.0       | H   | 6.0           | -95.8      |



Preview Result 1-PK+    FCC Licensed -13dBm    Final\_Result RMS    Final\_Result PK

Plot # 4

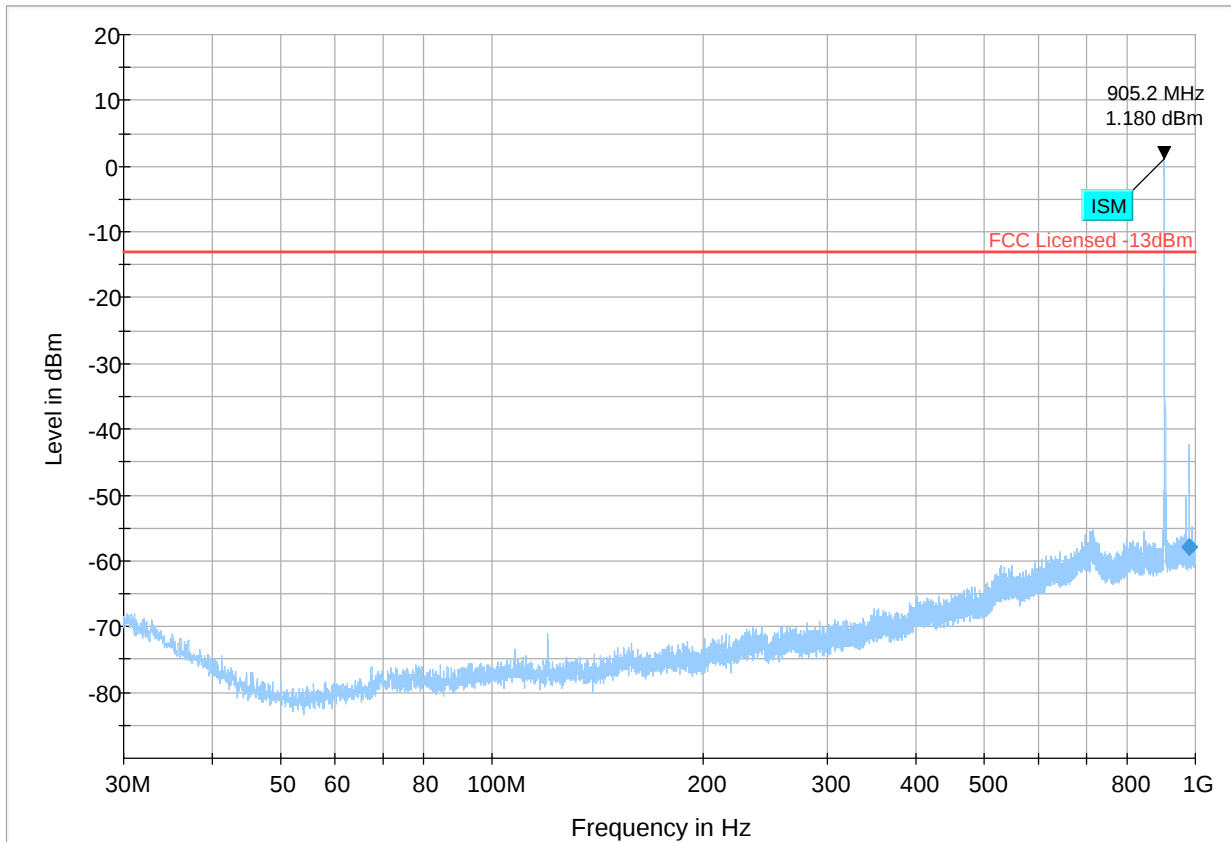
| Frequency (MHz) | RMS (dBm) | Limit (dBm) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB) | Comment |
|-----------------|-----------|-------------|-------------|-----------------|-----------------|-------------|-----|---------------|------------|---------|
| 0.009           | -21.51    | -13.00      | 8.51        | 500.0           | 1.000           | 304.0       | H   | 30.0          | -64.5      |         |
| 13.558          | -83.06    | -13.00      | 70.06       | 500.0           | 1.000           | 159.0       | V   | 153.0         | -78.0      |         |



— Preview Result 1-PK+ — FCC Licensed -13dBm ◆ Final\_Result RMS

Plot # 5

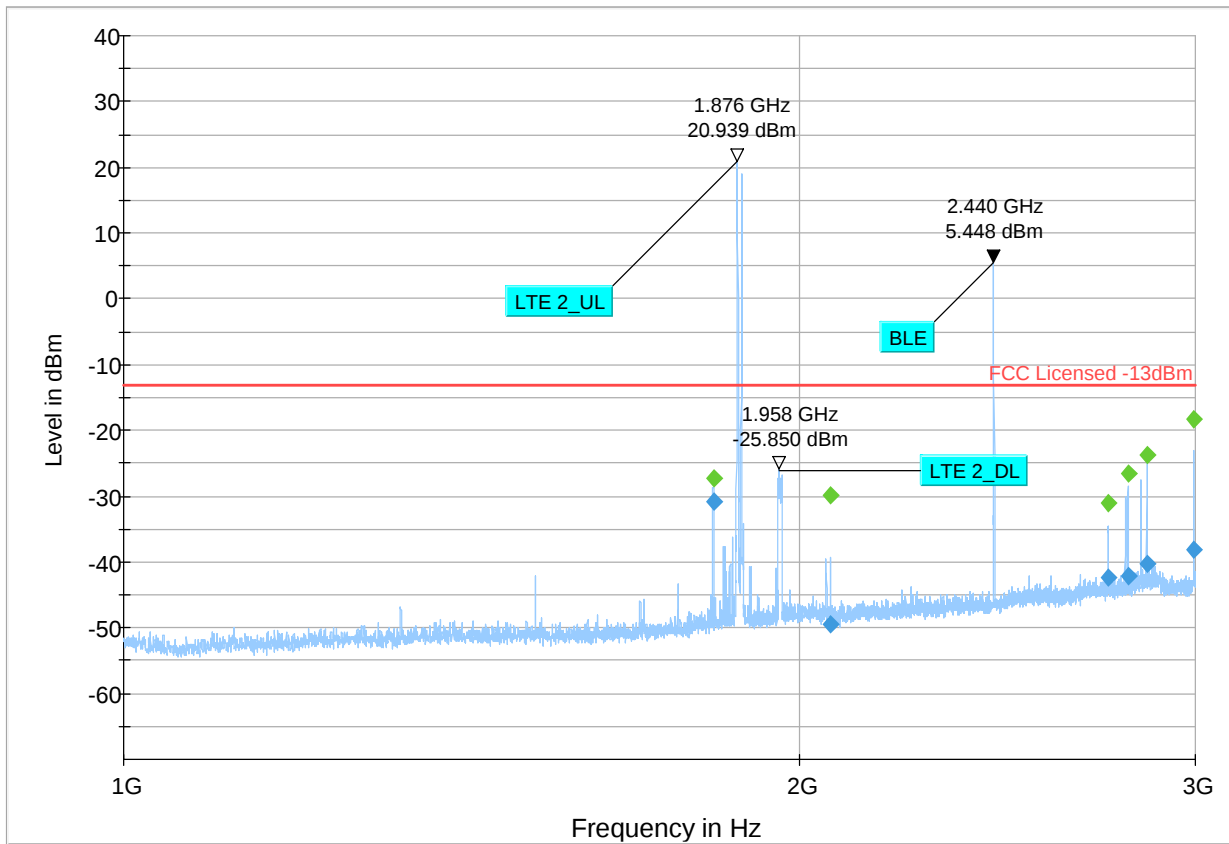
| Frequency (MHz) | RMS (dBm) | Limit (dBm) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB) | Comment |
|-----------------|-----------|-------------|-------------|-----------------|-----------------|-------------|-----|---------------|------------|---------|
| 979.565         | -57.93    | -13.00      | 44.93       | 500.0           | 100.000         | 149.0       | H   | 133.0         | -72.7      |         |



— Preview Result 1-PK+ — FCC Licensed -13dBm ◆ Final\_Result RMS

Plot # 6

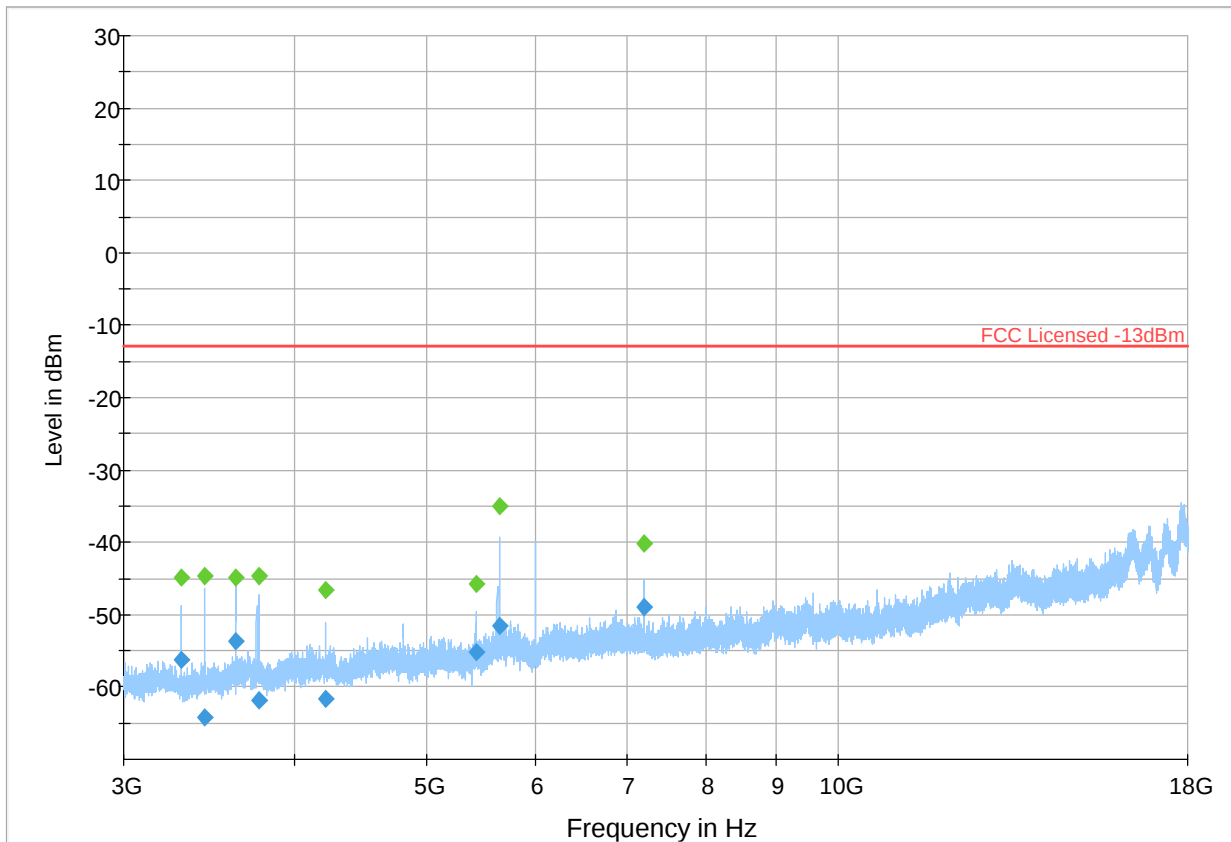
| Frequency (MHz) | RMS (dBm) | MaxPeak (dBm) | Limit (dBm) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB) |
|-----------------|-----------|---------------|-------------|-------------|-----------------|-----------------|-------------|-----|---------------|------------|
| 1830.250        | ---       | -27.32        | ---         | ---         | 500.0           | 1000.000        | 235.0       | V   | 273.0         | -64.5      |
| 1830.250        | -30.80    | ---           | -13.00      | 17.80       | 500.0           | 1000.000        | 235.0       | V   | 273.0         | -64.5      |
| 2063.750        | ---       | -29.90        | ---         | ---         | 500.0           | 1000.000        | 201.0       | H   | 195.0         | -63.6      |
| 2063.750        | -49.36    | ---           | -13.00      | 36.36       | 500.0           | 1000.000        | 201.0       | H   | 195.0         | -63.6      |
| 2745.500        | ---       | -31.02        | ---         | ---         | 500.0           | 1000.000        | 194.0       | H   | 353.0         | -61.2      |
| 2745.500        | -42.39    | ---           | -13.00      | 29.39       | 500.0           | 1000.000        | 194.0       | H   | 353.0         | -61.2      |
| 2799.500        | ---       | -26.57        | ---         | ---         | 500.0           | 1000.000        | 134.0       | H   | 2.0           | -61.0      |
| 2799.500        | -42.20    | ---           | -13.00      | 29.20       | 500.0           | 1000.000        | 134.0       | H   | 2.0           | -61.0      |
| 2853.750        | ---       | -23.75        | ---         | ---         | 500.0           | 1000.000        | 150.0       | H   | 4.0           | -60.7      |
| 2853.750        | -40.14    | ---           | -13.00      | 27.14       | 500.0           | 1000.000        | 150.0       | H   | 4.0           | -60.7      |
| 2996.000        | ---       | -18.19        | ---         | ---         | 500.0           | 1000.000        | 125.0       | H   | 302.0         | -59.5      |
| 2996.000        | -38.07    | ---           | -13.00      | 25.07       | 500.0           | 1000.000        | 125.0       | H   | 302.0         | -59.5      |



— Preview Result 1-PK+ 
 — FCC Licensed -13dBm 
 ◆ Final\_Result RMS 
 ◆ Final\_Result PK

Plot # 7

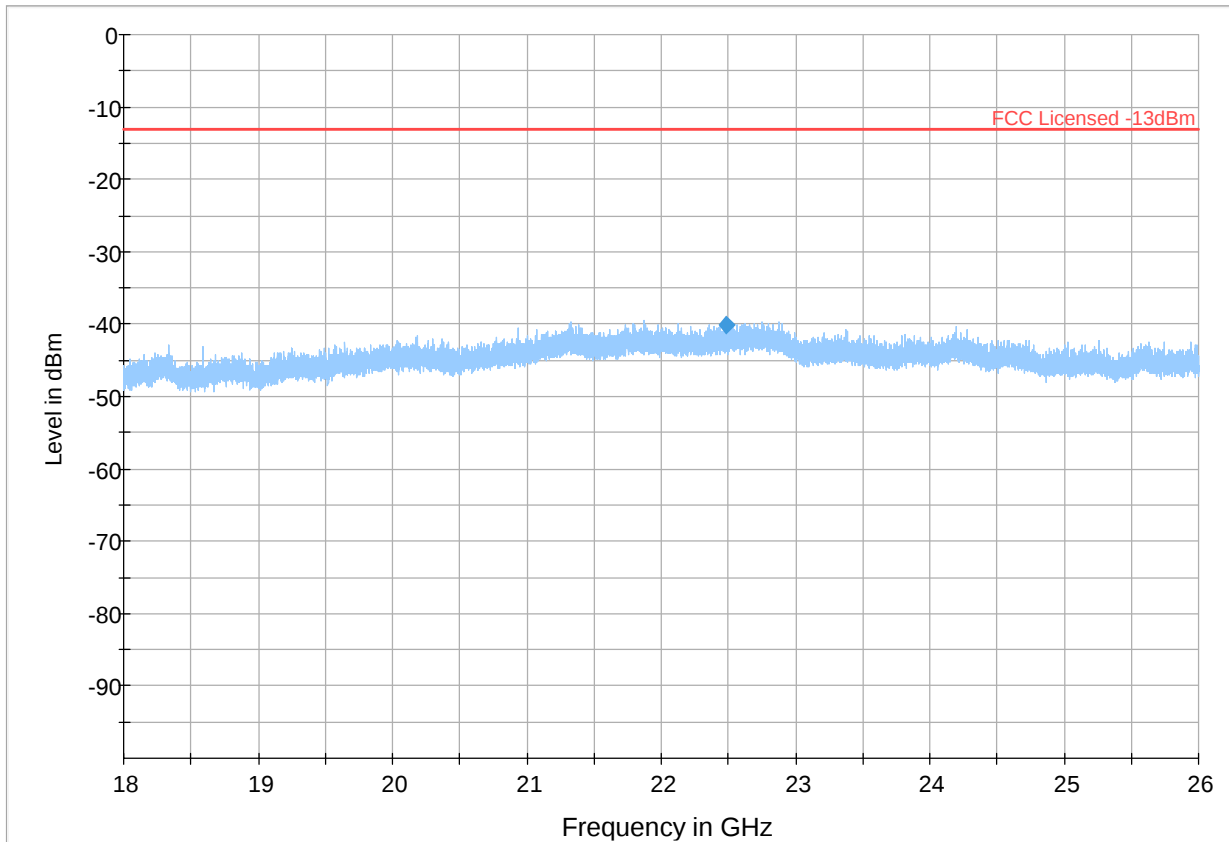
| Frequency (MHz) | RMS (dBm) | MaxPeak (dBm) | Limit (dBm) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB) |
|-----------------|-----------|---------------|-------------|-------------|-----------------|-----------------|-------------|-----|---------------|------------|
| 3307.000        | ---       | -44.90        | ---         | ---         | 500.0           | 1000.000        | 250.0       | H   | 22.0          | -103.3     |
| 3307.000        | -56.25    | ---           | -13.00      | 43.25       | 500.0           | 1000.000        | 250.0       | H   | 22.0          | -103.3     |
| 3436.250        | ---       | -44.60        | ---         | ---         | 500.0           | 1000.000        | 143.0       | H   | 4.0           | -102.3     |
| 3436.250        | -64.31    | ---           | -13.00      | 51.31       | 500.0           | 1000.000        | 143.0       | H   | 4.0           | -102.3     |
| 3619.000        | ---       | -44.99        | ---         | ---         | 500.0           | 1000.000        | 179.0       | H   | 126.0         | -101.2     |
| 3619.000        | -53.78    | ---           | -13.00      | 40.78       | 500.0           | 1000.000        | 179.0       | H   | 126.0         | -101.2     |
| 3768.500        | ---       | -44.66        | ---         | ---         | 500.0           | 1000.000        | 134.0       | V   | 4.0           | -100.9     |
| 3768.500        | -61.77    | ---           | -13.00      | 48.77       | 500.0           | 1000.000        | 134.0       | V   | 4.0           | -100.9     |
| 4211.500        | ---       | -46.60        | ---         | ---         | 500.0           | 1000.000        | 117.0       | H   | -29.0         | -99.2      |
| 4211.500        | -61.57    | ---           | -13.00      | 48.57       | 500.0           | 1000.000        | 117.0       | H   | -29.0         | -99.2      |
| 5431.000        | ---       | -45.66        | ---         | ---         | 500.0           | 1000.000        | 195.0       | V   | 180.0         | -97.7      |
| 5431.000        | -55.10    | ---           | -13.00      | 42.10       | 500.0           | 1000.000        | 195.0       | V   | 180.0         | -97.7      |
| 5653.000        | ---       | -34.93        | ---         | ---         | 500.0           | 1000.000        | 107.0       | H   | -41.0         | -96.3      |
| 5653.000        | -51.49    | ---           | -13.00      | 38.49       | 500.0           | 1000.000        | 107.0       | H   | -41.0         | -96.3      |
| 7205.250        | ---       | -40.13        | ---         | ---         | 500.0           | 1000.000        | 164.0       | H   | 12.0          | -95.8      |
| 7205.250        | -48.91    | ---           | -13.00      | 35.91       | 500.0           | 1000.000        | 164.0       | H   | 12.0          | -95.8      |



Preview Result 1-PK+    FCC Licensed -13dBm    Final\_Result RMS    Final\_Result PK

Plot # 8

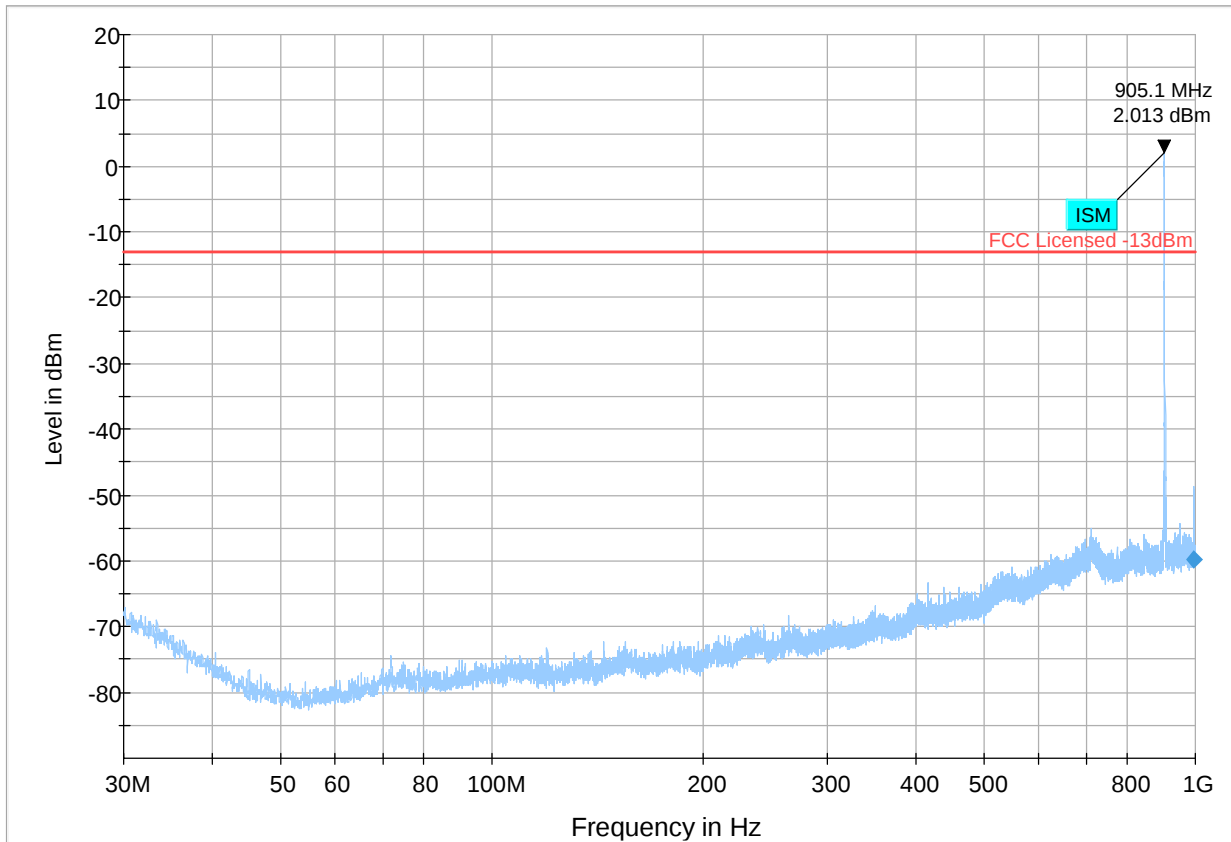
| Frequency (MHz) | RMS (dBm) | MaxPeak (dBm) | Limit (dBm) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB) |
|-----------------|-----------|---------------|-------------|-------------|-----------------|-----------------|-------------|-----|---------------|------------|
| 22484.500       | -40.09    | ---           | -13.00      | 27.09       | 500.0           | 1000.000        | 100.0       | H   | 64.0          | -75.8      |



— Preview Result 1-PK+ — FCC Licensed -13dBm ◆ Final\_Result RMS ◆ Final\_Result PK

Plot # 9

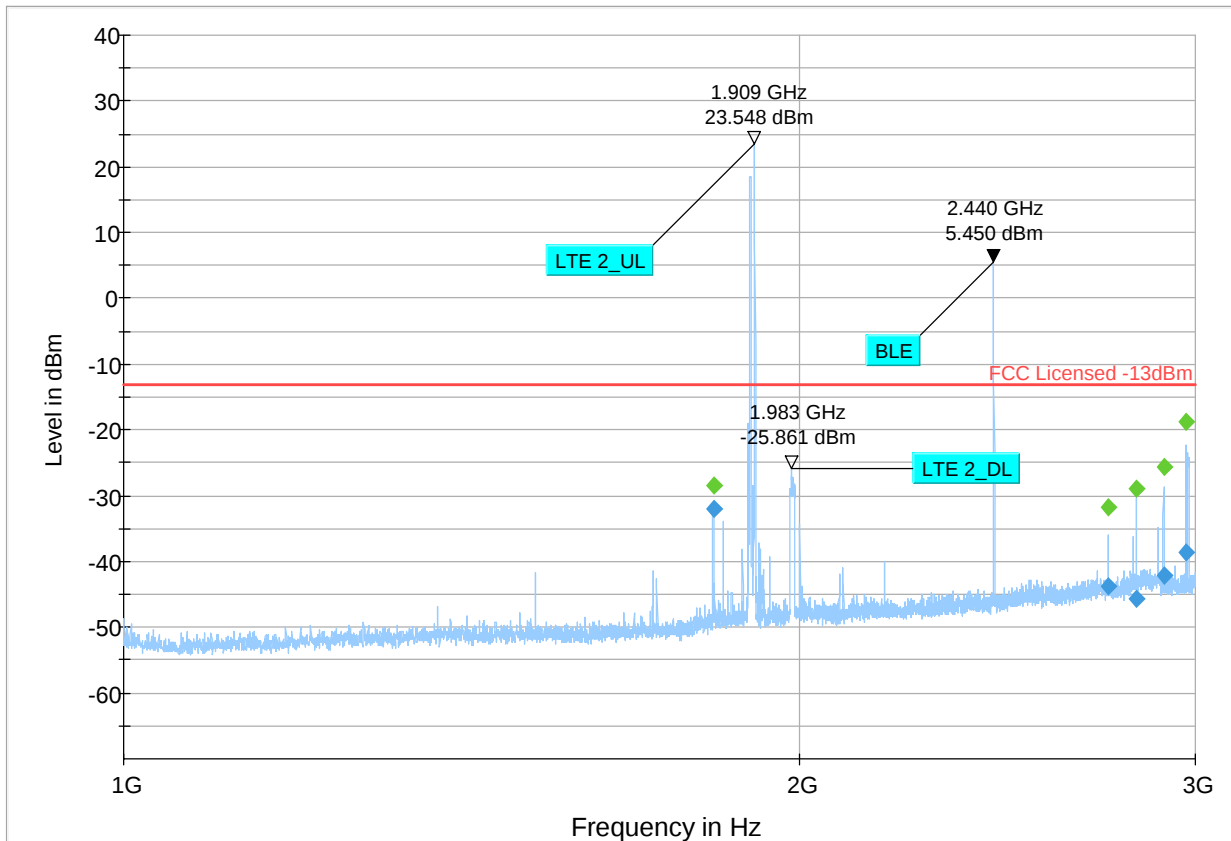
| Frequency (MHz) | RMS (dBm) | Limit (dBm) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB) | Comment |
|-----------------|-----------|-------------|-------------|-----------------|-----------------|-------------|-----|---------------|------------|---------|
| 996.249         | -59.83    | -13.00      | 46.83       | 500.0           | 100.000         | 161.0       | H   | 145.0         | -72.8      |         |



Preview Result 1-PK+    FCC Licensed -13dBm    Final\_Result RMS

Plot # 10

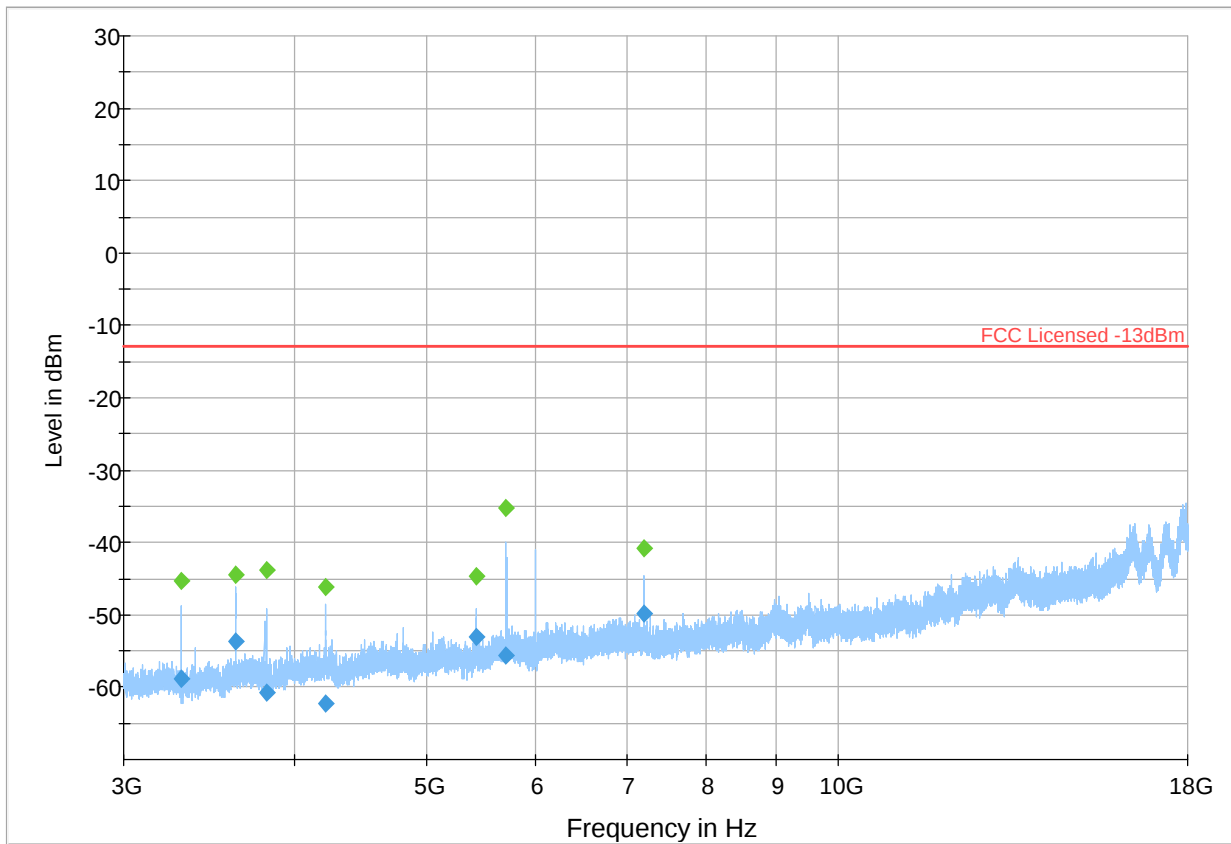
| Frequency (MHz) | RMS (dBm) | MaxPeak (dBm) | Limit (dBm) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB) |
|-----------------|-----------|---------------|-------------|-------------|-----------------|-----------------|-------------|-----|---------------|------------|
| 1830.250        | ---       | -28.39        | ---         | ---         | 500.0           | 1000.000        | 236.0       | V   | 271.0         | -64.5      |
| 1830.250        | -31.91    | ---           | -13.00      | 18.91       | 500.0           | 1000.000        | 236.0       | V   | 271.0         | -64.5      |
| 2745.500        | ---       | -31.77        | ---         | ---         | 500.0           | 1000.000        | 194.0       | H   | -1.0          | -61.2      |
| 2745.500        | -43.82    | ---           | -13.00      | 30.82       | 500.0           | 1000.000        | 194.0       | H   | -1.0          | -61.2      |
| 2824.750        | ---       | -28.89        | ---         | ---         | 500.0           | 1000.000        | 159.0       | H   | 1.0           | -60.8      |
| 2824.750        | -45.69    | ---           | -13.00      | 32.69       | 500.0           | 1000.000        | 159.0       | H   | 1.0           | -60.8      |
| 2904.000        | ---       | -25.51        | ---         | ---         | 500.0           | 1000.000        | 167.0       | H   | -13.0         | -60.4      |
| 2904.000        | -42.13    | ---           | -13.00      | 29.13       | 500.0           | 1000.000        | 167.0       | H   | -13.0         | -60.4      |
| 2970.250        | ---       | -18.74        | ---         | ---         | 500.0           | 1000.000        | 133.0       | H   | 303.0         | -60.2      |
| 2970.250        | -38.69    | ---           | -13.00      | 25.69       | 500.0           | 1000.000        | 133.0       | H   | 303.0         | -60.2      |



Preview Result 1-PK+    FCC Licensed -13dBm    Final\_Result RMS    Final\_Result PK

Plot # 11

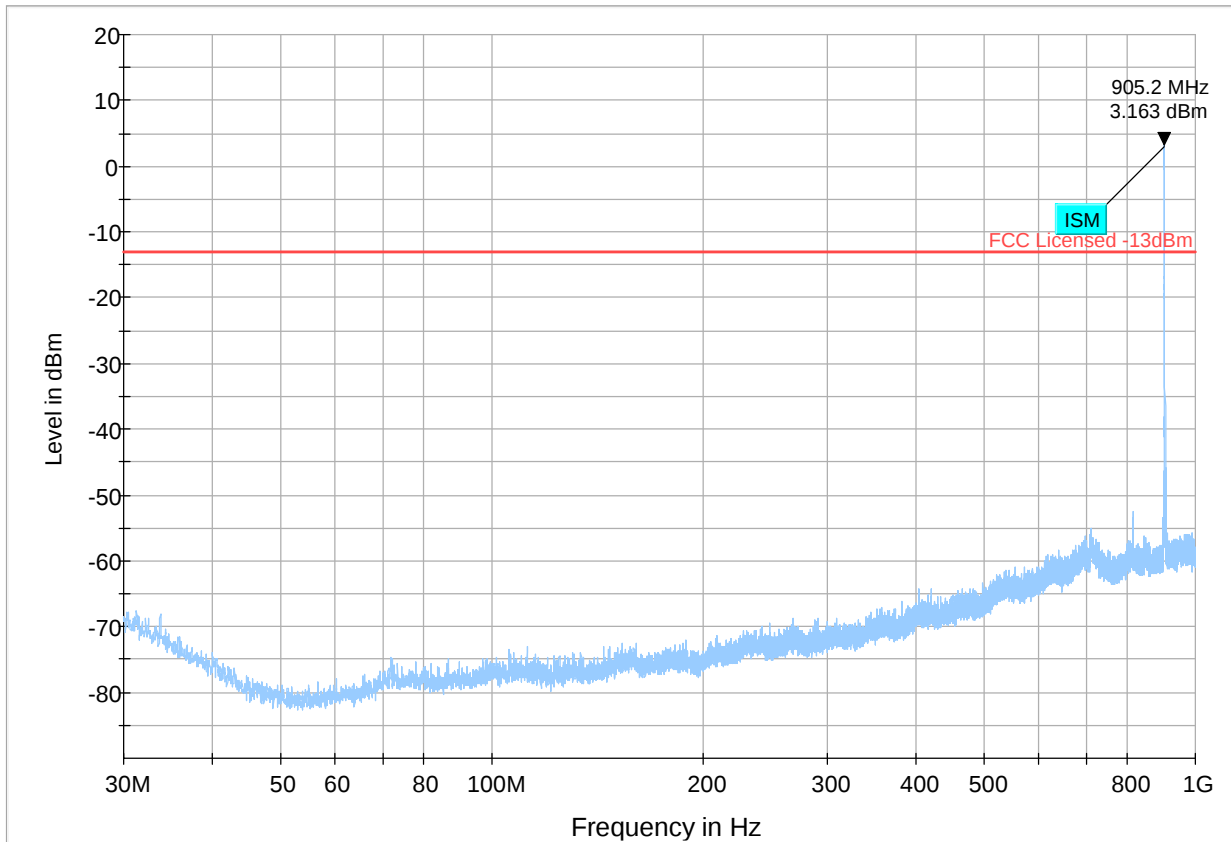
| Frequency (MHz) | RMS (dBm) | MaxPeak (dBm) | Limit (dBm) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB) |
|-----------------|-----------|---------------|-------------|-------------|-----------------|-----------------|-------------|-----|---------------|------------|
| 3306.500        | ---       | -45.27        | ---         | ---         | 500.0           | 1000.000        | 221.0       | H   | 2.0           | -103.3     |
| 3306.500        | -58.92    | ---           | -13.00      | 45.92       | 500.0           | 1000.000        | 221.0       | H   | 2.0           | -103.3     |
| 3619.000        | ---       | -44.42        | ---         | ---         | 500.0           | 1000.000        | 238.0       | H   | 128.0         | -101.2     |
| 3619.000        | -53.64    | ---           | -13.00      | 40.64       | 500.0           | 1000.000        | 238.0       | H   | 128.0         | -101.2     |
| 3818.750        | ---       | -43.84        | ---         | ---         | 500.0           | 1000.000        | 276.0       | V   | 137.0         | -101.4     |
| 3818.750        | -60.75    | ---           | -13.00      | 47.75       | 500.0           | 1000.000        | 276.0       | V   | 137.0         | -101.4     |
| 4211.250        | ---       | -46.22        | ---         | ---         | 500.0           | 1000.000        | 100.0       | H   | 304.0         | -99.2      |
| 4211.250        | -62.24    | ---           | -13.00      | 49.24       | 500.0           | 1000.000        | 100.0       | H   | 304.0         | -99.2      |
| 5431.000        | ---       | -44.65        | ---         | ---         | 500.0           | 1000.000        | 155.0       | V   | 326.0         | -97.7      |
| 5431.000        | -53.03    | ---           | -13.00      | 40.03       | 500.0           | 1000.000        | 155.0       | V   | 326.0         | -97.7      |
| 5703.000        | ---       | -35.25        | ---         | ---         | 500.0           | 1000.000        | 151.0       | H   | 321.0         | -96.0      |
| 5703.000        | -55.52    | ---           | -13.00      | 42.52       | 500.0           | 1000.000        | 151.0       | H   | 321.0         | -96.0      |
| 7205.250        | ---       | -40.73        | ---         | ---         | 500.0           | 1000.000        | 180.0       | H   | 9.0           | -95.8      |
| 7205.250        | -49.74    | ---           | -13.00      | 36.74       | 500.0           | 1000.000        | 180.0       | H   | 9.0           | -95.8      |



Preview Result 1-PK+    FCC Licensed -13dBm    Final\_Result RMS    Final\_Result PK

Plot # 12

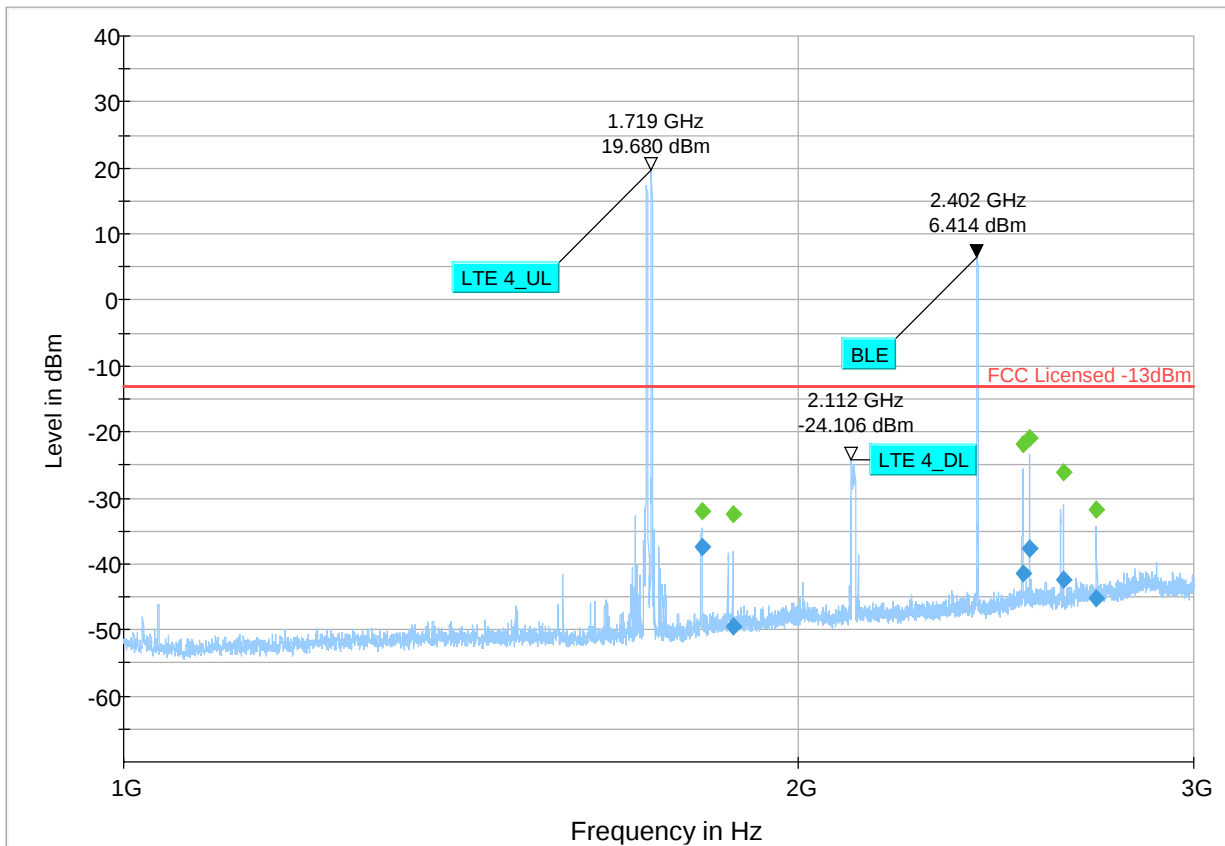
| Frequency (MHz) | RMS (dBm) | Limit (dBm) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB) | Comment |
|-----------------|-----------|-------------|-------------|-----------------|-----------------|-------------|-----|---------------|------------|---------|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



Preview Result 1-PK+ \* Critical\_Freqs PK+ FCC Licensed -13dBm Final\_Result RM

Plot # 13

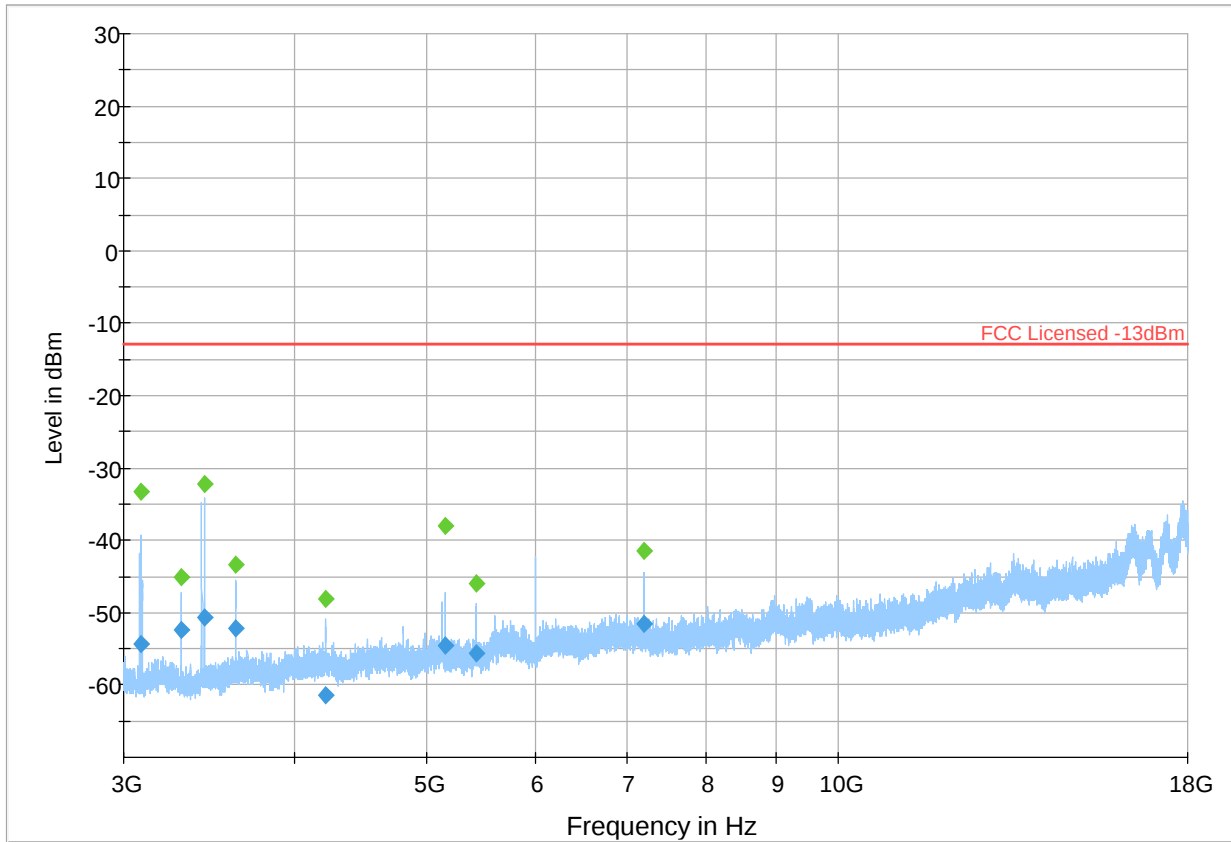
| Frequency (MHz) | RMS (dBm) | MaxPeak (dBm) | Limit (dBm) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB) |
|-----------------|-----------|---------------|-------------|-------------|-----------------|-----------------|-------------|-----|---------------|------------|
| 1810.250        | -37.43    | ---           | -13.00      | 24.43       | 500.0           | 1000.000        | 320.0       | V   | 261.0         | -64.7      |
| 1810.250        | ---       | -32.05        | ---         | ---         | 500.0           | 1000.000        | 320.0       | V   | 261.0         | -64.7      |
| 1868.750        | -49.51    | ---           | -13.00      | 36.51       | 500.0           | 1000.000        | 124.0       | H   | 25.0          | -64.1      |
| 1868.750        | ---       | -32.45        | ---         | ---         | 500.0           | 1000.000        | 124.0       | H   | 25.0          | -64.1      |
| 2517.250        | -41.41    | ---           | -13.00      | 28.41       | 500.0           | 1000.000        | 211.0       | H   | 325.0         | -61.7      |
| 2517.250        | ---       | -21.93        | ---         | ---         | 500.0           | 1000.000        | 211.0       | H   | 325.0         | -61.7      |
| 2534.000        | -37.71    | ---           | -13.00      | 24.71       | 500.0           | 1000.000        | 185.0       | H   | 333.0         | -61.7      |
| 2534.000        | ---       | -20.86        | ---         | ---         | 500.0           | 1000.000        | 185.0       | H   | 333.0         | -61.7      |
| 2624.250        | -42.44    | ---           | -13.00      | 29.44       | 500.0           | 1000.000        | 160.0       | H   | 2.0           | -61.7      |
| 2624.250        | ---       | -26.10        | ---         | ---         | 500.0           | 1000.000        | 160.0       | H   | 2.0           | -61.7      |
| 2714.500        | -45.17    | ---           | -13.00      | 32.17       | 500.0           | 1000.000        | 202.0       | H   | 2.0           | -61.3      |
| 2714.500        | ---       | -31.74        | ---         | ---         | 500.0           | 1000.000        | 202.0       | H   | 2.0           | -61.3      |



Preview Result 1-PK+ FCC Licensed -13dBm Final\_Result RMS Final\_Result PK

Plot # 14

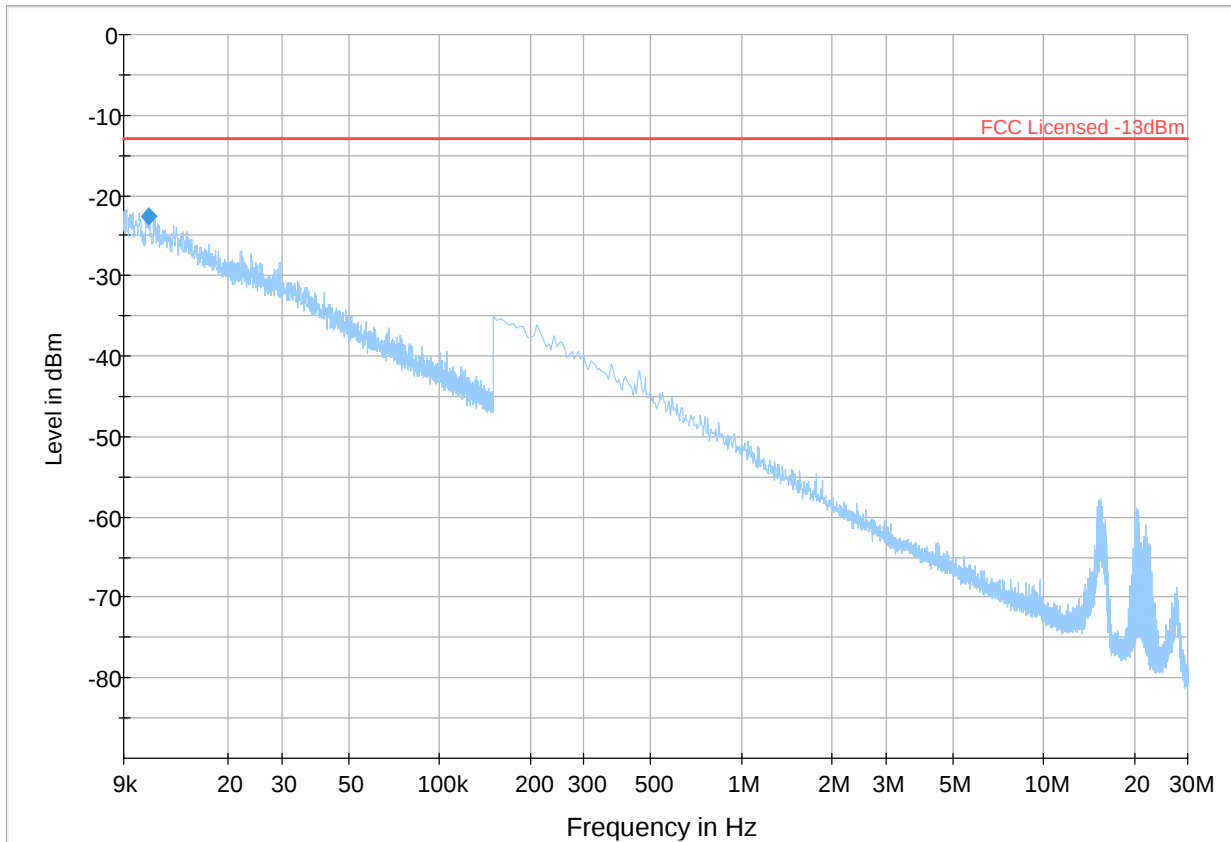
| Frequency (MHz) | RMS (dBm) | MaxPeak (dBm) | Limit (dBm) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB) |
|-----------------|-----------|---------------|-------------|-------------|-----------------|-----------------|-------------|-----|---------------|------------|
| 3085.250        | ---       | -33.40        | ---         | ---         | 500.0           | 1000.000        | 159.0       | H   | 189.0         | -103.4     |
| 3085.250        | -54.33    | ---           | -13.00      | 41.33       | 500.0           | 1000.000        | 159.0       | H   | 189.0         | -103.4     |
| 3307.000        | ---       | -45.14        | ---         | ---         | 500.0           | 1000.000        | 169.0       | H   | -1.0          | -103.3     |
| 3307.000        | -52.41    | ---           | -13.00      | 39.41       | 500.0           | 1000.000        | 169.0       | H   | -1.0          | -103.3     |
| 3438.250        | ---       | -32.33        | ---         | ---         | 500.0           | 1000.000        | 100.0       | H   | 13.0          | -102.3     |
| 3438.250        | -50.63    | ---           | -13.00      | 37.63       | 500.0           | 1000.000        | 100.0       | H   | 13.0          | -102.3     |
| 3619.000        | ---       | -43.47        | ---         | ---         | 500.0           | 1000.000        | 134.0       | H   | 147.0         | -101.2     |
| 3619.000        | -52.17    | ---           | -13.00      | 39.17       | 500.0           | 1000.000        | 134.0       | H   | 147.0         | -101.2     |
| 4212.250        | ---       | -48.14        | ---         | ---         | 500.0           | 1000.000        | 134.0       | V   | 91.0          | -99.2      |
| 4212.250        | -61.31    | ---           | -13.00      | 48.31       | 500.0           | 1000.000        | 134.0       | V   | 91.0          | -99.2      |
| 5158.000        | ---       | -38.10        | ---         | ---         | 500.0           | 1000.000        | 100.0       | H   | 314.0         | -97.9      |
| 5158.000        | -54.50    | ---           | -13.00      | 41.50       | 500.0           | 1000.000        | 100.0       | H   | 314.0         | -97.9      |
| 5428.750        | ---       | -45.96        | ---         | ---         | 500.0           | 1000.000        | 190.0       | V   | 92.0          | -97.7      |
| 5428.750        | -55.67    | ---           | -13.00      | 42.67       | 500.0           | 1000.000        | 190.0       | V   | 92.0          | -97.7      |
| 7205.000        | ---       | -41.40        | ---         | ---         | 500.0           | 1000.000        | 116.0       | H   | 9.0           | -95.8      |
| 7205.000        | -51.57    | ---           | -13.00      | 38.57       | 500.0           | 1000.000        | 116.0       | H   | 9.0           | -95.8      |



Preview Result 1-PK+    FCC Licensed -13dBm    Final\_Result RMS    Final\_Result PK

Plot # 15

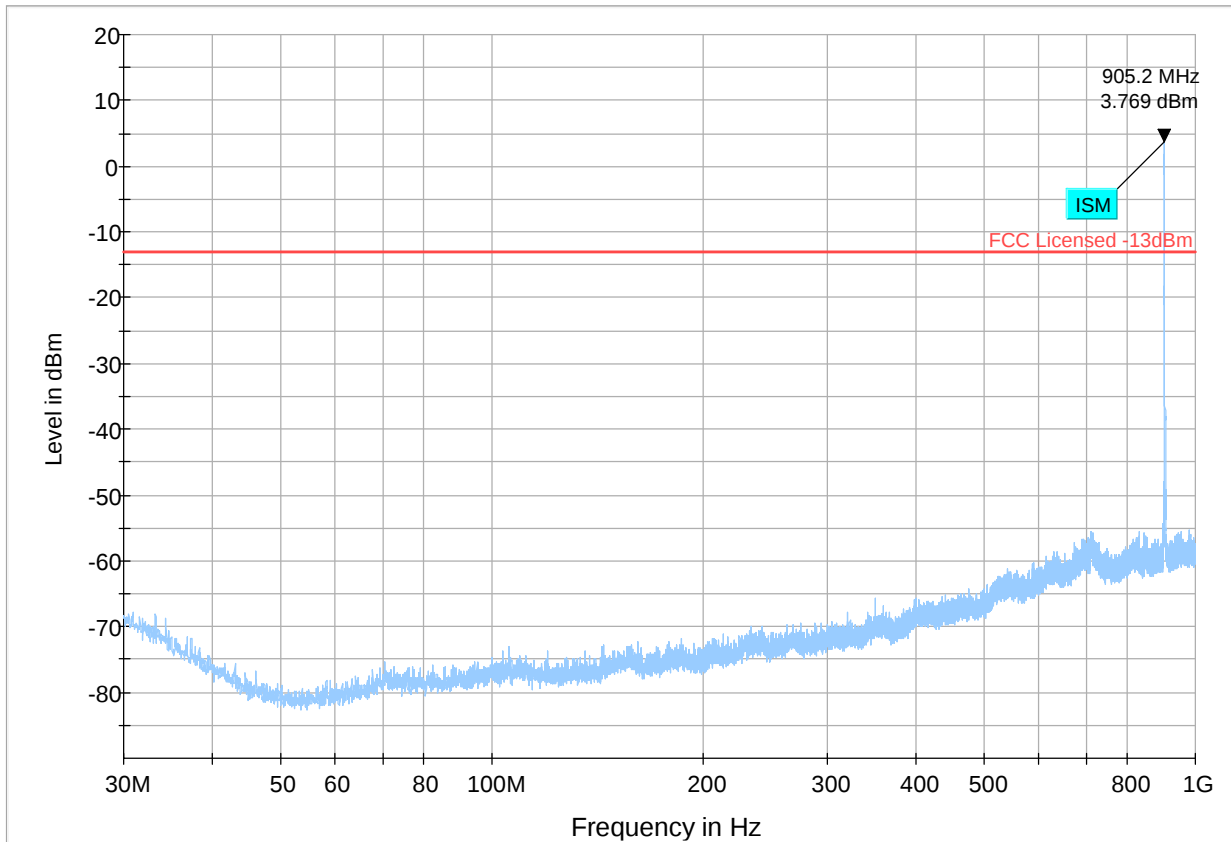
| Frequency (MHz) | RMS (dBm) | Limit (dBm) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB) | Comment |
|-----------------|-----------|-------------|-------------|-----------------|-----------------|-------------|-----|---------------|------------|---------|
| 0.011           | -22.56    | -13.00      | 9.56        | 500.0           | 1.000           | 254.0       | H   | -16.0         | -65.7      |         |



Preview Result 1-PK+    FCC Licensed -13dBm    Final\_Result RMS

Plot # 16

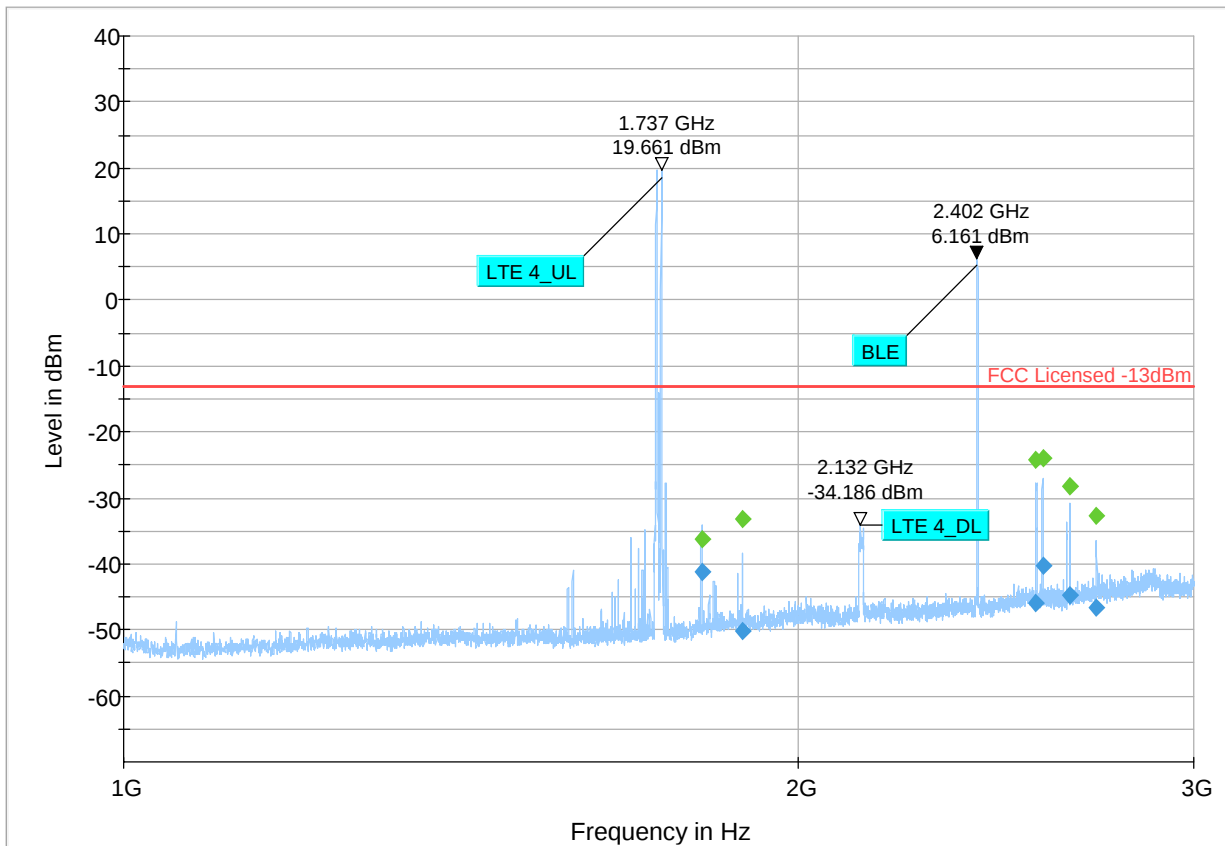
| Frequency (MHz) | RMS (dBm) | Limit (dBm) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB) | Comment |
|-----------------|-----------|-------------|-------------|-----------------|-----------------|-------------|-----|---------------|------------|---------|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



— Preview Result 1-PK+   
 \* Critical\_Freqs PK+   
 — FCC Licensed -13dBm   
 ◆ Final\_Result RM

Plot # 17

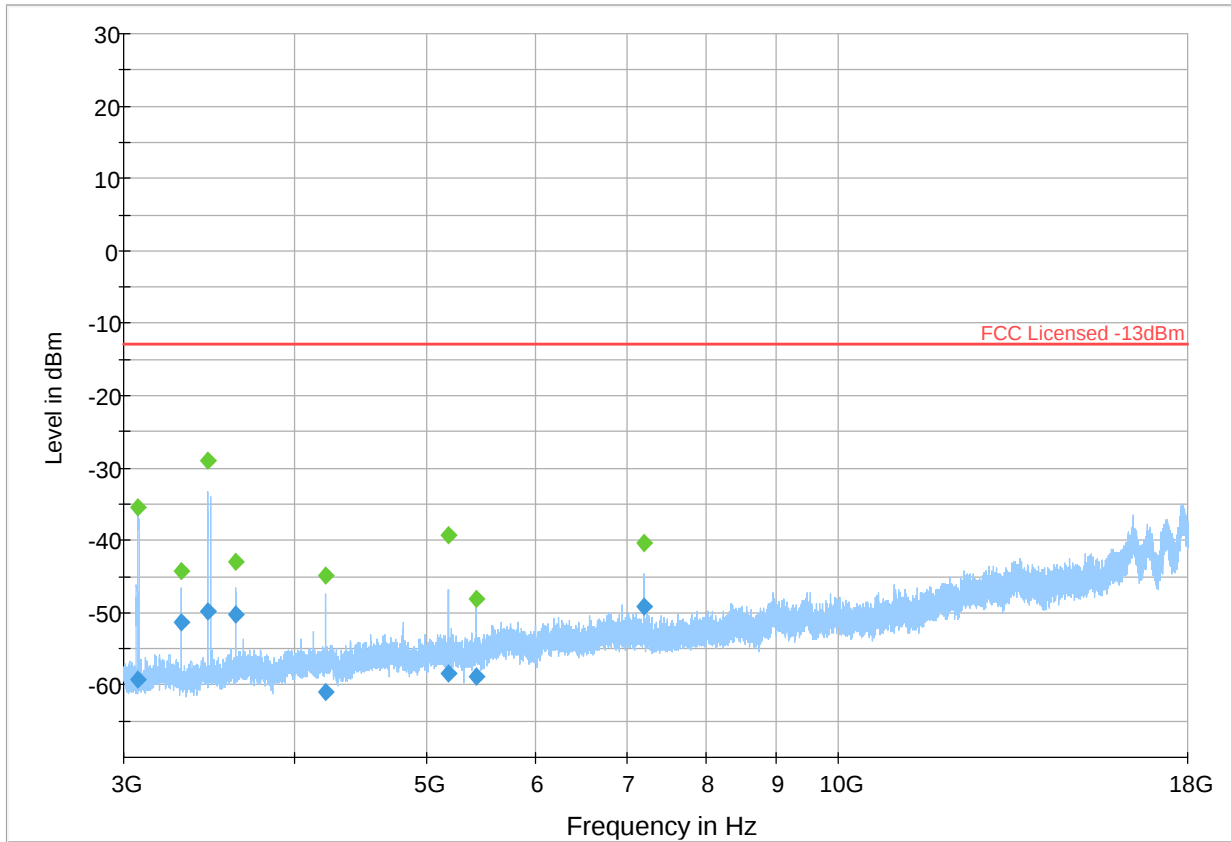
| Frequency (MHz) | RMS (dBm) | MaxPeak (dBm) | Limit (dBm) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB) |
|-----------------|-----------|---------------|-------------|-------------|-----------------|-----------------|-------------|-----|---------------|------------|
| 1810.000        | -41.26    | ---           | -13.00      | 28.26       | 500.0           | 1000.000        | 277.0       | V   | 34.0          | -64.7      |
| 1810.000        | ---       | -36.21        | ---         | ---         | 500.0           | 1000.000        | 277.0       | V   | 34.0          | -64.7      |
| 1887.750        | -50.26    | ---           | -13.00      | 37.26       | 500.0           | 1000.000        | 158.0       | H   | 185.0         | -64.1      |
| 1887.750        | ---       | -33.28        | ---         | ---         | 500.0           | 1000.000        | 158.0       | H   | 185.0         | -64.1      |
| 2551.750        | -46.01    | ---           | -13.00      | 33.01       | 500.0           | 1000.000        | 177.0       | H   | -13.0         | -61.7      |
| 2551.750        | ---       | -24.26        | ---         | ---         | 500.0           | 1000.000        | 177.0       | H   | -13.0         | -61.7      |
| 2568.750        | -40.27    | ---           | -13.00      | 27.27       | 500.0           | 1000.000        | 116.0       | H   | 332.0         | -61.7      |
| 2568.750        | ---       | -23.97        | ---         | ---         | 500.0           | 1000.000        | 116.0       | H   | 332.0         | -61.7      |
| 2641.750        | -44.64    | ---           | -13.00      | 31.64       | 500.0           | 1000.000        | 160.0       | H   | 345.0         | -61.6      |
| 2641.750        | ---       | -28.21        | ---         | ---         | 500.0           | 1000.000        | 160.0       | H   | 345.0         | -61.6      |
| 2714.500        | -46.73    | ---           | -13.00      | 33.74       | 500.0           | 1000.000        | 125.0       | H   | 355.0         | -61.3      |
| 2714.500        | ---       | -32.62        | ---         | ---         | 500.0           | 1000.000        | 125.0       | H   | 355.0         | -61.3      |



Preview Result 1-PK+    FCC Licensed -13dBm    Final\_Result RMS    Final\_Result PK

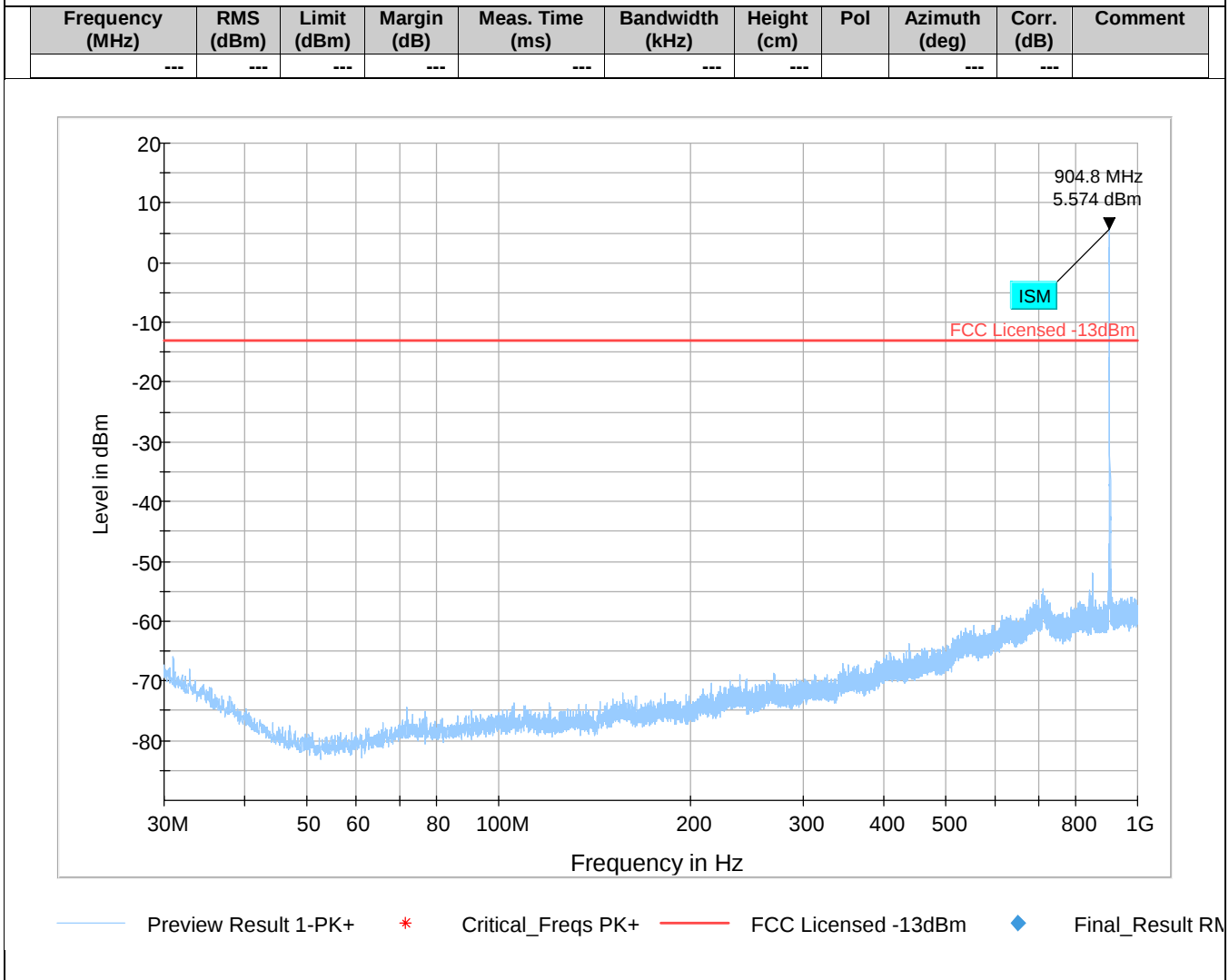
Plot # 18

| Frequency (MHz) | RMS (dBm) | MaxPeak (dBm) | Limit (dBm) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB) |
|-----------------|-----------|---------------|-------------|-------------|-----------------|-----------------|-------------|-----|---------------|------------|
| 3074.250        | ---       | -35.42        | ---         | ---         | 500.0           | 1000.000        | 167.0       | H   | 187.0         | -103.5     |
| 3074.250        | -59.33    | ---           | -13.00      | 46.33       | 500.0           | 1000.000        | 167.0       | H   | 187.0         | -103.5     |
| 3307.000        | ---       | -44.16        | ---         | ---         | 500.0           | 1000.000        | 177.0       | H   | 3.0           | -103.3     |
| 3307.000        | -51.42    | ---           | -13.00      | 38.42       | 500.0           | 1000.000        | 177.0       | H   | 3.0           | -103.3     |
| 3457.000        | ---       | -29.08        | ---         | ---         | 500.0           | 1000.000        | 100.0       | H   | 8.0           | -102.2     |
| 3457.000        | -49.75    | ---           | -13.00      | 36.75       | 500.0           | 1000.000        | 100.0       | H   | 8.0           | -102.2     |
| 3620.500        | ---       | -42.96        | ---         | ---         | 500.0           | 1000.000        | 151.0       | H   | 153.0         | -101.1     |
| 3620.500        | -50.23    | ---           | -13.00      | 37.23       | 500.0           | 1000.000        | 151.0       | H   | 153.0         | -101.1     |
| 4211.250        | ---       | -44.96        | ---         | ---         | 500.0           | 1000.000        | 100.0       | H   | 304.0         | -99.2      |
| 4211.250        | -60.94    | ---           | -13.00      | 47.94       | 500.0           | 1000.000        | 100.0       | H   | 304.0         | -99.2      |
| 5185.500        | ---       | -39.41        | ---         | ---         | 500.0           | 1000.000        | 117.0       | H   | 317.0         | -97.9      |
| 5185.500        | -58.51    | ---           | -13.00      | 45.51       | 500.0           | 1000.000        | 117.0       | H   | 317.0         | -97.9      |
| 5428.750        | ---       | -48.19        | ---         | ---         | 500.0           | 1000.000        | 298.0       | H   | 142.0         | -97.7      |
| 5428.750        | -58.83    | ---           | -13.00      | 45.83       | 500.0           | 1000.000        | 298.0       | H   | 142.0         | -97.7      |
| 7205.250        | ---       | -40.29        | ---         | ---         | 500.0           | 1000.000        | 160.0       | H   | 12.0          | -95.8      |
| 7205.250        | -49.23    | ---           | -13.00      | 36.23       | 500.0           | 1000.000        | 160.0       | H   | 12.0          | -95.8      |



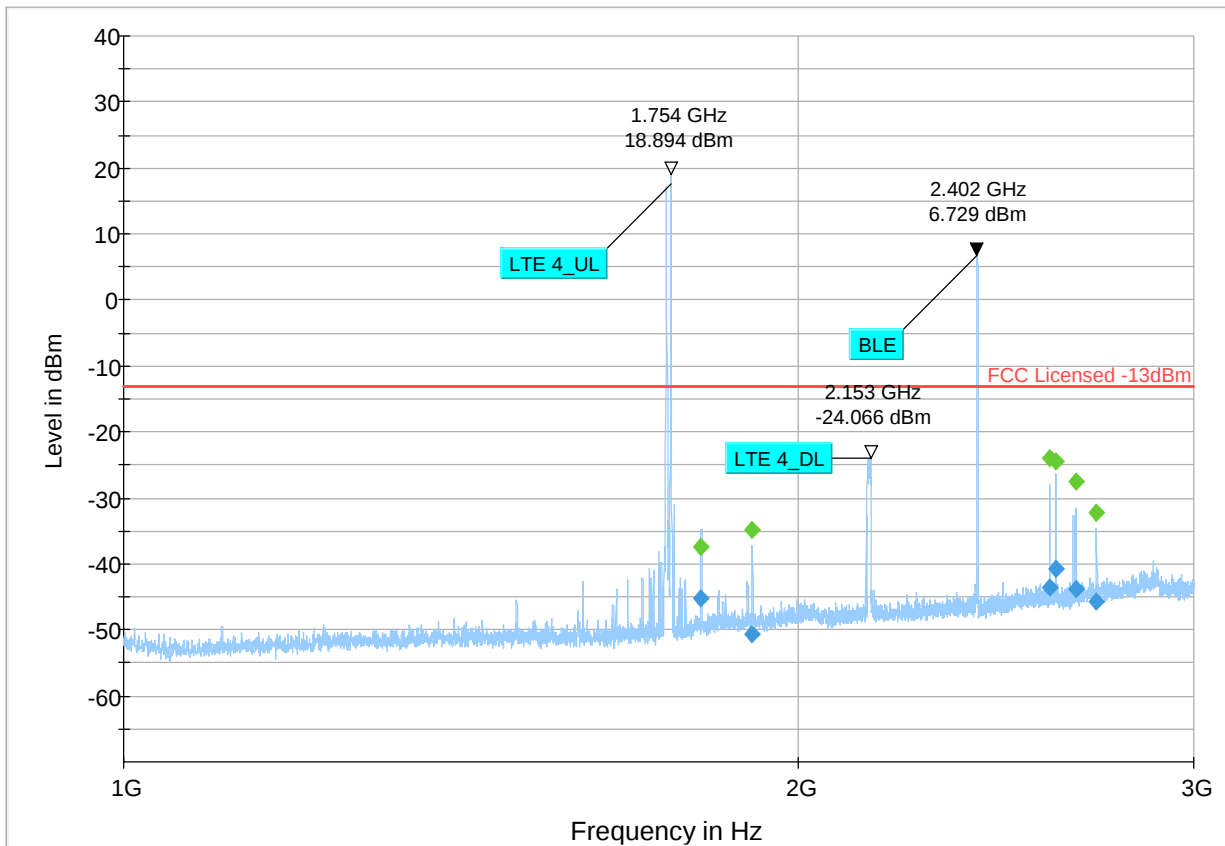
Preview Result 1-PK+    FCC Licensed -13dBm    Final\_Result RMS    Final\_Result PK

Plot # 19



Plot # 20

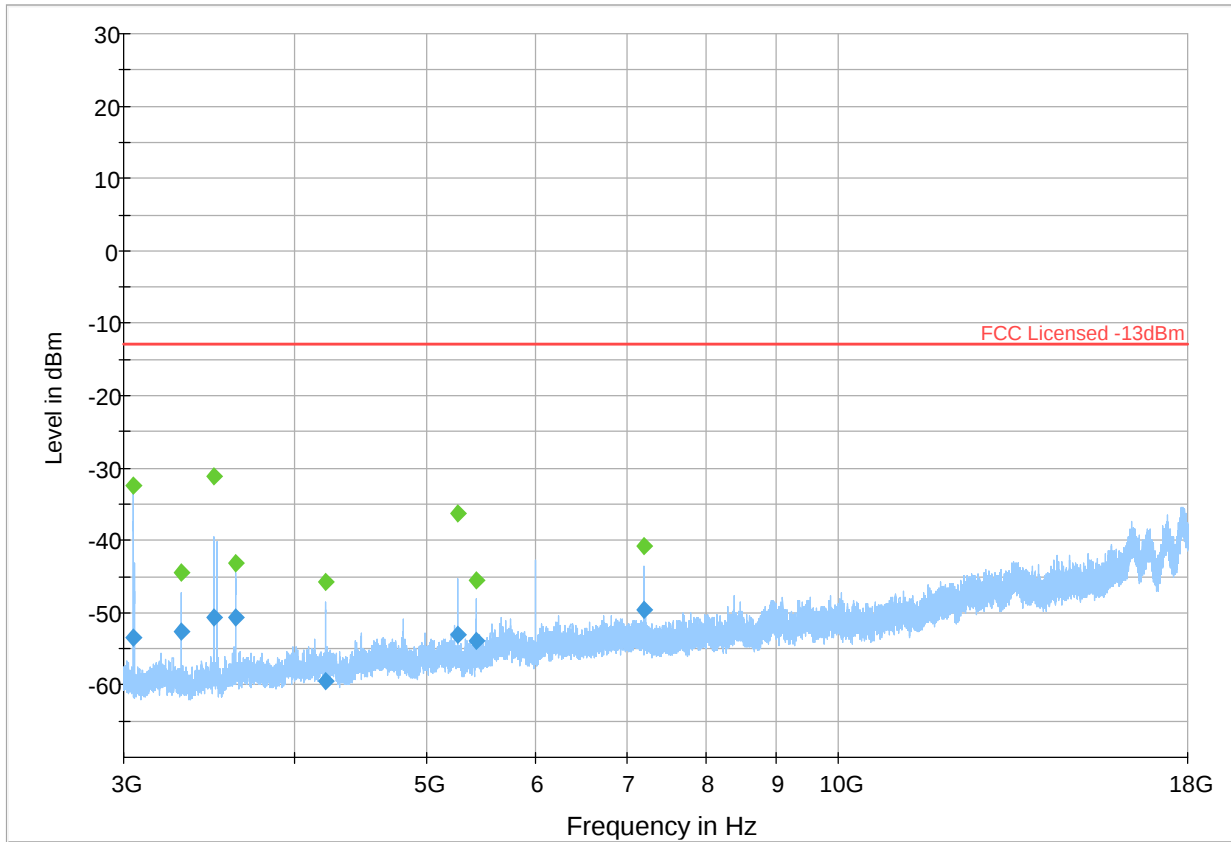
| Frequency (MHz) | RMS (dBm) | MaxPeak (dBm) | Limit (dBm) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB) |
|-----------------|-----------|---------------|-------------|-------------|-----------------|-----------------|-------------|-----|---------------|------------|
| 1809.500        | -45.20    | ---           | -13.00      | 32.20       | 500.0           | 1000.000        | 212.0       | H   | 297.0         | -64.7      |
| 1809.500        | ---       | -37.51        | ---         | ---         | 500.0           | 1000.000        | 212.0       | H   | 297.0         | -64.7      |
| 1906.750        | -50.58    | ---           | -13.00      | 37.58       | 500.0           | 1000.000        | 142.0       | H   | 191.0         | -64.0      |
| 1906.750        | ---       | -34.82        | ---         | ---         | 500.0           | 1000.000        | 142.0       | H   | 191.0         | -64.0      |
| 2587.000        | -43.55    | ---           | -13.00      | 30.55       | 500.0           | 1000.000        | 167.0       | H   | -1.0          | -61.7      |
| 2587.000        | ---       | -23.92        | ---         | ---         | 500.0           | 1000.000        | 167.0       | H   | -1.0          | -61.7      |
| 2603.750        | -40.73    | ---           | -13.00      | 27.73       | 500.0           | 1000.000        | 150.0       | H   | 300.0         | -61.7      |
| 2603.750        | ---       | -24.43        | ---         | ---         | 500.0           | 1000.000        | 150.0       | H   | 300.0         | -61.7      |
| 2659.250        | -43.72    | ---           | -13.00      | 30.72       | 500.0           | 1000.000        | 160.0       | H   | -5.0          | -61.5      |
| 2659.250        | ---       | -27.60        | ---         | ---         | 500.0           | 1000.000        | 160.0       | H   | -5.0          | -61.5      |
| 2714.500        | -45.72    | ---           | -13.00      | 32.72       | 500.0           | 1000.000        | 142.0       | H   | 357.0         | -61.3      |
| 2714.500        | ---       | -32.15        | ---         | ---         | 500.0           | 1000.000        | 142.0       | H   | 357.0         | -61.3      |



Preview Result 1-PK+    FCC Licensed -13dBm    Final\_Result RMS    Final\_Result PK

Plot # 21

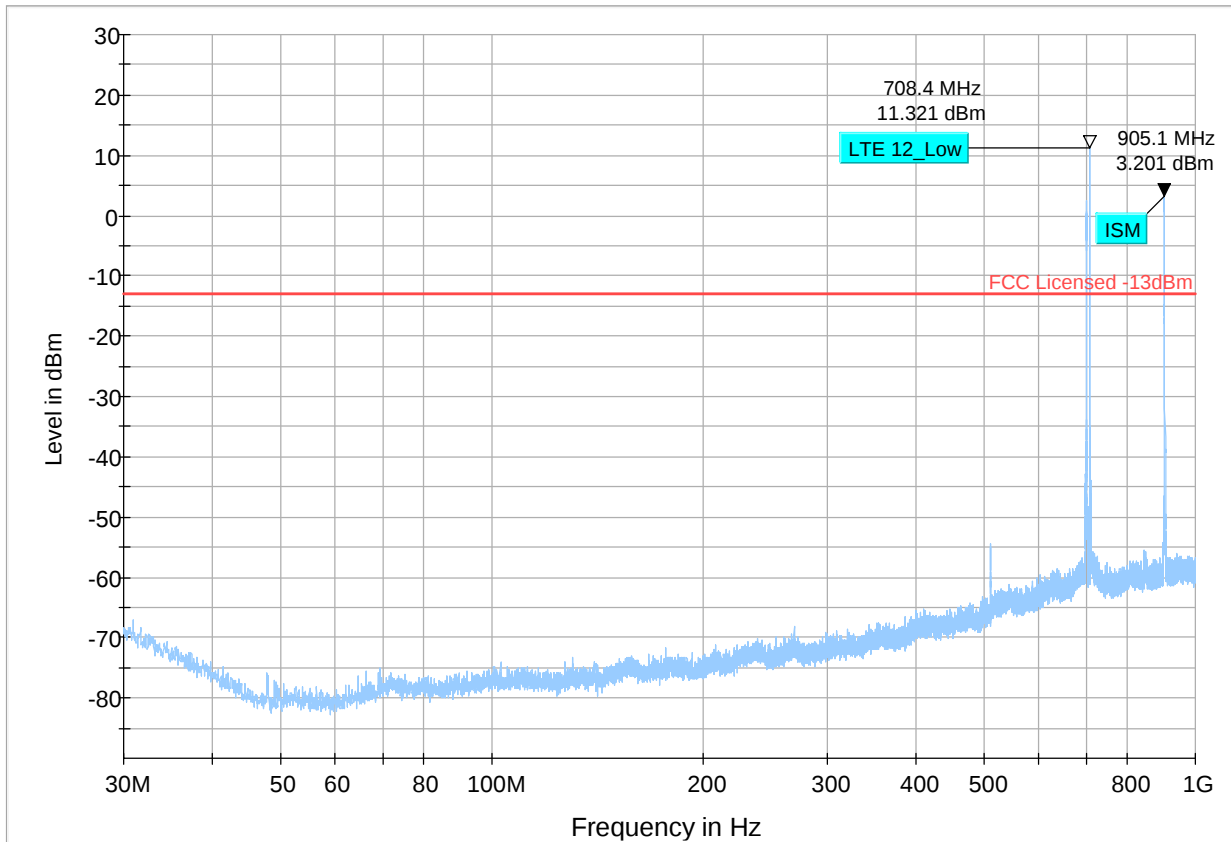
| Frequency (MHz) | RMS (dBm) | MaxPeak (dBm) | Limit (dBm) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB) |
|-----------------|-----------|---------------|-------------|-------------|-----------------|-----------------|-------------|-----|---------------|------------|
| 3049.000        | ---       | -32.46        | ---         | ---         | 500.0           | 1000.000        | 116.0       | H   | 188.0         | -103.5     |
| 3049.000        | -53.37    | ---           | -13.00      | 40.37       | 500.0           | 1000.000        | 116.0       | H   | 188.0         | -103.5     |
| 3306.750        | ---       | -44.50        | ---         | ---         | 500.0           | 1000.000        | 177.0       | H   | 18.0          | -103.3     |
| 3306.750        | -52.64    | ---           | -13.00      | 39.64       | 500.0           | 1000.000        | 177.0       | H   | 18.0          | -103.3     |
| 3492.000        | ---       | -31.23        | ---         | ---         | 500.0           | 1000.000        | 107.0       | H   | 3.0           | -102.2     |
| 3492.000        | -50.71    | ---           | -13.00      | 37.71       | 500.0           | 1000.000        | 107.0       | H   | 3.0           | -102.2     |
| 3620.500        | ---       | -43.16        | ---         | ---         | 500.0           | 1000.000        | 151.0       | H   | 150.0         | -101.1     |
| 3620.500        | -50.65    | ---           | -13.00      | 37.65       | 500.0           | 1000.000        | 151.0       | H   | 150.0         | -101.1     |
| 4212.250        | ---       | -45.79        | ---         | ---         | 500.0           | 1000.000        | 125.0       | H   | 327.0         | -99.2      |
| 4212.250        | -59.38    | ---           | -13.00      | 46.38       | 500.0           | 1000.000        | 125.0       | H   | 327.0         | -99.2      |
| 5263.000        | ---       | -36.32        | ---         | ---         | 500.0           | 1000.000        | 117.0       | H   | 314.0         | -97.3      |
| 5263.000        | -52.96    | ---           | -13.00      | 39.96       | 500.0           | 1000.000        | 117.0       | H   | 314.0         | -97.3      |
| 5431.000        | ---       | -45.53        | ---         | ---         | 500.0           | 1000.000        | 230.0       | V   | 118.0         | -97.7      |
| 5431.000        | -53.96    | ---           | -13.00      | 40.96       | 500.0           | 1000.000        | 230.0       | V   | 118.0         | -97.7      |
| 7206.500        | ---       | -40.72        | ---         | ---         | 500.0           | 1000.000        | 161.0       | H   | 14.0          | -95.8      |
| 7206.500        | -49.67    | ---           | -13.00      | 36.67       | 500.0           | 1000.000        | 161.0       | H   | 14.0          | -95.8      |



Preview Result 1-PK+    FCC Licensed -13dBm    Final\_Result RMS    Final\_Result PK

Plot # 22

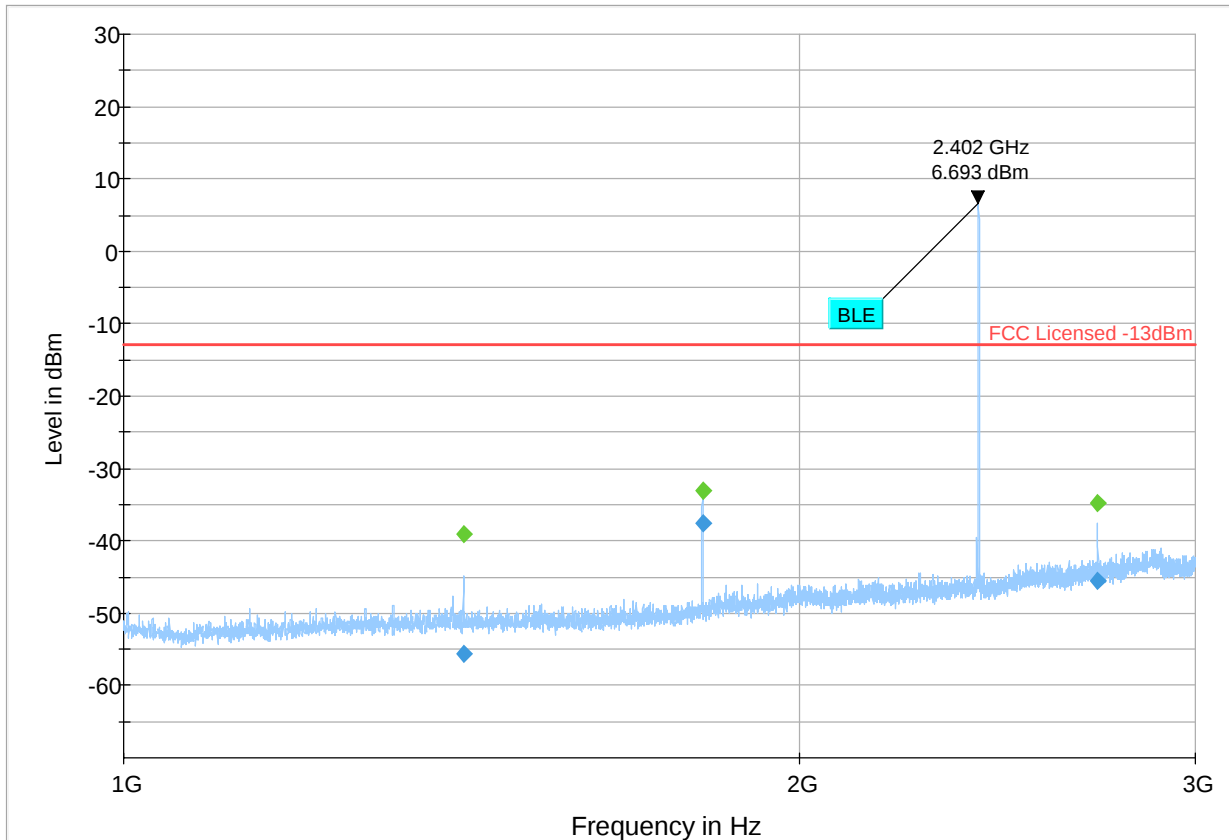
| Frequency (MHz) | RMS (dBm) | Limit (dBm) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB) | Comment |
|-----------------|-----------|-------------|-------------|-----------------|-----------------|-------------|-----|---------------|------------|---------|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



Preview Result 1-PK+ \* Critical\_Freqs PK+ FCC Licensed -13dBm Final\_Result RM

Plot # 23

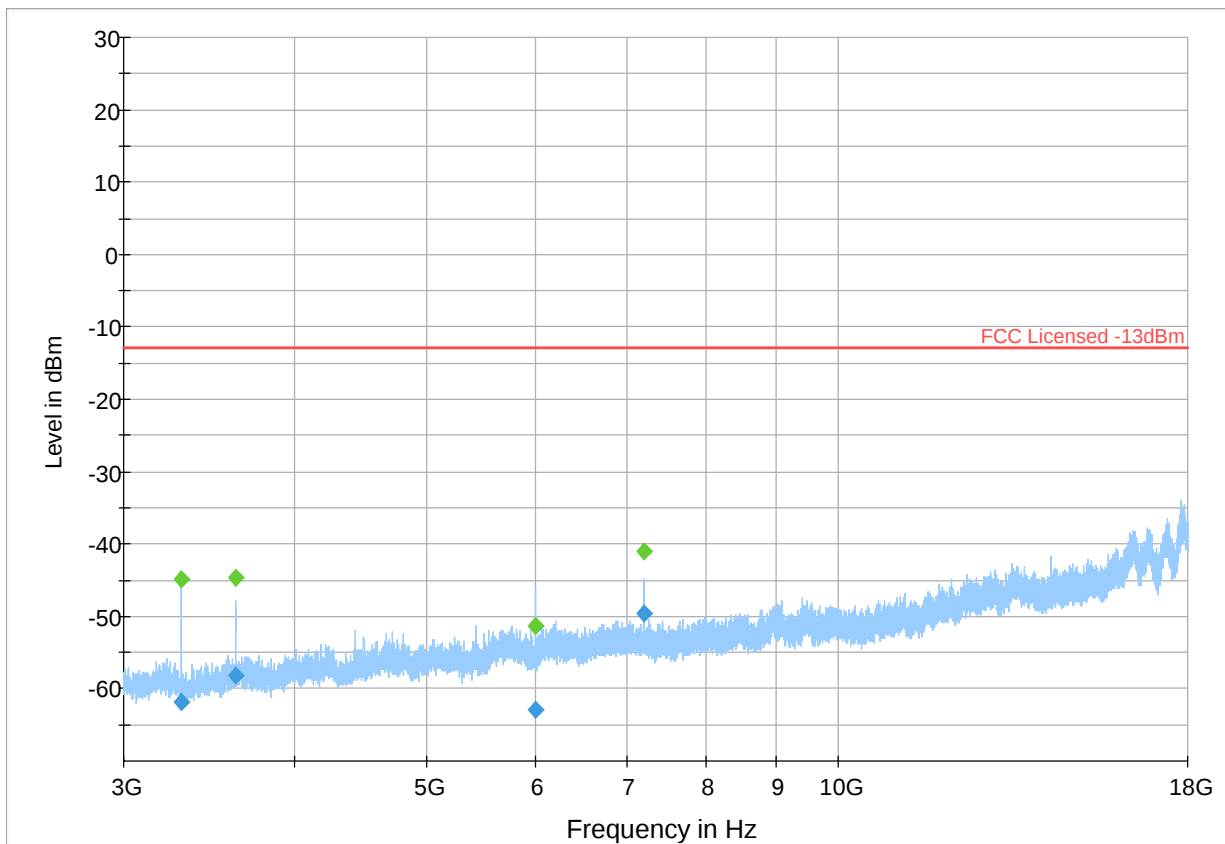
| Frequency (MHz) | RMS (dBm) | MaxPeak (dBm) | Limit (dBm) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB) |
|-----------------|-----------|---------------|-------------|-------------|-----------------|-----------------|-------------|-----|---------------|------------|
| 1416.500        | ---       | -39.15        | ---         | ---         | 500.0           | 1000.000        | 133.0       | H   | 236.0         | -66.4      |
| 1416.500        | -55.55    | ---           | -13.00      | 42.55       | 500.0           | 1000.000        | 133.0       | H   | 236.0         | -66.4      |
| 1809.750        | ---       | -33.18        | ---         | ---         | 500.0           | 1000.000        | 309.0       | V   | 264.0         | -64.7      |
| 1809.750        | -37.62    | ---           | -13.00      | 24.62       | 500.0           | 1000.000        | 309.0       | V   | 264.0         | -64.7      |
| 2714.500        | ---       | -34.79        | ---         | ---         | 500.0           | 1000.000        | 202.0       | H   | -3.0          | -61.3      |
| 2714.500        | -45.45    | ---           | -13.00      | 32.45       | 500.0           | 1000.000        | 202.0       | H   | -3.0          | -61.3      |



Preview Result 1-PK+    FCC Licensed -13dBm    Final\_Result RMS    Final\_Result PK

Plot # 24

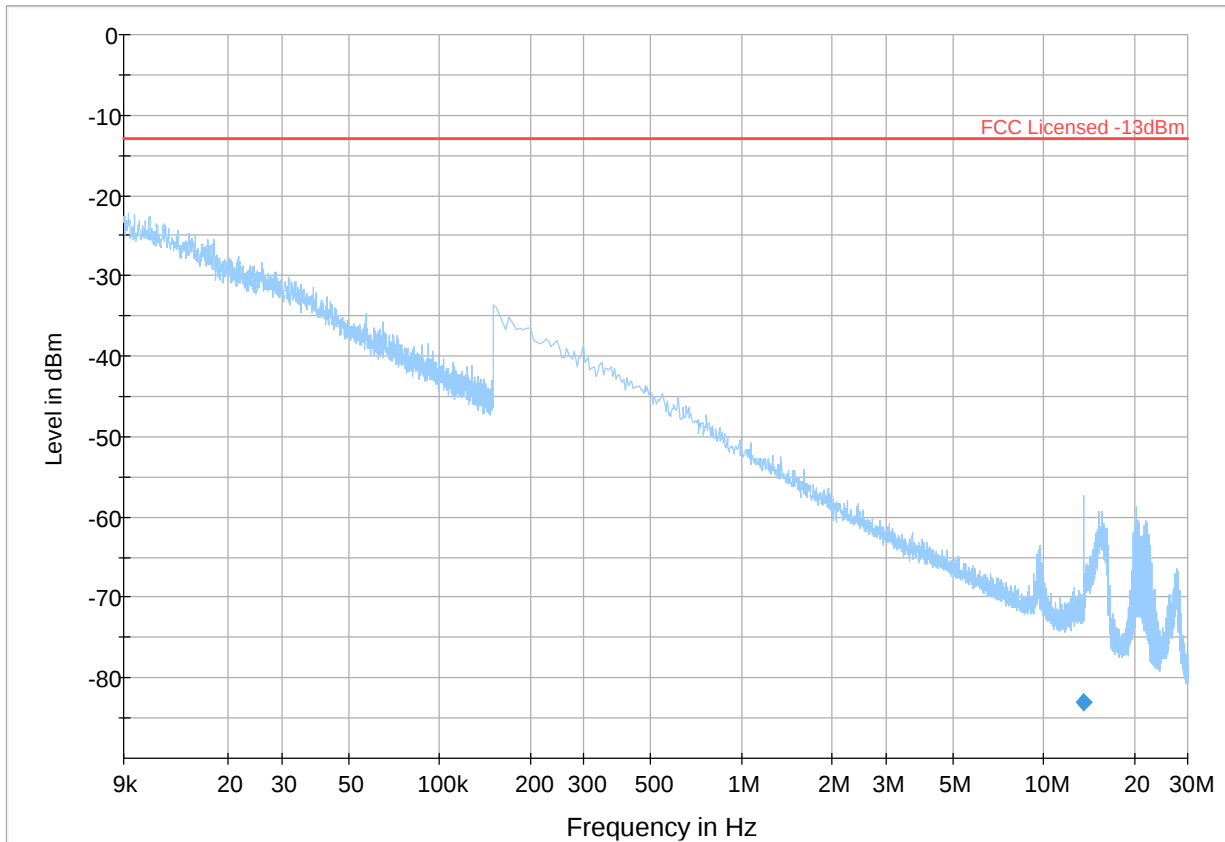
| Frequency (MHz) | RMS (dBm) | MaxPeak (dBm) | Limit (dBm) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB) |
|-----------------|-----------|---------------|-------------|-------------|-----------------|-----------------|-------------|-----|---------------|------------|
| 3306.250        | ---       | -44.84        | ---         | ---         | 500.0           | 1000.000        | 235.0       | H   | 13.0          | -103.3     |
| 3306.250        | -61.79    | ---           | -13.00      | 48.79       | 500.0           | 1000.000        | 235.0       | H   | 13.0          | -103.3     |
| 3619.000        | ---       | -44.76        | ---         | ---         | 500.0           | 1000.000        | 225.0       | H   | 19.0          | -101.2     |
| 3619.000        | -58.16    | ---           | -13.00      | 45.16       | 500.0           | 1000.000        | 225.0       | H   | 19.0          | -101.2     |
| 5999.750        | ---       | -51.37        | ---         | ---         | 500.0           | 1000.000        | 264.0       | V   | 308.0         | -97.1      |
| 5999.750        | -62.84    | ---           | -13.00      | 49.84       | 500.0           | 1000.000        | 264.0       | V   | 308.0         | -97.1      |
| 7206.500        | ---       | -40.93        | ---         | ---         | 500.0           | 1000.000        | 151.0       | H   | 7.0           | -95.8      |
| 7206.500        | -49.64    | ---           | -13.00      | 36.64       | 500.0           | 1000.000        | 151.0       | H   | 7.0           | -95.8      |



— Preview Result 1-PK+ 
 — FCC Licensed -13dBm 
 ◆ Final\_Result RMS 
 ◆ Final\_Result PK

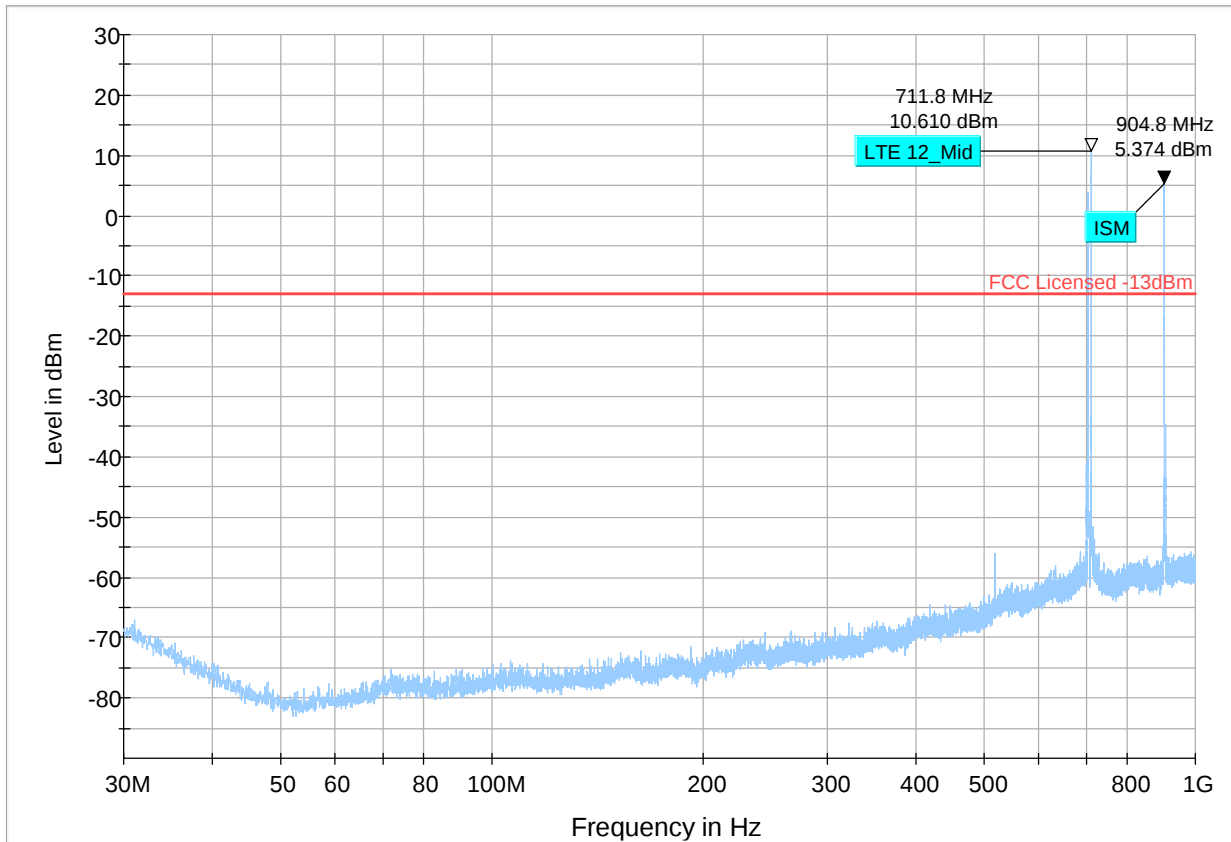
Plot # 25

| Frequency (MHz) | RMS (dBm) | Limit (dBm) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB) | Comment |
|-----------------|-----------|-------------|-------------|-----------------|-----------------|-------------|-----|---------------|------------|---------|
| 13.558          | -83.14    | -13.00      | 70.14       | 500.0           | 1.000           | 305.0       | H   | 163.0         | -78.0      |         |



Plot # 26

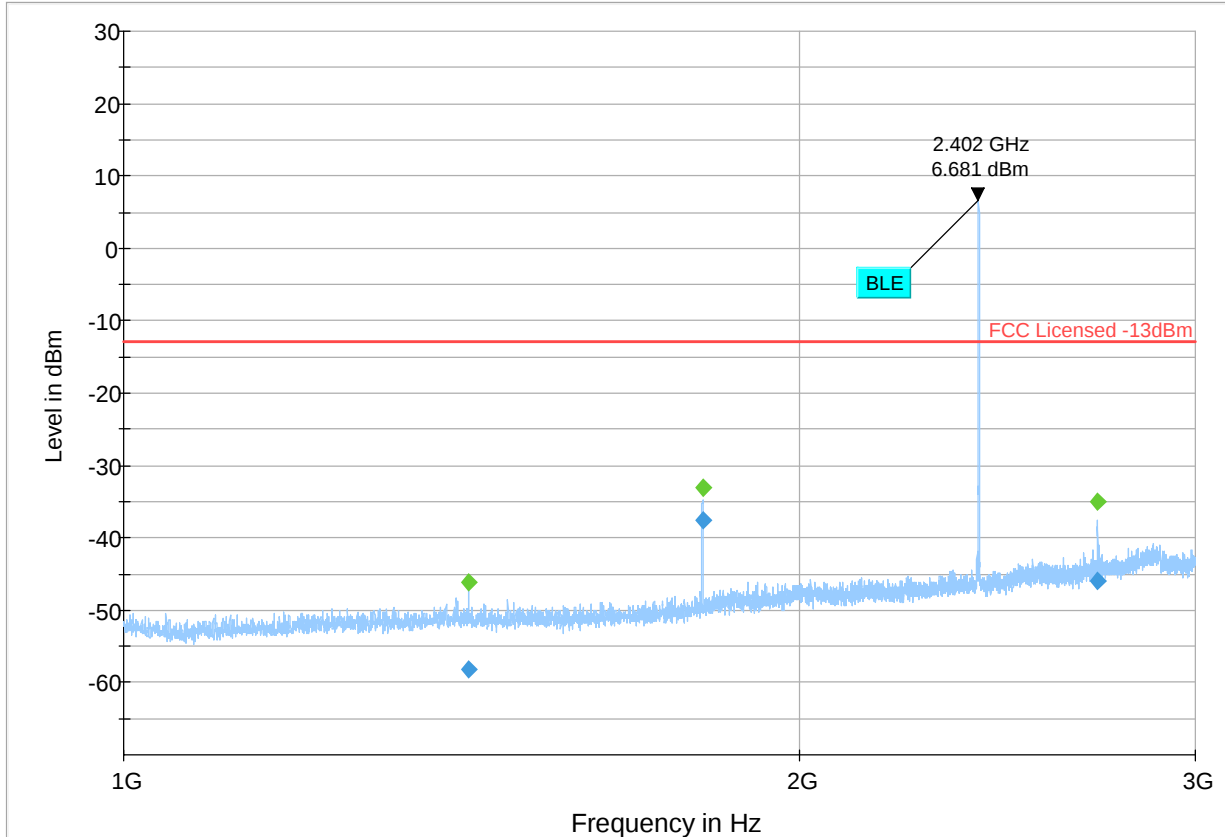
| Frequency (MHz) | RMS (dBm) | Limit (dBm) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB) | Comment |
|-----------------|-----------|-------------|-------------|-----------------|-----------------|-------------|-----|---------------|------------|---------|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



Preview Result 1-PK+ \* Critical\_Freqs PK+ FCC Licensed -13dBm ◆ Final\_Result RM

Plot # 27

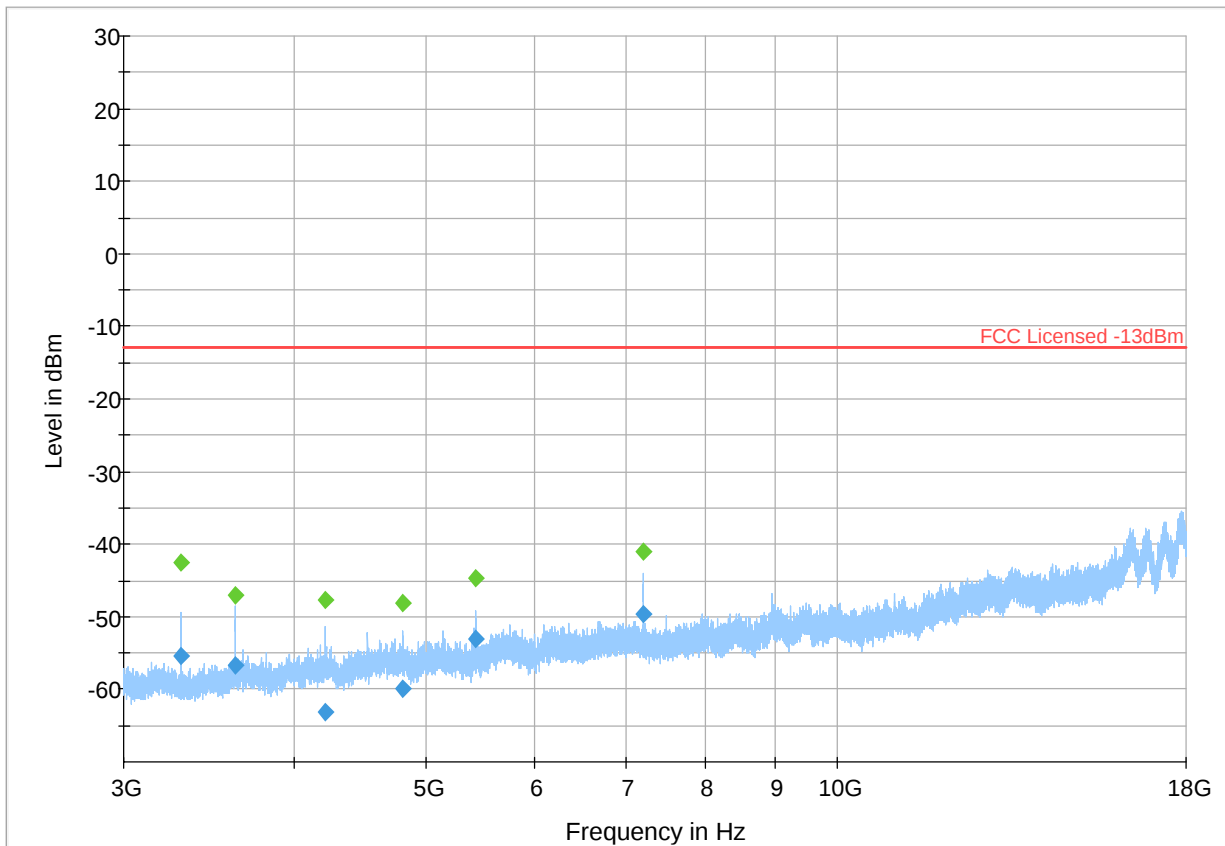
| Frequency (MHz) | RMS (dBm) | MaxPeak (dBm) | Limit (dBm) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB) |
|-----------------|-----------|---------------|-------------|-------------|-----------------|-----------------|-------------|-----|---------------|------------|
| 1423.750        | ---       | -46.27        | ---         | ---         | 500.0           | 1000.000        | 247.0       | H   | -3.0          | -66.4      |
| 1423.750        | -58.28    | ---           | -13.00      | 45.28       | 500.0           | 1000.000        | 247.0       | H   | -3.0          | -66.4      |
| 1810.250        | ---       | -33.10        | ---         | ---         | 500.0           | 1000.000        | 151.0       | V   | 306.0         | -64.7      |
| 1810.250        | -37.56    | ---           | -13.00      | 24.56       | 500.0           | 1000.000        | 151.0       | V   | 306.0         | -64.7      |
| 2714.750        | ---       | -35.08        | ---         | ---         | 500.0           | 1000.000        | 142.0       | H   | -10.0         | -61.3      |
| 2714.750        | -45.93    | ---           | -13.00      | 32.93       | 500.0           | 1000.000        | 142.0       | H   | -10.0         | -61.3      |



Preview Result 1-PK+    FCC Licensed -13dBm    Final\_Result RMS    Final\_Result PK

Plot # 28

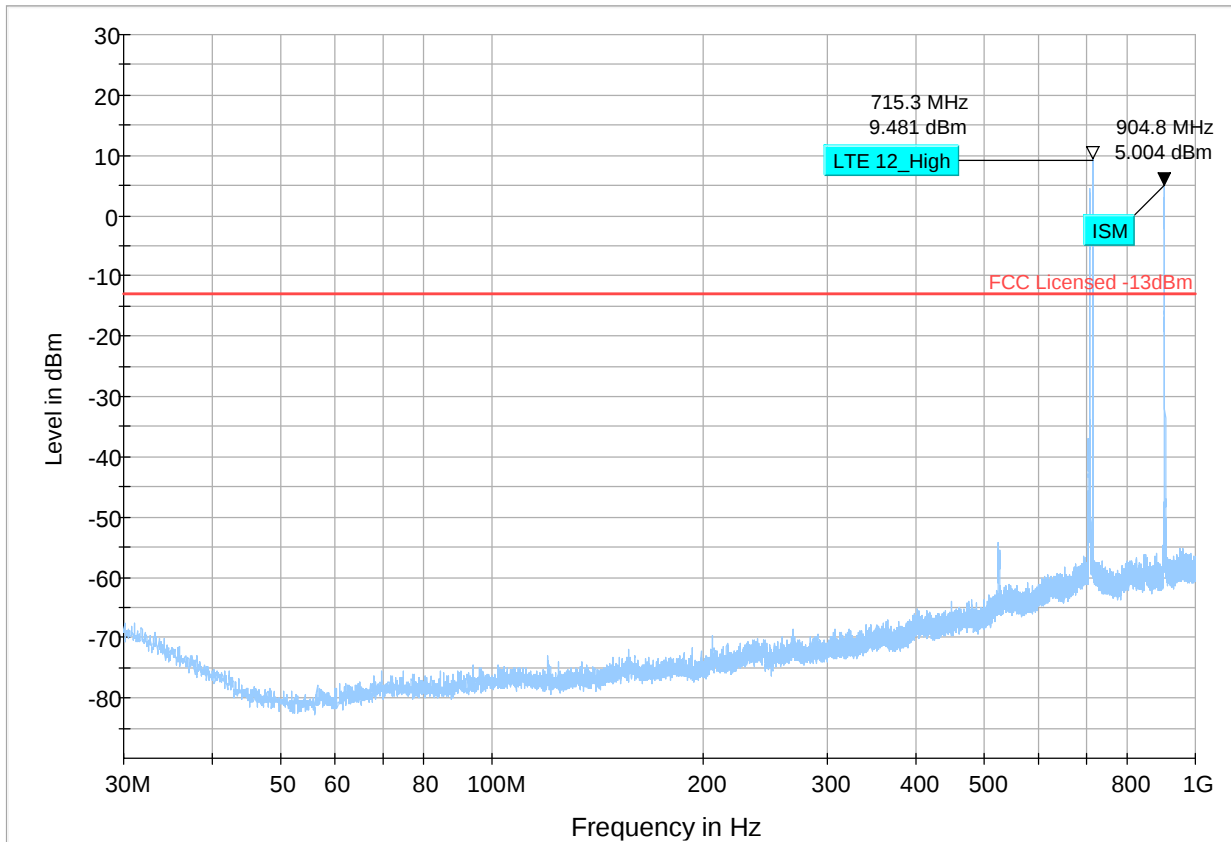
| Frequency (MHz) | RMS (dBm) | MaxPeak (dBm) | Limit (dBm) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB) |
|-----------------|-----------|---------------|-------------|-------------|-----------------|-----------------|-------------|-----|---------------|------------|
| 3307.000        | -55.50    | ---           | -13.00      | 42.50       | 500.0           | 1000.000        | 234.0       | H   | 1.0           | -103.3     |
| 3307.000        | ---       | -42.55        | ---         | ---         | 500.0           | 1000.000        | 234.0       | H   | 1.0           | -103.3     |
| 3620.500        | -56.69    | ---           | -13.00      | 43.69       | 500.0           | 1000.000        | 125.0       | H   | 196.0         | -101.1     |
| 3620.500        | ---       | -47.02        | ---         | ---         | 500.0           | 1000.000        | 125.0       | H   | 196.0         | -101.1     |
| 4211.250        | -63.11    | ---           | -13.00      | 50.11       | 500.0           | 1000.000        | 230.0       | H   | 340.0         | -99.2      |
| 4211.250        | ---       | -47.62        | ---         | ---         | 500.0           | 1000.000        | 230.0       | H   | 340.0         | -99.2      |
| 4803.250        | -59.86    | ---           | -13.00      | 46.86       | 500.0           | 1000.000        | 169.0       | H   | 330.0         | -98.4      |
| 4803.250        | ---       | -48.14        | ---         | ---         | 500.0           | 1000.000        | 169.0       | H   | 330.0         | -98.4      |
| 5431.000        | -53.05    | ---           | -13.00      | 40.05       | 500.0           | 1000.000        | 100.0       | V   | 325.0         | -97.7      |
| 5431.000        | ---       | -44.65        | ---         | ---         | 500.0           | 1000.000        | 100.0       | V   | 325.0         | -97.7      |
| 7206.500        | -49.67    | ---           | -13.00      | 36.67       | 500.0           | 1000.000        | 161.0       | H   | 6.0           | -95.8      |
| 7206.500        | ---       | -41.04        | ---         | ---         | 500.0           | 1000.000        | 161.0       | H   | 6.0           | -95.8      |



— Preview Result 1-PK+ 
 — FCC Licensed -13dBm 
 ◆ Final\_Result RMS 
 ◆ Final\_Result PK

Plot # 29

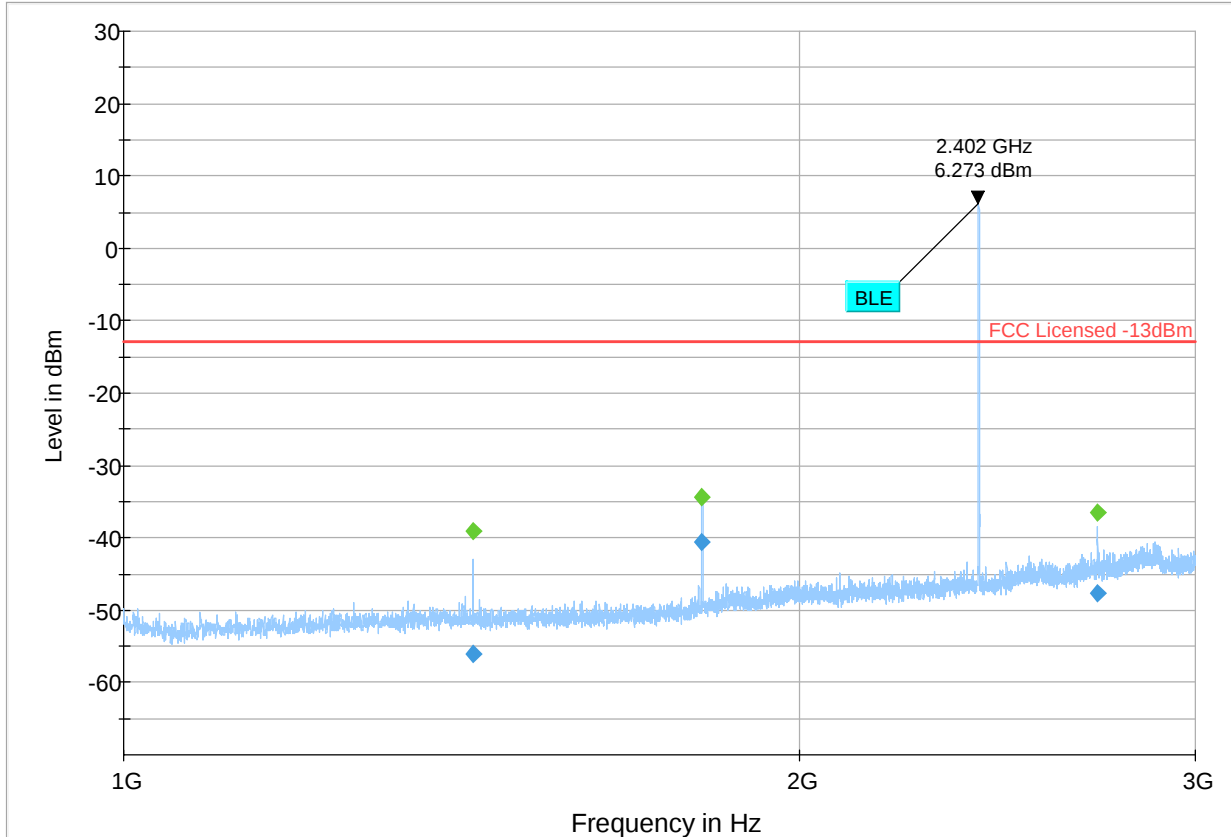
| Frequency (MHz) | RMS (dBm) | Limit (dBm) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB) | Comment |
|-----------------|-----------|-------------|-------------|-----------------|-----------------|-------------|-----|---------------|------------|---------|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



Preview Result 1-PK+ \* Critical\_Freqs PK+ FCC Licensed -13dBm Final\_Result RM

Plot # 30

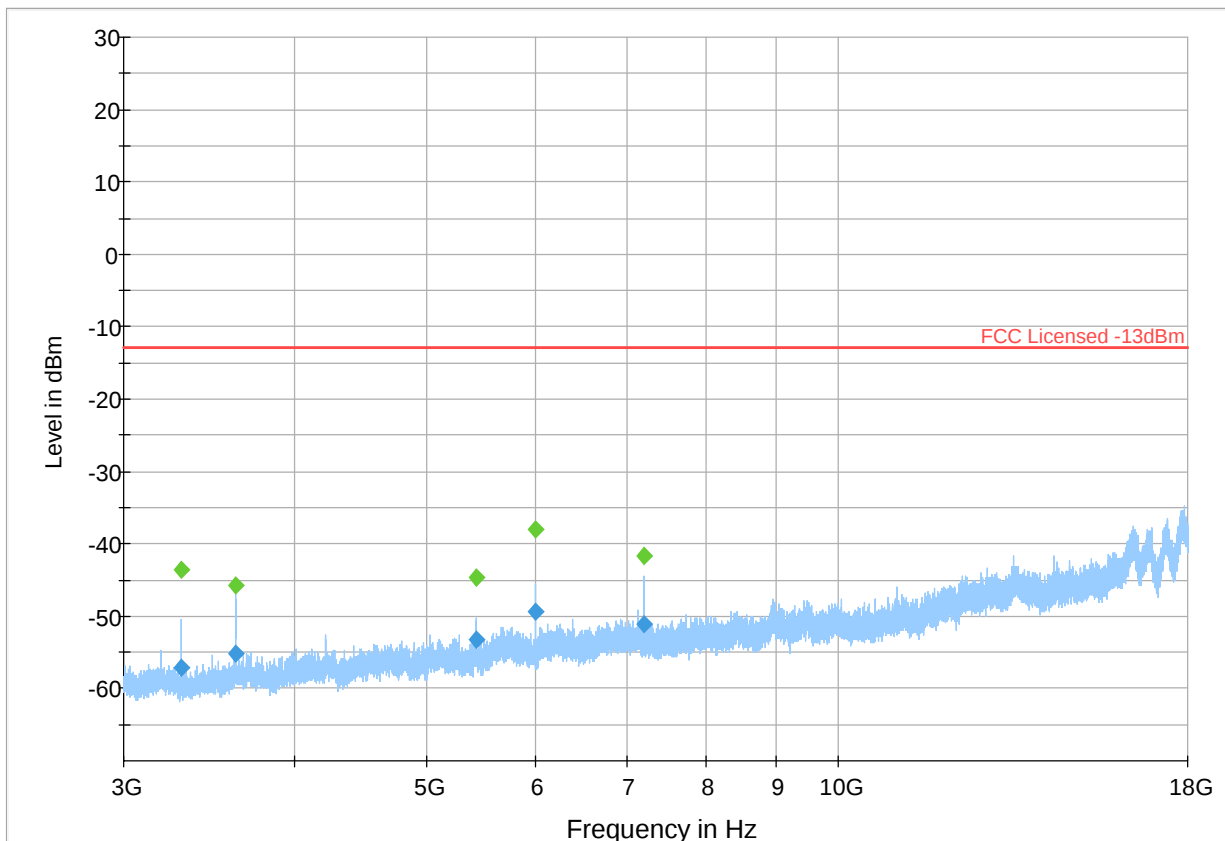
| Frequency (MHz) | RMS (dBm) | MaxPeak (dBm) | Limit (dBm) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB) |
|-----------------|-----------|---------------|-------------|-------------|-----------------|-----------------|-------------|-----|---------------|------------|
| 1430.500        | -56.03    | ---           | -13.00      | 43.03       | 500.0           | 1000.000        | 189.0       | H   | 240.0         | -66.4      |
| 1430.500        | ---       | -38.99        | ---         | ---         | 500.0           | 1000.000        | 189.0       | H   | 240.0         | -66.4      |
| 1809.500        | -40.55    | ---           | -13.00      | 27.55       | 500.0           | 1000.000        | 193.0       | V   | 78.0          | -64.7      |
| 1809.500        | ---       | -34.36        | ---         | ---         | 500.0           | 1000.000        | 193.0       | V   | 78.0          | -64.7      |
| 2714.500        | ---       | -36.59        | ---         | ---         | 500.0           | 1000.000        | 125.0       | H   | -45.0         | -61.3      |
| 2714.500        | -47.62    | ---           | -13.00      | 34.62       | 500.0           | 1000.000        | 125.0       | H   | -45.0         | -61.3      |



Preview Result 1-PK+    FCC Licensed -13dBm    Final\_Result RMS    Final\_Result PK

Plot # 31

| Frequency (MHz) | RMS (dBm) | MaxPeak (dBm) | Limit (dBm) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB) |
|-----------------|-----------|---------------|-------------|-------------|-----------------|-----------------|-------------|-----|---------------|------------|
| 3306.750        | ---       | -43.60        | ---         | ---         | 500.0           | 1000.000        | 228.0       | H   | -10.0         | -103.3     |
| 3306.750        | -57.13    | ---           | -13.00      | 44.13       | 500.0           | 1000.000        | 228.0       | H   | -10.0         | -103.3     |
| 3619.000        | ---       | -45.77        | ---         | ---         | 500.0           | 1000.000        | 107.0       | H   | 116.0         | -101.2     |
| 3619.000        | -55.22    | ---           | -13.00      | 42.22       | 500.0           | 1000.000        | 107.0       | H   | 116.0         | -101.2     |
| 5428.750        | ---       | -44.72        | ---         | ---         | 500.0           | 1000.000        | 100.0       | V   | 20.0          | -97.7      |
| 5428.750        | -53.24    | ---           | -13.00      | 40.24       | 500.0           | 1000.000        | 100.0       | V   | 20.0          | -97.7      |
| 5999.750        | ---       | -38.08        | ---         | ---         | 500.0           | 1000.000        | 266.0       | V   | 168.0         | -97.1      |
| 5999.750        | -49.30    | ---           | -13.00      | 36.30       | 500.0           | 1000.000        | 266.0       | V   | 168.0         | -97.1      |
| 7205.250        | ---       | -41.75        | ---         | ---         | 500.0           | 1000.000        | 151.0       | H   | 5.0           | -95.8      |
| 7205.250        | -51.16    | ---           | -13.00      | 38.16       | 500.0           | 1000.000        | 151.0       | H   | 5.0           | -95.8      |



Preview Result 1-PK+    FCC Licensed -13dBm    Final\_Result RMS    Final\_Result PK

## 8 Test setup photos

Setup photos are included in supporting file name: "EMC\_TELUL-101-21001\_FCC\_Setup\_Photos.pdf"

## 9 Test Equipment And Ancillaries Used For Testing

| Equipment Name/Type          | Manufacturer    | Model     | Serial #  | Calibration Cycle | Last Calibration Date |
|------------------------------|-----------------|-----------|-----------|-------------------|-----------------------|
| Biconilog Antenna            | A.H. Systems    | BiLA2G    | 569343    | 2 years           | 12/01/2020            |
| Horn Antenna                 | ETS Lindgren    | 3115      | 35114     | 2 years           | 10/10/2020            |
| Horn Antenna                 | ETS Lindgren    | 3117-PA   | 215984    | 2 years           | 01/31/2021            |
| Active Loop Antenna          | ETS Lindgren    | 6507      | 161344    | 2 years           | 10/30/2020            |
| Horn Antenna                 | ETS Lindgren    | 3116C     | 70497     | 2 years           | 11/23/2020            |
| Spectrum Analyzer            | R&S             | ESU40     | 100251    | 2 years           | 09/13/2021            |
| Wideband Comm. Tester        | R&S             | CMW 500   | 109825    | 2 years           | 09/23/2020            |
| Thermometer Humidity Monitor | CONTROL COMPANY | 36934-164 | 191871986 | 2 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       | Template Revision             | Changes to report | Prepared by |
|------------|-------------------------------|-------------------|-------------|
| 2022-01-12 | EMC_TELUL-101-21001_FCC_24_27 | Initial Version   | Cheng Song  |

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