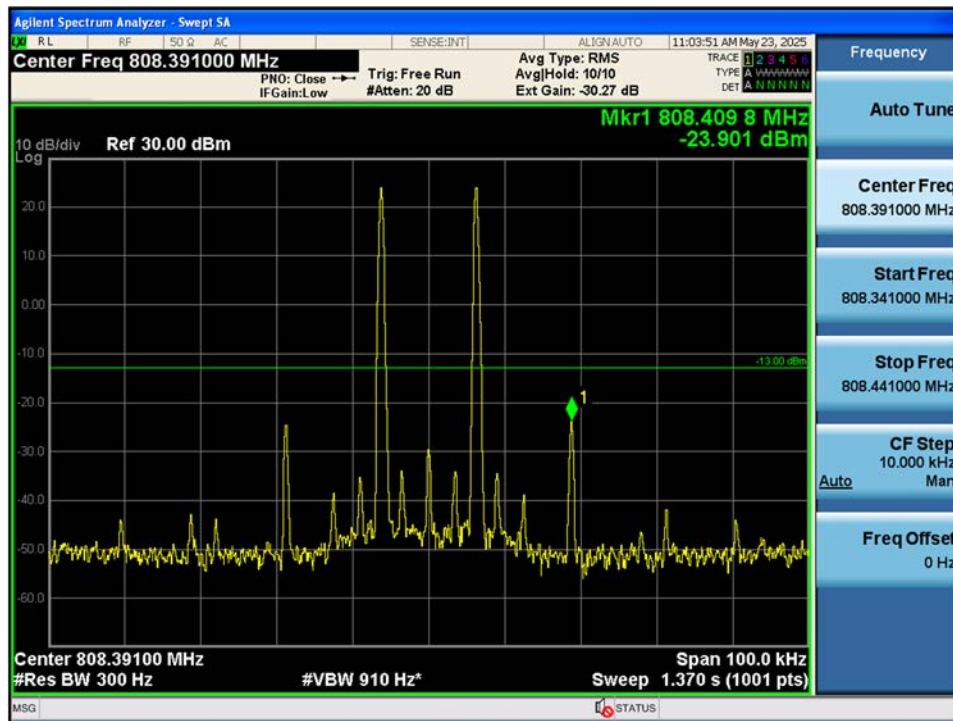
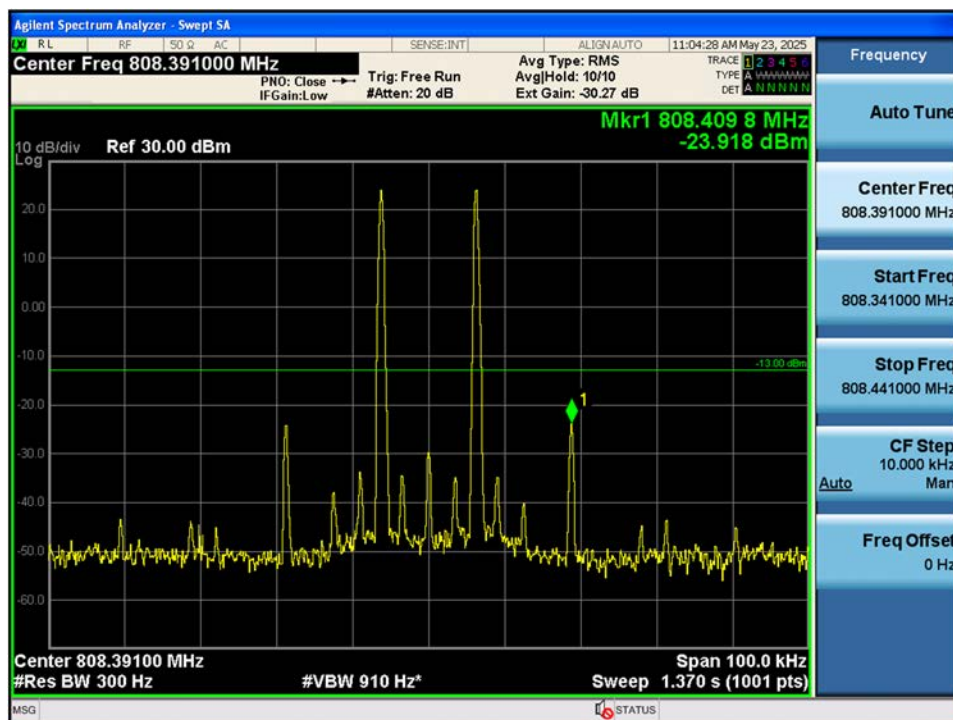


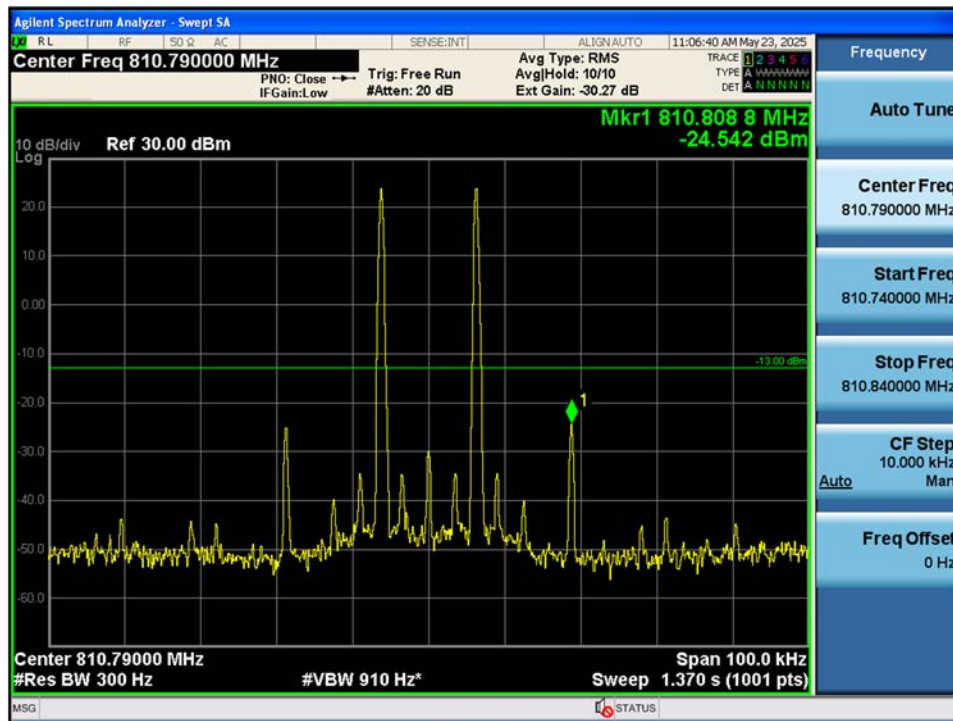
## Out-of-band (two adjacent test signals) / NPSPAC / Uplink



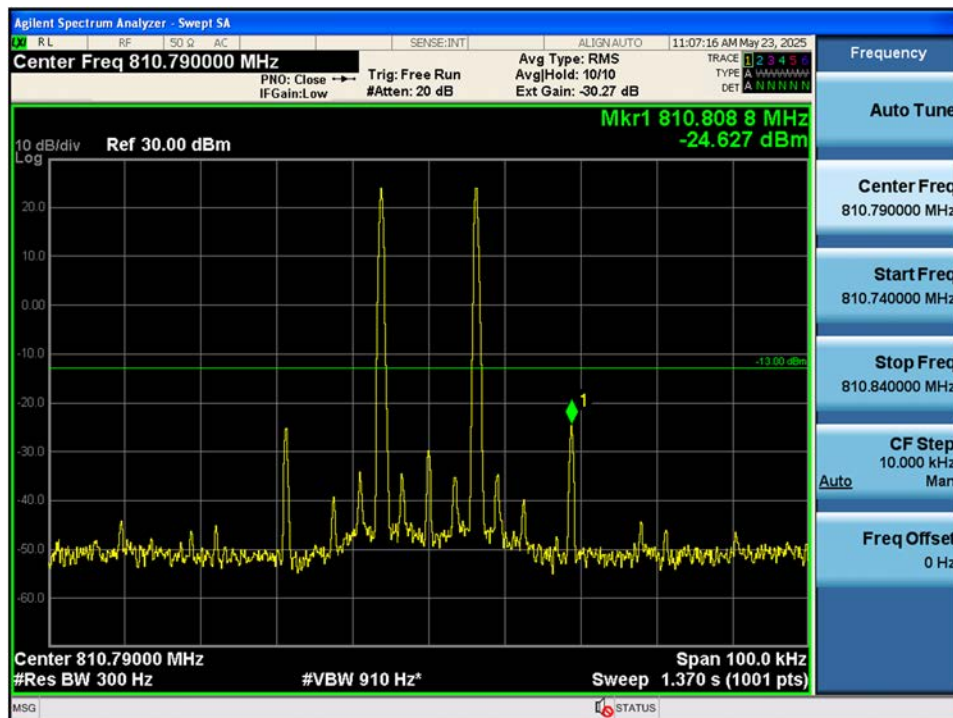
## +3 dB above Out-of-band (two adjacent test signals) / NPSPAC / Uplink



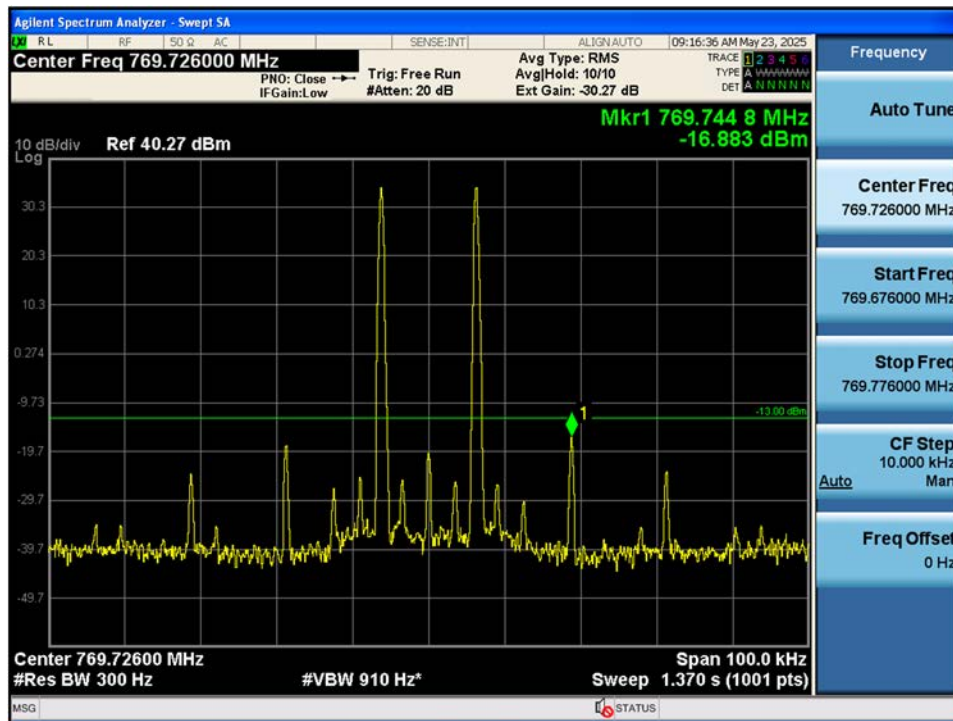
## Out-of-band (two adjacent test signals) / B/ILT; SMR / Uplink



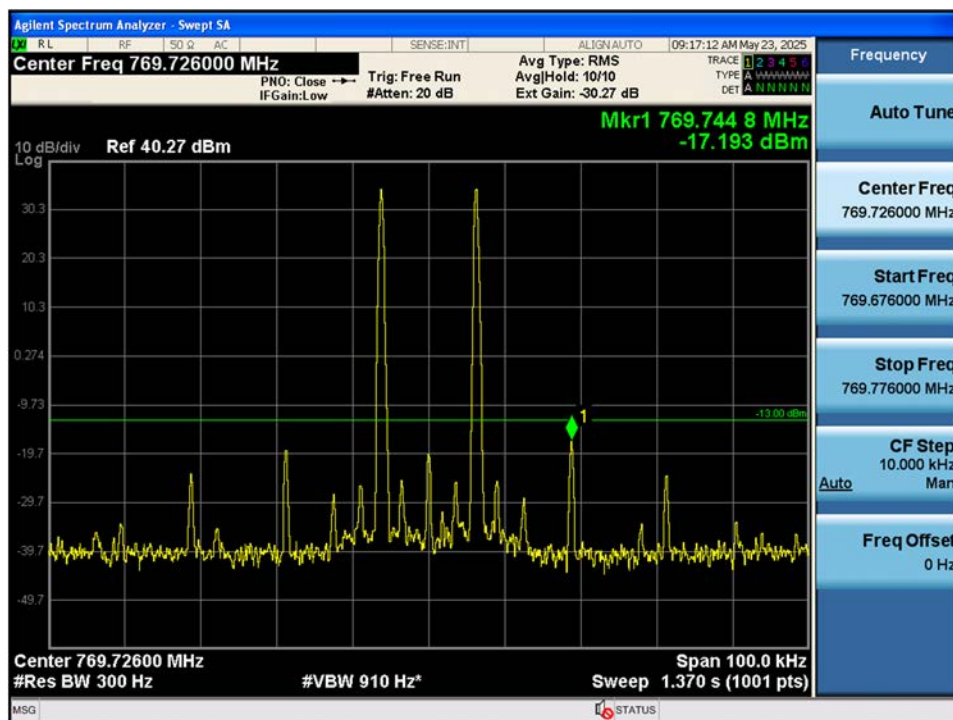
## +3 dB above Out-of-band (two adjacent test signals) / B/ILT; SMR / Uplink



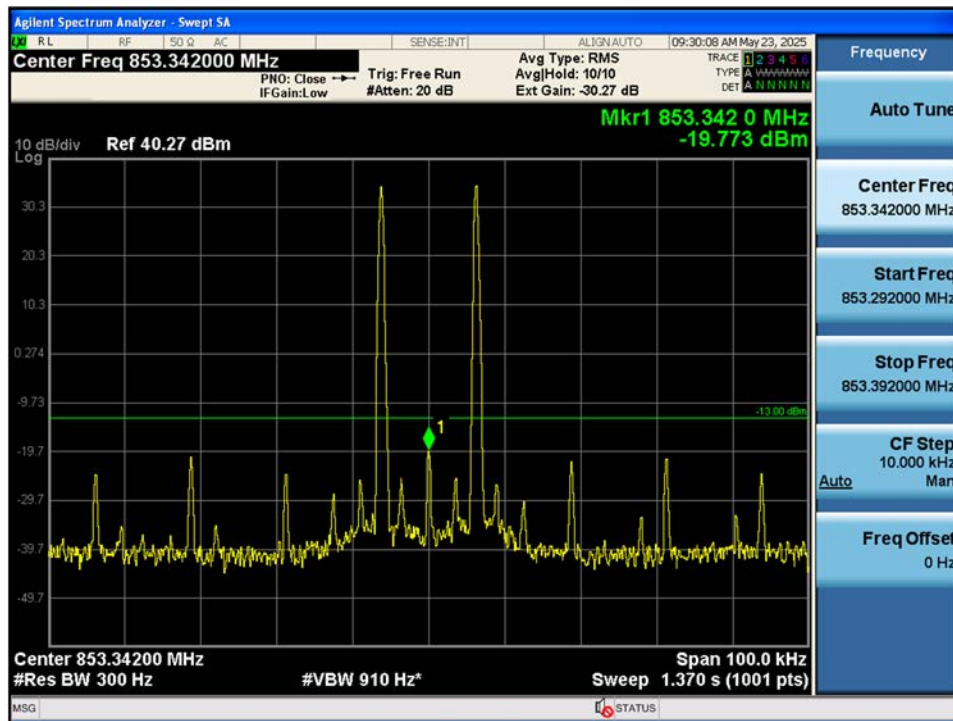
Out-of-band (two adjacent test signals) / Public Safety Narrowband / Downlink



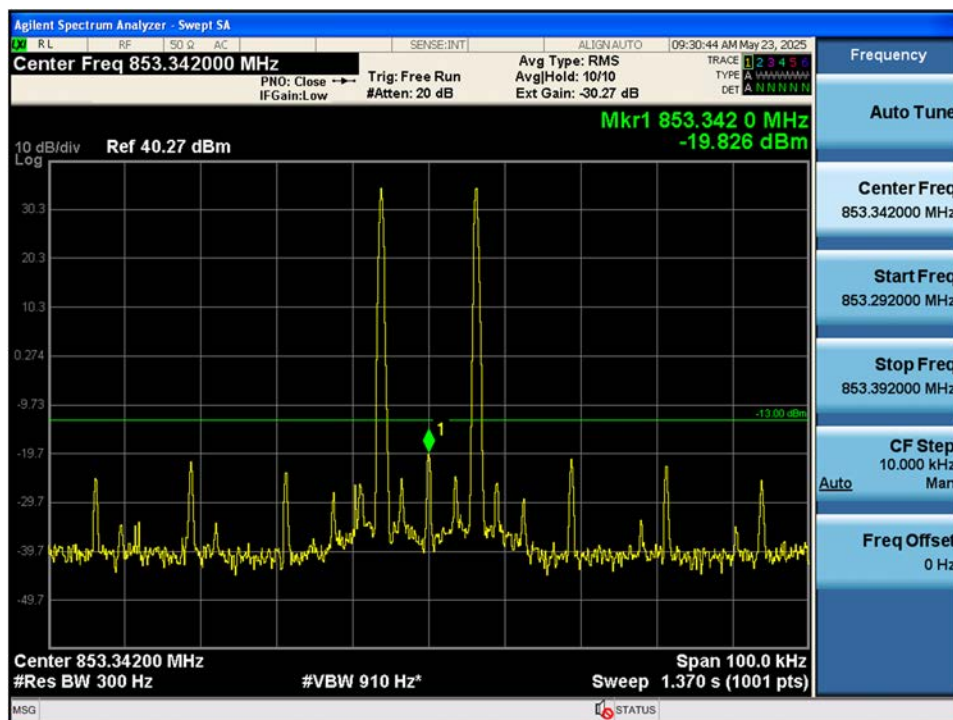
+3 dB above Out-of-band (two adjacent test signals) / Public Safety Narrowband / Downlink



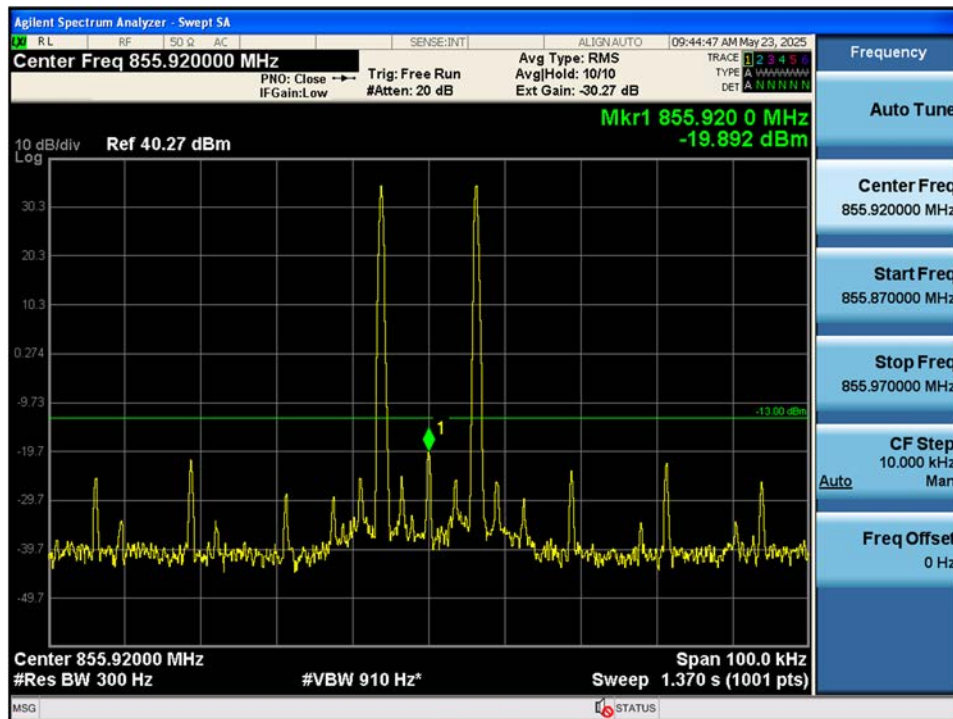
## Out-of-band (two adjacent test signals) / NPSPAC / Downlink



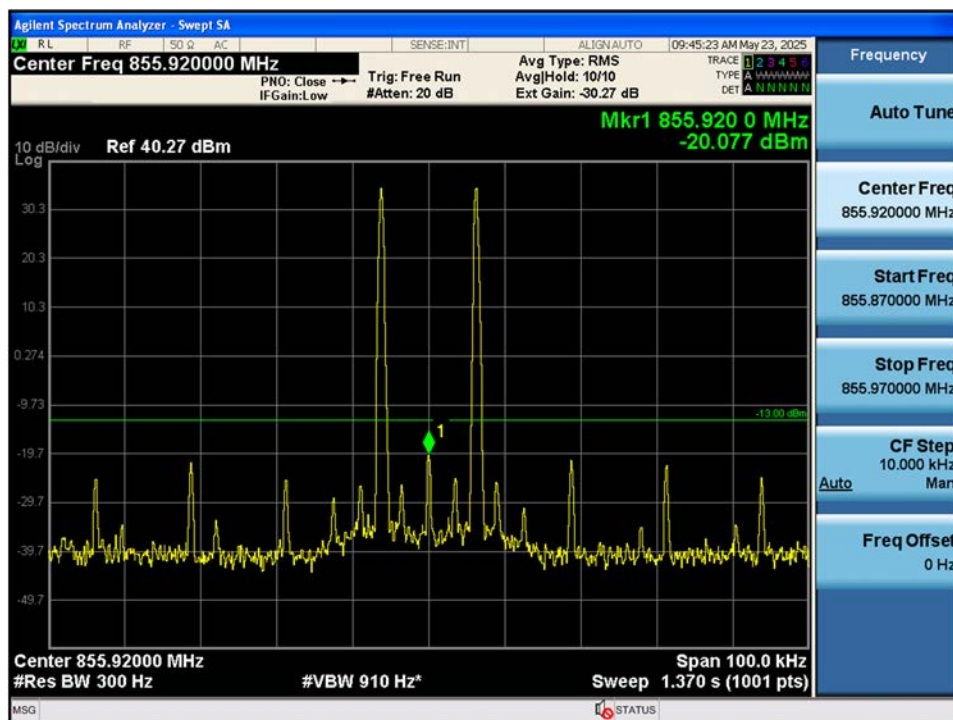
## +3 dB above Out-of-band (two adjacent test signals) / NPSPAC / Downlink



Out-of-band (two adjacent test signals) / B/ILT; SMR / Downlink

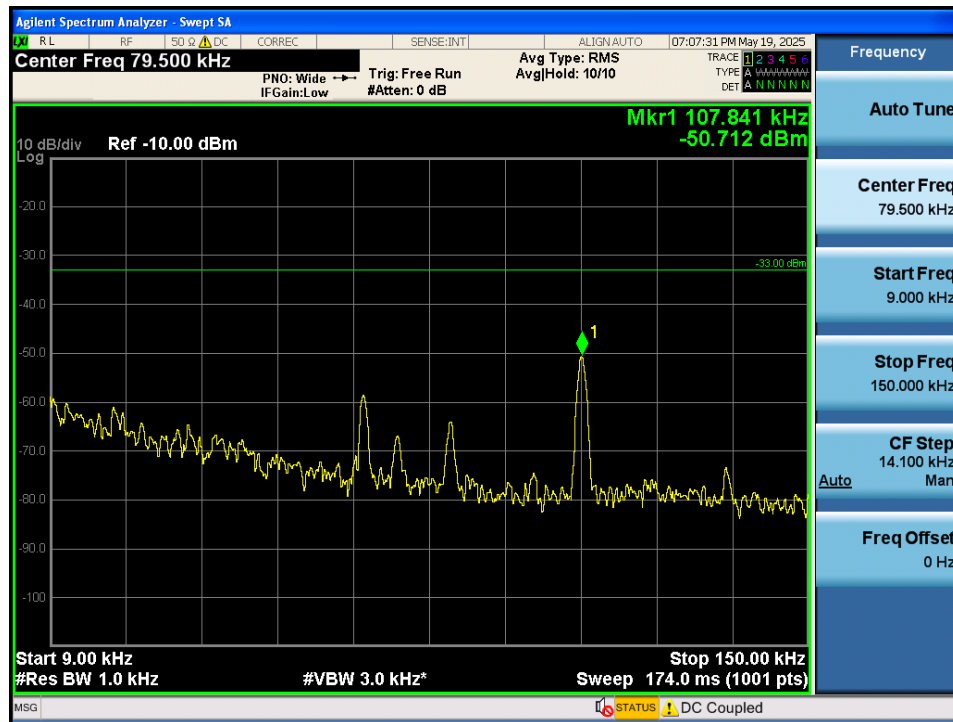


+3 dB above Out-of-band (two adjacent test signals) / B/ILT; SMR / Downlink

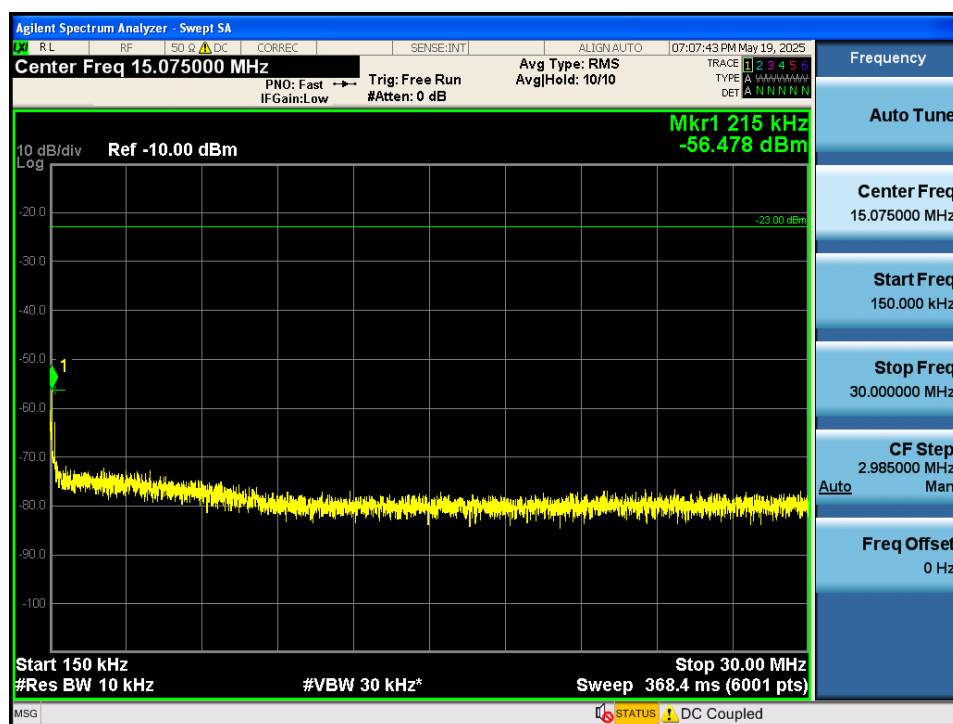


## Plot data of Spurious Emissions

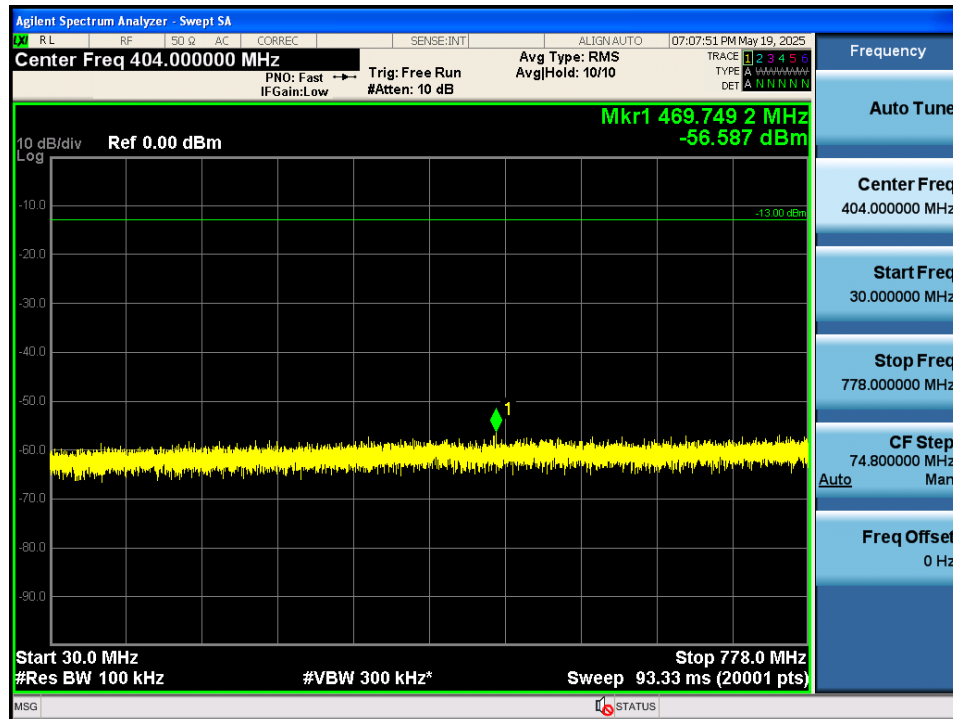
Spurious / FirstNet / Uplink / 9 kHz ~ 150 kHz



Spurious / FirstNet / Uplink / 150 kHz ~ 30 MHz



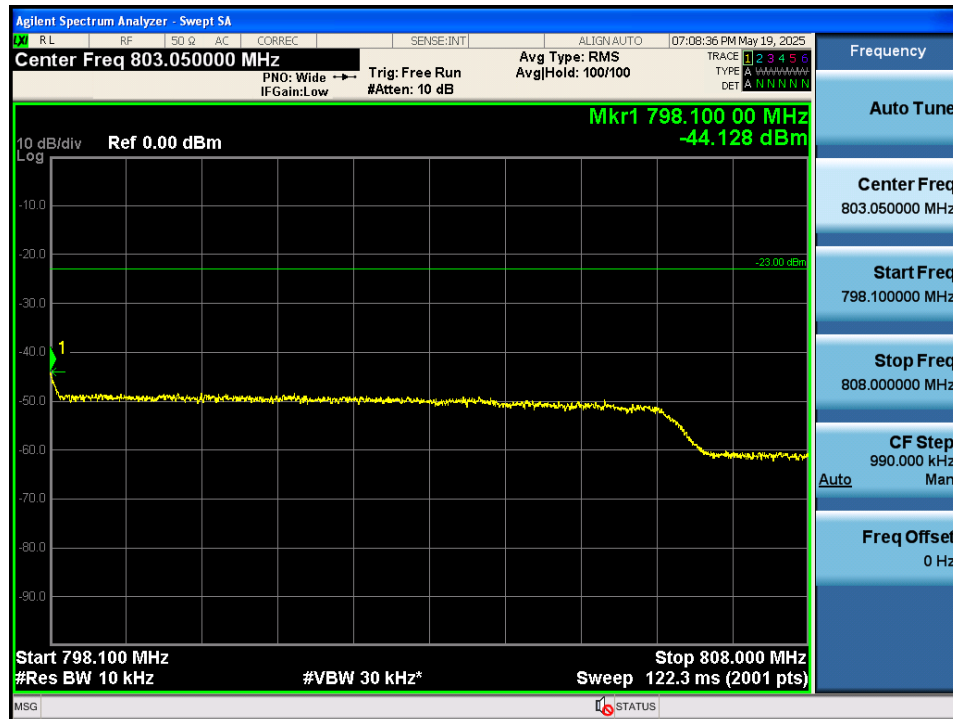
## Spurious / FirstNet / Uplink / 30 MHz ~ Low Edge - 10 MHz



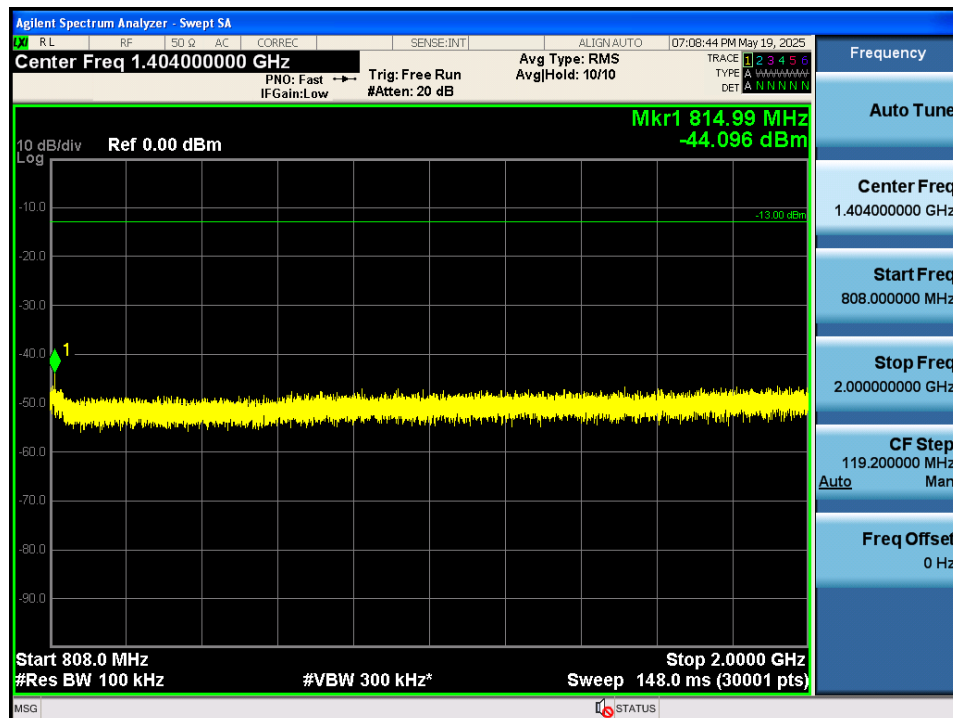
## Spurious / FirstNet / Uplink / Low Edge - 10 MHz ~ Low Edge



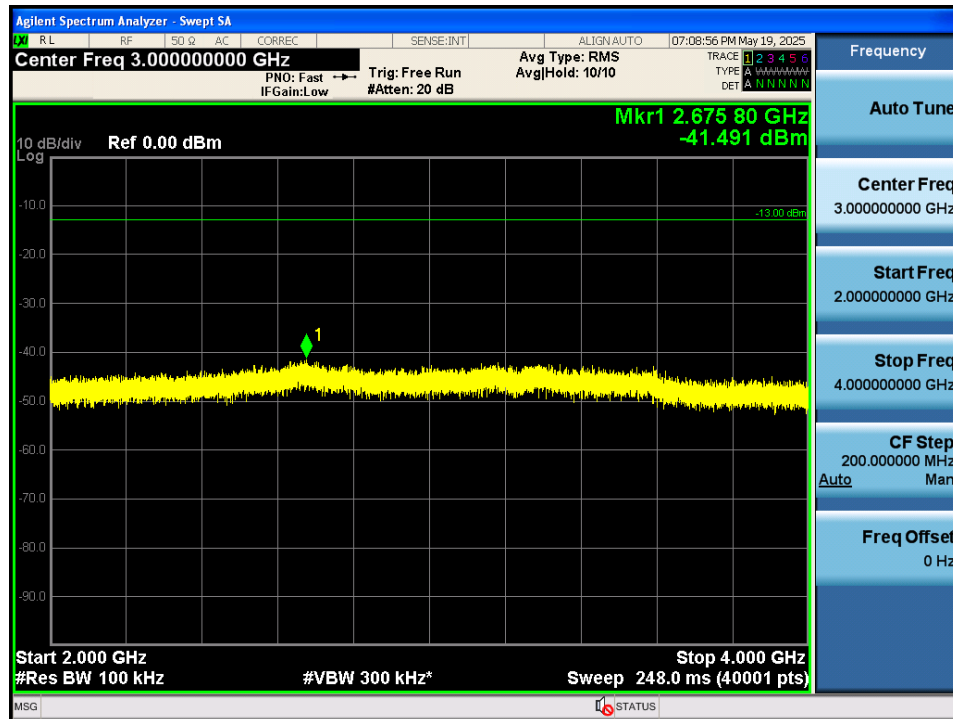
## Spurious / FirstNet / Uplink / High Edge ~ High Edge + 10 MHz



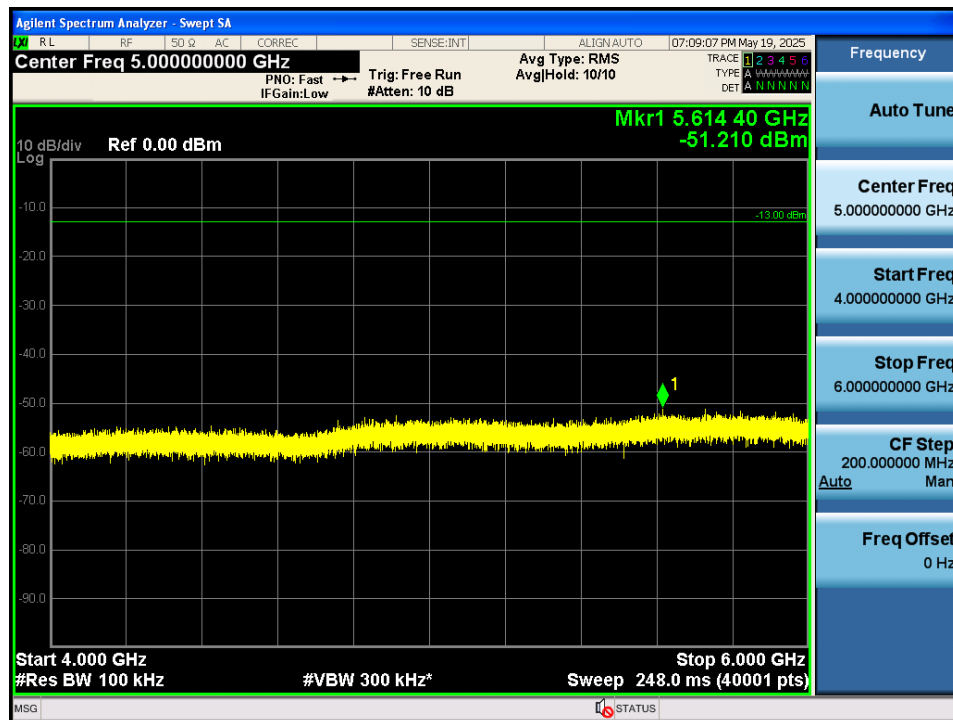
## Spurious / FirstNet / Uplink / High Edge + 10 MHz ~ 2 GHz



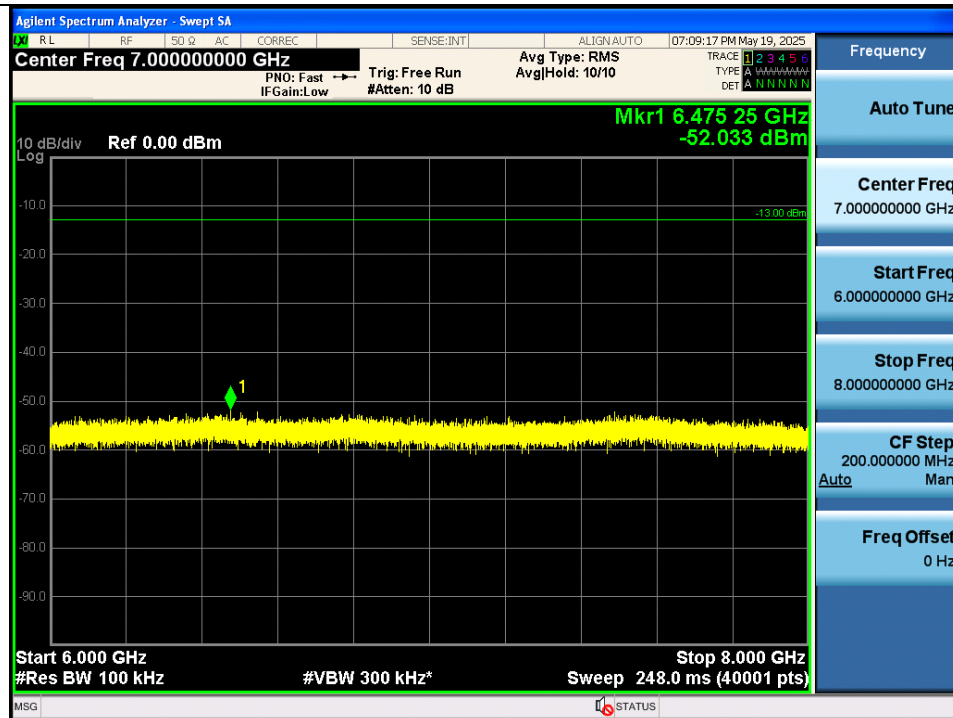
## Spurious / FirstNet / Uplink / 2 GHz ~ 4 GHz



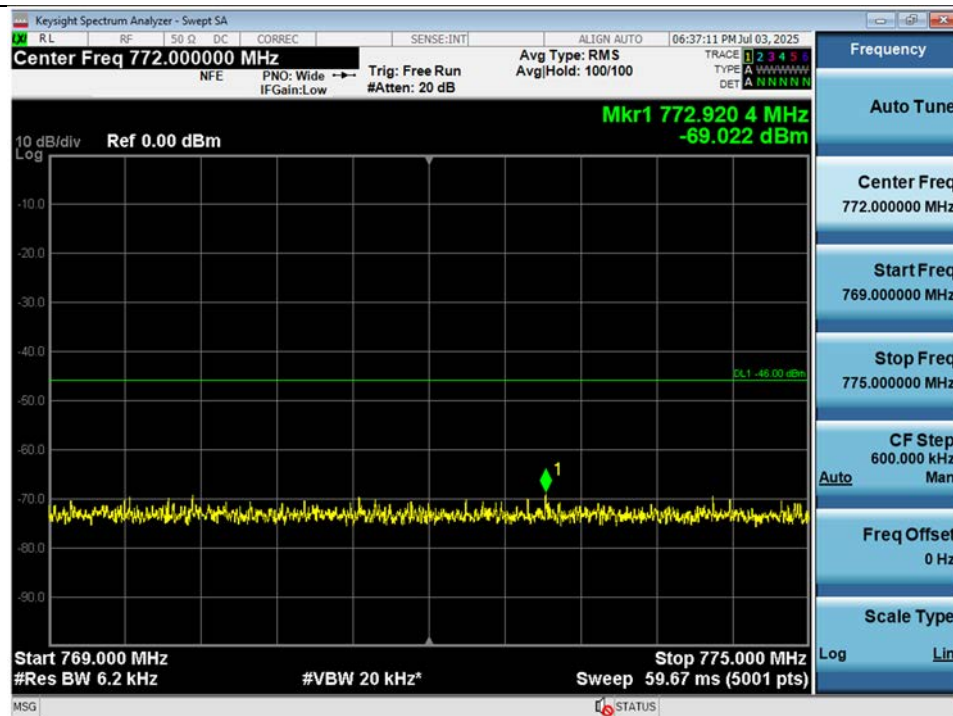
## Spurious / FirstNet / Uplink / 4 GHz ~ 6 GHz



## Spurious / FirstNet / Uplink / 6 GHz ~ 8 GHz

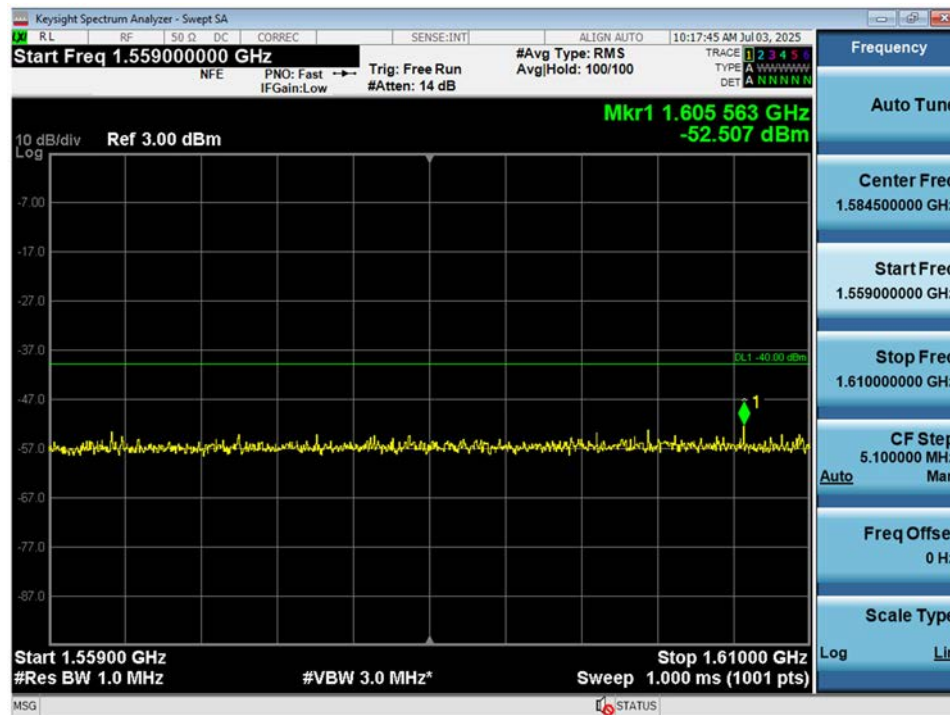


## Spurious / FirstNet / Uplink / Additional 769 ~ 775 MHz



# In accordance with § 90.543(e), emissions from 788 ~ 798 MHz must be measured in 769 ~ 775 MHz and 799 ~ 805 MHz bands. However, because the amplifier operates over 788 ~ 806 MHz and 798 ~ 805 MHz is designated for PS narrowband use, this band was excluded from testing (for Uplink).

Spurious / FirstNet / Uplink / Additional 1559 ~ 1610 MHz

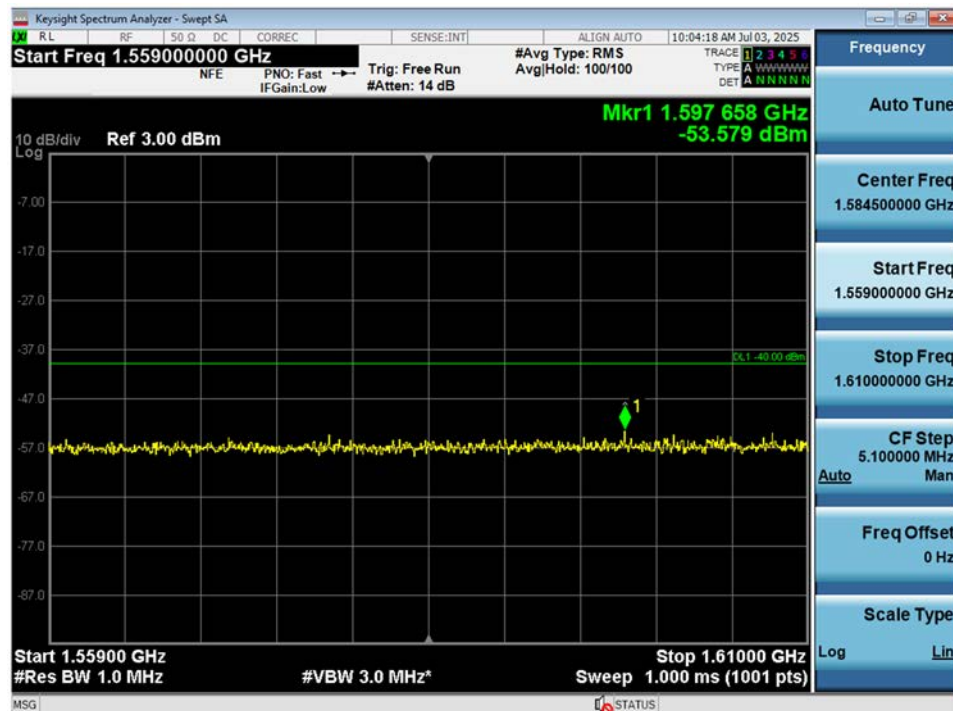


# Measured Level + Ant. Gain = -52.507 dBm + 9 dBi = -43.507 dBm(E.I.R.P.) complies with the limit 90.543(f).

## Spurious / Public Safety Narrowband / Uplink



## Spurious / Public Safety Narrowband / Uplink / Additional 1559 ~ 1610 MHz



# Measured Level + Ant. Gain = -53.579 dBm + 9 dBi = -44.579 dBm(E.I.R.P.) complies with the limit 90.543(f).

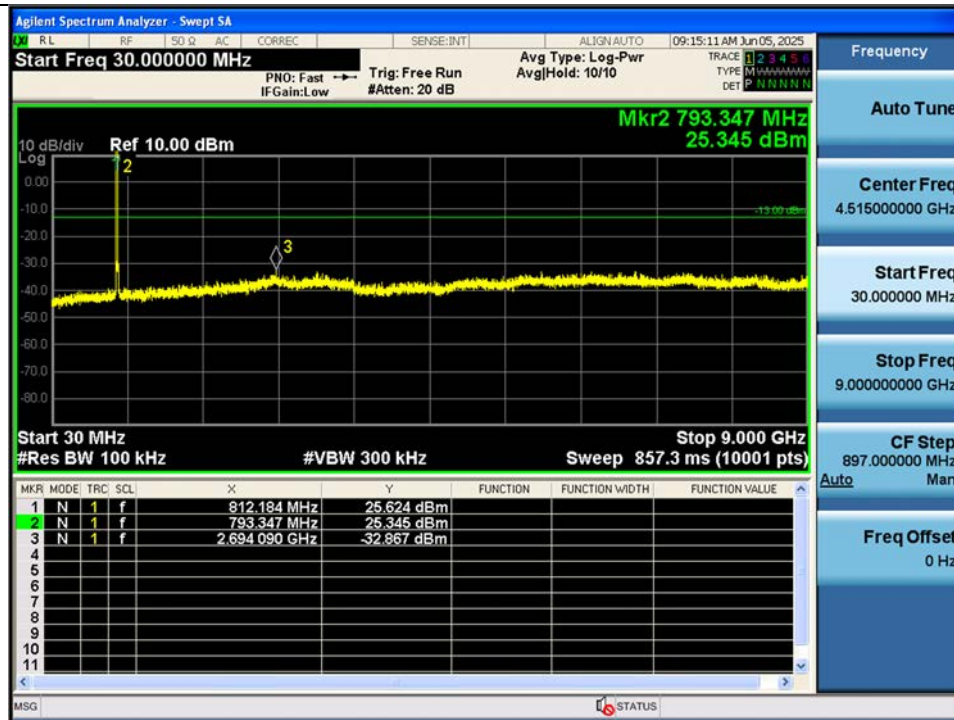
## Spurious / NPSPAC / Uplink



## Spurious / B/ILT; SMR / Uplink

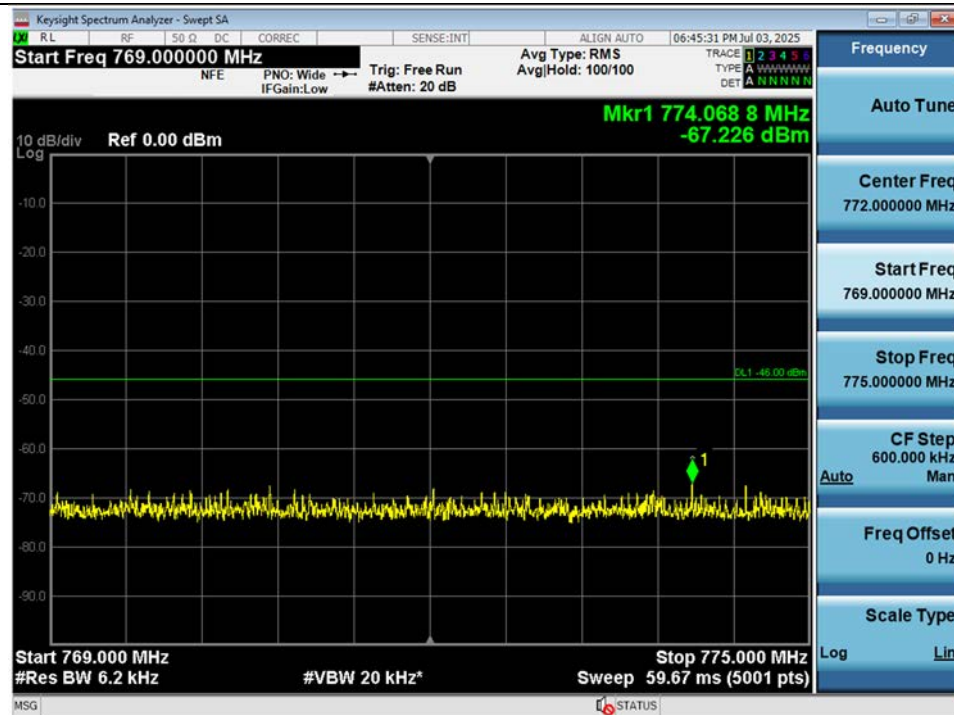


## Simultaneous / Spurious / FirstNet + B/ILT; SMR / Uplink



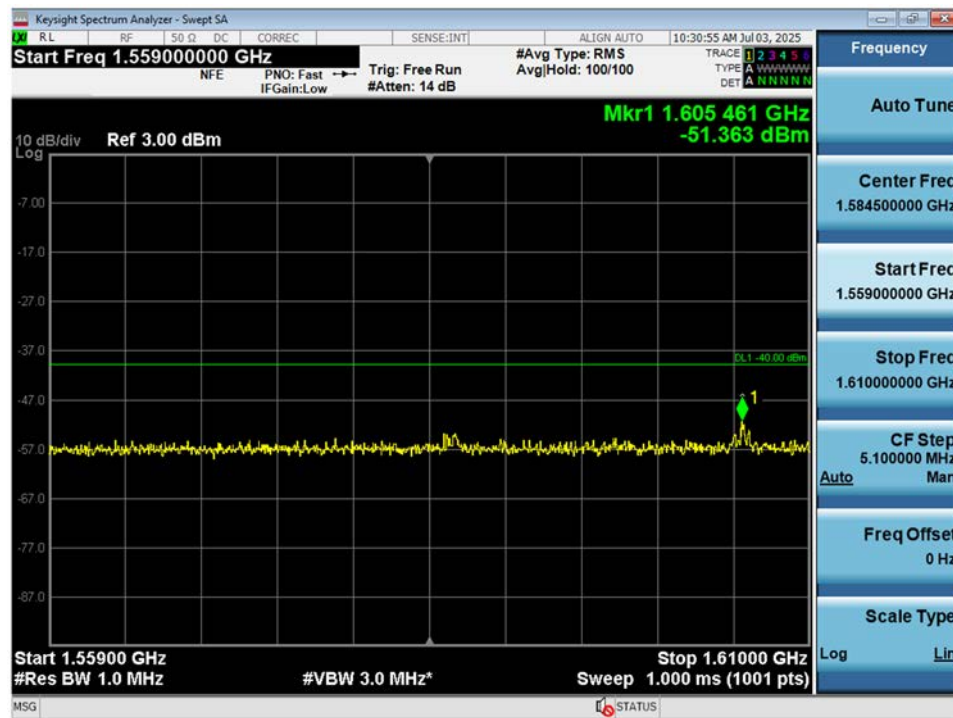
**Note:** Only the worst case plots for simultaneous spurious emissions.

## Simultaneous / Spurious / FirstNet + B/ILT; SMR / Uplink / Additional 769 MHz ~ 775 MHz



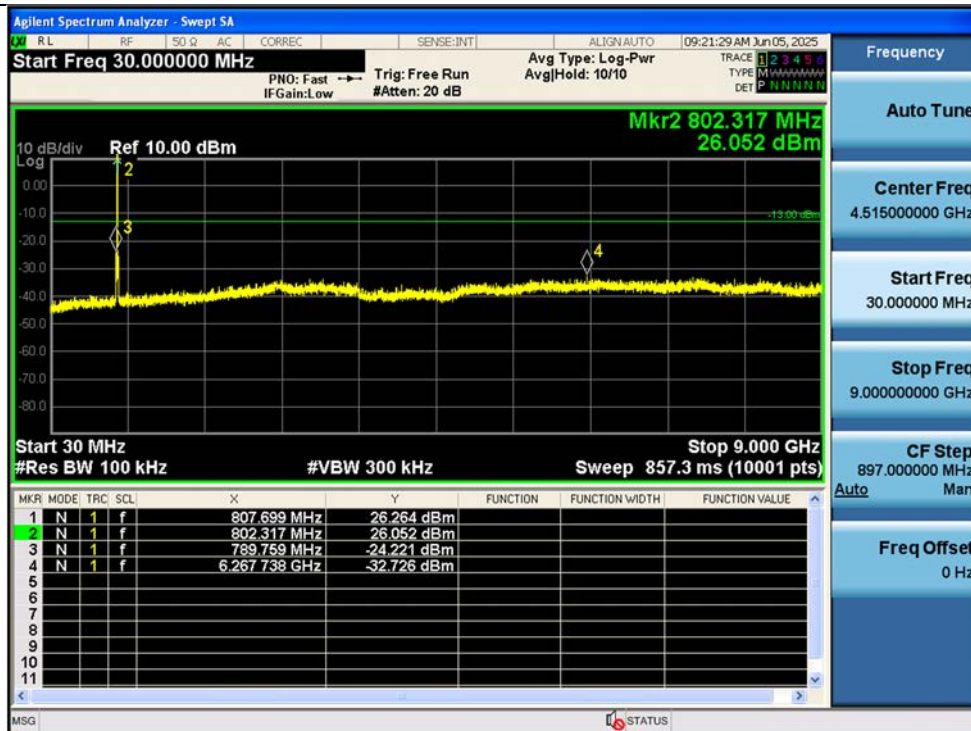
# In accordance with § 90.543(e), emissions from 788 ~ 798 MHz must be measured in 769 ~ 775 MHz and 799 ~ 805 MHz bands. However, because the amplifier operates over 788 ~ 806 MHz and 798 ~ 805 MHz is designated for PS narrowband use, this band was excluded from testing (for Uplink).

Simultaneous / Spurious / FirstNet+ B/ILT; SMR / Uplink / Additional 1559 MHz ~ 1610 MHz



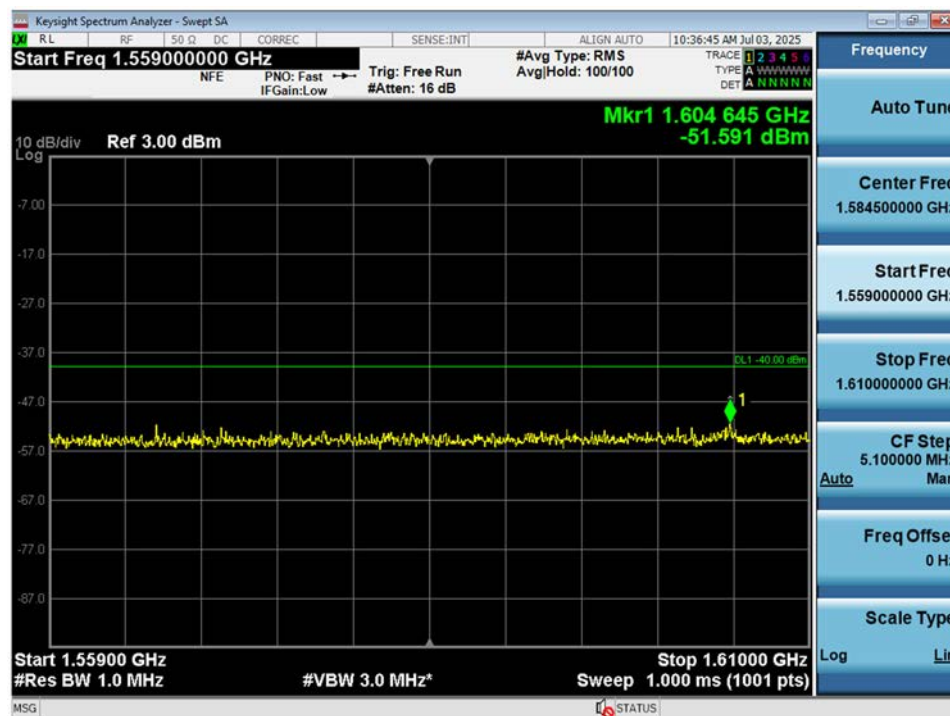
# Measured Level + Ant. Gain = -51.363 dBm + 9 dBi = -42.363 dBm(E.I.R.P.) complies with the limit 27.53(f).

## Simultaneous / Spurious / Public Safety Narrowband + NPSPAC / Uplink



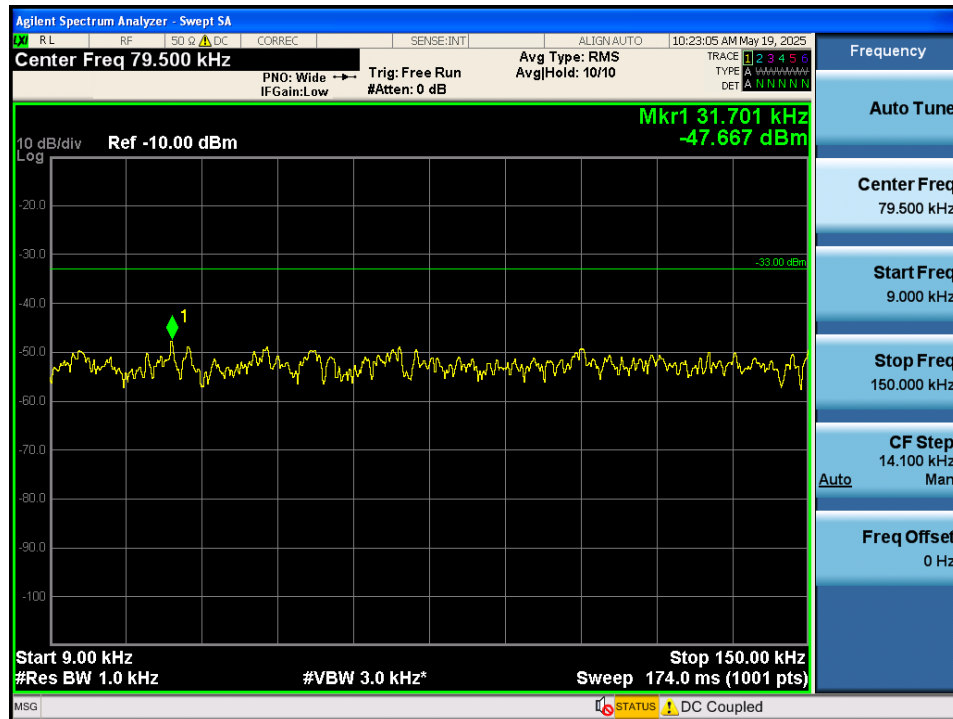
**Note:** Only the worst case plots for simultaneous spurious emissions.

## Simultaneous / Spurious / Public Safety Narrowband + B/ILT; SMR / Uplink / Additional 1559 MHz ~ 1610 MHz

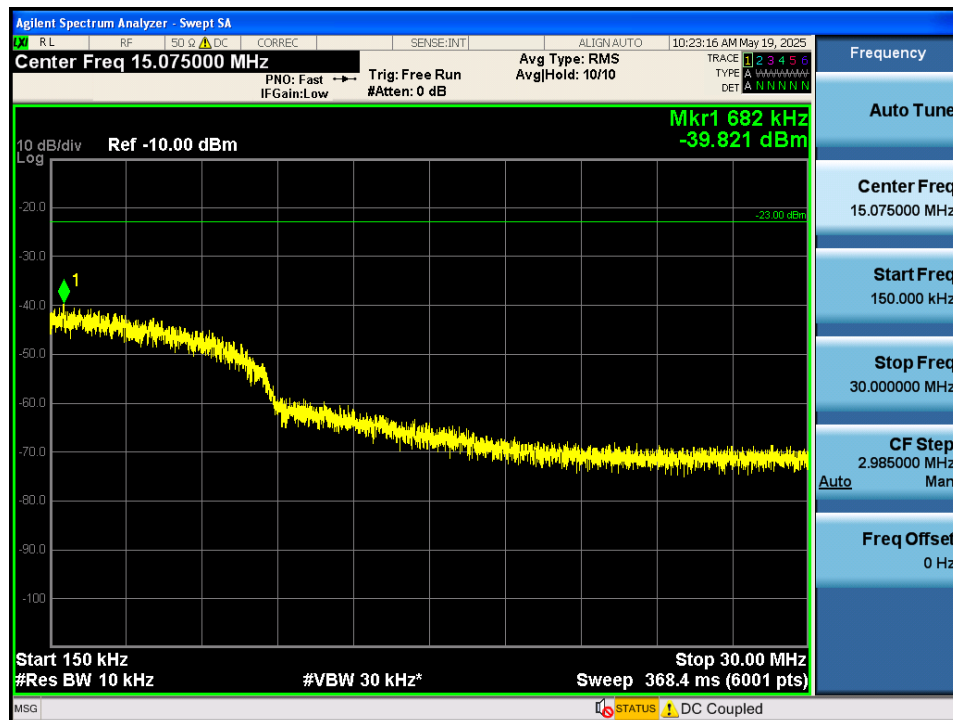


# Measured Level + Ant. Gain = -51.591 dBm + 9 dBi = -42.591 dBm(E.I.R.P.) complies with the limit 27.53(f).

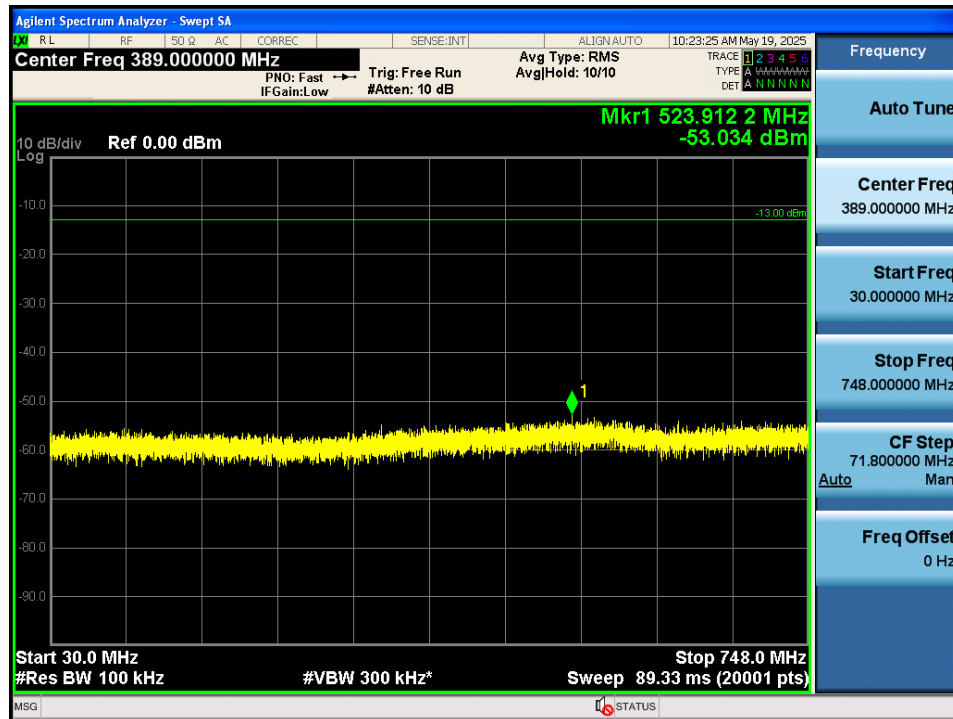
## Spurious / FirstNet / Downlink / 9 kHz ~ 150 kHz



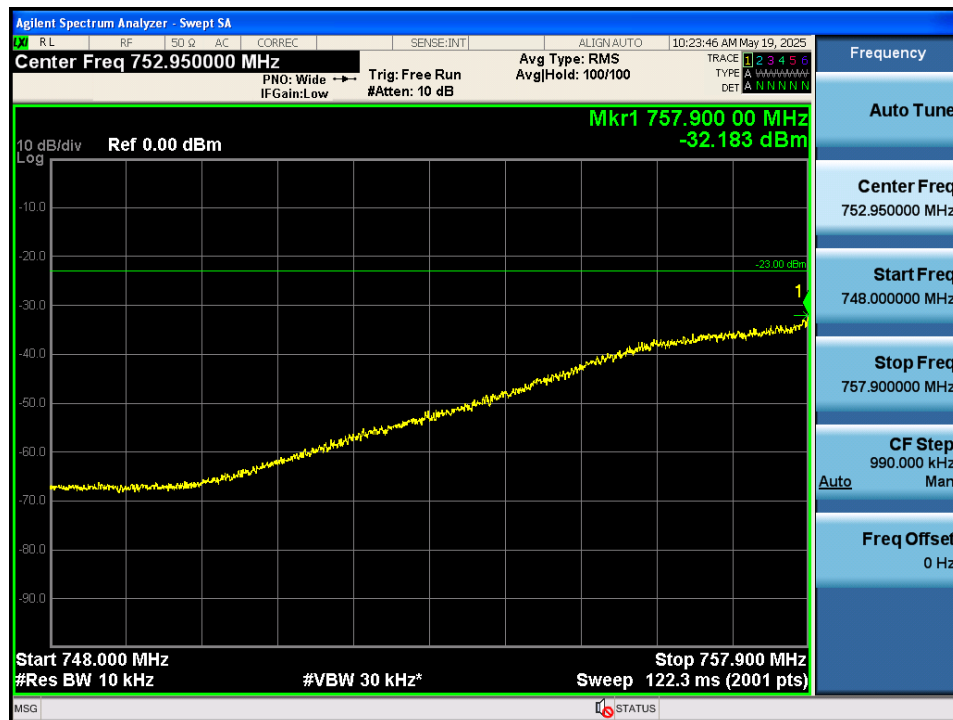
## Spurious / FirstNet / Downlink / 150 kHz ~ 30 MHz



## Spurious / FirstNet / Downlink / 30 MHz ~ Low Edge - 10 MHz



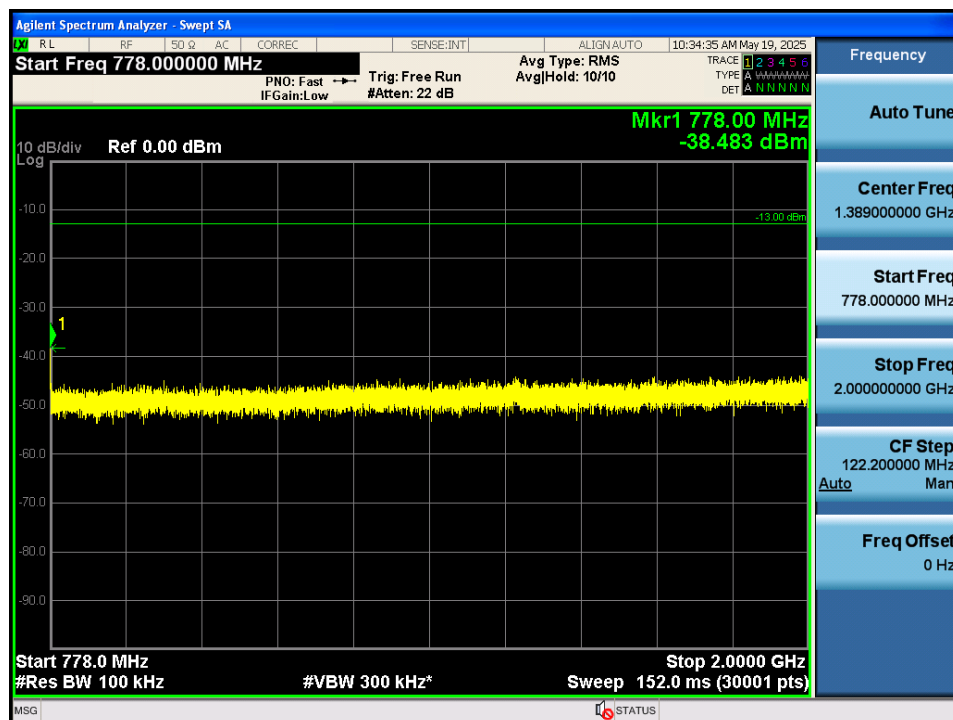
## Spurious / FirstNet / Downlink / Low Edge - 10 MHz ~ Low Edge



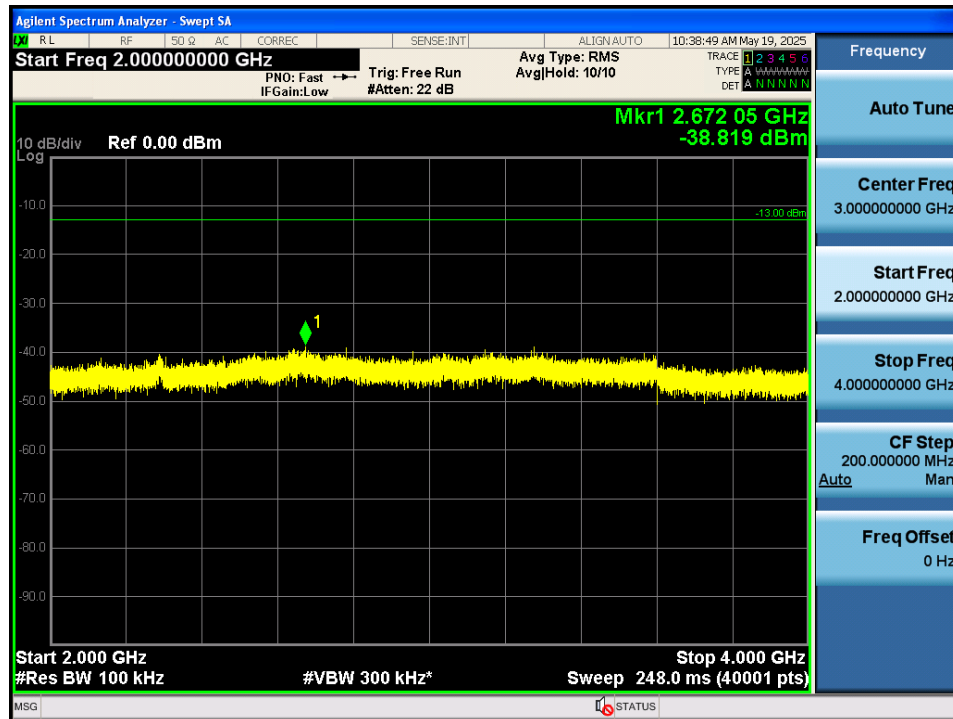
## Spurious / FirstNet / Downlink / High Edge ~ High Edge + 10 MHz



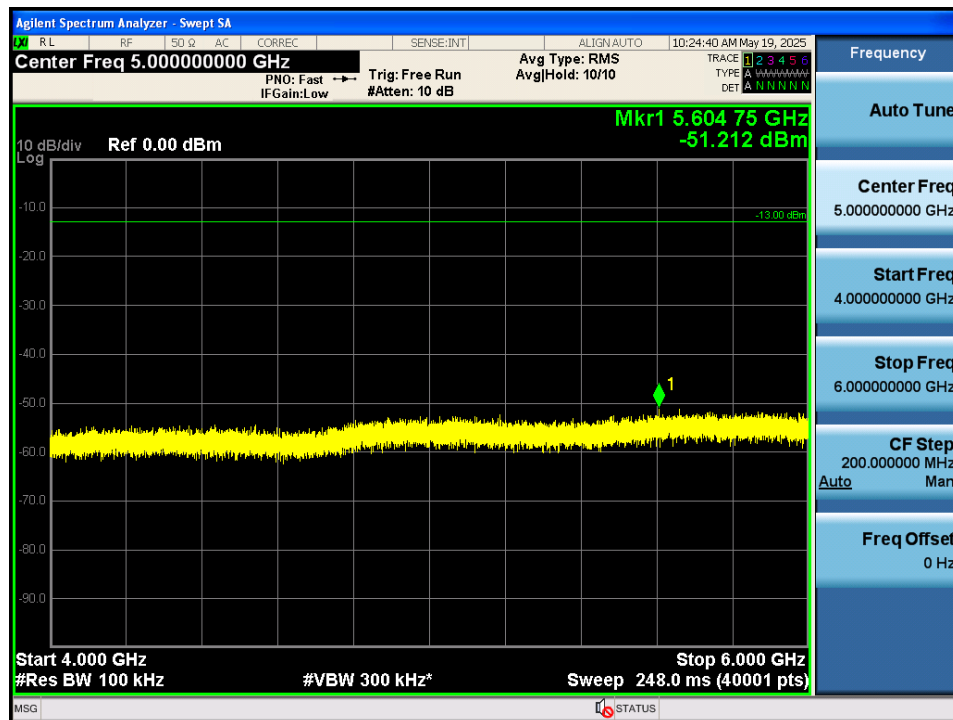
## Spurious / FirstNet / Downlink / High Edge + 10 MHz ~ 2 GHz



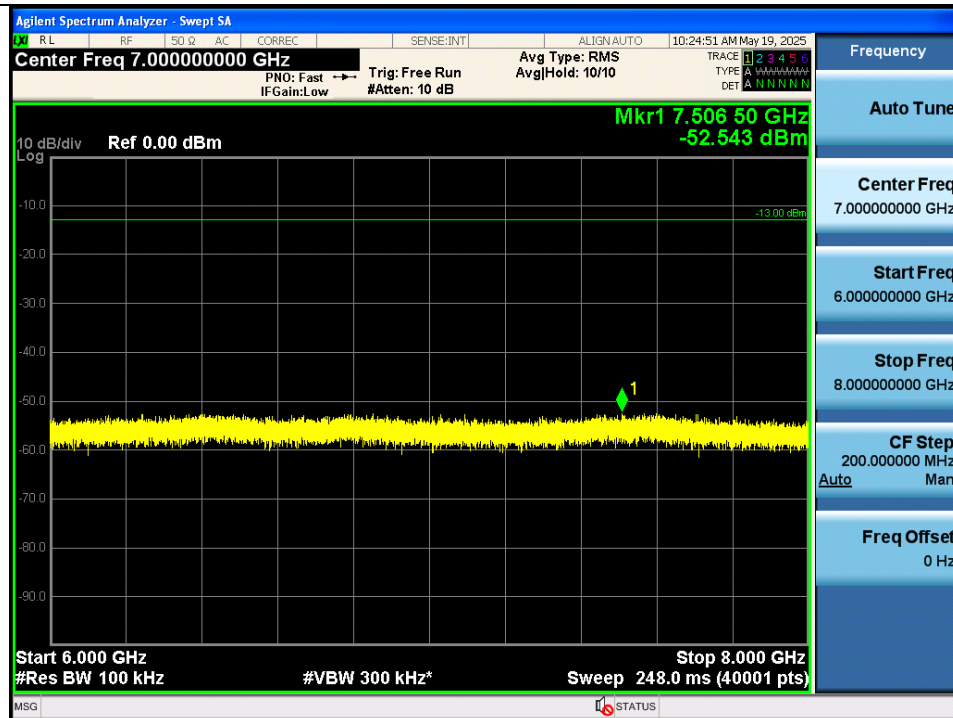
## Spurious / FirstNet / Downlink / 2 GHz ~ 4 GHz



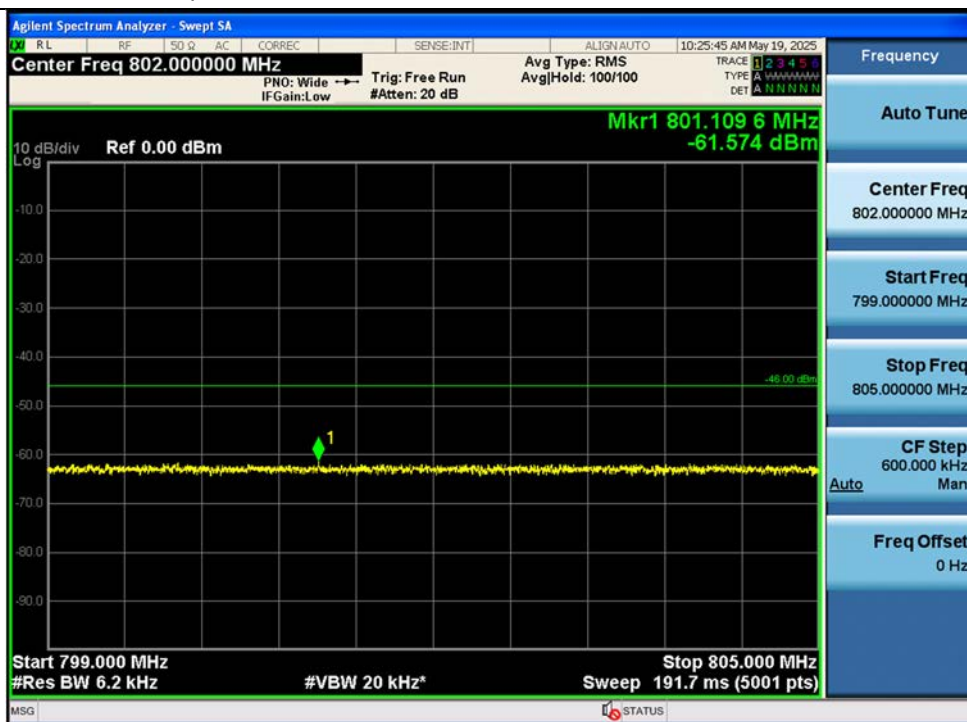
## Spurious / FirstNet / Downlink / 4 GHz ~ 6 GHz



## Spurious / FirstNet / Downlink / 6 GHz ~ 8 GHz

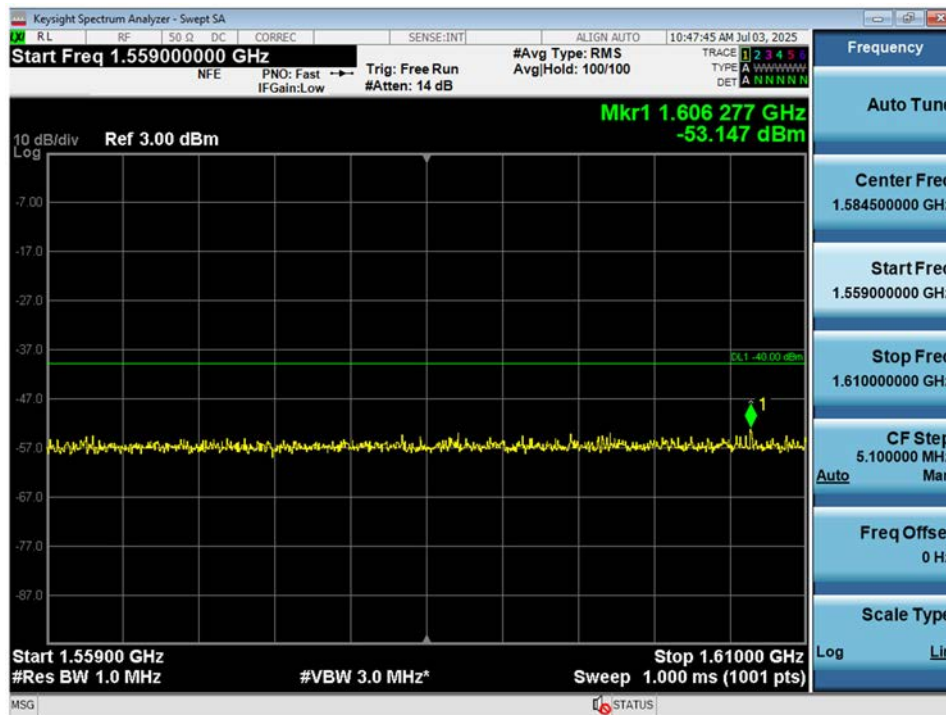


## Spurious / FirstNet / Downlink / Additional 799 ~ 805 MHz



# In accordance with § 90.543(e), emissions from 758 ~ 768 MHz must be measured in 769 ~ 775 MHz and 799 ~ 805 MHz bands. However, because the amplifier operates over 758 ~ 776 MHz and 769 ~ 775 MHz is designated for PS narrowband use, this band was excluded from testing (for Downlink).

Spurious / FirstNet / Downlink / Additional 1 559 ~ 1 610 MHz

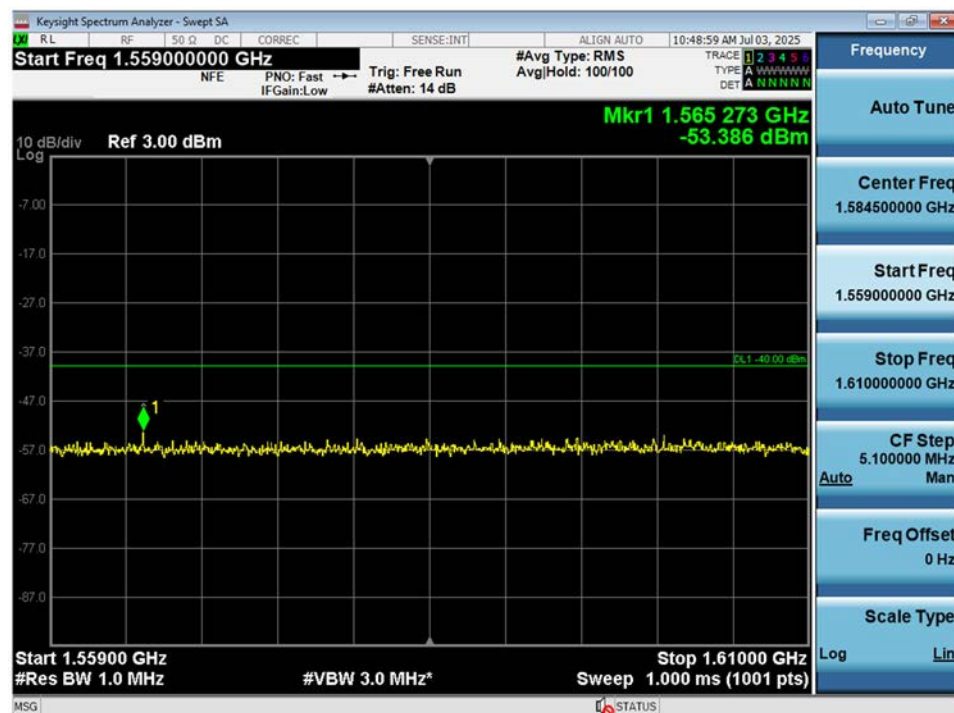


# Measured Level + Ant. Gain = -53.147 dBm + 1.5 dBi = -51.647 dBm(E.I.R.P.) complies with the limit 27.53(f).

## Spurious / Public Safety Narrowband / Downlink



## Spurious / Public Safety Narrowband / Downlink / Additional 1559 MHz ~ 1610 MHz

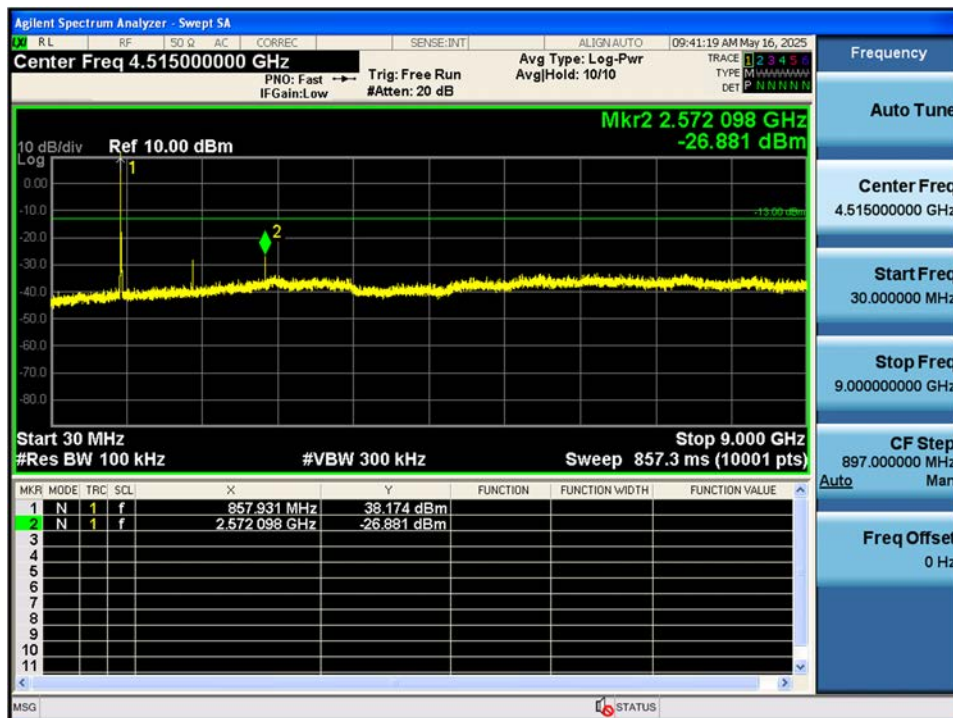


# Measured Level + Ant. Gain = -53.386 dBm + 1.5 dBi = -51.886 dBm(E.I.R.P.) complies with the limit 90.543(f).

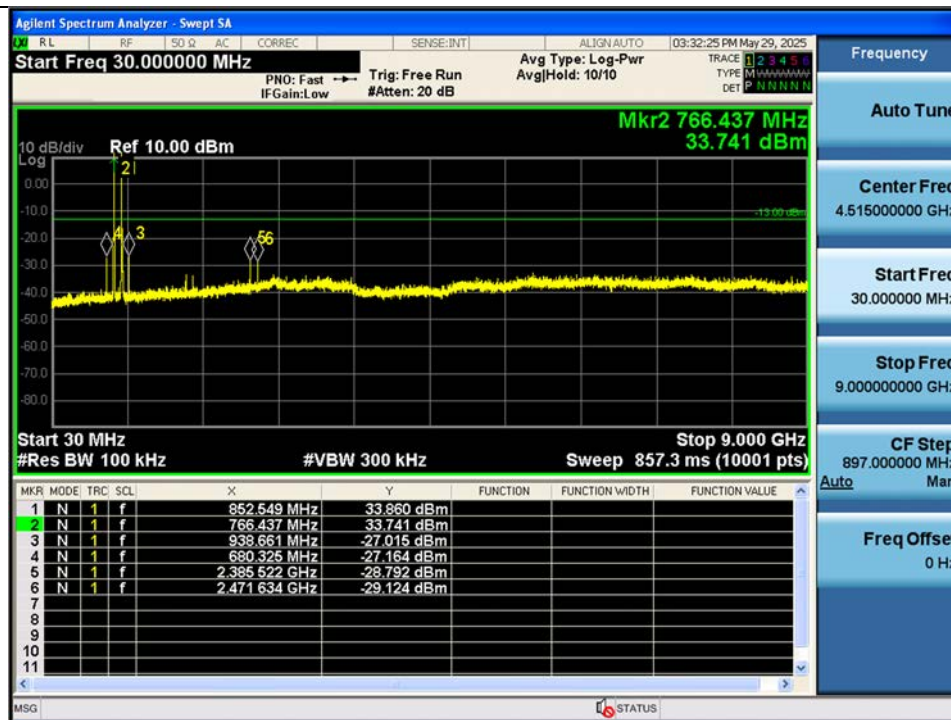
## Spurious / NPSPAC / Downlink



## Spurious / B/ILT; SMR / Downlink

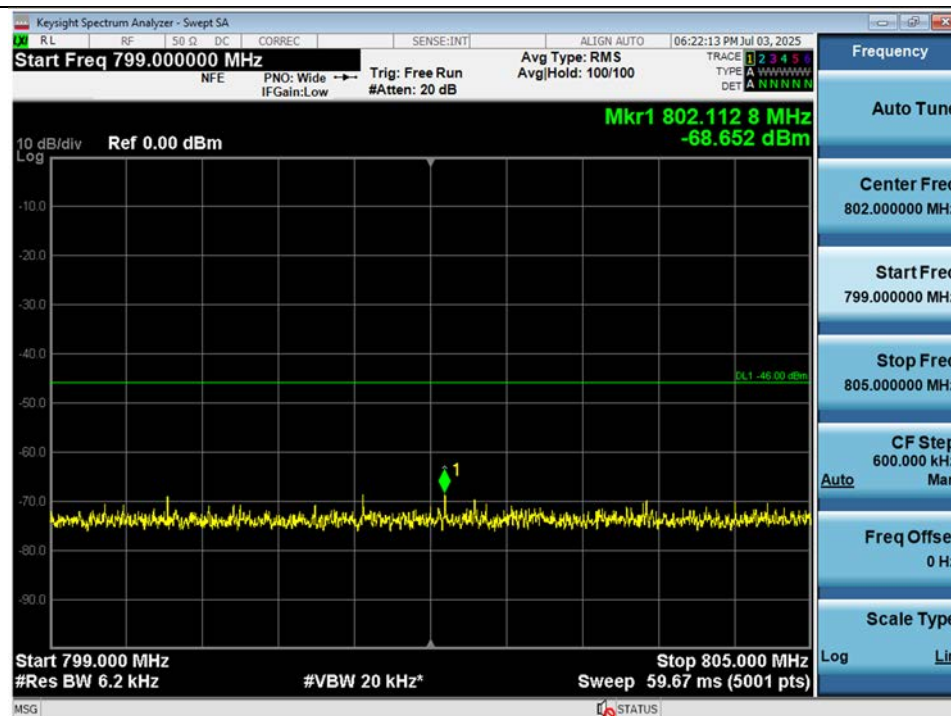


## Simultaneous / Spurious / FirstNet + NPSPAC / Downlink



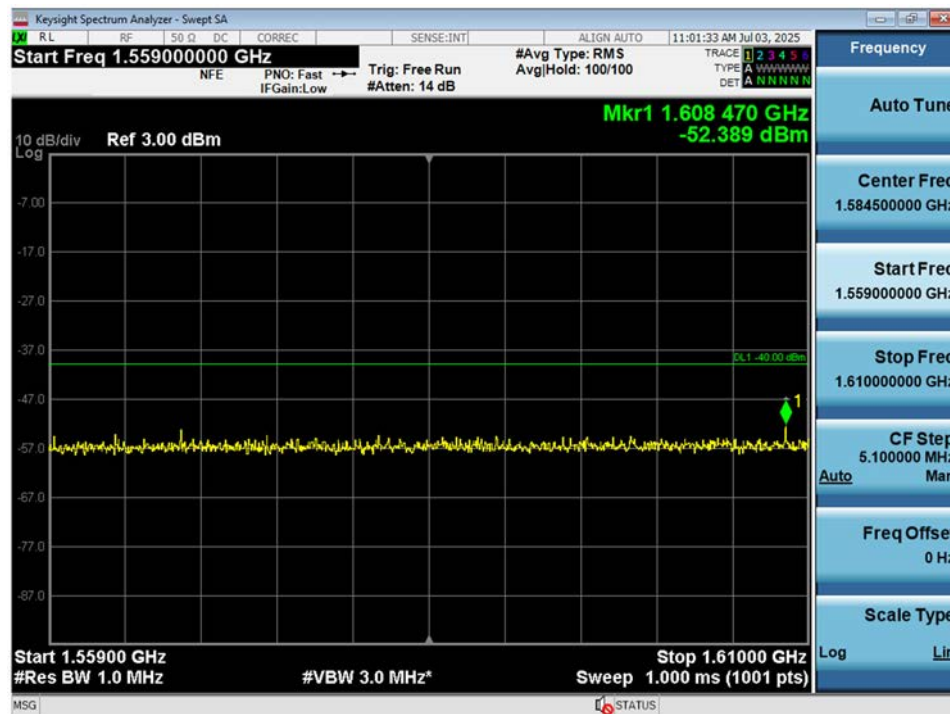
**Note:** Only the worst case plots for simultaneous spurious emissions.

## Simultaneous / Spurious / FirstNet + B/ILT; SMR / Downlink / Additional 799 MHz ~ 805 MHz



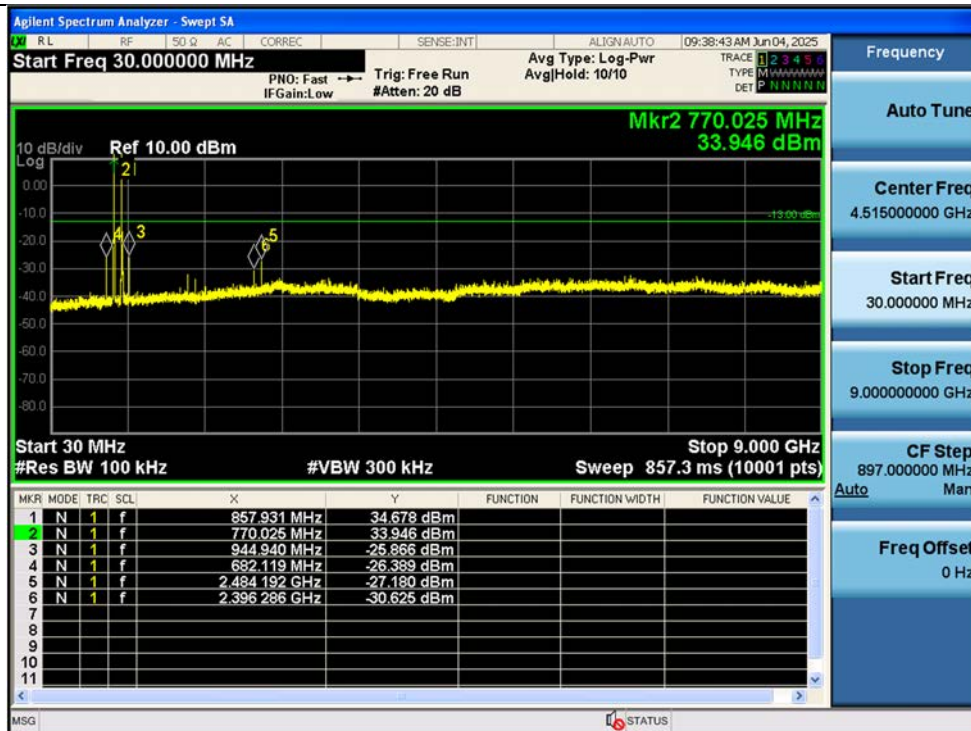
# In accordance with § 90.543(e), emissions from 758 ~ 768 MHz must be measured in 769 ~ 775 MHz and 799 ~ 805 MHz bands. However, because the amplifier operates over 758 ~ 776 MHz and 769 ~ 775 MHz is designated for PS narrowband use, this band was excluded from testing (for Downlink).

Simultaneous / Spurious / FirstNet + NPSAC / Downlink / Additional 1559 MHz ~ 1610 MHz



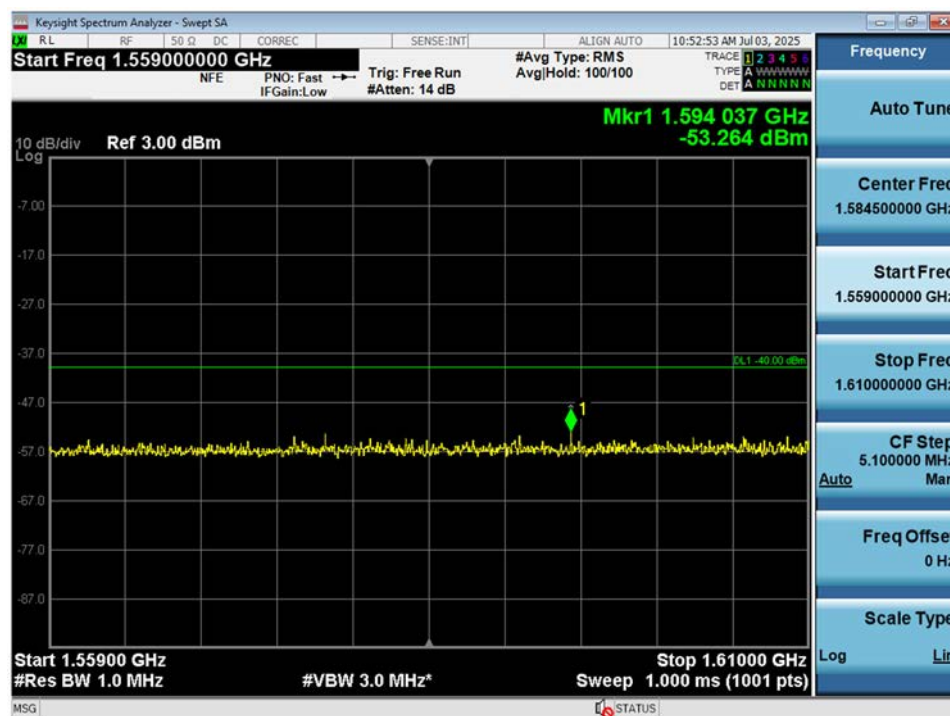
# Measured Level + Ant. Gain = -52.389 dBm + 1.5 dBi = -50.889 dBm(E.I.R.P.) complies with the limit 90.543(f).

Simultaneous / Spurious / Public Safety Narrowband + B/ILT; SMR / Downlink



**Note:** Only the worst case plots for simultaneous spurious emissions.

Simultaneous / Spurious / Public Safety Narrowband + NPSAC / Downlink / Additional 1559 MHz ~ 1610 MHz



# Measured Level + Ant. Gain = -53.264 dBm + 1.5 dBi = -51.764 dBm(E.I.R.P.) complies with the limit 90.543(f).

## 5.8. RADIATED SPURIOUS EMISSIONS

### Test Requirements:

#### § 2.1053 Measurements required: Field strength of spurious radiation.

- (a) Measurements shall be made to detect spurious emissions that may be radiated directly from the cabinet, control circuits, power leads, or intermediate circuit elements under normal conditions of installation and operation. Curves or equivalent data shall be supplied showing the magnitude of each harmonic and other spurious emission. For this test, single sideband, independent sideband, and controlled carrier transmitters shall be modulated under the conditions specified in paragraph (c) of § 2.1049, as appropriate. For equipment operating on frequencies below 890 MHz, an open field test is normally required, with the measuring instrument antenna located in the far-field at all test frequencies. In the event it is either impractical or impossible to make open field measurements (e.g. a broadcast transmitter installed in a building) measurements will be accepted of the equipment as installed. Such measurements must be accompanied by a description of the site where the measurements were made showing the location of any possible source of reflections which might distort the field strength measurements. Information submitted shall include the relative radiated power of each spurious emission with reference to the rated power output of the transmitter, assuming all emissions are radiated from halfwave dipole antennas.
- (b) The measurements specified in paragraph (a) of this section shall be made for the following equipment:
  - (1) Those in which the spurious emissions are required to be 60 dB or more below the mean power of the transmitter.
  - (2) All equipment operating on frequencies higher than 25 MHz.
  - (3) All equipment where the antenna is an integral part of, and attached directly to the transmitter.
  - (4) Other types of equipment as required, when deemed necessary by the Commission.

### Test Procedures:

Because KDB 935210 D05 procedure does not provide this requirement, measurements were in accordance with the test methods section 5.5 of ANSI C63.26-2015

- a) Place the EUT in the center of the turntable. The EUT shall be configured to transmit into the standard non-radiating load (for measuring radiated spurious emissions), connected with cables of minimal length unless specified otherwise. If the EUT uses an adjustable antenna, the antenna shall be positioned to the length that produces the worst case emission at the fundamental operating frequency.
- b) Each emission under consideration shall be evaluated:
  - 1) Raise and lower the measurement antenna in accordance 5.5.2, as necessary to enable detection of the maximum emission amplitude relative to measurement antenna height.
  - 2) Rotate the EUT through 360° to determine the maximum emission level relative to the axial position.
  - 3) Return the turntable to the azimuth where the highest emission amplitude level was observed.
  - 4) Vary the measurement antenna height again through 1 m to 4 m again to find the height associated with the maximum emission amplitude.
  - 5) Record the measured emission amplitude level and frequency using the appropriate RBW.
- c) Repeat step b) for each emission frequency with the measurement antenna oriented in both the horizontal and vertical polarizations to determine the orientation that gives the maximum emissions amplitude.

**Test Result(Uplink):**

| Mode | Frequency<br>(MHz) | Measured<br>Level<br>(dBuV) | Ant. Factor<br>(dB/m) | A.G.+C.L.+H.P.F.<br>(dB) | Pol. | Measured<br>Power<br>(dBm) | Result<br>(dBm/m) |
|------|--------------------|-----------------------------|-----------------------|--------------------------|------|----------------------------|-------------------|
|------|--------------------|-----------------------------|-----------------------|--------------------------|------|----------------------------|-------------------|

No Critical Peaks Found.

**Test Result(Downlink):**

| Mode | Frequency<br>(MHz) | Measured<br>Level<br>(dBuV) | Ant. Factor<br>(dB/m) | A.G.+C.L.+H.P.F.<br>(dB) | Pol. | Measured<br>Power<br>(dBm) | Result<br>(dBm/m) |
|------|--------------------|-----------------------------|-----------------------|--------------------------|------|----------------------------|-------------------|
|------|--------------------|-----------------------------|-----------------------|--------------------------|------|----------------------------|-------------------|

No Critical Peaks Found.

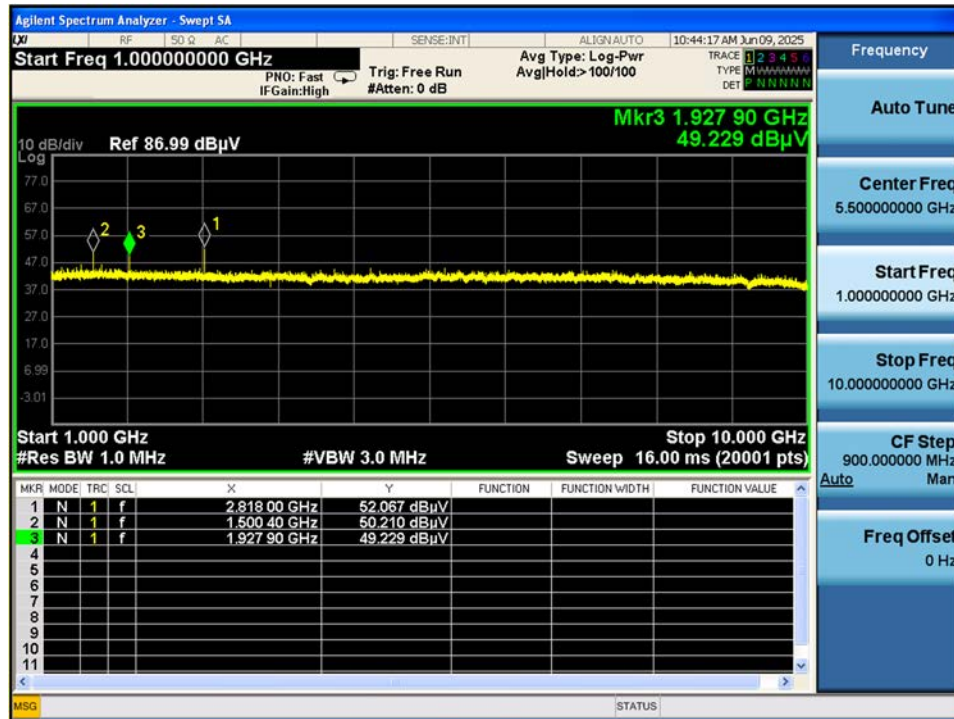
# C.L.: Cable Loss / A.G.: Amp. Gain / H.P.F.: High Pass Filter

**Note:**

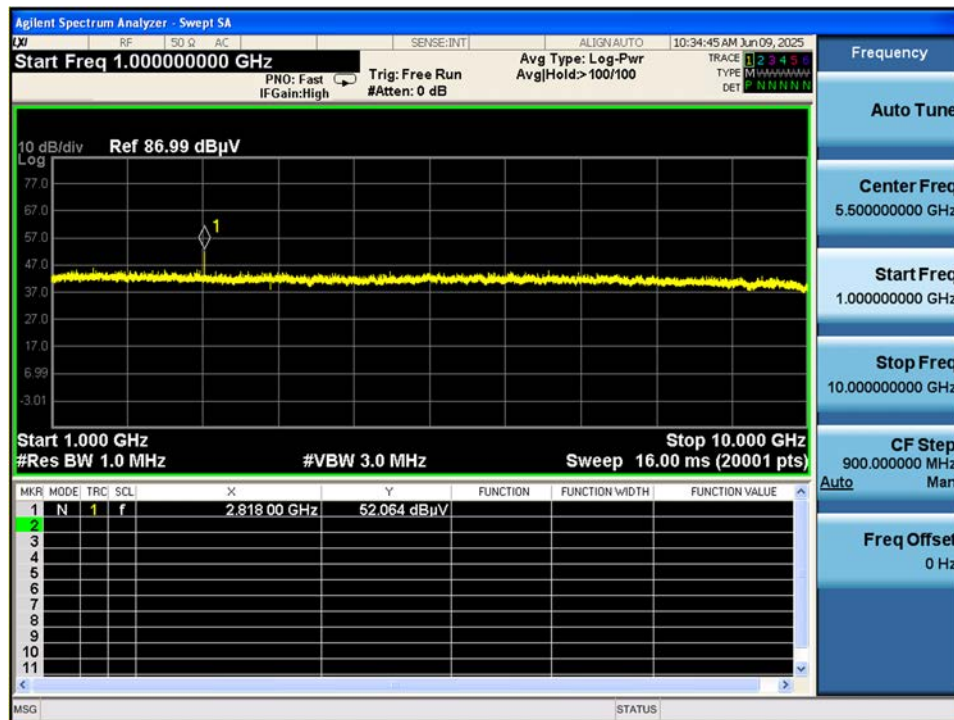
1. We have done horizontal and vertical polarization in detecting antenna.
2. Measure distance = 3 m
3. The amplitude of the spurious domain emission attenuated by more than 20 dB over the permissible value was not recorded according to ANSI C63.26, clause 5.1.1., c).
4. Test data were only the worst case.
5. Among the data of simultaneous and single band emission conditions, the single emission condition is the worst.

## Plot data of radiated spurious emissions

Uplink / NPSPAC, B/ILT; SMR



Downlink / NPSPAC, B/ILT; SMR



Note : Only the worst case plots for Radiated Spurious Emissions.

## 5.9. FREQUENCY STABILITY

### Test Requirements:

#### § 90.213 Frequency stability.

- (a) Unless noted elsewhere, transmitters used in the services governed by this part must have a minimum frequency stability as specified in the following table.

Table 1 to § 90.213(a)—Minimum Frequency Stability  
[Parts per million (ppm)]

| Frequency range (MHz) | Fixed and base stations | Mobile stations           |                              |
|-----------------------|-------------------------|---------------------------|------------------------------|
|                       |                         | Over 2 watts output power | 2 watts or less output power |
| Below 25              | 100                     | 100                       | 200                          |
| 25-50                 | 20                      | 20                        | 50                           |
| 72-76                 | 5                       |                           | 50                           |
| 150-174               | 5                       | 5                         | 50                           |
| 216-220               | 1.0                     |                           | 1.0                          |
| 220-222               | 0.1                     | 1.5                       | 1.5                          |
| 421-512               | 2.5                     | 5                         | 5                            |
| 806-809               | 1.0                     | 1.5                       | 1.5                          |
| 809-824               | 1.5                     | 2.5                       | 2.5                          |
| 851-854               | 1.0                     | 1.5                       | 1.5                          |
| 854-869               | 1.5                     | 2.5                       | 2.5                          |
| 896-901               | 0.1                     | 1.5                       | 1.5                          |
| 902-928               | 2.5                     | 2.5                       | 2.5                          |
| 902-928               | 2.5                     | 2.5                       | 2.5                          |
| 929-930               | 1.5                     |                           |                              |
| 935-940               | 0.1                     | 1.5                       | 1.5                          |
| 1427-1435             | 300                     | 300                       | 300                          |
| Above 2450            |                         |                           |                              |

### Test Procedures:

The measurement is performed in accordance with Section 5.6.3, 5.6.4 and 5.6.5 of ANSI C63.26.

#### 5.6.3 Procedure for frequency stability testing

Frequency stability is a measure of the frequency drift due to temperature and supply voltage variations, with reference to the frequency measured at +20 °C and rated supply voltage.

The operating carrier frequency shall be set up in accordance with the manufacturer's published operation and instruction manual prior to the commencement of these tests. No adjustment of any frequency determining circuit element shall be made subsequent to this initial set-up. Frequency stability is tested:

- a) At 10 °C intervals of temperatures between –30 °C and +50 °C at the manufacturer's rated supply voltage, and
- b) At +20 °C temperature and  $\pm 15\%$  supply voltage variations. If a product is specified to operate over a range of input voltage then the –15% variation is applied to the lowermost voltage and the +15% is applied to the uppermost voltage.

During the test all necessary settings, adjustments and control of the EUT have to be performed without disturbing the test environment, i.e., without opening the environmental chamber. The frequency stabilities can be maintained to a lesser temperature range provided that the transmitter is automatically inhibited from operating outside the lesser temperature range. For handheld equipment that is only capable of operating from internal batteries and the supply voltage cannot be varied, the frequency stability tests shall be performed at the nominal battery voltage and the battery end point voltage specified by the manufacturer. An external supply voltage can be used and set at the internal battery nominal voltage, and again at the battery operating end point voltage which shall be specified by the equipment manufacturer.

If an unmodulated carrier is not available, the mean frequency of a modulated carrier can be obtained by using a frequency counter with gating time set to an appropriately large multiple of bit periods (gating time depending on the required accuracy). Full details on the choice of values shall be included in the test report.

#### 5.6.4 Frequency stability over variations in temperature

- a) Supply the EUT with a nominal 60 Hz ac voltage, dc voltage, or install a new or fully charged battery in the EUT.
- b) If possible a dummy load should be connected to the EUT because an antenna near the metallic walls of an environmental test chamber could affect the output frequency of the EUT. If the EUT is equipped with a permanently attached, adjustable-length antenna, the EUT should be placed in the center of the chamber with the antenna adjusted to the shortest length possible.
- c) Turn on the EUT, and tune it to the center frequency of the operating band.
- d) Couple the transmitter output to the measuring instrument through a suitable attenuator and coaxial cable. If connection to the EUT output is not possible, make the measurement by connecting an antenna to the measuring instrument with a suitable length of coaxial cable and placing the measuring antenna near the EUT (e.g., 15 cm away).

NOTE—An instrument that has an adequate level of accuracy as specified by the procuring or regulatory authority is the recommended measuring instrument.

- e) Adjust the location of the measurement antenna and the controls on the measurement instrument to obtain a suitable signal level (i.e., a level that will not overload the measurement instrument, but is strong enough to allow measurement of the operating or fundamental frequency of the EUT). Adjust the detector bandwidth and span settings to achieve a resolution capable of accurate frequency measurements over the applicable frequency stability limits.
- f) Turn the EUT off, and place it inside the environmental temperature chamber. For devices that have oscillator heaters, energize only the heater circuit.
- g) Set the temperature control on the chamber to the Highest temperature specified in the regulatory requirements for the type of device, and allow the oscillator heater and the chamber temperature to stabilize. Unless otherwise instructed by the regulatory authority, this temperature should be 50 °C.
- h) While maintaining a constant temperature inside the environmental chamber, turn on the EUT and allow sufficient time for the EUT temperature to stabilize.
- i) Measure the frequency.
- j) Switch off the EUT, but do not switch off the oscillator heater.

- k) Lower the chamber temperature to the next level that is required by the standard and allow the temperature inside the chamber to stabilize. Unless otherwise instructed by the regulators, this temperature step should be 10 °C.
- l) Repeat step h) through step k) down to the lowest specified temperature. Unless otherwise instructed by the regulators, this temperature should be –30 °C. When the frequency stability limit is stated as being sufficient such that the fundamental emissions stay within the authorized bands of operation, a reference point shall be established at the applicable unwanted emissions limit using a RBW equal to the RBW required by the unwanted emissions specification of the applicable regulatory standard. These reference points measured using the lowest and Highest channel of operation shall be identified as  $f_L$  and  $f_H$  respectively. The worst-case frequency offset determined in the above methods shall be added or subtracted from the values of  $f_L$  and  $f_H$  and the resulting frequencies must remain within the band.
- m) Omitted

#### 5.6.5 Frequency stability when varying supply voltage

- a) Couple the transmitter output to the measuring instrument through a suitable attenuator and coaxial cable. If connection to the EUT output is not possible make the measurement by connecting an antenna to the measuring instrument with a suitable length of coaxial cable and placing the measuring antenna near the EUT (e.g., 15 cm away)
- b) Supply the EUT with nominal ac or dc voltage. The supply voltage shall be measured at the input to the cable normally provided with the equipment, or at the power supply terminals if cables are not normally provided. Effects on frequency of transmitter keying (except for broadcast transmitters) and any heating element cycling at the nominal supply voltage and at each extreme also shall be shown.
- c) Turn on the EUT, and couple its output to a frequency counter or other frequency-measuring instrument.
- d) Tune the EUT to the center frequency of the operating band. Adjust the location of the measurement antenna and the controls on the measurement instrument to obtain a suitable signal level (i.e., a level that will not overload the measurement instrument, but is strong enough to allow measurement of the operating or fundamental frequency of the EUT). Adjust the detector bandwidth and span settings to achieve a resolution capable of accurate frequency measurements over the applicable frequency stability limits.  
NOTE—An instrument that has an adequate level of accuracy as specified by the procuring or regulatory authority is the recommended measuring instrument.
- e) Measure the frequency.
- f) Unless otherwise specified, vary primary supply voltage from 85% to 115% of the nominal value for other than hand carried battery equipment.
- g) For hand carried, battery powered equipment, reduce the primary ac or dc supply voltage to the battery operating end point, which shall be specified by the manufacturer.
- h) Repeat the frequency measurement.  
NOTE—For band-edge compliance, it can be required to make these measurements at the low and High channel of the operating band.

**Note:** The results of the frequency stability test shown above the frequency deviation measured values are very small and similar trend for each port, so we are attached only the worst case data.

**Test Results(Uplink):**

| FirstNet |          | Reference: 200 VAC at 20°C Freq. = 793,000,000 Hz |            |           |          |
|----------|----------|---------------------------------------------------|------------|-----------|----------|
| Voltage  | Temp.    | Frequency                                         | Frequency  | Deviation | ppm      |
| (%)      | (°C)     | (Hz)                                              | Error (Hz) | (Hz)      |          |
| 100 %    | +20(Ref) | 793 000 006                                       | 5.817      | 0.000     | 0.00000  |
|          | -30      | 793 000 012                                       | 6.528      | 0.711     | 0.00090  |
|          | -20      | 793 000 013                                       | 6.855      | 1.038     | 0.00131  |
|          | -10      | 793 000 008                                       | 1.724      | -4.093    | -0.00516 |
|          | 0        | 793 000 015                                       | 9.467      | 3.650     | 0.00460  |
|          | +10      | 793 000 007                                       | 0.702      | -5.115    | -0.00645 |
|          | +30      | 793 000 009                                       | 2.912      | -2.905    | -0.00366 |
|          | +40      | 793 000 011                                       | 5.421      | -0.396    | -0.00050 |
|          | +50      | 793 000 012                                       | 5.774      | -0.043    | -0.00005 |
| 115 %    | +20      | 793 000 016                                       | 9.966      | 4.149     | 0.00523  |
| 85 %     | +20      | 793 000 008                                       | 2.085      | -3.732    | -0.00471 |

| Public Safety Narrowband |          | Reference: 200 VAC at 20°C Freq. = 802,000,000 Hz |            |           |          |
|--------------------------|----------|---------------------------------------------------|------------|-----------|----------|
| Voltage                  | Temp.    | Frequency                                         | Frequency  | Deviation | ppm      |
| (%)                      | (°C)     | (Hz)                                              | Error (Hz) | (Hz)      |          |
| 100 %                    | +20(Ref) | 802 000 004                                       | 4.384      | 0.000     | 0.00000  |
|                          | -30      | 802 000 006                                       | 1.262      | -3.122    | -0.00389 |
|                          | -20      | 802 000 012                                       | 7.527      | 3.143     | 0.00392  |
|                          | -10      | 802 000 010                                       | 5.768      | 1.384     | 0.00173  |
|                          | 0        | 802 000 013                                       | 8.396      | 4.012     | 0.00500  |
|                          | +10      | 802 000 008                                       | 3.229      | -1.155    | -0.00144 |
|                          | +30      | 802 000 005                                       | 0.541      | -3.843    | -0.00479 |
|                          | +40      | 802 000 014                                       | 9.759      | 5.375     | 0.00670  |
|                          | +50      | 802 000 008                                       | 3.246      | -1.138    | -0.00142 |
| 115 %                    | +20      | 802 000 010                                       | 5.917      | 1.533     | 0.00191  |
| 85 %                     | +20      | 802 000 006                                       | 1.320      | -3.064    | -0.00382 |

| NPSPAC  |          | Reference: 200 VAC at 20°C Freq. = 807,500,000 Hz |            |           |          |
|---------|----------|---------------------------------------------------|------------|-----------|----------|
| Voltage | Temp.    | Frequency                                         | Frequency  | Deviation | ppm      |
| (%)     | (°C)     | (Hz)                                              | Error (Hz) | (Hz)      |          |
| 100 %   | +20(Ref) | 807 500 010                                       | 9.923      | 0.000     | 0.00000  |
|         | -30      | 807 500 013                                       | 2.955      | -6.968    | -0.00863 |
|         | -20      | 807 500 019                                       | 8.913      | -1.010    | -0.00125 |
|         | -10      | 807 500 010                                       | 0.304      | -9.619    | -0.01191 |
|         | 0        | 807 500 019                                       | 9.267      | -0.656    | -0.00081 |
|         | +10      | 807 500 016                                       | 5.940      | -3.983    | -0.00493 |
|         | +30      | 807 500 010                                       | 0.029      | -9.894    | -0.01225 |
|         | +40      | 807 500 010                                       | 0.283      | -9.640    | -0.01194 |
|         | +50      | 807 500 017                                       | 7.084      | -2.839    | -0.00352 |
| 115 %   | +20      | 807 500 018                                       | 8.070      | -1.853    | -0.00229 |
| 85 %    | +20      | 807 500 018                                       | 7.859      | -2.064    | -0.00256 |

| B/ILT; SMR |          | Reference: 200 VAC at 20°C Freq. = 812,500,000 Hz |            |           |          |
|------------|----------|---------------------------------------------------|------------|-----------|----------|
| Voltage    | Temp.    | Frequency                                         | Frequency  | Deviation | ppm      |
| (%)        | (°C)     | (Hz)                                              | Error (Hz) | (Hz)      |          |
| 100 %      | +20(Ref) | 812 500 009                                       | 8.641      | 0.000     | 0.00000  |
|            | -30      | 812 500 016                                       | 7.540      | -1.101    | -0.00136 |
|            | -20      | 812 500 018                                       | 9.112      | 0.470     | 0.00058  |
|            | -10      | 812 500 010                                       | 1.843      | -6.798    | -0.00837 |
|            | 0        | 812 500 010                                       | 0.971      | -7.670    | -0.00944 |
|            | +10      | 812 500 015                                       | 6.059      | -2.582    | -0.00318 |
|            | +30      | 812 500 010                                       | 1.753      | -6.888    | -0.00848 |
|            | +40      | 812 500 012                                       | 3.001      | -5.640    | -0.00694 |
|            | +50      | 812 500 014                                       | 5.072      | -3.569    | -0.00439 |
| 115 %      | +20      | 812 500 009                                       | 0.137      | -8.504    | -0.01047 |
| 85 %       | +20      | 812 500 017                                       | 7.874      | -0.767    | -0.00094 |

**Test Results(Downlink):**

| FirstNet |          | Reference: 200 VAC at 20°C Freq. = 763,000,000 Hz |            |           |          |
|----------|----------|---------------------------------------------------|------------|-----------|----------|
| Voltage  | Temp.    | Frequency                                         | Frequency  | Deviation | ppm      |
| (%)      | (°C)     | (Hz)                                              | Error (Hz) | (Hz)      |          |
| 100 %    | +20(Ref) | 763 000 010                                       | 9.803      | 0.000     | 0.00000  |
|          | -30      | 763 000 010                                       | 0.148      | -9.655    | -0.01265 |
|          | -20      | 763 000 016                                       | 5.922      | -3.881    | -0.00509 |
|          | -10      | 763 000 019                                       | 8.714      | -1.089    | -0.00143 |
|          | 0        | 763 000 012                                       | 2.510      | -7.293    | -0.00956 |
|          | +10      | 763 000 019                                       | 9.585      | -0.219    | -0.00029 |
|          | +30      | 763 000 018                                       | 8.602      | -1.201    | -0.00157 |
|          | +40      | 763 000 013                                       | 3.047      | -6.756    | -0.00885 |
|          | +50      | 763 000 016                                       | 6.492      | -3.311    | -0.00434 |
| 115 %    | +20      | 763 000 017                                       | 7.184      | -2.619    | -0.00343 |
| 85 %     | +20      | 763 000 017                                       | 6.948      | -2.856    | -0.00374 |

| Public Safety Narrowband |          | Reference: 200 VAC at 20°C Freq. = 772,000,000 Hz |            |           |          |
|--------------------------|----------|---------------------------------------------------|------------|-----------|----------|
| Voltage                  | Temp.    | Frequency                                         | Frequency  | Deviation | ppm      |
| (%)                      | (°C)     | (Hz)                                              | Error (Hz) | (Hz)      |          |
| 100 %                    | +20(Ref) | 772 500 007                                       | 7.475      | 0.000     | 0.00000  |
|                          | -30      | 772 500 010                                       | 2.595      | -4.880    | -0.00632 |
|                          | -20      | 772 500 012                                       | 4.211      | -3.264    | -0.00423 |
|                          | -10      | 772 500 008                                       | 0.912      | -6.563    | -0.00850 |
|                          | 0        | 772 500 011                                       | 3.361      | -4.115    | -0.00533 |
|                          | +10      | 772 500 010                                       | 2.142      | -5.333    | -0.00690 |
|                          | +30      | 772 500 015                                       | 7.939      | 0.464     | 0.00060  |
|                          | +40      | 772 500 017                                       | 9.469      | 1.994     | 0.00258  |
|                          | +50      | 772 500 012                                       | 4.911      | -2.564    | -0.00332 |
| 115 %                    | +20      | 772 500 017                                       | 9.212      | 1.737     | 0.00225  |
| 85 %                     | +20      | 772 500 008                                       | 0.256      | -7.219    | -0.00934 |

| NPSPAC  |          | Reference: 200 VAC at 20°C Freq. = 852,500,000 Hz |            |           |          |
|---------|----------|---------------------------------------------------|------------|-----------|----------|
| Voltage | Temp.    | Frequency                                         | Frequency  | Deviation | ppm      |
| (%)     | (°C)     | (Hz)                                              | Error (Hz) | (Hz)      |          |
| 100 %   | +20(Ref) | 852 500 005                                       | 4.792      | 0.000     | 0.00000  |
|         | -30      | 852 500 006                                       | 1.562      | -3.230    | -0.00379 |
|         | -20      | 852 500 013                                       | 8.095      | 3.303     | 0.00388  |
|         | -10      | 852 500 013                                       | 7.873      | 3.081     | 0.00361  |
|         | 0        | 852 500 010                                       | 5.561      | 0.769     | 0.00090  |
|         | +10      | 852 500 007                                       | 1.716      | -3.075    | -0.00361 |
|         | +30      | 852 500 008                                       | 2.721      | -2.070    | -0.00243 |
|         | +40      | 852 500 005                                       | 0.140      | -4.652    | -0.00546 |
|         | +50      | 852 500 010                                       | 4.841      | 0.049     | 0.00006  |
| 115 %   | +20      | 852 500 006                                       | 0.762      | -4.030    | -0.00473 |
| 85 %    | +20      | 852 500 011                                       | 6.113      | 1.321     | 0.00155  |

| B/ILT; SMR |          | Reference: 200 VAC at 20°C Freq. = 857,500,000 Hz |            |           |          |
|------------|----------|---------------------------------------------------|------------|-----------|----------|
| Voltage    | Temp.    | Frequency                                         | Frequency  | Deviation | ppm      |
| (%)        | (°C)     | (Hz)                                              | Error (Hz) | (Hz)      |          |
| 100 %      | +20(Ref) | 857 500 003                                       | 2.991      | 0.000     | 0.00000  |
|            | -30      | 857 500 011                                       | 8.074      | 5.083     | 0.00593  |
|            | -20      | 857 500 013                                       | 9.691      | 6.699     | 0.00781  |
|            | -10      | 857 500 004                                       | 1.290      | -1.702    | -0.00198 |
|            | 0        | 857 500 007                                       | 3.669      | 0.678     | 0.00079  |
|            | +10      | 857 500 011                                       | 8.005      | 5.014     | 0.00585  |
|            | +30      | 857 500 011                                       | 8.338      | 5.346     | 0.00623  |
|            | +40      | 857 500 003                                       | 0.288      | -2.703    | -0.00315 |
|            | +50      | 857 500 009                                       | 6.037      | 3.046     | 0.00355  |
| 115 %      | +20      | 857 500 004                                       | 0.608      | -2.384    | -0.00278 |
| 85 %       | +20      | 857 500 003                                       | 0.055      | -2.936    | -0.00342 |

## 6. Annex A\_EUT AND TEST SETUP PHOTO

Please refer to test setup photo file no. as follows;

| No. | Description         |
|-----|---------------------|
| 1   | HCT-RF-2507-FC004-P |