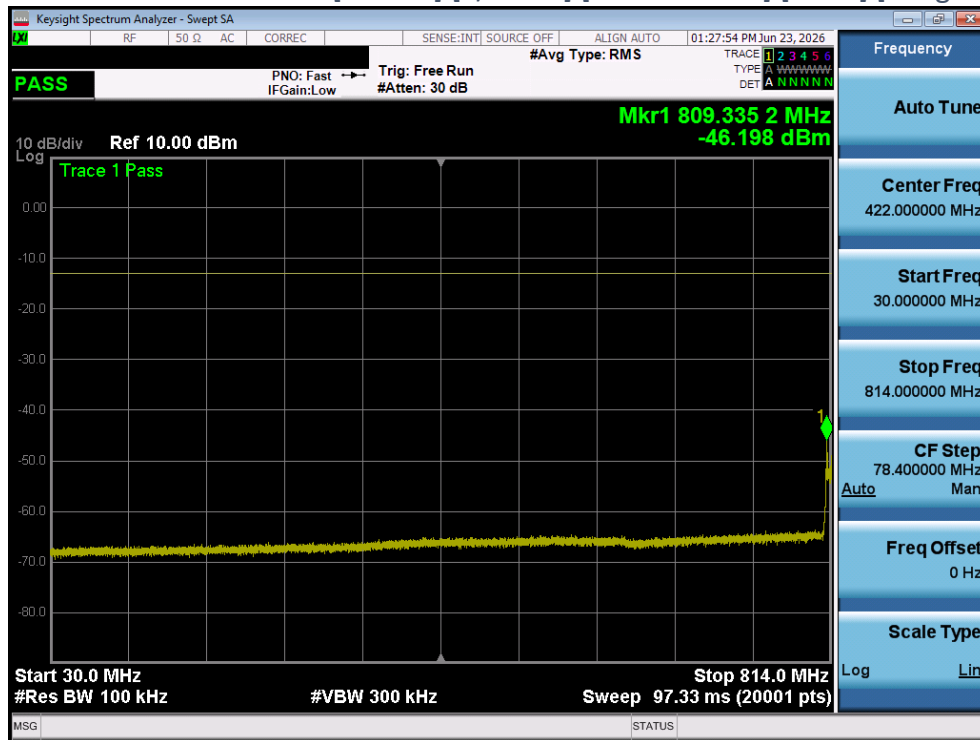


Plot 4-61 CSE Plot - LTE Band26 - [15MHz] [1/36 RB] [Mid Channel] [QPSK] [Range C] [Ant 1]



Plot 4-62 CSE Plot - LTE Band26 - [15MHz] [1/36 RB] [Mid Channel] [QPSK] [Range A] [Ant 2]



Plot 4-63 CSE Plot - LTE Band26 - [15MHz] [1/36 RB] [High Channel] [QPSK] [Range B] [Ant 2]



Plot 4-64 CSE Plot - LTE Band26 - [15MHz] [1/36 RB] [High Channel] [QPSK] [Range B] [Ant 2]



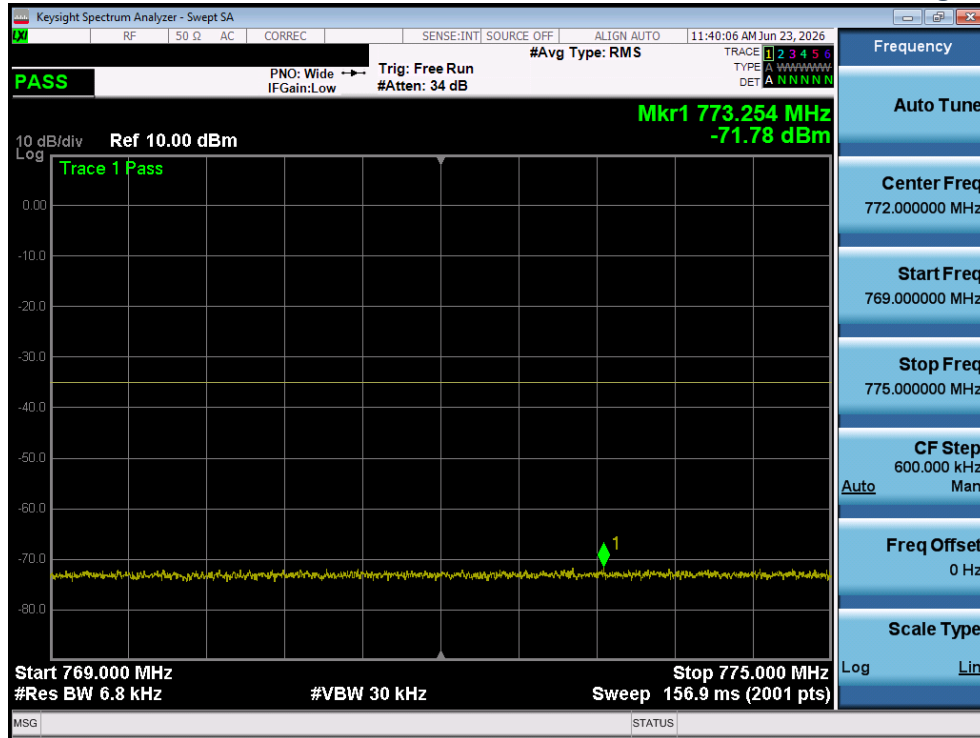
**Table 4-13 Conducted Spurious Emissions Data LTE Band 14 Ant1**

| Band        | Band Width [MHz] | Channel | Frequency [MHz] | RB Size/Offset | Modulation | Range | Level [dBm] | Limit [dBm] | Margin [dB] |
|-------------|------------------|---------|-----------------|----------------|------------|-------|-------------|-------------|-------------|
| LTE Band 14 | 10               | Mid     | 793             | 50/0           | QPSK       | A     | -64.09      | -35         | -29.09      |
|             |                  |         |                 |                |            | B     | -71.78      | -35         | -36.78      |
|             |                  |         |                 |                |            | C     | -44.26      | -35         | -9.26       |
|             |                  |         |                 |                |            | D     | -46.28      | -35         | -11.28      |
|             |                  |         |                 |                |            | E     | -38.95      | -13         | -25.95      |

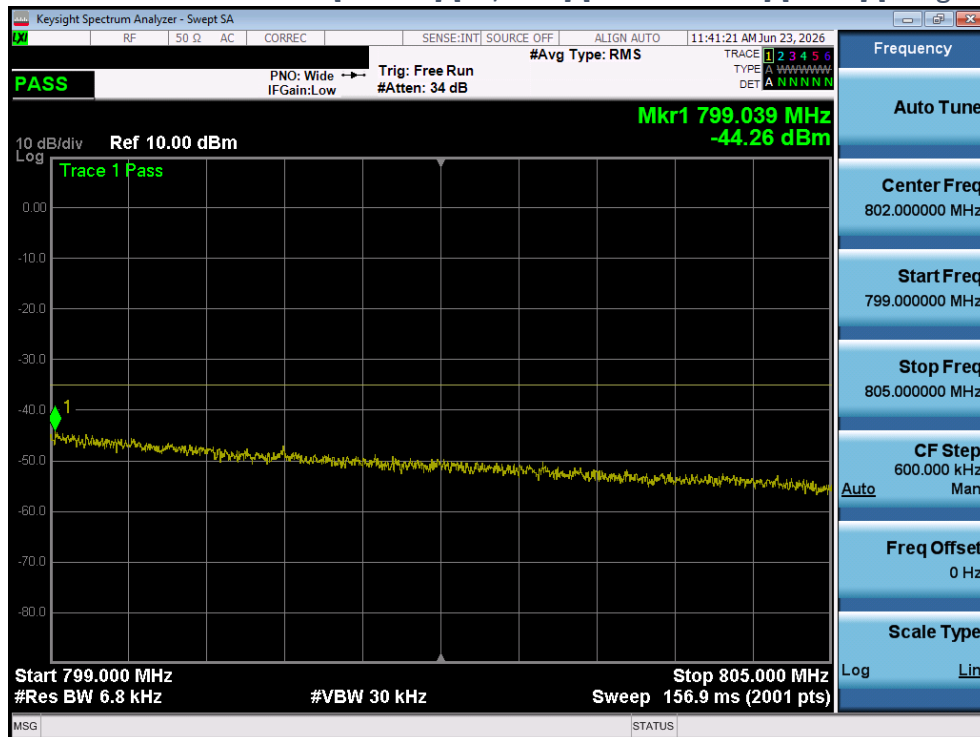
**Plot 4-65 CSE Plot - LTE Band14 - [10MHz] [50/0 RB] [Mid Channel ] [QPSK] [Range A] [Ant 1]**



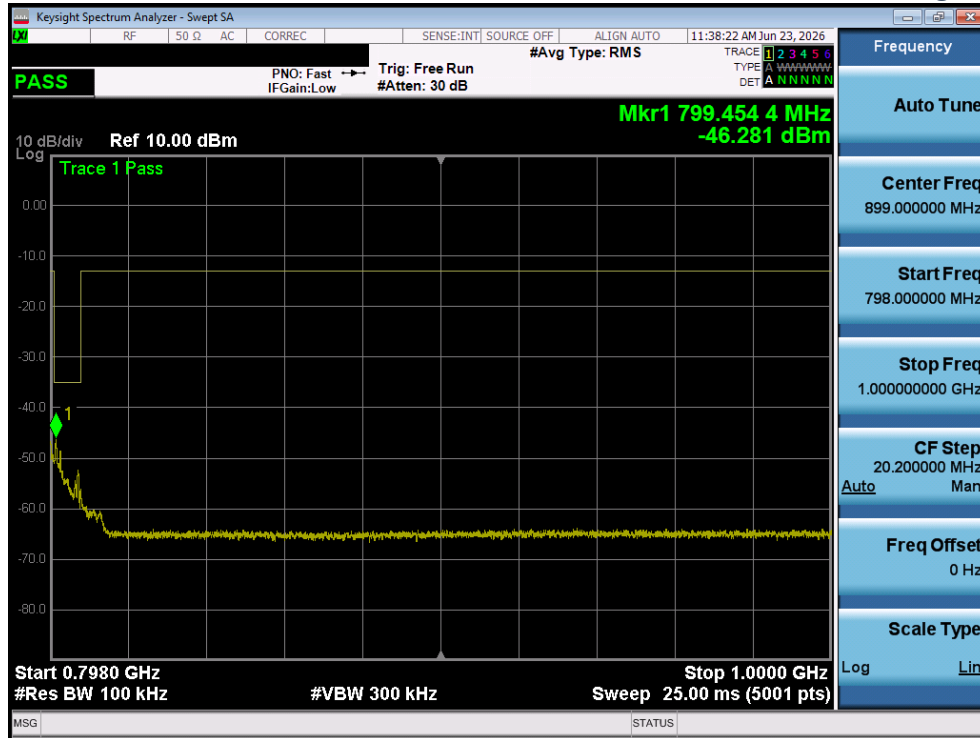
Plot 4-66 CSE Plot - LTE Band14 - [10MHz] [50/0 RB] [Mid Channel] [QPSK] [Range B] [Ant 1]



Plot 4-67 CSE Plot - LTE Band14 - [10MHz] [50/0 RB] [Mid Channel] [QPSK] [Range C] [Ant 1]



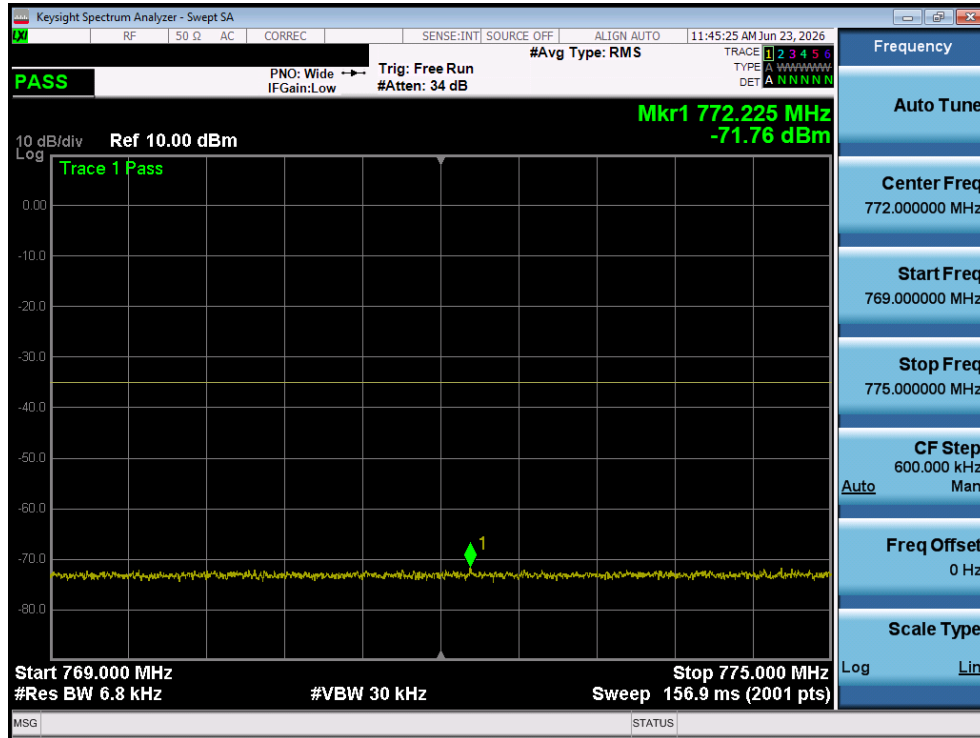
Plot 4-68 CSE Plot - LTE Band14 - [10MHz] [50/0 RB] [Mid Channel] [QPSK] [Range D] [Ant 1]



Plot 4-69 CSE Plot - LTE Band14 - [10MHz] [50/0 RB] [Mid Channel] [QPSK] [Range E] [Ant 1]



Plot 4-70 CSE Plot - LTE Band14 - [5MHz] 25/0 RB [Low Channel] [QPSK] [Ant 1]



Plot 4-71 CSE Plot - LTE Band14 - [5MHz] [25/0 RB] [High Channel] [QPSK] [Ant 1]

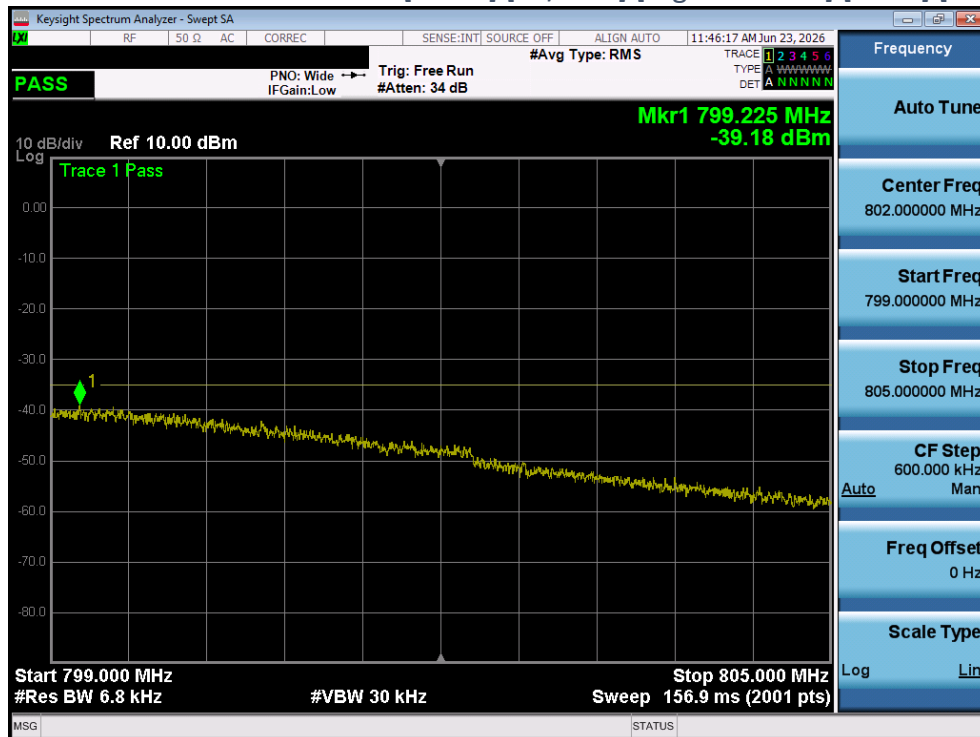
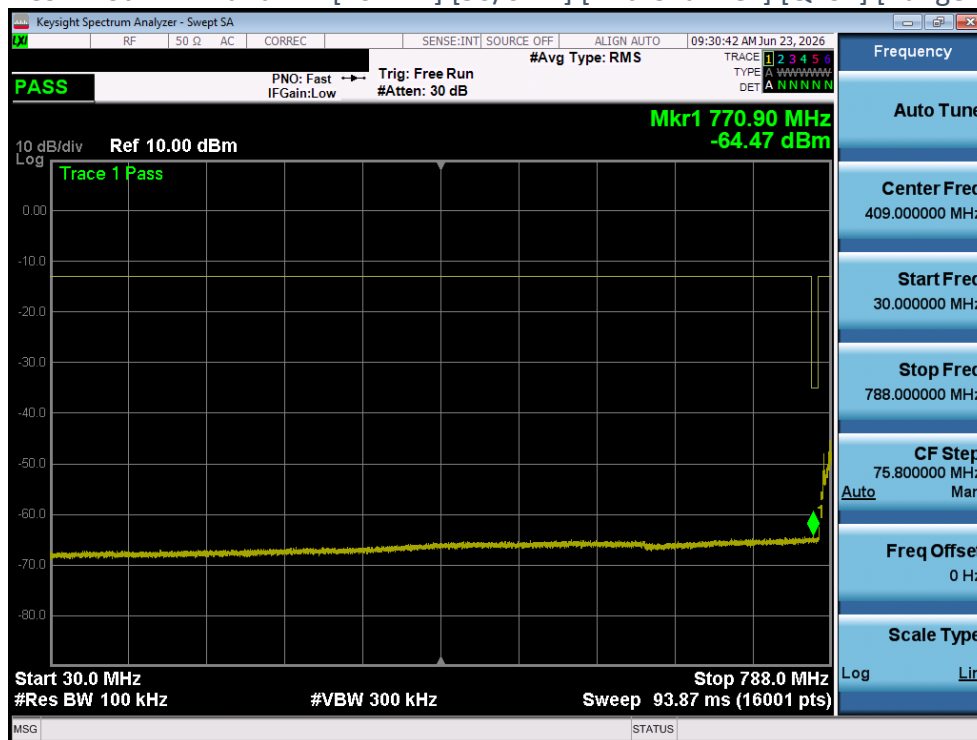


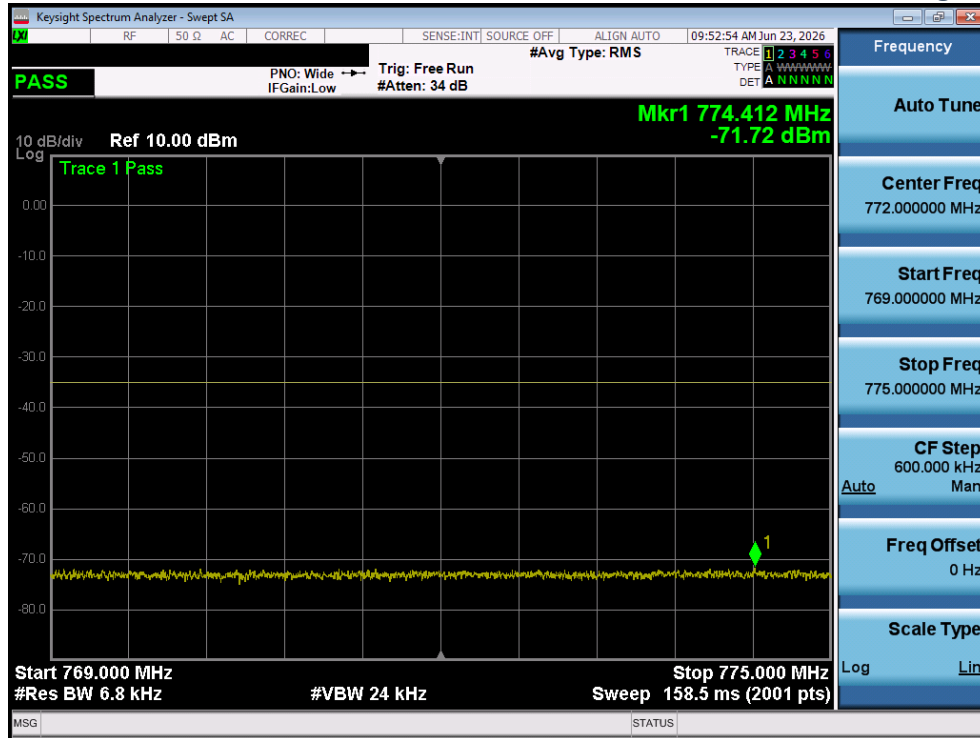
Table 4-14 Conducted Spurious Emissions Data LTE Band 14 Ant2

| Band        | Band Width [MHz] | Channel | Frequency [MHz] | RB Size/Offset | Modulation | Range | Level [dBm] | Limit [dBm] | Margin [dB] |
|-------------|------------------|---------|-----------------|----------------|------------|-------|-------------|-------------|-------------|
| LTE Band 14 | 10               | Mid     | 793             | 50/0           | QPSK       | A     | -64.47      | -35         | -29.47      |
|             |                  |         |                 |                |            | B     | -71.72      | -35         | -36.72      |
|             |                  |         |                 |                |            | C     | -45.09      | -35         | -10.09      |
|             |                  |         |                 |                |            | D     | -47.92      | -35         | -12.92      |
|             |                  |         |                 |                |            | E     | -38.96      | -13         | -25.96      |

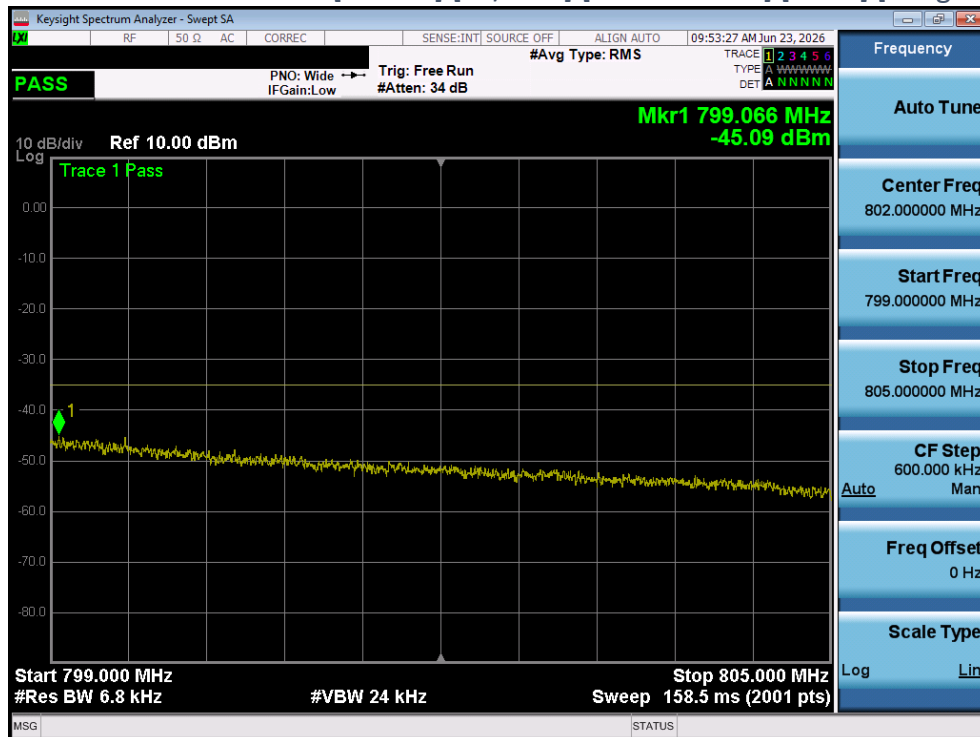
Plot 4-72 CSE Plot - LTE Band14 - [10MHz] [50/0 RB] [Mid Channel] [QPSK] [Range A] [Ant 2]



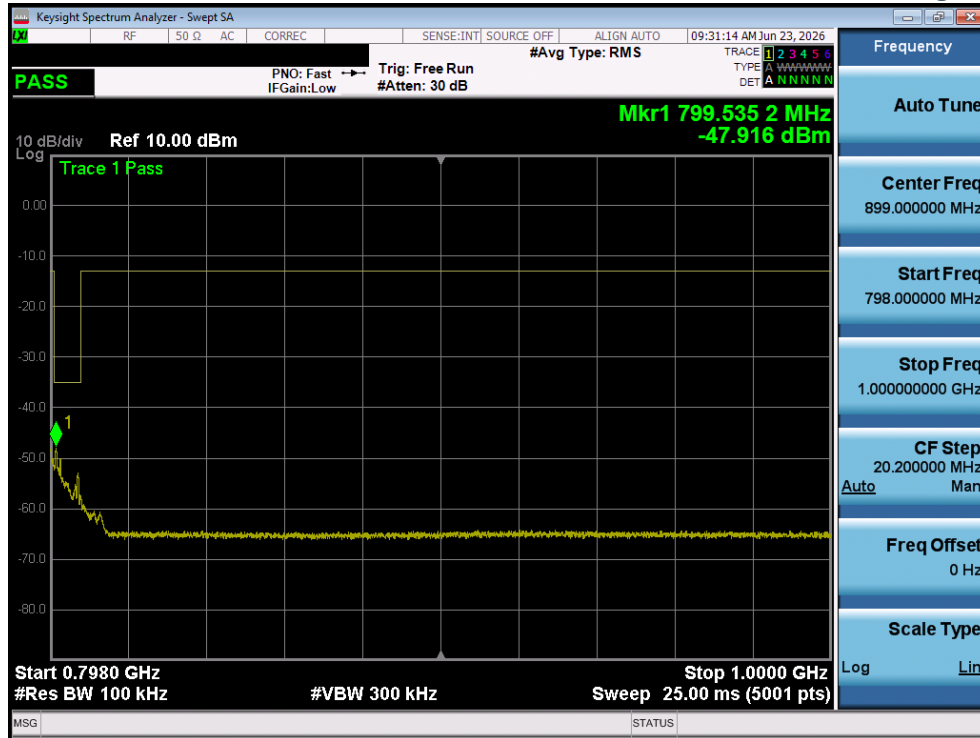
Plot 4-73 CSE Plot - LTE Band14 - [10MHz] [50/0 RB] [Mid Channel] [QPSK] [Range B] [Ant 2]



Plot 4-74 CSE Plot - LTE Band14 - [10MHz] [50/0 RB] [Mid Channel] [QPSK] [Range C] [Ant 2]



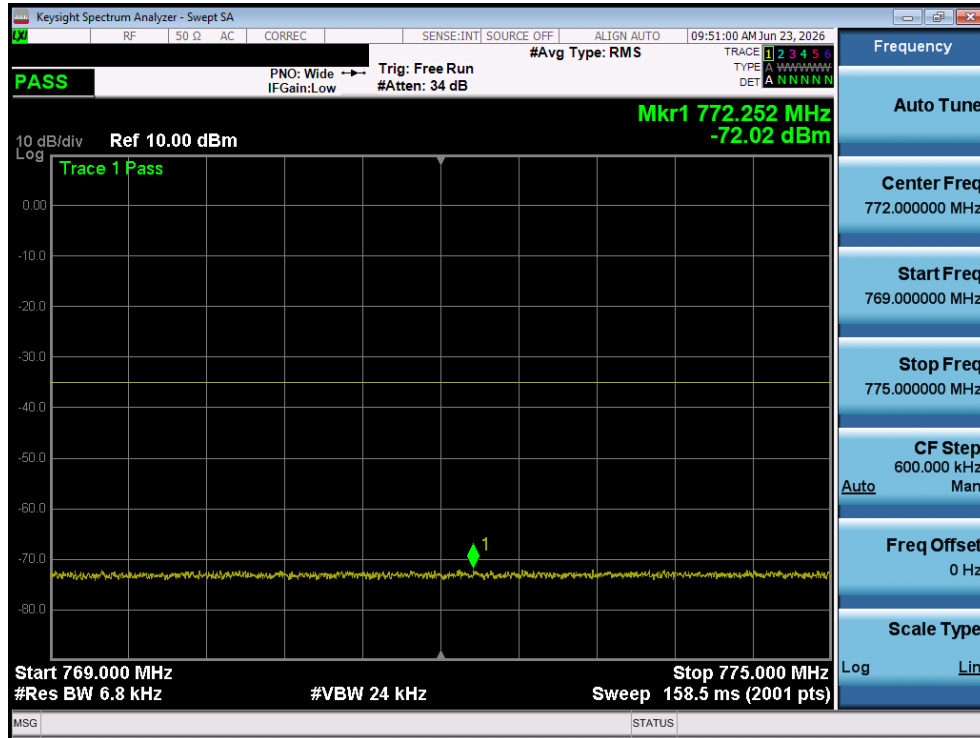
Plot 4-75 CSE Plot - LTE Band14 - [10MHz] [50/0 RB] [Mid Channel] [QPSK] [Range D] [Ant 2]



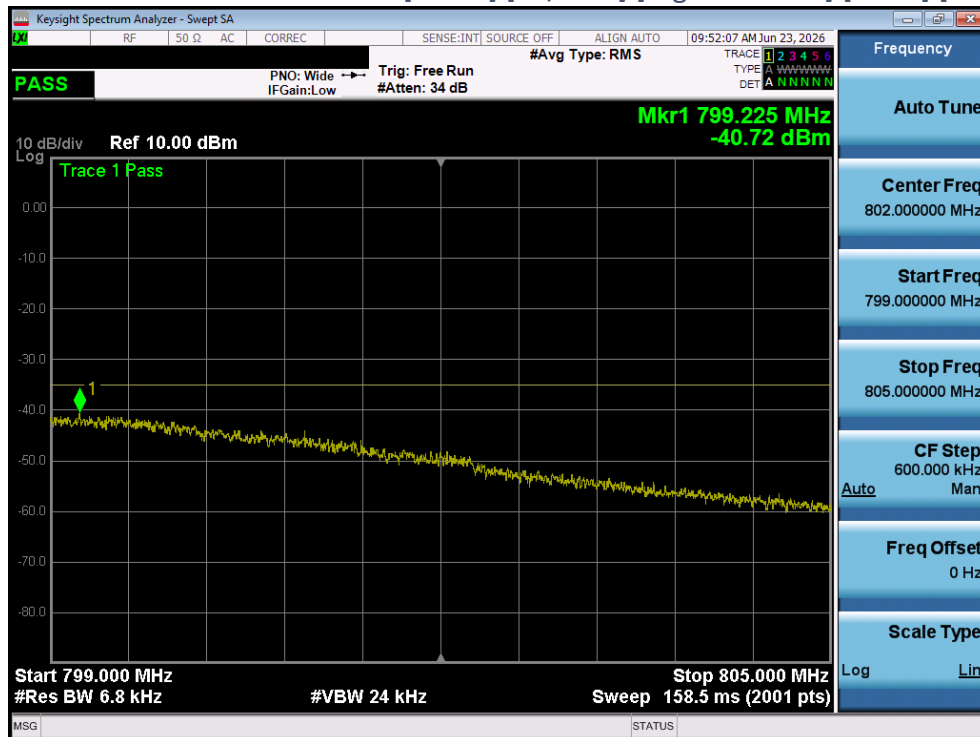
Plot 4-76 CSE Plot - LTE Band14 - [10MHz] [50/0 RB] [Mid Channel] [QPSK] [Range E] [Ant 2]



Plot 4-77 CSE Plot - LTE Band14 - [5MHz] [25/0 RB] [Low Channel] [QPSK] [Ant 2]



Plot 4-78 CSE Plot - LTE Band14 - [5MHz] [25/0 RB] [High Channel] [QPSK] [Ant 2]



## 4.8. Frequency Stability

### 4.8.1. Regulatory Limits

#### §Part. 90.213

The carrier frequency shall not depart from the reference frequency, in excess of  $\pm 2.5$  ppm for mobile stations

### 4.8.2. Test Method

ANSI C63.26-2015, clause 5.6

### 4.8.3. Test Procedure

The call simulator was used to control the EUT.

The procedure for this method is follows:

- a) Place the test sample (EUT) inside the temperature chamber.
- b) Reference Measurement - Set the chamber to  $+20^{\circ}\text{C}$  and wait until both the chamber and the EUT internal components are completely stabilized under the nominal voltage condition.
- c) Connect the dummy load provided by the client and perform the measurement at the battery operating end point voltage.
- d) High-Temperature - increase the chamber temperature to  $+50^{\circ}\text{C}$ .
- e) Incremental Temperature - lower the chamber temperature in  $10^{\circ}\text{C}$  ( $+50^{\circ}\text{C} \sim -30^{\circ}\text{C}$ )

## Test Note

- ✓ The supply voltage was varied using the dummy load provided by the customer, and the battery operating end point voltage was verified.
- ✓ Sufficient time was allowed for the EUT to stabilize under all temperature conditions.
- ✓ Frequency stability was evaluated at both the low and high operating channels to verify that the transmitter remains within the authorized frequency block across the operating frequency range.
- ✓ Nominal voltage – 3.89 VDC, Endpoint – 2.85 VDC
- ✓ For the frequency stability measurement, Also the OBW function of the spectrum analyzer was used.

#### 4.8.4. Test Results

Table 4-15 Frequency Stability Data LTE Band 26

| Band        | Channel | Voltage Condition | Temp [°C] | Frequency [Hz] | Dev [Hz] | Dev [ppm] | Limit [ppm] |
|-------------|---------|-------------------|-----------|----------------|----------|-----------|-------------|
| LTE Band 26 | Mid     | Nominal           | +50       | 819,000,019    | -8.54    | -0.010    | 2.5         |
|             |         |                   | +40       | 819,000,022    | -6.25    | -0.008    | 2.5         |
|             |         |                   | +30       | 819,000,017    | -11.26   | -0.014    | 2.5         |
|             |         |                   | +20       | 819,000,028    | 0.00     | 0.000     | 2.5         |
|             |         |                   | +10       | 819,000,019    | -8.88    | -0.011    | 2.5         |
|             |         |                   | 0         | 819,000,023    | -4.95    | -0.006    | 2.5         |
|             |         |                   | -10       | 819,000,026    | -2.12    | -0.003    | 2.5         |
|             |         |                   | -20       | 819,000,024    | -3.99    | -0.005    | 2.5         |
|             |         |                   | -30       | 819,000,026    | -1.58    | -0.002    | 2.5         |
|             |         | Endpoint          | +20       | 819,000,037    | 8.96     | 0.011     | 2.5         |

\*Note - Temp '+20°C' condition is reference

**Table 4-16 Frequency Stability Data LTE Band 14**

| Band        | Channel | Voltage Condition | Temp [°C] | Frequency [Hz] | Dev [Hz] | Dev [ppm] | Limit [ppm] |
|-------------|---------|-------------------|-----------|----------------|----------|-----------|-------------|
| LTE Band 14 | Low     | Nominal           | +50       | 787,999,974    | -26.18   | -0.033    | 2.5         |
|             |         |                   | +40       | 787,999,985    | -14.54   | -0.018    | 2.5         |
|             |         |                   | +30       | 787,999,992    | -8.25    | -0.010    | 2.5         |
|             |         |                   | +20       | 788,000,000    | 0.00     | 0.000     | 2.5         |
|             |         |                   | +10       | 787,999,990    | -9.54    | -0.012    | 2.5         |
|             |         |                   | 0         | 787,999,997    | -3.23    | -0.004    | 2.5         |
|             |         |                   | -10       | 788,000,003    | 2.88     | 0.004     | 2.5         |
|             |         |                   | -20       | 788,000,008    | 7.98     | 0.010     | 2.5         |
|             |         |                   | -30       | 788,000,016    | 15.65    | 0.020     | 2.5         |
|             |         | Endpoint          | +20       | 788,000,004    | 4.45     | 0.006     | 2.5         |
|             | Channel | Voltage Condition | Temp [°C] | Frequency [Hz] | Dev [Hz] | Dev [ppm] | Limit [ppm] |
|             | High    | Nominal           | +50       | 798,000,010    | 9.57     | 0.012     | 2.5         |
|             |         |                   | +40       | 798,000,006    | 6.05     | 0.008     | 2.5         |
|             |         |                   | +30       | 798,000,006    | 5.65     | 0.007     | 2.5         |
|             |         |                   | +20       | 798,000,000    | 0.00     | 0.000     | 2.5         |
|             |         |                   | +10       | 798,000,015    | 15.44    | 0.019     | 2.5         |
|             |         |                   | 0         | 798,000,011    | 11.28    | 0.014     | 2.5         |
|             |         |                   | -10       | 797,999,990    | -9.95    | -0.012    | 2.5         |
|             |         |                   | -20       | 797,999,985    | -15.23   | -0.019    | 2.5         |
|             |         |                   | -30       | 798,000,007    | 6.85     | 0.009     | 2.5         |
|             |         | Endpoint          | +20       | 798,000,007    | 7.09     | 0.009     | 2.5         |

\*Note - Temp '+20°C' condition is reference

## 5. Radiated Test Results

### 5.1. Test Configuration

#### Radiated Test Facilities & Setup

Radiated emissions testing was conducted in an indoor 3-meter semi-anechoic chamber (SAC). For all frequency ranges, the turntable was rotated 360° and the receive antenna height was varied from 1 m to 4 m to maximize emissions. The specific test setups and calibrated, linearly polarized antennas utilized are as follows:

- 9 kHz to 30 MHz : DUT height at 0.8 m / Active Loop Antenna
- 30 MHz to 1 GHz : DUT height at 0.8 m / No floor absorbers / Broadband Bi-log Antenna
- 1 GHz to 18 GHz : DUT height at 1.5 m / Floor absorbers deployed / Broadband Double-Ridge Horn Antenna
- Above 18 GHz : DUT height at 1.5 m / Floor absorbers deployed / Standard Gain Horn Antenna

#### Test Orientations

The DUT was investigated in three orthogonal orientations (X, Y, and Z) for each band. Since the equipment transmits below 10 GHz, Radiated Spurious Emissions testing was performed from 9 kHz up to the lower of the tenth harmonic of the highest fundamental frequency or 40 GHz. Testing from 1 GHz to 18 GHz was performed on the low, mid, and high channels. Testing below 1 GHz and above 18 GHz was conducted only under the worst-case configuration. In accordance with ANSI C63.26, measurement results for the 9 kHz to 30 MHz range and frequencies above 18 GHz are included in the report only when emissions are detected within 20 dB of the applicable limit.



Figure 5-1 Three orthogonal orientations.

Radiated emissions were captured using automated test software 'NGTL ATE' Ver. 0.00.

## 5.2. Radiated Measurement Setup

Figure 5-2 Radiated Measurement Setup Below 30 MHz

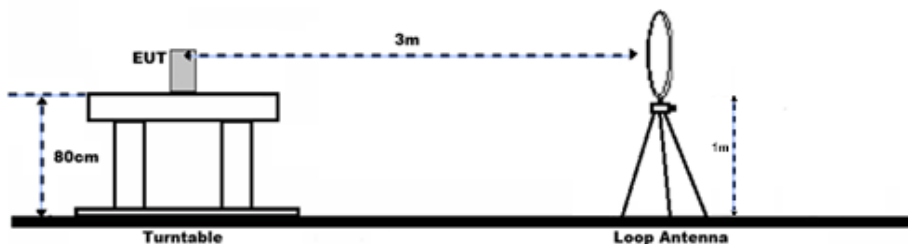


Figure 5-3 Radiated Measurement Setup Below 1GHz

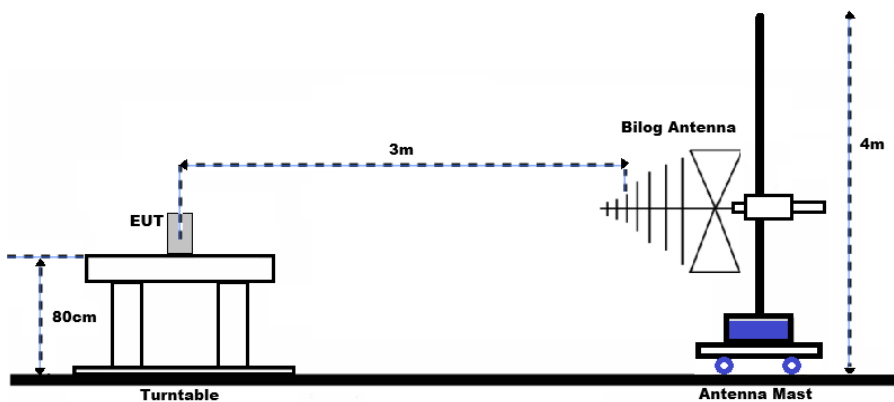
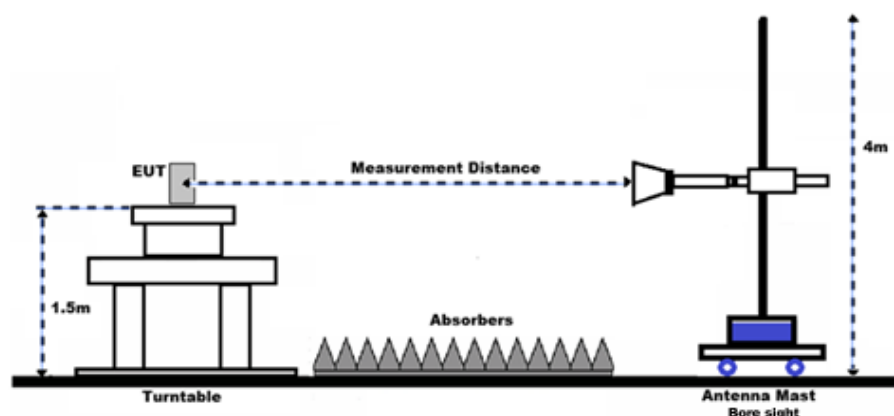


Figure 5-4 Radiated Measurement Setup Above 1GHz



## 5.3. Radiated Measurement Sample

Serial Number(s) :

ZF50735M, ZEE0154M, ZDR0217M

## 5.4. Radiated Power

### 5.4.1. Regulatory Limit

§ Part 90.542(a)(7)

Portable stations (hand-held devices) transmitting in the 758-768 MHz band and the 788-798 MHz band are limited to 3 watts ERP.

### 5.4.2. Test Method

ANSI C63.26 – 2015, clause 5.2.4.2,

### 5.4.3. Test Procedure

The procedure for Average measurement is follows:

- e) Connect the power sensor to the EMI receiver, and then perform zeroing and calibration.
- f) Connect the DUT to a wideband gated RF power sensor.
- g) Configure the DUT to transmit at its maximum power control level.
- h) Record the maximum power level
- i) When the burst duty cycle is below 98%, a trigger/gate is utilized to ensure power is measured only during active full-power transmission bursts.

## **Test Note**

- ✓ For this test, substitution measurements were performed in a 3m semi-anechoic chamber that meets both normalized site attenuation (NSA) and SVWSR requirements.
- ✓ For the test in this section, a power sensor was connected to the EMI receiver. Signal maximizing was performed using the receiver, while the power measurement was conducted using the sensor. A splitter was placed at the input of the receiver to distribute the signal to both the receiver and the sensor, and the resulting loss was compensated as an offset in the power sensor.

### 5.4.5. Test Results

Table 5-1 Effective Radiated Power (ERP) Data LTE Band 14 – ANT 1

| BW<br>[MHz] | Modulation | Ant.<br>Pol. | Antenna<br>Height<br>[m] | Turntable<br>Azimuth<br>[deg °] | RB Size | RB Offset | Frequency [MHz] / Earfcn / ERP [dBm] |       |       | ERP Limit | Margin at<br>Max Power<br>[dB] |
|-------------|------------|--------------|--------------------------|---------------------------------|---------|-----------|--------------------------------------|-------|-------|-----------|--------------------------------|
|             |            |              |                          |                                 |         |           | 793                                  |       |       |           |                                |
|             |            |              |                          |                                 |         |           | 23330                                |       |       |           |                                |
| 10          | QPSK       | V            | 1.45                     | 74                              | 1       | 0         | 19.95                                |       |       | 34.77     | -14.82                         |
|             |            | V            | 1.45                     | 74                              | 1       | 25        | 19.97                                |       |       |           | -14.80                         |
|             |            | V            | 1.45                     | 76                              | 1       | 49        | 20.34                                |       |       |           | -14.43                         |
|             |            | V            | 1.45                     | 77                              | 50      | 0         | 18.74                                |       |       |           | -16.03                         |
|             | 16QAM      | V            | 1.45                     | 74                              | 1       | 0         | 19.06                                |       |       |           | -15.71                         |
|             |            | V            | 1.45                     | 74                              | 1       | 25        | 19.08                                |       |       |           | -15.69                         |
|             |            | V            | 1.45                     | 76                              | 1       | 49        | 19.45                                |       |       |           | -15.32                         |
|             |            | V            | 1.45                     | 77                              | 50      | 0         | 18.16                                |       |       |           | -16.61                         |
| BW<br>[MHz] | Modulation | Ant.<br>Pol. | Antenna<br>Height<br>[m] | Turntable<br>Azimuth<br>[deg °] | RB Size | RB Offset | Frequency [MHz] / Earfcn / ERP [dBm] |       |       | ERP Limit | Margin at<br>Max Power<br>[dB] |
|             |            |              |                          |                                 |         |           | 790.5                                | 793   | 795.5 |           |                                |
|             |            |              |                          |                                 |         |           | 23305                                | 23330 | 23355 |           |                                |
| 5           | QPSK       | V            | 1.45                     | 74                              | 1       | 0         | 19.88                                | 19.91 | 19.89 | 34.77     | -14.86                         |
|             |            | V            | 1.45                     | 74                              | 1       | 12        | 19.92                                | 20.02 | 19.94 |           | -14.75                         |
|             |            | V            | 1.45                     | 76                              | 1       | 24        | 20.41                                | 20.40 | 20.31 |           | -14.36                         |
|             |            | V            | 1.45                     | 77                              | 25      | 0         | 18.77                                | 18.72 | 18.66 |           | -16.00                         |
|             | 16QAM      | V            | 1.45                     | 74                              | 1       | 0         | 19.16                                | 19.14 | 19.07 |           | -15.61                         |
|             |            | V            | 1.45                     | 74                              | 1       | 12        | 19.14                                | 19.37 | 18.95 |           | -15.40                         |
|             |            | V            | 1.45                     | 76                              | 1       | 24        | 19.54                                | 19.66 | 19.63 |           | -15.11                         |
|             |            | V            | 1.45                     | 77                              | 25      | 0         | 18.23                                | 18.16 | 18.07 |           | -16.54                         |

Table 5-2 Effective Radiated Power (ERP) Data LTE Band 14 – ANT 2

| BW<br>[MHz] | Modulation | Ant.<br>Pol. | Antenna<br>Height<br>[m] | Turntable<br>Azimuth<br>[deg °] | RB Size | RB Offset | Frequency [MHz] / Earfcn / ERP [dBm] |       |       | ERP Limit | Margin at<br>Max Power |
|-------------|------------|--------------|--------------------------|---------------------------------|---------|-----------|--------------------------------------|-------|-------|-----------|------------------------|
|             |            |              |                          |                                 |         |           | 793                                  |       |       |           |                        |
|             |            |              |                          |                                 |         |           | 23330                                |       |       |           |                        |
| 10          | QPSK       | V            | 1.45                     | 111                             | 1       | 0         | 20.91                                |       |       | 34.77     | -13.86                 |
|             |            | V            | 1.45                     | 112                             | 1       | 25        | 20.67                                |       |       |           | -14.10                 |
|             |            | V            | 1.45                     | 118                             | 1       | 49        | 20.63                                |       |       |           | -14.14                 |
|             |            | V            | 1.45                     | 115                             | 50      | 0         | 18.56                                |       |       |           | -16.21                 |
|             | 16QAM      | V            | 1.45                     | 111                             | 1       | 0         | 20.12                                |       |       |           | -14.65                 |
|             |            | V            | 1.45                     | 112                             | 1       | 25        | 19.78                                |       |       |           | -14.99                 |
|             |            | V            | 1.45                     | 118                             | 1       | 49        | 19.75                                |       |       |           | -15.02                 |
|             |            | V            | 1.45                     | 115                             | 50      | 0         | 17.62                                |       |       |           | -17.15                 |
| BW<br>[MHz] | Modulation | Ant.<br>Pol. | Antenna<br>Height<br>[m] | Turntable<br>Azimuth<br>[deg °] | RB Size | RB Offset | Frequency [MHz] / Earfcn / ERP [dBm] |       |       | ERP Limit | Margin at<br>Max Power |
|             |            |              |                          |                                 |         |           | 790.5                                | 793   | 795.5 |           |                        |
|             |            |              |                          |                                 |         |           | 23305                                | 23330 | 23355 |           |                        |
| 5           | QPSK       | V            | 1.45                     | 111                             | 1       | 0         | 20.92                                | 20.84 | 20.96 | 34.77     | -13.81                 |
|             |            | V            | 1.45                     | 112                             | 1       | 12        | 20.59                                | 20.68 | 20.50 |           | -14.09                 |
|             |            | V            | 1.45                     | 118                             | 1       | 24        | 20.70                                | 20.66 | 20.70 |           | -14.07                 |
|             |            | V            | 1.45                     | 115                             | 25      | 0         | 18.62                                | 18.59 | 18.54 |           | -16.15                 |
|             | 16QAM      | V            | 1.45                     | 111                             | 1       | 0         | 20.18                                | 20.19 | 20.18 |           | -14.58                 |
|             |            | V            | 1.45                     | 112                             | 1       | 12        | 19.75                                | 19.85 | 19.52 |           | -14.92                 |
|             |            | V            | 1.45                     | 118                             | 1       | 24        | 20.90                                | 19.95 | 19.93 |           | -13.87                 |
|             |            | V            | 1.45                     | 115                             | 25      | 0         | 17.73                                | 17.64 | 17.59 |           | -17.04                 |

**Table 5-3 Effective Radiated Power (ERP) Data LTE Band 26 – ANT 1**

| BW<br>[MHz] | Modulation | Ant.<br>Pol. | Antenna<br>Height<br>[m] | Turntable<br>Azimuth<br>[deg °] | RB Size | RB Offset | Frequency [MHz] / Earfcn / ERP [dBm] |       |       | Limit     | Margin at<br>Max Power<br>[dB] |
|-------------|------------|--------------|--------------------------|---------------------------------|---------|-----------|--------------------------------------|-------|-------|-----------|--------------------------------|
|             |            |              |                          |                                 |         |           | 821.5                                |       |       |           |                                |
|             |            |              |                          |                                 |         |           | 26765                                |       |       |           |                                |
| 15          | QPSK       | H            | 1.11                     | 173                             | 1       | 0         | 19.90                                |       |       | 38.45     | -18.55                         |
|             |            | H            | 1.11                     | 174                             | 1       | 36        | 20.92                                |       |       |           | -17.53                         |
|             |            | H            | 1.08                     | 173                             | 1       | 74        | 20.90                                |       |       |           | -17.55                         |
|             |            | H            | 1.05                     | 175                             | 75      | 0         | 19.86                                |       |       |           | -18.59                         |
|             | 16QAM      | H            | 1.11                     | 173                             | 1       | 0         | 19.01                                |       |       |           | -19.44                         |
|             |            | H            | 1.11                     | 174                             | 1       | 36        | 20.29                                |       |       |           | -18.16                         |
|             |            | H            | 1.08                     | 173                             | 1       | 74        | 20.02                                |       |       |           | -18.43                         |
|             |            | H            | 1.05                     | 175                             | 75      | 0         | 18.81                                |       |       |           | -19.64                         |
| BW<br>[MHz] | Modulation | Ant.<br>Pol. | Antenna<br>Height<br>[m] | Turntable<br>Azimuth<br>[deg °] | RB Size | RB Offset | Frequency [MHz] / Earfcn / ERP [dBm] |       |       | ERP Limit | Margin at<br>Max Power<br>[dB] |
|             |            |              |                          |                                 |         |           | 819                                  |       |       |           |                                |
|             |            |              |                          |                                 |         |           | 26740                                |       |       |           |                                |
| 10          | QPSK       | H            | 1.11                     | 173                             | 1       | 0         | 19.94                                |       |       | 38.45     | -18.51                         |
|             |            | H            | 1.11                     | 174                             | 1       | 25        | 20.99                                |       |       |           | -17.46                         |
|             |            | H            | 1.08                     | 173                             | 1       | 49        | 20.94                                |       |       |           | -17.51                         |
|             |            | H            | 1.05                     | 175                             | 50      | 0         | 19.84                                |       |       |           | -18.61                         |
|             | 16QAM      | H            | 1.11                     | 173                             | 1       | 0         | 19.12                                |       |       |           | -19.33                         |
|             |            | H            | 1.11                     | 174                             | 1       | 25        | 20.16                                |       |       |           | -18.29                         |
|             |            | H            | 1.08                     | 173                             | 1       | 49        | 20.13                                |       |       |           | -18.32                         |
|             |            | H            | 1.05                     | 175                             | 50      | 0         | 18.79                                |       |       |           | -19.66                         |
| BW<br>[MHz] | Modulation | Ant.<br>Pol. | Antenna<br>Height<br>[m] | Turntable<br>Azimuth<br>[deg °] | RB Size | RB Offset | Frequency [MHz] / Earfcn / ERP [dBm] |       |       | ERP Limit | Margin at<br>Max Power<br>[dB] |
|             |            |              |                          |                                 |         |           | 816.5                                | 819   | 821.5 |           |                                |
|             |            |              |                          |                                 |         |           | 26715                                | 26740 | 26765 |           |                                |
| 5           | QPSK       | H            | 1.11                     | 173                             | 1       | 0         | 19.93                                | 19.99 | 19.98 | 38.45     | -18.46                         |
|             |            | H            | 1.11                     | 174                             | 1       | 12        | 20.81                                | 21.01 | 21.06 |           | -17.39                         |
|             |            | H            | 1.08                     | 173                             | 1       | 24        | 21.04                                | 20.97 | 21.05 |           | -17.40                         |
|             |            | H            | 1.05                     | 175                             | 25      | 0         | 19.86                                | 19.84 | 19.87 |           | -18.58                         |
|             | 16QAM      | H            | 1.11                     | 173                             | 1       | 0         | 19.12                                | 19.13 | 19.19 |           | -19.26                         |
|             |            | H            | 1.11                     | 174                             | 1       | 12        | 20.21                                | 20.32 | 20.15 |           | -18.13                         |
|             |            | H            | 1.08                     | 173                             | 1       | 24        | 20.12                                | 20.22 | 20.29 |           | -18.16                         |
|             |            | H            | 1.05                     | 175                             | 25      | 0         | 18.89                                | 18.83 | 18.80 |           | -19.56                         |
| BW<br>[MHz] | Modulation | Ant.<br>Pol. | Antenna<br>Height<br>[m] | Turntable<br>Azimuth<br>[deg °] | RB Size | RB Offset | Frequency [MHz] / Earfcn / ERP [dBm] |       |       | ERP Limit | Margin at<br>Max Power<br>[dB] |
|             |            |              |                          |                                 |         |           | 815.5                                | 819   | 822.5 |           |                                |
|             |            |              |                          |                                 |         |           | 26705                                | 26740 | 26775 |           |                                |
| 3           | QPSK       | H            | 1.11                     | 173                             | 1       | 0         | 20.01                                | 19.96 | 19.91 | 38.45     | -18.44                         |
|             |            | H            | 1.11                     | 174                             | 1       | 7         | 20.87                                | 21.07 | 20.98 |           | -17.38                         |
|             |            | H            | 1.08                     | 173                             | 1       | 14        | 20.90                                | 21.02 | 20.99 |           | -17.43                         |
|             |            | H            | 1.05                     | 175                             | 15      | 0         | 19.89                                | 19.94 | 19.87 |           | -18.51                         |
|             | 16QAM      | H            | 1.11                     | 173                             | 1       | 0         | 19.12                                | 19.12 | 19.13 |           | -19.32                         |
|             |            | H            | 1.11                     | 174                             | 1       | 7         | 20.14                                | 20.38 | 20.24 |           | -18.07                         |
|             |            | H            | 1.08                     | 173                             | 1       | 14        | 20.02                                | 20.05 | 20.09 |           | -18.36                         |
|             |            | H            | 1.05                     | 175                             | 15      | 0         | 18.87                                | 18.83 | 18.89 |           | -19.56                         |
| BW<br>[MHz] | Modulation | Ant.<br>Pol. | Antenna<br>Height<br>[m] | Turntable<br>Azimuth<br>[deg °] | RB Size | RB Offset | Frequency [MHz] / Earfcn / ERP [dBm] |       |       | ERP Limit | Margin at<br>Max Power<br>[dB] |
|             |            |              |                          |                                 |         |           | 814.7                                | 819   | 823.3 |           |                                |
|             |            |              |                          |                                 |         |           | 26697                                | 26740 | 26783 |           |                                |
| 1.4         | QPSK       | H            | 1.11                     | 173                             | 1       | 0         | 19.87                                | 20.05 | 20.04 | 38.45     | -18.40                         |
|             |            | H            | 1.11                     | 174                             | 1       | 3         | 20.91                                | 21.04 | 21.11 |           | -17.34                         |
|             |            | H            | 1.08                     | 173                             | 1       | 5         | 20.91                                | 20.95 | 21.00 |           | -17.45                         |
|             |            | H            | 1.05                     | 175                             | 6       | 0         | 19.81                                | 19.91 | 19.89 |           | -18.54                         |
|             | 16QAM      | H            | 1.11                     | 173                             | 1       | 0         | 19.11                                | 19.22 | 19.14 |           | -19.23                         |
|             |            | H            | 1.11                     | 174                             | 1       | 3         | 20.03                                | 20.38 | 20.39 |           | -18.06                         |
|             |            | H            | 1.08                     | 173                             | 1       | 5         | 20.10                                | 20.12 | 20.18 |           | -18.27                         |
|             |            | H            | 1.05                     | 175                             | 6       | 0         | 18.85                                | 18.93 | 18.85 |           | -19.52                         |

Note - The 15 MHz channel bandwidth is supported only in LTE Band 26 (straddle)

**Table 5-4 Effective Radiated Power (ERP) Data LTE Band 26 – ANT 2**

| BW<br>[MHz]                                                                                                                                                                                                                                                                                                                                                                                      | Modulation | Ant.<br>Pol. | Antenna<br>Height<br>[m] | Turntable<br>Azimuth<br>[deg °] | RB Size | RB Offset | Frequency [MHz] / Earfcn / ERP [dBm] |  |  | Limit     | Margin at<br>Max Power<br>[dB] |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|--------------|--------------------------|---------------------------------|---------|-----------|--------------------------------------|--|--|-----------|--------------------------------|
|                                                                                                                                                                                                                                                                                                                                                                                                  |            |              |                          |                                 |         |           | 821.5                                |  |  |           |                                |
| 15                                                                                                                                                                                                                                                                                                                                                                                               | QPSK       | H            | 1.15                     | 206                             | 1       | 0         | 26765                                |  |  | 38.45     | -17.93                         |
|                                                                                                                                                                                                                                                                                                                                                                                                  |            | H            | 1.15                     | 205                             | 1       | 36        | 20.52                                |  |  |           | -17.56                         |
|                                                                                                                                                                                                                                                                                                                                                                                                  |            | H            | 1.15                     | 204                             | 1       | 74        | 20.89                                |  |  |           | -18.77                         |
|                                                                                                                                                                                                                                                                                                                                                                                                  |            | H            | 1.16                     | 204                             | 75      | 0         | 19.68                                |  |  |           | -18.79                         |
|                                                                                                                                                                                                                                                                                                                                                                                                  | 16QAM      | H            | 1.15                     | 206                             | 1       | 0         | 19.66                                |  |  |           | -18.81                         |
|                                                                                                                                                                                                                                                                                                                                                                                                  |            | H            | 1.15                     | 205                             | 1       | 36        | 19.64                                |  |  |           | -18.29                         |
|                                                                                                                                                                                                                                                                                                                                                                                                  |            | H            | 1.15                     | 204                             | 1       | 74        | 20.16                                |  |  |           | -19.75                         |
|                                                                                                                                                                                                                                                                                                                                                                                                  |            | H            | 1.16                     | 204                             | 75      | 0         | 18.70                                |  |  |           | -19.81                         |
| BW<br>[MHz] <th rowspan="2">Modulation</th> <th rowspan="2">Ant.<br/>Pol.</th> <th rowspan="2">Antenna<br/>Height<br/>[m]</th> <th rowspan="2">Turntable<br/>Azimuth<br/>[deg °]</th> <th rowspan="2">RB Size</th> <th rowspan="2">RB Offset</th> <th colspan="3">Frequency [MHz] / Earfcn / ERP [dBm]</th> <th rowspan="2">ERP Limit</th> <th rowspan="2">Margin at<br/>Max Power<br/>[dB]</th> | Modulation | Ant.<br>Pol. | Antenna<br>Height<br>[m] | Turntable<br>Azimuth<br>[deg °] | RB Size | RB Offset | Frequency [MHz] / Earfcn / ERP [dBm] |  |  | ERP Limit | Margin at<br>Max Power<br>[dB] |
|                                                                                                                                                                                                                                                                                                                                                                                                  |            |              |                          |                                 |         |           | 819                                  |  |  |           |                                |
| 10                                                                                                                                                                                                                                                                                                                                                                                               | QPSK       |              |                          |                                 |         |           | 26740                                |  |  | 38.45     | -18.00                         |
|                                                                                                                                                                                                                                                                                                                                                                                                  |            | H            | 1.15                     | 206                             | 1       | 0         | 20.45                                |  |  |           | -17.48                         |
|                                                                                                                                                                                                                                                                                                                                                                                                  |            | H            | 1.15                     | 205                             | 1       | 25        | 20.97                                |  |  |           | -18.67                         |
|                                                                                                                                                                                                                                                                                                                                                                                                  |            | H            | 1.15                     | 204                             | 1       | 49        | 19.78                                |  |  |           | -18.85                         |
|                                                                                                                                                                                                                                                                                                                                                                                                  | 16QAM      | H            | 1.16                     | 204                             | 50      | 0         | 19.60                                |  |  |           | -18.87                         |
|                                                                                                                                                                                                                                                                                                                                                                                                  |            | H            | 1.15                     | 206                             | 1       | 0         | 19.58                                |  |  |           | -18.42                         |
|                                                                                                                                                                                                                                                                                                                                                                                                  |            | H            | 1.15                     | 205                             | 1       | 25        | 20.03                                |  |  |           | -19.69                         |
|                                                                                                                                                                                                                                                                                                                                                                                                  |            | H            | 1.15                     | 204                             | 1       | 49        | 18.76                                |  |  |           | -19.85                         |
| BW<br>[MHz] <th rowspan="2">Modulation</th> <th rowspan="2">Ant.<br/>Pol.</th> <th rowspan="2">Antenna<br/>Height<br/>[m]</th> <th rowspan="2">Turntable<br/>Azimuth<br/>[deg °]</th> <th rowspan="2">RB Size</th> <th rowspan="2">RB Offset</th> <th colspan="3">Frequency [MHz] / Earfcn / ERP [dBm]</th> <th rowspan="2">ERP Limit</th> <th rowspan="2">Margin at<br/>Max Power<br/>[dB]</th> | Modulation | Ant.<br>Pol. | Antenna<br>Height<br>[m] | Turntable<br>Azimuth<br>[deg °] | RB Size | RB Offset | Frequency [MHz] / Earfcn / ERP [dBm] |  |  | ERP Limit | Margin at<br>Max Power<br>[dB] |
|                                                                                                                                                                                                                                                                                                                                                                                                  |            |              |                          |                                 |         |           | 816.5      819      821.5            |  |  |           |                                |
| 5                                                                                                                                                                                                                                                                                                                                                                                                | QPSK       |              |                          |                                 |         |           | 26715      26740      26765          |  |  | 38.45     | -18.00                         |
|                                                                                                                                                                                                                                                                                                                                                                                                  |            | H            | 1.15                     | 206                             | 1       | 0         | 20.45      20.42      20.33          |  |  |           | -17.49                         |
|                                                                                                                                                                                                                                                                                                                                                                                                  |            | H            | 1.15                     | 205                             | 1       | 12        | 20.83      20.96      20.85          |  |  |           | -18.70                         |
|                                                                                                                                                                                                                                                                                                                                                                                                  |            | H            | 1.15                     | 204                             | 1       | 24        | 19.71      19.75      19.70          |  |  |           | -18.87                         |
|                                                                                                                                                                                                                                                                                                                                                                                                  | 16QAM      | H            | 1.16                     | 204                             | 25      | 0         | 19.58      19.56      19.54          |  |  |           | -18.84                         |
|                                                                                                                                                                                                                                                                                                                                                                                                  |            | H            | 1.15                     | 206                             | 1       | 0         | 19.59      19.60      19.61          |  |  |           | -18.26                         |
|                                                                                                                                                                                                                                                                                                                                                                                                  |            | H            | 1.15                     | 205                             | 1       | 12        | 20.17      20.19      19.96          |  |  |           | -19.61                         |
|                                                                                                                                                                                                                                                                                                                                                                                                  |            | H            | 1.15                     | 204                             | 1       | 24        | 18.82      18.81      18.84          |  |  |           | -19.84                         |
| BW<br>[MHz] <th rowspan="2">Modulation</th> <th rowspan="2">Ant.<br/>Pol.</th> <th rowspan="2">Antenna<br/>Height<br/>[m]</th> <th rowspan="2">Turntable<br/>Azimuth<br/>[deg °]</th> <th rowspan="2">RB Size</th> <th rowspan="2">RB Offset</th> <th colspan="3">Frequency [MHz] / Earfcn / ERP [dBm]</th> <th rowspan="2">ERP Limit</th> <th rowspan="2">Margin at<br/>Max Power<br/>[dB]</th> | Modulation | Ant.<br>Pol. | Antenna<br>Height<br>[m] | Turntable<br>Azimuth<br>[deg °] | RB Size | RB Offset | Frequency [MHz] / Earfcn / ERP [dBm] |  |  | ERP Limit | Margin at<br>Max Power<br>[dB] |
|                                                                                                                                                                                                                                                                                                                                                                                                  |            |              |                          |                                 |         |           | 815.5      819      822.5            |  |  |           |                                |
| 3                                                                                                                                                                                                                                                                                                                                                                                                | QPSK       |              |                          |                                 |         |           | 26705      26740      26775          |  |  | 38.45     | -18.00                         |
|                                                                                                                                                                                                                                                                                                                                                                                                  |            | H            | 1.15                     | 206                             | 1       | 0         | 20.41      20.45      20.41          |  |  |           | -17.42                         |
|                                                                                                                                                                                                                                                                                                                                                                                                  |            | H            | 1.15                     | 205                             | 1       | 7         | 20.97      20.89      21.03          |  |  |           | -18.69                         |
|                                                                                                                                                                                                                                                                                                                                                                                                  |            | H            | 1.15                     | 204                             | 1       | 14        | 19.75      19.67      19.76          |  |  |           | -18.83                         |
|                                                                                                                                                                                                                                                                                                                                                                                                  | 16QAM      | H            | 1.16                     | 204                             | 15      | 0         | 19.62      19.57      19.55          |  |  |           | -18.92                         |
|                                                                                                                                                                                                                                                                                                                                                                                                  |            | H            | 1.15                     | 206                             | 1       | 0         | 19.49      19.51      19.53          |  |  |           | -18.26                         |
|                                                                                                                                                                                                                                                                                                                                                                                                  |            | H            | 1.15                     | 205                             | 1       | 7         | 20.19      20.10      20.12          |  |  |           | -19.59                         |
|                                                                                                                                                                                                                                                                                                                                                                                                  |            | H            | 1.15                     | 204                             | 1       | 14        | 18.72      18.74      18.86          |  |  |           | -19.84                         |
| BW<br>[MHz] <th rowspan="2">Modulation</th> <th rowspan="2">Ant.<br/>Pol.</th> <th rowspan="2">Antenna<br/>Height<br/>[m]</th> <th rowspan="2">Turntable<br/>Azimuth<br/>[deg °]</th> <th rowspan="2">RB Size</th> <th rowspan="2">RB Offset</th> <th colspan="3">Frequency [MHz] / Earfcn / ERP [dBm]</th> <th rowspan="2">ERP Limit</th> <th rowspan="2">Margin at<br/>Max Power<br/>[dB]</th> | Modulation | Ant.<br>Pol. | Antenna<br>Height<br>[m] | Turntable<br>Azimuth<br>[deg °] | RB Size | RB Offset | Frequency [MHz] / Earfcn / ERP [dBm] |  |  | ERP Limit | Margin at<br>Max Power<br>[dB] |
|                                                                                                                                                                                                                                                                                                                                                                                                  |            |              |                          |                                 |         |           | 814.7      819      823.3            |  |  |           |                                |
| 1.4                                                                                                                                                                                                                                                                                                                                                                                              | QPSK       |              |                          |                                 |         |           | 26697      26740      26783          |  |  | 38.45     | -18.07                         |
|                                                                                                                                                                                                                                                                                                                                                                                                  |            | H            | 1.15                     | 206                             | 1       | 0         | 20.38      20.35      20.33          |  |  |           | -17.48                         |
|                                                                                                                                                                                                                                                                                                                                                                                                  |            | H            | 1.15                     | 205                             | 1       | 3         | 20.97      20.96      20.91          |  |  |           | -18.67                         |
|                                                                                                                                                                                                                                                                                                                                                                                                  |            | H            | 1.15                     | 204                             | 1       | 5         | 19.78      19.70      19.70          |  |  |           | -18.80                         |
|                                                                                                                                                                                                                                                                                                                                                                                                  | 16QAM      | H            | 1.16                     | 204                             | 6       | 0         | 19.65      19.54      19.56          |  |  |           | -18.93                         |
|                                                                                                                                                                                                                                                                                                                                                                                                  |            | H            | 1.15                     | 206                             | 1       | 0         | 19.52      19.44      19.51          |  |  |           | -18.14                         |
|                                                                                                                                                                                                                                                                                                                                                                                                  |            | H            | 1.15                     | 205                             | 1       | 3         | 20.06      20.31      20.19          |  |  |           | -19.68                         |
|                                                                                                                                                                                                                                                                                                                                                                                                  |            | H            | 1.15                     | 204                             | 1       | 5         | 18.75      18.72      18.77          |  |  |           | -19.80                         |

Note - The 15 MHz channel bandwidth is supported only in LTE Band 26 (straddle)

## 5.5. Radiated Spurious Emissions

### 5.5.1. Regulatory Limit

#### §Part. 90.543(c) for LTE Band 14

On any frequency outside of the frequency ranges covered by the ACP tables in this section, the power of any emission must be reduced below the mean output power (P) by at least  $43 + 10\log(P)$  dB measured in a 100 kHz bandwidth for frequencies less than 1 GHz, and in a 1 MHz bandwidth for frequencies greater than 1 GHz.

#### §Part. 90.543(e) for LTE Band 14

The frequency band of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, in accordance with the following:

- (3) On all frequencies between 769-775 MHz and 799-805 MHz, by a factor not less than  $65 + 10 \log(P)$  dB in a 6.25 kHz band segment, for mobile and portable stations.
- (4) On any frequency between 775-788 MHz, above 805 MHz, and below 758 MHz, by at least  $43 + 10 \log(P)$  dB

#### § Part 90.543(f)

All emissions including harmonics in the band 1559-1610 MHz shall be limited to  $-70$  dBW/MHz equivalent isotropically radiated power (EIRP) for wideband signals.

#### §Part. 90.691(a) for LTE Band 26

Out-of-band emission requirement shall apply only to the “outer” channels included in an EA license and to spectrum adjacent to interior channels used by incumbent licensees. The emission limits are as follows:

- (3) The frequency block by up to and including 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least  $50 + 10 \log_{10}(P)$
- (4) The frequency block greater than 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least  $43 + 10\log(P)$  dB

### 5.5.2. Test Method

ANSI C63.26 – 2015, clause 5.5.4

### 5.5.3. Test Procedure

The procedure for this method is follows:

- a) Set RBW = 1 MHz  
100 kHz if the authorized frequency band/block is at or below 1 GHz  
1 MHz if the authorized frequency band/block is above 1 GHz
- b) Set the VBW  $\geq 3 \times$  RBW.
- c) Detector = RMS.
- d) Trace mode = Average.
- e) Set Number of points Sweep  $\geq 2 \times$  (span / RBW)

### 5.5.4. Sample Calculation

Where relevant, the following sample calculation is provided:

$E \text{ (dB } \mu\text{V/m)} = \text{Measured amplitude level (dBm)} + 107 + \text{Cable Loss (dB)} + \text{Antenna Factor (dB/m)}.$

$\text{EIRP (dBm)} = E \text{ (dB}\mu\text{V/m)} + 20\log(D) - 104.8;$

where D is the measurement distance (in the far field region) in m.

### Test Note

- ✓ The DUT incorporates an integral antenna, and testing was performed in a radiated configuration
- ✓ Radiated Unwanted emissions were measured using the direct radiated field strength method on a validated test site in accordance with the requirements of ANSI C63.4.
- ✓ The EUT was oriented in three orthogonal axes (X, Y, and Z), and only the worst-case emissions are reported.
- ✓ In accordance with ANSI C63.26 Section 5.5.2.5, a pre-scan was performed, and the final compliance tests were conducted using the designated detector at the worst-case parameters.

### 5.5.5. Test Results

Plot 5-1 Radiated Spurious Emissions Below 1GHz PLOT – [15MHz] [1/36RB] [Mid Channel] [QPSK] [ANT 1]

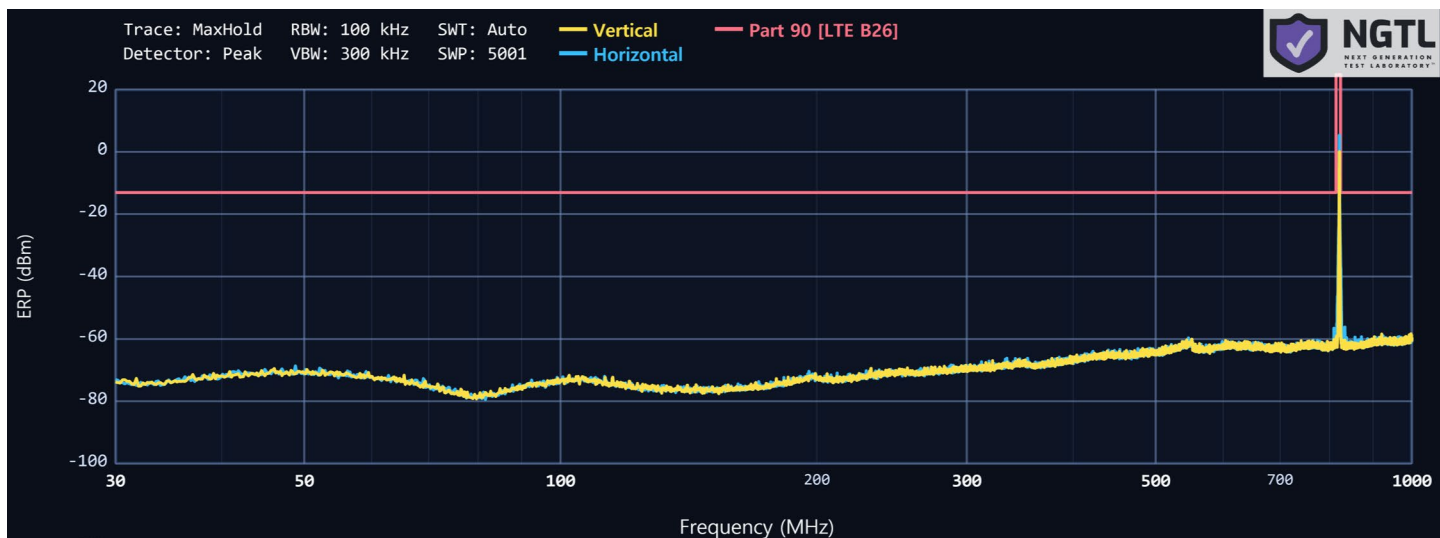
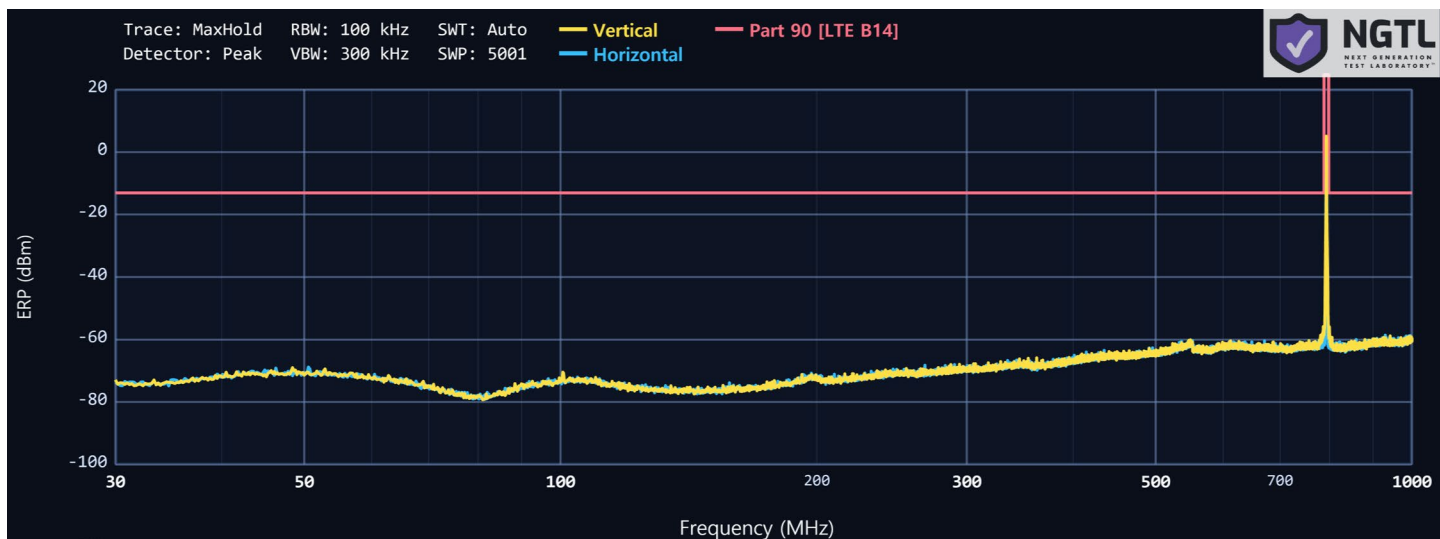


Table 5-5 Radiated Spurious Emissions Below 1GHz DATA – LTE Band 26 ANT 1

| Test mode               | Tested Frequency [MHz] | Frequency [MHz] | Reading Value [dBuV] | Pol [H/V] | Detector Mode | AFCL [dB] | Result [dBm] | Limit [dBm] | Margin [dB] |
|-------------------------|------------------------|-----------------|----------------------|-----------|---------------|-----------|--------------|-------------|-------------|
| LTE Band 26 (P90) ANT 1 | 821.5                  | 985.78          | 53.09                | H         | PK            | -22.10    | -64.21       | -13.00      | -51.21      |
|                         |                        | 950.75          | 54.57                | V         | PK            | -21.42    | -62.05       | -13.00      | -49.05      |

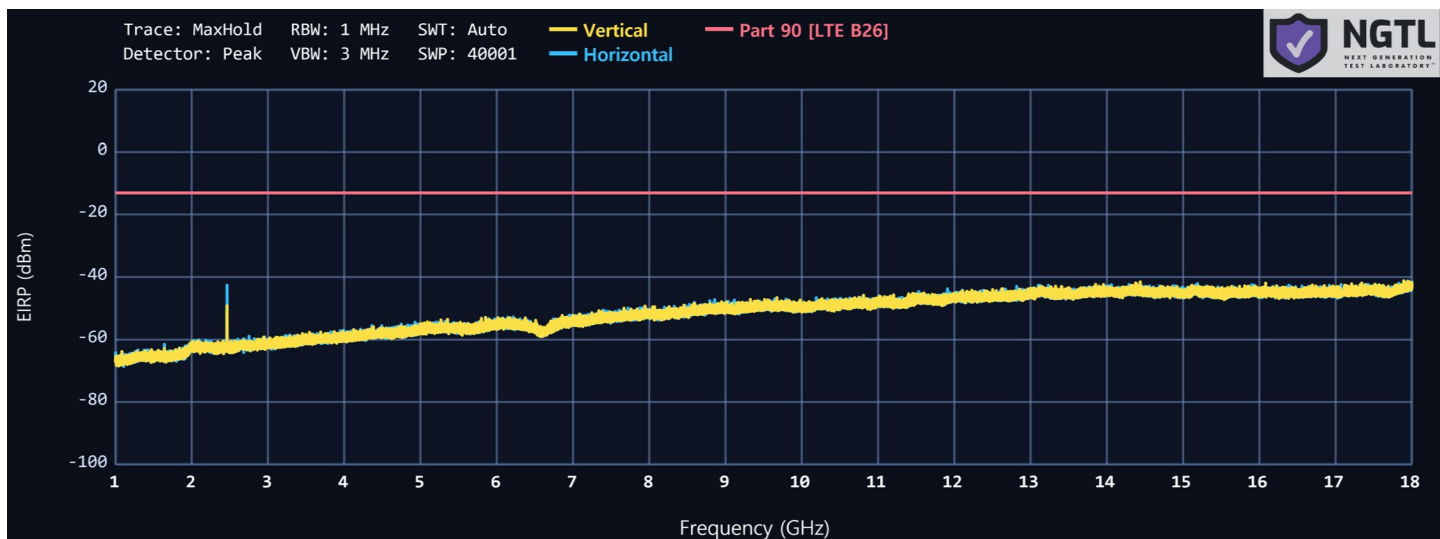
**Plot 5-2 Radiated Spurious Emissions Below 1GHz PLOT – [10MHz] [1/25RB] [Mid Channel] [QPSK] [ANT 1]**



**Table 5-6 Radiated Spurious Emissions Below 1GHz DATA – LTE Band 14 ANT 1**

| Test mode         | Tested Frequency [MHz] | Frequency [MHz] | Reading Value [dBuV] | Pol [H/V] | Detector Mode | AFCL [dB] | Result [dBm] | Limit [dBm] | Margin [dB] |
|-------------------|------------------------|-----------------|----------------------|-----------|---------------|-----------|--------------|-------------|-------------|
| LTE Band 14 ANT 1 | 793.0                  | 992.21          | 55.09                | H         | PK            | -22.10    | -62.21       | -13.00      | -49.21      |
|                   |                        | 952.15          | 54.19                | V         | PK            | -21.44    | -62.45       | -13.00      | -49.45      |

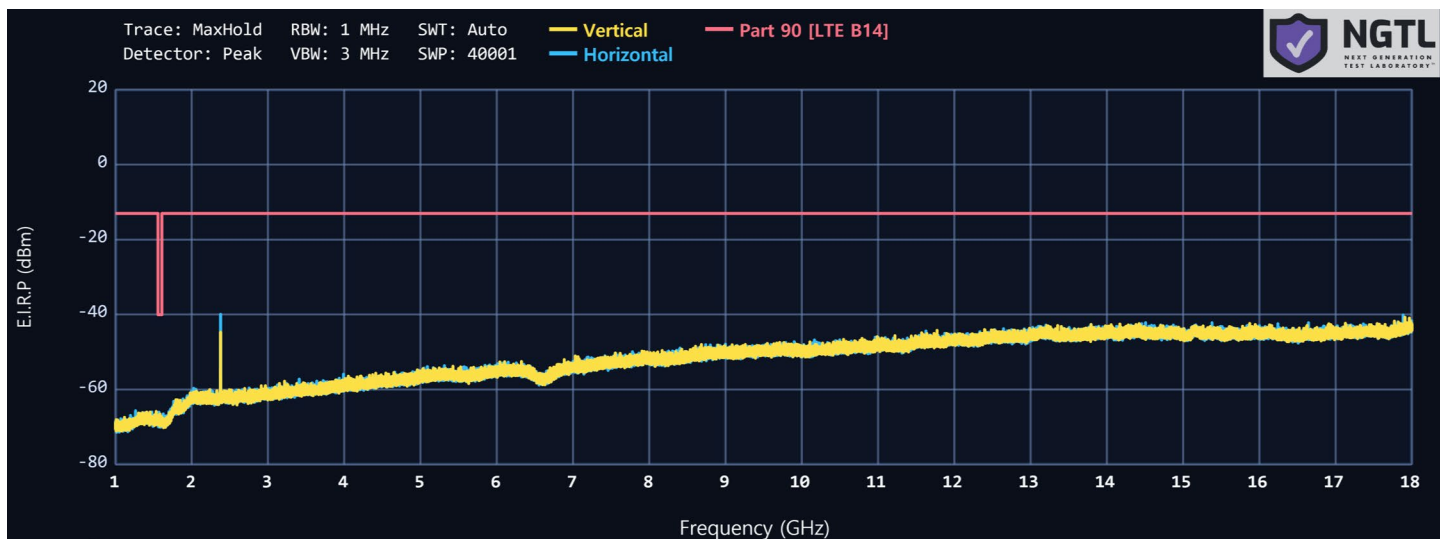
**Plot 5-3 Radiated Spurious Emissions Above 1GHz PLOT – [15MHz] [1/36RB] [Mid Channel] [QPSK] [ANT 1]**



**Table 5-7 Radiated Spurious Emissions Above 1GHz DATA – LTE Band 26 ANT 1**

| Test mode               | Tested Frequency [MHz] | Frequency [MHz] | Reading Value [dBuV] | Pol [H/V] | Detector Mode | AFCL [dB] | Result [dBm] | Limit [dBm] | Margin [dB] |
|-------------------------|------------------------|-----------------|----------------------|-----------|---------------|-----------|--------------|-------------|-------------|
| LTE Band 26 (P90) ANT 1 | 821.5                  | 1 642.18        | 45.10                | H         | PK            | -14.57    | -64.67       | -13.00      | -51.67      |
|                         |                        | 2 465.50        | 64.41                | H         | PK            | -11.23    | -42.02       | -13.00      | -29.02      |
|                         |                        | 3 286.83        | 44.50                | H         | PK            | -9.97     | -60.67       | -13.00      | -47.67      |

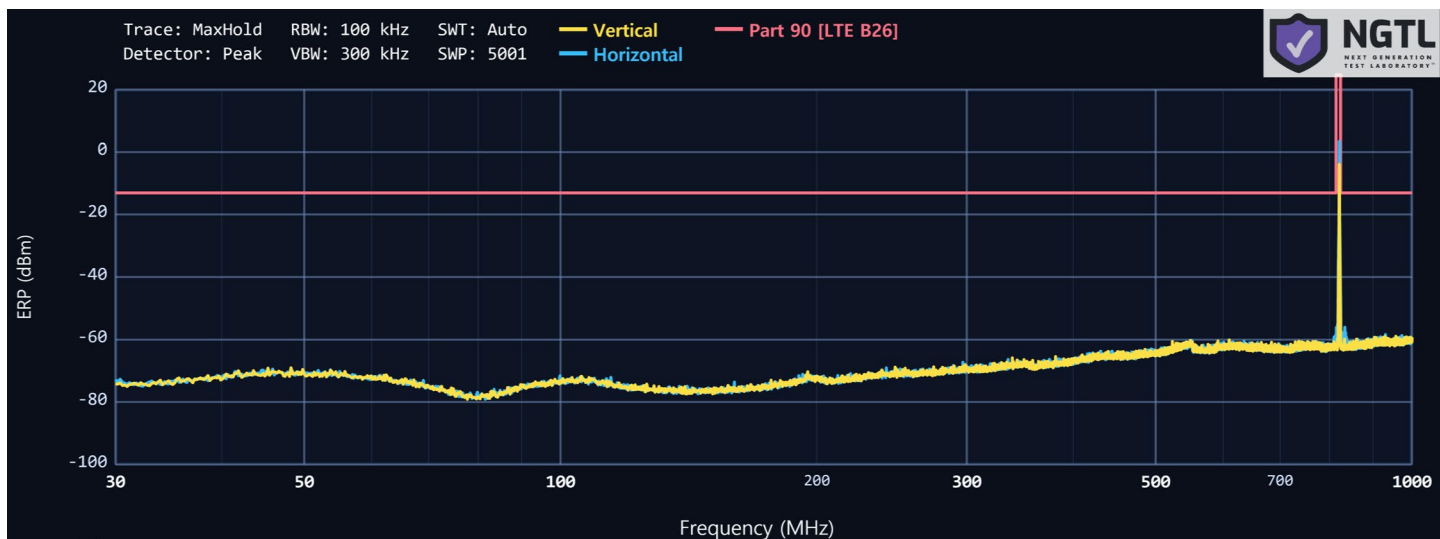
**Plot 5-4 Radiated Spurious Emissions Above 1GHz PLOT – [10MHz] [1/25RB] [Mid Channel] [QPSK] [ANT 1]**



**Table 5-8 Radiated Spurious Emissions Above 1GHz DATA – LTE Band 14 ANT 1**

| Test mode         | Tested Frequency [MHz] | Frequency [MHz] | Reading Value [dBuV] | Pol [H/V] | Detector Mode | AFCL [dB] | Result [dBm] | Limit [dBm] | Margin [dB] |
|-------------------|------------------------|-----------------|----------------------|-----------|---------------|-----------|--------------|-------------|-------------|
| LTE Band 14 ANT 1 | 793.0                  | 1 586.00        | 44.40                | H         | PK            | -14.34    | -65.14       | -13.00      | -52.14      |
|                   |                        | 2 379.00        | 64.40                | H         | PK            | -11.51    | -42.31       | -13.00      | -29.31      |
|                   |                        | 3 172.00        | 44.50                | H         | PK            | -10.14    | -60.84       | -13.00      | -47.84      |

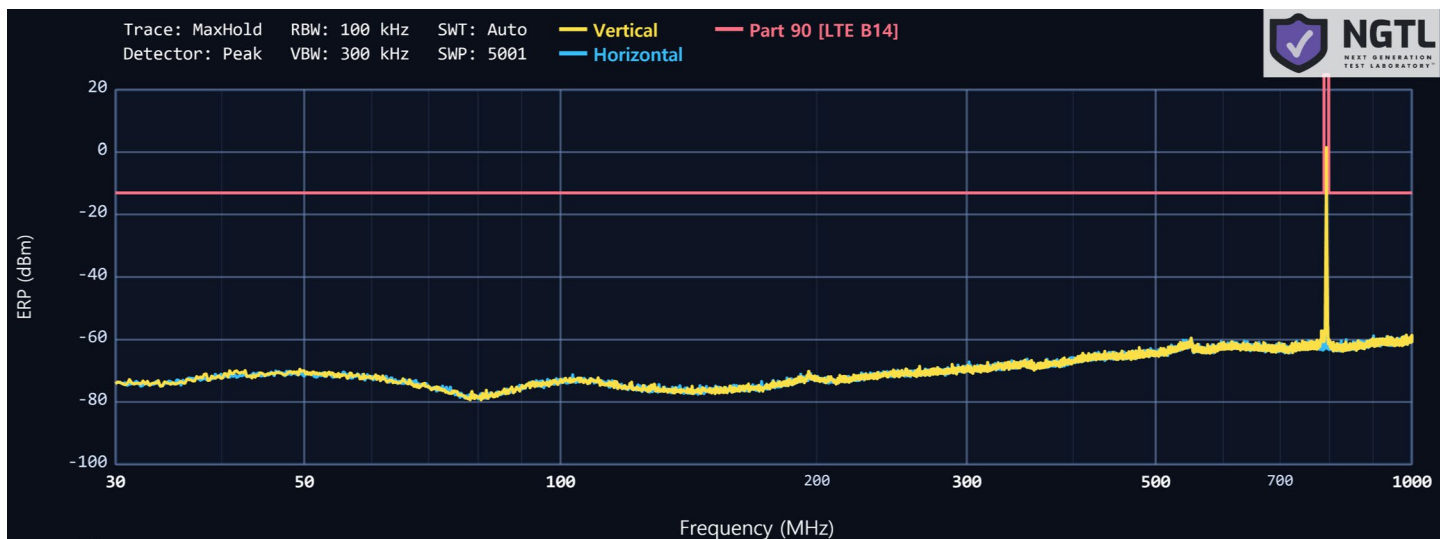
**Plot 5-5 Radiated Spurious Emissions Below 1GHz PLOT – [15MHz] [1/36RB] [Mid Channel] [QPSK] [ANT 2]**



**Table 5-9 Radiated Spurious Emissions Below 1GHz DATA – LTE Band 26 ANT 2**

| Test mode               | Tested Frequency [MHz] | Frequency [MHz] | Reading Value [dBuV] | Pol [H/V] | Detector Mode | AFCL [dB] | Result [dBm] | Limit [dBm] | Margin [dB] |
|-------------------------|------------------------|-----------------|----------------------|-----------|---------------|-----------|--------------|-------------|-------------|
| LTE Band 26 (P90) ANT 2 | 821.5                  | 989.41          | 54.19                | H         | PK            | -22.10    | -63.11       | -13.00      | -50.11      |
|                         |                        | 951.60          | 53.06                | V         | PK            | -21.43    | -63.57       | -13.00      | -50.57      |

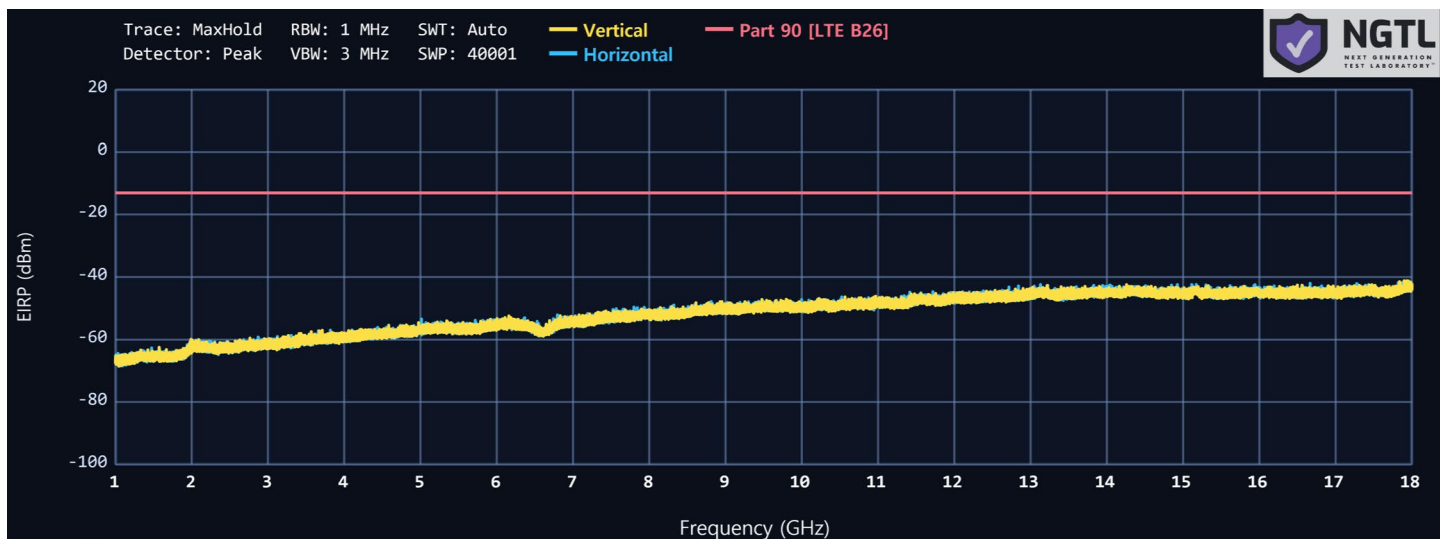
**Plot 5-6 Radiated Spurious Emissions Below 1GHz PLOT – [10MHz] [1/25RB] [Mid Channel] [QPSK] [ANT 2]**



**Table 5-10 Radiated Spurious Emissions Below 1GHz DATA – LTE Band 14 ANT 2**

| Test mode               | Tested Frequency [MHz] | Frequency [MHz] | Reading Value [dBuV] | Pol [H/V] | Detector Mode | AFCL [dB] | Result [dBm] | Limit [dBm] | Margin [dB] |
|-------------------------|------------------------|-----------------|----------------------|-----------|---------------|-----------|--------------|-------------|-------------|
| LTE Band 26 (P90) ANT 2 | 821.5                  | 1 642.63        | 43.94                | H         | PK            | -14.57    | -65.83       | -13.00      | -52.83      |
|                         |                        | 2 465.40        | 43.94                | H         | PK            | -11.23    | -62.49       | -13.00      | -49.49      |
|                         |                        | 3 285.87        | 44.38                | H         | PK            | -9.97     | -60.79       | -13.00      | -47.79      |

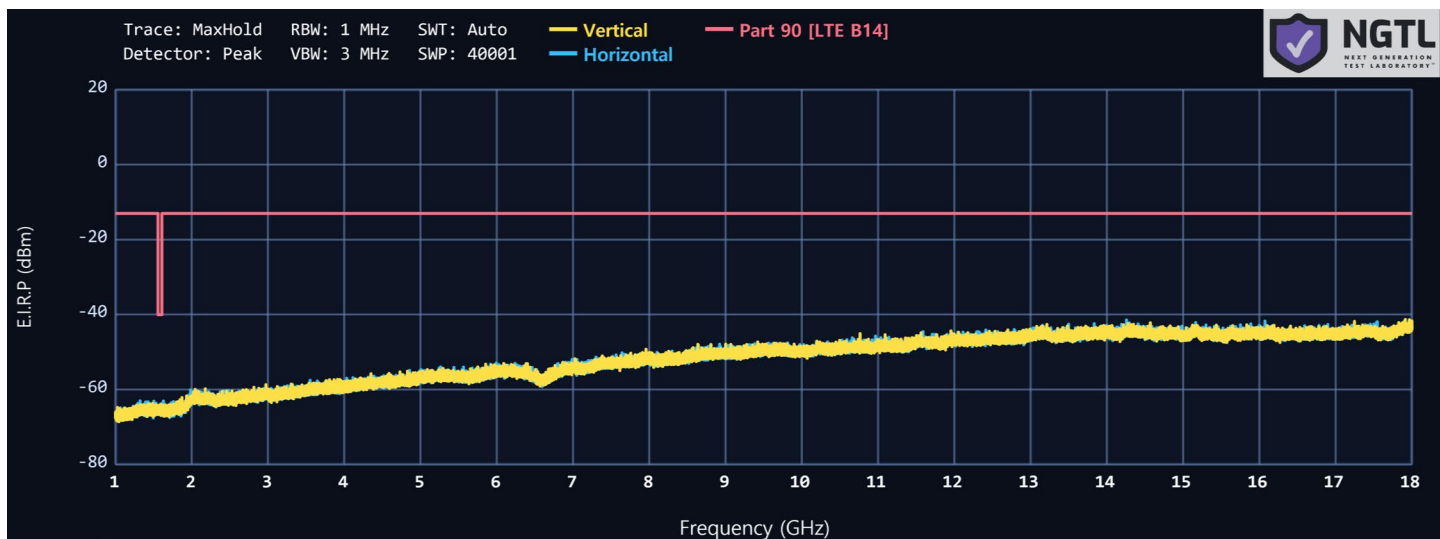
**Plot 5-7 Radiated Spurious Emissions Above 1GHz PLOT – [10MHz] [1/25RB] [Mid Channel] [QPSK] [ANT 2]**



**Table 5-11 Radiated Spurious Emissions Above 1GHz DATA – LTE Band 26 ANT 2**

| Test mode               | Tested Frequency [MHz] | Frequency [MHz] | Reading Value [dBuV] | Pol [H/V] | Detector Mode | AFCL [dB] | Result [dBm] | Limit [dBm] | Margin [dB] |
|-------------------------|------------------------|-----------------|----------------------|-----------|---------------|-----------|--------------|-------------|-------------|
| LTE Band 26 (P90) ANT 2 | 821.5                  | 1 642.63        | 43.94                | H         | PK            | -14.57    | -65.83       | -13.00      | -52.83      |
|                         |                        | 2 465.40        | 43.94                | H         | PK            | -11.23    | -62.49       | -13.00      | -49.49      |
|                         |                        | 3 285.87        | 44.38                | H         | PK            | -9.97     | -60.79       | -13.00      | -47.79      |

**Plot 5-8 Radiated Spurious Emissions Above 1GHz PLOT – [10MHz] [1/25RB] [Mid Channel] [QPSK] [ANT 2]**



**Table 5-12 Radiated Spurious Emissions Above 1GHz DATA – LTE Band 14 ANT 2**

| Test mode         | Tested Frequency [MHz] | Frequency [MHz] | Reading Value [dBuV] | Pol [H/V] | Detector Mode | AFCL [dB] | Result [dBm] | Limit [dBm] | Margin [dB] |
|-------------------|------------------------|-----------------|----------------------|-----------|---------------|-----------|--------------|-------------|-------------|
| LTE Band 14 ANT 2 | 793.0                  | 1 586.95        | 44.76                | H         | PK            | -14.35    | -64.79       | -13.00      | -51.79      |
|                   |                        | 2 378.51        | 44.70                | H         | PK            | -11.51    | -62.01       | -13.00      | -49.01      |
|                   |                        | 3 171.04        | 44.85                | H         | PK            | -10.14    | -60.49       | -13.00      | -47.49      |

## 6. Revision History

| Rev. | Issue Date | Revisions                 | Prepared By |
|------|------------|---------------------------|-------------|
| 00   | 07/06/2026 | Initial Release           | SK Hong     |
| 01   | 07/07/2026 | Typographical corrections | SK Hong     |
| 02   | 07/24/2026 | Typographical corrections | SK Hong     |

## 7. Measurement Uncertainty

| Measurement Items              | Frequency Range | Expanded Uncertainty (±) |
|--------------------------------|-----------------|--------------------------|
| Maximum Conducted Output Power | f < 8 GHz       | 1.06 dB                  |
| Conducted Emissions            | f < 1 GHz       | 0.71 dB                  |
| Conducted Emissions            | f < 18 GHz      | 2.06 dB                  |
| Conducted Emissions            | f > 18 GHz      | 3.12 dB                  |
| Radiated Emissions             | f < 30 MHz      | 3.68 dB                  |
| Radiated Emissions             | f < 1 GHz       | 4.01 dB                  |
| Radiated Emissions             | f > 1 GHz       | 4.41 dB                  |
| Radiated Emissions             | f > 18 GHz      | 5.23 dB                  |
| AC Line Conducted Emissions    | f < 30 MHz      | 2.66 dB                  |
| Occupied Bandwidth             |                 | 0.43 %                   |
| Time                           |                 | 4.8 %                    |

The expanded measurement uncertainty is calculated at an approximate 95% confidence level (k = 2).

✓ Note : Measurement uncertainty is for reference only. Based on Simple Acceptance, compliance is determined by directly comparing the measured data against applicable limits.

## 8. Equipment List

All test equipment used for the measurements was within its valid calibration interval. All test antennas were calibrated in accordance with ANSI C63.5-2017, and all test cables were calibrated in-house prior to testing. The calibration dates presented in the tables below apply only to equipment calibrated by an accredited calibration laboratory.

Table 8-1 Test Equipment and Calibration Date

| Equipment Name               | Manufacturer    | Model         | Serial Number | Cal. Date  | Next Cal.  |
|------------------------------|-----------------|---------------|---------------|------------|------------|
| Signal & Spectrum Analyzer   | Rohde & Schwarz | FSW43         | 103432        | 2026-02-13 | 2027-02-13 |
| Signal & Spectrum Analyzer   | Keysight        | N9010B        | MY56460241    | 2025-12-18 | 2026-12-18 |
| Signal & Spectrum Analyzer   | Keysight        | N9040B        | MY62480133    | 2026-01-23 | 2027-01-23 |
| Signal & Spectrum Analyzer   | Keysight        | N9020A        | MY54482751    | 2025-10-16 | 2026-10-16 |
| Signal & Spectrum Analyzer   | Keysight        | N9020A        | MY54480472    | 2026-02-24 | 2027-02-24 |
| Power Sensor                 | Rohde & Schwarz | NRP-Z85       | 102404        | 2026-01-19 | 2027-01-19 |
| EMI Test Receiver            | Rohde & Schwarz | ESU40         | 100469        | 2026-01-07 | 2027-01-07 |
| Loop Antenna                 | Rohde & Schwarz | HFH2-Z2E      | 101318        | 2026-01-19 | 2027-01-19 |
| Bi-log Antenna               | Schwarzbeck     | VULB9163      | 01843         | 2026-01-06 | 2027-01-06 |
| Horn Antenna                 | RF SPIN         | DRH18S        | CE2F08A18S    | 2026-01-08 | 2027-01-08 |
| Horn Antenna                 | Rohde & Schwarz | DRH40G20K     | 101356        | 2026-01-23 | 2027-01-23 |
| Dipole Antenna               | Schwarzbeck     | UHA9105       | 02850         | 2026-01-06 | 2027-01-06 |
| Call Simulator               | Rohde & Schwarz | CMX500        | 100198        | 2025-09-30 | 2026-09-30 |
| Vector Signal Generator      | Rohde & Schwarz | SMM100A       | 101593        | 2026-01-05 | 2027-01-05 |
| Signal Generator             | Rohde & Schwarz | SMC100A       | 104214        | 2026-02-10 | 2027-02-10 |
| Temperature&Humidity Chamber | ENEX            | EN-STH-604_1K | EN202510-03   | 2026-01-10 | 2027-01-10 |
| DC Power supply              | Rohde & Schwarz | NGC101        | 100740        | 2026-01-07 | 2027-01-07 |
| Two-Line V-Network           | Rohde & Schwarz | ENV216        | 103321        | 2026-01-09 | 2027-01-09 |
| Temperature & Humidity Meter | TESTO           | 608-H2        | 86293672      | 2026-04-02 | 2027-04-02 |
| Vector Network Analyzer      | Rohde & Schwarz | ZNL20         | 101202        | 2026-01-28 | 2027-01-28 |
| Conducted Test System        | Various         |               |               |            |            |
| Radiated Test System         | Various         |               |               |            |            |

**Table 8-2 Conducted Test System**

| Equipment Name | Manufacturer  | Model         | Serial Number | Cal. Date  | Next Cal.  |
|----------------|---------------|---------------|---------------|------------|------------|
| Power Splitter | Mini-Circuits | ZFRSC-183-S+  | FA46402540-1  | 2026-01-16 | 2027-01-16 |
| Power Splitter | Mini-Circuits | ZFRSC-183-S+  | FA46402540-2  | 2026-01-16 | 2027-01-16 |
| DC coupler     | EXYNOD        | EXDC-00504000 | 251201        | 2026-01-16 | 2027-01-16 |
| DC coupler     | EXYNOD        | EXDC-00504000 | 251202        | 2026-01-16 | 2027-01-16 |
| RF Attenuator  | EXYNOD        | 10A           | 008           | 2026-01-05 | 2027-01-05 |
| RF Attenuator  | EXYNOD        | SN0609        | 0609          | 2026-01-05 | 2027-01-05 |
| RF Cable       | OSI           | PLH16D-EXD    | RF Cable 1    | -          | -          |
| RF Cable       | OSI           | PLH16D-EXD    | RF Cable 2    | -          | -          |
| RF Cable       | OSI           | PLH16D-EXD    | RF Cable 3    | -          | -          |
| RF Cable       | OSI           | PLH16D-EXD    | RF Cable 4    | -          | -          |
| RF Cable       | Rosenberger   | LU7           | 0062          | -          | -          |
| RF Cable       | Rosenberger   | LU7           | 0083          | -          | -          |

**Table 8-3 Radiated Test System**

| Equipment Name             | Manufacturer  | Model      | Serial Number | Cal. Date  | Next Cal.  |
|----------------------------|---------------|------------|---------------|------------|------------|
| Amplifier                  | EXYNOD        | ELNA01-40D | 631307        | 2026-01-05 | 2027-01-05 |
| Amplifier                  | EXYNOD        | ELNA18     | 33686         | 2026-01-05 | 2027-01-05 |
| Amplifier                  | EXYNOD        | ELNA40-50  | 631308        | 2026-01-05 | 2027-01-05 |
| 9000 MHz High Pass Filter  | Mini-Circuits | ZHFW-K9000 | 2537          | 2026-01-29 | 2027-01-29 |
| 18000 MHz High Pass Filter | Mini-Circuits | ZHSS-K18G+ | 2546          | 2026-01-29 | 2027-01-29 |
| RF Cable                   | OSI           | LH18-EXD   | AP_X1         | -          | -          |
| RF Cable                   | OSI           | LH18-EXD   | AP_X2         | -          | -          |
| RF Cable                   | OSI           | E31-EXD    | AP_X3         | -          | -          |
| RF Cable                   | OSI           | E31-EXD    | AP_X4         | -          | -          |
| RF Cable                   | OSI           | PLH16D-EXD | RF Cable 5    | -          | -          |

**Table 8-4 Test Accessories**

| Test Accessories Name  | Brand   | Model No. | Used For          |
|------------------------|---------|-----------|-------------------|
| Power Adapter          | SamSung | EP-TA865  | AC Line Conducted |
| Charger Cable (C-type) | SamSung | EP-DN980  | AC Line Conducted |

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## 9. Conclusion

The RF evaluation indicates that the DUT is capable of compliance with the applicable FCC&ISED technical requirements for all parameters subject to this test. These measurements were performed under worst-case operating conditions to ensure representative results. Appropriate laboratory procedures were applied to ensure the repeatability and reliability of the measurements. The results and statements relate only to the item(s) tested.

The end.