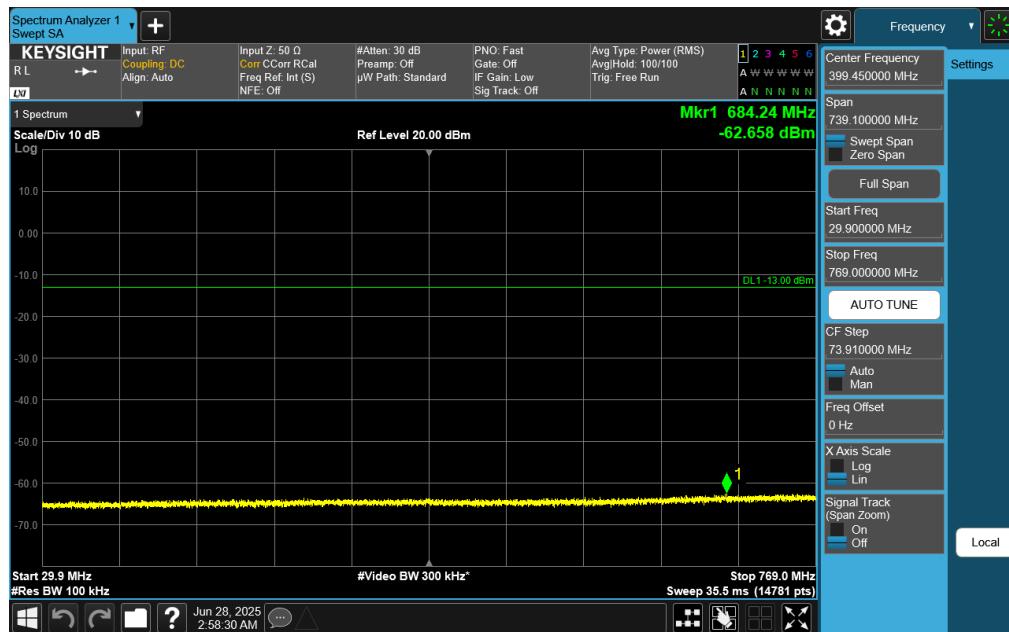
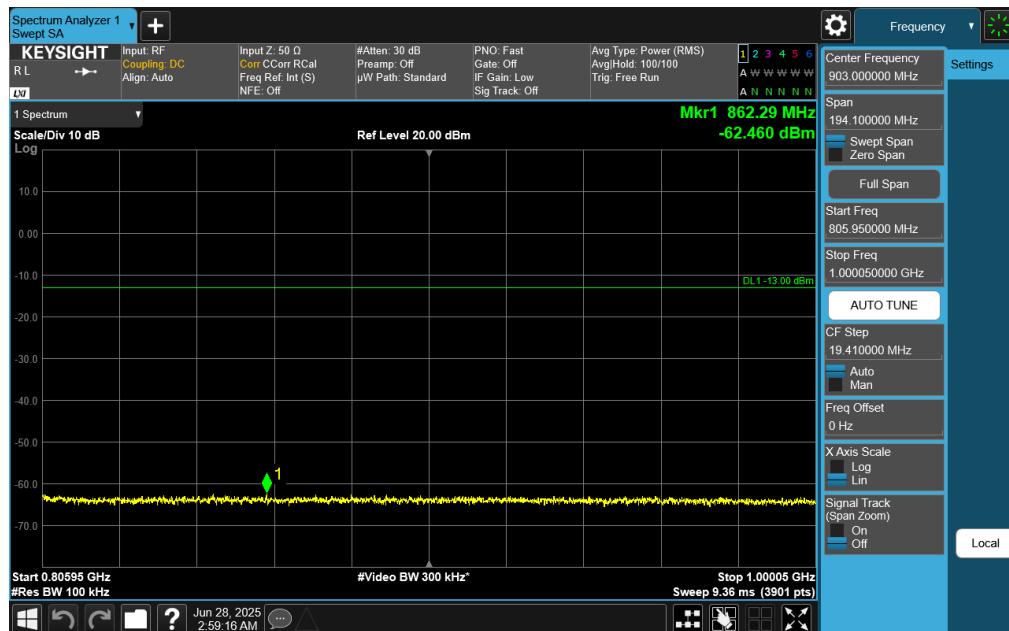


## NR Band n14

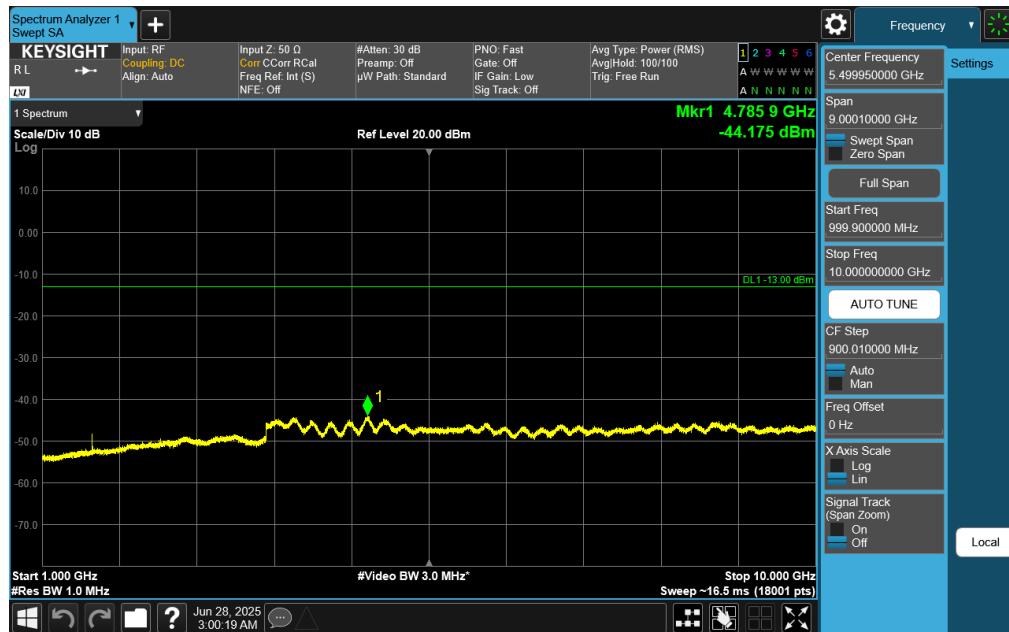


**Plot 7-56. Conducted Spurious Plot (NR Band n14 - 5MHz DFT-s-OFDM QPSK - RB Size 1, RB Offset 12 - Low Channel)**



**Plot 7-57. Conducted Spurious Plot (NR Band n14 - 5MHz DFT-s-OFDM QPSK - RB Size 1, RB Offset 12 - Low Channel)**

|                                         |                                                                                                    |                    |                            |                                   |
|-----------------------------------------|----------------------------------------------------------------------------------------------------|--------------------|----------------------------|-----------------------------------|
| FCC ID: BCG-A3337                       |  <b>element</b> |                    | PART 90 MEASUREMENT REPORT | Approved by:<br>Technical Manager |
| Test Report S/N:<br>1C2503270033-05.BCG | Test Dates:<br>01/31/2025 - 07/21/2025                                                             | EUT Type:<br>Watch |                            | Page 47 of 90                     |

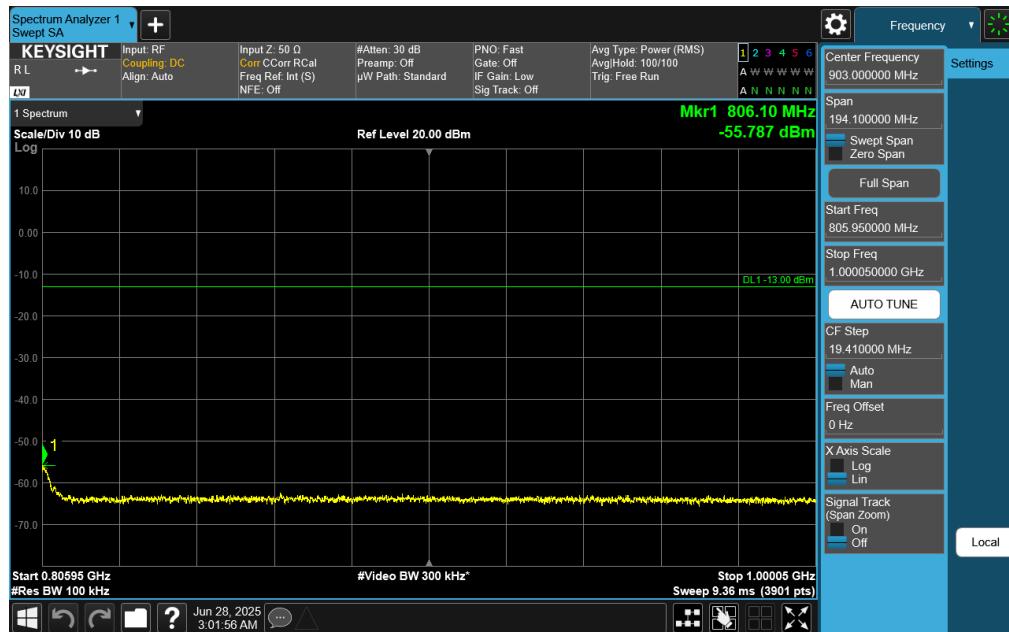


**Plot 7-58. Conducted Spurious Plot (NR Band n14 - 5MHz DFT-s-OFDM QPSK - RB Size 1, RB Offset 12 - Low Channel)**

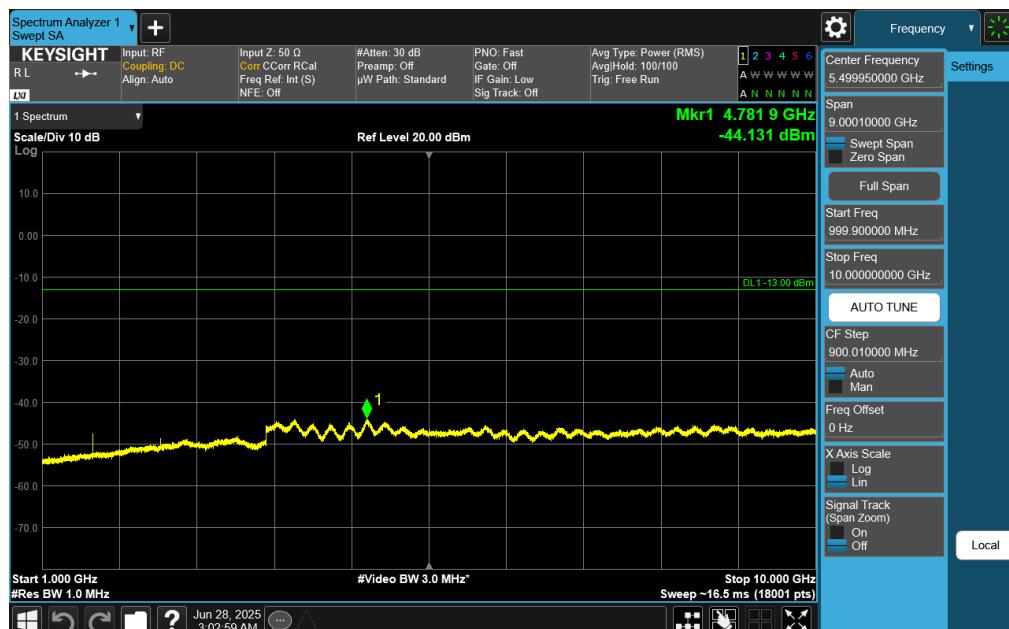


**Plot 7-59. Conducted Spurious Plot (NR Band n14 - 10MHz DFT-s-OFDM QPSK - RB Size 1, RB Offset 25 - Mid Channel)**

|                                         |                                        |                    |                                   |
|-----------------------------------------|----------------------------------------|--------------------|-----------------------------------|
| FCC ID: BCG-A3337                       | PART 90 MEASUREMENT REPORT             |                    | Approved by:<br>Technical Manager |
| Test Report S/N:<br>1C2503270033-05.BCG | Test Dates:<br>01/31/2025 - 07/21/2025 | EUT Type:<br>Watch | Page 48 of 90                     |

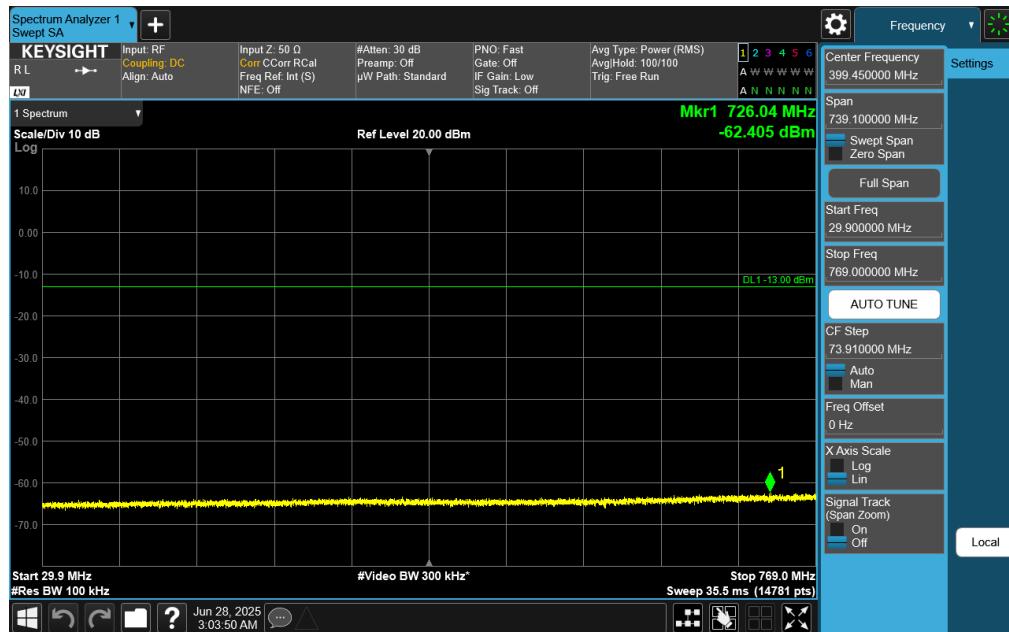


**Plot 7-60. Conducted Spurious Plot (NR Band n14 - 10MHz DFT-s-OFDM QPSK - RB Size 1, RB Offset 25 – Mid Channel)**

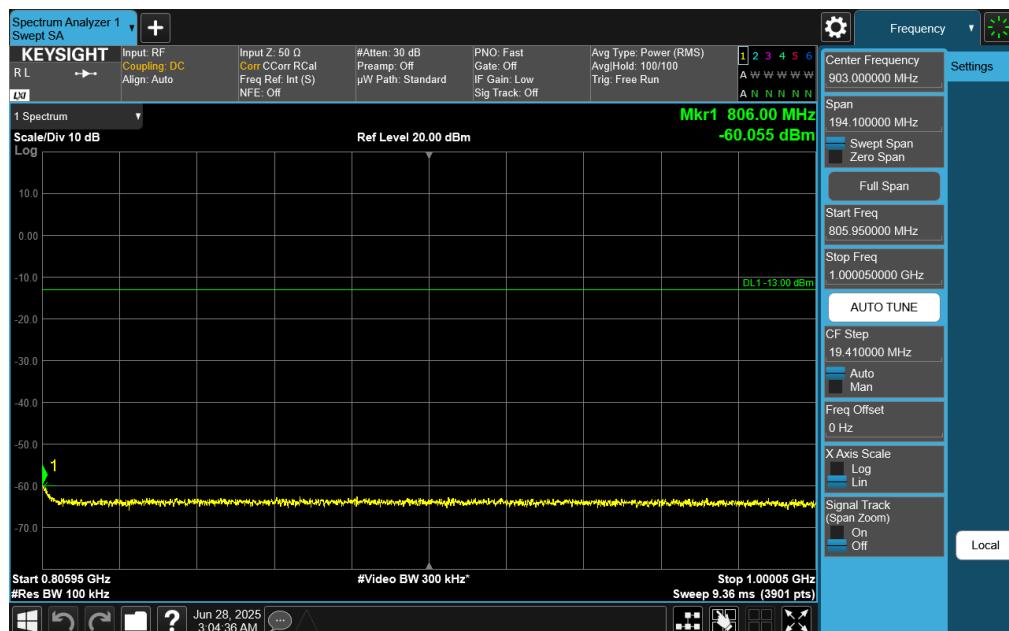


**Plot 7-61. Conducted Spurious Plot (NR Band n14 - 10MHz DFT-s-OFDM QPSK - RB Size 1, RB Offset 25 – Mid Channel)**

|                                         |                                        |                    |  |                                   |
|-----------------------------------------|----------------------------------------|--------------------|--|-----------------------------------|
| FCC ID: BCG-A3337                       | PART 90 MEASUREMENT REPORT             |                    |  | Approved by:<br>Technical Manager |
| Test Report S/N:<br>1C2503270033-05.BCG | Test Dates:<br>01/31/2025 - 07/21/2025 | EUT Type:<br>Watch |  | Page 49 of 90                     |

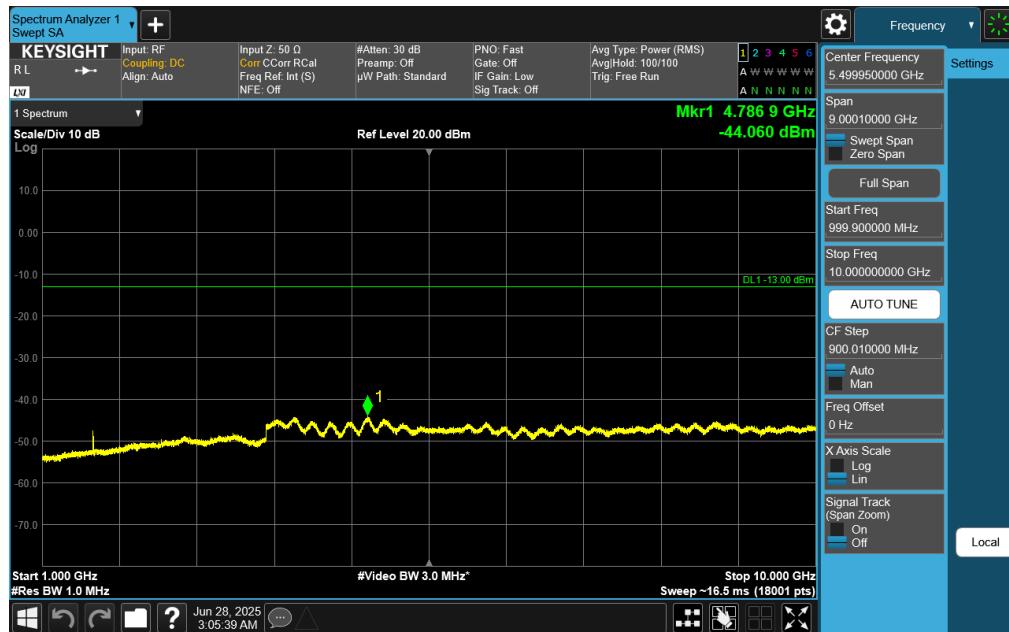


**Plot 7-62. Conducted Spurious Plot (NR Band n14 - 5MHz DFT-s-OFDM QPSK - RB Size 1, RB Offset 12 - High Channel)**



**Plot 7-63. Conducted Spurious Plot (NR Band n14 - 5MHz DFT-s-OFDM QPSK - RB Size 1, RB Offset 12 - High Channel)**

|                                         |                                        |                    |  |                                   |
|-----------------------------------------|----------------------------------------|--------------------|--|-----------------------------------|
| FCC ID: BCG-A3337                       | PART 90 MEASUREMENT REPORT             |                    |  | Approved by:<br>Technical Manager |
| Test Report S/N:<br>1C2503270033-05.BCG | Test Dates:<br>01/31/2025 - 07/21/2025 | EUT Type:<br>Watch |  | Page 50 of 90                     |



**Plot 7-64. Conducted Spurious Plot (NR Band n14 - 5MHz DFT-s-OFDM QPSK - RB Size 1, RB Offset 12 - High Channel)**

|                                         |                                           |                    |  |                                   |
|-----------------------------------------|-------------------------------------------|--------------------|--|-----------------------------------|
| FCC ID: BCG-A3337                       | <b>element</b> PART 90 MEASUREMENT REPORT |                    |  | Approved by:<br>Technical Manager |
| Test Report S/N:<br>1C2503270033-05.BCG | Test Dates:<br>01/31/2025 - 07/21/2025    | EUT Type:<br>Watch |  | Page 51 of 90                     |

## 7.4 Band Edge Emissions at Antenna Terminal

§2.1051 §90.691(a) §90.543(e)

### Test Overview

All out of band emissions are measured with a spectrum analyzer connected to the antenna terminal of the EUT while the EUT is operating at maximum power, and at the appropriate frequencies. All data rates were investigated to determine the worst case configuration. All modes of operation were investigated and the worst case configuration results are reported in this section.

**For LTE B26 operation under Part 90.691, the minimum permissible attenuation level of any spurious emission removed from the EA licensee's frequency block by greater than 37.5 kHz is  $43 + 10\log_{10}(P[\text{Watts}])$ , where  $P$  is the transmitter power in Watts. The minimum permissible attenuation level of any spurious emission removed from the EA licensee's frequency block by up to and including 37.5 kHz is  $50 + 10\log_{10}(P[\text{Watts}])$ , where  $P$  is the transmitter power in Watts.**

### Test Procedure Used

KDB 971168 D01 v03r01 – Section 6.0

### Test Settings

1. Span was set large enough so as to capture all out of band emissions near the band edge
2. RBW = 100 kHz
3. VBW = 300 kHz
4. Detector = RMS
5. Trace mode = trace average
6. Sweep time = auto couple
7. The trace was allowed to stabilize

### Test Setup

The EUT and measurement equipment were set up as shown in the diagram below.

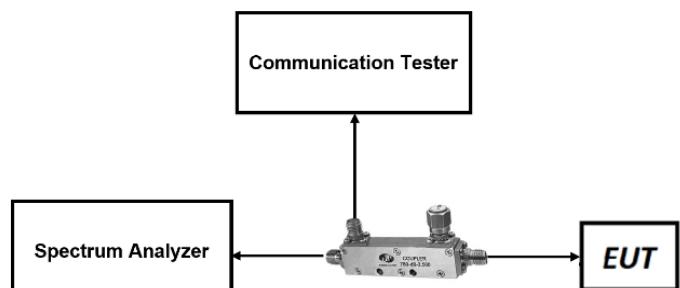


Figure 7-5. LTE Test Instrument & Measurement Setup

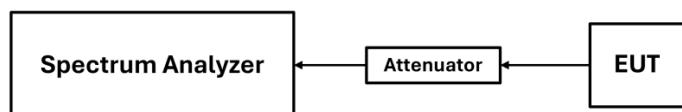


Figure 7-6. FR1 Instrument & Measurement Setup

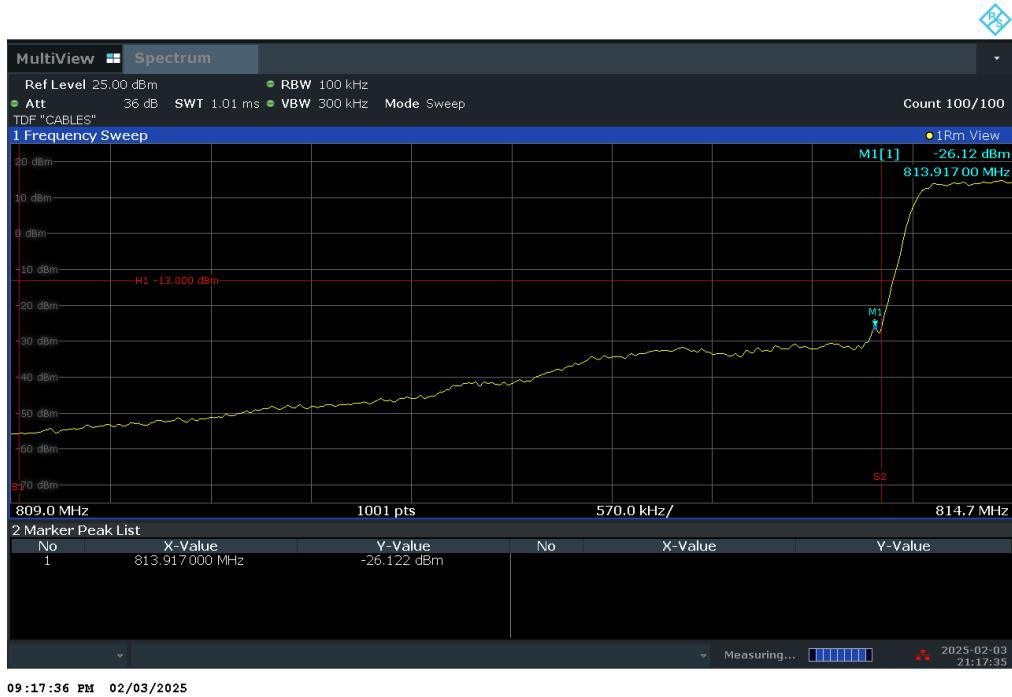
|                                         |                                        |                    |                            |                                   |
|-----------------------------------------|----------------------------------------|--------------------|----------------------------|-----------------------------------|
| FCC ID: BCG-A3337                       | element                                |                    | PART 90 MEASUREMENT REPORT | Approved by:<br>Technical Manager |
| Test Report S/N:<br>1C2503270033-05.BCG | Test Dates:<br>01/31/2025 - 07/21/2025 | EUT Type:<br>Watch |                            | Page 52 of 90                     |

## Test Notes

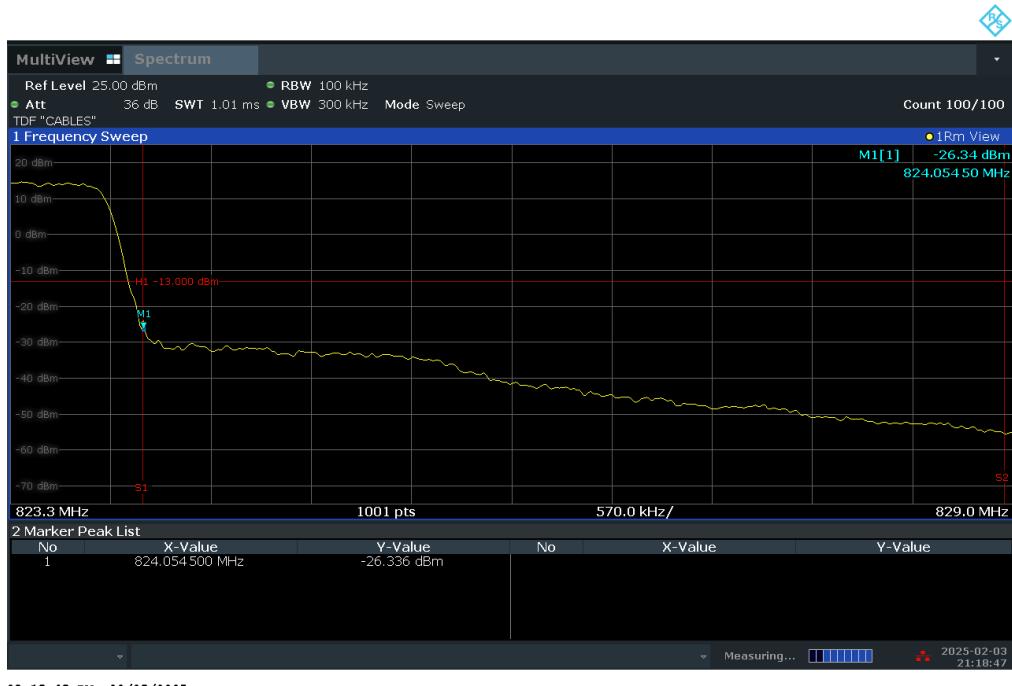
1. Per Part 90, in the 100 kHz bands immediately outside and adjacent to the frequency block, a resolution bandwidth of 30 kHz may be employed to demonstrate compliance with the out-of-band emissions limit. The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center.
2. For LTE Band 14 operation under Part 90.543, 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.
3. Additionally, for LTE Band 14 operation, on all frequencies between 769-775 MHz and 799-805 MHz, the power of any emission shall be attenuated by a factor not less than  $65 + 10 \log(P)$  dB in a 6.25 kHz band segment, for mobile and portable stations.

|                                         |                                        |                    |                                   |
|-----------------------------------------|----------------------------------------|--------------------|-----------------------------------|
| FCC ID: BCG-A3337                       | PART 90 MEASUREMENT REPORT             |                    | Approved by:<br>Technical Manager |
| Test Report S/N:<br>1C2503270033-05.BCG | Test Dates:<br>01/31/2025 - 07/21/2025 | EUT Type:<br>Watch | Page 53 of 90                     |

## LTE Band 26

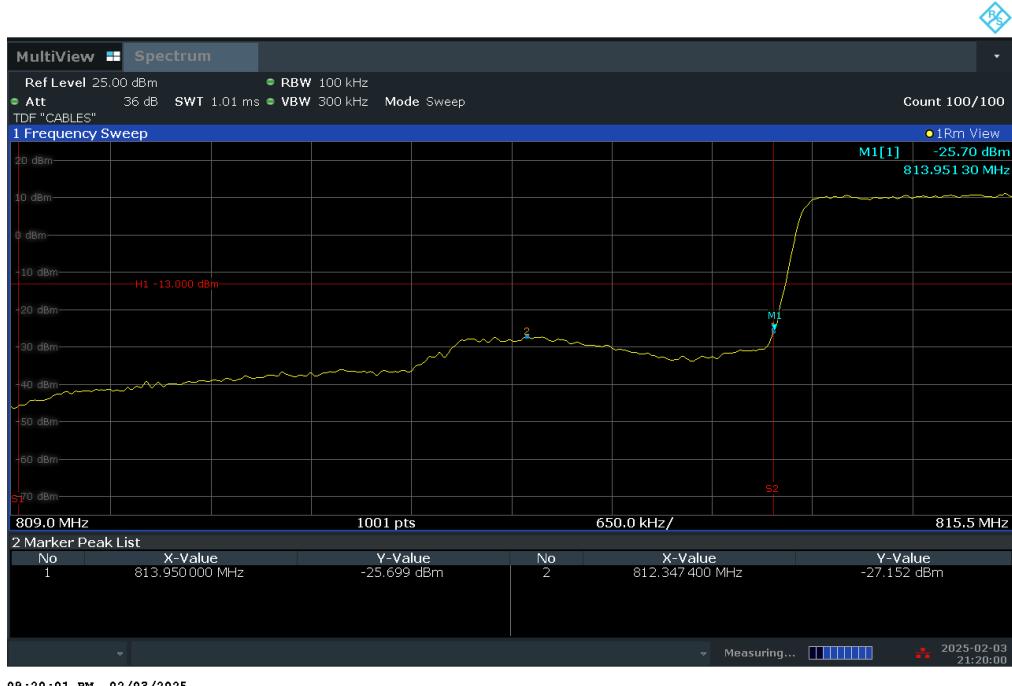


**Plot 7-65. Channel Edge Plot (LTE Band 26 - 1.4MHz QPSK - Lower Channel)**

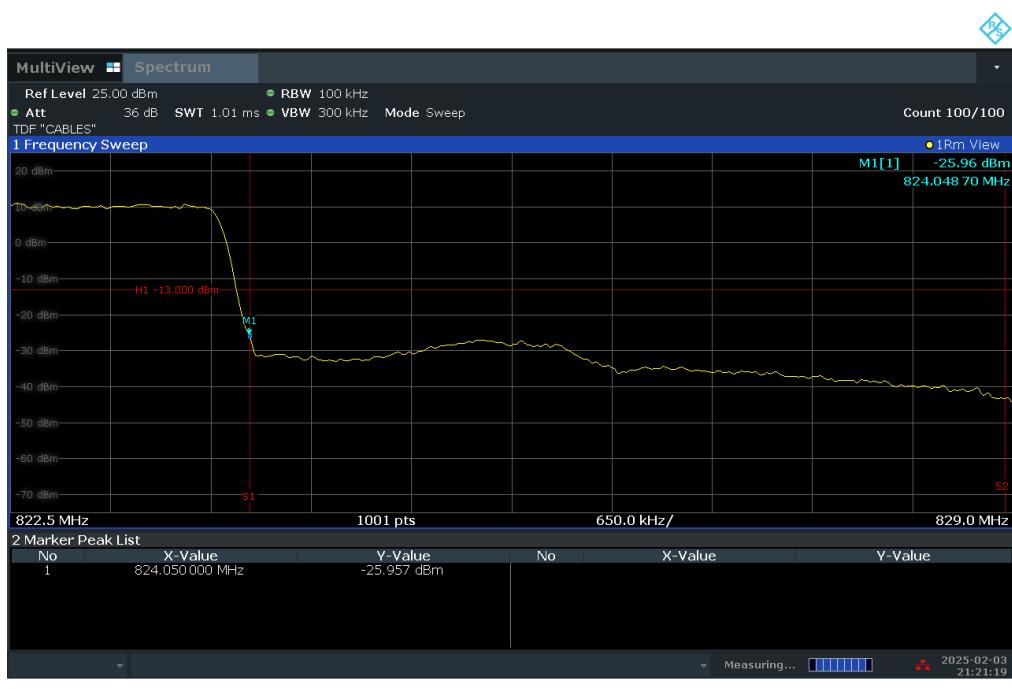


**Plot 7-66. Channel Edge Plot (LTE Band 26 - 1.4MHz QPSK - Upper Channel)**

|                                         |                                        |                    |                            |                                   |
|-----------------------------------------|----------------------------------------|--------------------|----------------------------|-----------------------------------|
| FCC ID: BCG-A3337                       | element                                |                    | PART 90 MEASUREMENT REPORT | Approved by:<br>Technical Manager |
| Test Report S/N:<br>1C2503270033-05.BCG | Test Dates:<br>01/31/2025 - 07/21/2025 | EUT Type:<br>Watch |                            | Page 54 of 90                     |

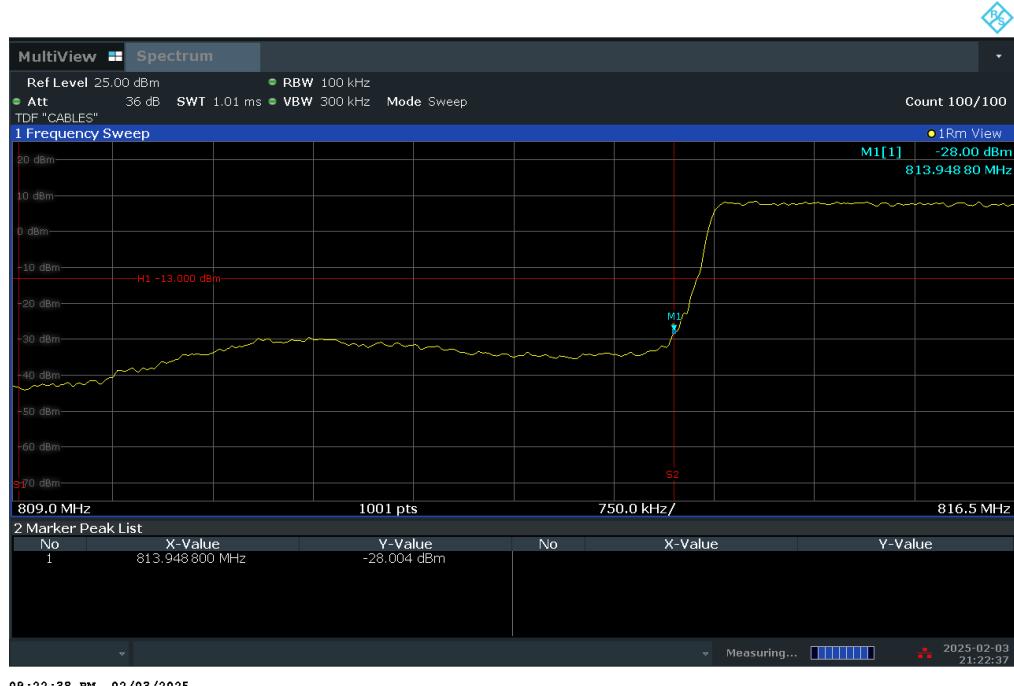


**Plot 7-67. Channel Edge Plot (LTE Band 26 - 3MHz QPSK - Lower Channel)**

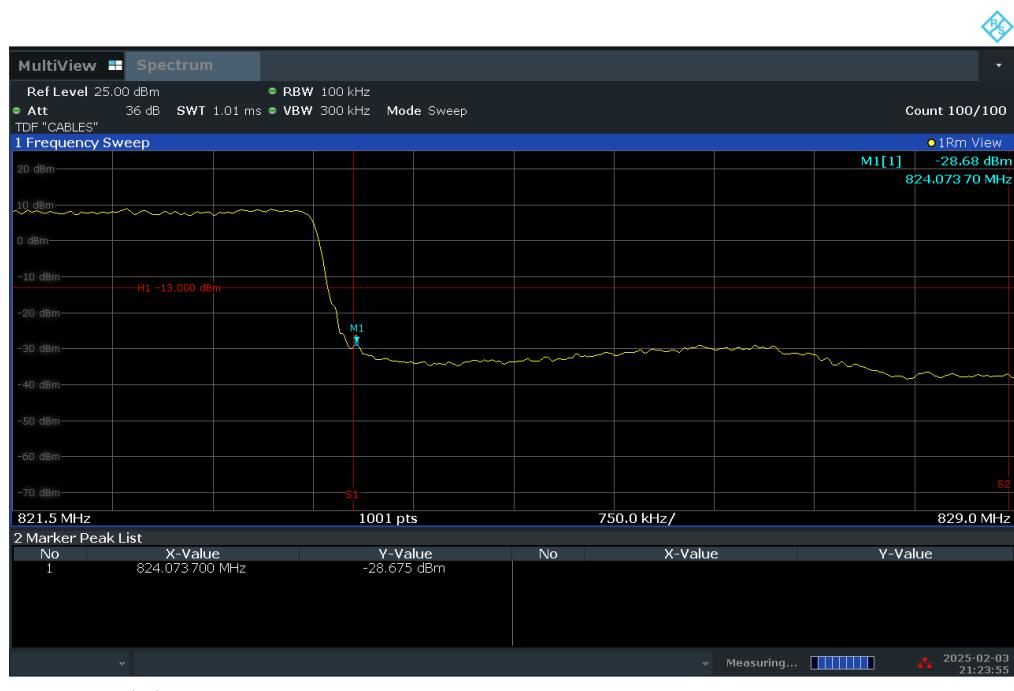


**Plot 7-68. Channel Edge Plot (LTE Band 26 - 3MHz QPSK - Upper Channel)**

|                                         |                                                                                             |                            |               |                                   |
|-----------------------------------------|---------------------------------------------------------------------------------------------|----------------------------|---------------|-----------------------------------|
| FCC ID: BCG-A3337                       |  element | PART 90 MEASUREMENT REPORT |               | Approved by:<br>Technical Manager |
| Test Report S/N:<br>1C2503270033-05.BCG | Test Dates:<br>01/31/2025 - 07/21/2025                                                      | EUT Type:<br>Watch         | Page 55 of 90 |                                   |

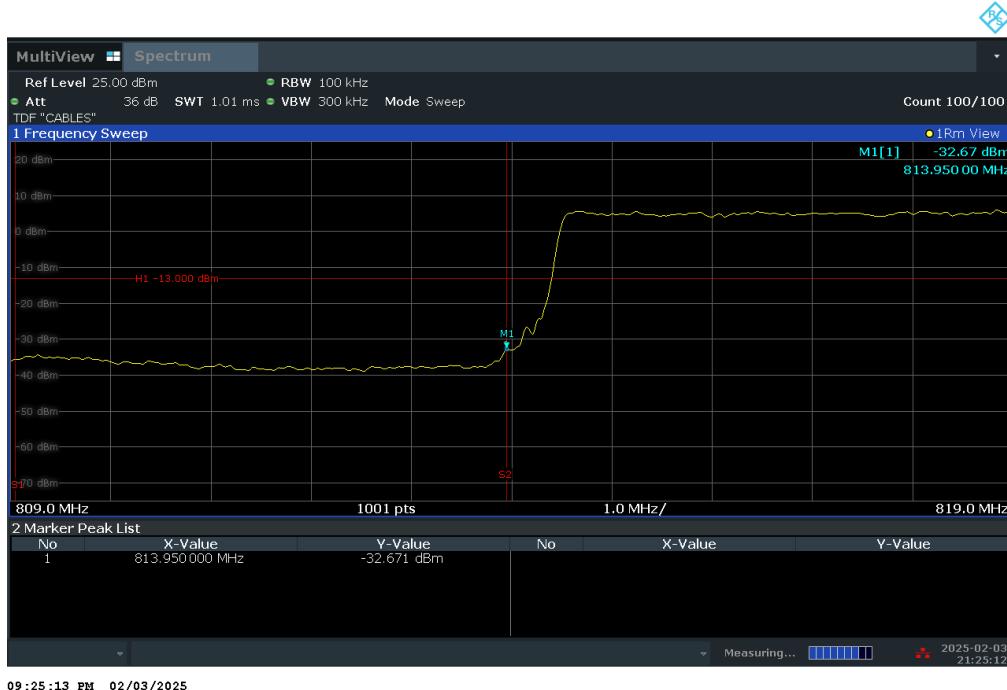


**Plot 7-69. Channel Edge Plot (LTE Band 26 - 5MHz QPSK - Lower Channel)**

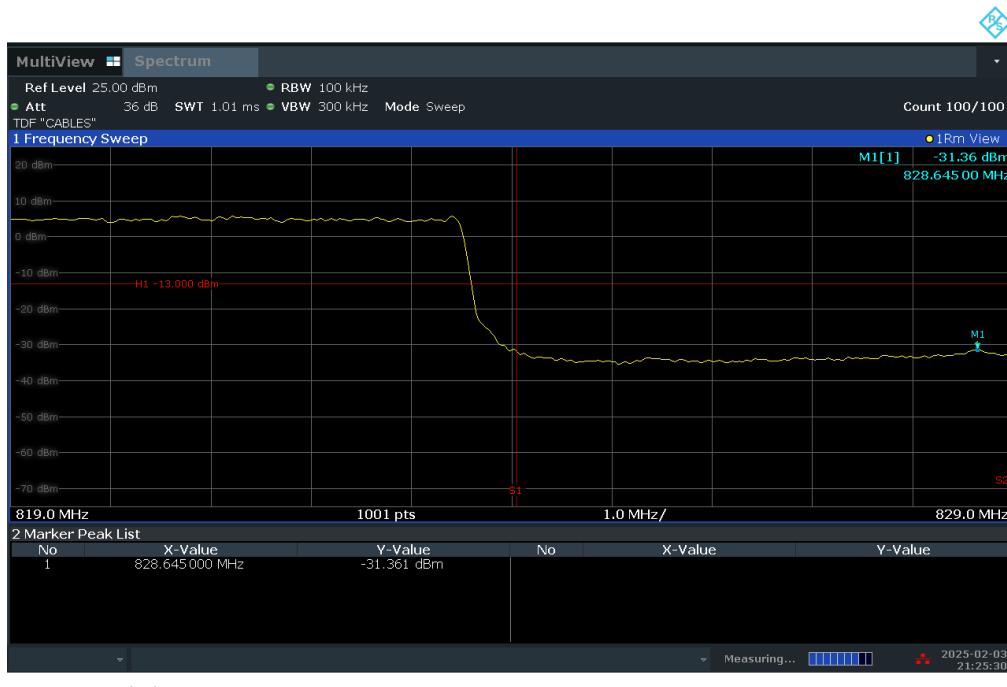


**Plot 7-70. Channel Edge Plot (LTE Band 26 - 5MHz QPSK - Upper Channel)**

|                                         |                                                                                             |                            |               |                                   |
|-----------------------------------------|---------------------------------------------------------------------------------------------|----------------------------|---------------|-----------------------------------|
| FCC ID: BCG-A3337                       |  element | PART 90 MEASUREMENT REPORT |               | Approved by:<br>Technical Manager |
| Test Report S/N:<br>1C2503270033-05.BCG | Test Dates:<br>01/31/2025 - 07/21/2025                                                      | EUT Type:<br>Watch         | Page 56 of 90 |                                   |



**Plot 7-71. Channel Edge Plot (LTE Band 26 - 10MHz QPSK - Lower Channel)**



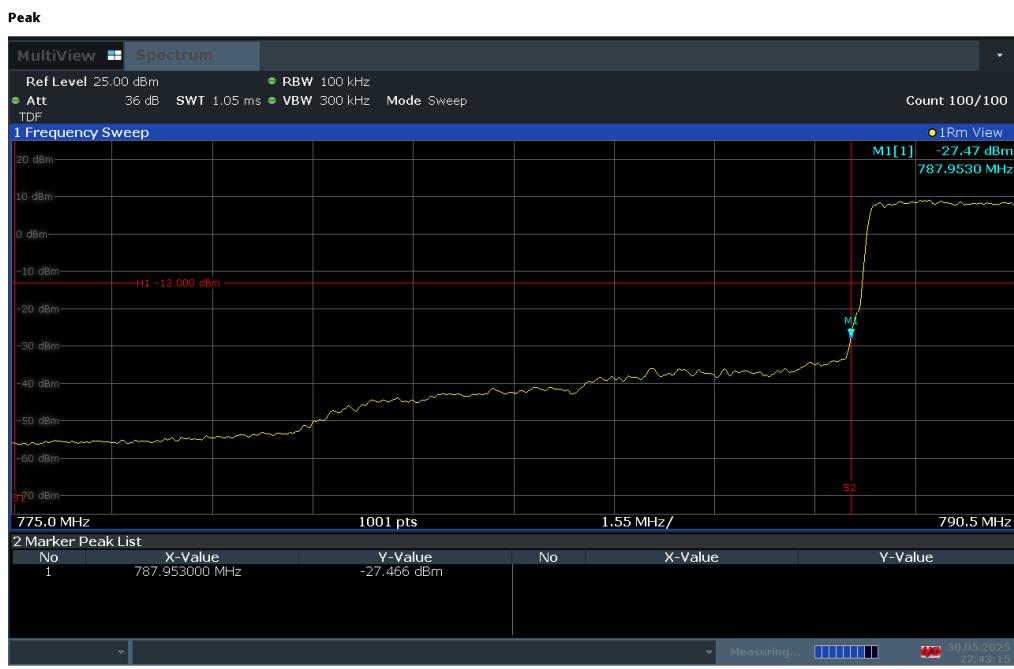
**Plot 7-72. Channel Edge Plot (LTE Band 26 - 10MHz QPSK - Upper Channel)**

|                                         |                                                                                             |                            |               |                                   |
|-----------------------------------------|---------------------------------------------------------------------------------------------|----------------------------|---------------|-----------------------------------|
| FCC ID: BCG-A3337                       |  element | PART 90 MEASUREMENT REPORT |               | Approved by:<br>Technical Manager |
| Test Report S/N:<br>1C2503270033-05.BCG | Test Dates:<br>01/31/2025 - 07/21/2025                                                      | EUT Type:<br>Watch         | Page 57 of 90 |                                   |

## LTE Band 14

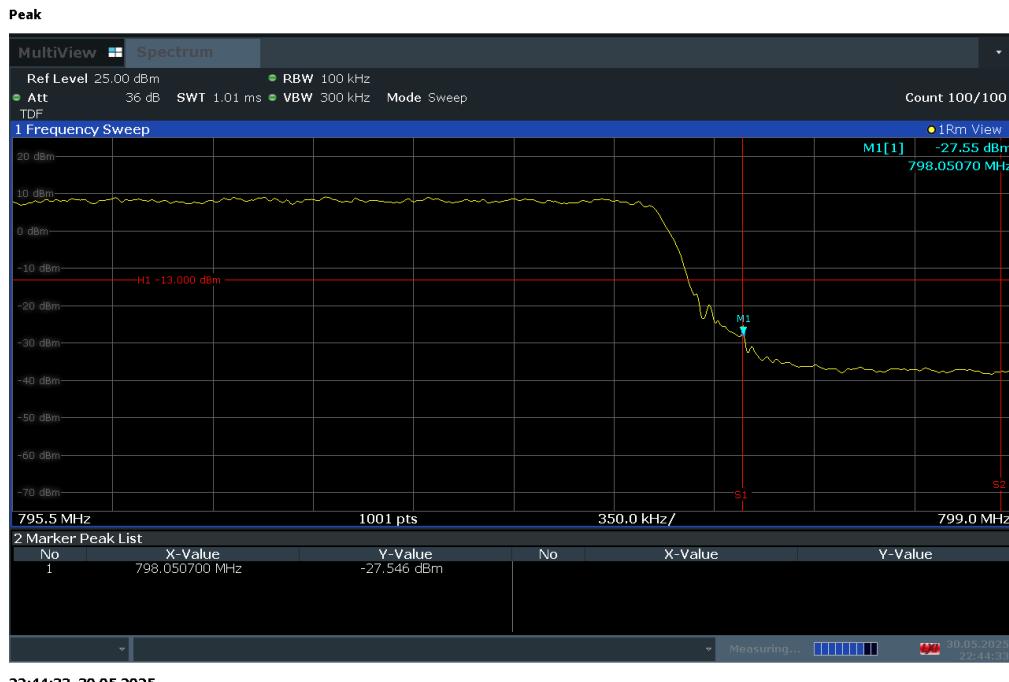


**Plot 7-73. Lower Emission Mask Plot (LTE Band 14, 5MHz QPSK - RB Size 25)**

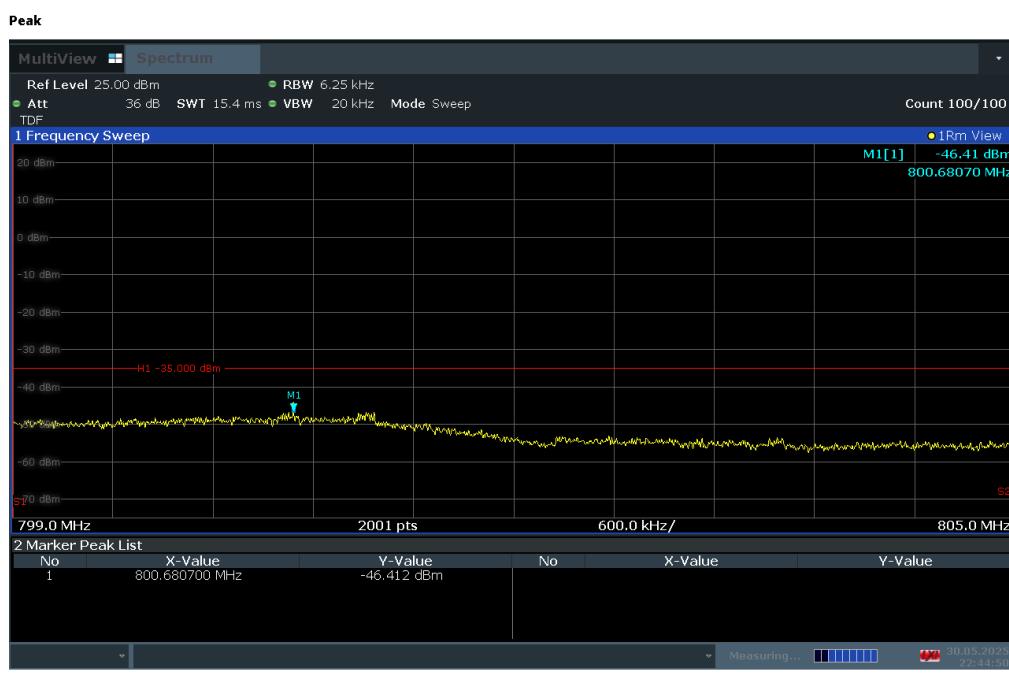


**Plot 7-74. Lower Band Edge Plot (LTE Band 14, 5MHz QPSK - RB Size 25)**

|                                         |                                                                                             |                            |               |                                   |
|-----------------------------------------|---------------------------------------------------------------------------------------------|----------------------------|---------------|-----------------------------------|
| FCC ID: BCG-A3337                       |  element | PART 90 MEASUREMENT REPORT |               | Approved by:<br>Technical Manager |
| Test Report S/N:<br>1C2503270033-05.BCG | Test Dates:<br>01/31/2025 - 07/21/2025                                                      | EUT Type:<br>Watch         | Page 58 of 90 |                                   |

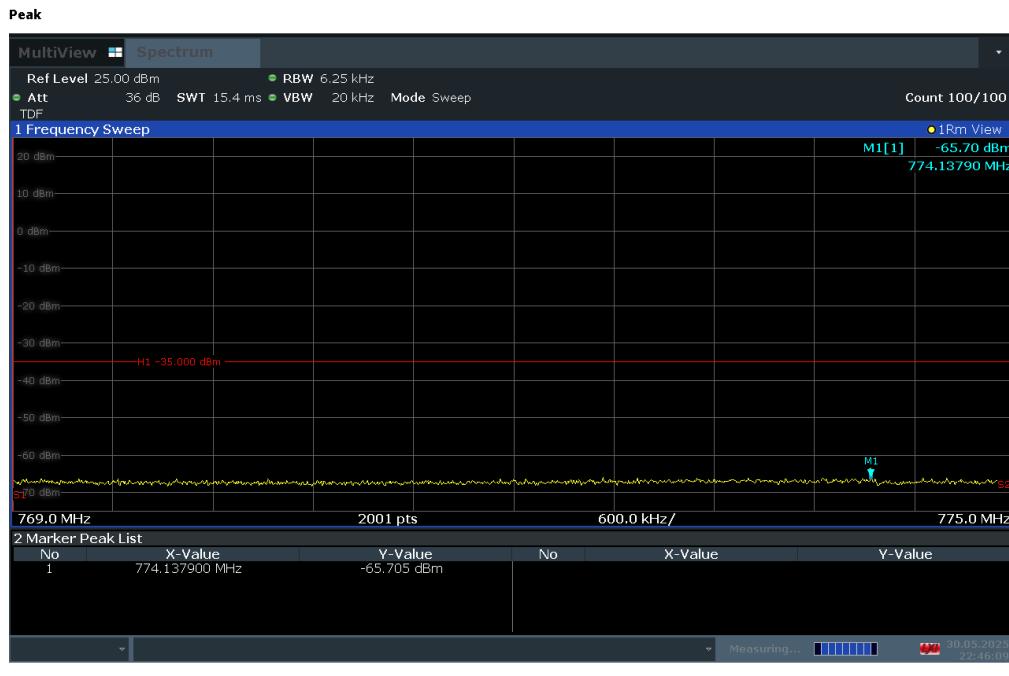


**Plot 7-75. Upper Band Edge Plot (LTE Band 14, 5MHz QPSK - RB Size 25)**

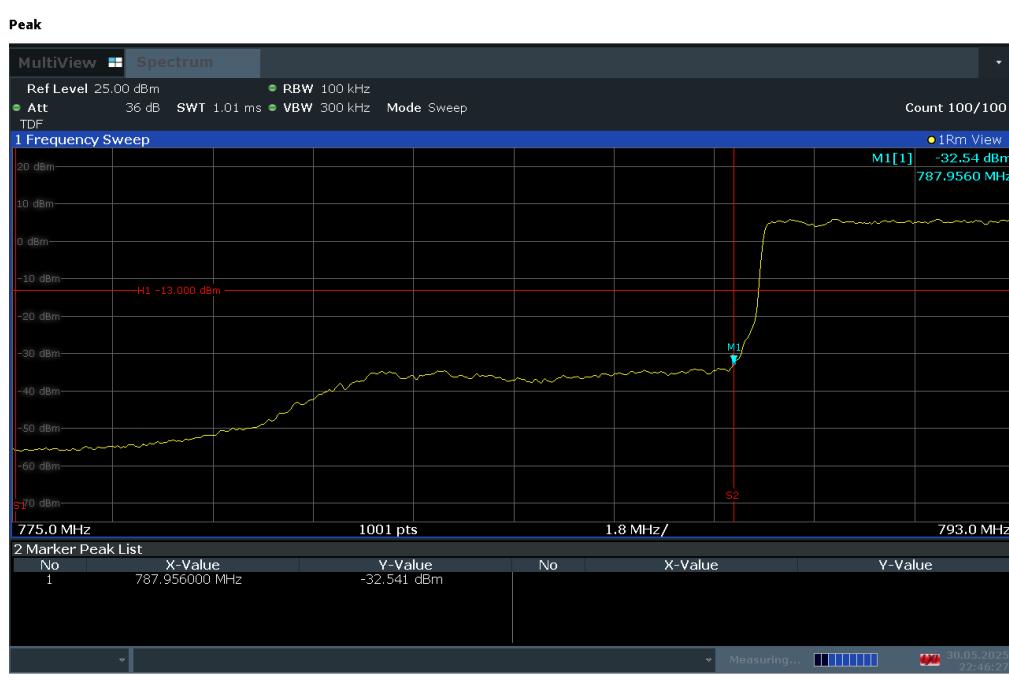


**Plot 7-76. Upper Emission Mask Plot (LTE Band 14, 5MHz QPSK - RB Size 25)**

|                                         |                                                                                             |                            |               |                                   |
|-----------------------------------------|---------------------------------------------------------------------------------------------|----------------------------|---------------|-----------------------------------|
| FCC ID: BCG-A3337                       |  element | PART 90 MEASUREMENT REPORT |               | Approved by:<br>Technical Manager |
| Test Report S/N:<br>1C2503270033-05.BCG | Test Dates:<br>01/31/2025 - 07/21/2025                                                      | EUT Type:<br>Watch         | Page 59 of 90 |                                   |

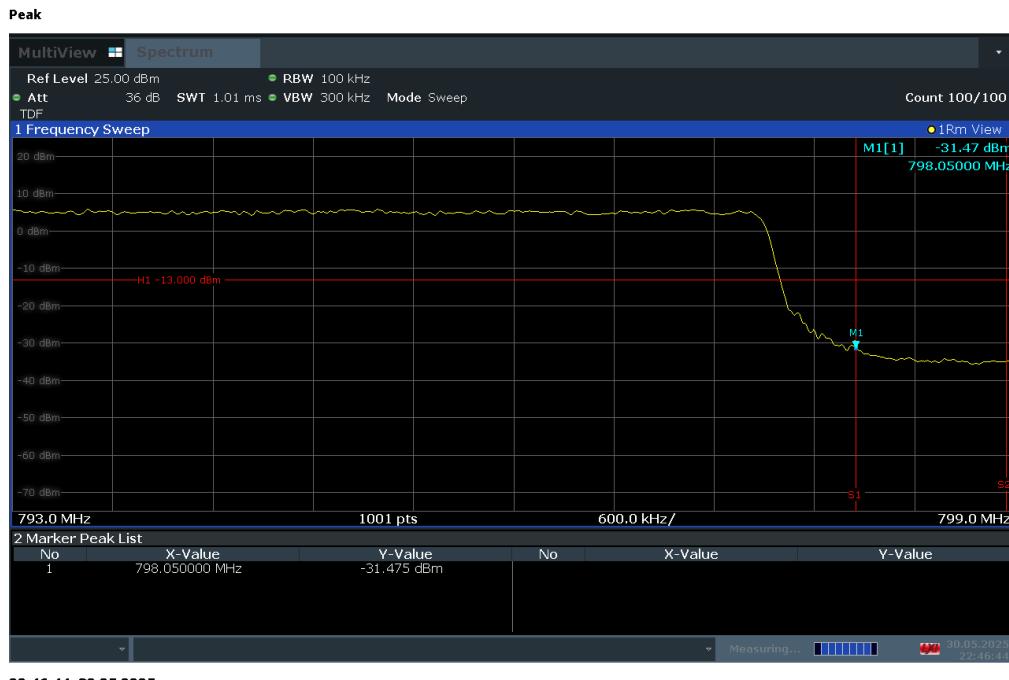


**Plot 7-77. Lower Emission Mask Plot (LTE Band 14, 10MHz QPSK - RB Size 50)**

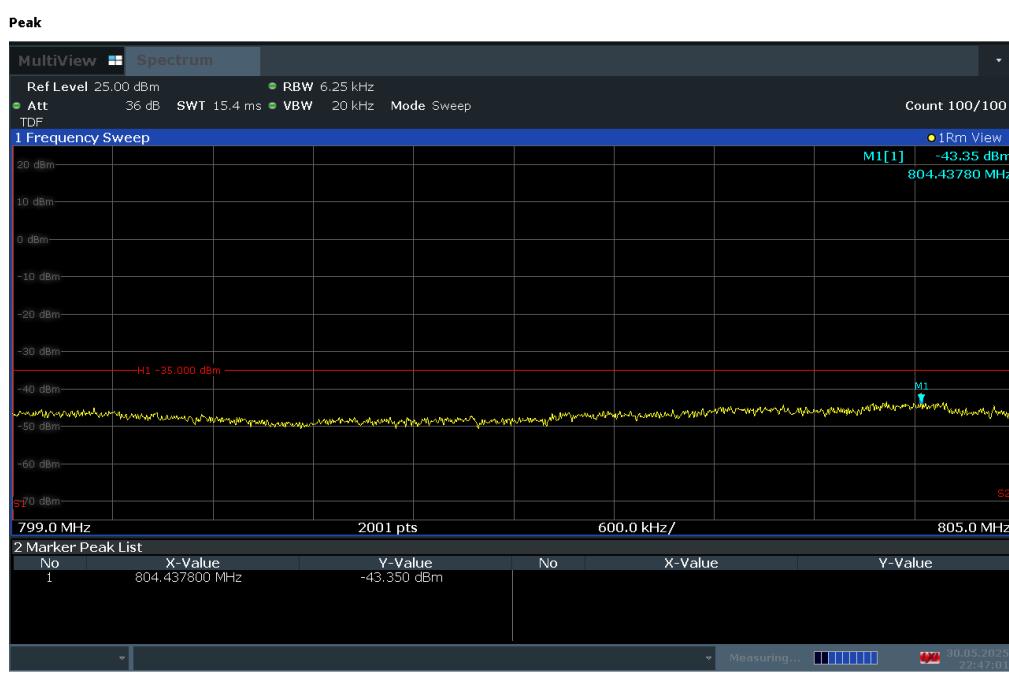


**Plot 7-78. Lower Band Edge Plot (LTE Band 14, 10MHz QPSK - RB Size 50)**

|                                         |                                                                                             |                            |               |                                   |
|-----------------------------------------|---------------------------------------------------------------------------------------------|----------------------------|---------------|-----------------------------------|
| FCC ID: BCG-A3337                       |  element | PART 90 MEASUREMENT REPORT |               | Approved by:<br>Technical Manager |
| Test Report S/N:<br>1C2503270033-05.BCG | Test Dates:<br>01/31/2025 - 07/21/2025                                                      | EUT Type:<br>Watch         | Page 60 of 90 |                                   |



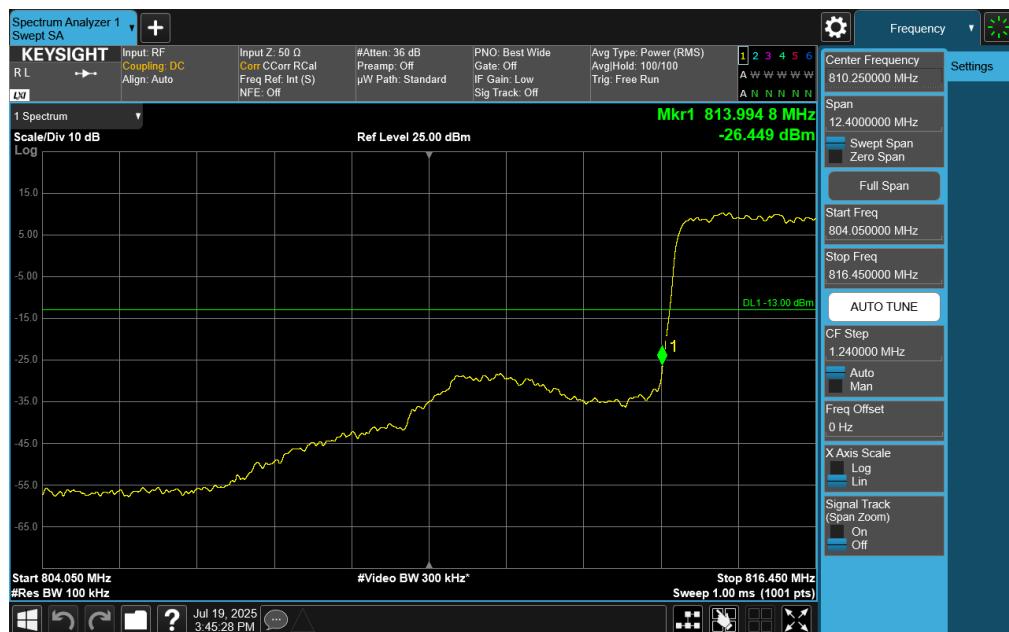
**Plot 7-79. Upper Band Edge Plot (LTE Band 14, 10MHz QPSK - RB Size 50)**



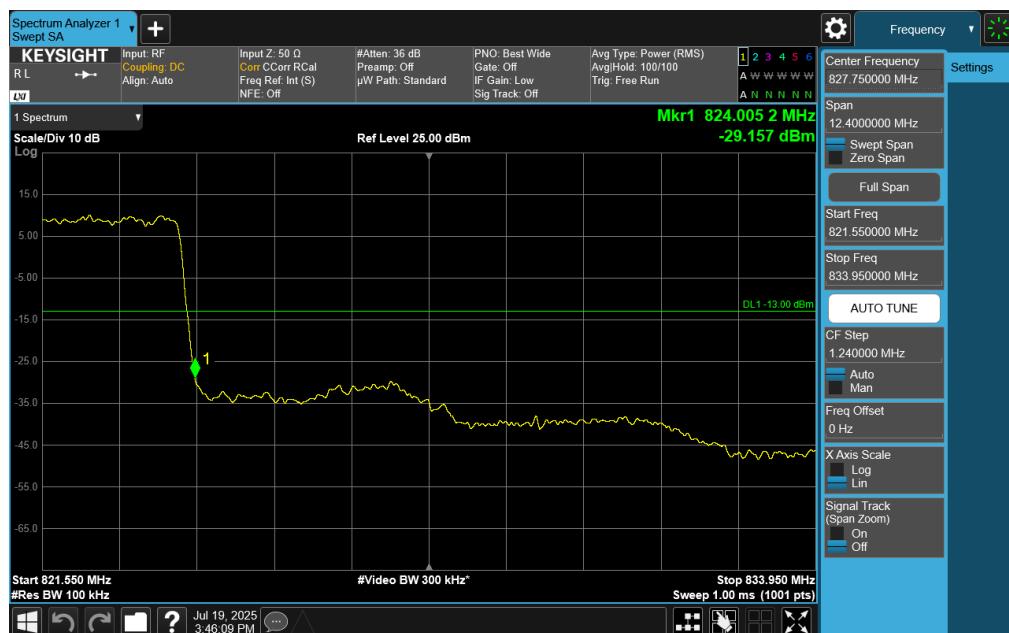
**Plot 7-80. Upper Emission Mask Plot (LTE Band 14, 10MHz QPSK - RB Size 50)**

|                                         |                                                                                             |                            |               |                                   |
|-----------------------------------------|---------------------------------------------------------------------------------------------|----------------------------|---------------|-----------------------------------|
| FCC ID: BCG-A3337                       |  element | PART 90 MEASUREMENT REPORT |               | Approved by:<br>Technical Manager |
| Test Report S/N:<br>1C2503270033-05.BCG | Test Dates:<br>01/31/2025 - 07/21/2025                                                      | EUT Type:<br>Watch         | Page 61 of 90 |                                   |

## NR Band n26

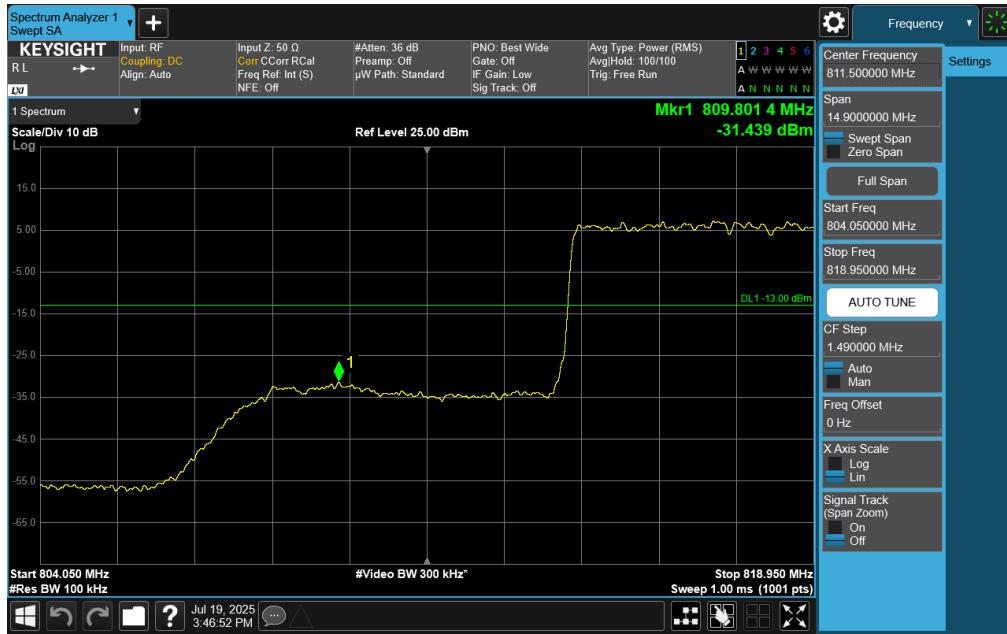


Plot 7-81. Lower Band Edge Plot (NR Band n26, 5MHz DFT-s-OFDM QPSK - RB Size 25)

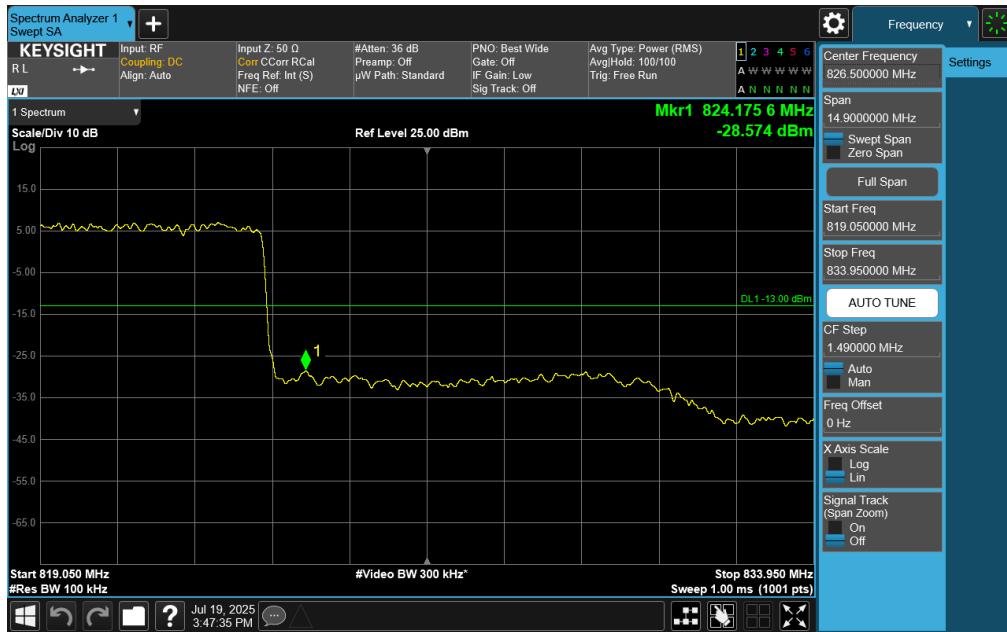


Plot 7-82. Upper Band Edge Plot (NR Band n26, 5MHz DFT-s-OFDM QPSK - RB Size 25)

|                                         |                                        |                    |                                   |
|-----------------------------------------|----------------------------------------|--------------------|-----------------------------------|
| FCC ID: BCG-A3337                       | PART 90 MEASUREMENT REPORT             |                    | Approved by:<br>Technical Manager |
| Test Report S/N:<br>1C2503270033-05.BCG | Test Dates:<br>01/31/2025 - 07/21/2025 | EUT Type:<br>Watch | Page 62 of 90                     |



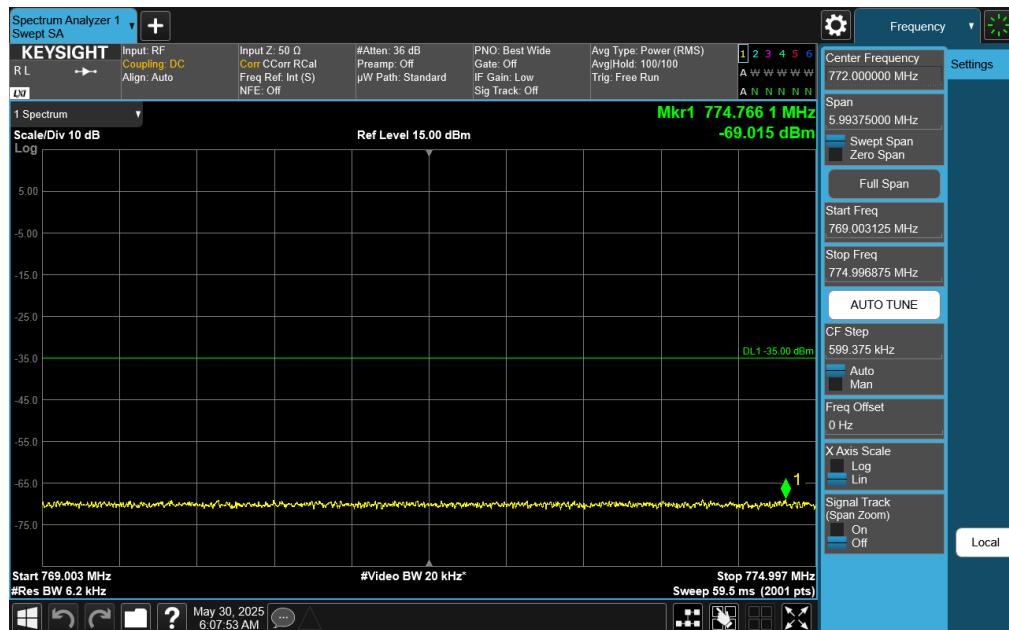
Plot 7-83. Lower Band Edge Plot (NR Band n26, 10MHz DFT-s-OFDM QPSK - RB Size 50)



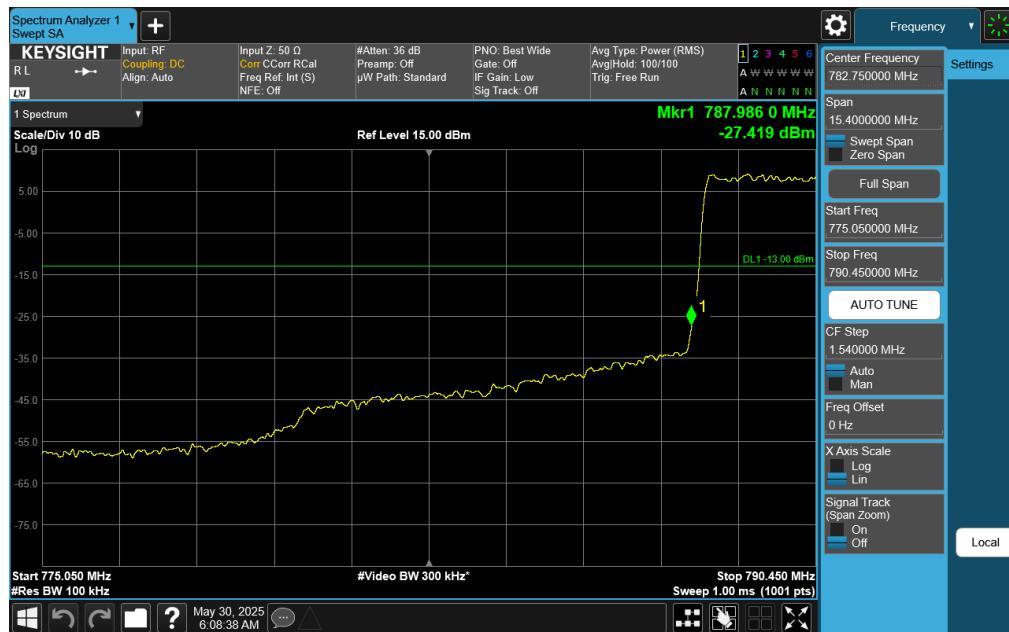
Plot 7-84. Upper Band Edge Plot (NR Band n26, 10MHz DFT-s-OFDM QPSK - RB Size 50)

|                                         |                                        |                    |  |                                   |
|-----------------------------------------|----------------------------------------|--------------------|--|-----------------------------------|
| FCC ID: BCG-A3337                       | PART 90 MEASUREMENT REPORT             |                    |  | Approved by:<br>Technical Manager |
| Test Report S/N:<br>1C2503270033-05.BCG | Test Dates:<br>01/31/2025 - 07/21/2025 | EUT Type:<br>Watch |  | Page 63 of 90                     |

## NR Band n14

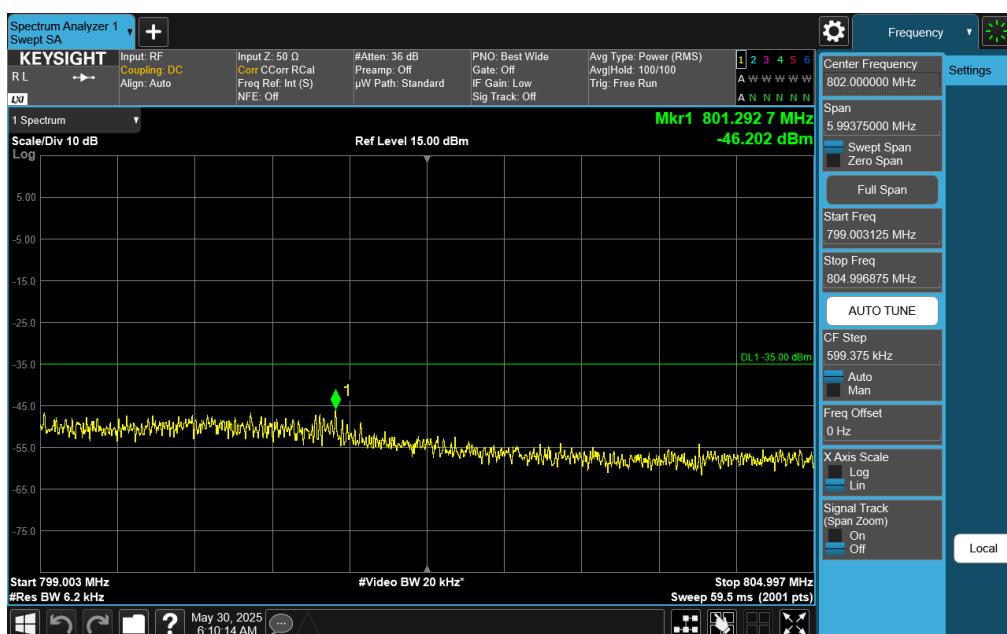
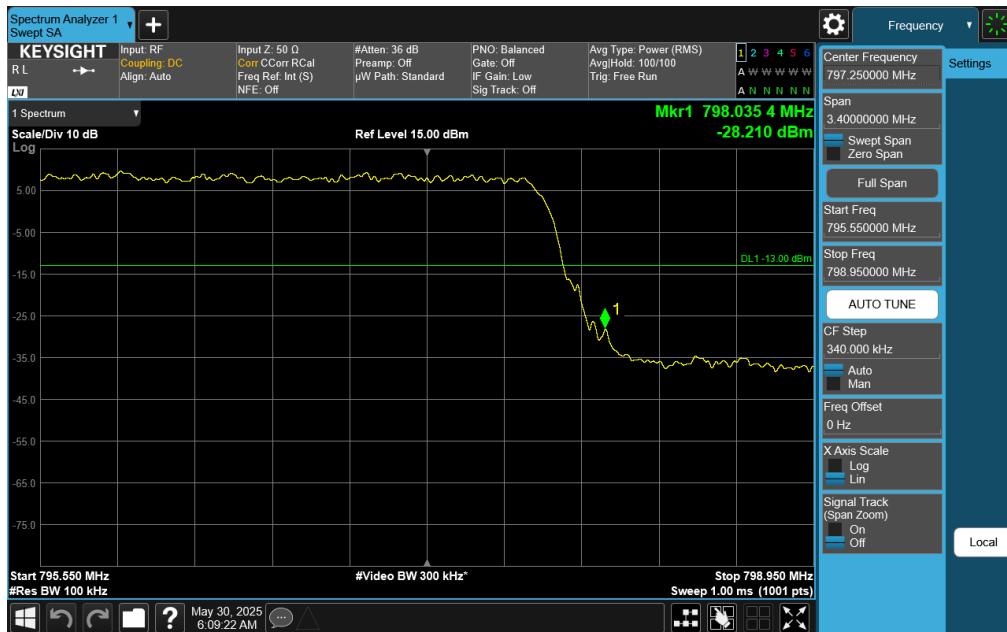


Plot 7-85. Lower Emission Mask Plot (NR Band n14, 5MHz DFT-s-OFDM QPSK - RB Size 25)

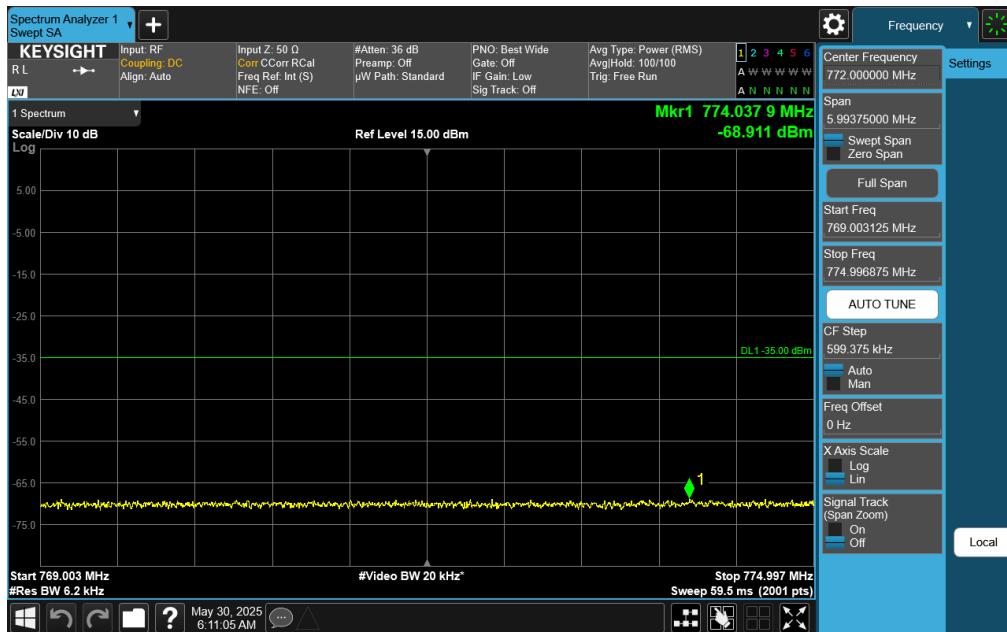


Plot 7-86. Lower Band Edge Plot (NR Band n14, 5MHz DFT-s-OFDM QPSK - RB Size 25)

|                                         |                                        |                    |                                   |
|-----------------------------------------|----------------------------------------|--------------------|-----------------------------------|
| FCC ID: BCG-A3337                       | PART 90 MEASUREMENT REPORT             |                    | Approved by:<br>Technical Manager |
| Test Report S/N:<br>1C2503270033-05.BCG | Test Dates:<br>01/31/2025 - 07/21/2025 | EUT Type:<br>Watch | Page 64 of 90                     |



|                                         |                                        |                    |  |                                   |
|-----------------------------------------|----------------------------------------|--------------------|--|-----------------------------------|
| FCC ID: BCG-A3337                       | PART 90 MEASUREMENT REPORT             |                    |  | Approved by:<br>Technical Manager |
| Test Report S/N:<br>1C2503270033-05.BCG | Test Dates:<br>01/31/2025 - 07/21/2025 | EUT Type:<br>Watch |  | Page 65 of 90                     |

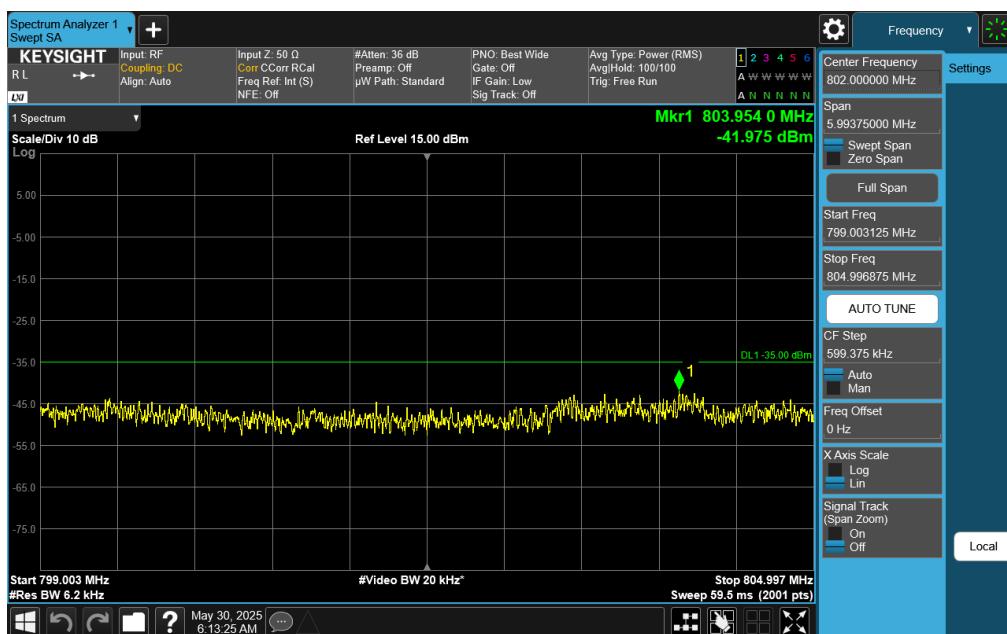
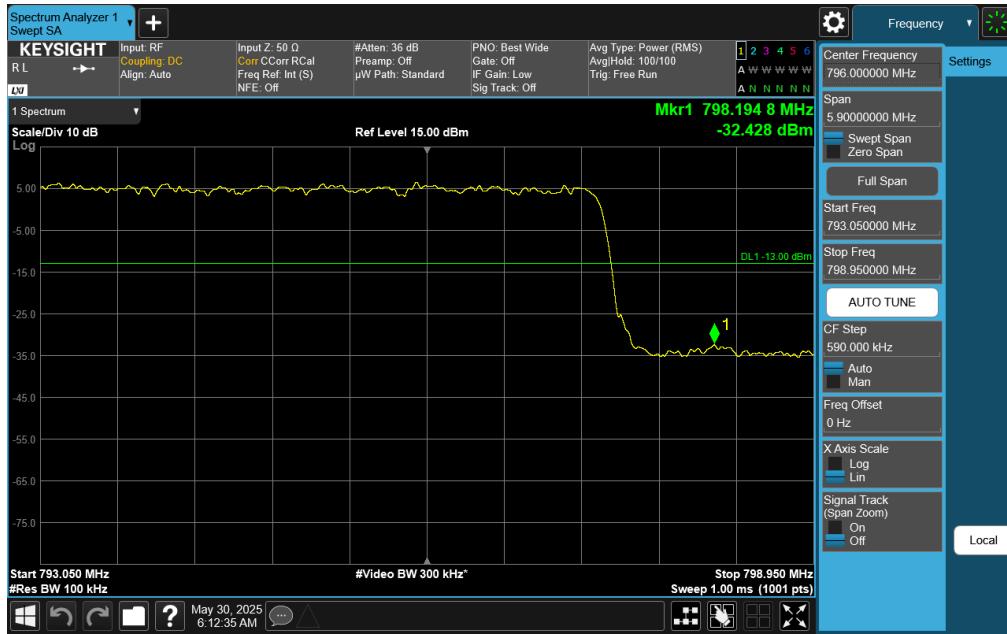


Plot 7-89. Lower Emission Mask Plot (NR Band n14, 10MHz DFT-s-OFDM QPSK - RB Size 50)



Plot 7-90. Lower Band Edge Plot (NR Band n14, 10MHz DFT-s-OFDM QPSK - RB Size 50)

|                                         |                                        |                    |                                   |
|-----------------------------------------|----------------------------------------|--------------------|-----------------------------------|
| FCC ID: BCG-A3337                       | PART 90 MEASUREMENT REPORT             |                    | Approved by:<br>Technical Manager |
| Test Report S/N:<br>1C2503270033-05.BCG | Test Dates:<br>01/31/2025 - 07/21/2025 | EUT Type:<br>Watch | Page 66 of 90                     |



|                                         |                                        |                    |                                   |
|-----------------------------------------|----------------------------------------|--------------------|-----------------------------------|
| FCC ID: BCG-A3337                       | PART 90 MEASUREMENT REPORT             |                    | Approved by:<br>Technical Manager |
| Test Report S/N:<br>1C2503270033-05.BCG | Test Dates:<br>01/31/2025 - 07/21/2025 | EUT Type:<br>Watch | Page 67 of 90                     |

## 7.5 Conducted Power Output Data

§2.1046 §90.635

### Test Overview

Conducted power measurements are performed to measure the average output power of the EUT. The averaging is to be performed only over duration of active transmissions at maximum output power level. The average measurements do not include averaging over periods when the transmitter is quiescent or when operating at reduced power level.

### Test Procedures Used

KDB 971168 D01 v03r01

### Test Setup

The EUT and measurement equipment were set up as shown in the diagram below.

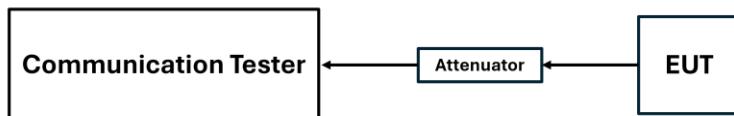


Figure 7-7. LTE Test Instrument & Measurement Setup

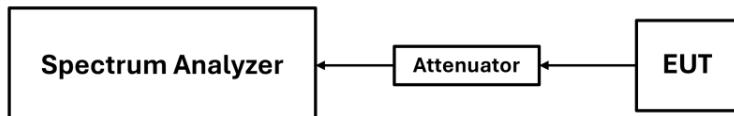


Figure 7-8. FR1 Test Instrument & Measurement Setup

### Test Notes

1. The EUT was tested in all possible test configurations. The worst case emissions are reported with the EUT modulations and channel bandwidth configurations shown in the tables below.

|                                         |                                        |                    |                                   |
|-----------------------------------------|----------------------------------------|--------------------|-----------------------------------|
| FCC ID: BCG-A3337                       | PART 90 MEASUREMENT REPORT             |                    | Approved by:<br>Technical Manager |
| Test Report S/N:<br>1C2503270033-05.BCG | Test Dates:<br>01/31/2025 - 07/21/2025 | EUT Type:<br>Watch | Page 68 of 90                     |

### 7.5.1 Antenna BCM – Conducted Power

| Bandwidth | Modulation | Frequency [MHz] | RB Size/Offset | Conducted Power [dBm] | Conducted Power [mW] | Conducted Power Limit [dBm] | Margin [dB] |
|-----------|------------|-----------------|----------------|-----------------------|----------------------|-----------------------------|-------------|
| 1.4 MHz   | QPSK       | 814.7           | 1 / 5          | 25.70                 | 371.535              | 50.00                       | -24.30      |
|           |            | 823.3           | 1 / 3          | 25.37                 | 344.350              | 50.00                       | -24.63      |
|           | 16-QAM     | 814.7           | 1 / 0          | 24.67                 | 293.089              | 50.00                       | -25.33      |
| 3 MHz     | QPSK       | 815.5           | 1 / 7          | 25.49                 | 353.997              | 50.00                       | -24.51      |
|           |            | 822.5           | 1 / 7          | 25.42                 | 348.337              | 50.00                       | -24.58      |
|           | 16-QAM     | 815.5           | 1 / 7          | 24.66                 | 292.415              | 50.00                       | -25.34      |
| 5 MHz     | QPSK       | 816.5           | 1 / 0          | 25.61                 | 363.915              | 50.00                       | -24.39      |
|           |            | 821.5           | 1 / 24         | 25.53                 | 357.273              | 50.00                       | -24.47      |
|           | 16-QAM     | 816.5           | 1 / 12         | 24.61                 | 289.068              | 50.00                       | -25.39      |
| 10 MHz    | QPSK       | 819.0           | 1 / 49         | 25.55                 | 358.922              | 50.00                       | -24.45      |
|           | 16-QAM     | 819.0           | 1 / 25         | 24.60                 | 288.403              | 50.00                       | -25.40      |

Table 7-2. Conducted Power Output Data (LTE Band 26)

| Bandwidth | Modulation   | Frequency [MHz] | RB Size/Offset | Conducted Power [dBm] | Conducted Power [mW] | Conducted Power Limit [dBm] | Margin [dB] |
|-----------|--------------|-----------------|----------------|-----------------------|----------------------|-----------------------------|-------------|
| 5 MHz     | $\pi/2$ BPSK | 816.5           | 1 / 0          | 25.34                 | 341.979              | 50.00                       | -24.66      |
|           |              | 819.0           | 1 / 12         | 25.30                 | 338.844              | 50.00                       | -24.70      |
|           |              | 821.5           | 1 / 12         | 25.34                 | 341.979              | 50.00                       | -24.66      |
|           | QPSK         | 816.5           | 1 / 0          | 25.27                 | 336.512              | 50.00                       | -24.73      |
|           |              | 819.0           | 1 / 12         | 25.36                 | 343.558              | 50.00                       | -24.64      |
|           |              | 821.5           | 1 / 24         | 25.37                 | 344.350              | 50.00                       | -24.63      |
|           | 16-QAM       | 821.5           | 1 / 12         | 24.41                 | 276.058              | 50.00                       | -25.59      |
|           | 64-QAM       | 819.0           | 1 / 0          | 23.43                 | 220.293              | 50.00                       | -26.57      |
|           | $\pi/2$ BPSK | 819.0           | 1 / 51         | 25.36                 | 343.558              | 50.00                       | -24.64      |
|           | QPSK         | 819.0           | 1 / 25         | 25.41                 | 347.536              | 50.00                       | -24.59      |
| 10 MHz    | 16-QAM       | 819.0           | 1 / 0          | 24.27                 | 267.301              | 50.00                       | -25.73      |
|           | 64-QAM       | 819.0           | 1 / 0          | 23.38                 | 217.771              | 50.00                       | -26.62      |

Table 7-3. Conducted Power Output Data (NR Band n26)

|                                         |                                                                                             |                            |  |  |                                   |
|-----------------------------------------|---------------------------------------------------------------------------------------------|----------------------------|--|--|-----------------------------------|
| FCC ID: BCG-A3337                       |  element | PART 90 MEASUREMENT REPORT |  |  | Approved by:<br>Technical Manager |
| Test Report S/N:<br>1C2503270033-05.BCG | Test Dates:<br>01/31/2025 - 07/21/2025                                                      | EUT Type:<br>Watch         |  |  |                                   |

V2.2 09/07/2023

Unless otherwise specified, no part of this report may be reproduced or utilized in any part, form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from Element Materials Technology. If you have any questions about this or have an enquiry about obtaining additional rights to this report or assembly of contents thereof, please contact [ct.info@element.com](mailto:ct.info@element.com).

Page 69 of 90

## 7.6 Radiated Power (ERP)

§90.542(a)(7)

### Test Overview

Effective Radiated Power (ERP) measurements are calculated by adding highest antenna gain to maximum measured conducted output power. All measurements are performed as RMS average measurements while the EUT is operating at its maximum duty cycle, at maximum power, and at the appropriate frequencies.

### Test Procedures Used

KDB 971168 D01 v03r01 – Section 5.2.1

ANSI C63.26-2015

TIA-603-E-2016 – Section 2.2.17

### Test Settings

The relevant equation for determining the ERP from the conducted RF output power measured is:

$$\text{ERP} = \text{PMes} - \text{LC} + \text{GT}$$

Where:

ERP = Effective Radiated Power (expressed in the same units as PMes, typically dBW or dBm)

PMes = measured transmitter output power or PSD, in dBW or dBm

LC = signal attenuation in the connecting cable between the transmitter and antenna in dB

GT = gain of the transmitting antenna, in dBd (ERP)

### Test Setup

The EUT and measurement equipment were set up as shown in the diagram below.

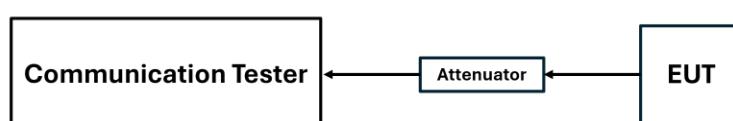


Figure 7-9. LTE Test Instrument & Measurement Setup

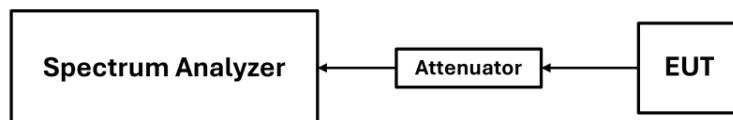


Figure 7-10. FR1 Test Instrument & Measurement Setup

|                                         |                                        |                    |                                   |
|-----------------------------------------|----------------------------------------|--------------------|-----------------------------------|
| FCC ID: BCG-A3337                       | PART 90 MEASUREMENT REPORT             |                    | Approved by:<br>Technical Manager |
| Test Report S/N:<br>1C2503270033-05.BCG | Test Dates:<br>01/31/2025 - 07/21/2025 | EUT Type:<br>Watch | Page 70 of 90                     |

## Test Notes

- 1) The worst case emissions are reported with the modulations, RB sizes and offsets, and channel bandwidth configurations shown in the tables below.
- 2) This unit was tested with its standard battery.
- 3) The Level (dBm) readings in the table were taken with a correction table loaded into the base station simulator. The correction table was used to account for the signal attenuation in the connecting cable between the transmitter and antenna.
- 4) The Ant. Gains (GT) are listed in dBi.
- 5) For NR operation, all subcarrier spacings (SCS) and transmission schemes (e.g. CP-OFDM and DFT-s-OFDM) were investigated to determine the worst case configuration. All modes of operation were investigated and the worst case configuration results are reported in this section.

|                                         |                                        |                    |                                   |
|-----------------------------------------|----------------------------------------|--------------------|-----------------------------------|
| FCC ID: BCG-A3337                       | PART 90 MEASUREMENT REPORT             |                    | Approved by:<br>Technical Manager |
| Test Report S/N:<br>1C2503270033-05.BCG | Test Dates:<br>01/31/2025 - 07/21/2025 | EUT Type:<br>Watch | Page 71 of 90                     |

### 7.6.1 Antenna BCM – ERP

| Bandwidth | Mod.   | Frequency [MHz] | Ant. Gain [dBi] | RB Size/Offset | Conducted Power [dBm] | ERP [dBm]    | ERP [mW] | ERP Limit [dBm] | Margin [dB] |
|-----------|--------|-----------------|-----------------|----------------|-----------------------|--------------|----------|-----------------|-------------|
| 5 MHz     | QPSK   | 790.5           | -27.20          | 1 / 12         | 25.70                 | <b>-3.65</b> | 0.432    | 34.77           | -38.42      |
|           |        | 793.0           | -27.20          | 1 / 12         | 25.50                 | -3.85        | 0.412    | 34.77           | -38.62      |
|           |        | 795.5           | -27.20          | 1 / 12         | 25.54                 | -3.81        | 0.416    | 34.77           | -38.58      |
| 10 MHz    | 16-QAM | 790.5           | -27.20          | 1 / 0          | 24.64                 | -4.71        | 0.338    | 34.77           | -39.48      |
|           | QPSK   | 793.0           | -27.20          | 1 / 0          | 25.57                 | <b>-3.78</b> | 0.419    | 34.77           | -38.55      |
| 16-QAM    |        | 793.0           | -27.20          | 1 / 49         | 24.41                 | -4.94        | 0.321    | 34.77           | -39.71      |

Table 7-4. ERP Data (LTE Band 14)

| Bandwidth | Modulation   | Frequency [MHz] | Ant. Gain [dBi] | RB Size/Offset | Conducted Power [dBm] | ERP [dBm]    | ERP [mW] | ERP Limit [dBm] | Margin [dB] |
|-----------|--------------|-----------------|-----------------|----------------|-----------------------|--------------|----------|-----------------|-------------|
| 5 MHz     | $\pi/2$ BPSK | 790.5           | -27.20          | 1 / 24         | 25.24                 | -4.11        | 0.388    | 34.77           | -38.88      |
|           |              | 793.0           | -27.20          | 1 / 12         | 25.35                 | -4.00        | 0.398    | 34.77           | -38.77      |
|           |              | 795.5           | -27.20          | 1 / 0          | 25.37                 | <b>-3.98</b> | 0.400    | 34.77           | -38.75      |
|           | QPSK         | 790.5           | -27.20          | 1 / 12         | 25.37                 | <b>-3.98</b> | 0.400    | 34.77           | -38.75      |
|           |              | 793.0           | -27.20          | 1 / 0          | 25.37                 | <b>-3.98</b> | 0.400    | 34.77           | -38.75      |
|           |              | 795.5           | -27.20          | 1 / 24         | 25.37                 | <b>-3.98</b> | 0.400    | 34.77           | -38.75      |
|           | 16-QAM       | 795.5           | -27.20          | 1 / 0          | 24.27                 | -5.08        | 0.310    | 34.77           | -39.85      |
|           | 64-QAM       | 793.0           | -27.20          | 1 / 12         | 23.25                 | -6.10        | 0.245    | 34.77           | -40.87      |
|           | $\pi/2$ BPSK | 793.0           | -27.20          | 1 / 25         | 25.22                 | <b>-4.13</b> | 0.386    | 34.77           | -38.90      |
|           | QPSK         | 793.0           | -27.20          | 1 / 0          | 25.37                 | <b>-3.98</b> | 0.400    | 34.77           | -38.75      |
| 10 MHz    | 16-QAM       | 793.0           | -27.20          | 1 / 0          | 24.36                 | -4.99        | 0.317    | 34.77           | -39.76      |
|           | 64-QAM       | 793.0           | -27.20          | 1 / 0          | 23.10                 | -6.25        | 0.237    | 34.77           | -41.02      |

Table 7-5. ERP Data (NR Band n14)

|                                         |                                                                                             |                            |  |  |  |                                   |
|-----------------------------------------|---------------------------------------------------------------------------------------------|----------------------------|--|--|--|-----------------------------------|
| FCC ID: BCG-A3337                       |  element | PART 90 MEASUREMENT REPORT |  |  |  | Approved by:<br>Technical Manager |
| Test Report S/N:<br>1C2503270033-05.BCG | Test Dates:<br>01/31/2025 - 07/21/2025                                                      | EUT Type:<br>Watch         |  |  |  |                                   |

V2.2 09/07/2023

Unless otherwise specified, no part of this report may be reproduced or utilized in any part, form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from Element Materials Technology. If you have any questions about this or have an enquiry about obtaining additional rights to this report or assembly of contents thereof, please contact [ct.info@element.com](mailto:ct.info@element.com).

Page 72 of 90

## 7.7 Radiated Spurious Emissions

§2.1053 §90.691(a) §90.543(e)

### Test Overview

Radiated spurious emissions measurements are performed using the field strength conversion method described in KDB 971168 with the EUT transmitting into an integral antenna. Measurements on signals operating below 1GHz are performed using horizontally and vertically polarized broadband hybrid antennas. Measurements on signals operating above 1GHz are performed using vertically and horizontally polarized broadband horn antennas. All measurements are performed while the EUT is operating at maximum power and at the appropriate frequencies.

### Test Procedures Used

KDB 971168 D01 v03r01 – Section 5.8

ANSI C63.26-2015

TIA-603-E-2016 – Section 2.2.12

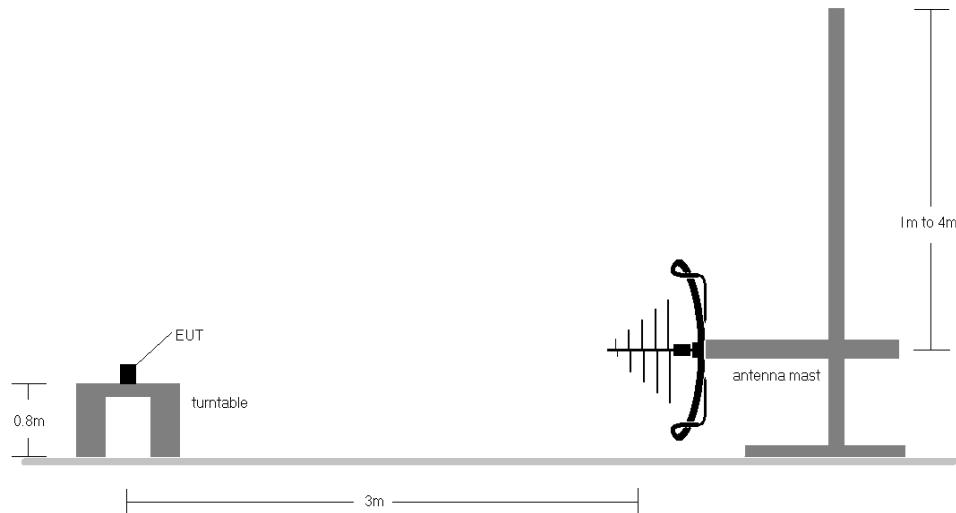
### Test Settings

1. RBW = 100kHz for emissions below 1GHz and 1MHz for emissions above 1GHz
2. VBW  $\geq 3 \times$  RBW
3. Span = 1.5 times the OBW
4. No. of sweep points  $\geq 2 \times$  span / RBW
5. Detector = RMS
6. Trace mode = Average (Max Hold for pulsed emissions)
7. The trace was allowed to stabilize

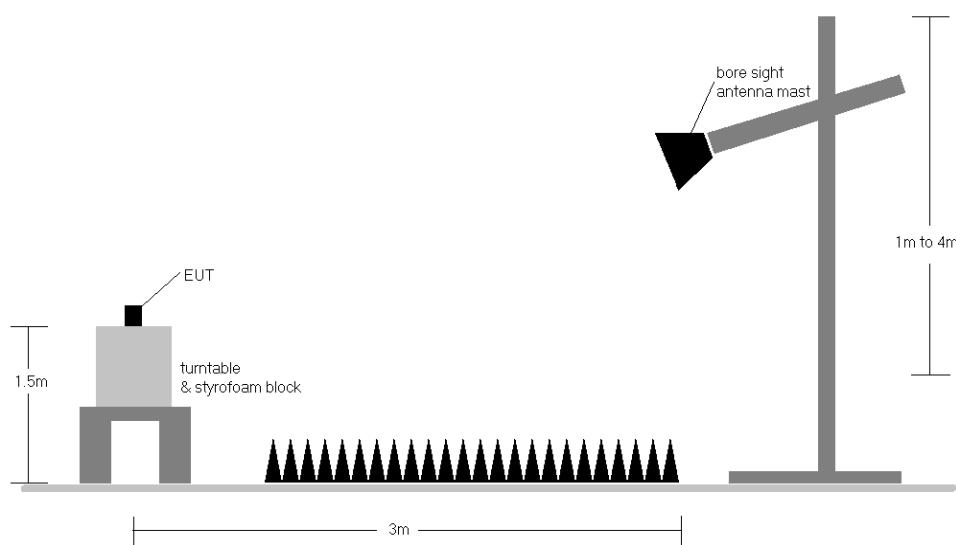
|                                         |                                        |                    |                                   |
|-----------------------------------------|----------------------------------------|--------------------|-----------------------------------|
| FCC ID: BCG-A3337                       | PART 90 MEASUREMENT REPORT             |                    | Approved by:<br>Technical Manager |
| Test Report S/N:<br>1C2503270033-05.BCG | Test Dates:<br>01/31/2025 - 07/21/2025 | EUT Type:<br>Watch | Page 73 of 90                     |

### Test Setup

The EUT and measurement equipment were set up as shown in the diagram below.



**Figure 7-11. Test Instrument & Measurement Setup < 1GHz**



**Figure 7-12. Test Instrument & Measurement Setup >1 GHz**

|                                         |                                        |                    |                                   |
|-----------------------------------------|----------------------------------------|--------------------|-----------------------------------|
| FCC ID: BCG-A3337                       | PART 90 MEASUREMENT REPORT             |                    | Approved by:<br>Technical Manager |
| Test Report S/N:<br>1C2503270033-05.BCG | Test Dates:<br>01/31/2025 - 07/21/2025 | EUT Type:<br>Watch | Page 74 of 90                     |

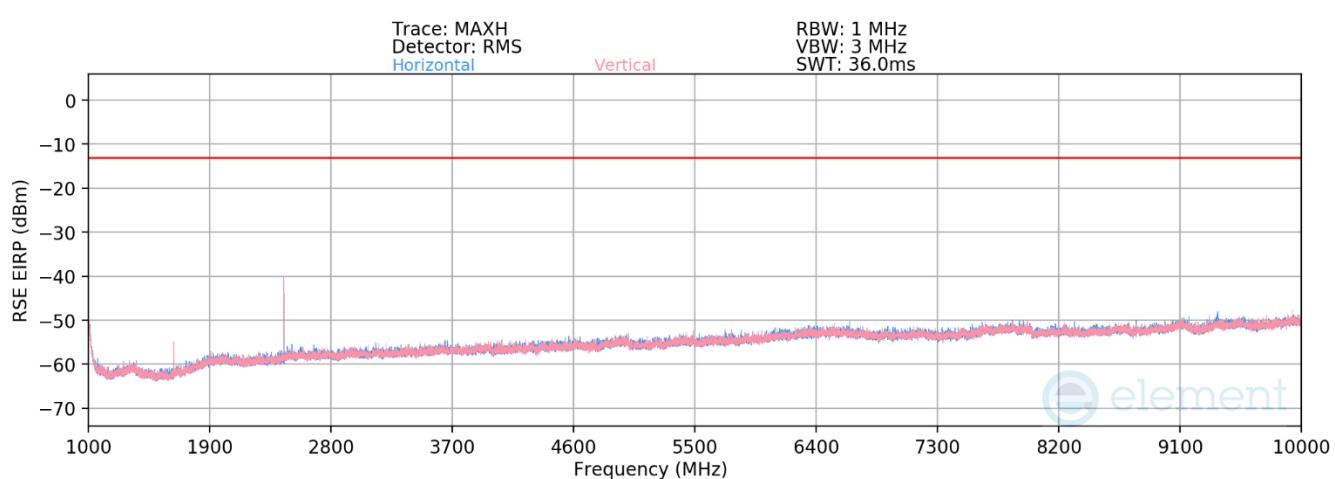
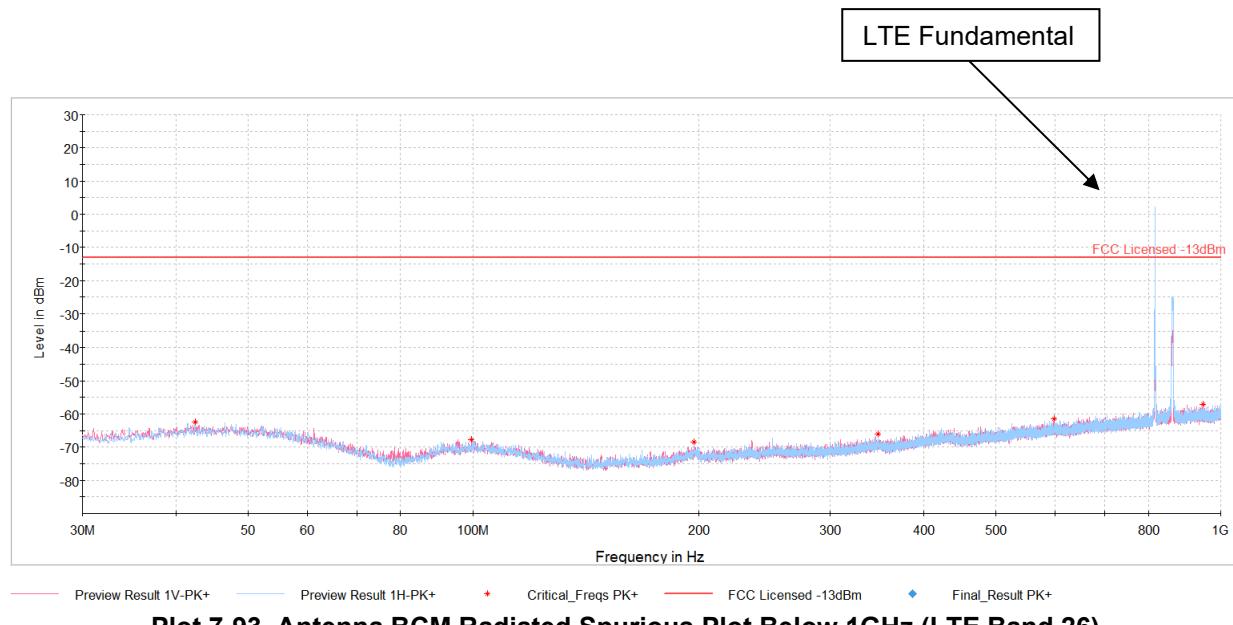
## Test Notes

1. Field strengths are calculated using the Measurement quantity conversions in KDB 971168 D01 v03r01 Section 5.8.4.
  - a.  $E(\text{dB}\mu\text{V}/\text{m}) = \text{Measured amplitude level (dBm)} + 107 + \text{Cable Loss (dB)} + \text{Antenna Factor (dB/m)}$
  - b.  $\text{EIRP (dBm)} = E(\text{dB}\mu\text{V}/\text{m}) + 20\log D - 104.8$ ; where D is the measurement distance in meters.
2. For LTE mode, the device was tested under all modulations, RB sizes and offsets, and channel bandwidth configurations and the worst case emissions are reported with 1 RB.
3. This unit was tested with its standard battery.
4. The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst case setup is reported in the tables below.
5. The "-" shown in the following RSE tables are used to denote a noise floor measurement.
6. For NR operation, all subcarrier spacings (SCS) and transmission schemes (e.g. CP-OFDM and DFT-s-OFDM) were investigated to determine the worst case configuration. All modes of operation were investigated and the worst case configuration results are reported in this section.

| FCC ID: BCG-A3337                       | PART 90 MEASUREMENT REPORT             |                    | Approved by:<br>Technical Manager |
|-----------------------------------------|----------------------------------------|--------------------|-----------------------------------|
| Test Report S/N:<br>1C2503270033-05.BCG | Test Dates:<br>01/31/2025 - 07/21/2025 | EUT Type:<br>Watch | Page 75 of 90                     |

## 7.7.1 Antenna BCM – Radiated Spurious Emission Measurements

### LTE Band 26



|                                         |                                        |                    |                                   |
|-----------------------------------------|----------------------------------------|--------------------|-----------------------------------|
| FCC ID: BCG-A3337                       | PART 90 MEASUREMENT REPORT             |                    | Approved by:<br>Technical Manager |
| Test Report S/N:<br>1C2503270033-05.BCG | Test Dates:<br>01/31/2025 - 07/21/2025 | EUT Type:<br>Watch | Page 76 of 90                     |

|                            |        |
|----------------------------|--------|
| Bandwidth (MHz):           | 5      |
| Frequency (MHz):           | 816.5  |
| Modulation Signal:         | QPSK   |
| RB Config (Size / Offset): | 1 / 12 |

| Frequency [MHz] | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Field Strength [dB $\mu$ V/m] | EIRP Spurious Emission Level [dBm] | Limit [dBm] | Margin [dB] |
|-----------------|-----------------|---------------------|----------------------------|----------------------|-------------|-------------------------------|------------------------------------|-------------|-------------|
| 1633.0          | V               | 150                 | 343                        | -73.05               | -2.36       | 31.59                         | -63.66                             | -13.00      | -50.66      |
| 2449.5          | V               | 137                 | 343                        | -61.66               | 1.99        | 47.33                         | -47.93                             | -13.00      | -34.93      |
| 3266.0          | V               | -                   | -                          | -79.03               | 4.36        | 32.33                         | -62.93                             | -13.00      | -49.93      |
| 4082.5          | H               | -                   | -                          | -79.79               | 6.11        | 33.32                         | -61.94                             | -13.00      | -48.94      |
| 4899.0          | V               | -                   | -                          | -80.44               | 7.99        | 34.55                         | -60.70                             | -13.00      | -47.70      |

**Table 7-6. Antenna BCM Radiated Spurious Data (LTE Band 26 – Low Channel)**

|                            |        |
|----------------------------|--------|
| Bandwidth (MHz):           | 10     |
| Frequency (MHz):           | 819.0  |
| Modulation Signal:         | QPSK   |
| RB Config (Size / Offset): | 1 / 25 |

| Frequency [MHz] | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Field Strength [dB $\mu$ V/m] | EIRP Spurious Emission Level [dBm] | Limit [dBm] | Margin [dB] |
|-----------------|-----------------|---------------------|----------------------------|----------------------|-------------|-------------------------------|------------------------------------|-------------|-------------|
| 1638.0          | V               | 222                 | 358                        | -74.56               | -2.36       | 30.08                         | -65.17                             | -13.00      | -52.17      |
| 2457.0          | V               | 145                 | 343                        | -71.46               | 2.31        | 37.85                         | -57.41                             | -13.00      | -44.41      |
| 3276.0          | V               | -                   | -                          | -78.97               | 4.36        | 32.39                         | -62.87                             | -13.00      | -49.87      |
| 4095.0          | V               | -                   | -                          | -80.28               | 6.53        | 33.25                         | -62.01                             | -13.00      | -49.01      |
| 4914.0          | H               | -                   | -                          | -80.66               | 8.03        | 34.38                         | -60.88                             | -13.00      | -47.88      |

**Table 7-7. Antenna BCM Radiated Spurious Data (LTE Band 26 – Mid Channel)**

|                            |        |
|----------------------------|--------|
| Bandwidth (MHz):           | 5      |
| Frequency (MHz):           | 821.5  |
| Modulation Signal:         | QPSK   |
| RB Config (Size / Offset): | 1 / 12 |

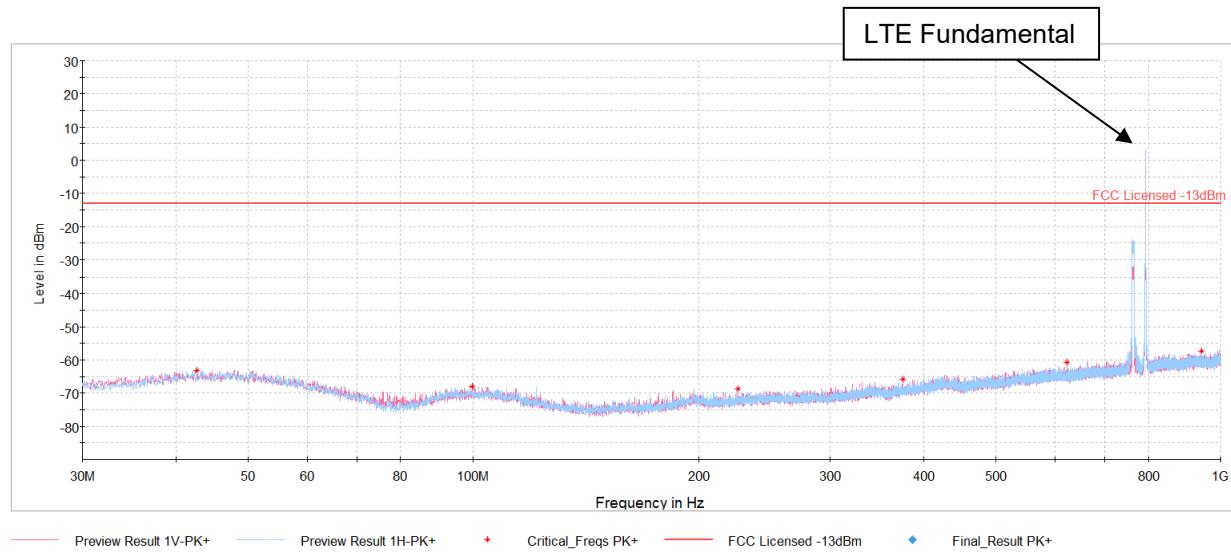
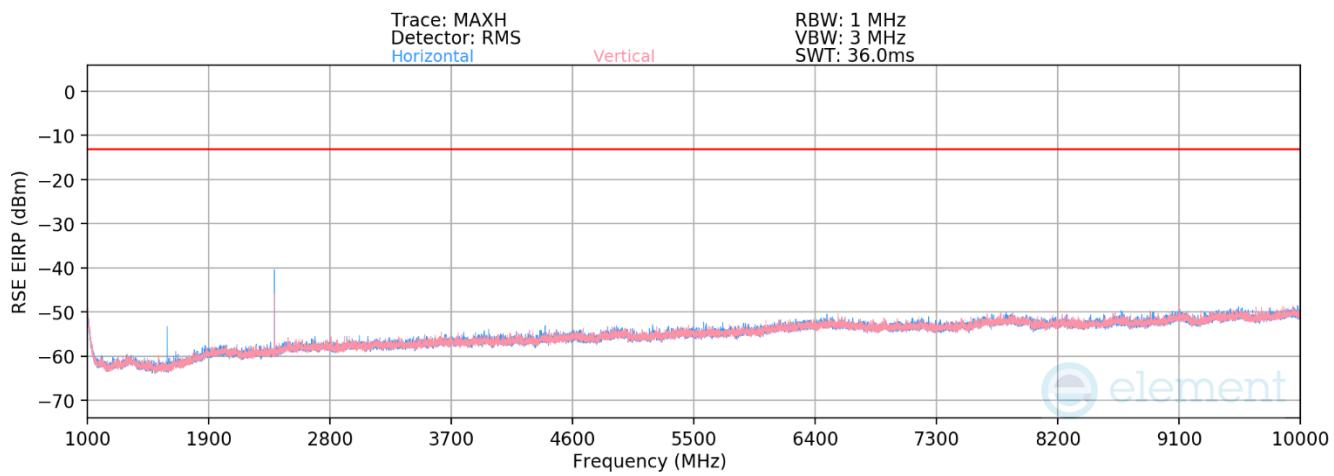
| Frequency [MHz] | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Field Strength [dB $\mu$ V/m] | EIRP Spurious Emission Level [dBm] | Limit [dBm] | Margin [dB] |
|-----------------|-----------------|---------------------|----------------------------|----------------------|-------------|-------------------------------|------------------------------------|-------------|-------------|
| 1643.0          | H               | 111                 | 229                        | -74.94               | -2.36       | 29.70                         | -65.56                             | -13.00      | -52.56      |
| 2464.5          | V               | 163                 | 349                        | -70.43               | 2.47        | 39.05                         | -56.21                             | -13.00      | -43.21      |
| 3286.0          | H               | -                   | -                          | -79.29               | 4.48        | 32.19                         | -63.06                             | -13.00      | -50.06      |
| 4107.5          | V               | -                   | -                          | -79.91               | 6.18        | 33.27                         | -61.99                             | -13.00      | -48.99      |
| 4929.0          | V               | -                   | -                          | -80.80               | 7.99        | 34.19                         | -61.07                             | -13.00      | -48.07      |

**Table 7-8. Antenna BCM Radiated Spurious Data (LTE Band 26 – High Channel)**

|                                         |                                                                                             |                            |  |  |  |                                   |
|-----------------------------------------|---------------------------------------------------------------------------------------------|----------------------------|--|--|--|-----------------------------------|
| FCC ID: BCG-A3337                       |  element | PART 90 MEASUREMENT REPORT |  |  |  | Approved by:<br>Technical Manager |
| Test Report S/N:<br>1C2503270033-05.BCG | Test Dates:<br>01/31/2025 - 07/21/2025                                                      | EUT Type:<br>Watch         |  |  |  |                                   |

V2.2 09/07/2023

Unless otherwise specified, no part of this report may be reproduced or utilized in any part, form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from Element Materials Technology. If you have any questions about this or have an enquiry about obtaining additional rights to this report or assembly of contents thereof, please contact [ct.info@element.com](mailto:ct.info@element.com).

**LTE Band 14**

**Plot 7-95. Antenna BCM Radiated Spurious Plot Below 1GHz (LTE Band 14)**

**Plot 7-96. Antenna BCM Radiated Spurious Plot Above 1GHz (LTE Band 14)**

|                                         |                                        |                    |  |                                   |
|-----------------------------------------|----------------------------------------|--------------------|--|-----------------------------------|
| FCC ID: BCG-A3337                       | PART 90 MEASUREMENT REPORT             |                    |  | Approved by:<br>Technical Manager |
| Test Report S/N:<br>1C2503270033-05.BCG | Test Dates:<br>01/31/2025 - 07/21/2025 | EUT Type:<br>Watch |  | Page 78 of 90                     |

|                            |        |
|----------------------------|--------|
| Bandwidth (MHz):           | 5      |
| Frequency (MHz):           | 790.5  |
| Modulation Signal:         | QPSK   |
| RB Config (Size / Offset): | 1 / 12 |

| Frequency [MHz] | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Field Strength [dB $\mu$ V/m] | EIRP Spurious Emission Level [dBm] | Limit [dBm] | Margin [dB] |
|-----------------|-----------------|---------------------|----------------------------|----------------------|-------------|-------------------------------|------------------------------------|-------------|-------------|
| 1581.0          | H               | 130                 | 240                        | -75.33               | -2.41       | 29.26                         | -66.00                             | -40.00      | -26.00      |
| 2371.5          | H               | 133                 | 199                        | -68.29               | 1.60        | 40.31                         | -54.94                             | -13.00      | -41.94      |
| 3162.0          | H               | -                   | -                          | -78.64               | 4.18        | 32.54                         | -62.72                             | -13.00      | -49.72      |
| 3952.5          | V               | -                   | -                          | -79.70               | 5.93        | 33.24                         | -62.02                             | -13.00      | -49.02      |
| 4743.0          | V               | -                   | -                          | -81.11               | 7.92        | 33.81                         | -61.44                             | -13.00      | -48.44      |

**Table 7-9. Antenna BCM Radiated Spurious Data (LTE Band 14 – Low Channel)**

|                            |        |
|----------------------------|--------|
| Bandwidth (MHz):           | 5      |
| Frequency (MHz):           | 793.0  |
| Modulation Signal:         | QPSK   |
| RB Config (Size / Offset): | 1 / 12 |

| Frequency [MHz] | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Field Strength [dB $\mu$ V/m] | EIRP Spurious Emission Level [dBm] | Limit [dBm] | Margin [dB] |
|-----------------|-----------------|---------------------|----------------------------|----------------------|-------------|-------------------------------|------------------------------------|-------------|-------------|
| 1586.0          | H               | 191                 | 224                        | -75.25               | -2.41       | 29.34                         | -65.92                             | -40.00      | -25.92      |
| 2379.0          | V               | 112                 | 14                         | -64.77               | 1.56        | 43.79                         | -51.46                             | -13.00      | -38.46      |
| 3172.0          | V               | -                   | -                          | -78.80               | 4.39        | 32.59                         | -62.67                             | -13.00      | -49.67      |
| 3965.0          | H               | -                   | -                          | -79.42               | 5.85        | 33.43                         | -61.83                             | -13.00      | -48.83      |
| 4758.0          | H               | -                   | -                          | -80.77               | 7.85        | 34.08                         | -61.17                             | -13.00      | -48.17      |

**Table 7-10. Antenna BCM Radiated Spurious Data (LTE Band 14 – Mid Channel)**

|                            |        |
|----------------------------|--------|
| Bandwidth (MHz):           | 5      |
| Frequency (MHz):           | 795.5  |
| Modulation Signal:         | QPSK   |
| RB Config (Size / Offset): | 1 / 12 |

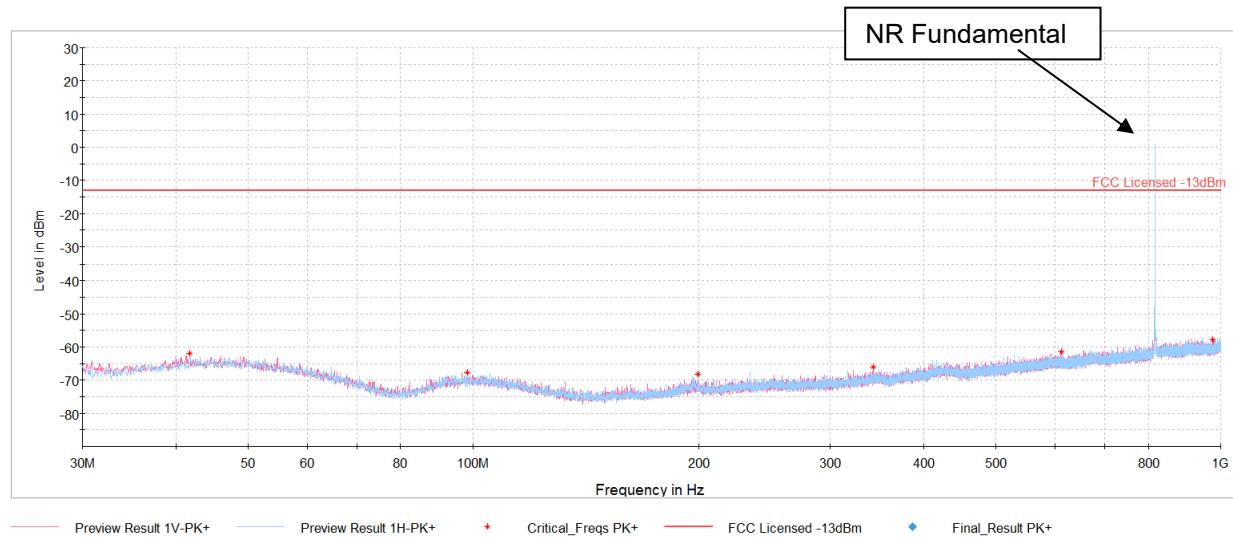
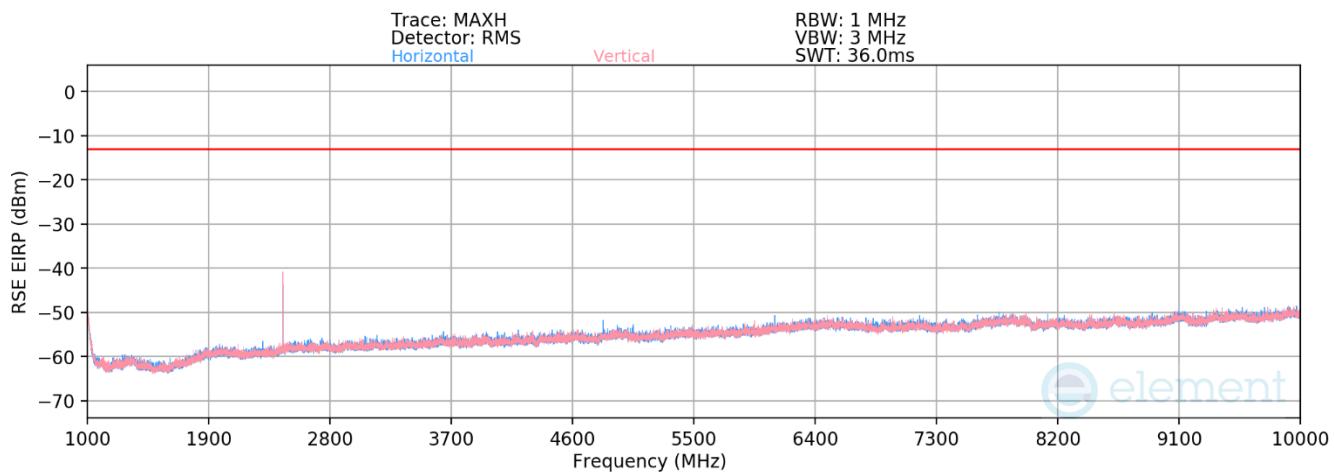
| Frequency [MHz] | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Field Strength [dB $\mu$ V/m] | EIRP Spurious Emission Level [dBm] | Limit [dBm] | Margin [dB] |
|-----------------|-----------------|---------------------|----------------------------|----------------------|-------------|-------------------------------|------------------------------------|-------------|-------------|
| 1591.0          | H               | 221                 | 9                          | -76.65               | -2.41       | 27.94                         | -67.32                             | -40.00      | -27.32      |
| 2386.5          | H               | 138                 | 52                         | -60.02               | 1.56        | 48.54                         | -46.72                             | -13.00      | -33.72      |
| 3182.0          | H               | -                   | -                          | -79.04               | 4.31        | 32.27                         | -62.99                             | -13.00      | -49.99      |
| 3977.5          | V               | -                   | -                          | -79.20               | 5.85        | 33.65                         | -61.61                             | -13.00      | -48.61      |
| 4773.0          | H               | -                   | -                          | -81.11               | 7.92        | 33.81                         | -61.44                             | -13.00      | -48.44      |

**Table 7-11. Antenna BCM Radiated Spurious Data (LTE Band 14 – High Channel)**

|                                         |                                                                                             |                            |  |  |  |                                   |
|-----------------------------------------|---------------------------------------------------------------------------------------------|----------------------------|--|--|--|-----------------------------------|
| FCC ID: BCG-A3337                       |  element | PART 90 MEASUREMENT REPORT |  |  |  | Approved by:<br>Technical Manager |
| Test Report S/N:<br>1C2503270033-05.BCG | Test Dates:<br>01/31/2025 - 07/21/2025                                                      | EUT Type:<br>Watch         |  |  |  |                                   |

V2.2 09/07/2023

Unless otherwise specified, no part of this report may be reproduced or utilized in any part, form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from Element Materials Technology. If you have any questions about this or have an enquiry about obtaining additional rights to this report or assembly of contents thereof, please contact [ct.info@element.com](mailto:ct.info@element.com).

**NR Band 26**

**Plot 7-97. Antenna BCM Radiated Spurious Plot Below 1GHz (NR Band n26)**

**Plot 7-98. Antenna BCM Radiated Spurious Plot Above 1GHz (NR Band n26)**

|                                         |                                        |                    |  |                                   |
|-----------------------------------------|----------------------------------------|--------------------|--|-----------------------------------|
| FCC ID: BCG-A3337                       | PART 90 MEASUREMENT REPORT             |                    |  | Approved by:<br>Technical Manager |
| Test Report S/N:<br>1C2503270033-05.BCG | Test Dates:<br>01/31/2025 - 07/21/2025 | EUT Type:<br>Watch |  | Page 80 of 90                     |

|                            |        |
|----------------------------|--------|
| Bandwidth (MHz):           | 5      |
| Frequency (MHz):           | 816.5  |
| Modulation Signal:         | QPSK   |
| RB Config (Size / Offset): | 1 / 12 |

| Frequency [MHz] | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Field Strength [dB $\mu$ V/m] | EIRP Spurious Emission Level [dBm] | Limit [dBm] | Margin [dB] |
|-----------------|-----------------|---------------------|----------------------------|----------------------|-------------|-------------------------------|------------------------------------|-------------|-------------|
| 1633.0          | V               | 199                 | 323                        | -76.50               | -2.36       | 28.14                         | -67.12                             | -13.00      | -54.12      |
| 2449.5          | V               | 104                 | 355                        | -64.29               | 1.99        | 44.70                         | -50.55                             | -13.00      | -37.55      |
| 3266.0          | H               | -                   | -                          | -79.29               | 4.56        | 32.27                         | -62.99                             | -13.00      | -49.99      |
| 4082.5          | H               | -                   | -                          | -79.94               | 6.11        | 33.17                         | -62.09                             | -13.00      | -49.09      |
| 4899.0          | V               | -                   | -                          | -80.78               | 8.03        | 34.25                         | -61.01                             | -13.00      | -48.01      |

**Table 7-12. Antenna BCM Radiated Spurious Data (NR Band n26 – Low Channel)**

|                            |        |
|----------------------------|--------|
| Bandwidth (MHz):           | 10     |
| Frequency (MHz):           | 819.0  |
| Modulation Signal:         | QPSK   |
| RB Config (Size / Offset): | 1 / 25 |

| Frequency [MHz] | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Field Strength [dB $\mu$ V/m] | EIRP Spurious Emission Level [dBm] | Limit [dBm] | Margin [dB] |
|-----------------|-----------------|---------------------|----------------------------|----------------------|-------------|-------------------------------|------------------------------------|-------------|-------------|
| 1638.0          | V               | 205                 | 360                        | -74.25               | -2.36       | 30.39                         | -64.87                             | -13.00      | -51.87      |
| 2457.0          | V               | 133                 | 348                        | -64.79               | 2.31        | 44.52                         | -50.74                             | -13.00      | -37.74      |
| 3276.0          | H               | -                   | -                          | -79.05               | 4.36        | 32.31                         | -62.95                             | -13.00      | -49.95      |
| 4095.0          | H               | -                   | -                          | -80.00               | 6.18        | 33.18                         | -62.07                             | -13.00      | -49.07      |
| 4914.0          | V               | -                   | -                          | -80.80               | 8.17        | 34.37                         | -60.89                             | -13.00      | -47.89      |

**Table 7-13. Antenna BCM Radiated Spurious Data (NR Band n26 – Mid Channel)**

|                            |        |
|----------------------------|--------|
| Bandwidth (MHz):           | 5      |
| Frequency (MHz):           | 821.5  |
| Modulation Signal:         | QPSK   |
| RB Config (Size / Offset): | 1 / 12 |

| Frequency [MHz] | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Field Strength [dB $\mu$ V/m] | EIRP Spurious Emission Level [dBm] | Limit [dBm] | Margin [dB] |
|-----------------|-----------------|---------------------|----------------------------|----------------------|-------------|-------------------------------|------------------------------------|-------------|-------------|
| 1643.0          | V               | 166                 | -9                         | -74.61               | -2.36       | 30.03                         | -65.23                             | -13.00      | -52.23      |
| 2464.5          | V               | 135                 | 25                         | -66.85               | 2.47        | 42.62                         | -52.63                             | -13.00      | -39.63      |
| 3286.0          | H               | -                   | -                          | -79.24               | 4.48        | 32.24                         | -63.02                             | -13.00      | -50.02      |
| 4107.5          | H               | -                   | -                          | -80.20               | 6.47        | 33.27                         | -61.99                             | -13.00      | -48.99      |
| 4929.0          | V               | -                   | -                          | -80.80               | 7.99        | 34.19                         | -61.06                             | -13.00      | -48.06      |

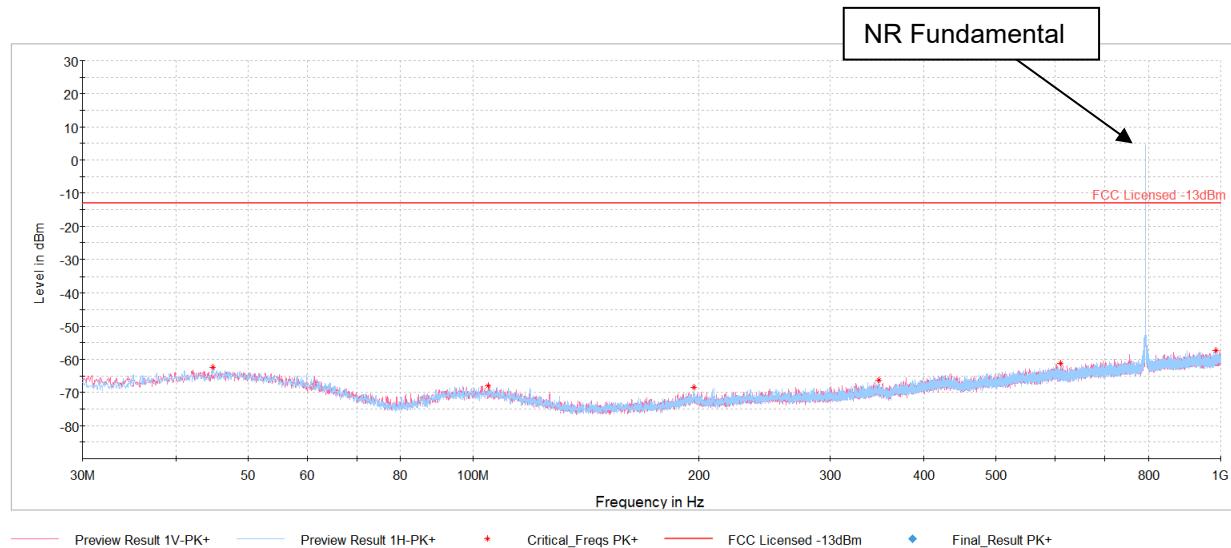
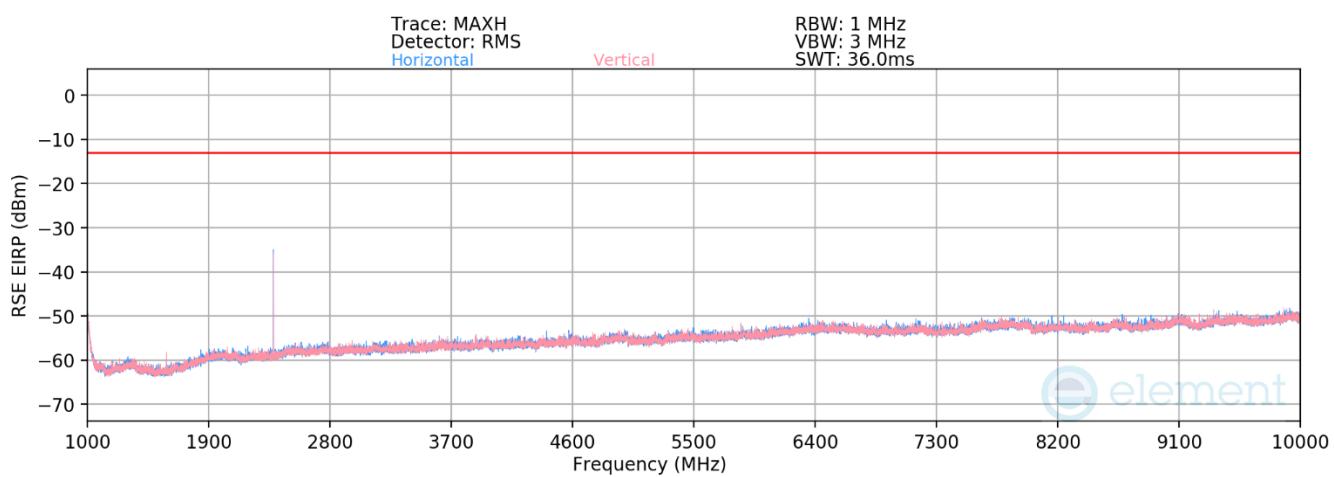
**Table 7-14. Antenna BCM Radiated Spurious Data (NR Band n26 – High Channel)**

|                                         |                                                                                             |                            |  |  |  |                                   |
|-----------------------------------------|---------------------------------------------------------------------------------------------|----------------------------|--|--|--|-----------------------------------|
| FCC ID: BCG-A3337                       |  element | PART 90 MEASUREMENT REPORT |  |  |  | Approved by:<br>Technical Manager |
| Test Report S/N:<br>1C2503270033-05.BCG | Test Dates:<br>01/31/2025 - 07/21/2025                                                      | EUT Type:<br>Watch         |  |  |  |                                   |

V2.2 09/07/2023

Unless otherwise specified, no part of this report may be reproduced or utilized in any part, form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from Element Materials Technology. If you have any questions about this or have an enquiry about obtaining additional rights to this report or assembly of contents thereof, please contact ct.info@element.com.

Page 81 of 90

**NR Band n14**

**Plot 7-99. Antenna BCM Radiated Spurious Plot Below 1GHz (NR Band n14)**

**Plot 7-100. Antenna BCM Radiated Spurious Plot Above 1GHz (NR Band n14)**

|                                         |                                        |                    |  |                                   |
|-----------------------------------------|----------------------------------------|--------------------|--|-----------------------------------|
| FCC ID: BCG-A3337                       | PART 90 MEASUREMENT REPORT             |                    |  | Approved by:<br>Technical Manager |
| Test Report S/N:<br>1C2503270033-05.BCG | Test Dates:<br>01/31/2025 - 07/21/2025 | EUT Type:<br>Watch |  | Page 82 of 90                     |

|                    |        |
|--------------------|--------|
| Bandwidth (MHz):   | 5      |
| Frequency (MHz):   | 790.5  |
| Modulation Signal: | QPSK   |
| RB / Offset:       | 1 / 12 |

| Frequency [MHz] | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Field Strength [dB $\mu$ V/m] | EIRP Spurious Emission Level [dBm] | Limit [dBm] | Margin [dB] |
|-----------------|-----------------|---------------------|----------------------------|----------------------|-------------|-------------------------------|------------------------------------|-------------|-------------|
| 1581.0          | H               | 185                 | 300                        | -75.87               | -2.41       | 28.71                         | -66.54                             | -40.00      | -26.54      |
| 2371.5          | H               | 112                 | 85                         | -63.47               | 1.60        | 45.13                         | -50.12                             | -13.00      | -37.12      |
| 3162.0          | V               | -                   | -                          | -78.82               | 4.33        | 32.51                         | -62.75                             | -13.00      | -49.75      |
| 3952.5          | V               | -                   | -                          | -79.16               | 5.85        | 33.70                         | -61.56                             | -13.00      | -48.56      |
| 4743.0          | V               | -                   | -                          | -80.74               | 7.82        | 34.08                         | -61.17                             | -13.00      | -48.17      |

**Table 7-15. Antenna BCM Radiated Spurious Data (NR Band n14 – Low Channel)**

|                    |        |
|--------------------|--------|
| Bandwidth (MHz):   | 5      |
| Frequency (MHz):   | 793.0  |
| Modulation Signal: | QPSK   |
| RB / Offset:       | 1 / 12 |

| Frequency [MHz] | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Field Strength [dB $\mu$ V/m] | EIRP Spurious Emission Level [dBm] | Limit [dBm] | Margin [dB] |
|-----------------|-----------------|---------------------|----------------------------|----------------------|-------------|-------------------------------|------------------------------------|-------------|-------------|
| 1586.0          | V               | 106                 | 9                          | -76.35               | -2.41       | 28.23                         | -67.02                             | -40.00      | -27.02      |
| 2379.0          | H               | 137                 | 268                        | -62.49               | 1.56        | 46.07                         | -49.18                             | -13.00      | -36.18      |
| 3172.0          | V               | -                   | -                          | -78.78               | 4.34        | 32.56                         | -62.70                             | -13.00      | -49.70      |
| 3965.0          | V               | -                   | -                          | -79.28               | 5.85        | 33.57                         | -61.69                             | -13.00      | -48.69      |
| 4758.0          | V               | -                   | -                          | -80.91               | 7.82        | 33.91                         | -61.34                             | -13.00      | -48.34      |

**Table 7-16. Antenna BCM Radiated Spurious Data (NR Band n14 – Mid Channel)**

|                    |        |
|--------------------|--------|
| Bandwidth (MHz):   | 5      |
| Frequency (MHz):   | 795.5  |
| Modulation Signal: | QPSK   |
| RB / Offset:       | 1 / 12 |

| Frequency [MHz] | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Field Strength [dB $\mu$ V/m] | EIRP Spurious Emission Level [dBm] | Limit [dBm] | Margin [dB] |
|-----------------|-----------------|---------------------|----------------------------|----------------------|-------------|-------------------------------|------------------------------------|-------------|-------------|
| 1591.0          | V               | 145                 | 6                          | -74.81               | -2.41       | 29.78                         | -65.48                             | -40.00      | -25.48      |
| 2386.5          | H               | 115                 | 323                        | -63.89               | 1.56        | 44.67                         | -50.59                             | -13.00      | -37.59      |
| 3182.0          | H               | -                   | -                          | -78.51               | 4.39        | 32.88                         | -62.37                             | -13.00      | -49.37      |
| 3977.5          | V               | -                   | -                          | -79.29               | 5.85        | 33.56                         | -61.69                             | -13.00      | -48.69      |
| 4773.0          | V               | -                   | -                          | -81.02               | 7.92        | 33.90                         | -61.36                             | -13.00      | -48.36      |

**Table 7-17. Antenna BCM Radiated Spurious Data (NR Band n14 – High Channel)**

|                                         |                                                                                             |                            |  |  |  |                                   |
|-----------------------------------------|---------------------------------------------------------------------------------------------|----------------------------|--|--|--|-----------------------------------|
| FCC ID: BCG-A3337                       |  element | PART 90 MEASUREMENT REPORT |  |  |  | Approved by:<br>Technical Manager |
| Test Report S/N:<br>1C2503270033-05.BCG | Test Dates:<br>01/31/2025 - 07/21/2025                                                      | EUT Type:<br>Watch         |  |  |  |                                   |

V2.2 09/07/2023

Unless otherwise specified, no part of this report may be reproduced or utilized in any part, form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from Element Materials Technology. If you have any questions about this or have an enquiry about obtaining additional rights to this report or assembly of contents thereof, please contact [ct.info@element.com](mailto:ct.info@element.com).

Page 83 of 90

## 7.8 Frequency Stability / Temperature Variation

§2.1055 §90.213

### Test Overview and Limit

Frequency stability testing is performed in accordance with the guidelines of ANSI C63.26-2015 and TIA-603-E-2016. The frequency stability of the transmitter is measured by:

- a.) **Temperature:** The temperature is varied from -30°C to +50°C in 10°C increments using an environmental chamber.
- b.) **Primary Supply Voltage:** The primary supply voltage is varied from 85% to 115% of the nominal value for non hand-carried battery and AC powered equipment. For hand-carried, battery-powered equipment, primary supply voltage is reduced to the battery operating end point which shall be specified by the manufacturer.

***For Band 26, the frequency stability of the transmitter shall be maintained within ±0.00025% (±2.5 ppm) of the center frequency. For Band 14 the frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.***

### Test Procedure Used

ANSI C63.26-2015

TIA-603-E-2016

### Test Settings

1. The carrier frequency of the transmitter is measured at room temperature (20°C to provide a reference).
2. The equipment is turned on in a "standby" condition for fifteen minutes before applying power to the transmitter. Measurement of the carrier frequency of the transmitter is made within one minute after applying power to the transmitter.
3. Frequency measurements are made at 10°C intervals ranging from -30°C to +50°C. A period of at least one half-hour is provided to allow stabilization of the equipment at each temperature level.

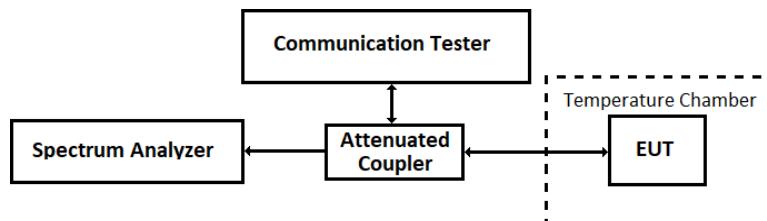
|                                         |                                        |                    |                                   |
|-----------------------------------------|----------------------------------------|--------------------|-----------------------------------|
| FCC ID: BCG-A3337                       | PART 90 MEASUREMENT REPORT             |                    | Approved by:<br>Technical Manager |
| Test Report S/N:<br>1C2503270033-05.BCG | Test Dates:<br>01/31/2025 - 07/21/2025 | EUT Type:<br>Watch | Page 84 of 90                     |

Unless otherwise specified, no part of this report may be reproduced or utilized in any part, form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from Element Materials Technology. If you have any questions about this or have an enquiry about obtaining additional rights to this report or assembly of contents thereof, please contact [ct.info@element.com](mailto:ct.info@element.com).

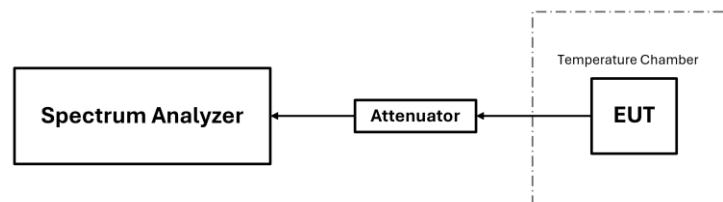
V2.2 09/07/2023

## Test Setup

The EUT was connected via an RF cable to a spectrum analyzer with the EUT placed inside an environmental chamber. For LTE testing, in addition, the EUT was connected to a communication tester via an attenuated RF coupler



**Figure 7-13. LTE Test Instrument & Measurement Setup**



**Figure 7-14. FR1 Test Instrument & Measurement Setup**

## Test Notes

N/A

|                                         |                                        |                    |                                   |
|-----------------------------------------|----------------------------------------|--------------------|-----------------------------------|
| FCC ID: BCG-A3337                       | PART 90 MEASUREMENT REPORT             |                    | Approved by:<br>Technical Manager |
| Test Report S/N:<br>1C2503270033-05.BCG | Test Dates:<br>01/31/2025 - 07/21/2025 | EUT Type:<br>Watch | Page 85 of 90                     |

**Frequency Stability / Temperature Variation**
**LTE Band 26**

|                            |                       |
|----------------------------|-----------------------|
| Operating Frequency (GHz): | 0.819                 |
| Ref. Voltage (VDC):        | 3.80                  |
| Deviation Limit:           | ± 0.00025% or 2.5 ppm |

| Voltage (%)      | Power (VDC) | Temp (°C)  | Frequency (GHz) | Freq. Dev. (GHz) | Deviation (%) |
|------------------|-------------|------------|-----------------|------------------|---------------|
| 100 %            | 3.80        | - 30       | 0.819000144     | 0.000000132      | 0.000016117   |
|                  |             | - 20       | 0.818999893     | -0.000000119     | -0.000014530  |
|                  |             | - 10       | 0.819000110     | 0.000000098      | 0.000011966   |
|                  |             | 0          | 0.819000114     | 0.000000102      | 0.000012454   |
|                  |             | + 10       | 0.818999947     | -0.000000065     | -0.000007937  |
|                  |             | + 20 (Ref) | 0.819000012     | 0.000000000      | 0.000000000   |
|                  |             | + 30       | 0.819000050     | 0.000000038      | 0.000004640   |
|                  |             | + 40       | 0.819000090     | 0.000000078      | 0.000009524   |
|                  |             | + 50       | 0.818999927     | -0.000000085     | -0.000010379  |
| Battery Endpoint | 3.40        | + 20       | 0.818999933     | -0.000000079     | -0.000009646  |

**Table 7-18. LTE Band 26 Frequency Stability Data**

|                                         |                                        |                    |  |                                   |
|-----------------------------------------|----------------------------------------|--------------------|--|-----------------------------------|
| FCC ID: BCG-A3337                       | PART 90 MEASUREMENT REPORT             |                    |  | Approved by:<br>Technical Manager |
| Test Report S/N:<br>1C2503270033-05.BCG | Test Dates:<br>01/31/2025 - 07/21/2025 | EUT Type:<br>Watch |  | Page 86 of 90                     |

**Frequency Stability / Temperature Variation**

| <b>LTE Band 14</b> |             |                                     |                      |                                        |
|--------------------|-------------|-------------------------------------|----------------------|----------------------------------------|
|                    |             | Operating Band Lower Boundary (GHz) | 0.788                |                                        |
|                    |             | Ref. Voltage (VDC):                 | 3.80                 |                                        |
| Voltage (%)        | Power (VDC) | Temp (°C)                           | Measured Freq. (GHz) | Freq. Delta from Operating Range (GHz) |
| 100 %              | 3.80        | - 30                                | 0.788513500          | -0.000513500                           |
|                    |             | - 20                                | 0.788953600          | -0.000953600                           |
|                    |             | - 10                                | 0.788302700          | -0.000302700                           |
|                    |             | 0                                   | 0.788122800          | -0.000122800                           |
|                    |             | + 10                                | 0.788655600          | -0.000655600                           |
|                    |             | + 20 (Ref)                          | 0.788600600          | -0.000600600                           |
|                    |             | + 30                                | 0.788193600          | -0.000193600                           |
|                    |             | + 40                                | 0.788499700          | -0.000499700                           |
|                    |             | + 50                                | 0.788503300          | -0.000503300                           |
| Battery Endpoint   | 3.40        | + 20                                | 0.788142800          | -0.000142800                           |

**Table 7-19. LTE Band 14 Lower Boundary Frequency Stability Data**

| <b>LTE Band 14</b> |             |                                     |                      |                                        |
|--------------------|-------------|-------------------------------------|----------------------|----------------------------------------|
|                    |             | Operating Band Upper Boundary (GHz) | 0.798                |                                        |
|                    |             | Ref. Voltage (VDC):                 | 3.80                 |                                        |
| Voltage (%)        | Power (VDC) | Temp (°C)                           | Measured Freq. (GHz) | Freq. Delta from Operating Range (GHz) |
| 100 %              | 3.80        | - 30                                | 0.797718100          | -0.000281900                           |
|                    |             | - 20                                | 0.797157200          | -0.000842800                           |
|                    |             | - 10                                | 0.797674000          | -0.000326000                           |
|                    |             | 0                                   | 0.797316700          | -0.000683300                           |
|                    |             | + 10                                | 0.797796400          | -0.000203600                           |
|                    |             | + 20 (Ref)                          | 0.797275300          | -0.000724700                           |
|                    |             | + 30                                | 0.797225900          | -0.000774100                           |
|                    |             | + 40                                | 0.797646100          | -0.000353900                           |
|                    |             | + 50                                | 0.797612000          | -0.000388000                           |
| Battery Endpoint   | 3.40        | + 20                                | 0.797895200          | -0.000104800                           |

**Table 7-20. LTE Band 14 Upper Boundary Frequency Stability Data**

|                                         |                                                                                             |                            |  |                                   |
|-----------------------------------------|---------------------------------------------------------------------------------------------|----------------------------|--|-----------------------------------|
| FCC ID: BCG-A3337                       |  element | PART 90 MEASUREMENT REPORT |  | Approved by:<br>Technical Manager |
| Test Report S/N:<br>1C2503270033-05.BCG | Test Dates:<br>01/31/2025 - 07/21/2025                                                      | EUT Type:<br>Watch         |  | Page 87 of 90                     |

**Frequency Stability / Temperature Variation**
**NR Band n26**

| Operating Frequency (GHz): | 0.819                 |            |                 |                  |               |
|----------------------------|-----------------------|------------|-----------------|------------------|---------------|
| Ref. Voltage (VDC):        | 3.80                  |            |                 |                  |               |
| Deviation Limit:           | ± 0.00025% or 2.5 ppm |            |                 |                  |               |
| <b>NR Band n26</b>         |                       |            |                 |                  |               |
| Voltage (%)                | Power (VDC)           | Temp (°C)  | Frequency (GHz) | Freq. Dev. (GHz) | Deviation (%) |
| 100 %                      | 3.80                  | - 30       | 0.819000116     | 0.000000074      | 0.000009035   |
|                            |                       | - 20       | 0.818999939     | -0.000000103     | -0.000012576  |
|                            |                       | - 10       | 0.819000126     | 0.000000084      | 0.000010256   |
|                            |                       | 0          | 0.818999996     | -0.000000046     | -0.000005617  |
|                            |                       | + 10       | 0.819000014     | -0.000000028     | -0.000003419  |
|                            |                       | + 20 (Ref) | 0.819000042     | 0.000000000      | 0.000000000   |
|                            |                       | + 30       | 0.819000120     | 0.000000078      | 0.000009524   |
|                            |                       | + 40       | 0.819000152     | 0.000000110      | 0.000013431   |
|                            |                       | + 50       | 0.818999954     | -0.000000088     | -0.000010745  |
| Battery Endpoint           | 3.40                  | + 20       | 0.818999973     | -0.000000069     | -0.000008425  |

**Table 7-21. NR Band n26 Frequency Stability Data**

|                                         |                                        |                    |  |                                   |
|-----------------------------------------|----------------------------------------|--------------------|--|-----------------------------------|
| FCC ID: BCG-A3337                       | PART 90 MEASUREMENT REPORT             |                    |  | Approved by:<br>Technical Manager |
| Test Report S/N:<br>1C2503270033-05.BCG | Test Dates:<br>01/31/2025 - 07/21/2025 | EUT Type:<br>Watch |  | Page 88 of 90                     |

**Frequency Stability / Temperature Variation**

| <b>NR Band n14</b>                  |                    |                  |                             |                                               |
|-------------------------------------|--------------------|------------------|-----------------------------|-----------------------------------------------|
| Operating Band Lower Boundary (GHz) |                    | 0.788            |                             |                                               |
| Ref. Voltage (VDC):                 |                    | 3.80             |                             |                                               |
| <b>Voltage (%)</b>                  | <b>Power (VDC)</b> | <b>Temp (°C)</b> | <b>Measured Freq. (GHz)</b> | <b>Freq. Delta from Operating Range (GHz)</b> |
| 100 %                               | 3.80               | - 30             | 0.788037100                 | -0.000037100                                  |
|                                     |                    | - 20             | 0.788904600                 | -0.000904600                                  |
|                                     |                    | - 10             | 0.788962300                 | -0.000962300                                  |
|                                     |                    | 0                | 0.788634700                 | -0.000634700                                  |
|                                     |                    | + 10             | 0.788779500                 | -0.000779500                                  |
|                                     |                    | + 20 (Ref)       | 0.788058200                 | -0.000058200                                  |
|                                     |                    | + 30             | 0.788902900                 | -0.000902900                                  |
|                                     |                    | + 40             | 0.788443300                 | -0.000443300                                  |
|                                     |                    | + 50             | 0.788702800                 | -0.000702800                                  |
| Battery Endpoint                    | 3.40               | + 20             | 0.788479500                 | -0.000479500                                  |

**Table 7-22. NR Band n14 Lower Boundary Frequency Stability Data**

| <b>NR Band n14</b>                  |                    |                  |                             |                                               |
|-------------------------------------|--------------------|------------------|-----------------------------|-----------------------------------------------|
| Operating Band Upper Boundary (GHz) |                    | 0.798            |                             |                                               |
| Ref. Voltage (VDC):                 |                    | 3.80             |                             |                                               |
| <b>Voltage (%)</b>                  | <b>Power (VDC)</b> | <b>Temp (°C)</b> | <b>Measured Freq. (GHz)</b> | <b>Freq. Delta from Operating Range (GHz)</b> |
| 100 %                               | 3.80               | - 30             | 0.797032800                 | -0.000967200                                  |
|                                     |                    | - 20             | 0.797818200                 | -0.000181800                                  |
|                                     |                    | - 10             | 0.797373400                 | -0.000626600                                  |
|                                     |                    | 0                | 0.797498700                 | -0.000501300                                  |
|                                     |                    | + 10             | 0.797162500                 | -0.000837500                                  |
|                                     |                    | + 20 (Ref)       | 0.797886200                 | -0.000113800                                  |
|                                     |                    | + 30             | 0.797707600                 | -0.000292400                                  |
|                                     |                    | + 40             | 0.797552800                 | -0.000447200                                  |
|                                     |                    | + 50             | 0.797195400                 | -0.000804600                                  |
| Battery Endpoint                    | 3.40               | + 20             | 0.797368000                 | -0.000632000                                  |

**Table 7-23. NR Band n14 Upper Boundary Frequency Stability Data**

|                                         |                                                                                             |                            |  |                                   |
|-----------------------------------------|---------------------------------------------------------------------------------------------|----------------------------|--|-----------------------------------|
| FCC ID: BCG-A3337                       |  element | PART 90 MEASUREMENT REPORT |  | Approved by:<br>Technical Manager |
| Test Report S/N:<br>1C2503270033-05.BCG | Test Dates:<br>01/31/2025 - 07/21/2025                                                      | EUT Type:<br>Watch         |  | Page 89 of 90                     |

## 8.0 CONCLUSION

The data collected relate only to the item(s) tested and show that the **Apple Watch FCC ID: BCG-A3337** complies with all the requirements of Part 90 of the FCC rules.

| FCC ID: BCG-A3337                       | PART 90 MEASUREMENT REPORT             |                    | Approved by:<br>Technical Manager |
|-----------------------------------------|----------------------------------------|--------------------|-----------------------------------|
| Test Report S/N:<br>1C2503270033-05.BCG | Test Dates:<br>01/31/2025 - 07/21/2025 | EUT Type:<br>Watch | Page 90 of 90                     |